FINAL REPORT
MAY 2019

City of Santa Clarita

Transit Development Plan

moore & associates

Table of Contents

List of Exhibits

E. EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

Santa Clarita is a dynamic community located approximately 30 miles north of Los Angeles. Founded in 1987 through the consolidation of Canyon Country, Newhall, Saugus, and Valencia, it is now home to more than 200,000 residents. The Santa Clarita Transit service area mirrors the Santa Clarita Valley including unincorporated portions of Los Angeles County, such as Castaic, Stevenson Ranch, and Val Verde.

Since its incorporation, the City has annexed 32 adjacent communities into its boundaries, with the most recent annexation taking place in 2018. Economic development is vibrant, as Santa Clarita is home to more than 6,000 businesses in sectors ranging from aerospace manufacturing, to bio-medical research, to entertainment. The redevelopment of Downtown Newhall and pending new development at Newhall Ranch and Vista Canyon further demonstrate the community's exciting future.

Santa Clarita has changed significantly since the completion of its 2013 Transportation Development Plan. New residential developments including River Village and Five Knolls have approached build-out, while others such as Aliento and Avalon at Plum Canyon are still primarily in the construction stage. Infill development at the former Pier One and El Pollo Loco locations on Magic Mountain Parkway has brought new businesses into the Town Center area, while the expansion of the McBean Regional Transit Center to include a Park & Ride supports access to commuter bus services. The widening of the Golden Valley bridge over Highway 14 has improved mobility in the area, while ongoing construction on Interstate 5 has had a temporary impact on local mobility on the west side.

With such growth comes a need to re-evaluate the City's transit service delivery approach, long-term vision, and community mobility needs and priorities.

Report Overview

The goal of a Transportation Development Plan (TDP) is to present a plan for short-term operational, financial, and capital improvements for the City of Santa Clarita's transit program. These strategies reflect findings from rider and non-rider (community) input as well as a review of transit system performance. This TDP is an update of the prior TDP completed in 2013. The 2018 TDP is divided into nine chapters:

1. Executive Summary;
2. Goals, Objectives, and Performance Measures;
3. Community Profile and Demand Analysis;
4. Service Overview and Evaluation;
5. Public Outreach;
6. Operations Plan;
7. Capital and Financial Plan;
8. Other Transportation Considerations, and
9. Appendix.

The Goals, Objectives, and Performance Standards outlined herein present the City with a blueprint that identifies ways in which the City can monitor SCT performance and cost-effectiveness.

The Community Profile and Demand Analysis provides an insight into the Santa Clarita Valley resident base. This chapter highlights segments of the population that are historically transit users. In preparing this chapter, we analyzed demographic data from the federal Census and the California Department of Finance. We then mapped our findings using Geographic Information Systems (GIS) software.

The Service Overview and Evaluation is a snapshot of current transit usage and system performance. The information is displayed by service type, route, direction, and time of day. This chapter allows the City to analyze how current performance aligns with program goals and objectives. For this analysis, we collected line-by-line route data for each Santa Clarita Transit route and analyzed recent and historic operating data. Through this process we were able to identify opportunities of improvement as well as growth.

The Public Outreach section included multiple surveys that targeted fixed-route riders, commuter bus riders, Dial-A-Ride users, and any other residents of the Santa Clarita Valley, regardless of transit patronage. In total, we collected over 3,700 unique pieces of data. In addition to our surveys, we also facilitated two rounds of community workshops that actively engaged members of the public in defining and prioritizing local transit needs. Public involvement in the preparation of the 2018 TDP has been important to understanding the transit needs and priorities of residents throughout the Santa Clarita Valley.

The Operations Plan section details 14 recommendations designed to address the aforementioned findings. Each recommendation falls into one of two general categories: 1) operating strategies or 2) marketing, administrative, and fare strategies.

The Capital and Financial Plan analyzes both the current state of Santa Clarita Transit's finances as well as the financial ramifications of the recommendations presented in Chapter 6. This chapter discusses the components of the City's transit budget (capital needs, capital expenses, operational expenses, and revenue).

The Other Transportation Considerations section discusses other mobility options presents within the Santa Clarita Valley.

1 GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

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CHAPTER 1 | GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

The 2013 Transportation Development Plan included five goals, each of which included numerous tactics, performance measures, and performance standards. Rather than simply updating those goals and objectives Moore & Associates worked with the City to identify goals and objectives that are more in line with the City's current vision for the future (based largely on *Santa Clarita 2020*). Many of the goals established for FY 2016 – FY 2018 have already been achieved.

The following goals and objectives for Santa Clarita Transit were identified by *Santa Clarita 2020*, along with notes regarding their implementation and/or next steps.

- Expand transit services to enhance underserved business areas.
    - Issue RFP and award contract for the purchase and delivery of new transit buses. (FY 2016)
    - Purchase additional buses. (FY 2016)
        - Five CNG-powered commuter coaches arrived December 2015.
    - Identify underserved areas and employee commuting needs. (FY 2017)
        - Met with Economic Development Corporation to discuss business-specific transit survey to assess transit demand.
        - Participating in rideshare and employer outreach events to identify underserved areas.
        - Conduct survey of commuter riders (completed in mid-2018).
        - Design community and employer survey (community survey conducted as part of TDP).
    - Purchase additional buses. (FY 2017)
        - Award contract of the purchase and delivery of new CNG-powered Dial-A-Ride vehicles.
        - Took delivery of Dial-A-Ride vehicles.
    - Issue RFP and award contract for the update of the City's Transit Development Plan. (FY 2018)
        - Completed early 2019.
    - Complete data review to identify future development and assess transit demand, as part of the TDP. (FY 2018)
        - Completed mid-2018.
    - Complete community outreach to assess existing transit demand and underserved areas, as part of the TDP. (FY 2018)
    - Update the Transit Forecast to reflect expansion of transit services in future years, if warranted by the budget process. (FY 2018)
    - Partner with College of the Canyons and cross-promote the COC Student Pass. (FY 2019)
    - Participate in local and regional rideshare events being held throughout the year. (FY 2019)
    - Continue efforts to complete the Transit Development Plan. (FY 2019)
    - Conduct outreach to local junior high and high school campuses. (FY 2019)
    - Take delivery of new buses. (FY 2019)

- Review the City's fleet and maintenance standards to address changes in technology and clean fuels and implement best management practices.
    - Assess current infrastructure and prepare a capital replacement plan. (FY 2016)
    - Issue an RFP, award contract, and receive completed study and recommendations. (FY 2016)
    - Conduct an assessment of City's transit fleet and maintenance practices to ensure that the fleet is maintained efficiently; to confirm that the fleet is meeting the City's needs; and to make sure that the contractor is compliant with the maintenance needs. (FY 2016)
    - Monitor CNG usage and project future trends; receive completed plan with recommendations to evaluate the effectiveness of the compressed natural gas program and to ensure the capacity to provide CNG fuel. (FY 2016)
    - Manage vehicle maintenance records to establish appropriate vehicle-replacement cycle. (FY 2016)
    - Assess the ability to transition the service fleet to alternative fuel platforms when and where possible. (FY 2017)
    - Add additional slow-fill CNG fueling stations at the Yard and at City Hall. (FY 2017)
        - Decision package for a consultant was approved for FY 2018. Staff will pursue hiring a consultant when funds are made available.
    - Ensure the City's fleet and maintenance standards are meeting standards and best management practices. (FY 2018)
    - Assess the ability to transition the service fleet to alternative fuel platforms; assess locations and timing. (FY 2018)
    - Establish a Motor Management Pool System for the under-utilized vehicles in the City's fleet. (FY 2019)
- Identify and develop a schedule for the maintenance and/or replacement of transit customer amenities including benches, shelters, trash receptacles, and signage.
    - Maintain compliance with federal, state, and local policies. (FY 2016)
    - Create and maintain a log of all customer amenities at transit stops. (FY 2016)
    - Review ridership/usage data to determine the appropriate level of amenities for each location. (FY 2016)
    - Update FTIP to reflect the City's amenities replacement/improvement cycle. (FY 2016)
    - Visit and photograph all 675 transit stops to determine projected useful life and industry best practices. (FY 2016-FY 2017)
    - Implement a replacement plan that would repair and update customer amenities at approximately 25 stops throughout the city. (FY 2018)
    - Identify bus stops for the next round of bus stop improvements. (FY 2019)
    - Develop and implement the federally required Asset Management Plan. (FY 2019)
- Expand our customer service training program to contract service providers (including bus drivers) and part-time seasonal employees to ensure their practices are consistent with City values and service levels.
    - Create specialized customer service training for City contract service providers. (FY 2017)

Given the *Santa Clarita 2020* goals only extend to FY 2019 at this time, we have updated the objectives for three of the above-stated goals to reflect the five- to ten-year horizon of the Transportation Development Plan. The fourth goal has been reshaped to better address the specific customer service environment of the transit program.

Goal 1: Expand transit services to enhance underserved business areas.

- Conduct ongoing outreach with local schools and employers.
- Participate in ridesharing activities and promotions throughout the community.
- Continue to work with the City's planning division to identify areas of commercial and residential development, as well as the status of those developments, to determine whether changes to the transit system are warranted and when those changes should occur.
- Develop strategies for serving large areas currently in development for implementation when appropriate.

Goal 2: Review the City's fleet and maintenance standards to address changes in technology and clean fuels and implement best management practices.

- Work toward meeting the goals set forth in the City's Transit Asset Management Plan.
- Replace and/or overhaul vehicles according to their useful life specifications as well as in accordance with the City's fleet replacement plan.
- Expand fleet where necessary to address service expansion recommendations.
- Fully develop and certify the City's FTA-required Public Transportation Agency Safety Plan prior to July 20, 2020.

Goal 3: Identify and develop a schedule for the maintenance and/or replacement of transit customer amenities including benches, shelters, trash receptacles, and signage.

- Continue to identify 25 bus stops each year for improvements.

Goal 4: Enhance the customer experience so that it accurately represents the City's commitment to customer service.

- Continue to provide customer service training in line with City values to front-line transit employees, including bus drivers, dispatchers, and customer service representatives, as well as City transit staff.

In addition to these goals, we reviewed the current operations contract to identify performance goals by mode.

Exhibit 1.1 Performance Goals by Mode

Performance Metric	Mode	Standard/ Target	Actual Performance FY 2017/18	Actual Performance FY 2016/17
On-time performance	Local fixed-route	90%	89.1%*	89.7%
	Commuter	90%		
	Dial-A-Ride	90%	93.2%*	93.8%
Increase in passengers/VSH	Local fixed-route	Increase over prior month	-5.79%**,+	10.85%+
	Commuter	Increase over prior month	-4.42%**,+	5.78%+
Trip denials	Dial-A-Ride	0%		
Reservations initial telephone hold time	Dial-A-Ride	4 minutes or less		
Total miles between road calls	System	15,000 miles or more		
Valid complaints	System	15 complaints per 100,000 boardings		
Preventable accidents	System	0.7 or fewer per 100,000 miles		

** Reflects OTP data for July 2017 – April 2018.*
***Reflects ridership and service hours data for July 2017 – May 2018.*
+Estimated FY 2017 data based on total vehicle service hours for fixed-route.

Across the past two fiscal years, local fixed-route on-time performance barely missed the 90-percent goal. As such, we believe the 90-percent goal remains appropriate. The Dial-A-Ride goal was exceeded in both years. If this trend continues, the City may wish to increase the goal to 92 percent to encourage the higher level of performance.

With the overall decrease in ridership has come a decrease in passengers/vehicle service hour (VSH). While local and commuter services achieved an annual increase in FY 2017, both services saw a decline in performance in FY 2018. The current incentives/liquidated damages provision in the operations contract provides an incentive if passengers/VSH increases 10 percent or more, and incurs liquidated damages only if it decreases 10 percent or more month-over-month. The performance target should be any positive change in passengers/VSH month-over-month. We believe the contract appropriately includes rewards/disincentives for large changes (10 percent or greater) while allowing for smaller fluctuations (less than 10 percent).

2 COMMUNITY PROFILE AND DEMAND ANALYSIS

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CHAPTER 2 | COMMUNITY PROFILE AND DEMAND ANALYSIS

This chapter presents an analysis of population, demographic, and economic data, resulting in a general profile of Santa Clarita Valley residents.

Santa Clarita Transit's local service area is defined as the city of Santa Clarita as well as Castaic, Hasley Canyon, Stevenson Ranch, and Val Verde. The profile was developed to illustrate current as well as forecast demand for transit, as well as local and regional travel patterns. The chapter is divided into several discussions including population, social, housing, and economic profiles, as well as trip-generators and land-use.

Population Profile

The Santa Clarita Valley, located in northern Los Angeles County, is home to more than a quarter-million residents. Of those in Santa Clarita Transit's local service area, slightly more than 80 percent reside within city limits. The Santa Clarita Valley recently experienced a significant population increase. In the first ten years of the century, growth in the Valley was nearly 30 percent while Los Angeles County increased by approximately 3 percent.

Large numbers of residential developments fueled by the advent of easily attainable mortgages in the early to mid-2000s contributed to this significant population growth. The surrounding Santa Clarita Valley (unincorporated Los Angeles County) has been growing much faster than Santa Clarita itself. Growth has slowed after the recession. However, new homes are under construction across the Valley.

The current service area population estimate from the City is 264,500. This includes the city population based on the California Department of Finance, as well as recently annexed areas and the adjacent unincorporated county.

Exhibit 3.1 presents population growth for Santa Clarita Transit's local service area, the city of Santa Clarita, Los Angeles County, and California at-large. Of these locales, Castaic and Stevenson Ranch are the largest communities within the unincorporated portion of the Santa Clarita Valley.

Exhibit 2.1 Population

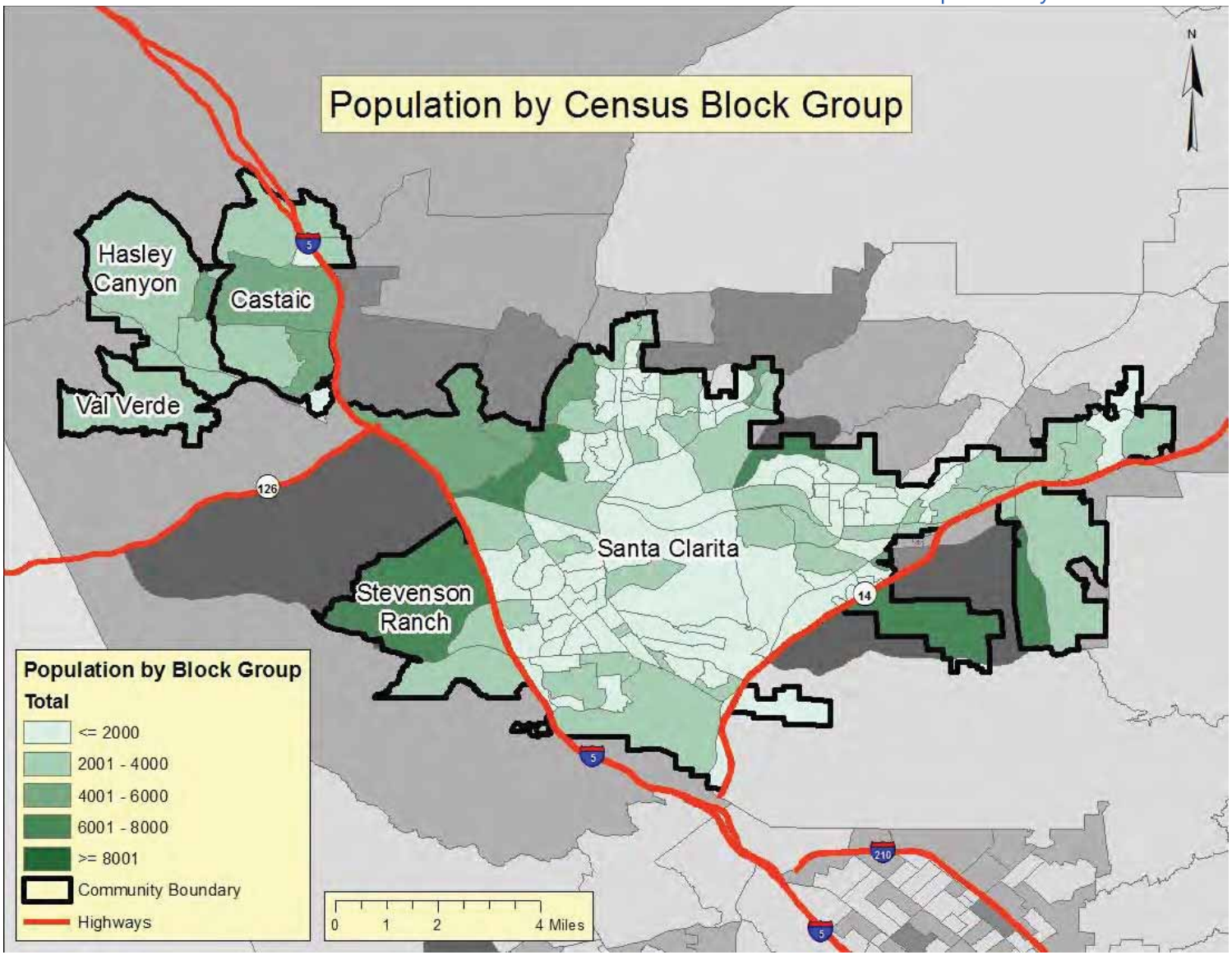
Jurisdiction	2000	2010	Growth 2000-2010	2016 Population	2020 Projected Population	2030 Projected Population
Santa Clarita Transit Local Service Area	194,261	216,497	11%	223,420	249,571	273,970
City of Santa Clarita	151,381	176,320	16%	180,303	205,935	229,023
Unincorportated Service Areas/CDPs	22,730	40,177	77%	43,117	43,636	44,947
Stevenson Ranch	9,930	17,557	77%	19,737	19,974	20,574
Hasley Canyon	650	1,137	75%	1,135	1,149	1,184
Castaic	10,750	19,015	77%	19,529	19,764	20,357
Val Verde	1,400	2,468	76%	2,716	2,749	2,832
Los Angeles County	9,519,338	9,818,605	3%	10,057,155	10,177,841	10,483,177
California	34,000,835	37,312,510	10%	38,654,206	38,771,715	39,066,381

Source: Census 2000, Census 2010, and 2016 ACS 5-Year
Note: Census data for unincorporated places (i.e., Stevenson Ranch, Hasley Canyon, Castaic, and Val Verde) not available for 2000. Data shown are estimates.
Note: 2030 Projections based on forecast growth of rate for Los Angeles County.
Note: Projections for City of Santa Clarita from City's growth rate estimates.

Exhibit 2.2 illustrates ACS 2012-2016 population by block group. The data reveals large populations residing in unincorporated portions of the Santa Clarita Valley such as Castaic and Stevenson Ranch. The smaller block groups, as found within the city of Santa Clarita, are a result of the greater level of land development, more established road network, and other physical attributes. Although it may appear the unincorporated areas are denser, this is misleading given the block groups are much larger. The dark gray area east of Castaic actually represents Pitchess Detention Center; while the block north of Stevenson Ranch encompasses Six Flags Magic Mountain. In the latter, the acreage outside Stevenson Ranch is sparsely populated.

Many Santa Clarita Transit routes serve the more densely populated portions of the Santa Clarita Valley. Specifically, the core areas of Canyon Country, Newhall, Saugus, and Valencia are served by local transit service.

Exhibit 2.2 Population by Census Block Group



Source: 2012-2016 ACS 5-Year estimates.

Ride-Dependent Populations

Ride-dependent populations are traditionally defined as individuals who, for one reason or another, do not have the ability to transport themselves and therefore rely on other means (i.e., public transportation) for basic mobility needs. The public transit community typically defines ride-dependent individuals as low-income, seniors, youth, persons with disabilities, and individuals with no or limited access to a personal vehicle. The following is an analysis of current ride-dependent populations in Santa Clarita Transit's local service area. Identification of areas with large populations of ride-dependent groups helps identify gaps between existing service (e.g., coverage, frequency) and demand.

Exhibit 3.3 illustrates the various population groups most likely to be dependent on public transit for some portion of their mobility needs. Low-income individuals and youth (ages 5 to 17) represent the largest cohort within ride-dependent groups. Reflecting recent population trends in the United States, an increase in ride-dependent seniors is expected as the "baby boomer" generation "ages in place."

Exhibit 2.3 Ride-Dependent Population Estimates

Population Group	2012		2016		2012 - 2016
	Number	Share of Population	Number	Share of Population	Percent Change
Youth (5-17)	45,772	21.2%	43,801	19.6%	-4.5%
Seniors (60 and over)	29,536	13.7%	24,654	11.0%	-19.8%
Persons with disabilities	18,567	8.6%	21,659	9.7%	14.3%
Low-Income Individuals	17,262	8.0%	19,357	8.7%	10.8%
Persons with no vehicle access	1,511	0.7%	1,762	0.8%	14.2%
Santa Clarita Transit Local Service Area	216,129	100.0%	223,420	100.0%	3.3%

Sources: 2008-2012 ACS 5-Year estimates, 2012-2016 ACS 5-Year estimates.

The increase in the ride-dependent populations translates to strong (and continuing) demand for cost-effective public transit options. While providing local bus service can be effective in serving most populations (such as youth and low-income individuals), more individualized mobility options (such as dial-a-ride service) can be more effective for others (including persons with disabilities or seniors).

Santa Clarita Transit currently operates 21 supplemental routes to local junior high schools and high schools as a means of providing affordable home-to-school transportation for the community's youth, as well as a local dial-a-ride service for eligible seniors and persons with disabilities.

Seniors

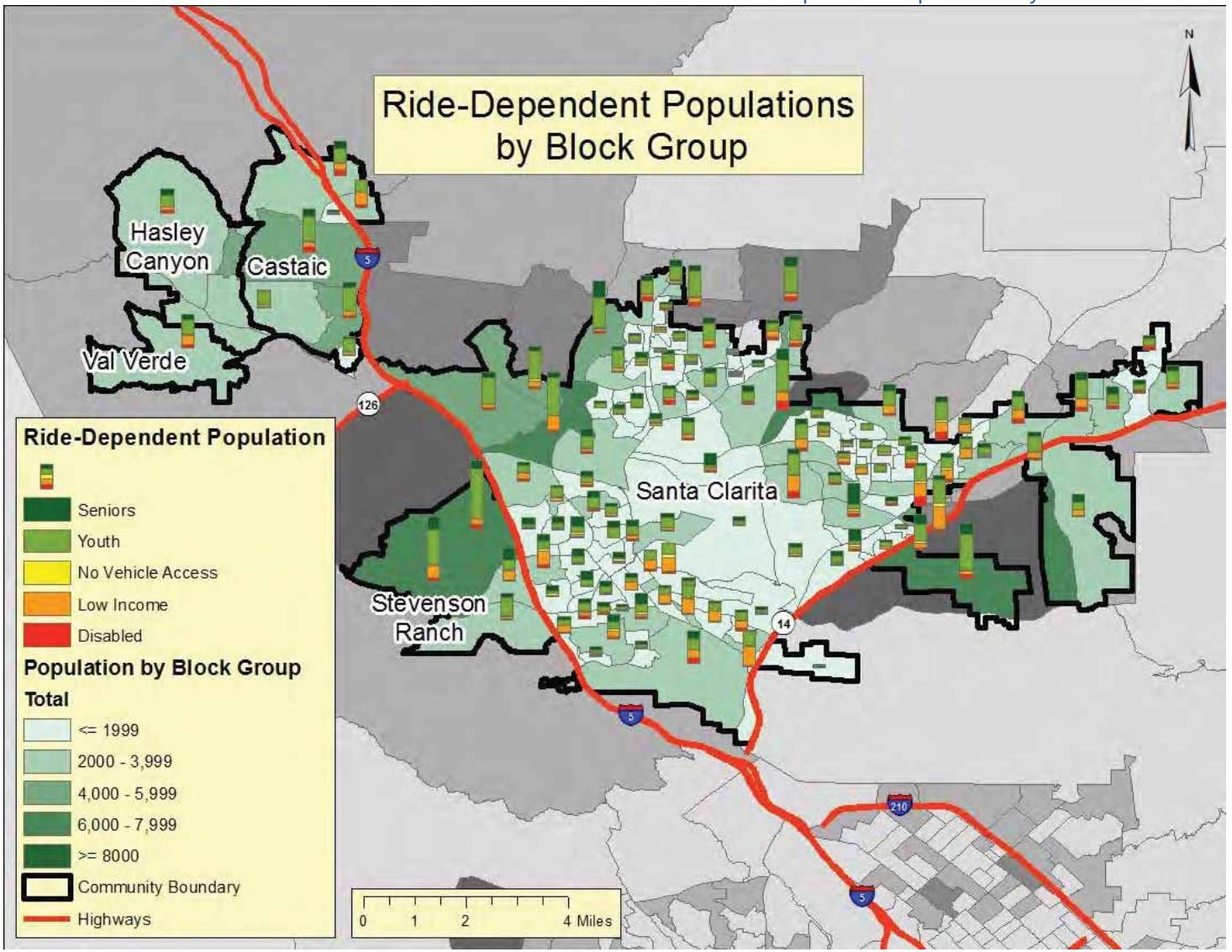
Routes 4/14, 5/6, and 12 each serve the Santa Clarita Senior Center, while the City's dial-a-ride service is available to individuals over the age of 60 who are unable to use the City's fixed-route bus service. Additional senior-oriented destination/trip generators (such as senior housing) and the routes attracting seniors include:

- Belcaro (Route 7);
- Bouquet Canyon Seniors (Routes 3, 4/14);
- Canterbury Village Seniors (Routes 4/14, 5/6);
- Canyon Country Senior Apartments (Route 12);
- Castaic Lake Senior Village (Route 1);
- Fountain Glen Apartments (Route 7);
- Friendly Valley (Route 12);
- Orchard Arms (Routes 5/6);
- Pacifica Senior Living (Routes 5/6);
- Santa Clarita Convalescent Home (Route 12);
- Summerhill Villa (Routes 5/6); and
- Sunrise at Sterling Canyon (Routes 5/6);
- Valencia Villas (4/14); and
- Whispering Oaks (Routes 4/14).

To illustrate the relationship between transit demand and supply, the mapping program ArcGIS was used to quantify aggregate demand (ride-dependent population as well as total residents) within individual census tracts within the Santa Clarita Valley. Exhibit 3.4 provides a visual representation of the aggregate demand by identifying the ride-dependent population distribution combined with the previous block population information.

In contrast to Exhibit 3.2 (Population by Census Block Group), there are high concentrations of ride-dependent persons residing in the south and southeast portions of the Valley. These areas are currently served by Santa Clarita Transit Routes 12 and 5/6, as well as several Santa Clarita Transit commuter routes (757, 795, 796, 797, and 799) and various school trippers. Given the density of ride-dependant populations in these areas, existing levels of service should be maintained or expanded to keep up with projected population growth.

Exhibit 2.4 Ride-Dependent Populations by Census Block Group



Source: 2012-2016 ACS 5-Year estimates.

Social Profile

According to the 2012-2016 American Community Survey, the median age in Santa Clarita Transit's local service area and the city of Santa Clarita are approximately the same, and higher than the County and State. The contrast in demographics lies within the educational attainment of residents. Transit ridership typically has an inverse relationship to educational attainment[1]. Exhibit 3.5 indicates Santa Clarita Transit's local service area and the city of Santa Clarita have fewer residents lacking a high school diploma than both Los Angeles County and California at-large. Santa Clarita Transit's local service area has more adults with a bachelor's degree or higher, followed closely by the city of Santa Clarita, California, and Los Angeles County respectively.

Exhibit 2.5 Median Age

Jurisdiction	Median Age
City of Santa Clarita	37.7
Santa Clarita Transit Local Service Area	37.6
Los Angeles County	35.8
California	36.0

Source: 2012-2016 ACS 5-Year estimates.

Exhibit 2.6 Education

Jurisdiction	Percentage Over 25 without High School Diploma	Percentage High School Granduate Only*	Percentage Bachelors Degree or Higher
City of Santa Clarita	10.6%	20.5%	33.5%
Santa Clarita Transit Local Service Area	9.9%	19.8%	34.9%
Los Angeles County	22.3%	21.5%	30.8%
California	17.9%	21.7%	32.0%

Source: ACS 2012-2016 ACS 5-Year estimates.
**Note: This category indicates individuals whose highest educational attainment is high school or GED.*

[1]Fielding, S. R. (1998):*Report 28 Transit Markets of the Future.* Washington D.C.: National Academy Press.

Housing Profile

The housing profile for the Santa Clarita Valley indicates both the city of Santa Clarita and the overall Santa Clarita Valley are perceived as more affordable than the balance of Los Angeles County for ownership yet less affordable for renting. The city, with its slightly more expensive median house pricing, is less affordable than the state average. The percentage of home-owners paying more than 35 percent of their monthly income is lower for both the city of Santa Clarita and the Santa Clarita Valley, when compared with the county and state.

Median rent is higher in the Santa Clarita Valley and city compared to the county and state. However, the percentage of renters paying 35 percent or more of their monthly income as rent is lower for both the city and Santa Clarita Valley when compared with the county and state.

Exhibit 2.7 Summary of Santa Clarita Valley Housing Characteristics

Jurisdiction	Median Rooms/ per Structure	Owner-Occupied		Renter-Occupied	
		Median Value	Mortgage Cost Greater Than 35% of Monthly Income	Median Rent	Rental Cost Greater Than 35% of Monthly Income
City of Santa Clarita	5.5	$417,400	28.9%	$1,653	43.0%
Santa Clarita Transit Local Service Area	5.7	$436,904	29.3%	$1,633	44.7%
Los Angeles County	4.6	$465,000	36.9%	$1,264	49.9%
California	5.1	$409,300	31.9%	$1,297	47.0%

Source: 2012-2016 ACS 5-Year estimates.

Economic Profile

The Santa Clarita Valley and city of Santa Clarita have the same 5.5 percent unemployment rate as California at-large. All these are slightly lower than the 5.7 percent rate of Los Angeles County.

Modes of travel employed by residents of the Santa Clarita Valley and the city of Santa Clarita are fairly similar. Compared with county and state data, residents of the Valley and City are slightly more reliant on single-occupancy vehicles and shared rides for home-to-work commuting.

Residents of both the Santa Clarita Valley and city rely significantly less on public transit and walking trips than the county and state. According to census data measuring communing characteristics for workers 16 and older, Santa Clarita Valley residents utilize public transit half as frequently as typical Los Angeles County residents: 2.8 percent compared to 6.5 percent. Similarly, trips via walking occur less frequently within the city (1.3 percent) versus Los Angeles County (2.8 percent).

Exhibit 3.10 summarizes income levels. Residents within the Santa Clarita Transit's local service area have much higher median household and per capita incomes than Los Angeles County or California at-large. The Santa Clarita Valley includes higher median household incomes and family incomes than the city. The median household income and family income within the Santa Clarita Valley is significantly greater than that of Los Angeles County. Santa Clarita's lower transit ridership and higher average income levels (as reported in the 2012-2016 ACS), suggests much of the public transit ridership is comprised of transit-dependent riders rather than "choice riders" who utilize the service yet have access to other means of transportation.

Exhibit 2.8 Commuting Characteristics

Jurisdiction	Drive Alone	Carpool	Public Transit	Walk	Other
City of Santa Clarita	76.9%	11.8%	2.9%	1.3%	7.1%
Santa Clarita Transit Local Service Area	77.2%	11.4%	2.8%	1.3%	7.3%
Los Angeles County	73.3%	9.8%	6.5%	2.8%	7.6%
California	73.5%	10.6%	5.2%	2.7%	8.0%

Source: 2012-2016 ACS 5-Year estimates.

Exhibit 2.9 Unemployment Characteristics

Jurisdiction	Percentage Unemployed
City of Santa Clarita	5.5%
Santa Clarita Service Area	5.5%
Los Angeles County	5.7%
California	5.5%

Source: 2012-2016 ACS 5-Year estimates.

Exhibit 2.10 Income Characteristics

Jurisdiction	Median Household Income	Social Security Income	Supplemental Security Income	Cash Public Assistance Income	Food Stamps/ SNAP in last 12 months	Median Family Income	Per Capita Income
City of Santa Clarita	$85,042	25.9%	3.6%	1.6%	4.7%	$95,007	$35,317
Santa Clarita Transit Local Service Area	$90,158	24.6%	3.7%	1.5%	4.4%	$102,209	$36,763
Los Angeles County	$57,952	24.2%	6.9%	4.0%	9.0%	$64,824	$29,301
California	$63,783	26.7%	6.2%	3.8%	9.4%	$101,373	$31,458

Source: 2012-2016 ACS 5-Year estimates.

Employment centers can be found throughout the Santa Clarita Valley although most are concentrated chiefly within city limits. As shown in Exhibit 3.11, the largest employment center is Six Flags Magic Mountain, which employs 3,200. The largest employers fall within the entertainment, government, healthcare, aviation, and education sectors. Nearly all of the more important employment centers in the surrounding unincorporated county areas are served by fixed-route public transit.

Pitchess Detention Center, which houses both county and state inmates, is located within Castaic, north of the city of Santa Clarita. As it is on the fringes of the study area and employs a large number of Santa Clarita residents, it has been included within the study. At the time of the TDP's development, Pitchess Detention Center was not served by public transit.

Exhibit 2.11 – Top Employers in Santa Clarita Valley

Rank	Company	Employment
1	Six Flags Magic Mountain	3,200
2	College of the Canyons	2,214
3	Princess Cruises	2,096
4	Henry Mayo Newhall Hospital	2,052
5	William S. Hart Unified School District	1,879
6	Saugus Union School District	1,711
7	U.S. Postal Service	1,010
8	Boston Scientific	1,000
9	Newhall School District	781
10	The Master's College	760
11	Wal-Mart	730
12	City of Santa Clarita	720
13	California Institute of the Arts	700
14	Woodward HRT	680
15	Quest Diagnostics	648
16	Aerospace Dynamics International	617
17	Advanced Bionics	613
18	Wesco Aircraft	500
19	ITT Aerospace Controls	475
20	US Healthworks	451
21	Contractors Wardrobe	450
22	Scorpion	425
23	Bocchi Laboratories	400
24	Q2 Solutions	400
25	Pharmavite	378

Source: Santa Clarita Valley Economic Development Corporation, March 2018.

Trip Generators and Land-Use

Home-to-school travel is a significant motivator for transit trips throughout the Santa Clarita Valley. The two College of the Canyons campuses are served by Santa Clarita Transit Routes 4/14 for the Valencia campus and Route 5 for the Canyon Country campus (both of which also serve the McBean Regional Transit Center). Routes 3 and 7 also operate within proximity to the Valencia campus.

California Institute of the Arts is served by Santa Clarita Transit Routes 4/14; while Charter College is served by Routes 5, 6, and 12. Public and private schools within a half-mile of a bus stop served by Santa Clarita Transit are listed in Exhibit 3.12 with applicable route number(s); school day service is denoted by "school."

All three branches of the City's library system (Canyon Country, Newhall, and Valencia) are served by Santa Clarita Transit, as are the County libraries in Castaic and Stevenson Ranch.

Exhibit 2.12 Santa Clarita Schools

District	Schools	Santa Clarita Transit Routes									
		1	2	3	4	5	6	7	12	14	School
Castaic Union School District	*Castaic Elementary*										
	Castaic Middle										
	Live Oaks Elementary										
	Northlake Hills Elementary										
Newhall School District (K-6)	*McGrath*								X		
	Meadows				X	X	X			X	
	Newhall				X	X	X		X	X	
	Oak Hills										
	Old Orchard				X	X	X			X	
	Peachland				X	X	X			X	
	Pico Canyon					X	X				
	Stevenson Ranch					X	X				
	Valencia Valley					X	X				
	Wiley Canyon				X	X	X			X	
Saugus Union School District (K-6)	*Bridgeport*	X	X	X				X			
	Cedarcreek								X		
	Charles Helmers										
	Emblem			X	X					X	
	James Foster			X							
	Highlands				X					X	
	Mountainview										
	North Park							X			
	Plum Canyon									X	
	Rio Vista					X	X				
	Rosedell				X					X	
	Santa Clarita			X							
	Skyblue Mesa								X		
	Tesoro del Valle										
	West Creek										
Sulphur Springs School District	*Canyon Springs*					X					
	Fair Oaks Ranch										
	Golden Oak										
	Leona Cox								X		
	Mint Canyon					X					
	Mitchell						X				
	Pinetree						X				
	Sulphur Springs										
	Valley View								X		
William S. Hart Union High School District (7-12)	*Academy of the Canyons*				X					X	
	Bowman Continuation					X	X				
	Castaic High (Fall 2019)										
	Canyon High								X		X
	Golden Valley High								X		X
	Hart High				X	X	X			X	X
	Learning Post Continuation			X	X			X		X	
	Saugus High				X					X	X
	Valencia High	X	X					X			X
	West Ranch High										X
	La Mesa Junior High										X
	Arroyo Seco Junior High			X							X
	Placerita Junior High					X	X				X
	Rancho Pico Junior High										X
	Rio Norte Junior High										X
	Sierra Vista Junior High					X	X		X		
Private Schools	*Legacy Christian Academy*	X	X					X			
	Mission View				X	X	X		X	X	
	Our Lady of Perpetual Help				X	X	X			X	
	Santa Clarita Christian					X	X		X		
	Santa Clarita Valley International	X	X								
	Trinity Classical Academy							X			

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3 SERVICE OVERVIEW AND EVALUATION

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CHAPTER 3 | SERVICE OVERVIEW AND EVALUATION

The City of Santa Clarita funds the operation and maintenance of a public transit program composed of three services: 1) a local fixed-route service (nine local routes and two station link routes), 2) a commuter service including seven routes connecting Santa Clarita to North Hollywood, Downtown Los Angeles, Warner Center, and Century City, and 3) a dial-a-ride service.

The local fixed-routes, North Hollywood commuter route, and dial-a-ride services operate seven days per week, while the other commuter routes, and station link routes, operates weekdays only. The local fixed-routes serve the greater Santa Clarita area including Castaic, Hasley Canyon, Val Verde, and Stevenson Ranch.

Based on 2016 National Transit Database reporting, Santa Clarita Transit provides more than 2,500,000 annual unlinked trips on local fixed-route service. This translates to a productivity of 19.33 rides/VSH for fixed-route service, 13.26 for commuter route service, and 2.03 for dial-a-ride service.

In addition to Santa Clarita Transit, the city of Santa Clarita is served by Metrolink (rail) Antelope Valley line with three stations: Newhall, Santa Clarita, and Via Princessa. The city is also served by the Los Angeles County Department of Public Works (shuttle) connecting Acton and Agua Dulce with the Newhall Metrolink Station.

Santa Clarita Transit operates the McBean Regional Transit Center on McBean Pkwy and Valencia Blvd, exclusively serving Santa Clarita Transit routes and operating as time-pulse transfer station. Outside of Santa Clarita transfer stations served by commuter routes include Chatsworth Station, North Hollywood Station, Burbank Downtown Station, and Los Angeles Union Station.

Line-by-Line Analysis

To assess service/program performance, Moore & Associates conducted ride-checks. In addition, data provided by the City between April 9 and May 18, 2018, allowed detailed analysis of ridership activity and on-time performance. The following exhibits illustrate in-depth rider activity and on-time performance.

Route 1 Profile and Performance Analysis

Route Description

Route 1 serves the McBean Regional Transit Center (MRTC), Valencia Industrial Center, Valencia Commerce Center, Castaic, Valencia Town Center, and River Oaks Shopping Center. The route travels between Castaic and MRTC via the Valencia Industrial Center.

Primary streets of operation for Route 1 include Parker Road, Ridgecrest Road, Lake Hughes Road, Sloan Canyon Road, The Old Road, Commerce Center Drive, Highway 126, Avenue Stanford, Rye Canyon Road, Avenue Scott, Avenue Tibbitts, and McBean Parkway.

Outbound service is defined as that originating in Castaic and traveling to the McBean Regional Transit Center. Inbound service travels from the MRTC to Castaic. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, both inbound and outbound services see a peak in ridership in the early morning and mid-afternoon. For the outbound service, average ridership peaks at 6:59 a.m. (24) and 3:34 p.m. (25). For the inbound service, average ridership peaks at 6:28 a.m. (32) and 3:03 p.m. (34). This aligns with local high school bell times, which is not surprising given the high volume of school-age riders (especially those traveling between Castaic and Valencia and West Ranch high schools).

On Saturday, ridership is steadier throughout the day. For the outbound service, ridership peaks at 3:03 p.m., but multiple trips have average ridership of 13 or 14 (10:03 a.m., 12:33 p.m., 3:48 p.m., and 5:33 p.m.). The inbound service has no clear peak, with two trips having an average ridership of 16 (8:30 a.m. and 2:30 p.m.), one with an average ridership of 15 (4:00 p.m.), and 10 of the remaining 14 trips with an average ridership between 11 and 13.

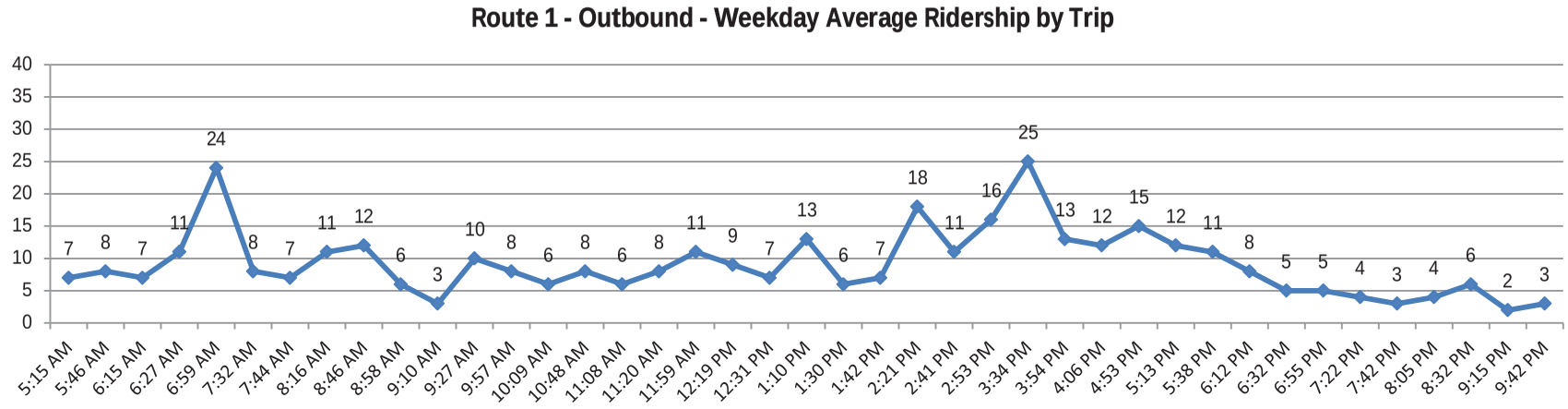
On Sunday, average ridership by trip for the outbound service ranges from seven to 12 across most of the day. High points (average ridership of 12) occur at 10:03 a.m., 3:03 p.m., and 5:33 p.m. The inbound service experiences a similar profile, with peaks occurring at 10:15 a.m. (15), 2:30 p.m. (14), and 5:00 p.m. (15). The majority of the trips experience ridership between nine and 12 across the day.

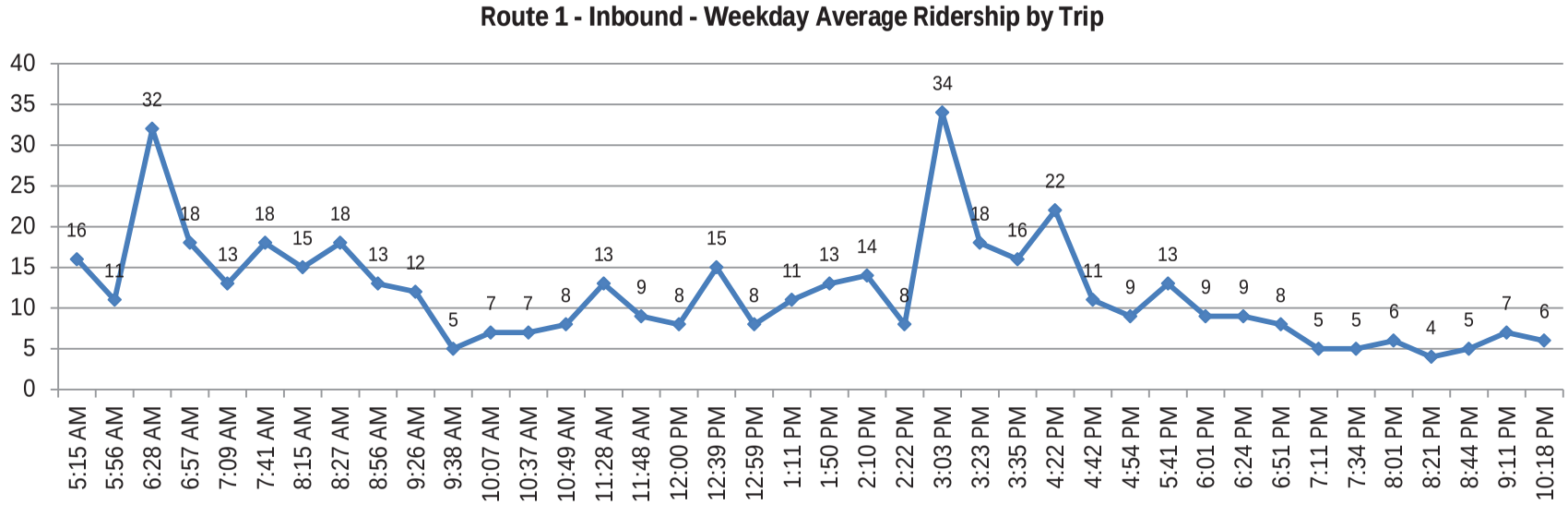
Average ridership by time of day

On weekdays, the outbound service experiences comparable average ridership during both the AM Peak and PM peak day-parts (average of 18 riders each). The inbound service peaks during the PM Peak day-part, with an average of 15 riders.

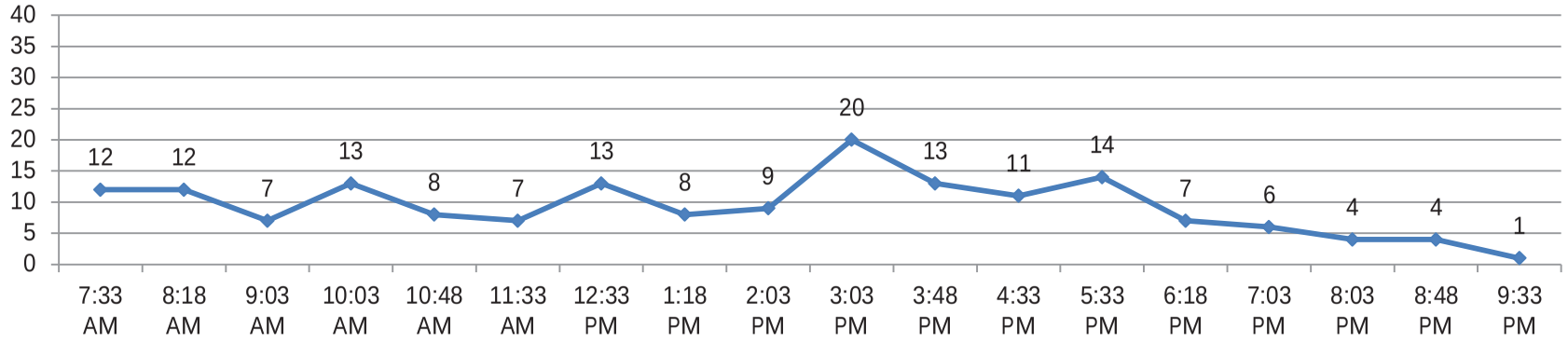
On Saturday, the outbound service sees the most riders during the PM Peak period (average of 14), while the inbound service sees the most riders during the AM Peak period (average of 15). On Sunday, both services experience their greatest average ridership during the PM Peak period (average of 10 riders on the outbound service and 12 riders on the inbound service).

Exhibit 3.1.1 Route 1 Average Ridership by Trip

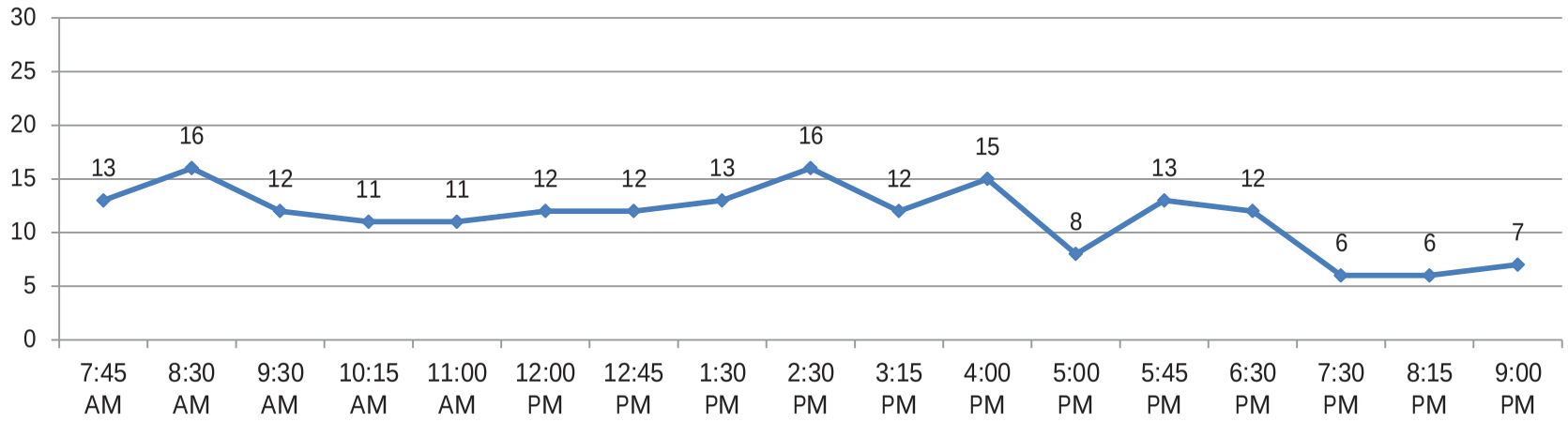


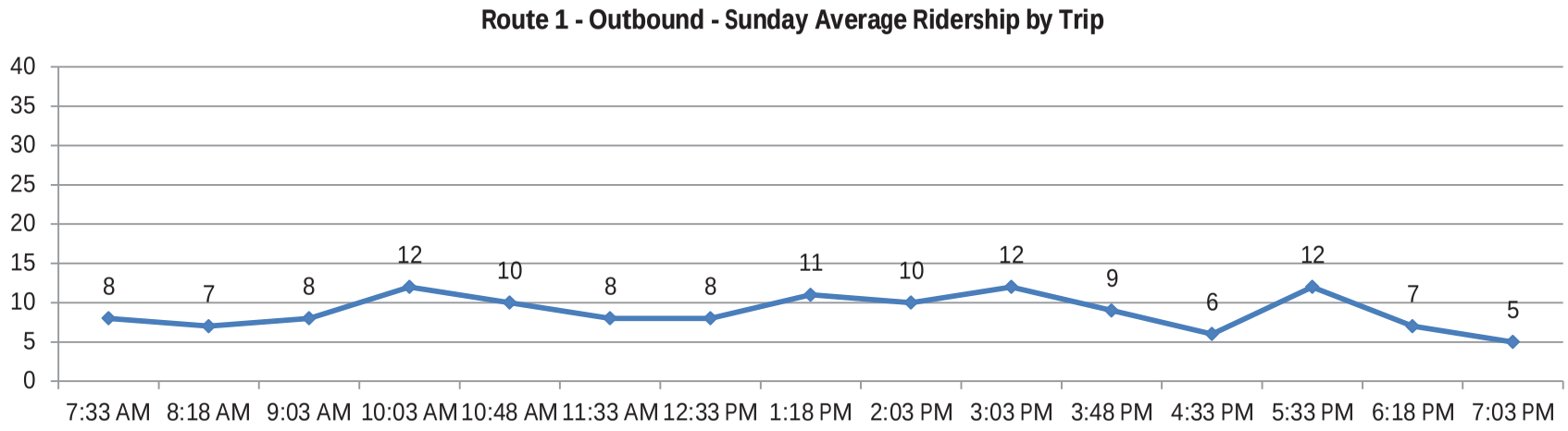


Route 1 - Outbound - Saturday Average Ridership by Trip



Route 1 - Inbound - Saturday Average Ridership by Trip




Route 1 - Outbound - Sunday Average Ridership by Trip
40
35
30
25
20
15
10
5
0
8
7
8
12
10
8
8
11
10
12
9
6
12
7
5
7:33 AM
8:18 AM
9:03 AM
10:03 AM
10:48 AM
11:33 AM
12:33 PM
1:18 PM
2:03 PM
3:03 PM
3:48 PM
4:33 PM
5:33 PM
6:18 PM
7:03 PM

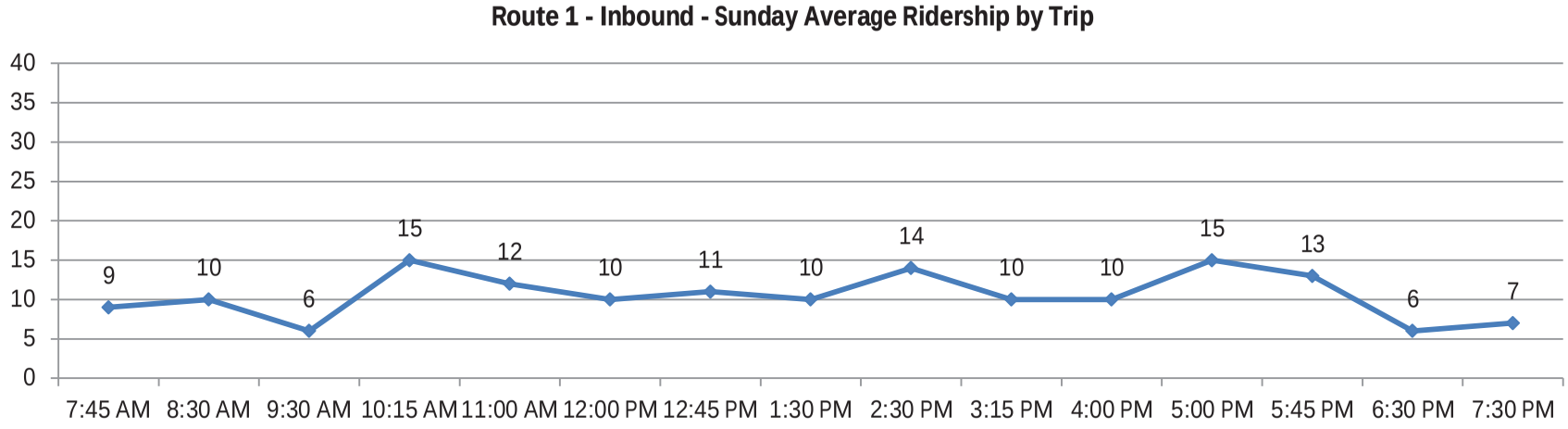
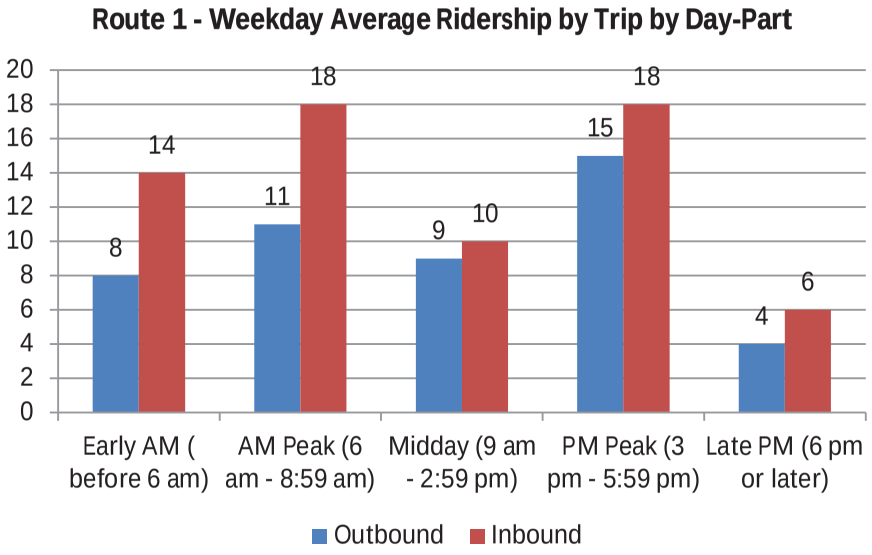
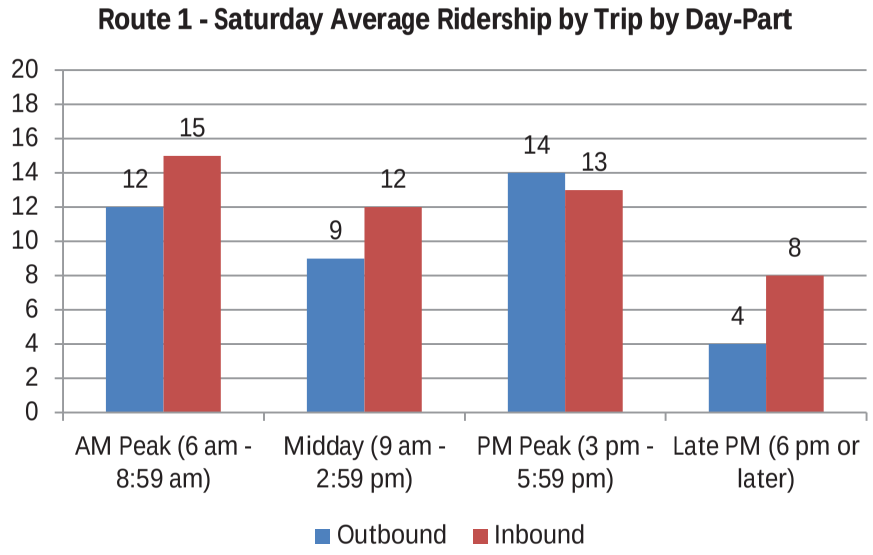
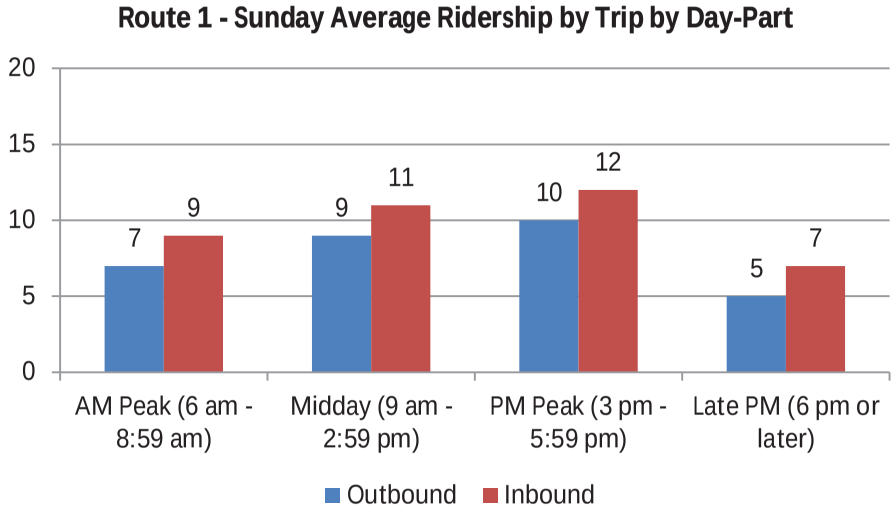

Route 1 - Inbound - Sunday Average Ridership by Trip
40
35
30
25
20
15
10
5
0
9
10
6
15
12
10
11
10
14
10
10
15
13
6
7
7:45 AM
8:30 AM
9:30 AM
10:15 AM
11:00 AM
12:00 PM
12:45 PM
1:30 PM
2:30 PM
3:15 PM
4:00 PM
5:00 PM
5:45 PM
6:30 PM
7:30 PM

Exhibit 3.1.2 Route 1 Average Ridership by Trip Day-Part







Average ridership (boardings) by segment

On weekdays, boardings are significantly greater within the inbound MRTC to Rye Canyon/Avenue Stanford route segment. This is presumably comprised of individuals traveling from Valencia back to Castaic. As expected, outbound boardings are greater within the Rye Canyon/Avenue Stanford to Sloan Canyon segment, but are significantly lower than inbound boardings. As a result, average boardings per trip are higher on the inbound MRTC to Rye Canyon/Avenue Stanford segment.

On Saturday, this pattern is reversed. Boardings are significantly greater within the outbound Rye Canyon/Avenue Stanford to Sloan Canyon segment. As a result, average boardings per trip are higher on the outbound Rye Canyon/Avenue Stanford to Sloan Canyon segment. The average ridership for this segment (15) exceeds the peak average ridership by segment for weekdays (9), presumably because there are fewer trips on Saturday.

While Sunday ridership is lower overall, it has a pattern similar to that observed on weekdays. The highest number of inbound boardings take place within the MRTC to Rye Canyon/Avenue Stanford segment, while the highest number of outbound boardings, though fewer than inbound, take place within the Rye Canyon/Avenue Stanford to Sloan Canyon segment.

Average boarding and alighting by stop

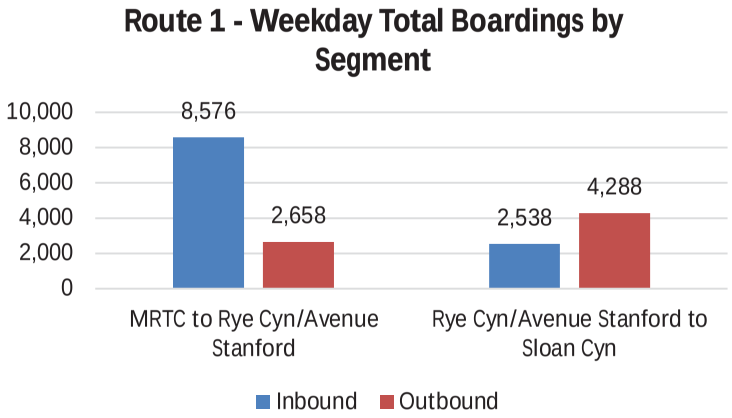
Beginning on page 9, bubble maps indicate the relative level of activity at each Route 1 bus stop, both inbound and outbound. Not surprisingly, the MRTC is the greatest activity location across all days.

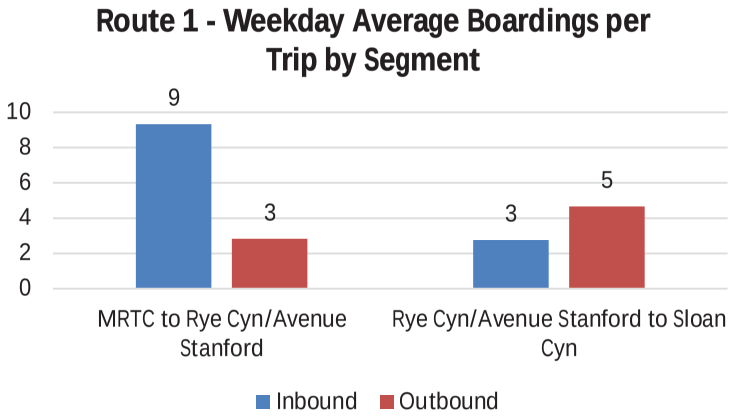
On weekdays, the greatest activity is observed at Sloan Canyon/The Old Road, Hasley Canyon/Cambridge Ave, Commerce Center Dr/Industry Dr, Ave Tibbitts/Ave Mentry, Newhall Ranch Rd/Ave Tibbitts, and McBean Pkwy/Creekside Rd (outbound) and Ave Tibbitts/Dickason Dr, Commerce Center Dr/Live Oak Rd, Hasley Canyon/Cambridge Ave, and stops throughout Castaic (inbound).

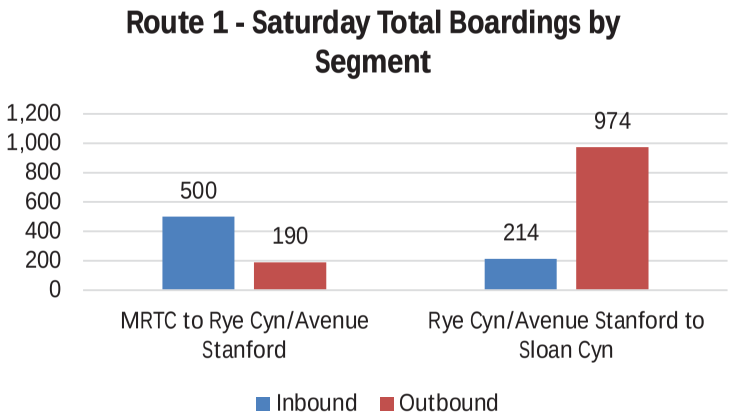
On Saturday, the greatest activity is observed at The Old Road/Parker Rd, Hasley Canyon/Cambridge Ave, and Rye Canyon/Ave Stanford (outbound) and Hasley Canyon/Cambridge Ave, Ridge Route Rd/Castaic Rd, and Lake Hughes Rd/Castaic Rd (inbound).

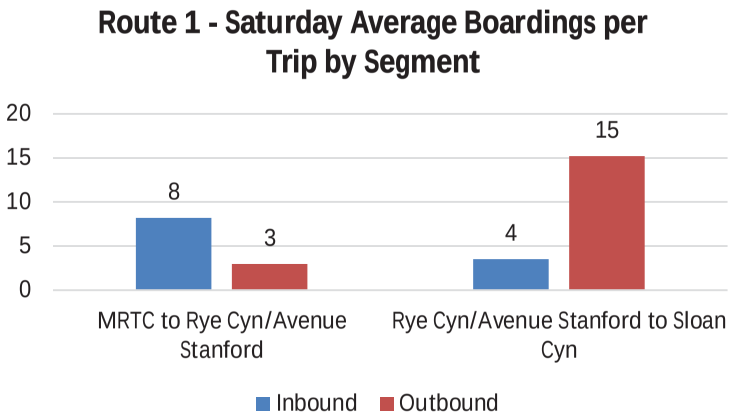
On Sunday, the greatest activity is observed at The Old Road/Parker Rd, Hasley Canyon/Cambridge Ave, and Rye Canyon/Ave Stanford (outbound) and McBean Pkwy/Bridgeport Ln, Hasley Canyon/Cambridge Ave, Ridge Route Rd/Castaic Rd, Lake Hughes Rd/Castaic Rd, and Sloan Canyon/The Old Road (inbound).

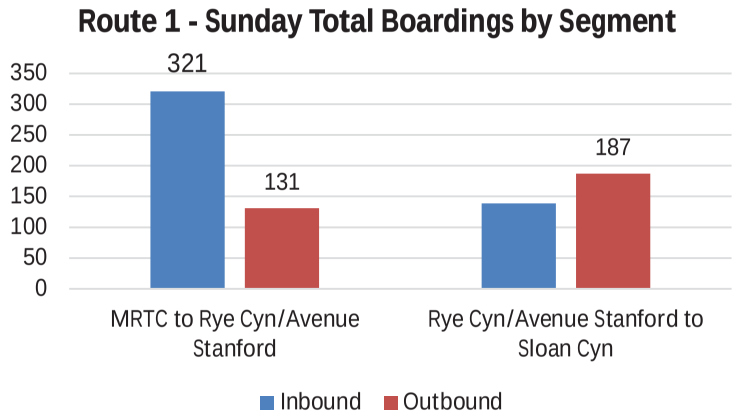
Exhibit 3.1.3 Route 1 Total and Average Boardings per Trip Segment










Route 1 - Sunday Total Boardings by Segment
350
300
250
200
150
100
50
0
321
131
187
MRTC to Rye Cyn/Avenue Stanford
Rye Cyn/Avenue Stanford to Sloan Cyn
Inbound
Outbound

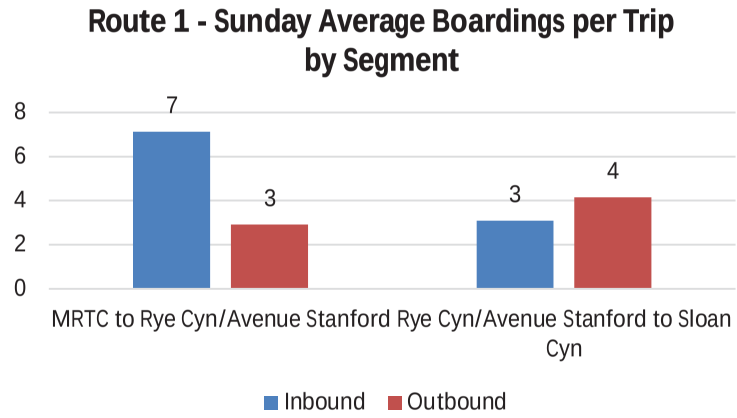
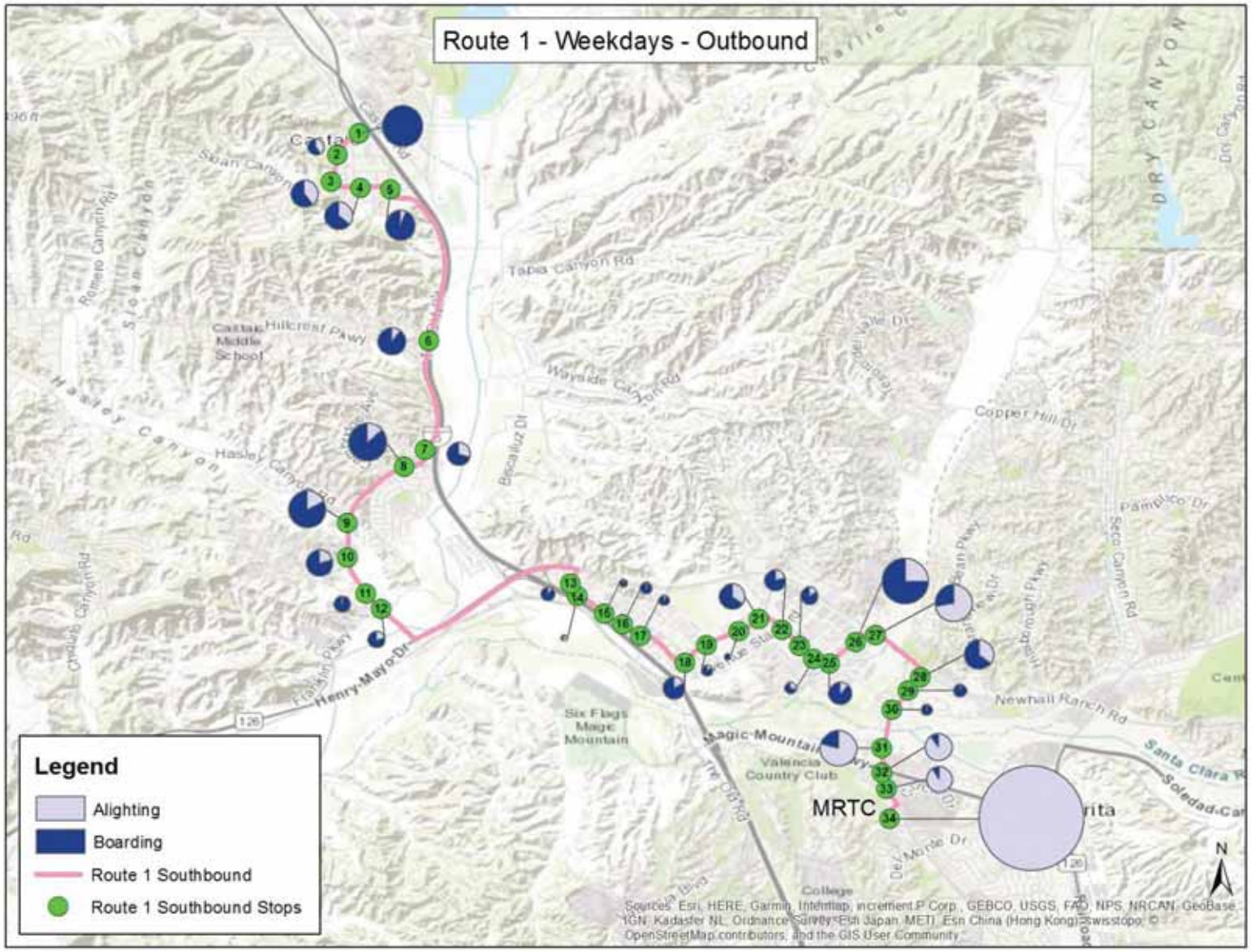
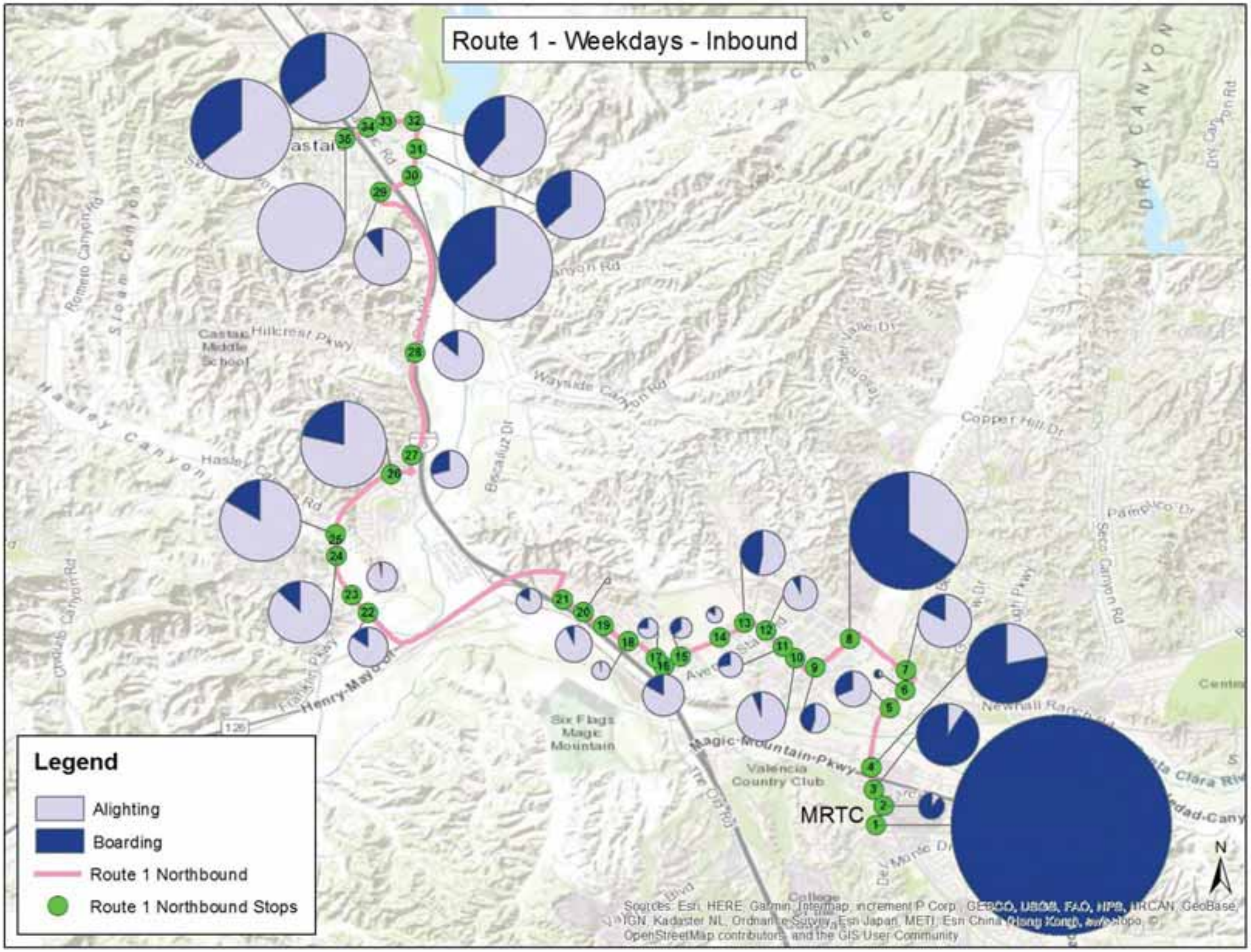
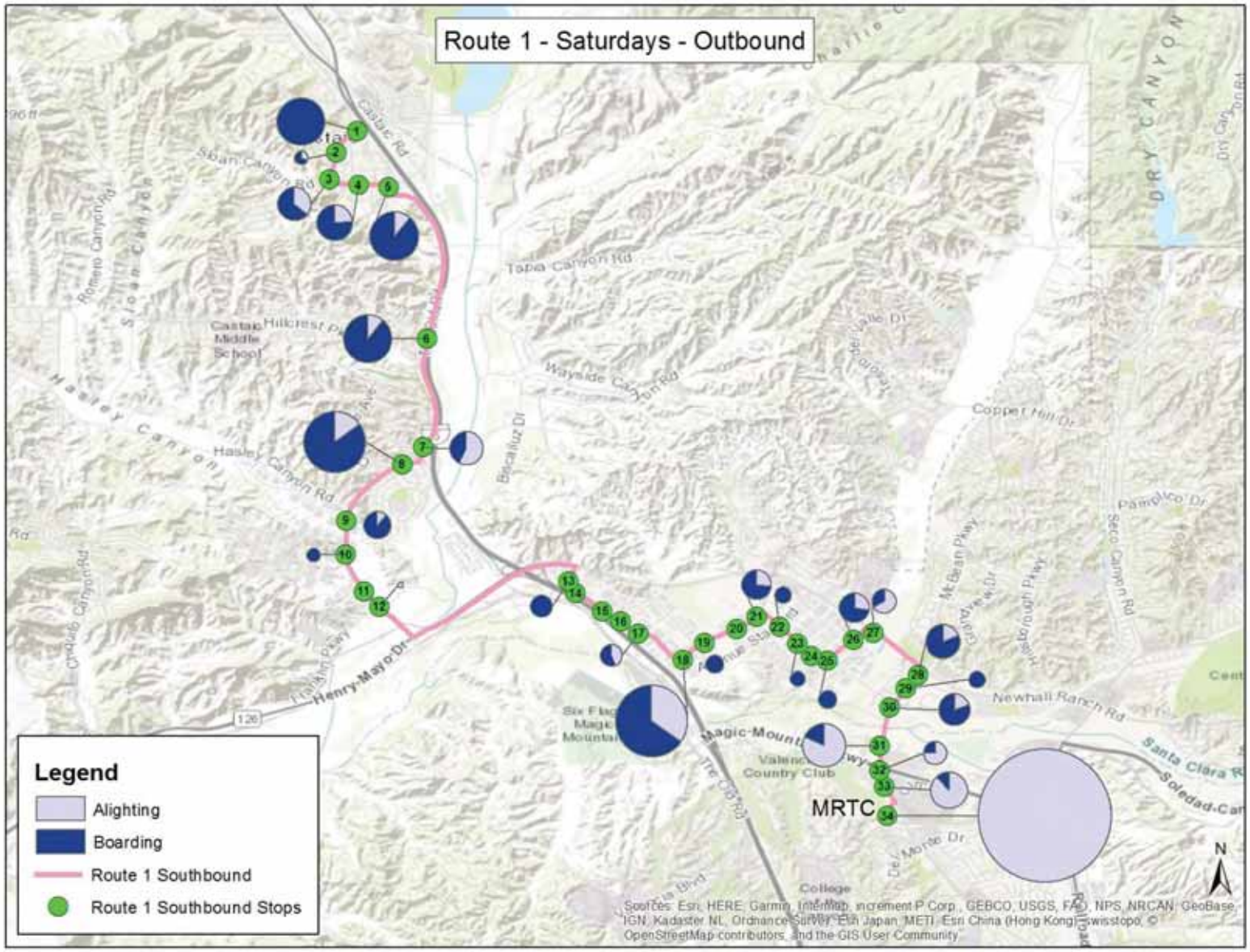
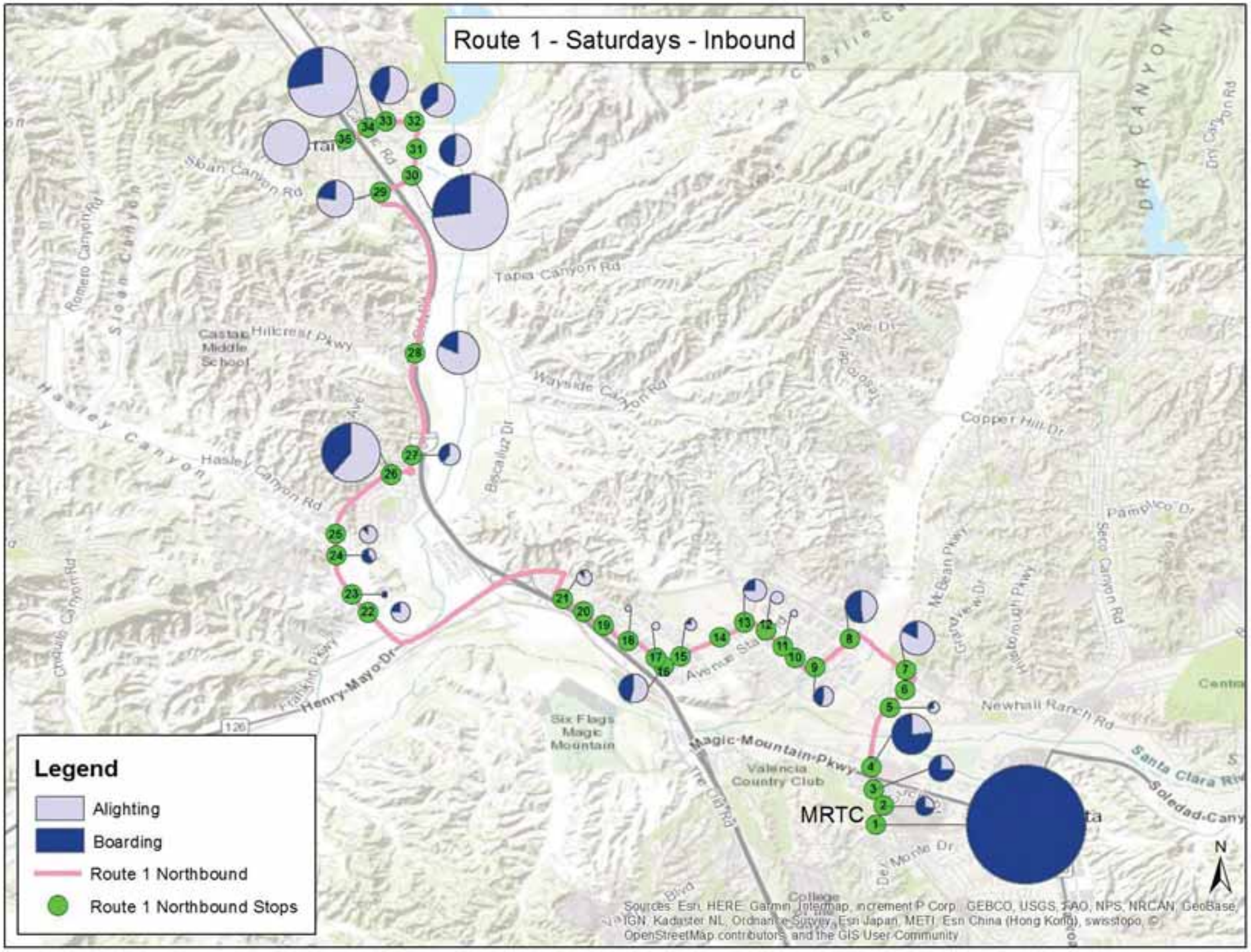

Route 1 - Sunday Average Boardings per Trip by Segment
8
6
4
2
0
7
3
3
4
MRTC to Rye Cyn/Avenue Stanford
Rye Cyn/Avenue Stanford to Sloan Cyn
Inbound
Outbound

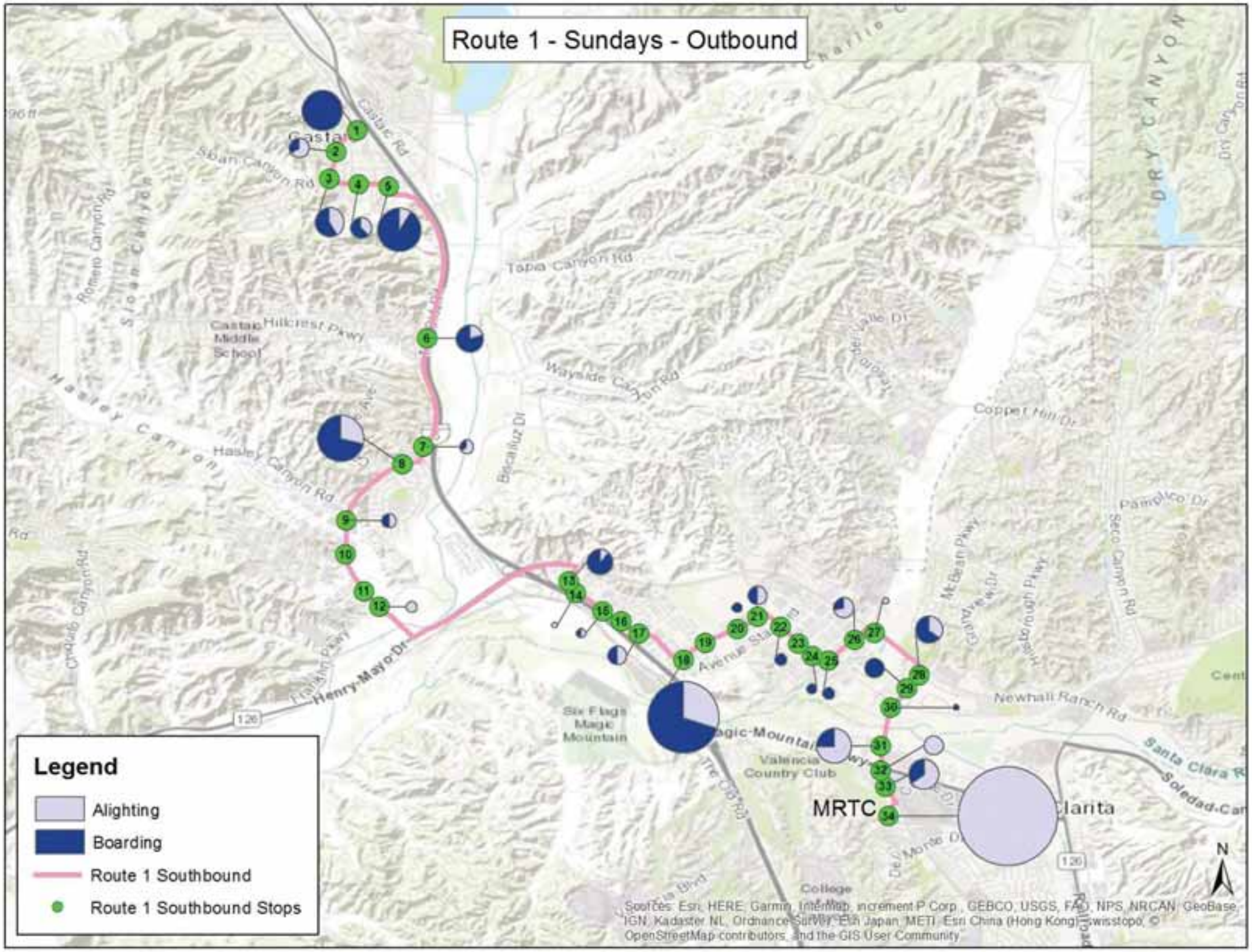
Exhibit 3.1.4 Route 1 Boarding and Alighting Maps




Route 1 - Weekdays - Inbound
Legend
Alighting
Boarding
Route 1 Northbound
Route 1 Northbound Stops
MRTC
Six Flags Magic Mountain
Valencia Country Club
Magic Mountain Pkwy
Henry Mayo Dr
Hillcrest Pkwy
Castaic Middle School
Copper Hill Dr
Seco Canyon Rd
Wayside Canyon Rd
Bouquet Canyon Rd
Dry Canyon
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 1 - Saturdays - Outbound
Legend
Alighting
Boarding
Route 1 Southbound
Route 1 Southbound Stops
MRTC
Henry Mayo Dr
Tapia Canyon Rd
Wayside Canyon Rd
Hasley Canyon Rd
Newhall Ranch Rd
Castaic Middle School
Valencia Country Club
DRY CANYON
N


Route 1 - Saturdays - Inbound
Legend
Alighting
Boarding
Route 1 Northbound
Route 1 Northbound Stops
MRTC
Magic Mountain Pkwy
Valencia Country Club
Six Flags Magic Mountain
Henry Mayo Dr
Newhall Ranch Rd
Tapia Canyon Rd
Wayside Canyon Rd
Copper Hill Dr
Hasley Canyon Rd
Sloan Canyon Rd
Castaic Middle School
Hillcrest Pkwy
Santa Clara River
Soledad Canyon
Dry Canyon
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 1 - Sundays - Outbound
Legend
Alighting
Boarding
Route 1 Southbound
Route 1 Southbound Stops
MRTC
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

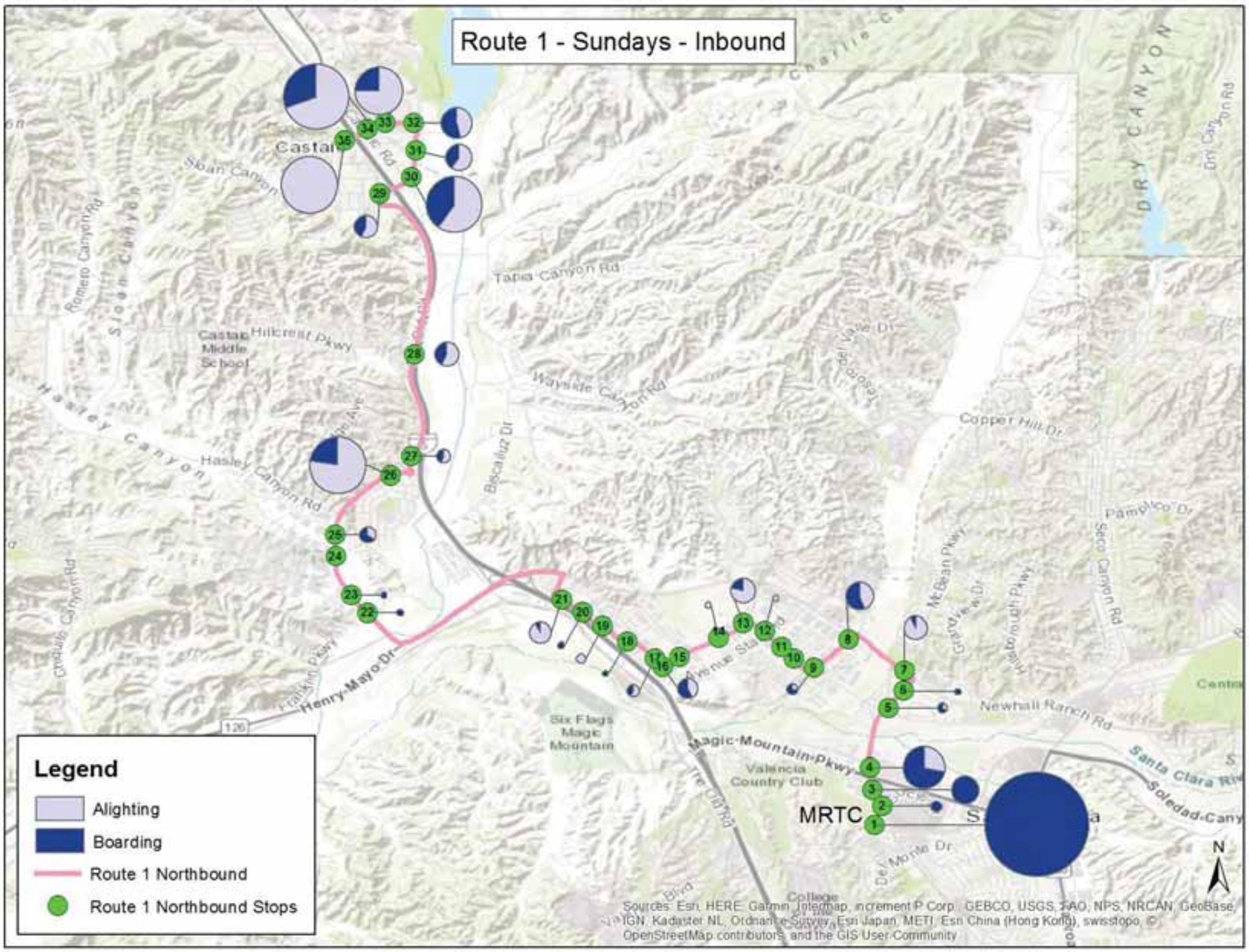

Route 1 - Sundays - Inbound
Legend
Alighting
Boarding
Route 1 Northbound
Route 1 Northbound Stops
MRTC
Tapia Canyon Rd
Wayside Canyon Rd
Hasley Canyon Rd
Henry Mayo Dr
Magic Mountain Pkwy
Newhall Ranch Rd
Copper Hill Dr
Six Flags Magic Mountain
Valencia Country Club
Castaic Middle School
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.1.5 Route 1 Stop Lists

Route 1 Inbound Stop List	
Stop Number	Stop Name
1	McBean MRTC
2	McBean Pky
3	McBean Pky & Town Center Dr
4	McBean Pky & Creekside Rd
5	McBean Pky & Bridgeport Ln
6	McBean Pky & Baywood Ln
7	Newhall Ranch Rd & Baywood Ln
8	Ave Tibbitts & Nth Dickason Dr
9	Ave Tibbitts & Ave Scott
10	Ave Scott & Anza Dr
11	Ave Scott & Ave Kearny
12	Ave Scott & Ave Stanford
13	Rye Canyon Rd & Ave Scott
14	Rye Canyon Rd & Beale Ct
15	Rye Canyon Rd & Ave Crocker
16	Ave Stanford & Rye Canyon Rd
17	Ave Stanford & Rye Canyon Rd
18	Ave Stanford & Huntington Ln
19	Ave Stanford & Ave Hall
20	Ave Stanford & Technology Dr
21	Ave Stanford & Vanderbilt Wy
22	Commerce Center Dr & Franklin Pky
23	Commerce Center Dr & Harrison Pky
24	Commerce Center Dr & Witherspoon Pky
25	Commerce Center Dr & Live Oak Rd
26	Hasley Canyon Rd & Cambridge Ave
27	The Old Rd & 173
28	The Old Rd & Hillcrest Pky
29	Parker Rd & The Old Rd
30	Ridge Route Rd & Castaic Rd
31	Ridge Route Rd & Violin Canyon Rd
32	Lake Hughes Rd & Ridge Route Rd
33	Lake Hughes Rd & Diamond Ln
34	Lake Hughes Rd & Castaic Rd
35	Sloan Canyon Rd & The Old Rd

Route 1 Outbound Stop List	
Stop Number	Stop Name
1	Sloan Canyon Rd & The Old Rd
2	Sloan Canyon Rd & Nares Dr
3	Parker Rd & Sloan Canyon Rd
4	Parker Rd & Tobiah Pl
5	The Old Rd & Parker Rd
6	The Old Rd & Hillcrest Pky
7	The Old Rd & Sedona Wy
8	Hasley Canyon Rd & Cambridge Ave
9	Commerce Center Dr & Industry Dr
10	Commerce Center Dr & Witherspoon Pky
11	Commerce Center Dr & Harrison Pky
12	Commerce Center Dr & Franklin Pky
13	Vanderbilt Wy & Westinghouse Pl
14	Ave Stanford & Vanderbilt Wy
15	Ave Stanford & Technology Dr
16	Ave Stanford & Ave Hall
17	Ave Stanford & Huntington Ln
18	Rye Canyon Rd & Ave Stanford
19	Rye Canyon Rd & Ave Crocker
20	Rye Canyon Rd & Beale Ct
21	Rye Canyon Rd & Ave Scott
22	Ave Scott & Ave Stanford
23	Ave Scott & Ave Kearny
24	Ave Scott & Anza Dr
25	Ave Tibbitts & Ave Scott
26	Ave Tibbitts & Ave Mentry
27	Newhall Ranch Rd & Ave Tibbitts
28	McBean Pky & Newhall Ranch Rd
29	McBean Pky & Baywood Ln
30	McBean Pky & Bridgeport Ln
31	McBean Pky & Creekside Rd
32	McBean Pky & Magic Mountain Pky
33	McBean Pky & Town Center Dr
34	McBean MRTC

Average load factor by trip

Both inbound and outbound trips on Route 1 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.46. Trips with the highest average peak loads for each day and direction are identified below.

Exhibit 3.1.6 Route 1 Trips with Highest Average Peak Loads

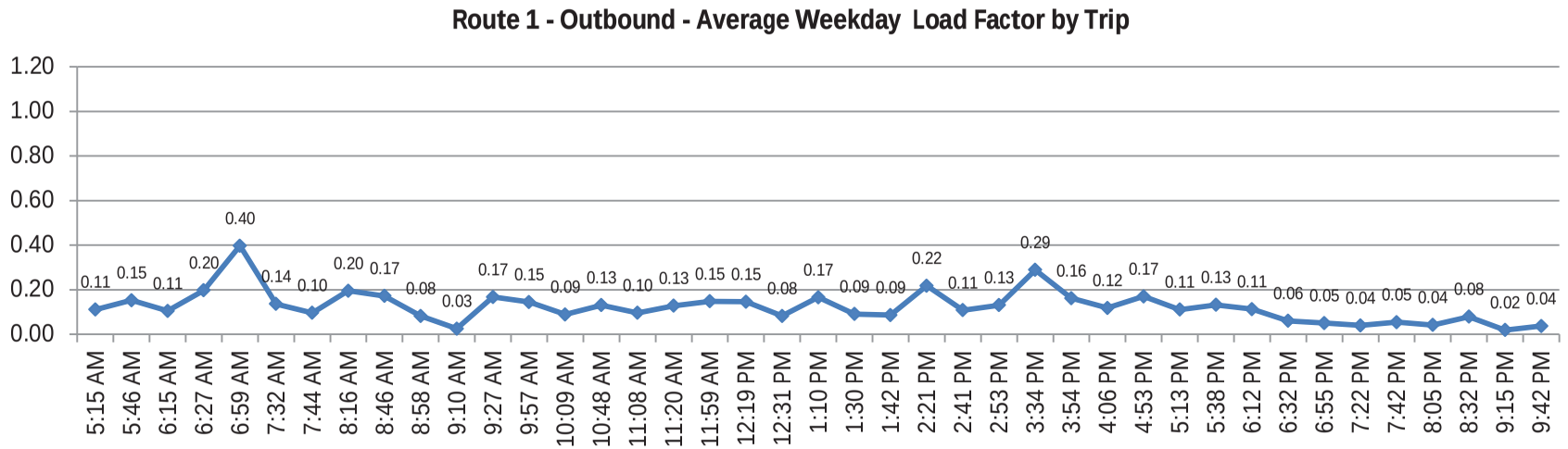
Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	6:59 a.m.	0.40
Weekday	Inbound	3:03 p.m.	0.46
Saturday	Outbound	3:03 p.m.	0.27
Saturday	Inbound	5:45 p.m.	0.24
Sunday	Outbound	10:03 a.m.	0.18
Sunday	Inbound	5:00 p.m.	0.23

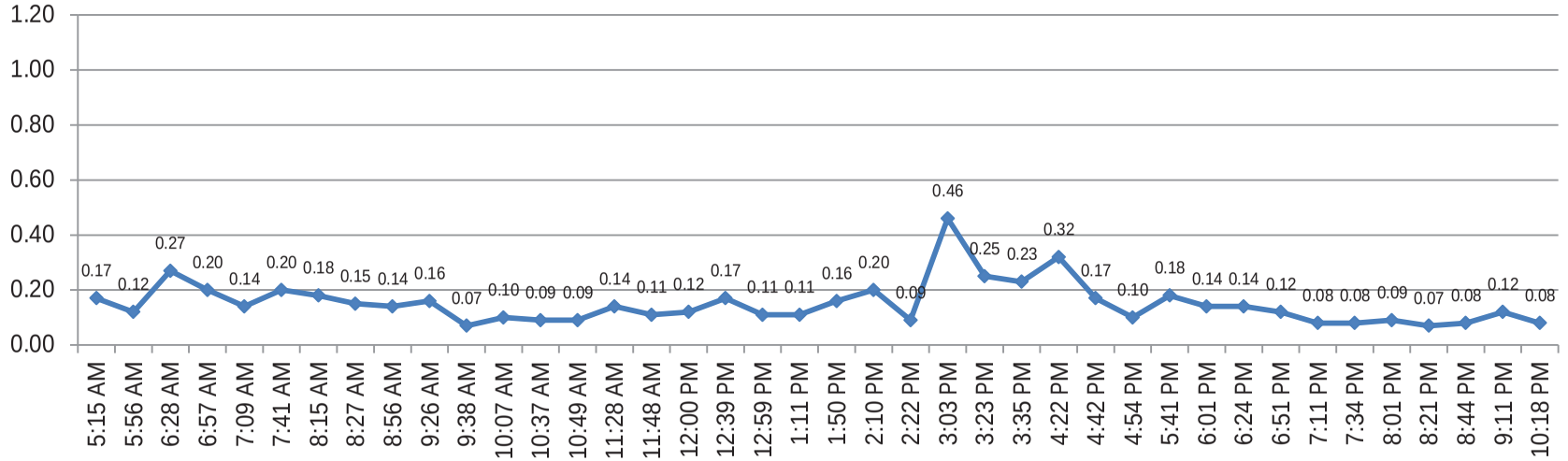
There were 18 individual trips which exhibited a load factor of at least 0.50, though none exceeded 0.70. Those trips are as follows:

Exhibit 3.1.7 Route 1 Trips with Load Factor at least 0.50

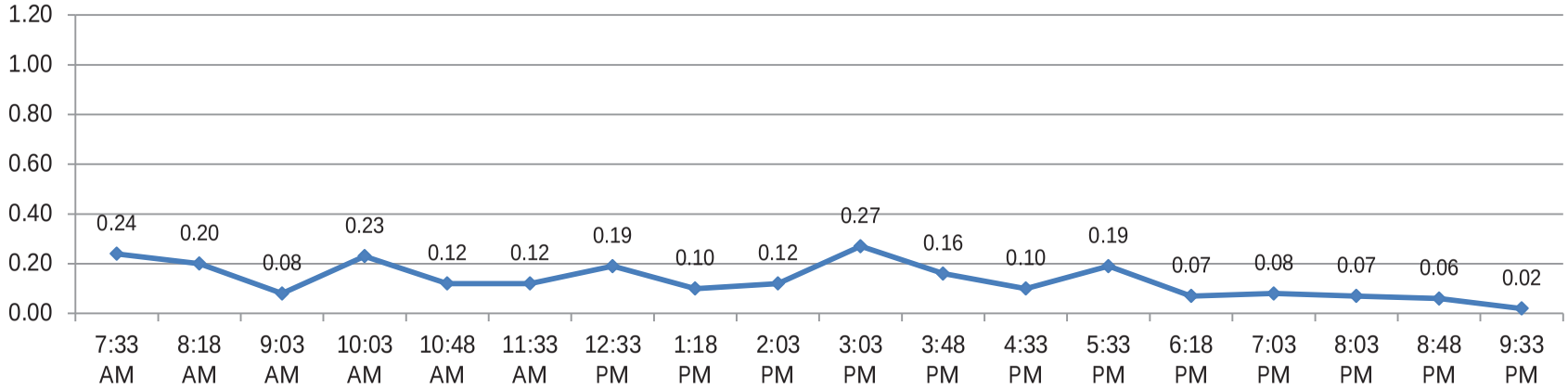
Date	Direction	Trip	Load factor
April 10	Inbound	3:03 p.m.	0.70
May 16	Inbound	3:03 p.m.	0.64
April 24	Inbound	3:03 p.m.	0.63
April 19	Inbound	3:03 p.m.	0.59
May 18	Inbound	3:03 p.m.	0.57
April 11	Inbound	3:03 p.m.	0.57
April 16	Outbound	6:59 a.m.	0.56
April 18	Inbound	3:03 p.m.	0.55
April 16	Inbound	4:22 p.m.	0.55
May 9	Inbound	3:03 p.m.	0.54
May 7	Outbound	6:59 a.m.	0.53
April 19	Inbound	2:10 p.m.	0.53
May 3	Outbound	6:59 a.m.	0.52
May 10	Inbound	3:03 p.m.	0.52
April 17	Outbound	6:59 a.m.	0.52
April 30	Outbound	6:59 a.m.	0.51
April 23	Outbound	6:59 a.m.	0.50
April 26	Outbound	8:16 a.m.	0.50

Exhibit 3.1.8 Route 1 Average Load Factor by Trip

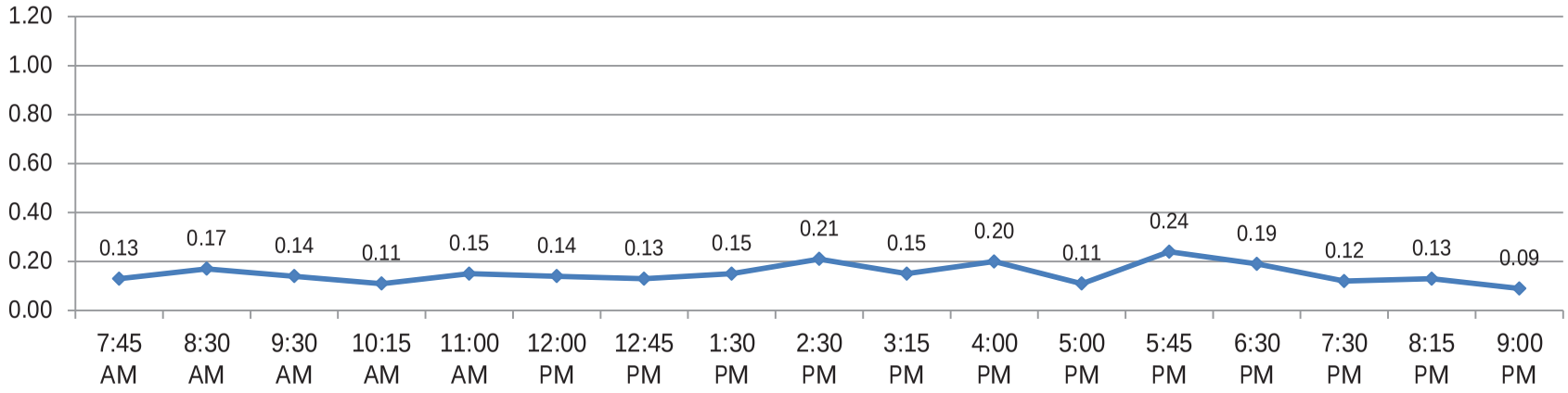




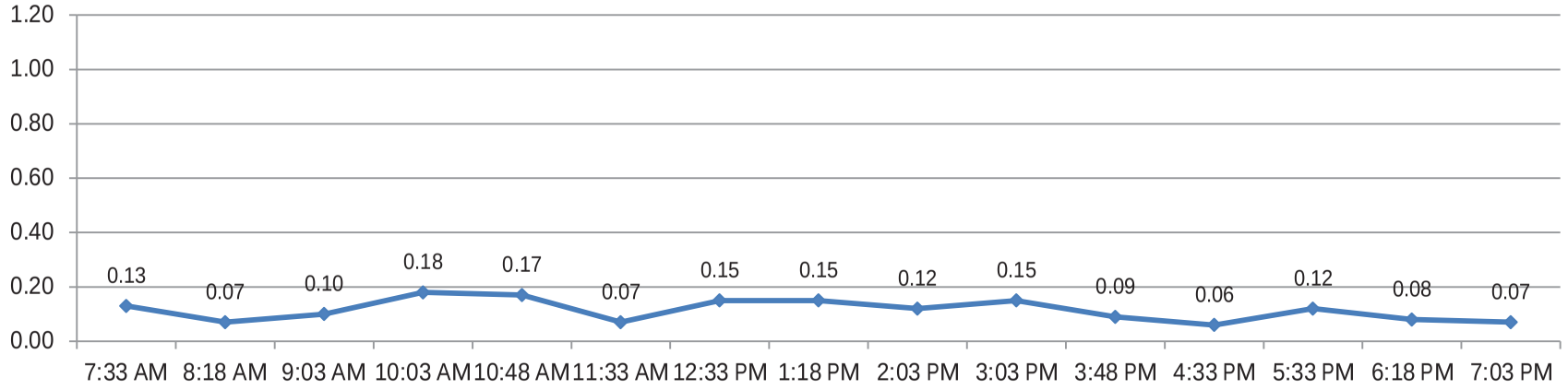
Route 1 - Outbound - Saturday Average Load Factor by Trip



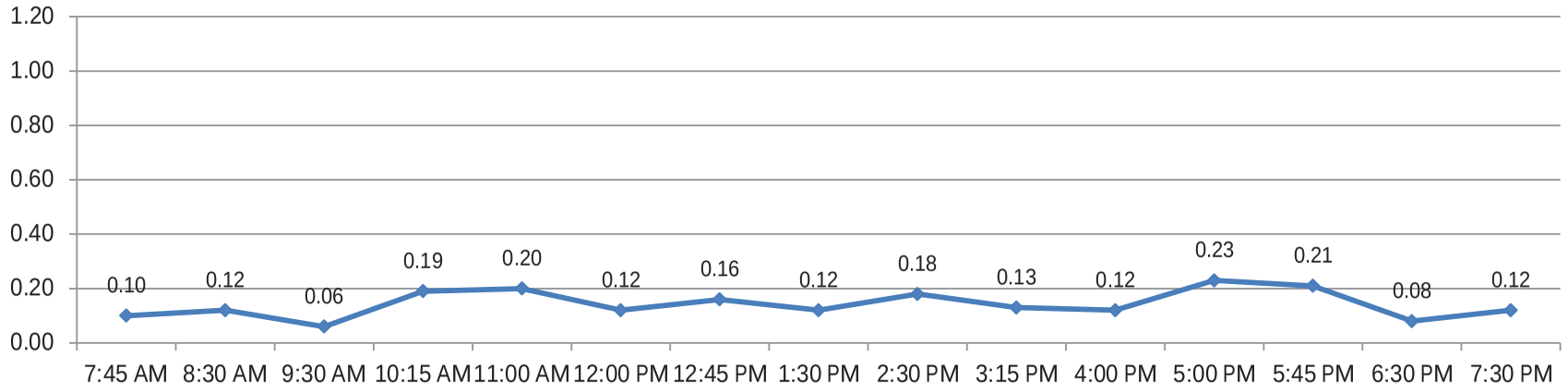
Route 1 - Inbound - Saturday Average Load Factor by Trip



Route 1 - Outbound - Sunday Average Load Factor by Trip



Route 1 - Inbound - Sunday Average Load Factor by Trip



Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 1's weekday inbound service exhibits slightly better overall schedule adherence (76.7 percent) than the outbound service (70.6 percent). On Saturday, schedule adherence improves significantly, with both inbound and outbound services operating at approximately 88 percent on-time. On Sunday, schedule adherence improves further, with 89.6 percent of outbound trips and 94.2 percent of inbound trips on-time.

Schedule adherence by time-point

Given the 10-minute layover that occurs at the MRTC, schedule adherence at the MRTC was highest for both inbound and outbound services. However, weekday outbound arrivals at the MRTC had the lowest schedule adherence (77.3 percent), while Sunday inbound departures from the MRTC had the highest (100 percent).

Of the three time-points on Route 1, Sloan Canyon consistently had the lowest performance. On weekdays, only 63.3 percent of outbound trips were on-time, while 65.0 percent of inbound trips were on-time. Schedule adherence improved on the weekend, with inbound trips being on-time 91.1 percent of the time.

During our analysis, we noted that Block #1137 had consistent issues with on-time performance, especially in the outbound service (see table below). While all outbound Route 1 buses exhibited some challenges remaining on-time between 2:21 p.m. and 4:53 p.m., Block #1137 continued that trend throughout the evening, with 17 instances of late departures from Sloan Canyon out of the 20 9:42 p.m. trips observed. Given the average ridership on that trip is three persons, the cause of this late running should be investigated. A review of the inbound service showed a similar pattern, with the majority of departures from the MRTC on-time but late running happening consistently as the trip progresses. The other blocks appear to be able to regain better control of their schedule adherence between 5:00 and 6:00 p.m.

Schedule adherence by time of day

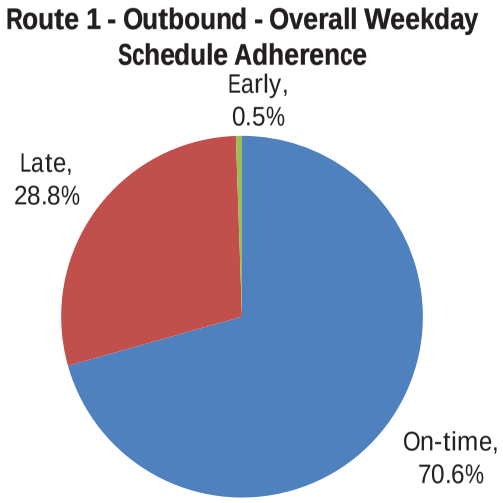
On weekdays, schedule adherence peaks during the Early AM day-part and steadily erodes throughout the day. There is very little "hot-running" (early departures) on weekdays.

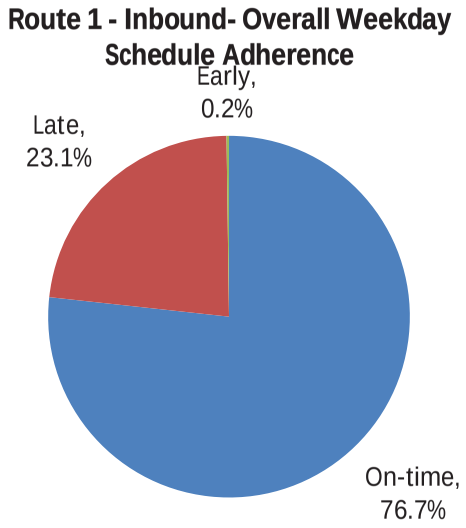
On Saturday, schedule adherence is highest during the PM Peak period, but worst during the Late PM day-part. Sundays have the most early trips, with early outbound departures occurring during the AM Peak, Mid-day, and PM Peak day-parts. Inbound early departures occurred only during the AM Peak period. Sunday schedule adherence is good throughout the day, with all day-parts experiencing 87 percent or higher on-time performance.

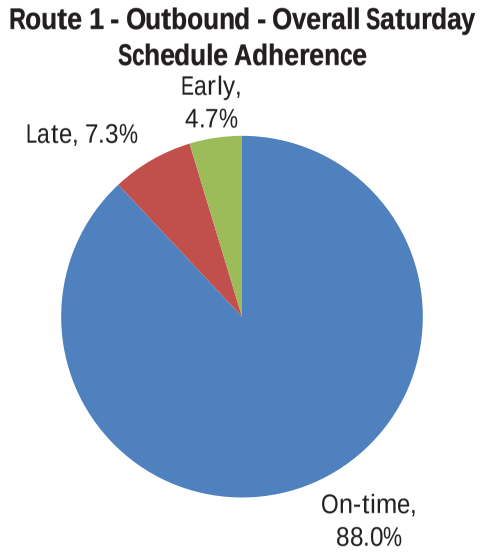
Exhibit 3.1.9 Route 1 On-Time Performance Table

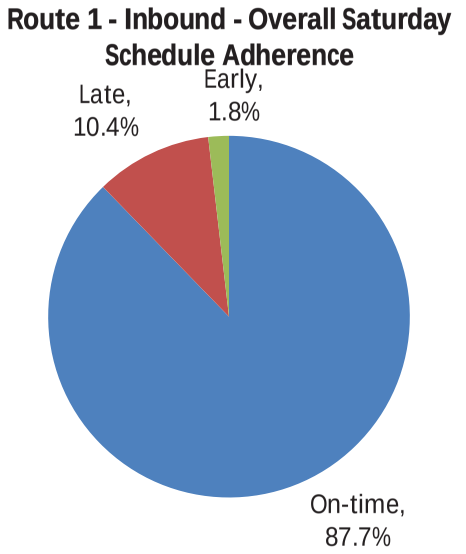
4/16/18 - 5/25/18 BLOCK #	Sloan Cyn Rd & The Old Rd	On-time (+0-5 min)	Late (+6+ min)	Early (0+ min)	Ave Stanford & Rye Cyn Rd	On-time (+0-5 min)	Late (+6+ min)	Early (0+ min)	MRTC (arrive)	On-time (+0-5 min)	Late (+6+ min)	Early (0+ min) = N/A
1138	5:15 AM	21	1	0	5:33 AM	22	1	0	5:46 AM	23	0	0
1137	5:46 AM	22	2	0	6:04 AM	24	0	0	6:18 AM	24	0	0
1139	6:15 AM	23	1	0	6:33 AM	23	1	0	6:47 AM	24	0	0
1138	6:27 AM	21	1	1	6:45 AM	21	2	0	6:59 AM	22	1	0
1137	6:59 AM	9	15	0	7:17 AM	9	15	0	7:31 AM	16	8	0
1139	7:32 AM	15	9	0	7:50 AM	14	10	0	8:05 AM	17	7	0
1138	7:44 AM	20	2	1	8:02 AM	19	4	0	8:17 AM	23	0	0
1137	8:16 AM	16	8	0	8:34 AM	16	8	0	8:46 AM	16	8	0
1139	8:46 AM	11	13	0	9:04 AM	13	11	0	9:16 AM	15	9	0
1502					9:10 AM	24	0	0	9:22 AM	21	3	0
1138	8:58 AM	14	9	0	9:16 AM	17	6	0	9:28 AM	17	3	0
1137	9:27 AM	19	5	0	9:45 AM	21	3	0	9:57 AM	23	1	0
1139	9:57 AM	12	12	0	10:15 AM	12	12	0	10:27 AM	14	10	0
1138	10:09 AM	22	1	0	10:27 AM	22	0	1	10:39 AM	22	1	0
1137	10:48 AM	23	0	1	11:06 AM	24	0	0	11:18 AM	24	0	0
1139	11:08 AM	15	9	0	11:26 AM	15	9	0	11:38 AM	15	9	0
1138	11:20 AM	17	4	2	11:38 AM	21	1	1	11:50 AM	22	1	0
1137	11:59 AM	15	9	0	12:17 PM	19	4	0	12:29 PM	19	5	0
1139	12:19 PM	13	11	0	12:37 PM	12	10	0	12:49 PM	17	7	0
1138	12:31 PM	15	8	0	12:49 PM	14	9	0	1:01 PM	16	7	0
1137	1:10 PM	17	7	0	1:28 PM	16	6	1	1:40 PM	21	3	0
1139	1:30 PM	19	5	0	1:48 PM	20	4	0	2:00 PM			
1138	1:42 PM	15	8	0	2:00 PM				2:12 PM	16	7	0
1137	2:21 PM	13	11	0	2:39 PM	9	15	0	2:53 PM	17	7	0
1139	2:41 PM	13	11	0	2:59 PM	14	10	0	3:13 PM	18	6	0
1138	2:53 PM	13	10	0	3:11 PM	15	7	0	3:25 PM	18	5	0
1137	3:34 PM	5	18	0	3:58 PM	12	12	0	4:12 PM	13	11	0
1139	3:54 PM	11	13	0	4:18 PM	22	2	0	4:32 PM	24	0	0
1138	4:06 PM	7	16	0	4:30 PM	21	2	0	4:44 PM	21	2	0
1137	4:53 PM	3	18	0	5:17 PM	6	15	0	5:31 PM	7	16	0
1139	5:13 PM	18	6	0	5:37 PM	23	1	0	5:51 PM	23	1	0
1138	5:38 PM	20	1	1	6:02 PM	19	0	3	6:14 PM	22	0	0
1137	6:12 PM	3	18	0	6:29 PM	4	17	0	6:41 PM	7	15	0
1139	6:32 PM	16	7	1	6:49 PM	17	7	0	7:01 PM	19	5	0
1138	6:55 PM	15	7	0	7:12 PM	17	5	0	7:24 PM	18	4	0
1137	7:22 PM	4	16	0	7:39 PM	3	17	0	7:51 PM	4	17	0
1139	7:42 PM	20	2	1	7:59 PM	20	2	1	8:11 PM	21	2	0
1138	8:05 PM	21	1	0	8:22 PM	20	2	0	8:34 PM	20	2	0
1137	8:32 PM	2	18	0	8:49 PM	5	15	0	9:01 PM	3	17	0
1138	9:15 PM	22	0	0	9:32 PM	22	0	0	9:44 PM	22	0	0
1137	9:42 PM	3	17	0	9:59 PM	8	12	0	10:11 PM	10	10	0

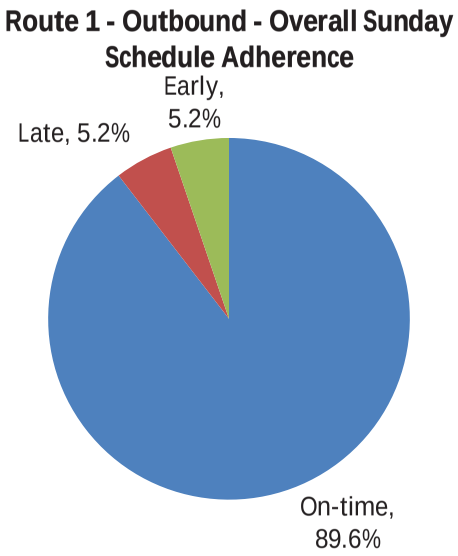
Exhibit 3.1.10 Route 1 Overall Schedule Adherence










Route 1 - Outbound - Overall Sunday Schedule Adherence
Early, 5.2%
Late, 5.2%
On-time, 89.6%

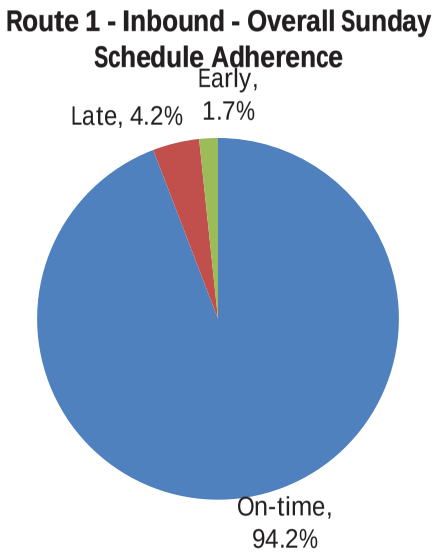
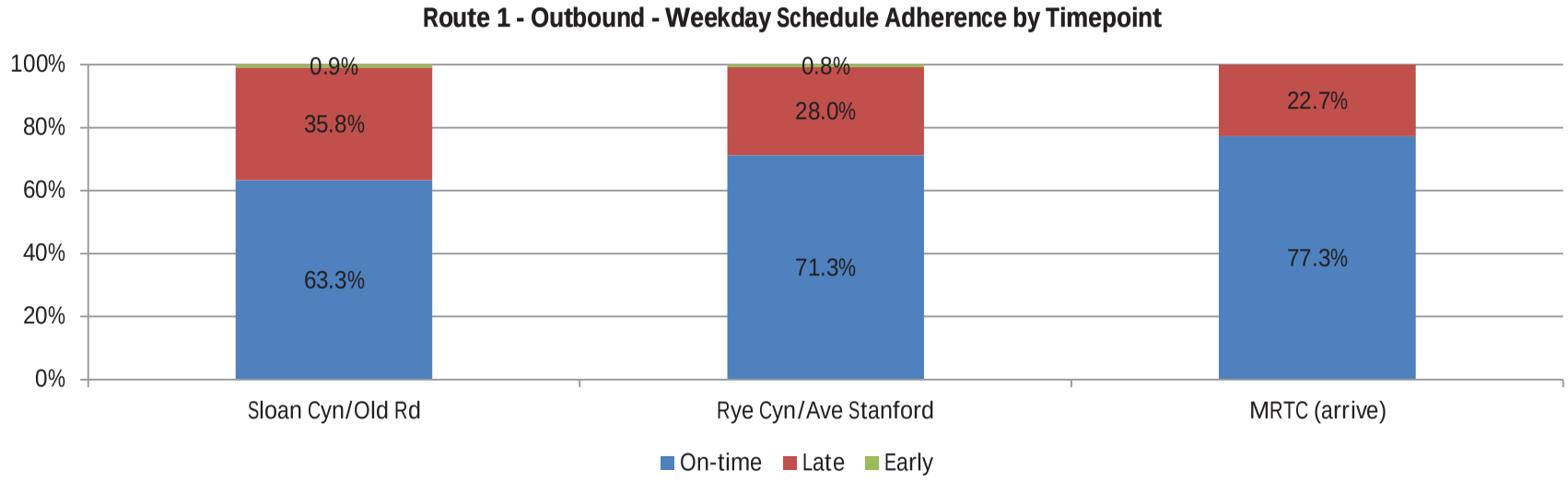
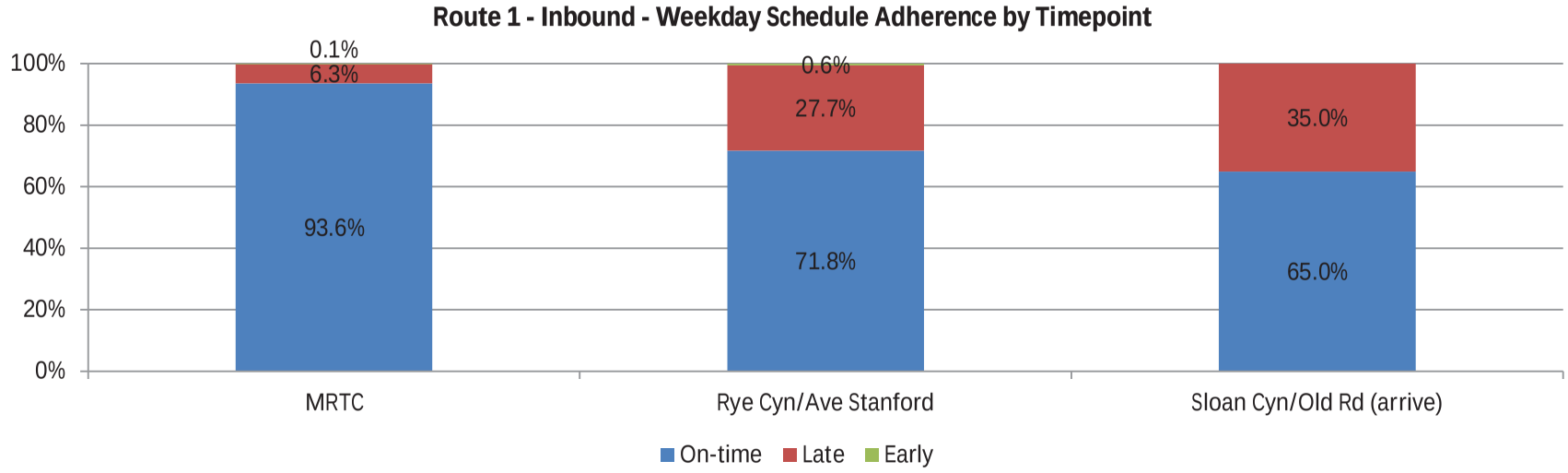
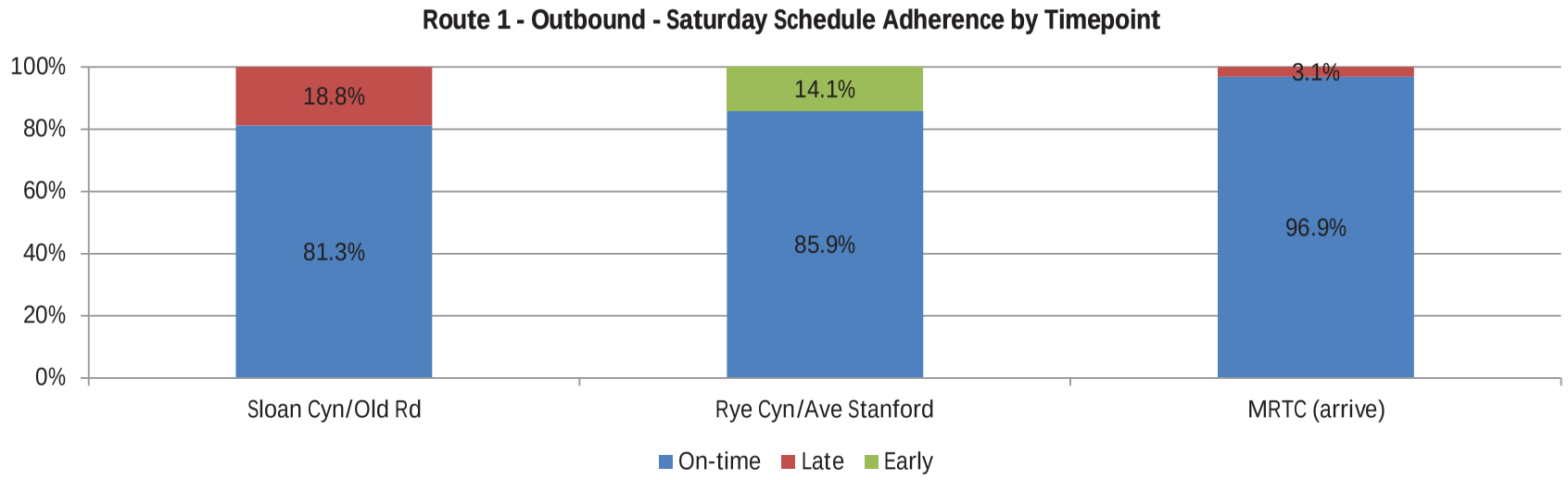
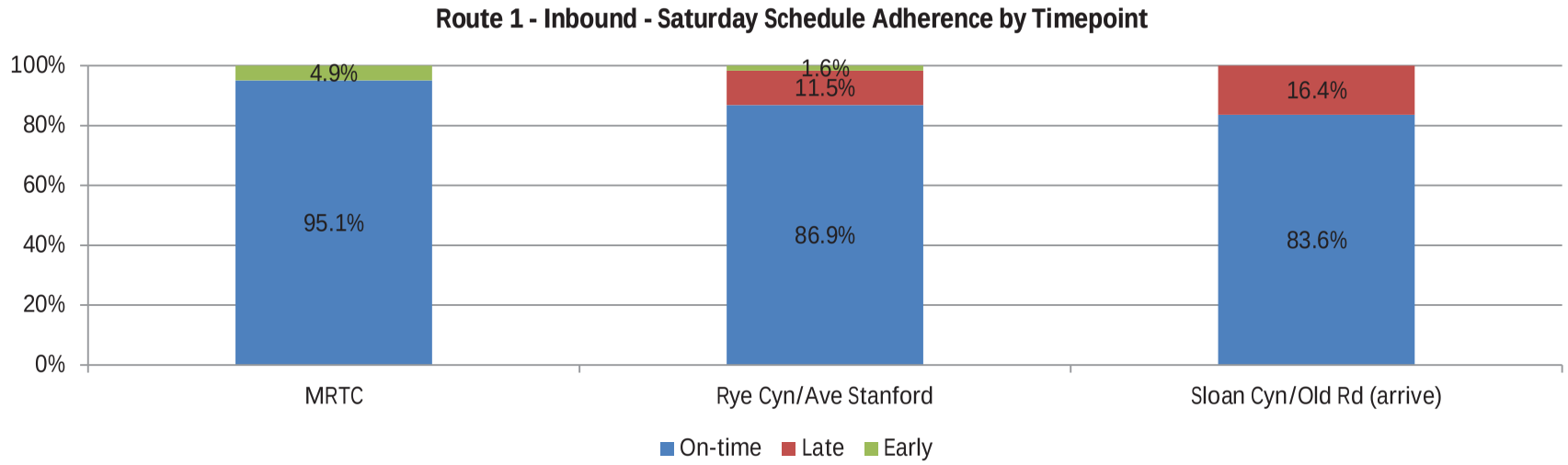

Route 1 - Inbound - Overall Sunday Schedule Adherence
Early, 1.7%
Late, 4.2%
On-time, 94.2%

Exhibit 3.1.11 Route 1 Schedule Adherence by Time-point

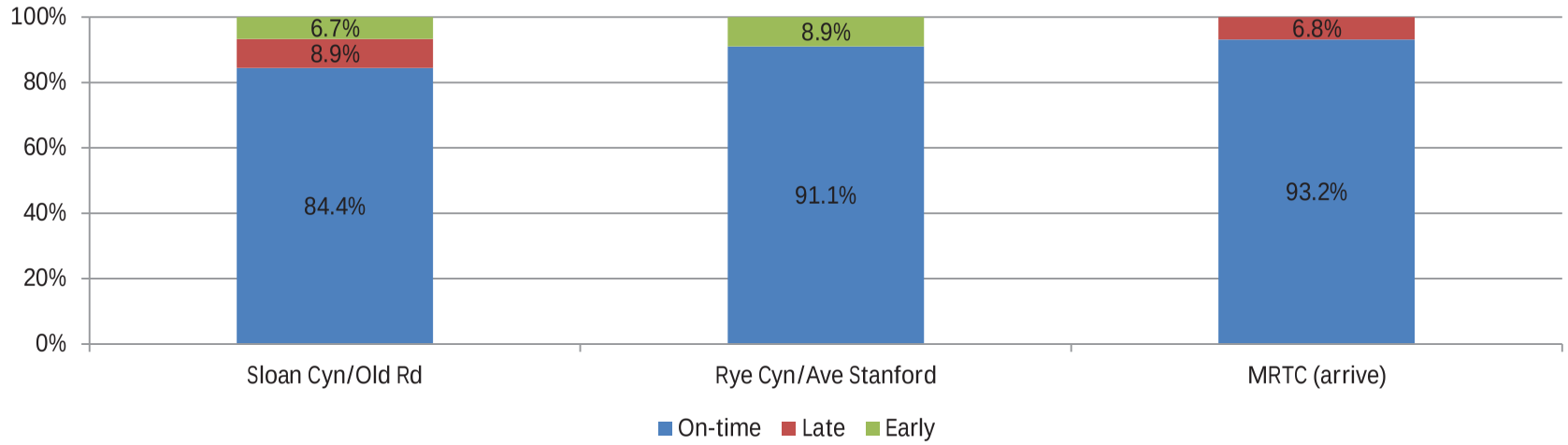





Route 1 - Outbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
18.8%
81.3%
14.1%
85.9%
3.1%
96.9%
Sloan Cyn/Old Rd
Rye Cyn/Ave Stanford
MRTC (arrive)
On-time
Late
Early


Route 1 - Inbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
4.9%
95.1%
1.6%
11.5%
86.9%
16.4%
83.6%
MRTC
Rye Cyn/Ave Stanford
Sloan Cyn/Old Rd (arrive)
On-time
Late
Early

Route 1 - Outbound - Sunday Schedule Adherence by Timepoint



Route 1 - Inbound - Sunday Schedule Adherence by Timepoint

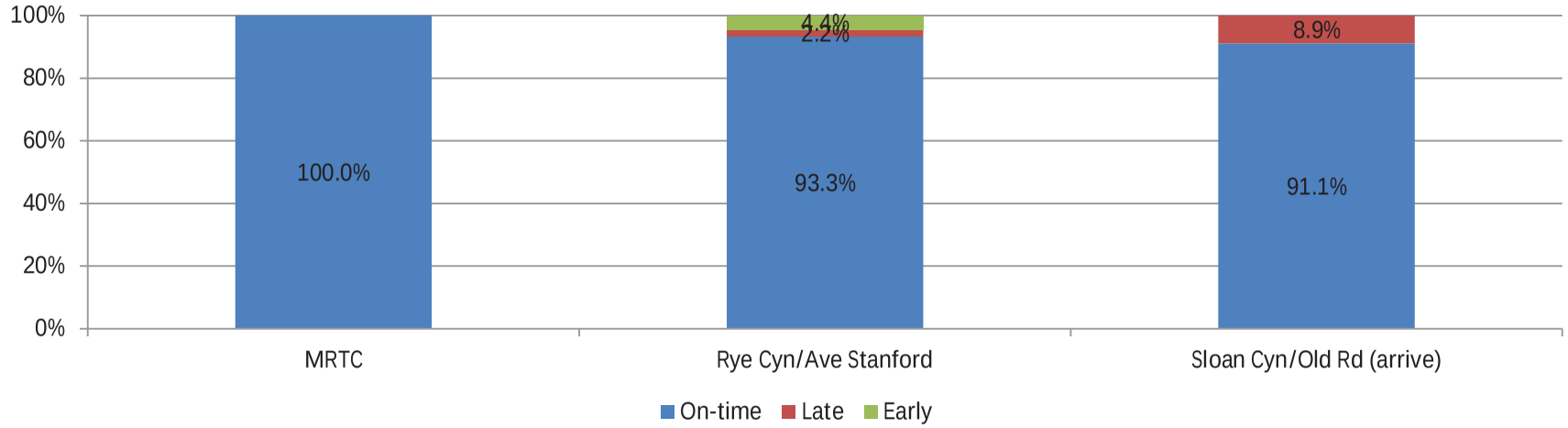
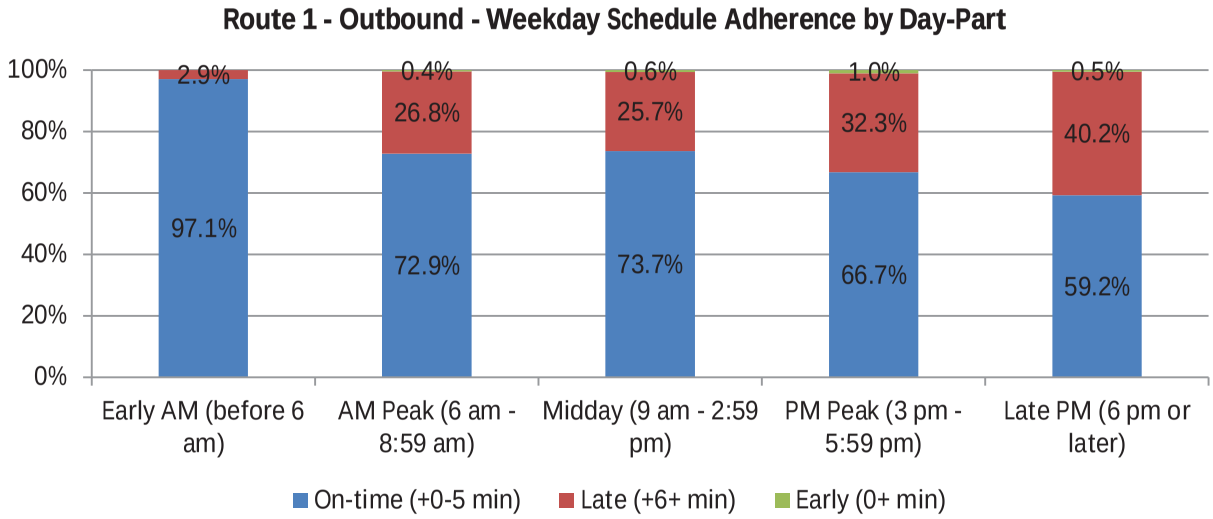
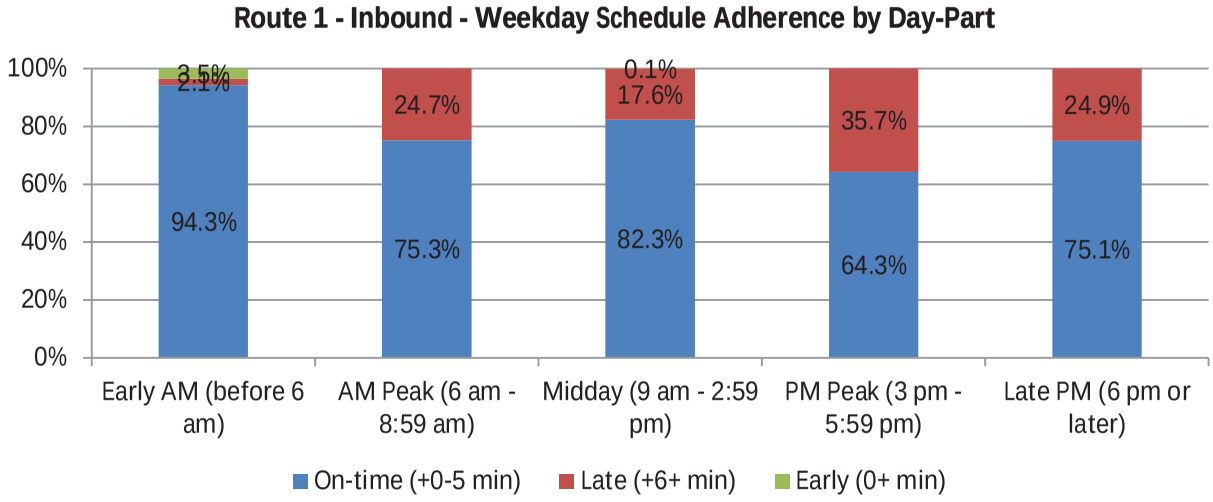
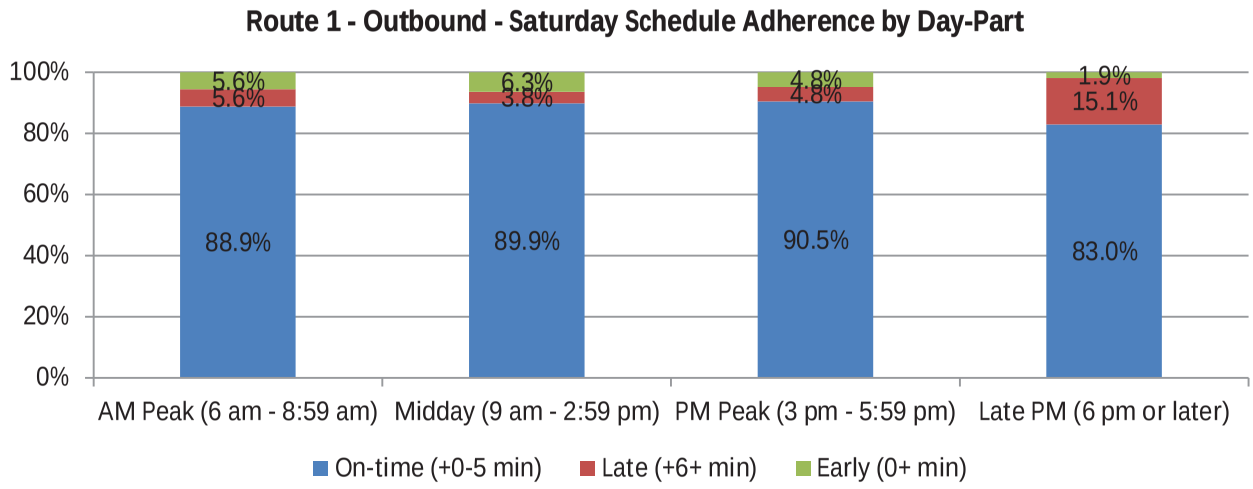
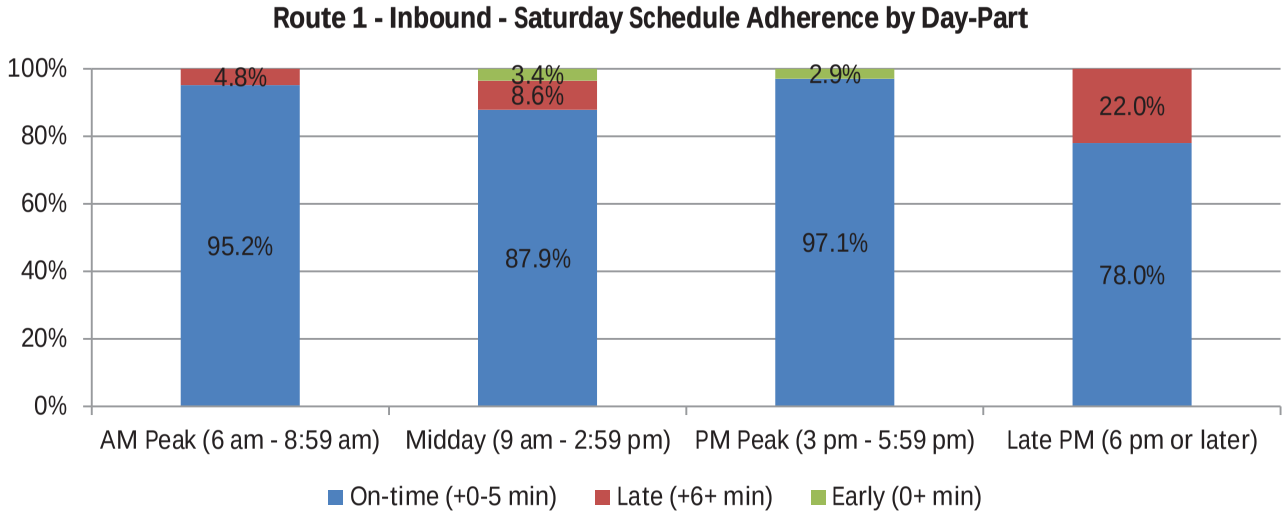


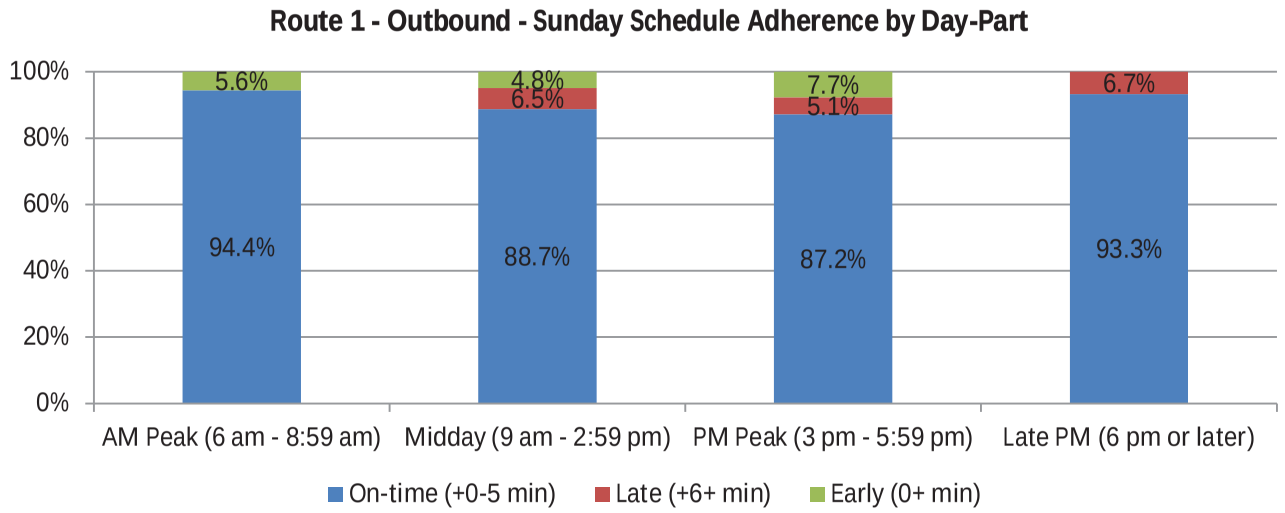
Exhibit 3.1.12 Route 1 Schedule Adherence by Day-Part

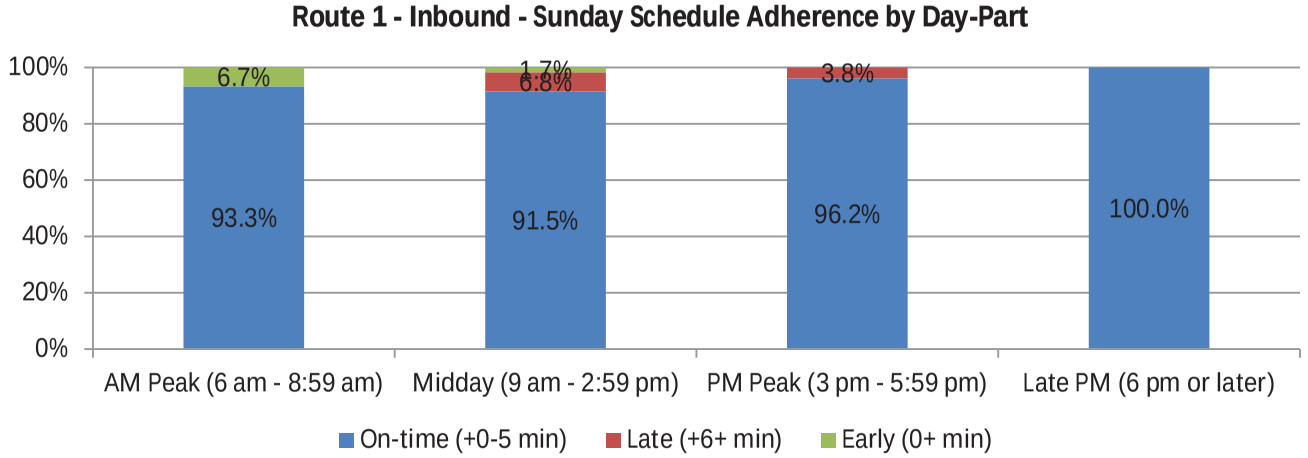





Route 1 - Outbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
5.6%
5.6%
88.9%
6.3%
3.8%
89.9%
4.8%
4.8%
90.5%
1.9%
15.1%
83.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 1 - Inbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
4.8%
95.2%
3.4%
8.6%
87.9%
2.9%
97.1%
22.0%
78.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 1 - Outbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
5.6%
94.4%
4.8%
6.5%
88.7%
7.7%
5.1%
87.2%
6.7%
93.3%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 1 - Inbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
6.7%
93.3%
1.7%
6.8%
91.5%
3.8%
96.2%
100.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route Performance

Overall ridership

Exhibit 3.1.13 Route 1 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Percent of trips on-time, compared to other routes

Exhibit 3.1.14 Route 1 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking (overall)
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	72.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 2 Profile and Performance Analysis

Route Description

Route 2 serves the McBean Regional Transit Center (MRTC), Valencia Industrial Center, Valencia Commerce Center, Val Verde, Valencia Town Center, and River Oaks Shopping Center. The route travels between Val Verde and the MRTC via the Valencia Industrial Center.

Primary streets of operation for Route 2 include Chiquito Canyon Road, San Martinez Road, Del Valle Road, Hasley Canyon Road, Commerce Center Drive, Highway 126, Avenue Stanford, Rye Canyon Road, Avenue Scott, Avenue Tibbitts, and McBean Parkway.

Outbound service is defined as that originating in Val Verde and traveling to the McBean Regional Transit Center. Inbound service travels from the MRTC to Val Verde. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, Route 2 outbound ridership peaks twice early in the day (6:53 a.m. and 8:41 a.m.) (average of 18 riders each trip). Ridership rises slightly again in the afternoon (2:36 p.m. and 3:11 p.m.) (average of 15 riders each). Inbound ridership peaks at 3:18 p.m. (average of 17 riders).

On Saturday, ridership is fairly steady throughout the day. For the outbound service, ridership peaks slightly at 5:06 p.m. with an average of 11 riders. The inbound service has two modest peaks, one at 10:48 a.m. (average of 11 riders) and the other at 3:48 p.m. (average of 12 riders).

On Sunday, ridership peaks early in the day. Trips at 7:51 a.m. and 9:36 a.m. have an average of 10 riders each, followed by an average of nine riders at 11:21 a.m. In the afternoon, a slight peak of an average of nine riders occurs at 3:21 p.m.

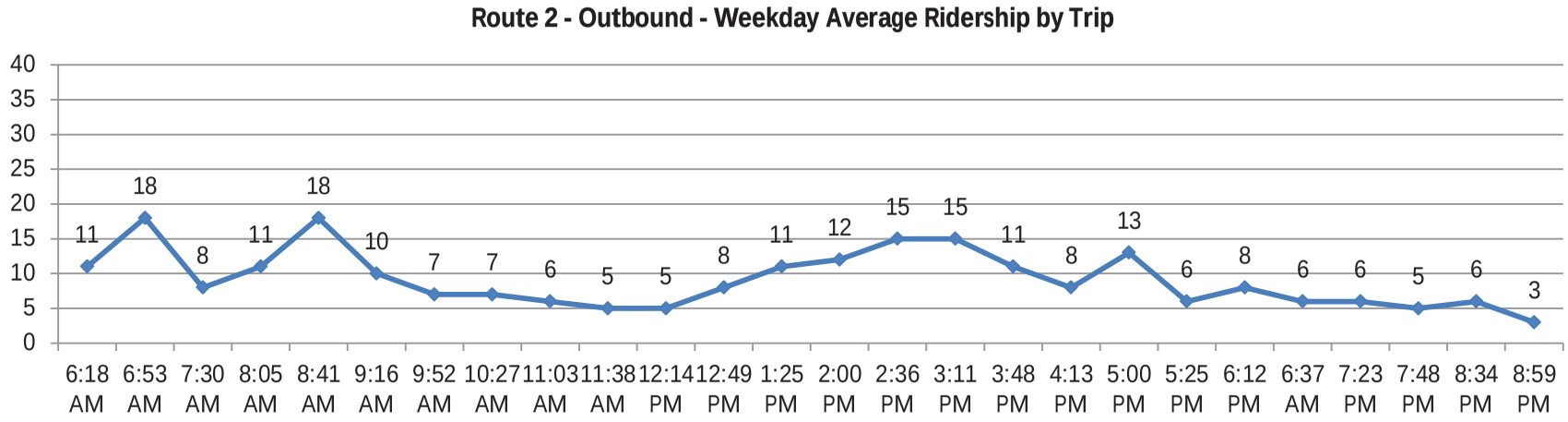
Average ridership by time of day

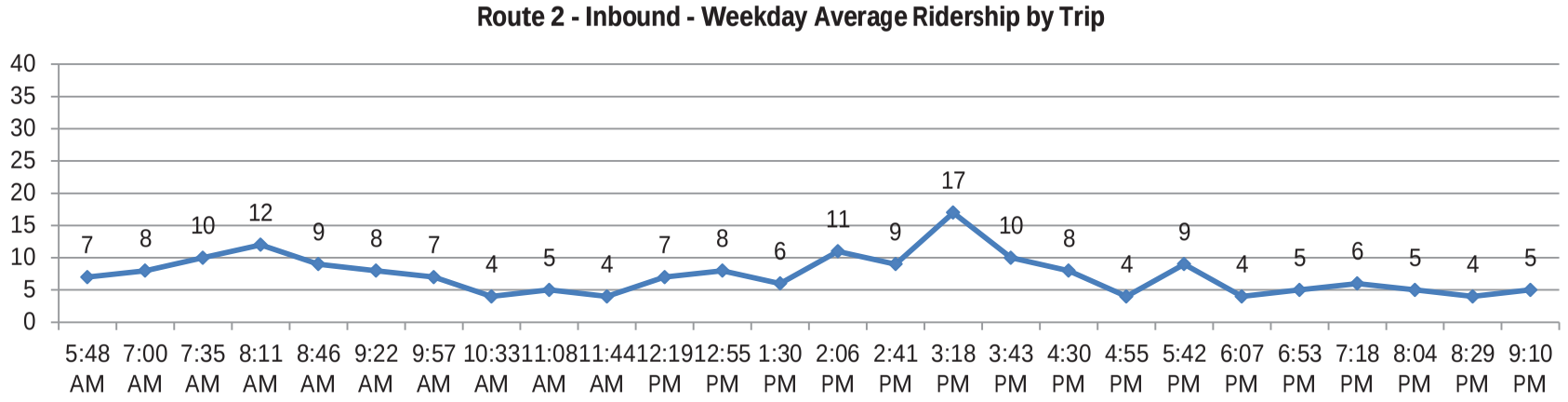
On weekdays, the outbound service experiences its highest average ridership during both the AM Peak and PM peak day-parts (average of 13 and 11 riders each, respectively). The inbound service peaks during the PM Peak day-part, with an average of 10 riders, followed by the AM Peak day-part, with an average of nine riders.

On Saturday, the outbound service sees the most riders during the AM Peak and PM Peak periods (average of eight riders each), while the inbound service sees the most riders during the PM Peak period (also average of eight riders).

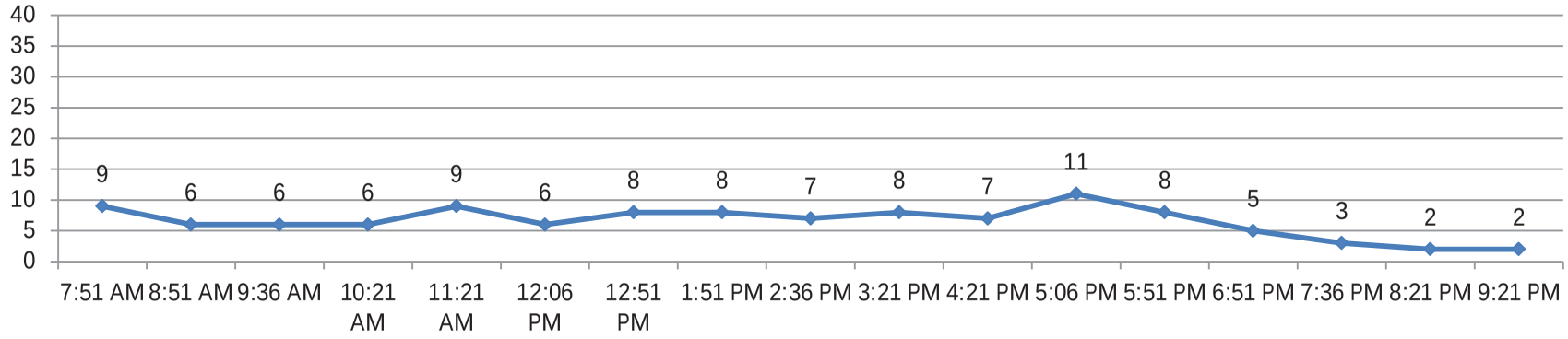
On Sunday, both services experience their greatest average ridership during the PM Peak period (average of seven riders on the outbound service and eight riders on the inbound service). The outbound service sees an average of seven riders during mid-day trips as well.

Exhibit 3.2.1 Route 2 Average Ridership by Trip

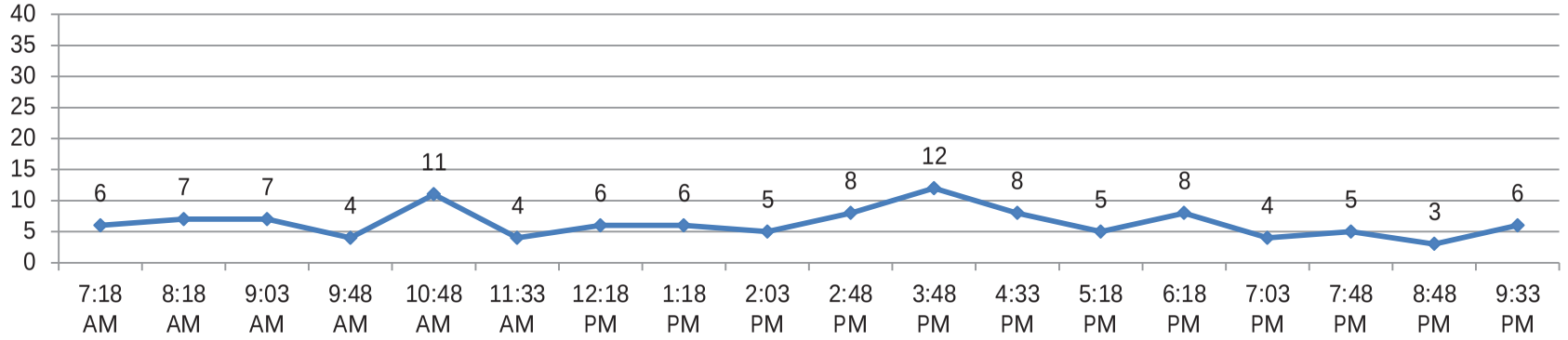




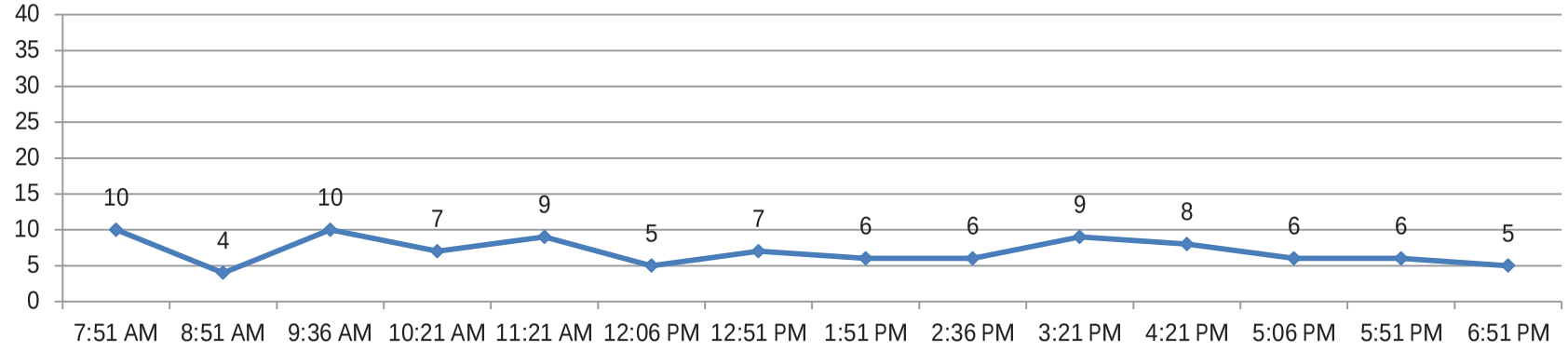
Route 2 - Outbound - Saturday Average Ridership by Trip



Route 2 - Inbound - Saturday Average Ridership by Trip



Route 2 - Outbound - Sunday Average Ridership by Trip



Route 2- Inbound - Sunday Average Ridership by Trip

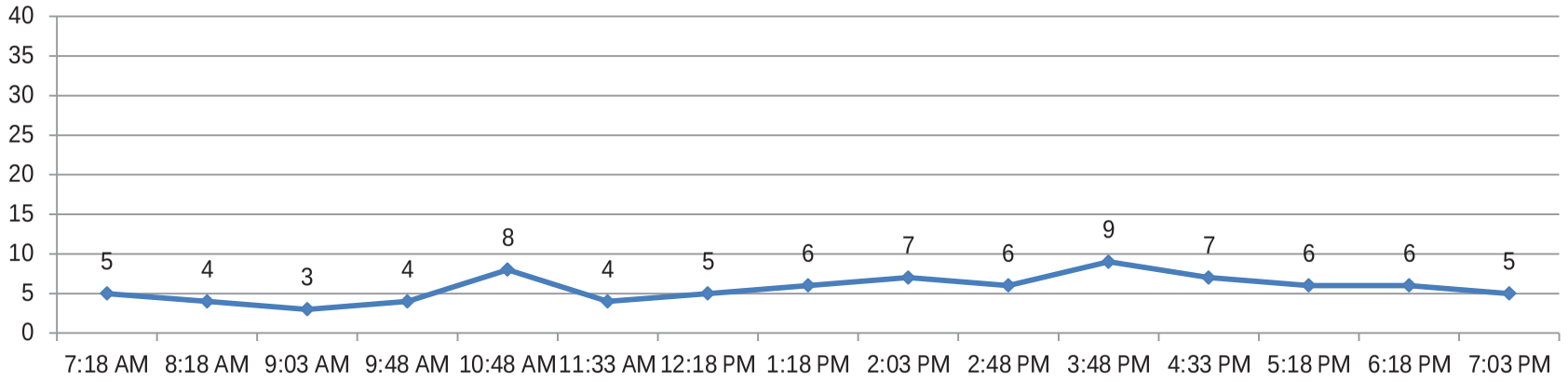
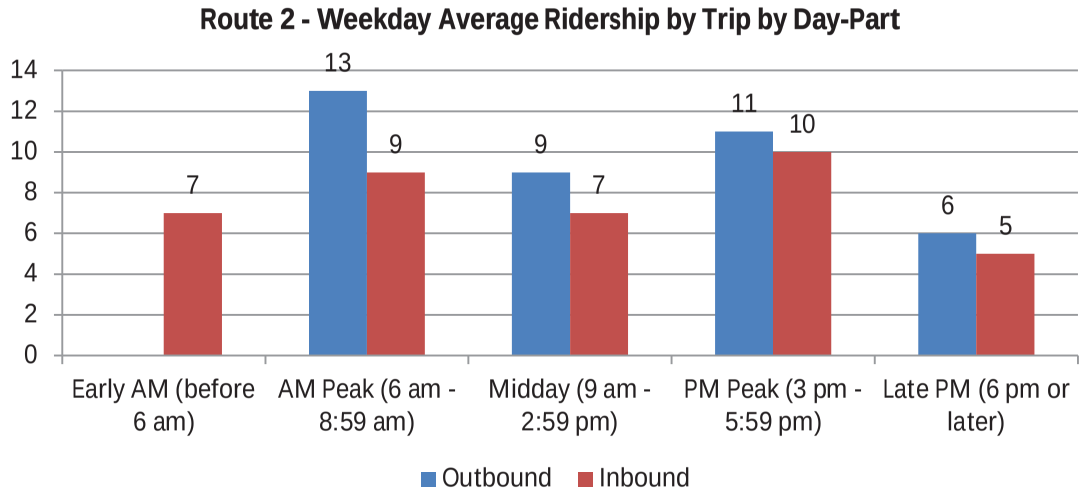
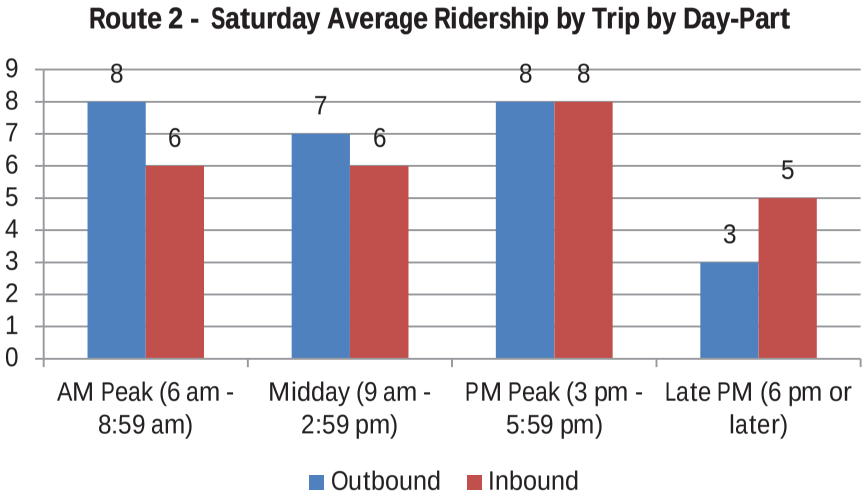
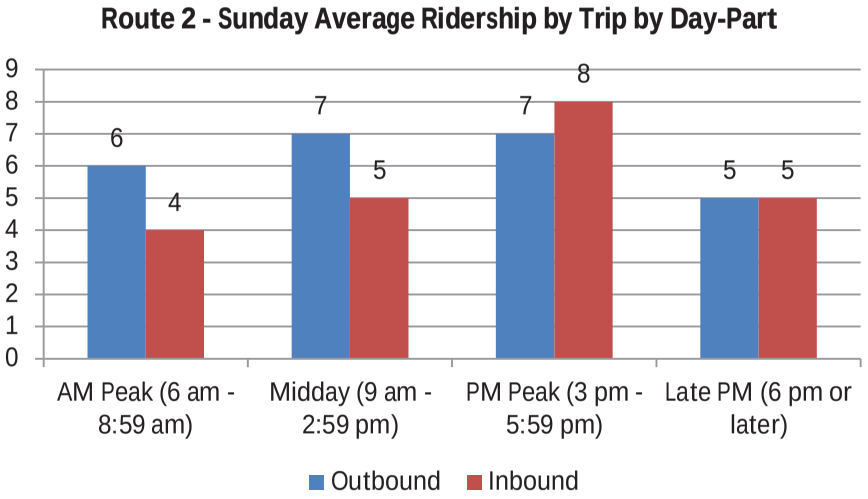


Exhibit 3.2.2 Route 2 Average Ridership by Trip by Day-Part



Note: there is no outbound trip during the Early AM day-part.





Average ridership (boardings) by segment

On weekdays and Saturday, boardings are significantly greater within the inbound MRTC to Rye Canyon/Avenue Stanford route segment. Outbound boardings are greater within the Rye Canyon/Avenue Stanford to Val Verde Park segment, but are significantly lower than inbound boardings. As a result, average boardings per trip are higher on the inbound MRTC to Rye Canyon/Avenue Stanford segment.

On Sunday, inbound boardings within the MRTC to Rye Canyon/Avenue Stanford segment are nearly equal with outbound boardings within the Rye Canyon/Avenue Stanford to Val Verde Park segment. This implies that more people are using the bus to make round trips between Valencia and Val Verde on Sundays.

Average boarding and alighting by stop

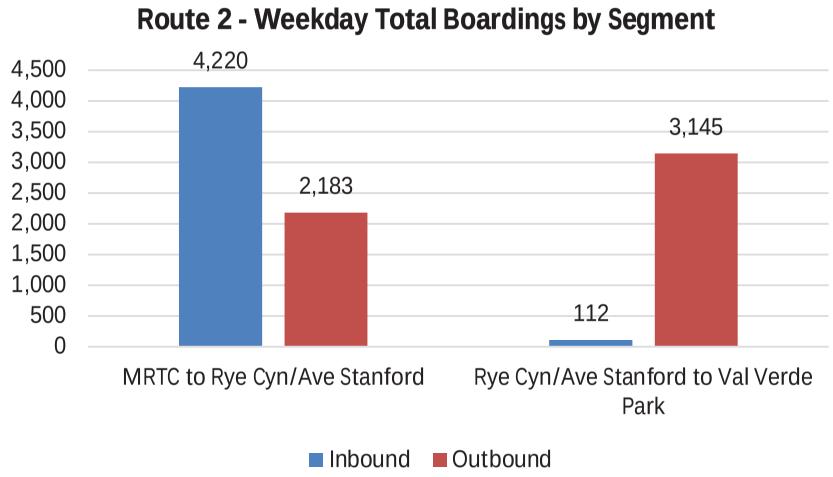
Beginning on page 9, bubble maps indicate the relative level of activity at each Route 2 bus stop, both inbound and outbound. Not surprisingly, the MRTC is the greatest activity location across all days.

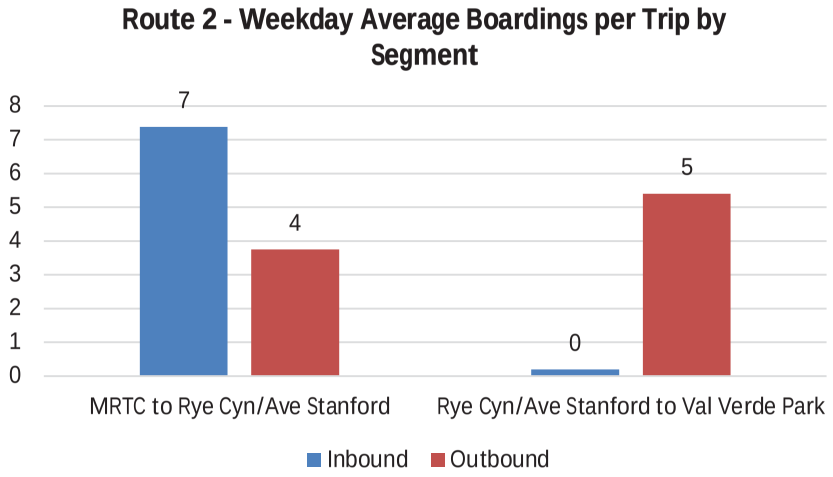
On weekdays, the greatest activity is observed at Val Verde Park, Ave Tibbitts/Ave Mentry, and McBean Pkwy/Magic Mountain Pkwy (outbound) and McBean Pkwy/Creekside Rd, Ave Tibbitts/Dickason Dr, and Val Verde Park (inbound).

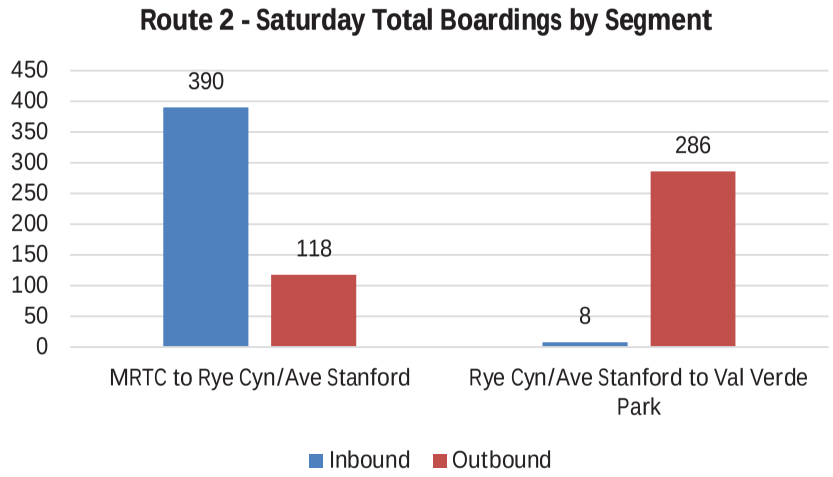
On Saturday, the greatest activity is observed at Val Verde Park, McBean Pkwy/Newhall Ranch Rd, McBean Pkwy/Magic Mountain Pkwy, and McBean Pkwy/Town Center Dr (outbound) and McBean Pkwy/Creekside Rd, Newhall Ranch Rd/Baywood Ln, and Val Verde Park (inbound).

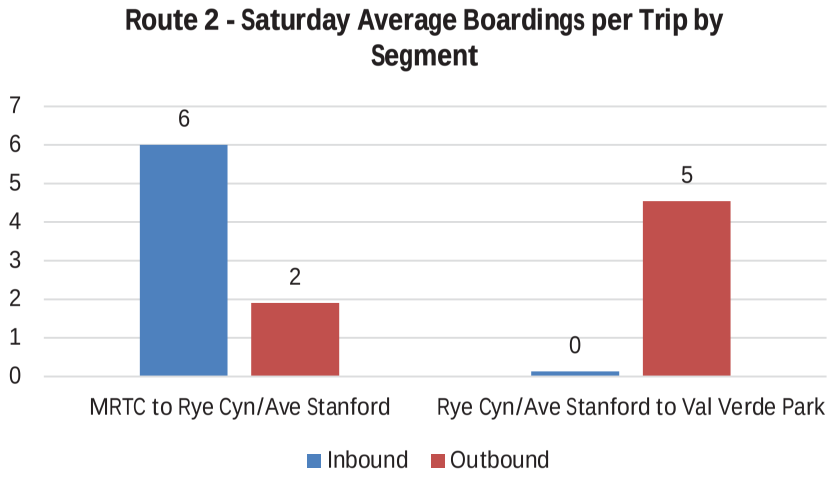
On Sunday, the most significant activity is observed at only Val Verde Park and the MRTC (both directions).

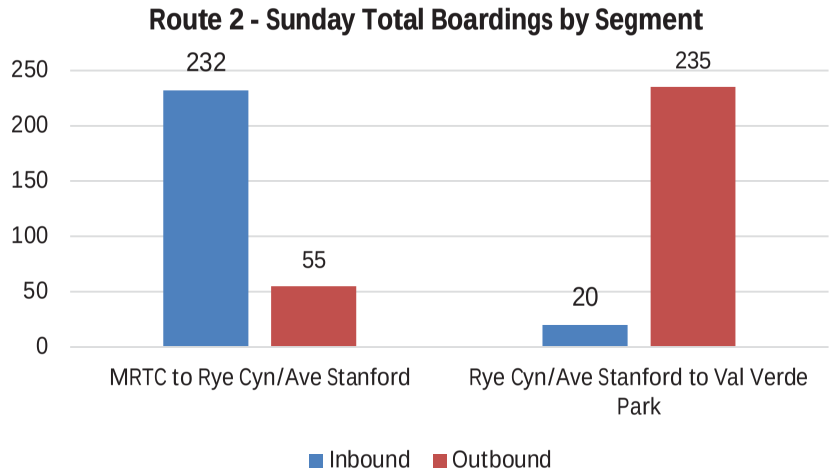
Exhibit 3.2.3 Route 2 Total and Average Boardings by Segment










Route 2 - Sunday Total Boardings by Segment
250
200
150
100
50
0
232
55
20
235
MRTC to Rye Cyn/Ave Stanford
Rye Cyn/Ave Stanford to Val Verde Park
Inbound
Outbound

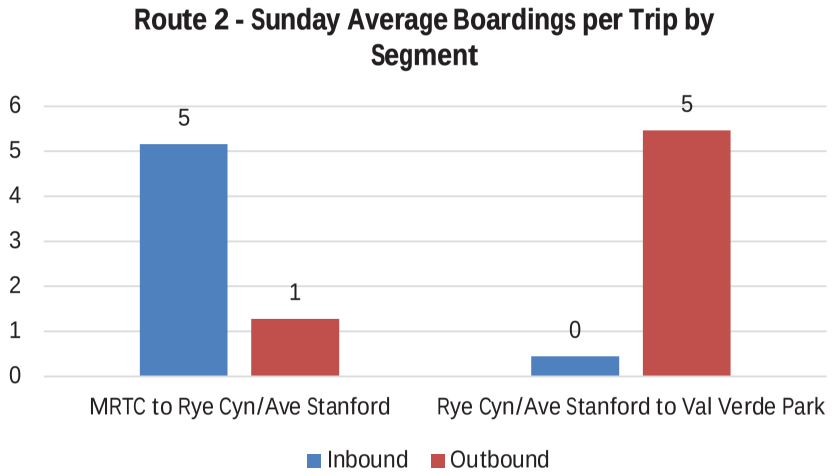
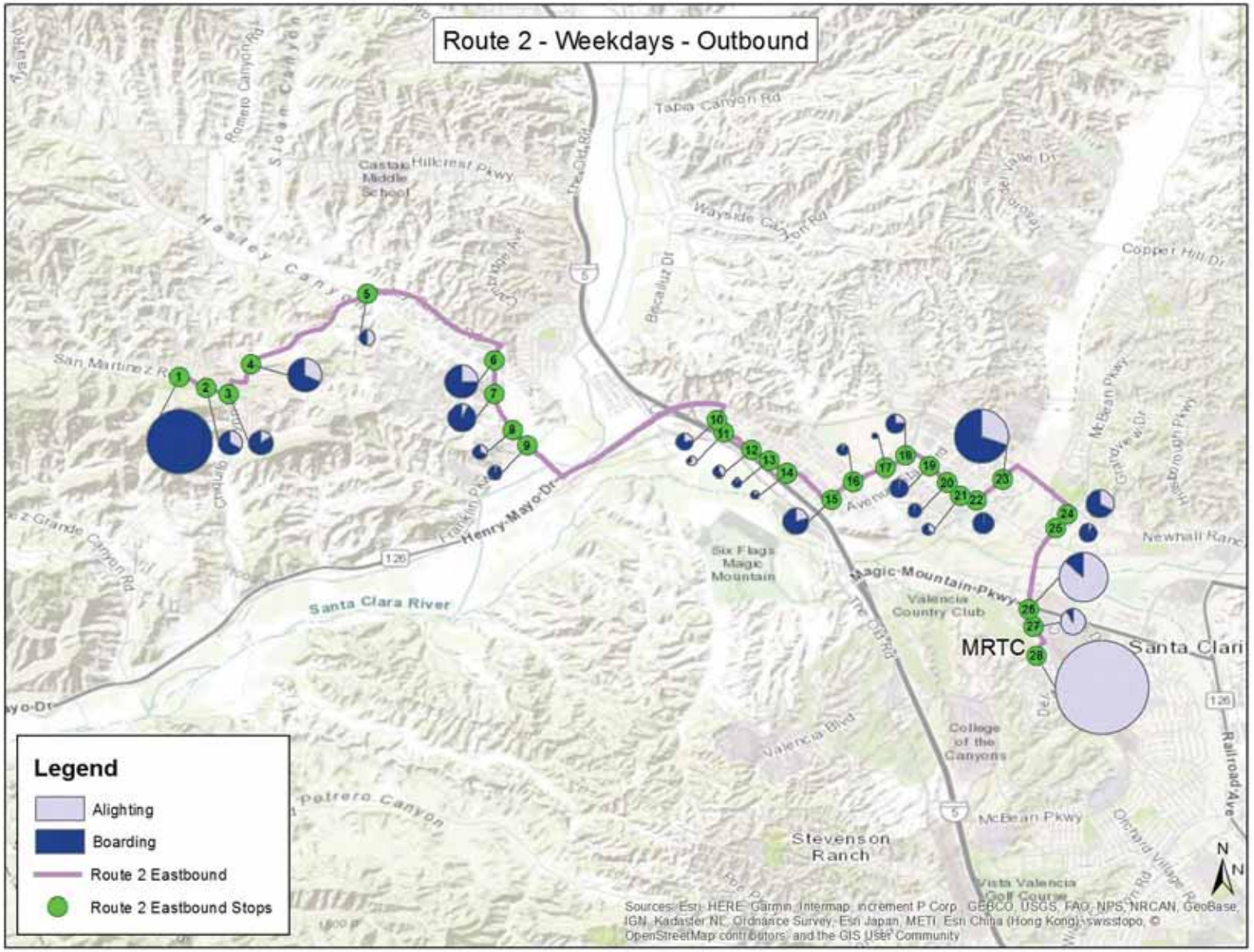
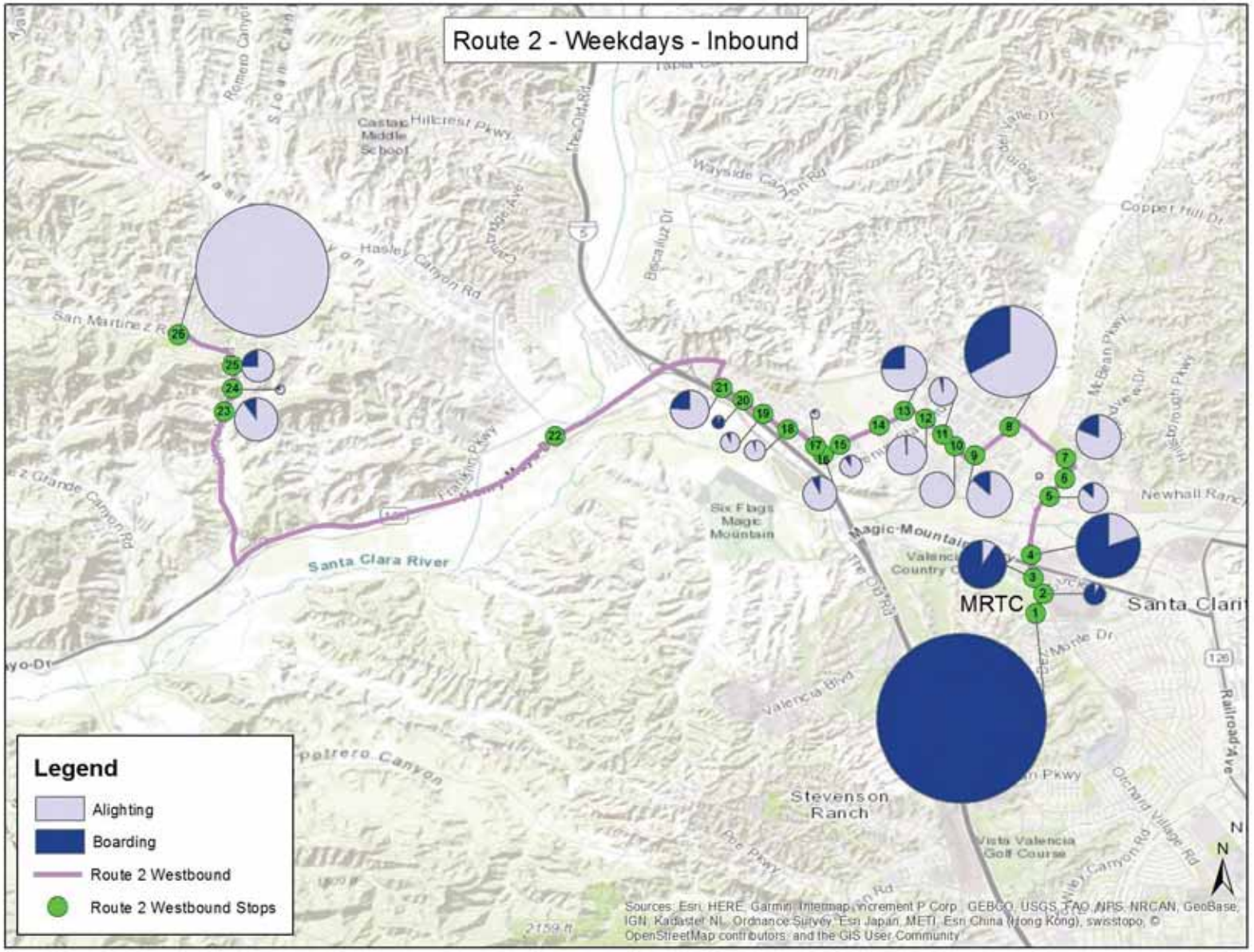
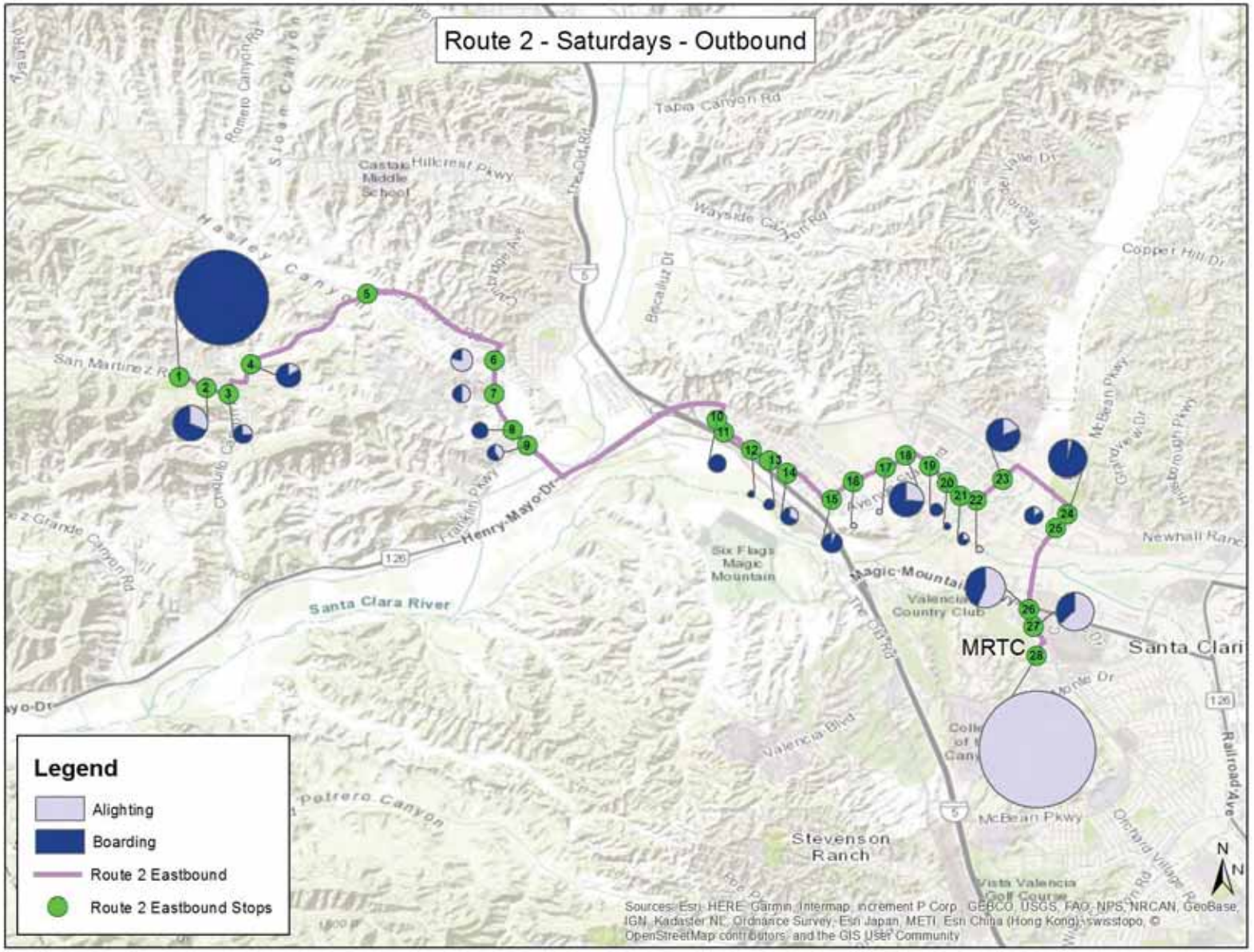
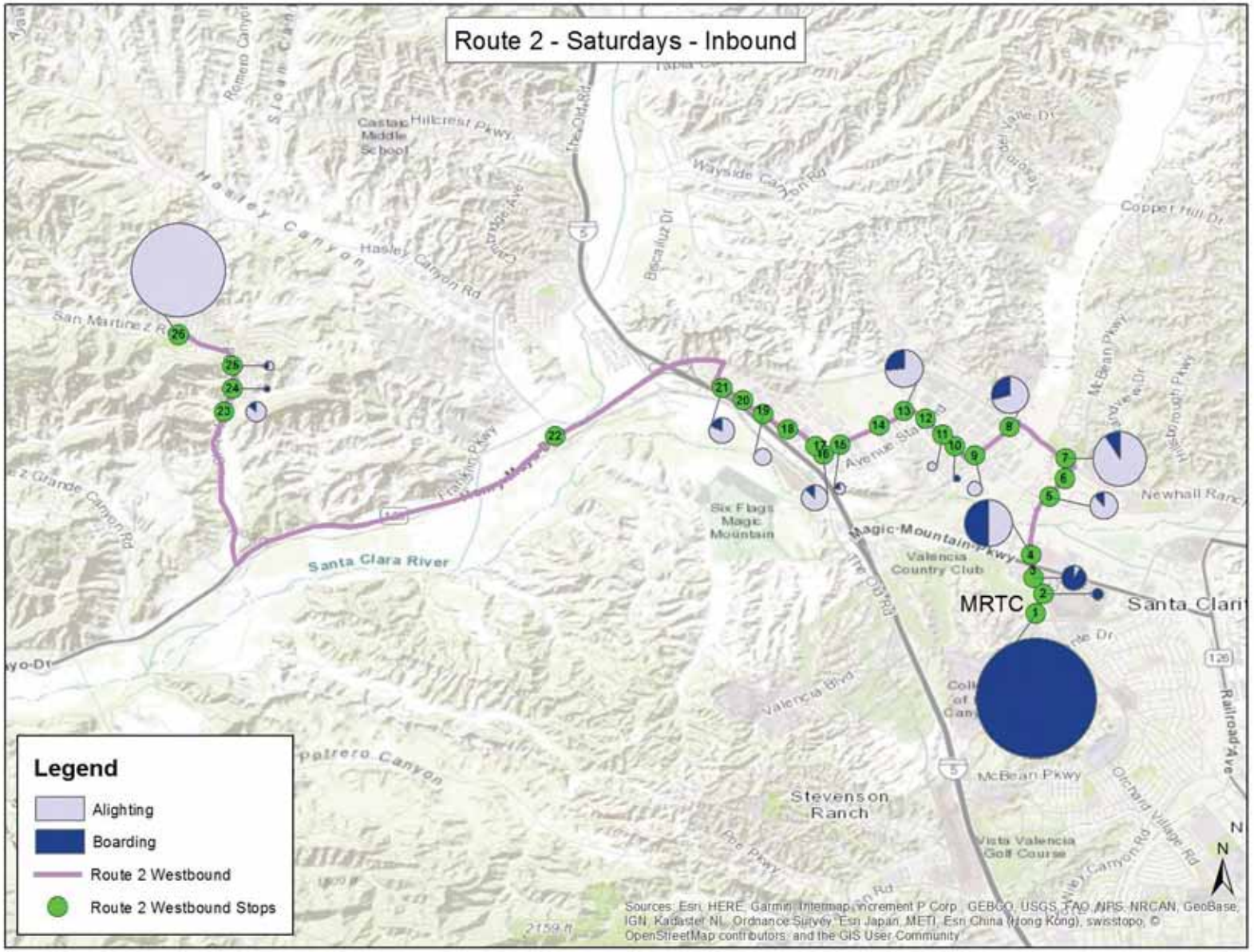

Route 2 - Sunday Average Boardings per Trip by Segment
6
5
4
3
2
1
0
5
1
0
5
MRTC to Rye Cyn/Ave Stanford
Rye Cyn/Ave Stanford to Val Verde Park
Inbound
Outbound

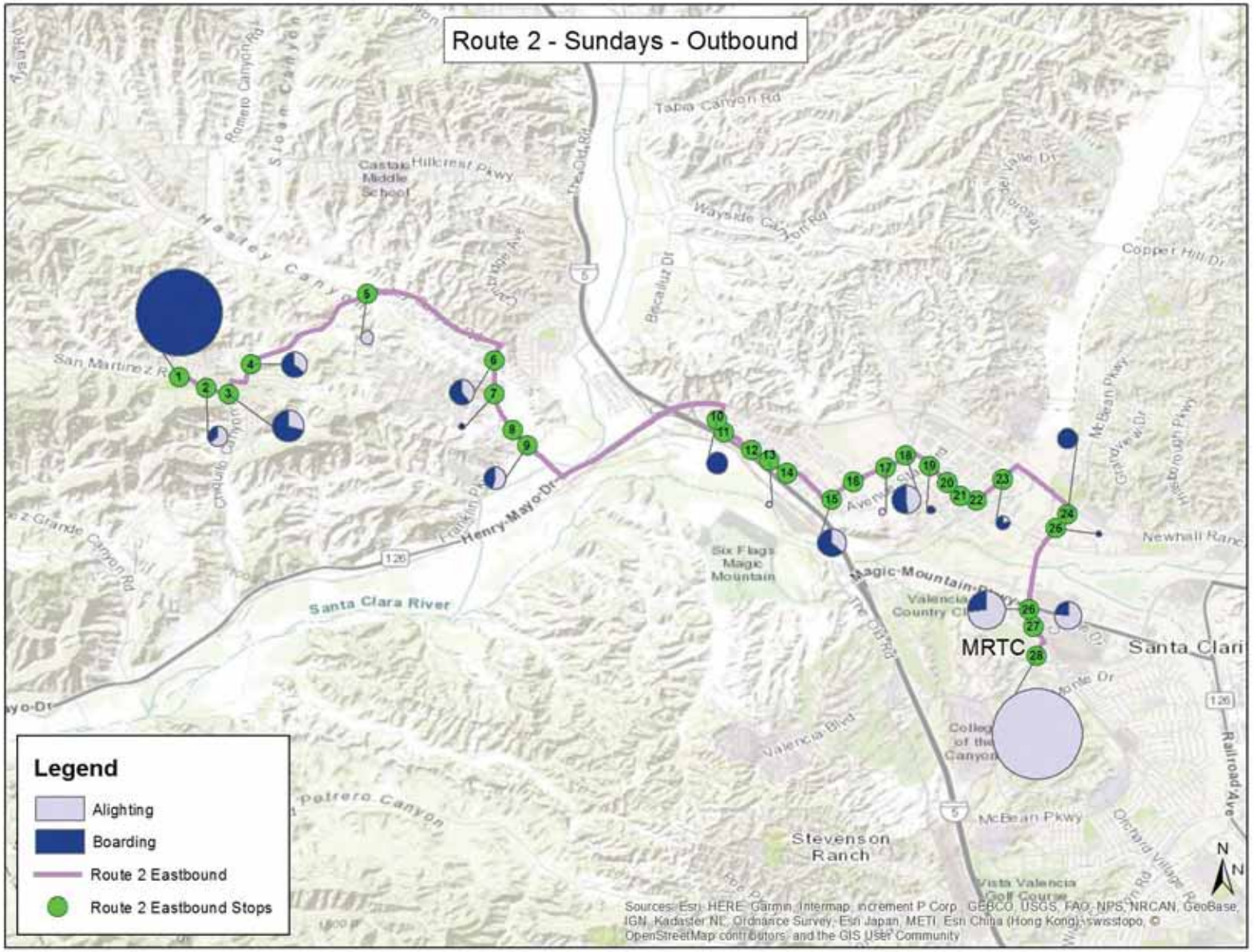
Exhibit 3.2.4 Route 2 Boarding and Alighting Maps




Route 2 - Weekdays - Inbound
Legend
Alighting
Boarding
Route 2 Westbound
Route 2 Westbound Stops
MRTC
Santa Clara River
Six Flags Magic Mountain
Stevenson Ranch
Hasley Canyon Rd
Hillcrest Pkwy
Wayside Canyon Rd
Copper Hill Dr
Newhall Ranch
Valencia Blvd
Railroad Ave
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 2 - Saturdays - Outbound
Tapia Canyon Rd
Hillcrest Pkwy
Wayside Canyon Rd
Copper Hill Dr
Becaiuz Dr
San Martinez Rd
Henry Mayo Dr
Franklin Pkwy
Six Flags Magic Mountain
Valencia Country Club
MRTC
Santa Clari
Newhall Ranc
Santa Clara River
Valencia Blvd
McBean Pkwy
Stevenson Ranch
Vista Valencia Golf Course
Railroad Ave
Legend
Alighting
Boarding
Route 2 Eastbound
Route 2 Eastbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 2 - Saturdays - Inbound
Legend
Alighting
Boarding
Route 2 Westbound
Route 2 Westbound Stops
MRTC
Santa Clara River
Six Flags Magic Mountain
Valencia Country Club
Stevenson Ranch
Vista Valencia Golf Course
Hasley Canyon
Hasley Canyon Rd
Hillcrest Pkwy
Wayside Canyon Rd
Magic Mountain Pkwy
McBean Pkwy
Valencia Blvd
Newhall Ranch
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
N


Route 2 - Sundays - Outbound
Legend
Alighting
Boarding
Route 2 Eastbound
Route 2 Eastbound Stops
MRTC
Santa Clara River
Henry Mayo Dr
Hasley Canyon
Tapia Canyon Rd
Hillcrest Pkwy
Wayside Canyon Rd
Copper Hill Dr
McBean Pkwy
Magic Mountain Pkwy
Six Flags Magic Mountain
Valencia Blvd
Stevenson Ranch
Newhall Ranch
Railroad Ave
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

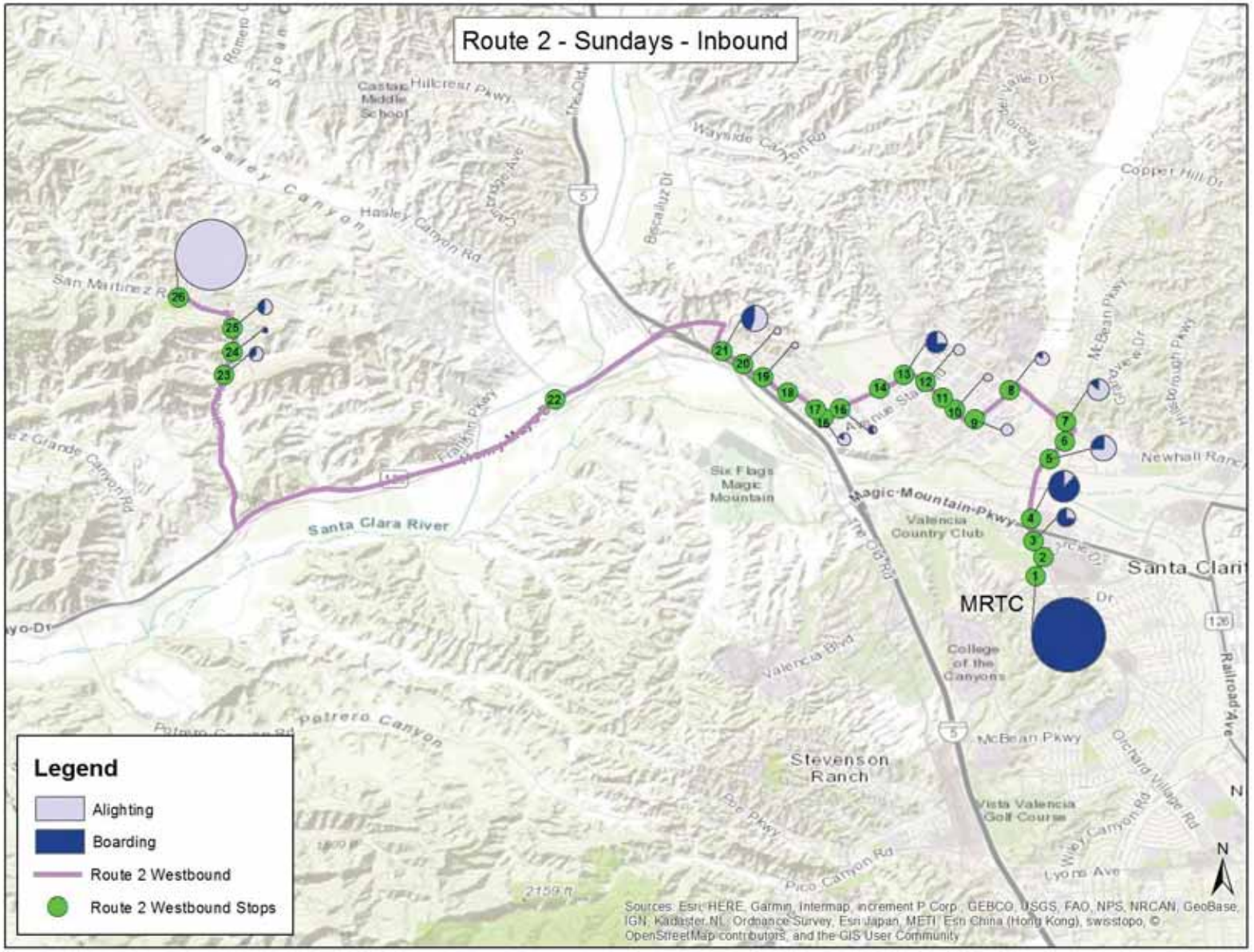

Route 2 - Sundays - Inbound
Legend
Alighting
Boarding
Route 2 Westbound
Route 2 Westbound Stops
MRTC
Santa Clara River
Six Flags Magic Mountain
Valencia Country Club
College of the Canyons
Stevenson Ranch
Vista Valencia Golf Course
Newhall Ranch
Hasley Canyon
Hasley Canyon Rd
Magic Mountain Pkwy
Valencia Blvd
McBean Pkwy
Lyons Ave
Pico Canyon Rd
Railroad Ave
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.2.5 Route 2 Stop Lists

Route 2 Inbound Stop List	
Stop Number	Stop Name
1	McBean MRTC
2	McBean Pky
3	McBean Pky & Town Center Dr
4	McBean Pky & Creekside Rd
5	McBean Pky & Bridgeport Ln
6	McBean Pky & Baywood Ln
7	Newhall Ranch Rd & Baywood Ln
8	Ave Tibbitts & Nth Dickason Dr
9	Ave Tibbitts & Ave Scott
10	Ave Scott & Anza Dr
11	Ave Scott & Ave Kearny
12	Ave Scott & Ave Stanford
13	Rye Canyon Rd & Ave Scott
14	Rye Canyon Rd & Beale Ct
15	Rye Canyon Rd & Ave Crocker
16	Ave Stanford & Rye Canyon Rd
17	Ave Stanford & Rye Canyon Rd
18	Ave Stanford & Huntington Ln
19	Ave Stanford & Ave Hall
20	Ave Stanford & Technology Dr
21	Ave Stanford & Vanderbilt Wy
22	Henry Mayo Dr & CA-126
23	Chiquito Canyon Rd & Lincoln Ave
24	Chiquito Canyon Rd & Taft Ct
25	Chiquito Canyon Rd & Taylor St
26	San Martinez Rd & Val Verde Rd

Route 2 Outbound Stop List	
Stop Number	Stop Name
1	San Martinez Rd & Val Verde Rd
2	San Martinez Rd & Neuraschel St
3	San Martinez Rd & Chiquito Canyon Rd
4	Del Valle Rd & Silver St
5	Del Valle Rd & Hasley Canyon Rd
6	Commerce Center Dr & Industry Dr
7	Commerce Center Dr & Witherspoon Pky
8	Commerce Center Dr & Harrison Pky
9	Commerce Center Dr & Franklin Pky
10	Vanderbilt Wy & Westinghouse Pl
11	Ave Stanford & Vanderbilt Wy
12	Ave Stanford & Technology Dr
13	Ave Stanford & Ave Hall
14	Ave Stanford & Huntington Ln
15	Rye Canyon Rd & Ave Stanford
16	Rye Canyon Rd & Ave Crocker
17	Rye Canyon Rd & Beale Ct
18	Rye Canyon Rd & Ave Scott
19	Ave Scott & Ave Stanford
20	Ave Scott & Ave Kearny
21	Ave Scott & Anza Dr
22	Ave Tibbitts & Ave Scott
23	Ave Tibbitts & Ave Mentry
24	McBean Pky & Newhall Ranch Rd
25	McBean Pky & Baywood Ln
26	McBean Pky & Magic Mountain Pky
27	McBean Pky & Town Center Dr
28	McBean MRTC

Average load factor by trip

Both inbound and outbound trips on Route 2 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.33. Trips with the highest average peak loads for each day and direction are identified below.

Exhibit 3.2.6 Route 2 Trips with Highest Average Peak Loads

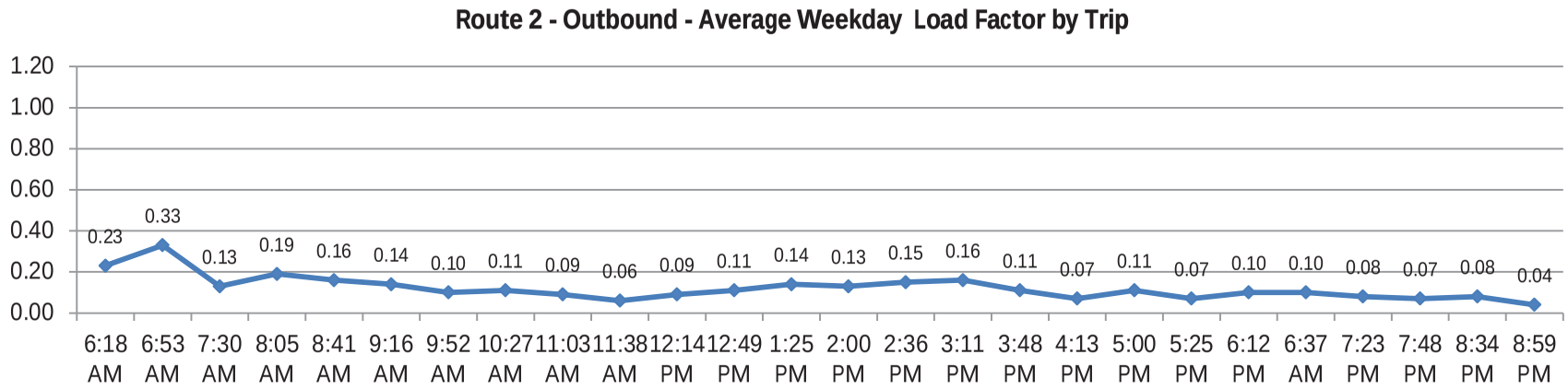
Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	6:53 a.m.	0.33
Weekday	Inbound	3:18 p.m.	0.33
Saturday	Outbound	7:51 a.m.	0.20
Saturday	Inbound	10:48 a.m. & 6:18 p.m.	0.19
Sunday	Outbound	9:36 a.m.	0.18
Sunday	Inbound	2:03 p.m.	0.17

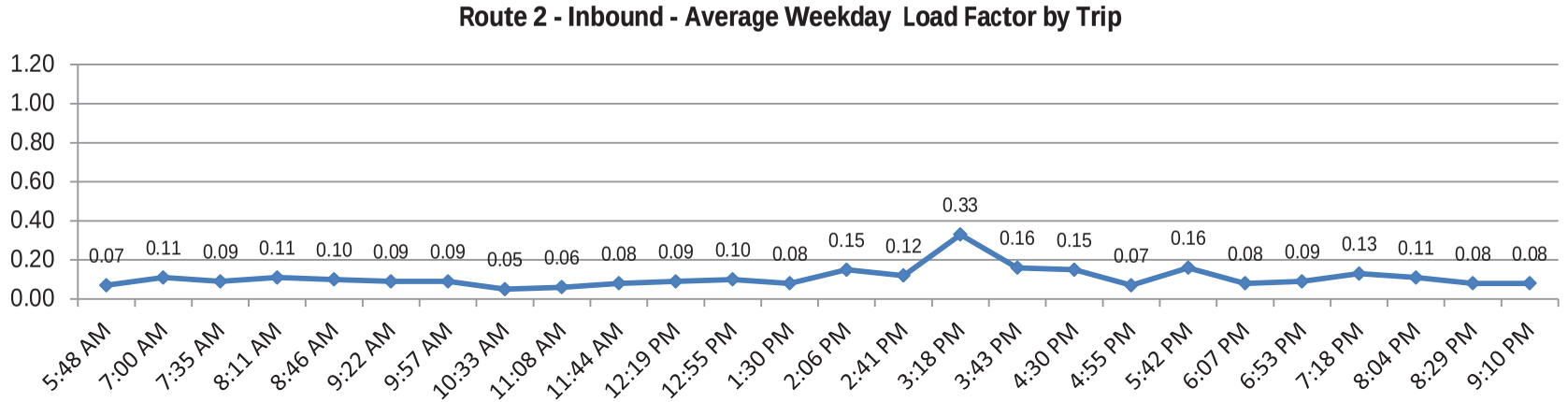
There were two individual trips which exhibited a load factor of at least 0.50. Those trips are as follows:

Exhibit 3.2.7 Route 2 Trips with Load Factor at least 0.50

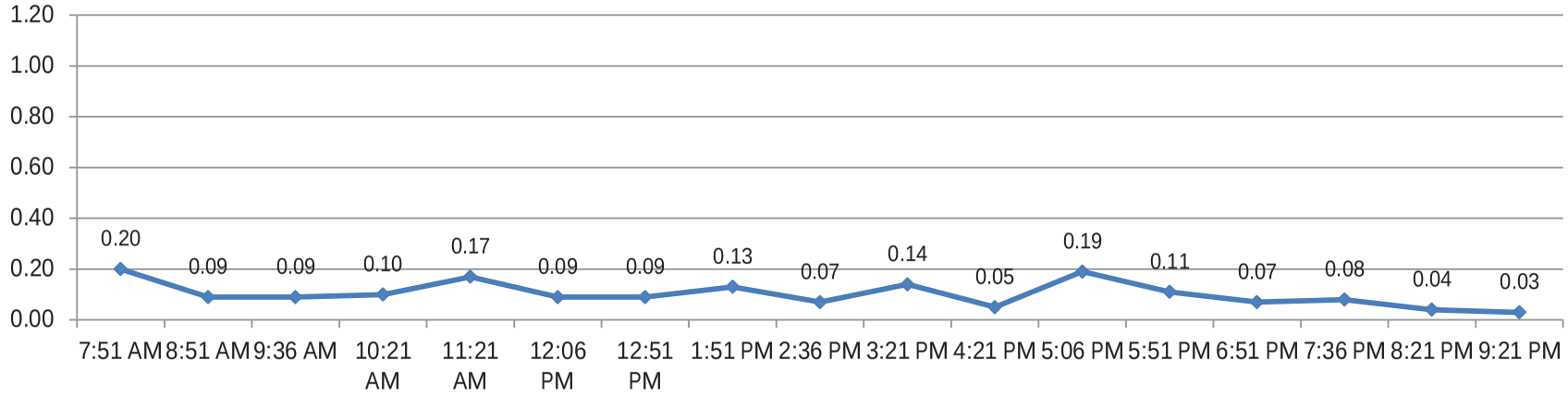
Date	Direction	Trip	Load factor
April 16	Outbound	6:53 a.m.	0.58
April 30	Outbound	6:53 a.m.	0.56

Exhibit 3.2.8 Route 2 Average Load Factor by Trip

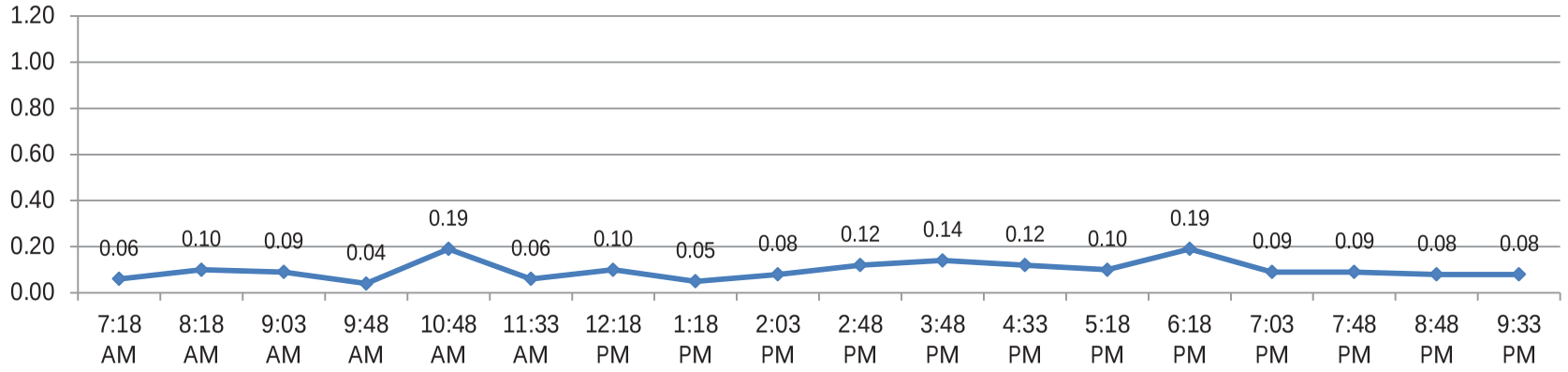




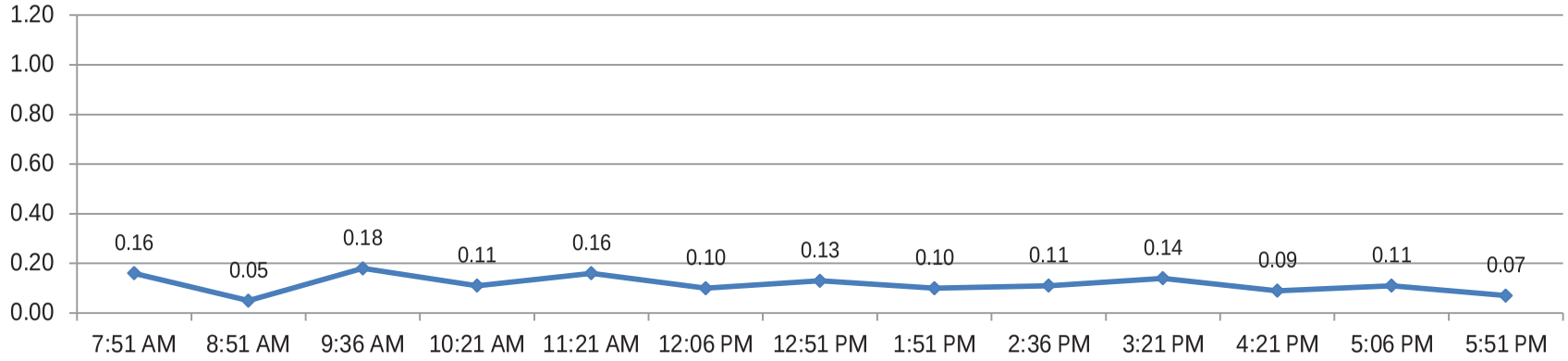
Route 2- Outbound - Saturday Average Load Factor by Trip



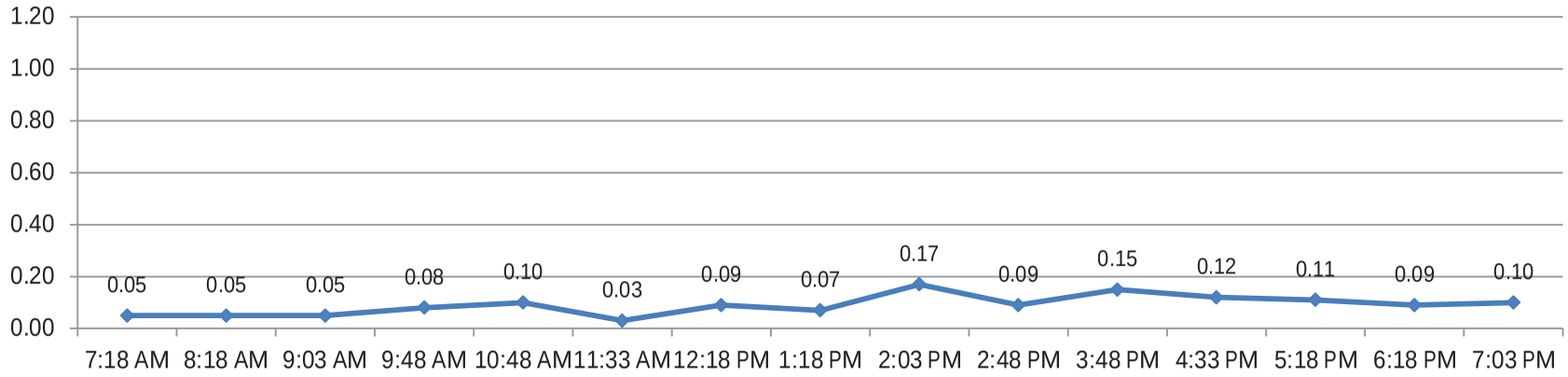
Route 2 - Inbound - Saturday Average Load Factor by Trip



Route 2- Outbound - Sunday Average Load Factor by Trip



Route 2 - Inbound - Sunday Average Load Factor by Trip



Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 2's weekday outbound service exhibits slightly better overall schedule adherence (85 percent) than the inbound service (80.3 percent). On Saturday, schedule adherence improves significantly, with the outbound service operating at 94.1 percent on-time and the inbound at 89.7 percent. On Sunday, schedule adherence improves further, with 96.9 percent of outbound trips and 97.8 percent of inbound trips on-time.

Schedule adherence by time-point

Given the 10-minute layover that occurs at the MRTC, schedule adherence at the MRTC was consistently high for both inbound and outbound services. Sunday outbound arrivals at the MRTC and inbound arrivals at Val Verde Park had the highest schedule adherence (100 percent). The lowest level of on-time trips was observed inbound at Avenue Stanford/Rye Canyon on weekdays (56.8 percent).

Of the three time-points on Route 2, Avenue Stanford/Rye Canyon consistently had the lowest performance. However, time-points at the beginning and end of each trip were much more likely to be on time. Therefore, there may be some adjustments to the schedule that would balance the schedule so as to improve schedule adherence at that time-point.

Schedule adherence by time of day

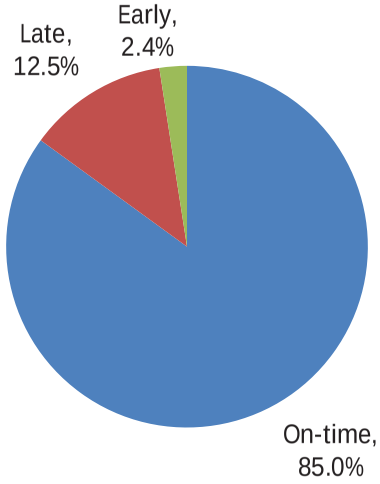
On weekdays, schedule adherence is generally highest during Mid-day periods (91.6 percent on-time for outbound and 88.7 percent on-time for inbound). The single Early AM inbound trip generally operates 100 percent on-time. PM Peak sees the lowest percentage of on-time trips for both inbound (54.1 percent) and outbound (65.2 percent). The high number of late trips suggests additional runtime may be needed during this day-part. The AM Peak period on the outbound service experienced the most early trips on weekdays.

On Saturday, most day-parts experienced schedule adherence of 86 percent or better. The exception was AM Peak inbound service, which had an on-time performance of just 76.2 percent. Saturday outbound service saw "hot-running" (early departures) in every day-part, though AM Peak had the most early trips (4.8 percent).

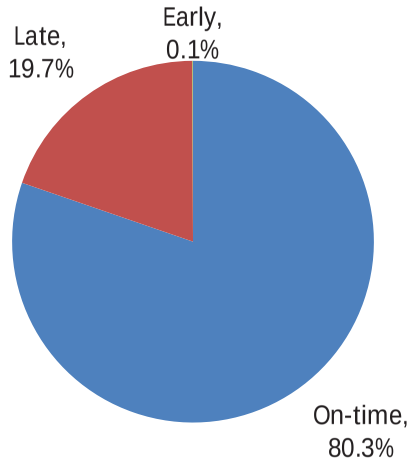
Sunday service had the best schedule adherence, ranging from 95 percent (outbound Mid-day service) to 100 percent (PM Peak and Late PM service in both directions). There were very few late trips; early departures were more of a concern. Five percent of Mid-day outbound trips departed early.

Exhibit 3.2.9 Route 2 Overall Schedule Adherence

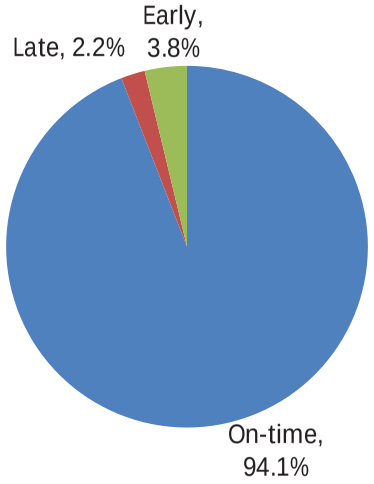
Route 2- Outbound - Overall Weekday Schedule Adherence



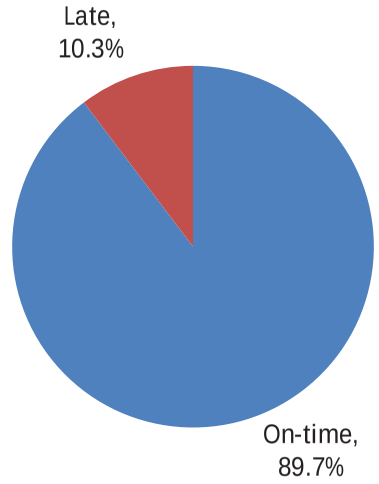
Route 2- Inbound - Overall Weekday Schedule Adherence

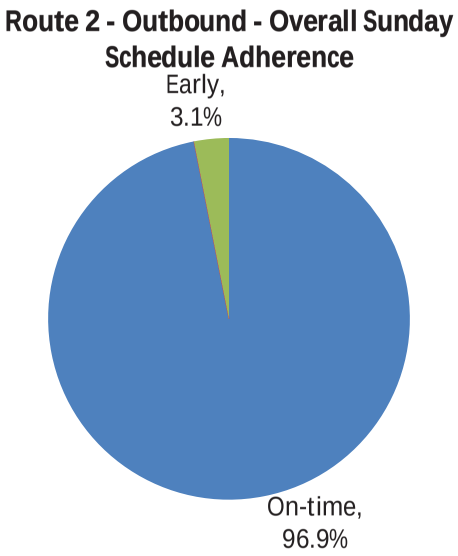


Route 2 - Outbound - Overall Saturday Schedule Adherence



Route 1 - Inbound - Overall Saturday Schedule Adherence




Route 2 - Outbound - Overall Sunday Schedule Adherence
Early, 3.1%
On-time, 96.9%

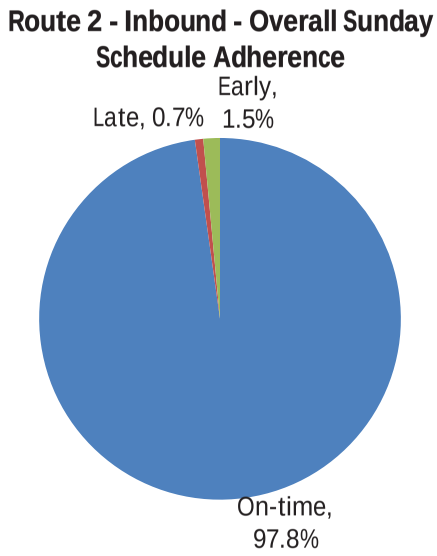
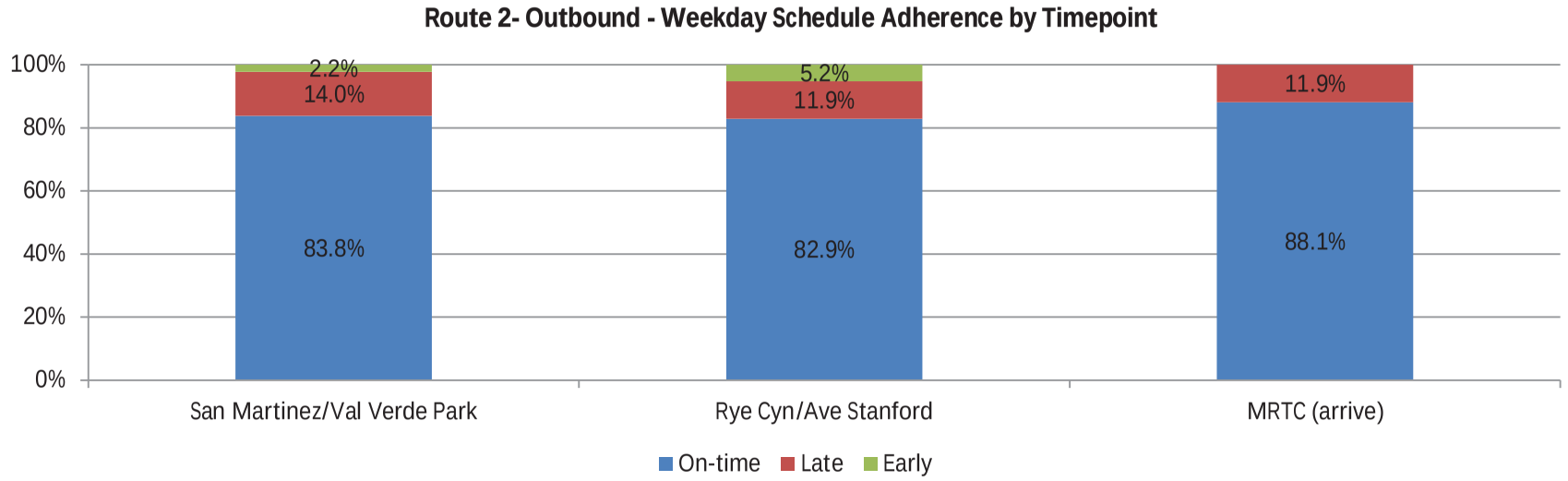
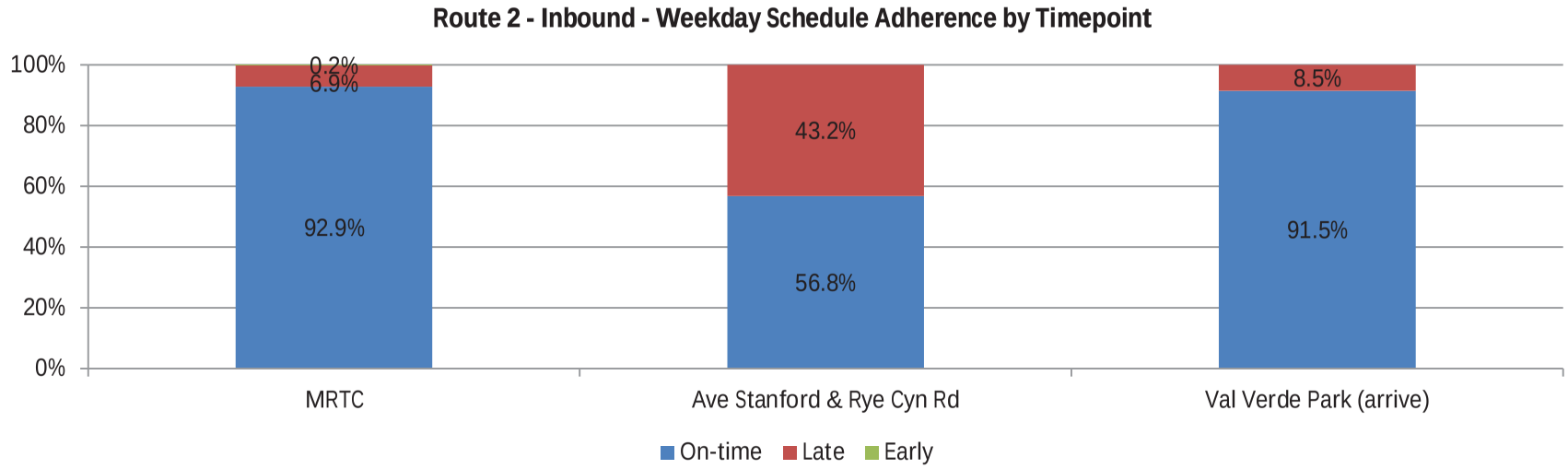
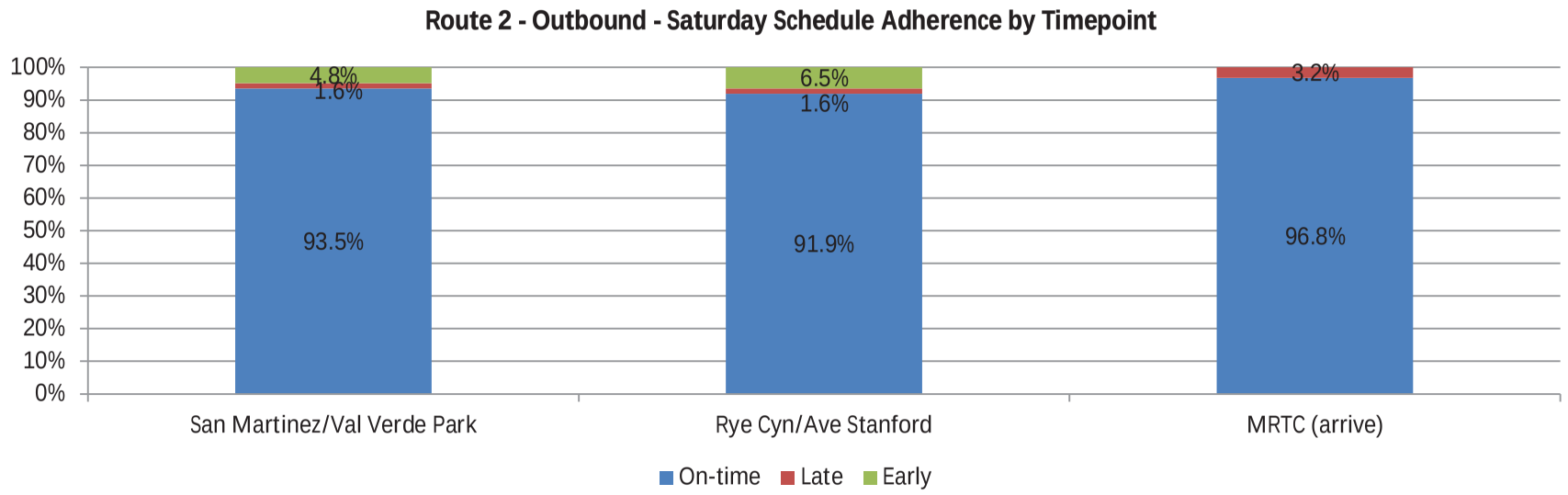
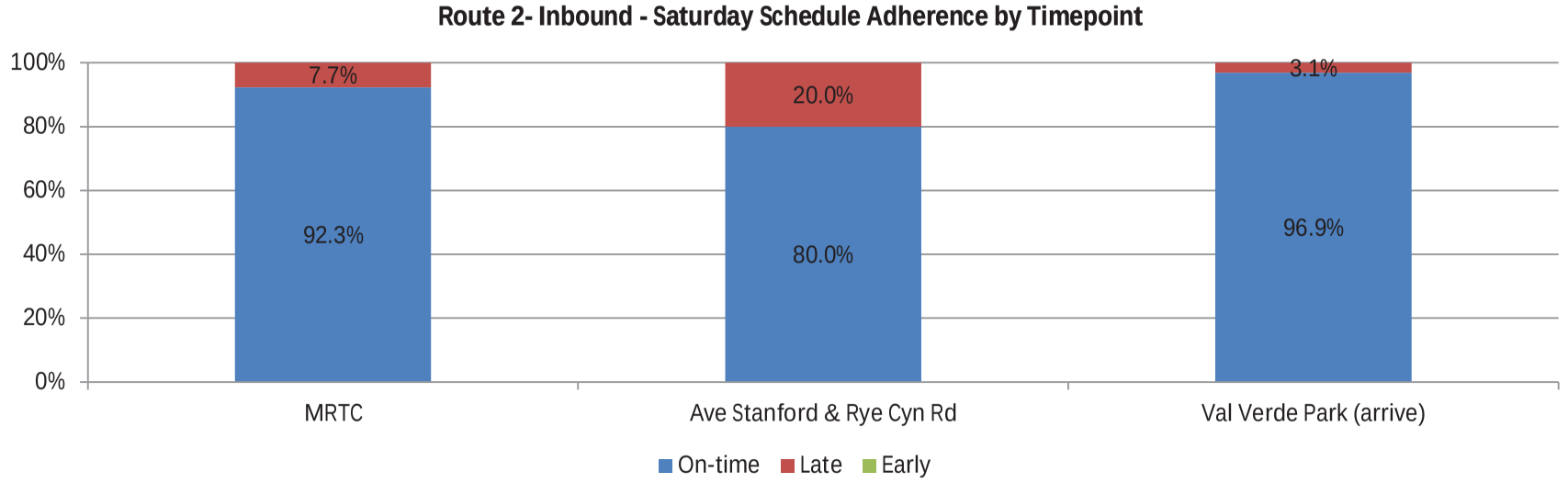

Route 2 - Inbound - Overall Sunday Schedule Adherence
Late, 0.7%
Early, 1.5%
On-time, 97.8%

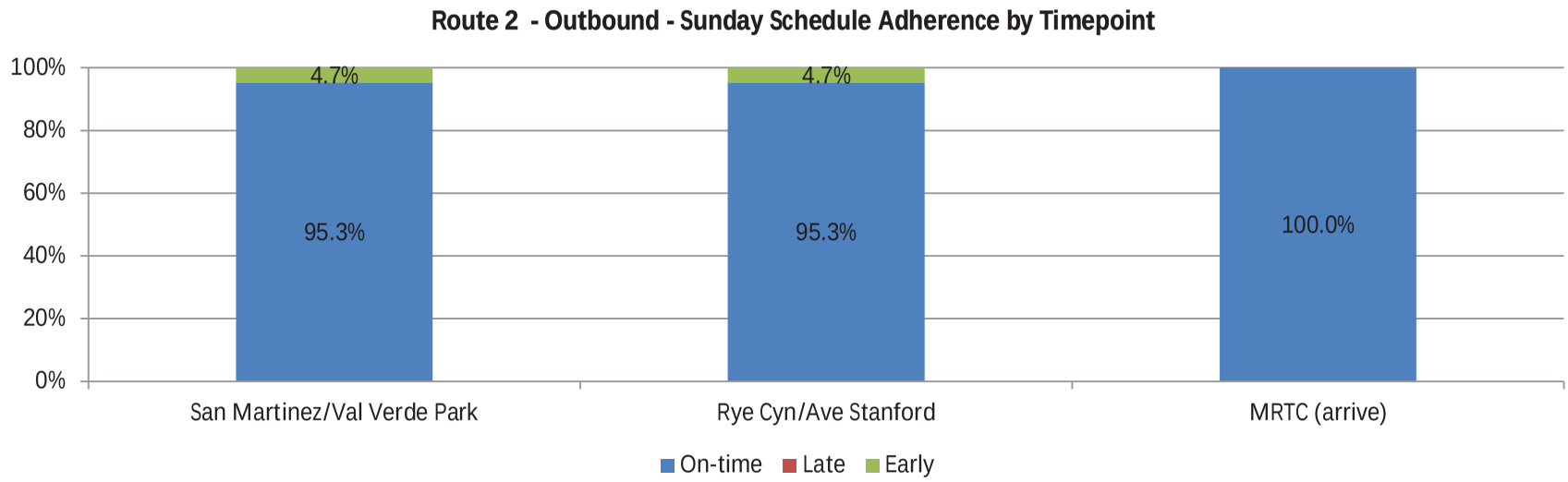
Exhibit 3.2.10 Route 2 Schedule Adherence by Time-point






Route 2 - Outbound - Saturday Schedule Adherence by Timepoint
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
4.8%
1.6%
93.5%
6.5%
1.6%
91.9%
3.2%
96.8%
San Martinez/Val Verde Park
Rye Cyn/Ave Stanford
MRTC (arrive)
On-time
Late
Early


Route 2- Inbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
7.7%
92.3%
20.0%
80.0%
3.1%
96.9%
MRTC
Ave Stanford & Rye Cyn Rd
Val Verde Park (arrive)
On-time
Late
Early


Route 2 - Outbound - Sunday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
4.7%
4.7%
95.3%
95.3%
100.0%
San Martinez/Val Verde Park
Rye Cyn/Ave Stanford
MRTC (arrive)
On-time
Late
Early

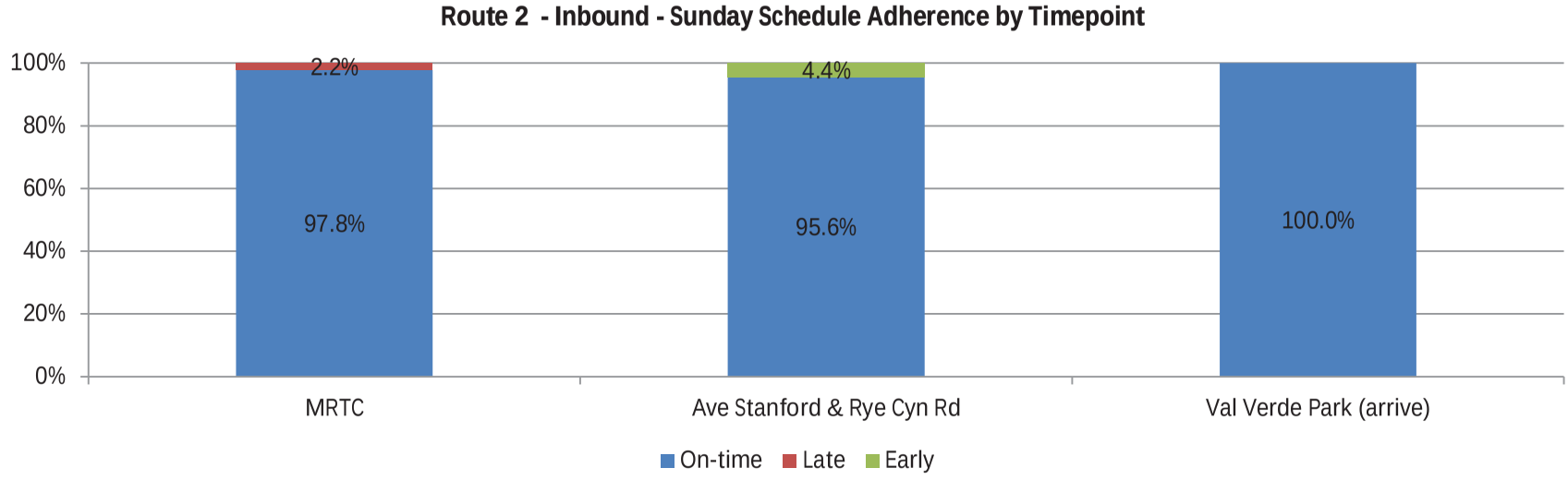
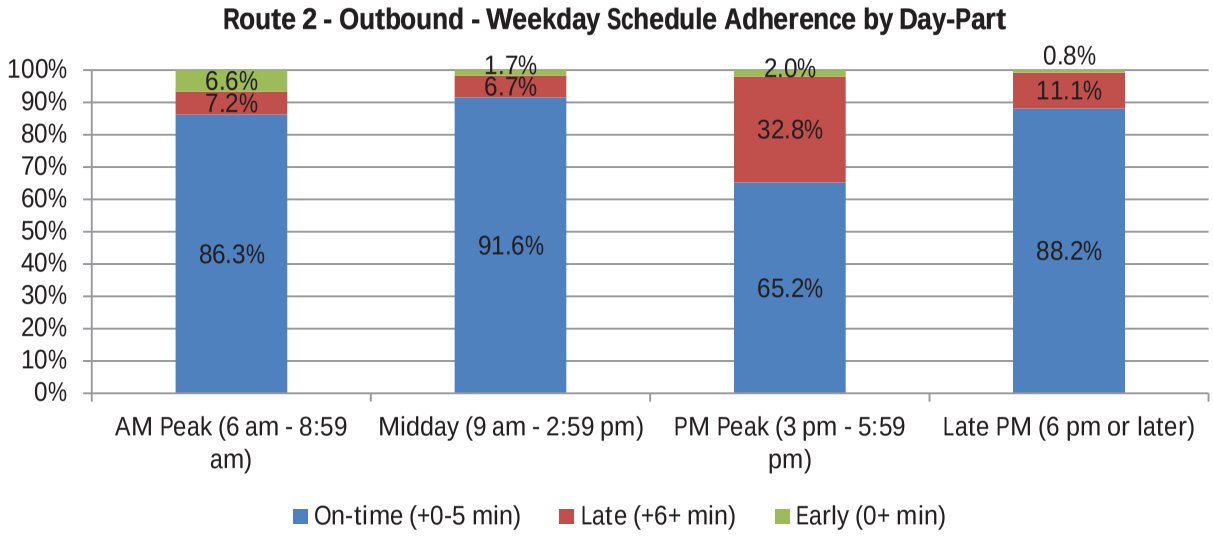
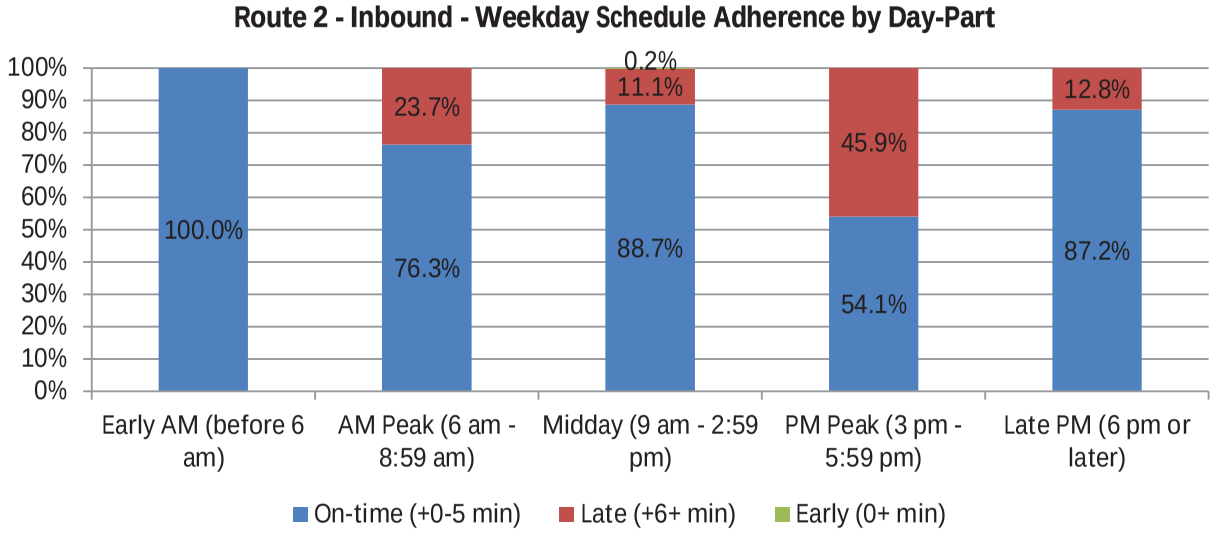
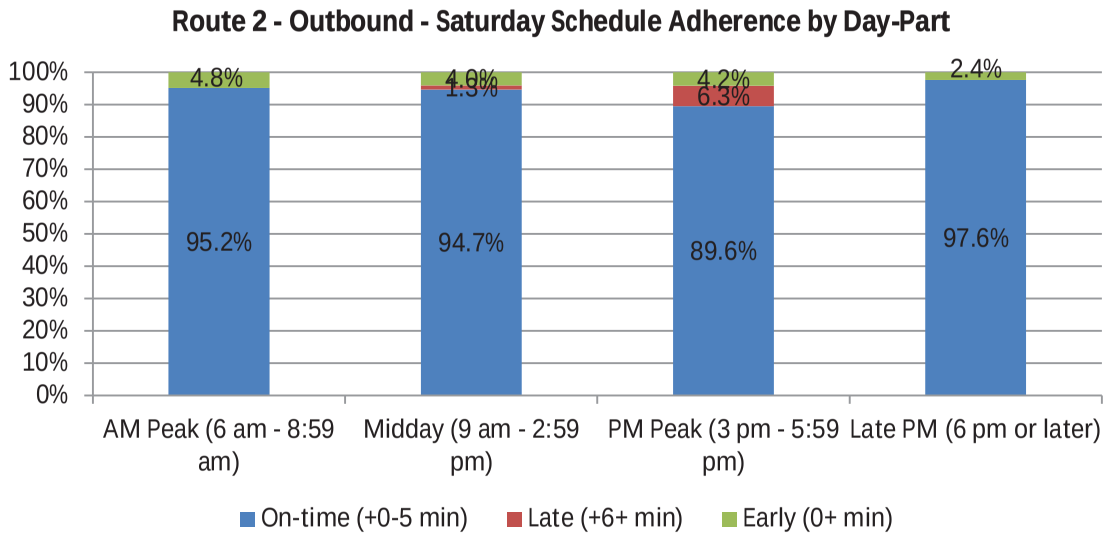
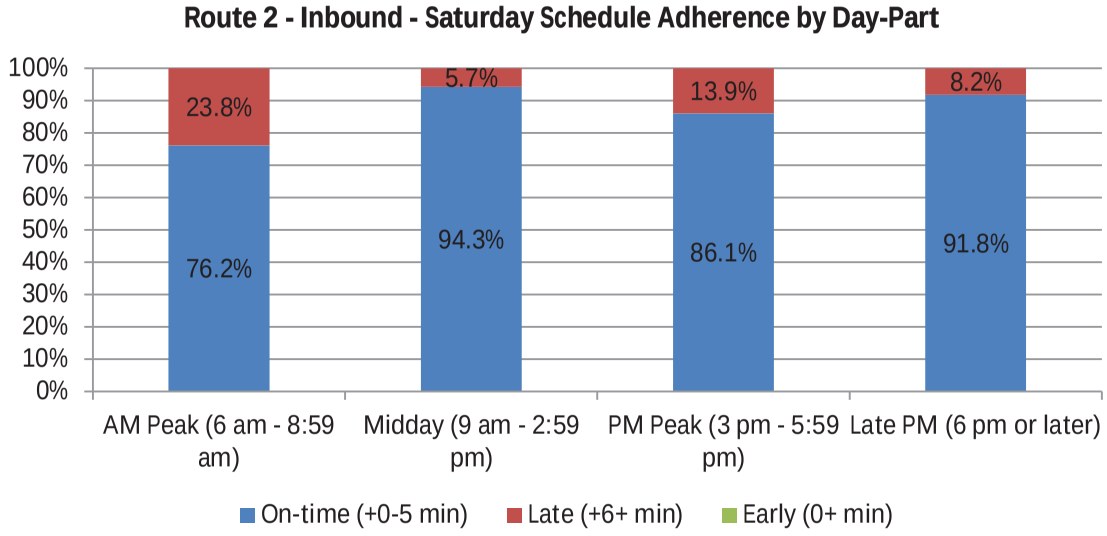

Route 2 - Inbound - Sunday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
2.2%
4.4%
97.8%
95.6%
100.0%
MRTC
Ave Stanford & Rye Cyn Rd
Val Verde Park (arrive)
On-time
Late
Early

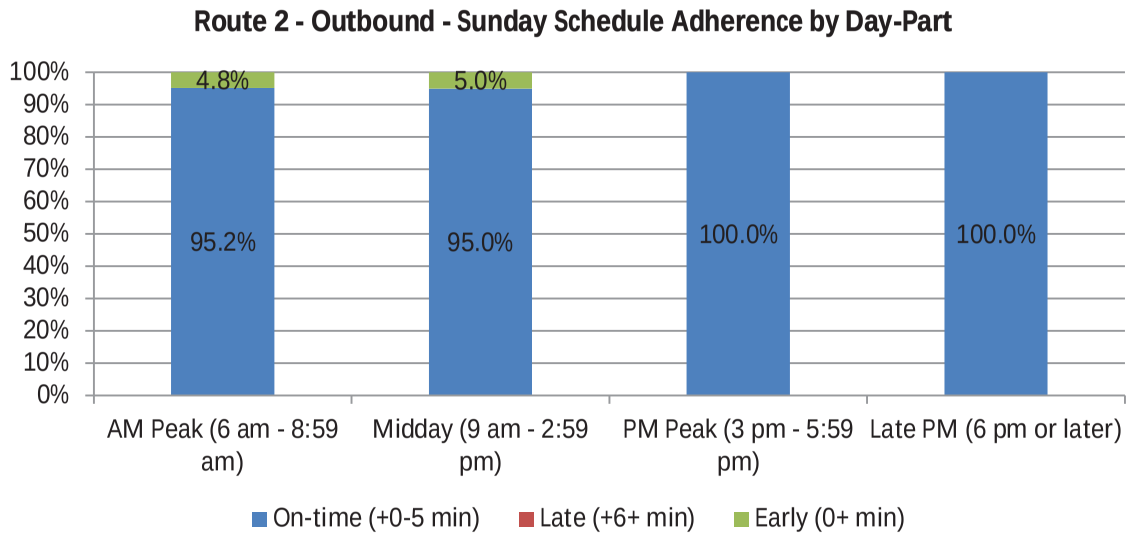
Exhibit 3.2.11 Route 2 Schedule Adherence by Day-Part

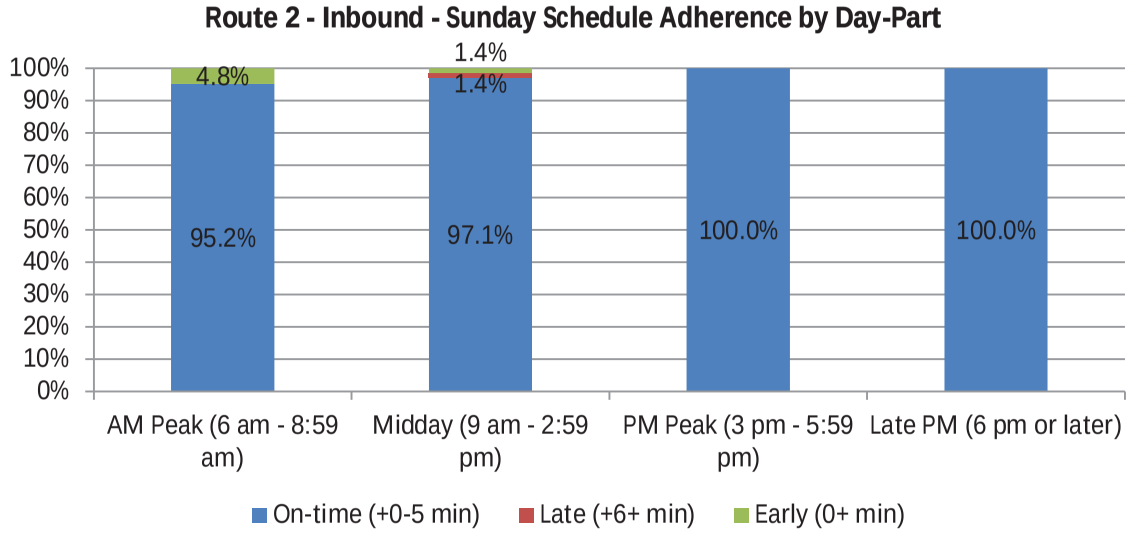





Route 2 - Outbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
4.8%
95.2%
4.0%
1.3%
94.7%
4.2%
6.3%
89.6%
2.4%
97.6%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 2 - Inbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
23.8%
76.2%
5.7%
94.3%
13.9%
86.1%
8.2%
91.8%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 2 - Outbound - Sunday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
4.8%
5.0%
95.2%
95.0%
100.0%
100.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 2 - Inbound - Sunday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1.4%
4.8%
1.4%
95.2%
97.1%
100.0%
100.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route Performance

Overall ridership

Exhibit 3.2.12 Route 2 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.2.13 Route 2 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking (overall)
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 3 Profile and Performance Analysis

Route Description

Route 3 serves Six Flags Magic Mountain, Kaiser Permanente, College of the Canyons, MRTC, Westfield Valencia Town Center, Bridgeport, Bouquet Center Shopping Center, Arroyo Seco Junior High School, and Santa Clarita Park. Route 3 mirrors Route 7 for a good portion of its alignment, and both routes travel between Six Flags Magic Mountain and Seco Canyon. The routes diverge between Newhall Ranch Road/McBean Parkway and Copper Hill Road/Seco Canyon Road.

Primary streets of operation include Tourney Road, Valencia Boulevard, McBean Parkway, Newhall Ranch Road, Bouquet Canyon Road, and Seco Canyon Road. Route 3 interlines with Route 7 on each trip, providing what is essentially a single-seat ride throughout Saugus and Valencia.

Inbound service is defined as that originating at Six Flags Magic Mountain and traveling to Seco Canyon Road and Tamarack Lane. Outbound service travels in the opposite direction. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, Route 3 outbound ridership peaks twice early in the day (7:14 a.m. and 10:02 a.m.) (average of 18 and 19 riders per trip, respectively). Ridership gradually declines throughout the rest of the day. Inbound ridership peaks at 3:53 p.m. (average of 17 riders).

On Saturday, outbound ridership sees an almost identical pattern as on weekdays, with two peaks early in the day (7:14 a.m. and 10:02 a.m.) (average of 18 and 19 riders per trip, respectively), with a decline through the balance of the day. Inbound service peaks at 5:18 p.m. with an average of 16 riders per trip. Several trips see an average of 11 riders (1:03 p.m., 3:53 p.m., and 8:08 p.m.), with ridership remaining strong through the end of the day.

Sunday service largely mirrors Saturday in terms of the outbound service. Service peaks at 10:02 a.m. with an average of 16 riders per trip, with a smaller peak at 7:14 a.m. (average of 13 riders). Inbound service sees a small peak at 2:28 p.m. (average of 11 riders) and again at 5:18 p.m. (average of 14 riders).

The inbound 10:13 a.m. trip experiences the least amount of riders on both Saturday and Sunday. The last trip of the day on the outbound service has the least amount of riders regardless of the day of the week.

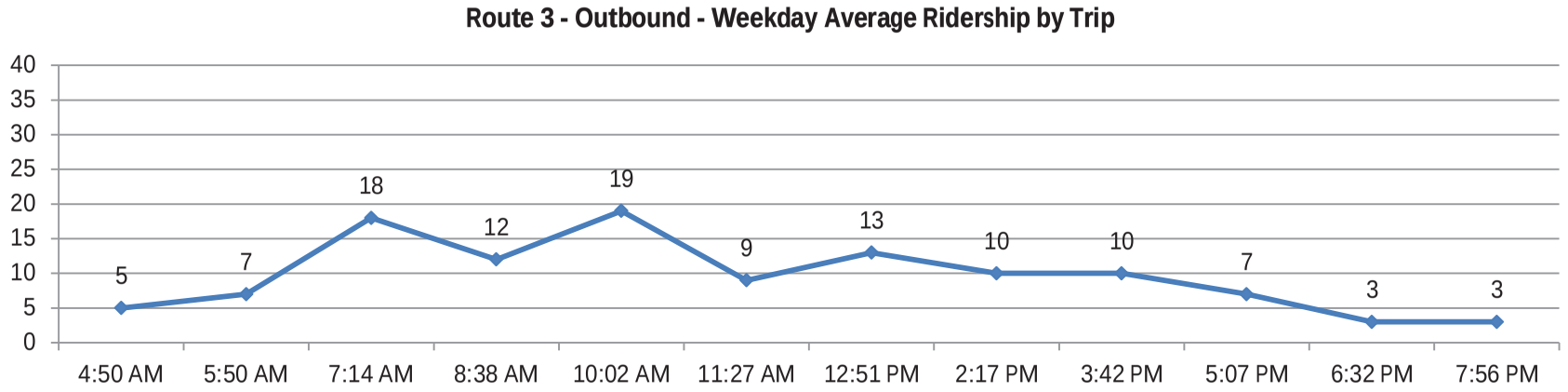
Average ridership by time of day

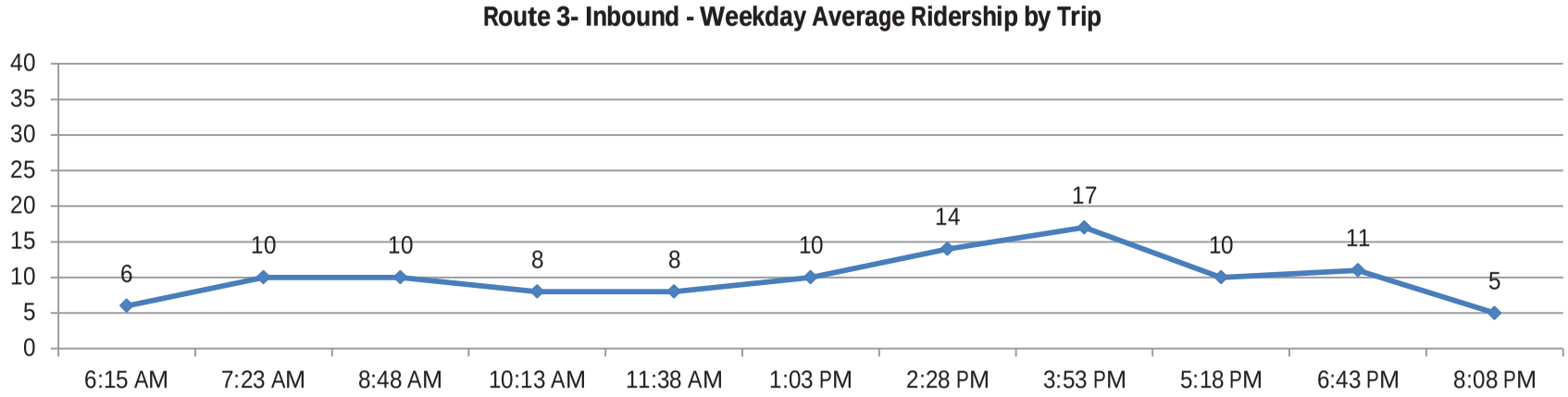
On weekdays, the outbound service experiences its highest average ridership during the AM Peak day-parts (average of 15 riders). The inbound service peaks during the PM Peak day-part, with an average of 14 riders.

On Saturday, the outbound service sees the most riders during the AM Peak period (average of 14 riders), while the inbound service sees the most riders during the PM Peak period (also average of 14 riders).

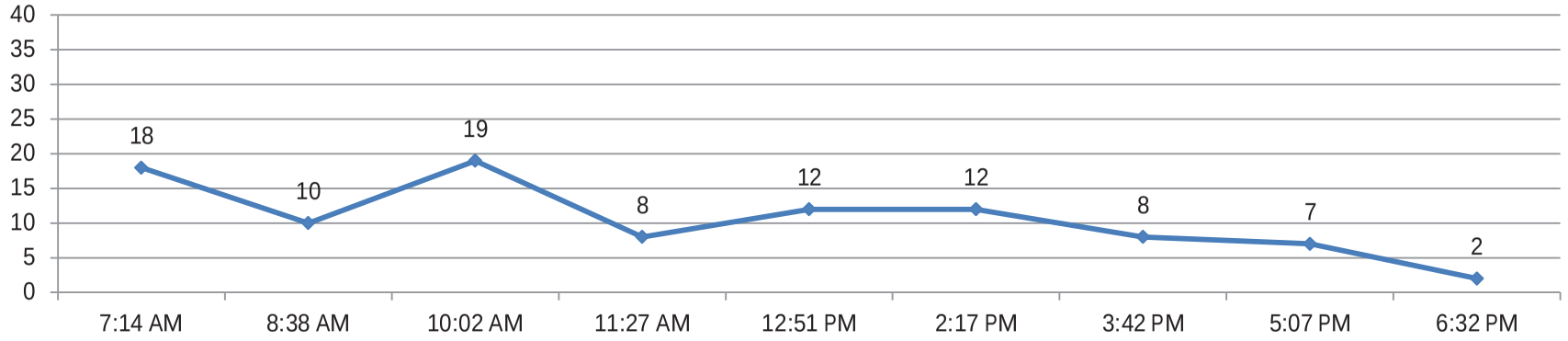
On Sunday, the outbound service sees the most riders during the Mid-day period (average of 11 riders), while the inbound service sees the most riders during the PM Peak period (average of 11 riders).

Exhibit 3.3.1 Route 3 Average Ridership by Trip

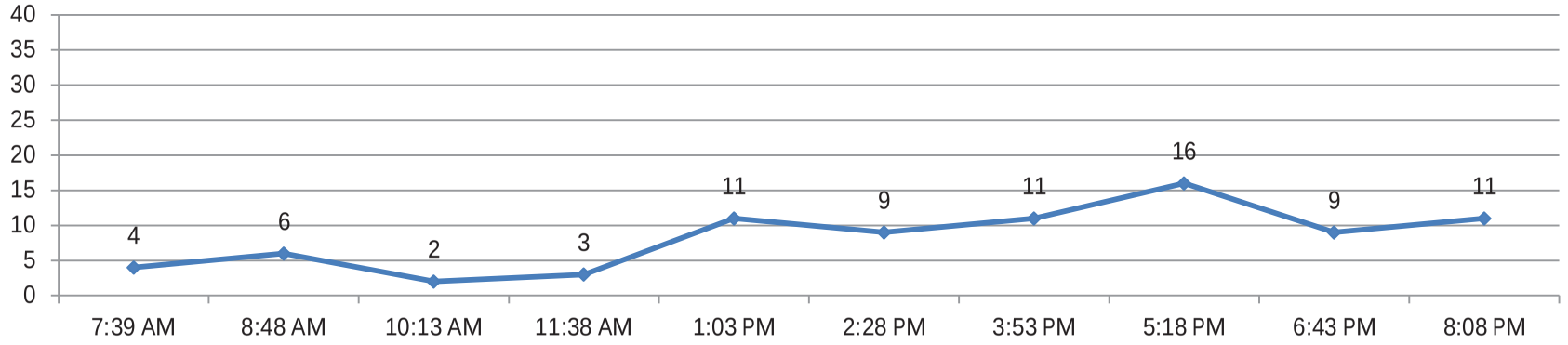




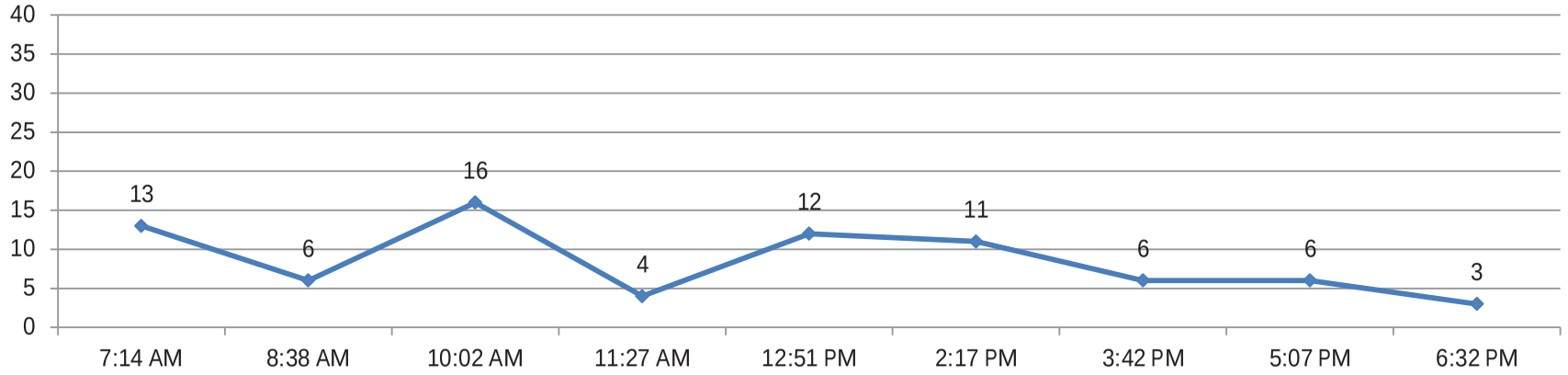
Route 3 - Outbound - Saturday Average Ridership by Trip



Route 3 - Inbound - Saturday Average Ridership by Trip



Route 3 - Outbound - Sunday Average Ridership by Trip



Route 3 - Inbound - Sunday Average Ridership by Trip

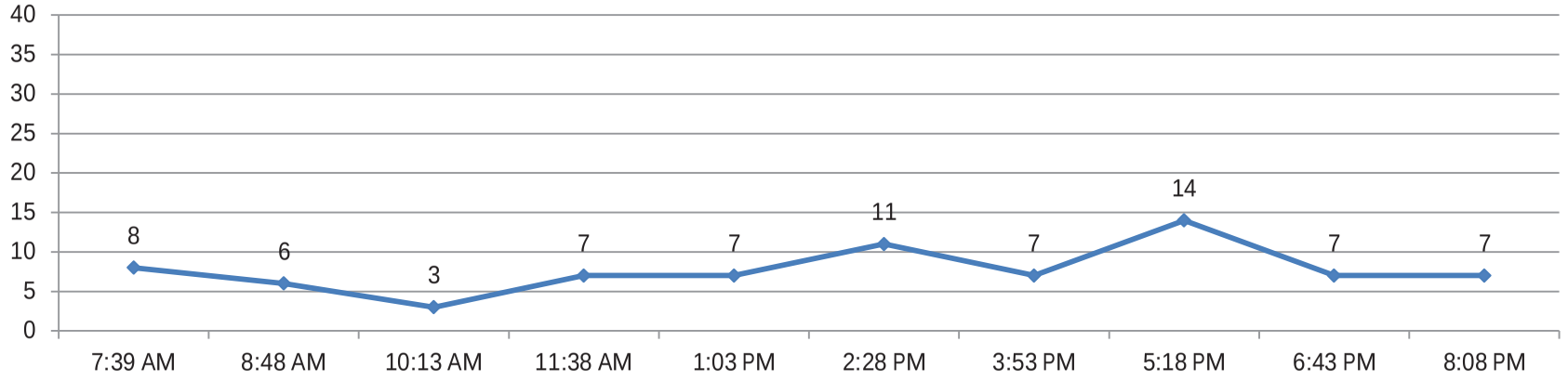
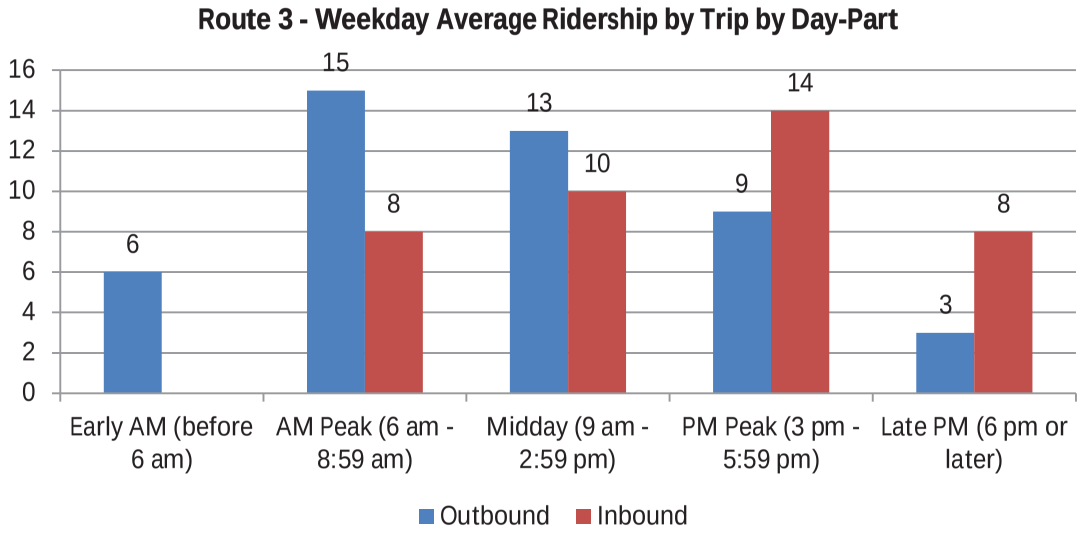
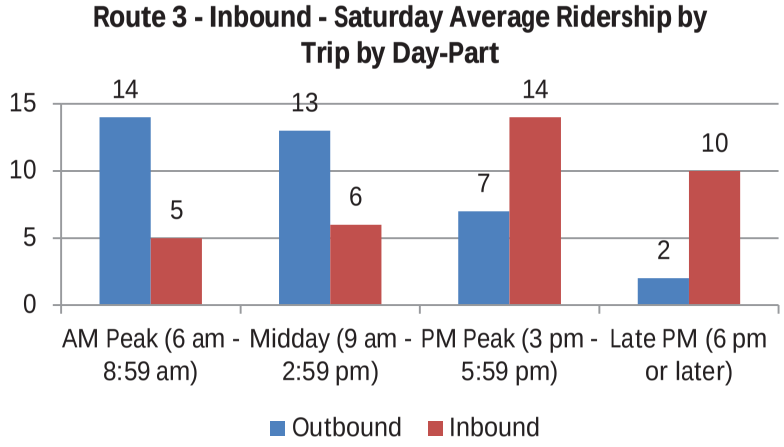
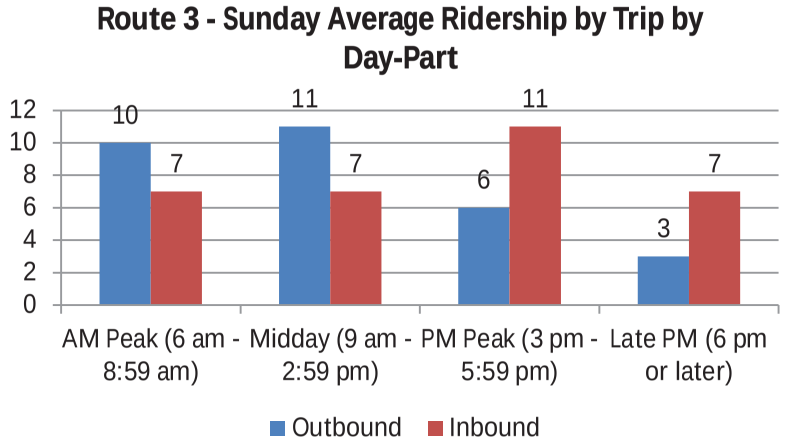


Exhibit 3.3.2 Route 3 Average Ridership by Trip by Day-Part







Average ridership (boardings) by segment

On weekdays, inbound boardings are highest within the MRTC to Seco Canyon/Bouquet Canyon route segment. Outbound boardings are highest within the Tourney Rd/Wayne Mills to MRTC segment, followed by the Seco Canyon/Decoro to Tamarack/Lemon segment. Average boardings per trip are highest on the inbound MRTC to Seco Canyon/Bouquet Canyon segment.

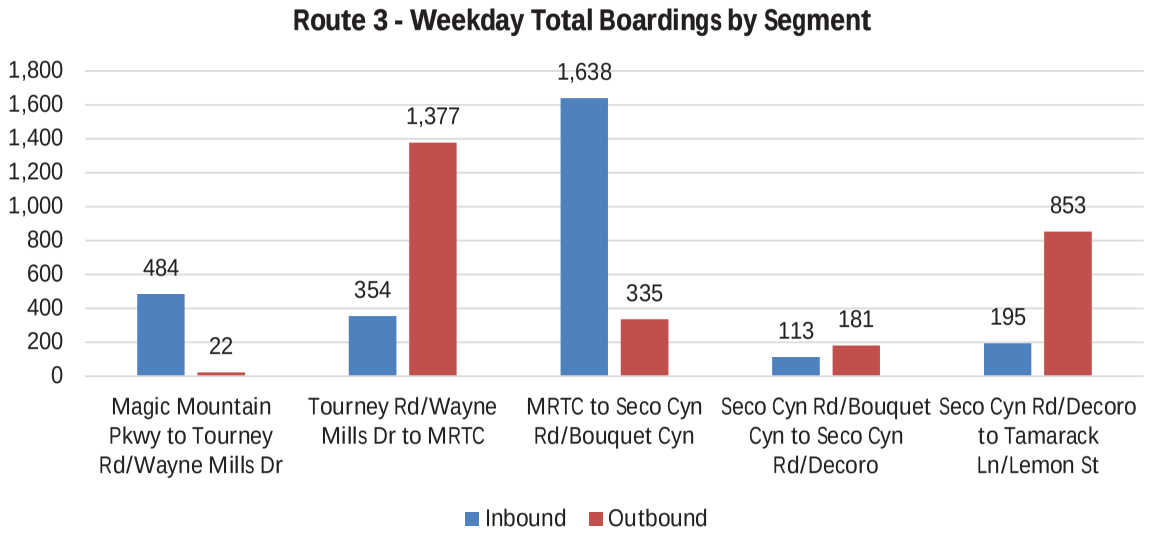
On Saturday, inbound boardings are highest within the MRTC to Seco Canyon/Bouquet Canyon route segment, followed by the Magic Mountain Pkwy to Tourney Rd/Wayne Mills route segment. Outbound boardings are highest within the Tourney Rd/Wayne Mills to MRTC segment. Average boardings per trip are highest on the outbound Tourney Rd/Wayne Mills to MRTC segment.

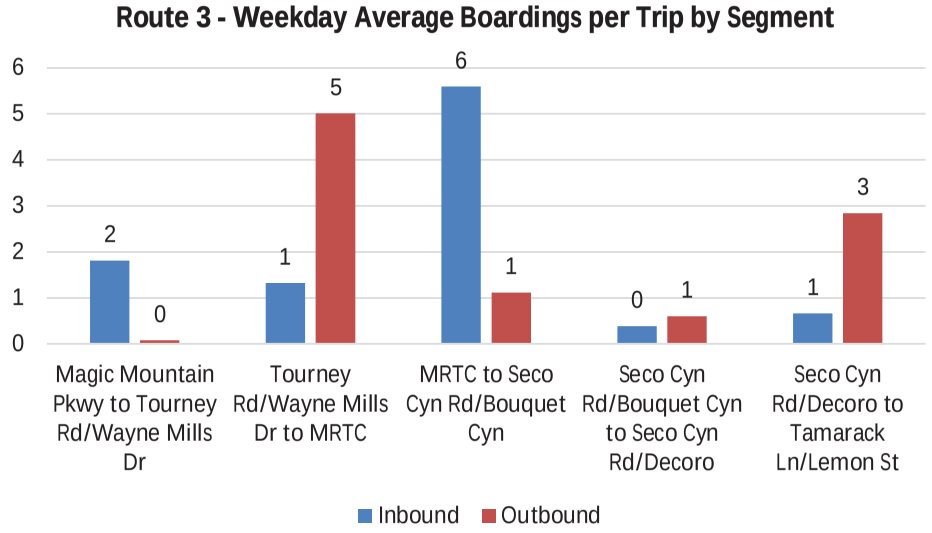
On Sunday, inbound boardings are highest within the MRTC to Seco Canyon/Bouquet Canyon route segment. Outbound boardings are highest within the Tourney Rd/Wayne Mills to MRTC segment. Average boardings per trip are highest on the outbound Tourney Rd/Wayne Mills to MRTC segment.

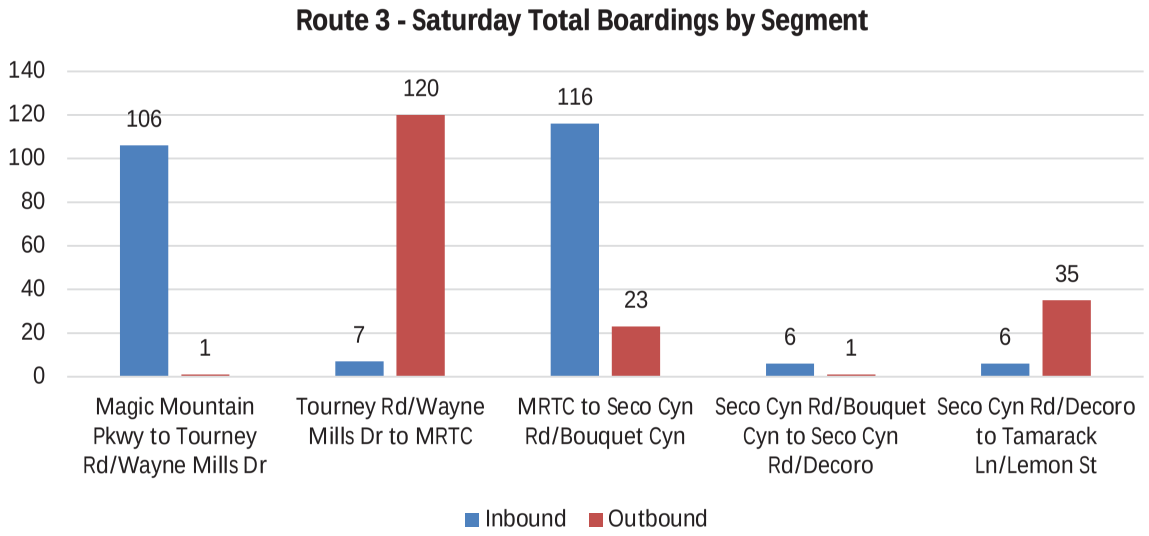
Average boarding and alighting by stop

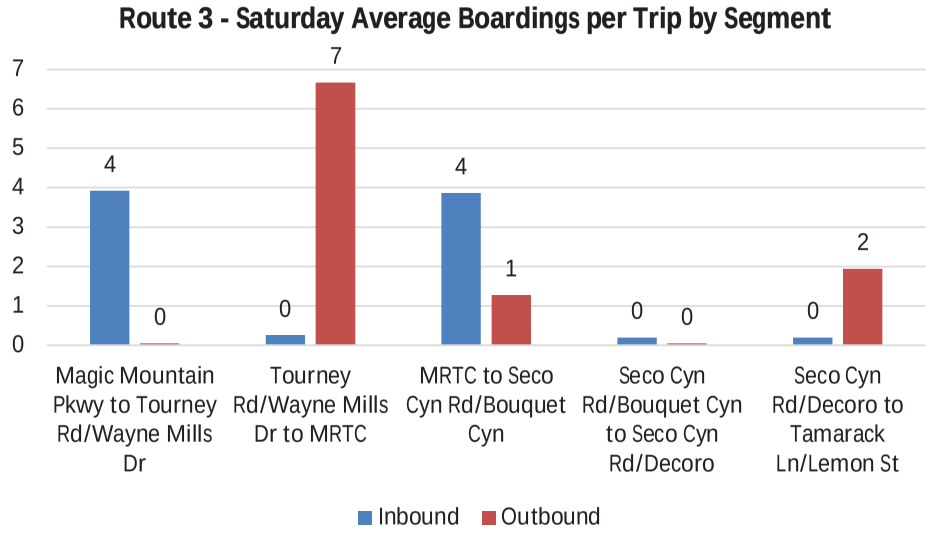
Beginning on page 11, bubble maps indicate the relative level of activity at each Route 3 bus stop, both inbound and outbound. For all days and both directions, the most frequently utilized bus stops are the MRTC and Six Flags Magic Mountain. Secondarily, bus stops located along Seco Canyon Rd tend to have higher activity than those located elsewhere.

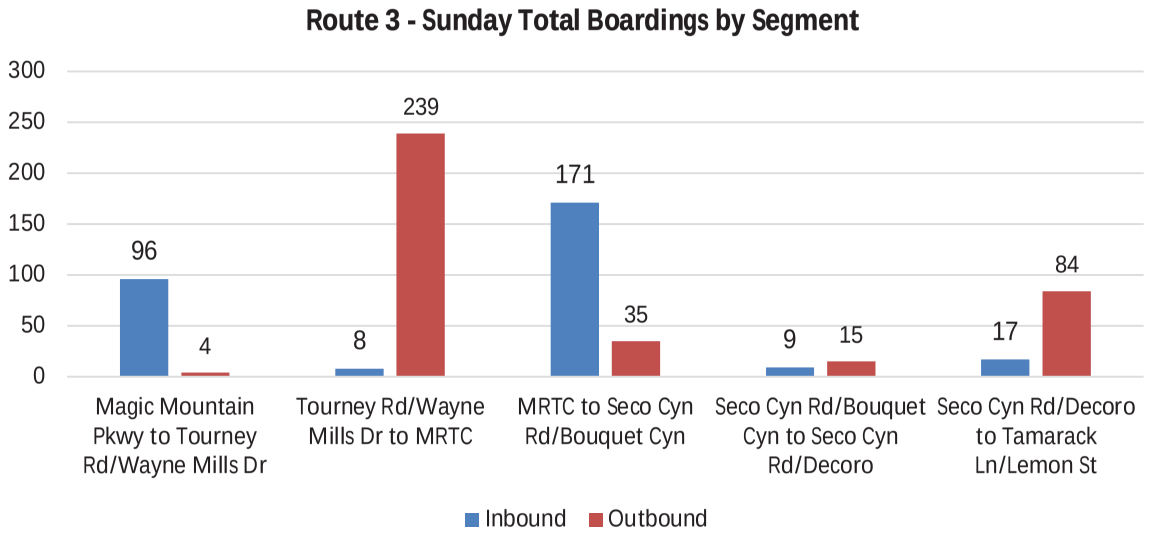
Exhibit 3.3.3 Route 3 Total and Average Boardings by Segment






Route 3 - Saturday Total Boardings by Segment
140
120
100
80
60
40
20
0
106
1
7
120
116
23
6
1
6
35
Magic Mountain Pkwy to Tourney Rd/Wayne Mills Dr
Tourney Rd/Wayne Mills Dr to MRTC
MRTC to Seco Cyn Rd/Bouquet Cyn
Seco Cyn Rd/Bouquet Cyn to Seco Cyn Rd/Decoro
Seco Cyn Rd/Decoro to Tamarack Ln/Lemon St
Inbound
Outbound


Route 3 - Saturday Average Boardings per Trip by Segment
7
6
5
4
3
2
1
0
4
0
0
7
4
1
0
0
0
2
Magic Mountain Pkwy to Tourney Rd/Wayne Mills Dr
Tourney Rd/Wayne Mills Dr to MRTC
MRTC to Seco Cyn Rd/Bouquet Cyn
Seco Cyn Rd/Bouquet Cyn to Seco Cyn Rd/Decoro
Seco Cyn Rd/Decoro to Tamarack Ln/Lemon St
Inbound
Outbound


Route 3 - Sunday Total Boardings by Segment
300
250
200
150
100
50
0
96
4
8
239
171
35
9
15
17
84
Magic Mountain Pkwy to Tourney Rd/Wayne Mills Dr
Tourney Rd/Wayne Mills Dr to MRTC
MRTC to Seco Cyn Rd/Bouquet Cyn
Seco Cyn Rd/Bouquet Cyn to Seco Cyn Rd/Decoro
Seco Cyn Rd/Decoro to Tamarack Ln/Lemon St
Inbound
Outbound

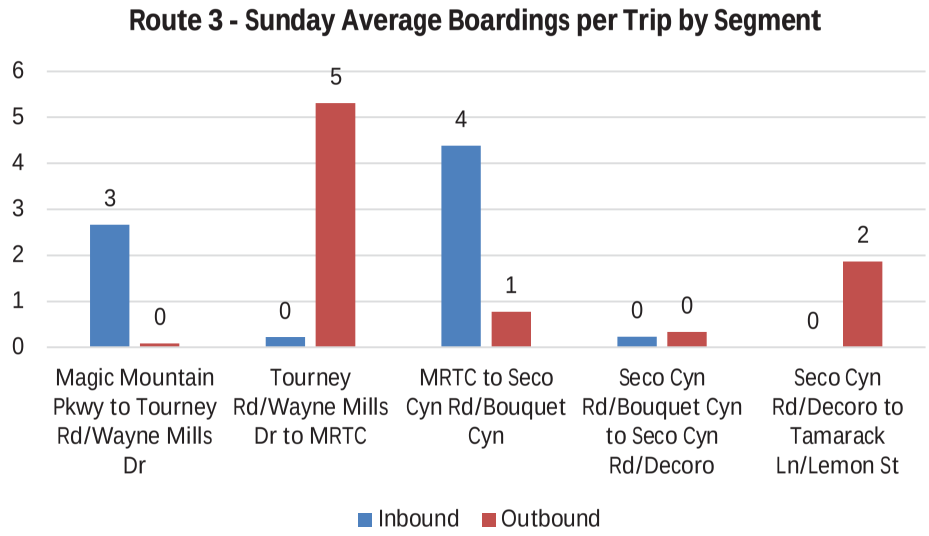
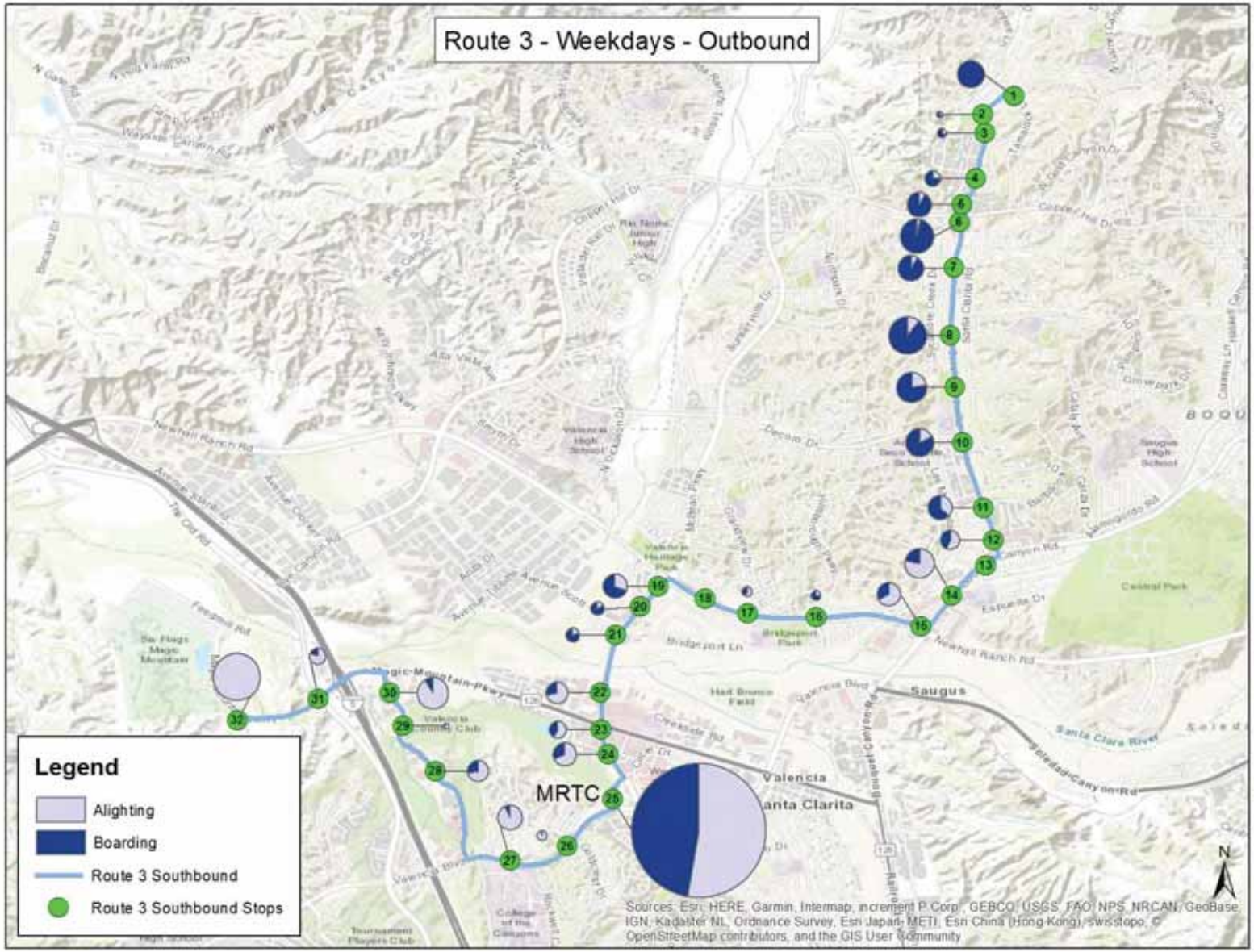
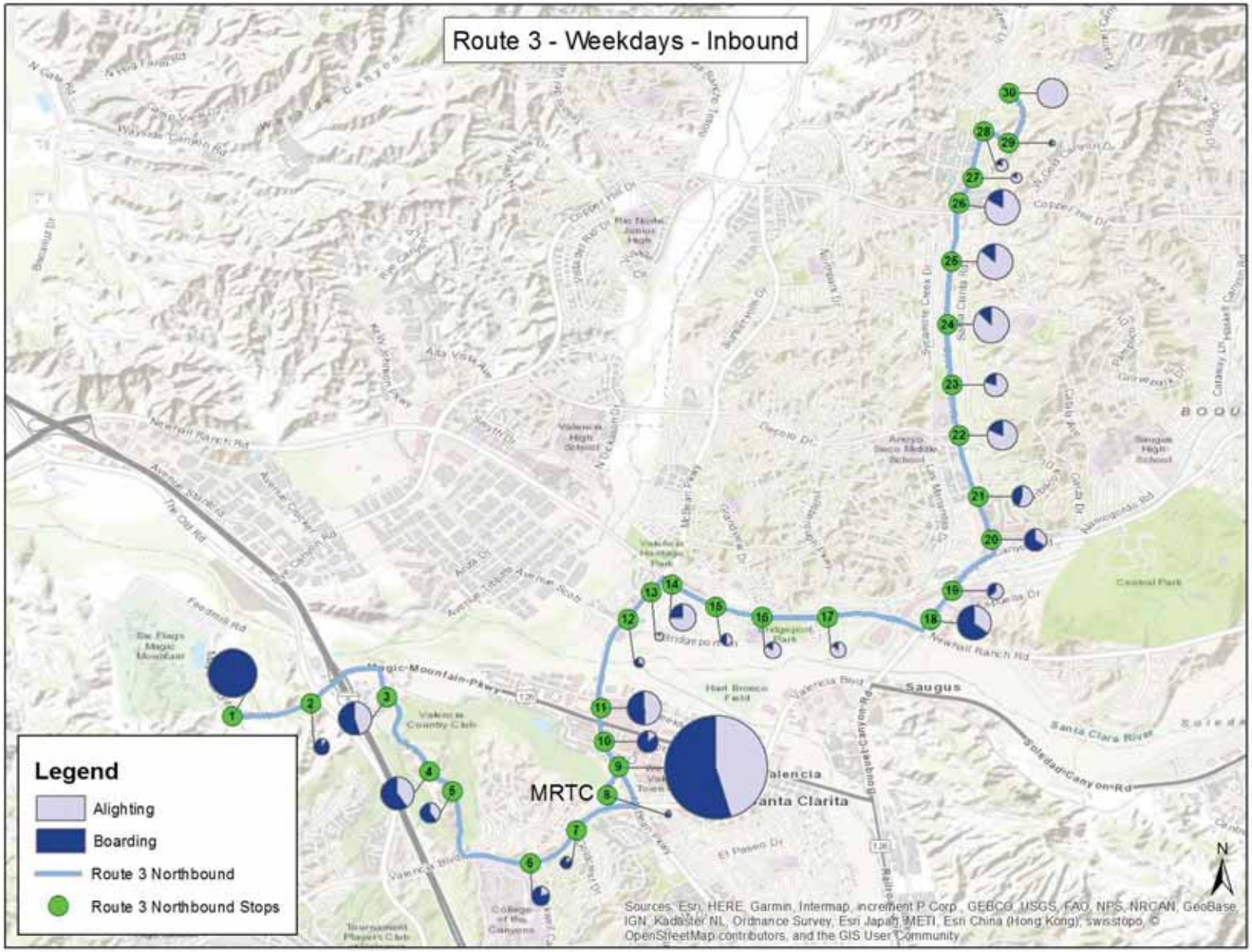
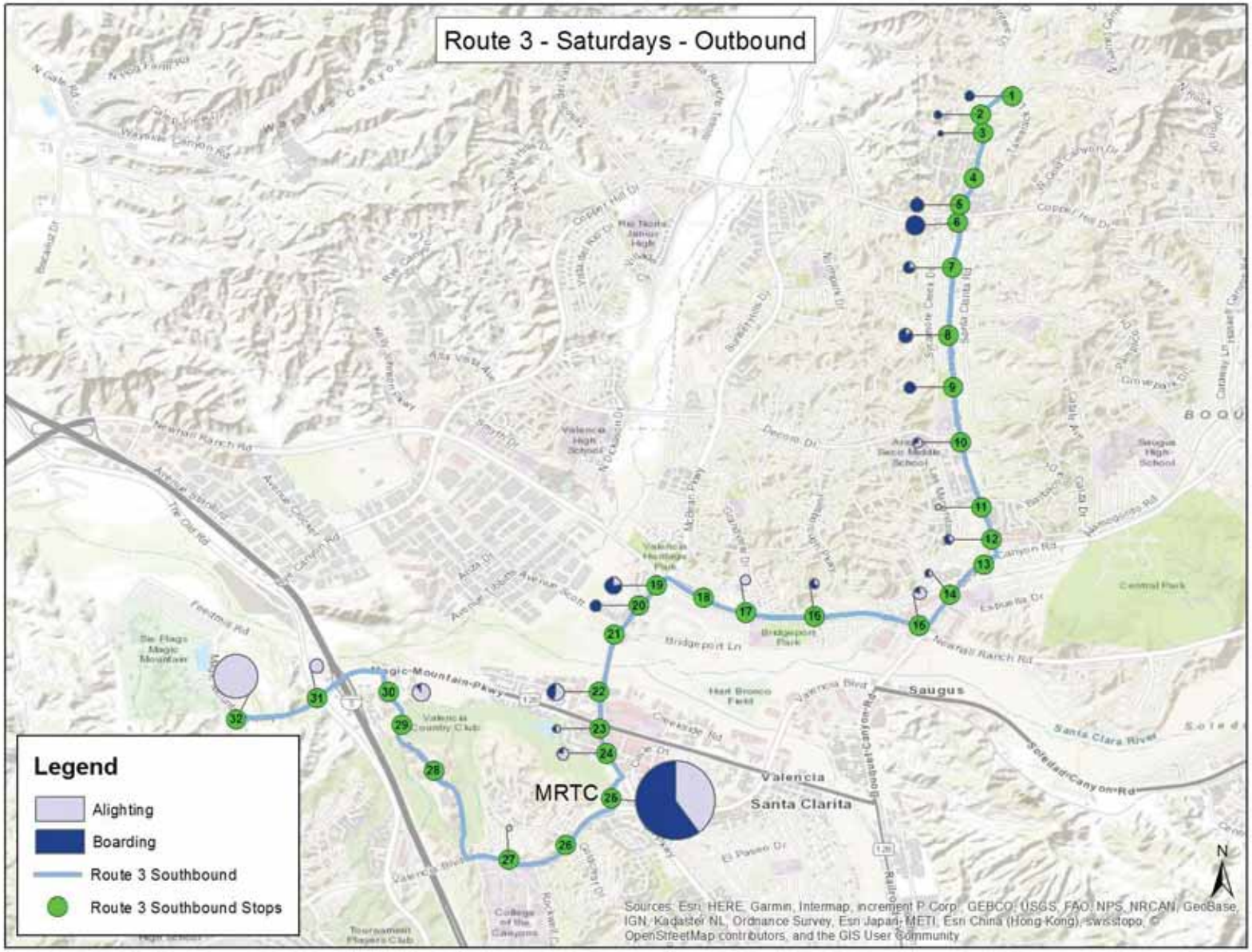
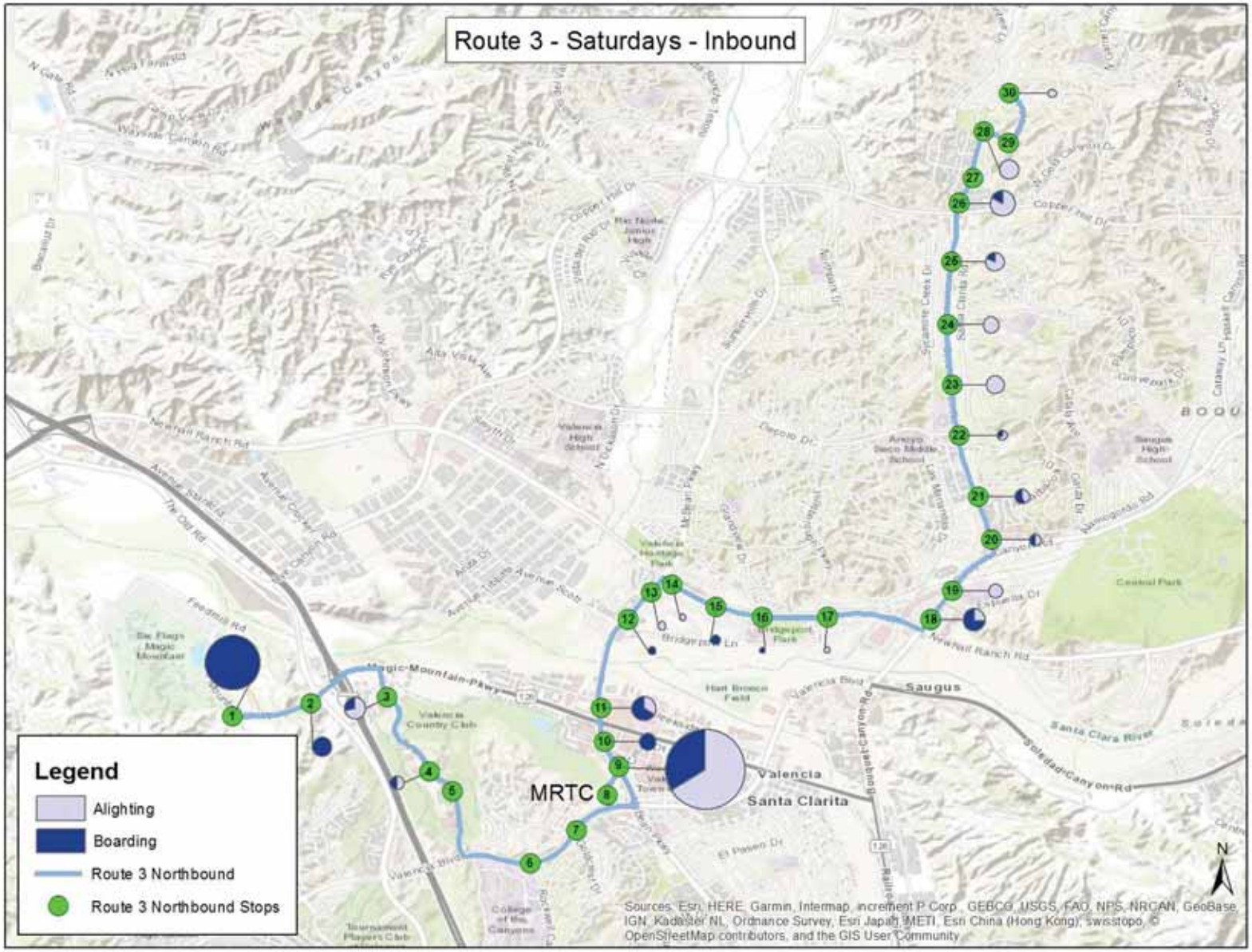

Route 3 - Sunday Average Boardings per Trip by Segment
6
5
4
3
2
1
0
3
0
0
5
4
1
0
0
0
2
Magic Mountain Pkwy to Tourney Rd/Wayne Mills Dr
Tourney Rd/Wayne Mills Dr to MRTC
MRTC to Seco Cyn Rd/Bouquet Cyn
Seco Cyn Rd/Bouquet Cyn to Seco Cyn Rd/Decoro
Seco Cyn Rd/Decoro to Tamarack Ln/Lemon St
Inbound
Outbound

Exhibit 3.3.4 Route 3 Boarding and Alighting Maps




Route 3 - Weekdays - Inbound
Legend
Alighting
Boarding
Route 3 Northbound
Route 3 Northbound Stops
MRTC
Saugus
Valencia
Santa Clarita
Magic Mountain Pkwy
Newhall Ranch Rd
Valencia Blvd
Soledad Canyon Rd
Santa Clara River
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
N


Route 3 - Saturdays - Outbound
Legend
Alighting
Boarding
Route 3 Southbound
Route 3 Southbound Stops
MRTC
Valencia
Santa Clarita
Saugus
Magic Mountain Pkwy
Bouquet Canyon Rd
Soledad Canyon Rd
Santa Clara River
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 3 - Saturdays - Inbound
Legend
Alighting
Boarding
Route 3 Northbound
Route 3 Northbound Stops
MRTC
Valencia
Santa Clarita
Saugus
Magic Mountain Pkwy
Newhall Ranch Rd
Valencia Blvd
Soledad Canyon Rd
Santa Clara River
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
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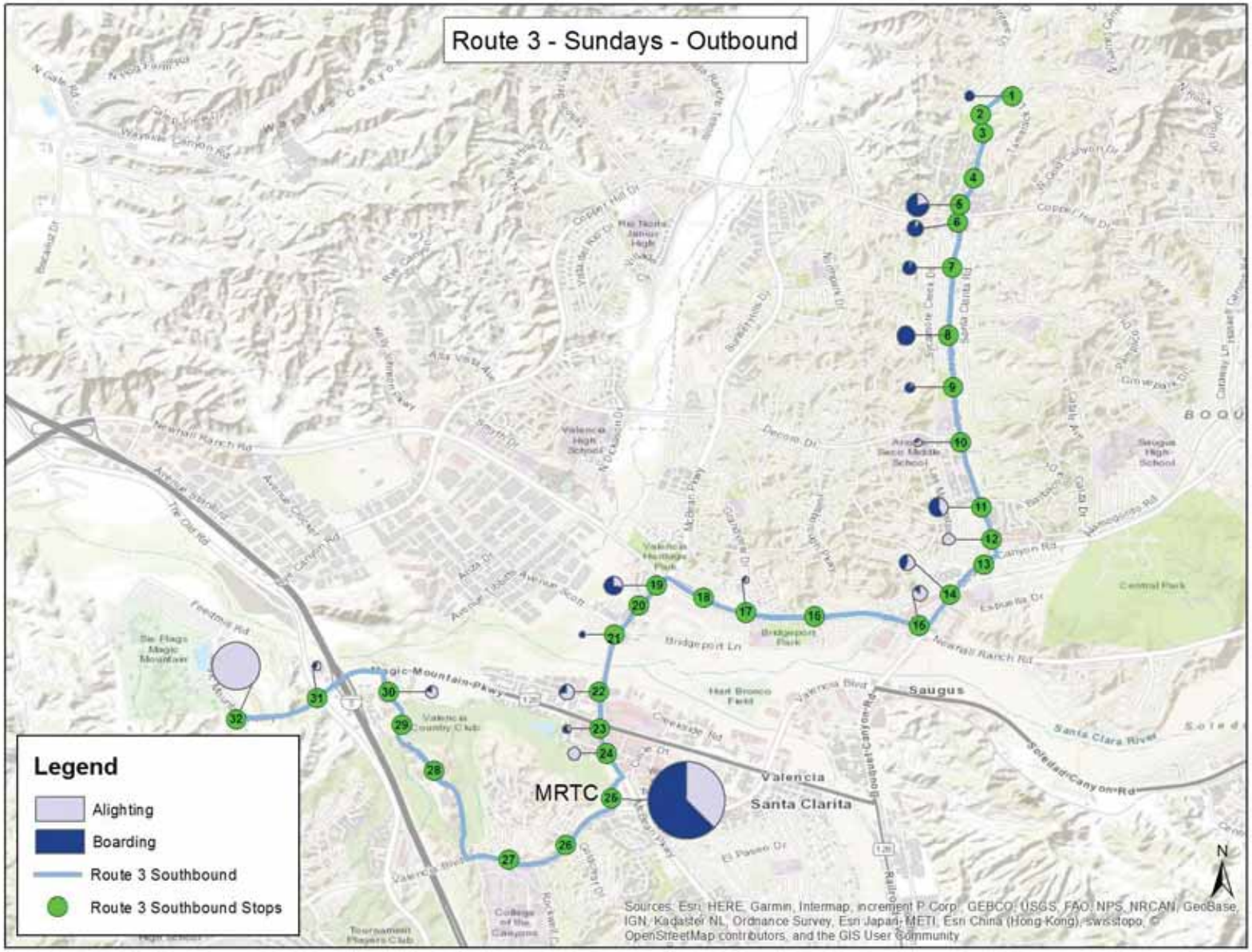

Route 3 - Sundays - Outbound
Legend
Alighting
Boarding
Route 3 Southbound
Route 3 Southbound Stops
MRTC
Valencia
Santa Clarita
Saugus
Magic Mountain Pkwy
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

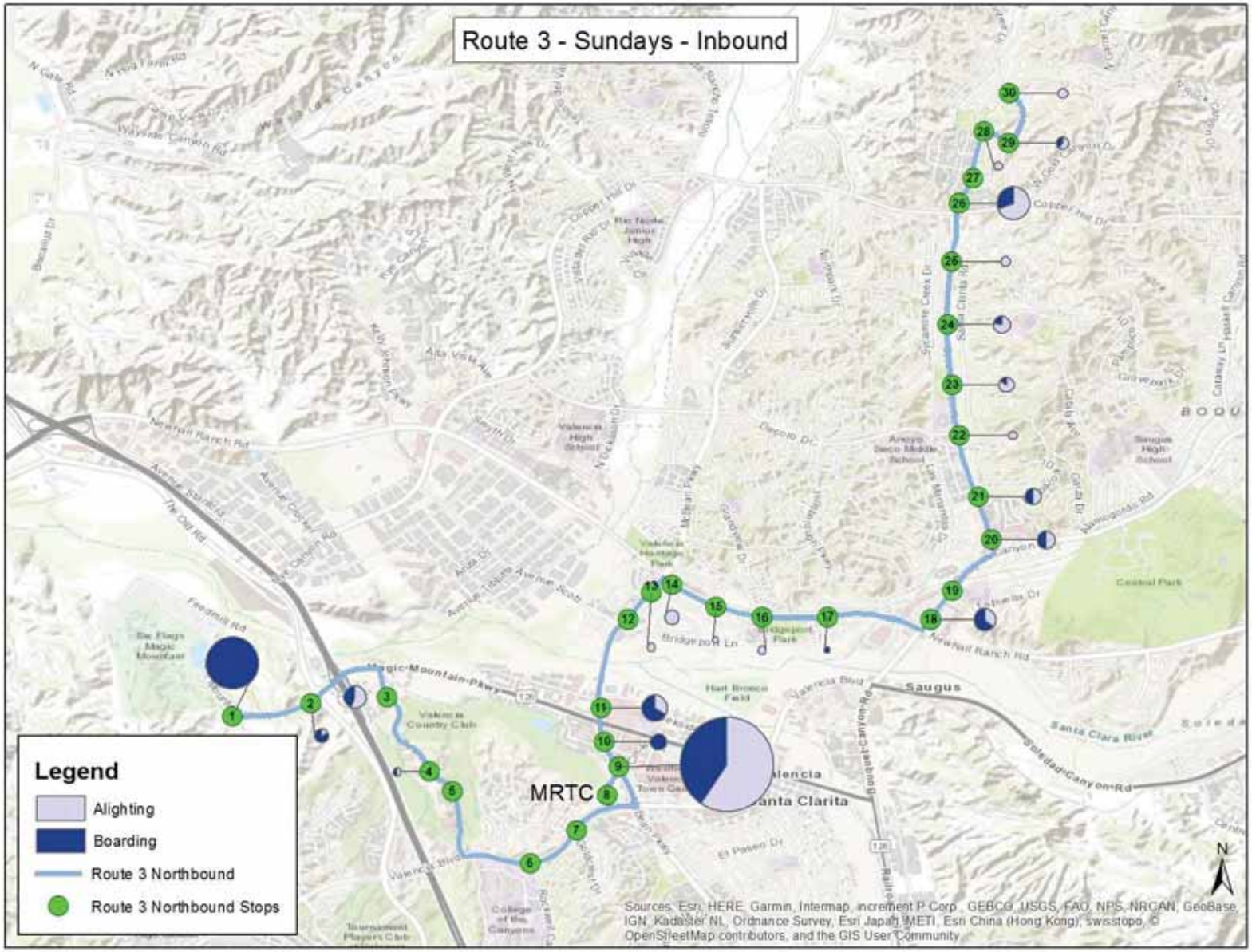

Route 3 - Sundays - Inbound
Legend
Alighting
Boarding
Route 3 Northbound
Route 3 Northbound Stops
MRTC
Saugus
Santa Clara River
Magic Mountain Pkwy
Valencia Blvd
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.3.5 Route 3 Stop Lists

Route 3 Outbound Stop List	
Stop Number	Stop Name
1	Tamarack Ln & Lemon St
2	Seco Canyon Rd & Coral Wy
3	Seco Canyon Rd & Hazel St
4	Seco Canyon Rd & Banyan Pl
5	Seco Canyon Rd
6	Seco Canyon Rd & Copper Hill Dr
7	Seco Canyon Rd & Tupelo Ridge Dr
8	Seco Canyon Rd & Pamplico Dr
9	Seco Canyon Rd & Guadilamar Dr
10	Seco Canyon Rd & Decoro Dr
11	Seco Canyon Rd & Garzota Dr
12	Seco Canyon Rd & Bouquet Canyon Rd
13	Bouquet Canyon Rd & Festividad Dr
14	Bouquet Canyon Rd & Espuella Dr
15	Newhall Ranch Rd & Bouquet Canyon Rd
16	Newhall Ranch Rd & Hillsborough Pky
17	Newhall Ranch Rd & Grandview Dr
18	Newhall Ranch Rd & Bridgeview Ln
19	McBean Pky & Newhall Ranch Rd
20	McBean Pky & Baywood Ln
21	McBean Pky & Bridgeport Ln
22	McBean Pky & Creekside Rd
23	McBean Pky & Magic Mountain Pky
24	McBean Pky & Town Center Dr
25	McBean MRTC
26	Valencia Blvd & Goldcrest Dr
27	Valencia Blvd
28	Tourney Rd
29	Tourney Rd
30	Tourney Rd & Wayne Mills Pl
31	Magic Mountain Pky & The Old Rd
32	Magic Mountain Pky

Route 3 Inbound Stop List	
Stop Number	Stop Name
1	Magic Mountain Pky
2	Magic Mountain Pky & The Old Rd
3	Tourney Rd & Wayne Mills Pl
4	Tourney Rd
5	Tourney Rd & Springfield Ct
6	Valencia Blvd & Rockwell Canyon Rd
7	Valencia Blvd & Goldcrest Dr
8	McBean MRTC
9	McBean Pky
10	McBean Pky & Town Center Dr
11	McBean Pky & Creekside Rd
12	McBean Pky & Bridgeport Ln
13	McBean Pky & Baywood Ln
14	Newhall Ranch Rd & McBean Pky
15	Newhall Ranch Rd & Bridgeview Ln
16	Newhall Ranch Rd & Grandview Dr
17	Newhall Ranch Rd & Parkwood Ln
18	Bouquet Canyon Rd & Newhall Ranch Rd
19	Bouquet Canyon Rd & Espuella Dr
20	Seco Canyon Rd & Bouquet Canyon Rd
21	Garzota Dr & Seco Canyon Rd
22	Seco Canyon Rd & Decoro Dr
23	Seco Canyon Rd & Guadilamar Dr
24	Seco Canyon Rd & Pamplico Dr
25	Seco Canyon Rd & Tupelo Ridge Dr
26	Seco Canyon Rd
27	Seco Canyon Rd & Banyan Pl
28	Hazel St & Seco Canyon Rd
29	Hazel St
30	Tamarack Ln & Lemon St

Average load factor by trip

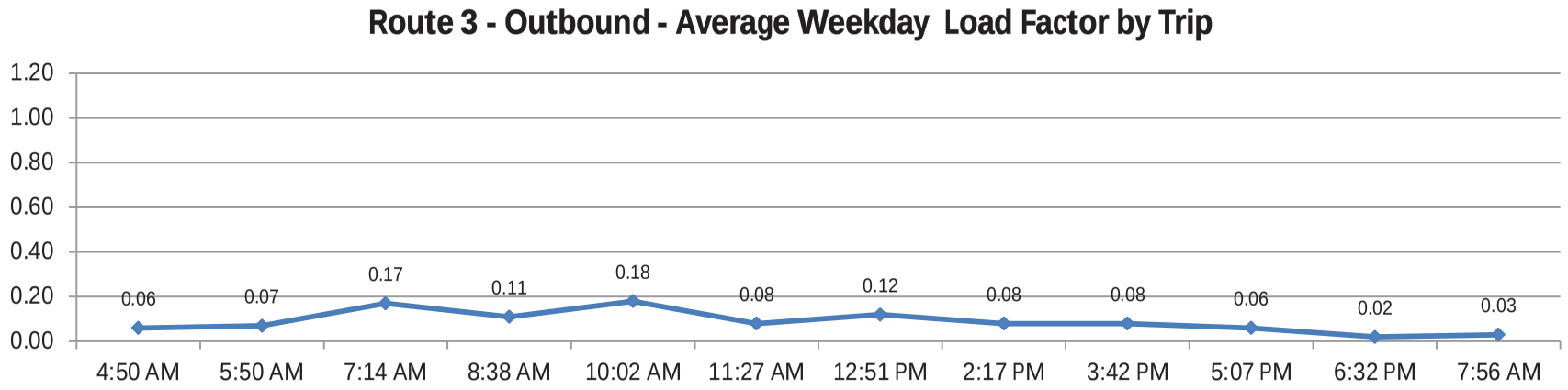
Both inbound and outbound trips on Route 3 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.22. Trips with the highest average peak loads for each day and direction are identified below.

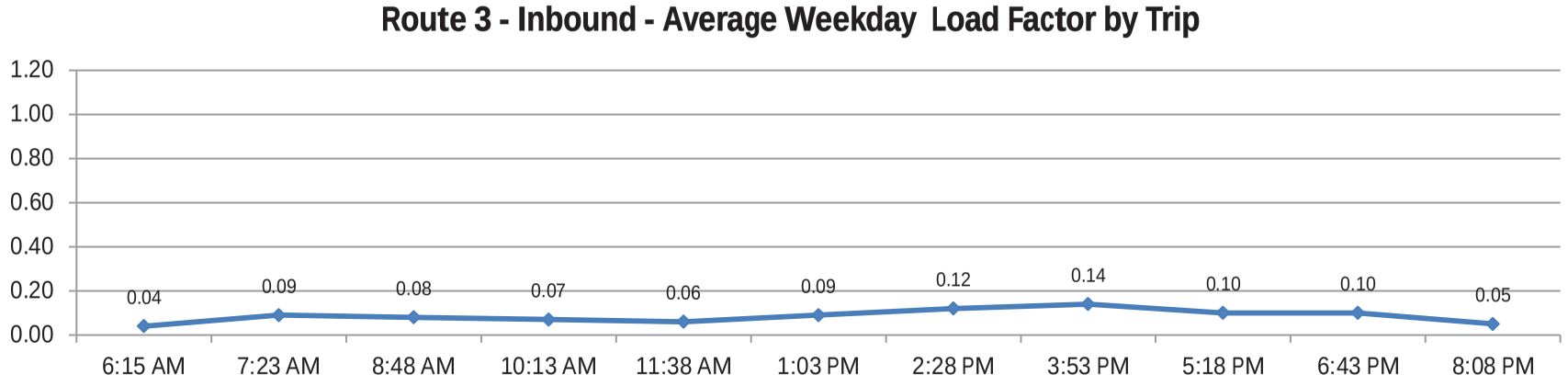
Exhibit 3.3.6 Route 3 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	10:02 a.m.	0.18
Weekday	Inbound	3:53 p.m.	0.14
Saturday	Outbound	7:14 a.m. 10:02 a.m.	0.22
Saturday	Inbound	5:18 p.m.	0.16
Sunday	Outbound	7:14 a.m. 10:02 a.m.	0.17
Sunday	Inbound	2:28 p.m.	0.14

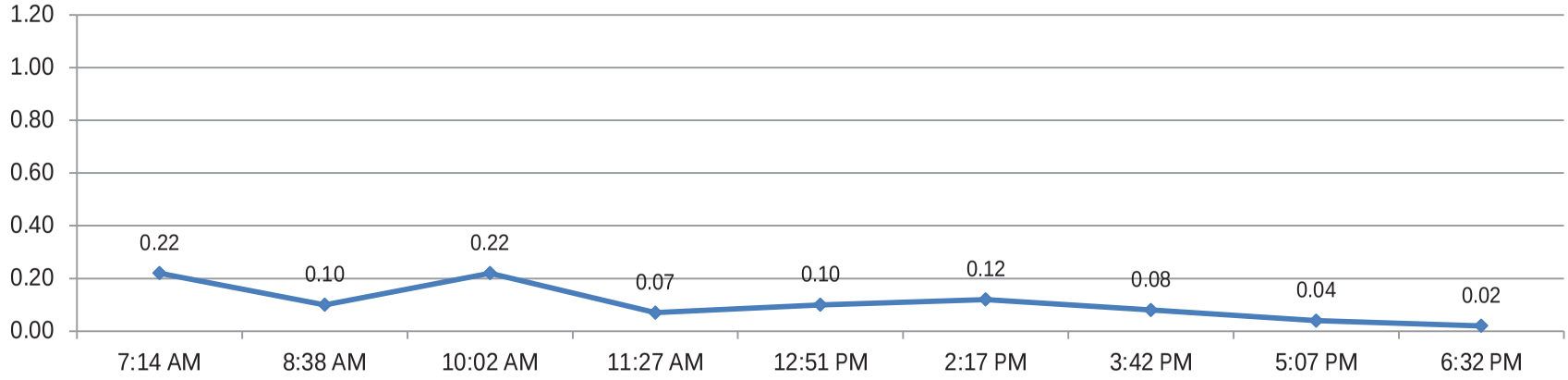
There were no trips which exhibited a load factor of higher than 0.28.

Exhibit 3.3.7 Route 3 Load Factor by Trip

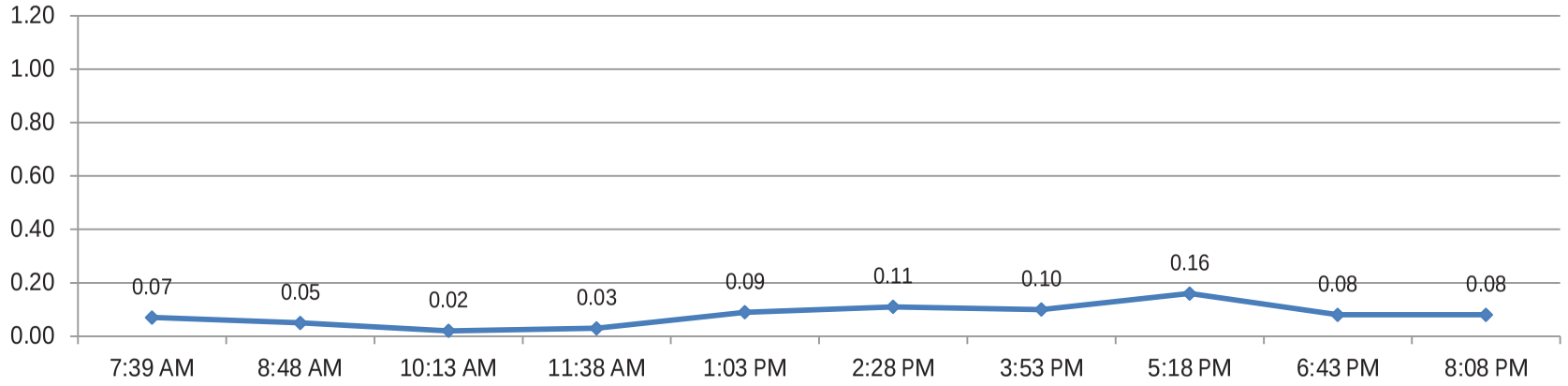




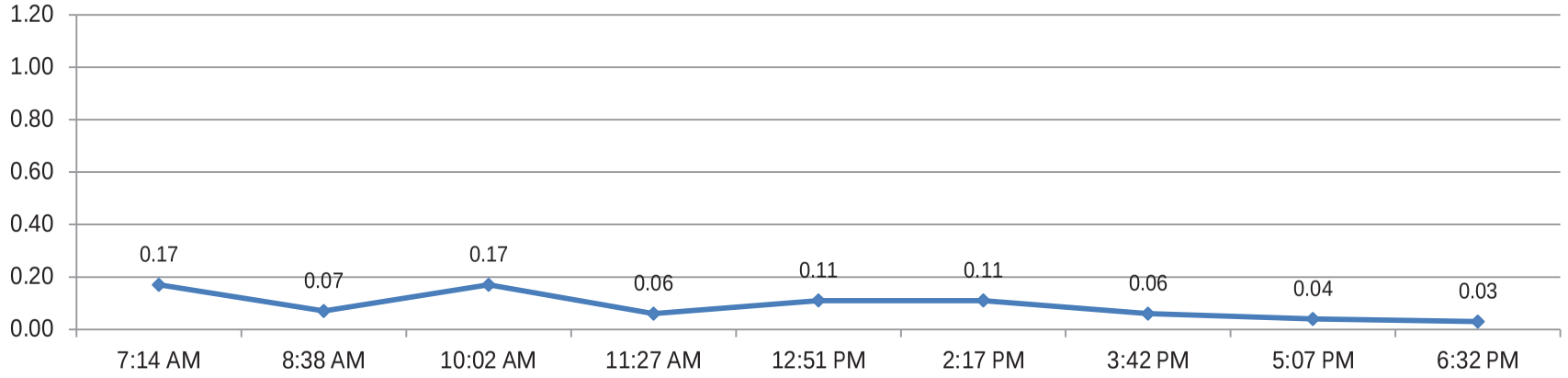
Route 3 - Outbound - Saturday Average Load Factor by Trip



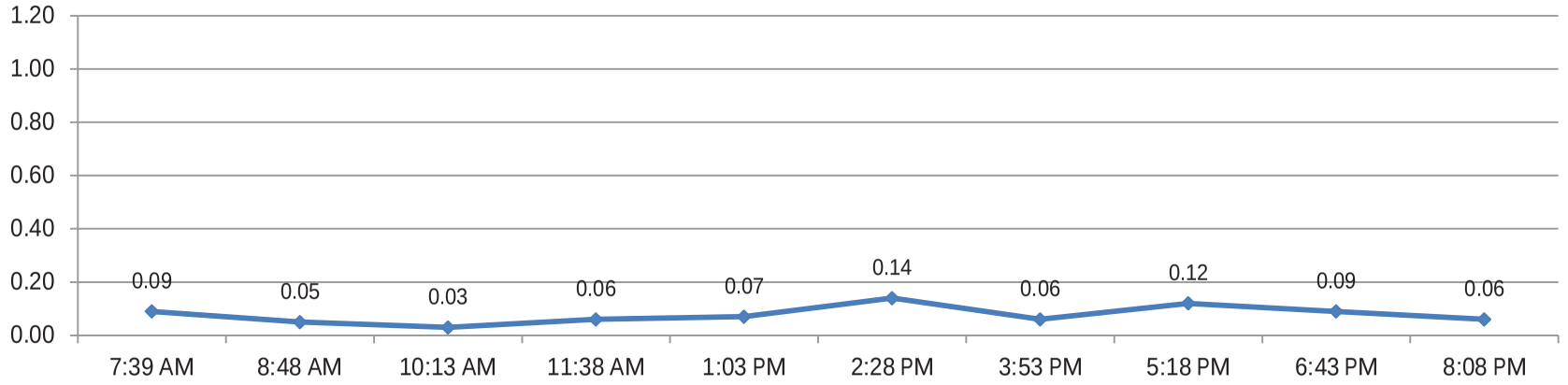
Route 3 - Inbound - Saturday Average Load Factor by Trip



Route 3 - Outbound - Sunday Average Load Factor by Trip



Route 3 - Inbound - Sunday Average Load Factor by Trip



Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 3's weekday outbound service exhibits slightly better overall schedule adherence (75.4 percent) than the inbound service (74.7percent). On Saturday, schedule adherence improves significantly on the outbound service (92.5 percent), though the inbound service remains low at 79.3 percent. On Sunday, schedule adherence improves further for the outbound service (94.3 percent), though the inbound service remains relatively low (76.3 percent).

Schedule adherence is significantly impacted by early departures from the MRTC following the layover period. For example, on April 25, the 7:56 p.m. outbound trip arrived at the MRTC at 8:17 p.m. (scheduled arrival was 8:16 p.m.), which is on-time. However, the trip was not scheduled to depart the MRTC until 8:26 p.m. The driver departed at 8:17 p.m., more than eight minutes ahead of the scheduled departure. The higher frequency of early departures on the inbound service is likely due to the short four-minute layover (in contrast with the ten-minute layover on the outbound service).

Schedule adherence for Route 3 was reviewed using the data provided by the City, which calculates only the deviation from the scheduled departure time from the MRTC (not the arrival time). Given the details above, on-time performance at the MRTC was examined more closely.

With respect to the outbound service, approximately 25 percent of trips arriving at the MRTC on weekdays arrived late. On Saturday and Sunday, there were very few late arrivals. While a handful of trips departed early on weekdays, this was not a significant concern. The length of the layover (10 minutes) is likely deterring drivers from immediately departing the MRTC, thereby adhering more closely to the posted schedule.

For the inbound service, arrivals at the MRTC were generally on-time or early (which does not negatively impact on-time performance). However, 83 percent of weekday departures from the MRTC were early, as well as nearly all weekend departures. It appears that inbound drivers are not dwelling through the four-minute layover and instead depart immediately. This resulted in the significantly lower on-time performance for the inbound service.

Schedule adherence by time-point

On weekdays, the outbound service had issues with late performance during the first half of the route (before reaching MRTC), with Seco Canyon/Decoro performing the worst (only 45.7 percent of trips were on-time). The Magic Mountain time-point had the best on-time performance (96.7 percent). The inbound service had its poorest on-time performance at the MRTC, as discussed previously. The best performing time-point on the inbound service was at Tourney Rd/Wayne Mills, with 90.3 percent of trips on-time.

Saturday and Sunday service exhibited similar patterns as weekday service. The outbound service saw its poorest on-time performance at Seco Canyon/Decoro (77.8 percent on Saturday and 75.6 percent on Sunday) and its best performance between the MRTC and Magic Mountain Pkwy (100 percent for all time-points on both days). As discussed previously, the inbound service was plagued with early departures at the MRTC, yet on-time performance on the majority of the rest of the route was generally good.

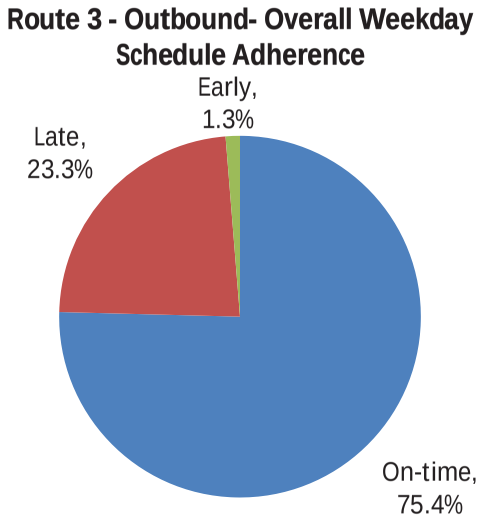
Schedule adherence by time of day

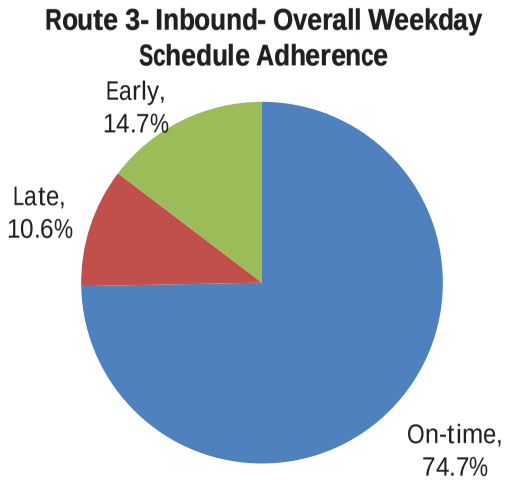
On the weekday outbound service, late trips occur most often during the PM Peak period (34.3 percent). Early trips are most likely to occur in the Early AM day part. On the inbound service, late trips are also most common during the PM Peak period (33 percent). However, early trips occur during all day-parts, with the highest frequency in the Late PM period (16.8 percent of trips). Early AM saw the best on-time performance for both directions, and PM Peak was on-time the least for both directions.

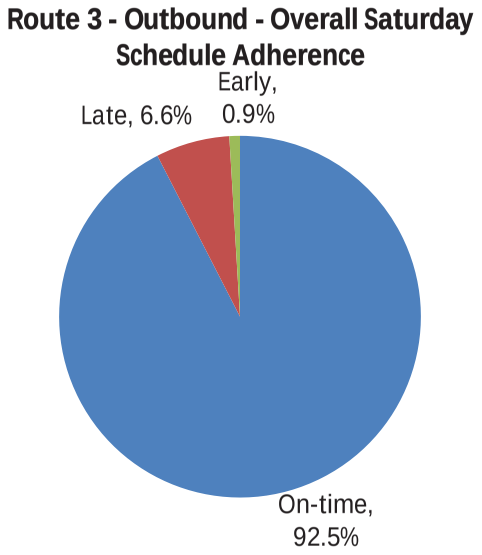
On Saturday, all outbound day-parts exhibited an on-time performance greater than 87 percent. The Late PM day-part performed the best, with 100 percent of surveyed trips on-time. For the inbound service, the PM Peak day-part had the most early trips, while the best adherence to the published schedule occurred during the AM Peak and Late PM day-parts (83.3 percent).

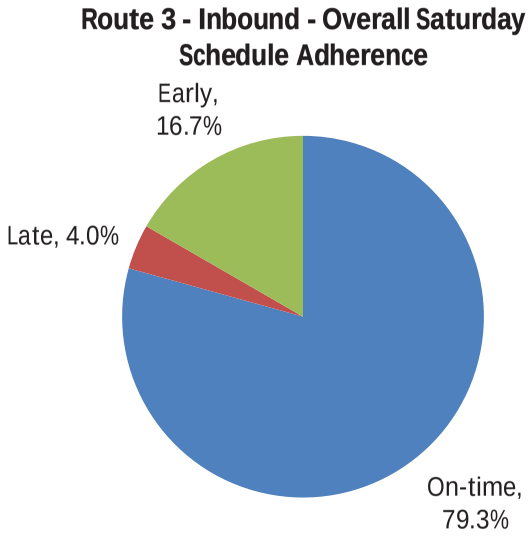
On Sunday, all outbound day-parts exhibited an on-time performance of at least 90 percent. AM Peak had the best inbound on-time performance (83.3 percent), while the Late PM day-part had the most early trips (followed closely by the Mid-day and PM Peak periods).

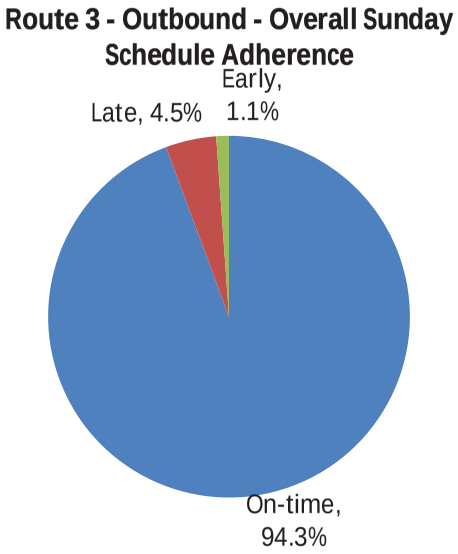
Exhibit 3.3.8 Route 3 Overall Schedule Adherence










Route 3 - Outbound - Overall Sunday Schedule Adherence
Early, 1.1%
Late, 4.5%
On-time, 94.3%

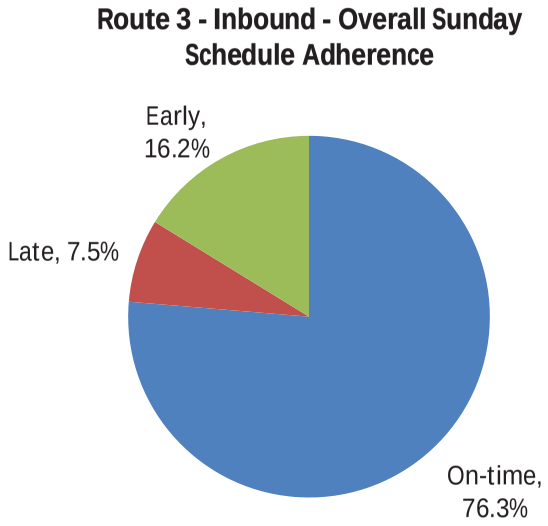
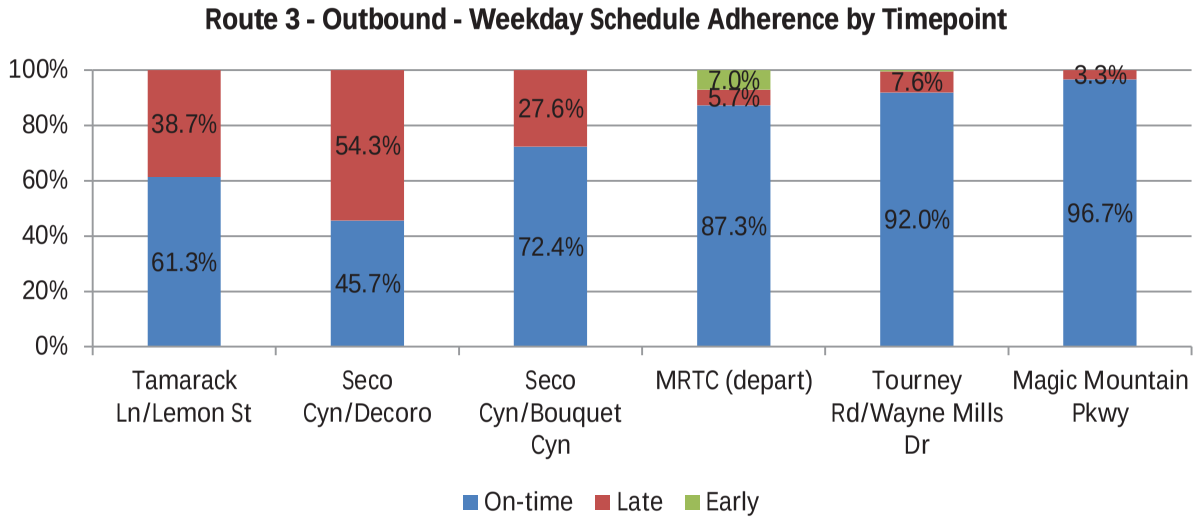
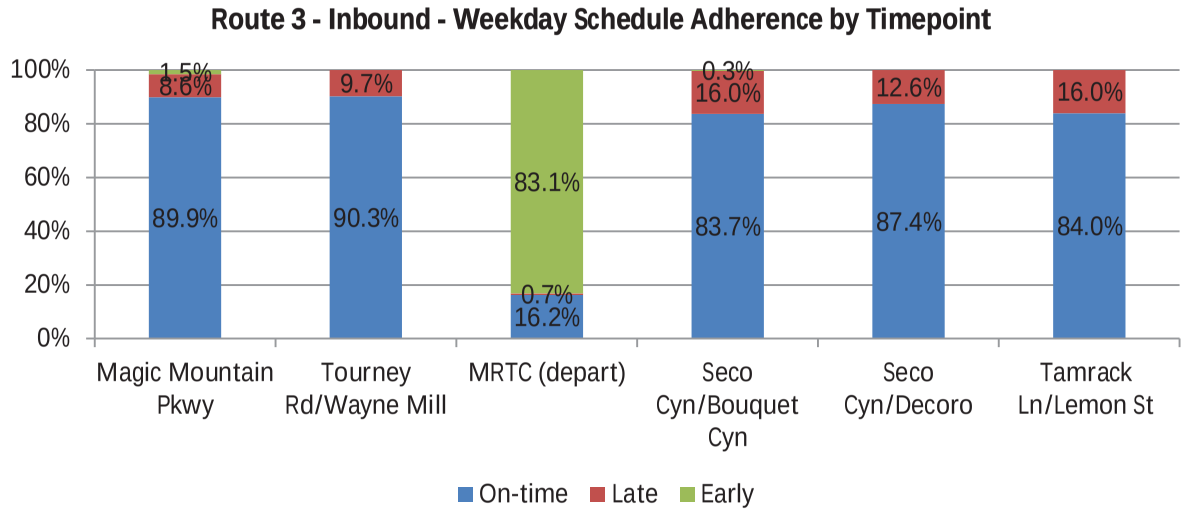
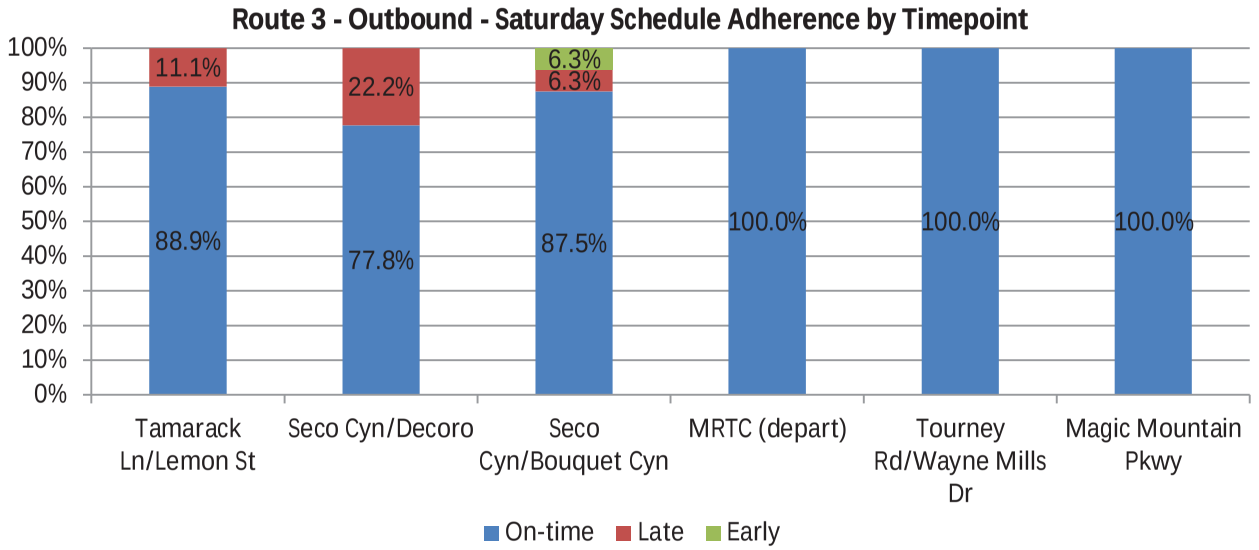
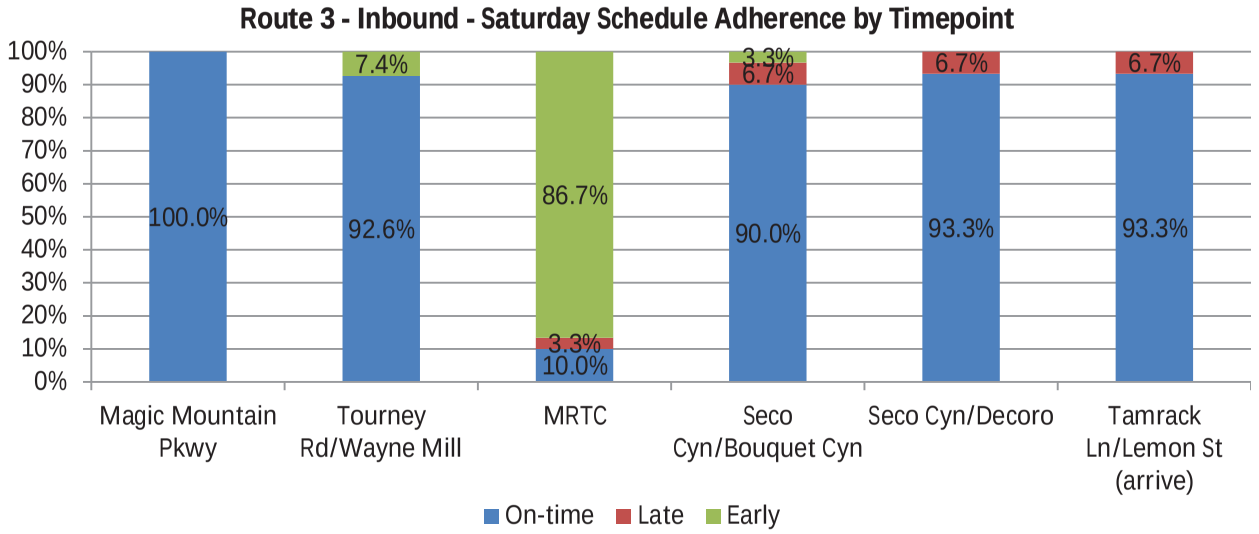

Route 3 - Inbound - Overall Sunday Schedule Adherence
Early, 16.2%
Late, 7.5%
On-time, 76.3%

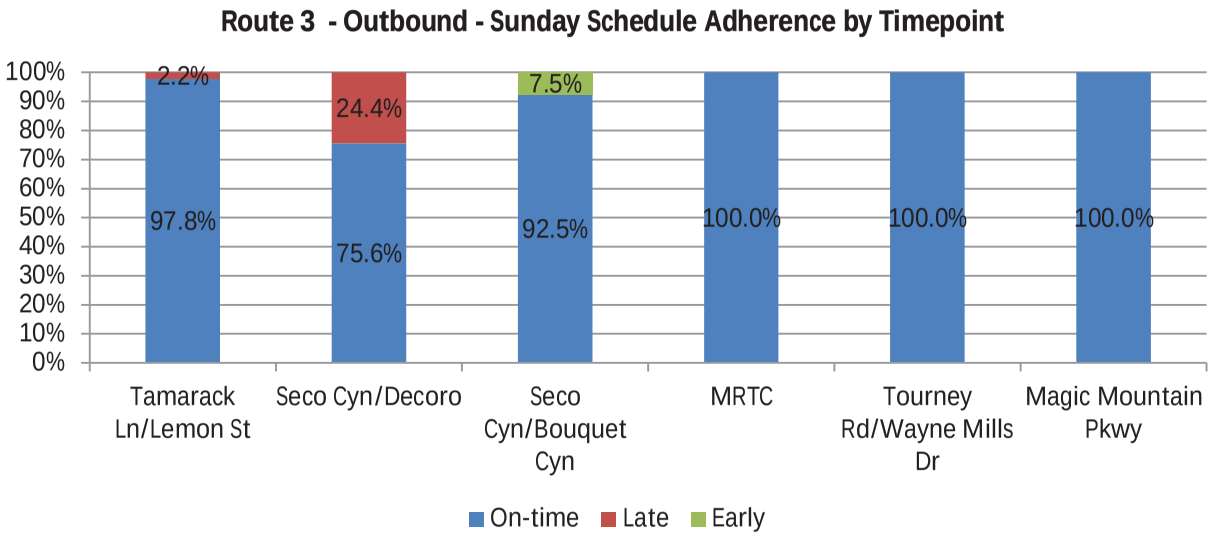
Exhibit 3.3.9 Route 3 Schedule Adherence by Time-point






Route 3 - Outbound - Saturday Schedule Adherence by Timepoint
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
11.1%
88.9%
22.2%
77.8%
6.3%
6.3%
87.5%
100.0%
100.0%
100.0%
Tamarack Ln/Lemon St
Seco Cyn/Decoro
Seco Cyn/Bouquet Cyn
MRTC (depart)
Tourney Rd/Wayne Mills Dr
Magic Mountain Pkwy
On-time
Late
Early


Route 3 - Inbound - Saturday Schedule Adherence by Timepoint
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
100.0%
7.4%
92.6%
86.7%
3.3%
10.0%
3.3%
6.7%
90.0%
6.7%
93.3%
6.7%
93.3%
Magic Mountain Pkwy
Tourney Rd/Wayne Mill
MRTC
Seco Cyn/Bouquet Cyn
Seco Cyn/Decoro
Tamrack Ln/Lemon St (arrive)
On-time
Late
Early


Route 3 - Outbound - Sunday Schedule Adherence by Timepoint
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2.2%
97.8%
24.4%
75.6%
7.5%
92.5%
100.0%
100.0%
100.0%
Tamarack Ln/Lemon St
Seco Cyn/Decoro
Seco Cyn/Bouquet Cyn
MRTC
Tourney Rd/Wayne Mills Dr
Magic Mountain Pkwy
On-time
Late
Early

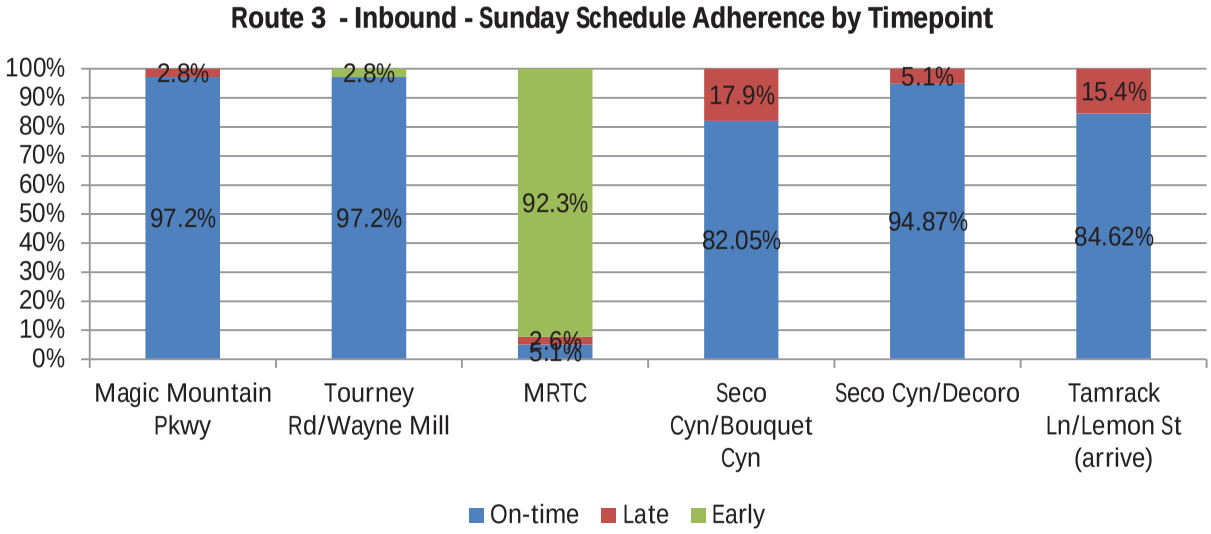
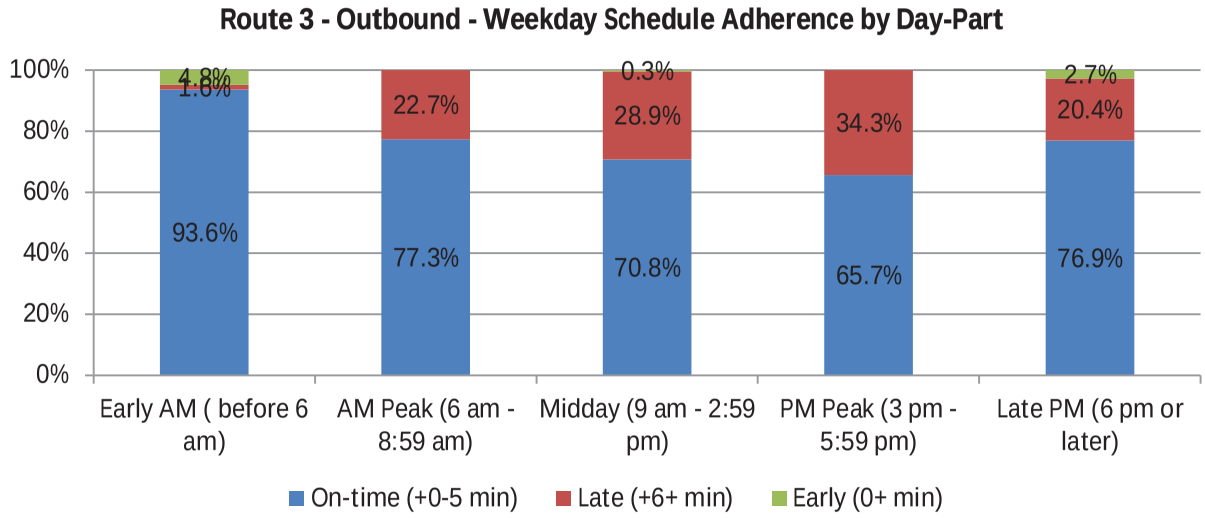
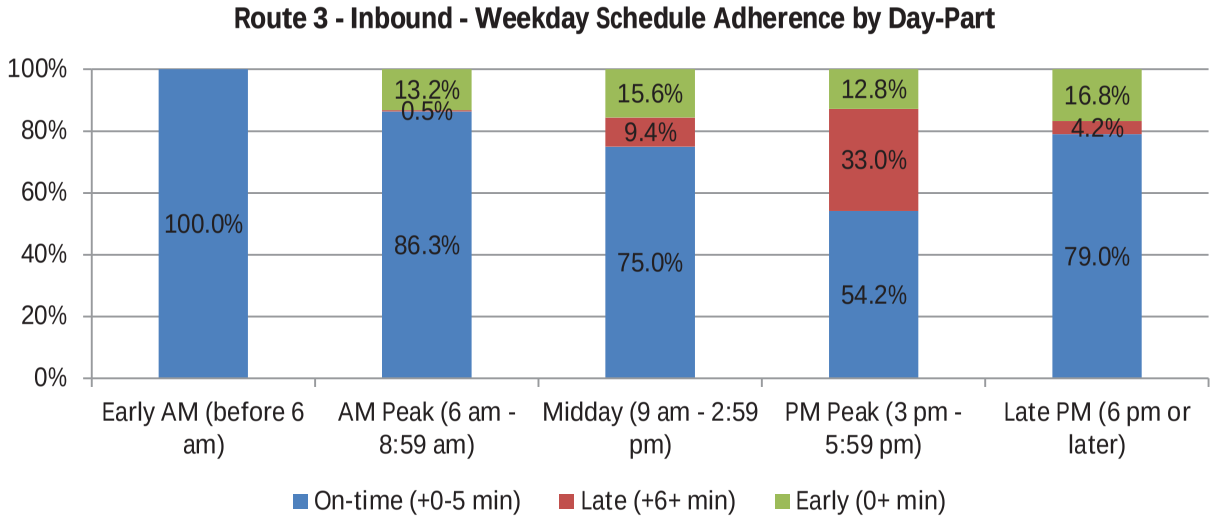
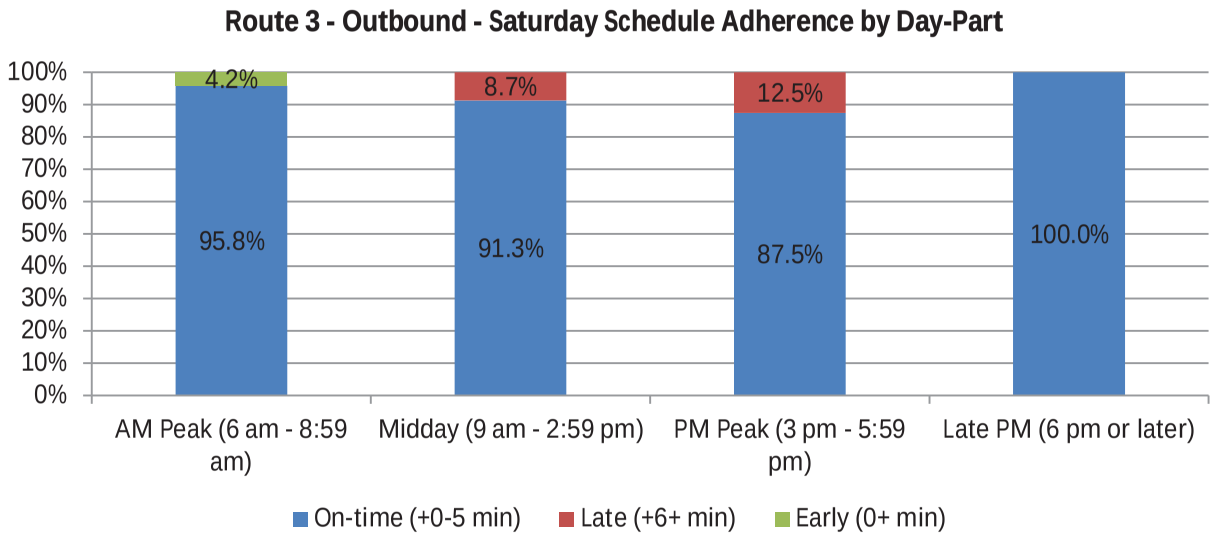
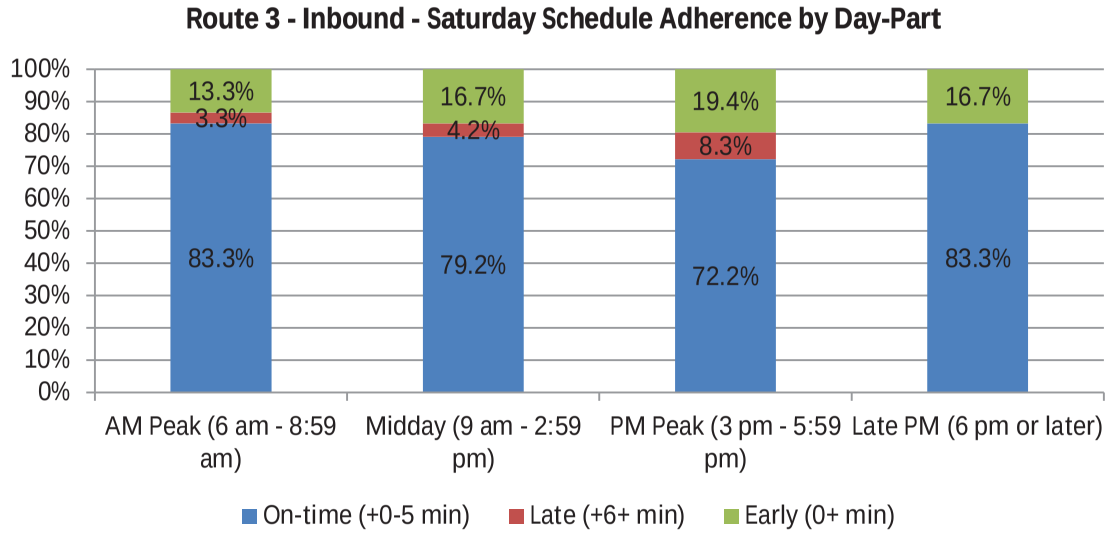

Route 3 - Inbound - Sunday Schedule Adherence by Timepoint
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2.8%
97.2%
2.8%
97.2%
92.3%
2.6%
5.1%
17.9%
82.05%
5.1%
94.87%
15.4%
84.62%
Magic Mountain Pkwy
Tourney Rd/Wayne Mill
MRTC
Seco Cyn/Bouquet Cyn
Seco Cyn/Decoro
Tamrack Ln/Lemon St (arrive)
On-time
Late
Early

Exhibit 3.3.10 Route 3 Schedule Adherence by Day-Part

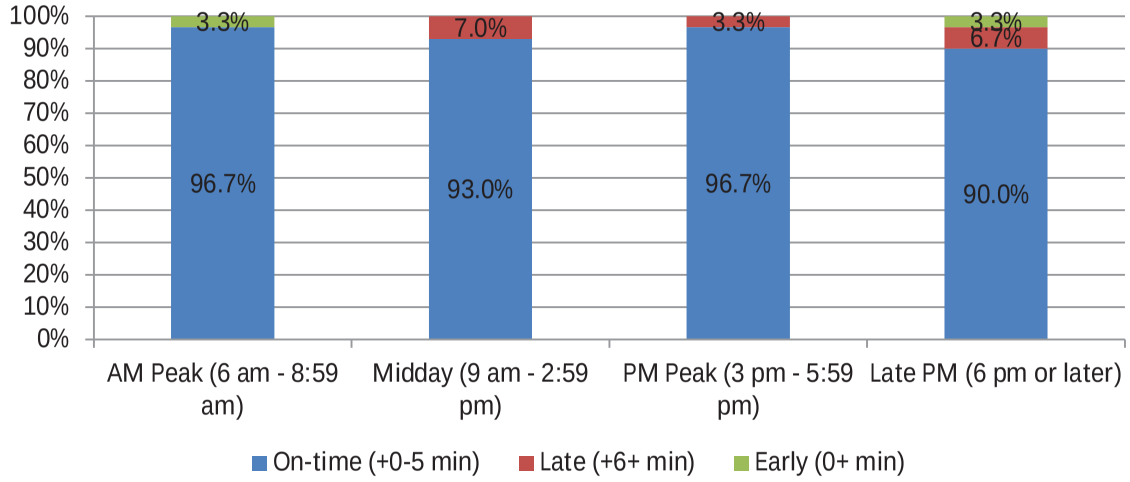




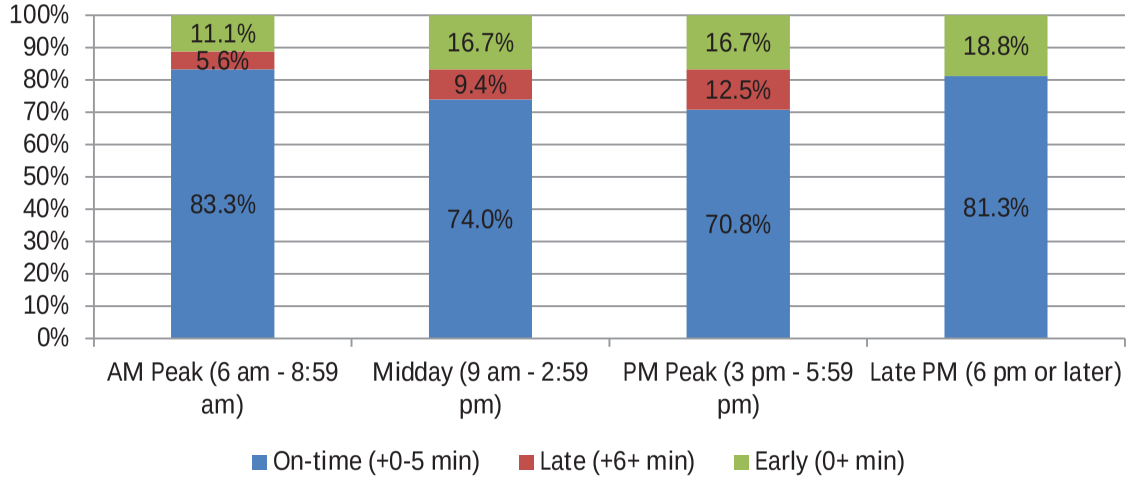

Route 3 - Outbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
4.2%
8.7%
12.5%
95.8%
91.3%
87.5%
100.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 3 - Inbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
13.3%
3.3%
16.7%
4.2%
19.4%
8.3%
16.7%
83.3%
79.2%
72.2%
83.3%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route 3 - Outbound - Sunday Schedule Adherence by Day-Part



Route 3 - Inbound - Sunday Schedule Adherence by Day-Part



Route Performance

Overall ridership

Exhibit 3.3.11 Route 3 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.3.12 Route 3 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking (overall)
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 4 Profile and Performance Analysis

Route Description

Route 4 serves the McBean Regional Transit Center, William S. Hart Park, Newhall Metrolink Station, Senior Center, California Institute of the Arts, College of the Canyons, River Oaks Shopping Center, Civic Center, Saugus High School, and LARC Ranch. Route 4 shares the majority of its alignment with Route 14. However, Route 4 continues north on Bouquet Canyon while Route 14 travels east on Plum Canyon Road. Sunday service terminates at the MRTC and does not travel into Newhall.

Primary streets of operation include Lyons Avenue, Tournament Road, Rockwell Canyon Road, Valencia Boulevard, Magic Mountain Parkway, and Bouquet Canyon Road. During the morning and mid-day inbound route deviates slightly to serve the SCV Senior Center.

Outbound service is defined as that originating at the Newhall Metrolink Station and traveling to LARC Ranch via the McBean Regional Transit Center. Inbound service travels in the opposite direction and includes service to the SCV Senior Center. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, Route 4 outbound average ridership holds fairly steady between 7:17 a.m. and 10:14 a.m., increases around noon, and peaks in the early afternoon (2:21 p.m.) with an average of 35 riders per trip. Ridership then decreases across the balance of the day, reaching its lowest point on the final trip of the day. Inbound ridership experiences two peak periods: first at 7:13 a.m. (average of 39 riders) and again at 3:21 p.m. (average of 43 riders). While average ridership between the peaks is fairly steady (generally averaging between 26 and 29 riders per trip), it drops off quickly after the 3:21 p.m. peak.

On Saturday, outbound ridership peaks at 2:15 p.m., with an average of 20 riders per trip. The last trip of the day has the fewest riders (average of four per trip). The inbound service peaks a little later in the afternoon at 4:15 p.m., also with an average of 20 riders per trip. The 6:15 p.m. trip has the fewest riders, with an average of 10 riders per trip.

On Sunday, outbound ridership peaks at 5:50 p.m., with an average of 12 riders per trip. There are three peaks on the inbound service: 9:15 a.m. (average of 14 riders), 1:15 p.m. (average of 13 riders), and 4:15 p.m. (average of 13 riders). Both directions see a slight uptick for the last trip of the day.

Average ridership by time of day

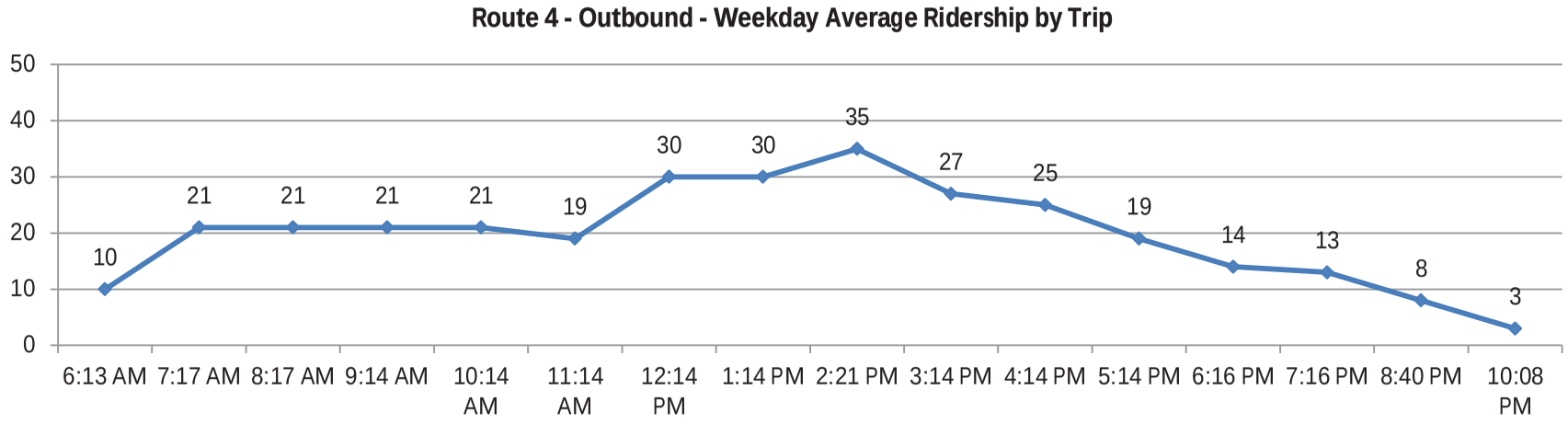
On weekdays, the outbound service experiences its highest average ridership during the Mid-day day-parts (average of 26 riders), followed by the PM Peak period (average of 24 riders). The inbound service peaks during the PM Peak day-part, with an average of 30 riders, followed closely by the AM Peak day-part, with an average of 28 riders, and the Mid-day day-part, with an average of 27 riders.

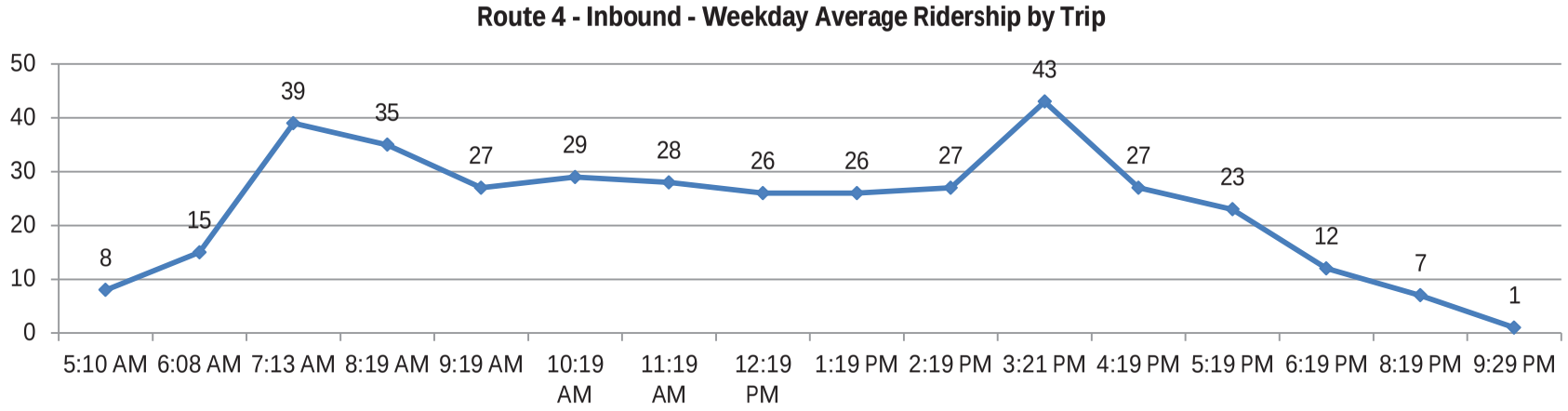
On Saturday, the outbound service experiences its highest average ridership per trip during the PM Peak period (average of 15 riders per trip), followed closely by the Mid-day period (average of 14 riders per

trip). The inbound service sees its highest average ridership during the PM Peak period (average of 18 riders per trip), followed by the AM Peak period (average of 16 riders per trip).

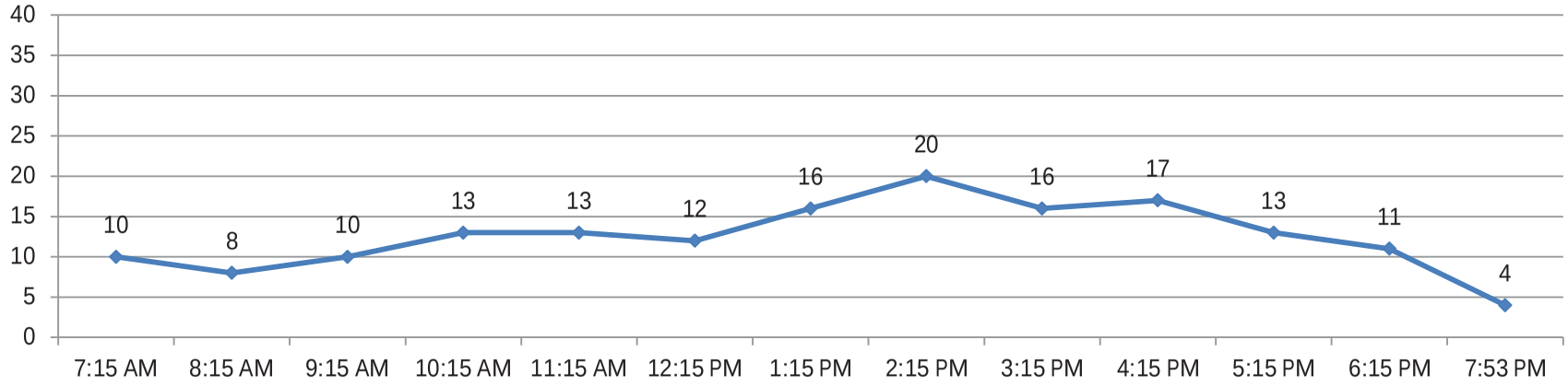
On Sunday, the outbound service experiences its greatest average ridership during the PM Peak period (average of nine riders). The inbound service sees its greatest average ridership (average of 10 riders) during the Mid-day day-part.

Exhibit 3.4.1 Route 4 Average Ridership by Trip

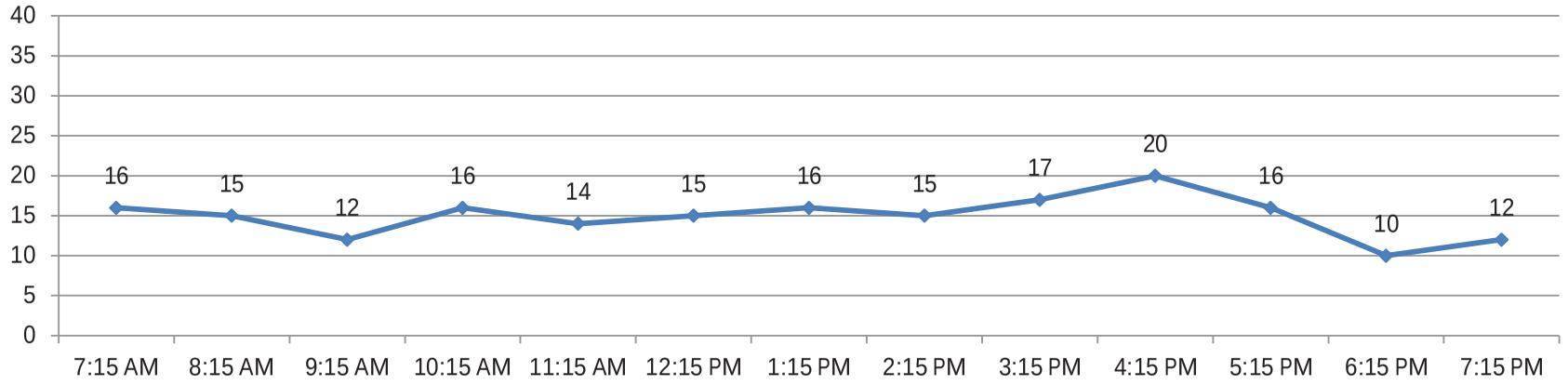




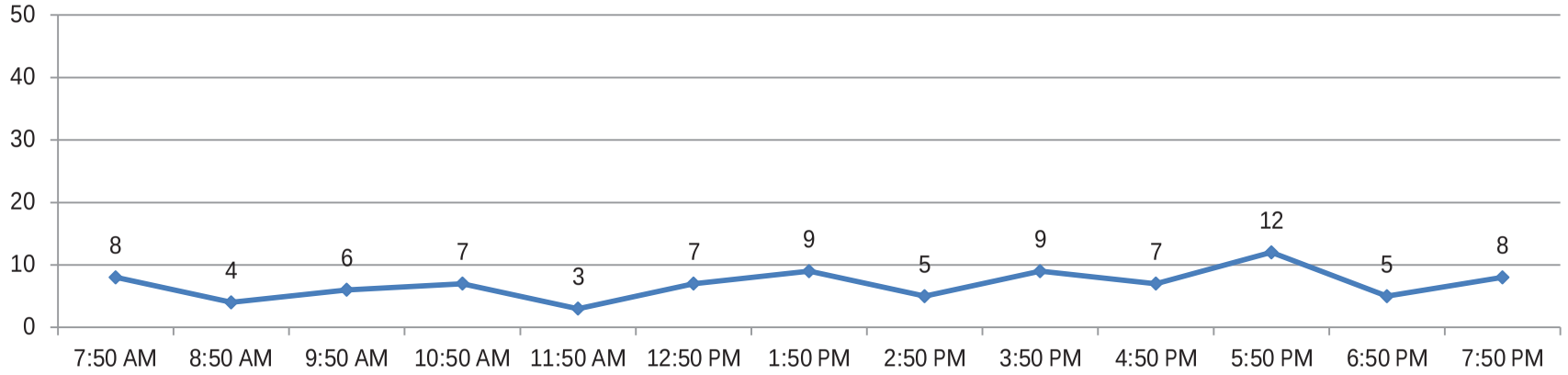
Route 4 - Outbound - Saturday Average Ridership by Trip



Route 4 - Inbound - Saturday Average Ridership by Trip



Route 4 - Outbound - Sunday Average Ridership by Trip



Route 4 - Inbound - Sunday Average Ridership by Trip

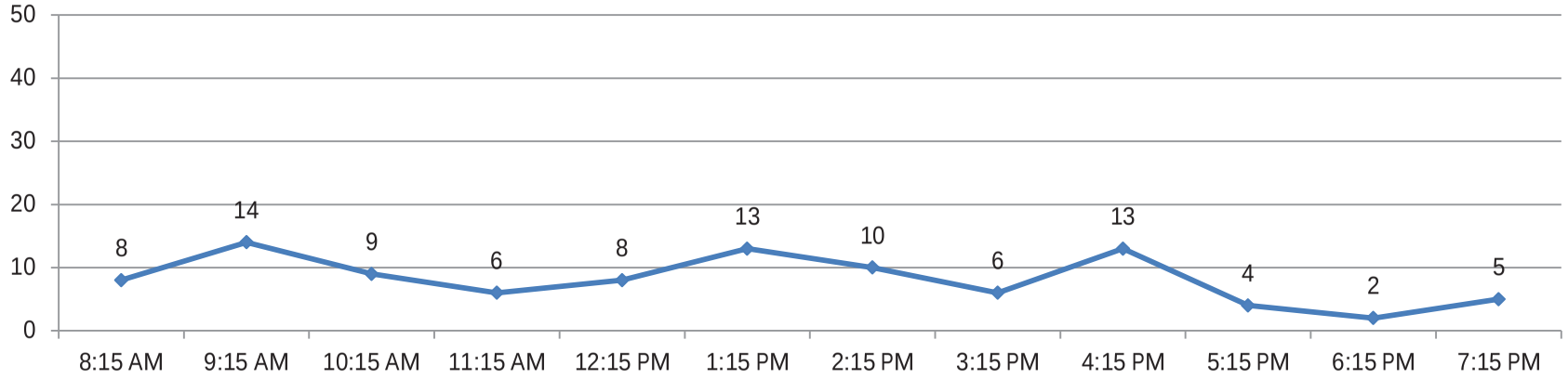
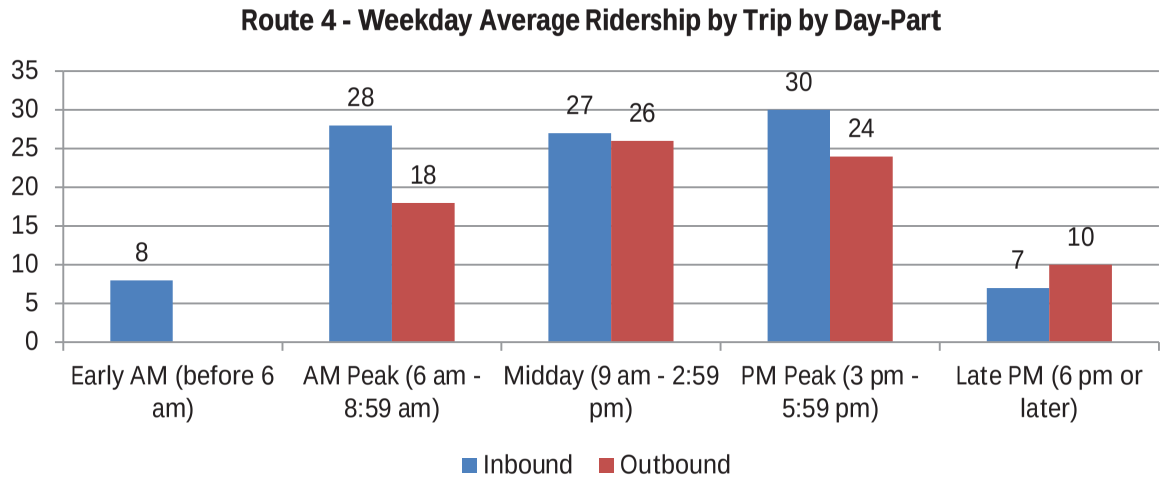
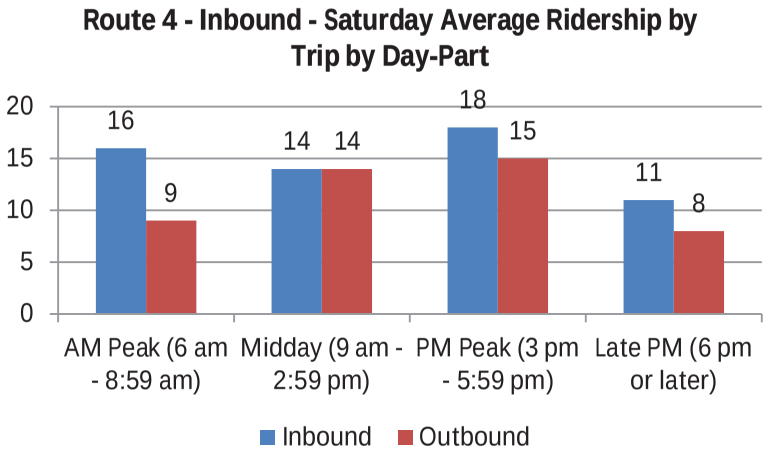
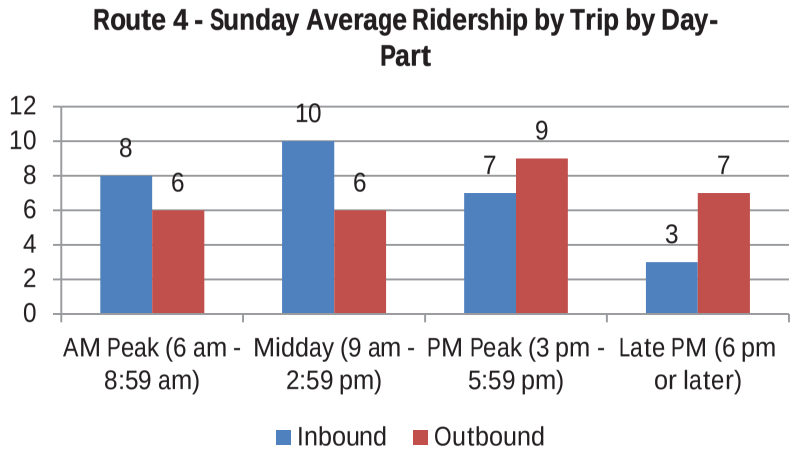


Exhibit 3.4.2 Route 4 Average Ridership by Trip by Day-Part







Average ridership (boardings) by segment

On weekdays, the outbound service sees its greatest number of boardings in the MRTC to Bouquet Canyon and Festividad/Seco Canyon segment and the Newhall Metrolink Station to Lyons Ave/Orchard Village segment. The inbound service sees a consistently high number of boardings within most route segments between College of the Canyons and LARC Ranch, with the College of the Canyons to MRTC segment having the most boardings.

On Saturday, the outbound service sees its greatest number of boardings in the MRTC to Bouquet Canyon and Festividad/Seco Canyon segment. The inbound service sees a higher number of boardings between College of the Canyons and LARC Ranch, with the College of the Canyons to MRTC segment having the most boardings.

On Sunday, the outbound service sees its greatest number of boardings in the MRTC to Bouquet Canyon and Festividad/Seco Canyon segment. The inbound service sees comparable boardings in the MRTC to Bouquet Canyon and Festividad/Seco Canyon segment and the Bouquet Canyon/Centurion Way to Bouquet Canyon and Shadow Valley/Alaminos Dr segment. There is very little ridership in the Bouquet Canyon and Shadow Valley/Alaminos Dr to LARC Ranch route segment on Sunday.

Average boarding and alighting by stop

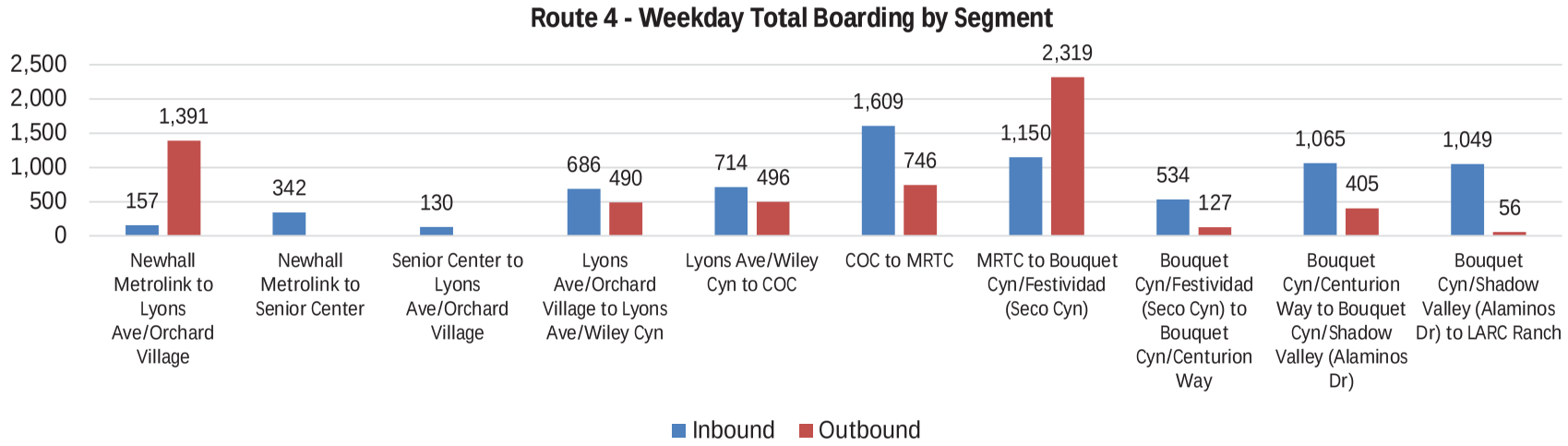
Beginning on page 11, bubble maps indicate the relative level of activity at each Route 4 bus stop, both inbound and outbound.

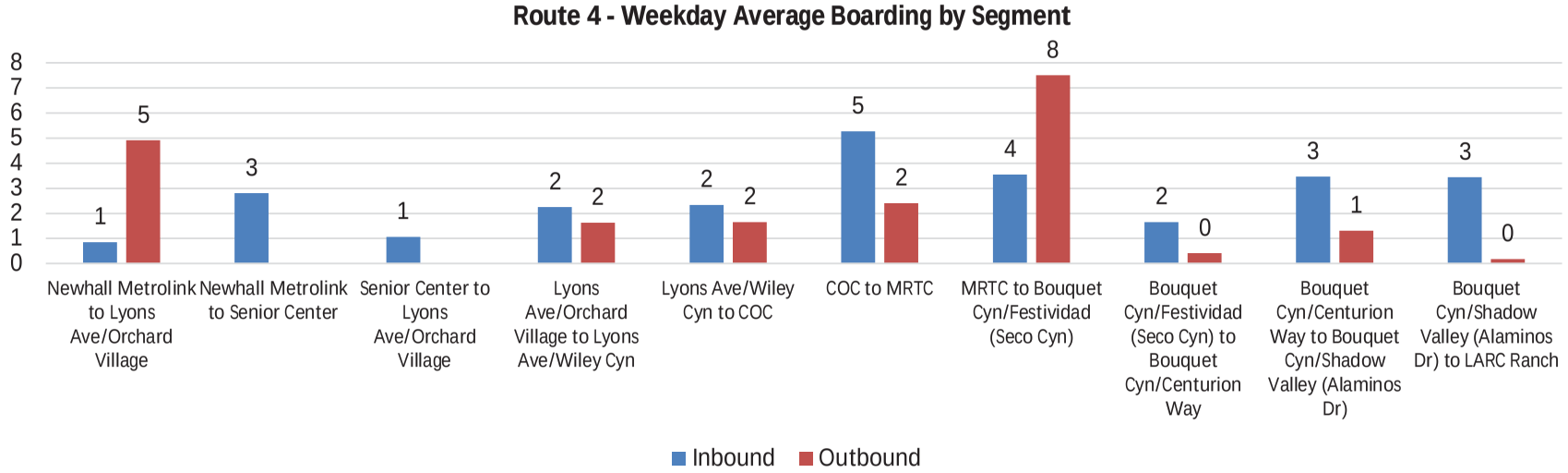
On weekdays, outbound boarding activity is greatest at the Newhall Metrolink Station, College of the Canyons, and the MRTC. For the inbound service, key activity points include Bouquet Canyon/Blue Cloud Rd (adjacent to the Lily of the Valley Mobile Home Park) and College of the Canyons. The data also show that the largest service point was at McBean Pkwy at the mall, just north of the MRTC. This seems unusual, given all other days and directions saw the highest volume at the MRTC. It is possible that this data was mislabeled and the MRTC is the correct location for this volume of boardings.

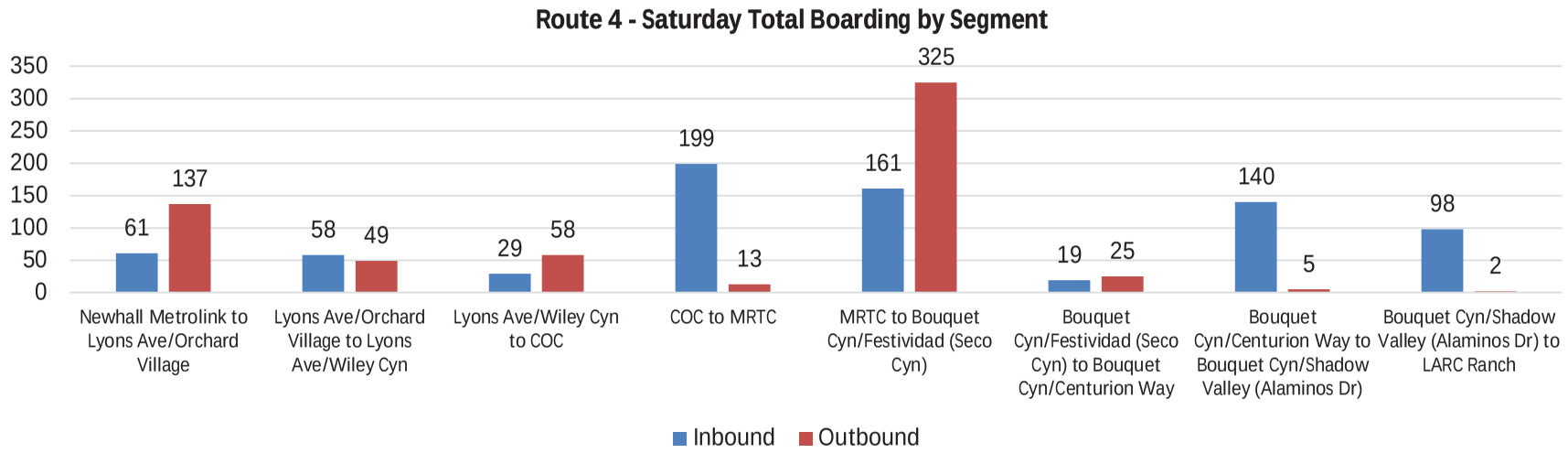
On Saturday, key outbound service points are the Newhall Metrolink Station, Lyons Ave/Wiley Canyon Rd, and the MRTC. Key inbound service points are the MRTC and Market St/Walnut St in Newhall.

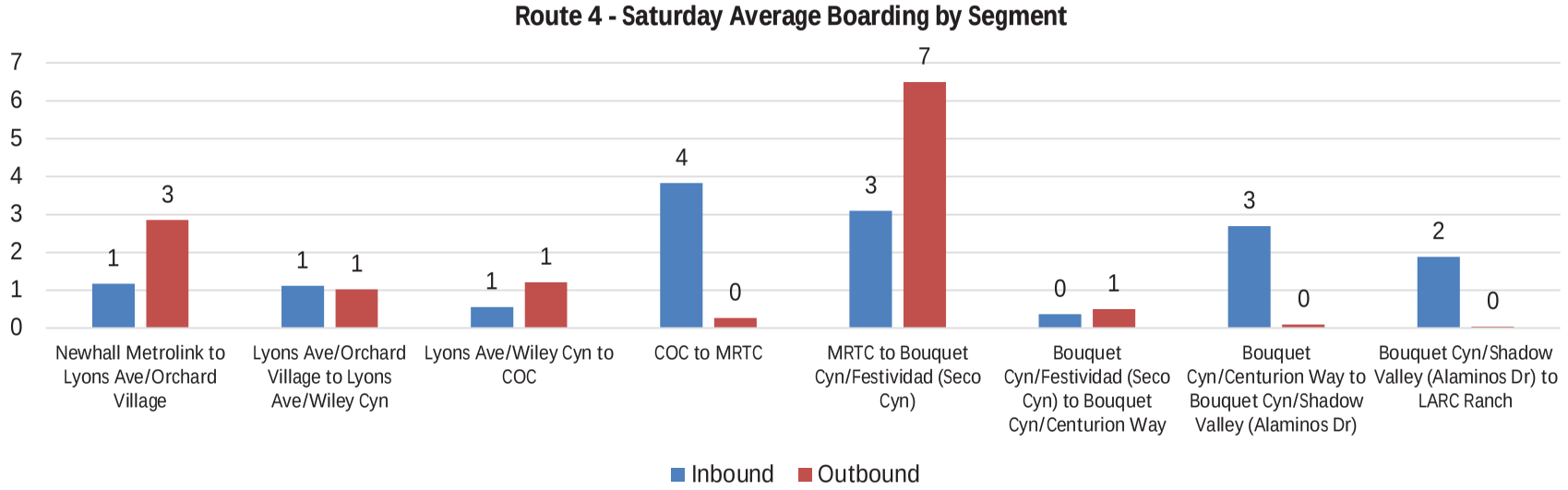
On Sunday, service is only provided between LARC Ranch and the MRTC. Key outbound service points are the MRTC, Bouquet Canyon Rd/Plum Canyon Rd, and LARC Ranch. Key inbound service points are Bouquet Canyon/Blue Cloud Rd, Bouquet Canyon/Haskell Canyon (Albertsons), and the MRTC.

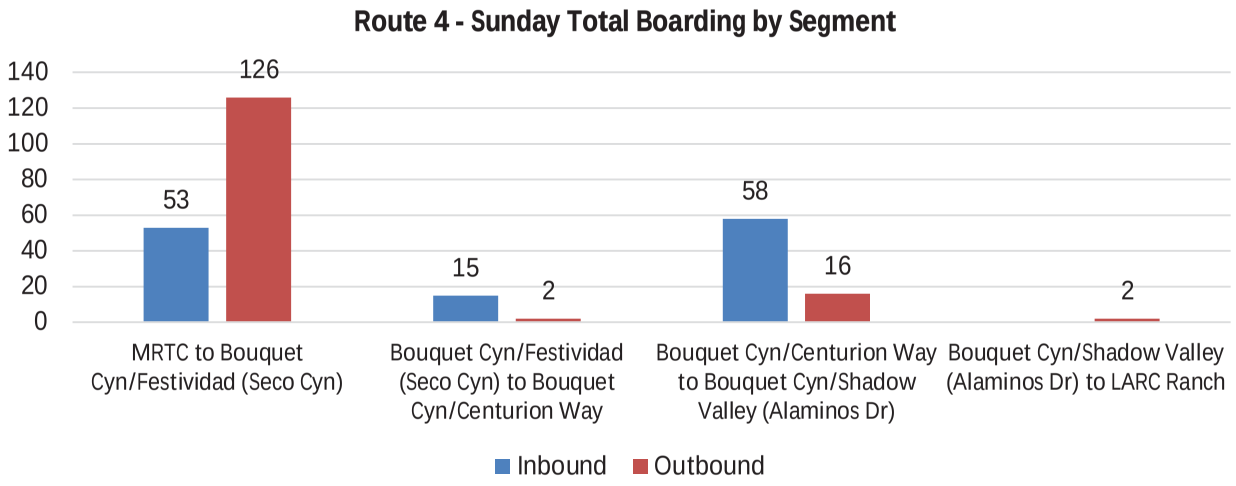
Exhibit 3.4.3 Route 4 Total and Average Boardings by Segment






Route 4 - Saturday Total Boarding by Segment
350
300
250
200
150
100
50
0
61
137
58
49
29
58
199
13
161
325
19
25
140
5
98
2
Newhall Metrolink to Lyons Ave/Orchard Village
Lyons Ave/Orchard Village to Lyons Ave/Wiley Cyn
Lyons Ave/Wiley Cyn to COC
COC to MRTC
MRTC to Bouquet Cyn/Festividad (Seco Cyn)
Bouquet Cyn/Festividad (Seco Cyn) to Bouquet Cyn/Centurion Way
Bouquet Cyn/Centurion Way to Bouquet Cyn/Shadow Valley (Alaminos Dr)
Bouquet Cyn/Shadow Valley (Alaminos Dr) to LARC Ranch
Inbound
Outbound


Route 4 - Saturday Average Boarding by Segment
7
6
5
4
3
2
1
0
1
3
1
1
1
1
4
0
3
7
0
1
3
0
2
0
Newhall Metrolink to Lyons Ave/Orchard Village
Lyons Ave/Orchard Village to Lyons Ave/Wiley Cyn
Lyons Ave/Wiley Cyn to COC
COC to MRTC
MRTC to Bouquet Cyn/Festividad (Seco Cyn)
Bouquet Cyn/Festividad (Seco Cyn) to Bouquet Cyn/Centurion Way
Bouquet Cyn/Centurion Way to Bouquet Cyn/Shadow Valley (Alaminos Dr)
Bouquet Cyn/Shadow Valley (Alaminos Dr) to LARC Ranch
Inbound
Outbound


Route 4 - Sunday Total Boarding by Segment
140
120
100
80
60
40
20
0
53
126
15
2
58
16
2
MRTC to Bouquet Cyn/Festividad (Seco Cyn)
Bouquet Cyn/Festividad (Seco Cyn) to Bouquet Cyn/Centurion Way
Bouquet Cyn/Centurion Way to Bouquet Cyn/Shadow Valley (Alaminos Dr)
Bouquet Cyn/Shadow Valley (Alaminos Dr) to LARC Ranch
Inbound
Outbound

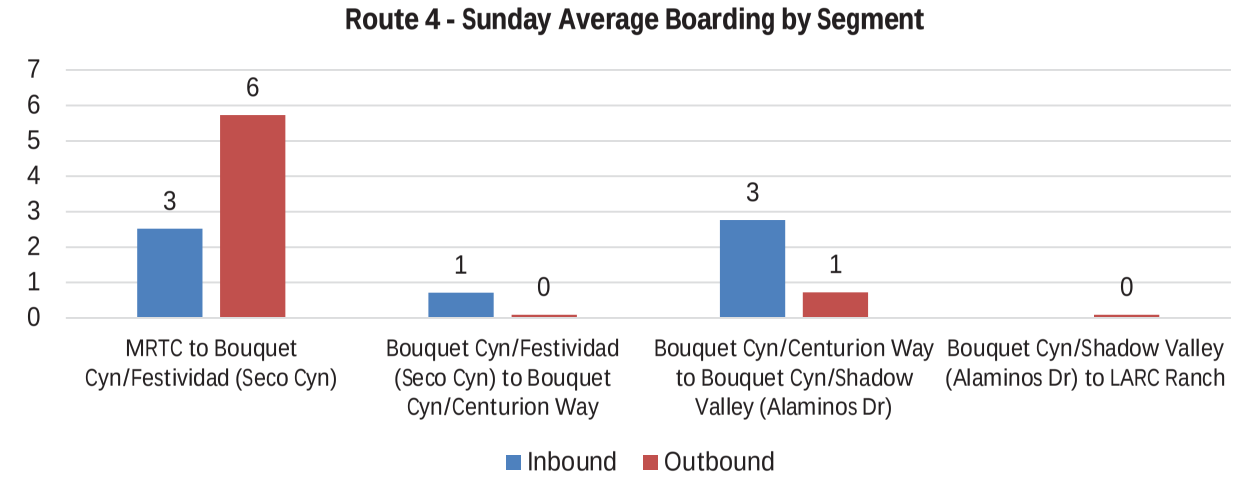
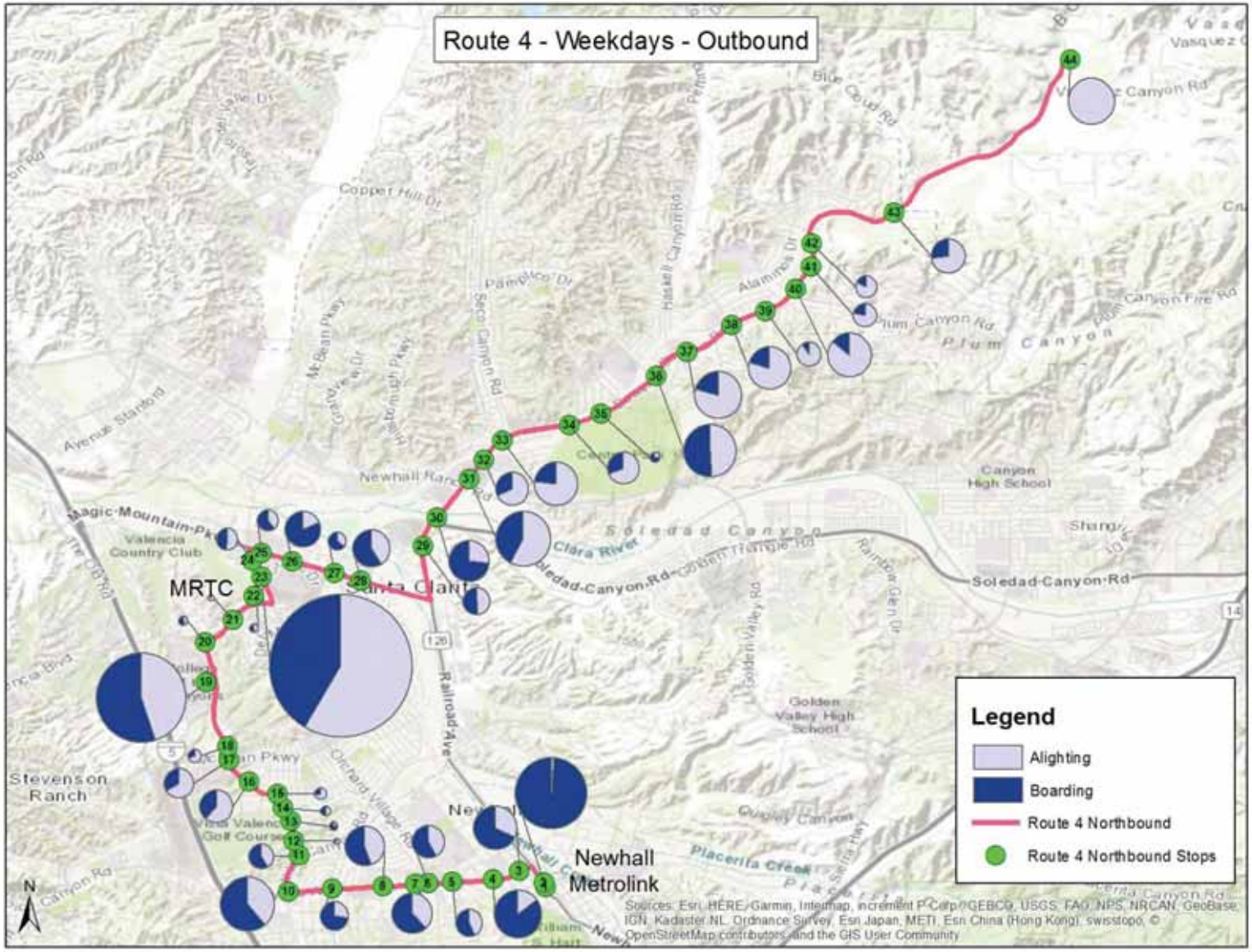
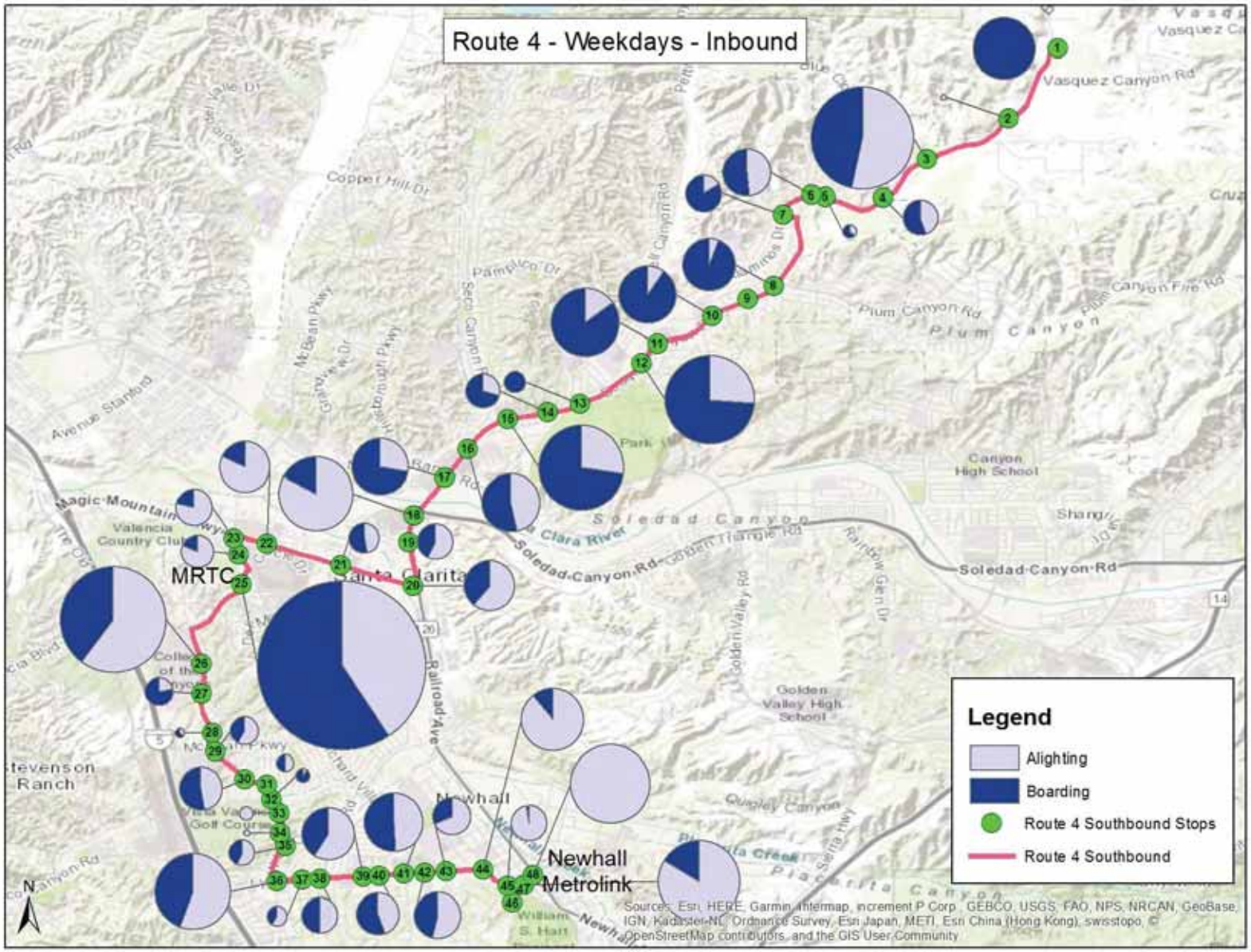
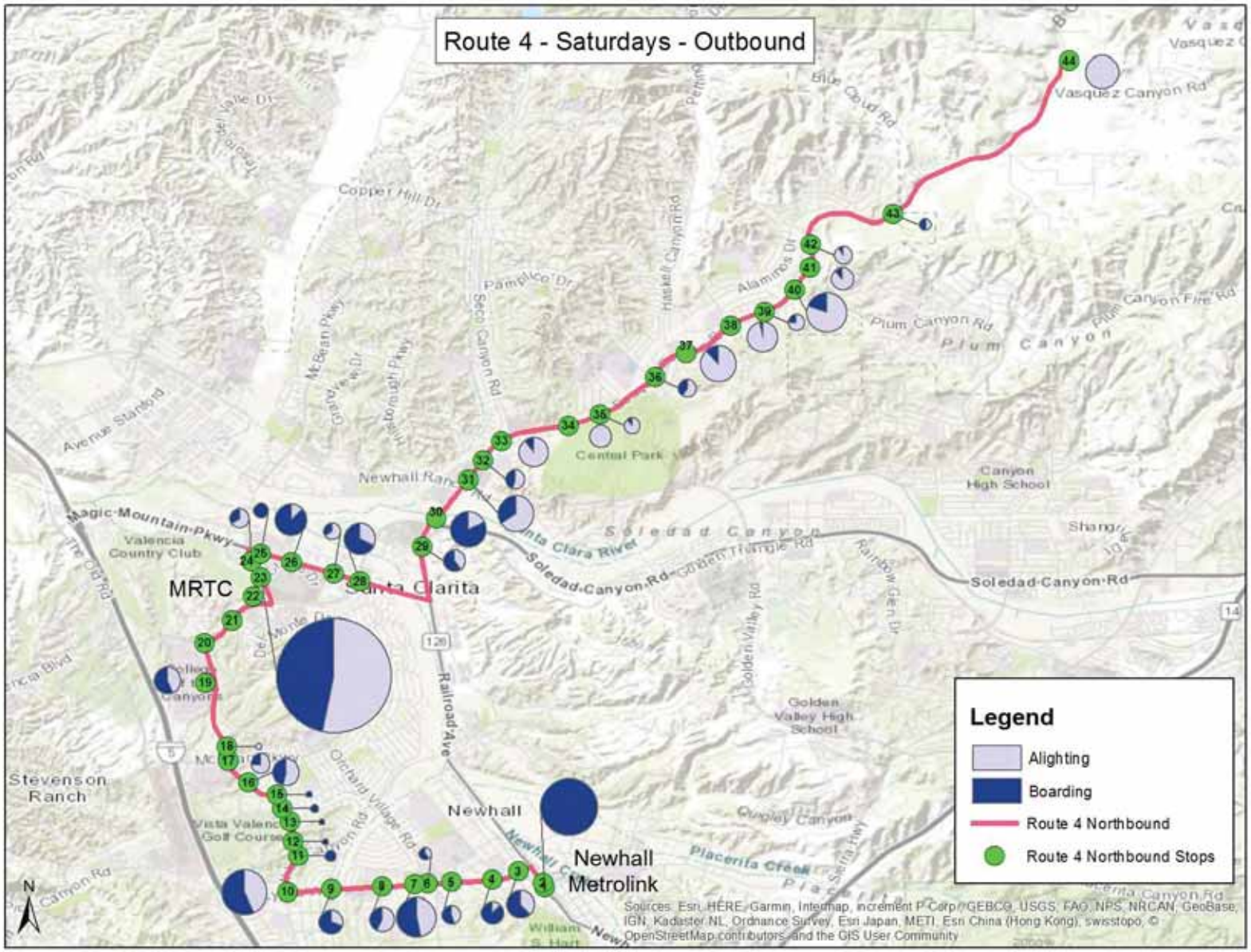
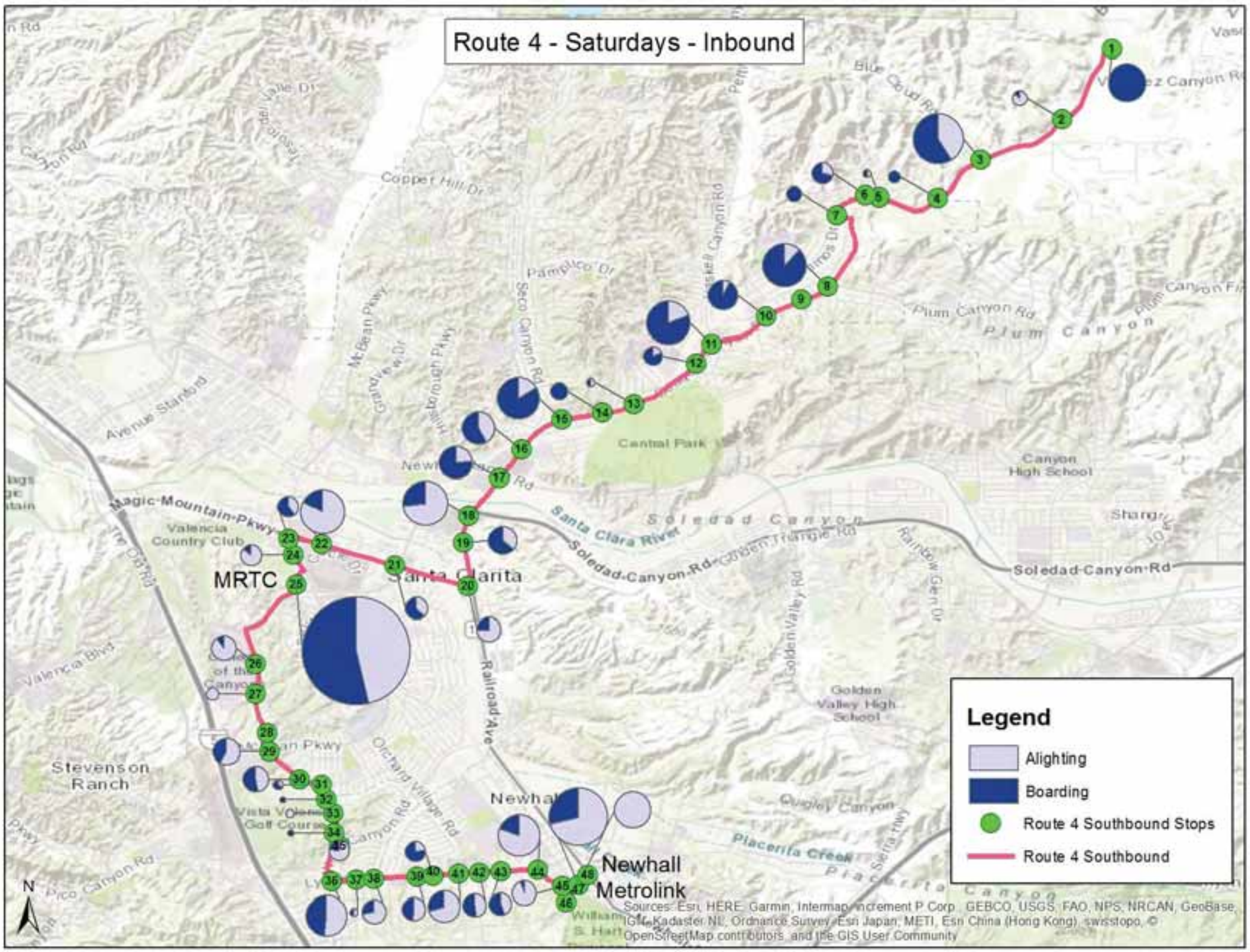

Route 4 - Sunday Average Boarding by Segment
7
6
5
4
3
2
1
0
3
6
1
0
3
1
0
MRTC to Bouquet Cyn/Festividad (Seco Cyn)
Bouquet Cyn/Festividad (Seco Cyn) to Bouquet Cyn/Centurion Way
Bouquet Cyn/Centurion Way to Bouquet Cyn/Shadow Valley (Alaminos Dr)
Bouquet Cyn/Shadow Valley (Alaminos Dr) to LARC Ranch
Inbound
Outbound

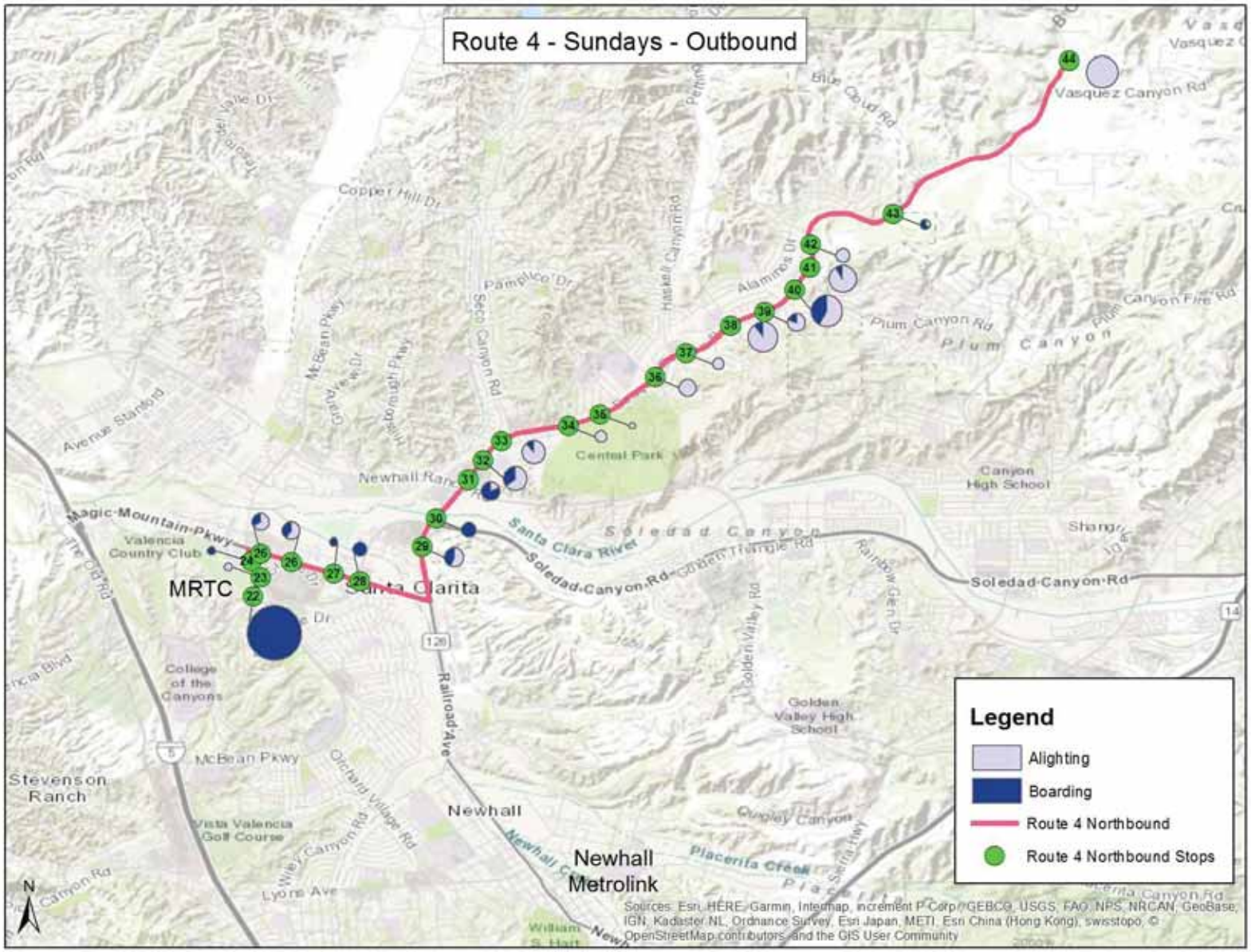
Exhibit 3.4.4 Route 4 Boarding and Alighting Maps




Route 4 - Weekdays - Inbound
Vasquez Canyon Rd
Copper Hill Dr
Plum Canyon Rd
Plum Canyon
Canyon High School
Soledad Canyon Rd
Golden Valley High School
Golden Valley Rd
Rainbow Glen Dr
Railroad Ave
Magic Mountain Pkwy
Valencia Country Club
MRTC
Santa Clarita
Newhall
Newhall Metrolink
Quigley Canyon
Stevenson Ranch
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
Legend
Alighting
Boarding
Route 4 Southbound Stops
Route 4 Southbound
N


Route 4 - Saturdays - Outbound
MRTC
Newhall
Newhall Metrolink
Vasquez Canyon Rd
Plum Canyon Rd
Soledad Canyon Rd
Magic Mountain Pkwy
Valencia Country Club
Central Park
Canyon High School
Golden Valley High School
Stevenson Ranch
Railroad Ave
Legend
Alighting
Boarding
Route 4 Northbound
Route 4 Northbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 4 - Saturdays - Inbound
Legend
Alighting
Boarding
Route 4 Southbound Stops
Route 4 Southbound
MRTC
Newhall Metrolink
Santa Clarita
Central Park
Canyon High School
Golden Valley High School
Stevenson Ranch
Valencia Country Club
Magic Mountain Pkwy
Soledad Canyon Rd
Railroad Ave
Santa Clara River
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 4 - Sundays - Outbound
MRTC
Newhall Metrolink
Legend
Alighting
Boarding
Route 4 Northbound
Route 4 Northbound Stops
Vasquez Canyon Rd
Plum Canyon Rd
Soledad Canyon Rd
Santa Clara River
Magic Mountain Pkwy
McBean Pkwy
Railroad Ave
Newhall
Stevenson Ranch
College of the Canyons
Golden Valley High School
Central Park
Valencia Country Club
Vista Valencia Golf Course
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

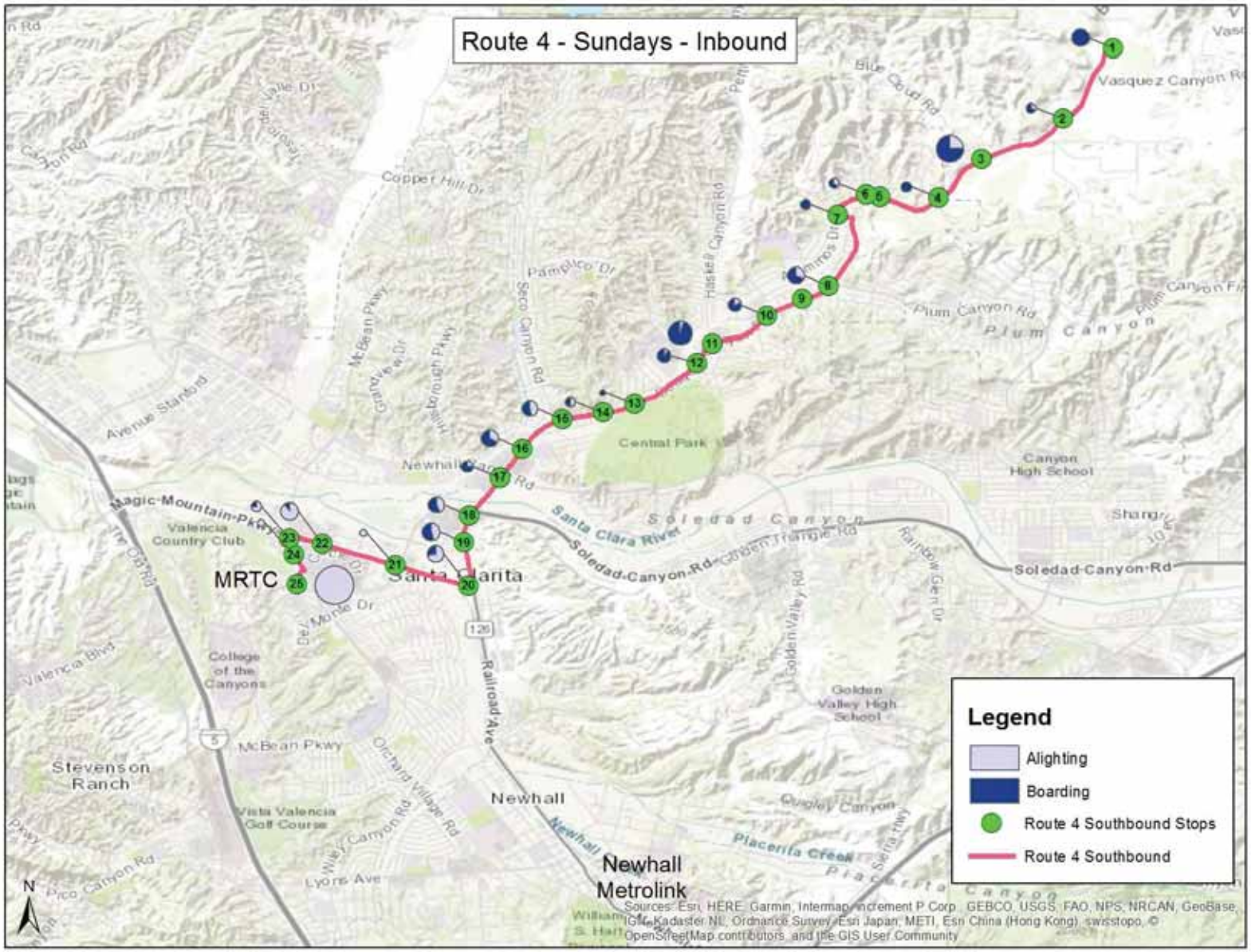

Route 4 - Sundays - Inbound
MRTC
Santa Clarita
Newhall
Newhall Metrolink
Legend
Alighting
Boarding
Route 4 Southbound Stops
Route 4 Southbound
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.4.5 Route 4 Stop Lists

Route 4 Outbound Stop List	
Stop Number	Stop Name
1	Railroad Ave & Market St
2	Railroad Ave & 8th St
3	Lyons Ave & Main St
4	Lyons Ave & Newhall Ave
5	Lyons Ave & Wayman St
6	Lyons Ave & Orchard Village Rd
7	Lyons Ave & Apple St
8	Lyons Ave & Peachland Ave
9	Lyons Ave & Avenida Entrana
10	Lyons Ave & Wiley Canyon Rd
11	Tournament Rd & Wiley Canyon Rd
12	Tournament Rd & Vista Hills Dr
13	Tournament Rd & Oak Vale Dr
14	Tournament Rd & Trevino Dr
15	Tournament Rd & Golf Course Rd
16	Tournament Rd & Golfview Dr
17	Tournament Rd & McBean Pky
18	Rockwell Canyon Rd & Summit Pl
19	COC Campus
20	Rockwell Canyon Rd & Valencia Blvd
21	Valencia Blvd & Goldcrest Dr
22	McBean MRTC
23	McBean Pky
24	McBean Pky & Town Center Dr
25	Magic Mountain Pky & Theater Dr
26	Magic Mountain Pky & Carousel Ln
27	Magic Mountain Pky & Citrus Dr
28	Magic Mountain Pky & Valencia Blvd
29	Bouquet Canyon Rd & Cinema Dr
30	Bouquet Canyon Rd & Soledad Canyon Rd
31	Bouquet Canyon Rd & Newhall Ranch Rd
32	Bouquet Canyon Rd & Espuella Dr
33	Bouquet Canyon Rd & Festividad Dr
34	Bouquet Canyon Rd & Alamogordo Rd
35	Bouquet Canyon Rd & Central Prk
36	Bouquet Canyon Rd & Centurion Wy
37	Bouquet Canyon Rd & Susan Beth Wy
38	Bouquet Canyon Rd & Urbandale Ave
39	Bouquet Canyon Rd & Wellston Dr
40	Bouquet Canyon Rd & Plum Canyon Rd
41	Bouquet Canyon Rd & Steve Jon St
42	Bouquet Canyon Rd & Russ Jay St
43	Bouquet Canyon Rd & Shadow Valley Ln
44	LARC Ranch

Route 4 Inbound Stop List	
Stop Number	Stop Name
1	LARC Ranch
2	Bouquet Canyon Rd & Esguerra Rd
3	Bouquet Canyon Rd & Blue Cloud Rd
4	Bouquet Canyon Rd & Shadow Valley Ln
5	Hob Ct & Pin Ct
6	Alaminos Dr & Row Ct
7	Benz Rd & Alaminos Dr
8	Bouquet Canyon Rd & Plum Canyon Rd
9	Bouquet Canyon Rd & Wellston Dr
10	Bouquet Canyon Rd & Urbandale Ave
11	Bouquet Canyon Rd & Haskell Canyon Rd
12	Bouquet Canyon Rd & Centurion Wy
13	Bouquet Canyon Rd & Central Prk
14	Bouquet Canyon Rd & Alamogordo Rd
15	Bouquet Canyon Rd & Seco Canyon Rd
16	Bouquet Canyon Rd & Espuella Dr
17	Bouquet Canyon Rd
18	Bouquet Canyon Rd & Soledad Canyon Rd
19	Bouquet Canyon Rd & Cinema Dr
20	Magic Mountain Pky & Bouquet Canyon Rd
21	Magic Mountain Pky & Valencia Blvd
22	Magic Mountain Pky & Auto Center Dr
23	McBean Pky & Magic Mountain Pky
24	McBean Pky & Town Center Dr
25	McBean MRTC
26	Rockwell Canyon Rd
27	University Center Dr & Rockwell Canyon Rd
28	Rockwell Canyon Rd
29	Tournament Rd & McBean Pky
30	Tournament Rd & Golfview Dr
31	Tournament Rd & Golf Course Rd
32	Tournament Rd & Trevino Dr
33	Tournament Rd & Oak Vale Dr
34	Tournament Rd & Vista Hills Dr
35	Wiley Canyon Rd & Tournament Rd
36	Lyons Ave & Wiley Canyon Rd
37	Lyons Ave & De Wolfe Rd
38	Lyons Ave & Everett Dr
39	Lyons Ave & Peachland Ave
40	Lyons Ave & Avenida Rotella
41	Lyons Ave & Apple St
42	Lyons Ave & Valley St
43	Lyons Ave & Wayman St
44	Lyons Ave & Newhall Ave
45	Newhall Ave & 8th St
46	Senior Center
47	Market St & Walnut St
48	Railroad Ave & Market St

Average load factor by trip

Both inbound and outbound trips on Route 4 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.35. Trips with the highest average peak loads for each day and direction are identified below.

Exhibit 3.4.6 Route 4 Trips with Highest Average Peak Loads

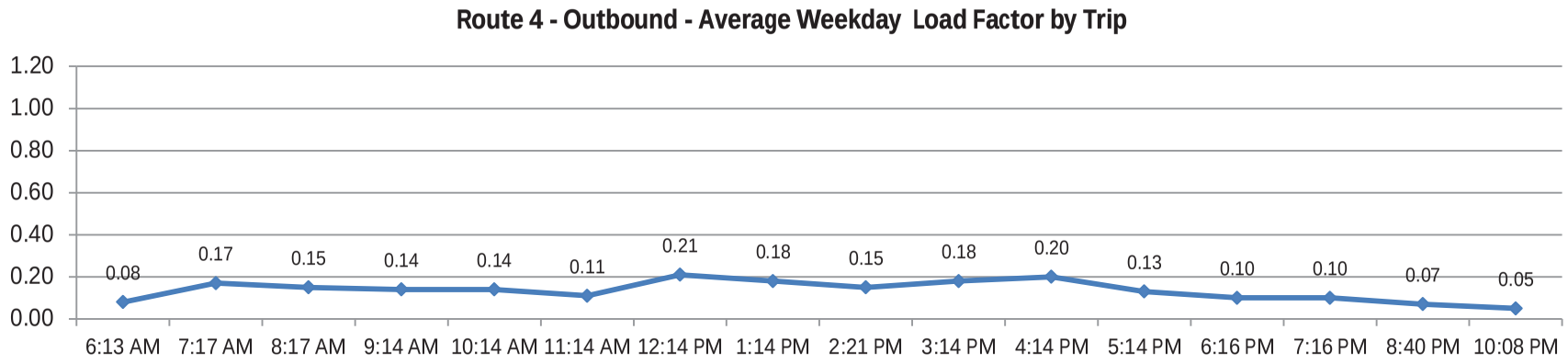
Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	12:14 p.m.	0.21
Weekday	Inbound	3:32 p.m.	0.35
Saturday	Outbound	2:15 p.m.	0.14
Saturday	Inbound	4:15 p.m.	0.18
Sunday	Outbound	5:50 p.m.	0.17
Sunday	Inbound	4:15 p.m.	0.16

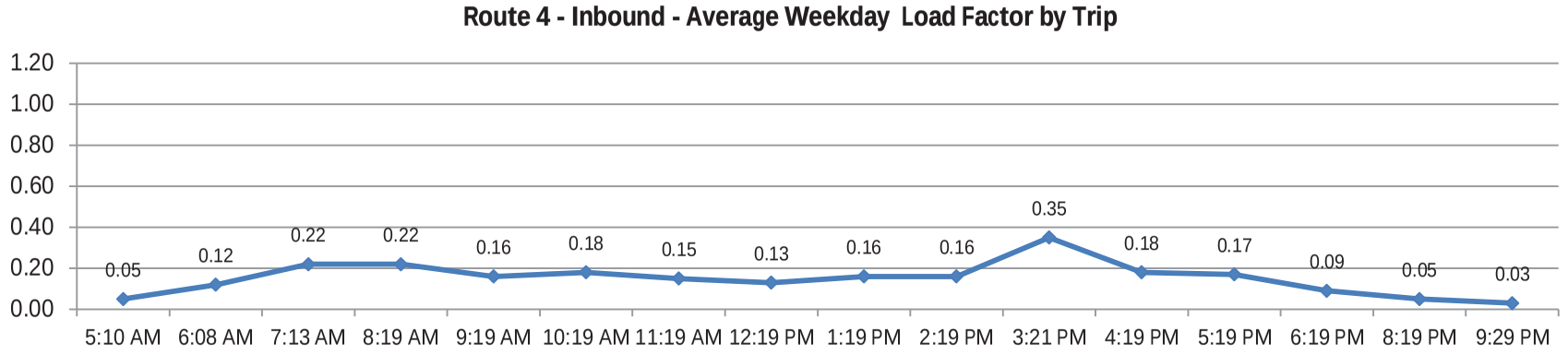
There were two individual trips which exhibited a load factor of at least 0.50. Those trips are as follows:

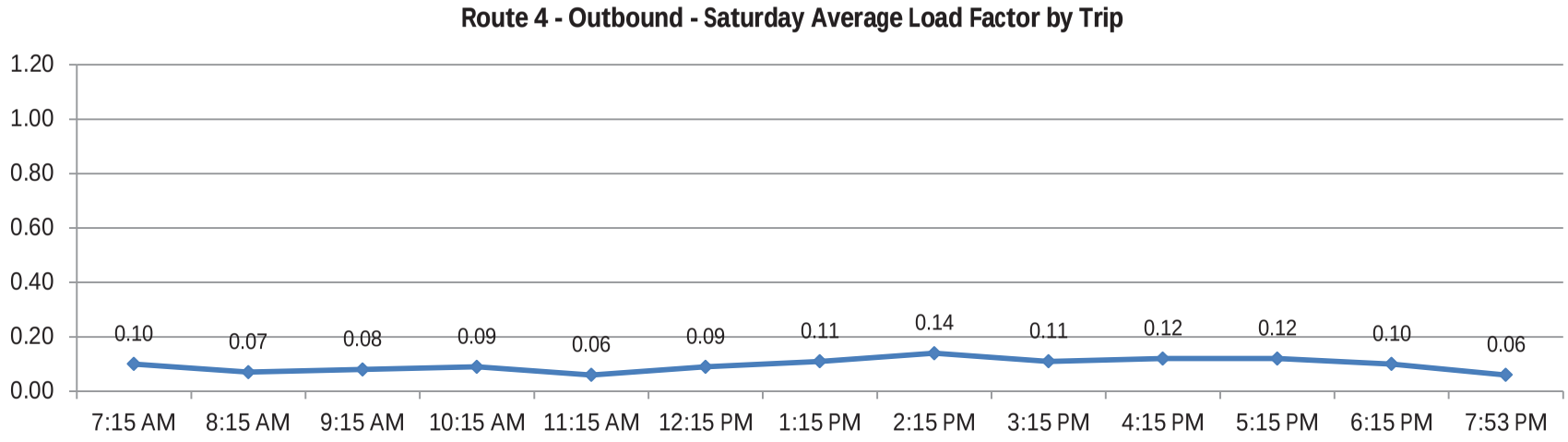
Exhibit 3.4.7 Route 4 Trips with Load Factor at least 0.50

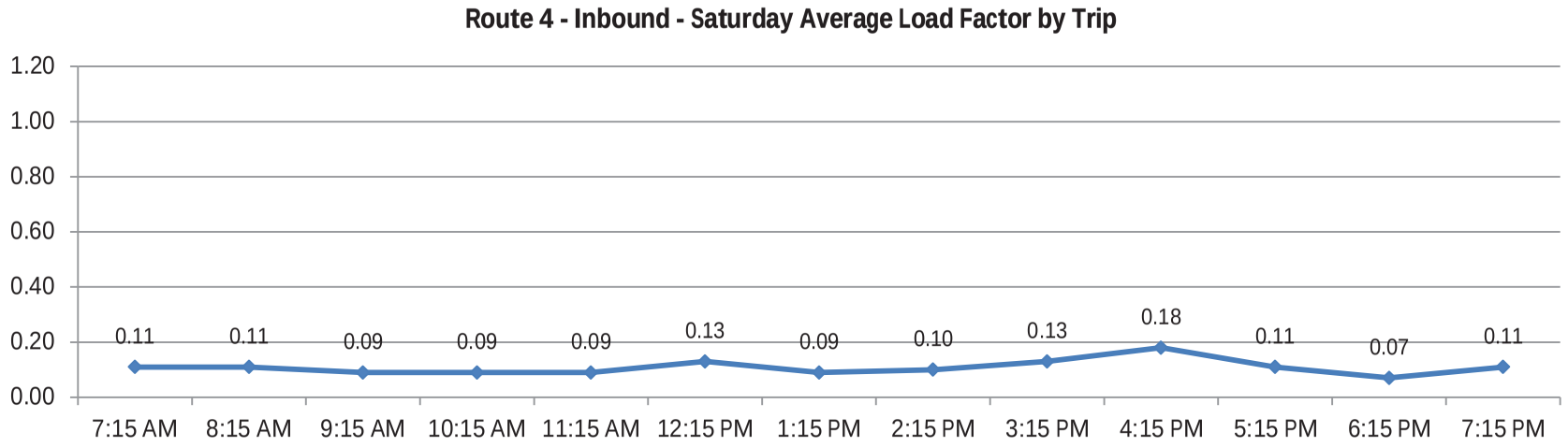
Date	Direction	Trip	Load factor
May 7	Inbound	3:21 p.m.	0.52
May 14	Inbound	3:21 p.m.	0.51

Exhibit 3.4.8 Route 4 Average Load Factor by Trip

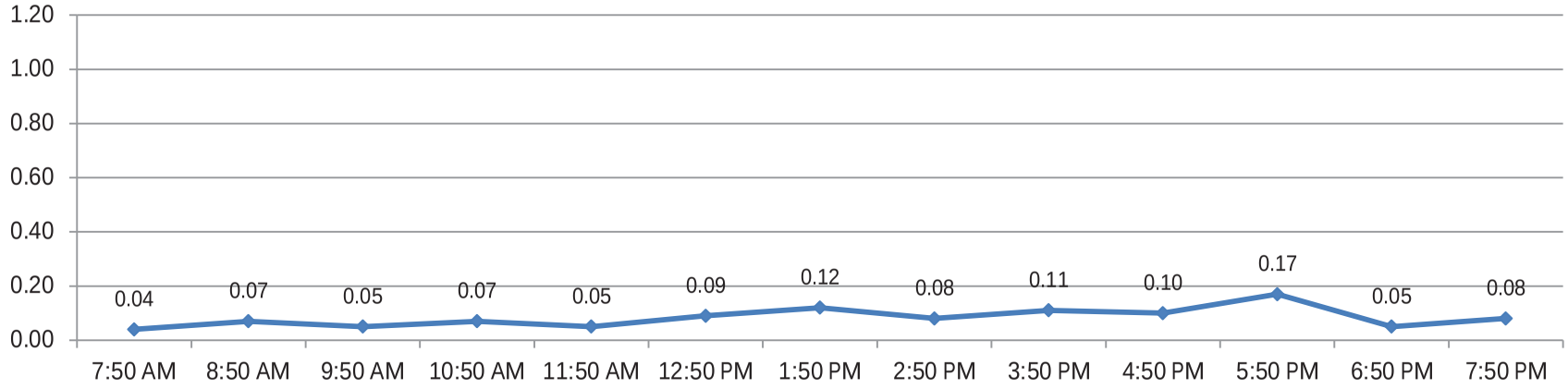




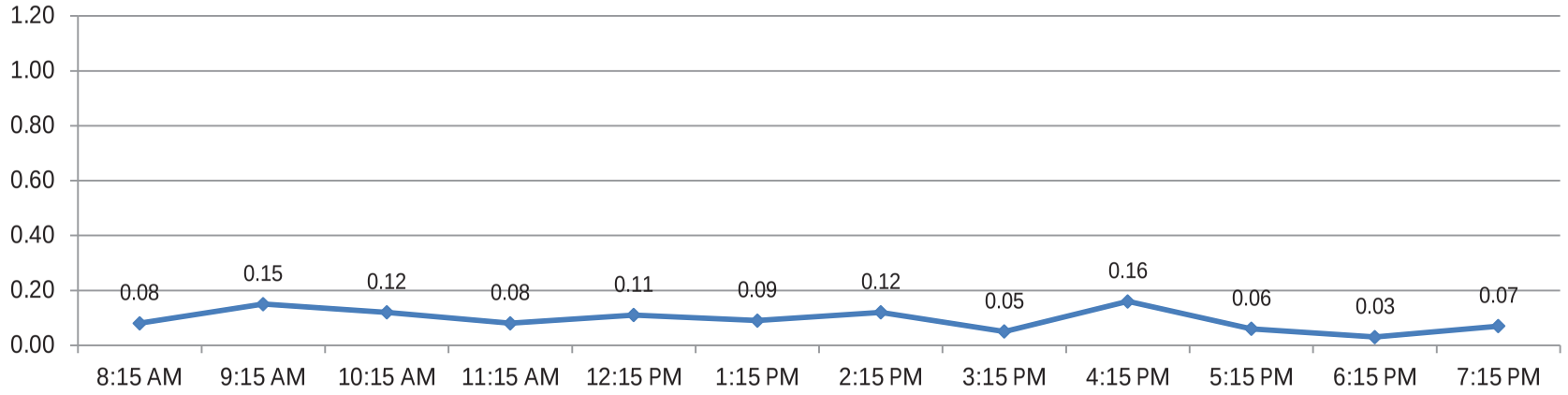

Route 4 - Outbound - Saturday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.10
0.07
0.08
0.09
0.06
0.09
0.11
0.14
0.11
0.12
0.12
0.10
0.06
7:15 AM
8:15 AM
9:15 AM
10:15 AM
11:15 AM
12:15 PM
1:15 PM
2:15 PM
3:15 PM
4:15 PM
5:15 PM
6:15 PM
7:53 PM


Route 4 - Inbound - Saturday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.11
0.11
0.09
0.09
0.09
0.13
0.09
0.10
0.13
0.18
0.11
0.07
0.11
7:15 AM
8:15 AM
9:15 AM
10:15 AM
11:15 AM
12:15 PM
1:15 PM
2:15 PM
3:15 PM
4:15 PM
5:15 PM
6:15 PM
7:15 PM

Route 4 - Outbound - Sunday Average Load Factor by Trip



Route 4 - Inbound - Sunday Average Load Factor by Trip



Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 4's weekday inbound service exhibits better overall schedule adherence (79.3 percent) than the outbound service (71.7 percent). On Saturday, schedule adherence improves, with the outbound service operating at 83 percent on-time and the inbound at 81 percent. On Sunday, schedule adherence erodes again, with 80.7 percent of outbound trips and 74.3 percent of inbound trips on-time.

Schedule adherence for Route 4 was reviewed using the data provided by the City, which calculates only the deviation from the scheduled departure time from the MRTC (not the arrival time). Given the high incidence of early outbound departures from the MRTC, on-time performance at the MRTC was examined more closely.

With respect to the outbound service, approximately half of the surveyed trips arriving at the MRTC on weekdays arrived late. The layover at the MRTC on weekdays generally ranges from 11 to 15 minutes, with some trips later in the evening having a shorter layover (three to six minutes). Nearly 86 percent of the departures from the MRTC left early. Trips during the Mid-day and PM Peak day-parts were most likely to arrive late and depart early, while those in the Late PM day-part were most likely to arrive on-time and depart early. This is likely due to drivers who take one of two approaches: either they 1) attempt to make up for a late arrival by leaving immediately (but wind up leaving early), or 2) they do not dwell for the full amount of the short layover at the MRTC during late evening trips.

Given the limited schedule adherence data available for Saturday outbound service at the MRTC, a separate analysis of Saturday performance was not conducted. However, it is likely that a similar pattern exists on Saturday as well.

Schedule adherence by time-point

On the weekday outbound service, schedule adherence was highest at LARC Ranch (80 percent) and lowest at the MRTC (11.2 percent). For the inbound service, it was highest at Alaminos Dr/Hob Ct (90.9 percent) and lowest at the Newhall Metrolink Station (57.3 percent).

On Saturday, the Newhall Metrolink Station had the highest on-time performance for both directions (outbound was 97.5 percent and inbound was 93.2 percent). For the outbound service, the lowest on-time performance was at the MRTC (40 percent). For the inbound service, it was at Bouquet Canyon/Centurion Way and Lyons Ave/Orchard Village (75 percent each).

On the Sunday outbound service, schedule adherence was highest at LARC Ranch (85.3 percent) and lowest at Seco Canyon Rd/Bouquet Canyon Rd (76.2 percent). For the inbound service, it was highest at Seco Canyon Rd/Bouquet Canyon Rd (85 percent) and lowest at the MRTC (47.6 percent). However,

given MRTC is the terminus of the route on Sunday, the low on-time performance was due to late arrivals rather than early departures.

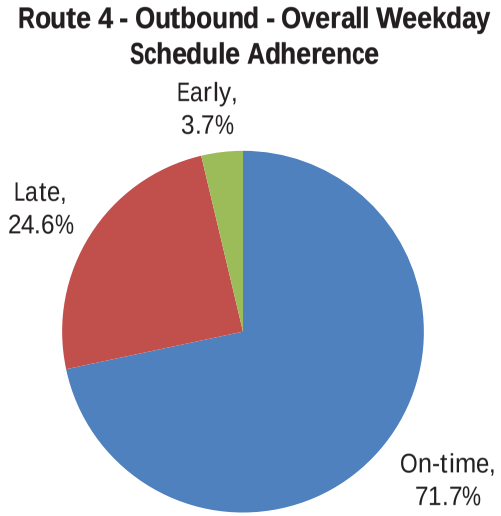
Schedule adherence by time of day

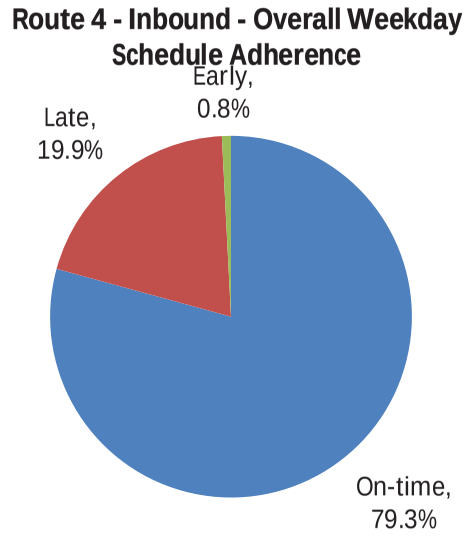
On weekdays, outbound schedule adherence is generally highest during the AM Peak period (85.9 percent). The most late trips take place during the PM Peak day-part (45 percent late), while the most early trips occur during the Late PM day-part (5.8 percent early). For the inbound service, Early AM has the best schedule adherence (96.4 percent) but also the highest percentage of early trips (2.9 percent). The PM Peak period has the largest percentage of late trips (37.9 percent).

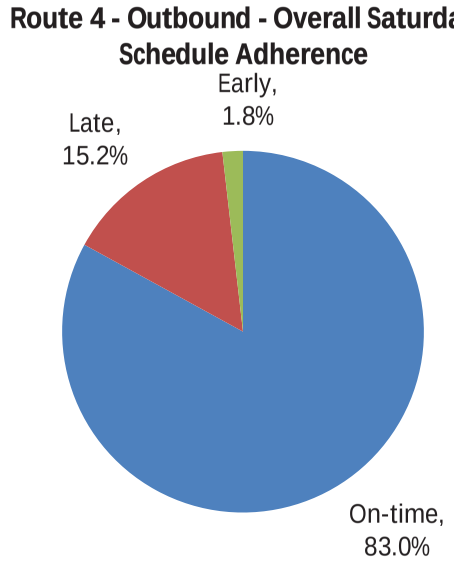
On the Saturday outbound service, the Late PM day-part had the best schedule adherence (97.4 percent), while the PM Peak period had the most late trips (28.9 percent). For the inbound service, AM Peak was on-time for 100 percent of observed trips, while PM Peak had the most late trips (39.6 percent).

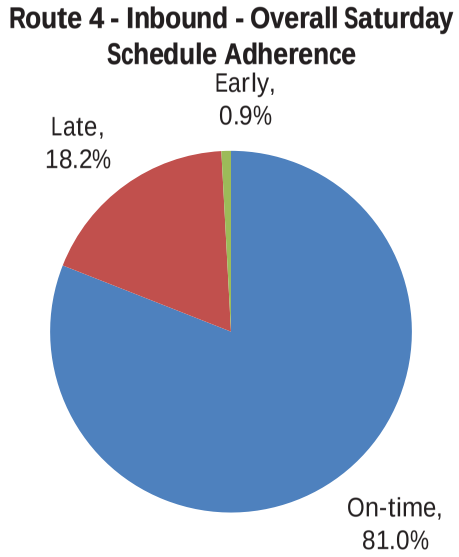
On the Sunday outbound service, the AM Peak period was on-time for 100 percent of observed trips, while the PM Peak period was late on 38.9 percent of trips. Inbound AM Peak service also had the highest percentage of on-time trips (90.9 percent). The PM Peak period had the highest percentage of late trips (35 percent), while the Late PM period had the highest percentage of early trips (9.1 percent).

Exhibit 3.4.9 Route 4 Overall Schedule Adherence

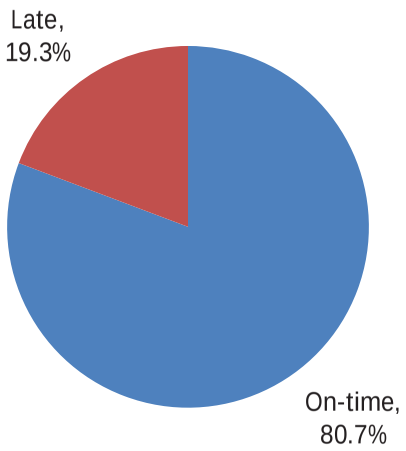








Route 4 - Outbound - Overall Sunday Schedule Adherence



Route 4 - Inbound - Overall Sunday Schedule Adherence

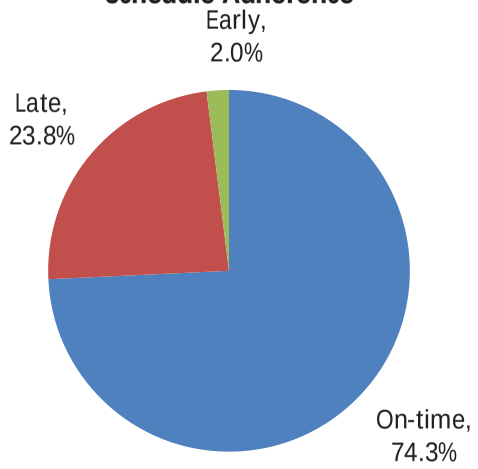
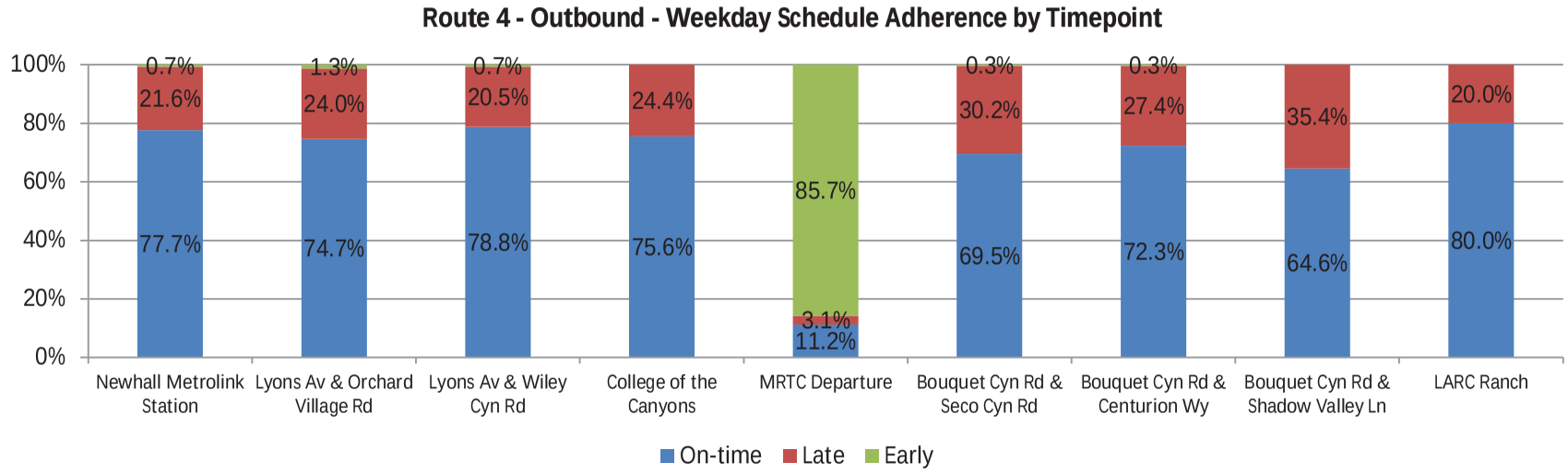
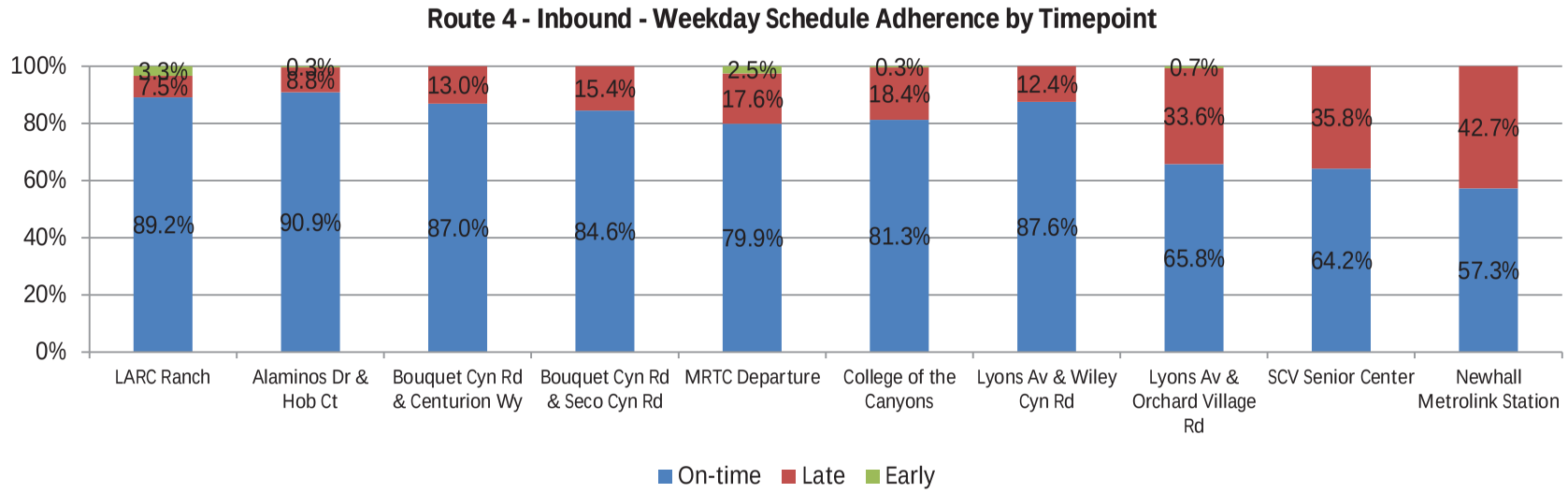
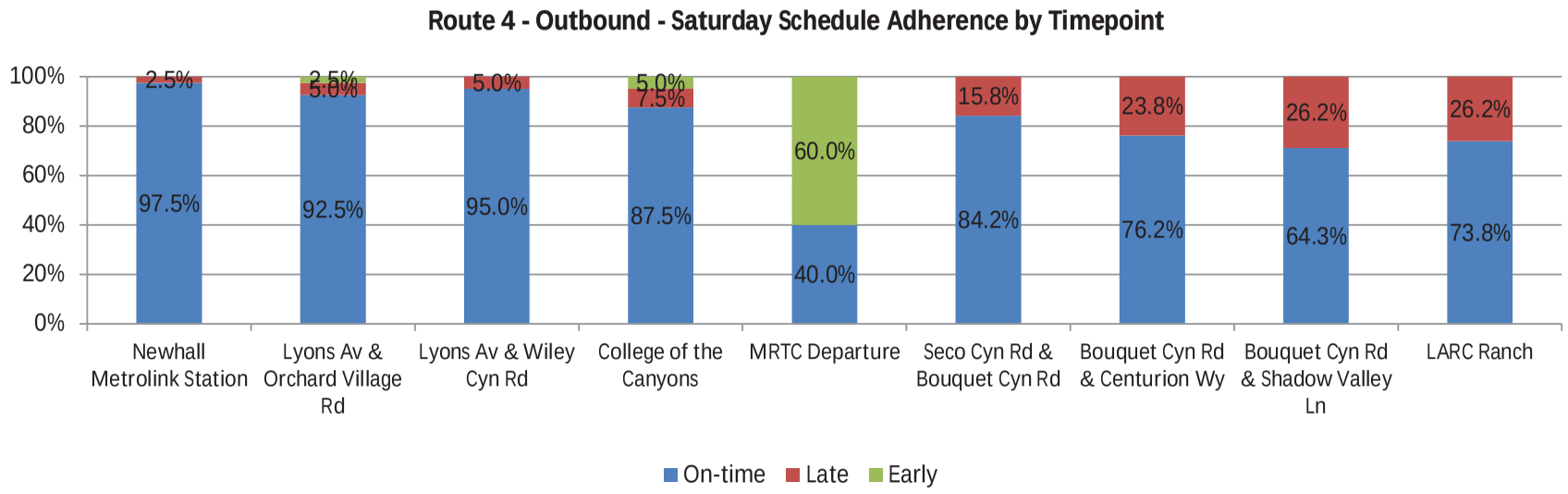
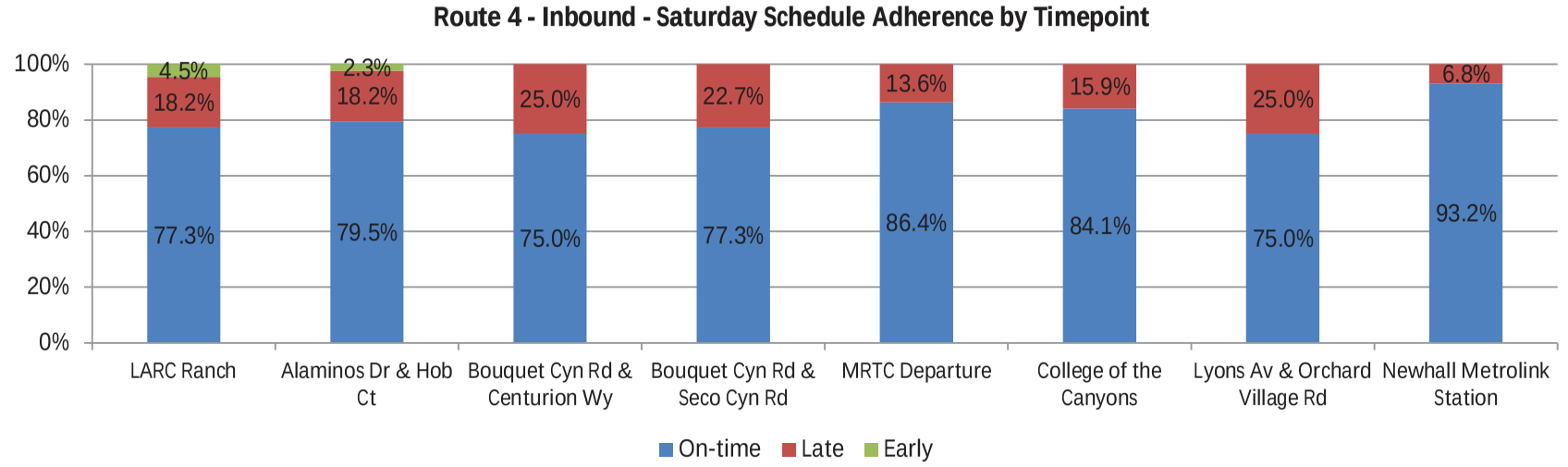


Exhibit 3.4.10 Route 4 Schedule Adherence by Time-point

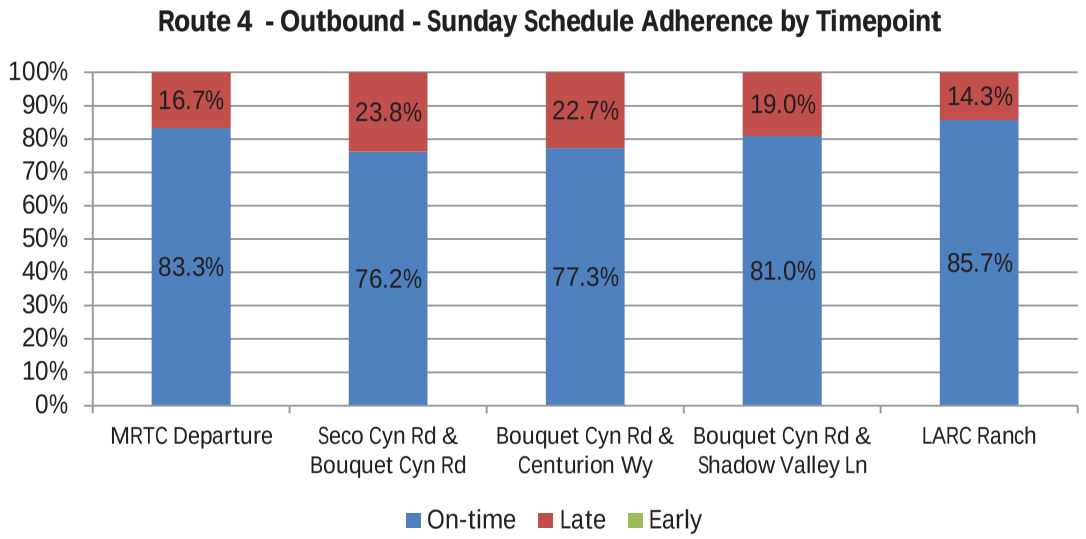








Note: no data was provided for the Lyons Ave/Wiley Canyon time-point for Saturday inbound service.


Route 4 - Outbound - Sunday Schedule Adherence by Timepoint
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
16.7%
23.8%
22.7%
19.0%
14.3%
83.3%
76.2%
77.3%
81.0%
85.7%
MRTC Departure
Seco Cyn Rd & Bouquet Cyn Rd
Bouquet Cyn Rd & Centurion Wy
Bouquet Cyn Rd & Shadow Valley Ln
LARC Ranch
On-time
Late
Early

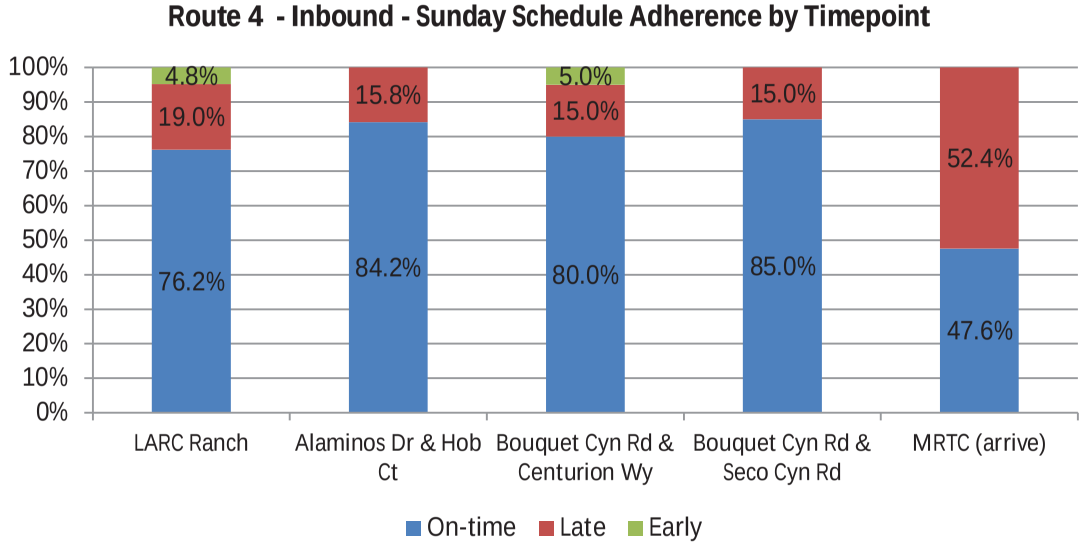
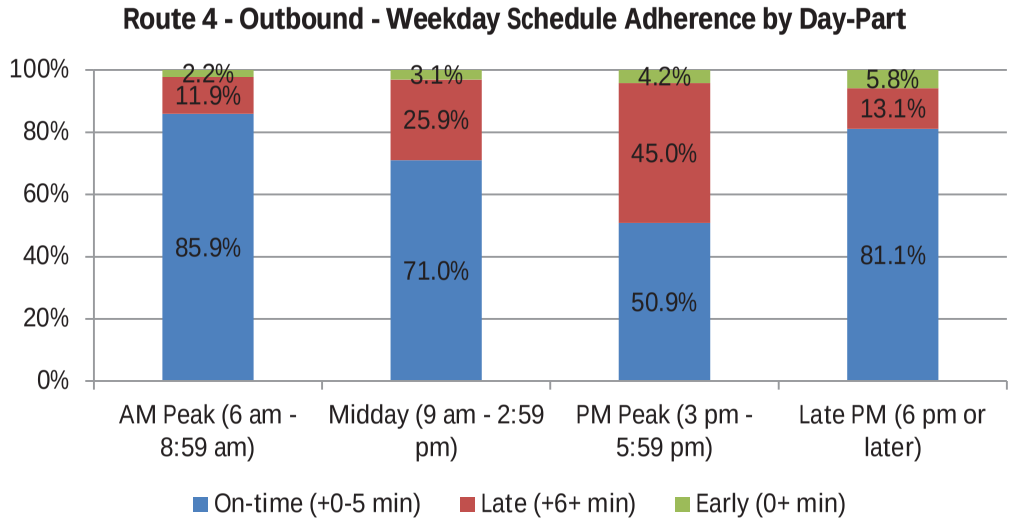
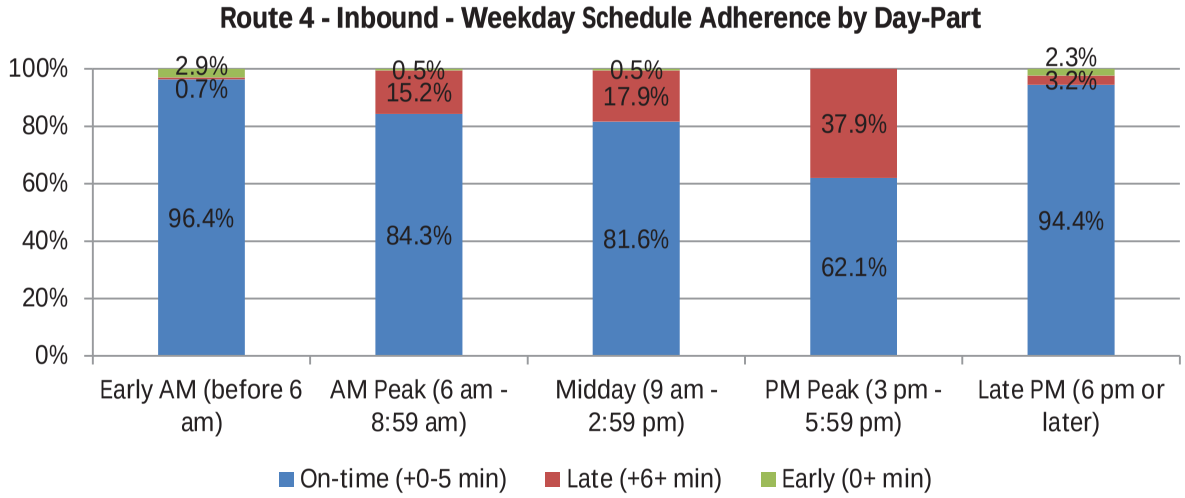
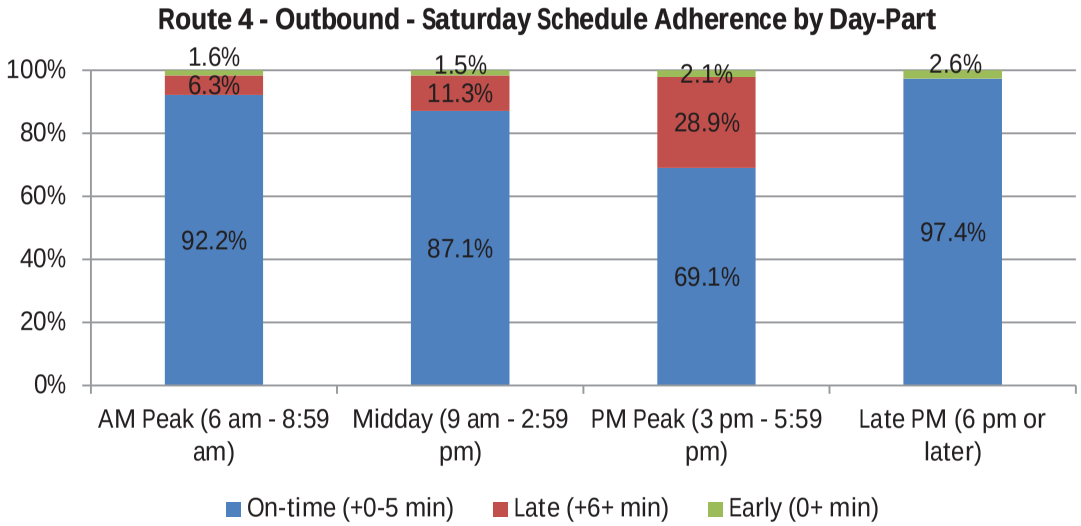
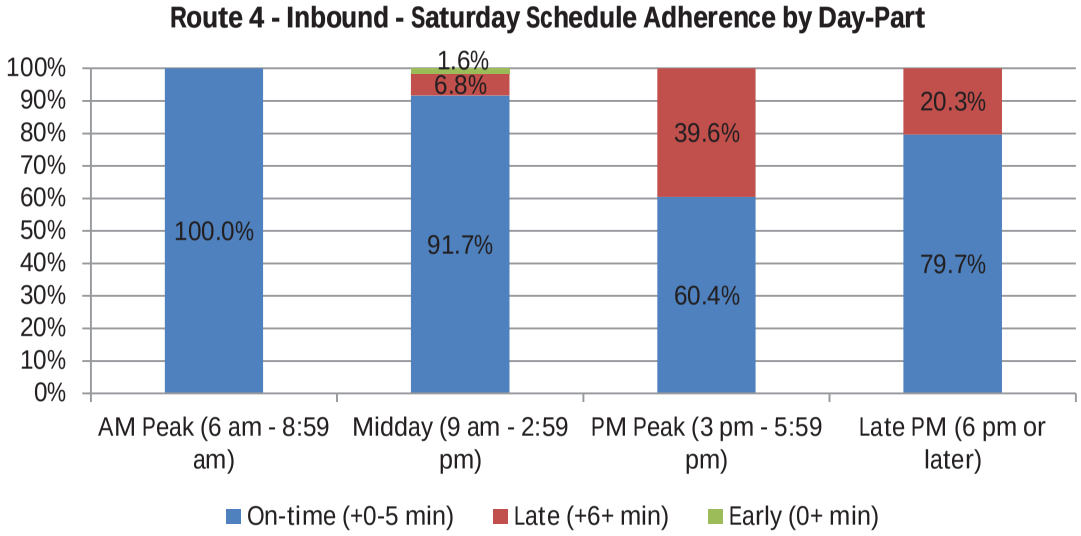

Route 4 - Inbound - Sunday Schedule Adherence by Timepoint
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
4.8%
19.0%
15.8%
5.0%
15.0%
15.0%
52.4%
76.2%
84.2%
80.0%
85.0%
47.6%
LARC Ranch
Alaminos Dr & Hob Ct
Bouquet Cyn Rd & Centurion Wy
Bouquet Cyn Rd & Seco Cyn Rd
MRTC (arrive)
On-time
Late
Early

Exhibit 3.4.11 Route 4 Schedule Adherence by Day-Part

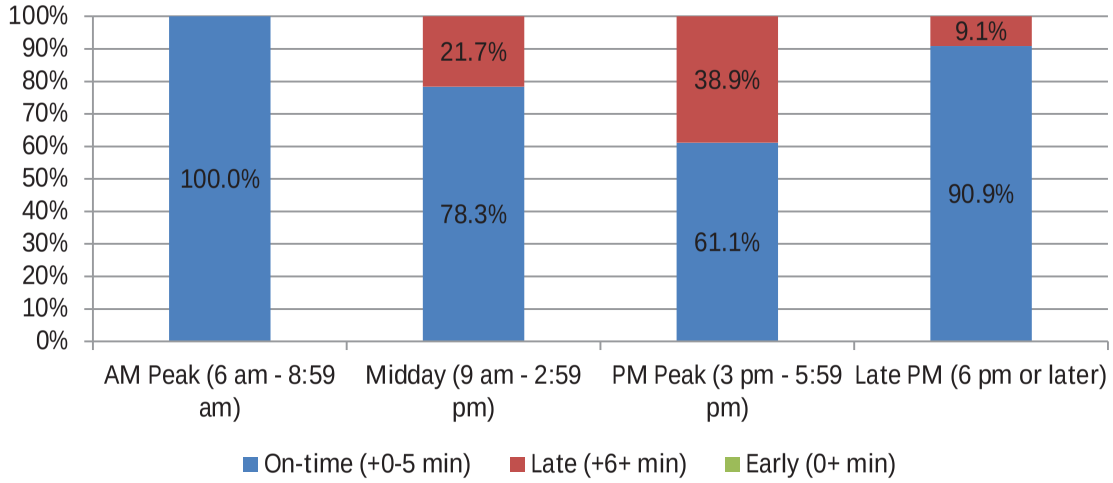




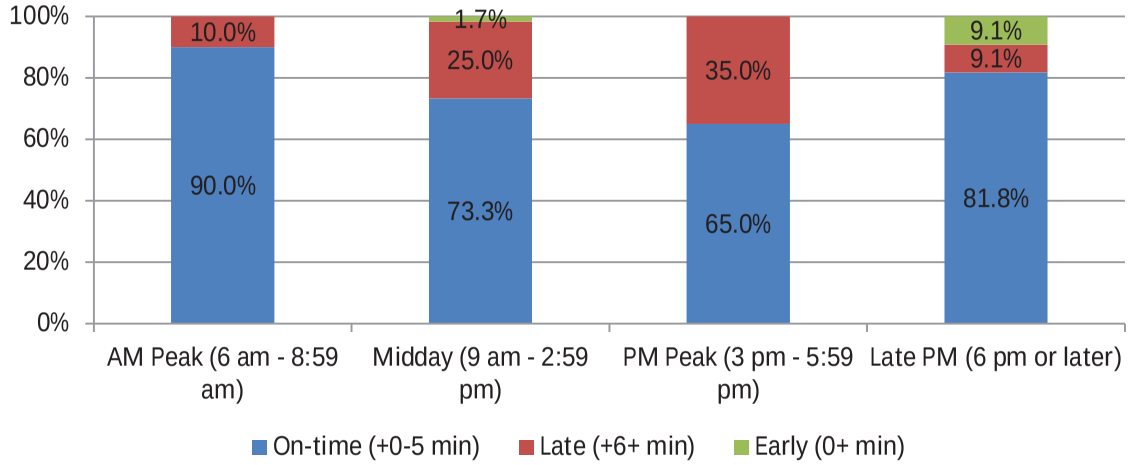

Route 4 - Outbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
1.6%
6.3%
92.2%
1.5%
11.3%
87.1%
2.1%
28.9%
69.1%
2.6%
97.4%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 4 - Inbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
100.0%
1.6%
6.8%
91.7%
39.6%
60.4%
20.3%
79.7%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route 4 - Outbound - Sunday Schedule Adherence by Day-Part



Route 4 - Inbound - Sunday Schedule Adherence by Day-Part



Route Performance

Overall ridership

Exhibit 3.4.12 Route 4 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.4.13 Route 4 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 5 Profile and Performance Analysis

Route Description

Route 5 serves Stevenson Ranch, Valencia Marketplace, Sunset Point, William S. Hart High School, Newhall Community Center, Newhall Metrolink Station, Placerita Junior High School, Henry Mayo Newhall Memorial Hospital, MRTC, Civic Center, Santa Clarita Metrolink Station, Bowman High School, Aquatic Center, Canyon Country Library, College of the Canyons Canyon County Campus, and Vasquez Canyon Road. Not all trips serve all stops. Route 5 shares the majority of its alignment with Route 6. However, Route 6 continues east on Soledad Canyon Road to Shadow Pines while Route 5 travels north on Sierra Highway.

Primary streets of operation include Stevenson Ranch Parkway, The Old Road, Lyons Avenue, Newhall Avenue, Orchard Village Road, McBean Parkway, Magic Mountain Parkway, Soledad Canyon Road, and Sierra Highway.

Outbound service is defined as that originating at Sierra Highway and Vasquez Canyon Road and traveling to Carroll Lane and Faulkner Drive in Stevenson Ranch via the MRTC. Inbound service travels in the opposite direction. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, Route 5 outbound ridership peaks twice: 6:56 a.m., with an average of 63 riders per trip, and 3:36 p.m., with an average of 60 riders per trip. This is consistent with high school bell times. Lowest average ridership is at the end of the day, with an average ridership of one rider on the last trip. For the inbound service, ridership ramps up gradually throughout the morning and mid-day, reaching its peak at 1:38 p.m. (average of 69 riders per trip) and 2:50 p.m. (average of 70 riders per trip). While the next trip sees only an average of 23 riders, the following trip (4:00 p.m.) rebounds to an average of 61 riders per trip.

On Saturday outbound service, ridership never actually peaks. Instead, it ranges from an average of 30 to 38 riders per trip for seven of the ten trips operated. Ridership declines after 5:00 p.m. For the inbound service, ridership reaches a sustained peak between approximately 9:30 a.m. and 3:30 p.m. Four of the five trips during that period have an average ridership of 41 to 43 riders per trip; a slight dip to an average of 33 riders at 10:31 a.m. is the only outlier.

On Sunday, outbound ridership peaks at 9:06 a.m. with an average of 46 riders, followed by a second peak at 12:06 p.m. with an average of 42 riders. Inbound ridership peaks between 12:31 p.m. and 3:31 p.m., with an average of 42, 44, and 43 riders on those three trips.

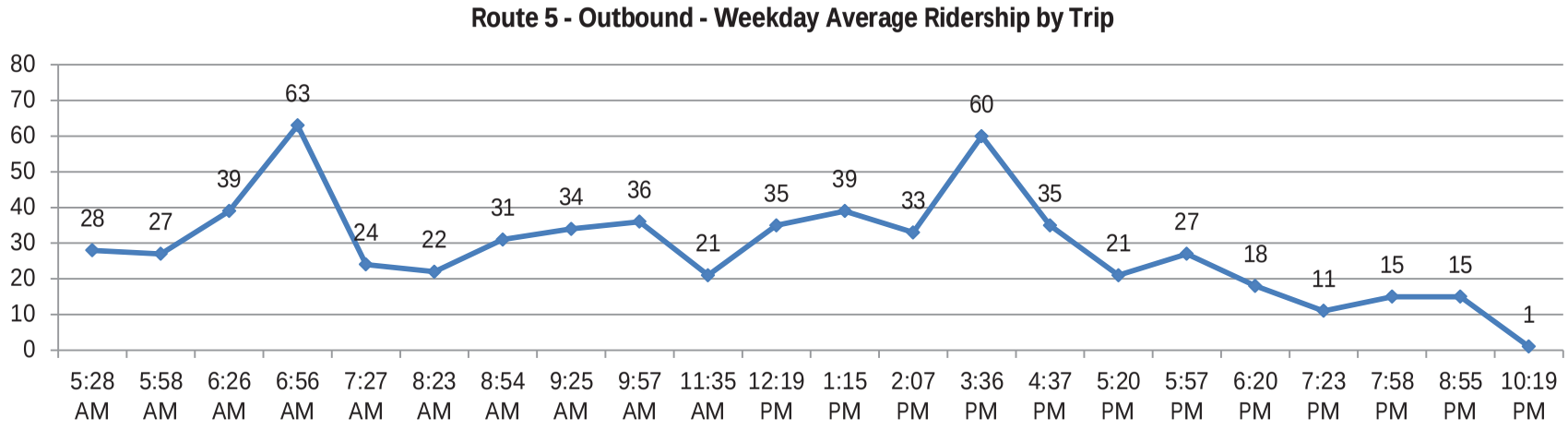
Average ridership by time of day

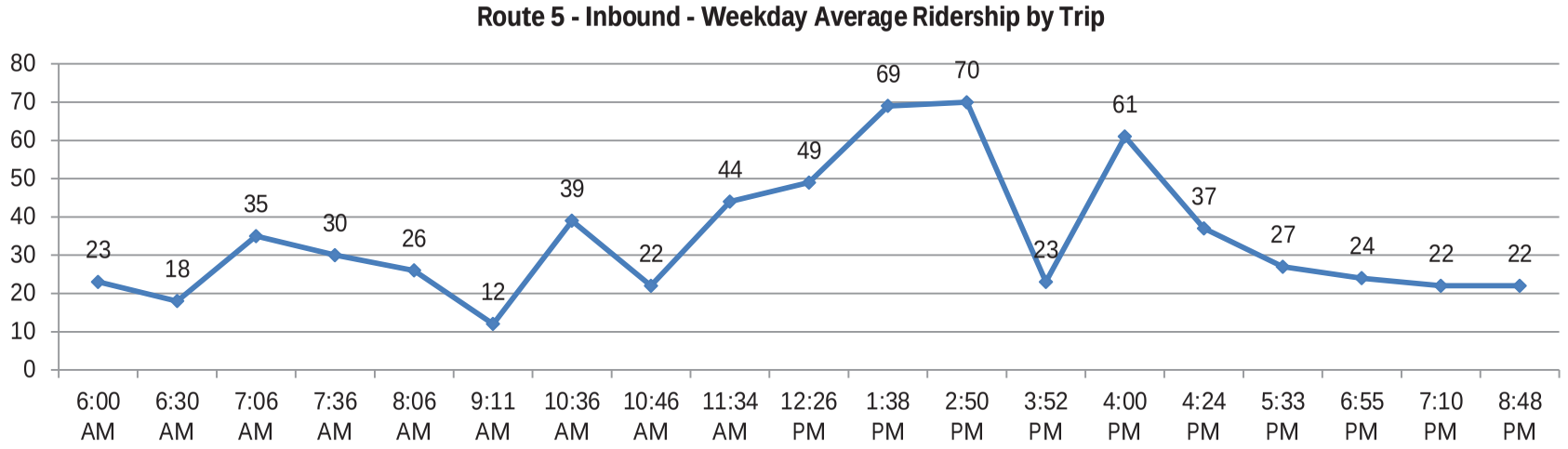
On weekdays, outbound ridership is greatest within the AM Peak, Mid-day, and PM Peak day-parts, with an average of 35, 33, and 37 riders per trip, respectively. For the inbound service, ridership is greatest within the Mid-day period, with an average of 43 riders per trip.

On Saturday, outbound ridership is greatest within the AM Peak, Mid-day, and PM Peak day-parts, with an average of 30, 34, and 27 riders per trip, respectively. For the inbound service, ridership is greatest within the Mid-day and PM Peak periods, with an average of 40 and 38 riders per trip, respectively.

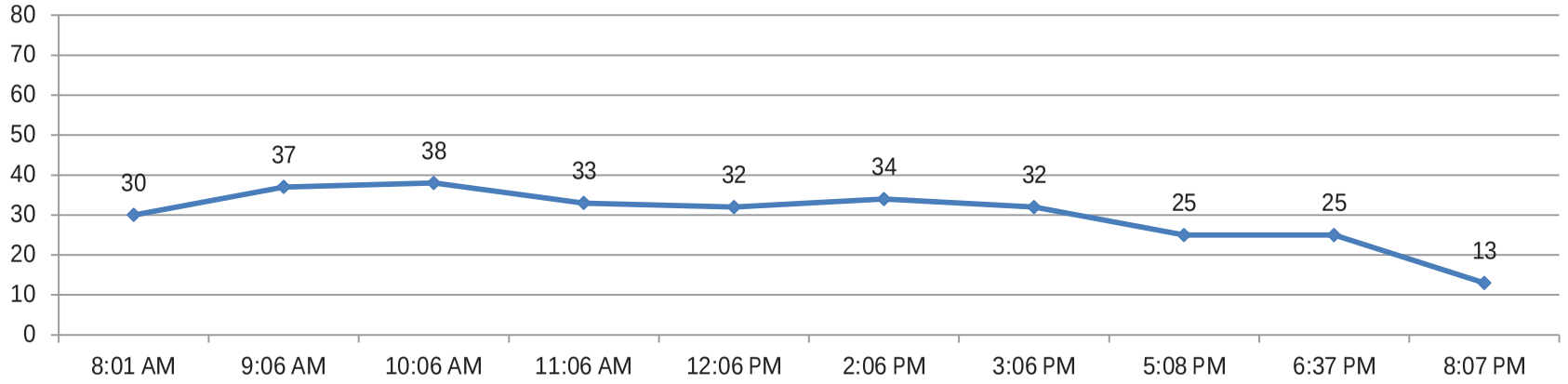
On Sunday, outbound ridership is greatest within the Mid-day day-part, with an average of 39 riders per trip. For the inbound service, ridership is greatest within the Mid-day and PM Peak periods, with an average of 39 and 41 riders per trip, respectively.

Exhibit 3.5.1 Route 5 Average Ridership by Trip

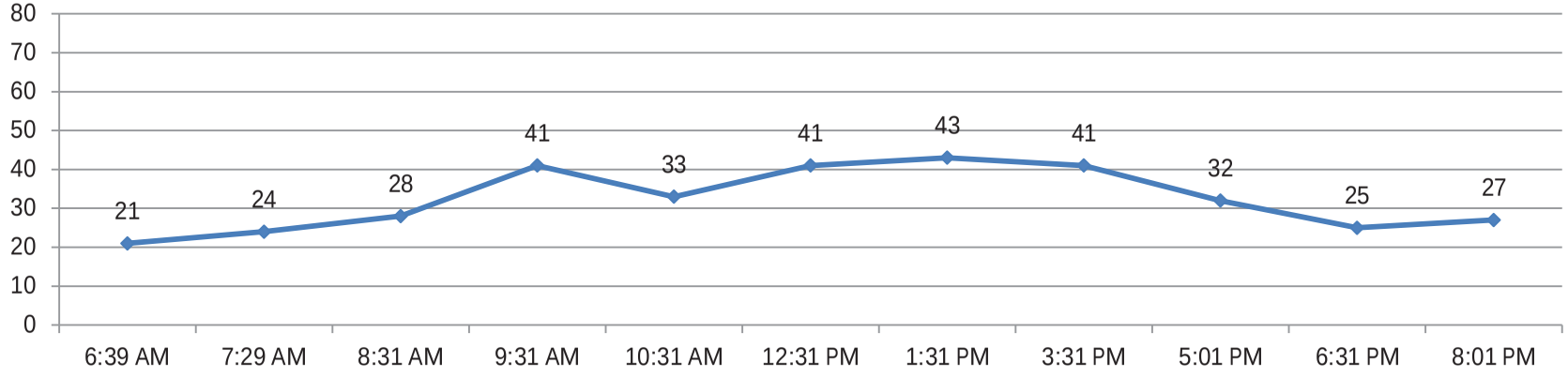




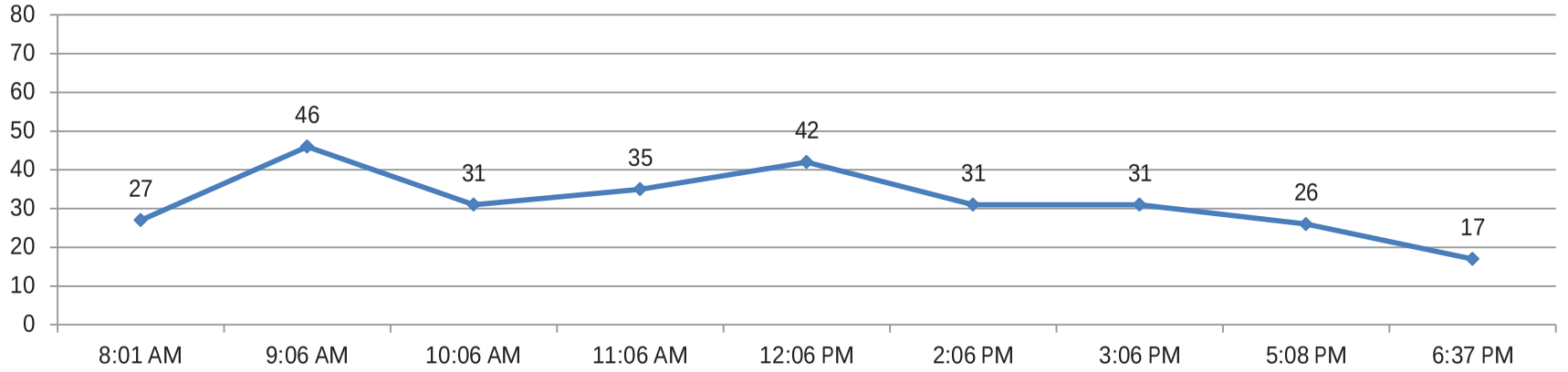
Route 5 - Outbound - Saturday Average Ridership by Trip



Route 5 - Inbound - Saturday Average Ridership by Trip



Route 5 - Outbound - Sunday Average Ridership by Trip



Route 5 - Inbound - Sunday Average Ridership by Trip

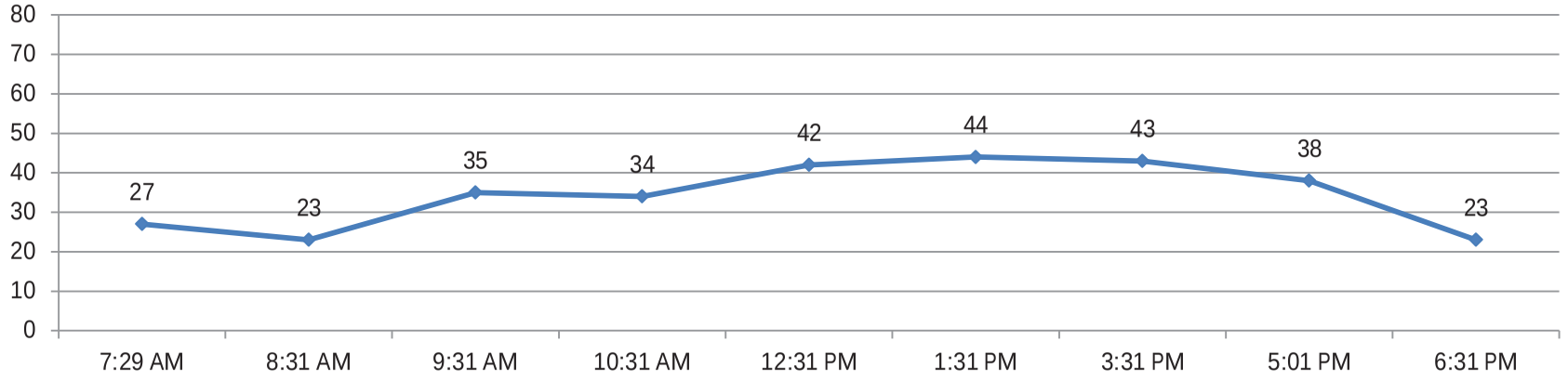
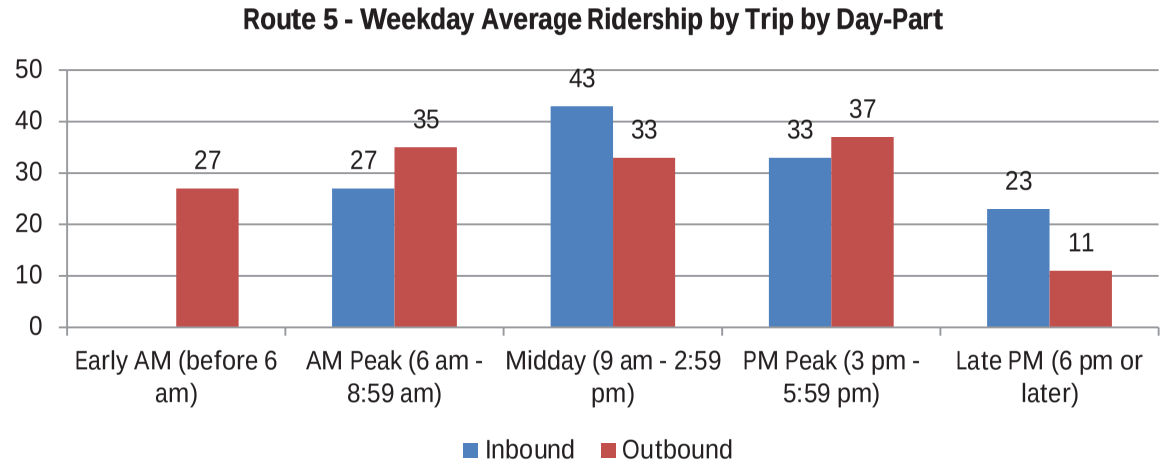
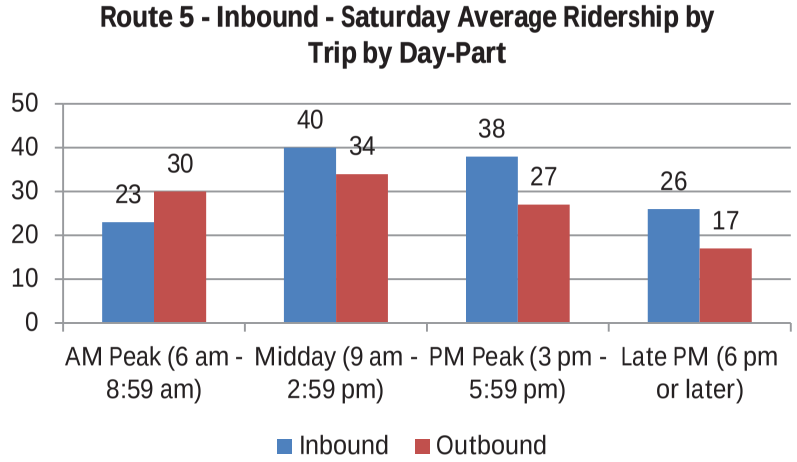
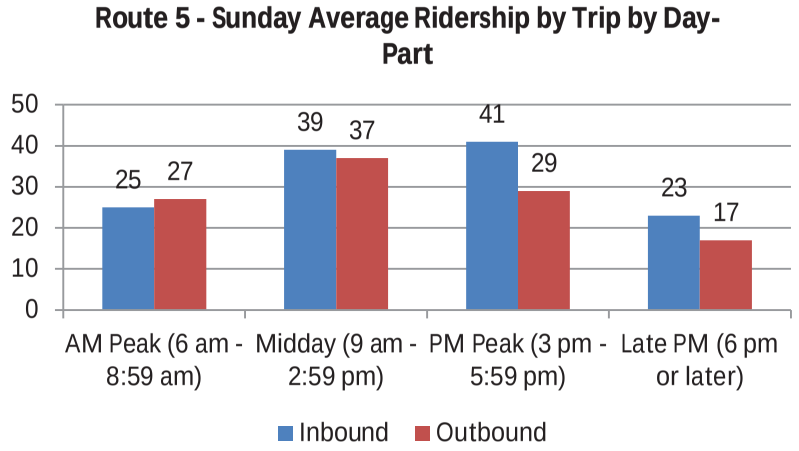


Exhibit 3.5.2 Route 5 Average Ridership by Trip by Day-Part







Average ridership (boardings) by segment

Given the variations in the stops served by trip, some segments were either included within a larger route segment or omitted from this analysis. All trips to the Santa Clarita Metrolink Station and Bowman High School were included within the Soledad Canyon/Bouquet Canyon to Aquatic Center segment. The Soledad Canyon/Bouquet Canyon to Soledad Canyon/Whites Canyon segment was omitted given there are very few trips that travel this segment without stopping at the Aquatic Center. The Soledad Canyon/Whites Canyon to Santa Clarita Metrolink segment was also omitted for the same reason.

On weekdays, outbound boardings are greatest within the McBean Pkwy/Ave Navarre to MRTC and Soledad Canyon/Whites Canyon to Soledad Canyon/Sierra Hwy route segments. Inbound boardings are greatest within the MRTC to Soledad Canyon/Bouquet Canyon and Newhall Metrolink Station to McBean Pkwy/Avenida Navarre route segments.

On Saturday, outbound boardings are greatest within the Soledad Canyon/Whites Canyon to Soledad Canyon/Sierra Hwy and McBean Pkwy/Ave Navarre to MRTC route segments. As on weekdays, inbound boardings are greatest within the MRTC to Soledad Canyon/Bouquet Canyon and Newhall Metrolink to McBean Pkwy/Ave Navarre route segments.

On Sunday, outbound boardings are greatest within the McBean Pkwy/Ave Navarre to MRTC route segment, followed by the Lyons Ave/Orchard Village to Newhall Metrolink, Soledad Canyon/Whites Canyon to Soledad Canyon/Sierra Hwy, and Aquatic Center to Soledad Canyon/Whites Canyon route segments. Inbound boardings are greatest within the MRTC to Soledad Canyon/Bouquet Canyon, Newhall Metrolink to McBean Pkwy/Ave Navarre, and Stevenson Ranch/The Old Rd to The Old Rd/Chiquella route segments.

Average boarding and alighting by stop

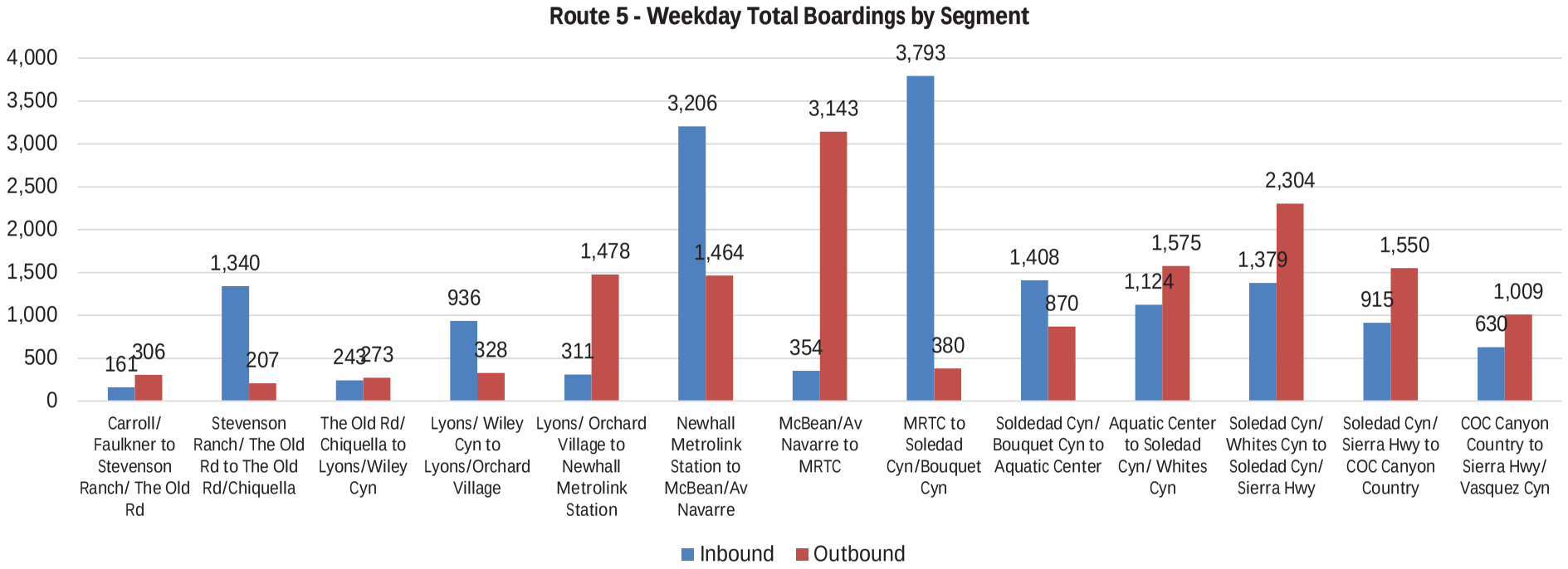
Beginning on page 14, bubble maps indicate the relative level of activity at each Route 5 bus stop, both inbound and outbound. Each direction has been broken up into two maps due to the length of the route and to ensure readability of the data contained within the maps.

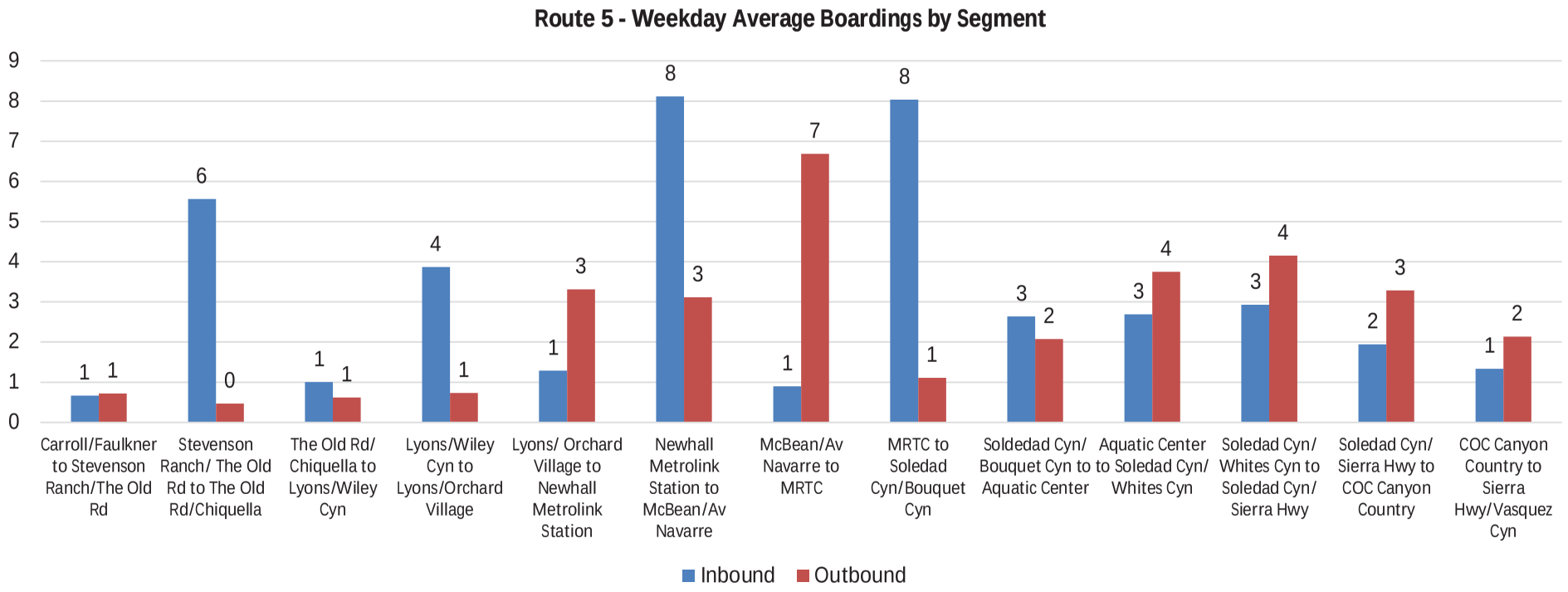
The MRTC was one of the highest activity locations on the route, regardless of day or direction. Weekday outbound service also saw high activity at the Santa Clarita Metrolink Station, Soledad Canyon Rd/Whites Canyon Rd, Soledad Canyon Rd/Sierra Hwy, and Sierra Hwy/Mirror Way. Weekday inbound service saw high activity at The Old Rd/Constitution Ave, Newhall Metrolink Station, Soledad Canyon Rd/Whites Canyon Rd, and Sierra Hwy/Soledad Canyon Rd.

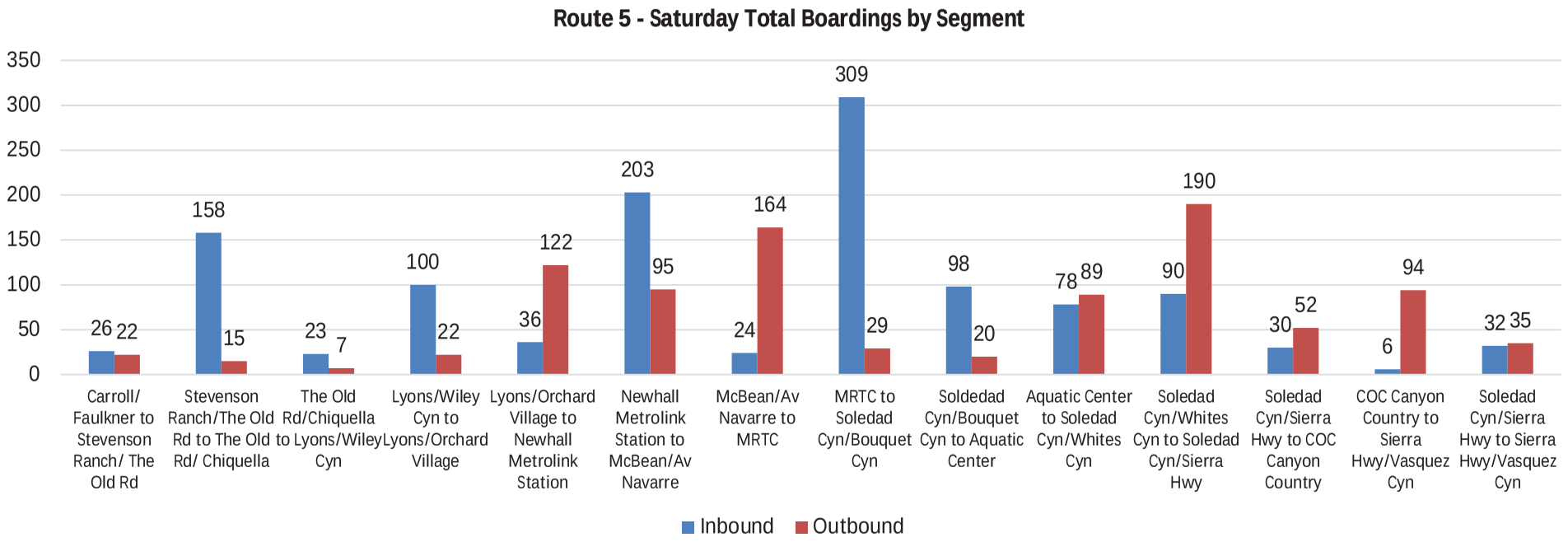
On Saturday, high-activity outbound stops included The Old Rd/Constitution Ave, Newhall Metrolink Station, and Soledad Canyon Rd/Whites Canyon Rd. High-activity inbound stops included The Old Rd/Constitution Ave, Lyons Ave/Wiley Canyon Rd, Newhall Metrolink Station, Newhall Ave/15th St, Dalbey Dr/Avenida Ignacio, Soledad Canyon Rd/Camp Plenty Rd, Soledad Canyon Rd/Whites Canyon Rd, and Sierra Hwy/Soledad Canyon Rd.

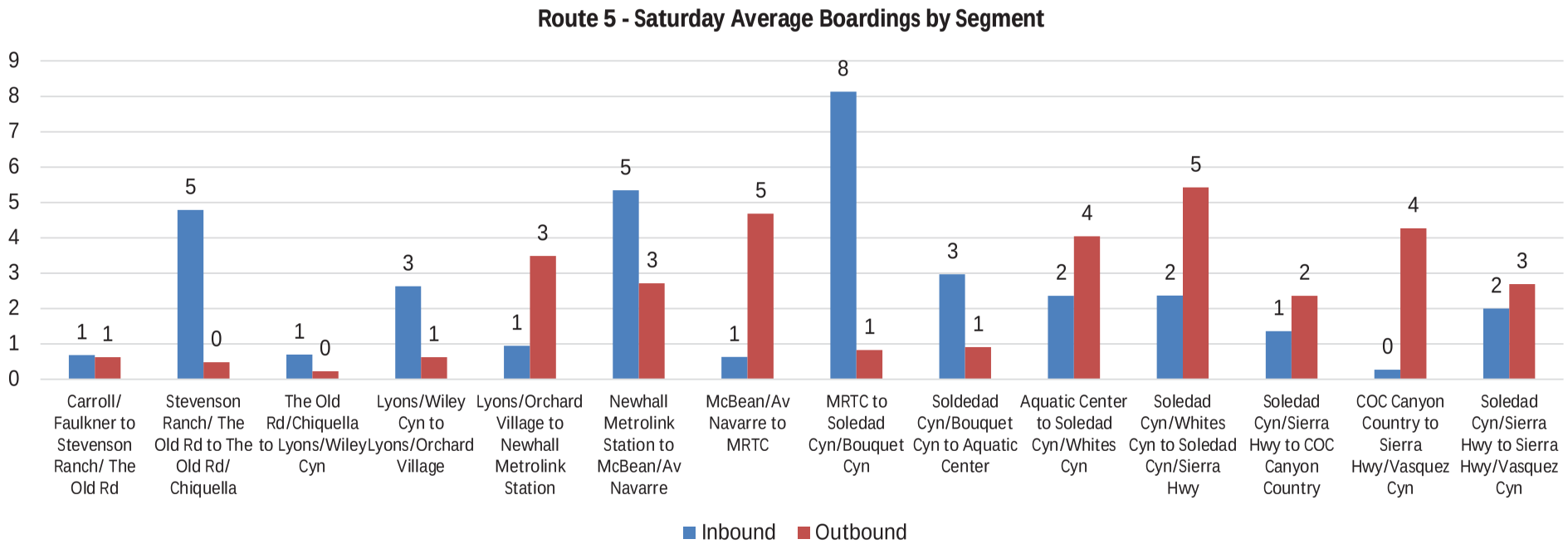
On Sunday, outbound stops with the highest activity other than the MRTC included Soledad Canyon Rd/Whites Canyon Rd and Sierra Hwy & Vasquez Canyon Rd. High-activity inbound stops included The Old Rd/Constitution Ave and the Newhall Metrolink Station.

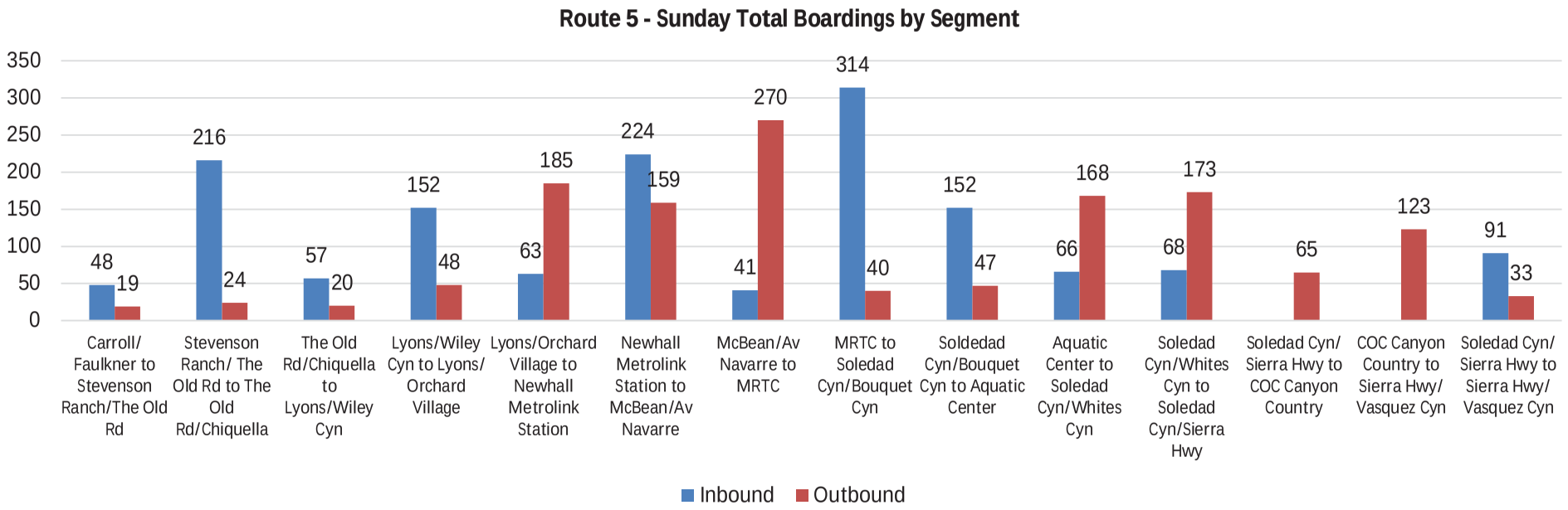
Exhibit 3.5.3 Route 5 Total and Average Boardings by Segment




Route 5 - Weekday Average Boardings by Segment
9
8
7
6
5
4
3
2
1
0
1 1
6 0
1 1
4 1
1 3
8 3
1 7
8 1
3 2
3 4
3 4
2 3
1 2
Carroll/Faulkner to Stevenson Ranch/The Old Rd
Stevenson Ranch/ The Old Rd to The Old Rd/Chiquella
The Old Rd/ Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/Orchard Village
Lyons/ Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soldedad Cyn/ Bouquet Cyn to Aquatic Center
Aquatic Center to Soledad Cyn/ Whites Cyn
Soledad Cyn/ Whites Cyn to Soledad Cyn/ Sierra Hwy
Soledad Cyn/ Sierra Hwy to COC Canyon Country
COC Canyon Country to Sierra Hwy/Vasquez Cyn
Inbound
Outbound


Route 5 - Saturday Total Boardings by Segment
350
300
250
200
150
100
50
0
26 22
158 15
23 7
100 22
36 122
203 95
24 164
309 29
98 20
78 89
90 190
30 52
6 94
32 35
Carroll/ Faulkner to Stevenson Ranch/ The Old Rd
Stevenson Ranch/The Old Rd to The Old Rd/ Chiquella
The Old Rd/Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/Orchard Village
Lyons/Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soldedad Cyn/Bouquet Cyn to Aquatic Center
Aquatic Center to Soledad Cyn/Whites Cyn
Soledad Cyn/Whites Cyn to Soledad Cyn/Sierra Hwy
Soledad Cyn/Sierra Hwy to COC Canyon Country
COC Canyon Country to Sierra Hwy/Vasquez Cyn
Soledad Cyn/Sierra Hwy to Sierra Hwy/Vasquez Cyn
Inbound
Outbound


Route 5 - Saturday Average Boardings by Segment
9
8
7
6
5
4
3
2
1
0
1 1
5 0
1 0
3 1
1 3
5 3
1 5
8 1
3 1
2 4
2 5
1 2
0 4
2 3
Carroll/ Faulkner to Stevenson Ranch/ The Old Rd
Stevenson Ranch/ The Old Rd to The Old Rd/ Chiquella
The Old Rd/Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/Orchard Village
Lyons/Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soldedad Cyn/Bouquet Cyn to Aquatic Center
Aquatic Center to Soledad Cyn/Whites Cyn
Soledad Cyn/Whites Cyn to Soledad Cyn/Sierra Hwy
Soledad Cyn/Sierra Hwy to COC Canyon Country
COC Canyon Country to Sierra Hwy/Vasquez Cyn
Soledad Cyn/Sierra Hwy to Sierra Hwy/Vasquez Cyn
Inbound
Outbound


Route 5 - Sunday Total Boardings by Segment
350
300
250
200
150
100
50
0
48
19
216
24
57
20
152
48
63
185
224
159
41
270
314
40
152
47
66
168
68
173
65
123
91
33
Carroll/ Faulkner to Stevenson Ranch/The Old Rd
Stevenson Ranch/ The Old Rd to The Old Rd/Chiquella
The Old Rd/Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/ Orchard Village
Lyons/Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soldedad Cyn/Bouquet Cyn to Aquatic Center
Aquatic Center to Soledad Cyn/Whites Cyn
Soledad Cyn/Whites Cyn to Soledad Cyn/Sierra Hwy
Soledad Cyn/ Sierra Hwy to COC Canyon Country
COC Canyon Country to Sierra Hwy/ Vasquez Cyn
Soledad Cyn/ Sierra Hwy to Sierra Hwy/ Vasquez Cyn
Inbound
Outbound

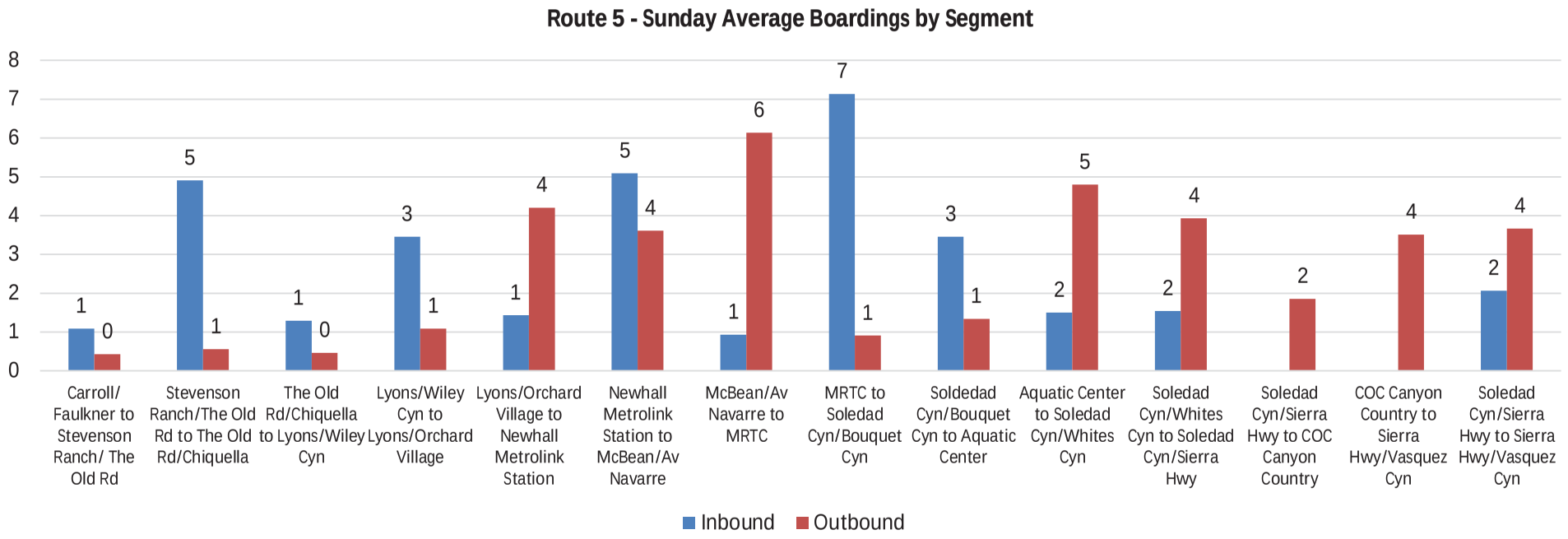
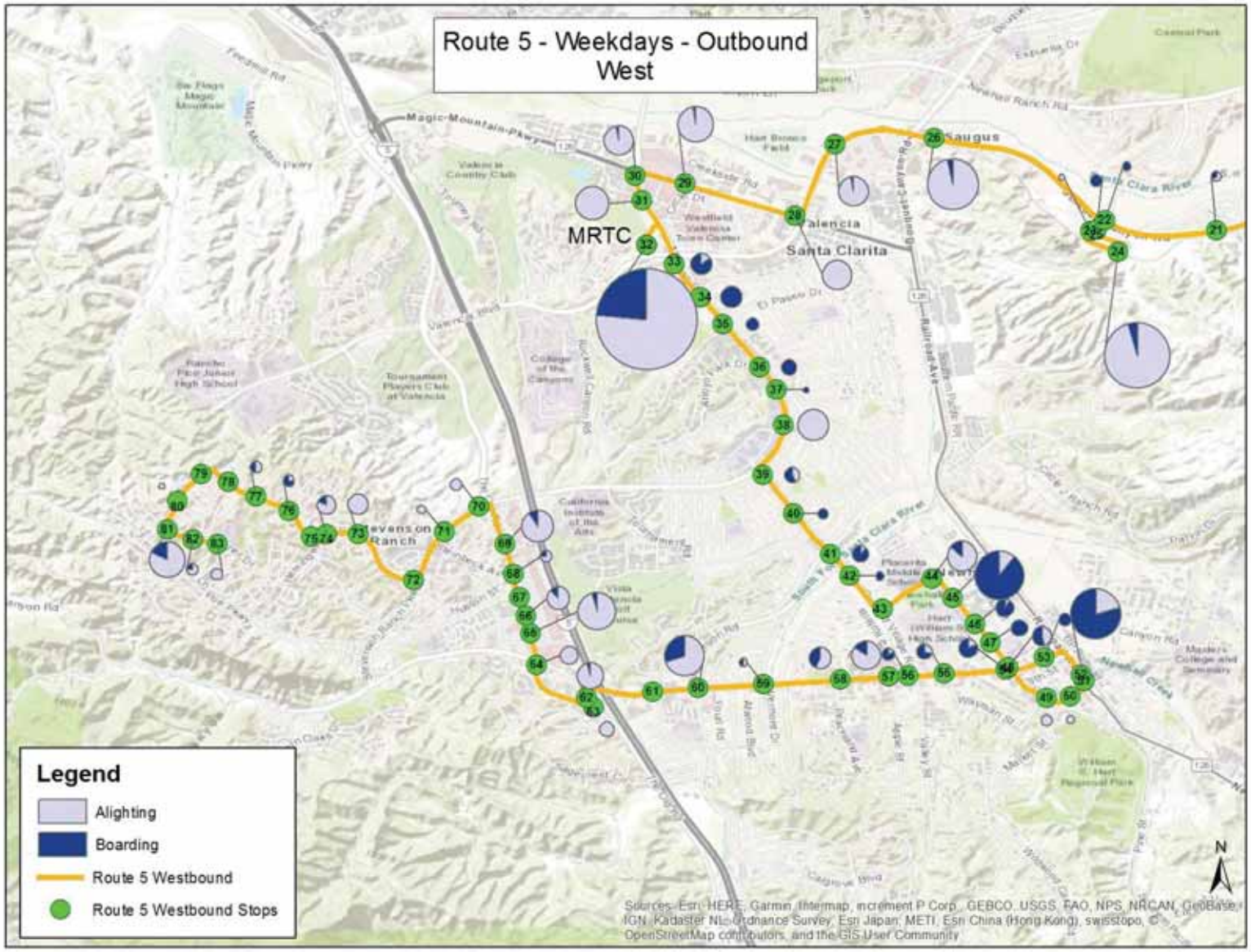
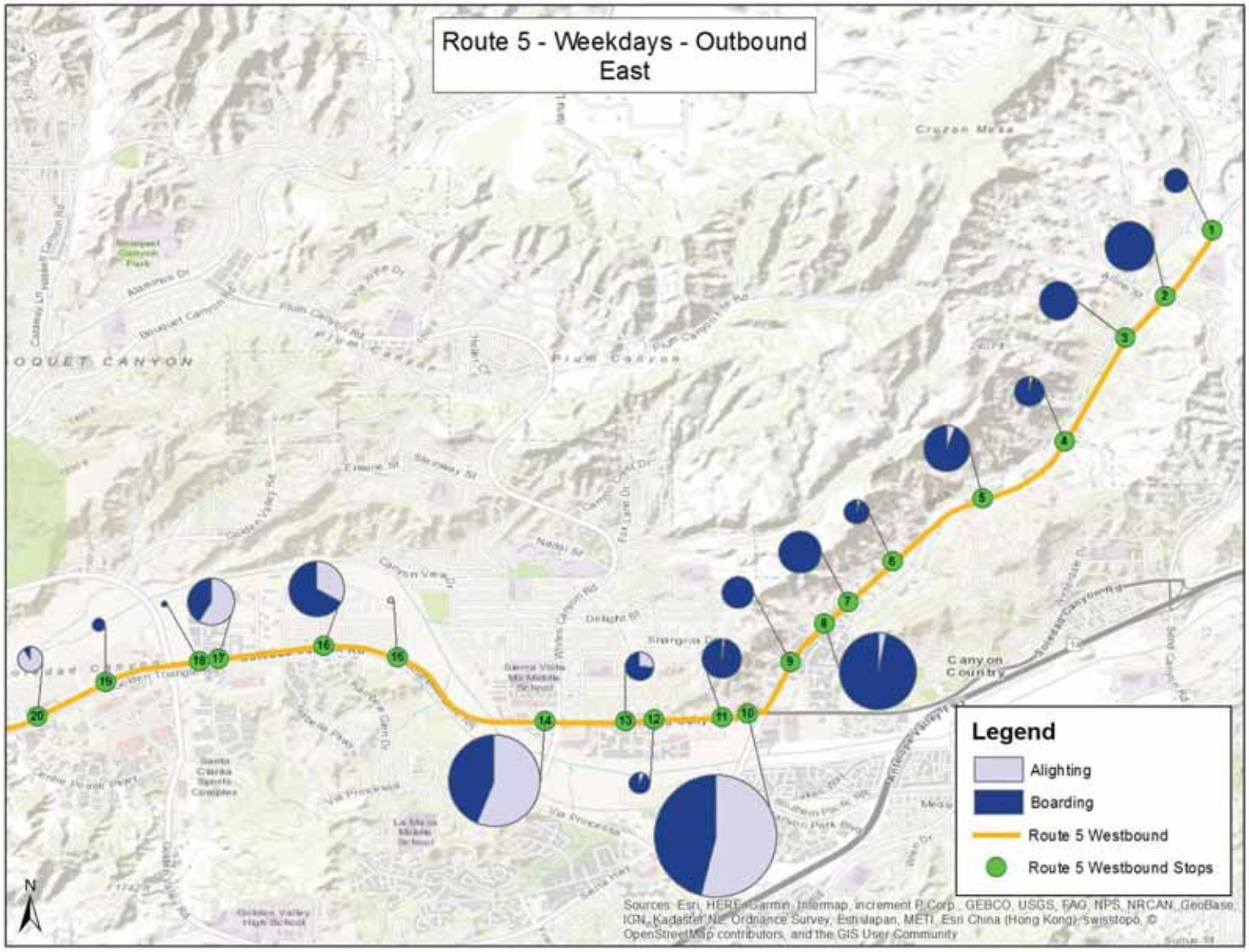
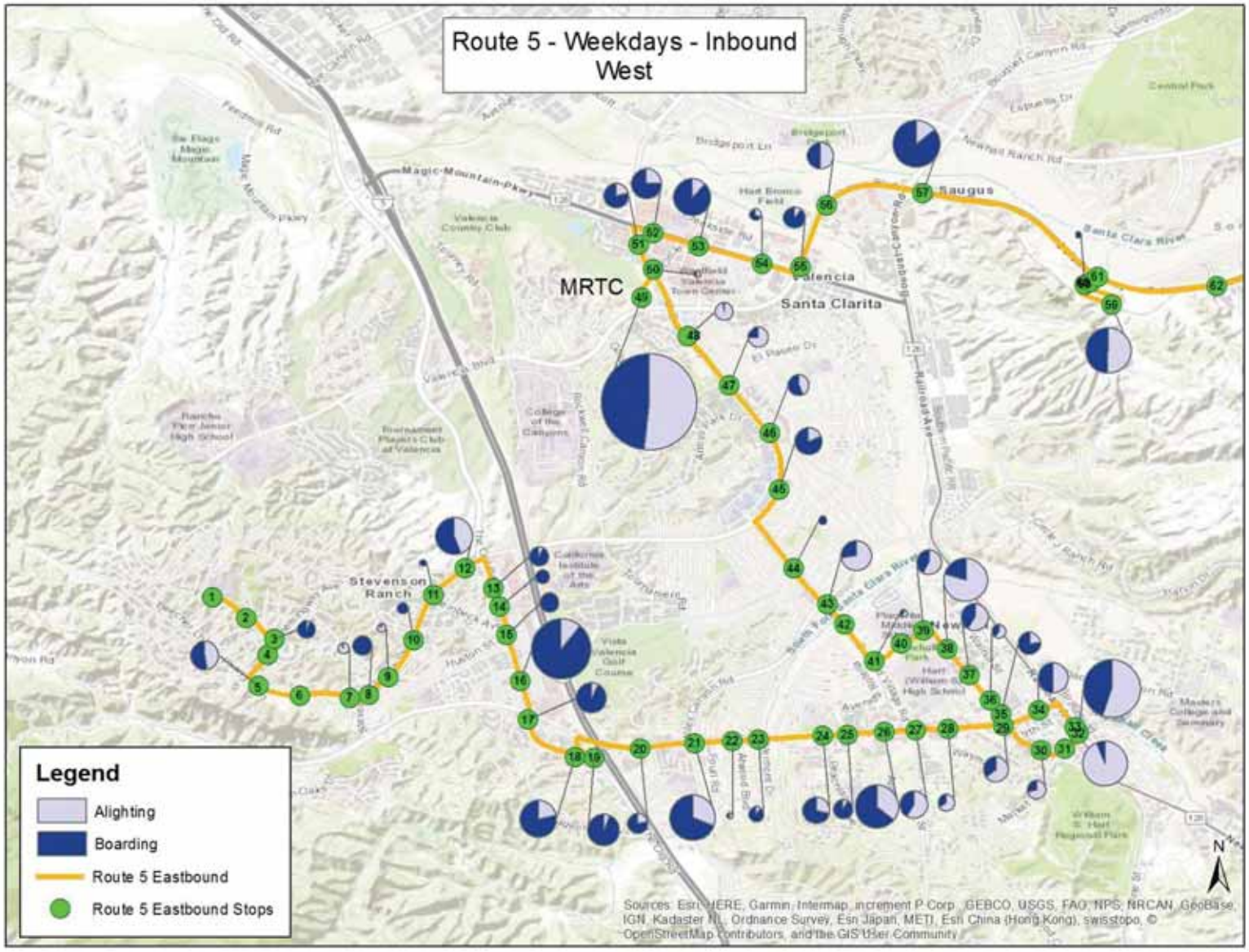
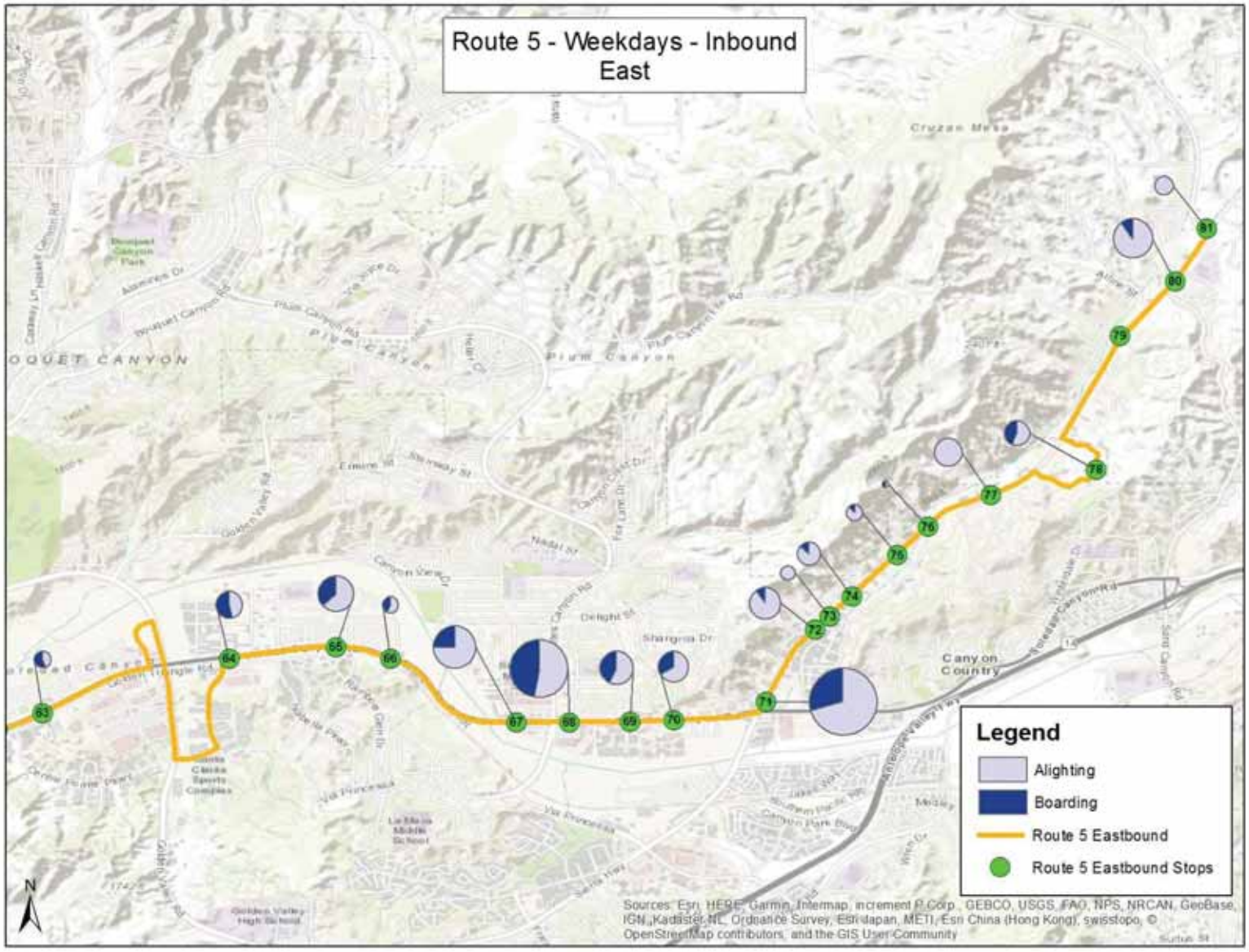

Route 5 - Sunday Average Boardings by Segment
8
7
6
5
4
3
2
1
0
1
0
5
1
1
0
3
1
1
4
5
4
1
6
7
1
3
1
2
5
2
4
2
4
2
4
Carroll/ Faulkner to Stevenson Ranch/ The Old Rd
Stevenson Ranch/The Old Rd to The Old Rd/Chiquella
The Old Rd/Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/Orchard Village
Lyons/Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soldedad Cyn/Bouquet Cyn to Aquatic Center
Aquatic Center to Soledad Cyn/Whites Cyn
Soledad Cyn/Whites Cyn to Soledad Cyn/Sierra Hwy
Soledad Cyn/Sierra Hwy to COC Canyon Country
COC Canyon Country to Sierra Hwy/Vasquez Cyn
Soledad Cyn/Sierra Hwy to Sierra Hwy/Vasquez Cyn
Inbound
Outbound

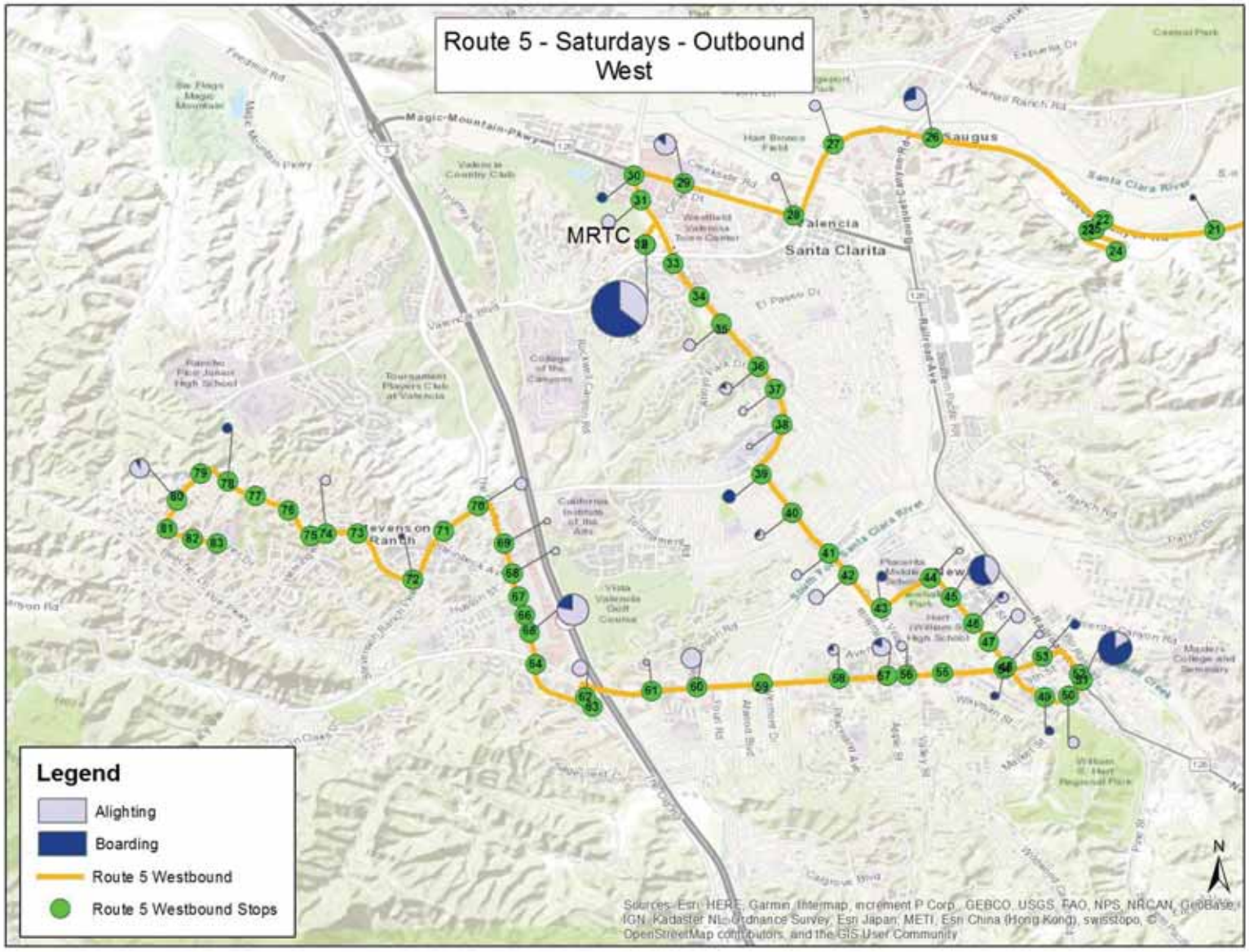
Exhibit 3.5.4 Route 5 Boarding and Alighting Maps

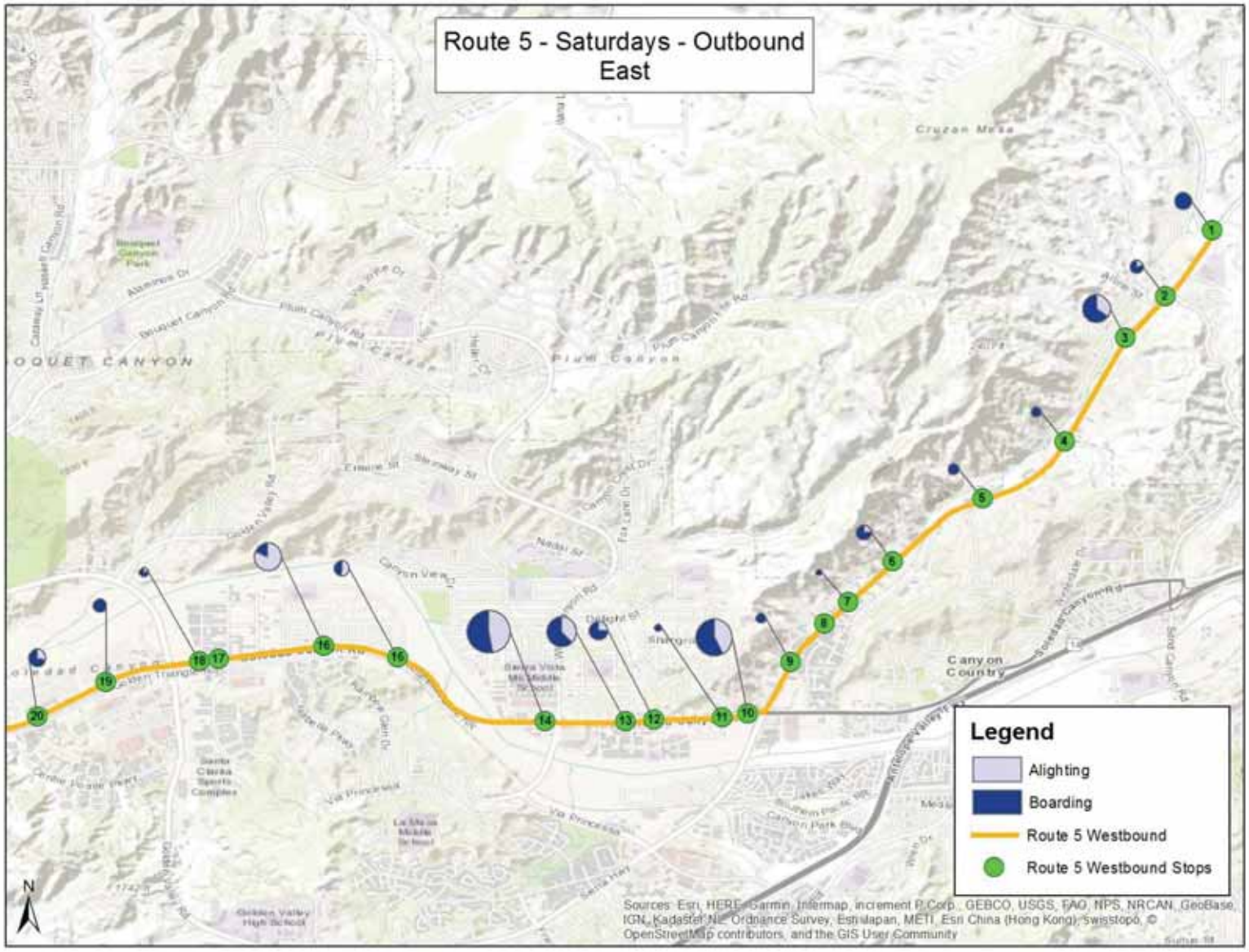


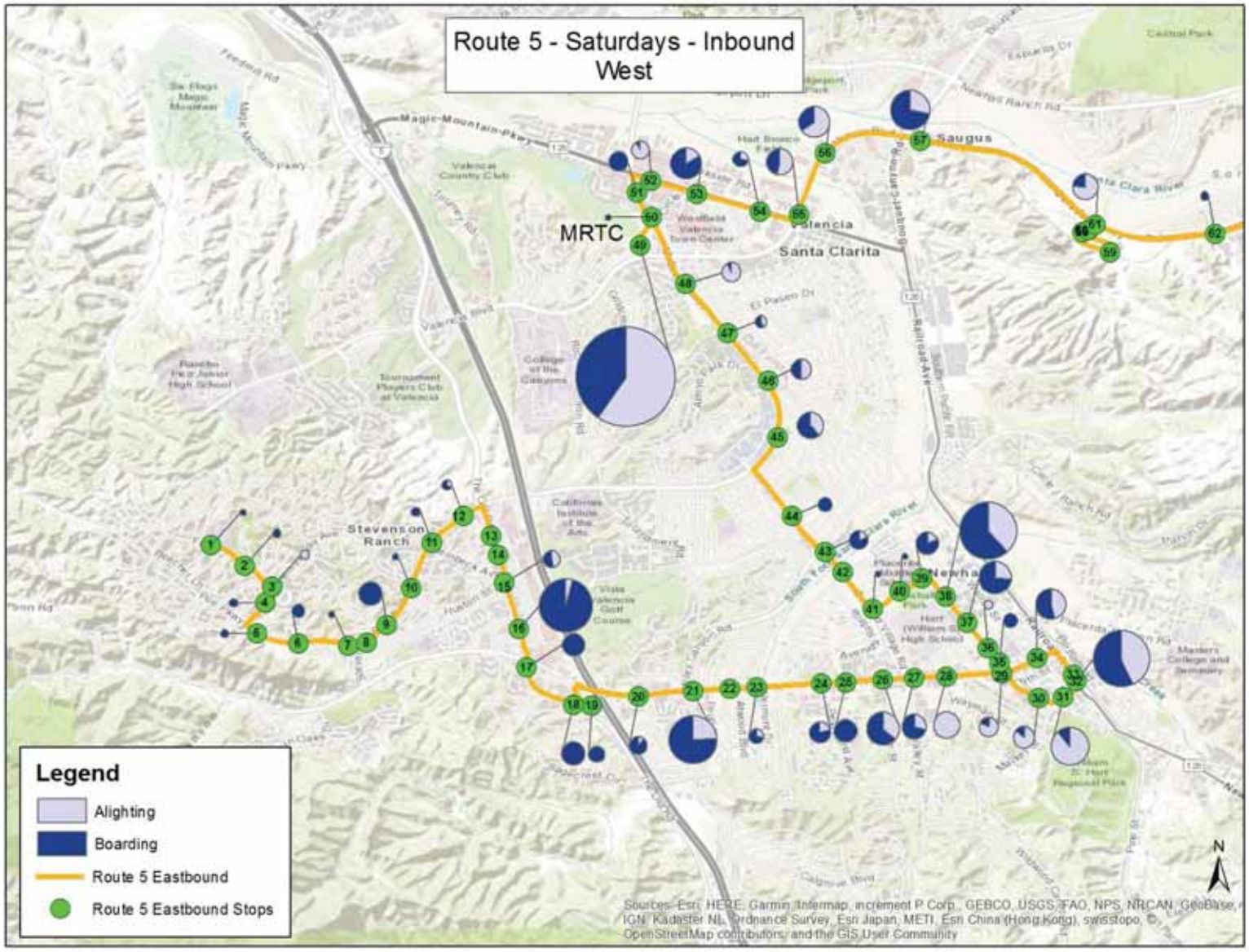

Route 5 - Weekdays - Outbound East
Legend
Alighting
Boarding
Route 5 Westbound
Route 5 Westbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, © OpenStreetMap contributors, and the GIS User Community

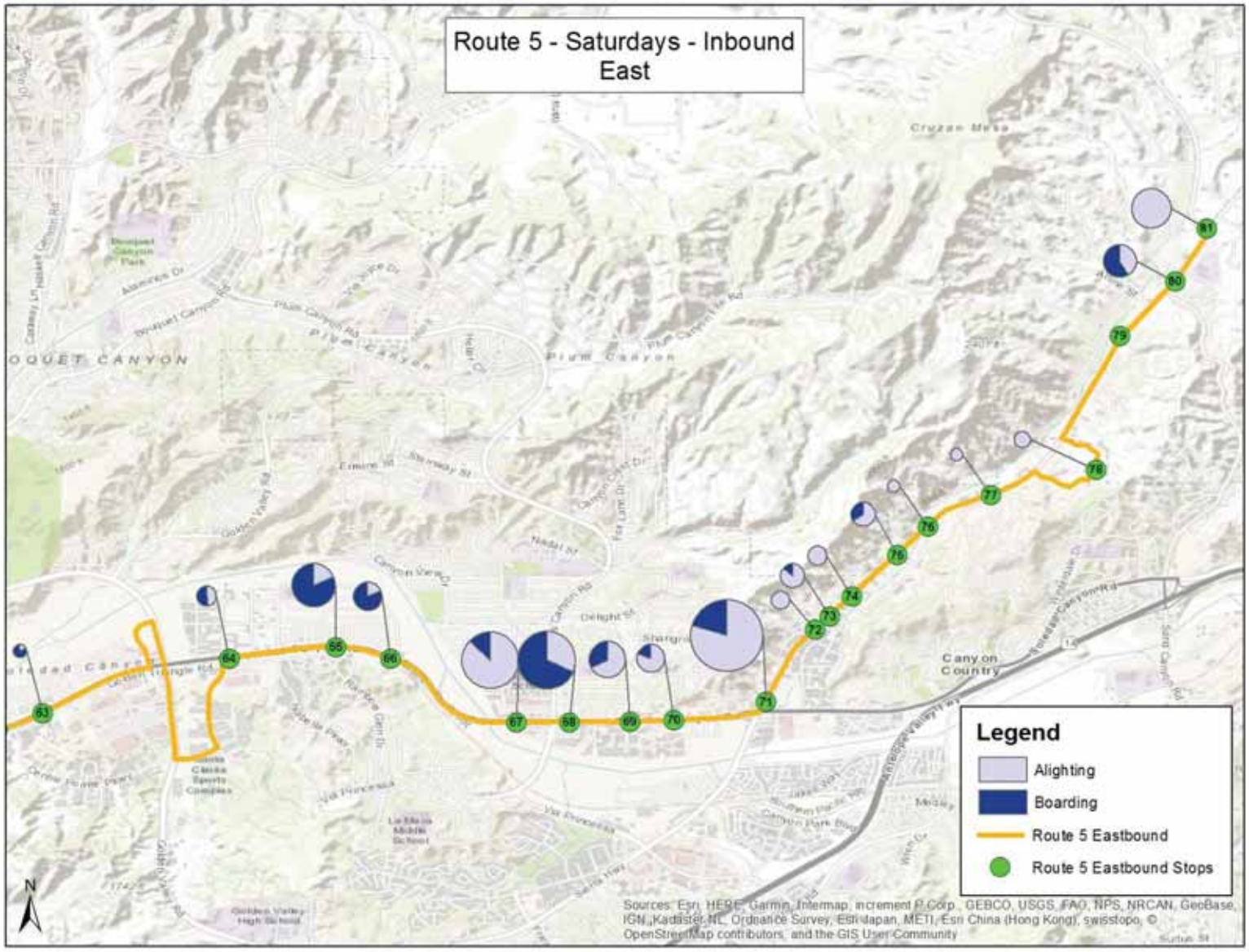

Route 5 - Weekdays - Inbound
West
MRTC
Saugus
Valencia
Santa Clarita
Stevenson
Ranch
Legend
Alighting
Boarding
Route 5 Eastbound
Route 5 Eastbound Stops
N


Route 5 - Weekdays - Inbound East
Legend
Alighting
Boarding
Route 5 Eastbound
Route 5 Eastbound Stops
Canyon Country
Plum Canyon
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

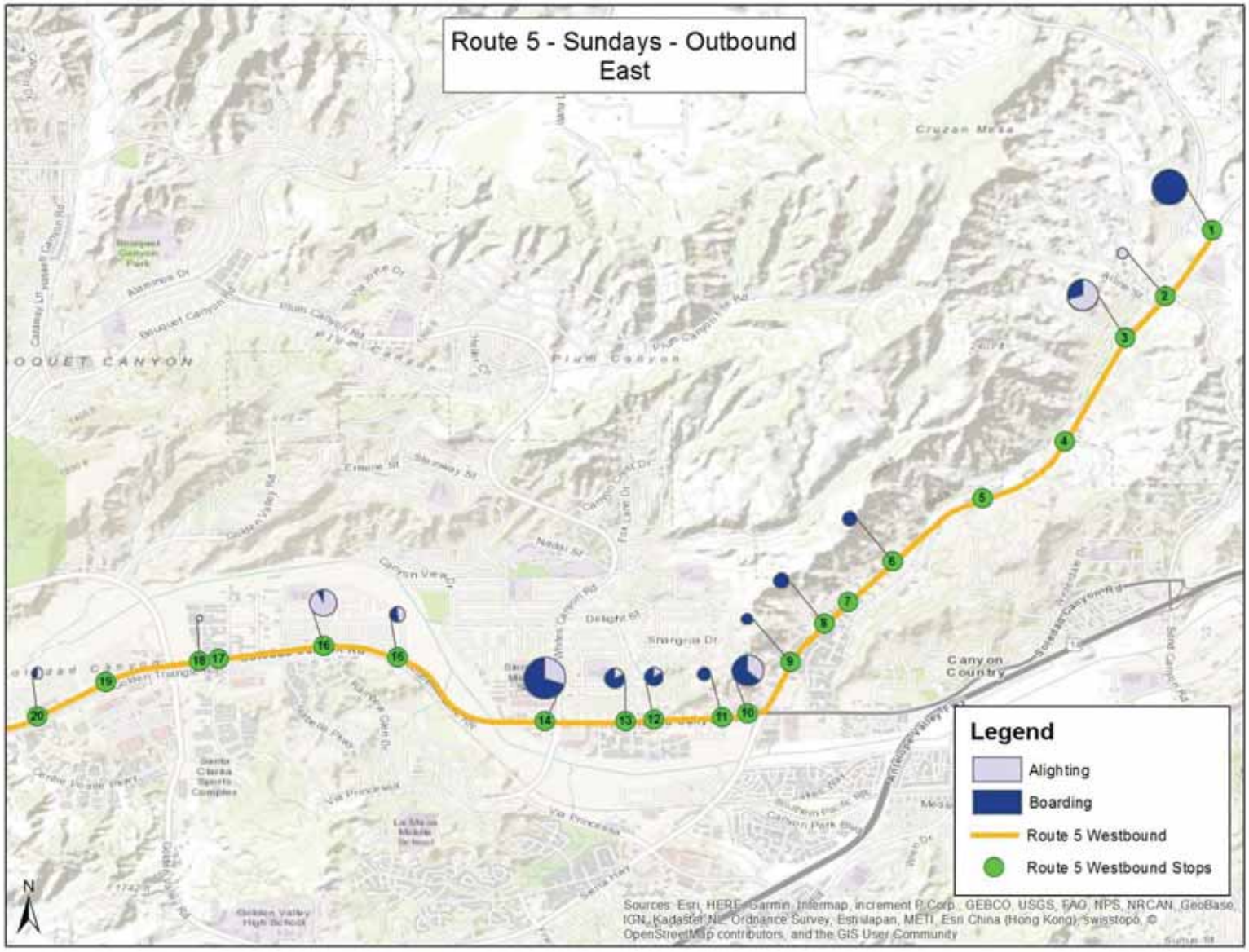

Route 5 - Saturdays - Outbound West
MRTC
Saugus
Santa Clarita
Legend
Alighting
Boarding
Route 5 Westbound
Route 5 Westbound Stops
N

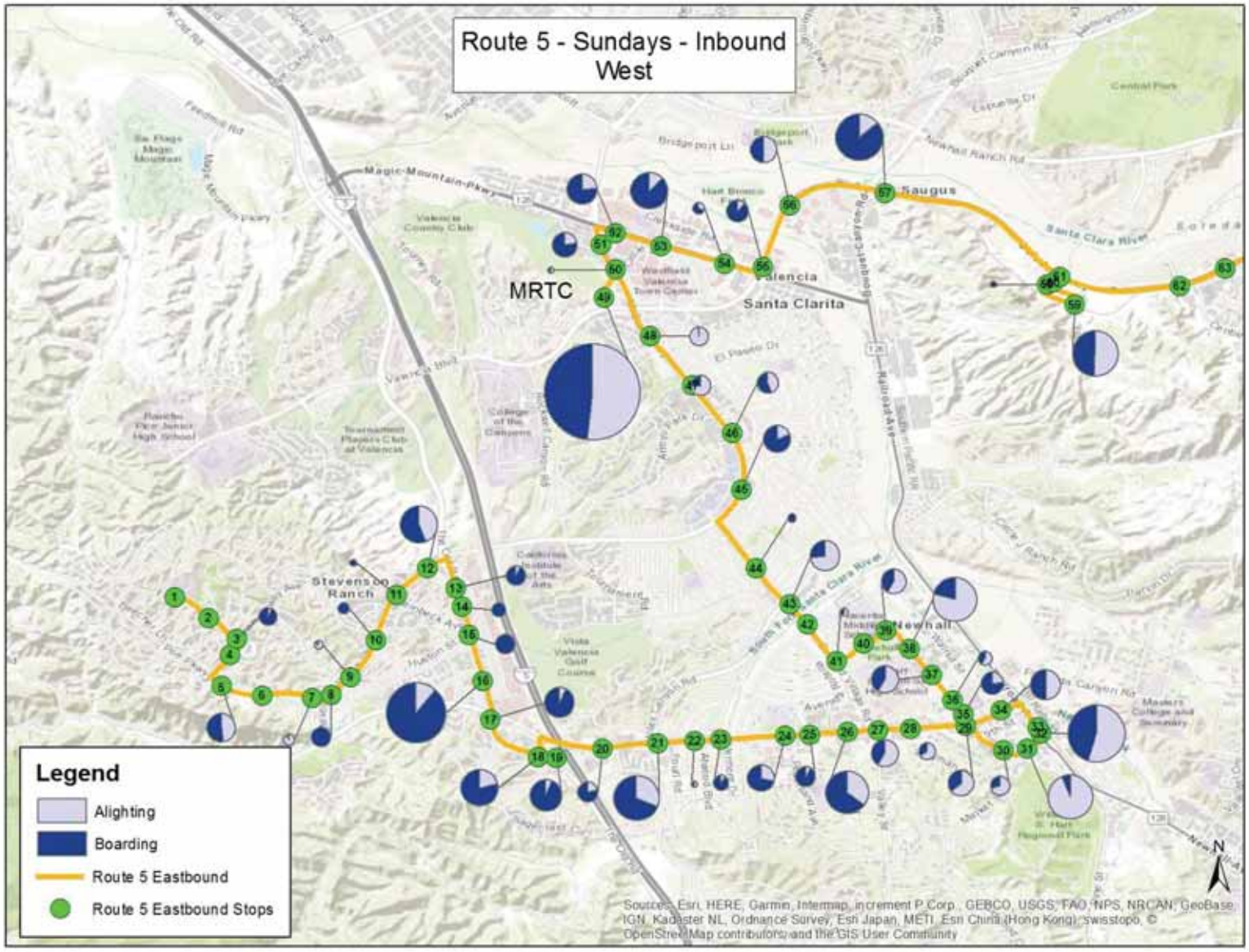

Route 5 - Saturdays - Outbound East
Legend
Alighting
Boarding
Route 5 Westbound
Route 5 Westbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 5 - Saturdays - Inbound
West
MRTC
Santa Clarita
Saugus
Stevenson
Ranch
Newhall
Legend
Alighting
Boarding
Route 5 Eastbound
Route 5 Eastbound Stops
N


Route 5 - Saturdays - Inbound East
Legend
Alighting
Boarding
Route 5 Eastbound
Route 5 Eastbound Stops
Canyon Country
Plum Canyon
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 5 - Sundays - Outbound
West
MRTC
Saugus
Valencia
Santa Clarita
Legend
Alighting
Boarding
Route 5 Westbound
Route 5 Westbound Stops
N


Route 5 - Sundays - Outbound East
Legend
Alighting
Boarding
Route 5 Westbound
Route 5 Westbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 5 - Sundays - Inbound
West
MRTC
Saugus
Valencia
Santa Clarita
Stevenson Ranch
Newhall
Legend
Alighting
Boarding
Route 5 Eastbound
Route 5 Eastbound Stops
N

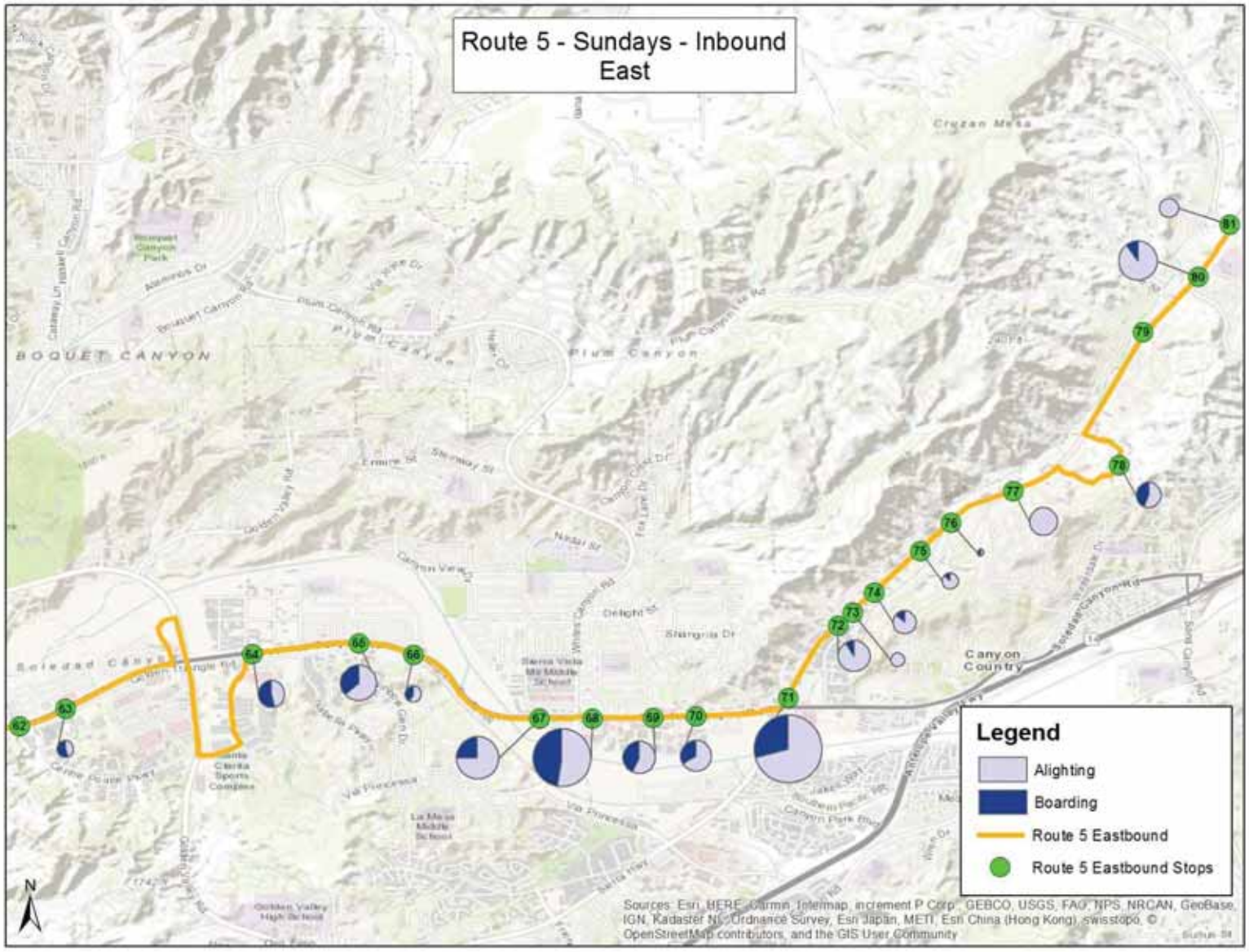

Route 5 - Sundays - Inbound East
BOUQUET CANYON
Canyon Country
Legend
Alighting
Boarding
Route 5 Eastbound
Route 5 Eastbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.5.5 Route 5 Stop Lists

Route 5 Outbound Stop List	
Stop Number	Stop Name
1	Sierra Hwy & Vasquez Canyon Rd
2	Sierra Hwy & Sand Canyon Rd
3	Sierra Hwy & Fitch Ave
4	Sierra Hwy & Campus Exit
5	Sierra Hwy & Linda Vista St
6	Sierra Hwy & Hillfield Ln
7	Sierra Hwy & Adon Ave
8	Sierra Hwy & Mirror Wy
9	Sierra Hwy & Racquet Ct
10	Soledad Canyon Rd & Sierra Hwy
11	Soledad Canyon Rd & Shangrila Dr
12	Soledad Canyon Rd & Homyr Pl
13	Soledad Canyon Rd & Crossglade Ave
14	Soledad Canyon Rd & Whites Canyon Rd
15	Soledad Canyon Rd & Langside Ave
16	Soledad Canyon Rd & Rainbow Gln Dr
17	Soledad Canyon Rd & Ruether Ave
18	Soledad Canyon Rd & Oak Ave
19	Soledad Canyon Rd & Wishbone Wy
20	Soledad Canyon Rd & Golden Oak Rd
21	Soledad Canyon Rd & Prima Way
22	Soledad Canyon Rd & Commuter Wy
23	Commuter Wy & Soledad Canyon Rd
24	Santa Clarita Metrolink
25	Commuter Wy & Soledad Canyon Rd
26	Soledad Canyon Rd & Bouquet Canyon Rd
27	Valencia Blvd & Cinema Dr
28	Magic Mountain Pky & Valencia Blvd
29	Magic Mountain Pky & Auto Center Dr
30	McBean Pky & Magic Mountain Pky
31	McBean Pky & Town Center Dr
32	McBean MRTC
33	McBean Pky & Valencia Blvd
34	McBean Pky & Del Monte Dr
35	McBean Pky & Gamble House Ct
36	McBean Pky & Arroyo Prk Dr
37	McBean Pky & Arroyo Prk Dr
38	McBean Pky
39	Orchard Village Rd & McBean Pky
40	Orchard Village Rd & Mill Valley Rd
41	Orchard Village Rd & Wiley Canyon Rd
42	Orchard Village Rd & Avenida Ronada

Route 5 Outbound Stop List	
Stop Number	Stop Name
43	Dalbey Dr & Avenida Balita
44	Dalbey Dr & Newhall Ave
45	Newhall Ave & 15th St
46	Newhall Ave & 14th St
47	Newhall Ave & 13th St
48	Newhall Ave & 11th St
49	Newhall Ave & 8th St
50	Market St & Walnut St
51	Railroad Ave & Market St
52	Railroad Ave & 8th St
53	Lyons Ave & Main St
54	Lyons Ave & Newhall Ave
55	Lyons Ave & Wayman St
56	Lyons Ave & Orchard Village Rd
57	Lyons Ave & Apple St
58	Lyons Ave & Peachland Ave
59	Lyons Ave & Avenida Entrana
60	Lyons Ave & Wiley Canyon Rd
61	Lyons Ave & Avenida Dorena
62	Chiquella Ln
63	The Old Rd & Chiquella Ln
64	The Old Rd & Pico Canyon Rd
65	The Old Rd & Constitution Ave
66	The Old Rd & Constitution Ave
67	The Old Rd & Constitution Ave
68	The Old Rd & Steinbeck Ave
69	The Old Rd & Steinbeck Ave
70	Stevenson Ranch Pky & The Old Rd
71	Stevenson Ranch Pky & Holmes Pl
72	Hemingway Ave & Stevenson Ranch Pky
73	Hemingway Ave & Anderson Ln
74	Hemingway Ave & London Pl
75	Kavenaugh Ln & Hemingway Ave
76	Kavenaugh Ln & Twain Pl
77	Kavenaugh Ln & Bates Pl
78	Kavenaugh Ln & Carroll Ln
79	Mallory Dr & Peacock Pl
80	Mallory Dr & Waycott Wy
81	Faulkner Dr & Burke Pl
82	Faulkner Dr & Forsythe Wy
83	Faulkner Dr & Thurber Wy

Route 5 Inbound Stop List	
Stop Number	Stop Name
1	Faulkner Dr & Thurber Wy
2	Faulkner Dr & Hood Wy
3	Faulkner Dr & Christie Ct
4	Hemingway Ave & Wilde Ave
5	Poe Pky & Franklin Ln
6	Poe Pky & Whitman St
7	Poe Pky & Keats Ln
8	Stevenson Ranch Pky
9	Stevenson Ranch Pky & Chisom Ln
10	Stevenson Ranch Pky & Hemingway Ave
11	Stevenson Ranch Pky & Steinbeck Ave
12	Stevenson Ranch Pky & The Old Rd
13	The Old Rd & Stevenson Ranch Pky
14	The Old Rd & Steinbeck Ave
15	The Old Rd & Steinbeck Ave
16	The Old Rd & Constitution Ave
17	The Old Rd & Pico Canyon Rd
18	The Old Rd & Sagecrest Cir
19	Chiquella Ln
20	Lyons Ave
21	Lyons Ave & Wiley Canyon Rd
22	Lyons Ave & De Wolfe Rd
23	Lyons Ave & Everett Dr
24	Lyons Ave & Peachland Ave
25	Lyons Ave & Avenida Rotella
26	Lyons Ave & Apple St
27	Lyons Ave & Valley St
28	Lyons Ave & Wayman St
29	Lyons Ave & Newhall Ave
30	Newhall Ave & 8th St
31	Market St & Walnut St
32	Railroad Ave & Market St
33	Railroad Ave & 8th St
34	Lyons Ave & Main St
35	Newhall Ave & 11th St
36	Newhall Ave & 13th St
37	Newhall Ave & 14th St
38	Newhall Ave & 15th St
39	Dalbey Dr & Newhall Ave
40	Dalbey Dr & Avenida Ignacio
41	Dalbey Dr & Orchard Village Rd

Route 5 Inbound Stop List	
Stop Number	Stop Name
42	Orchard Village Rd & 16th St
43	Orchard Village Rd & Wiley Canyon Rd
44	Orchard Village Rd & Mill Valley Rd
45	McBean Pky & Avenida Navarre
46	McBean Pky & Arroyo Prk Dr
47	McBean Pky & Gamble House Ct
48	McBean Pky & Del Monte Dr
49	McBean MRTC
50	McBean Pky
51	McBean Pky & Town Center Dr
52	Magic Mountain Pky & Theater Dr
53	Magic Mountain Pky & Carousel Ln
54	Magic Mountain Pky & Citrus Dr
55	Valencia Blvd & Magic Mountain Pky
56	Valencia Blvd & Cinema Dr
57	Soledad Canyon Rd & Bouquet Canyon Rd
58	Commuter Wy & Soledad Canyon Rd
59	Santa Clarita Metrolink
60	Commuter Wy & Soledad Canyon Rd
61	Soledad Canyon Rd & Commuter Wy
62	Soledad Canyon Rd & Prima Way
63	Soledad Canyon Rd & Golden Oak Rd
64	Soledad Canyon Rd & Ruether Ave
65	Soledad Canyon Rd & Rainbow Gln Dr
66	Soledad Canyon Rd & Langside Ave
67	Soledad Canyon Rd & Camp Plenty Rd
68	Soledad Canyon Rd & Whites Cyn
69	Soledad Canyon Rd & Crossglade Ave
70	Soledad Canyon Rd & Luther Dr
71	Sierra Hwy & Soledad Canyon Rd
72	Sierra Hwy & Sarabande Ln
73	Sierra Hwy & Mirror Wy
74	Sierra Hwy & Adon Ave
75	Sierra Hwy & Sierra Cross Ave
76	Sierra Hwy & Scherzinger Ln
77	Sierra Hwy & Linda Vista St
78	COC Canyon Country Campus
79	Sierra Hwy & Fitch Ave
80	Sierra Hwy & Garyford Rd
81	Sierra Hwy & Vasquez Canyon Rd

Average load factor by trip

Both inbound and outbound trips on Route 5 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.31. Trips with the highest average peak loads for each day and direction are identified below.

Exhibit 3.5.6 Route 5 Trips with Highest Average Peak Loads

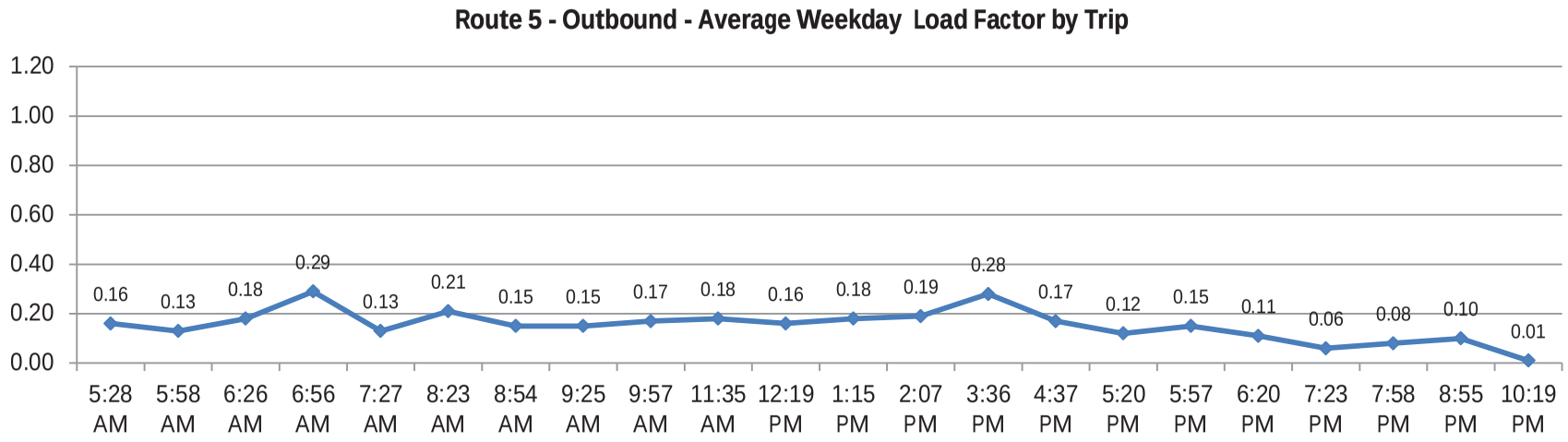
Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	6:56 a.m.	0.29
Weekday	Inbound	1:38 p.m. 4:00 p.m.	0.31
Saturday	Outbound	9:06 a.m.	0.23
Saturday	Inbound	3:31 p.m. 5:01 p.m.	0.23
Sunday	Outbound	9:06 a.m.	0.21
Sunday	Inbound	3:31 p.m.	0.23

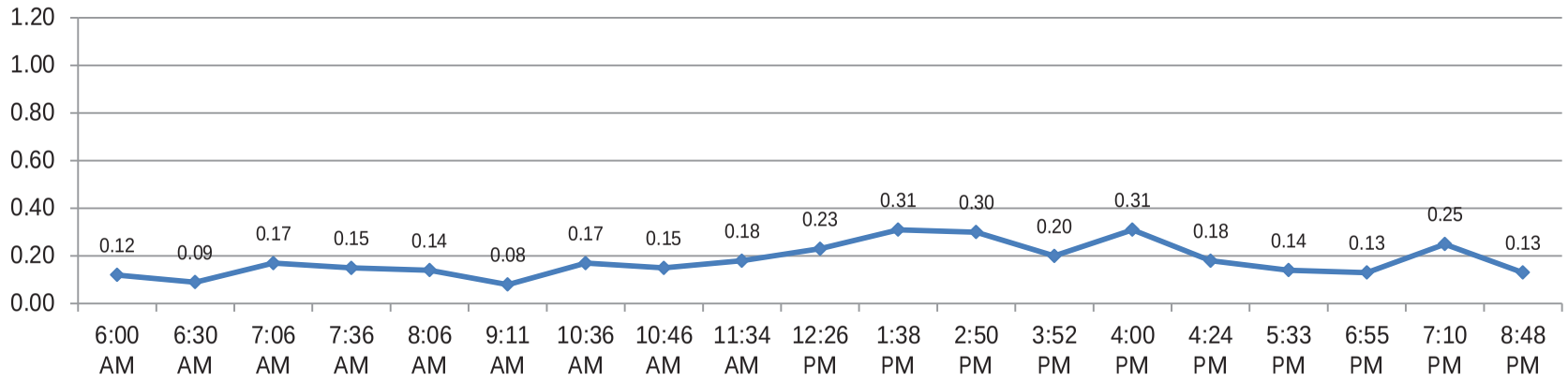
There was one individual trip which exhibited a load factor of at least 0.50. That trip was:

Exhibit 3.5.7 Route 5 Trips with Load Factor at least 0.50

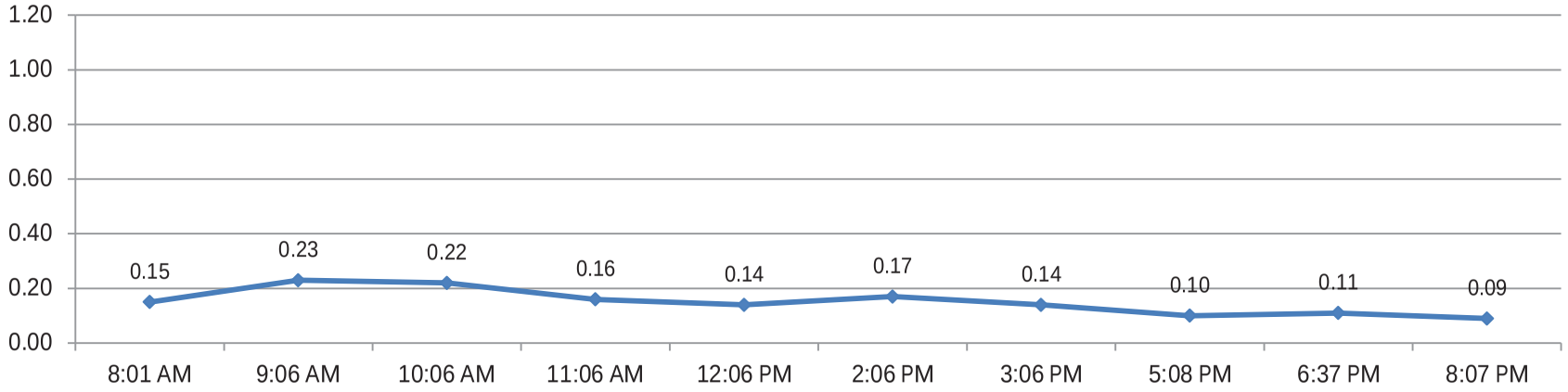
Date	Direction	Trip	Load factor
May 15	Inbound	2:50 p.m.	0.53

Exhibit 3.5.8 Route 5 Average Load Factor by Trip

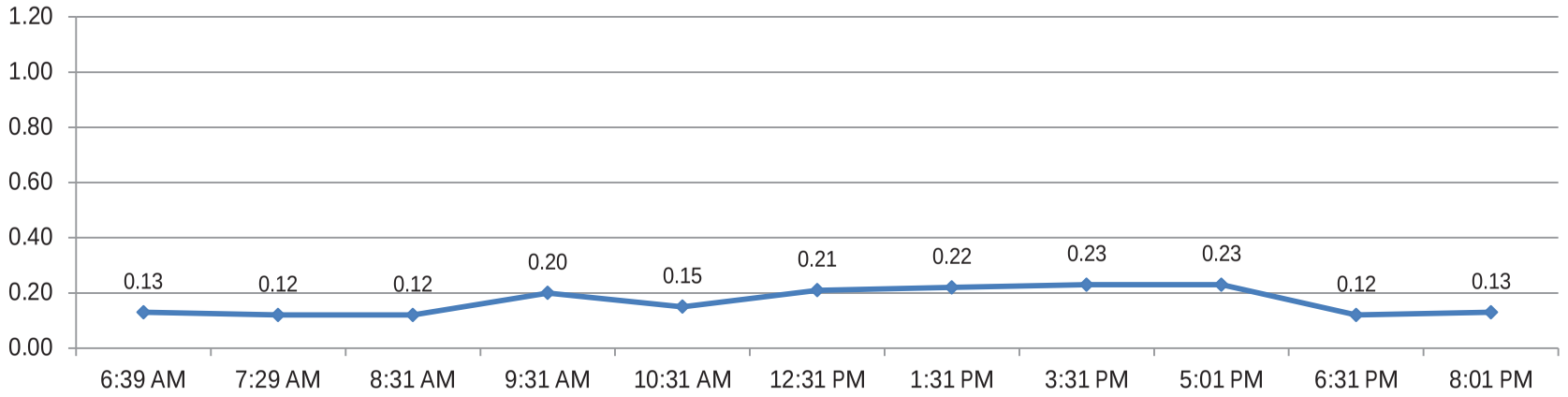


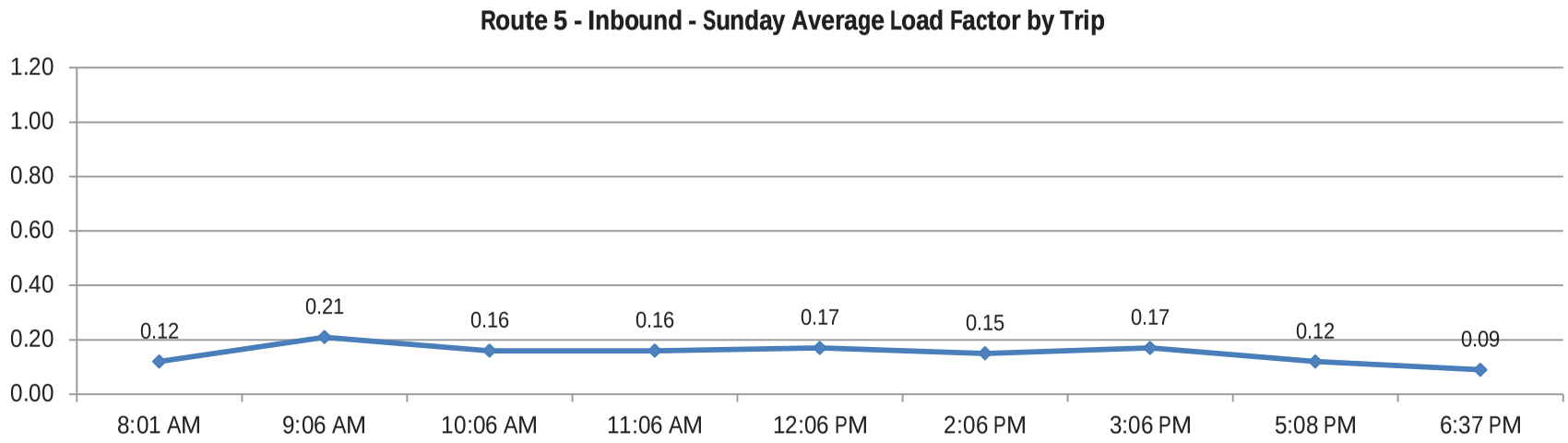


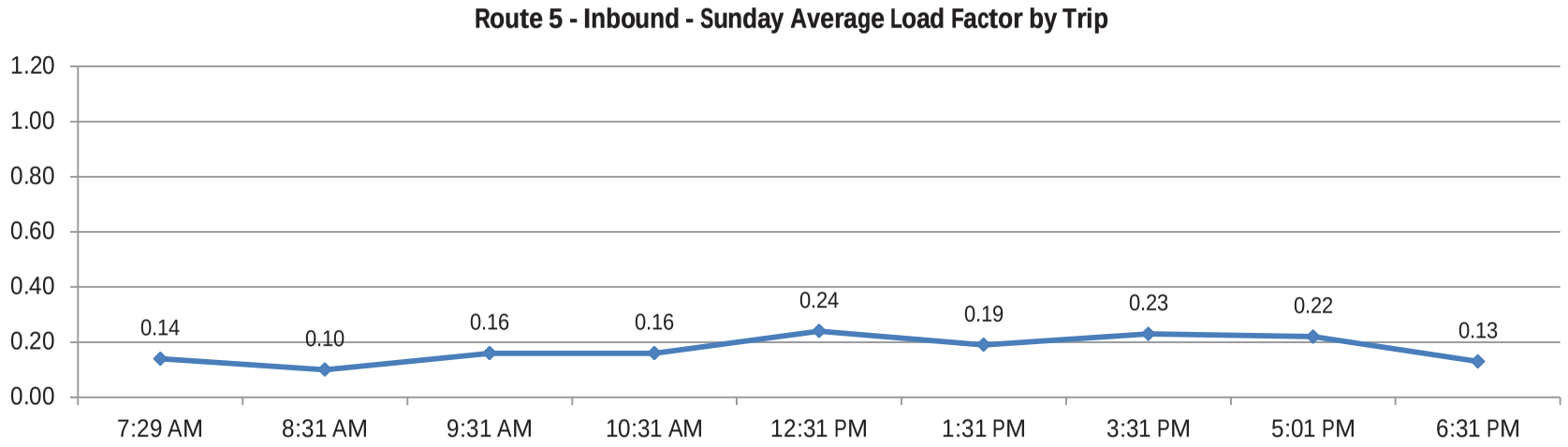
Route 5 - Outbound - Saturday Average Load Factor by Trip



Route 5 - Inbound - Saturday Average Load Factor by Trip




Route 5 - Inbound - Sunday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.12
0.21
0.16
0.16
0.17
0.15
0.17
0.12
0.09
8:01 AM
9:06 AM
10:06 AM
11:06 AM
12:06 PM
2:06 PM
3:06 PM
5:08 PM
6:37 PM


Route 5 - Inbound - Sunday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.14
0.10
0.16
0.16
0.24
0.19
0.23
0.22
0.13
7:29 AM
8:31 AM
9:31 AM
10:31 AM
12:31 PM
1:31 PM
3:31 PM
5:01 PM
6:31 PM

Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 5's weekday outbound service exhibits slightly better overall schedule adherence (76.4 percent) than the inbound service (73.9 percent). Early departures are somewhat of an issue on weekdays, but not a notable concern on weekends. On Saturday, schedule adherence improves slightly for the outbound service (78 percent on-time), but the inbound service experiences significant issues with late trips and on-time performance drops to 63.5 percent. On Sunday, outbound schedule adherence improves slightly over Saturday, to 80.2 percent, but inbound performance declines to 61.3 percent, again due to late trips.

Schedule adherence by time-point

Weekday outbound schedule adherence exhibits three clear performance segments. Schedule adherence between the beginning of the route and Soledad Canyon Rd/Bouquet Canyon Rd tends to stay in the upper 80th percentile (83.5 percent to 90.2 percent), increases to the low 90th percentile (91.5 percent to 95.8 percent) right after leaving the MRTC, and declining into the upper 70th to low 80th percentile (76.1 percent to 83.6 percent) through the end of the route. Late trips increase significantly during the end of the route. Early trips, while not a big concern, tend to occur more at the beginning of the route.

Weekday inbound service also performs best when departing the MRTC (93.8 percent). Key time-points with the lowest on-time performance include the beginning of the route (Carroll Ln/Faulkner Dr) (74.1 percent), McBean Pkwy/Avenida Navarre (77.6 percent), Santa Clarita Metrolink Station (70.7 percent), and Sierra Hwy/Vasquez Canyon (at the end of the route) (75.2 percent). It is likely the second half of the route would operate even more behind schedule absent the more than 10-minute layover at the MRTC, which allows some trips to recover.

On the Saturday outbound service, the MRTC experiences lower on-time performance (68.6 percent) despite the lengthy layover. The route starts with 100 percent of observed trips at Sierra Hwy/Vasquez Canyon on-time, and remains above 80 percent until reaching the MRTC. After the MRTC, on-time performance never goes above 80 percent, with late trips being the primary issue.

On Sunday, outbound on-time performance begins the route fairly high, peaking at the Aquatic Center (97.1 percent). Once the route departs the MRTC (where only 84.1 percent of trips are on-time), schedule adherence declines to a low of 56.8 percent at the end of the route (Carroll Ln/Faulkner Dr). Inbound service experiences fairly low schedule adherence throughout the route, starting the route with just 63.6 percent of departures on-time from Carroll Ln/Faulkner Dr. The route typically departs from the MRTC on-time (90.9 percent), but on-time performance quickly erodes, dropping to 34.9 percent at the Aquatic Center and 39.5 percent at the final two time-points of the route.

Schedule adherence by time of day

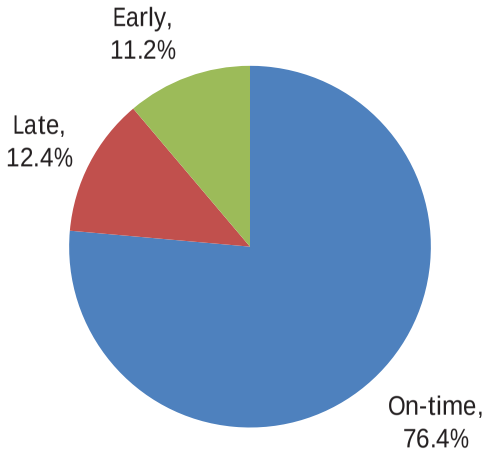
On weekdays, outbound on-time performance is best during the Early AM (92 percent) and Mid-day (90.8 percent) day-parts. It is poorest during the PM Peak period (74.1 percent). For the inbound service, the AM Peak period performs the best (93.4 percent on-time), while the Mid-day period has the lowest percentage of on-time trips (77.5 percent). Late trips are the primary concern across all day-parts.

On Saturday, AM Peak performs the best of all the day-parts for the outbound service (97.1 percent). Mid-day has the lowest schedule adherence, with just over two-thirds of trips on-time (67.8 percent). Inbound service exhibits low schedule adherence through most of the day, including Mid-day (56.1 percent), PM Peak (46.2 percent), and Late PM day-parts (61.5 percent).

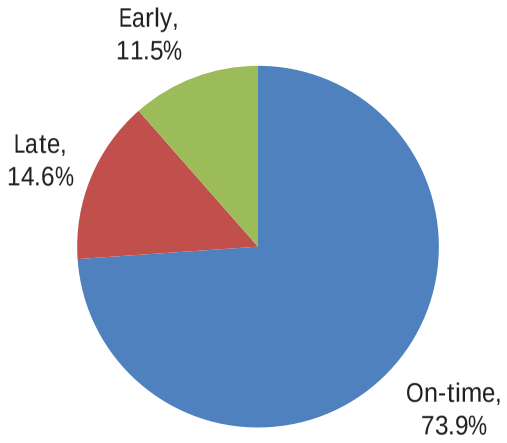
On Sunday, outbound schedule adherence is highest during the Late PM day-part (100 percent of observed trips), followed by the AM Peak period (87.1 percent). On-time performance is lowest during the Mid-day period (75.4 percent). Inbound schedule adherence is high during the AM Peak period (97.7 percent), but does not rise above 54 percent on-time throughout the balance of the day.

Exhibit 3.5.9 Route 5 Overall Schedule Adherence

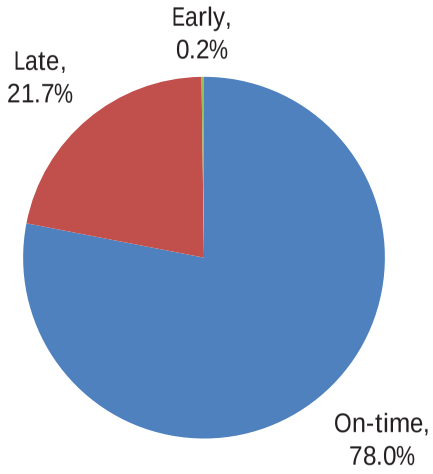
Route 5 - Outbound - Overall Weekday Schedule Adherence



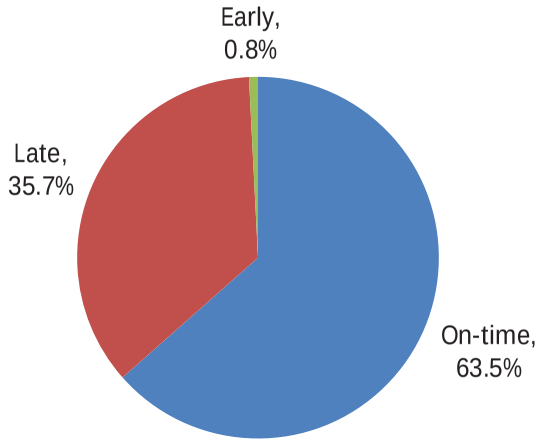
Route 5 - Inbound- Overall Weekday Schedule Adherence

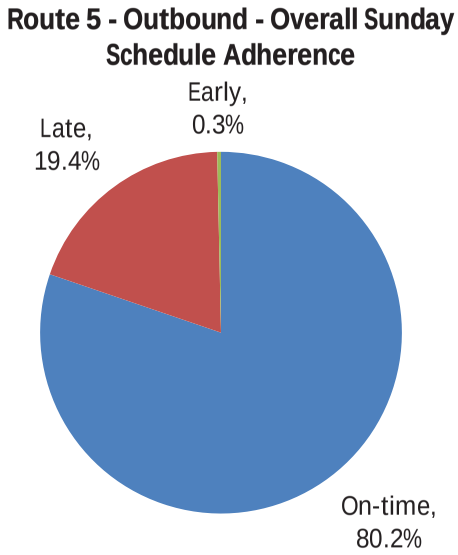


Route 5 - Outbound - Overall Saturday Schedule Adherence



Route 5 - Inbound- Overall Saturday Schedule Adherence




Route 5 - Outbound - Overall Sunday Schedule Adherence
Early, 0.3%
Late, 19.4%
On-time, 80.2%

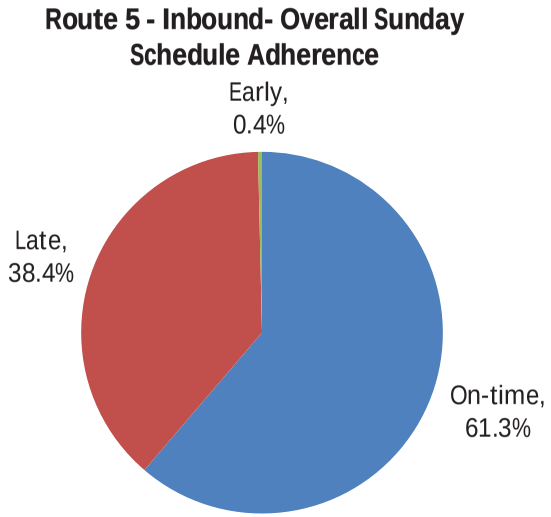
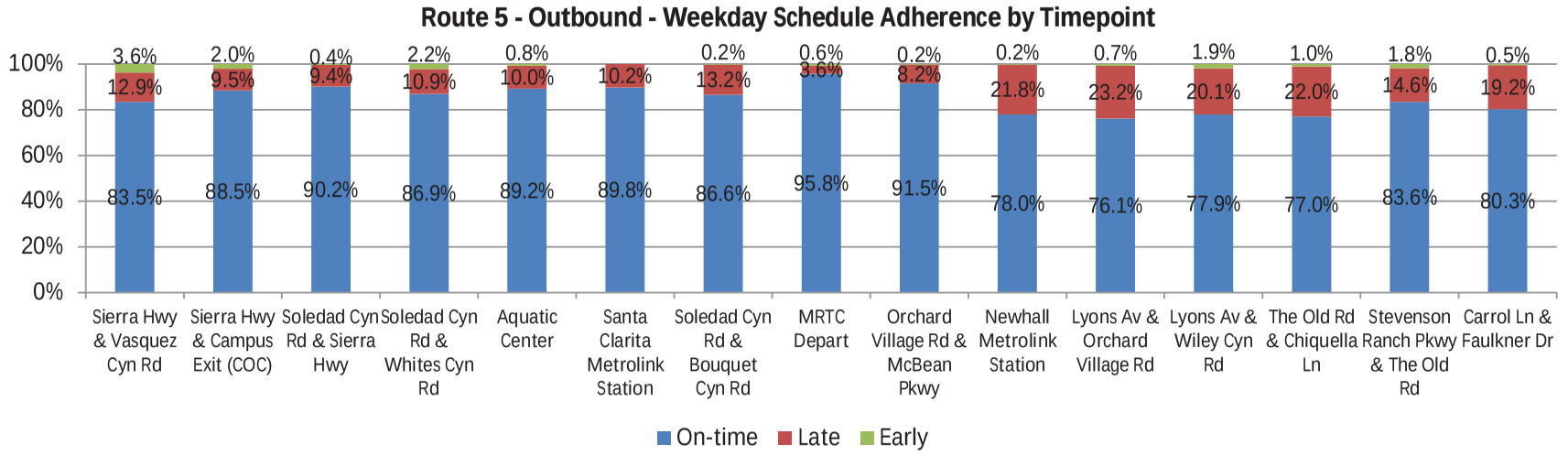
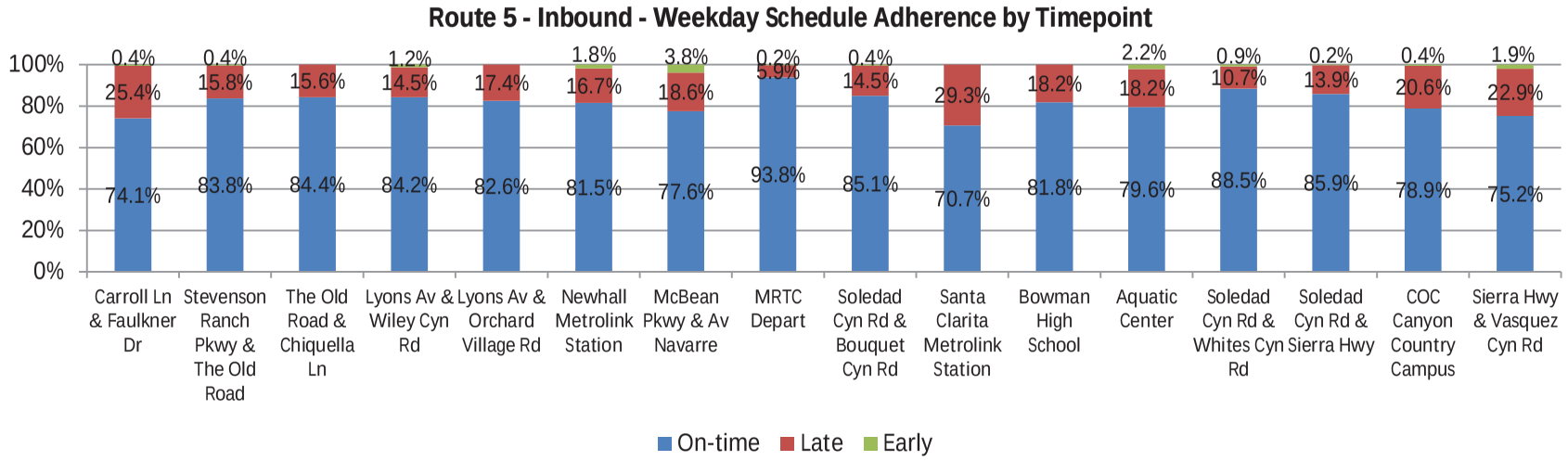
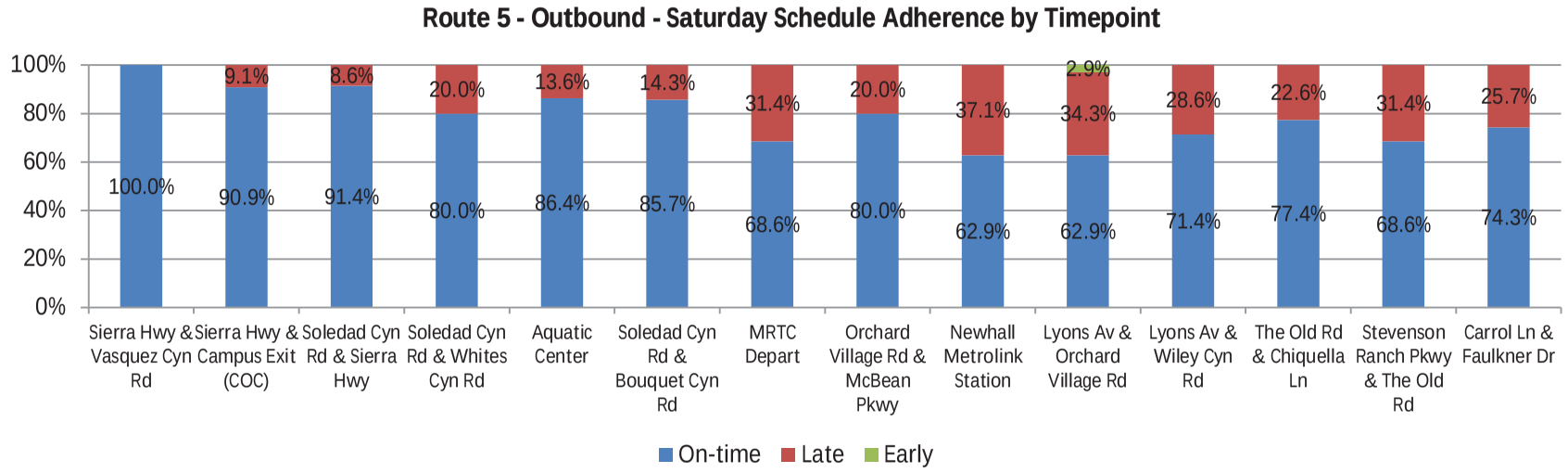
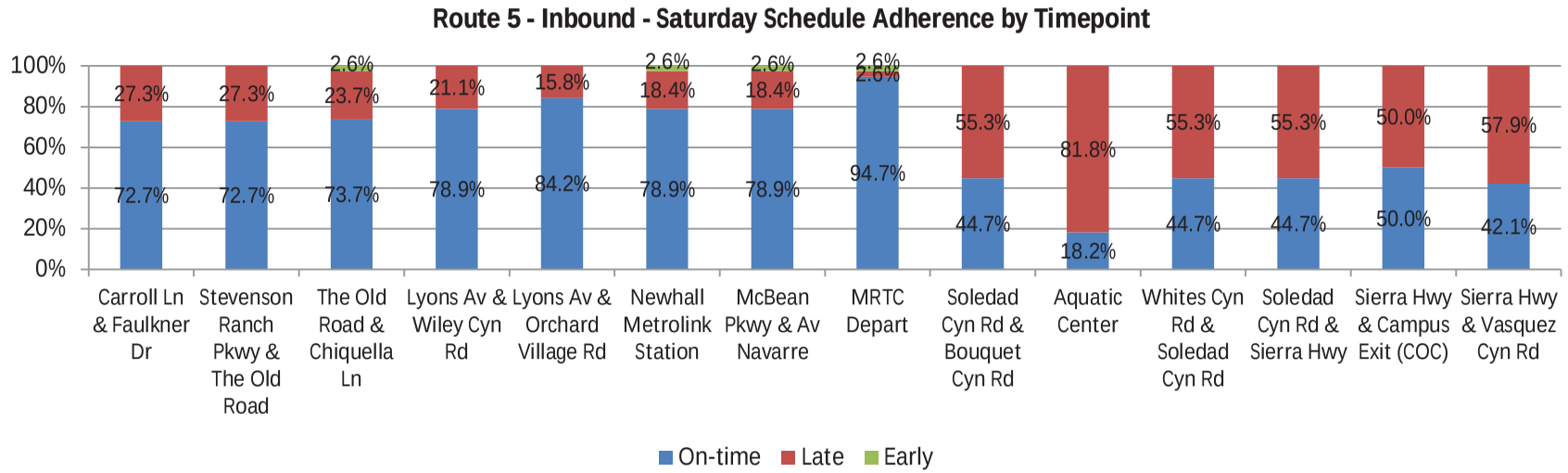

Route 5 - Inbound- Overall Sunday Schedule Adherence
Early, 0.4%
Late, 38.4%
On-time, 61.3%

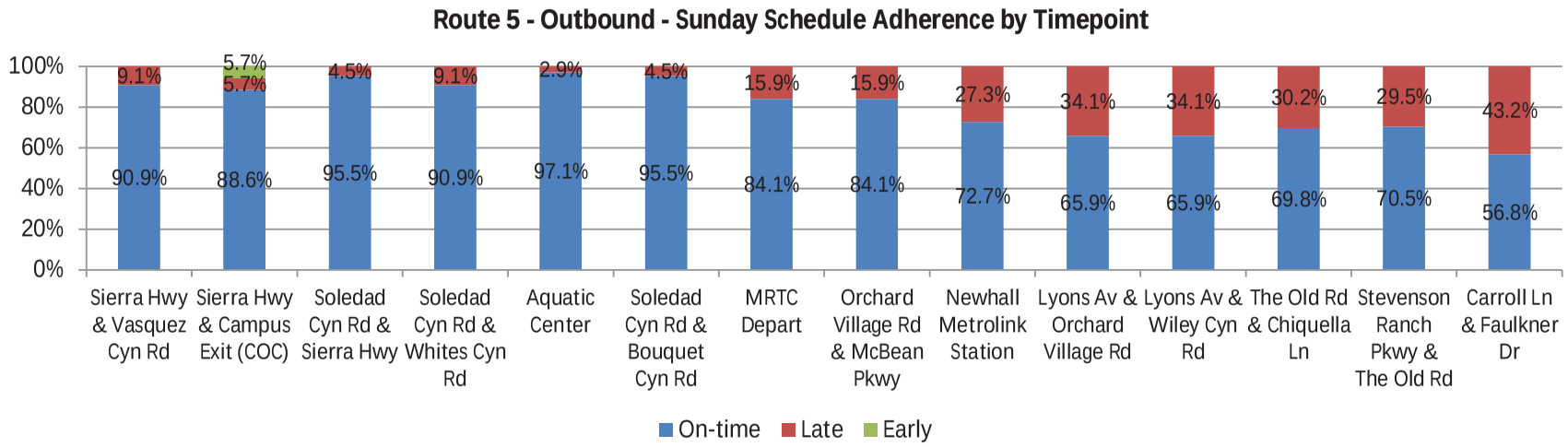
Exhibit 3.5.10 Route 5 Schedule Adherence by Time-point






Route 5 - Outbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
100.0%
9.1%
90.9%
8.6%
91.4%
20.0%
80.0%
13.6%
86.4%
14.3%
85.7%
31.4%
68.6%
20.0%
80.0%
37.1%
62.9%
2.9%
34.3%
62.9%
28.6%
71.4%
22.6%
77.4%
31.4%
68.6%
25.7%
74.3%
Sierra Hwy & Vasquez Cyn Rd
Sierra Hwy & Campus Exit (COC)
Soledad Cyn Rd & Sierra Hwy
Soledad Cyn Rd & Whites Cyn Rd
Aquatic Center
Soledad Cyn Rd & Bouquet Cyn Rd
MRTC Depart
Orchard Village Rd & McBean Pkwy
Newhall Metrolink Station
Lyons Av & Orchard Village Rd
Lyons Av & Wiley Cyn Rd
The Old Rd & Chiquella Ln
Stevenson Ranch Pkwy & The Old Rd
Carrol Ln & Faulkner Dr
On-time
Late
Early


Route 5 - Inbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
27.3%
72.7%
27.3%
72.7%
2.6%
23.7%
73.7%
21.1%
78.9%
15.8%
84.2%
2.6%
18.4%
78.9%
2.6%
18.4%
78.9%
2.6%
2.6%
94.7%
55.3%
44.7%
81.8%
18.2%
55.3%
44.7%
55.3%
44.7%
50.0%
50.0%
57.9%
42.1%
Carroll Ln & Faulkner Dr
Stevenson Ranch Pkwy & The Old Road
The Old Road & Chiquella Ln
Lyons Av & Wiley Cyn Rd
Lyons Av & Orchard Village Rd
Newhall Metrolink Station
McBean Pkwy & Av Navarre
MRTC Depart
Soledad Cyn Rd & Bouquet Cyn Rd
Aquatic Center
Whites Cyn Rd & Soledad Cyn Rd
Soledad Cyn Rd & Sierra Hwy
Sierra Hwy & Campus Exit (COC)
Sierra Hwy & Vasquez Cyn Rd
On-time
Late
Early


Route 5 - Outbound - Sunday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
9.1%
90.9%
5.7%
5.7%
88.6%
4.5%
95.5%
9.1%
90.9%
2.9%
97.1%
4.5%
95.5%
15.9%
84.1%
15.9%
84.1%
27.3%
72.7%
34.1%
65.9%
34.1%
65.9%
30.2%
69.8%
29.5%
70.5%
43.2%
56.8%
Sierra Hwy & Vasquez Cyn Rd
Sierra Hwy & Campus Exit (COC)
Soledad Cyn Rd & Sierra Hwy
Soledad Cyn Rd & Whites Cyn Rd
Aquatic Center
Soledad Cyn Rd & Bouquet Cyn Rd
MRTC Depart
Orchard Village Rd & McBean Pkwy
Newhall Metrolink Station
Lyons Av & Orchard Village Rd
Lyons Av & Wiley Cyn Rd
The Old Rd & Chiquella Ln
Stevenson Ranch Pkwy & The Old Rd
Carroll Ln & Faulkner Dr
On-time
Late
Early

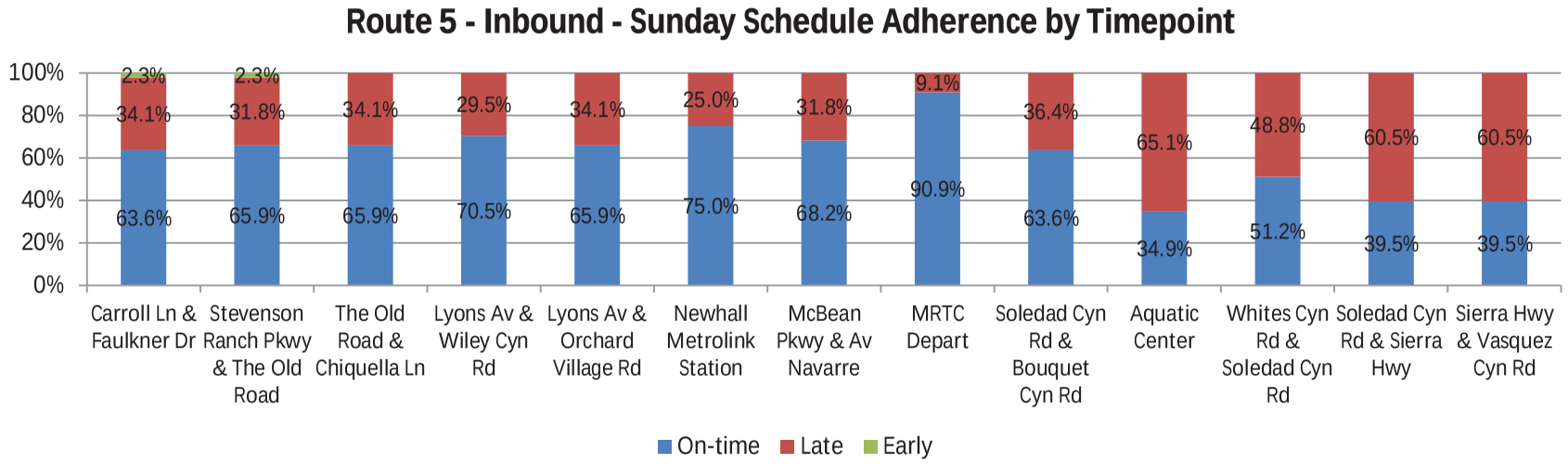
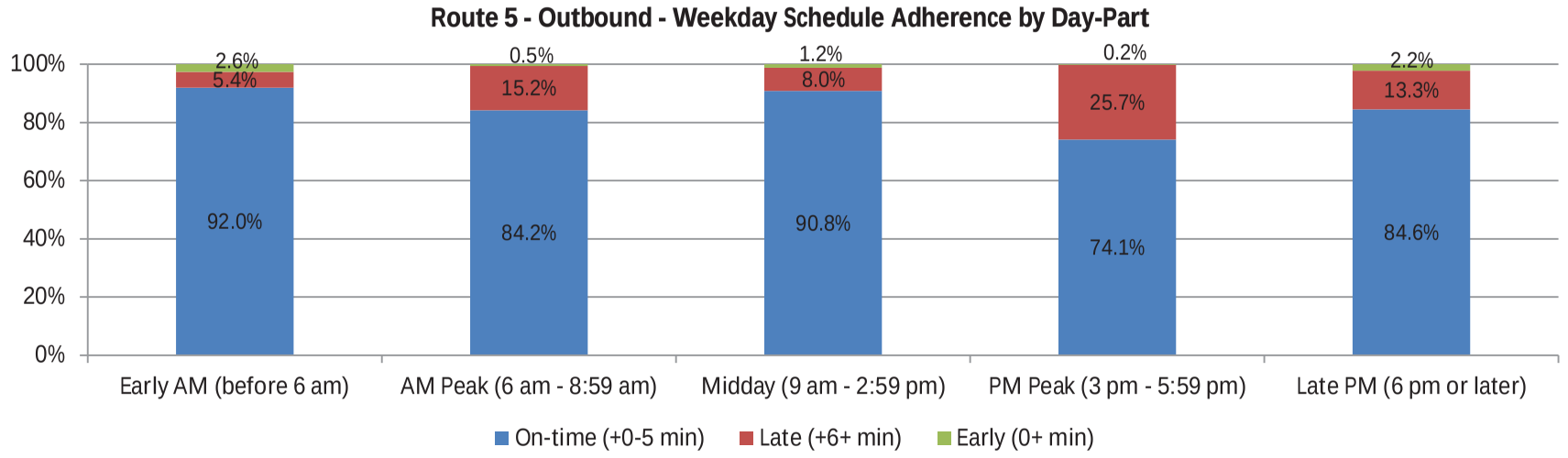
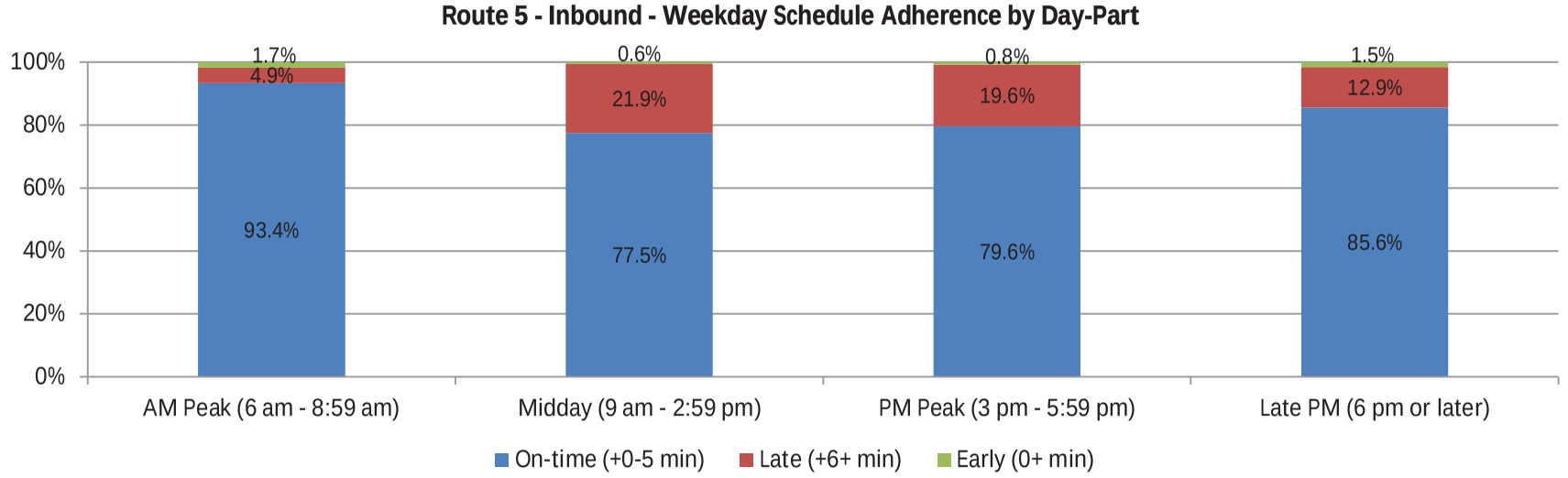
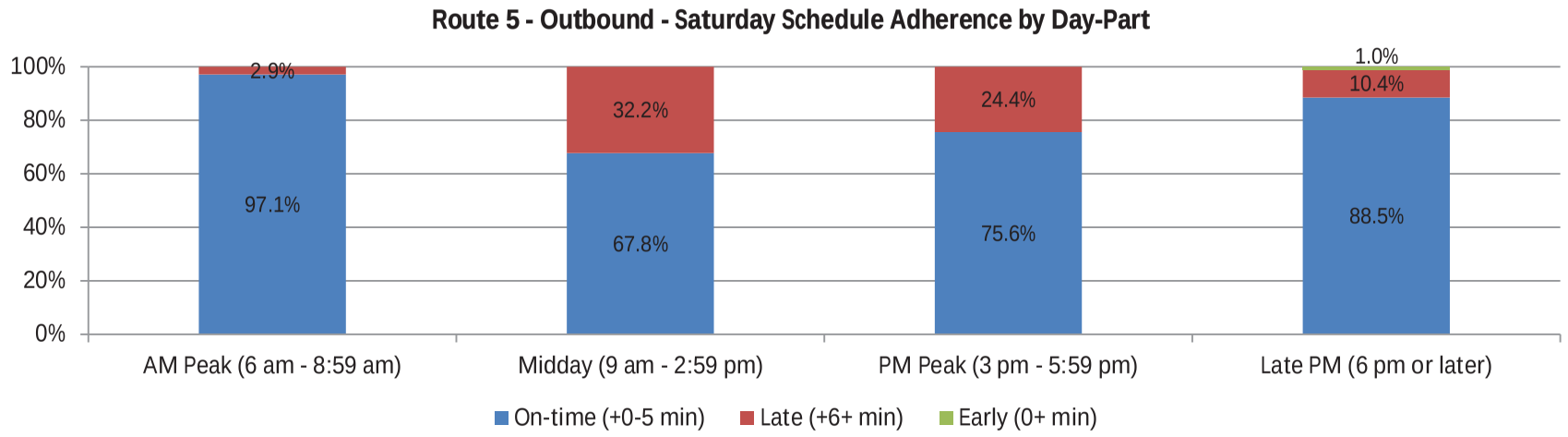
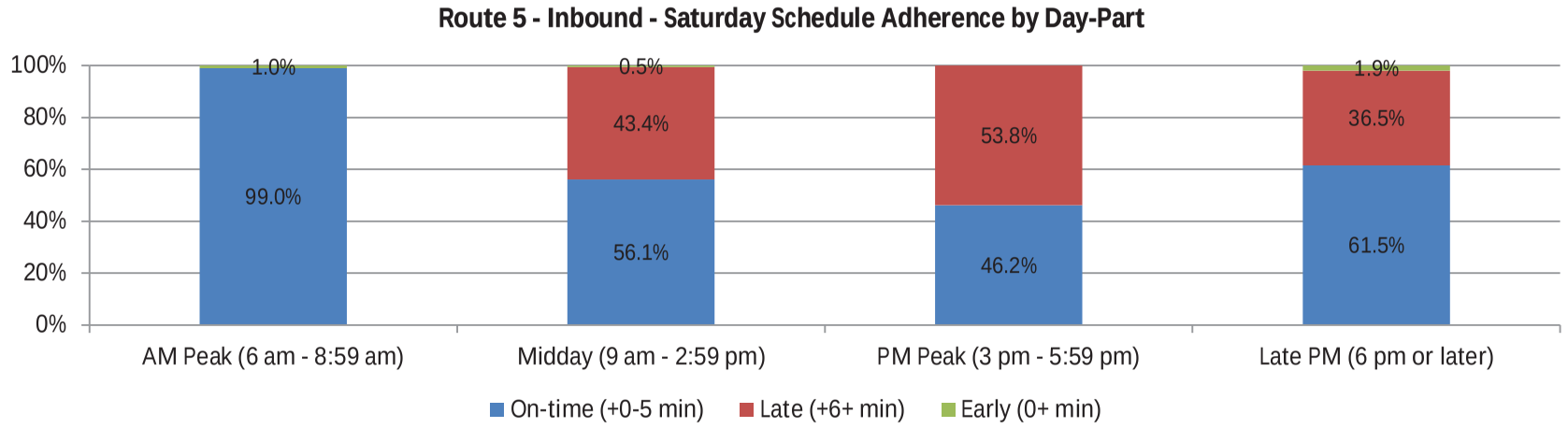

Route 5 - Inbound - Sunday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
2.3%
34.1%
63.6%
2.3%
31.8%
65.9%
34.1%
65.9%
29.5%
70.5%
34.1%
65.9%
25.0%
75.0%
31.8%
68.2%
9.1%
90.9%
36.4%
63.6%
65.1%
34.9%
48.8%
51.2%
60.5%
39.5%
60.5%
39.5%
Carroll Ln & Faulkner Dr
Stevenson Ranch Pkwy & The Old Road
The Old Road & Chiquella Ln
Lyons Av & Wiley Cyn Rd
Lyons Av & Orchard Village Rd
Newhall Metrolink Station
McBean Pkwy & Av Navarre
MRTC Depart
Soledad Cyn Rd & Bouquet Cyn Rd
Aquatic Center
Whites Cyn Rd & Soledad Cyn Rd
Soledad Cyn Rd & Sierra Hwy
Sierra Hwy & Vasquez Cyn Rd
On-time
Late
Early

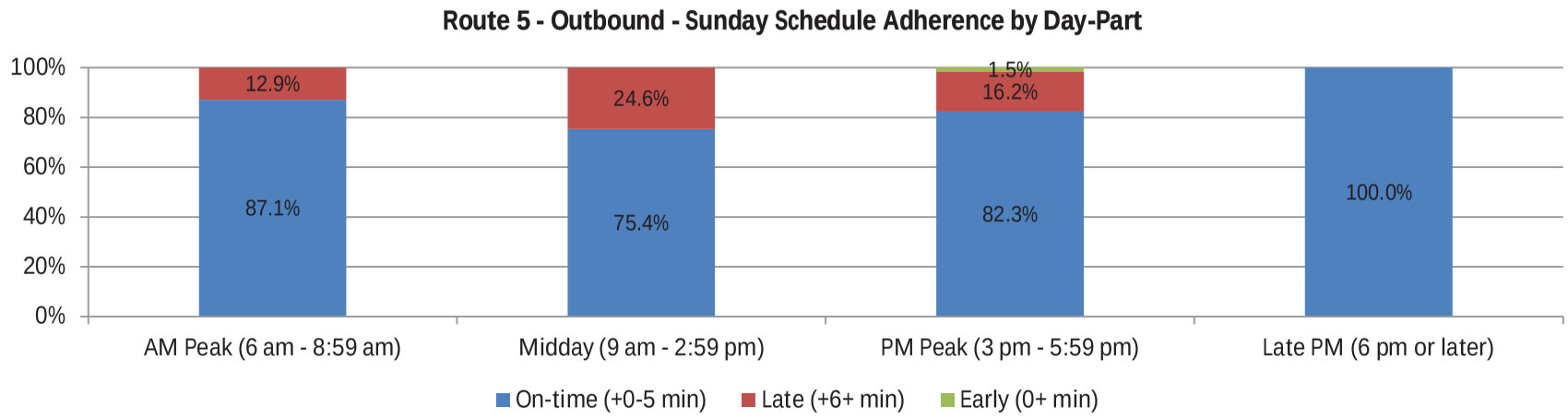
Exhibit 3.5.11 Route 5 Schedule Adherence by Day-Part

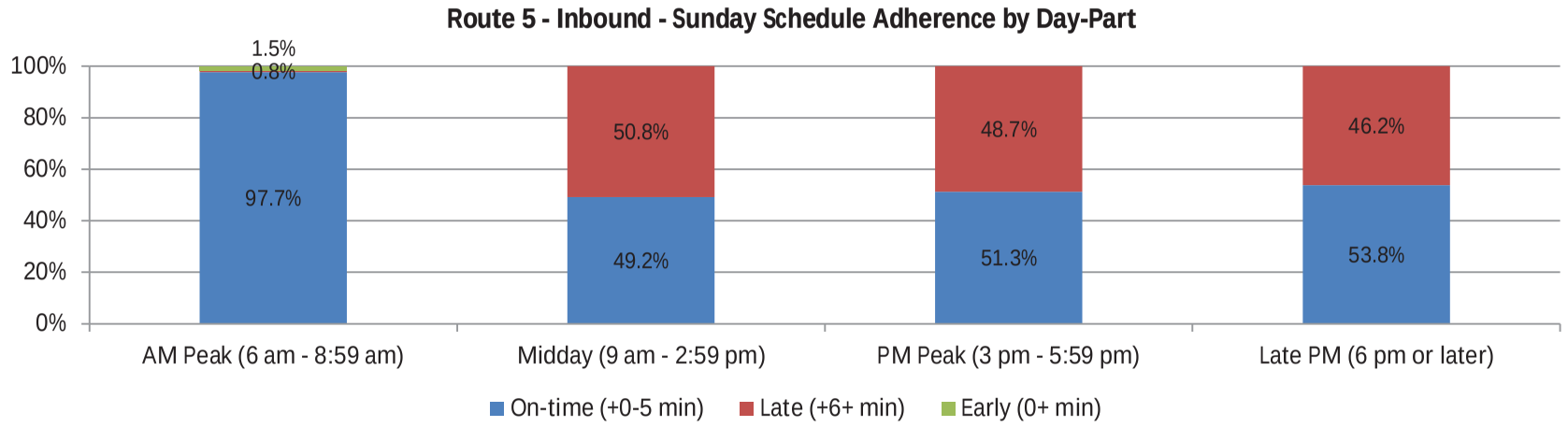





Route 5 - Outbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
2.9%
97.1%
32.2%
67.8%
24.4%
75.6%
1.0%
10.4%
88.5%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 5 - Inbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
1.0%
99.0%
0.5%
43.4%
56.1%
53.8%
46.2%
1.9%
36.5%
61.5%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 5 - Outbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
12.9%
87.1%
24.6%
75.4%
1.5%
16.2%
82.3%
100.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 5 - Inbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
1.5%
0.8%
97.7%
50.8%
49.2%
48.7%
51.3%
46.2%
53.8%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route Performance

Overall ridership

Exhibit 3.5.12 Route 5 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.5.13 Route 5 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking (overall)
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.10%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 6 Profile and Performance Analysis

Route Description

Route 6 serves Stevenson Ranch, Valencia Marketplace, Sunset Point, William S. Hart High School, Newhall Community Center, Newhall Metrolink Station, Placerita Junior High School, Henry Mayo Newhall Memorial Hospital, MRTC, Civic Center, Santa Clarita Metrolink Station, Bowman High School, Aquatic Center, Canyon Country Library, and Shadow Pines. Route 6 shares the majority of its alignment with Route 5; however, Route 6 continues east on Soledad Canyon Road to Shadow Pines while Route 5 travels north on Sierra Highway.

Primary streets of operation include Stevenson Ranch Parkway, The Old Road, Lyons Avenue, Newhall Avenue, Orchard Village Road, McBean Parkway, Magic Mountain Parkway, Soledad Canyon Road, and Shadow Pines.

Outbound service is defined as that originating at Shadow Pines Boulevard and Grandifloras Road and traveling to Carroll Lane and Faulkner Drive in Stevenson Ranch via the MRTC. Inbound service travels in the opposite direction. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, the outbound service peaks at 11:13 a.m. and 2:32 p.m. with an average of 58 riders per trip. Not surprisingly, the trips with the least average riders per trip are partial trips that include only one or two route segments. The inbound service peaks at 2:21 p.m. with an average of 77 riders per trip. A second peak occurs at 1:56 p.m., with an average of 73 riders per trip. The lowest average ridership occurs during the first and last trips of the day (4:21 a.m. and 9:57 p.m.) (The 9:57 p.m. trip is a partial trip that terminates at the Newhall Metrolink Station.)

On Saturday, outbound ridership peaks during the first trip of the day (7:05 a.m.) with an average of 57 riders per trip. In general, ridership is higher during the first half of the day. Average ridership is lowest during the 7:23 a.m. trip, likely because that trip only includes one route segment. Inbound ridership peaks at 3:01 p.m. with an average of 55 riders per trip. Trips with the lowest ridership occur at 12:01 p.m. and 7:31 p.m., yet still had an average of 20 riders per trip.

As on Saturday, Sunday outbound ridership also peaks during the first trip of the day (7:05 a.m.) with an average of 61 riders per trip. The 7:23 a.m. and 7:53 a.m.[2] trips exhibited the lowest ridership as they each consist of a single route segment. Inbound service on Sunday peaks at 4:01 p.m. with an average of 55 riders per trip. The first trip of the day (7:12 a.m.) has the lowest ridership, with an average of 25 riders per trip.

[2] This trip is shown as 7:55 a.m. in the published schedule but appears as 7:53 a.m. in the trip data report used for this analysis.

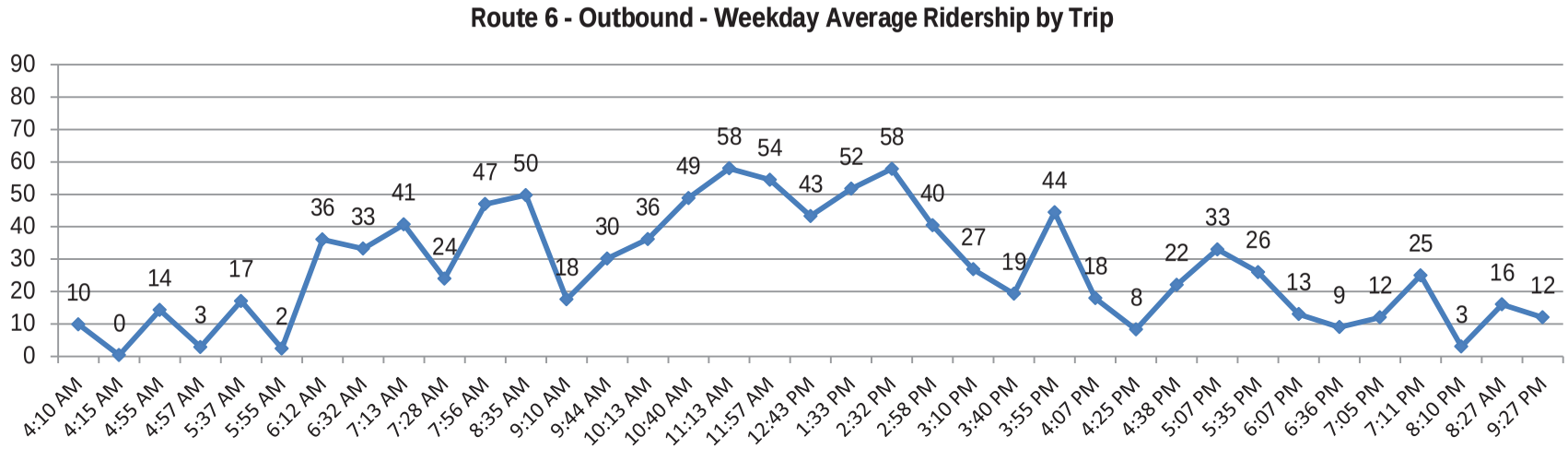
Average ridership by time of day

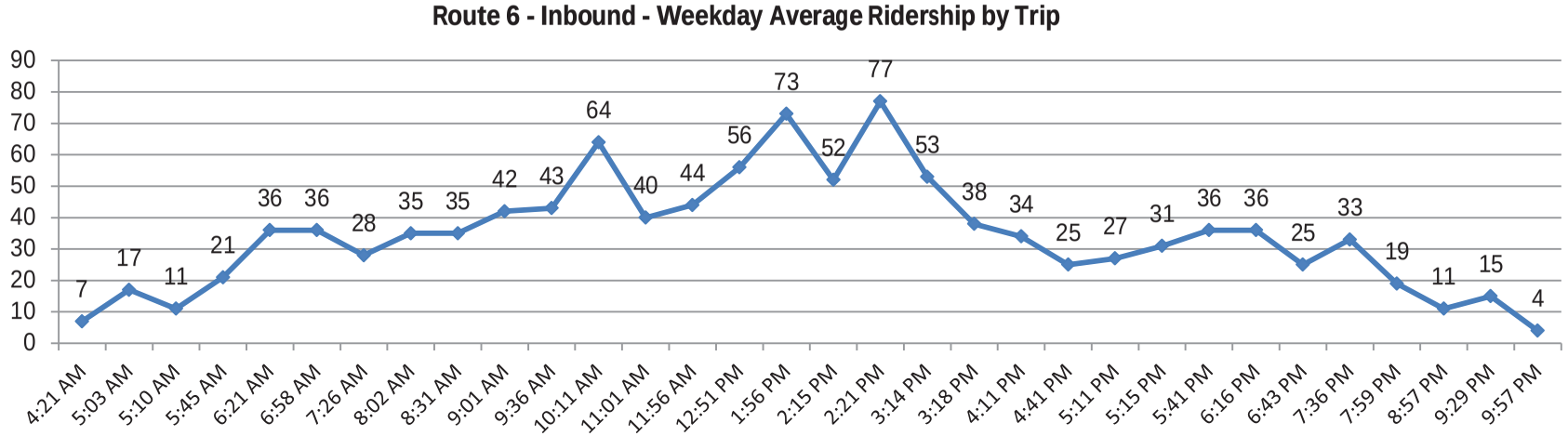
On weekdays, the outbound service sees its highest number of boardings during the Mid-day period (average of 44 boardings per trip), followed by the AM Peak period (average of 38 boardings per trip). The inbound service also has its highest boardings during the Mid-day period (55 boardings per trip), followed by the PM Peak and AM Peak day-parts (average of 36 and 34 boardings per trip, respectively).

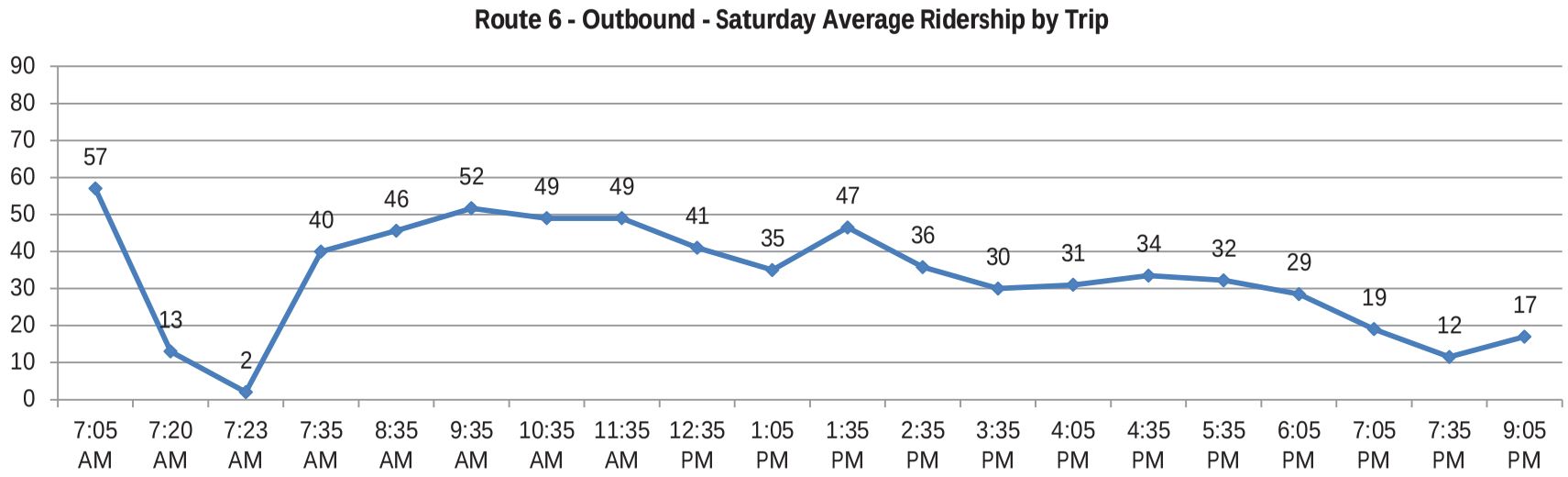
On Saturday, the outbound service again has its highest boardings during the Mid-day period (average of 44 boardings per trip). The inbound service sees its highest ridership during the PM Peak period, with an average of 49 boardings per trip.

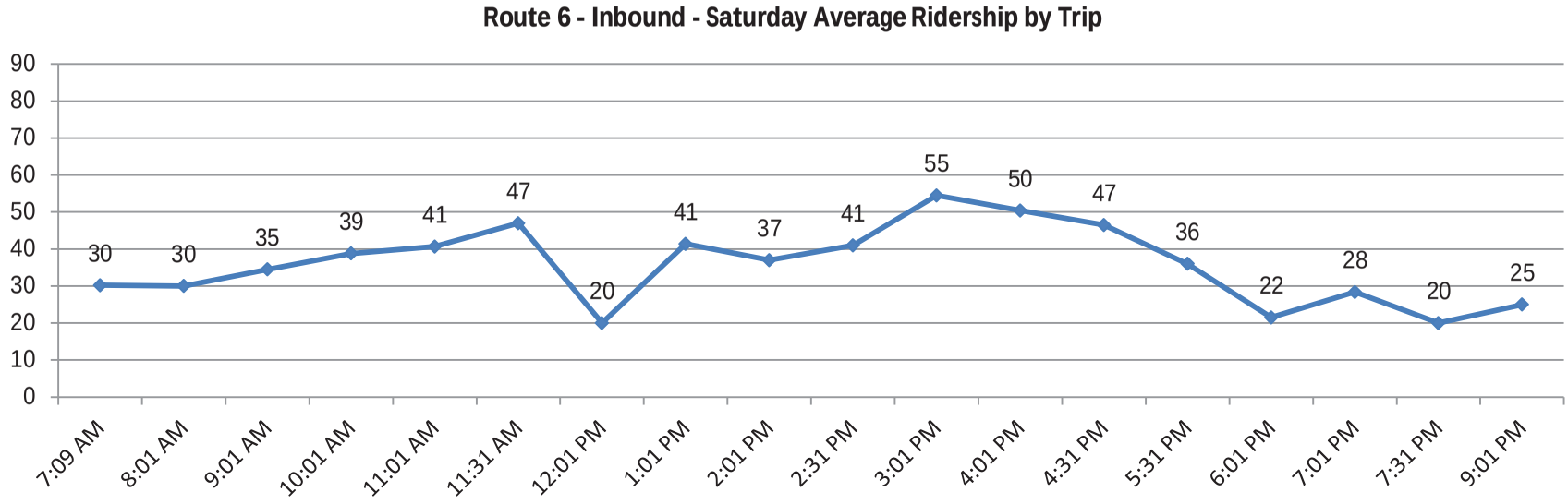
On Sunday, the outbound service continues to see its highest average ridership during the Mid-day period (average of 37 boardings per trip), while the inbound service sees its highest ridership during the PM Peak and Mid-day day-parts (average of 43 and 40 boardings per trip, respectively).

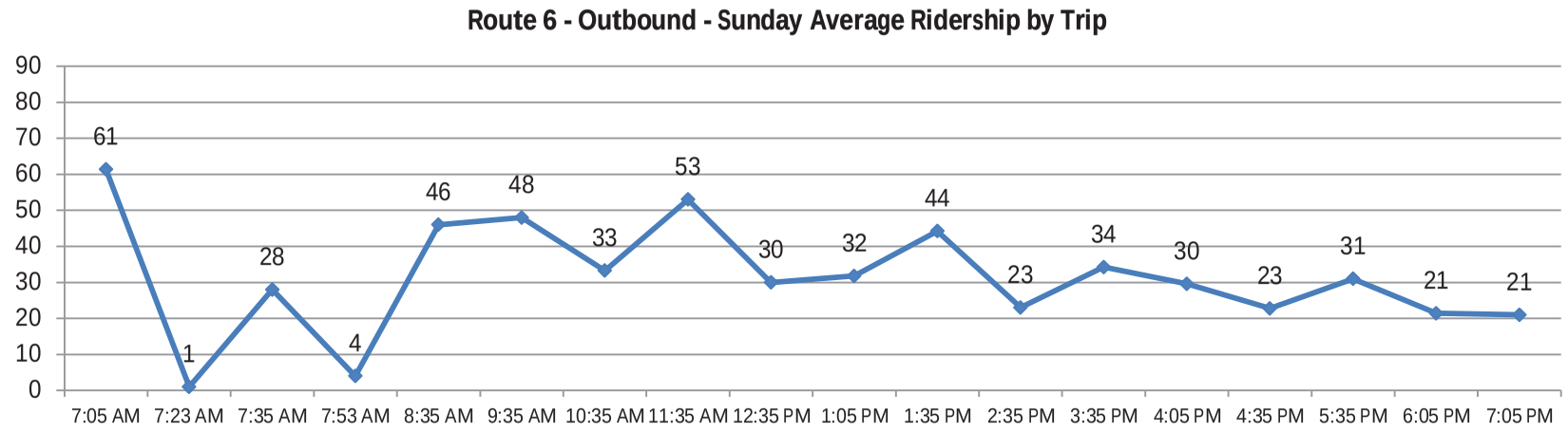
Exhibit 3.6.1 Route 6 Average Ridership by Trip






Route 6 - Outbound - Saturday Average Ridership by Trip
90
80
70
60
50
40
30
20
10
0
57
13
2
40
46
52
49
49
41
35
47
36
30
31
34
32
29
19
12
17
7:05 AM
7:20 AM
7:23 AM
7:35 AM
8:35 AM
9:35 AM
10:35 AM
11:35 AM
12:35 PM
1:05 PM
1:35 PM
2:35 PM
3:35 PM
4:05 PM
4:35 PM
5:35 PM
6:05 PM
7:05 PM
7:35 PM
9:05 PM


Route 6 - Inbound - Saturday Average Ridership by Trip
90
80
70
60
50
40
30
20
10
0
30
30
35
39
41
47
20
41
37
41
55
50
47
36
22
28
20
25
7:09 AM
8:01 AM
9:01 AM
10:01 AM
11:01 AM
11:31 AM
12:01 PM
1:01 PM
2:01 PM
2:31 PM
3:01 PM
4:01 PM
4:31 PM
5:31 PM
6:01 PM
7:01 PM
7:31 PM
9:01 PM


Route 6 - Outbound - Sunday Average Ridership by Trip
90
80
70
60
50
40
30
20
10
0
61
1
28
4
46
48
33
53
30
32
44
23
34
30
23
31
21
21
7:05 AM
7:23 AM
7:35 AM
7:53 AM
8:35 AM
9:35 AM
10:35 AM
11:35 AM
12:35 PM
1:05 PM
1:35 PM
2:35 PM
3:35 PM
4:05 PM
4:35 PM
5:35 PM
6:05 PM
7:05 PM

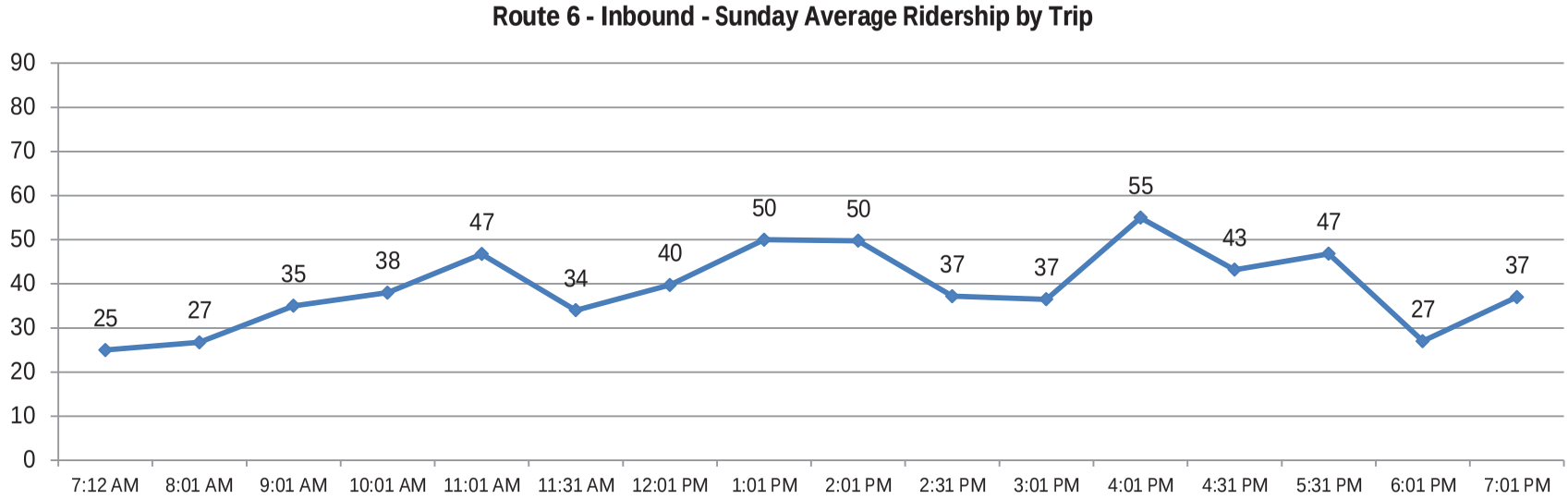
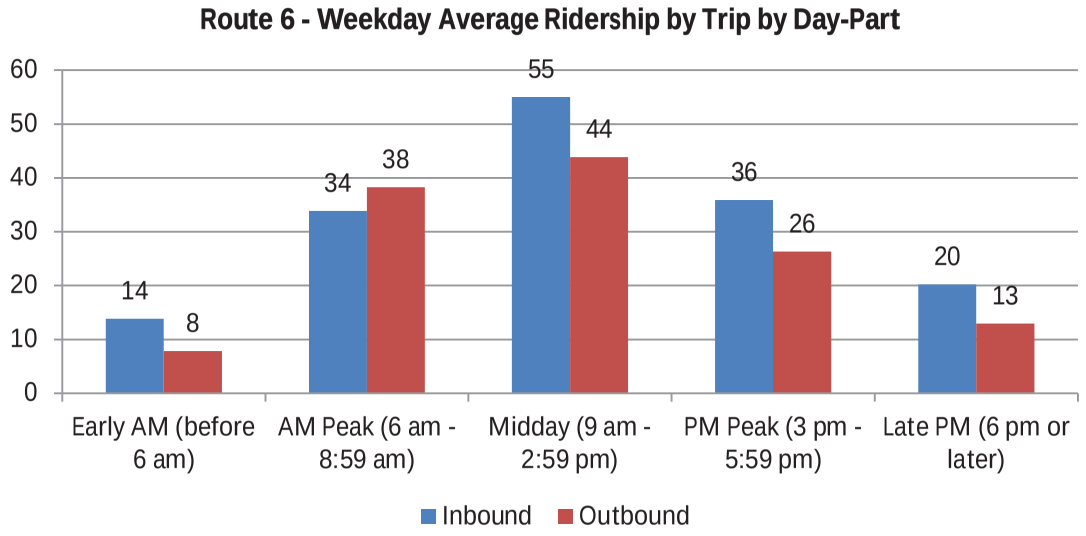
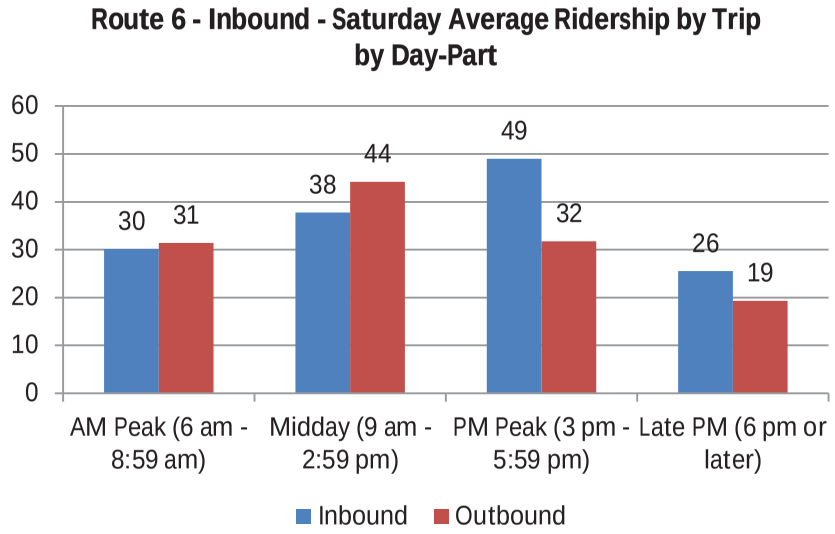
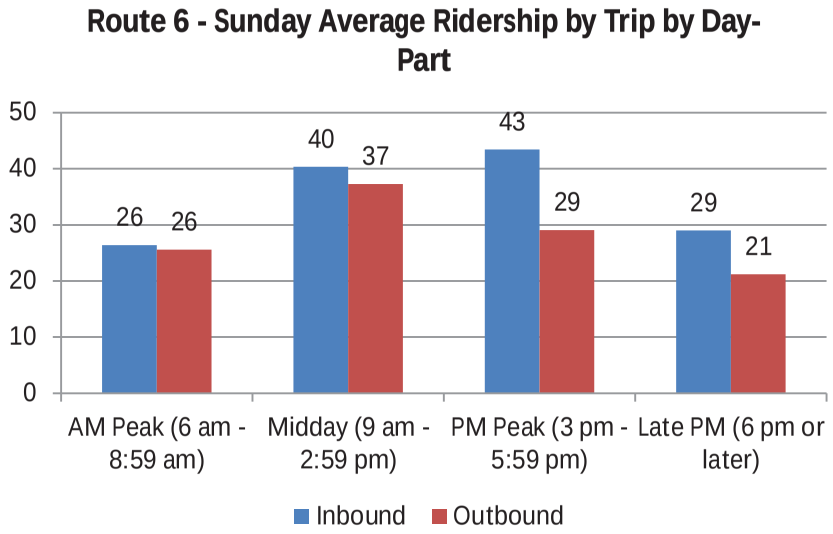

Route 6 - Inbound - Sunday Average Ridership by Trip
90
80
70
60
50
40
30
20
10
0
25
27
35
38
47
34
40
50
50
37
37
55
43
47
27
37
7:12 AM
8:01 AM
9:01 AM
10:01 AM
11:01 AM
11:31 AM
12:01 PM
1:01 PM
2:01 PM
2:31 PM
3:01 PM
4:01 PM
4:31 PM
5:31 PM
6:01 PM
7:01 PM

Exhibit 3.6.2 Route 6 Average Ridership by Trip by Day-Part







Average ridership (boardings) by segment

On weekdays, the outbound service sees its greatest boardings within route segments between McBean Pkwy/Avenida Navarre (Henry Mayo Newhall Memorial Hospital) and Canyon Country. The route segment between Soledad Canyon/Sierra Highway and Shadow Pines Blvd/Grandifloras Rd has the highest number of outbound boardings, followed by the Soledad Canyon Rd/Whites Canyon Rd to Soledad Canyon Rd/Sierra Highway route segment. The inbound service sees its greatest number of boardings within two route segments: MRTC to Soledad Canyon Rd/Bouquet Canyon Rd and Newhall Metrolink Station to McBean Pkwy/Avenida Navarre.

On Saturday and Sunday, the outbound service see its highest number of boardings in the Soledad Canyon/Sierra Highway to Shadow Pines Blvd/Grandifloras Rd and Soledad Canyon Rd/Bouquet Canyon Rd to Soledad Canyon Rd/Whites Canyon Rd route segments. The inbound service has its highest number of boardings in the MRTC to Soledad Canyon Rd/Bouquet Canyon Rd route segment.

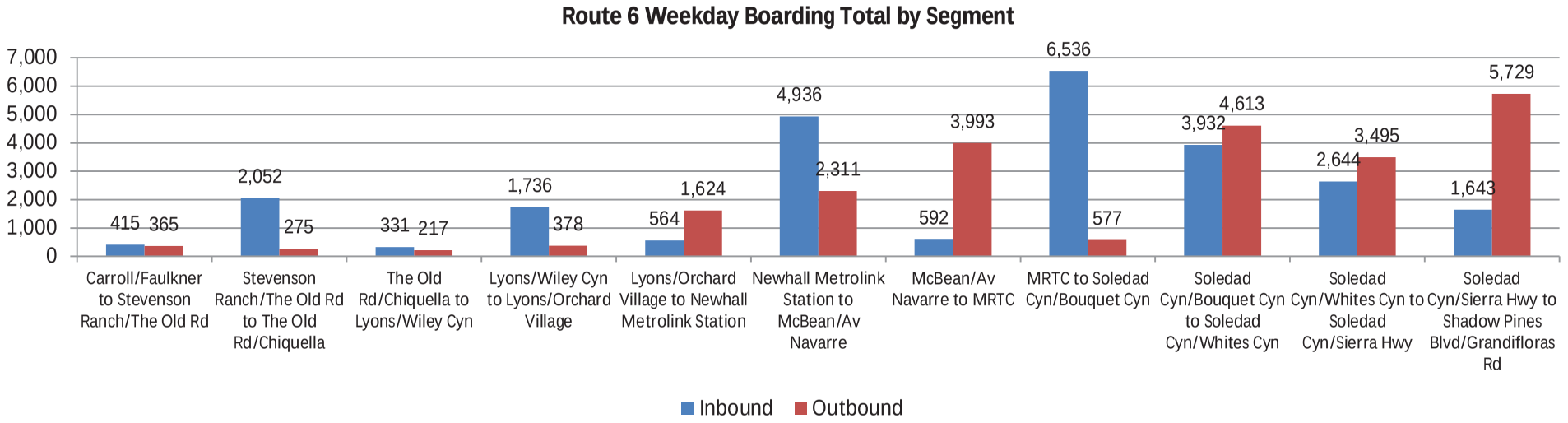
Average boarding and alighting by stop

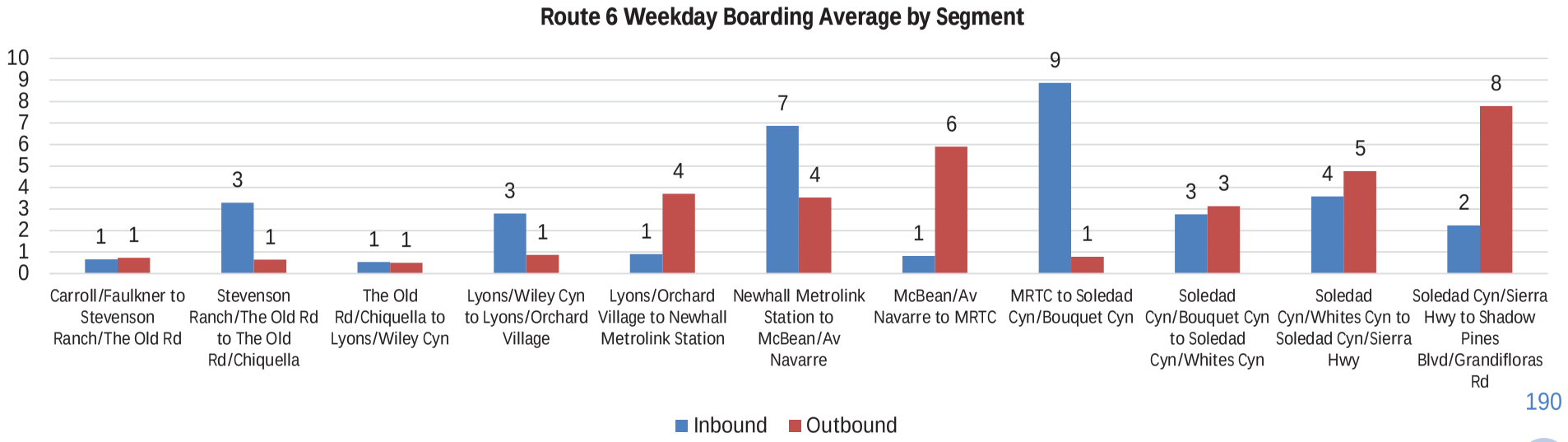
Beginning on page 11, bubble maps indicate the relative level of activity at each Route 6 bus stop, both inbound and outbound.

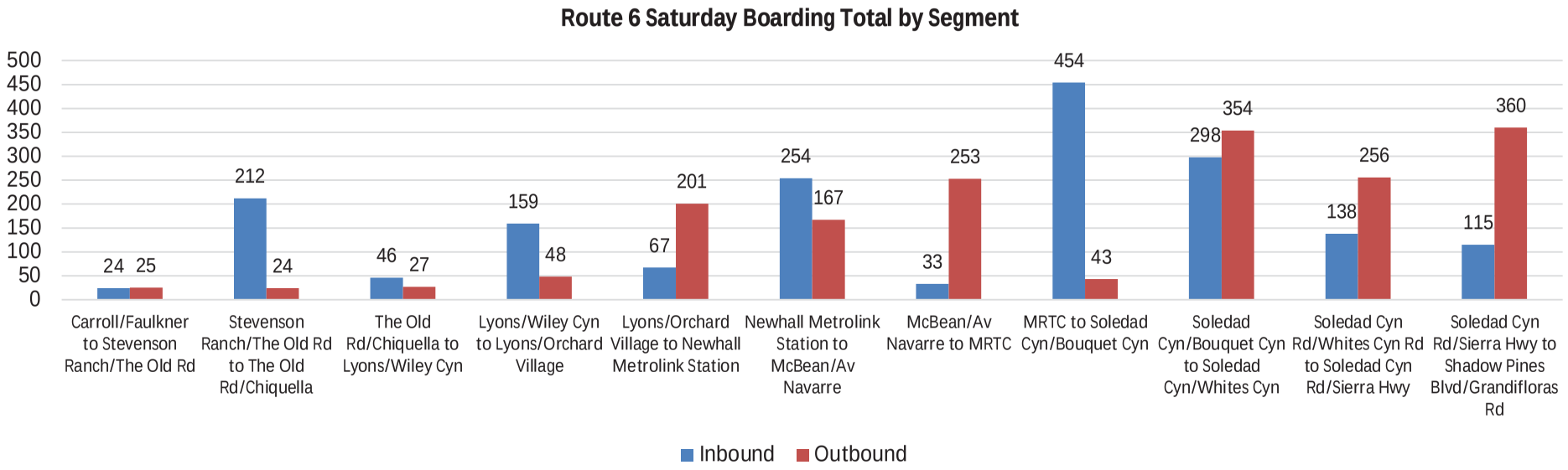
On weekdays, the highest level of activity on the outbound service is at Soledad Canyon Rd/Whites Canyon Rd, Soledad Canyon Rd/Sierra Highway, and the MRTC. On the inbound service, it is at these locations as well as the Newhall Metrolink Station and The Old Rd/Constitution Ave. On Saturday, the highest level of activity in both directions is at Soledad Canyon Rd/Whites Canyon Rd, Soledad Canyon Rd/Sierra Highway, and the MRTC.

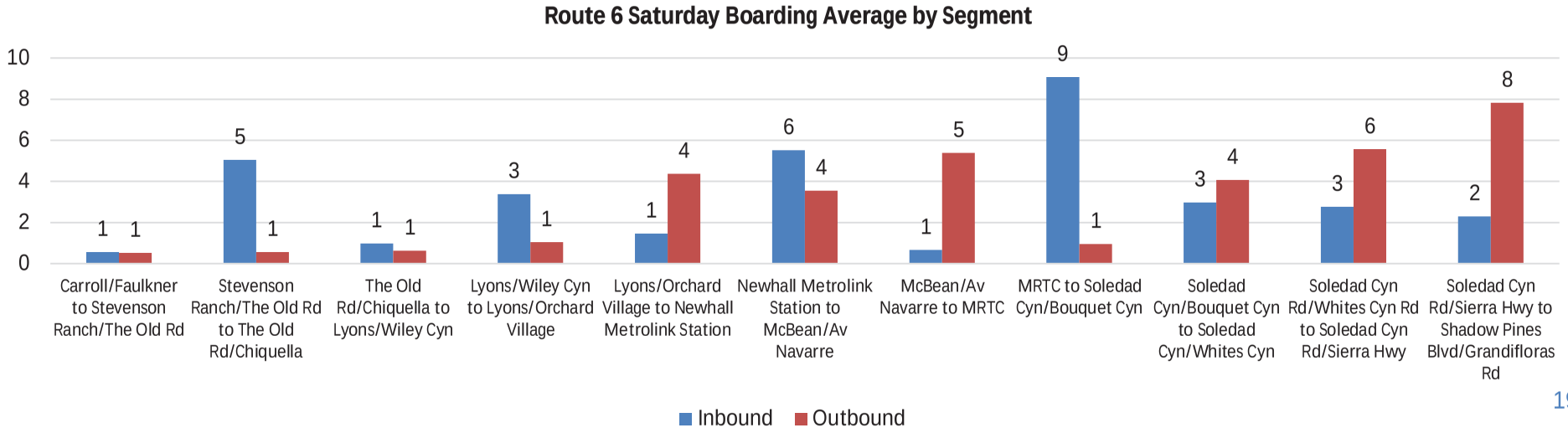
On Sunday, the outbound stops with the greatest activity are Soledad Canyon Rd/Whites Canyon Rd, the MRTC, and the Newhall Metrolink Station. For the inbound service, they are Soledad Canyon Rd/Camp Plenty Rd, Soledad Canyon Rd/Sierra Highway, Soledad Canyon Rd/Kenroy Ave, the MRTC, Newhall Ave/15th St, the Newhall Metrolink Station, and The Old Rd/Constitution Ave.

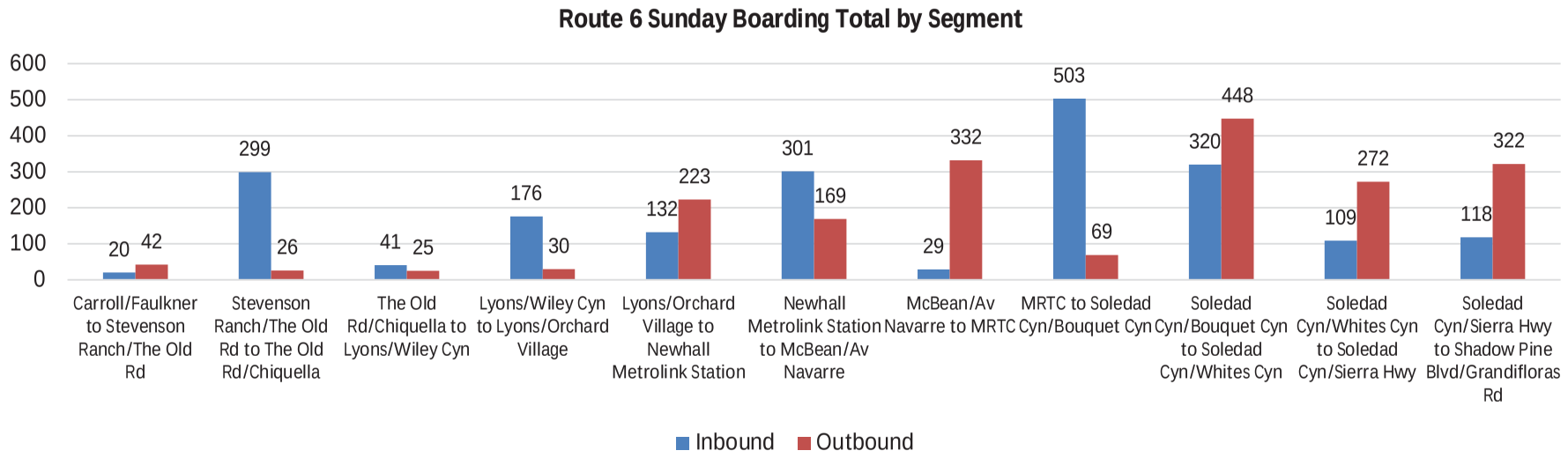
Exhibit 3.6.3 Route 6 Total and Average Boarding by Segment






Route 6 Saturday Boarding Total by Segment
500
450
400
350
300
250
200
150
100
50
0
24 25
212 24
46 27
159 48
67 201
254 167
33 253
454 43
298 354
138 256
115 360
Carroll/Faulkner to Stevenson Ranch/The Old Rd
Stevenson Ranch/The Old Rd to The Old Rd/Chiquella
The Old Rd/Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/Orchard Village
Lyons/Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soledad Cyn/Bouquet Cyn to Soledad Cyn/Whites Cyn
Soledad Cyn Rd/Whites Cyn Rd to Soledad Cyn Rd/Sierra Hwy
Soledad Cyn Rd/Sierra Hwy to Shadow Pines Blvd/Grandifloras Rd
Inbound
Outbound


Route 6 Saturday Boarding Average by Segment
10
8
6
4
2
0
1 1
5 1
1 1
3 1
1 4
6 4
1 5
9 1
3 4
3 6
2 8
Carroll/Faulkner to Stevenson Ranch/The Old Rd
Stevenson Ranch/The Old Rd to The Old Rd/Chiquella
The Old Rd/Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/Orchard Village
Lyons/Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soledad Cyn/Bouquet Cyn to Soledad Cyn/Whites Cyn
Soledad Cyn Rd/Whites Cyn Rd to Soledad Cyn Rd/Sierra Hwy
Soledad Cyn Rd/Sierra Hwy to Shadow Pines Blvd/Grandifloras Rd
Inbound
Outbound


Route 6 Sunday Boarding Total by Segment
600
500
400
300
200
100
0
20 42
299 26
41 25
176 30
132 223
301 169
29 332
503 69
320 448
109 272
118 322
Carroll/Faulkner to Stevenson Ranch/The Old Rd
Stevenson Ranch/The Old Rd to The Old Rd/Chiquella
The Old Rd/Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/Orchard Village
Lyons/Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soledad Cyn/Bouquet Cyn to Soledad Cyn/Whites Cyn
Soledad Cyn/Whites Cyn to Soledad Cyn/Sierra Hwy
Soledad Cyn/Sierra Hwy to Shadow Pine Blvd/Grandifloras Rd
Inbound
Outbound

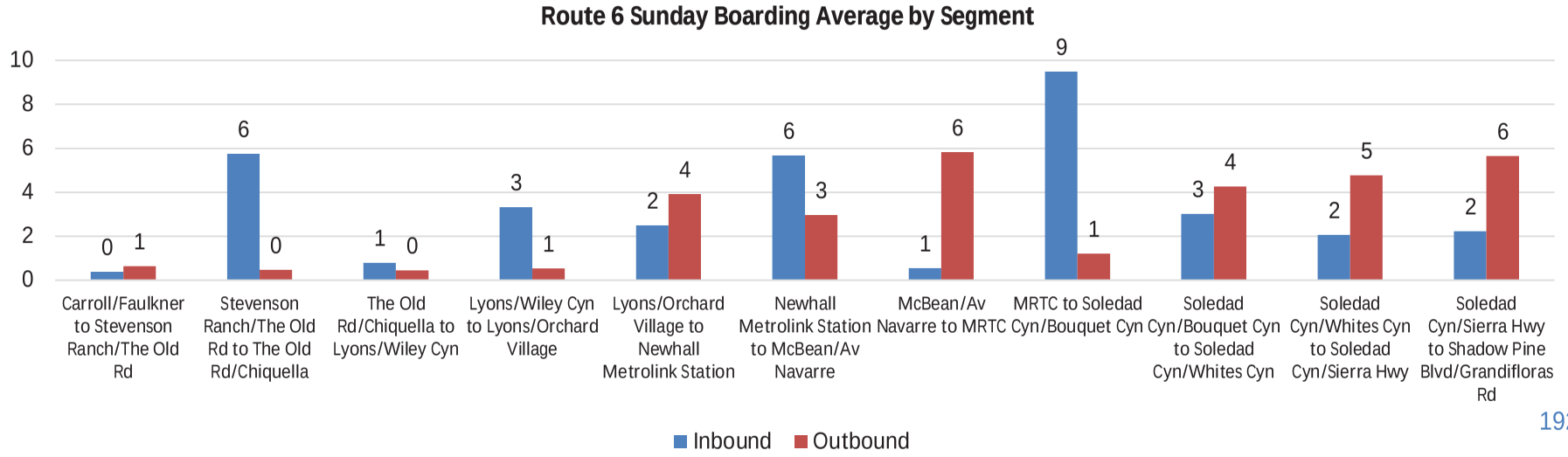
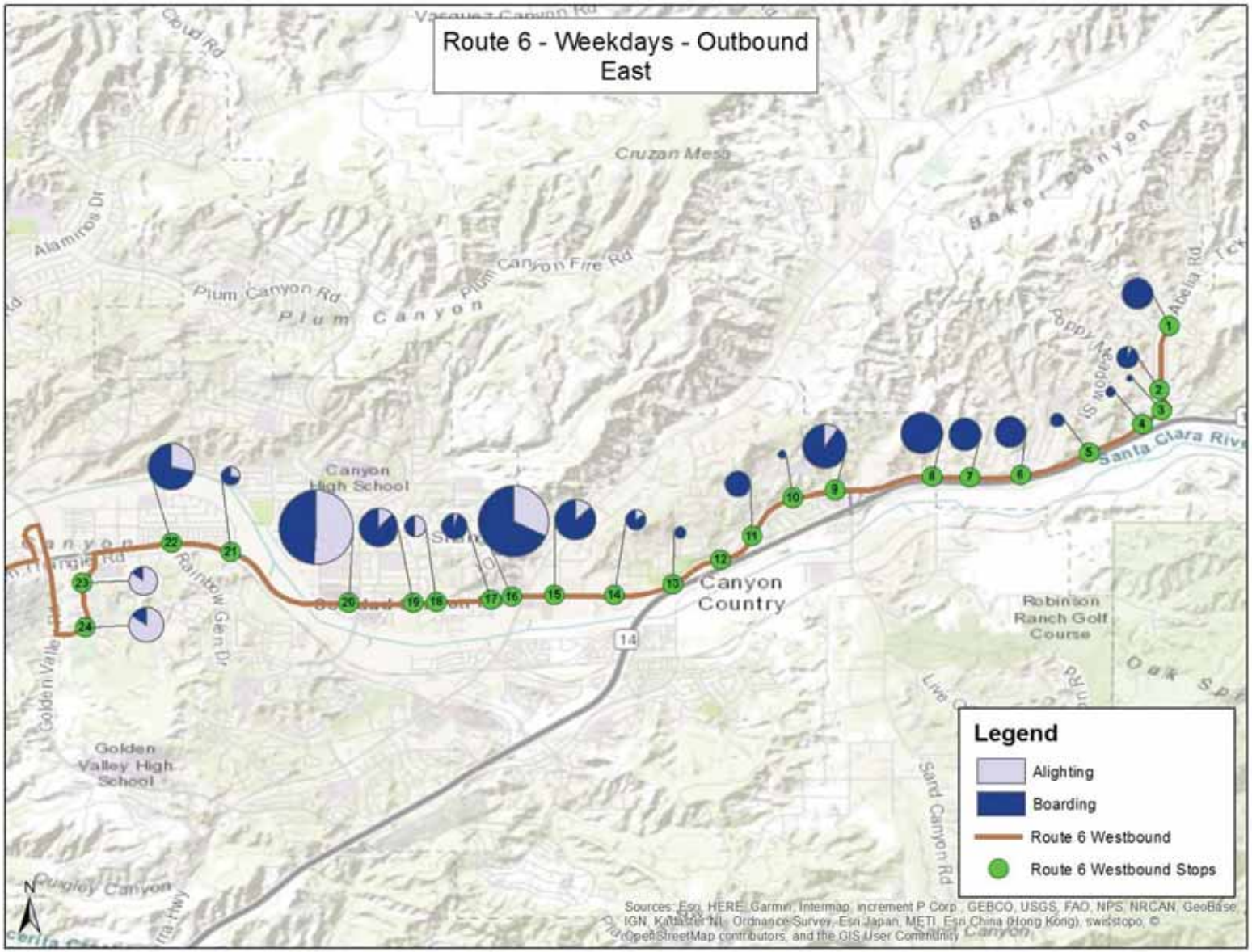
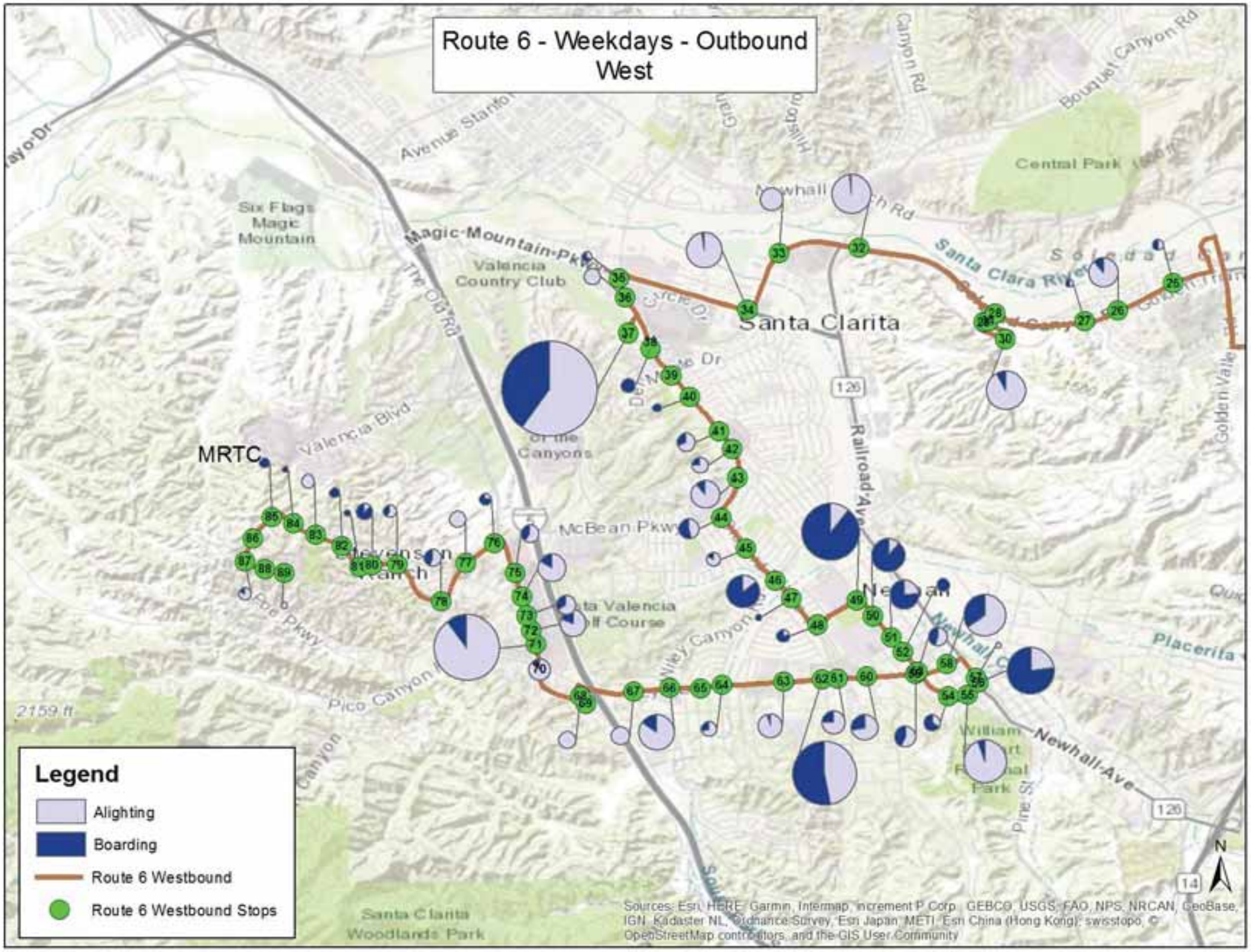
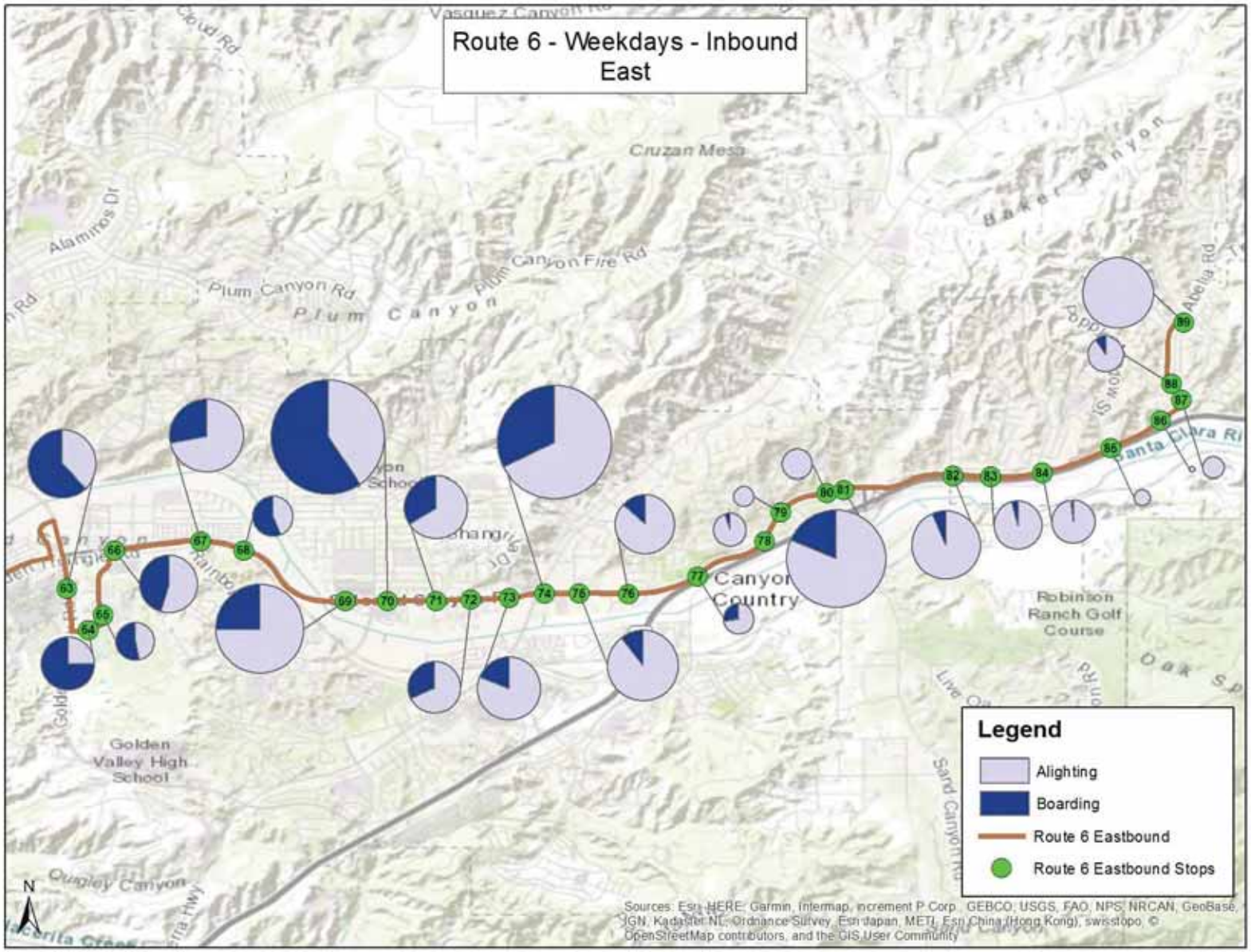
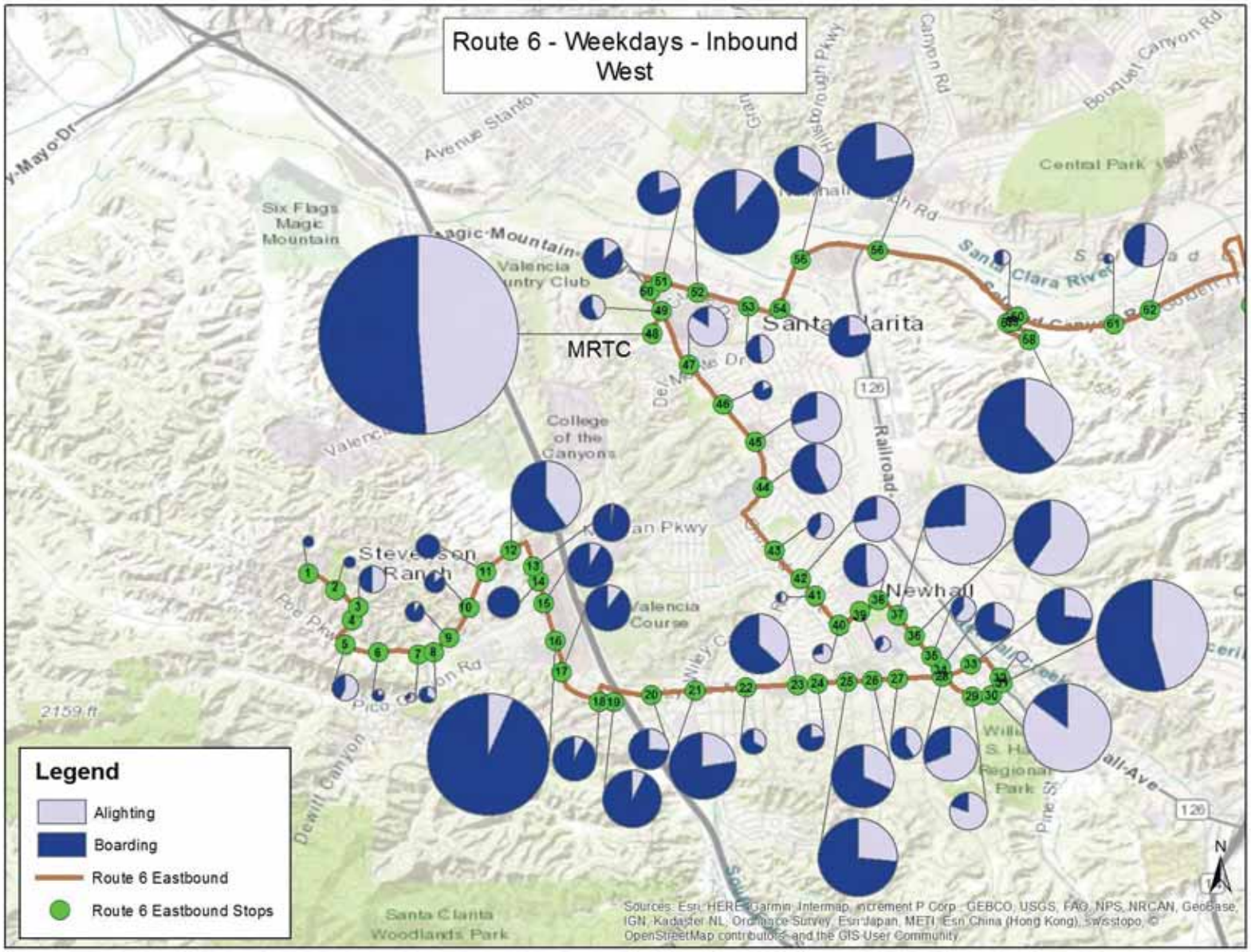

Route 6 Sunday Boarding Average by Segment
10
8
6
4
2
0
0 1
6 0
1 0
3 1
2 4
6 3
1 6
9 1
3 4
2 5
2 6
Carroll/Faulkner to Stevenson Ranch/The Old Rd
Stevenson Ranch/The Old Rd to The Old Rd/Chiquella
The Old Rd/Chiquella to Lyons/Wiley Cyn
Lyons/Wiley Cyn to Lyons/Orchard Village
Lyons/Orchard Village to Newhall Metrolink Station
Newhall Metrolink Station to McBean/Av Navarre
McBean/Av Navarre to MRTC
MRTC to Soledad Cyn/Bouquet Cyn
Soledad Cyn/Bouquet Cyn to Soledad Cyn/Whites Cyn
Soledad Cyn/Whites Cyn to Soledad Cyn/Sierra Hwy
Soledad Cyn/Sierra Hwy to Shadow Pine Blvd/Grandifloras Rd
Inbound
Outbound

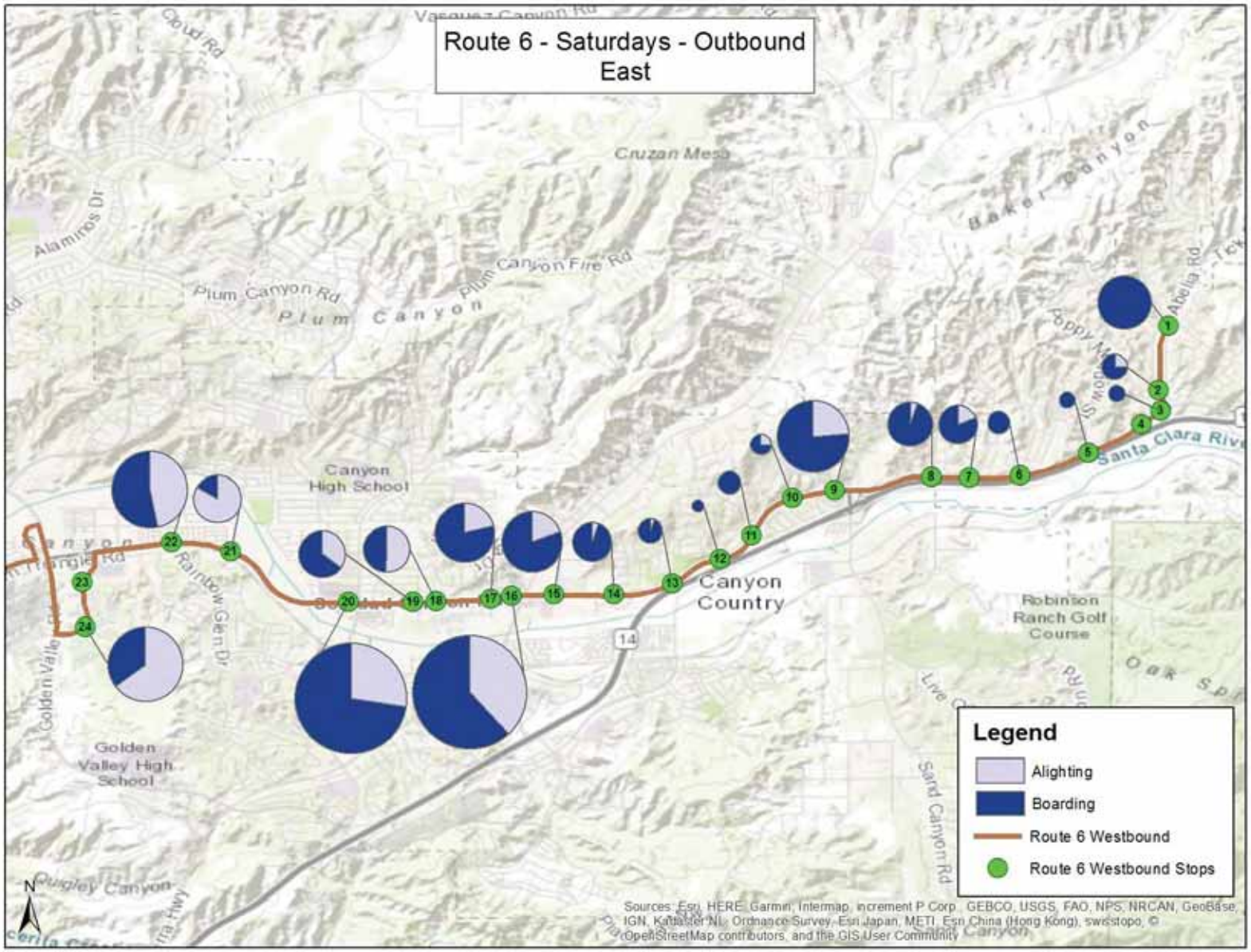
Exhibit 3.6.4 Route 6 Boarding and Alighting Maps

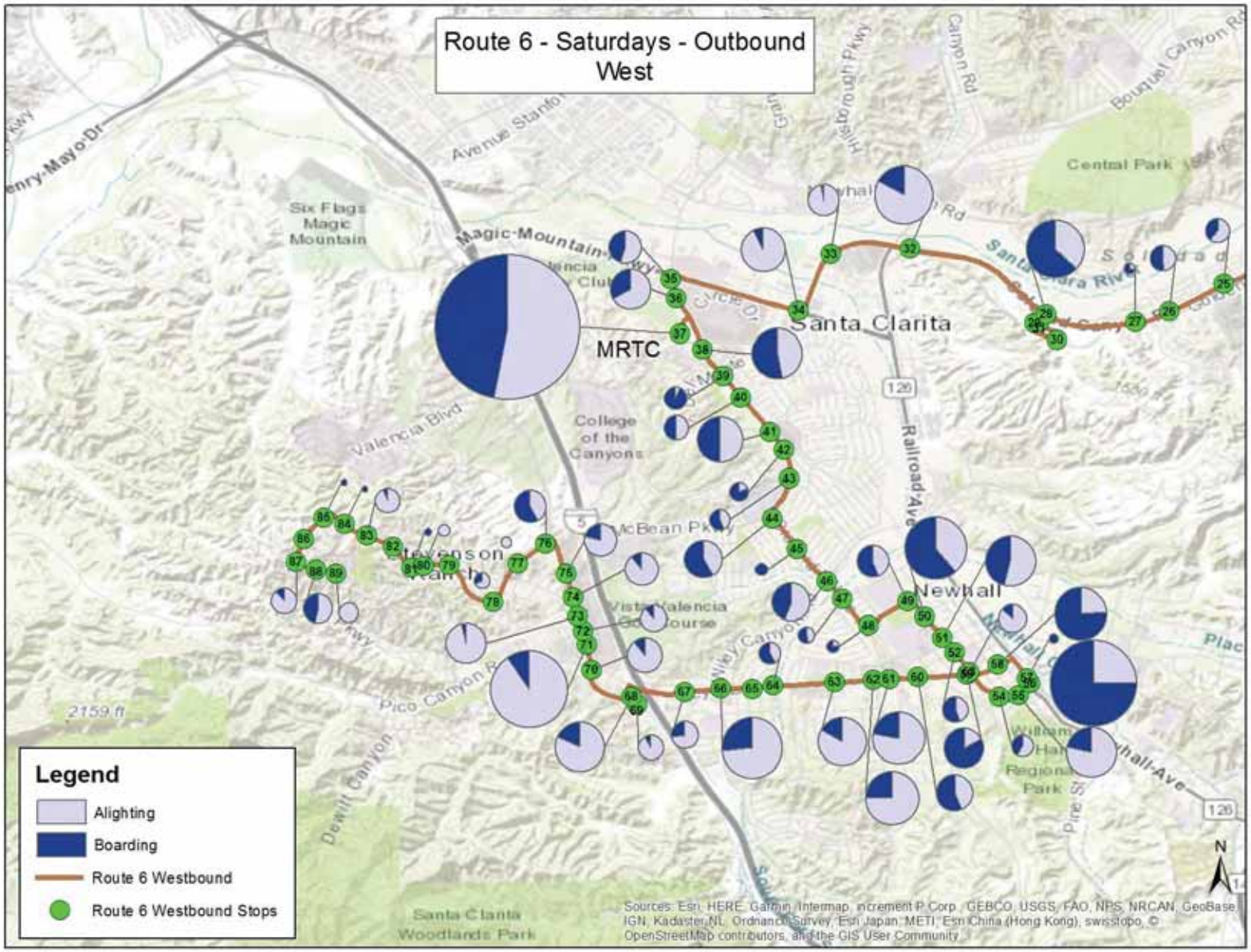


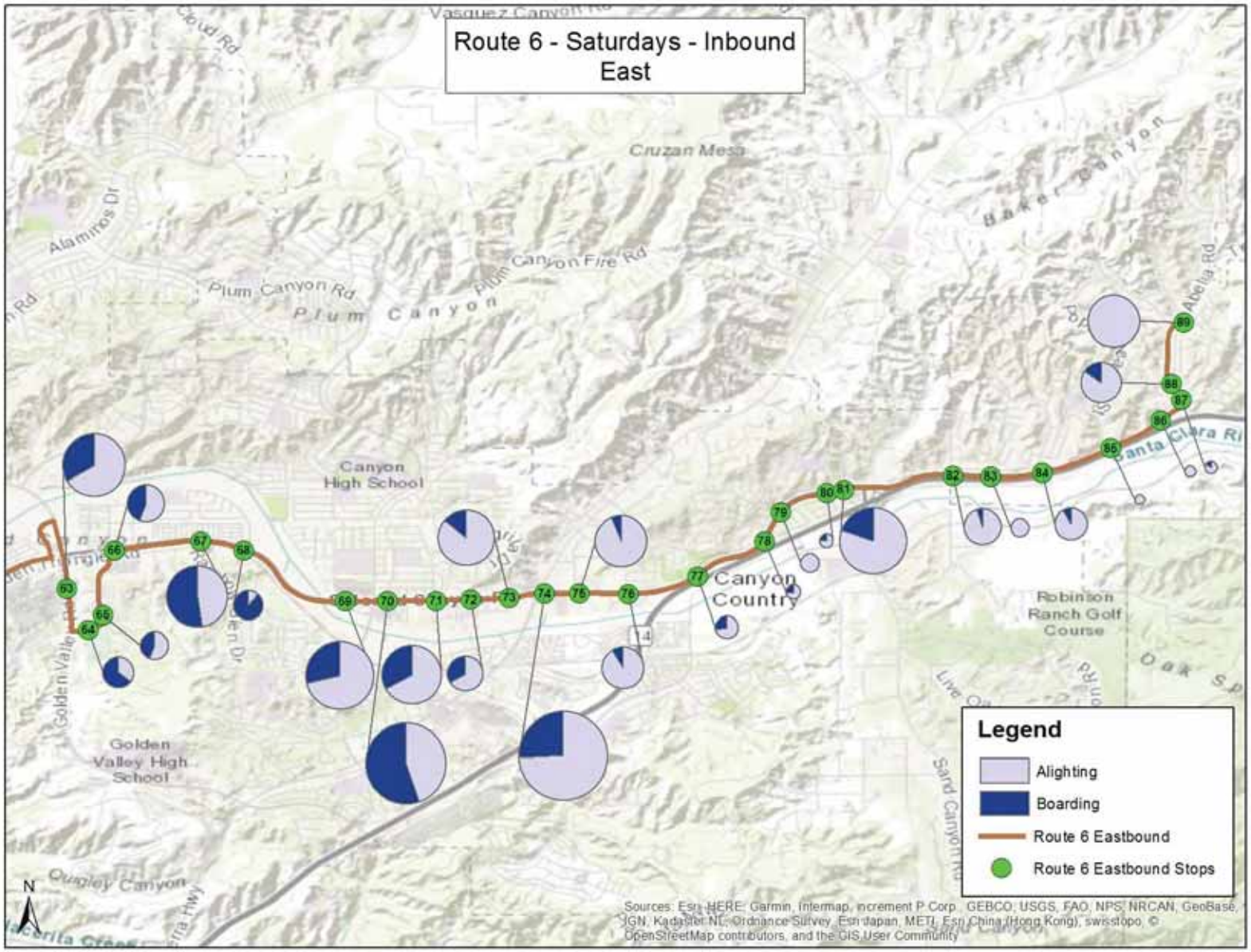

Route 6 - Weekdays - Outbound West
Legend
Alighting
Boarding
Route 6 Westbound
Route 6 Westbound Stops
MRTC
Santa Clarita
Railroad Ave
Magic Mountain Pkwy
McBean Pkwy
Valencia Blvd
Newhall Ave
Santa Clara River
Central Park
Six Flags Magic Mountain
Valencia Country Club
Santa Clarita Woodlands Park
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

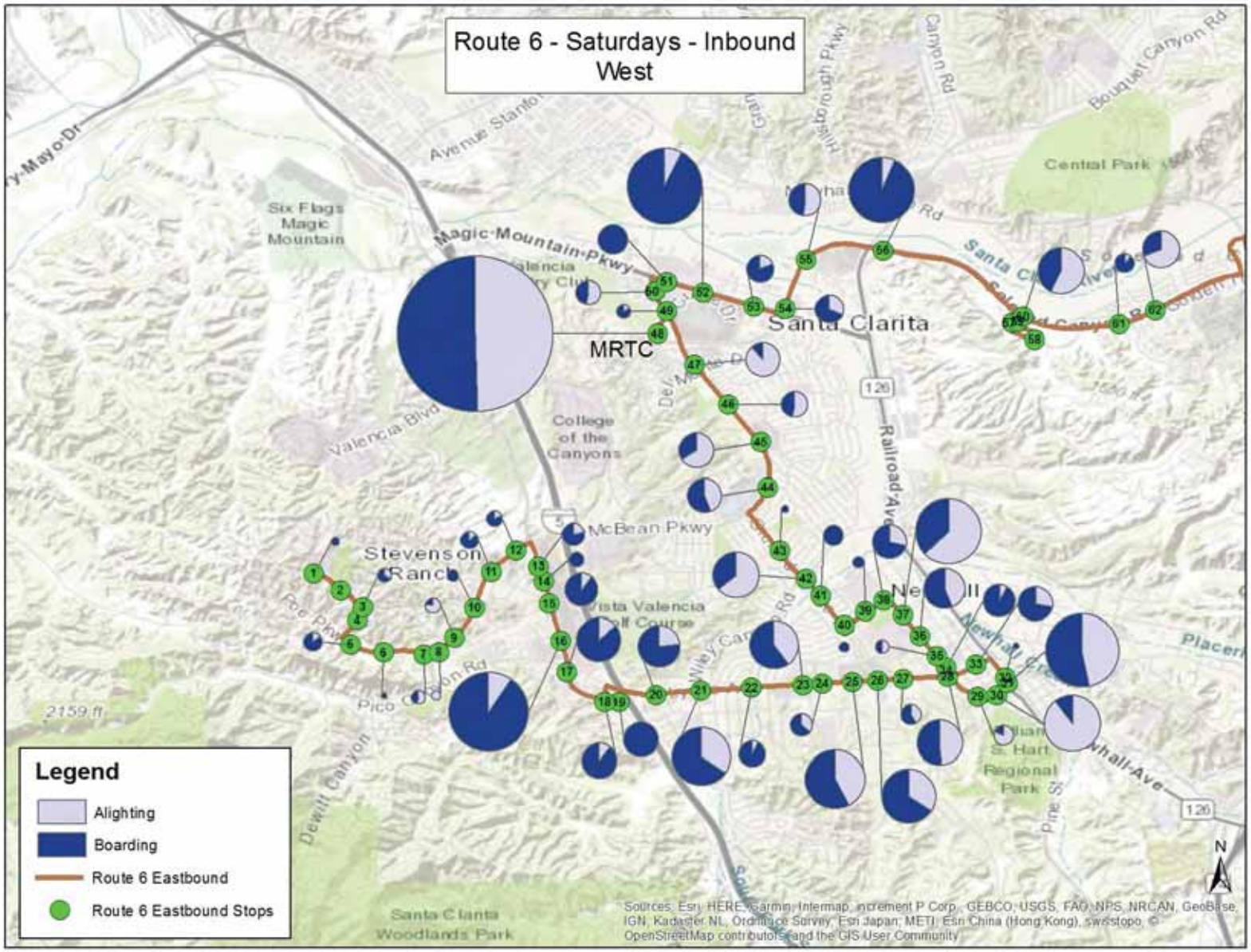

Route 6 - Weekdays - Inbound
East
Cruzan Mesa
Plum Canyon Rd
Plum Canyon
Plum Canyon Fire Rd
Alamitos Dr
Baker Canyon
Abelia Rd
Canyon Country
Robinson Ranch Golf Course
Golden Valley High School
Dugway Canyon
Sand Canyon Rd
Legend
Alighting
Boarding
Route 6 Eastbound
Route 6 Eastbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

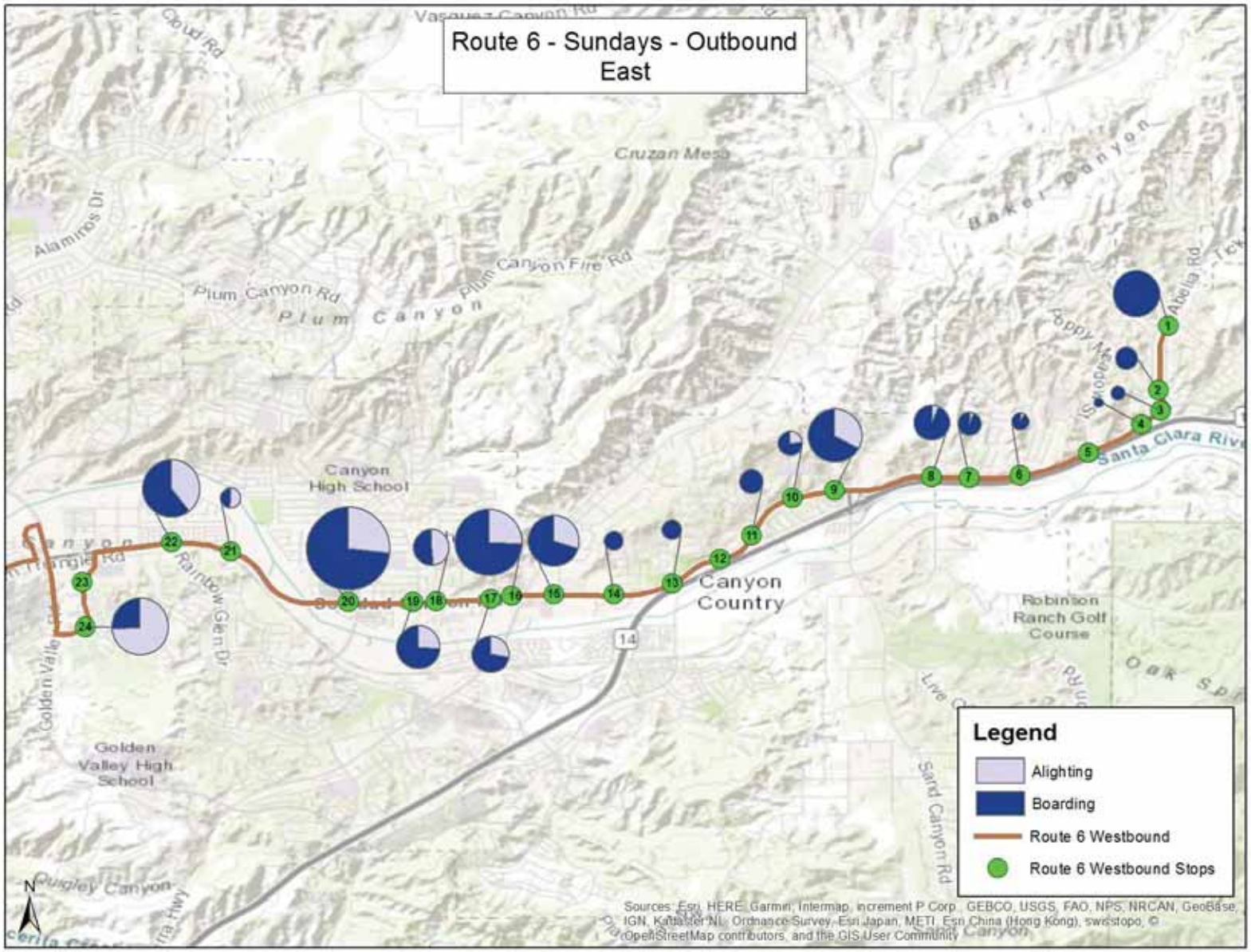

Route 6 - Weekdays - Inbound
West
MRTC
Santa Clarita
Newhall
Six Flags Magic Mountain
College of the Canyons
Valencia Course
Central Park
Bouquet Canyon Rd
Railroad
Legend
Alighting
Boarding
Route 6 Eastbound
Route 6 Eastbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, © OpenStreetMap contributors, and the GIS User Community

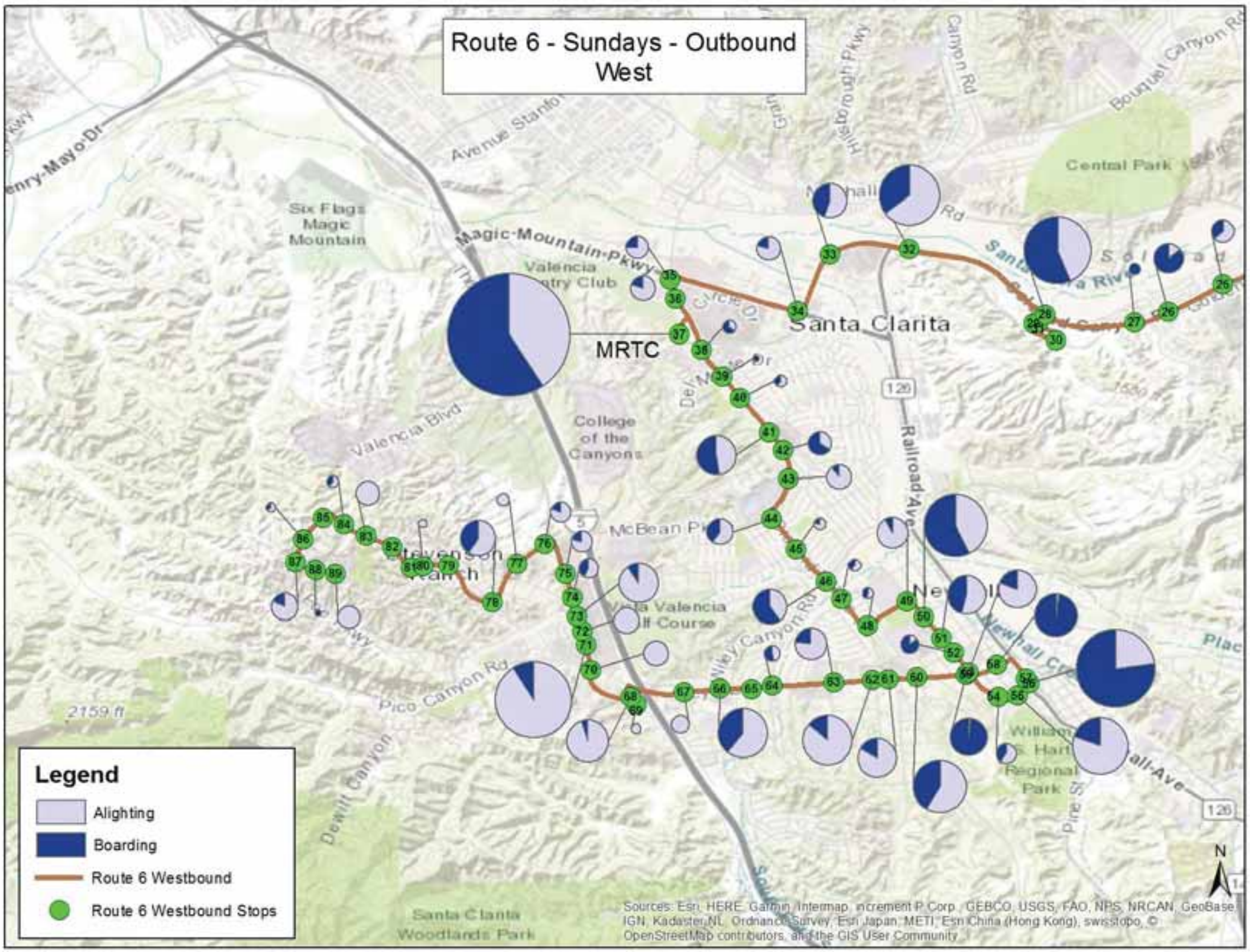

Route 6 - Saturdays - Outbound
East
Cruzan Mesa
Plum Canyon Rd
Plum Canyon
Plum Canyon Fire Rd
Alamitos Dr
Baker Canyon
Abelia Rd
Poppy Meadow Dr
Santa Clara River
Canyon
High School
Canyon
Country
Robinson
Ranch Golf
Course
Golden
Valley High
School
Golden Valley Rd
Rainbow Glen Dr
Sand Canyon Rd
Rugley Canyon
14
Legend
Alighting
Boarding
Route 6 Westbound
Route 6 Westbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

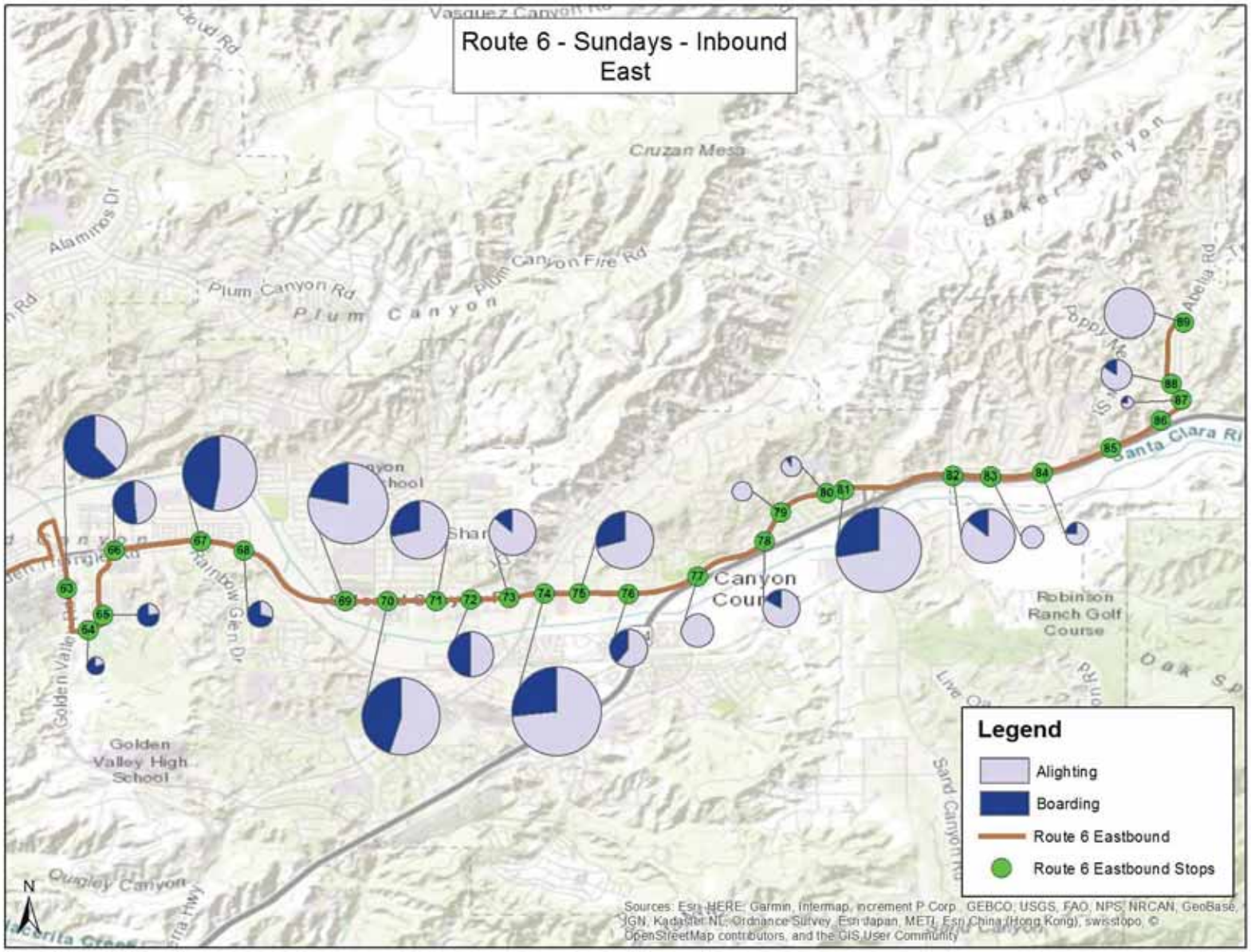

Route 6 - Saturdays - Outbound
West
MRTC
Santa Clarita
Newhall
Six Flags
Magic
Mountain
College
of the
Canyons
Central Park
Valencia Blvd
McBean Pkwy
Pico Canyon Rd
Railroad Ave
Bouquet Canyon Rd
Dewitt Canyon
Santa Clarita
Woodlands Park
2159 ft
Legend
Alighting
Boarding
Route 6 Westbound
Route 6 Westbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 6 - Saturdays - Inbound
East
Cruzan Mesa
Alamitos Dr
Plum Canyon Rd
Plum Canyon
Plum Canyon Fire Rd
Baker Canyon
Abelia Rd
Canyon
High School
Canyon
Country
Robinson
Ranch Golf
Course
Golden
Valley High
School
Dugway Canyon
Sand Canyon Rd
Legend
Alighting
Boarding
Route 6 Eastbound
Route 6 Eastbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 6 - Saturdays - Inbound
West
MRTC
Santa Clarita
Six Flags
Magic
Mountain
Magic Mountain Pkwy
Valencia Blvd
College
of the
Canyons
McBean Pkwy
Stevenson
Ranch
Vista Valencia
Golf Course
Central Park
Bouquet Canyon Rd
Railroad Ave
Newhall Ave
Whall Ave
S. Hart
Regional
Park
Pico Canyon Rd
Dewitt Canyon
Santa Clarita
Woodlands Park
2159 ft
126
Legend
Alighting
Boarding
Route 6 Eastbound
Route 6 Eastbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 6 - Sundays - Outbound
East
Cruzan Mesa
Plum Canyon Rd
Plum Canyon
Plum Canyon Fire Rd
Alamitos Dr
Cloud Rd
Baker Canyon
Abelia Rd
Poppy Meadow Dr
Santa Clara River
Canyon
High School
Canyon
Country
Rainbow Glen Dr
Golden Valley Rd
Golden
Valley High
School
Robinson
Ranch Golf
Course
Sand Canyon Rd
Rugley Canyon
14
Legend
Alighting
Boarding
Route 6 Westbound
Route 6 Westbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 6 - Sundays - Outbound West
Legend
Alighting
Boarding
Route 6 Westbound
Route 6 Westbound Stops
MRTC
Santa Clarita
Six Flags Magic Mountain
College of the Canyons
Central Park
Railroad Ave
Magic Mountain Pkwy
Valencia Blvd
McBean Pkwy
Pico Canyon Rd
Santa Clarita Woodlands Park
William S. Hart Regional Park
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 6 - Sundays - Inbound
East
Cruzan Mesa
Plum Canyon Rd
Plum Canyon Fire Rd
Plum Canyon
Alamitos Dr
Rainbow Glen Dr
Golden Valley High School
Canyon Country
Robinson Ranch Golf Course
Oak Spring Canyon Rd
Sand Canyon Rd
Dugway Canyon
Santa Clara River
Abelia Rd
Poppy Meadow
Legend
Alighting
Boarding
Route 6 Eastbound
Route 6 Eastbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

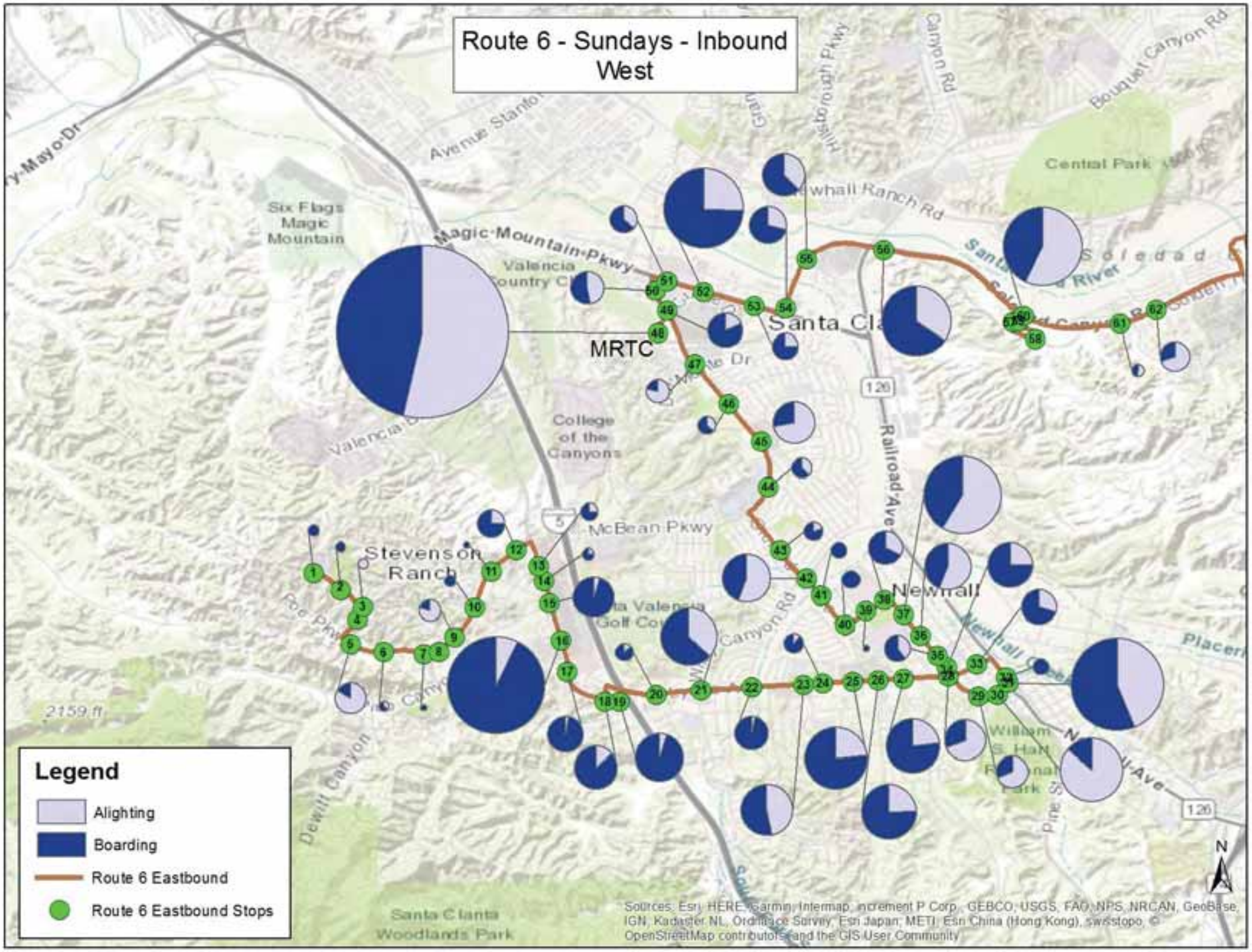

Route 6 - Sundays - Inbound West
Legend
Alighting
Boarding
Route 6 Eastbound
Route 6 Eastbound Stops
MRTC
Santa Cla
Newhall
Stevenson Ranch
College of the Canyons
Six Flags Magic Mountain
Magic Mountain Pkwy
Newhall Ranch Rd
Railroad Ave
McBean Pkwy
Central Park
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.6.5 Route 6 Stop Lists

Route 6 Outbound Stop List	
Stop Number	Stop Name
1	Shadow Pines Blvd & Grandifloras Rd
2	Shadow Pines Blvd & Begonias Ln
3	Soledad Canyon Rd & Shadow Pines Blvd
4	Soledad Canyon Rd & Raquel Ln
5	Soledad Canyon Rd & Poppy Meadow St
6	Soledad Canyon Rd & Flowerpark Dr
7	Soledad Canyon Rd & Rue Entree
8	Soledad Canyon Rd & Oak Spring Canyon Rd
9	Soledad Canyon Rd & Kenroy Ave
10	Soledad Canyon Rd & Gailxy Ave
11	Soledad Canyon Rd & Anne Freda St
12	Soledad Canyon Rd & Deep Creek Dr
13	Soledad Canyon Rd & Canyon Country Prk
14	Soledad Canyon Rd & Galeton Rd
15	Soledad Canyon Rd & Solamint Rd
16	Soledad Canyon Rd & Sierra Hwy
17	Soledad Canyon Rd & Shangrila Dr
18	Soledad Canyon Rd & Homyr Pl
19	Soledad Canyon Rd & Crossglade Ave
20	Soledad Canyon Rd & Whites Canyon Rd
21	Soledad Canyon Rd & Langside Ave
22	Soledad Canyon Rd & Rainbow Gln Dr
23	Ruether Ave & Golden Triangle Rd
24	Centre Point Pky & Ruether Ave
25	Soledad Canyon Rd & Wishbone Wy
26	Soledad Canyon Rd & Golden Oak Rd
27	Soledad Canyon Rd & Prima Way
28	Soledad Canyon Rd & Commuter Wy
29	Commuter Wy & Soledad Canyon Rd
30	Santa Clarita Metrolink
31	Commuter Wy & Soledad Canyon Rd
32	Soledad Canyon Rd & Bouquet Canyon Rd
33	Valencia Blvd & Cinema Dr
34	Magic Mountain Pky & Valencia Blvd
35	McBean Pky & Magic Mountain Pky
36	McBean Pky & Town Center Dr
37	McBean MRTC
38	McBean Pky & Valencia Blvd
39	McBean Pky & Del Monte Dr
40	McBean Pky & Gamble House Ct
41	McBean Pky & Arroyo Prk Dr
42	McBean Pky & Arroyo Prk Dr
43	McBean Pky
44	Orchard Village Rd & McBean Pky
45	Orchard Village Rd & Mill Valley Rd

Route 6 Outbound Stop List	
Stop Number	Stop Name
46	Orchard Village Rd & Wiley Canyon Rd
47	Orchard Village Rd & Avenida Ronada
48	Dalbey Dr & Avenida Balita
49	Dalbey Dr & Newhall Ave
50	Newhall Ave & 15th St
51	Newhall Ave & 14th St
52	Newhall Ave & 13th St
53	Newhall Ave & 11th St
54	Newhall Ave & 8th St
55	Market St & Walnut St
56	Railroad Ave & Market St
57	Railroad Ave & 8th St
58	Lyons Ave & Main St
59	Lyons Ave & Newhall Ave
60	Lyons Ave & Wayman St
61	Lyons Ave & Orchard Village Rd
62	Lyons Ave & Apple St
63	Lyons Ave & Peachland Ave
64	Lyons Ave & Avenida Entrana
65	Lyons Ave & De Wolfe Rd
66	Lyons Ave & Wiley Canyon Rd
67	Lyons Ave & Avenida Dorena
68	Chiquella Ln
69	The Old Rd & Chiquella Ln
70	The Old Rd & Pico Canyon Rd
71	The Old Rd & Constitution Ave
72	The Old Rd & Constitution Ave
73	The Old Rd & Constitution Ave
74	The Old Rd & Steinbeck Ave
75	The Old Rd & Steinbeck Ave
76	Stevenson Ranch Pky & The Old Rd
77	Stevenson Ranch Pky & Holmes Pl
78	Hemingway Ave & Stevenson Ranch Pky
79	Hemingway Ave & Anderson Ln
80	Hemingway Ave & London Pl
81	Kavenaugh Ln & Hemingway Ave
82	Kavenaugh Ln & Twain Pl
83	Kavenaugh Ln & Bates Pl
84	Kavenaugh Ln & Carroll Ln
85	Mallory Dr & Peacock Pl
86	Mallory Dr & Waycott Wy
87	Faulkner Dr & Burke Pl
88	Faulkner Dr & Forsythe Wy
89	Faulkner Dr & Thurber Wy

Route 6 Inbound Stop List	
Stop Number	Stop Name
1	Faulkner Dr & Thurber Wy
2	Faulkner Dr & Hood Wy
3	Faulkner Dr & Christie Ct
4	Hemingway Ave & Wilde Ave
5	Poe Pky & Franklin Ln
6	Poe Pky & Whitman St
7	Poe Pky & Keats Ln
8	Stevenson Ranch Pky
9	Stevenson Ranch Pky & Chisom Ln
10	Stevenson Ranch Pky & Hemingway Ave
11	Stevenson Ranch Pky & Steinbeck Ave
12	Stevenson Ranch Pky & The Old Rd
13	The Old Rd & Stevenson Ranch Pky
14	The Old Rd & Steinbeck Ave
15	The Old Rd & Steinbeck Ave
16	The Old Rd & Constitution Ave
17	The Old Rd & Pico Canyon Rd
18	The Old Rd & Sagecrest Cir
19	Chiquella Ln
20	Lyons Ave
21	Lyons Ave & Wiley Canyon Rd
22	Lyons Ave & Everett Dr
23	Lyons Ave & Peachland Ave
24	Lyons Ave & Avenida Rotella
25	Lyons Ave & Apple St
26	Lyons Ave & Valley St
27	Lyons Ave & Wayman St
28	Lyons Ave & Newhall Ave
29	Newhall Ave & 8th St
30	Market St & Walnut St
31	Railroad Ave & Market St
32	Railroad Ave & 8th St
33	Lyons Ave & Main St
34	Newhall Ave & 11th St
35	Newhall Ave & 13th St
36	Newhall Ave & 14th St
37	Newhall Ave & 15th St
38	Dalbey Dr & Newhall Ave
39	Dalbey Dr & Avenida Ignacio
40	Dalbey Dr & Orchard Village Rd
41	Orchard Village Rd & 16th St
42	Orchard Village Rd & Wiley Canyon Rd
43	Orchard Village Rd & Mill Valley Rd
44	McBean Pky & Avenida Navarre
45	McBean Pky & Arroyo Park Dr

Route 6 Inbound Stop List	
Stop Number	Stop Name
46	McBean Pky & Gamble House Ct
47	McBean Pky & Del Monte Dr
48	McBean MRTC
49	McBean Pky
50	McBean Pky & Town Center Dr
51	Magic Mountain Pky & Theater Dr
52	Magic Mountain Pky & Carousel Ln
53	Magic Mountain Pky & Citrus Dr
54	Valencia Blvd & Magic Mountain Pky
55	Valencia Blvd & Cinema Dr
56	Soledad Canyon Rd & Bouquet Canyon Rd
57	Commuter Wy & Soledad Canyon Rd
58	Santa Clarita Metrolink
59	Commuter Wy & Soledad Canyon Rd
60	Soledad Canyon Rd & Commuter Wy
61	Soledad Canyon Rd & Prima Way
62	Soledad Canyon Rd & Golden Oak Rd
63	Golden Valley Rd & McKeon Dr
64	Centre Point Pky & Golden Valley Rd
65	Ruether Ave & Centre Point Pky
66	Soledad Canyon Rd & Ruether Ave
67	Soledad Canyon Rd & Rainbow Gln Dr
68	Soledad Canyon Rd & Langside Ave
69	Soledad Canyon Rd & Camp Plenty Rd
70	Soledad Canyon Rd & Whites Cyn
71	Soledad Canyon Rd & Crossglade Ave
72	Soledad Canyon Rd & Luther Dr
73	Soledad Canyon Rd & Shangrila Dr
74	Soledad Canyon Rd & Sierra Hwy
75	Soledad Canyon Rd & Solamint Rd
76	Soledad Canyon Rd & River Cir
77	Soledad Canyon Rd & Canyon Country Prk
78	Soledad Canyon Rd & Anne Freda St
79	Soledad Canyon Rd & Miss Grace Dr
80	Soledad Canyon Rd & Solon Ave
81	Soledad Canyon Rd & Kenroy Ave
82	Soledad Canyon Rd & Oak Spring Canyon Rd
83	Soledad Canyon Rd & Rue Entree
84	Soledad Canyon Rd & Flowerpark Dr
85	Soledad Canyon Rd & Poppy Meadow St
86	Soledad Canyon Rd & Raquel Ln
87	Shadow Pines Blvd & Soledad Canyon Rd
88	Begonias Ln & Shadow Pines Blvd
89	Shadow Pines Blvd & Grandifloras Rd

Average load factor by trip

Both inbound and outbound trips on Route 6 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.48. Trips with the highest average peak loads for each day and direction are identified below.

Exhibit 3.6.6 Route 6 Trips with Highest Average Peak Loads

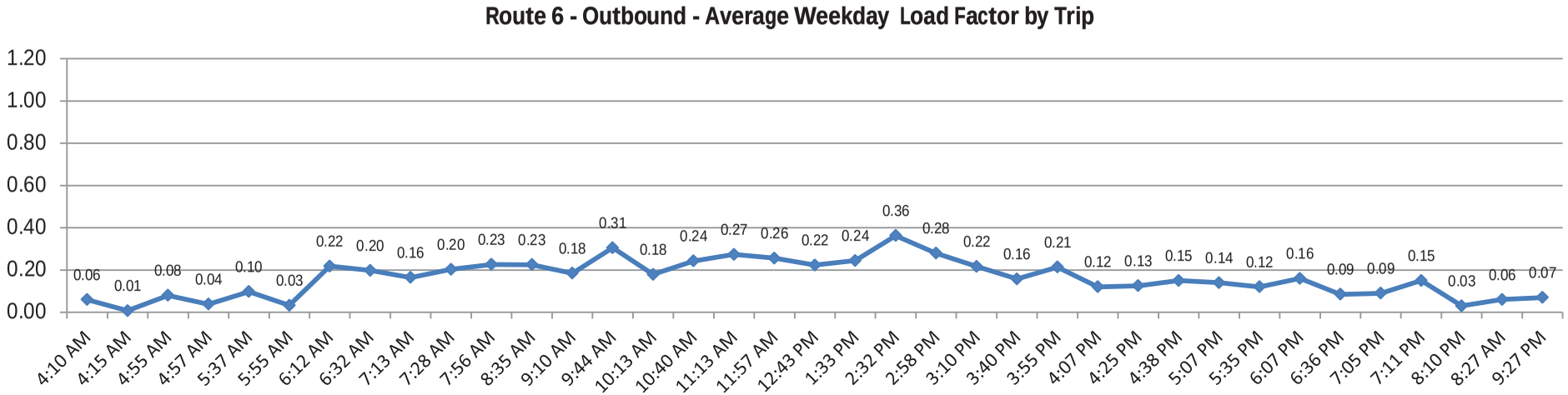
Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	2:32 p.m.	0.36
Weekday	Inbound	2:15 p.m.	0.48
Saturday	Outbound	10:35 a.m.	0.31
Saturday	Inbound	3:01 p.m.	0.28
Sunday	Outbound	7:05 a.m.	0.33
Sunday	Inbound	5:31 p.m.	0.26

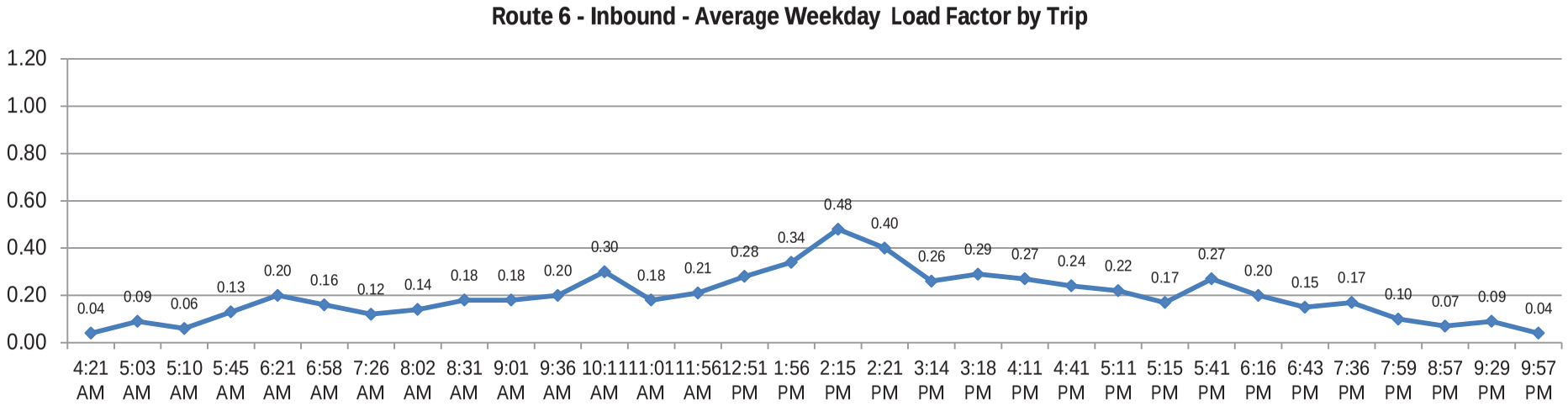
There were 17 individual trips which exhibited a load factor of at least 0.50, though none exceeded 0.70. Those trips are as follows:

Exhibit 3.6.7 Route 6 Trips with Load Factor at least 0.50

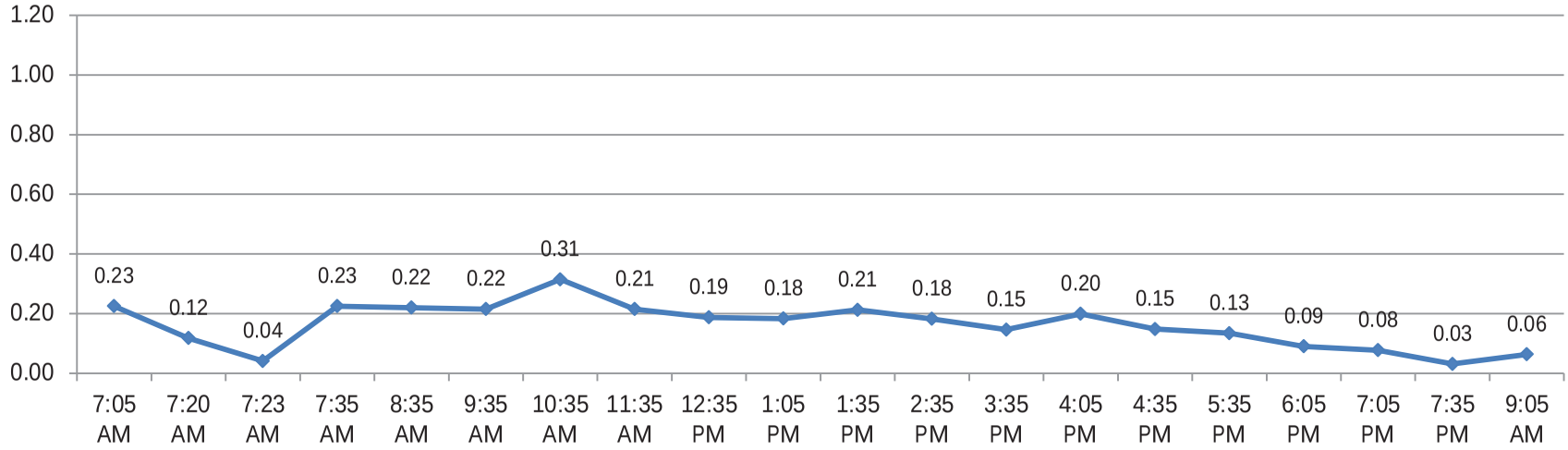
Date	Direction	Trip	Load factor
May 16	Inbound	2:15 p.m.	0.69
May 11	Inbound	2:15 p.m.	0.64
May 3	Outbound	2:32 p.m.	0.61
April 27	Inbound	2:15 p.m.	0.60
April 23	Inbound	2:21 p.m.	0.58
April 25	Inbound	2:21 p.m.	0.58
April 11	Inbound	2:15 p.m.	0.58
April 26	Outbound	2:32 p.m.	0.54
April 25	Inbound	2:15 p.m.	0.53
May 18	Inbound	2:15 p.m.	0.53
May 14	Inbound	2:15 p.m.	0.52
May 2	Inbound	2:15 p.m.	0.52
April 18	Inbound	2:21 p.m.	0.52
May 16	Inbound	2:21 p.m.	0.52
April 26	Inbound	2:15 p.m.	0.51
May 4	Inbound	5:41 p.m.	0.50
April 30	Inbound	2:21 p.m.	0.50

Exhibit 3.6.8 Route 6 Average Load Factor by Trip

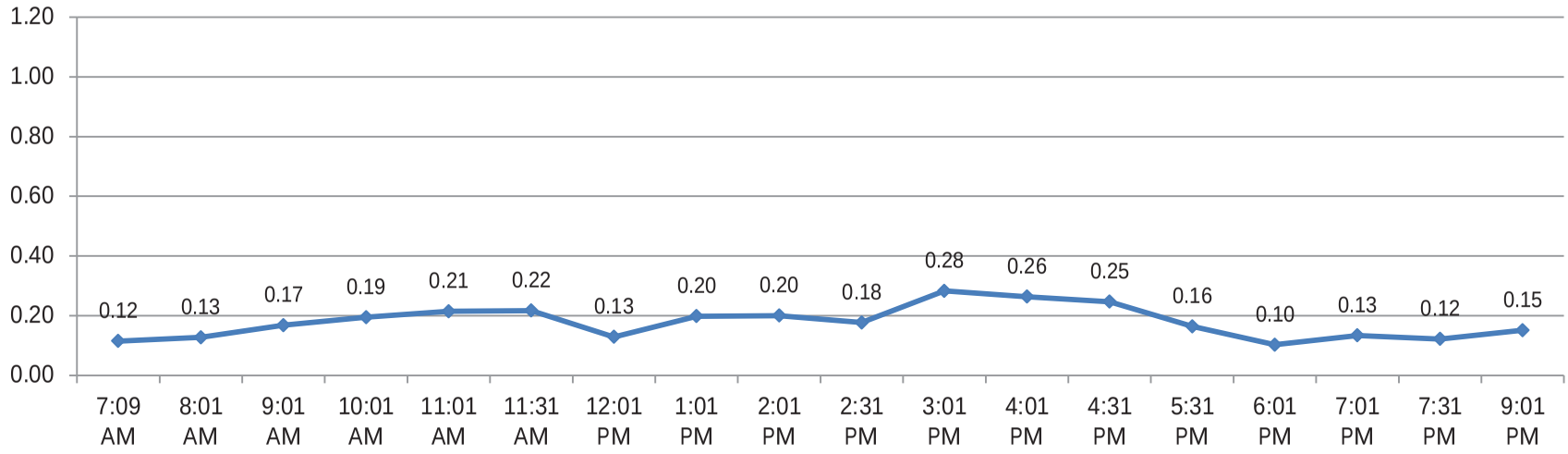




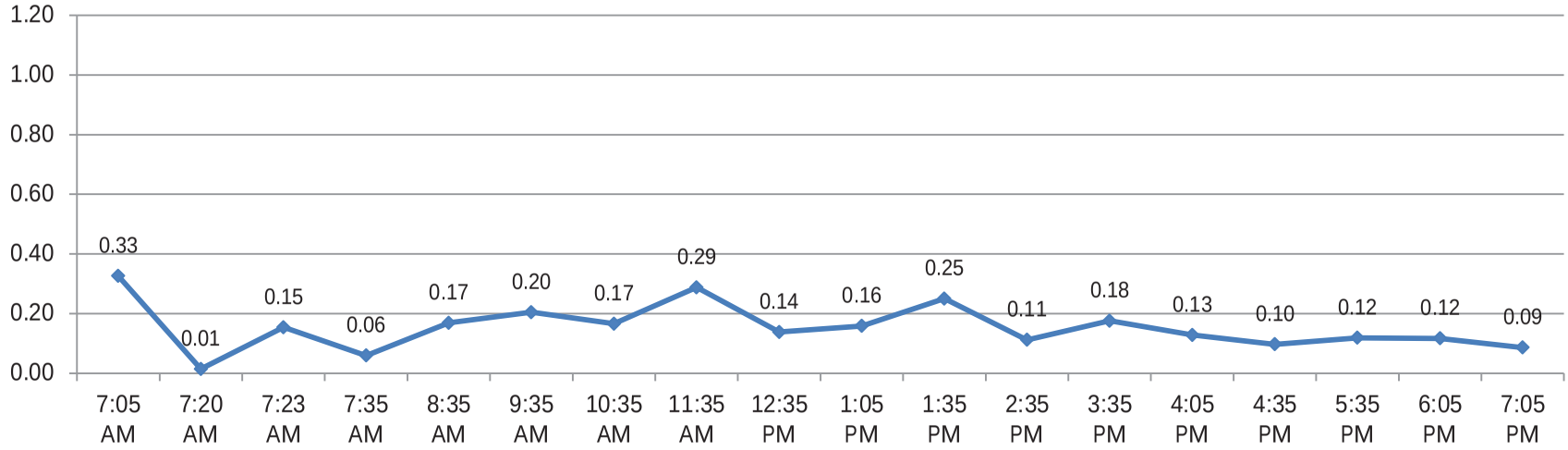
Route 6 - Outbound - Saturday Average Load Factor by Trip



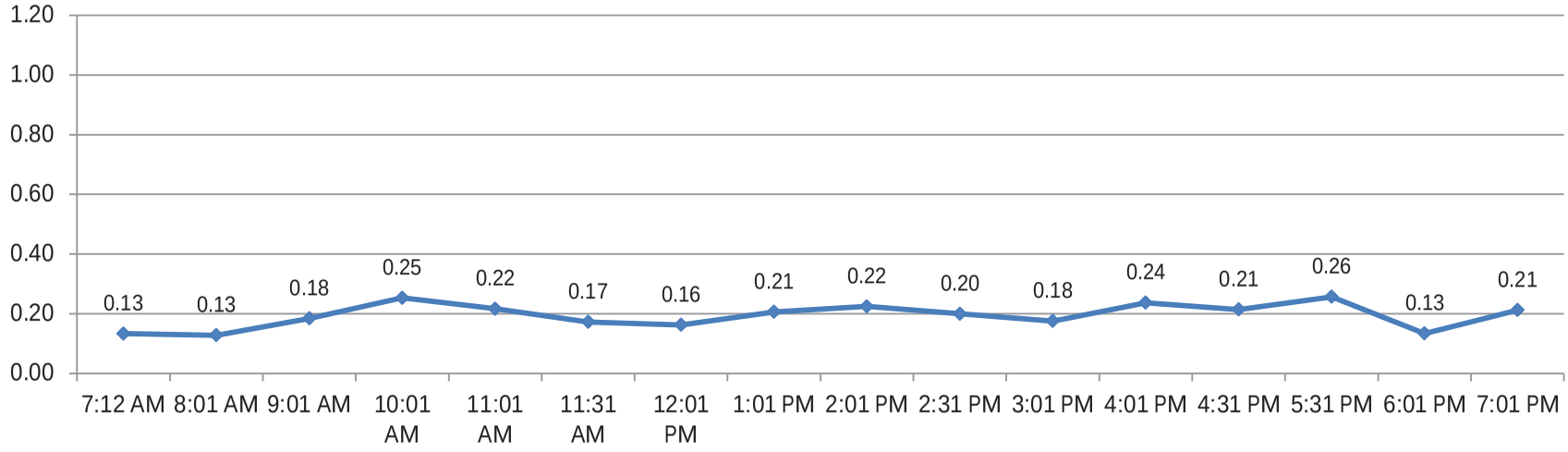
Route 6 - Inbound - Saturday Average Load Factor by Trip



Route 6 - Outbound - Sunday Average Load Factor by Trip



Route 6 - Inbound - Sunday Average Load Factor by Trip



Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

On weekdays, schedule adherence on the inbound service (85.9 percent) is higher than that on the outbound service (78.5 percent). Unlike several other routes, weekday schedule adherence is higher than on Saturday or Sunday. On Saturday, schedule adherence on the outbound service (62.7 percent) is higher than that on the inbound service (57.5 percent). On Sunday, schedule adherence on the outbound service (79.8 percent) is higher than that on the inbound service (67.9 percent). The primary challenge for all days and directions is late trips.

Schedule adherence by time-point

On weekdays, the outbound service saw its greatest schedule adherence at the MRTC (departures) (89.3 percent). The time-point with the lowest on-time performance was the Newhall Metrolink Station (62.9 percent). For the inbound service, schedule adherence was highest at the Santa Clarita Metrolink Station (100 percent) and lowest at Soledad Canyon Rd/Sierra Highway (80.6 percent).

On Saturday, the outbound service had the best schedule adherence at Shadow Pines Blvd/Grandifloras Rd (75.6 percent). On-time performance was lowest at Soledad Canyon Rd/Whites Canyon Rd (51.2 percent). For the inbound service, the MRTC had the highest schedule adherence for departures (82 percent), while 75.6 percent of trips at Shadow Pines Blvd/Grandifloras Rd were late. However, the five-minute dwell time at the end of the inbound route is apparently sufficient for recovery, as only 24.4 percent of outbound trips departed late.

On Sunday, Soledad Canyon Rd/Bouquet Canyon Rd had the highest schedule adherence (87.7 percent) on the outbound service. The Newhall Metrolink Station had the lowest on-time performance (70.2 percent). For the inbound service, departures from the MRTC again had the highest on-time performance (96.2 percent), while the Aquatic Center had the lowest (26.4 percent).

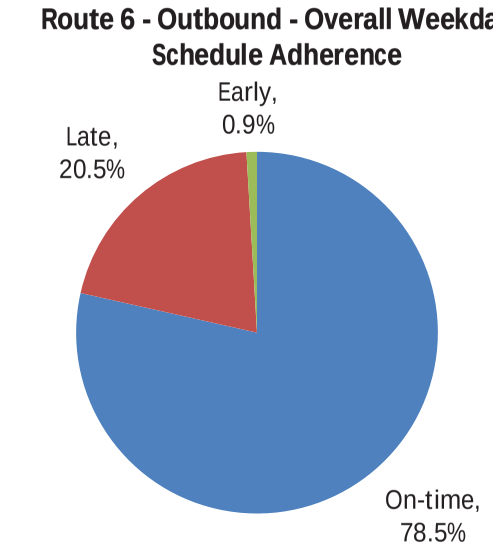
Schedule adherence by time of day

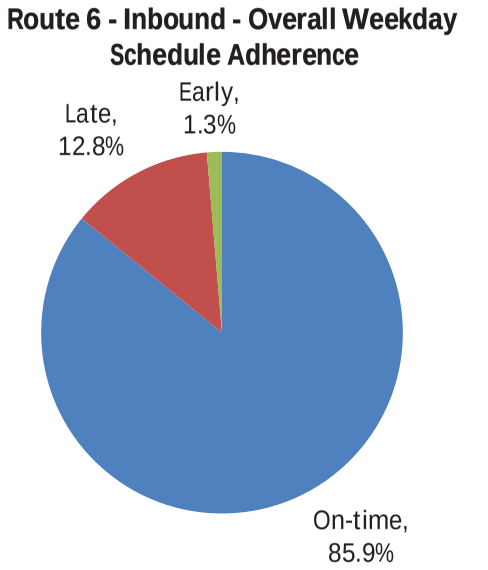
On weekdays, outbound schedule adherence is highest during the PM Peak period (94.5 percent) and lowest during the Mid-day day-part (71.2 percent). For the inbound service, the Early AM day-part has the highest schedule adherence (97.2 percent), while the PM Peak period has the lowest (77.3 percent).

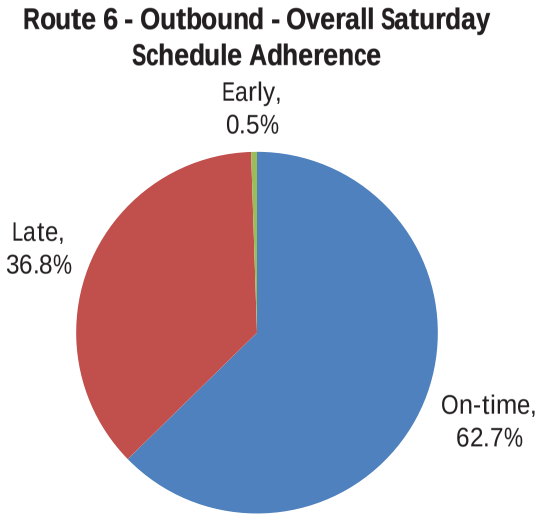
On Saturday, outbound schedule adherence is highest during the AM Peak period (96.9 percent) and lowest during the Mid-day day-part (46 percent). Inbound schedule adherence is also highest during the AM Peak period (91.5 percent) and lowest during the PM Peak day-part (40.5 percent).

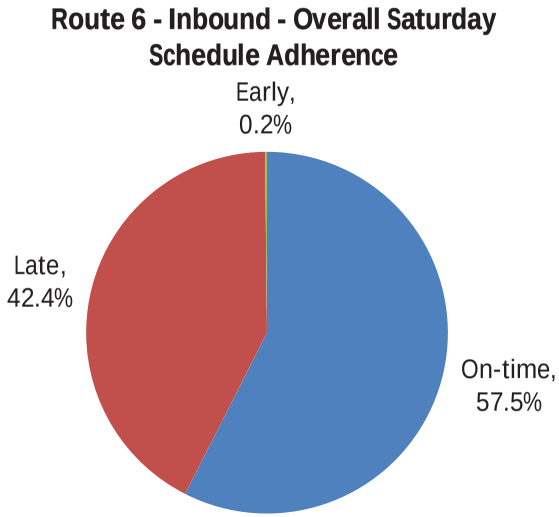
On Sunday, outbound schedule adherence is highest during the AM Peak day-part (92.8 percent), though all other day-parts have on-time performance between 75 and 80 percent. Inbound schedule adherence is 100 percent during the AM Peak period, but drops to 50.8 percent during the PM Peak day-part.

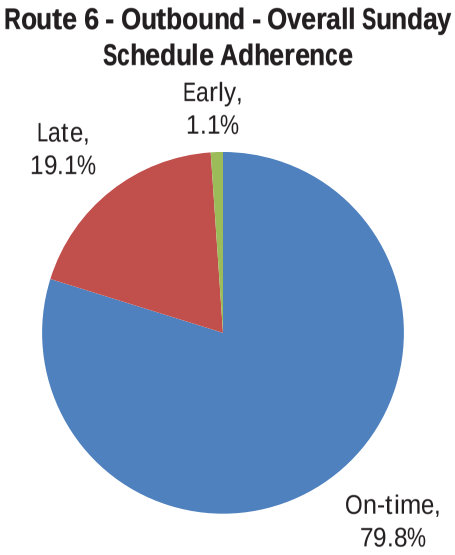
Exhibit 3.6.9 Route 6 Overall Schedule Adherence










Route 6 - Outbound - Overall Sunday Schedule Adherence
Early, 1.1%
Late, 19.1%
On-time, 79.8%

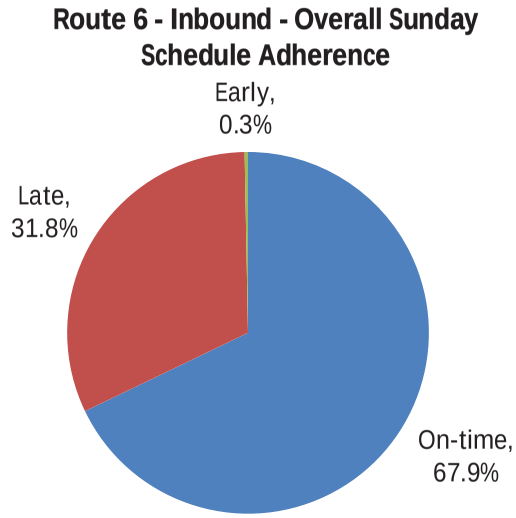
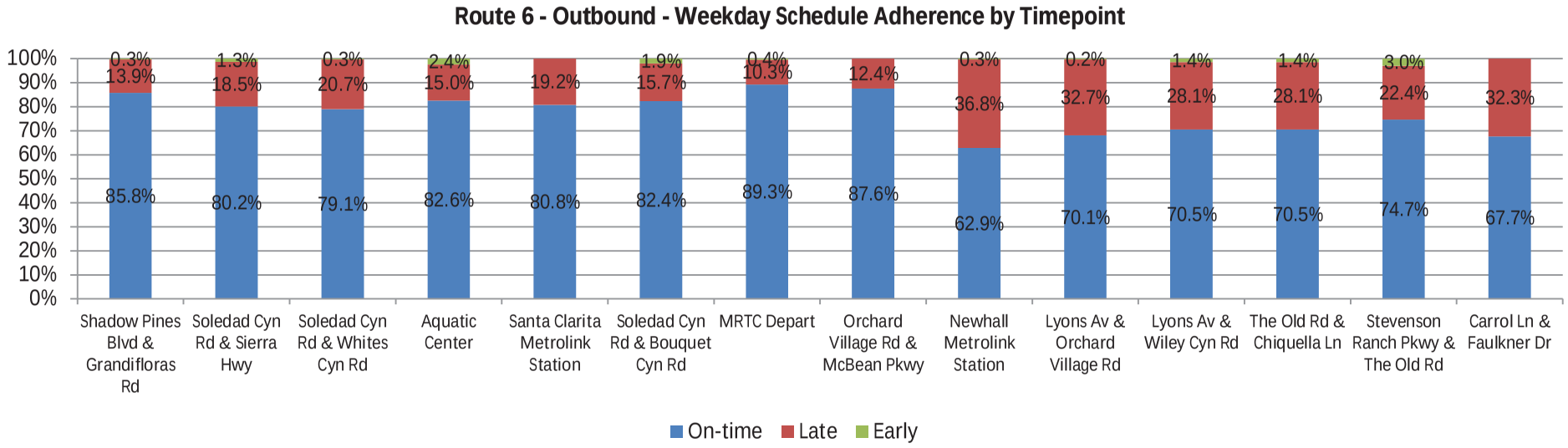
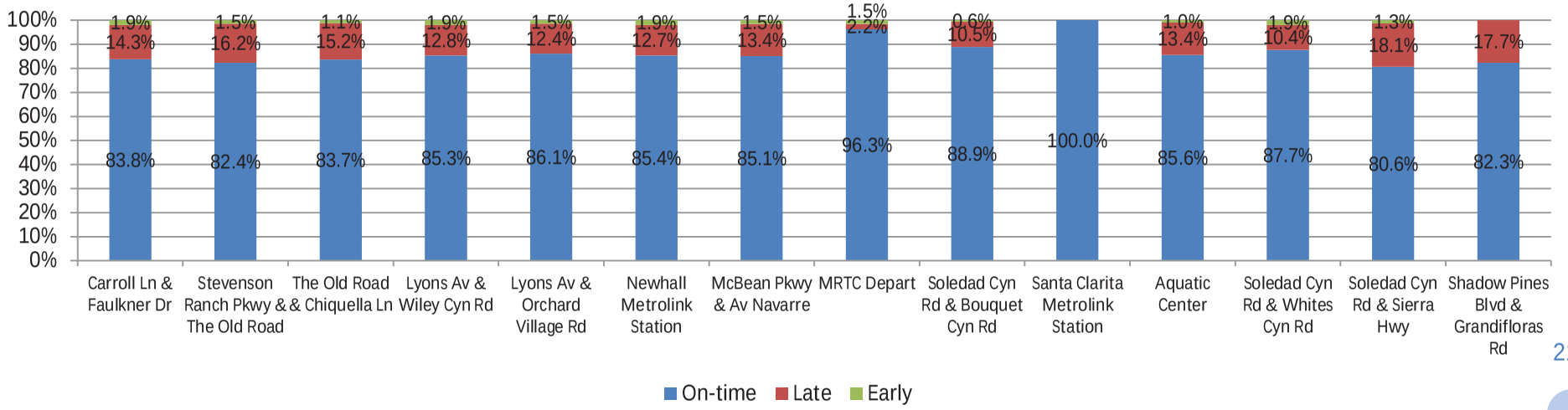
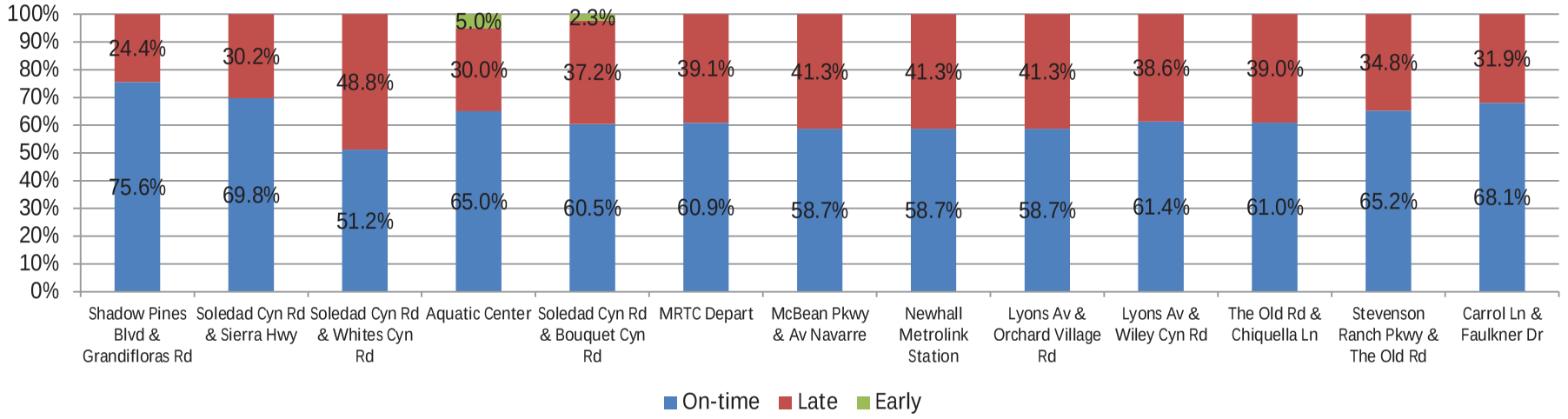

Route 6 - Inbound - Overall Sunday Schedule Adherence
Early, 0.3%
Late, 31.8%
On-time, 67.9%

Exhibit 3.6.10 Route 6 Schedule Adherence by Time-point

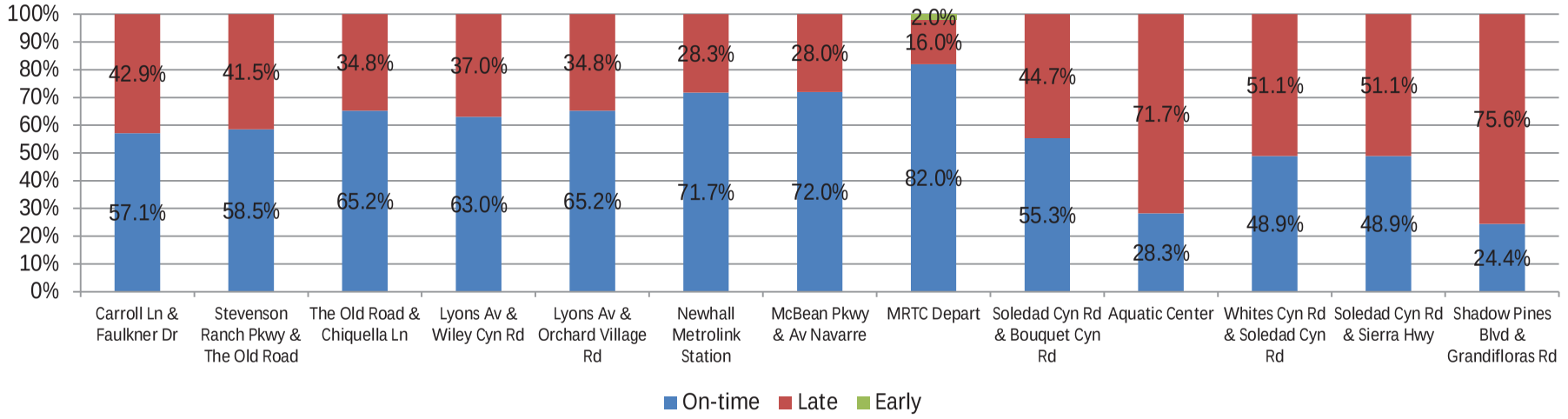




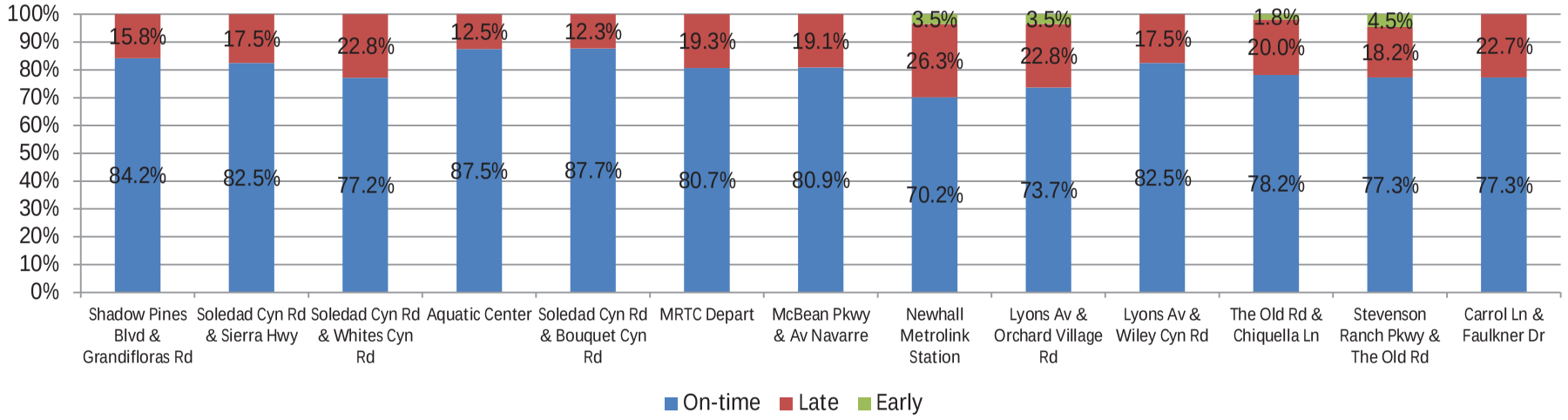
Route 6 - Outbound - Saturday Schedule Adherence by Timepoint



Route 6 - Inbound - Saturday Schedule Adherence by Timepoint



Route 6 - Outbound - Sunday Schedule Adherence by Timepoint



Route 6 - Inbound - Sunday Schedule Adherence by Timepoint

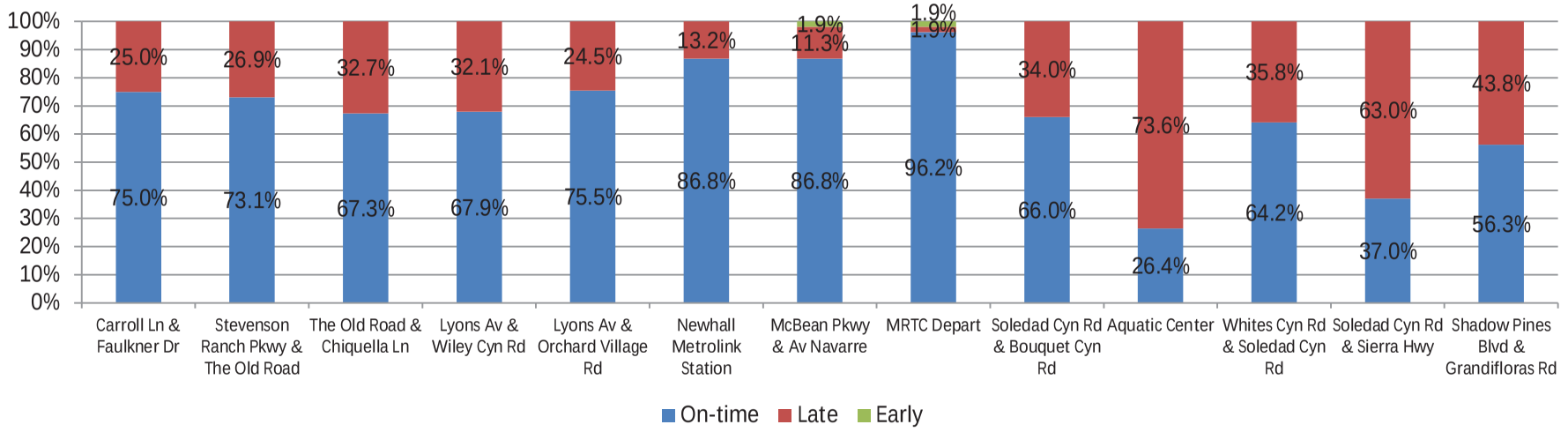
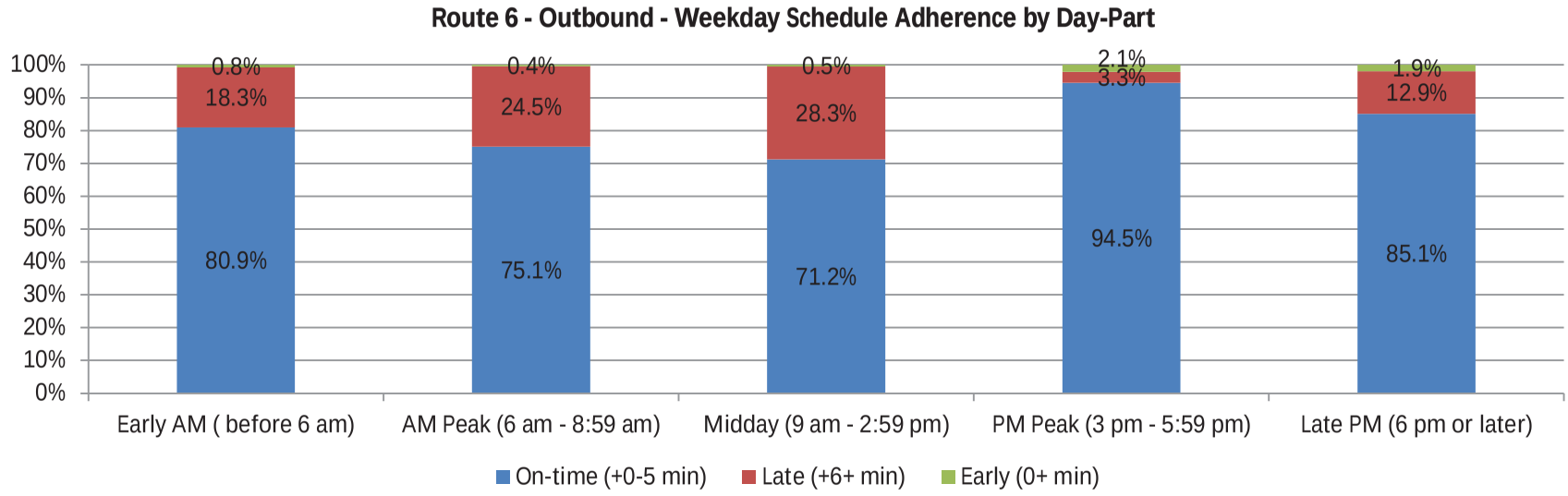
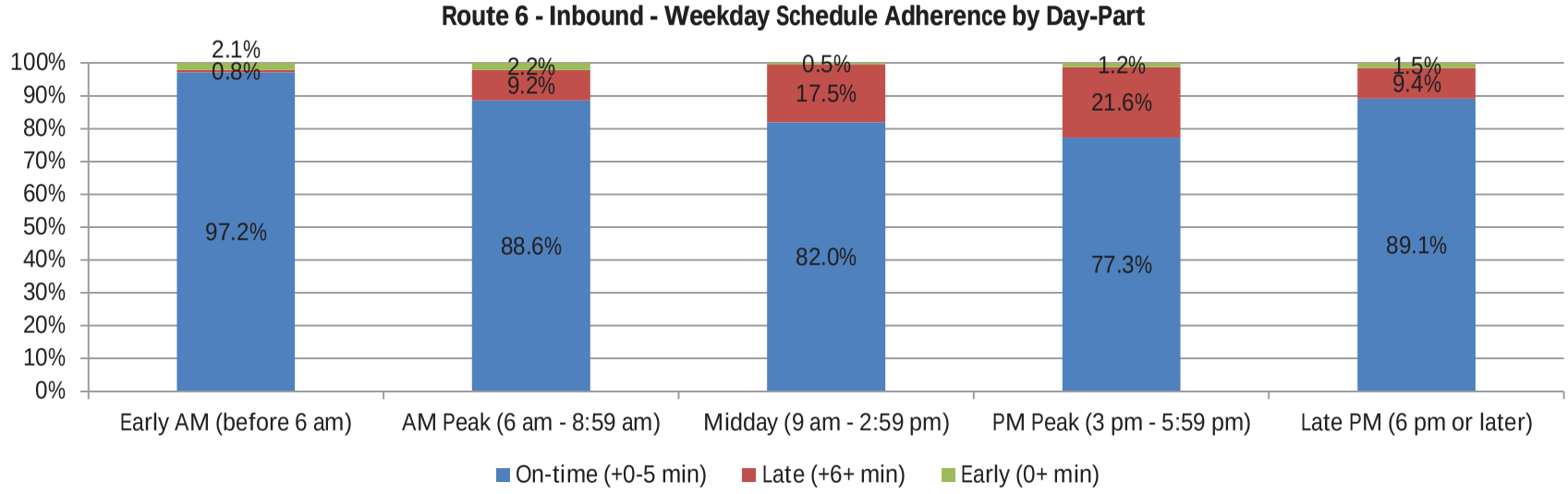
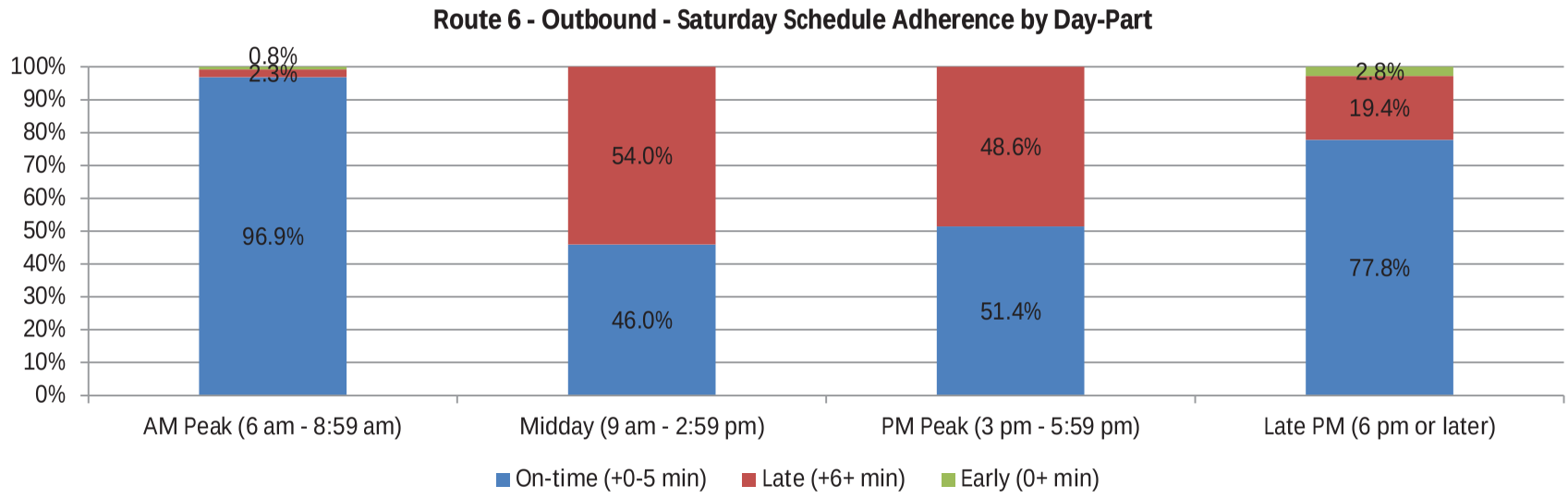
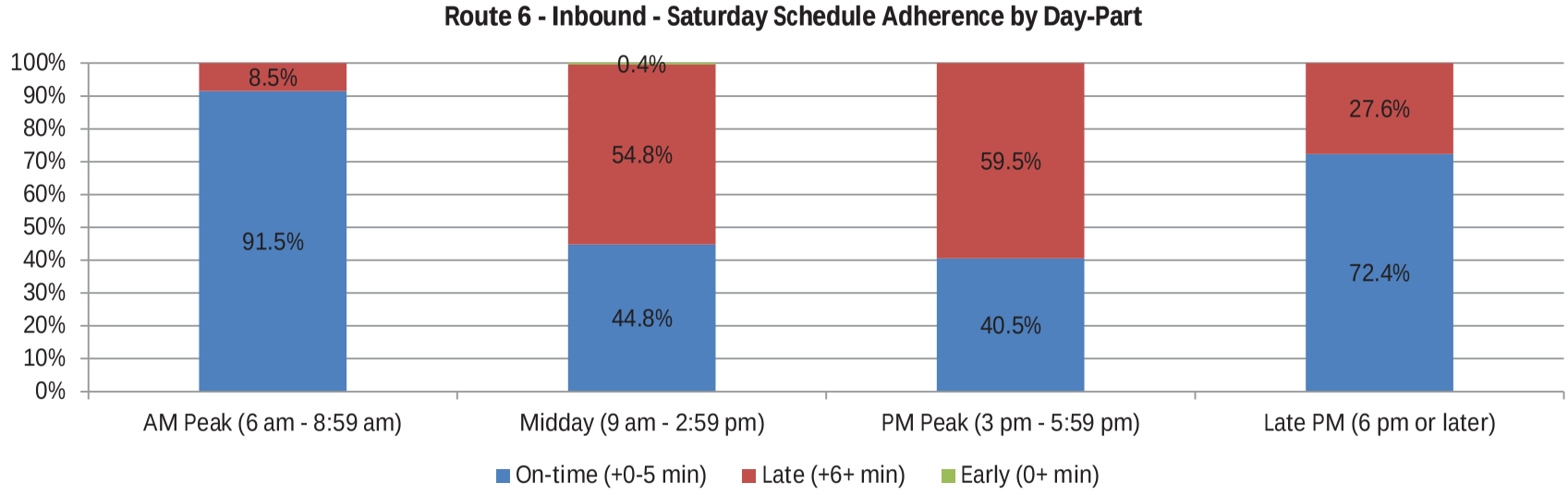


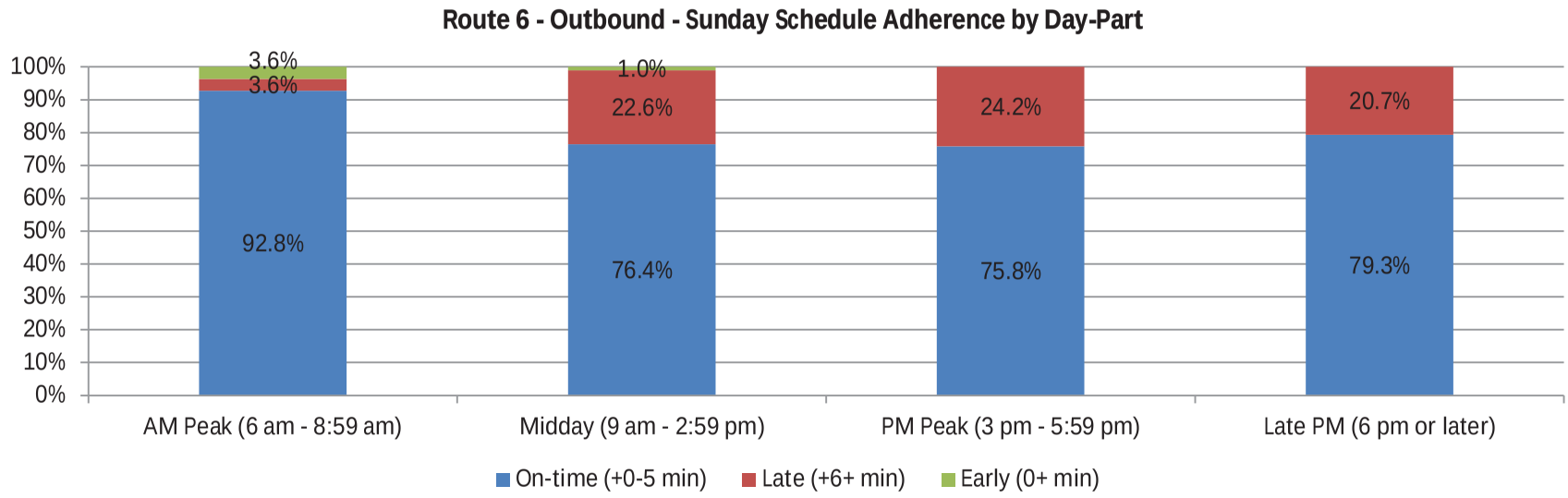
Exhibit 3.6.11 Route 6 Schedule Adherence by Day-Part

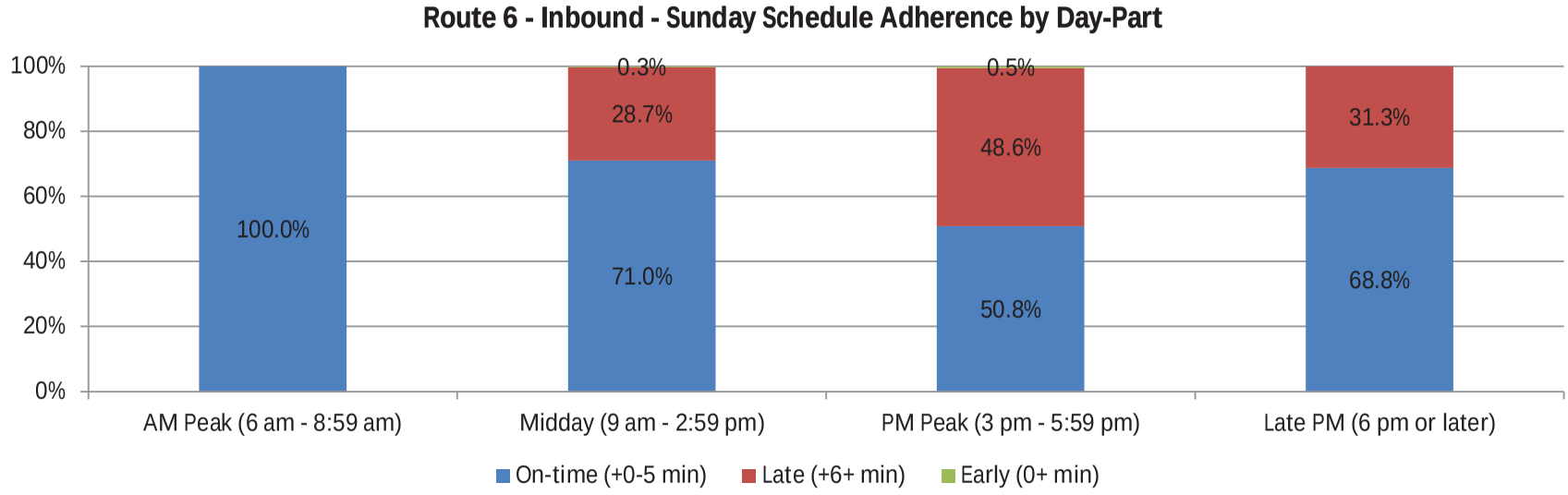





Route 6 - Outbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.8%
2.3%
96.9%
54.0%
46.0%
48.6%
51.4%
2.8%
19.4%
77.8%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 6 - Inbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
8.5%
91.5%
0.4%
54.8%
44.8%
59.5%
40.5%
27.6%
72.4%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 6 - Outbound - Sunday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
3.6%
3.6%
92.8%
1.0%
22.6%
76.4%
24.2%
75.8%
20.7%
79.3%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 6 - Inbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
100.0%
0.3%
28.7%
71.0%
0.5%
48.6%
50.8%
31.3%
68.8%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route Performance

Overall ridership

Exhibit 3.6.12 Route 6 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.6.13 Route 6 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 7 Profile and Performance Analysis

Route Description

Route 7 serves the MRTC, Valencia Town Center, College of the Canyons, Six Flags Magic Mountain, The Old Road/Westridge Center, Kaiser Permanente, Santa Clarita Park, and Arroyo Seco Junior High School. Route 7 mirrors Route 3 for a good portion of its alignment, and both routes travel between Six Flags Magic Mountain and Seco Canyon. The routes diverge between Newhall Ranch Road/McBean Parkway and Copper Hill Road/Seco Canyon Road.

Primary streets of operation include The Old Road, Valencia Boulevard, McBean Parkway, Newhall Ranch Road, Decoro Drive, and Copper Hill Drive. Route 7 interlines with Route 3 on each trip, providing what is essentially a single-seat ride throughout Saugus and Valencia.

Inbound service is defined as that originating at Six Flags Magic Mountain and traveling to Seco Canyon Road and Tamarack Lane. Outbound service travels in the opposite direction. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, Route 7 outbound peaks twice: once in the morning at 7:59 a.m. (average of 20 riders per trip) and once in the afternoon at 3:05 p.m. (average of 17 riders per trip). The inbound service peaks just once at 10:42 a.m. with average ridership of 19 riders per trip.

On both Saturday and Sunday, the outbound service begins with its highest ridership trip as the first trip of the day (7:59 a.m.), with average ridership of 25 and 18 riders, respectively. Saturday inbound service peaks later in the day at 1:31 p.m. with an average ridership of 13 riders. Sunday inbound service does not exhibit any true peaks, but reaches its maximum average riders per trip (eight riders) at three points during the day: 1:31 p.m., 4:21 p.m., and 5:48 p.m.

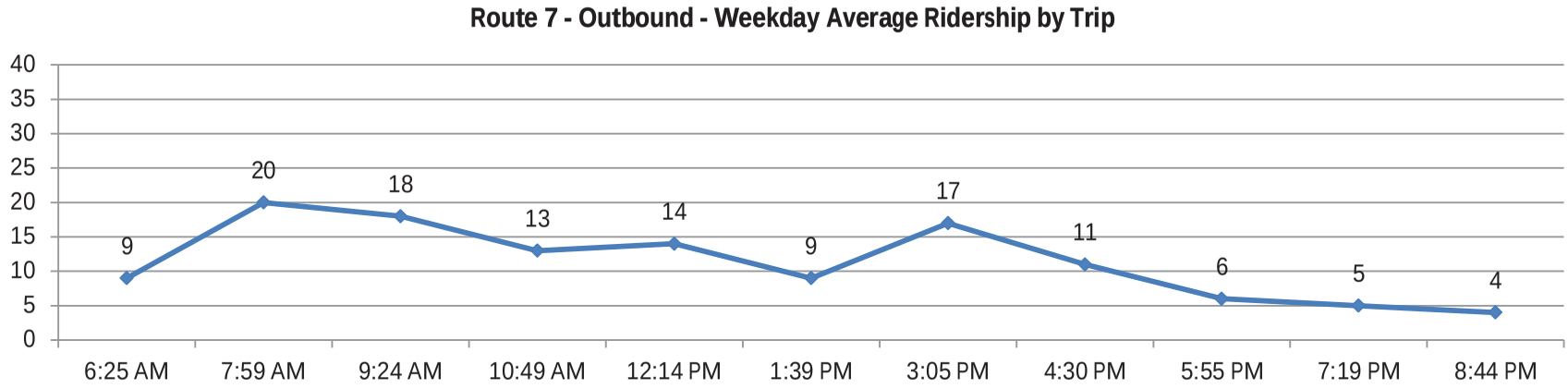
Average ridership by time of day

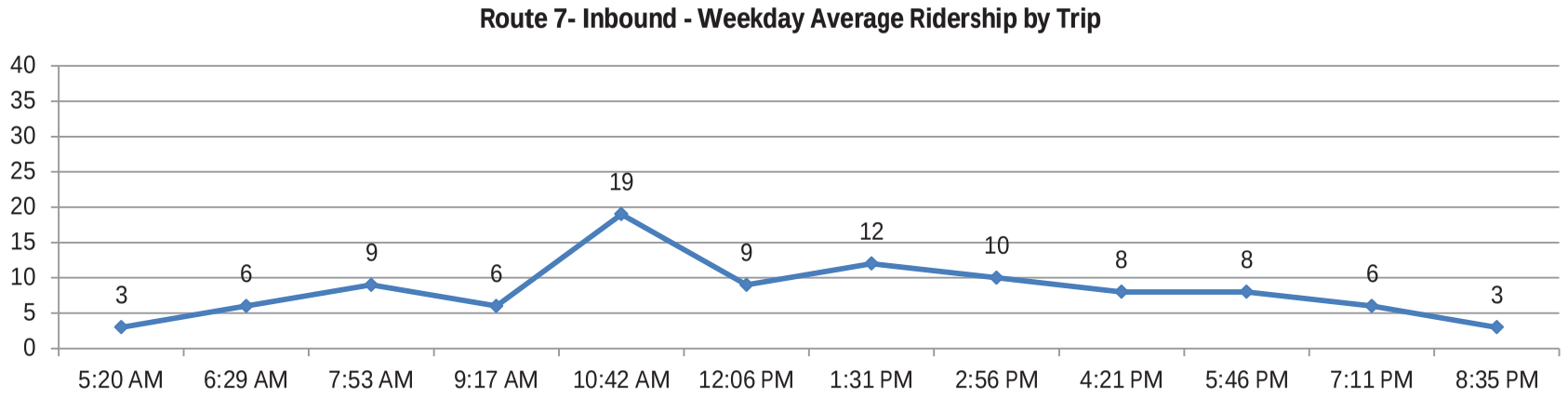
On weekdays, the outbound service experiences its highest average ridership during the AM Peak day-part (average of 15 riders), after which average ridership drops across the balance of the day. The inbound service peaks during the Mid-day day-part, with an average of 11 riders. Both direction experience the same average ridership for trips during the Late PM day-part.

On Saturday, the outbound service sees the most riders during the AM Peak period (average of 25 riders), while the inbound service sees similar numbers of riders across multiple day-parts. The Mid-day and PM Peak periods average eight riders per trip, the Late PM period averages seven riders per trip, and the AM Peak period averages six riders per trip.

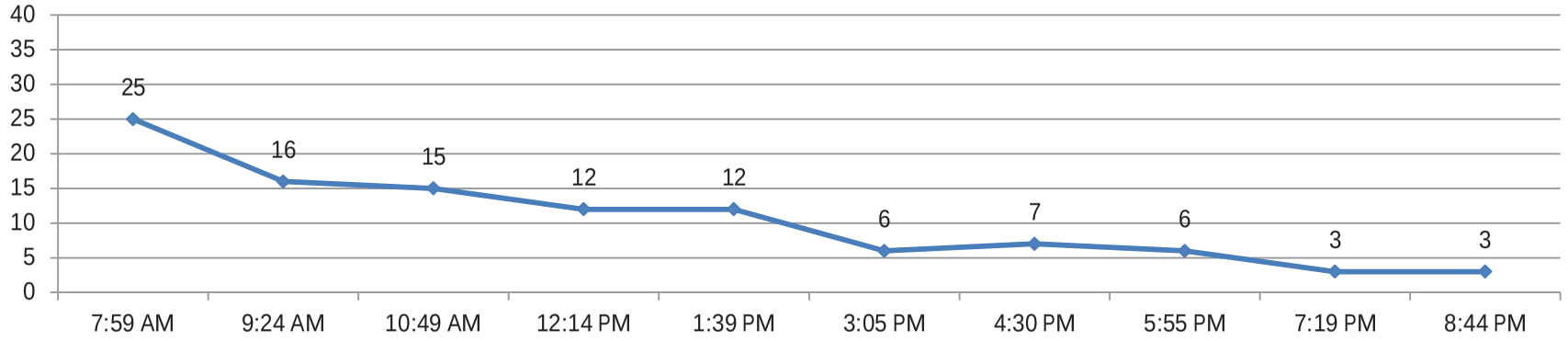
On Sunday, the outbound service experiences its greatest ridership during the AM Peak period (average of 18 riders) and the inbound service during the PM Peak period (average of eight riders).

Exhibit 3.7.1 Route 7 Average Ridership by Trip

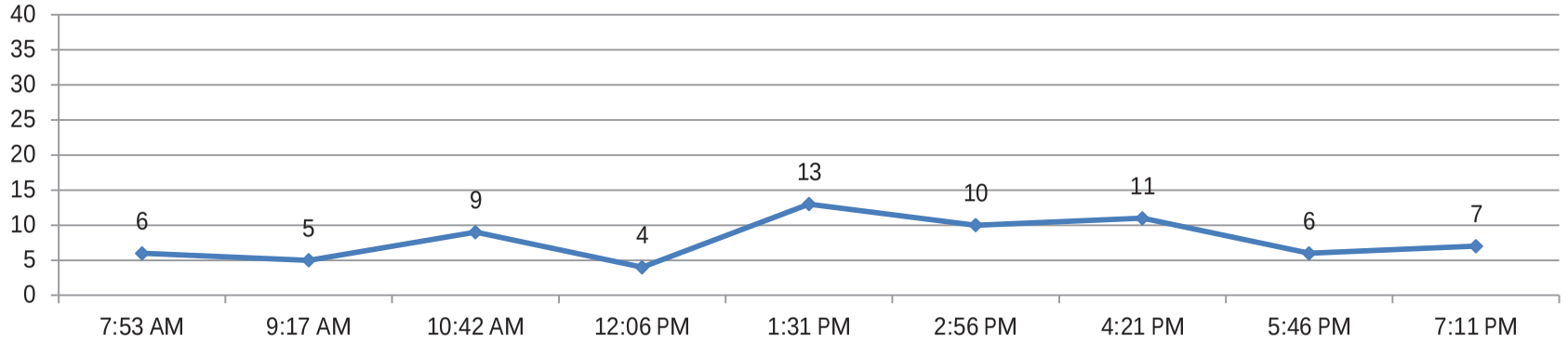




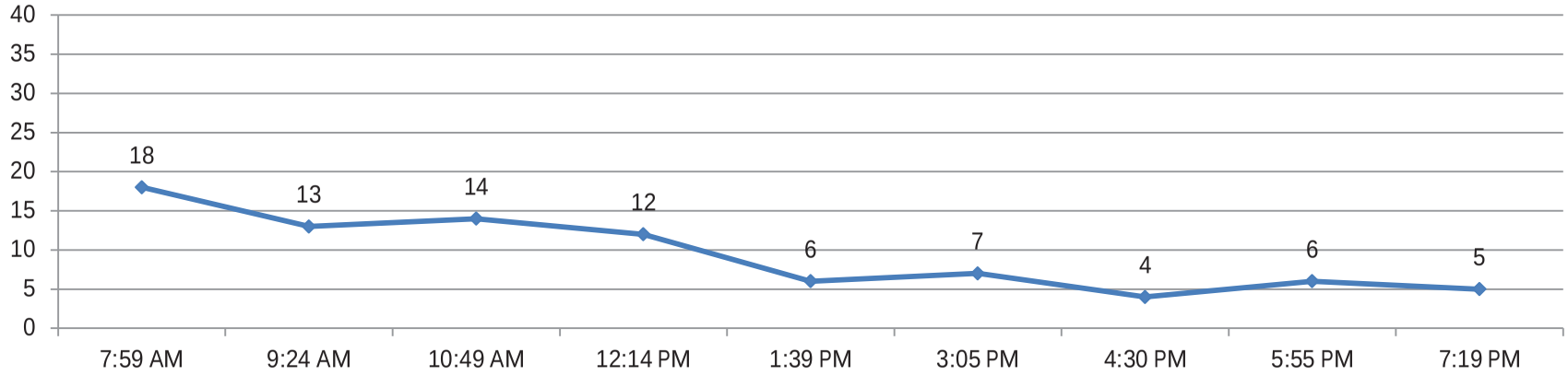
Route 7 - Outbound - Saturday Average Ridership by Trip



Route 7 - Inbound - Saturday Average Ridership by Trip



Route 7 - Outbound - Sunday Average Ridership by Trip



Route 7 - Inbound - Sunday Average Ridership by Trip

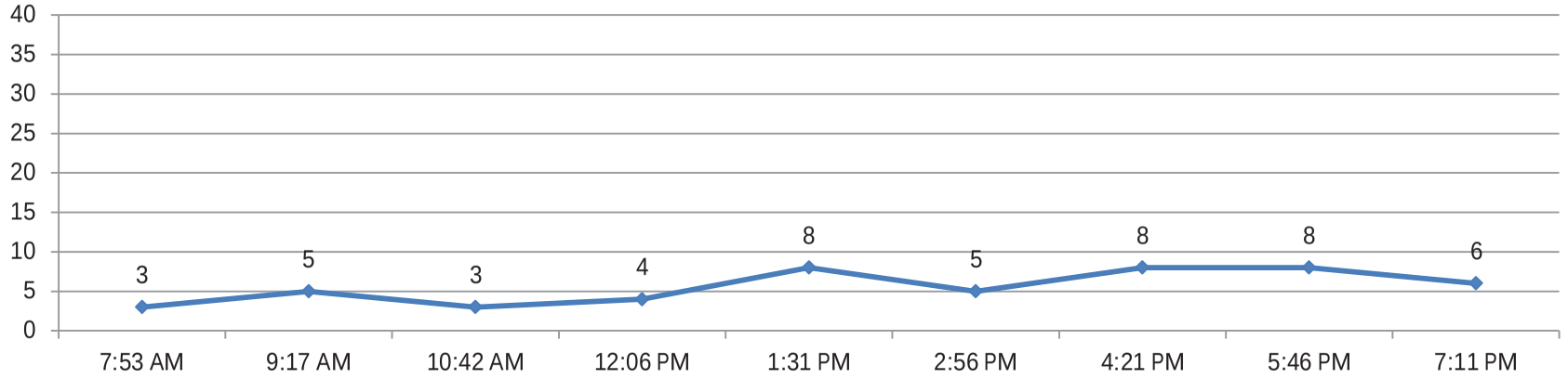
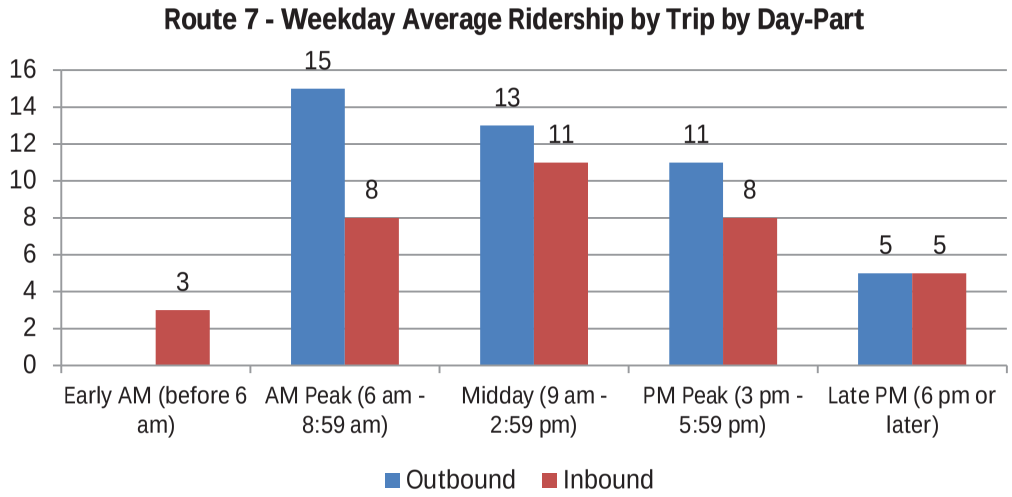
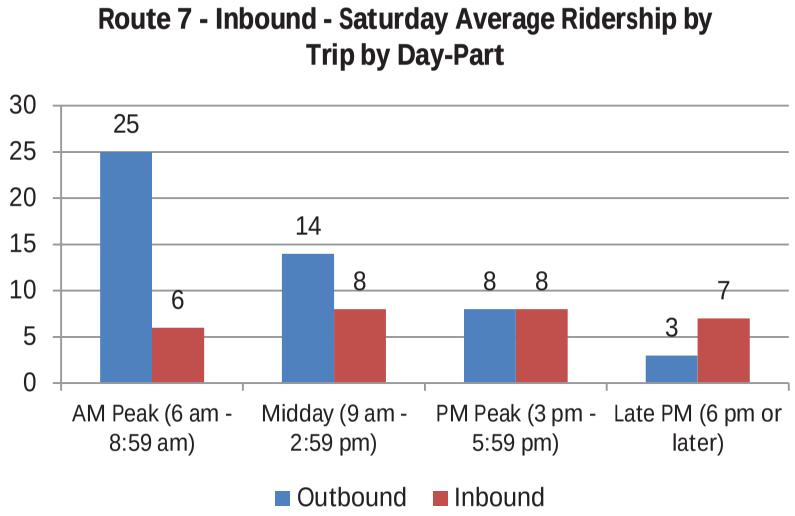
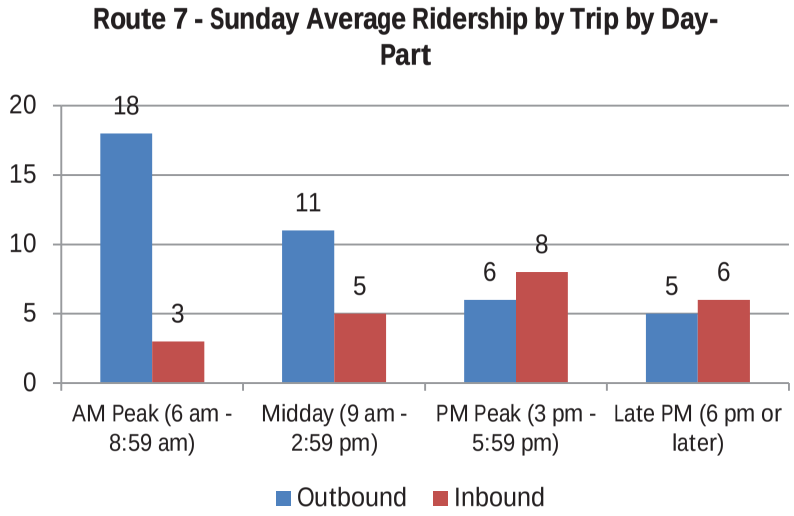


Exhibit 3.7.2 Route 7 Average Ridership by Trip by Day-Part







Average ridership (boardings) by segment

Two route segments account for the highest number of boardings each day, regardless of direction. The MRTC to McBean Pkwy/Newhall Ranch Rd segment saw the greatest number of boardings for weekday outbound and Saturday and Sunday inbound services. The Old Road/Silver Aspen Way to MRTC segment saw the greatest number of boardings for weekday inbound and Saturday and Sunday outbound services.

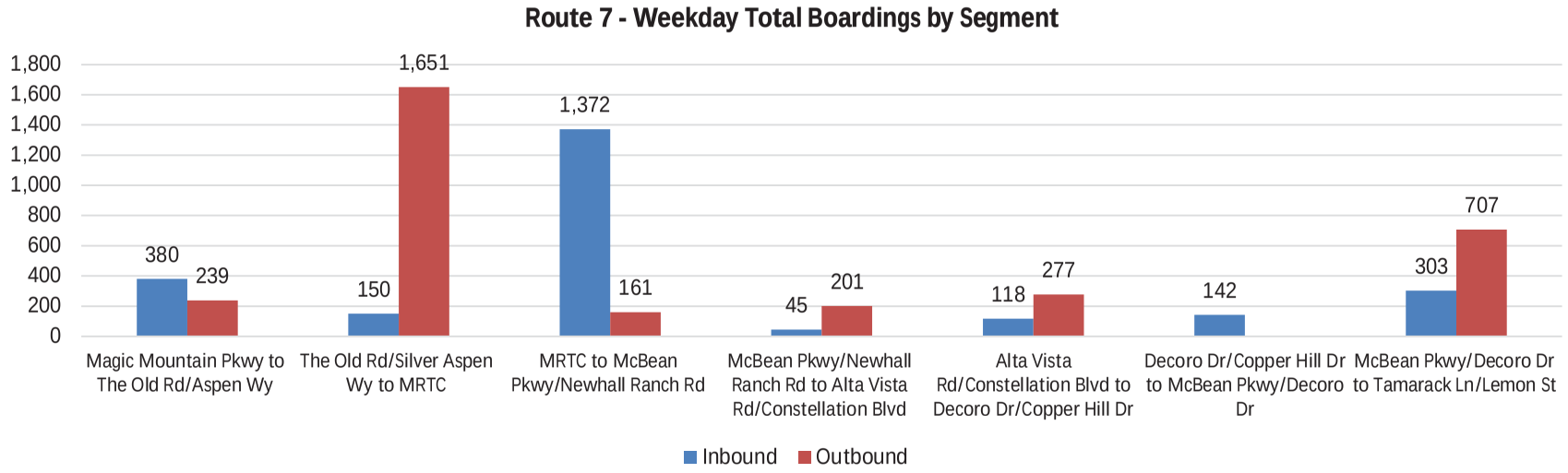
Average boarding and alighting by stop

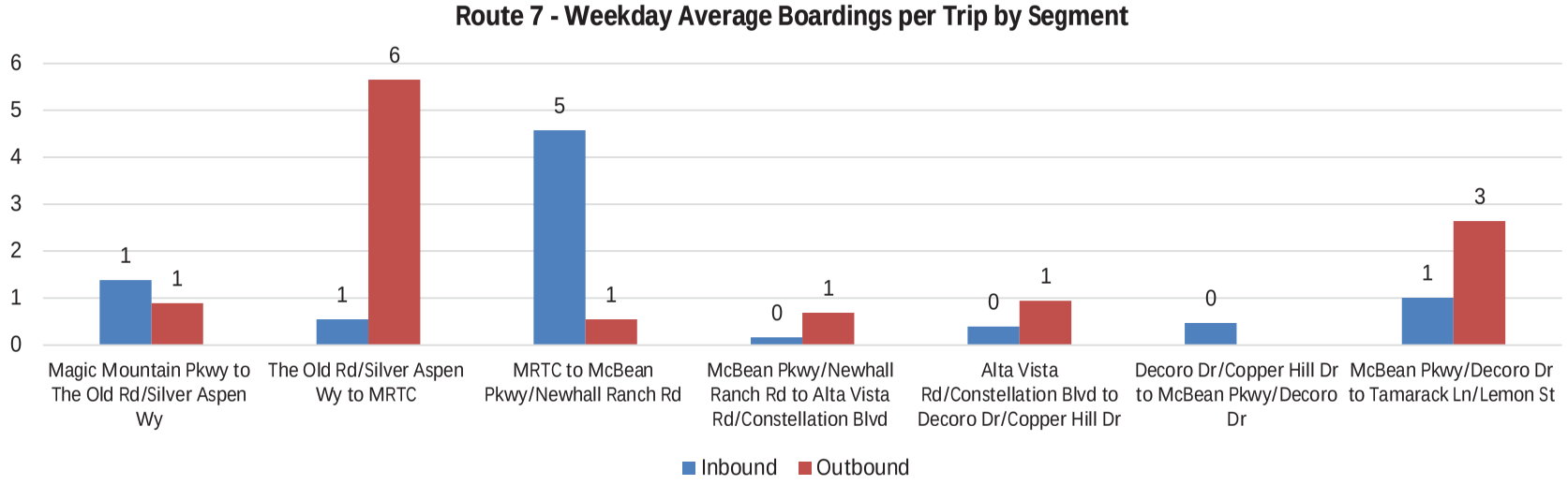
Beginning on page 10, bubble maps indicate the relative level of activity at each Route 7 bus stop, both inbound and outbound.

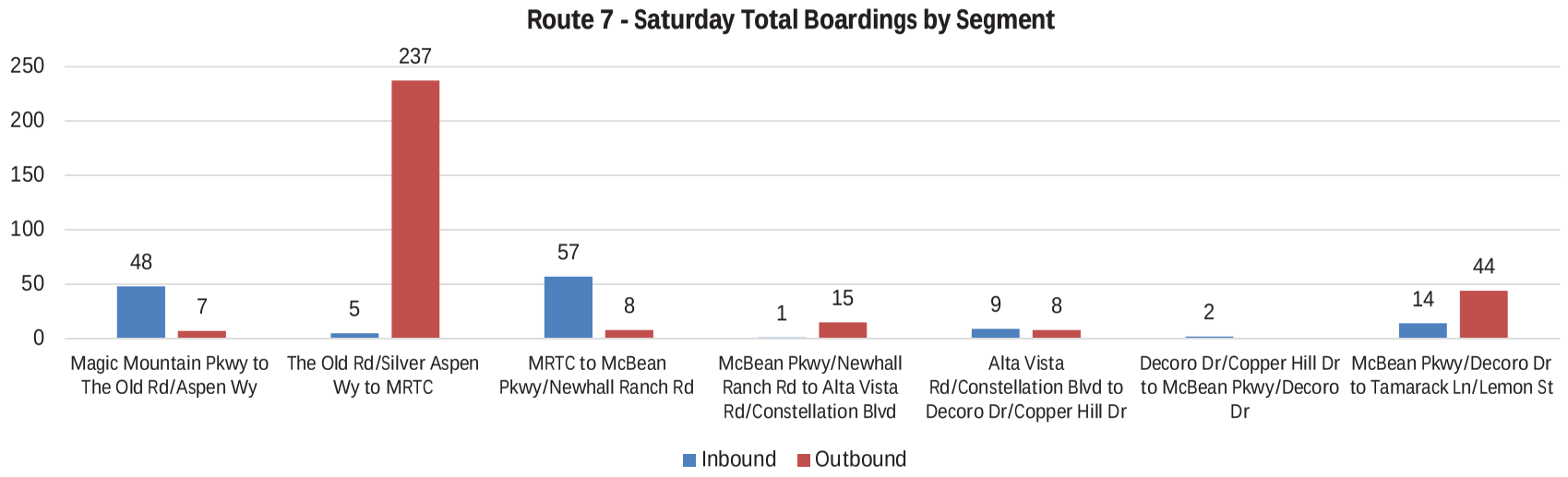
Six Flags Magic Mountain and the MRTC are the two stops with the greatest level of activity for all days and directions. On weekdays, the outbound service also sees high activity at The Old Road/Silver Aspen Way and McBean Pkwy/Copper Hill Dr. The inbound service also sees high activity at Decoro Dr/Dickason Dr.

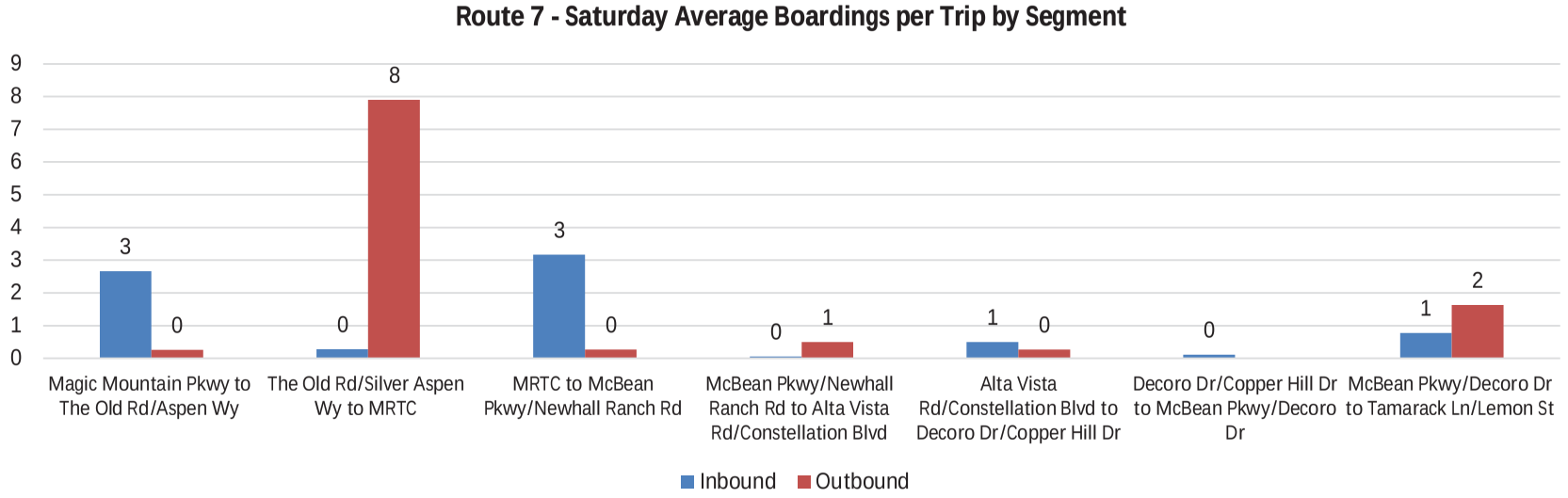
On Saturday and Sunday, the data indicates McBean Pkwy (near the Valencia Town Center) as the location with the highest activity. However, as indicated in Route 4, this may be a data error, as we would expect to see that level of activity at the MRTC.

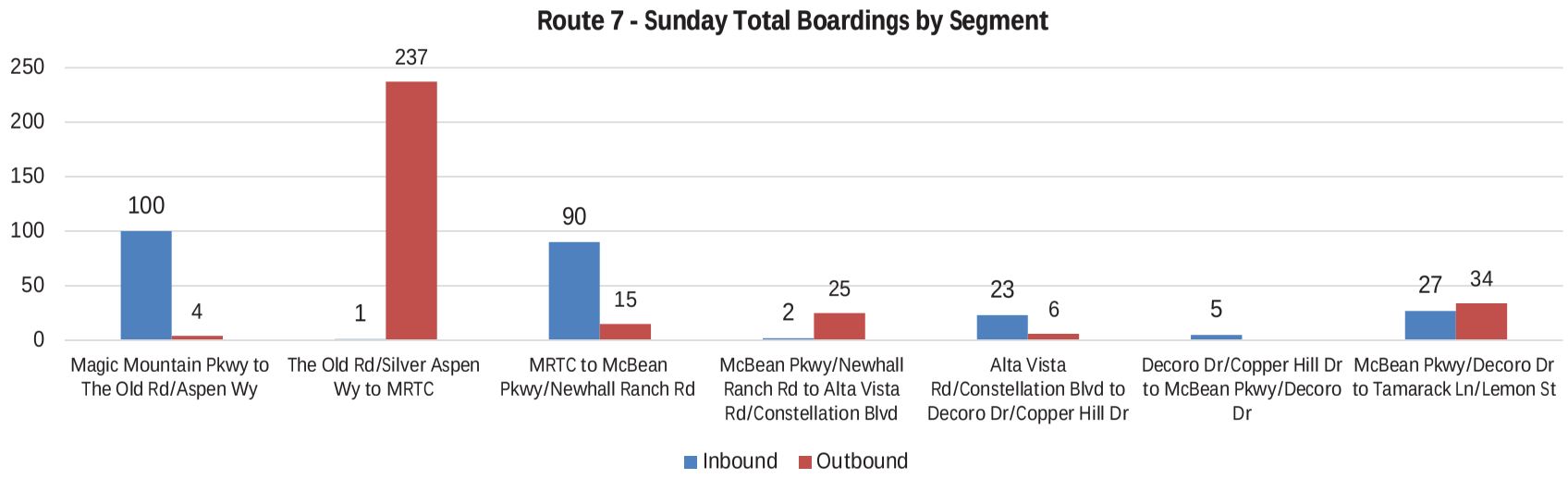
Exhibit 3.7.3 Route 7 Total and Average Boardings by Segment






Route 7 - Saturday Total Boardings by Segment
250
200
150
100
50
0
48
7
5
237
57
8
1
15
9
8
2
14
44
Magic Mountain Pkwy to The Old Rd/Aspen Wy
The Old Rd/Silver Aspen Wy to MRTC
MRTC to McBean Pkwy/Newhall Ranch Rd
McBean Pkwy/Newhall Ranch Rd to Alta Vista Rd/Constellation Blvd
Alta Vista Rd/Constellation Blvd to Decoro Dr/Copper Hill Dr
Decoro Dr/Copper Hill Dr to McBean Pkwy/Decoro Dr
McBean Pkwy/Decoro Dr to Tamarack Ln/Lemon St
Inbound
Outbound


Route 7 - Saturday Average Boardings per Trip by Segment
9
8
7
6
5
4
3
2
1
0
3
0
0
8
3
0
0
1
1
0
0
1
2
Magic Mountain Pkwy to The Old Rd/Aspen Wy
The Old Rd/Silver Aspen Wy to MRTC
MRTC to McBean Pkwy/Newhall Ranch Rd
McBean Pkwy/Newhall Ranch Rd to Alta Vista Rd/Constellation Blvd
Alta Vista Rd/Constellation Blvd to Decoro Dr/Copper Hill Dr
Decoro Dr/Copper Hill Dr to McBean Pkwy/Decoro Dr
McBean Pkwy/Decoro Dr to Tamarack Ln/Lemon St
Inbound
Outbound


Route 7 - Sunday Total Boardings by Segment
250
200
150
100
50
0
100
4
237
1
90
15
2
25
23
6
5
27
34
Magic Mountain Pkwy to The Old Rd/Aspen Wy
The Old Rd/Silver Aspen Wy to MRTC
MRTC to McBean Pkwy/Newhall Ranch Rd
McBean Pkwy/Newhall Ranch Rd to Alta Vista Rd/Constellation Blvd
Alta Vista Rd/Constellation Blvd to Decoro Dr/Copper Hill Dr
Decoro Dr/Copper Hill Dr to McBean Pkwy/Decoro Dr
McBean Pkwy/Decoro Dr to Tamarack Ln/Lemon St
Inbound
Outbound

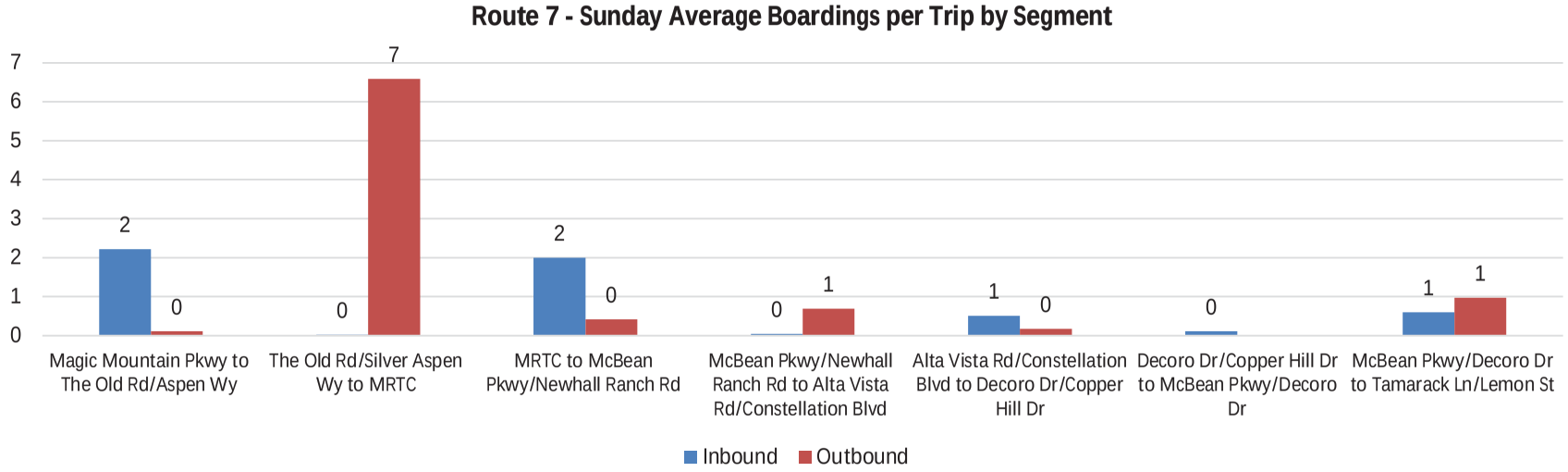
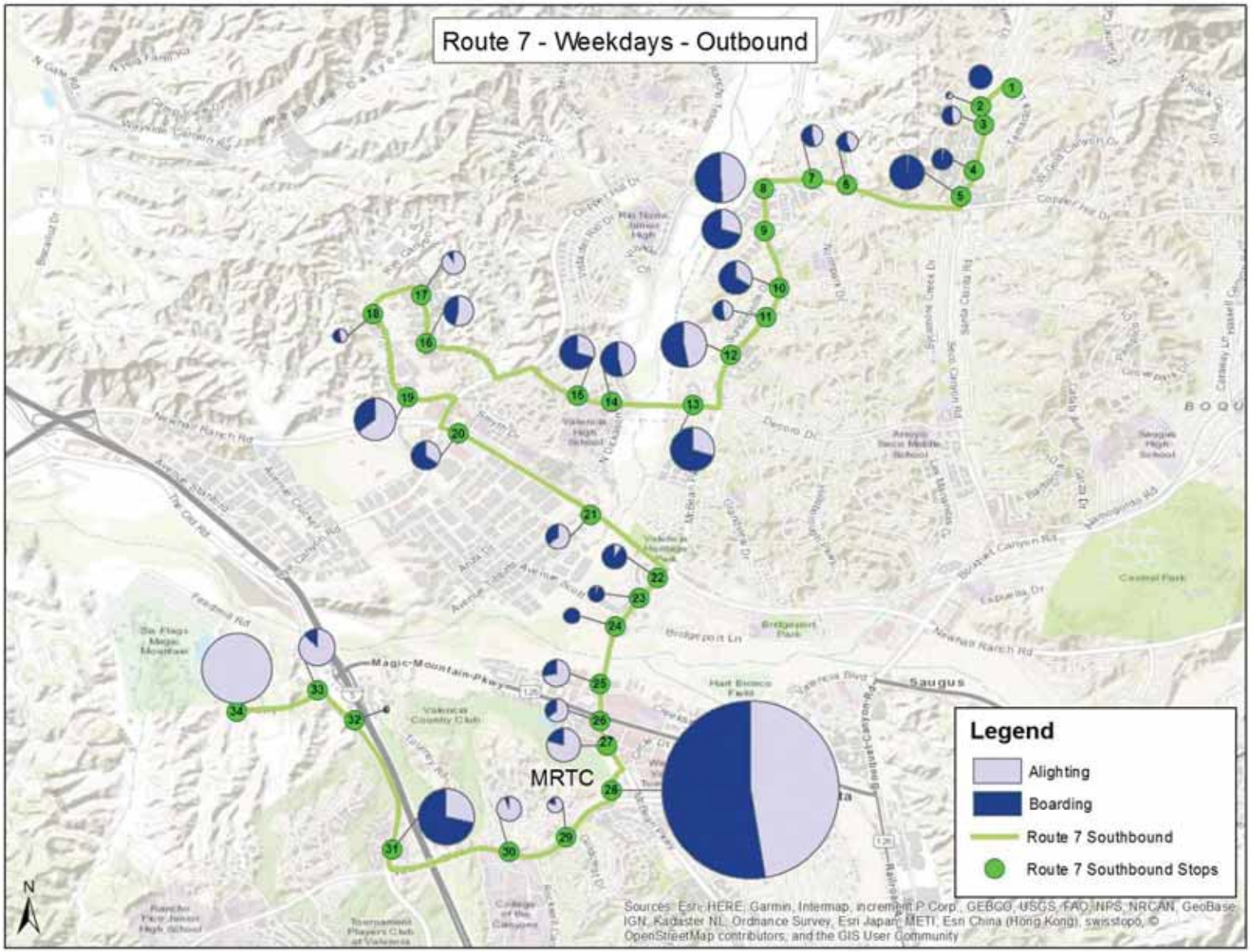
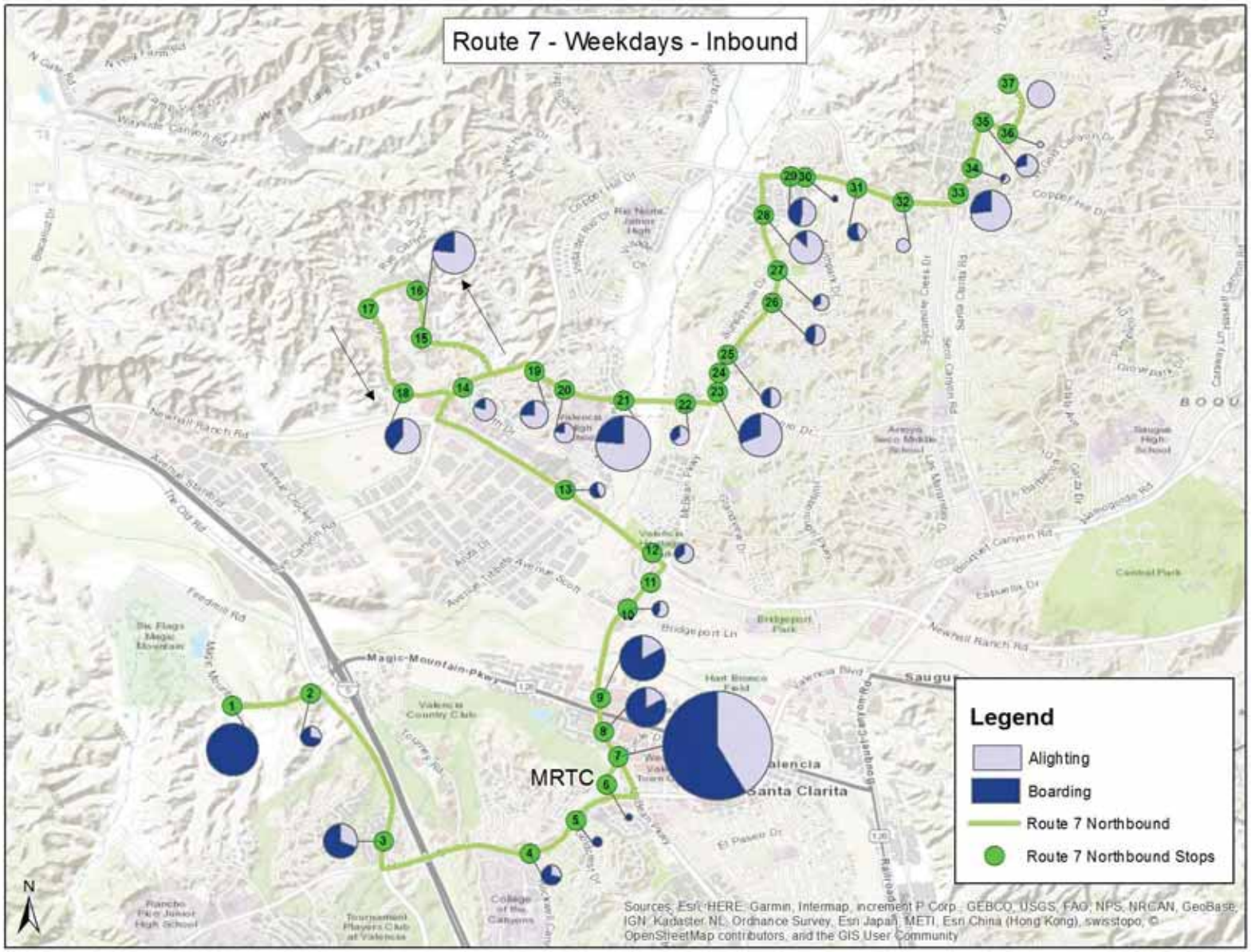
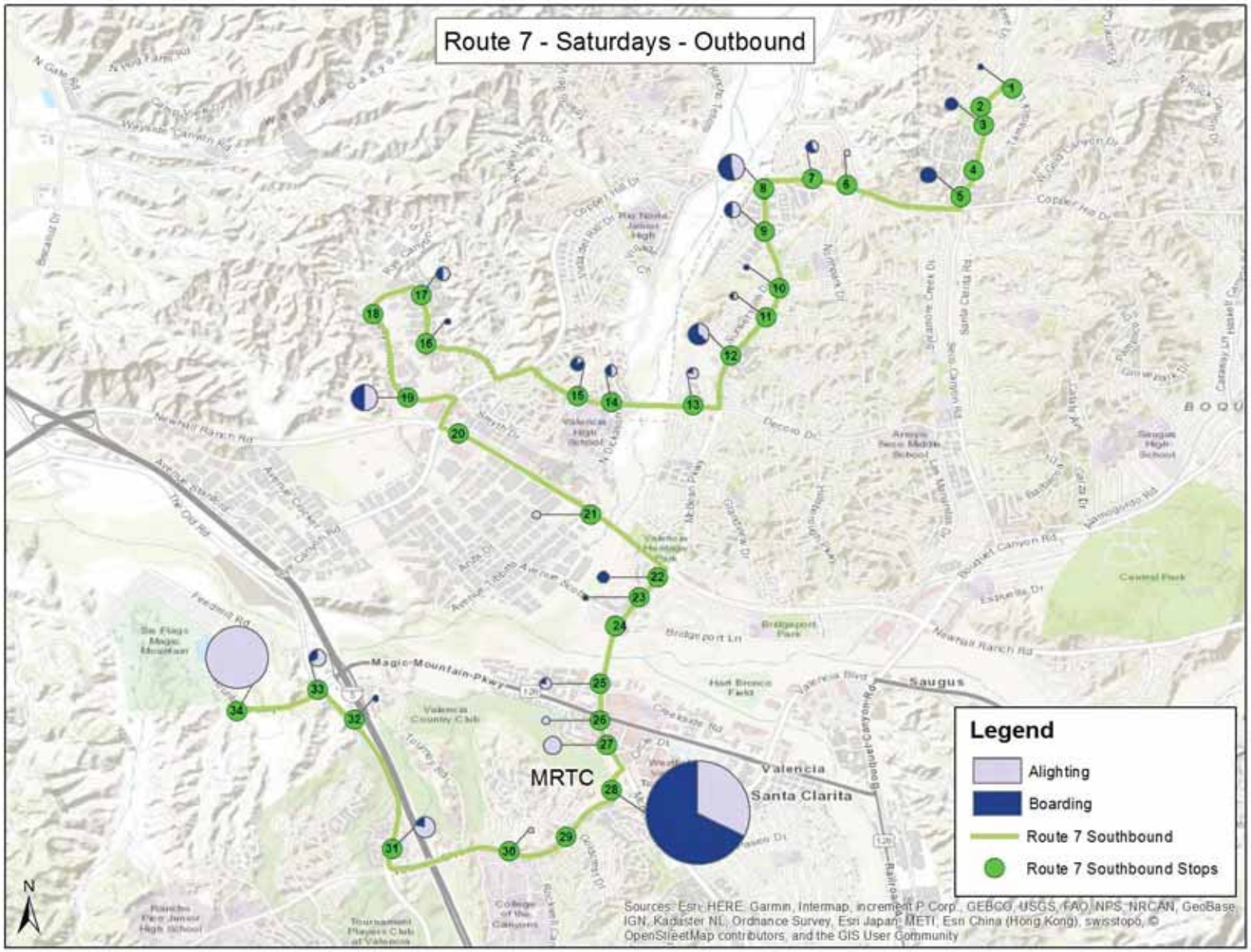
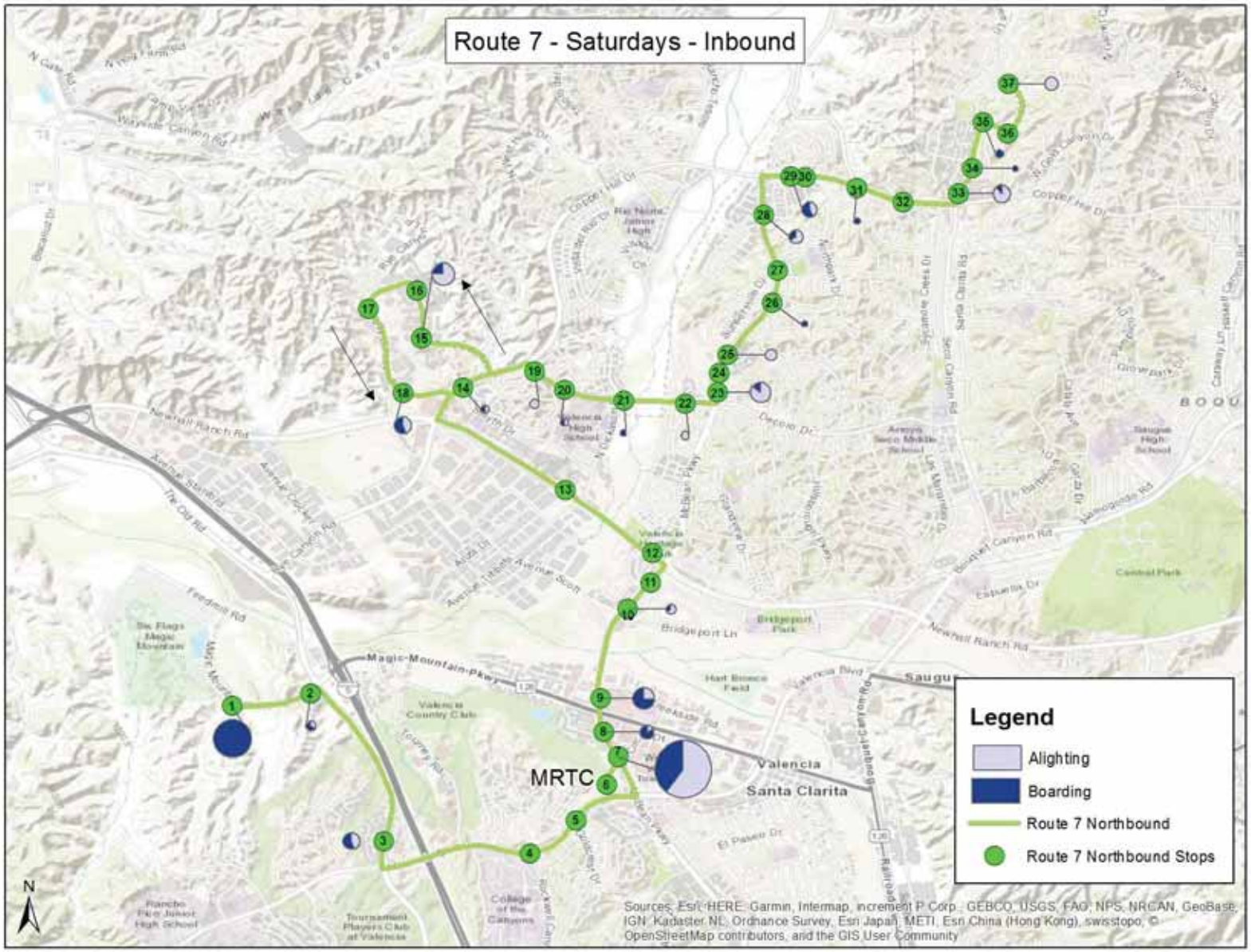

Route 7 - Sunday Average Boardings per Trip by Segment
7
6
5
4
3
2
1
0
2
0
0
7
2
0
0
1
1
0
0
1
1
Magic Mountain Pkwy to The Old Rd/Aspen Wy
The Old Rd/Silver Aspen Wy to MRTC
MRTC to McBean Pkwy/Newhall Ranch Rd
McBean Pkwy/Newhall Ranch Rd to Alta Vista Rd/Constellation Blvd
Alta Vista Rd/Constellation Blvd to Decoro Dr/Copper Hill Dr
Decoro Dr/Copper Hill Dr to McBean Pkwy/Decoro Dr
McBean Pkwy/Decoro Dr to Tamarack Ln/Lemon St
Inbound
Outbound

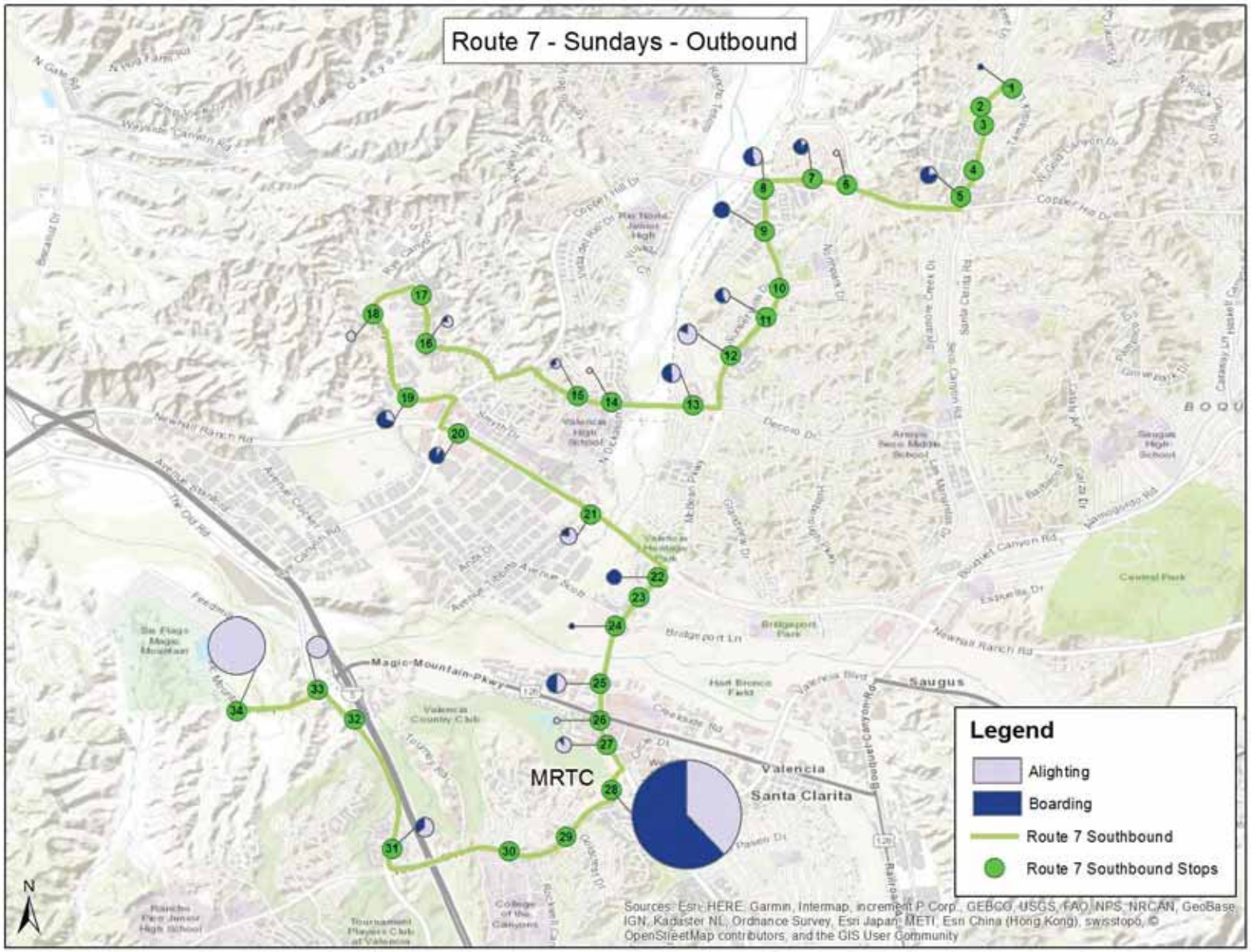
Exhibit 3.7.4 Route 7 Boarding and Alighting Maps




Route 7 - Weekdays - Inbound
MRTC
Santa Clarita
Magic Mountain Pkwy
Legend
Alighting
Boarding
Route 7 Northbound
Route 7 Northbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 7 - Saturdays - Outbound
MRTC
Valencia
Santa Clarita
Saugus
Magic Mountain Pkwy
Legend
Alighting
Boarding
Route 7 Southbound
Route 7 Southbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 7 - Saturdays - Inbound
MRTC
Valencia
Santa Clarita
Magic Mountain Pkwy
Legend
Alighting
Boarding
Route 7 Northbound
Route 7 Northbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 7 - Sundays - Outbound
MRTC
Valencia
Santa Clarita
Saugus
Magic Mountain Pkwy
Legend
Alighting
Boarding
Route 7 Southbound
Route 7 Southbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

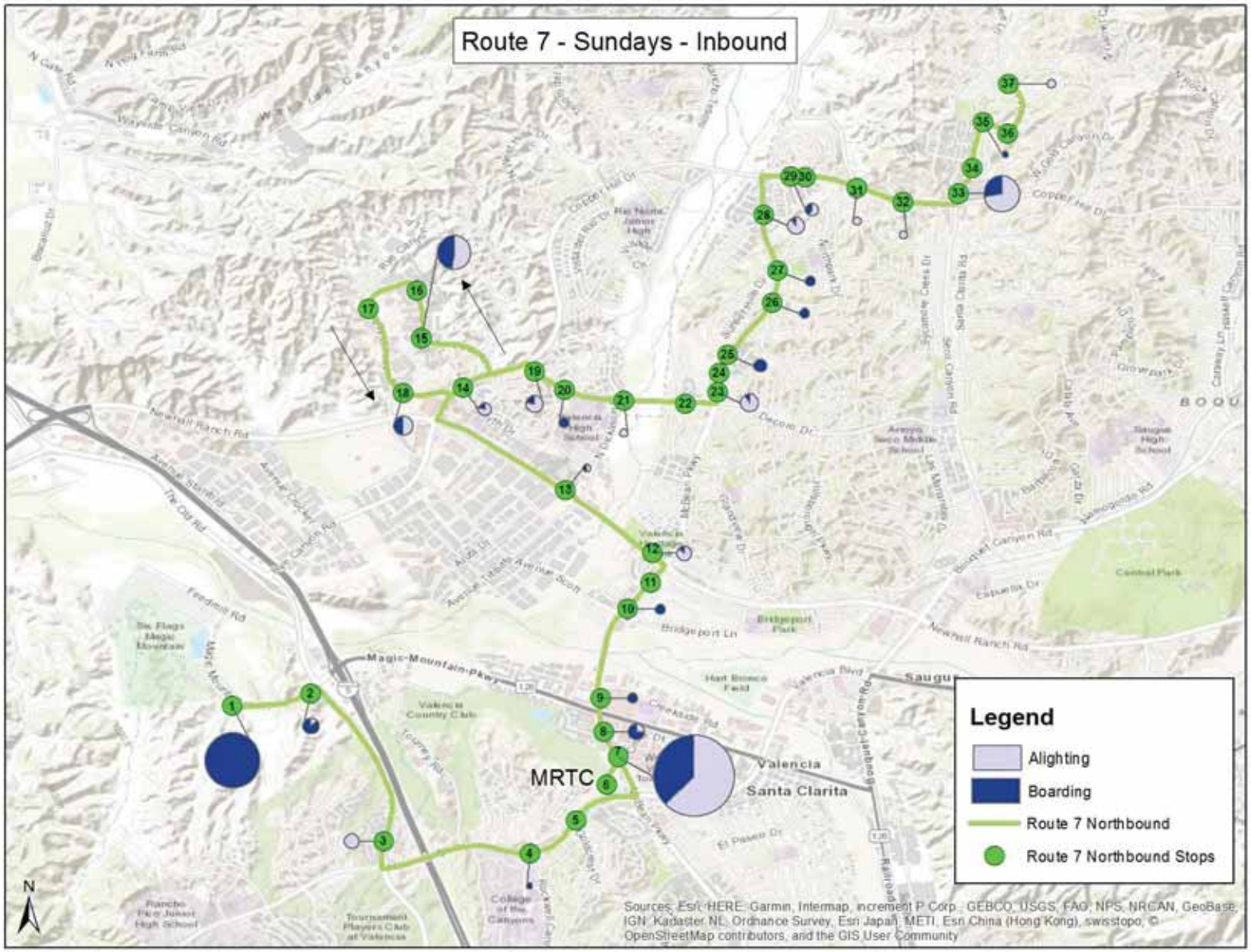

Route 7 - Sundays - Inbound
MRTC
Valencia
Santa Clarita
Magic Mountain Pkwy
Legend
Alighting
Boarding
Route 7 Northbound
Route 7 Northbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.7.5 Route 7 Stop Lists

Route 7 Outbound Stop List	
Stop Number	Stop Name
1	Tamarack Ln & Lemon St
2	Seco Canyon Rd & Coral Wy
3	Seco Canyon Rd & Hazel St
4	Seco Canyon Rd & Banyan Pl
5	Seco Canyon Rd
6	Copper Hill Dr & Nth Prk Dr
7	Copper Hill Dr & Medlar Dr
8	McBean Pky & Copper Hill Dr
9	McBean Pky & Gv House Dr
10	McBean Pky & Sunset Hills Dr
11	McBean Pky & Nth Prk Dr
12	McBean Pky & Skycrest Circle Dr
13	Decoro Dr & Sunny Creek Dr
14	Decoro Dr & Nth Dickason Dr
15	Decoro Dr & Copperstone Dr
16	Alta Vista Ave & Constellation Rd
17	Constellation Rd & Hercules St
18	Kelly Johnson Pky & Rye Canyon Lp
19	Kelly Johnson Pky & Aurora Dr
20	Newhall Ranch Rd & Rye Canyon Rd
21	Newhall Ranch Rd & Ave Tibbitts
22	McBean Pky & Newhall Ranch Rd
23	McBean Pky & Baywood Ln
24	McBean Pky & Bridgeport Ln
25	McBean Pky & Creekside Rd
26	McBean Pky & Magic Mountain Pky
27	McBean Pky & Town Center Dr
28	McBean MRTC
29	Valencia Blvd & Goldcrest Dr
30	Valencia Blvd
31	The Old Rd & Silver Aspen Wy
32	The Old Rd & Magic Mountain Pky
33	Magic Mountain Pky & The Old Rd
34	Magic Mountain Pky (Six Flags)

Route 7 Inbound Stop List	
Stop Number	Stop Name
1	Magic Mountain Pky (Six Flags)
2	Magic Mountain Pky & The Old Rd
3	The Old Rd & Silver Aspen Wy
4	Valencia Blvd & Rockwell Canyon Rd
5	Valencia Blvd & Goldcrest Dr
6	McBean MRTC
7	McBean Pky
8	McBean Pky & Town Center Dr
9	McBean Pky & Creekside Rd
10	McBean Pky & Bridgeport Ln
11	McBean Pky & Baywood Ln
12	Newhall Ranch Rd & Baywood Ln
13	Newhall Ranch Rd
14	Copper Hill Dr & Kelly Johnson Pky
15	Alta Vista Ave & Constellation Rd
16	Constellation Rd & Hercules St
17	Kelly Johnson Pky & Rye Canyon Lp
18	Kelly Johnson Pky & Aurora Dr
19	Decoro Dr & Copper Hill Dr
20	Decoro Dr & Alta Vista Ave
21	Decoro Dr & Nth Dickason Dr
22	Decoro Dr & Sunny Creek Dr
23	McBean Pky & Decoro Dr
24	McBean Pky & Summerhill Ln
25	McBean Pky & Skycrest Circle Dr
26	McBean Pky & Nth Prk Dr
27	McBean Pky & Sunset Hills Dr
28	McBean Pky & Gv House Dr
29	Copper Hill Dr & Calex Dr
30	Copper Hill Dr & Medlar Dr
31	Copper Hill Dr & Nth Prk Dr
32	Copper Hill Dr & Sycamore Creek Dr
33	Seco Canyon Rd
34	Seco Canyon Rd & Banyan Pl
35	Hazel St & Seco Canyon Rd
36	Hazel St
37	Tamarack Ln & Lemon St

Average load factor by trip

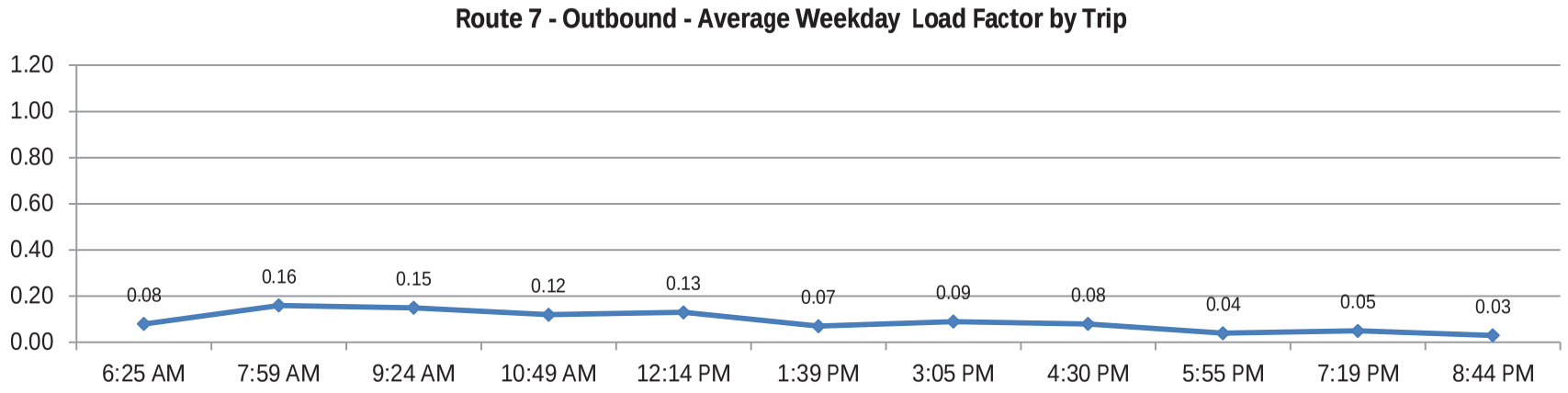
Both inbound and outbound trips on Route 7 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.27. Trips with the highest average peak loads for each day and direction are identified below.

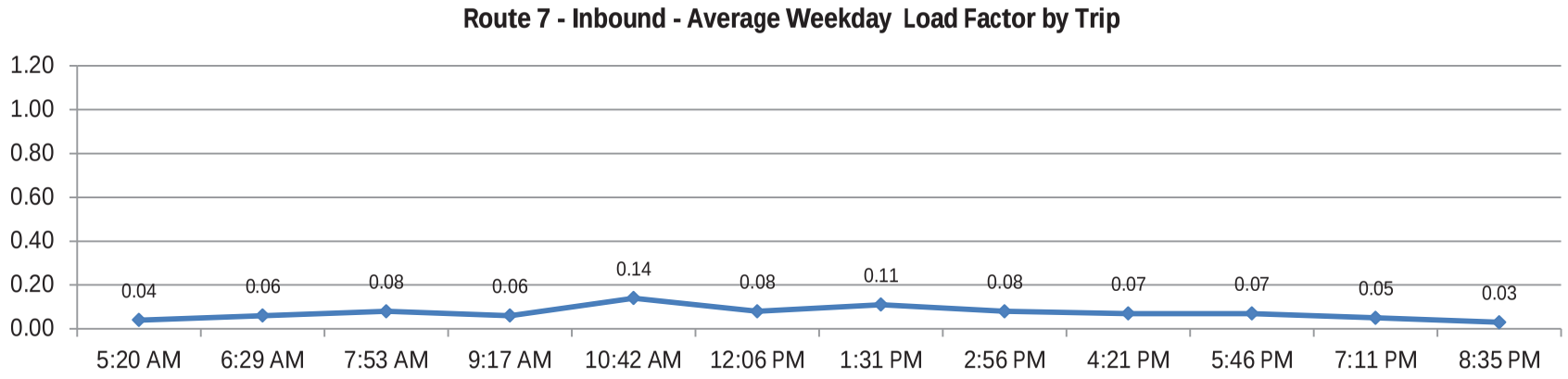
Exhibit 3.7.6 Route 7 Trips with Highest Average Peak Loads

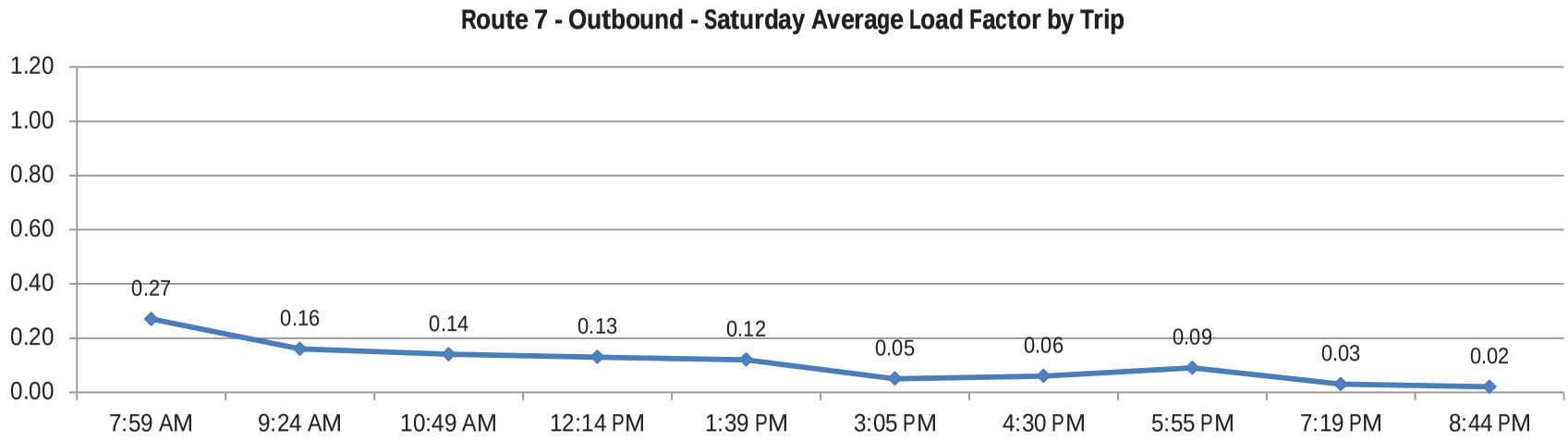
Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	7:59 a.m.	0.16
Weekday	Inbound	10:42 a.m.	0.14
Saturday	Outbound	7:59 a.m.	0.27
Saturday	Inbound	2:56 p.m.	0.10
Sunday	Outbound	7:59 a.m.	0.20
Sunday	Inbound	1:31 p.m.	0.31

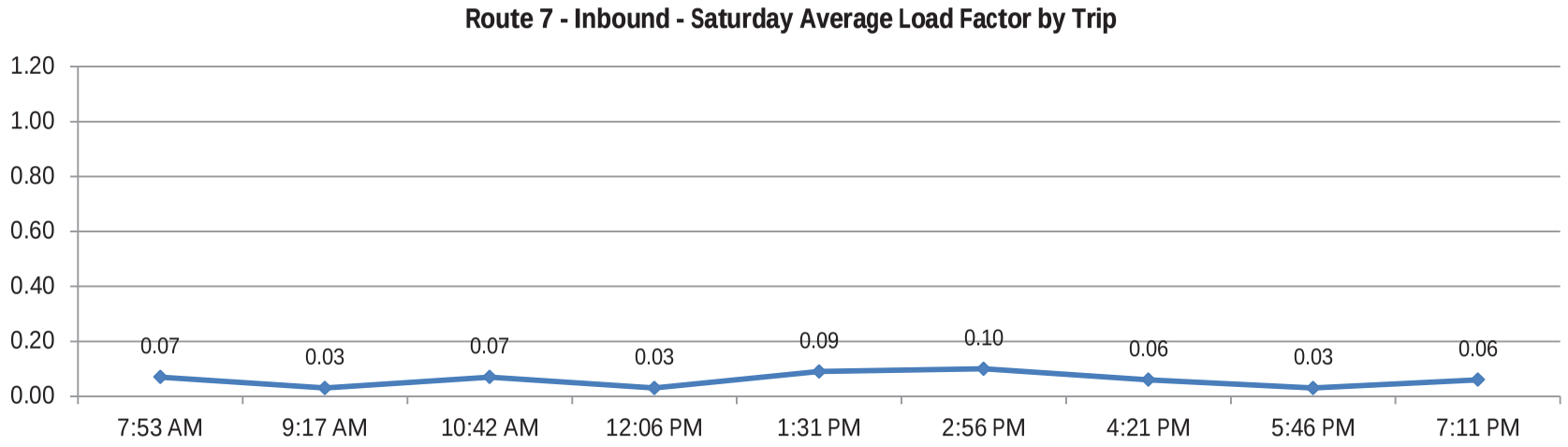
There were no individual trips which exhibited a load factor of at least 0.50.

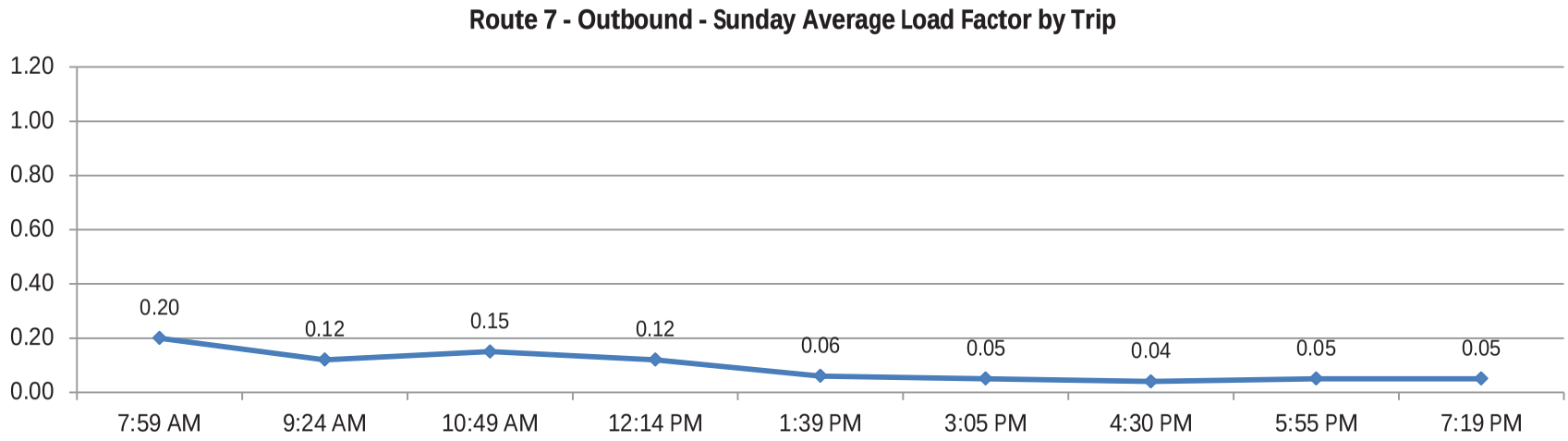
Exhibit 3.7.7 Route 7 Average Load Factor by Trip

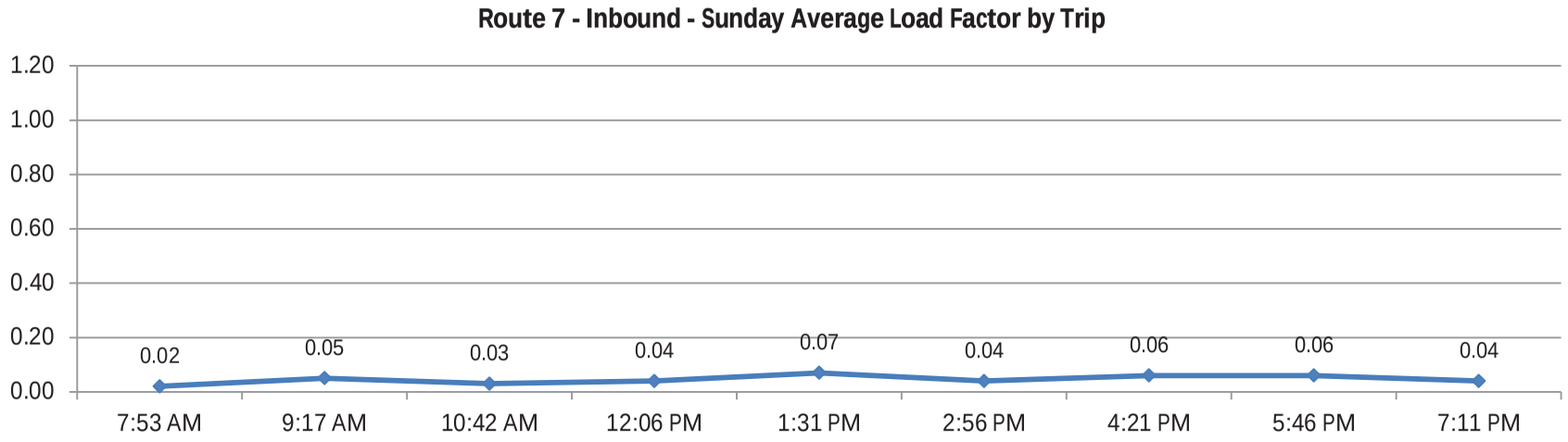





Route 7 - Outbound - Saturday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.27
0.16
0.14
0.13
0.12
0.05
0.06
0.09
0.03
0.02
7:59 AM
9:24 AM
10:49 AM
12:14 PM
1:39 PM
3:05 PM
4:30 PM
5:55 PM
7:19 PM
8:44 PM


Route 7 - Inbound - Saturday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.07
0.03
0.07
0.03
0.09
0.10
0.06
0.03
0.06
7:53 AM
9:17 AM
10:42 AM
12:06 PM
1:31 PM
2:56 PM
4:21 PM
5:46 PM
7:11 PM


Route 7 - Outbound - Sunday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.20
0.12
0.15
0.12
0.06
0.05
0.04
0.05
0.05
7:59 AM
9:24 AM
10:49 AM
12:14 PM
1:39 PM
3:05 PM
4:30 PM
5:55 PM
7:19 PM


Route 7 - Inbound - Sunday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.02
0.05
0.03
0.04
0.07
0.04
0.06
0.06
0.04
7:53 AM
9:17 AM
10:42 AM
12:06 PM
1:31 PM
2:56 PM
4:21 PM
5:46 PM
7:11 PM

Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 7's weekday outbound service exhibits better overall schedule adherence (78.3 percent) than the inbound service (72.7 percent). On Saturday, schedule adherence improves, with both services operating at approximately 83 to 84 percent. On Sunday, schedule adherence improves slightly, with 84.3 percent of outbound trips and 84.9 percent of inbound trips on-time.

Schedule adherence for Route 7 was reviewed using the data provided by the City, which calculates only the deviation from the scheduled departure time from the MRTC (not the arrival time). Given the high incidence of early inbound departures from the MRTC, on-time performance at the MRTC was examined more closely.

With respect to the inbound service, nearly all trips traveling to the MRTC on weekdays arrived on time. However, the scheduled layover is just three minutes, which appears to result in the majority of drivers ignoring it all together. Nearly 87 percent of the inbound weekday departures from the MRTC departed early. On Saturday and Sunday, all departures from the MRTC departed prior to the published schedule.

It should also be noted that a closer look at outbound early departures seemed to be concentrated at McBean Pkwy, rather than at the MRTC. This is consistent with the data issue noted in conjunction with the bubble maps. However, while that bus stop appears as a time-point in the data, it does not have both published arrival and departure times associated with it. Therefore, that stop is being evaluated against the arrival time, rather than the departure time, and some of the "early" designations appear to be in error. Reconciliation of this issue will require further analysis of data as produced by the City's onboard data platform.

Schedule adherence by time-point

On weekdays, outbound service had the highest schedule adherence at Magic Mountain Pkwy (Six Flags) (95.5 percent). The lowest was at Alta Vista Rd/Constellation Blvd (57.8 percent). Late trips were the primary issue, though some early departures were noted. The inbound service had its highest schedule adherence at The Old Rd/Silver Aspen Wy (94 percent) and lowest at the MRTC (13.3 percent). Early departures from the MRTC were a significant concern, as discussed above. However, despite the early departures from the MRTC, Newhall Ranch Rd/McBean Pkwy (the next time-point) experienced 41 percent late trips. This indicates there may not be sufficient time in the schedule for that segment, and may explain why drivers do not dwell at the MRTC.

On Saturday, outbound service had the highest schedule adherence at the MRTC and Magic Mountain Pkwy (Six Flags) (100 percent of observed trips), and the lowest at The Old Rd/Silver Aspen Wy (70 percent). The primary issue at this time-point is early departures. The inbound service had 100-percent

on-time performance for observed trips at multiple time-points. However, the MRTC had zero percent of trips on-time, as 100 percent departed early (as discussed above).

On Sunday, the outbound service had its highest schedule adherence at Magic Mountain Pkwy (Six Flags) (100 percent of observed trips) and its lowest at Alta Vista Rd/Constellation Blvd (62.5 percent). Late trips were the primary issue. As on Saturday, the inbound service the MRTC saw zero percent of trips on-time, as 100 percent departed early. All other time-points had on-time performance of 95 percent or greater.

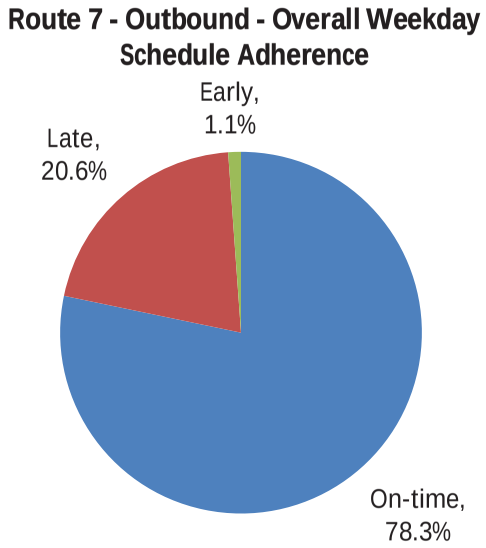
Schedule adherence by time of day

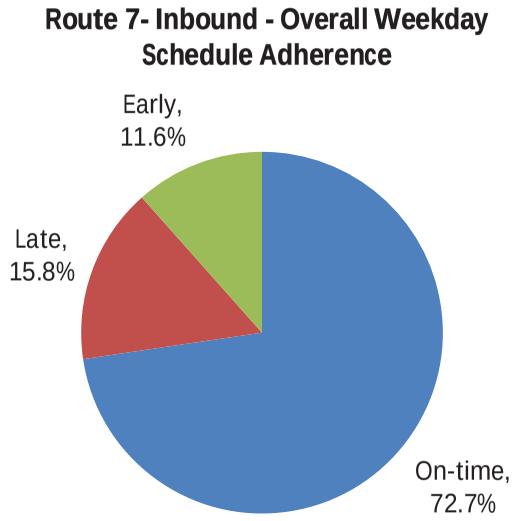
On weekdays, outbound schedule adherence is highest during the Late PM period (87.9 percent) and lowest during the PM Peak day-part (54.8 percent). For the inbound service, schedule adherence is highest in the Early AM period (99.3 percent), though that day-part consists of only one trip. Late PM sees the next-highest schedule adherence (80 percent). As with the outbound service, the PM Peak day-part has the lowest on-time performance (62.9 percent). Early trips are experienced across all day-parts.

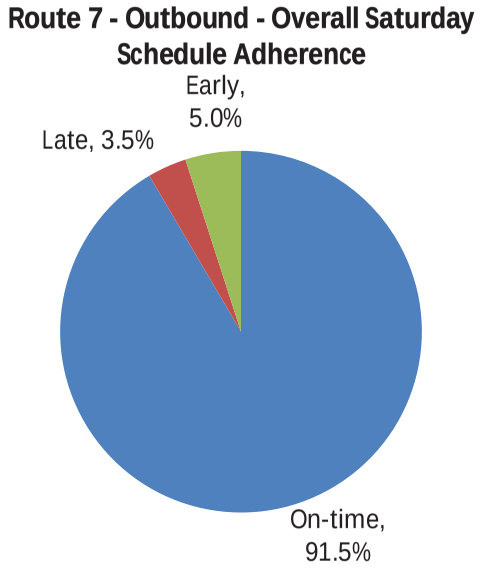
On Saturday, outbound schedule adherence is highest during the AM Peak day-part (100 percent of observed trips) and lowest during the PM Peak period (84.1 percent). For the inbound service, schedule adherence is highest during the AM Peak and Late PM day-parts (87.5 percent each), and lowest during the PM Peak period (80 percent). Early trips are the primary issue for the inbound service during all day-parts.

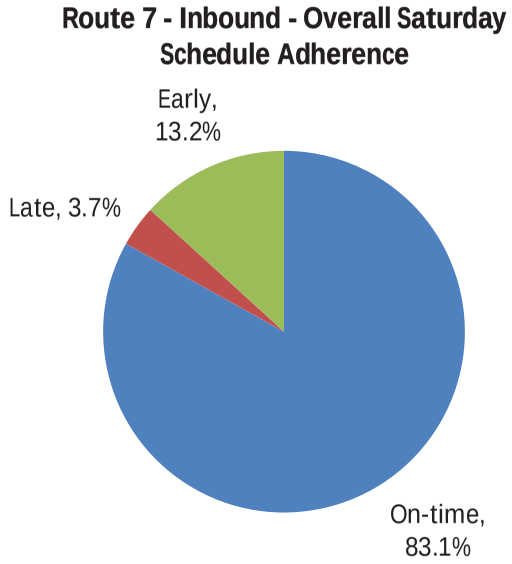
On Sunday, the outbound service has its highest schedule adherence during the Late PM day-part (100 percent of observed trips) and lowest during the PM Peak period (66.7 percent), where late trips are the issue. The Sunday inbound service is very similar to the Saturday inbound service, with early trips the primary issue across all day-parts. On-time performance for the Sunday inbound service ranges from 87.5 percent (AM Peak) to 82.5 percent (Late PM), gradually eroding across the service day.

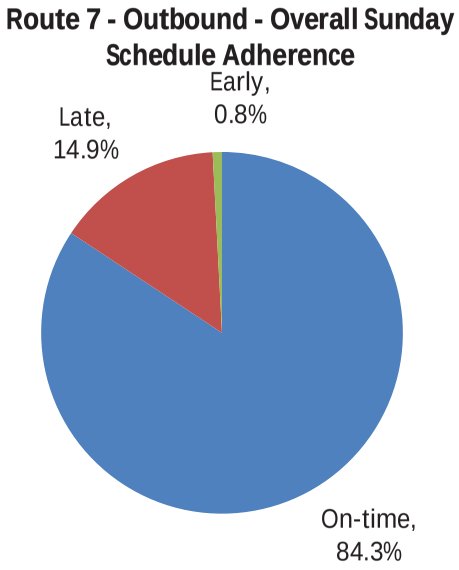
Exhibit 3.7.8 Route 7 Overall Schedule Adherence










Route 7 - Outbound - Overall Sunday Schedule Adherence
Early, 0.8%
Late, 14.9%
On-time, 84.3%

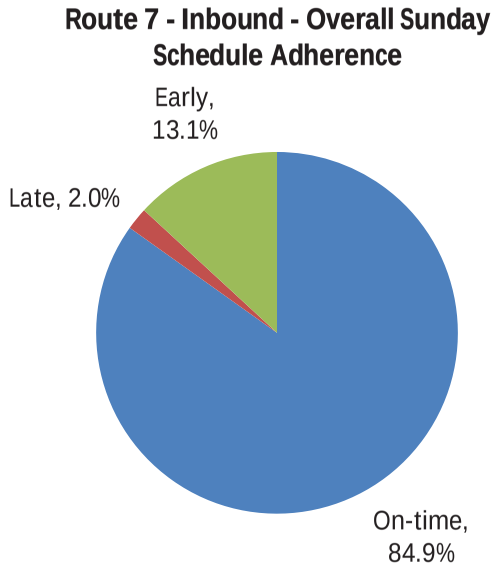
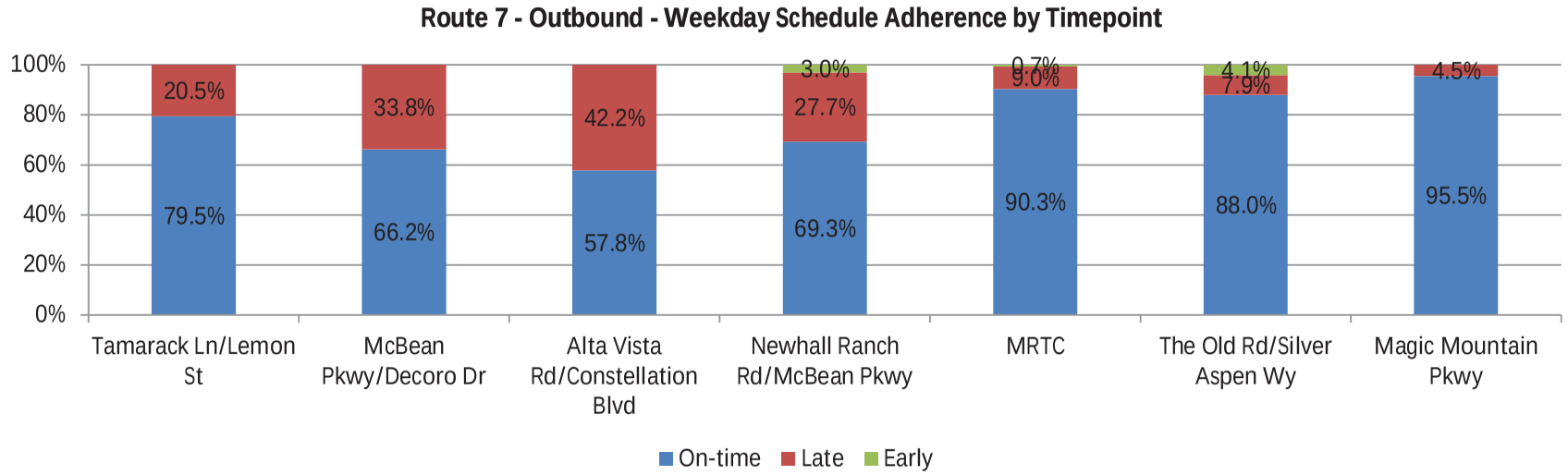
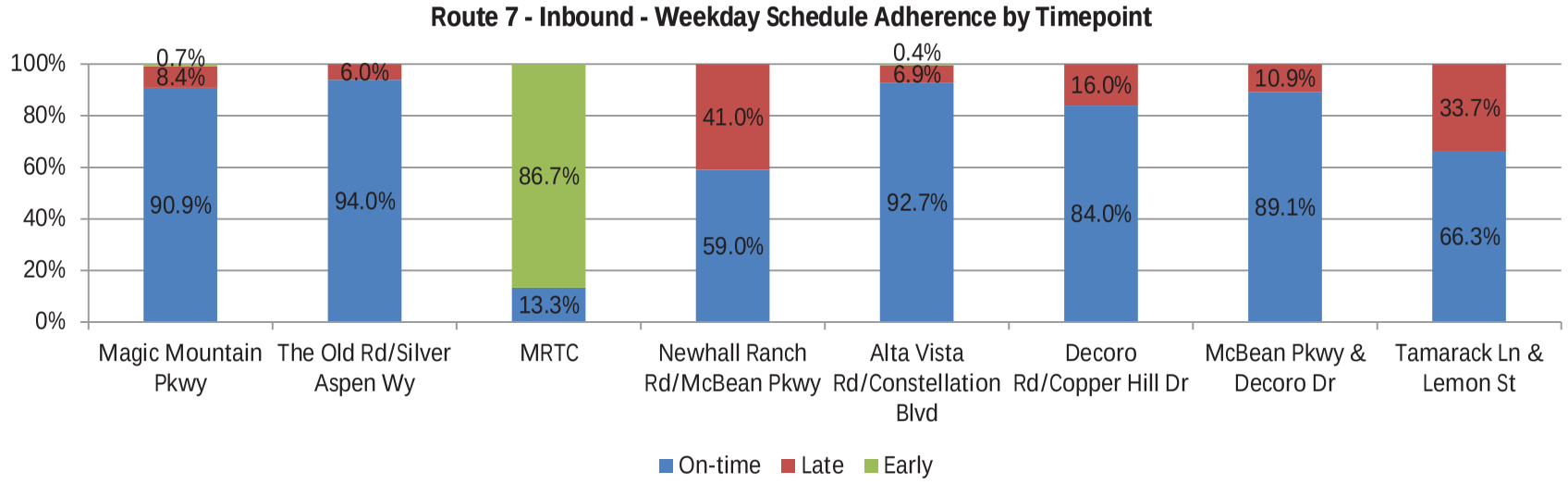
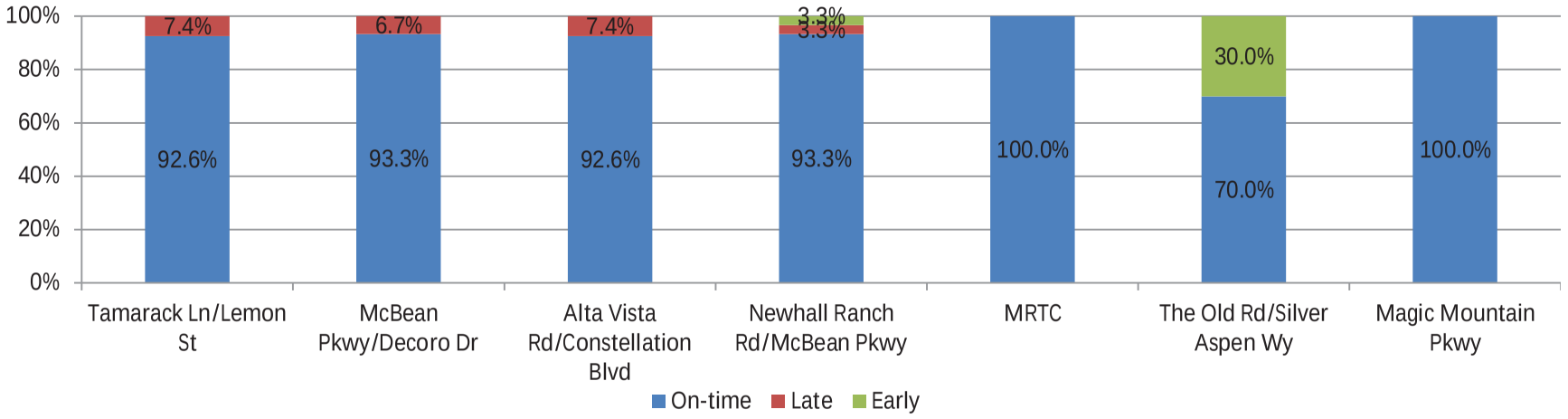

Route 7 - Inbound - Overall Sunday Schedule Adherence
Early, 13.1%
Late, 2.0%
On-time, 84.9%

Exhibit 3.7.9 Route 7 Schedule Adherence by Time-point

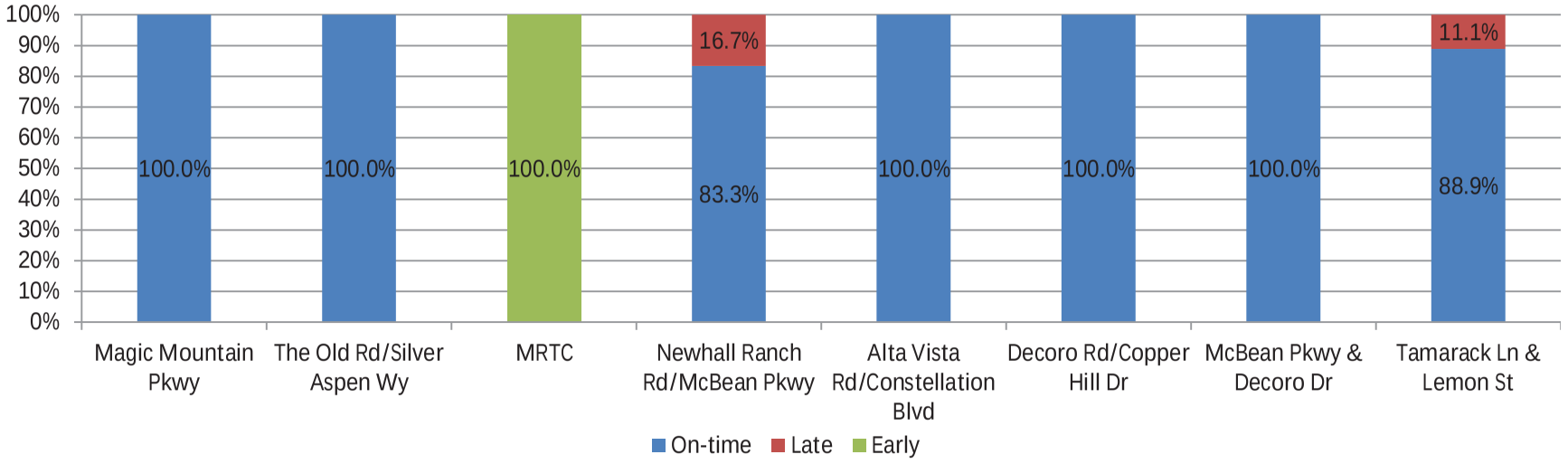


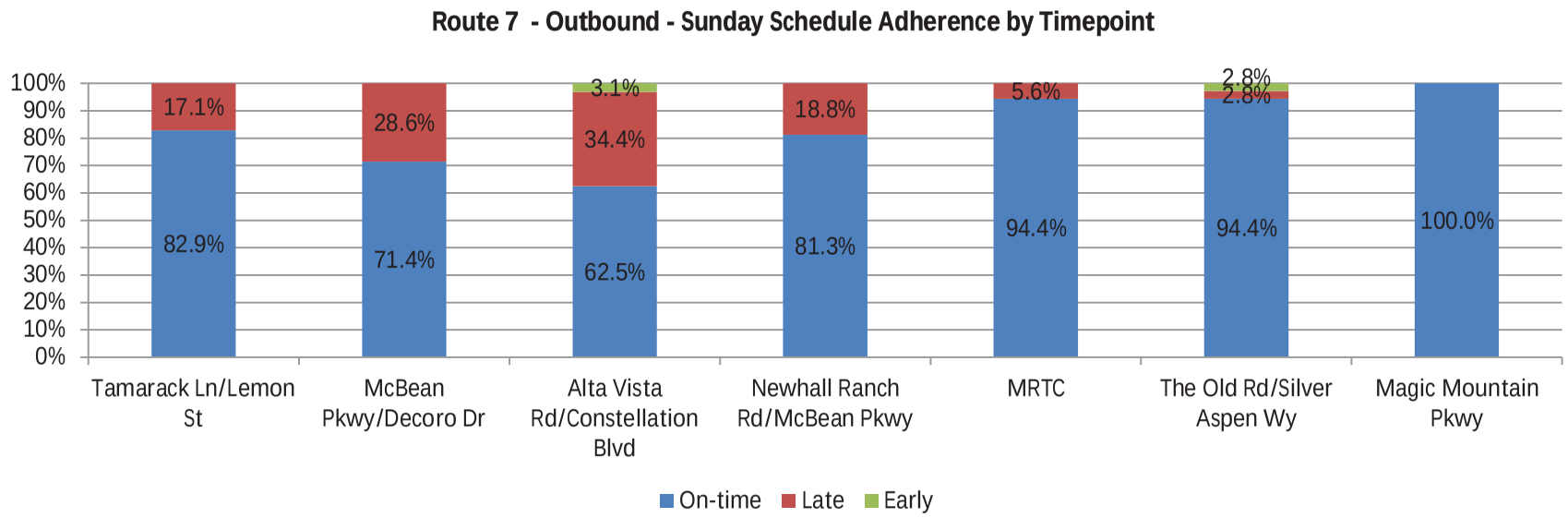


Route 7 - Outbound - Saturday Schedule Adherence by Timepoint



Route 7 - Inbound - Saturday Schedule Adherence by Timepoint




Route 7 - Outbound - Sunday Schedule Adherence by Timepoint
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
17.1%
82.9%
28.6%
71.4%
3.1%
34.4%
62.5%
18.8%
81.3%
5.6%
94.4%
2.8%
2.8%
94.4%
100.0%
Tamarack Ln/Lemon St
McBean Pkwy/Decoro Dr
Alta Vista Rd/Constellation Blvd
Newhall Ranch Rd/McBean Pkwy
MRTC
The Old Rd/Silver Aspen Wy
Magic Mountain Pkwy
On-time
Late
Early

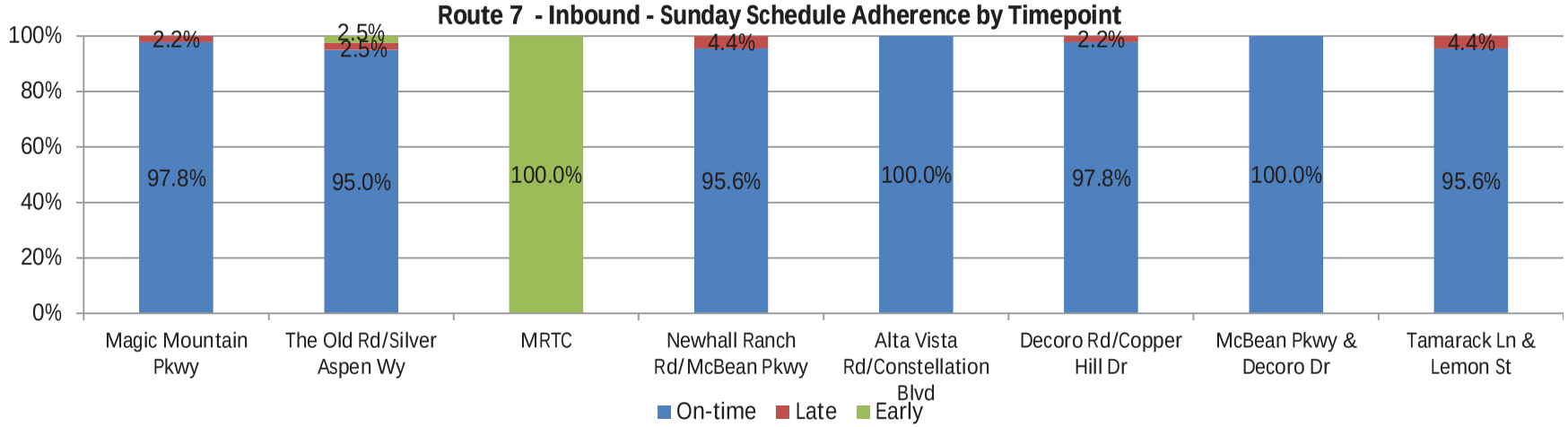
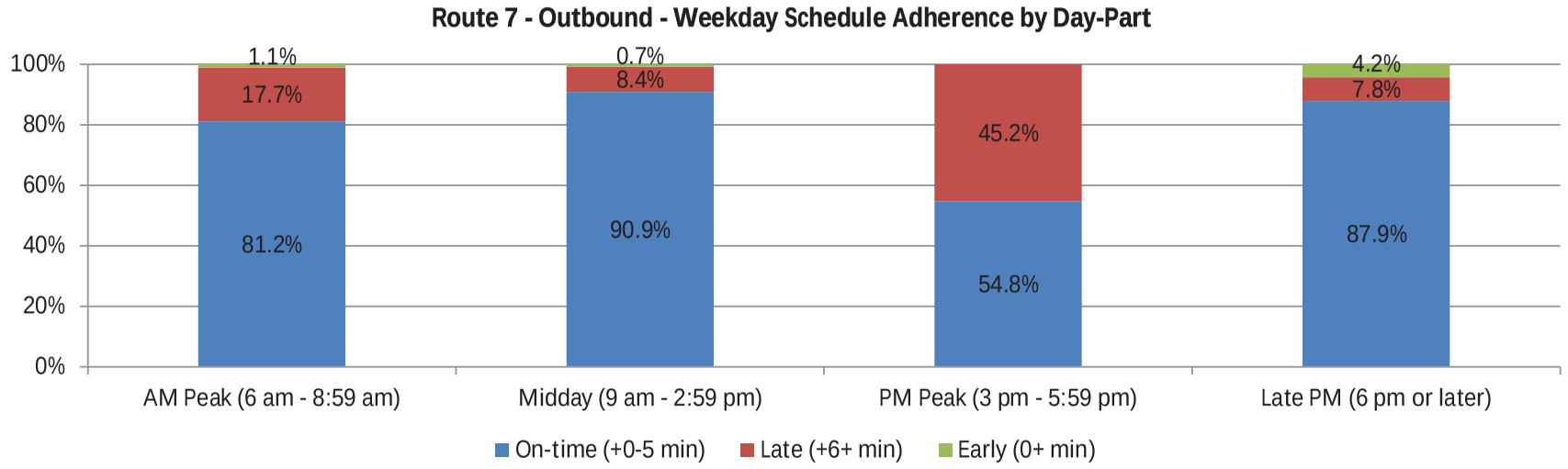
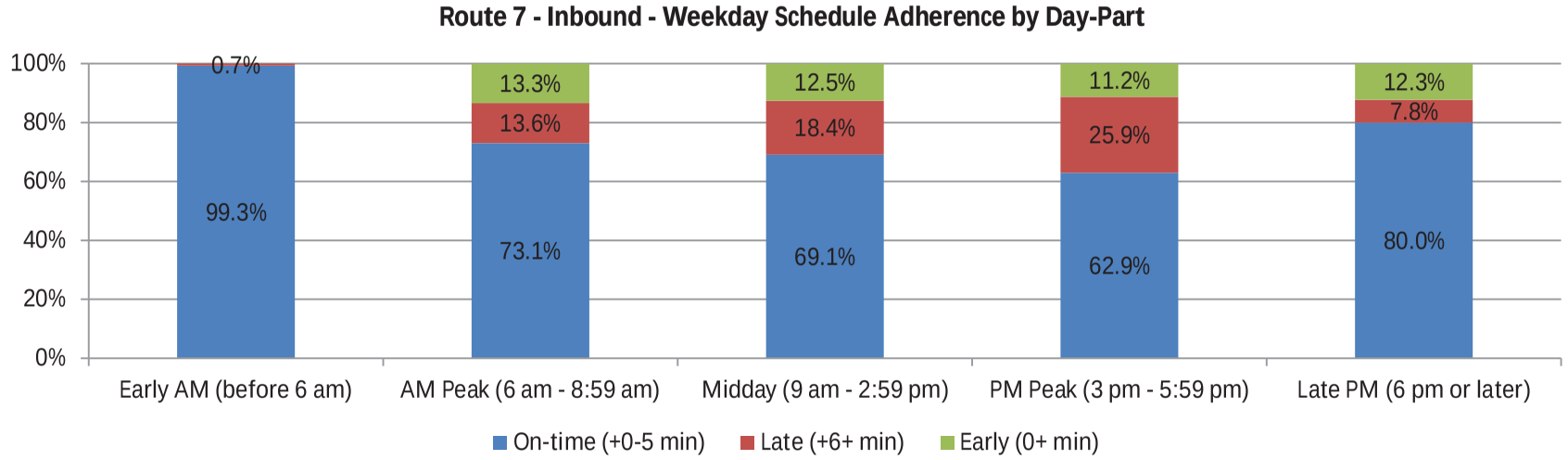
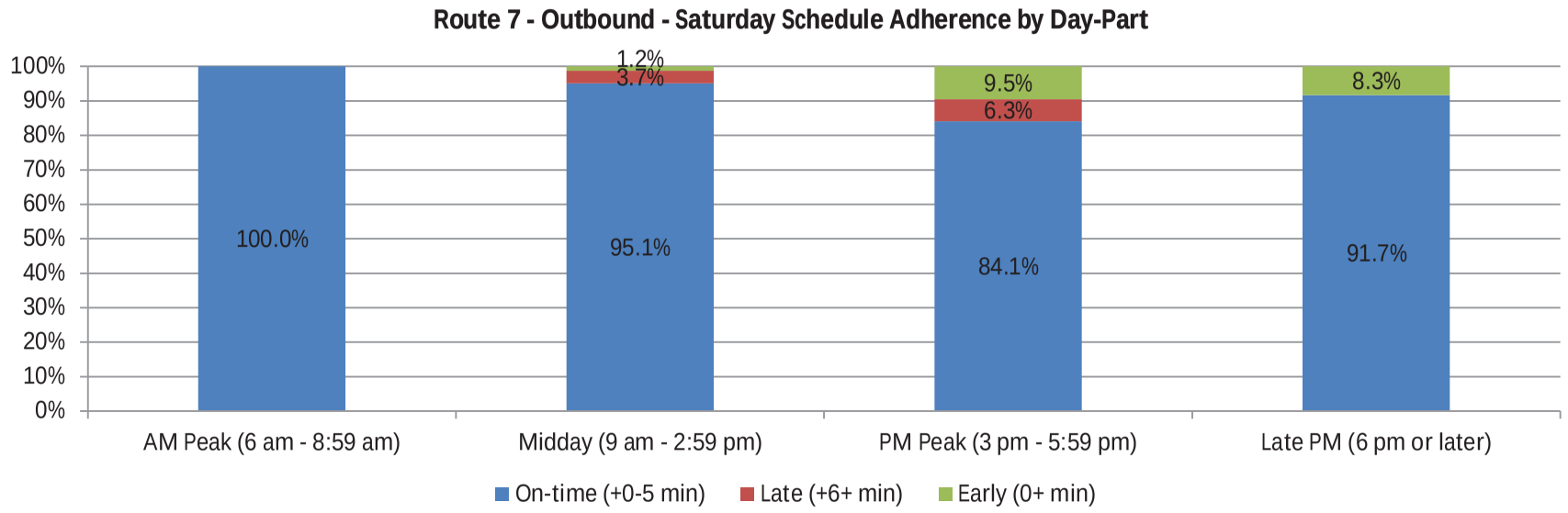
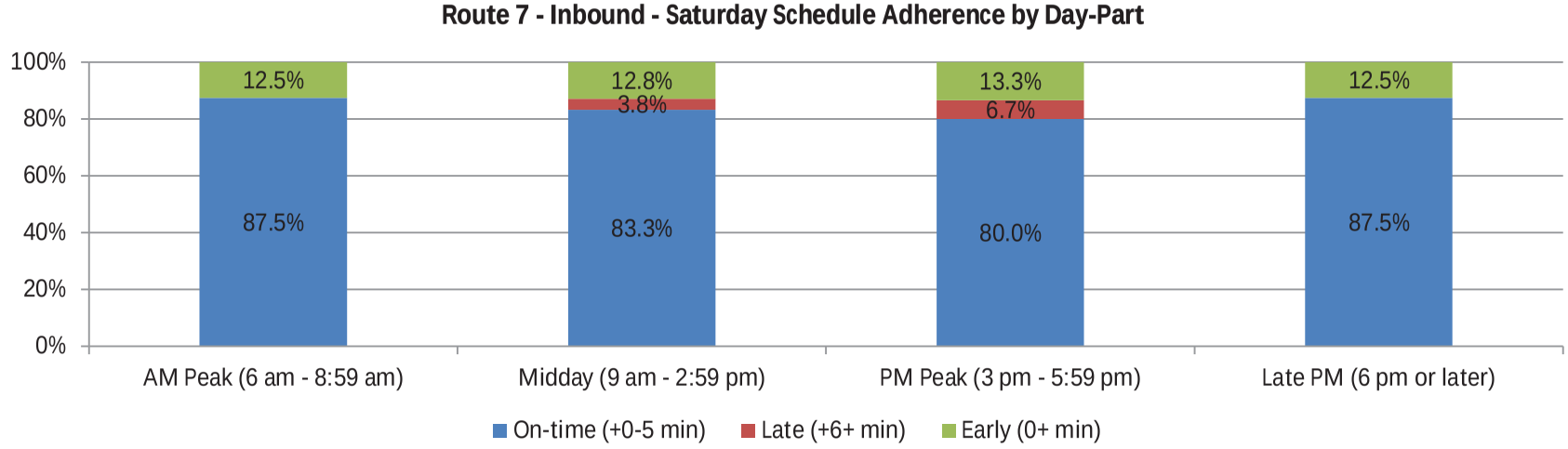

Route 7 - Inbound - Sunday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
2.2%
97.8%
2.5%
2.5%
95.0%
100.0%
4.4%
95.6%
100.0%
2.2%
97.8%
100.0%
4.4%
95.6%
Magic Mountain Pkwy
The Old Rd/Silver Aspen Wy
MRTC
Newhall Ranch Rd/McBean Pkwy
Alta Vista Rd/Constellation Blvd
Decoro Rd/Copper Hill Dr
McBean Pkwy & Decoro Dr
Tamarack Ln & Lemon St
On-time
Late
Early

Exhibit 3.7.10 Route 7 Schedule Adherence by Day-Part

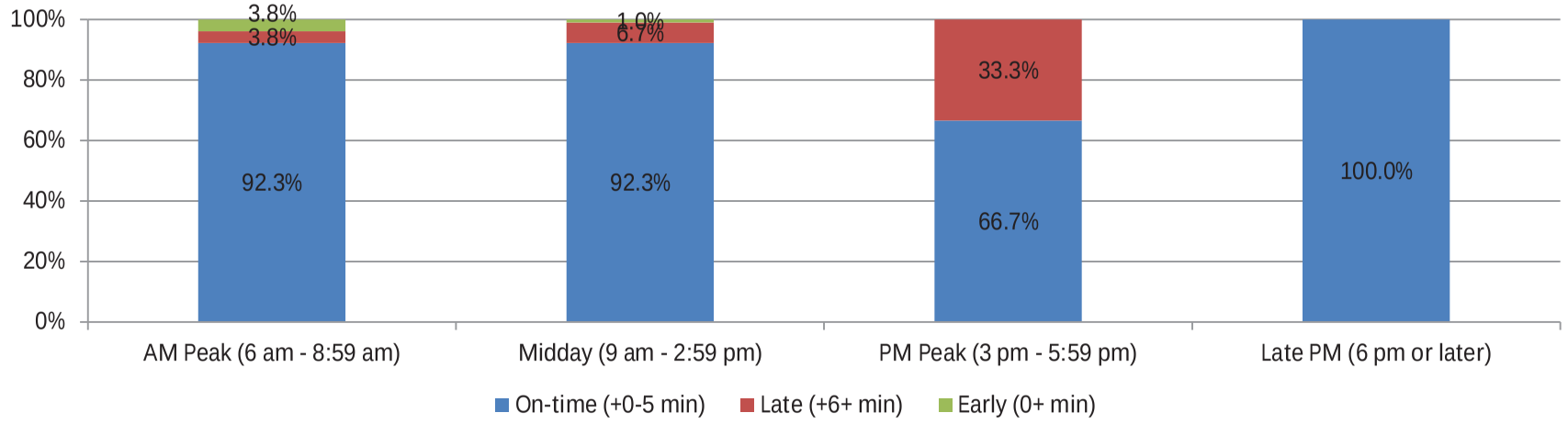




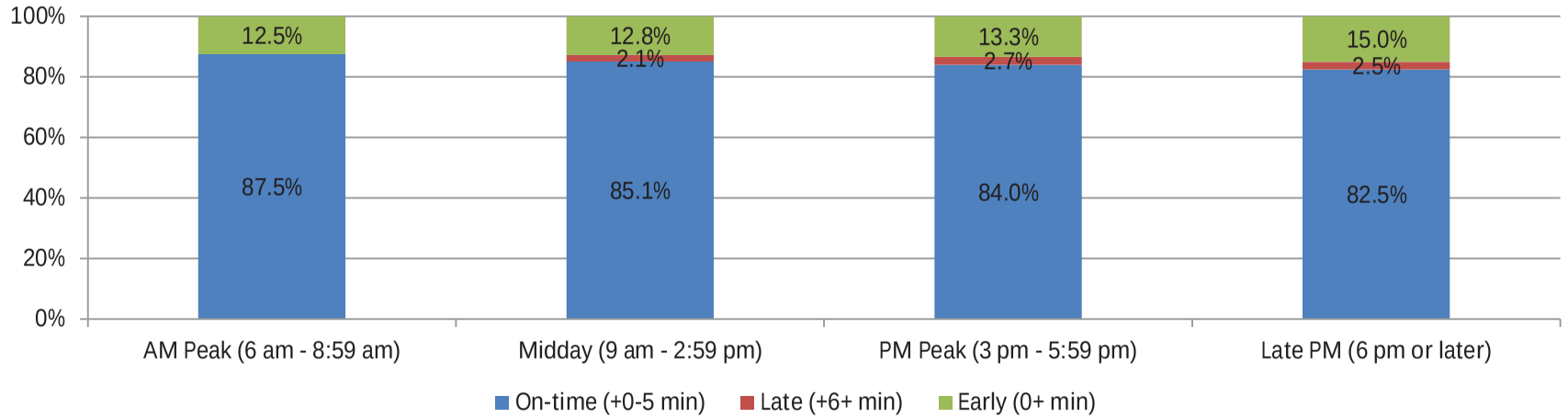

Route 7 - Outbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
100.0%
1.2%
3.7%
95.1%
9.5%
6.3%
84.1%
8.3%
91.7%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 7 - Inbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
12.5%
87.5%
12.8%
3.8%
83.3%
13.3%
6.7%
80.0%
12.5%
87.5%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route 7 - Outbound - Sunday Schedule Adherence by Day-Part



Route 7 - Inbound - Sunday Schedule Adherence by Day-Part



Route Performance

Overall ridership

Exhibit 3.7.11 Route 7 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.7.12 Route 7 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking (overall)
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	83.4%	84.6%	76.9%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 12 Profile and Performance Analysis

Route Description

Route 12 serves the McBean Regional Transit Center, Valencia Town Center, Valencia Library and Courthouse, Newhall Library, Newhall Metrolink Station, Newhall Community Center, William S. Hart Park, Via Princessa Metrolink Station, Sierra Vista Junior High School, Canyon High School, Canyon Country Community Center, Canyon Country Library, Whites Canyon, and Plum Canyon. The route travels between Canyon Country and the MRTC via Newhall.

Primary streets of operation include Valencia Boulevard, Bouquet Canyon Road, Railroad Avenue, Newhall Avenue, Sierra Highway, Soledad Canyon Road, Whites Canyon Road, and Heller Circle.

Outbound service is defined as that originating at Heller Circle and Maitland Lane in Plum Canyon and traveling to the McBean Regional Transit Center. Inbound service travels in the opposite direction. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, outbound ridership peaks at 3:06 p.m. with an average of 101 riders per trip. A two smaller morning peaks occur at 6:37 a.m. and 7:00 a.m. (with an average of 68 and 72 riders, respectively). There is a similar pattern for the inbound service. Ridership peaks at 3:00 p.m. with an average of 73 riders per trip, with a smaller peak at 6:37 a.m. (average of 59 riders per trip).

On Saturday, outbound ridership peaks during the first trip of the day (6:38 a.m.) with an average of 37 riders per trip. Ridership gradually erodes across the service day. Average ridership per trip generally remains between 20 and 30 from 7:33 a.m. to 1:35 p.m.; between 10 and 20 from 1:59 p.m. to 6:36 p.m., and ten or below after 7:00 p.m. Inbound ridership peaks at 12:44 p.m. with an average of 34 riders per trip. It peaks again at 5:20 p.m. with an average of 33 riders per trip.

On Sunday, as on Saturday, outbound ridership peaks during the first trip of the day (7:08 a.m.) with an average of 32 riders per trip. A second peak occurs at 1:35 p.m., with an average of 27 riders per trip. Average ridership remains between approximately 10 and 20 riders per trip across the majority of the service day. Inbound service peaks late in the day (6:17 p.m.) with an average of 41 riders per trip. Average ridership per trip ranges from approximately 10 to 20 until around 4:00 p.m., when average ridership goes up.

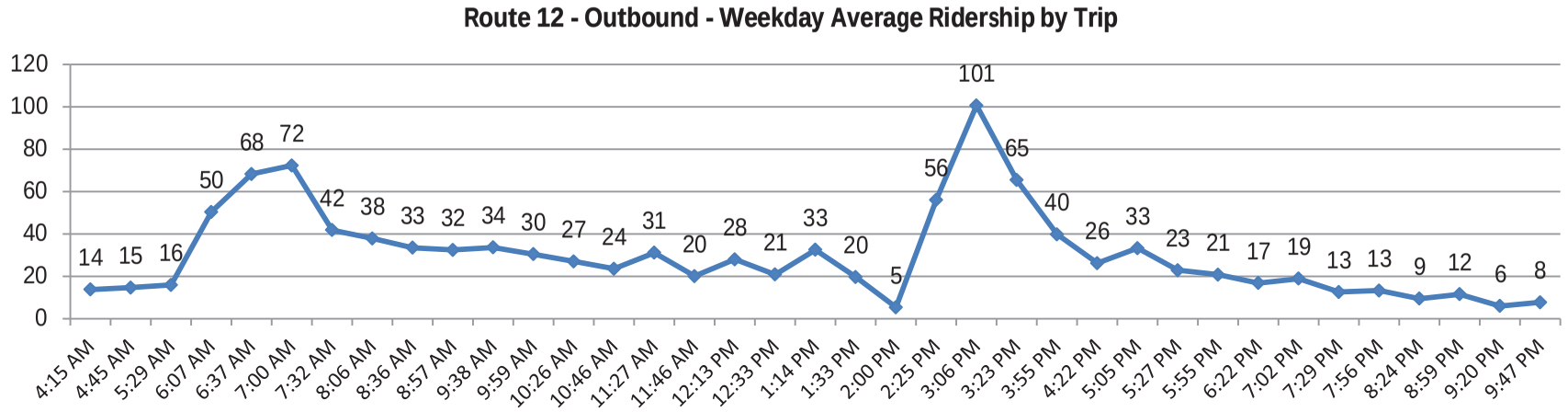
Average ridership by time of day

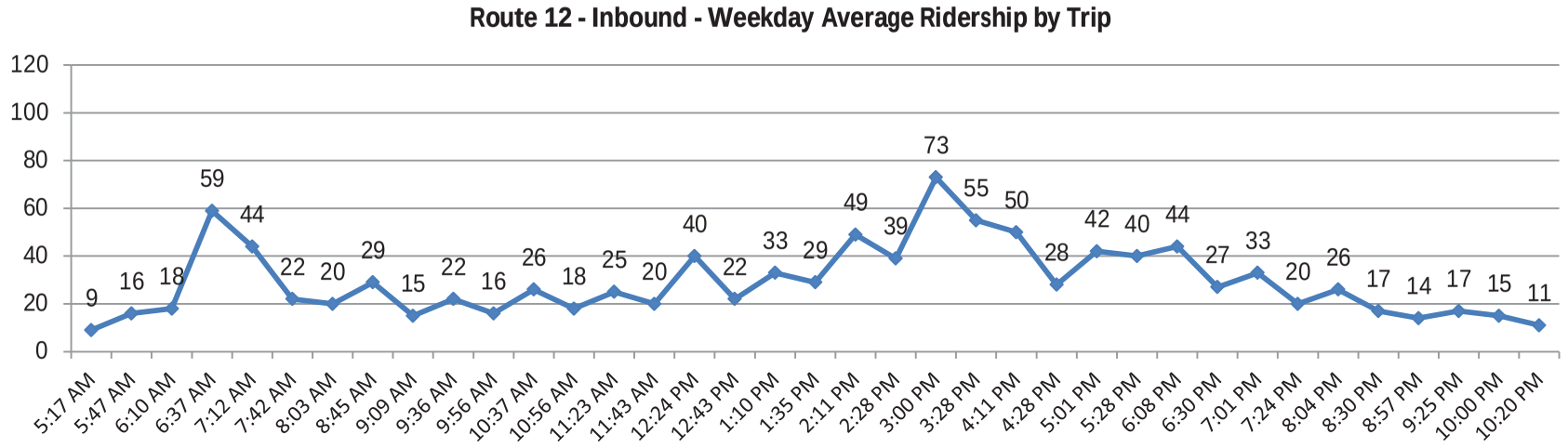
On weekdays, outbound ridership is greatest during the AM Peak and PM Peak day-parts (average of 47 riders per trip each). Inbound ridership is greatest during the PM Peak period, with an average of 46 riders per trip.

On Saturday, outbound ridership is greatest during the AM Peak period (average of 28 riders per trip). Inbound ridership is greatest during the PM Peak day-part (average of 27 riders per trip).

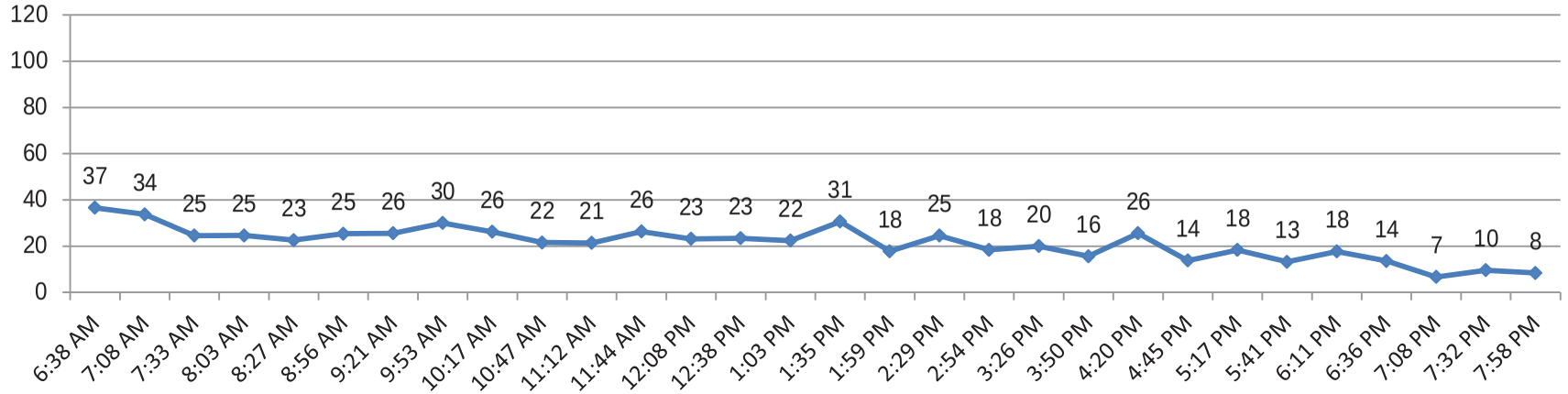
On Sunday, outbound ridership is greatest during the AM Peak and Mid-day periods (average of 21 riders per trip each). Inbound ridership is greatest during the PM Peak and Late PM day-parts (average of 24 and 23 riders per trip, respectively).

Exhibit 3.8.1 Route 12 Average Ridership by Trip

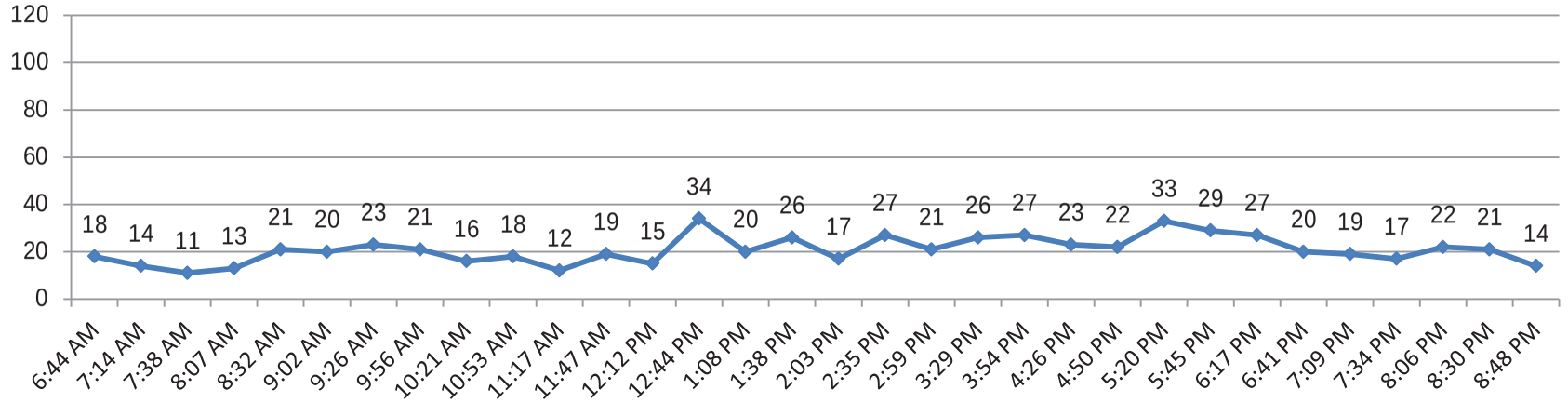




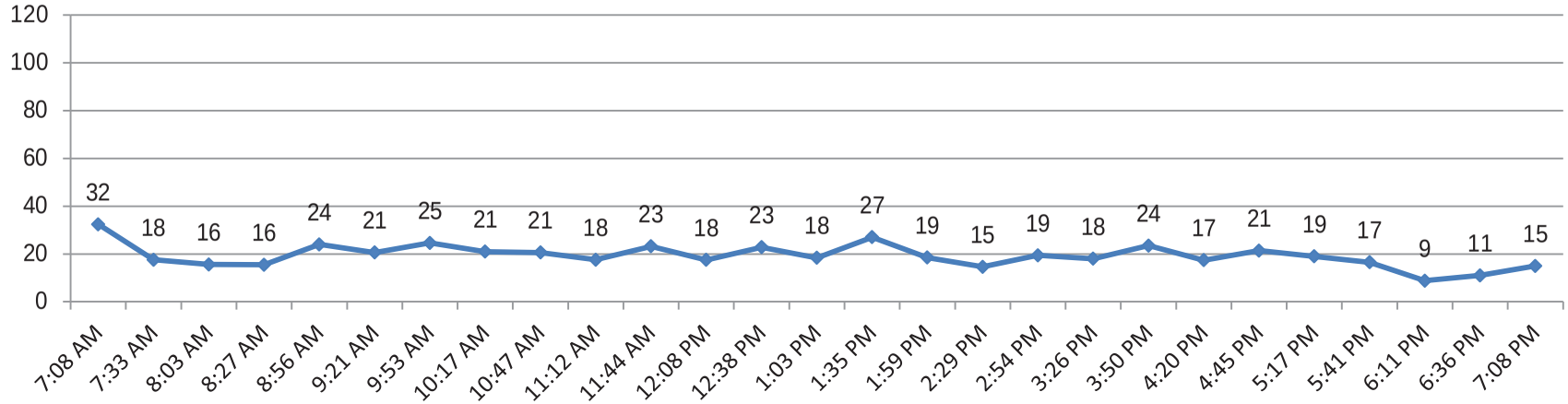
Route 12 - Outbound - Saturday Average Ridership by Trip



Route 12 - Inbound - Saturday Average Ridership by Trip



Route 12 - Outbound - Sunday Average Ridership by Trip



Route 12 - Inbound - Sunday Average Ridership by Trip

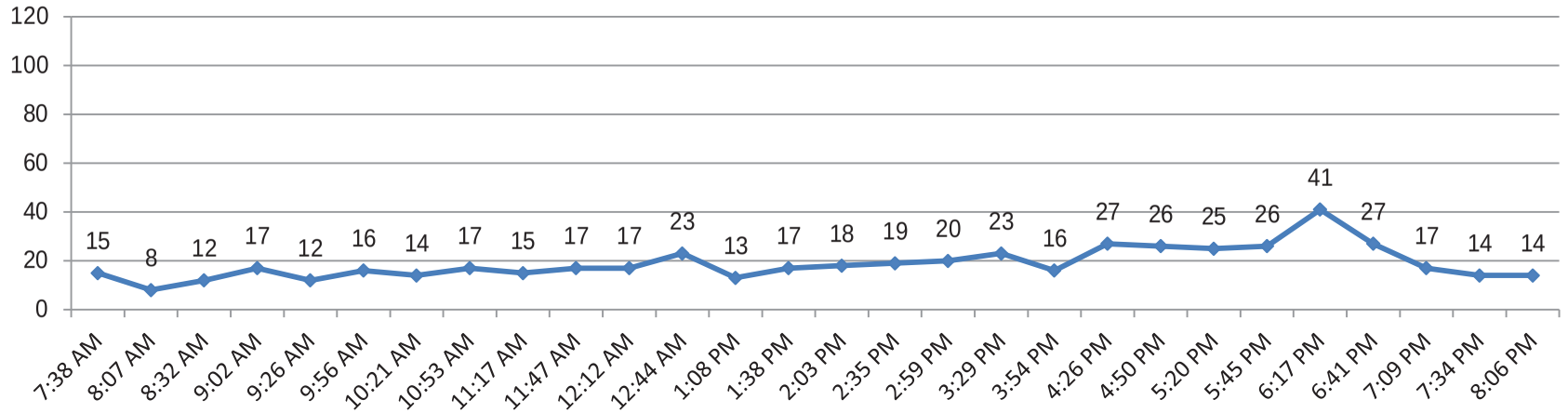
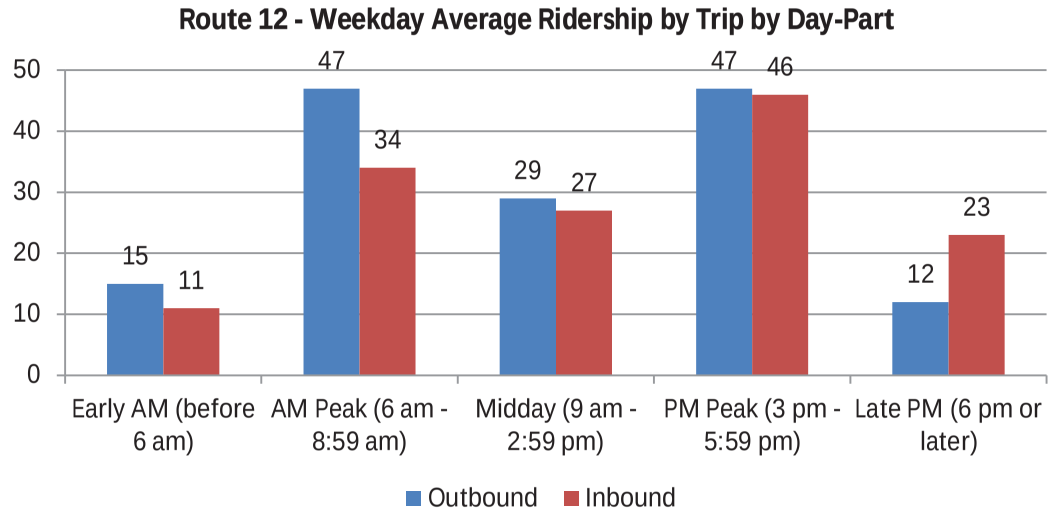
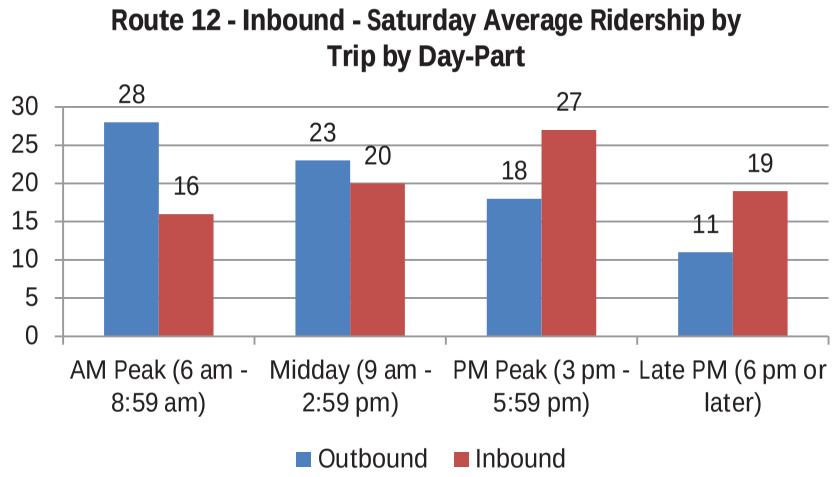
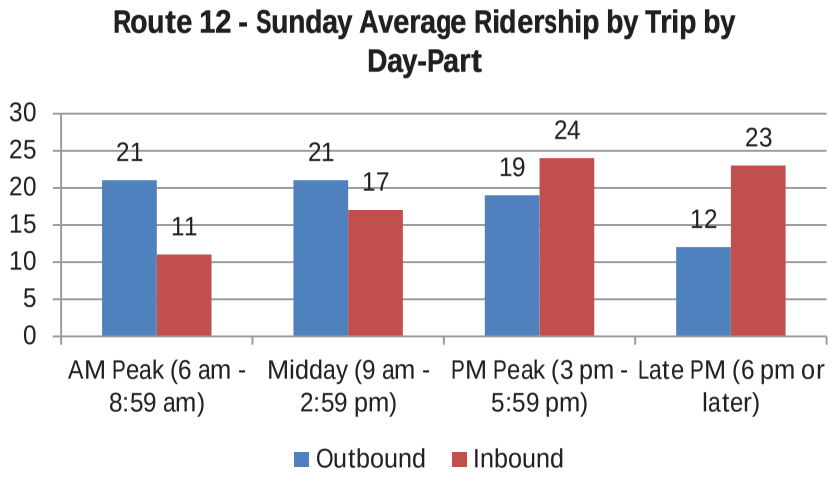


Exhibit 3.8.2 Route 12 Average Ridership by Trip by Day-Part







Average ridership (boardings) by segment

On weekdays, the outbound service saw the greatest number of boardings within the Heller Circle/Maitland Ln to Soledad Canyon/Whites Canyon and Soledad Canyon/Sierra Hwy to Sierra Hwy/Friendly Valley Pkwy route segments. The inbound service saw the greatest number of boardings within the Railroad Ave/Sixth Street to MRTC route segment.

On Saturday, the Soledad Canyon/Whites Canyon to Soledad Canyon/Sierra Hwy segment had the greatest number of boardings by far. The inbound service saw the greatest number of boardings within the Railroad Ave/Sixth Street to MRTC route segment.

On Sunday, outbound boardings were spread fairly evenly across multiple segments, with Heller Circle/Maitland Ln to Soledad Canyon/Whites Canyon and Soledad Canyon/Sierra Hwy to Sierra Hwy/Friendly Valley Pkwy route segments slightly higher than the others. The inbound service saw the greatest number of boardings within the Railroad Ave/6th Street to MRTC route segment.

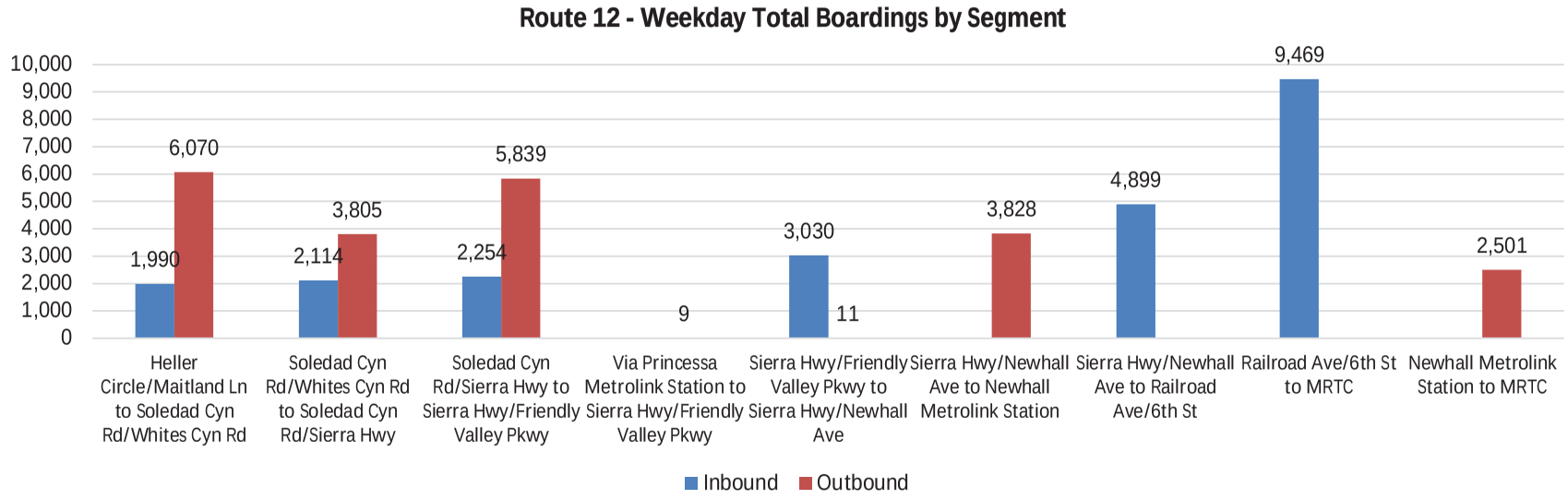
Average boarding and alighting by stop

Beginning on page 11, bubble maps indicate the relative level of activity at each Route 12 bus stop, both inbound and outbound.

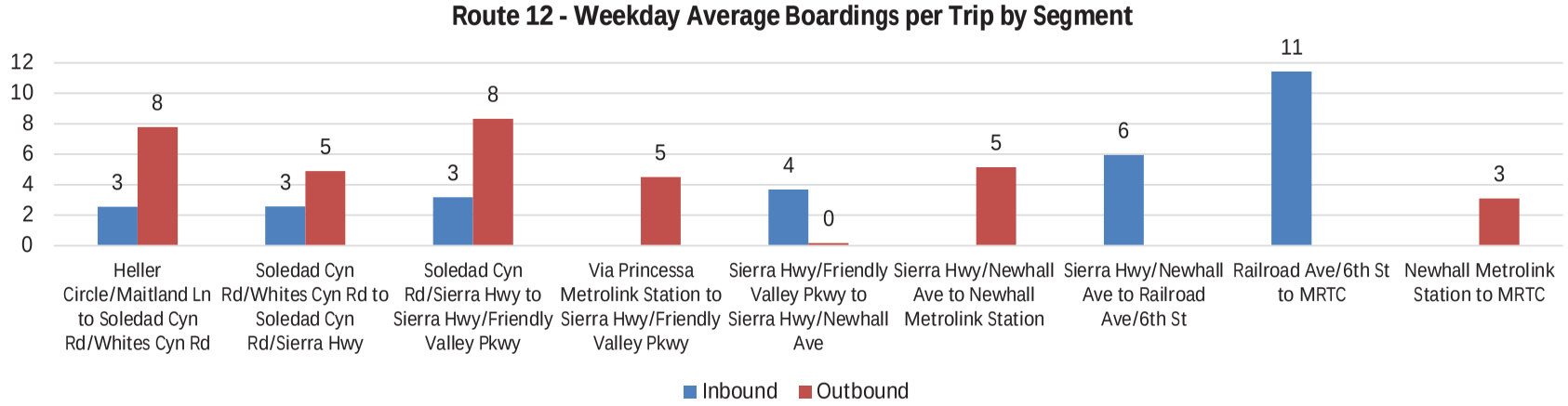
The MRTC is one of the highest-activity stops for both directions on all days of the week. On weekdays, other high-activity stops for the outbound service include Sierra Hwy/Canyon Park Blvd and the Newhall Metrolink Station. For the inbound service, high-activity stops also include Railroad Ave/6th Street, Sierra Hwy/Golden Valley Rd, Sierra Hwy/Canyon Park Blvd, and Soledad Canyon/Sierra Hwy.

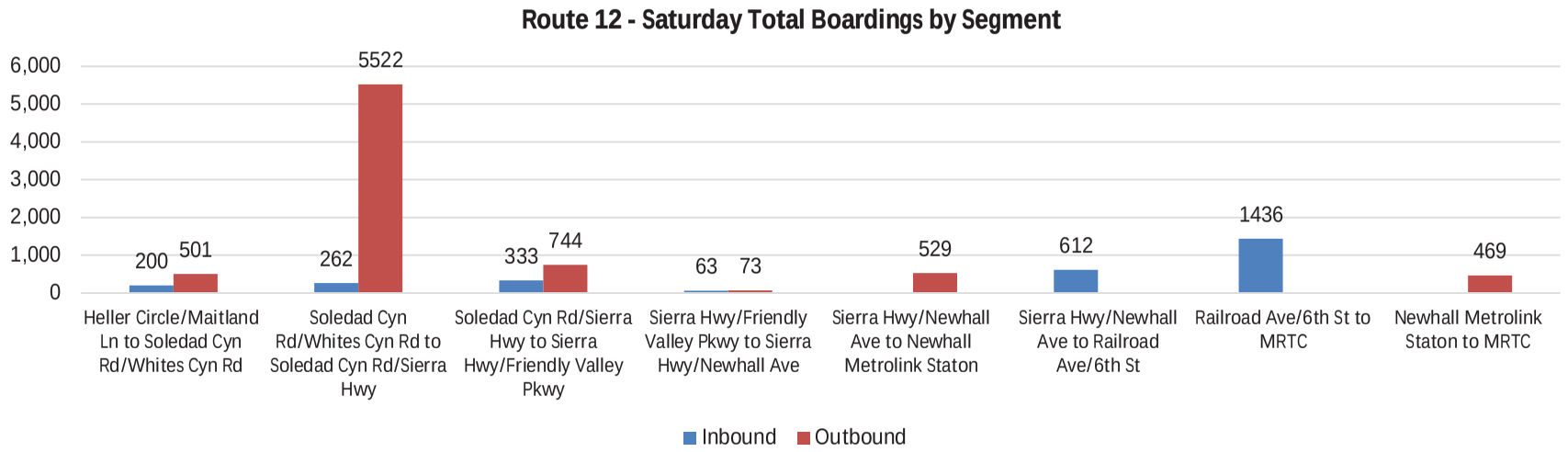
On Saturday and Sunday, outbound activity is greatest at the MRTC and the Newhall Metrolink Station. Inbound activity is greatest at the MRTC, Railroad Ave/6th Street, and Soledad Canyon/Sierra Hwy. There is also significant inbound activity at Whites Canyon/Soledad Canyon on Sunday.

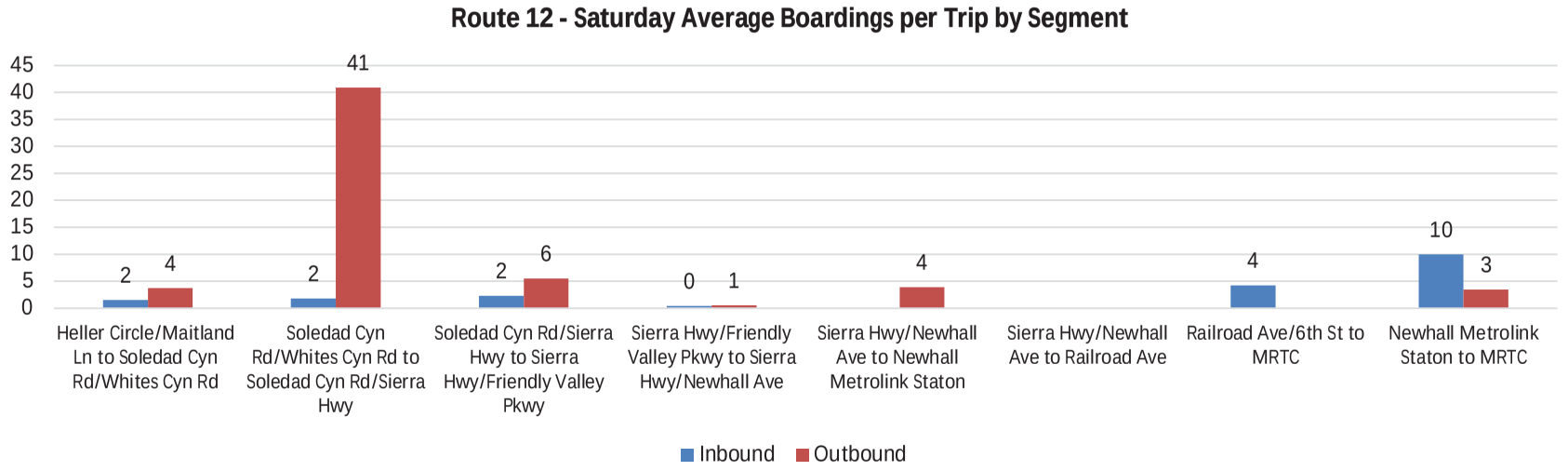
Exhibit 3.8.3 Route 12 Total and Average Boardings by Segment

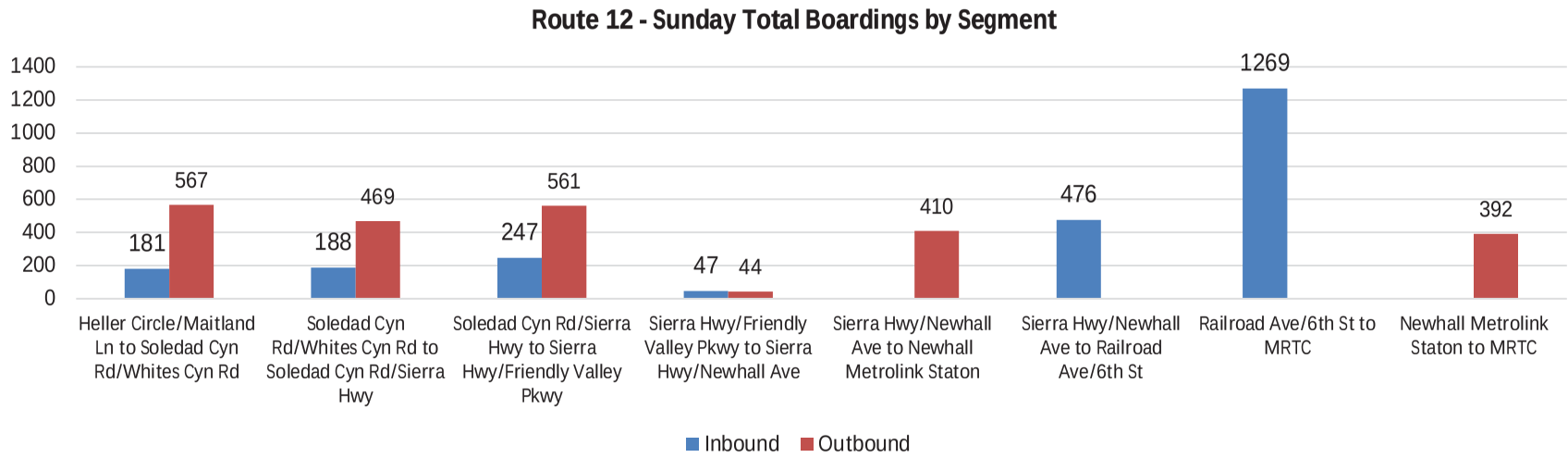


Note: Segments differ slightly with respect to inbound and outbound service. As a result, a particular segment may only show boardings for one direction.




Route 12 - Saturday Total Boardings by Segment
6,000
5,000
4,000
3,000
2,000
1,000
0
200
501
262
5522
333
744
63
73
529
612
1436
469
Heller Circle/Maitland Ln to Soledad Cyn Rd/Whites Cyn Rd
Soledad Cyn Rd/Whites Cyn Rd to Soledad Cyn Rd/Sierra Hwy
Soledad Cyn Rd/Sierra Hwy to Sierra Hwy/Friendly Valley Pkwy
Sierra Hwy/Friendly Valley Pkwy to Sierra Hwy/Newhall Ave
Sierra Hwy/Newhall Ave to Newhall Metrolink Staton
Sierra Hwy/Newhall Ave to Railroad Ave/6th St
Railroad Ave/6th St to MRTC
Newhall Metrolink Staton to MRTC
Inbound
Outbound


Route 12 - Saturday Average Boardings per Trip by Segment
45
40
35
30
25
20
15
10
5
0
2
4
2
41
2
6
0
1
4
4
10
3
Heller Circle/Maitland Ln to Soledad Cyn Rd/Whites Cyn Rd
Soledad Cyn Rd/Whites Cyn Rd to Soledad Cyn Rd/Sierra Hwy
Soledad Cyn Rd/Sierra Hwy to Sierra Hwy/Friendly Valley Pkwy
Sierra Hwy/Friendly Valley Pkwy to Sierra Hwy/Newhall Ave
Sierra Hwy/Newhall Ave to Newhall Metrolink Staton
Sierra Hwy/Newhall Ave to Railroad Ave
Railroad Ave/6th St to MRTC
Newhall Metrolink Staton to MRTC
Inbound
Outbound


Route 12 - Sunday Total Boardings by Segment
1400
1200
1000
800
600
400
200
0
181
567
188
469
247
561
47
44
410
476
1269
392
Heller Circle/Maitland Ln to Soledad Cyn Rd/Whites Cyn Rd
Soledad Cyn Rd/Whites Cyn Rd to Soledad Cyn Rd/Sierra Hwy
Soledad Cyn Rd/Sierra Hwy to Sierra Hwy/Friendly Valley Pkwy
Sierra Hwy/Friendly Valley Pkwy to Sierra Hwy/Newhall Ave
Sierra Hwy/Newhall Ave to Newhall Metrolink Staton
Sierra Hwy/Newhall Ave to Railroad Ave/6th St
Railroad Ave/6th St to MRTC
Newhall Metrolink Staton to MRTC
Inbound
Outbound

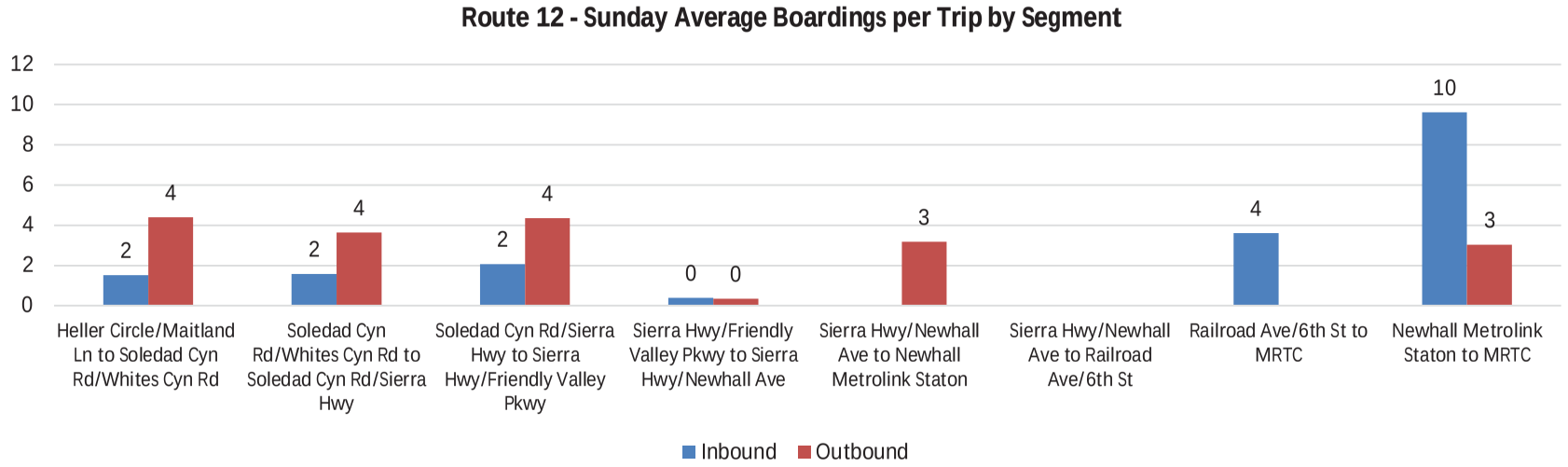
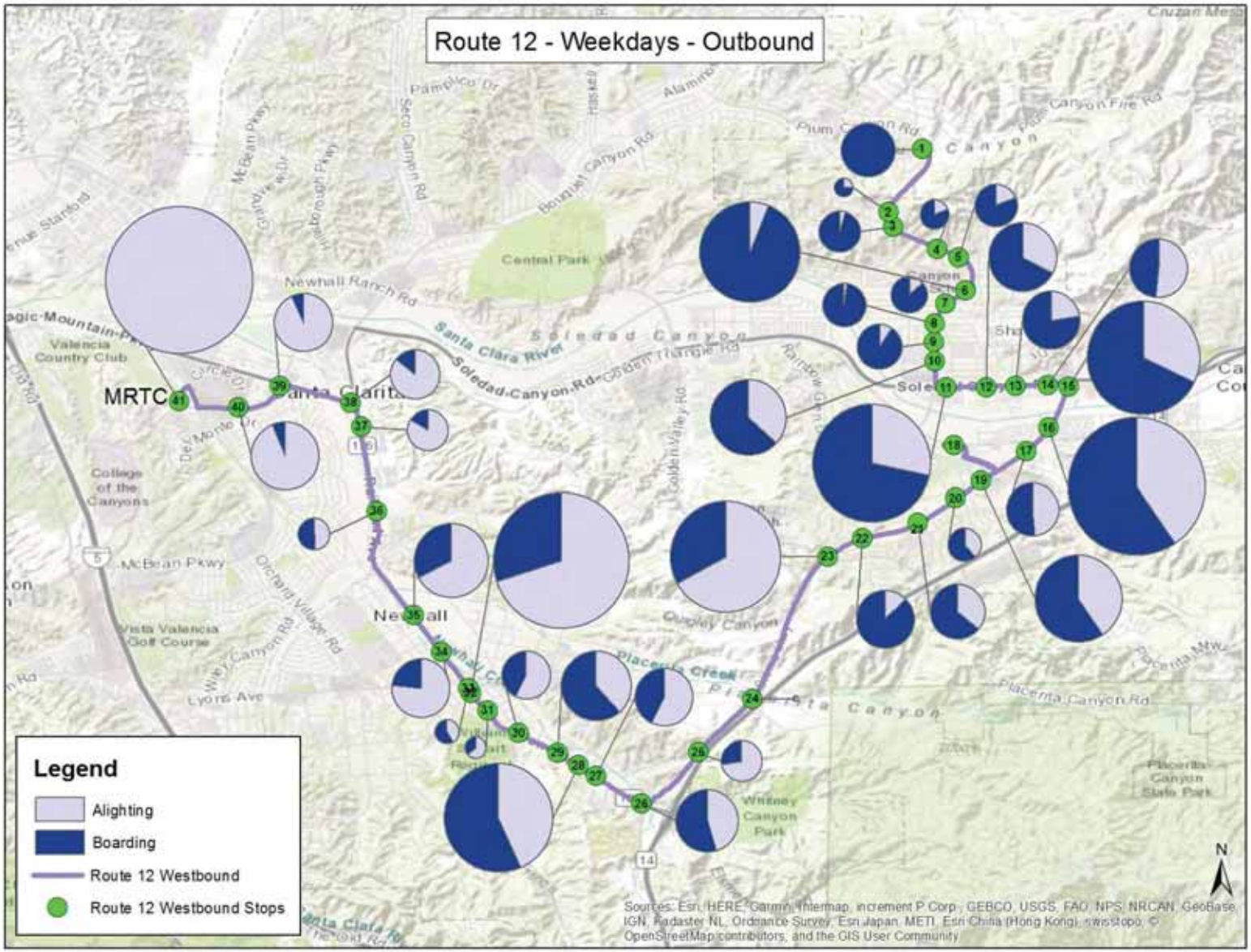
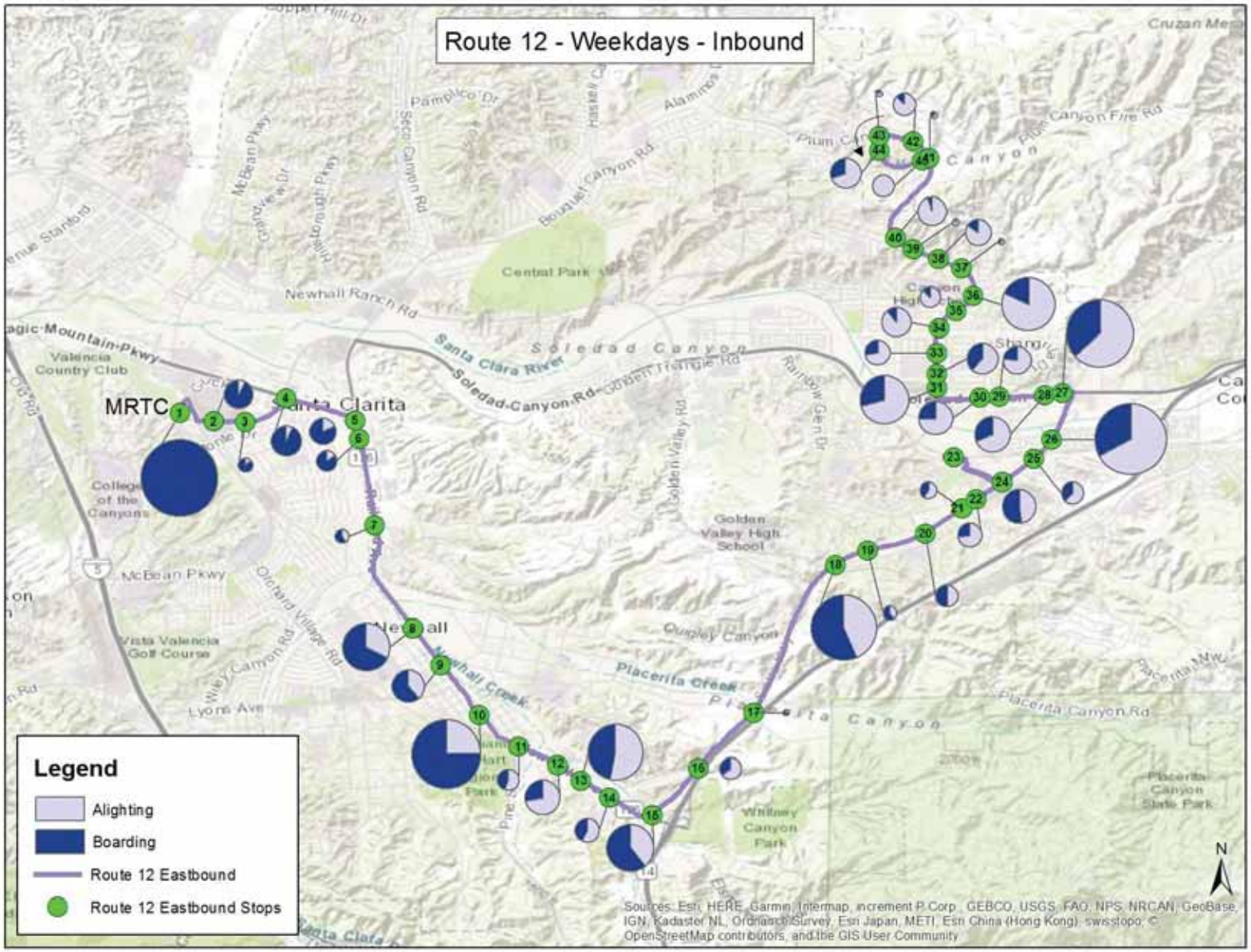
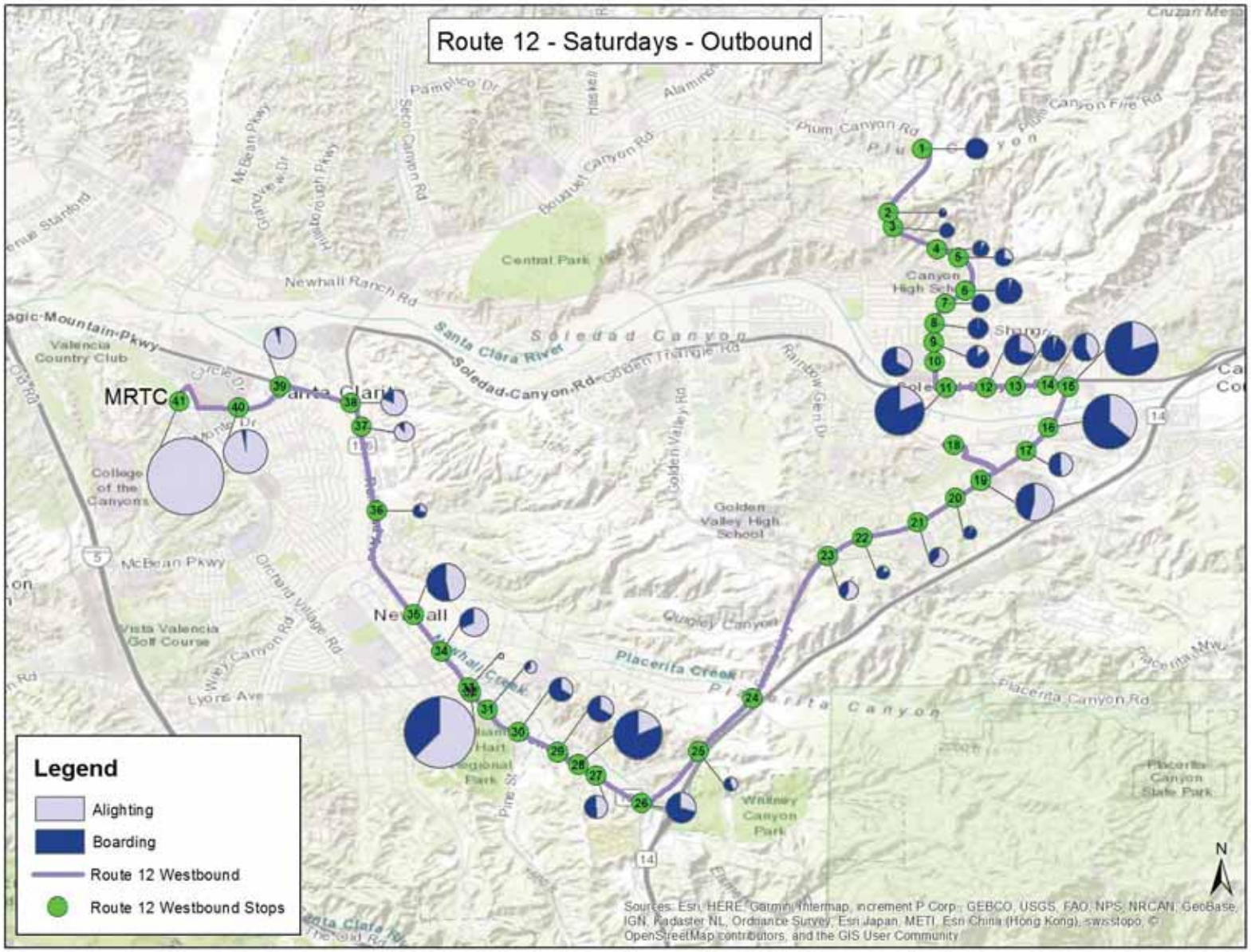
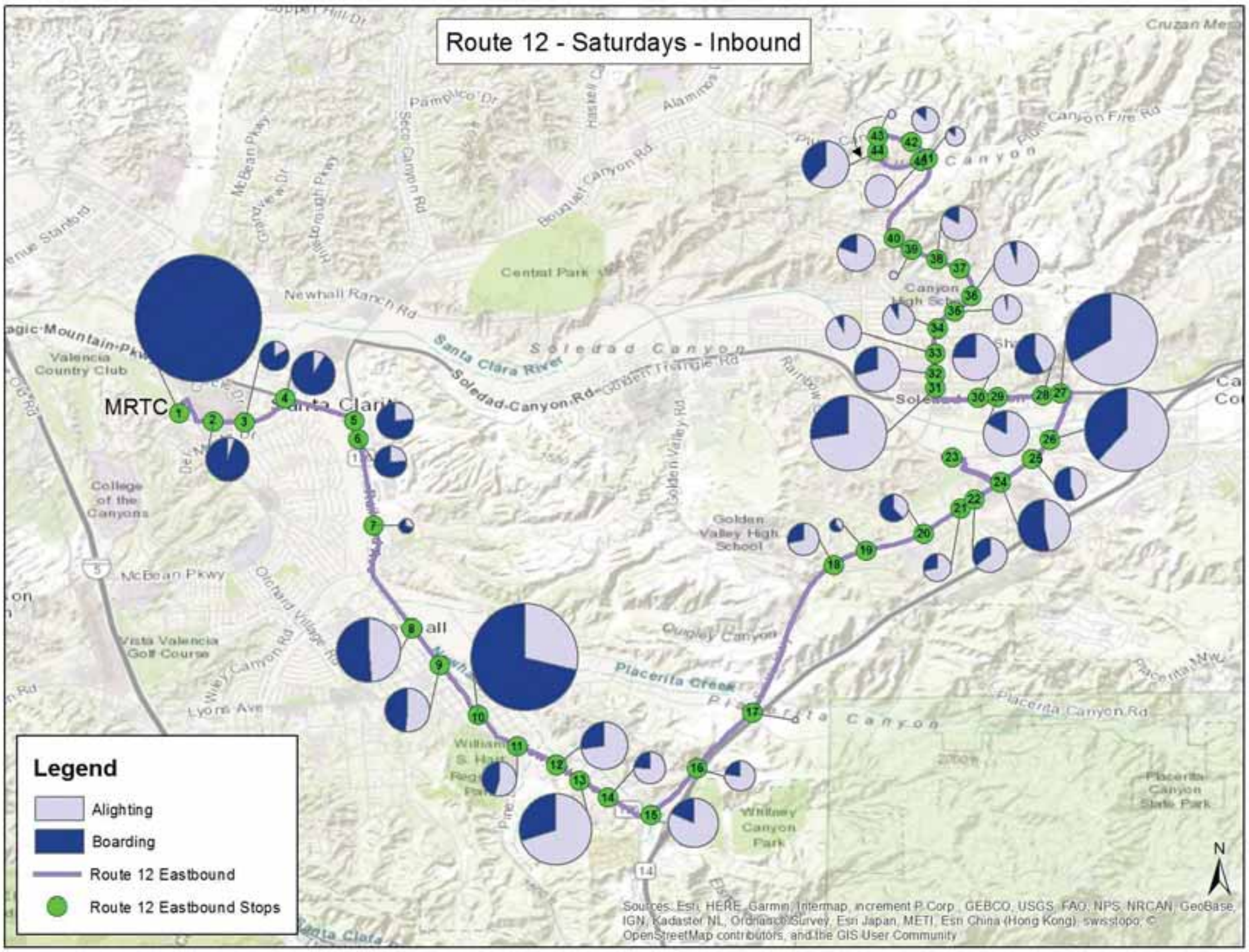

Route 12 - Sunday Average Boardings per Trip by Segment
12
10
8
6
4
2
0
2
4
2
4
2
4
0
0
3
4
10
3
Heller Circle/Maitland Ln to Soledad Cyn Rd/Whites Cyn Rd
Soledad Cyn Rd/Whites Cyn Rd to Soledad Cyn Rd/Sierra Hwy
Soledad Cyn Rd/Sierra Hwy to Sierra Hwy/Friendly Valley Pkwy
Sierra Hwy/Friendly Valley Pkwy to Sierra Hwy/Newhall Ave
Sierra Hwy/Newhall Ave to Newhall Metrolink Staton
Sierra Hwy/Newhall Ave to Railroad Ave/6th St
Railroad Ave/6th St to MRTC
Newhall Metrolink Staton to MRTC
Inbound
Outbound

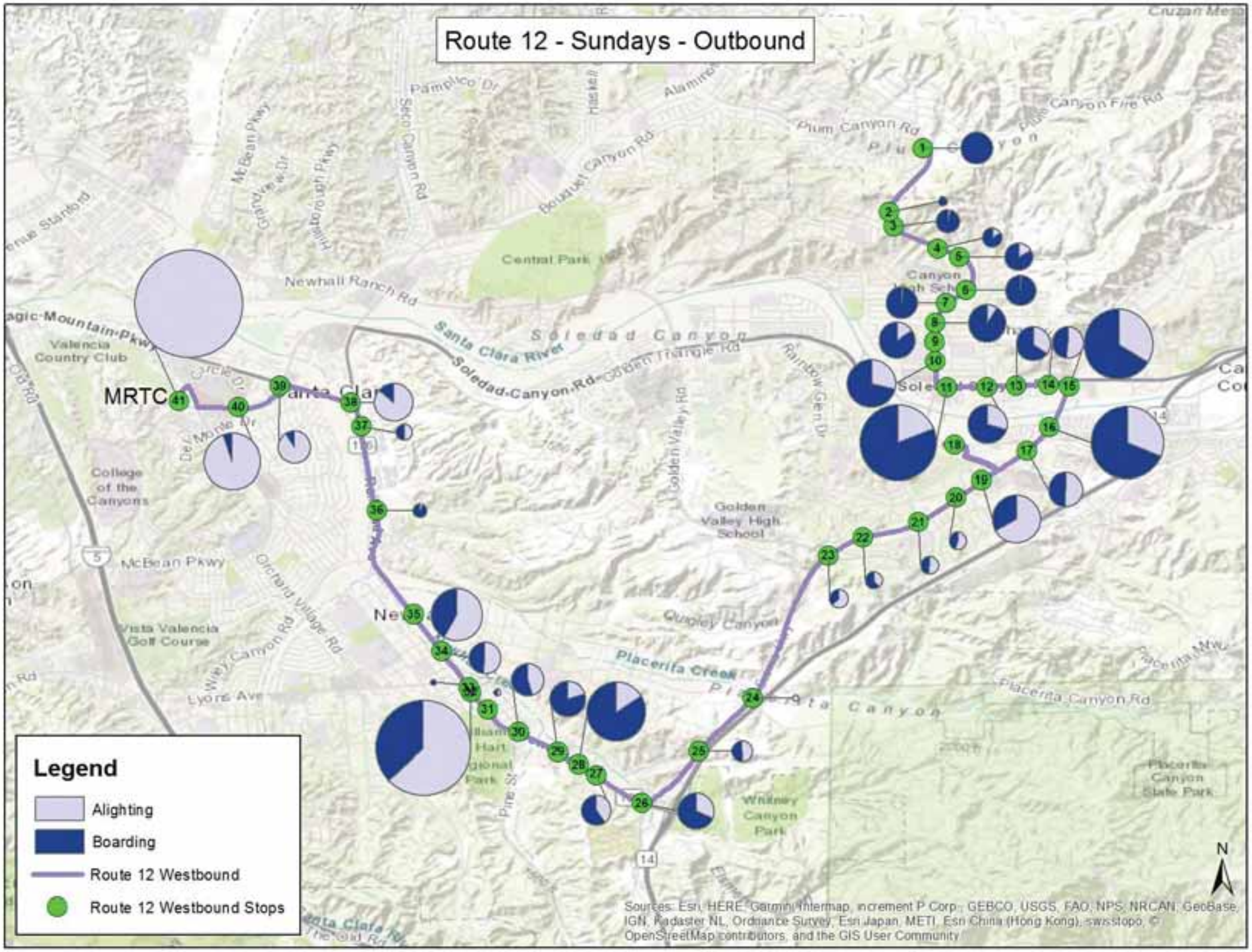
Exhibit 3.8.4 Route 12 Boarding and Alighting Maps




Route 12 - Weekdays - Inbound
MRTC
Santa Clarita
Newhall
Soledad Canyon
Soledad Canyon Rd
Santa Clara River
Newhall Ranch Rd
McBean Pkwy
Valencia Country Club
College of the Canyons
Golden Valley High School
Central Park
Placerita Creek
Placerita Canyon Rd
Whitney Canyon Park
Placerita Canyon State Park
Vista Valencia Golf Course
Lyons Ave
Golden Valley Rd
Bouquet Canyon Rd
Legend
Alighting
Boarding
Route 12 Eastbound
Route 12 Eastbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 12 - Saturdays - Outbound
MRTC
Legend
Alighting
Boarding
Route 12 Westbound
Route 12 Westbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 12 - Saturdays - Inbound
MRTC
Legend
Alighting
Boarding
Route 12 Eastbound
Route 12 Eastbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 12 - Sundays - Outbound
Legend
Alighting
Boarding
Route 12 Westbound
Route 12 Westbound Stops
MRTC
Santa Clara River
Soledad Canyon
Soledad Canyon Rd
Central Park
Newhall Ranch Rd
Plum Canyon Rd
Bouquet Canyon Rd
Seco Canyon Rd
Golden Valley Rd
Rainbow Glen Dr
Golden Valley High School
College of the Canyons
Valencia Country Club
Vista Valencia Golf Course
McBean Pkwy
Orchard Village Rd
Wiley Canyon Rd
Lyons Ave
Placerita Creek
Placerita Canyon Rd
Placerita Canyon State Park
Whitney Canyon Park
Quigley Canyon
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

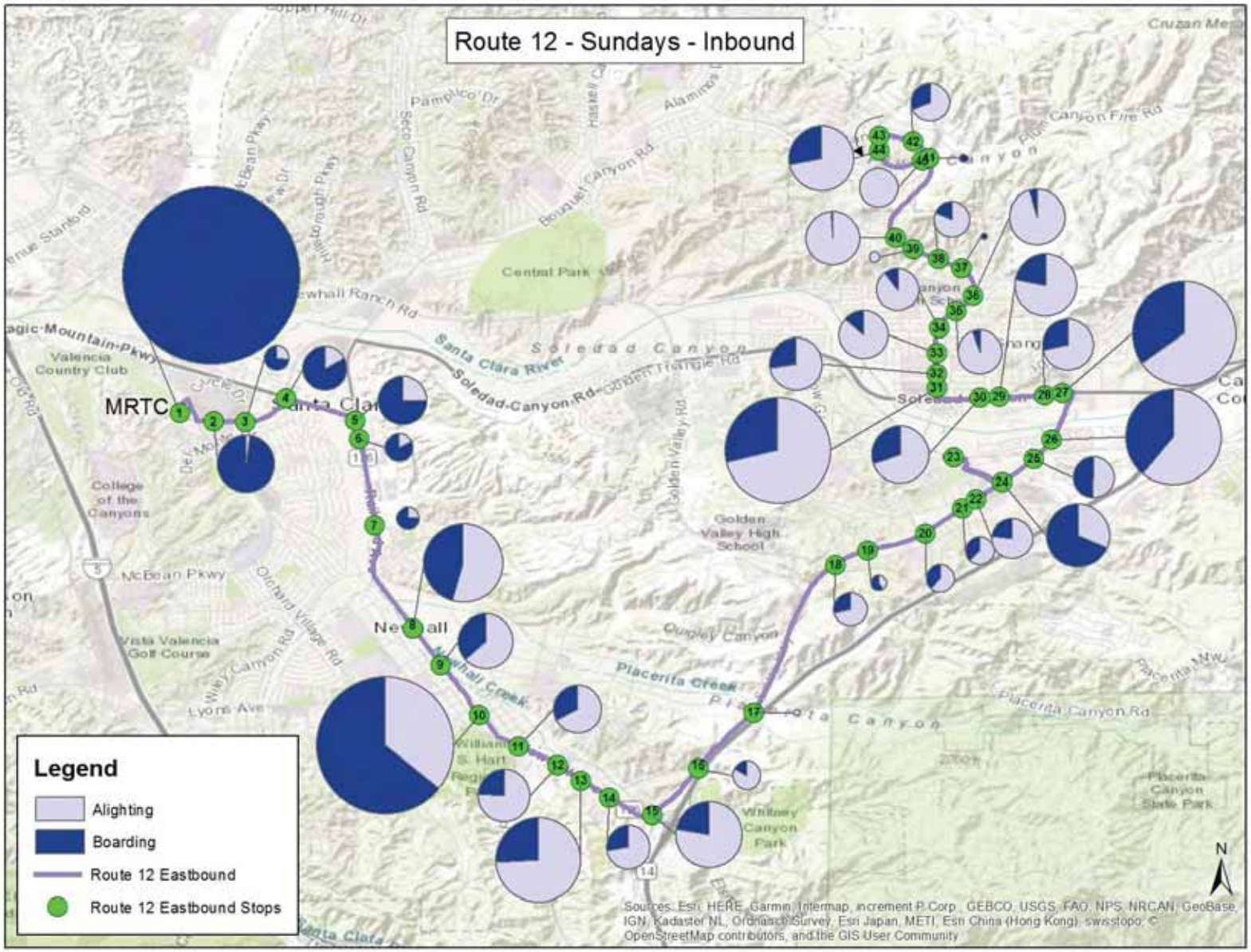

Route 12 - Sundays - Inbound
MRTC
Legend
Alighting
Boarding
Route 12 Eastbound
Route 12 Eastbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.8.5 Route 12 Stop Lists

Route 12 Outbound Stop List	
Stop Number	Stop Name
1	Heller Cir & Maitland Ln
2	Whites Canyon Rd & Ashboro Dr
3	Whites Canyon Rd & Steinway St
4	Whites Canyon Rd & Canyon Crest Dr
5	Whites Canyon Rd & Canyon Crest Dr
6	Whites Canyon Rd & Nadal St
7	Whites Canyon Rd & Ranier St
8	Whites Canyon Rd & Delight St
9	Whites Canyon Rd & Pleasantdale St
10	Whites Canyon Rd & Stillmore St
11	Soledad Canyon Rd & Whites Cyn
12	Soledad Canyon Rd & Crossglade Ave
13	Soledad Canyon Rd & Luther Dr
14	Soledad Canyon Rd & Shangrila Dr
15	Sierra Hwy & Soledad Canyon Rd
16	Sierra Hwy & Canyon Prk Blvd
17	Sierra Hwy & Flying Tiger Dr
18	Via Princessa & Weyerhaeuser Wy
19	Sierra Hwy & Vista Del Canon
20	Sierra Hwy & Whispering Leaves Dr
21	Sierra Hwy & Friendly Valley Pky
22	Sierra Hwy & Rainbow Gln Dr
23	Sierra Hwy & Golden Valley Rd
24	Sierra Hwy & Placerita Canyon Rd
25	Sierra Hwy & Dockweiler Dr
26	Newhall Ave & Sierra Hwy
27	Newhall Ave & Judah Ln
28	Newhall Ave & Valle Del Oro
29	Newhall Ave & Carl Ct
30	Newhall Ave & Pine St
31	Railroad Ave & 5th St
32	Railroad Ave & Market St
33	Railroad Ave & 8th St
34	Railroad Ave & 13th St
35	Railroad Ave & 15th St
36	Railroad Ave & Oak Ridge Dr
37	Railroad Ave & Drayton St
38	Magic Mountain Pky & Bouquet Canyon Rd
39	Valencia Blvd & Magic Mountain Pky
40	Valencia Blvd & Citrus Dr
41	McBean MRTC

Route 12 Inbound Stop List	
Stop Number	Stop Name
1	McBean MRTC
2	Valencia Blvd
3	Valencia Blvd & Citrus Dr
4	Magic Mountain Pky & Valencia Blvd
5	Railroad Ave & Bouquet Canyon Rd
6	Railroad Ave & Drayton St
7	Railroad Ave & Oak Ridge Dr
8	Railroad Ave & 15th St
9	Railroad Ave & 13th St
10	Railroad Ave & 6th St
11	Newhall Ave & Pine St
12	Newhall Ave & Carl Ct
13	Newhall Ave & Silverado
14	Newhall Ave & Meadow Ridge Dr
15	Sierra Hwy & Newhall Ave
16	Sierra Hwy & Dockweiler Dr
17	Sierra Hwy & Placerita Canyon Rd
18	Sierra Hwy & Golden Valley Rd
19	Sierra Hwy & Rainbow Gln Dr
20	Sierra Hwy & Friendly Valley Pky
21	Sierra Hwy & Whispering Leaves Dr
22	Sierra Hwy & Vista Del Canon
23	Via Princessa & Weyerhaeuser Wy
24	Sierra Hwy & Via Princessa
25	Sierra Hwy & Flying Tiger Dr
26	Sierra Hwy & Canyon Prk Blvd
27	Soledad Canyon Rd & Sierra Hwy
28	Soledad Canyon Rd & Shangrila Dr
29	Soledad Canyon Rd & Homyr Pl
30	Soledad Canyon Rd & Crossglade Ave
31	Whites Canyon Rd & Soledad Canyon Rd
32	Whites Canyon Rd & Stillmore St
33	Whites Canyon Rd & Pleasantdale St
34	Whites Canyon Rd & Delight St
35	Whites Canyon Rd & Ranier St
36	Whites Canyon Rd & Nadal St
37	Whites Canyon Rd & Canyon Crest Dr
38	Whites Canyon Rd & Canyon Crest Dr
39	Whites Canyon Rd & Wildwind Rd
40	Whites Canyon Rd & Steinway St
41	Plum Canyon Rd & White Canyon Rd
42	Plum Canyon Rd & La Madrid Dr
43	Plum Canyon Rd & Heller Cir
44	Heller Cir & Edgehurst Ln
45	Heller Cir & Maitland Ln

Average load factor by trip

Most inbound and outbound trips on Route 12 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.63. Trips with the highest average peak loads for each day and direction are identified below.

Exhibit 3.8.6 Route 12 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	3:06 p.m.	0.63
Weekday	Inbound	3:00 p.m.	0.50
Saturday	Outbound	6:38 a.m.	0.41
Saturday	Inbound	5:20 p.m.	0.30
Sunday	Outbound	7:08 a.m.	0.31
Sunday	Inbound	6:17 p.m.	0.35

There were 106 individual trips which exhibited a load factor of at least 0.50. Of those, 13 exhibited a load factor greater than 0.70, with one trip reaching a load factor of 0.89. Those trips are as follows:

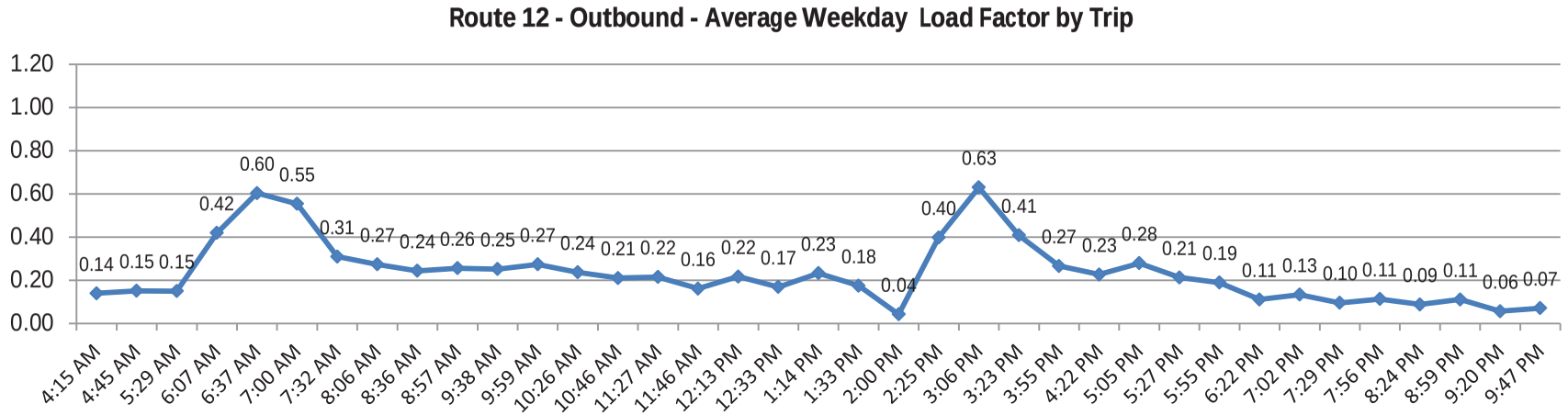
Exhibit 3.8.7 Route 12 Trips with Load Factor at least 0.50

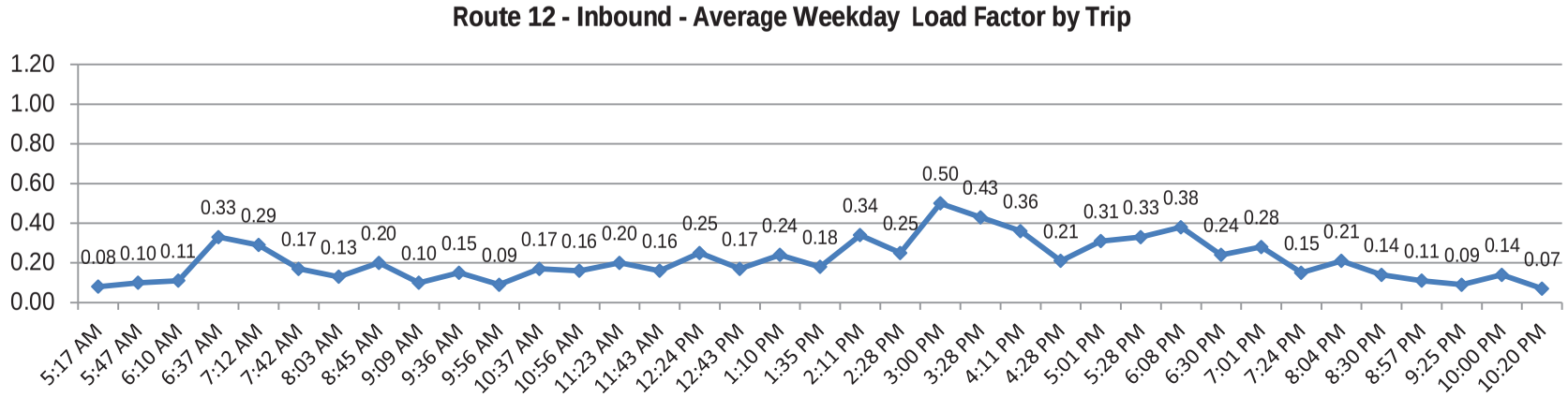
Date	Direction	Trip	Load factor
April 30	Inbound	2:11 p.m.	0.89
April 26	Outbound	3:06 p.m.	0.88
May 16	Outbound	2:25 p.m.	0.80
April 10	Outbound	7:00 a.m.	0.79
April 26	Outbound	7:00 a.m.	0.77
April 16	Inbound	3:00 p.m.	0.76
April 10	Outbound	3:06 p.m.	0.76
April 25	Outbound	3:06 p.m.	0.74
May 14	Outbound	3:06 p.m.	0.74
April 27	Outbound	3:06 p.m.	0.71
May 3	Outbound	3:06 p.m.	0.71
April 19	Outbound	3:06 p.m.	0.70
April 18	Outbound	3:06 p.m.	0.70
April 18	Outbound	6:37 a.m.	0.69
May 1	Outbound	7:00 a.m.	0.68
April 12	Outbound	7:00 a.m.	0.68
May 1	Inbound	3:28 p.m.	0.68
April 18	Outbound	7:00 a.m.	0.68
May 8	Outbound	3:06 p.m.	.067
May 16	Outbound	7:00 a.m.	0.67
May 15	Outbound	3:06 p.m.	0.67
May 9	Outbound	2:25 p.m.	0.67
May 15	Outbound	7:00 a.m.	0.66
April 16	Outbound	6:37 a.m.	0.65
April 9	Outbound	3:06 p.m.	0.65

Date	Direction	Trip	Load factor
May 9	Inbound	3:00 p.m.	0.65
April 24	Outbound	6:37 a.m.	0.65
April 16	Outbound	7:00 a.m.	0.65
April 13	Outbound	3:06 p.m.	0.65
May 10	Outbound	3:06 p.m.	0.64
April 19	Outbound	6:37 a.m.	0.64
April 9	Outbound	6:37 a.m.	0.64
May 7	Outbound	7:00 a.m.	0.64
April 23	Outbound	3:23 p.m.	0.63
May 2	Outbound	3:06 p.m.	0.63
May 2	Outbound	2:25 p.m.	0.63
April 17	Outbound	3:06 p.m.	0.63
April 11	Inbound	4:11 p.m.	0.63
April 12	Outbound	3:06 p.m.	0.62
May 8	Outbound	7:00 a.m.	0.62
April 18	Outbound	2:25 p.m.	0.62
May 11	Outbound	3:06 p.m.	0.62
May 9	Outbound	7:00 a.m.	0.62
May 4	Outbound	3:06 p.m.	0.62
May 1	Outbound	3:06 p.m.	0.62
May 3	Outbound	7:00 a.m.	0.61
May 11	Outbound	9:59 a.m.	0.61
May 15	Inbound	3:00 p.m.	0.61
May 1	Outbound	6:37 a.m.	0.61
April 10	Outbound	6:37 a.m.	0.61
April 30	Outbound	3:23 p.m.	0.61
April 24	Outbound	3:06 p.m.	0.60
May 2	Outbound	7:00 a.m.	0.60
May 10	Outbound	7:00 a.m.	0.59
April 17	Inbound	4:11 p.m.	0.59
May 17	Outbound	3:06 p.m.	0.59
May 14	Outbound	6:37 a.m.	0.58
May 1	Inbound	3:00 p.m.	0.58
April 27	Outbound	2:25 p.m.	0.58
April 24	Inbound	3:28 p.m.	0.58
April 17	Outbound	7:00 a.m.	0.56
May 17	Outbound	7:00 a.m.	0.56
May 16	Outbound	3:06 p.m.	0.56
May 8	Outbound	6:07 a.m.	0.56
April 10	Outbound	3:23 p.m.	0.56
May 18	Inbound	3:00 p.m.	0.56
May 15	Outbound	6:07 a.m.	0.55
April 18	Inbound	6:08 p.m.	0.55

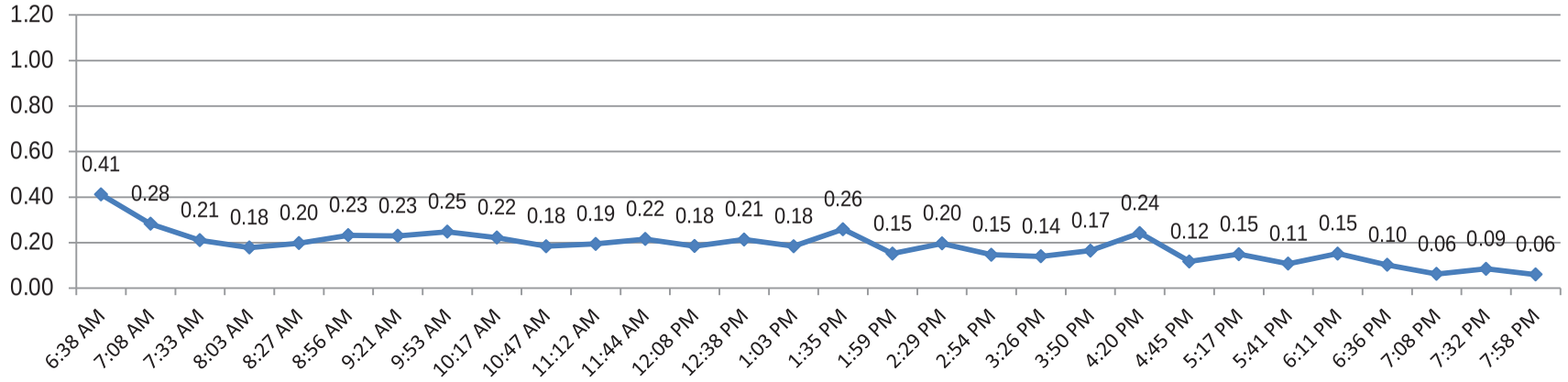
Date	Direction	Trip	Load factor
May 18	Outbound	6:37 a.m.	0.55
May 3	Outbound	6:07 a.m.	0.55
April 10	Inbound	3:00 p.m.	0.55
May 7	Inbound	3:28 p.m.	0.55
April 20	Outbound	3:06 p.m.	0.55
May 7	Outbound	3:06 p.m.	0.55
May 11	Outbound	3:23 p.m.	0.54
April 25	Outbound	7:00 a.m.	0.54
April 9	Inbound	3:00 p.m.	0.54
April 25	Outbound	2:25 p.m.	0.54
April 17	Outbound	6:07 a.m.	0.54
April 19	Outbound	7:00 a.m.	0.53
May 10	Inbound	3:28 p.m.	0.53
May 15	Outbound	6:37 a.m.	0.53
May 8	Outbound	7:32 a.m.	0.53
April 15	Outbound	4:45 p.m.	0.53
May 11	Outbound	7:32 a.m.	0.52
May 9	Outbound	6:07 a.m.	0.52
April 26	Outbound	6:07 a.m.	0.52
April 17	Outbound	3:23 p.m.	0.52
May 14	Inbound	3:00 p.m.	0.52
April 10	Inbound	3:28 p.m.	052
April 20	Inbound	8:45 a.m.	0.51
May 16	Inbound	2:11 p.m.	0.51
May 10	Outbound	6:07 a.m.	0.51
May 15	Outbound	3:23 p.m.	0.51
April 17	Inbound	3:28 p.m.	0.51
May 8	Inbound	6:08 p.m.	0.51
May 14	Outbound	3:23 p.m.	0.51
April 15	Inbound	6:17 p.m.	0.51
May 15	Inbound	4:11 p.m.	0.50
May 9	Outbound	6:37 a.m.	0.50
April 30	Outbound	1:14 p.m.	0.50
May 17	Outbound	6:07 a.m.	0.50
April 30	Outbound	3:06 p.m.	0.50
April 12	Outbound	6:07 a.m.	0.50
May 16	Inbound	3:28 p.m.	0.50
May 7	Inbound	6:37 a.m.	0.50

Exhibit 3.8.8 Route 12 Average Load Factor by Trip

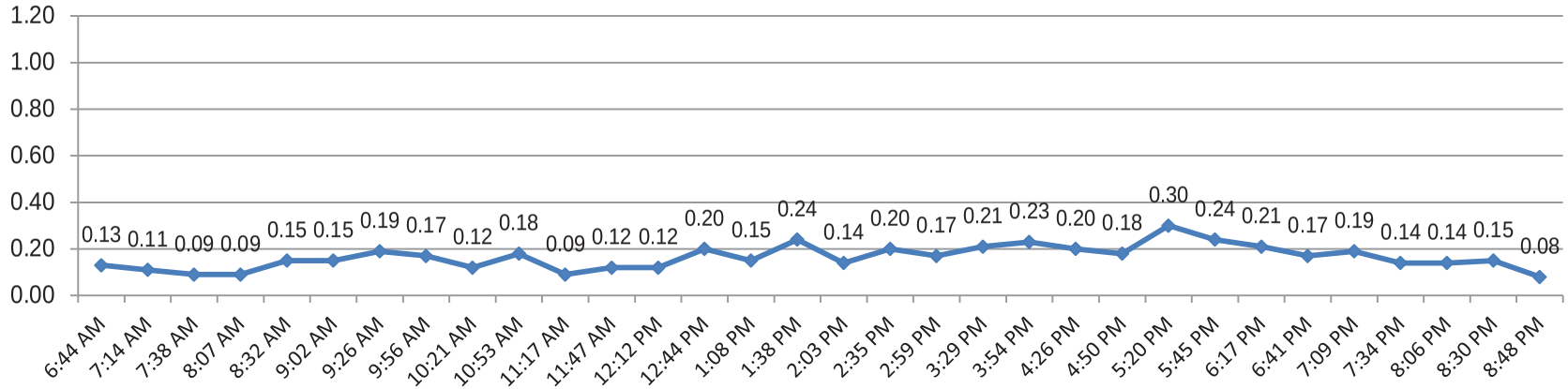


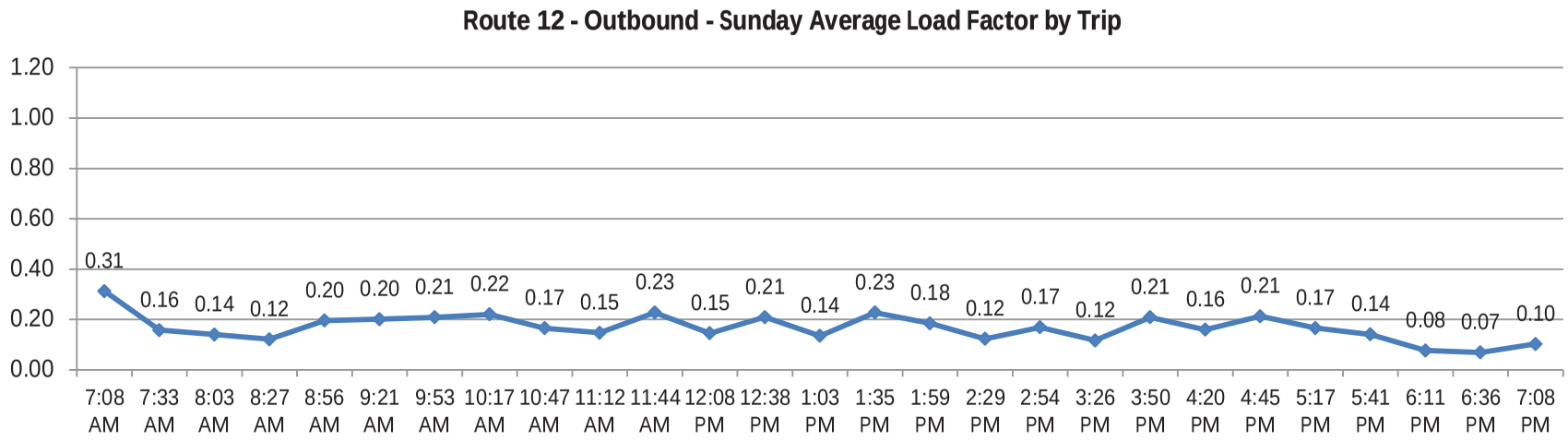


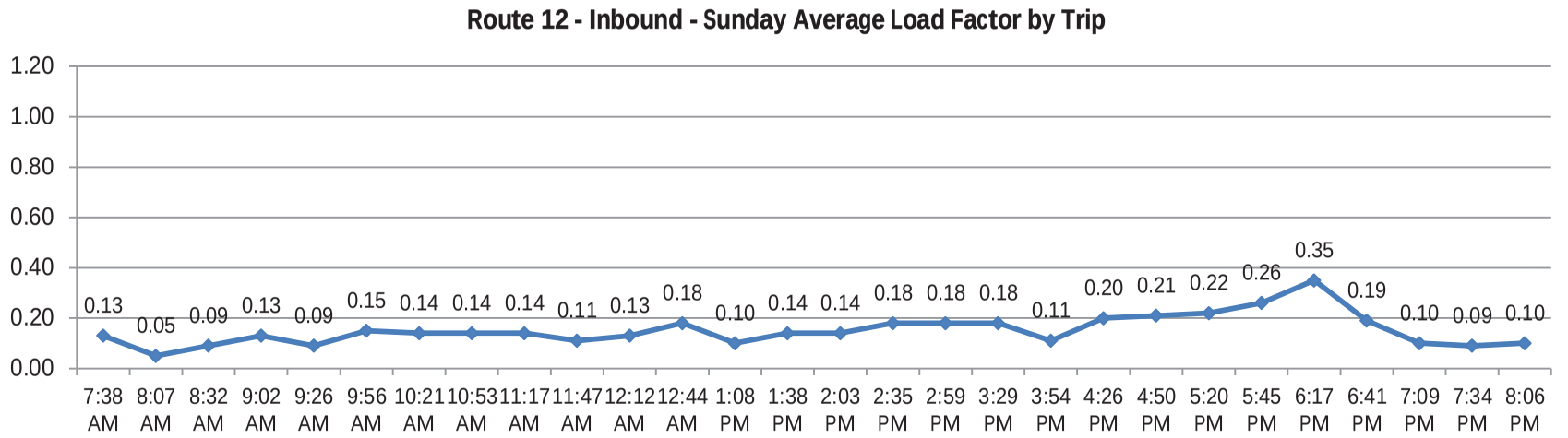
Route 12 - Outbound - Saturday Average Load Factor by Trip



Route 12 - Inbound - Saturday Average Load Factor by Trip




Route 12 - Outbound - Sunday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.31 0.16 0.14 0.12 0.20 0.20 0.21 0.22 0.17 0.15 0.23 0.15 0.21 0.14 0.23 0.18 0.12 0.17 0.12 0.21 0.16 0.21 0.17 0.14 0.08 0.07 0.10
7:08 AM 7:33 AM 8:03 AM 8:27 AM 8:56 AM 9:21 AM 9:53 AM 10:17 AM 10:47 AM 11:12 AM 11:44 AM 12:08 PM 12:38 PM 1:03 PM 1:35 PM 1:59 PM 2:29 PM 2:54 PM 3:26 PM 3:50 PM 4:20 PM 4:45 PM 5:17 PM 5:41 PM 6:11 PM 6:36 PM 7:08 PM


Route 12 - Inbound - Sunday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.13 0.05 0.09 0.13 0.09 0.15 0.14 0.14 0.14 0.11 0.13 0.18 0.10 0.14 0.14 0.18 0.18 0.18 0.11 0.20 0.21 0.22 0.26 0.35 0.19 0.10 0.09 0.10
7:38 AM 8:07 AM 8:32 AM 9:02 AM 9:26 AM 9:56 AM 10:21 AM 10:53 AM 11:17 AM 11:47 AM 12:12 AM 12:44 AM 1:08 PM 1:38 PM 2:03 PM 2:35 PM 2:59 PM 3:29 PM 3:54 PM 4:26 PM 4:50 PM 5:20 PM 5:45 PM 6:17 PM 6:41 PM 7:09 PM 7:34 PM 8:06 PM

Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 12's weekday inbound service exhibits significantly better overall schedule adherence (87.8 percent) than the outbound service (79.7 percent). On Saturday, schedule adherence improves significantly for the outbound service (87.2 percent) and modestly for the inbound service (89.8 percent). On Sunday, schedule adherence improves further for both directions, with 92 percent of outbound trips and 93.1 percent of inbound trips on-time.

Schedule adherence by time-point

Late departures were the primary concern for both outbound and inbound services throughout the route. On weekday outbound service, the MRTC had the highest on-time performance (86.5 percent), while the Via Princessa Metrolink Station experienced late departures for all observed trips. Aside from that time-point, schedule adherence was lowest at Sierra Hwy/Newhall Ave. The inbound service saw schedule adherence above 91 percent between the MRTC and Sierra Hwy/Friendly Valley Pkwy, but experienced more late trips between Soledad Canyon/Sierra Hwy and Heller Circle/Maitland Ln.

On Saturday, outbound schedule adherence started low (82.2 percent at Heller Circle/Maitland Ln) and generally increased as the trip progressed, ending with its best on-time performance at MRTC (89.7 percent). The inbound service was the opposite, starting at the MRTC with 93.5 percent schedule adherence and ending at Heller Circle/Maitland Ln with on-time performance of 86.3 percent.

Sunday saw the highest instances of early departures, though late departures continue to be the primary issue. On the outbound service, schedule adherence was greatest at the beginning and end of the route (94.6 percent at Heller Circle/Maitland Ln and 97.6 percent at MRTC). The highest percentage of early departures took place at the Newhall Metrolink Station (5.7 percent). For the inbound service, on-time performance was highest at the end of the route (Heller Circle/Maitland Ln) (96.6 percent) and lowest at Sierra Hwy/Friendly Valley Pkwy (90.8 percent). Sierra Hwy/Friendly Valley Pkwy also had the highest percentage of early trips (3.8 percent).

Schedule adherence by time of day

On weekdays, schedule adherence for the outbound service typically peaks during the Early AM day-part (97.5 percent), followed by the Late PM period (89.6 percent). Schedule adherence is lowest during the PM Peak period (64.3 percent), which has more than one-third of its trips running late. The inbound service experiences a similar pattern. On-time performance is highest during the Early AM day-part (98.9 percent) and lowest in the PM Peak period (73.6 percent).

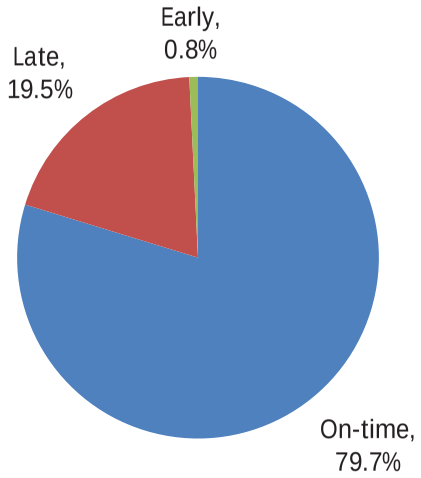
On Saturday, the outbound service sees its greatest schedule adherence during the Late PM day-part (95 percent) and its lowest during the Mid-day period (81.5 percent). The inbound service has on-time

performance of 86 percent or higher throughout the day, though the Late PM day-part performs the best (96.6 percent).

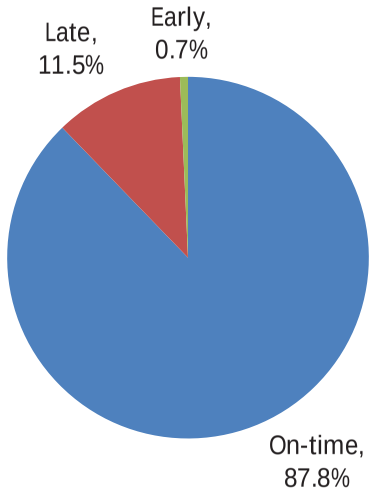
On Sunday, the outbound AM Peak period sees the highest percentage of early trips (4.9 percent). The Mid-day and PM Peak periods have the highest schedule adherence (94.5 percent each). For the inbound service, all day-parts have schedule adherence of 96 percent or higher except for the Late PM period, which see nearly 26 percent of trips departing late.

Exhibit 3.8.9 Route 12 Overall Schedule Adherence

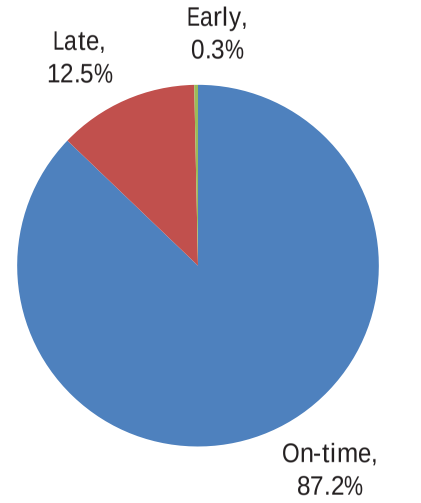
Route 12 - Outbound - Overall Weekday Schedule Adherence



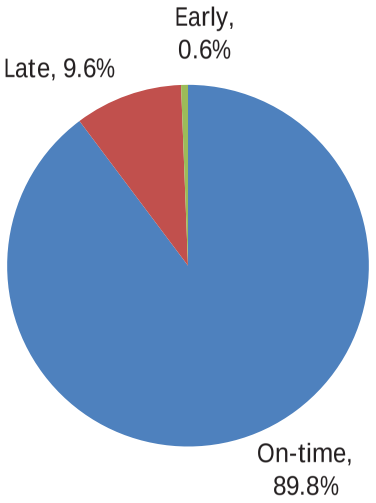
Route 12 - Inbound - Overall Weekday Schedule Adherence

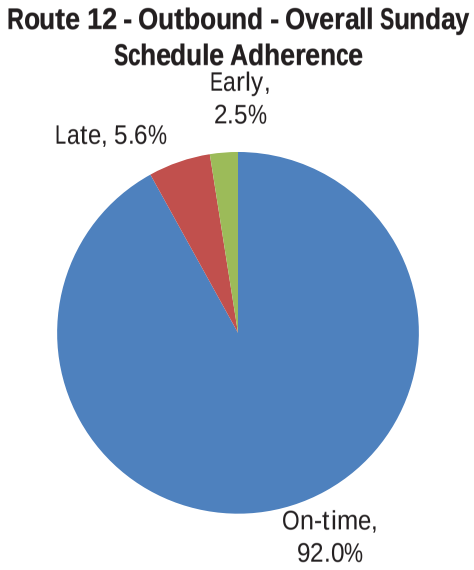


Route 12 - Outbound - Overall Saturday Schedule Adherence



Route 12 - Inbound - Overall Saturday Schedule Adherence




Route 12 - Outbound - Overall Sunday Schedule Adherence
Early, 2.5%
Late, 5.6%
On-time, 92.0%

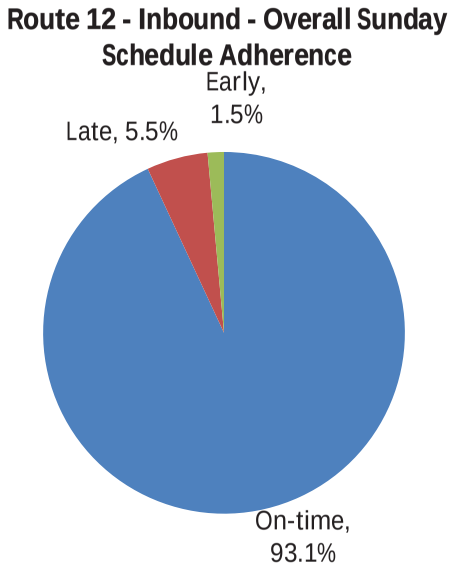
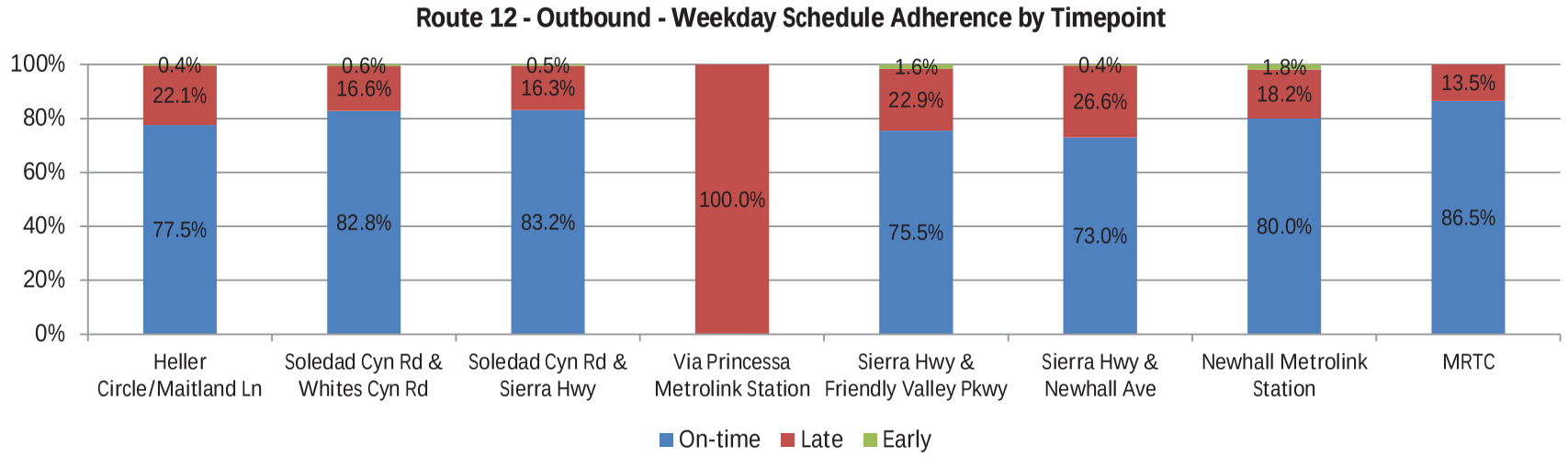
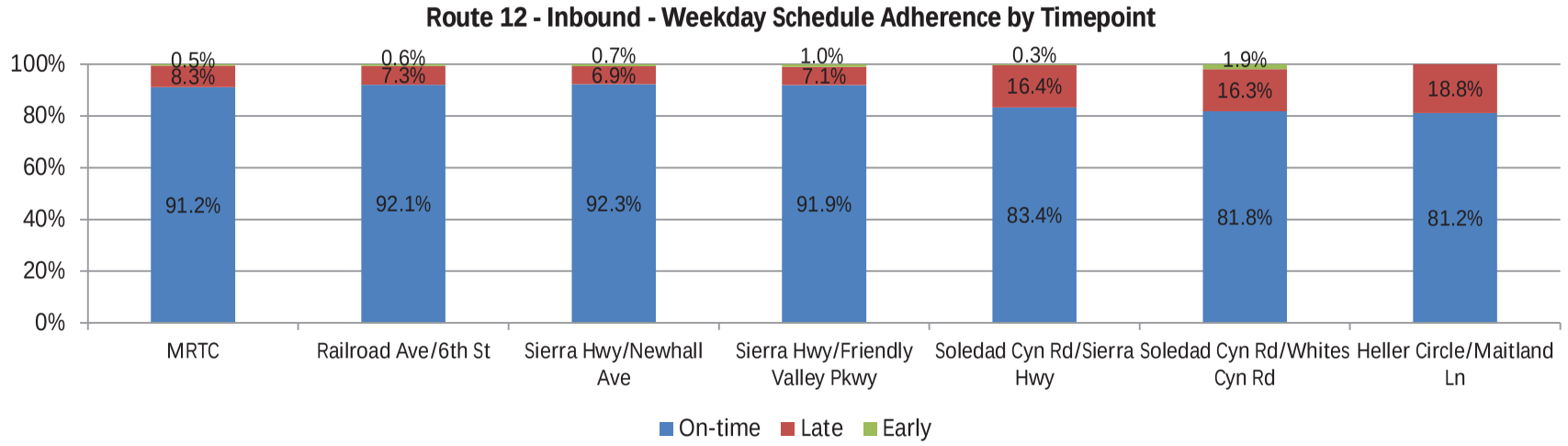
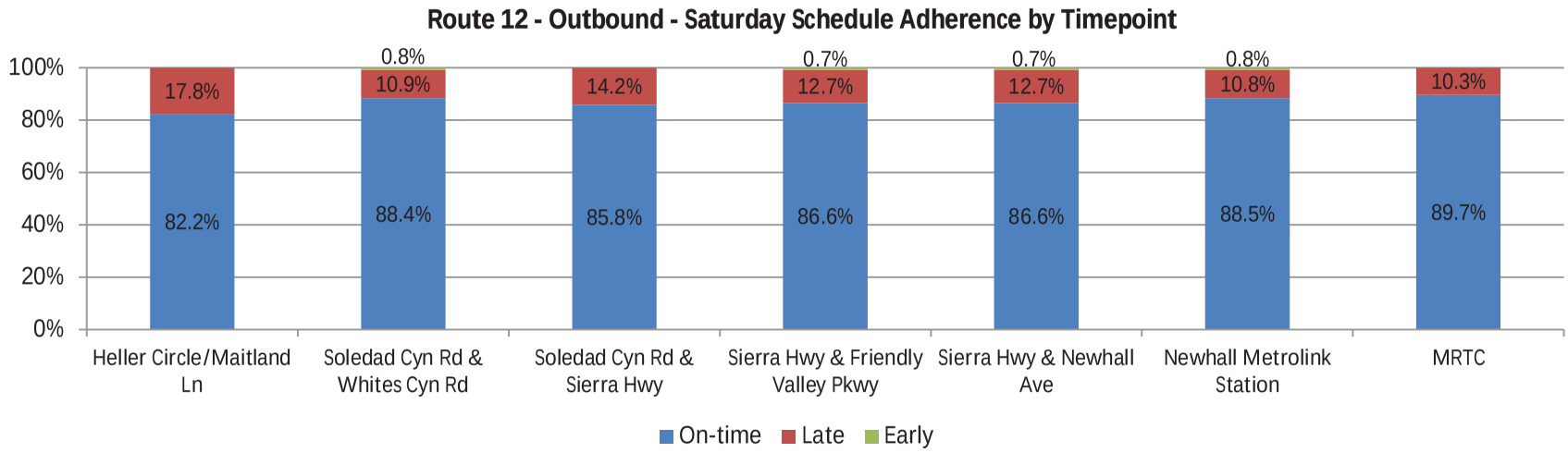
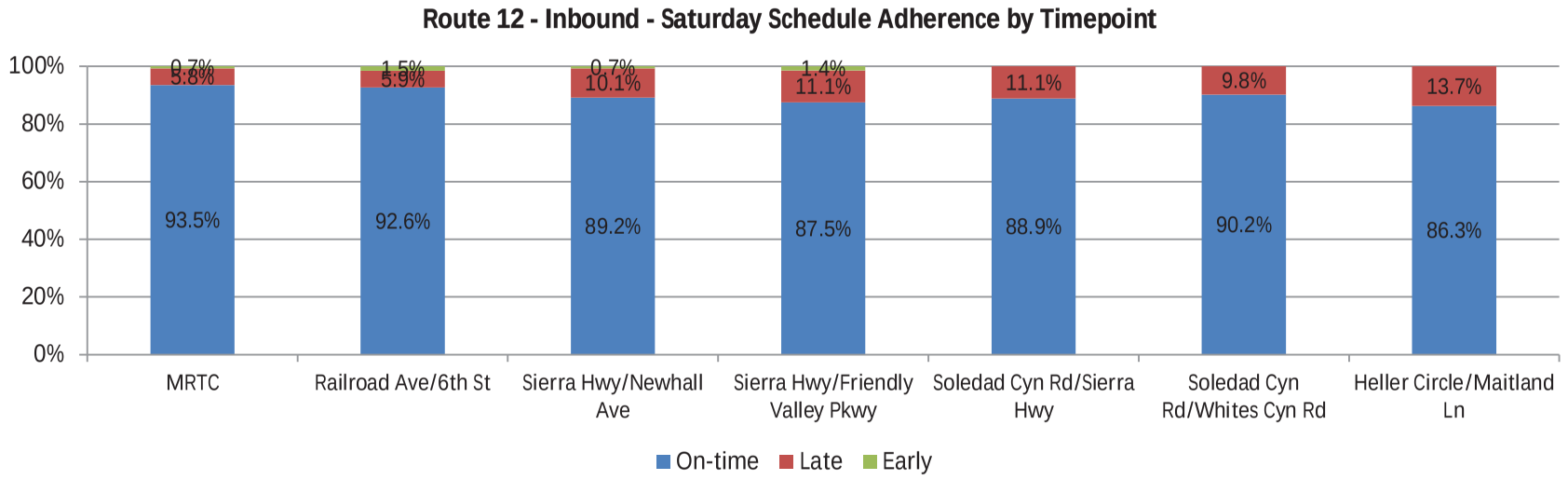

Route 12 - Inbound - Overall Sunday Schedule Adherence
Early, 1.5%
Late, 5.5%
On-time, 93.1%

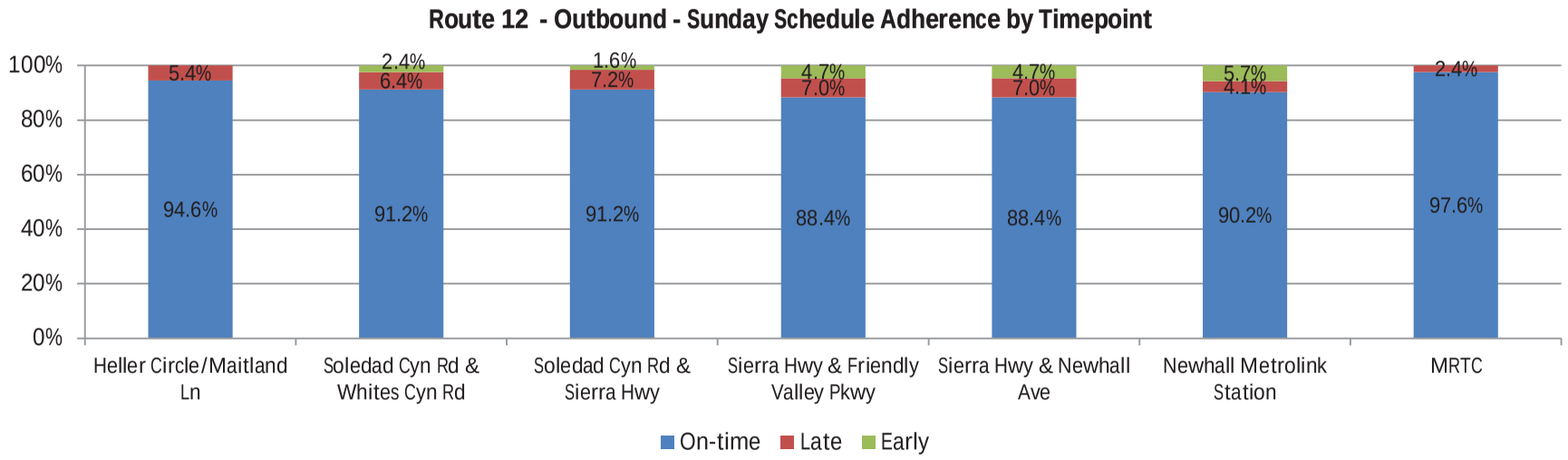
Exhibit 3.8.10 Route 12 Schedule Adherence by Time-point






Route 12 - Outbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
17.8%
82.2%
0.8%
10.9%
88.4%
14.2%
85.8%
0.7%
12.7%
86.6%
0.7%
12.7%
86.6%
0.8%
10.8%
88.5%
10.3%
89.7%
Heller Circle/Maitland Ln
Soledad Cyn Rd & Whites Cyn Rd
Soledad Cyn Rd & Sierra Hwy
Sierra Hwy & Friendly Valley Pkwy
Sierra Hwy & Newhall Ave
Newhall Metrolink Station
MRTC
On-time
Late
Early


Route 12 - Inbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
93.5%
92.6%
89.2%
10.1%
87.5%
11.1%
88.9%
11.1%
90.2%
9.8%
86.3%
13.7%
MRTC
Railroad Ave/6th St
Sierra Hwy/Newhall Ave
Sierra Hwy/Friendly Valley Pkwy
Soledad Cyn Rd/Sierra Hwy
Soledad Cyn Rd/Whites Cyn Rd
Heller Circle/Maitland Ln
On-time
Late
Early


Route 12 - Outbound - Sunday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
5.4%
94.6%
2.4%
6.4%
91.2%
1.6%
7.2%
91.2%
4.7%
7.0%
88.4%
4.7%
7.0%
88.4%
5.7%
4.1%
90.2%
2.4%
97.6%
Heller Circle/Maitland Ln
Soledad Cyn Rd & Whites Cyn Rd
Soledad Cyn Rd & Sierra Hwy
Sierra Hwy & Friendly Valley Pkwy
Sierra Hwy & Newhall Ave
Newhall Metrolink Station
MRTC
On-time
Late
Early

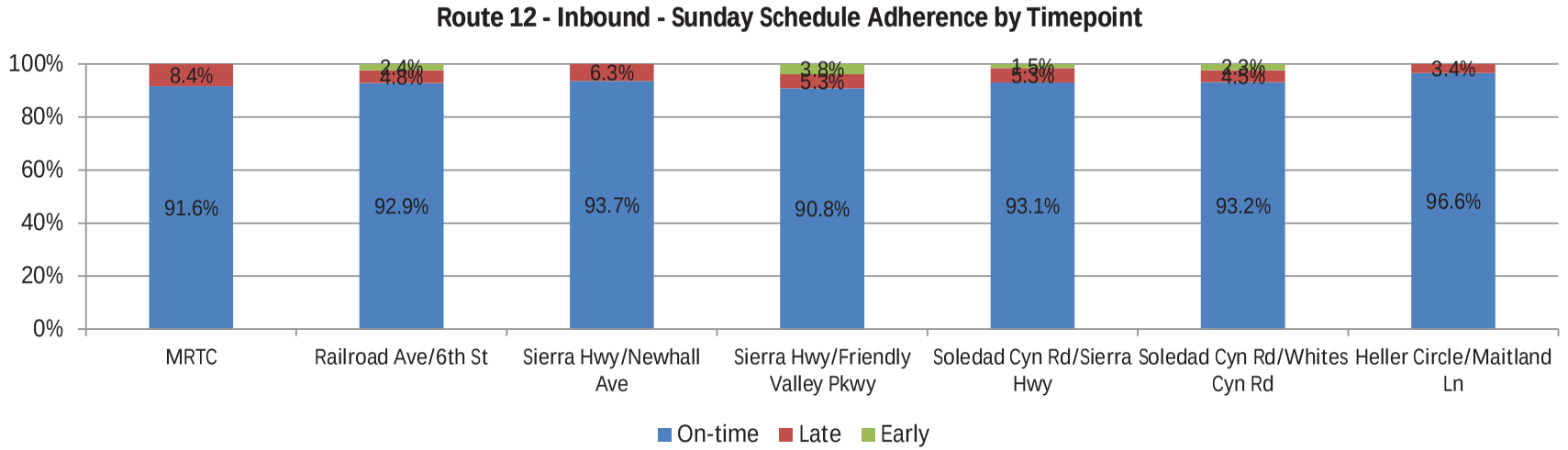
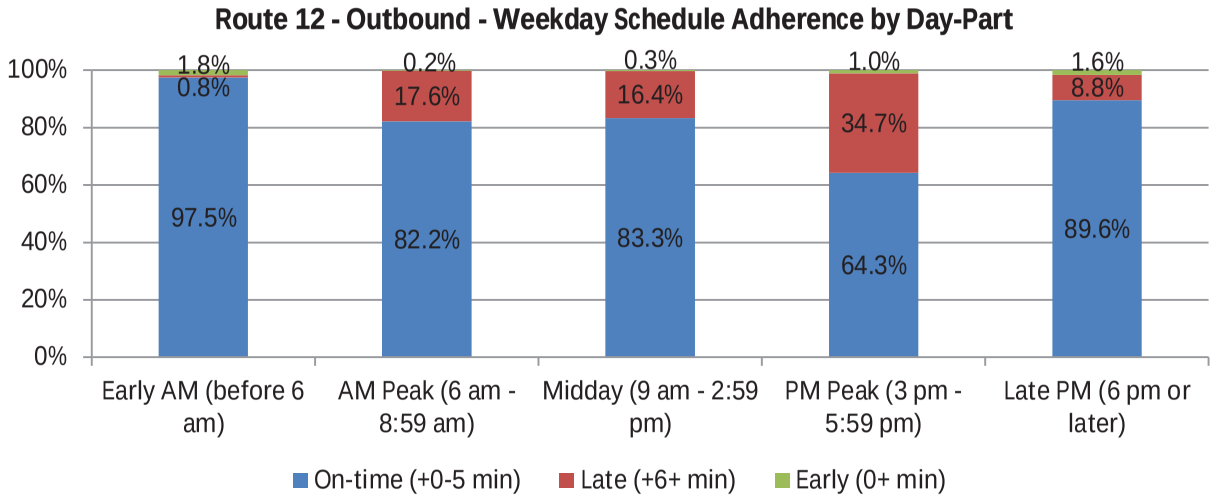
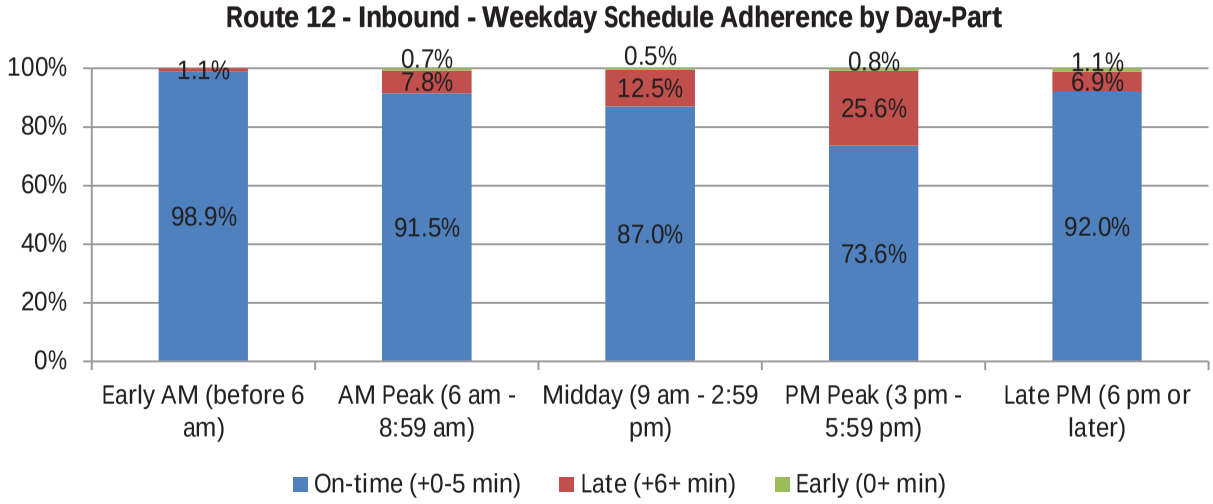
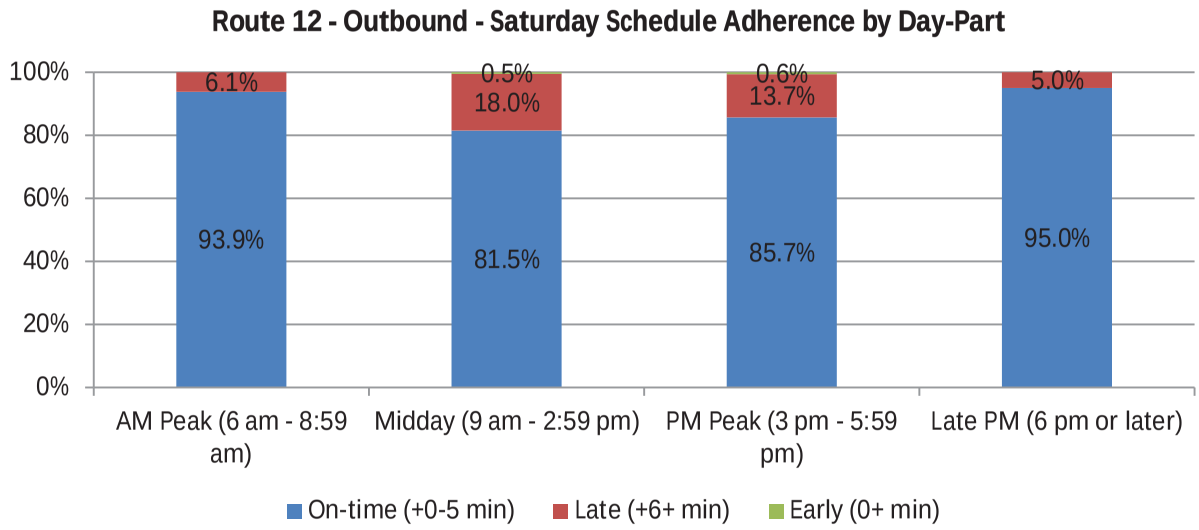
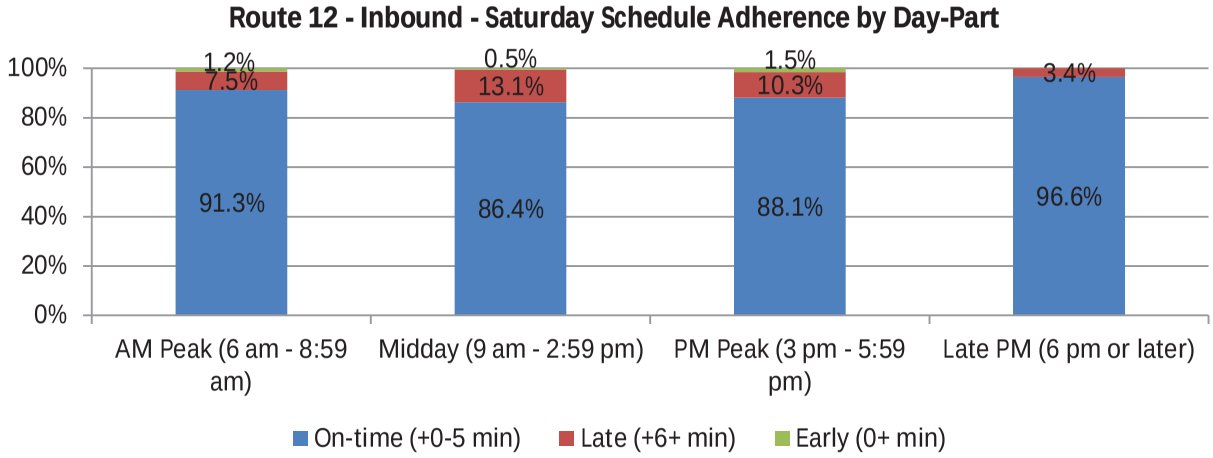

Route 12 - Inbound - Sunday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
8.4%
91.6%
2.4%
4.8%
92.9%
6.3%
93.7%
3.8%
5.3%
90.8%
1.5%
5.3%
93.1%
2.3%
4.5%
93.2%
3.4%
96.6%
MRTC
Railroad Ave/6th St
Sierra Hwy/Newhall Ave
Sierra Hwy/Friendly Valley Pkwy
Soledad Cyn Rd/Sierra Hwy
Soledad Cyn Rd/Whites Cyn Rd
Heller Circle/Maitland Ln
On-time
Late
Early

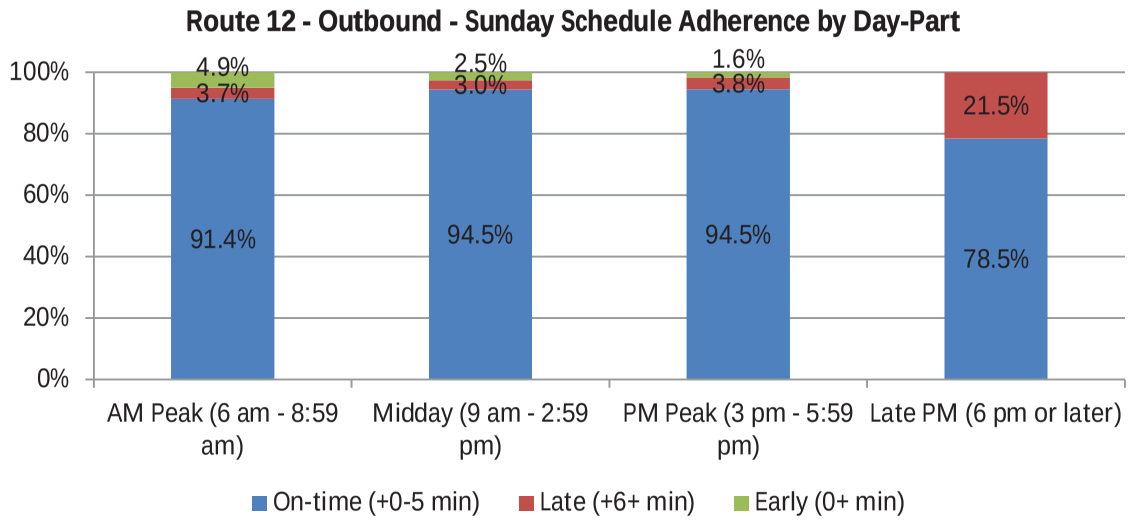
Exhibit 3.8.11 Route 12 Schedule Adherence by Day-Part

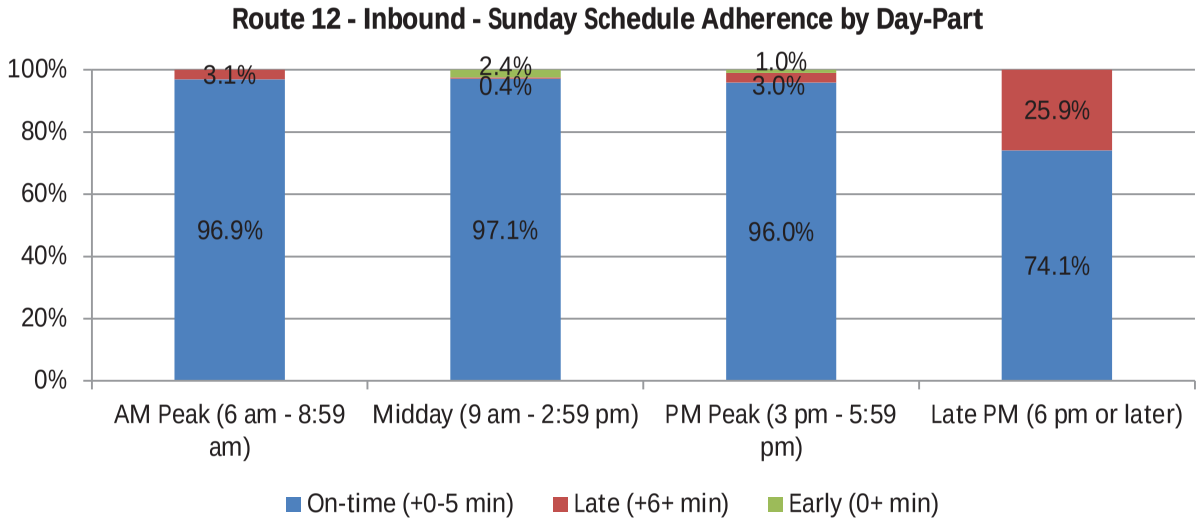





Route 12 - Outbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
6.1%
93.9%
0.5%
18.0%
81.5%
0.6%
13.7%
85.7%
5.0%
95.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 12 - Inbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
1.2%
7.5%
91.3%
0.5%
13.1%
86.4%
1.5%
10.3%
88.1%
3.4%
96.6%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 12 - Outbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
4.9%
3.7%
91.4%
2.5%
3.0%
94.5%
1.6%
3.8%
94.5%
21.5%
78.5%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 12 - Inbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
3.1%
96.9%
2.4%
0.4%
97.1%
1.0%
3.0%
96.0%
25.9%
74.1%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route Performance

Overall ridership

Exhibit 3.8.12 Route 12 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.8.13 Route 12 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 14 Profile and Performance Analysis

Route Description

Route 14 serves the MRTC, William S. Hart Park, Newhall Metrolink Station, Senior Center, California Institute of the Arts, College of the Canyons, River Oaks Shopping Center, Civic Center, Saugus High School, and Plum Canyon. Route 14 shares the majority of its alignment with Route 4. However, Route 4 continues north on Bouquet Canyon while Route 14 travels east on Plum Canyon Road.

Primary streets of operation include Lyons Avenue, Tournament Road, Rockwell Canyon Road, Valencia Boulevard, Magic Mountain Parkway, Bouquet Canyon Road, and Plum Canyon. During the morning and mid-day hours the inbound route deviates slightly to serve the SCV Senior Center.

Outbound service is defined as that originating at the Newhall Metrolink Station and traveling to Plum Canyon (Heller Circle and Maitland Lane) via the McBean Regional Transit Center. Inbound service travels in the opposite direction and includes service to the SCV Senior Center. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, outbound ridership peaks at 1:44 p.m., with an average of 30 riders per trip. The first and last trip of the day have the lowest number of average riders per trip (seven and nine, respectively). The inbound service peaks early in the day (6:41 a.m.) with an average of 26 riders per trip. However, five additional trips see an average of 25 riders per trip. Ridership is lowest during the first and last two trips of the day (each with an average of eight riders per trip).

On Saturday, outbound ridership peaks in the afternoon as well (3:45 p.m.), with an average of 21 riders per day. Inbound ridership peaks a little earlier in the afternoon, reaching an average of 23 and 24 riders per trip, respectively, at 12:48 p.m. and 1:48 p.m. Ridership is lowest during the first trip of the day in both directions.

On Sunday, outbound ridership peaks at 4:20 p.m. with an average of 14 riders per trip. Inbound ridership peaks on the first trip of the day (7:48 a.m.) with an average of 10 riders per trip. Ridership is constant throughout the balance of the day, with the average ridership on all other trips between five and eight.

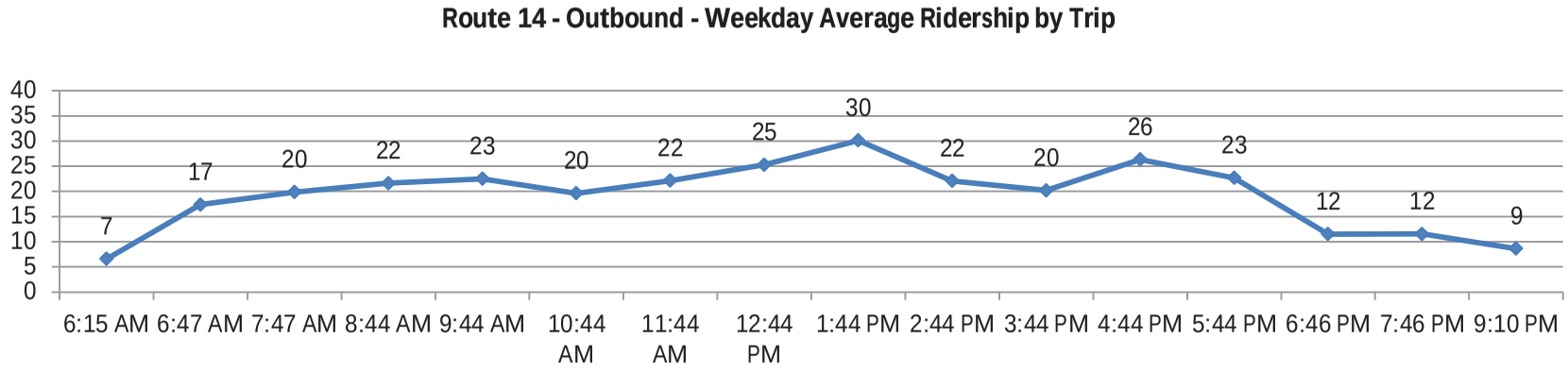
Average ridership by time of day

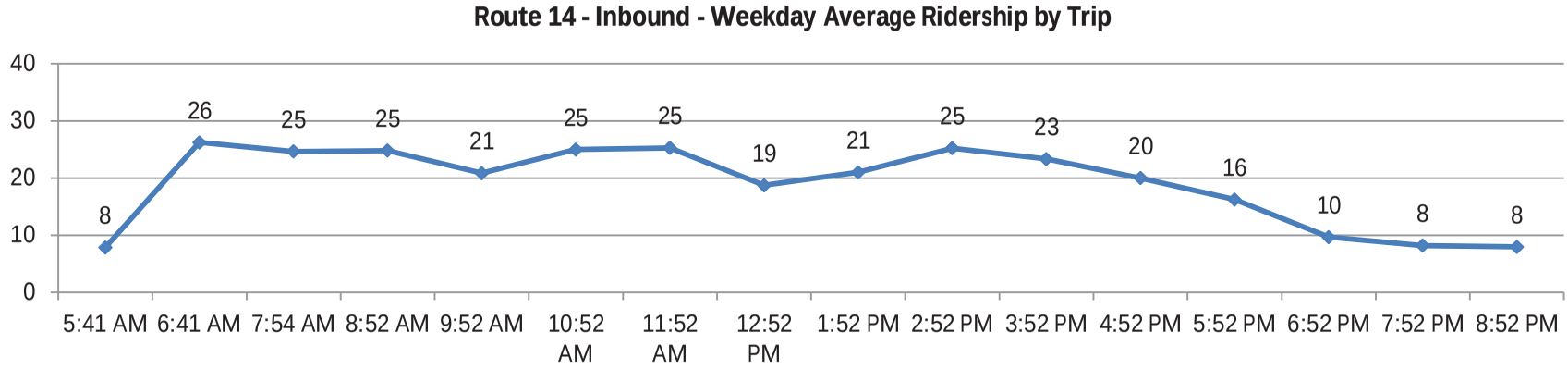
On weekdays, outbound ridership is greatest in the Mid-day and PM Peak day-parts (average of 24 and 23 riders per trip, respectively). Inbound ridership is greatest during the AM Peak period (average of 25 riders per trip).

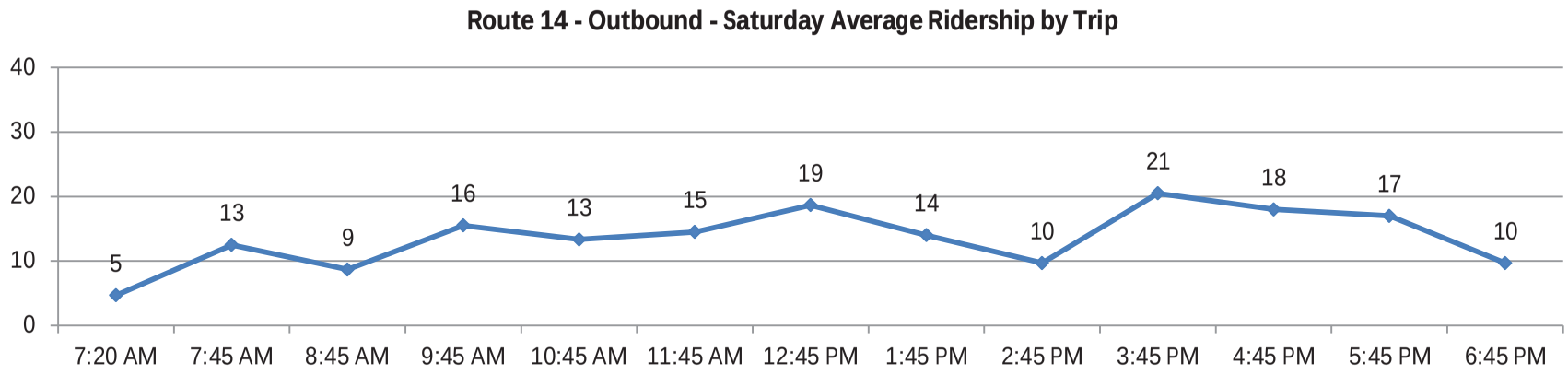
On Saturday, outbound ridership is highest during the PM Peak period (average of 18 riders per trip). Inbound ridership is highest during the Mid-day day-part (average of 17 riders per trip).
On Sunday, outbound ridership is highest during the PM Peak period (average of nine riders per trip). Inbound ridership is fairly consistent through three of the four day-parts, with AM Peak seeing an

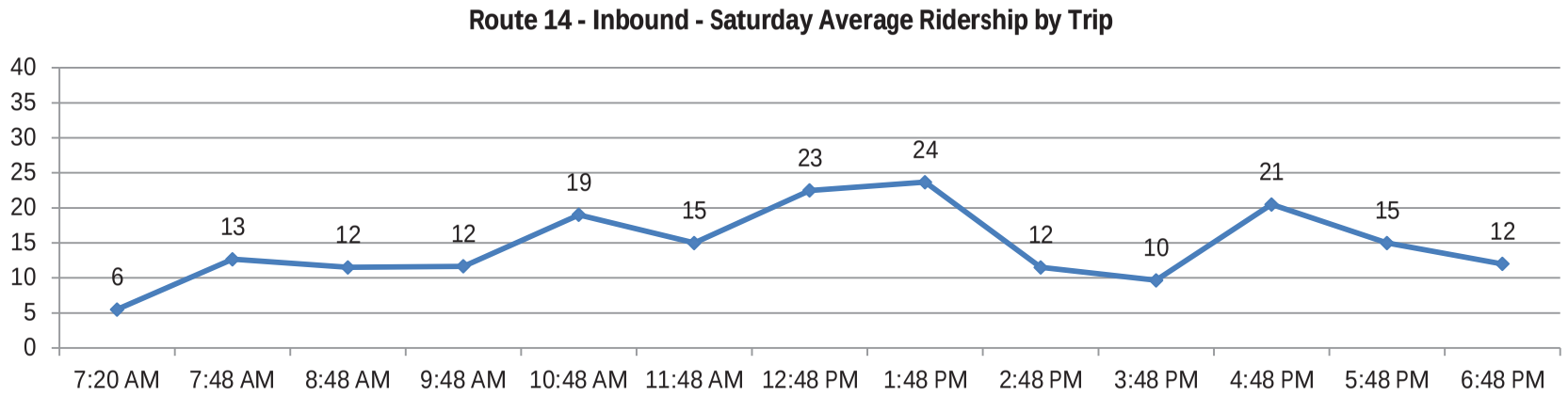
average of eight riders per trip and the Mid-day and PM Peak periods each seeing an average of seven riders per trip.

Exhibit 3.9.1 Route 14 Average Ridership by Trip

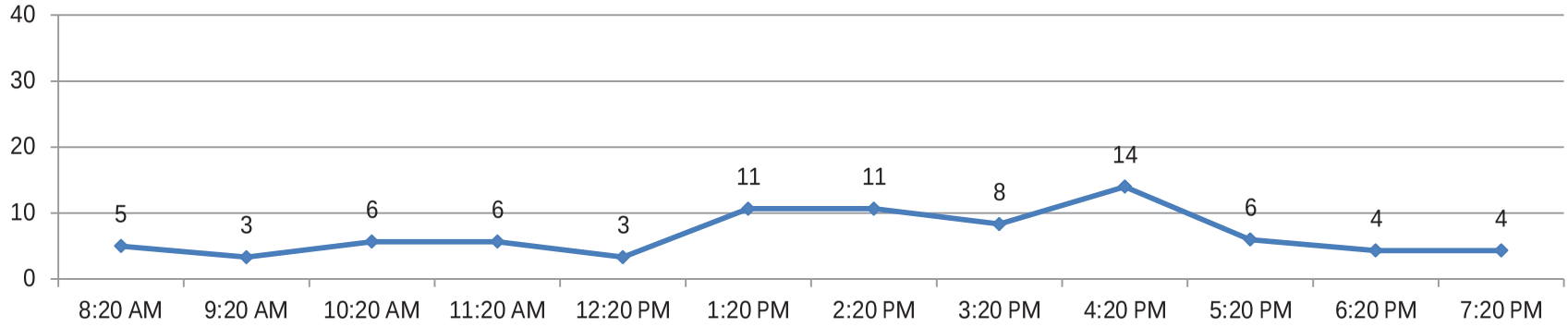





Route 14 - Outbound - Saturday Average Ridership by Trip
40
30
20
10
0
5
13
9
16
13
15
19
14
10
21
18
17
10
7:20 AM
7:45 AM
8:45 AM
9:45 AM
10:45 AM
11:45 AM
12:45 PM
1:45 PM
2:45 PM
3:45 PM
4:45 PM
5:45 PM
6:45 PM


Route 14 - Inbound - Saturday Average Ridership by Trip
40
35
30
25
20
15
10
5
0
6
13
12
12
19
15
23
24
12
10
21
15
12
7:20 AM
7:48 AM
8:48 AM
9:48 AM
10:48 AM
11:48 AM
12:48 PM
1:48 PM
2:48 PM
3:48 PM
4:48 PM
5:48 PM
6:48 PM

Route 14 - Outbound - Sunday Average Ridership by Trip



Route 14 - Inbound - Sunday Average Ridership by Trip

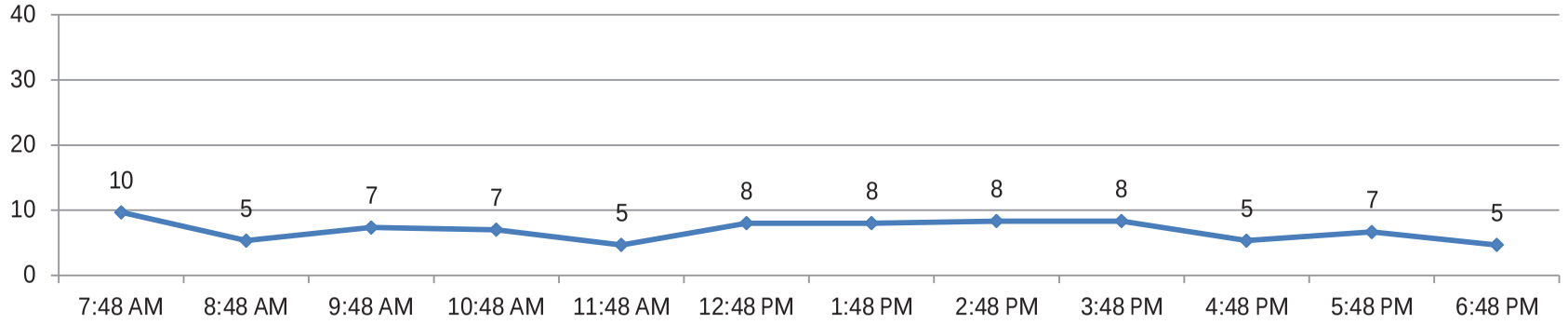
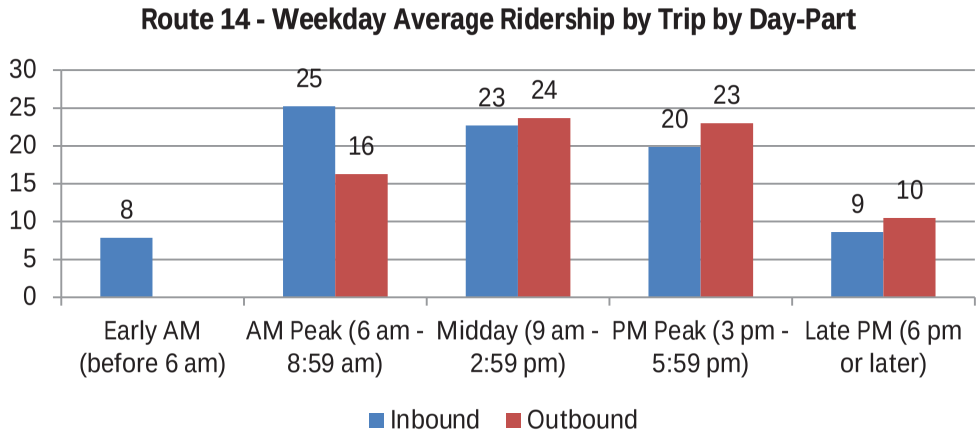
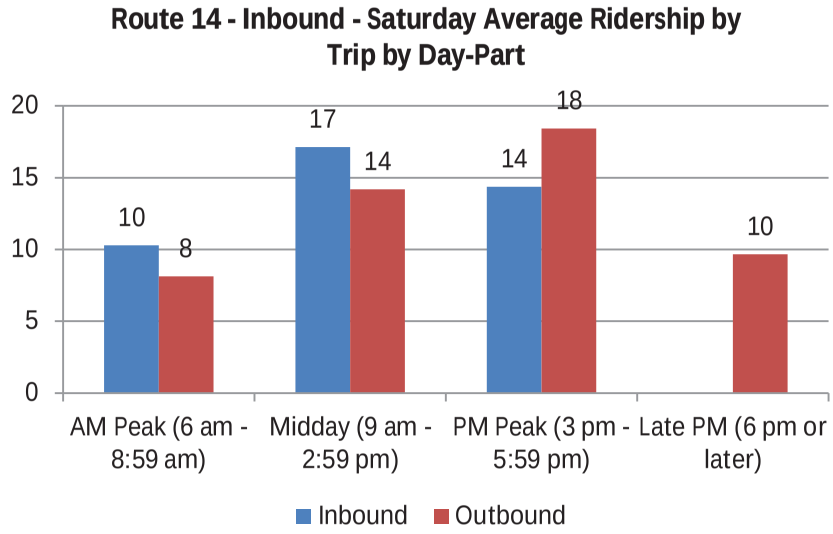
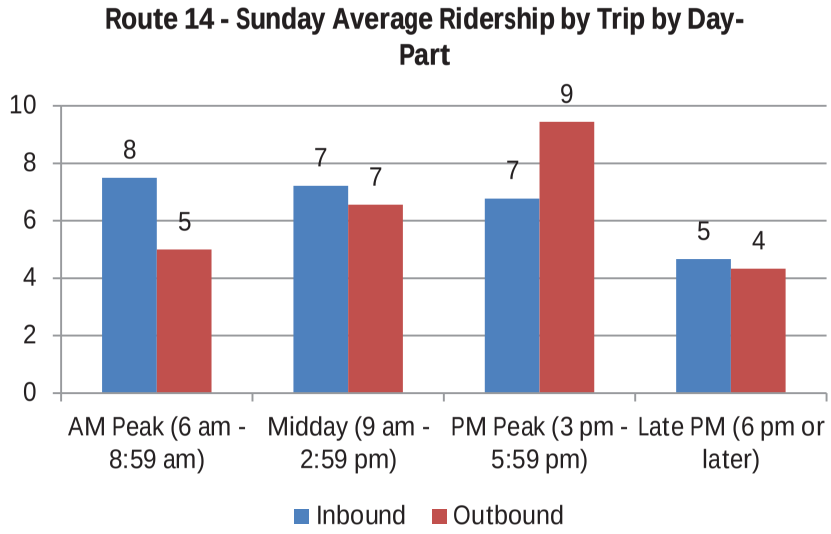


Exhibit 3.9.2 Route 14 Average Ridership by Trip by Day-Part







Average ridership (boardings) by segment

On weekdays, the highest outbound boarding activity takes place in the Bouquet Canyon/Seco Canyon to MRTC segment, followed by the Lyons Ave/Orchard Village to Newhall Metrolink Station segment. The greatest inbound boarding activity takes place within the MRTC to College of the Canyons segment and the Heller Circle/Maitland Lane to Bouquet Canyon/Centurion Way segment.

On Saturday, the highest outbound boarding activity takes place in the Bouquet Canyon/Seco Canyon to MRTC segment. The greatest inbound boarding activity takes place within the MRTC to College of the Canyons segment.

On Sunday, the route is truncated and does not serve Newhall or College of the Canyons. The highest outbound boarding activity takes place in the Bouquet Canyon/Seco Canyon to MRTC segment. The greatest inbound boarding activity takes place within the Heller Circle/Maitland Lane to Bouquet Canyon/Centurion Way segment.

Average boarding and alighting by stop

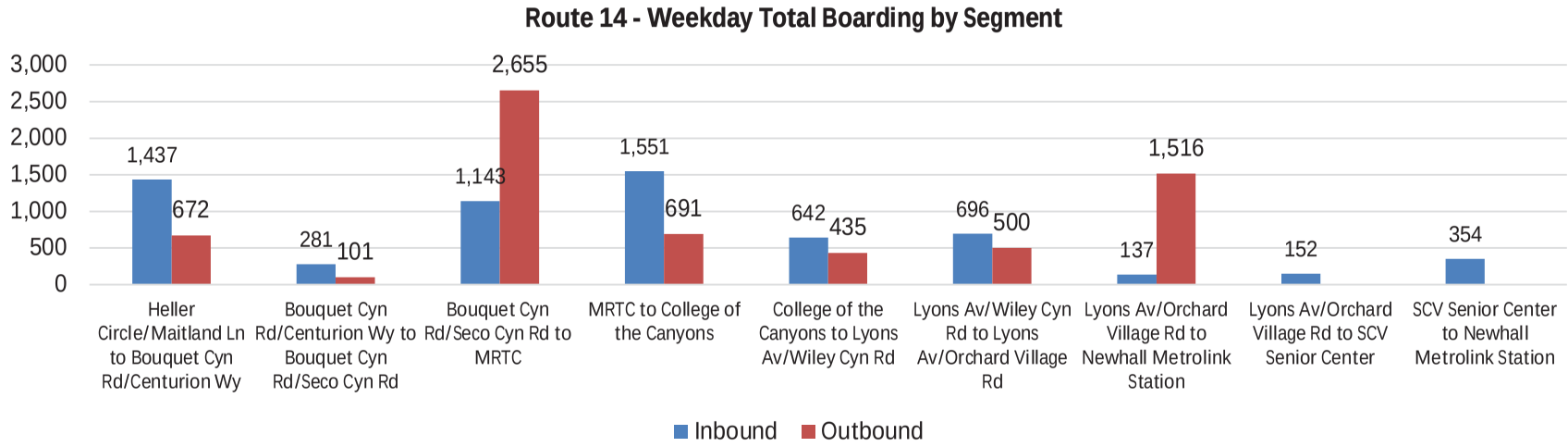
Beginning on page 8, bubble maps illustrate the relative level of activity at each Route 14 stop, both inbound and outbound.

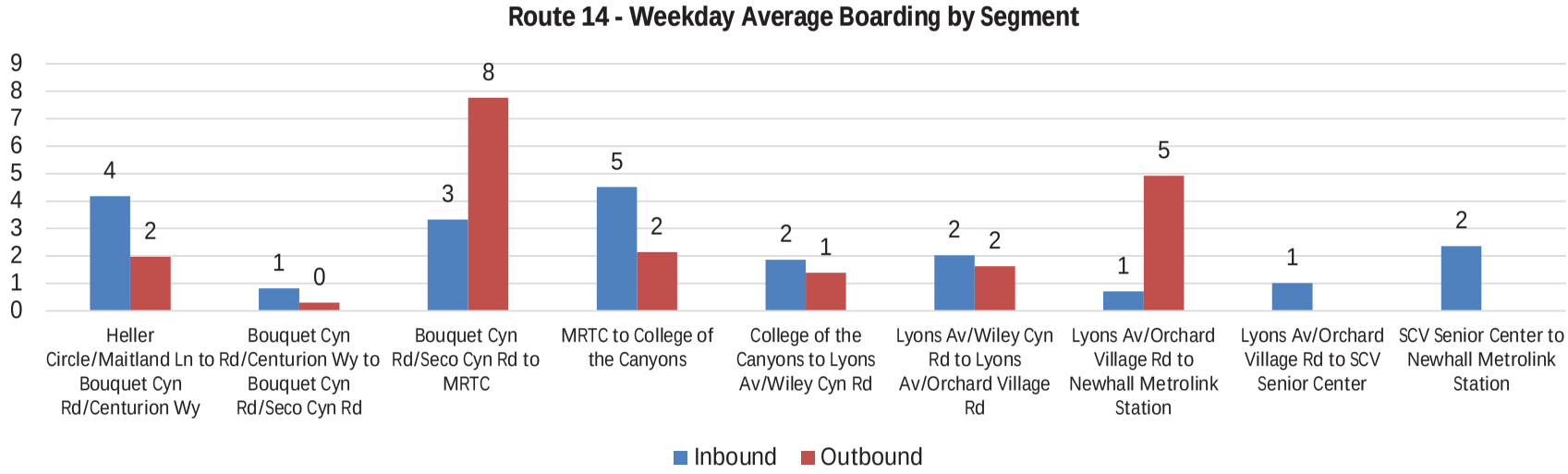
For weekday and Saturday outbound service, the data show that the largest service point was at McBean Pkwy at the Valencia Town Center, just north of the MRTC. This seems unusual, given other days and directions saw the highest volume at the MRTC. It is possible that this data was mislabeled and the MRTC is the correct location for this volume of boardings.

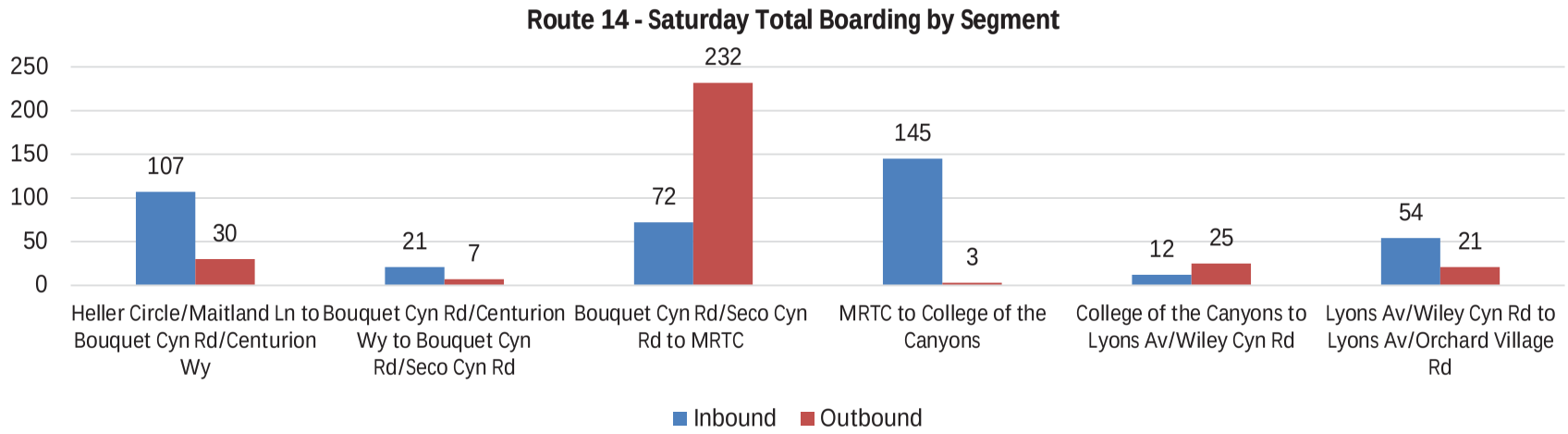
On weekdays, the highest outbound activity was observed at McBean Pkwy, the COC Campus, and the Newhall Metrolink Station. For the inbound service, key activity points were the MRTC, Senior Center, and Rockwell Canyon Rd (College of the Canyons).

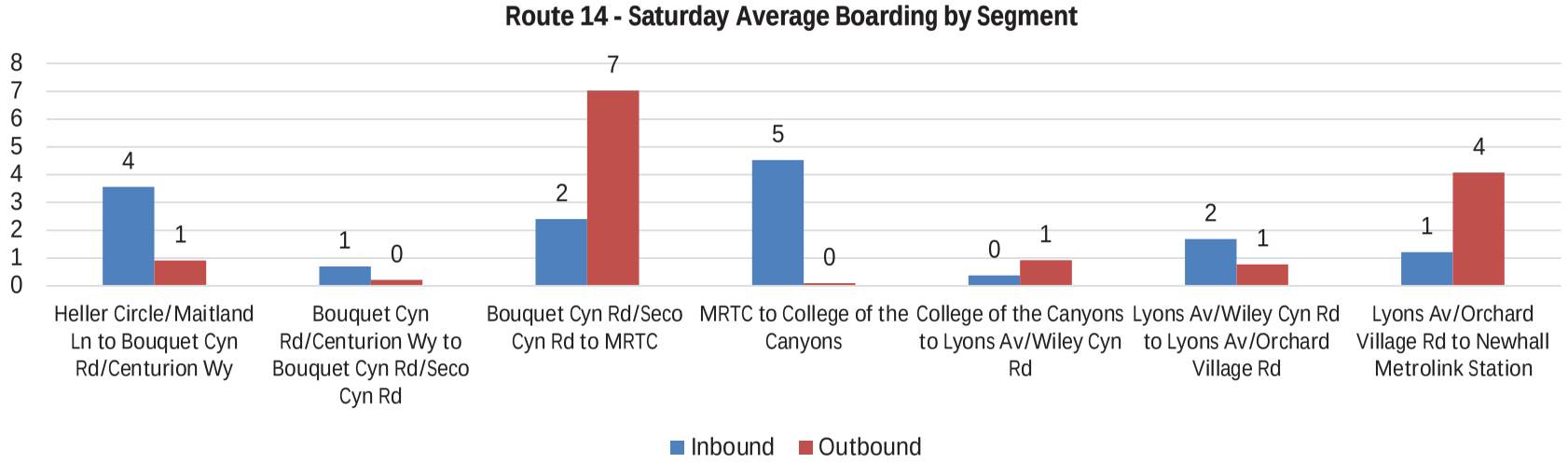
On Saturday, the highest outbound activity was observed at McBean Pkwy and Newhall Metrolink Station. The highest inbound activity took place at MRTC and Market St/Walnut St. On Sunday, key activity points for the outbound service were the MRTC and Plum Canyon Rd. For the inbound service, the highest activity was observed at the MRTC and Bouquet Canyon Rd/Haskell Canyon Rd.

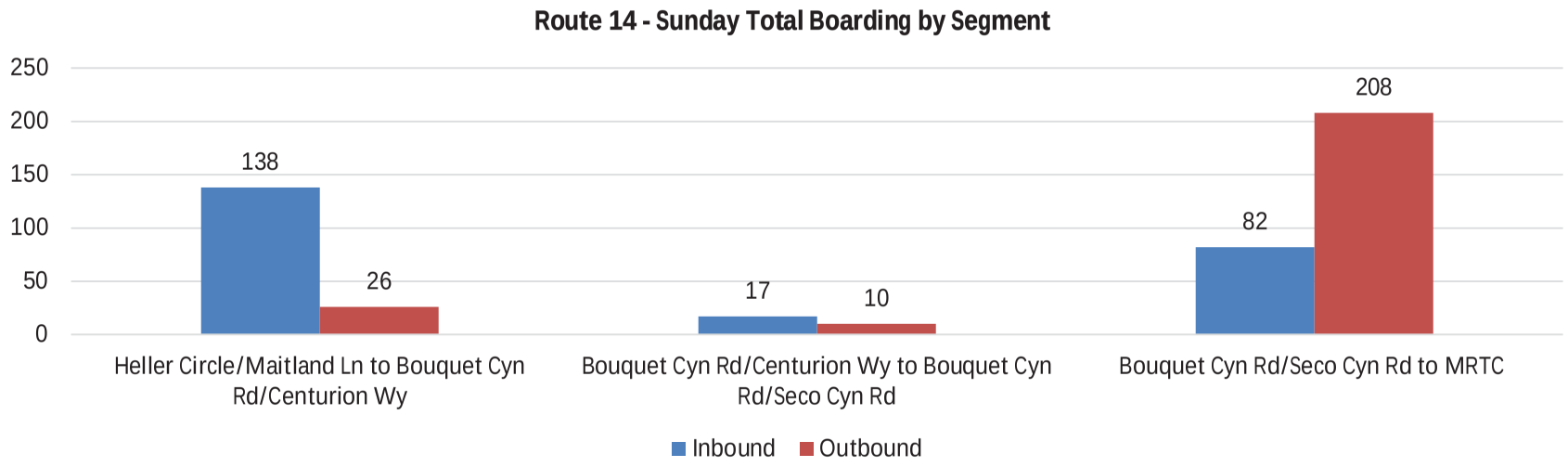
Exhibit 3.9.3 Route 14 Total and Average Boardings by Segment






Route 14 - Saturday Total Boarding by Segment
250
200
150
100
50
0
107
30
21
7
72
232
145
3
12
25
54
21
Heller Circle/Maitland Ln to Bouquet Cyn Rd/Centurion Wy
Bouquet Cyn Rd/Centurion Wy to Bouquet Cyn Rd/Seco Cyn Rd
Bouquet Cyn Rd/Seco Cyn Rd to MRTC
MRTC to College of the Canyons
College of the Canyons to Lyons Av/Wiley Cyn Rd
Lyons Av/Wiley Cyn Rd to Lyons Av/Orchard Village Rd
Inbound
Outbound


Route 14 - Saturday Average Boarding by Segment
8
7
6
5
4
3
2
1
0
4
1
1
0
2
7
5
0
0
1
2
1
1
4
Heller Circle/Maitland Ln to Bouquet Cyn Rd/Centurion Wy
Bouquet Cyn Rd/Centurion Wy to Bouquet Cyn Rd/Seco Cyn Rd
Bouquet Cyn Rd/Seco Cyn Rd to MRTC
MRTC to College of the Canyons
College of the Canyons to Lyons Av/Wiley Cyn Rd
Lyons Av/Wiley Cyn Rd to Lyons Av/Orchard Village Rd
Lyons Av/Orchard Village Rd to Newhall Metrolink Station
Inbound
Outbound


Route 14 - Sunday Total Boarding by Segment
250
200
150
100
50
0
138
26
17
10
82
208
Heller Circle/Maitland Ln to Bouquet Cyn Rd/Centurion Wy
Bouquet Cyn Rd/Centurion Wy to Bouquet Cyn Rd/Seco Cyn Rd
Bouquet Cyn Rd/Seco Cyn Rd to MRTC
Inbound
Outbound

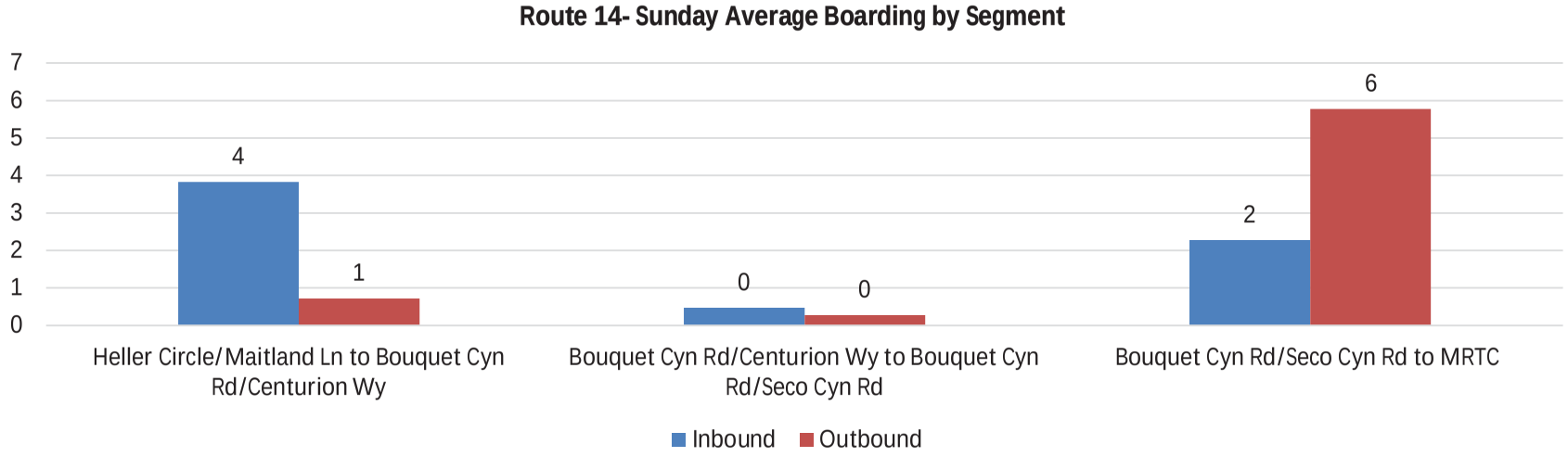
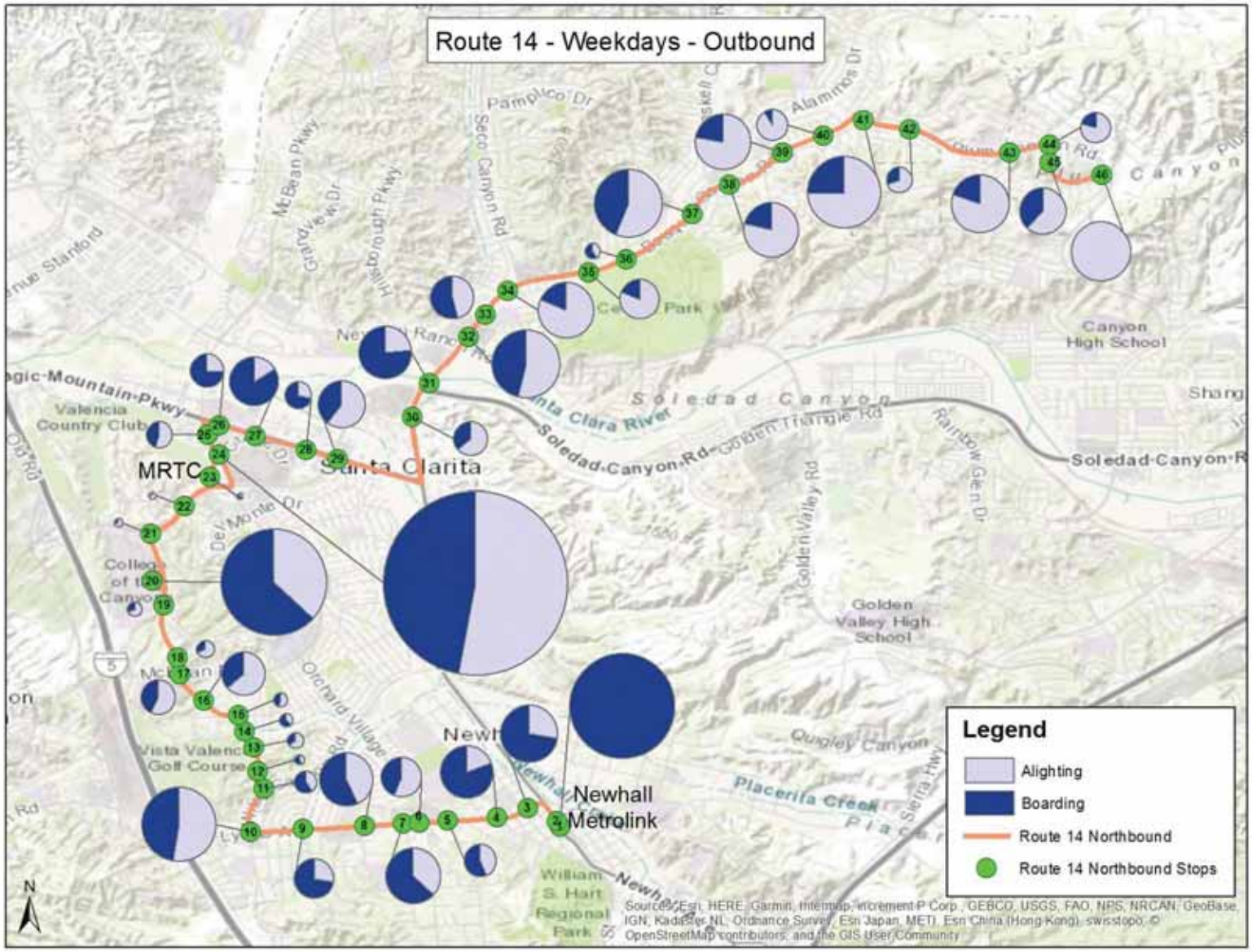
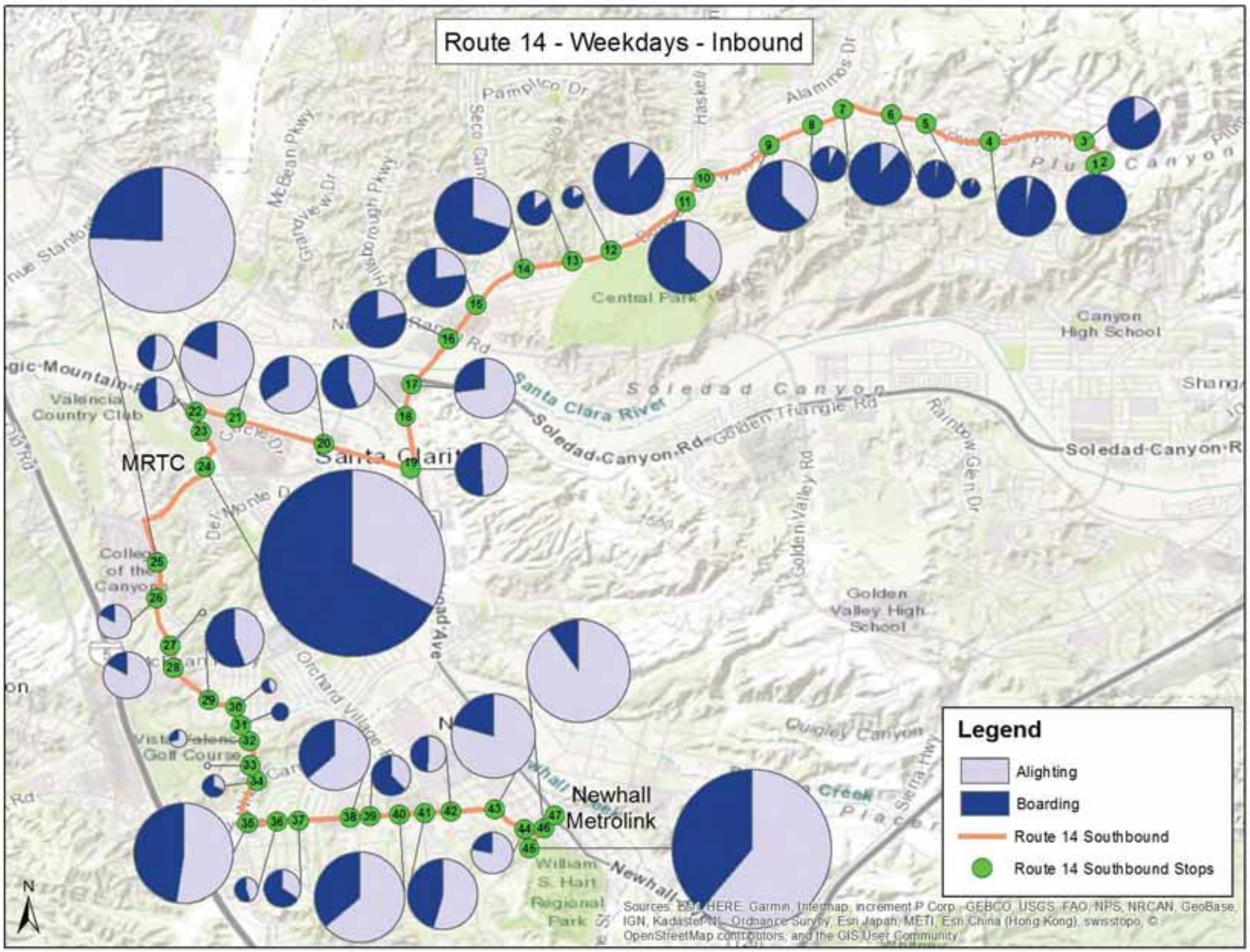
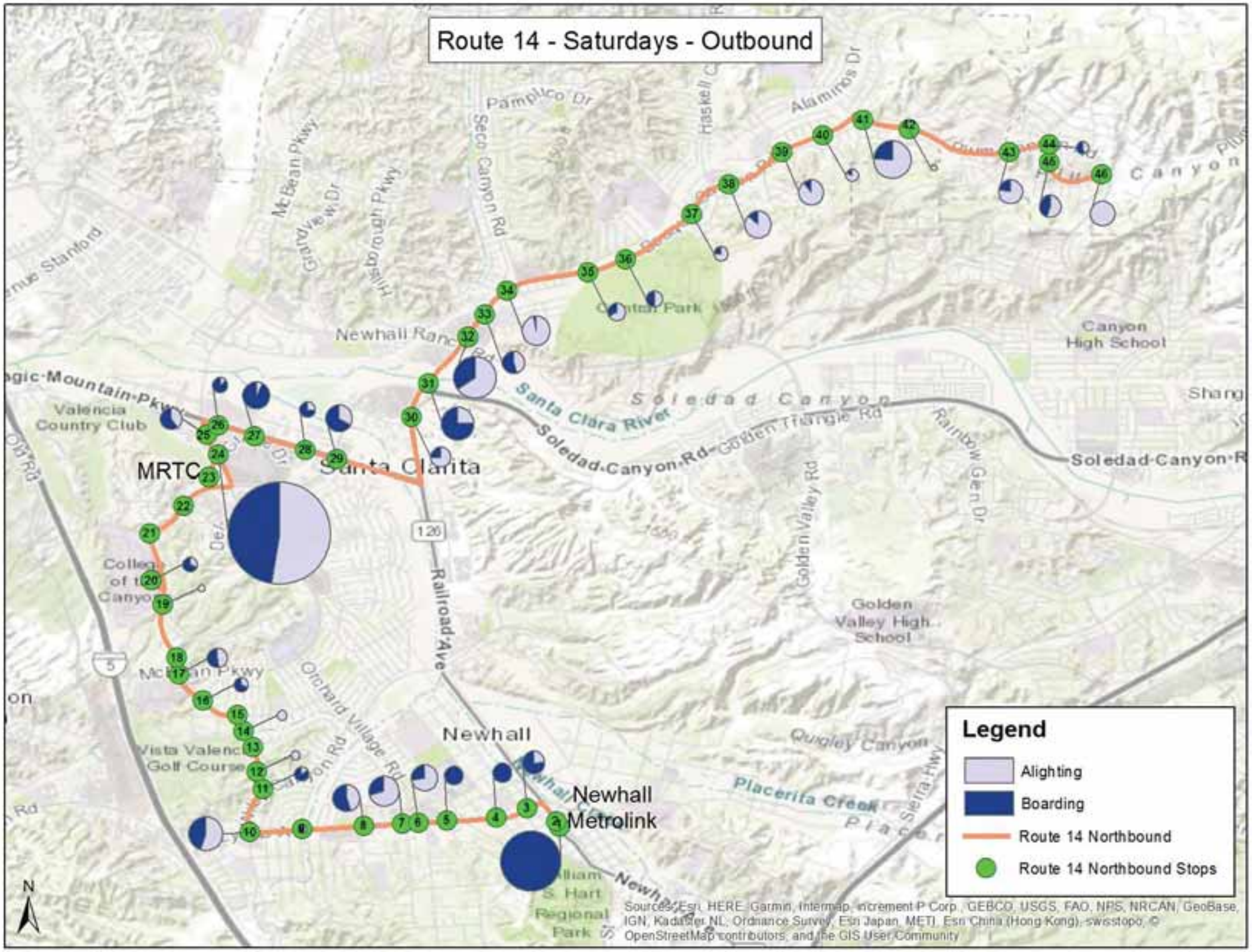
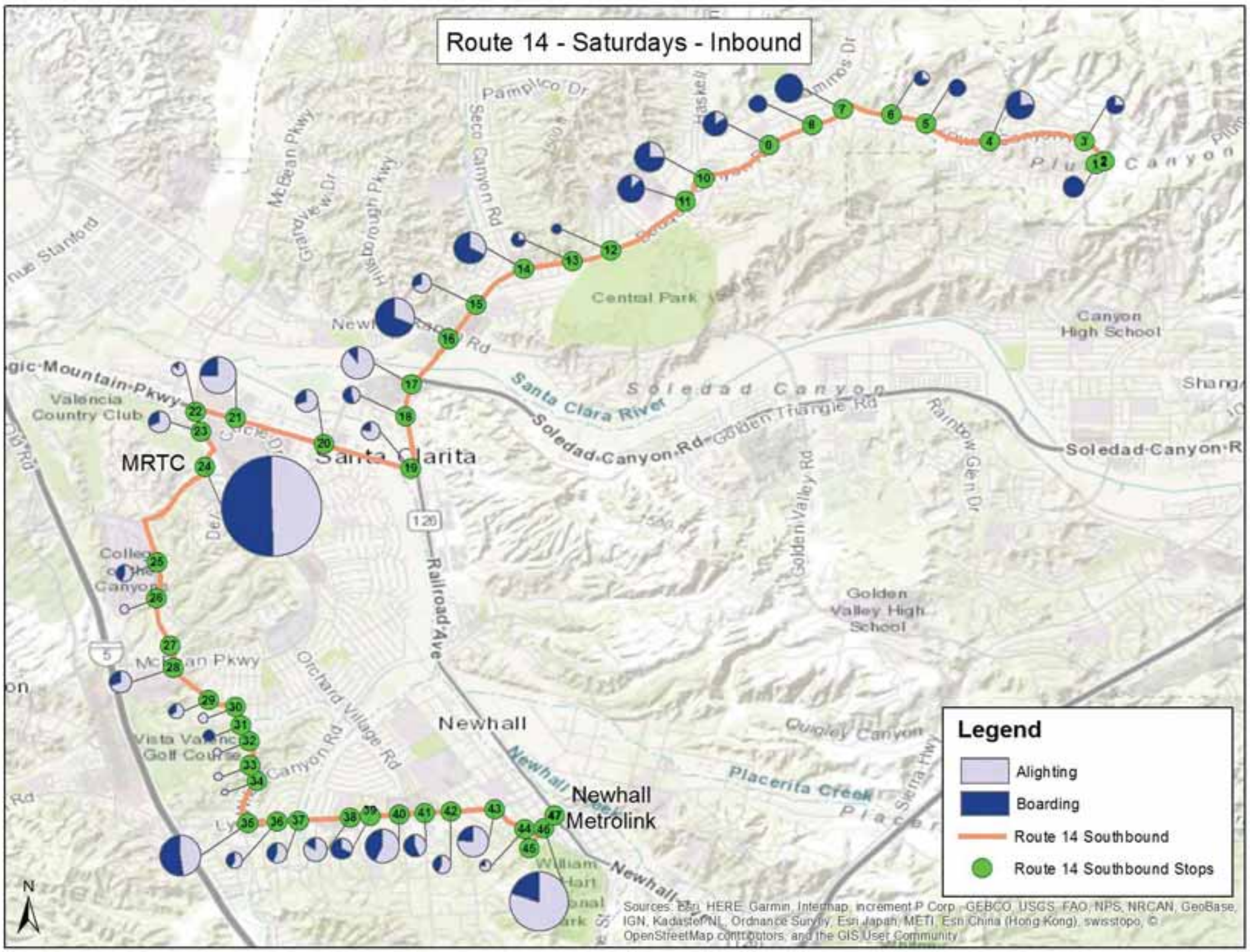

Route 14- Sunday Average Boarding by Segment
7
6
5
4
3
2
1
0
4
1
0
0
2
6
Heller Circle/Maitland Ln to Bouquet Cyn Rd/Centurion Wy
Bouquet Cyn Rd/Centurion Wy to Bouquet Cyn Rd/Seco Cyn Rd
Bouquet Cyn Rd/Seco Cyn Rd to MRTC
Inbound
Outbound

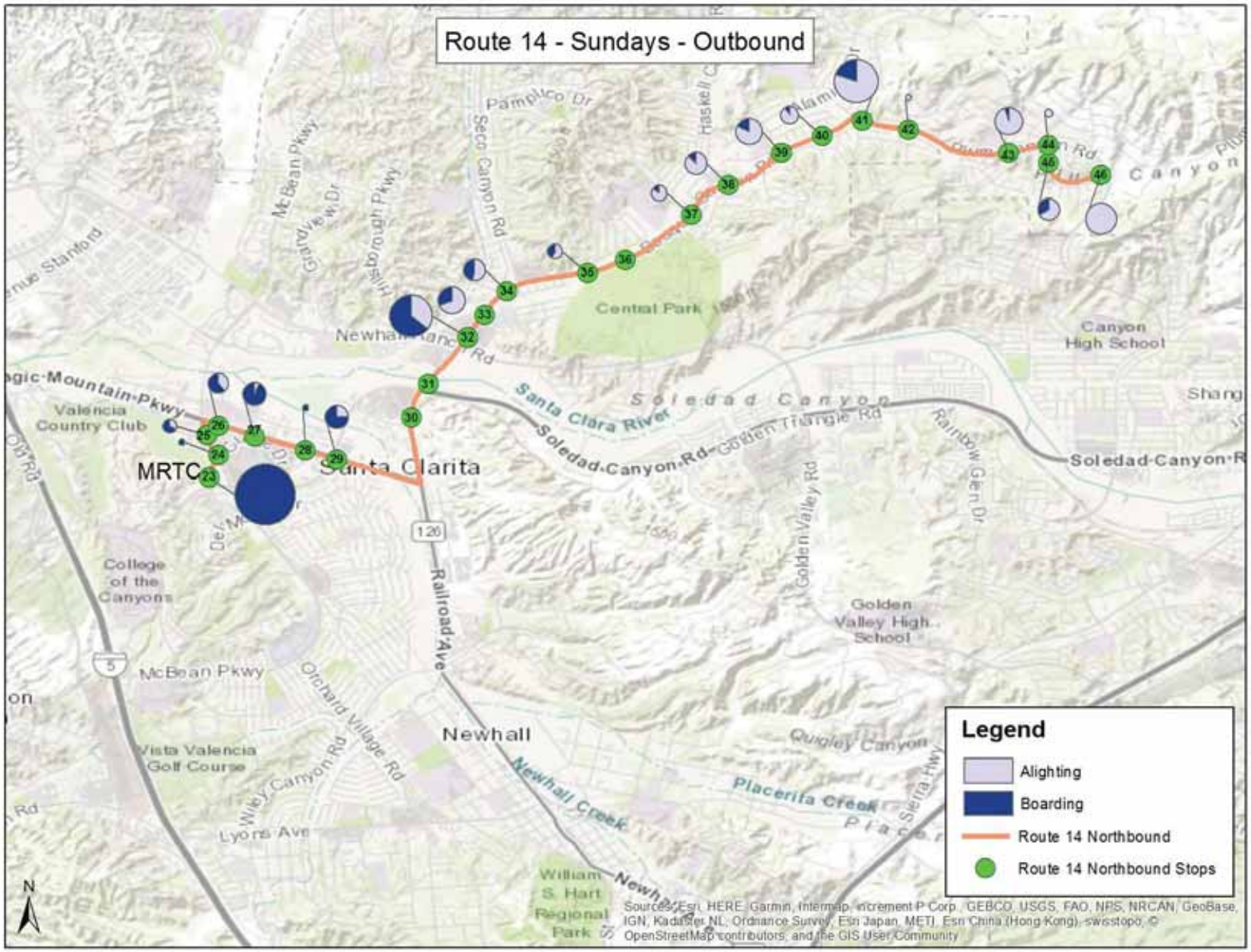
Exhibit 3.9.4 Route 14 Boarding and Alighting Maps




Route 14 - Weekdays - Inbound
Legend
Alighting
Boarding
Route 14 Southbound
Route 14 Southbound Stops
MRTC
Newhall Metrolink
Central Park
Canyon High School
Golden Valley High School
Santa Clara River
Soledad Canyon Rd
Valencia Country Club
William S. Hart Regional Park
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 14 - Saturdays - Outbound
Legend
Alighting
Boarding
Route 14 Northbound
Route 14 Northbound Stops
MRTC
Newhall
Metrolink
Santa Clarita
Newhall
Santa Clara River
Soledad Canyon
Soledad Canyon Rd
Railroad Ave
Seco Canyon Rd
Newhall Ranch Rd
Canyon High School
Golden Valley High School
Placerita Creek
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 14 - Saturdays - Inbound
Legend
Alighting
Boarding
Route 14 Southbound
Route 14 Southbound Stops
MRTC
Newhall Metrolink
Santa Clarita
Newhall
Central Park
Canyon High School
Golden Valley High School
Valencia Country Club
Santa Clara River
Soledad Canyon Rd
Railroad Ave
Orchard Village Rd
Placerita Creek
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 14 - Sundays - Outbound
MRTC
Santa Clarita
Newhall
Central Park
Canyon High School
Valencia Country Club
College of the Canyons
Vista Valencia Golf Course
Golden Valley High School
William S. Hart Regional Park
Soledad Canyon
Soledad Canyon Rd
Santa Clara River
Newhall Creek
Placerita Creek
Railroad Ave
McBean Pkwy
Golden Valley Rd
Rainbow Glen Dr
Seco Canyon Rd
Lyons Ave
Wiley Canyon Rd
Orchard Village Rd
Quigley Canyon
Legend
Alighting
Boarding
Route 14 Northbound
Route 14 Northbound Stops
N
Source: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

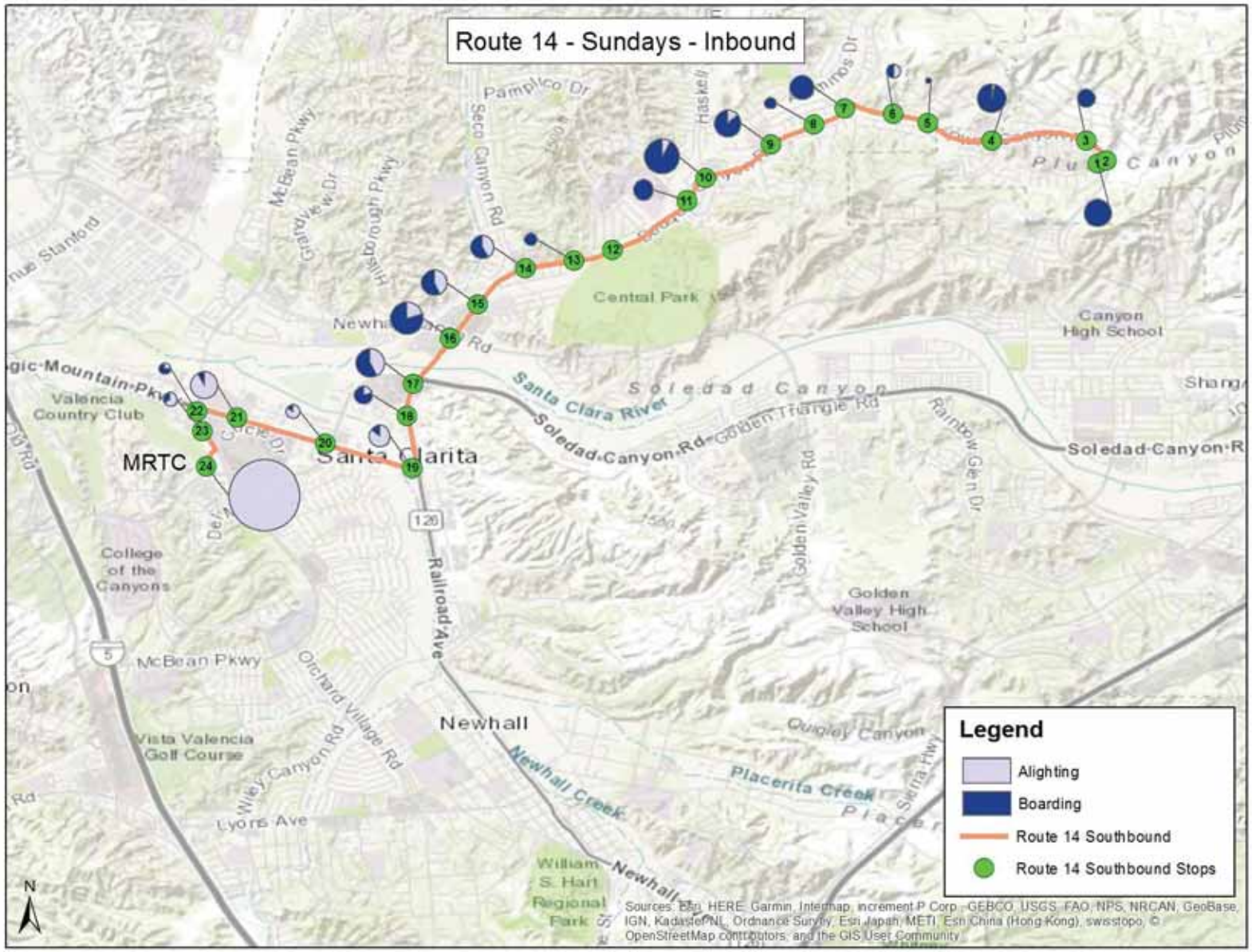

Route 14 - Sundays - Inbound
Legend
Alighting
Boarding
Route 14 Southbound
Route 14 Southbound Stops
MRTC
Santa Clarita
Newhall
Central Park
Canyon High School
Golden Valley High School
College of the Canyons
Valencia Country Club
Vista Valencia Golf Course
Soledad Canyon
Soledad Canyon Rd
Santa Clara River
Newhall Creek
Placerita Creek
Railroad Ave
McBean Pkwy
Lyons Ave
Golden Triangle Rd
Rainbow Glen Dr
Golden Valley Rd
Seco Canyon Rd
Pamplico Dr
Haskell
Pinos Dr
Plum Canyon
Orchard Village Rd
Wiley Canyon Rd
Quigley Canyon
William S. Hart Regional Park
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
N

Exhibit 3.9.5 Route 14 Stop Lists

Route 14 Outbound Stop List	
Stop Number	Stop Name
1	Railroad Ave & Market St
2	Railroad Ave & 8th St
3	Lyons Ave & Main St
4	Lyons Ave & Newhall Ave
5	Lyons Ave & Wayman St
6	Lyons Ave & Orchard Village Rd
7	Lyons Ave & Apple St
8	Lyons Ave & Peachland Ave
9	Lyons Ave & Avenida Entrana
10	Lyons Ave & Wiley Canyon Rd
11	Tournament Rd & Wiley Canyon Rd
12	Tournament Rd & Vista Hills Dr
13	Tournament Rd & Oak Vale Dr
14	Tournament Rd & Trevino Dr
15	Tournament Rd & Golf Course Rd
16	Tournament Rd & Golfview Dr
17	Tournament Rd & McBean Pky
18	Rockwell Canyon Rd & Summit Pl
19	Rockwell Canyon Rd
20	COC Campus
21	Rockwell Canyon Rd & Valencia Blvd
22	Valencia Blvd & Goldcrest Dr
23	McBean MRTC
24	McBean Pky
25	McBean Pky & Town Center Dr
26	Magic Mountain Pky & Theater Dr
27	Magic Mountain Pky & Carousel Ln
28	Magic Mountain Pky & Citrus Dr
29	Magic Mountain Pky & Valencia Blvd
30	Bouquet Canyon Rd & Cinema Dr
31	Bouquet Canyon Rd & Soledad Canyon Rd
32	Bouquet Canyon Rd & Newhall Ranch Rd
33	Bouquet Canyon Rd & Espuella Dr
34	Bouquet Canyon Rd & Festividad Dr
35	Bouquet Canyon Rd & Alamogordo Rd
36	Bouquet Canyon Rd & Central Prk
37	Bouquet Canyon Rd & Centurion Wy
38	Bouquet Canyon Rd & Susan Beth Wy
39	Bouquet Canyon Rd & Urbandale Ave
40	Bouquet Canyon Rd & Wellston Dr
41	Plum Canyon Rd
42	Plum Canyon Rd & Rodgers Dr
43	Plum Canyon Rd & Golden Valley Rd
44	Plum Canyon Rd & Heller Cir
45	Heller Cir & Edgehurst Ln
46	Heller Cir & Maitland Ln

Route 14 Inbound Stop List	
Stop Number	Stop Name
1	Heller Cir & Maitland Ln
2	Plum Canyon Rd & White Canyon Rd
3	Plum Canyon Rd & La Madrid Dr
4	Plum Canyon Rd & Santa Catarina Rd
5	Plum Canyon Rd & Via Joyce Dr
6	Plum Canyon Rd & Rodgers Dr
7	Bouquet Canyon Rd & Plum Canyon Rd
8	Bouquet Canyon Rd & Wellston Dr
9	Bouquet Canyon Rd & Urbandale Ave
10	Bouquet Canyon Rd & Haskell Canyon Rd
11	Bouquet Canyon Rd & Centurion Wy
12	Bouquet Canyon Rd & Central Prk
13	Bouquet Canyon Rd & Alamogordo Rd
14	Bouquet Canyon Rd & Seco Canyon Rd
15	Bouquet Canyon Rd & Espuella Dr
16	Bouquet Canyon Rd
17	Bouquet Canyon Rd & Soledad Canyon Rd
18	Bouquet Canyon Rd & Cinema Dr
19	Magic Mountain Pky & Bouquet Canyon Rd
20	Magic Mountain Pky & Valencia Blvd
21	Magic Mountain Pky & Auto Center Dr
22	McBean Pky & Magic Mountain Pky
23	McBean Pky & Town Center Dr
24	McBean MRTC
25	Rockwell Canyon Rd
26	University Center Dr & Rockwell Canyon Rd
27	Rockwell Canyon Rd
28	Tournament Rd & McBean Pky
29	Tournament Rd & Golfview Dr
30	Tournament Rd & Golf Course Rd
31	Tournament Rd & Trevino Dr
32	Tournament Rd & Oak Vale Dr
33	Tournament Rd & Vista Hills Dr
34	Wiley Canyon Rd & Tournament Rd
35	Lyons Ave & Wiley Canyon Rd
36	Lyons Ave & De Wolfe Rd
37	Lyons Ave & Everett Dr
38	Lyons Ave & Peachland Ave
39	Lyons Ave & Avenida Rotella
40	Lyons Ave & Apple St
41	Lyons Ave & Valley St
42	Lyons Ave & Wayman St
43	Lyons Ave & Newhall Ave
44	Newhall Ave & 8th St
45	Senior Center
46	Market St & Walnut St
47	Railroad Ave & Market St

Average load factor by trip

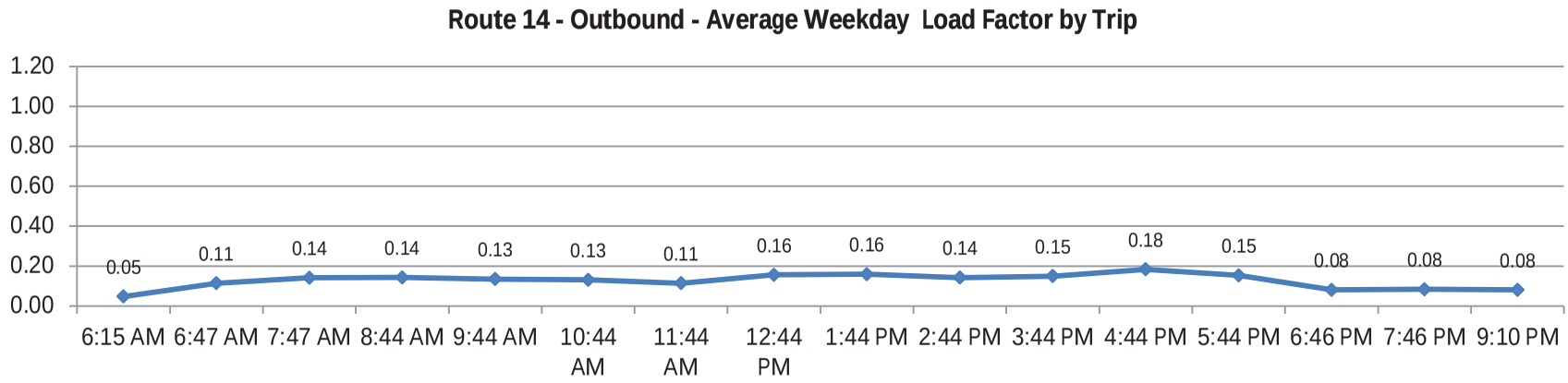
Both inbound and outbound trips on Route 14 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.18. Trips with the highest average peak loads for each day and direction are identified below.

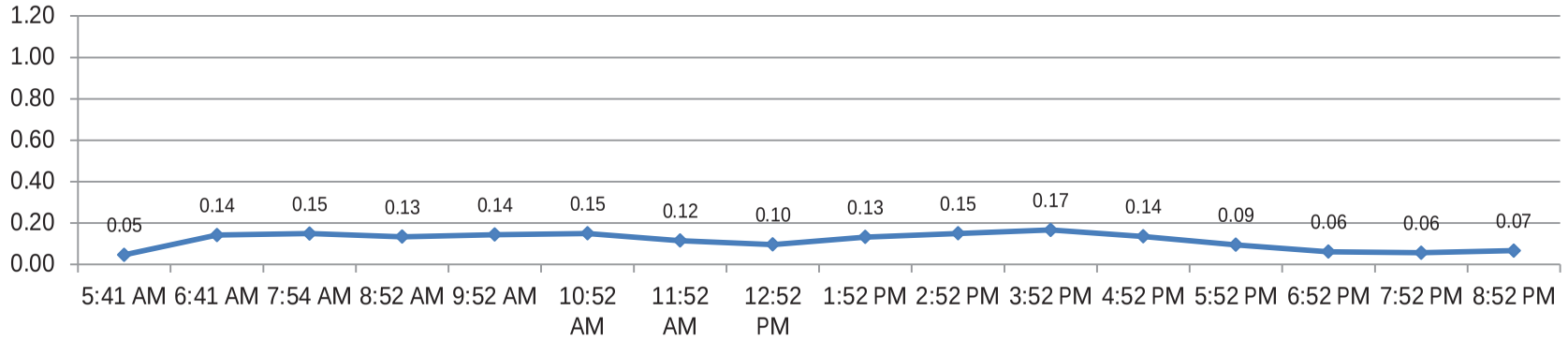
Exhibit 3.9.6 Route 14 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	4:44 p.m.	0.18
Weekday	Inbound	3:52 p.m.	0.17
Saturday	Outbound	12:45 p.m. 5:45 p.m.	0.14
Saturday	Inbound	12:48 p.m.	0.16
Sunday	Outbound	1:20 p.m.	0.14
Sunday	Inbound	7:48 a.m.	0.15

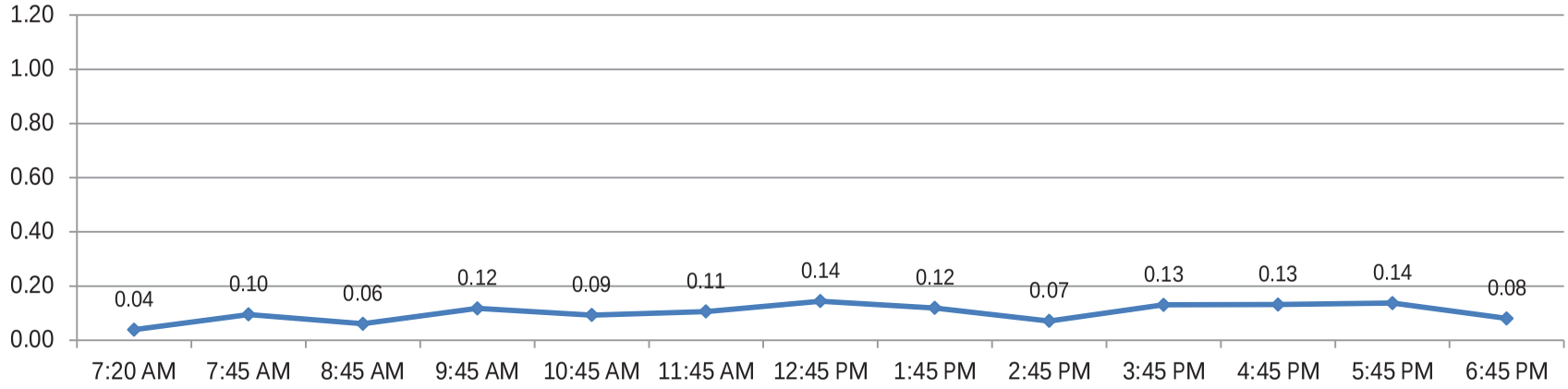
There were no individual trips which exhibited a load factor of at least 0.50.

Exhibit 3.9.7 Route 14 Average Load Factor by Trip

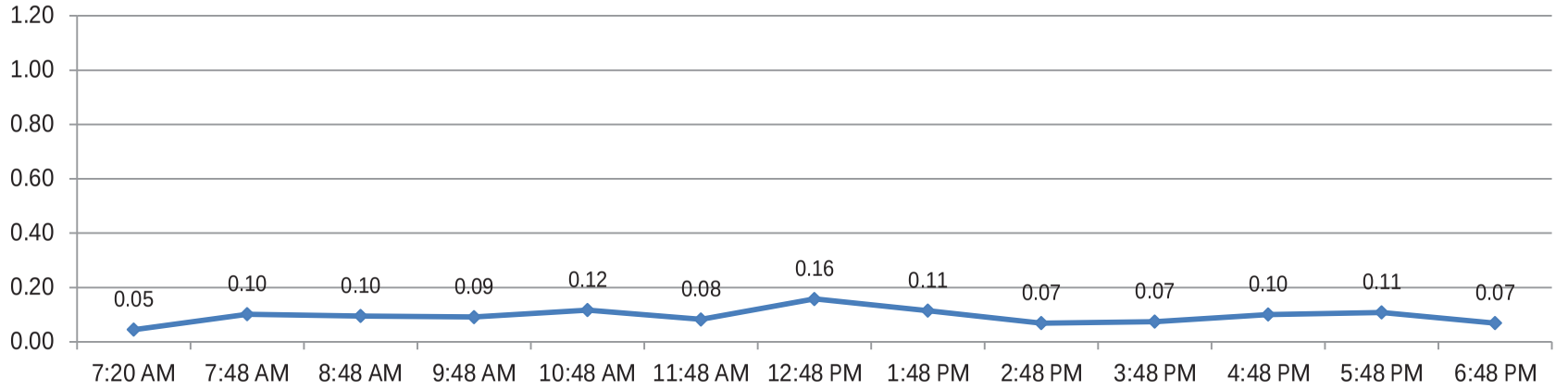




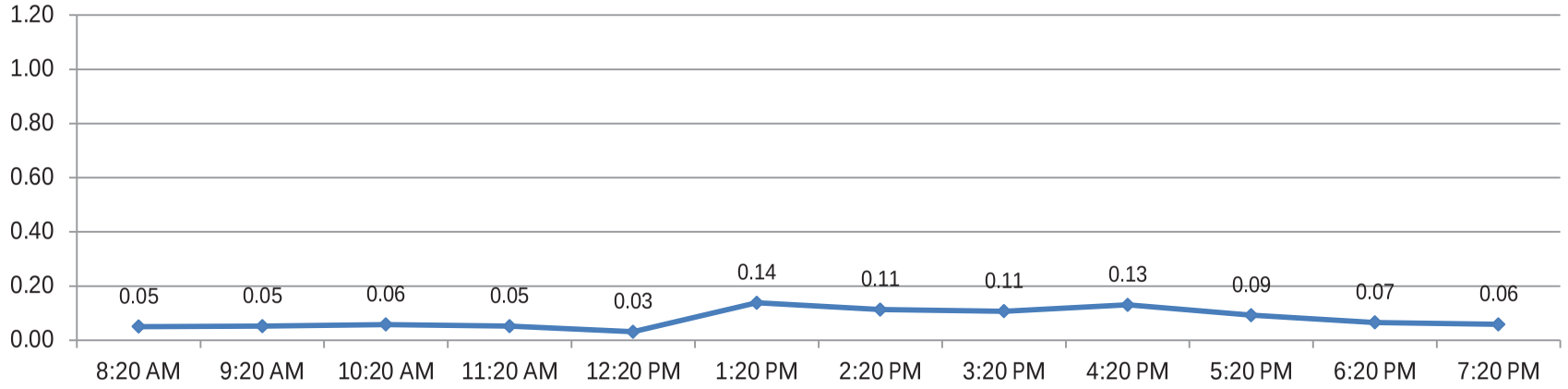
Route 14 - Outbound - Saturday Average Load Factor by Trip



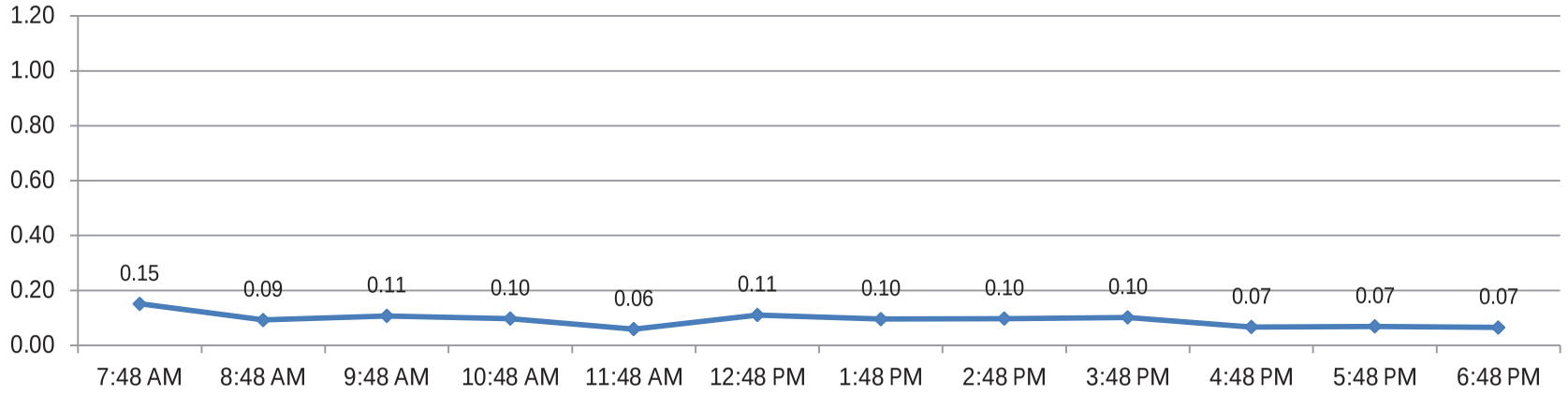
Route 14 - Inbound - Saturday Average Load Factor by Trip



Route 14 - Outbound - Sunday Average Load Factor by Trip



Route 14 - Inbound - Sunday Average Load Factor by Trip



Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

On weekdays, schedule adherence for the inbound service (88.5 percent) is significantly better than schedule adherence for the outbound service (72.4 percent). On Saturday, the same pattern is exhibited, though schedule adherence for both directions is higher than on weekdays (93.6 percent for inbound, 78.8 percent for outbound). On Sunday, both directions experience their lowest level of schedule adherence; just 86.8 percent of inbound trips are on-time, and just 70.1 percent of outbound trips adhere to the published schedule.

Schedule adherence by time-point

On weekdays, the outbound service had its best schedule adherence at College of the Canyons (99.1 percent), and its lowest at Heller Circle/Maitland Lane. Nearly two-thirds of trips at the MRTC were reported as departing early.

Schedule adherence for Route 14 was reviewed using the data provided by the City, which calculates only the deviation from the scheduled departure time from the MRTC (not the arrival time). Given the high incidence of early outbound departures from the MRTC, on-time performance at the MRTC was examined more closely.

With respect to the outbound service, 37 percent of trips arriving at the MRTC on weekdays arrived late. The layover at the MRTC on weekdays generally ranges from 11 to 14 minutes. All but one of the departures from the MRTC after 6:15 a.m. (which starts its trip at the MRTC) left early. This is likely due to drivers who take one of two approaches: either they 1) attempt to make up for a late arrival by leaving immediately (but end up leaving early), or 2) they do not dwell for the full amount of the layover at the MRTC. It should be noted that the observation included 22 days for the 6:15 a.m. trip, and as few as two or three days each for the remaining trips. Therefore, the incidence of early departures from the MRTC could actually be considerably higher if all trips for that time period were to be examined.

Weekday inbound service generally saw high on-time performance between Heller Circle/Maitland Lane and College of the Canyons (93 percent or higher), but schedule adherence declined on the Newhall portion of the route, dropping from 86 percent at Lyons Ave/Wiley Canyon Rd to 74.2 percent at the Newhall Metrolink Station.

On Saturday, the outbound service reported 100 percent of trips at College of the Canyons as on-time. By the end of the route (Heller Circle/Maitland Lane), schedule adherence drops to 30.3 percent. (It should be noted that only four trips were recorded for the MRTC; therefore, while on-time performance is shown as 75 percent, the "25 percent early" is comprised of a single trip.

Schedule adherence for the Saturday inbound service was high across the entire route, with no time-point having fewer than 88 percent of trips on-time.

On Sunday, late trips were a significant concern at Heller Circle/Maitland Lane for the outbound service (61.1 percent of trips were late). The seven-minute dwell time at Heller Circle/Maitland appears to be sufficient for recovery, as 94.4 percent of inbound trips left that stop on-time. The inbound service saw the majority of its late trips concentrated at the MRTC (38.9 percent were late). Early trips were not a significant problem on Sunday.

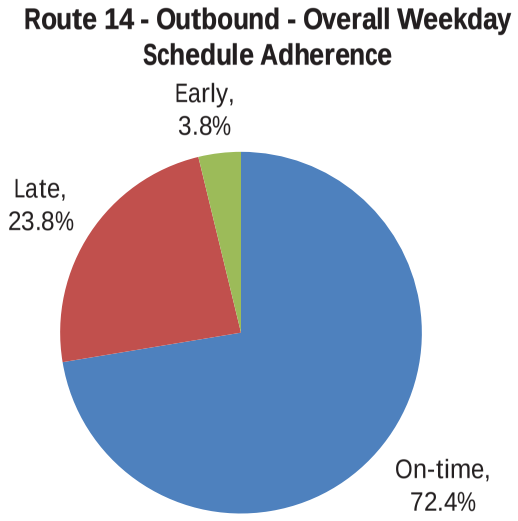
Schedule adherence by time of day

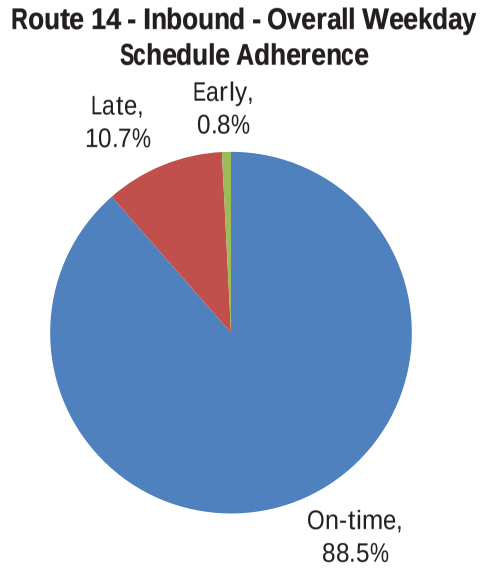
On weekdays, schedule adherence is generally highest during the Late PM period (81.8 percent for the outbound service and 94.5 for the inbound service). Schedule adherence for the outbound service is lowest during the PM Peak day-part (57.5 percent). The inbound service has its lowest on-time performance during the AM Peak (80.6 percent).

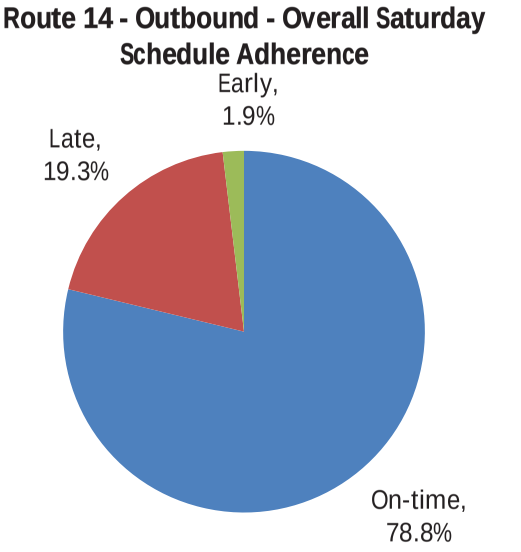
On Saturday, outbound schedule adherence is highest during the Mid-day period (83.2 percent) and lowest during the PM Peak day-part (66 percent). For the inbound service, on-time performance is best during the Late PM period (100 percent) and lowest during the PM Peak day-part (80.4 percent).

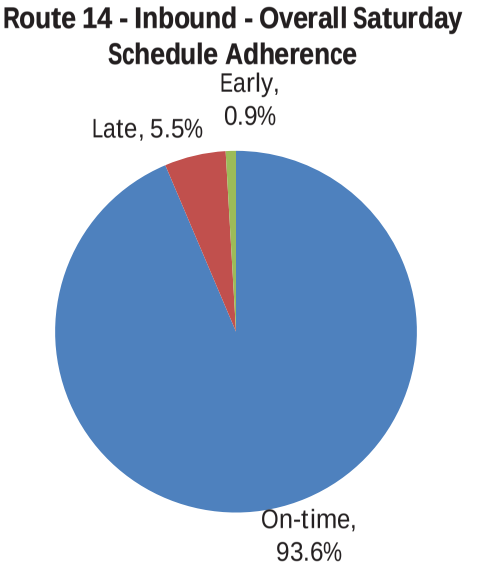
On Sunday, schedule adherence for the outbound service is highest during the AM Peak period (100 percent) and lowest during the PM Peak period (47.2 percent). Schedule adherence for the inbound service is highest during the Late PM period (100 percent) and lowest during the Mid-day day-part (77.8 percent). There were few early trips observed on Sunday.

Exhibit 3.9.8 Route 14 Overall Schedule Adherence

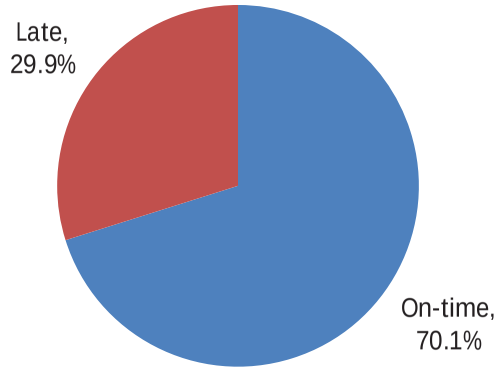








Route 14 - Outbound - Overall Sunday Schedule Adherence



Route 14 - Inbound - Overall Sunday Schedule Adherence

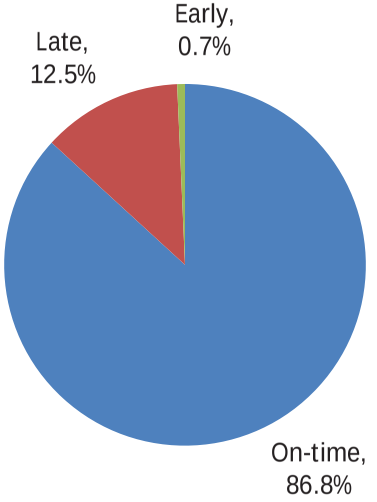
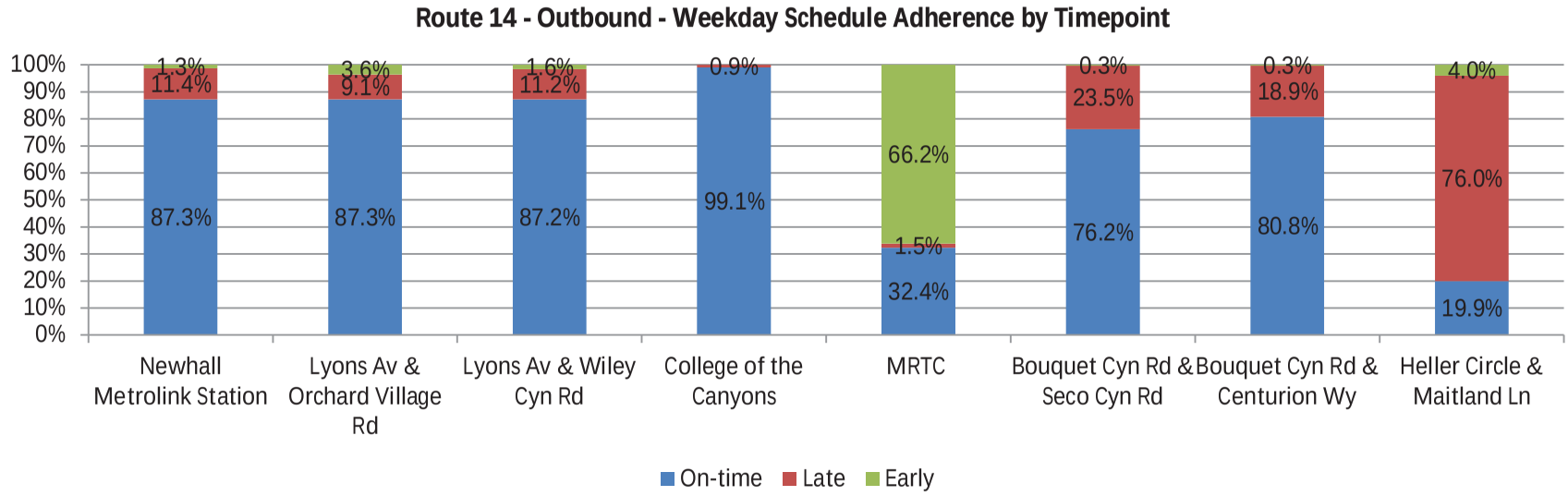
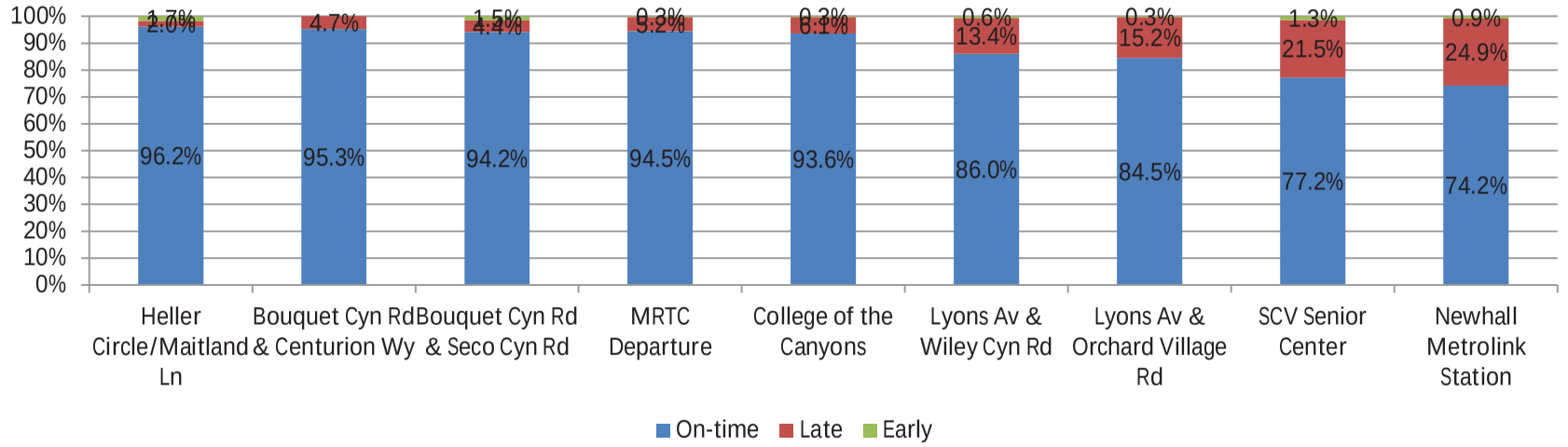
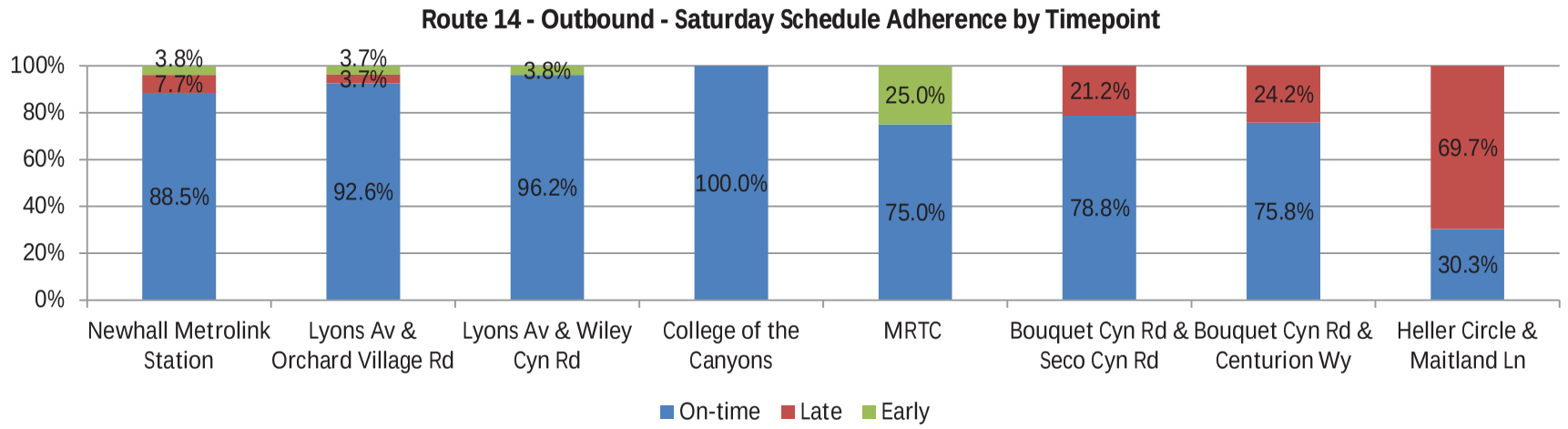
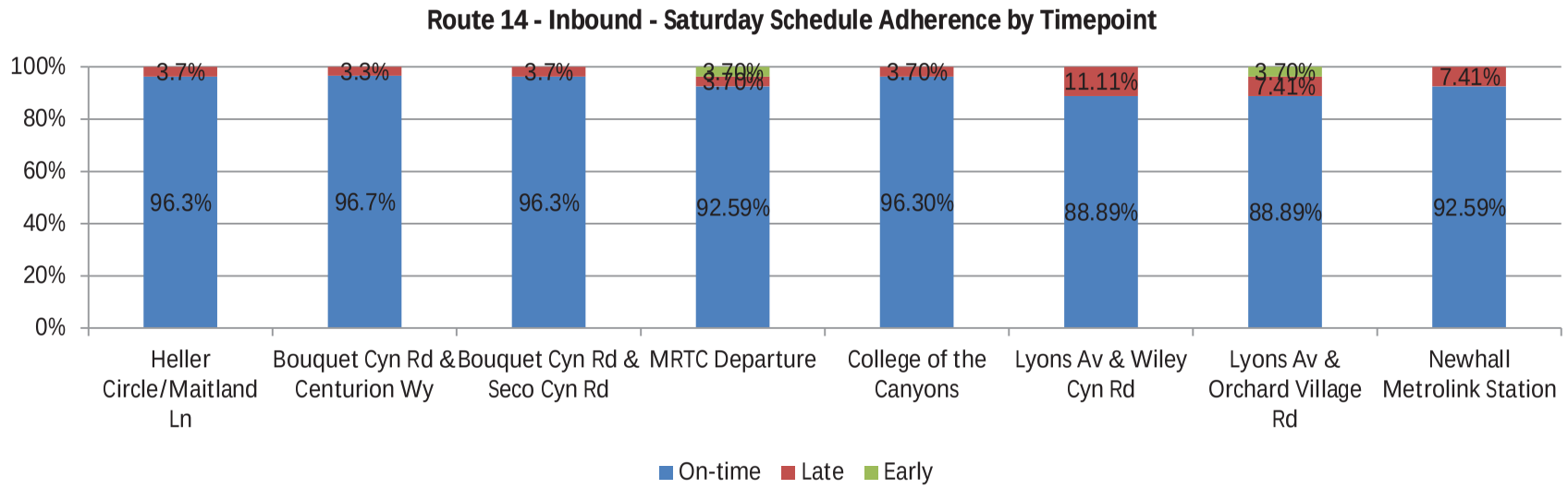


Exhibit 3.9.9 Route 14 Schedule Adherence by Time-point

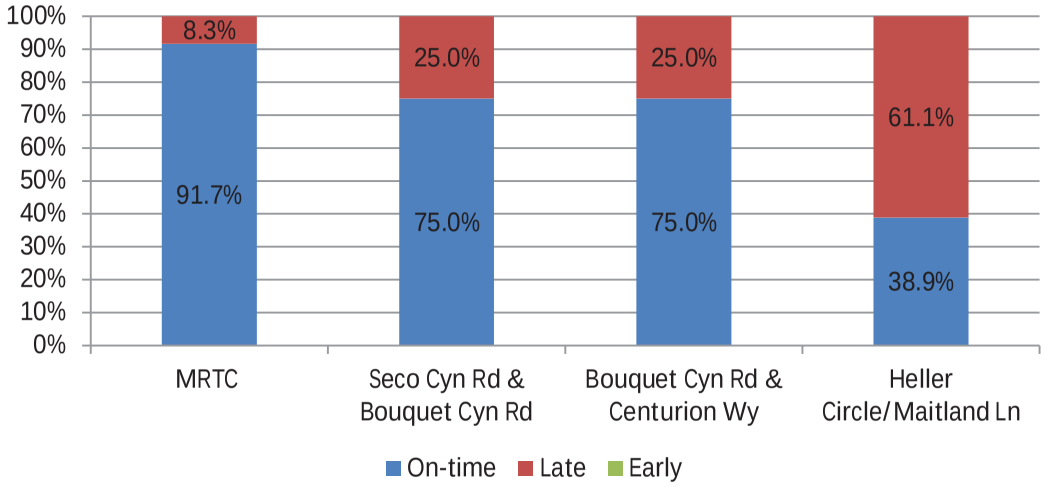





Route 14 - Outbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
3.8%
7.7%
88.5%
3.7%
3.7%
92.6%
3.8%
96.2%
100.0%
25.0%
75.0%
21.2%
78.8%
24.2%
75.8%
69.7%
30.3%
Newhall Metrolink Station
Lyons Av & Orchard Village Rd
Lyons Av & Wiley Cyn Rd
College of the Canyons
MRTC
Bouquet Cyn Rd & Seco Cyn Rd
Bouquet Cyn Rd & Centurion Wy
Heller Circle & Maitland Ln
On-time
Late
Early


Route 14 - Inbound - Saturday Schedule Adherence by Timepoint
100%
80%
60%
40%
20%
0%
3.7%
96.3%
3.3%
96.7%
3.7%
96.3%
3.70%
92.59%
3.70%
96.30%
11.11%
88.89%
3.70%
7.41%
88.89%
7.41%
92.59%
Heller Circle/Maitland Ln
Bouquet Cyn Rd & Centurion Wy
Bouquet Cyn Rd & Seco Cyn Rd
MRTC Departure
College of the Canyons
Lyons Av & Wiley Cyn Rd
Lyons Av & Orchard Village Rd
Newhall Metrolink Station
On-time
Late
Early

Route 14 - Outbound - Sunday Schedule Adherence by Timepoint



Route 14 - Inbound - Sunday Schedule Adherence by Timepoint

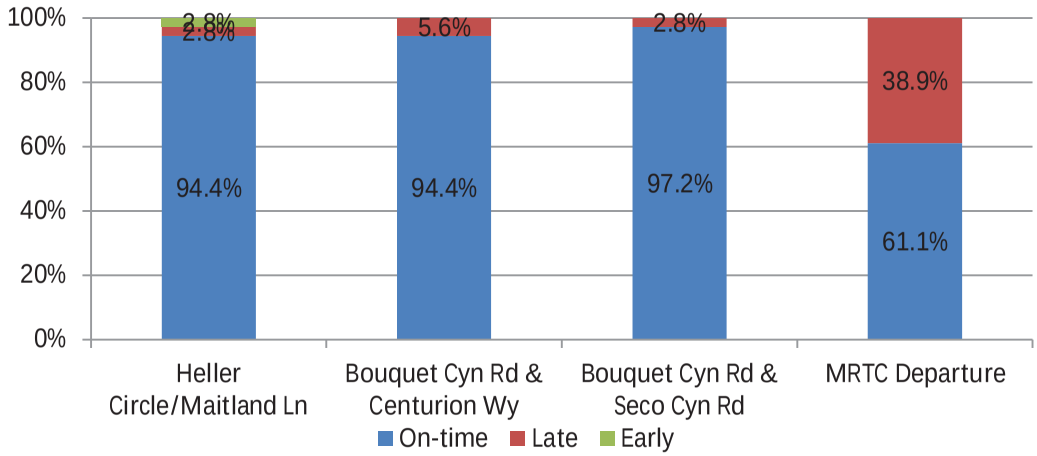
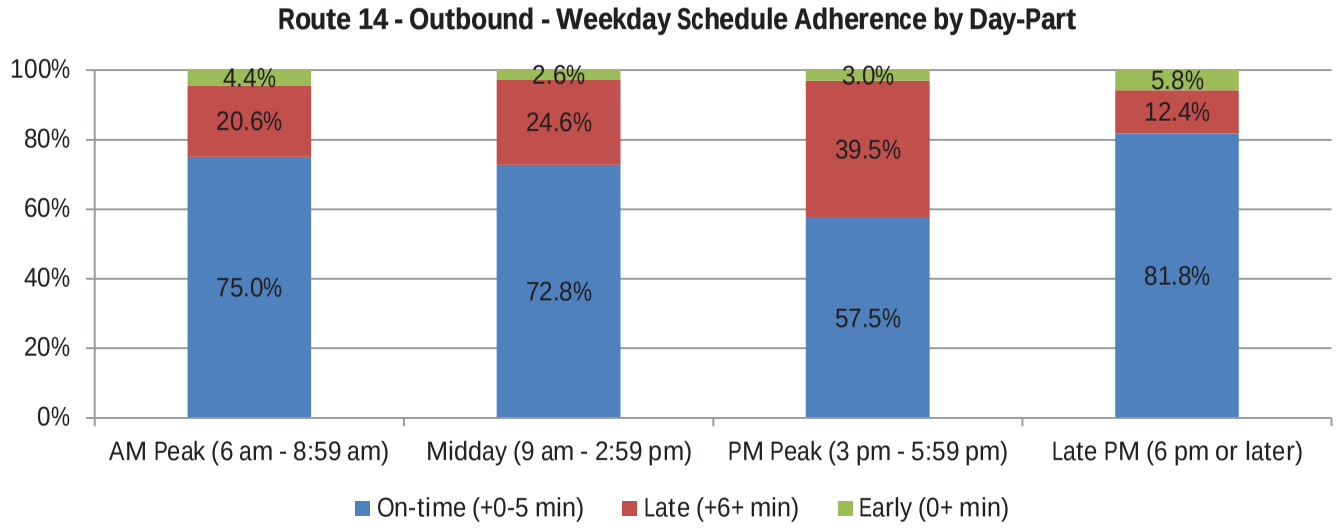
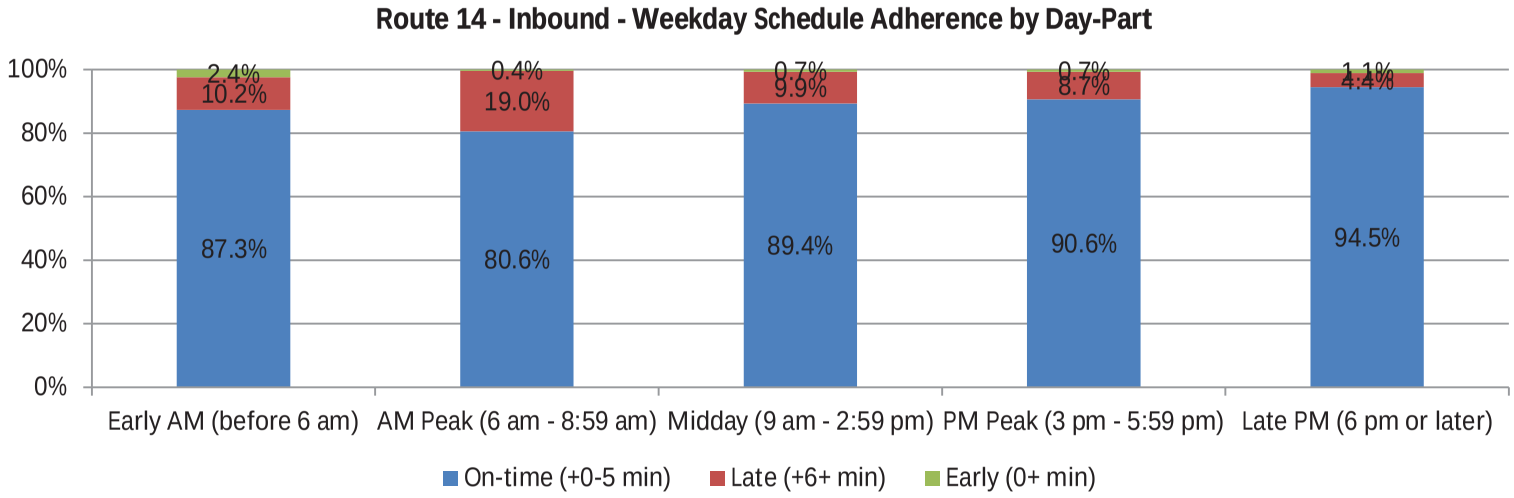
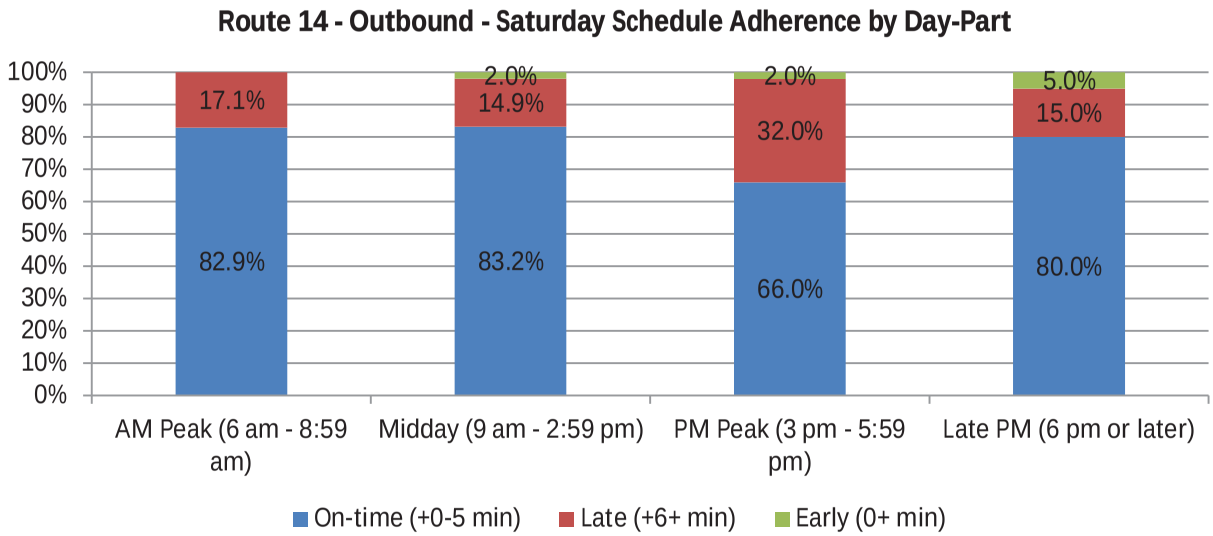
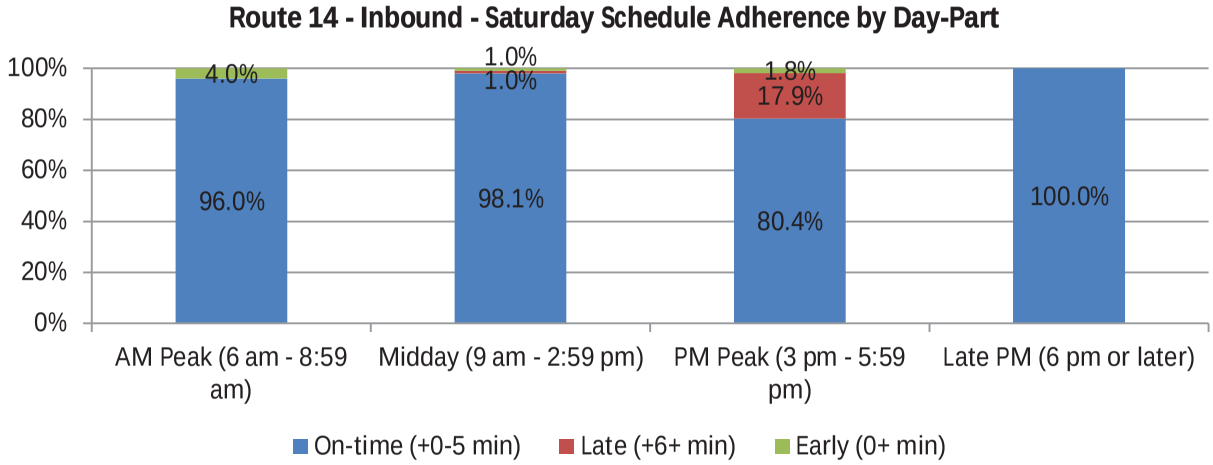


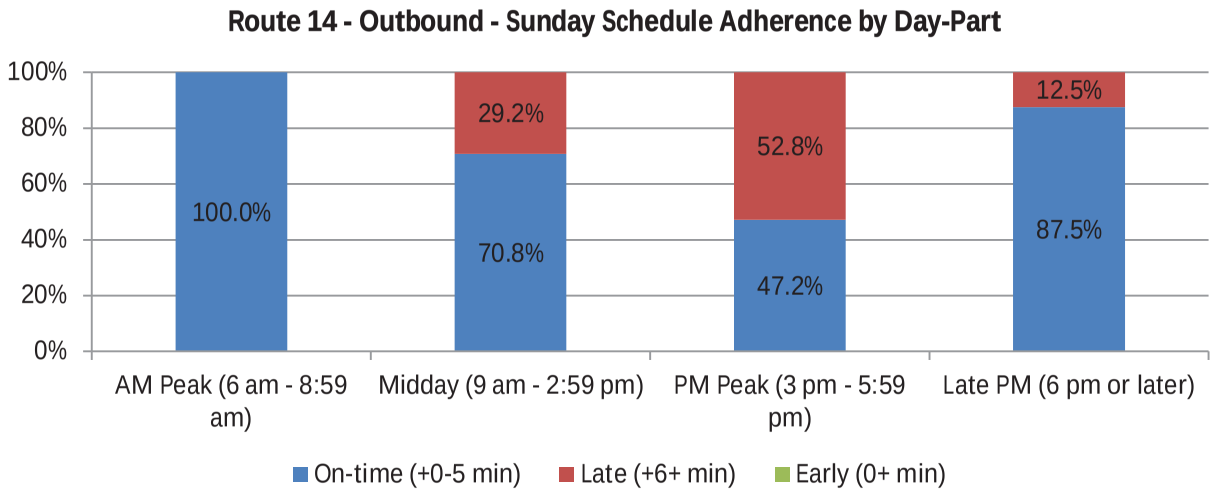
Exhibit 3.9.10 Route 14 Schedule Adherence by Day-Part

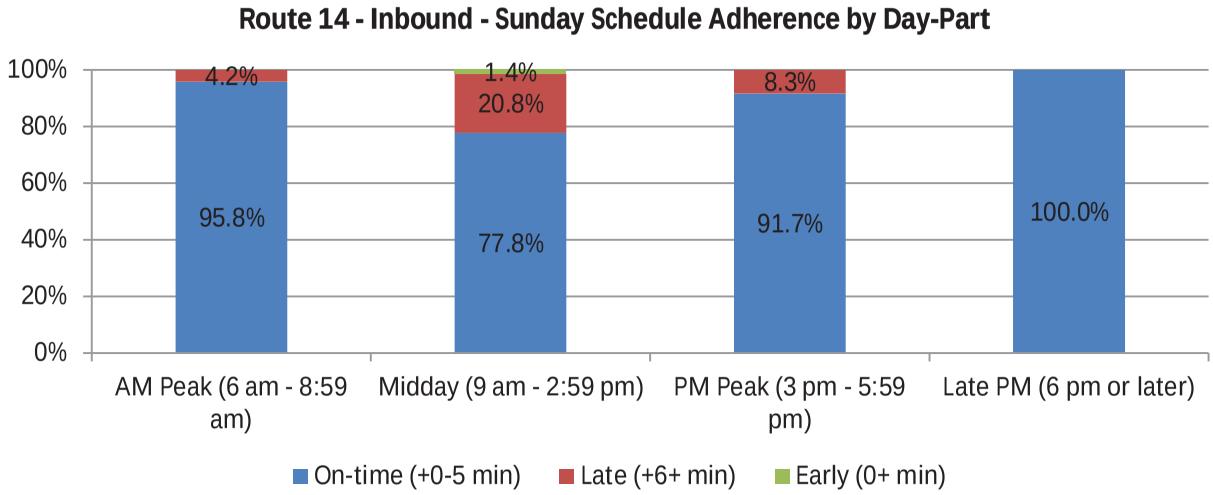





Route 14 - Outbound - Saturday Schedule Adherence by Day-Part
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
17.1%
82.9%
2.0%
14.9%
83.2%
2.0%
32.0%
66.0%
5.0%
15.0%
80.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 14 - Inbound - Saturday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
4.0%
96.0%
1.0%
1.0%
98.1%
1.8%
17.9%
80.4%
100.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 14 - Outbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
100.0%
29.2%
70.8%
52.8%
47.2%
12.5%
87.5%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)


Route 14 - Inbound - Sunday Schedule Adherence by Day-Part
100%
80%
60%
40%
20%
0%
4.2%
95.8%
1.4%
20.8%
77.8%
8.3%
91.7%
100.0%
AM Peak (6 am - 8:59 am)
Midday (9 am - 2:59 pm)
PM Peak (3 pm - 5:59 pm)
Late PM (6 pm or later)
On-time (+0-5 min)
Late (+6+ min)
Early (0+ min)

Route Performance

Overall ridership

Exhibit 3.9.11 Route 14 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.9.12 Route 14 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 501 Profile and Performance Analysis

Route Description

Route 501 is a Station Link route connecting the Santa Clarita Metrolink station with nearby employment opportunities. Although categorized as a local route for the purposes of this analysis, Route 501 is designed as the "last mile" in commuter rail trips to employment. Route 501 serves Six Flags Magic Mountain, Kaiser Permanente, College of the Canyons, River Oaks Shopping Center, and Saugus High School via a one-way loop that reverses direction in the afternoon.

Primary streets of operation on Route 501 include Soledad Canyon Road, Valencia Boulevard, Tourney Road, and Magic Mountain Parkway. The route is timed to meet Metrolink trains and operates in the morning and evening peak periods on weekdays only.

Inbound service is defined as morning (AM) service, which originates at the Santa Clarita Metrolink Station and travels to the Six Flags Magic Mountain Employee Gate before returning to the Santa Clarita Metrolink Station (though the last trip terminates at the Employee Gate). Outbound service occurs in the afternoon (PM) and originates at the Six Flags Magic Mountain Employee Gate and travels to the Santa Clarita Metrolink Station before returning to the Employee Gate (though the last trip terminates at the station). This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

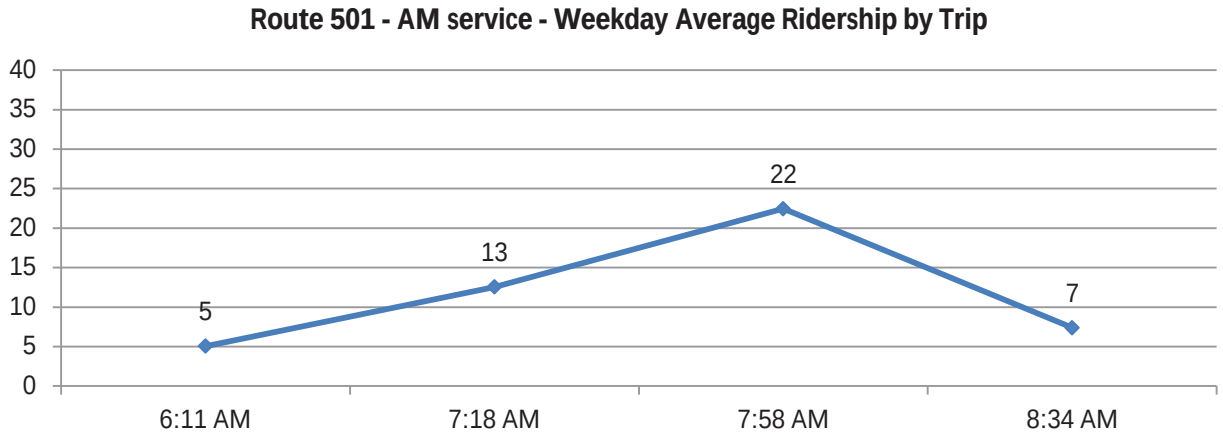
Route Performance

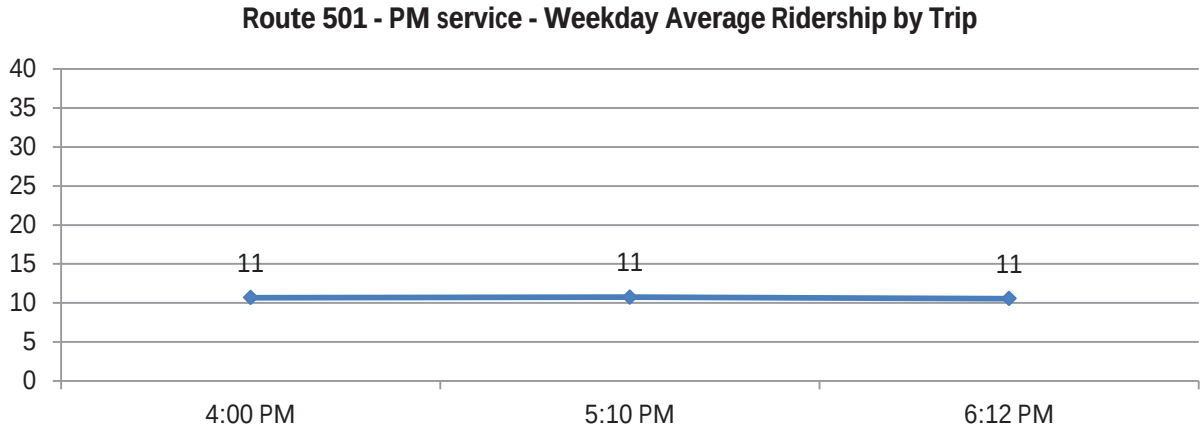
Average ridership by trip

For the AM service, ridership peaks at 7:58 a.m., with an average of 22 riders per trip. This trip corresponds with the 7:55 a.m. arrival of Metrolink #208 traveling from Lancaster and Palmdale. Given the park opens at 10:30 a.m., it likely also corresponds with the time many employees need to arrive at work.

For the PM service, ridership is consistent (average of 11 riders per trip) across all three trips. From this, it can be inferred that some AM service riders do not take the Route 501 bus in the afternoon, perhaps instead finding a ride with a friend or family member, or traveling elsewhere by bus via Routes 3 or 7.

Exhibit 3.10.1 Route 501 Average Ridership by Trip





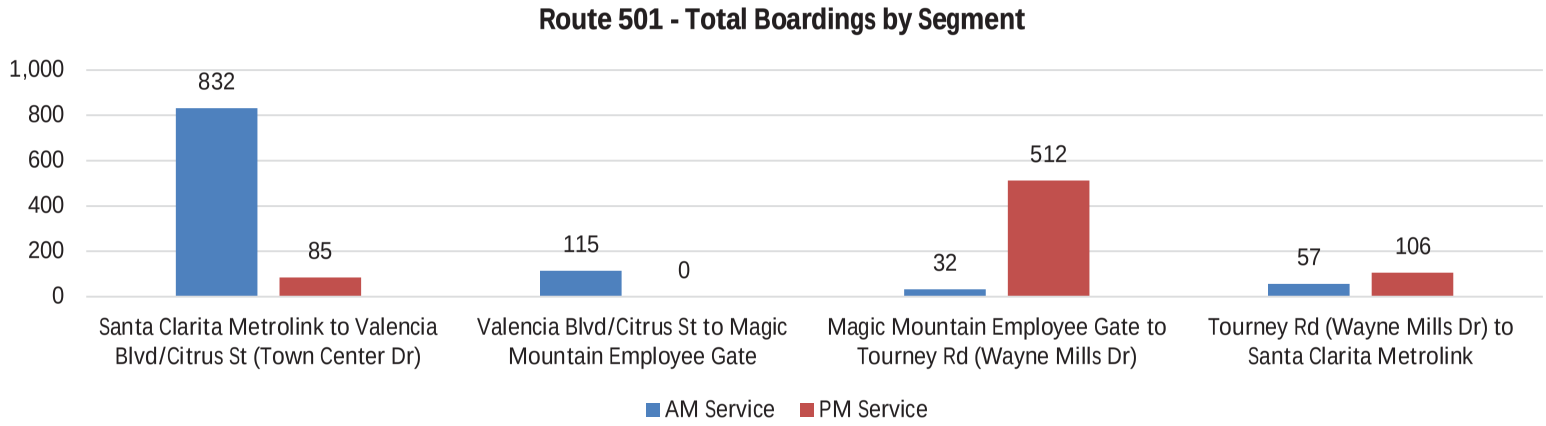
Average ridership (boardings) by segment

During the AM service, boardings are highest within the Santa Clarita Metrolink to Valencia Blvd/Citrus St segment. During the PM service, boardings are highest in the Magic Mountain Employee Gate to Tourney Rd segment. This suggests that riders are boarding at the Santa Clarita Metrolink station and traveling to Six Flags Magic Mountain.

Average boarding and alighting by stop

Beginning on page 4, bubble maps indicate the relative level of activity at each Route 501 bus stop, both inbound (AM) and outbound (PM). Not surprisingly, given the boarding data, the stops with the greatest activity during both the AM and PM service periods are the Santa Clarita Metrolink Station and Six Flags Magic Mountain.

Exhibit 3.10.2 Route 501 Total and Average Boardings by Segment



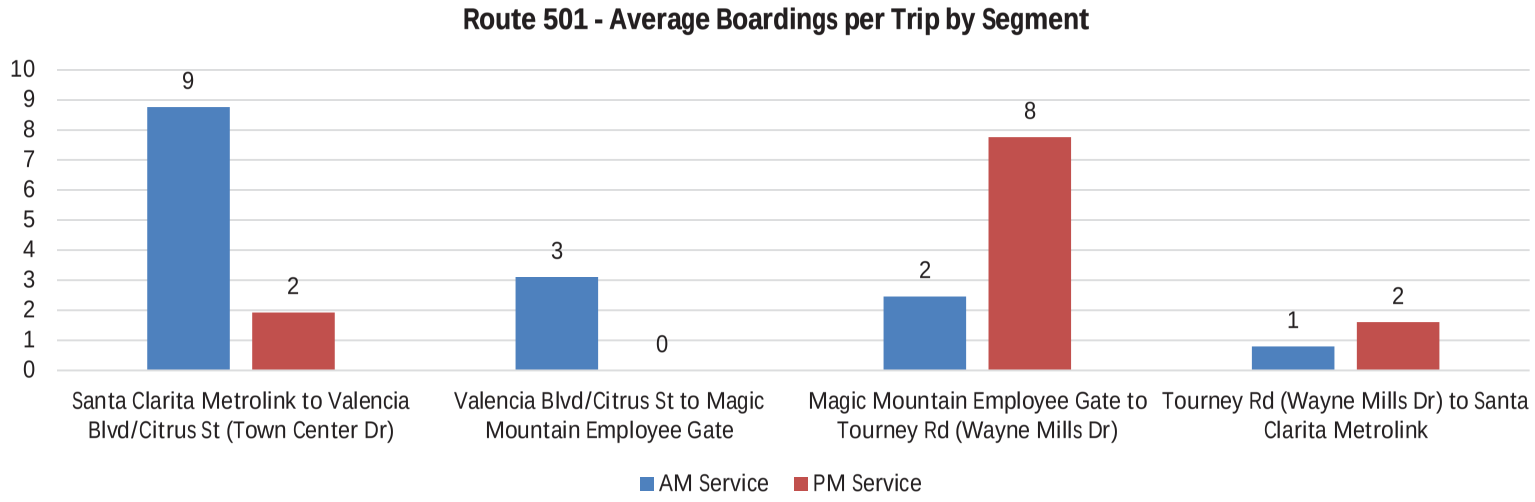
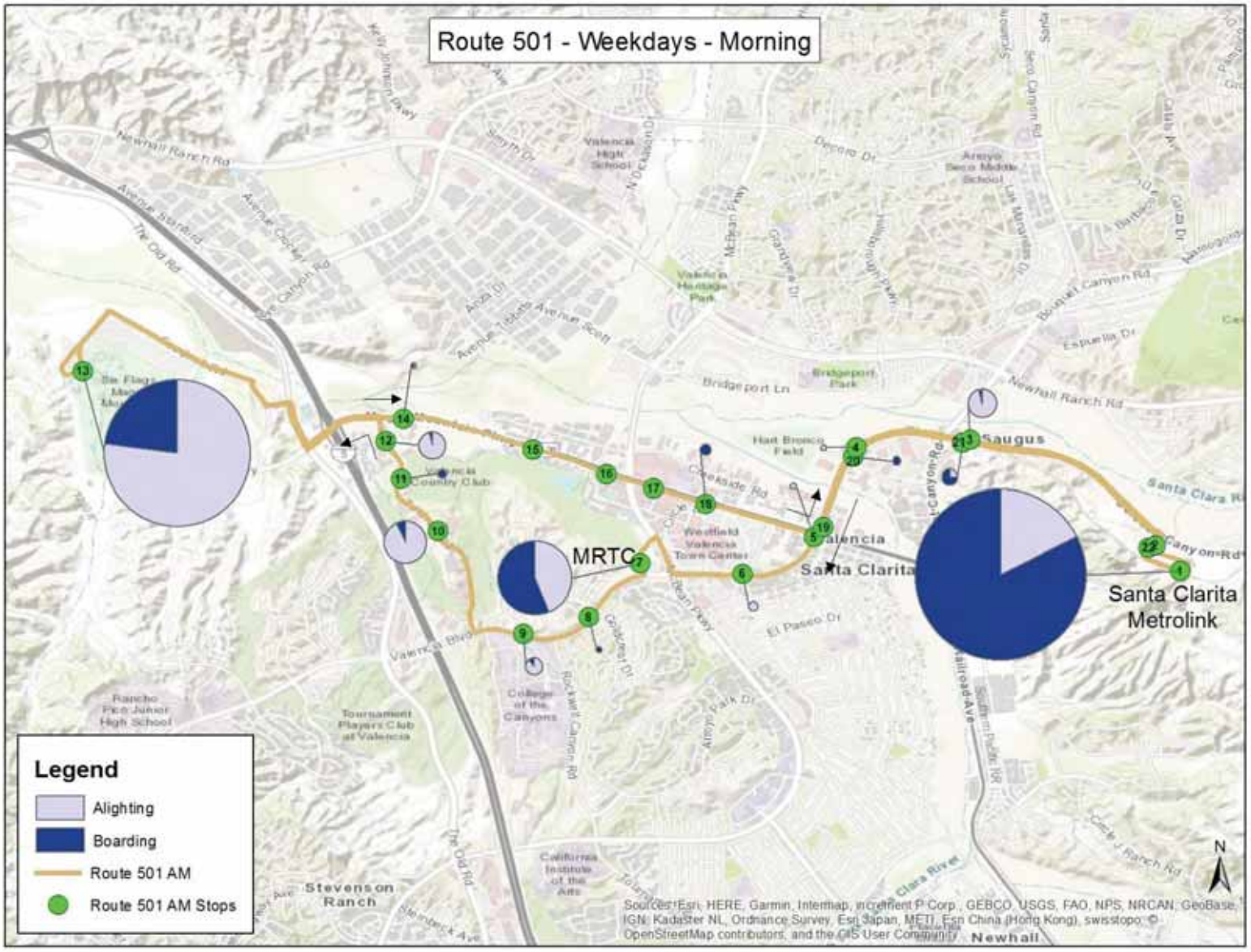


Exhibit 3.10.3 Route 501 Boarding and Alighting Maps



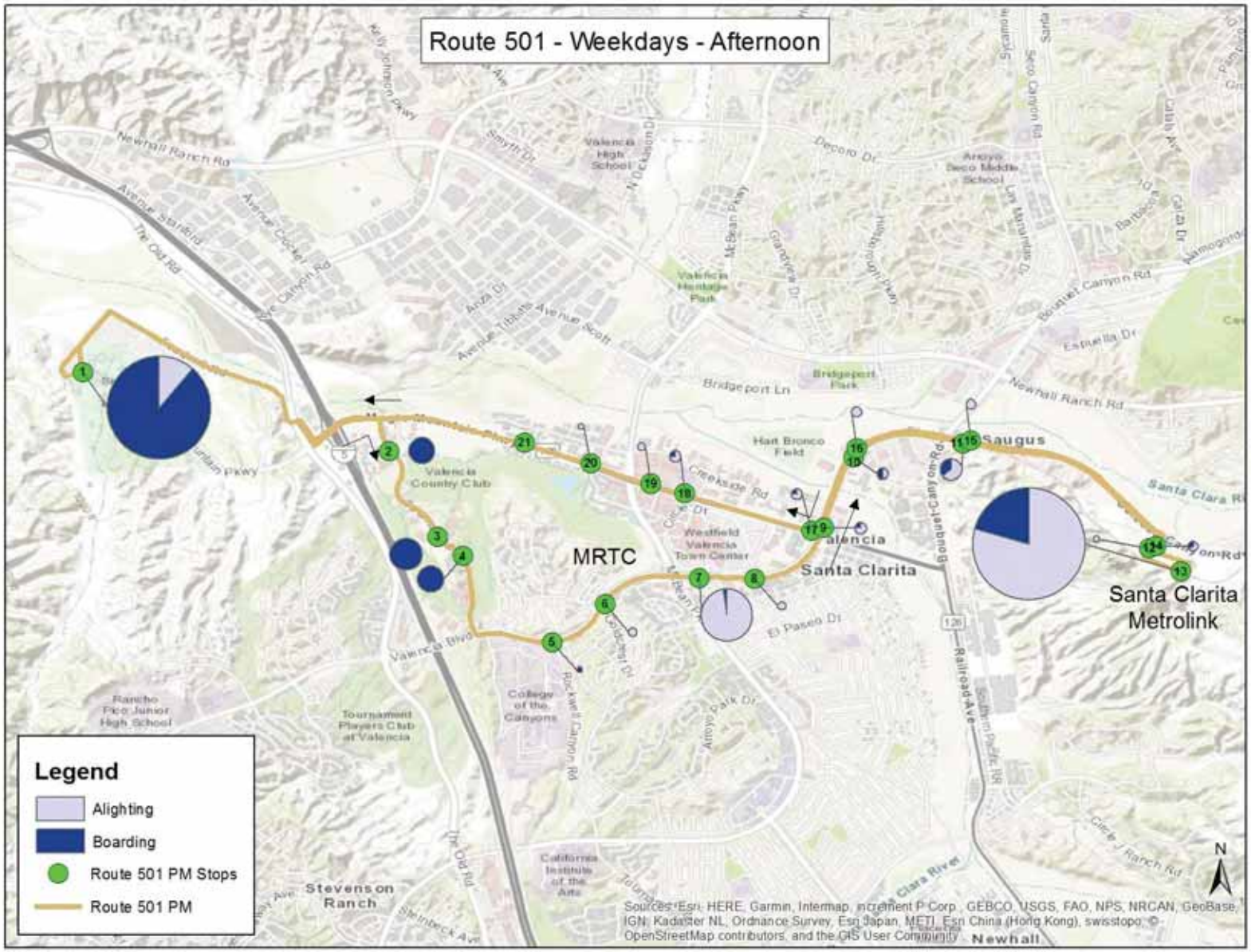

Route 501 - Weekdays - Afternoon
MRTC
Santa Clarita
Saugus
Santa Clarita Metrolink
Valencia Country Club
Westfield Valencia Town Center
Hart Bronco Field
Valencia Heritage Park
Bridgeport Park
College of the Canyons
Tournament Players Club at Valencia
Rancho Pico Junior High School
Stevenson Ranch
Newhall
Legend
Alighting
Boarding
Route 501 PM Stops
Route 501 PM
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.10.4 Route 501 Stop Lists

Route 501 Inbound (Morning) Stop List	
Stop Number	Stop Name
1	Santa Clarita Metrolink
2	Commuter Wy & Soledad Canyon Rd
3	Soledad Canyon Rd & Bouquet Canyon Rd
4	Valencia Blvd & Cinema Dr
5	Valencia Blvd & Magic Mountain Pky
6	Valencia Blvd & Citrus Dr
7	McBean MRTC
8	Valencia Blvd & Goldcrest Dr
9	Valencia Blvd
10	Tourney Rd
11	Tourney Rd
12	Tourney Rd & Wayne Mills Pl
13	Off Feedmill Rd
14	Magic Mountain Pky & Wayne Mills Pl
15	Magic Mountain Pky & Avignon Dr
16	Magic Mountain Pky & Town Center Dr
17	Magic Mountain Pky & Theater Dr
18	Magic Mountain Pky & Carousel Ln
19	Valencia Blvd & Magic Mountain Pky
20	Valencia Blvd & Cinema Dr
21	Soledad Canyon Rd & Bouquet Canyon Rd
22	Commuter Wy & Soledad Canyon Rd

Route 501 Outbound (Afternoon) Stop List	
Stop Number	Stop Name
1	Off Feedmill Rd
2	Tourney Rd & Wayne Mills Pl
3	Tourney Rd
4	Tourney Rd & Springfield Ct
5	Valencia Blvd & Rockwell Canyon Rd
6	Valencia Blvd & Goldcrest Dr
7	Valencia Blvd
8	Valencia Blvd & Citrus Dr
9	Valencia Blvd & Magic Mountain Pky
10	Valencia Blvd & Cinema Dr
11	Soledad Canyon Rd & Bouquet Canyon Rd
12	Commuter Wy & Soledad Canyon Rd
13	Santa Clarita Metrolink
14	Commuter Wy & Soledad Canyon Rd
15	Soledad Canyon Rd & Bouquet Canyon Rd
16	Valencia Blvd & Cinema Dr
17	Magic Mountain Pky & Valencia Blvd
18	Magic Mountain Pky & Auto Center Dr
19	Magic Mountain Pky & Theater Dr
20	Magic Mountain Pky & Town Center Dr
21	Magic Mountain Pky & Avignon Dr

Average load factor by trip

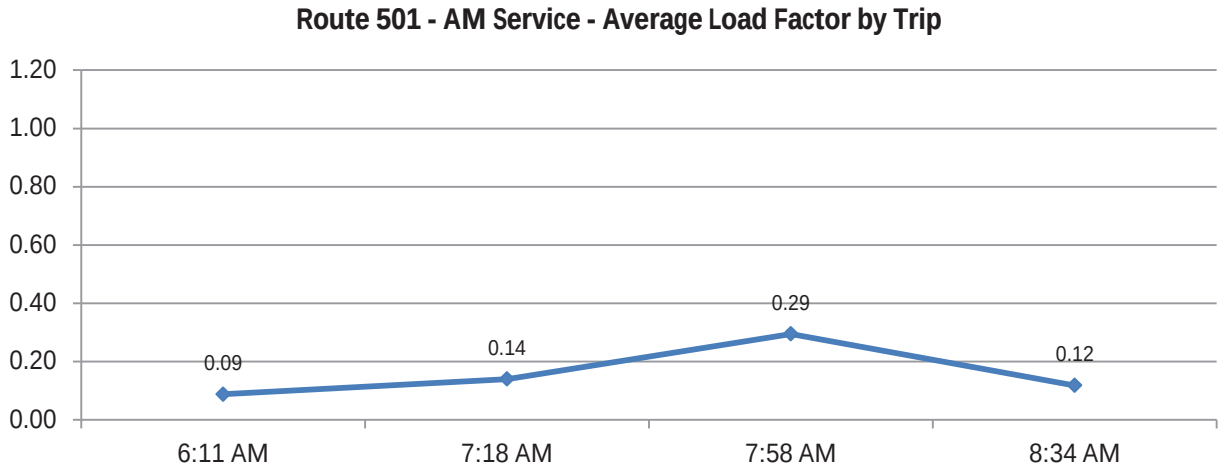
Both AM and PM trips on Route 501 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.29. Trips with the highest average peak loads for each day and direction are identified below.

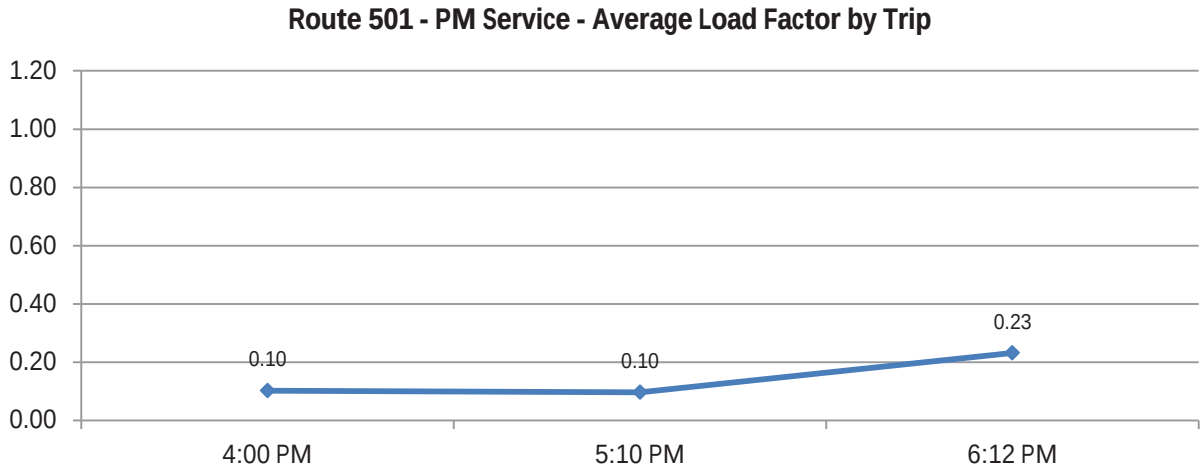
Exhibit 3.10.5 Route 501 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	AM Service	7:58 a.m.	0.29
Weekday	PM Service	6:12 p.m.	0.23

There were no individual trips which exhibited a load factor of at least 0.50.

Exhibit 3.10.6 Route 501 Average Load Factor by Trip





Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

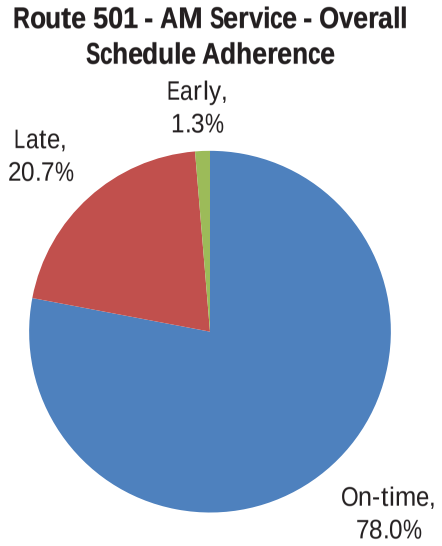
Route 501's PM service exhibits significantly better overall schedule adherence (90.5 percent) than the AM service (78 percent).

Schedule adherence by time-point

During the AM service, the Magic Mountain Employee Gate bus stop had the lowest schedule adherence (37.8 percent) due primarily to late trips. However, as the route returns to the Santa Clarita Metrolink Station, it experiences on-time performance of 40.5 percent at Magic Mountain Pkwy/Tourney Rd due to 59.5 percent of trips departing early. It appears that many of these trips arrive at Magic Mountain Pkwy/Tourney Rd significantly early (sometimes as much as 10 minutes ahead of the departure time). As there is no layover designated for that location, drivers appear to leave shortly after arriving. It is likely there is too much time built into the schedule for the trip from the Employee Gate to Magic Mountain Pkwy/Tourney Rd.

During the PM service, departures from and arrivals to the Magic Mountain Employee Gate were 100 percent on-time. Early departures from Magic Mountain Pkwy/Town Center Dr (22.7 percent) were also noted. However, nearly all of these departures were less than one minute early, which may not be an issue given the route is returning to Magic Mountain and is likely to have few customers boarding at this location.

Exhibit 3.10.7 Route 501 Overall Schedule Adherence



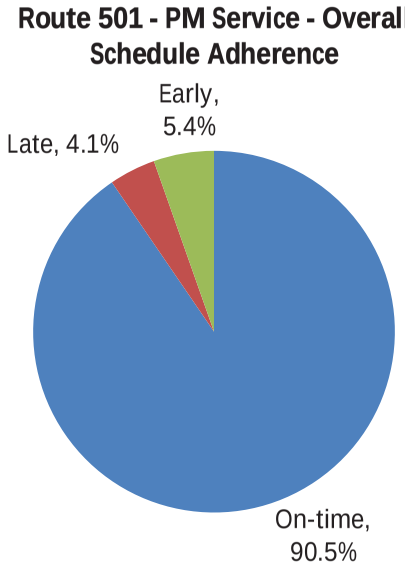
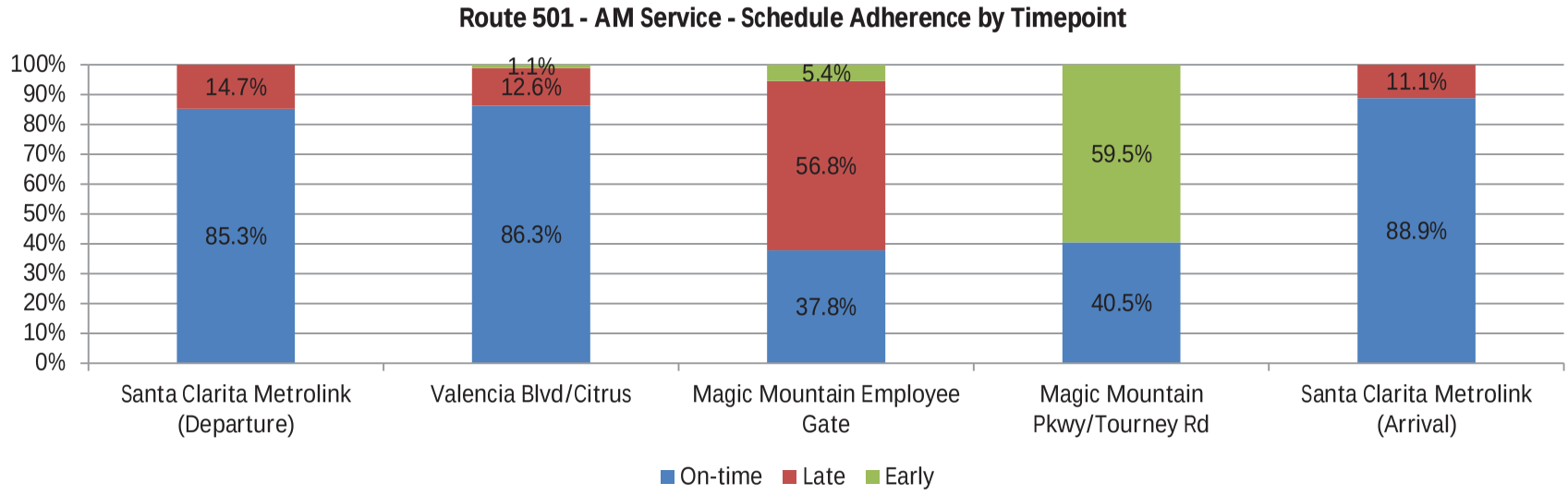
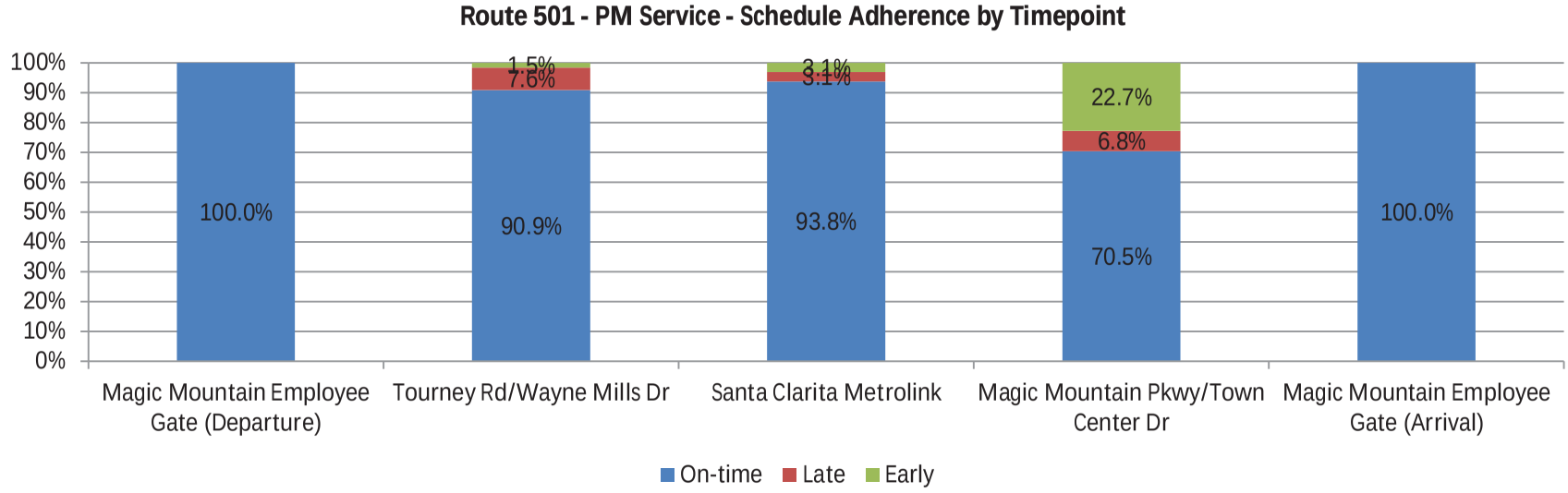


Exhibit 3.10.8 Route 501 Schedule Adherence by Time-point





Route Performance

Overall ridership

Exhibit 3.10.9 Route 501 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.10.10 Route 501 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 502 Profile and Performance Analysis

Route Description

Route 502 is a Station Link route connecting the Santa Clarita Metrolink station with nearby employment opportunities. Although categorized as a local route for the purposes of this analysis, Route 502 is designed as the "last mile" in commuter rail trips to employment. Route 502 serves the Industrial Center and Commerce Center.

Primary streets of operation for Route 502 include Soledad Canyon Road, Newhall Ranch Road, Avenue Tibbitts, Avenue Scott, Rye Canyon Road, Avenue Stanford, Highway 126, and Commerce Center Drive. The route is timed to meet Metrolink trains and operates in the morning and evening peak periods on weekdays only.

Outbound service originates at the Santa Clarita Metrolink Station and travels to the Valencia Commerce Center (Commerce Center Drive and Witherspoon Parkway). Inbound service operates in the opposite direction. Some inbound and outbound trips do not serve all stops. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

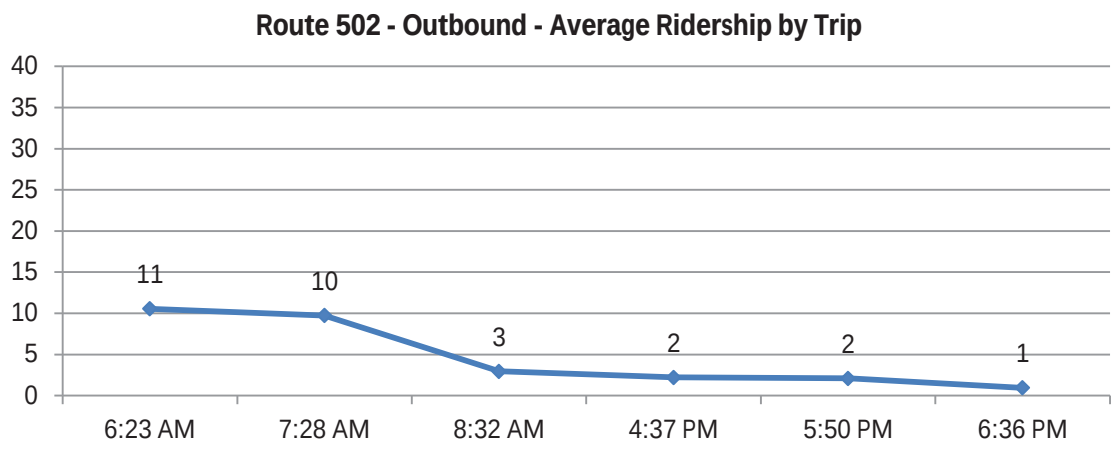
Average ridership by trip

Route 502 outbound ridership peaks during the first two trips of the day (6:23 a.m. and 7:28 a.m.) (average of 11 and 10 riders per trip, respectively). Inbound ridership peaks at 3:55 p.m. (average of 11 riders per trip), but ends the day with an average of zero riders during the last trip (6:04 p.m.).

Average ridership by time of day

On weekdays, the outbound service experiences its highest average ridership during the AM Peak day-parts (average of eight riders per trip). The inbound service peaks during the PM Peak day-part, with an average of nine riders per trip.

Exhibit 3.11.1 Route 502 Average Ridership by Trip



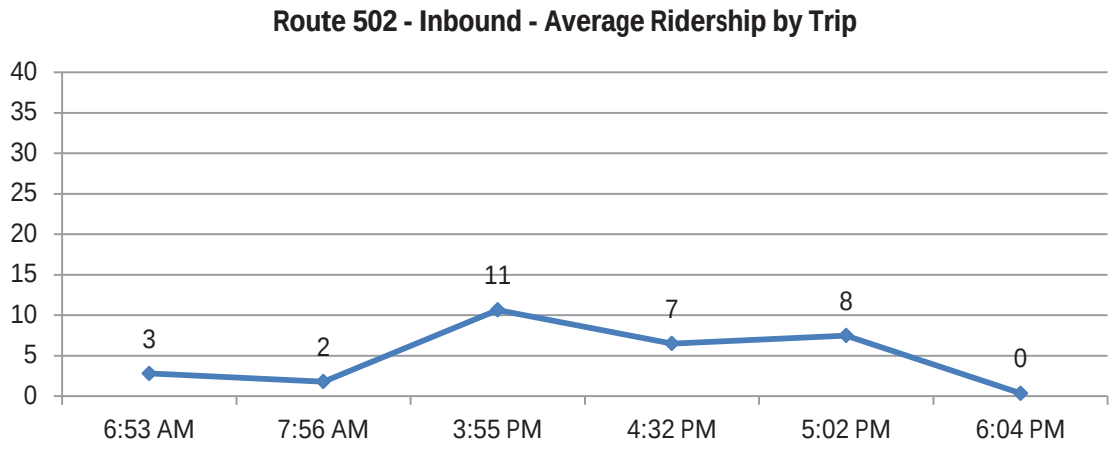
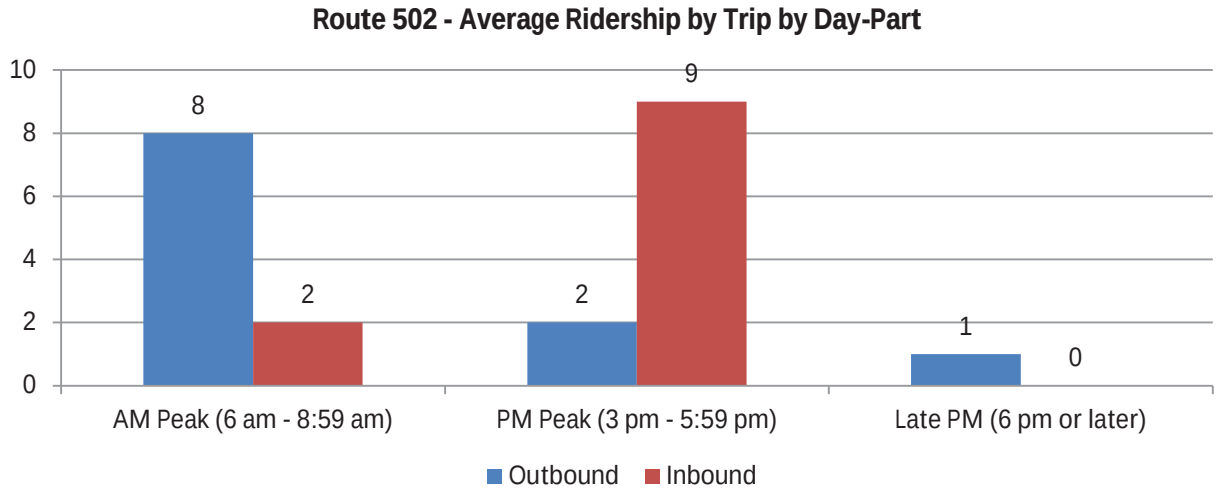


Exhibit 3.11.2 Route 502 Average Ridership by Trip by Day-Part



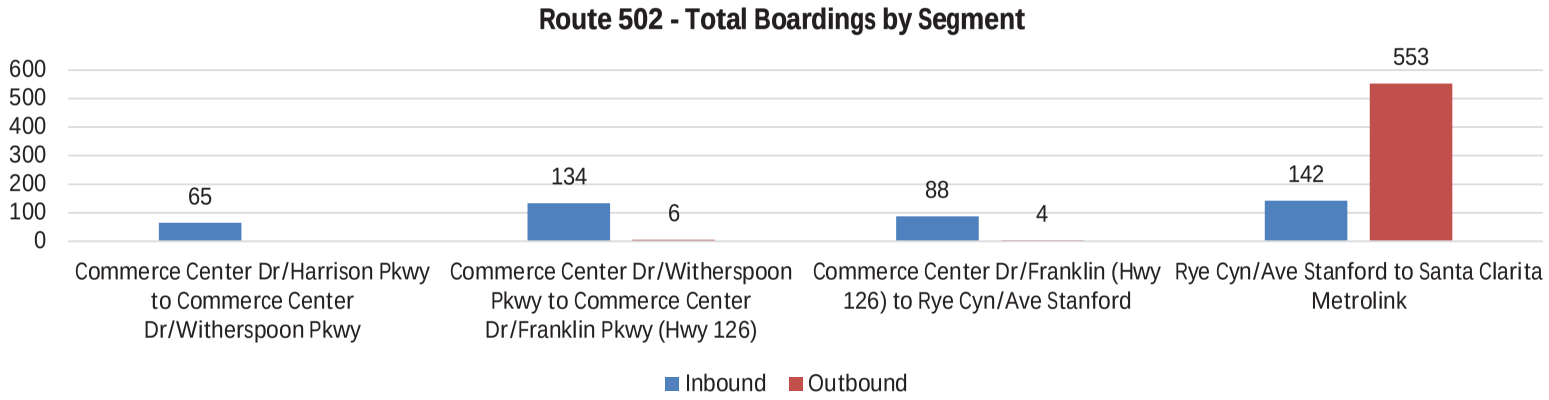
Average ridership (boardings) by segment

The Rye Canyon/Avenue Stanford to Santa Clarita Metrolink route segment sees the highest number of boardings for both inbound and outbound services. The Commerce Center Dr/Witherspoon Pkwy to Commerce Center Dr/Franklin Pkwy route segment also sees a notable number of boardings for the inbound service.

Average boarding and alighting by stop

Beginning on page 4, bubble maps indicate the relative level of activity at each Route 502 bus stop, both inbound and outbound. The Santa Clarita Metrolink Station is the location with the highest activity level on both the inbound and outbound services.

Exhibit 3.11.3 Route 502 Total and Average Boardings by Segment



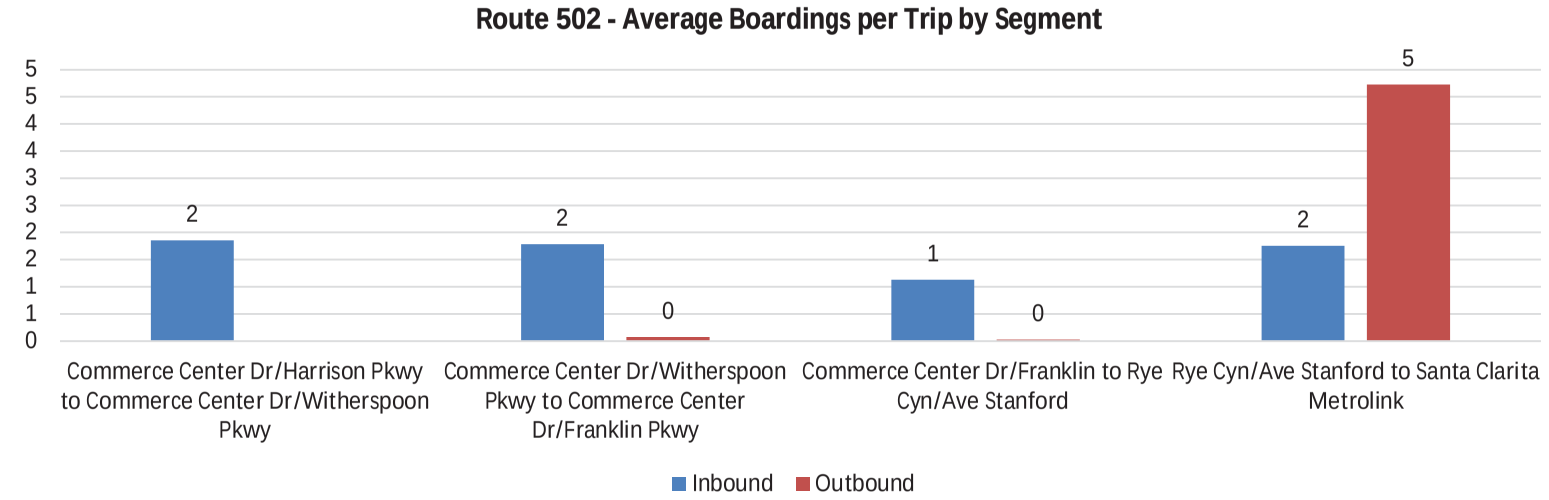
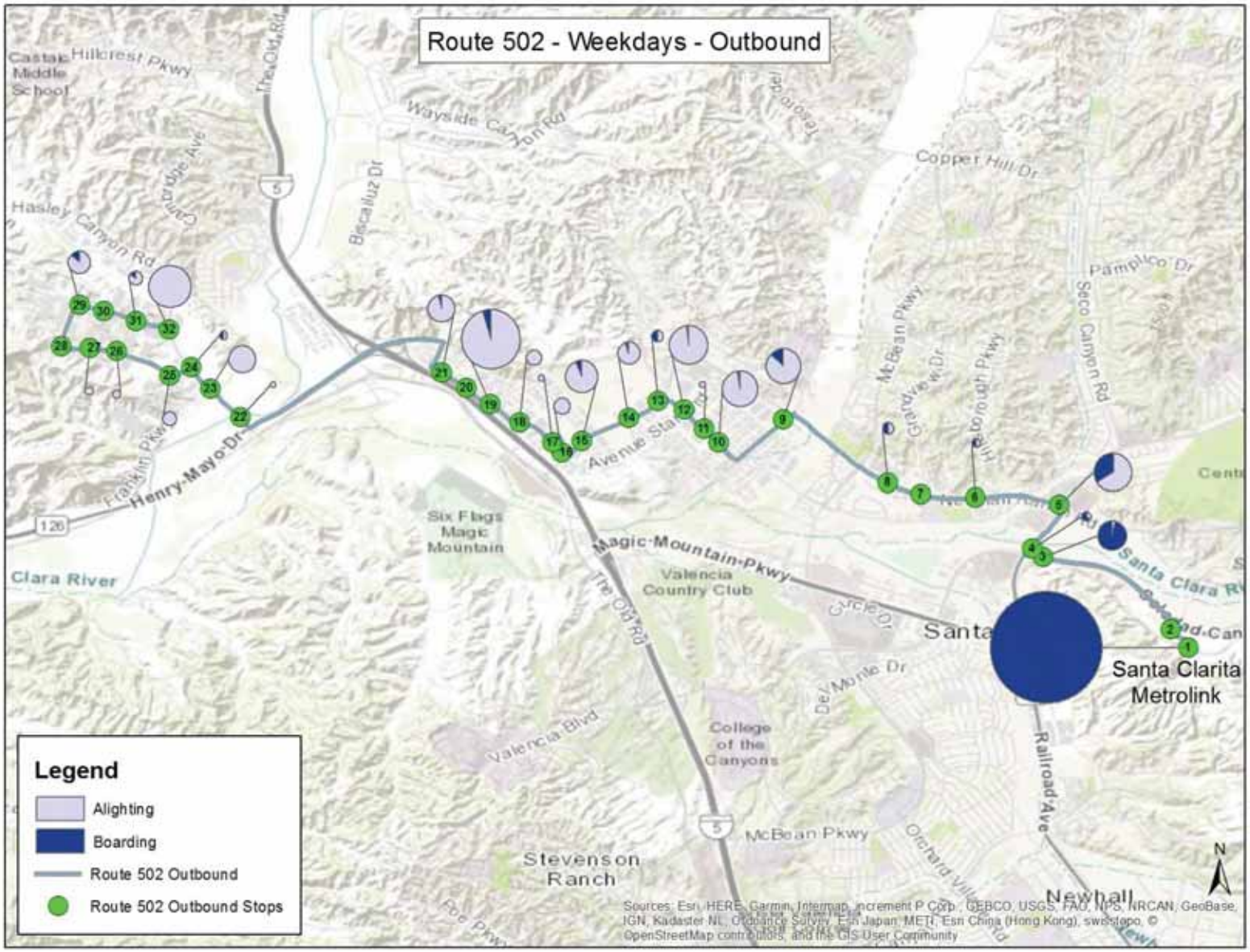


Exhibit 3.11.4 Route 502 Boarding and Alighting Maps



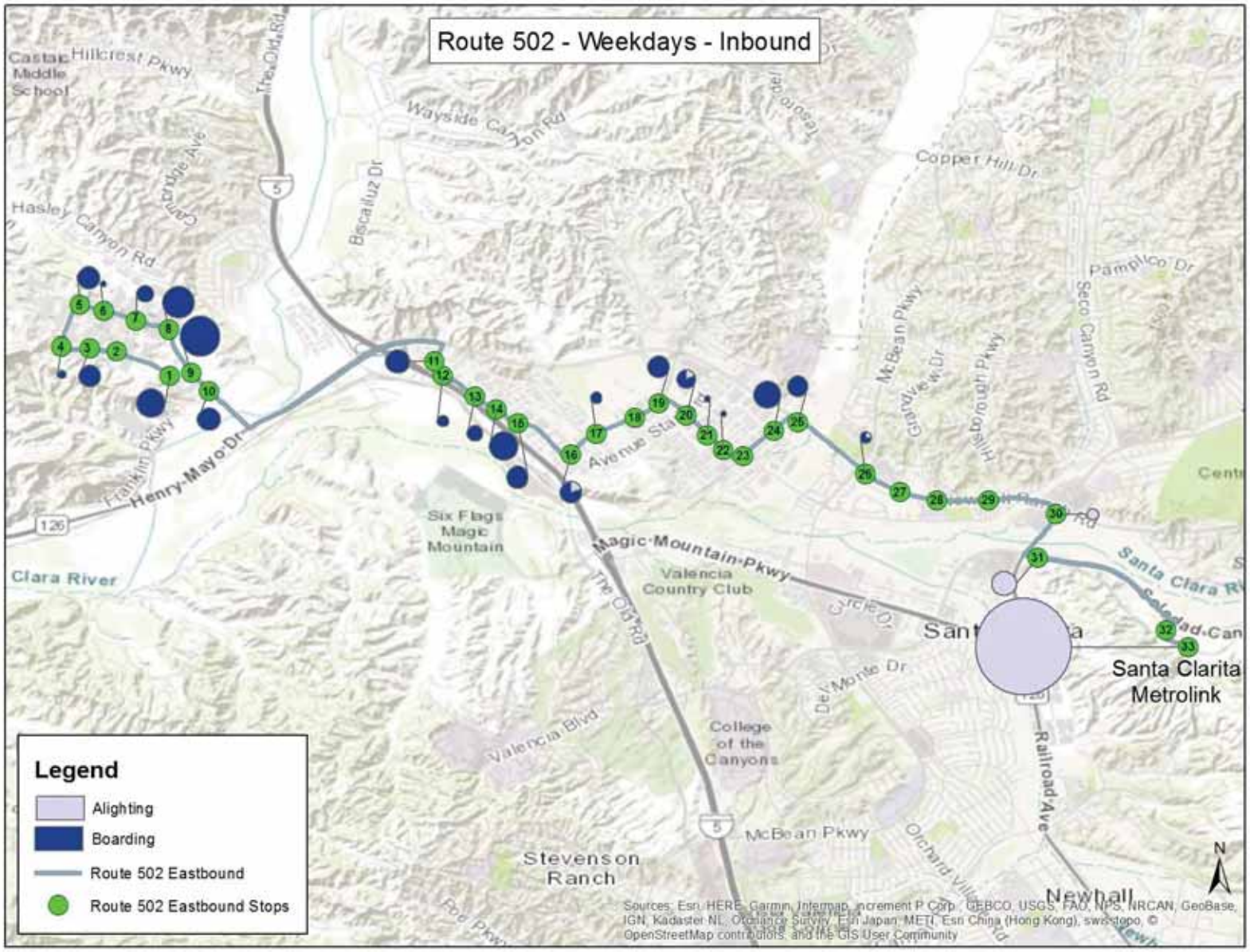

Route 502 - Weekdays - Inbound
Castaic Middle School
Hillcrest Pkwy
The Old Rd
Wayside Canyon Rd
Bscaluz Dr
Copper Hill Dr
Hasley Canyon Rd
Pamplico Dr
Seco Canyon Rd
Mc Bean Pkwy
Henry Mayo Dr
Franklin Pkwy
Six Flags Magic Mountain
Magic Mountain Pkwy
Valencia Country Club
Santa Clara River
Santa Clarita Metrolink
Valencia Blvd
College of the Canyons
McBean Pkwy
Stevenson Ranch
Railroad Ave
Newhall
Legend
Alighting
Boarding
Route 502 Eastbound
Route 502 Eastbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.11.5 Route 502 Stop Lists

Route 502 Outbound Stop List	
Stop Number	Stop Name
1	Santa Clarita Metrolink
2	Commuter Wy & Soledad Canyon Rd
3	Soledad Canyon Rd & Bouquet Canyon Rd
4	Bouquet Canyon Rd & Soledad Canyon Rd
5	Newhall Ranch Rd & Bouquet Canyon Rd
6	Newhall Ranch Rd & Hillsborough Pky
7	Newhall Ranch Rd & Grandview Dr
8	Newhall Ranch Rd & Bridgeview Ln
9	Ave Tibbitts & Nth Dickason Dr
10	Ave Scott & Anza Dr
11	Ave Scott & Ave Kearny
12	Ave Scott & Ave Stanford
13	Rye Canyon Rd & Ave Scott
14	Rye Canyon Rd & Beale Ct
15	Rye Canyon Rd & Ave Crocker
16	Ave Stanford & Rye Canyon Rd
17	Ave Stanford & Rye Canyon Rd
18	Ave Stanford & Huntington Ln
19	Ave Stanford & Ave Hall
20	Ave Stanford & Technology Dr
21	Ave Stanford & Vanderbilt Wy
22	Commerce Center Dr & Henry Mayo Dr
23	Commerce Center Dr & Franklin Pky
24	Commerce Center Dr & Harrison Pky
25	Livingston Ave & Harrison Pky
26	Livingston Ave & Ave Paine
27	Livingston Ave & Ave Sherman
28	Ave Williams & Livingston Ave
29	Witherspoon Pky & Ave Williams
30	Witherspoon Pky & Ave Sherman
31	Witherspoon Pky & Ave Paine
32	Commerce Center Dr & Witherspoon Pky

Route 502 Inbound Stop List	
Stop Number	Stop Name
1	Livingston Ave & Harrison Pky
2	Livingston Ave & Ave Paine
3	Livingston Ave & Ave Sherman
4	Ave Williams & Livingston Ave
5	Witherspoon Pky & Ave Williams
6	Witherspoon Pky & Ave Sherman
7	Witherspoon Pky & Ave Paine
8	Commerce Center Dr & Witherspoon Pky
9	Commerce Center Dr & Harrison Pky
10	Commerce Center Dr & Franklin Pky
11	Vanderbilt Wy & Westinghouse Pl
12	Ave Stanford & Vanderbilt Wy
13	Ave Stanford & Technology Dr
14	Ave Stanford & Ave Hall
15	Ave Stanford & Huntington Ln
16	Rye Canyon Rd & Ave Stanford
17	Rye Canyon Rd & Ave Crocker
18	Rye Canyon Rd & Beale Ct
19	Rye Canyon Rd & Ave Scott
20	Ave Scott & Ave Stanford
21	Ave Scott & Ave Kearny
22	Ave Scott & Anza Dr
23	Ave Tibbitts & Ave Scott
24	Ave Tibbitts & Ave Mentry
25	Newhall Ranch Rd & Ave Tibbitts
26	Newhall Ranch Rd & McBean Pky
27	Newhall Ranch Rd & Bridgeview Ln
28	Newhall Ranch Rd & Grandview Dr
29	Newhall Ranch Rd & Parkwood Ln
30	Bouquet Canyon Rd
31	Soledad Canyon Rd & Bouquet Canyon Rd
32	Commuter Wy & Soledad Canyon Rd
33	Santa Clarita Metrolink

Average load factor by trip

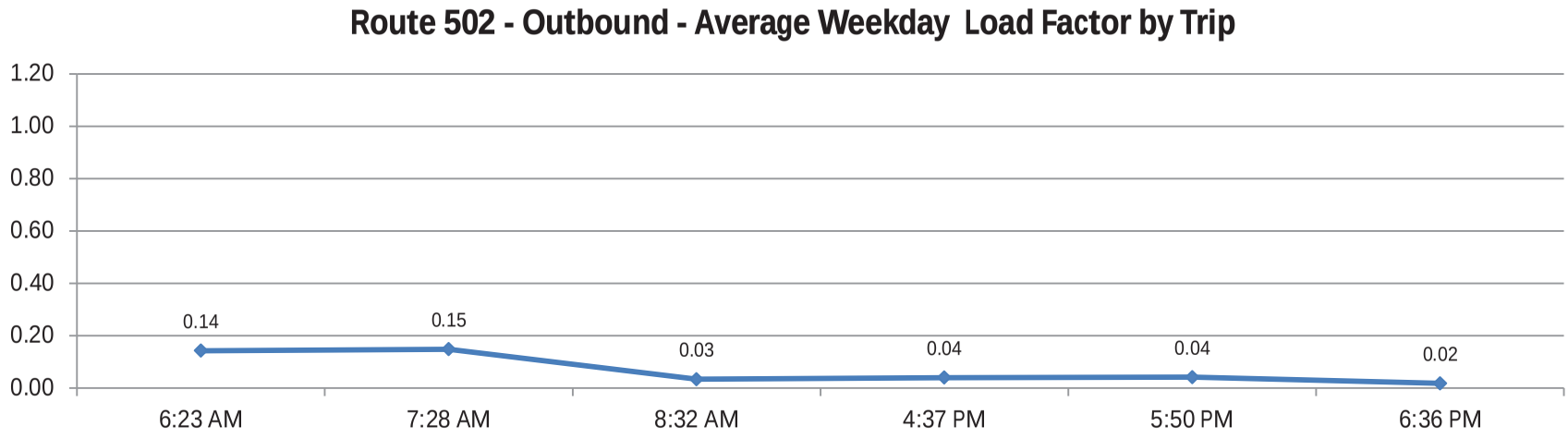
Both inbound and outbound trips on Route 502 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.18. Trips with the highest average peak loads for each direction are identified below.

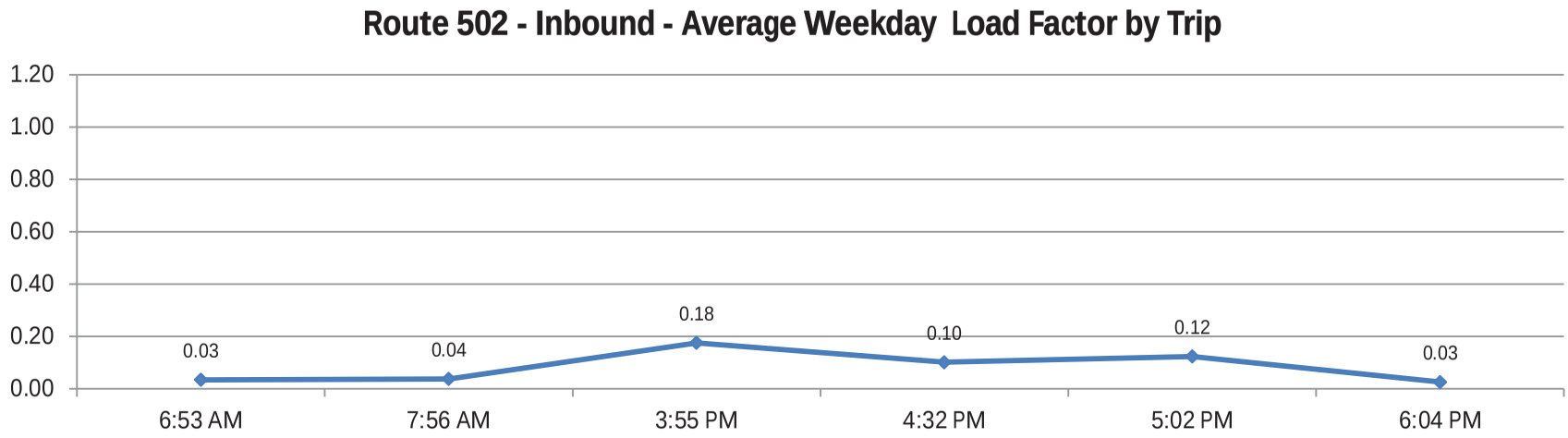
Exhibit 3.11.6 Route 502 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	7:28 a.m.	0.15
Weekday	Inbound	3:55 p.m.	0.18

There were no individual trips which exhibited a load factor of at least 0.50.

Exhibit 3.11.7 Route 502 Average Load Factor by Trip





Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. (Any early departures would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 502's inbound service exhibited greater schedule adherence (86.3 percent) than the outbound service (79.8 percent). Early departures are more of a concern during the outbound service.

Schedule adherence by time-point

The outbound service experiences its highest level of on-time performance at its first time-point, the Santa Clarita Metrolink Station (95 percent). The time-point with the lowest schedule adherence is Commerce Center Dr/Harrison Pkwy (60.8 percent), where more than 30 percent of departures were early. The majority of the early departures occurred during the 6:23 a.m. and 8:32 a.m. trips.

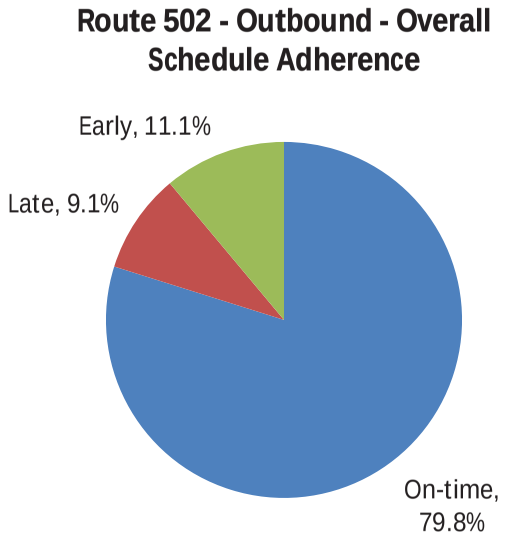
The highest level of schedule adherence for the inbound service occurs at Commerce Center Dr/Franklin Pkwy (93.1 percent). Commerce Center Dr/Witherspoon Pkwy has the lowest on-time performance (78.7 percent).

Schedule adherence by time of day

For the outbound service, schedule adherence is highest during the AM Peak period (77 percent), though that day-part also has the highest percentage of early trips (13.7 percent). The Late PM period has the lowest on-time performance (44.2 percent); however, this day-part includes just one trip.

For the inbound service, schedule adherence is highest during the PM Peak period (89.4 percent). The Late PM period has the lowest on-time performance (66.7 percent); however, this day-part also includes just one trip.

Exhibit 3.11.8 Route 502 Overall Schedule Adherence



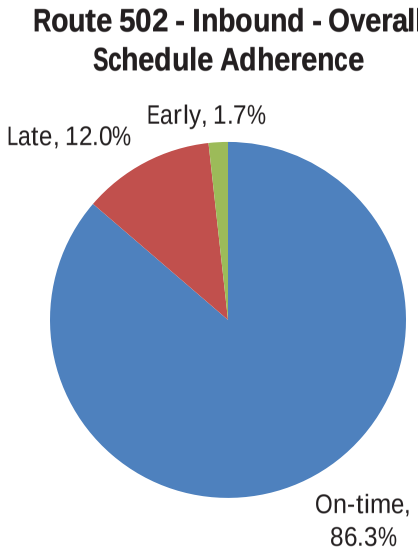
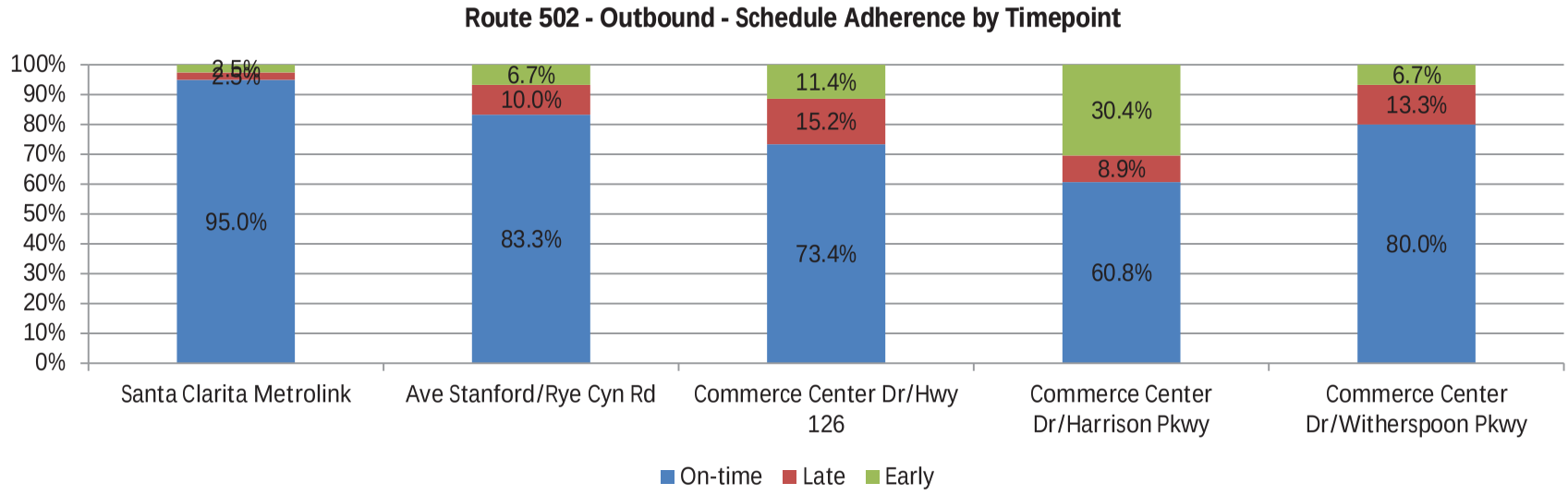


Exhibit 3.11.9 Route 502 Schedule Adherence by Time-point



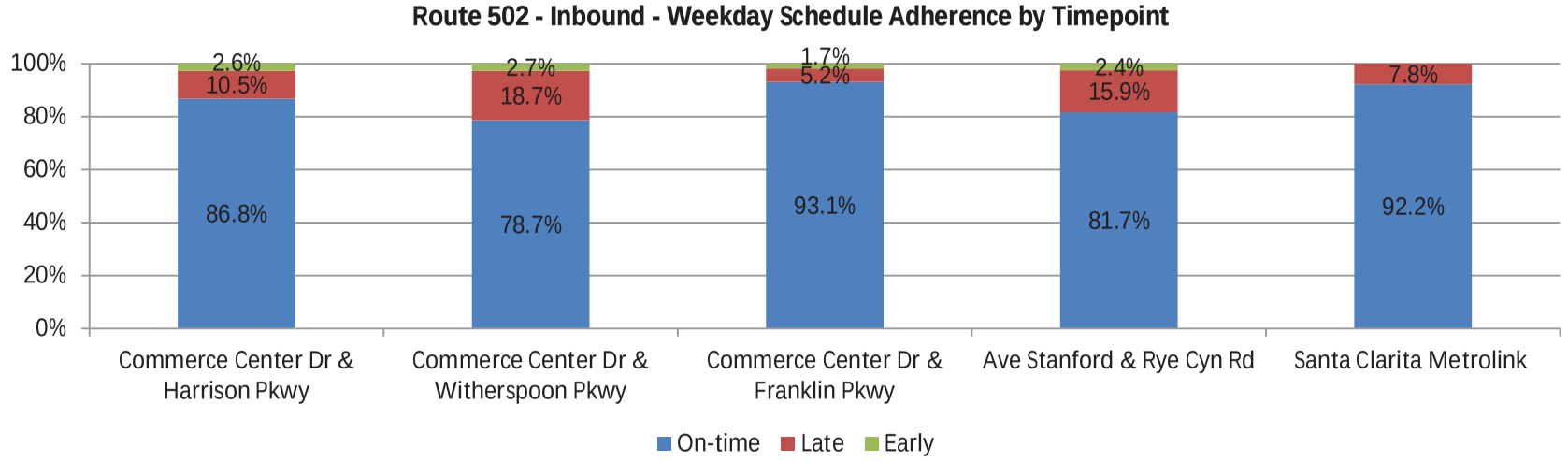
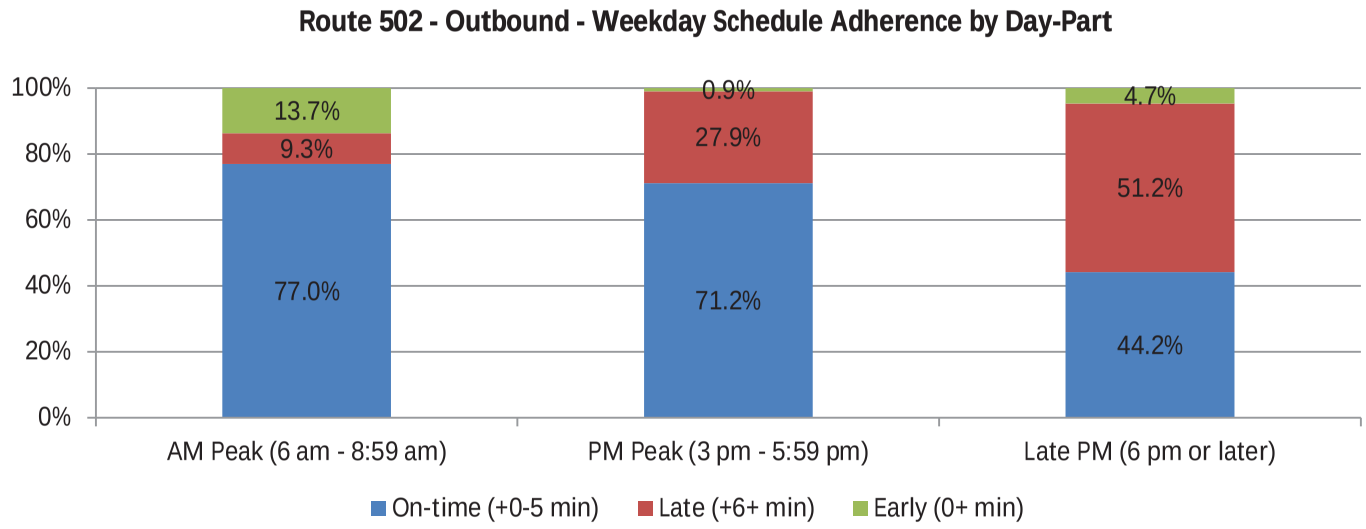
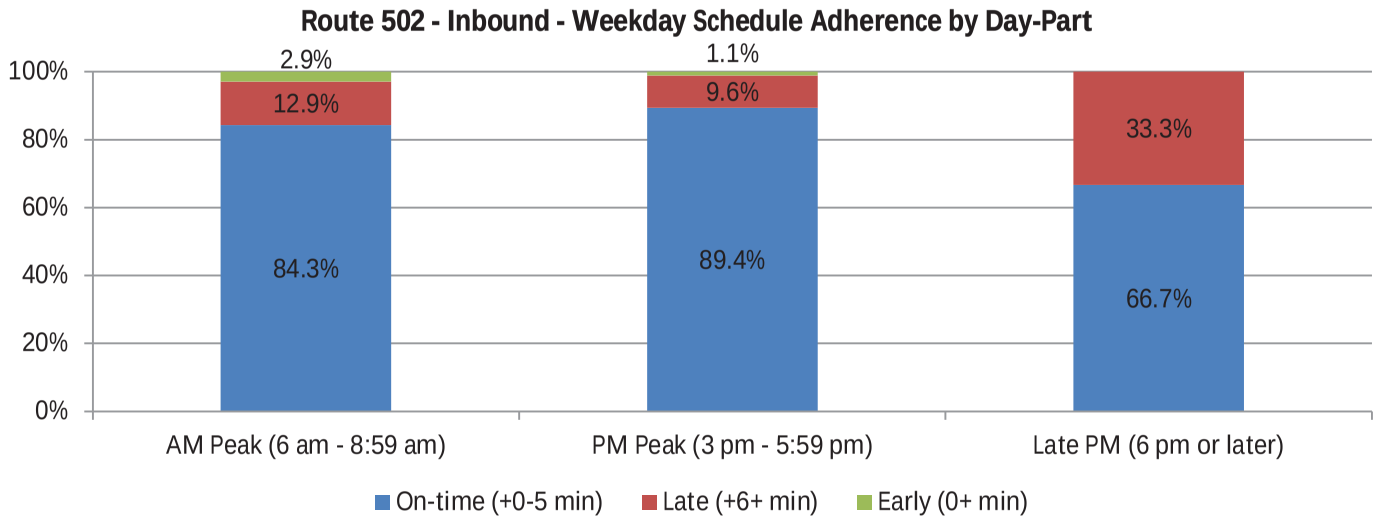


Exhibit 3.11.10 Route 502 Schedule Adherence by Day-Part





Route Performance

Overall ridership

Exhibit 3.11.11 Route 502 Overall Ridership

	Weekday	Saturday	Sunday	Total	Ranking
Route 1	23,003	1,069	1,030	25,249	4
Route 2	11,667	1,076	745	13,564	7
Route 3	10,613	1,173	1,174	13,019	8
Route 4	20,762	1,651	927	23,469	5
Route 5	45,941	3,515	5,147	54,945	3
Route 6	67,003	9,684	7,574	84,809	2
Route 7	2,037	672	343	3,071	9
Route 12	79,071	7,997	6,647	94,278	1
Route 14	18,344	1,798	766	21,029	6
Route 501	2,383	0	0	2,383	10
Route 502	1,935	0	0	1,945	11

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.11.12 Route 502 Overall Schedule Adherence

	Weekday	Saturday	Sunday	Overall	Ranking
Route 1	73.7%	87.9%	91.7%	75.3%	11
Route 2	82.7%	91.8%	97.4%	84.5%	2
Route 3	75.1%	84.3%	86.0%	77.0%	9
Route 4	75.6%	81.9%	77.6%	76.4%	10
Route 5	79.9%	70.5%	71.0%	78.6%	7
Route 6	82.4%	60.0%	74.2%	80.4%	6
Route 7	75.2%	88.1%	84.6%	77.2%	8
Route 12	83.8%	88.5%	92.5%	85.4%	1
Route 14	81.3%	86.5%	78.5%	81.5%	5
Route 501	84.4%	N/A	N/A	84.4%	3
Route 502	82.8%	N/A	N/A	82.8%	4

Route 757 Profile and Performance Analysis

Route Description

Route 757 is an express route connecting Santa Clarita and North Hollywood. Unlike the other express routes, Route 757 is not part of a route pairing. More stops are served on weekdays than weekends, with the McBean Regional Transit Center and North Hollywood Station always served. On weekdays, College of the Canyons and California Institute of the Arts are served on the majority of runs.

Route 775 runs in a loop between McBean Regional Transit Center and North Hollywood Station, serving different areas by the time of day and day of week. On weekdays Route 757 departs McBean Regional Transit Center and travels either west on Valencia Boulevard to Interstate 5 or travels south on Rockwell Canyon Road to serve the two colleges mentioned before traveling west on McBean Parkway to Interstate 5. Other primary streets for Route 757 are Interstate 5, State Route 170, Burbank Boulevard, Lankershim Boulevard, Cumpston Street, Chandler Boulevard, State Route 14, Newhall Avenue, Railroad Avenue, and Cinema Drive. Weekend service directly connects McBean Regional Transit Center to North Hollywood Station.

Inbound service for weekdays is defined as that originating at Newhall Avenue and Sierra Highway traveling to McBean Regional Transit Center. Outbound service for weekdays travels from McBean Regional Transit Center to Newhall Avenue and Sierra Highway via North Hollywood Station. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

Route Performance

Average ridership by trip

On weekdays, outbound peaks at 6:32 a.m. (average of 27 riders per trip). The inbound service peaks at 7:40 a.m. (average of 9 riders per trip).

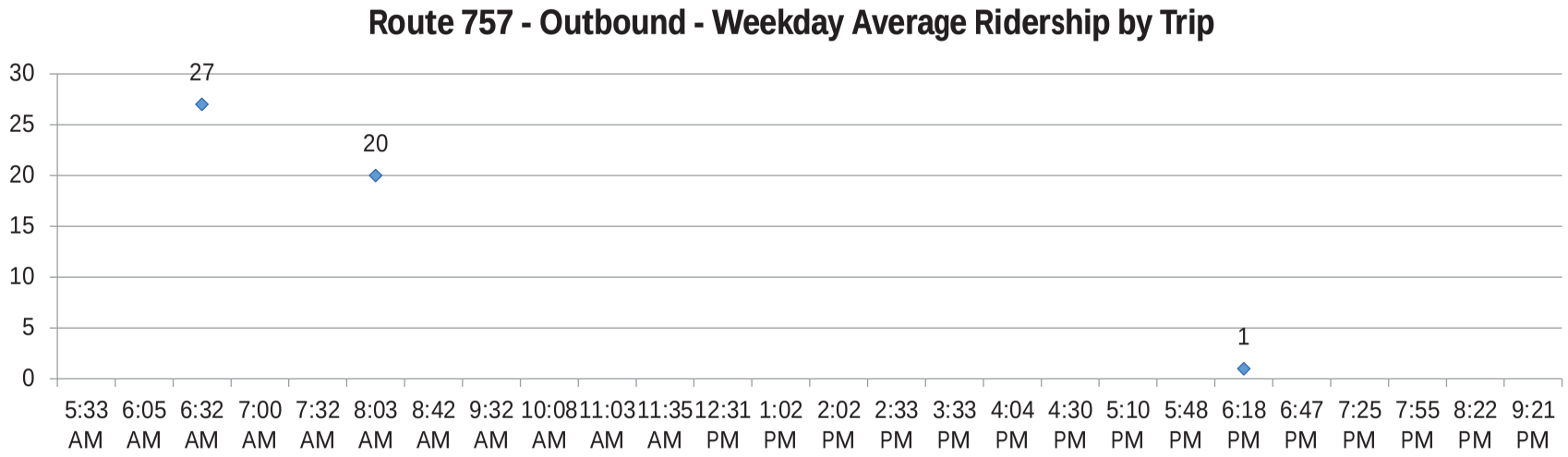
On Saturday, outbound peaks twice; once at 10:25 a.m. and the other at 4:35 p.m. (average of 19 rides per trip). The inbound service peaks at 2:46 p.m. (average of 17 rides per trip).On Sunday, outbound continues its peak across three contiguous time-points; 7:55 a.m., 9:10 a.m., and 10:25 a.m. (average of 7 rides per trip). The inbound service only has one datapoint at 7:20 a.m. (average of 8 rides per trip).

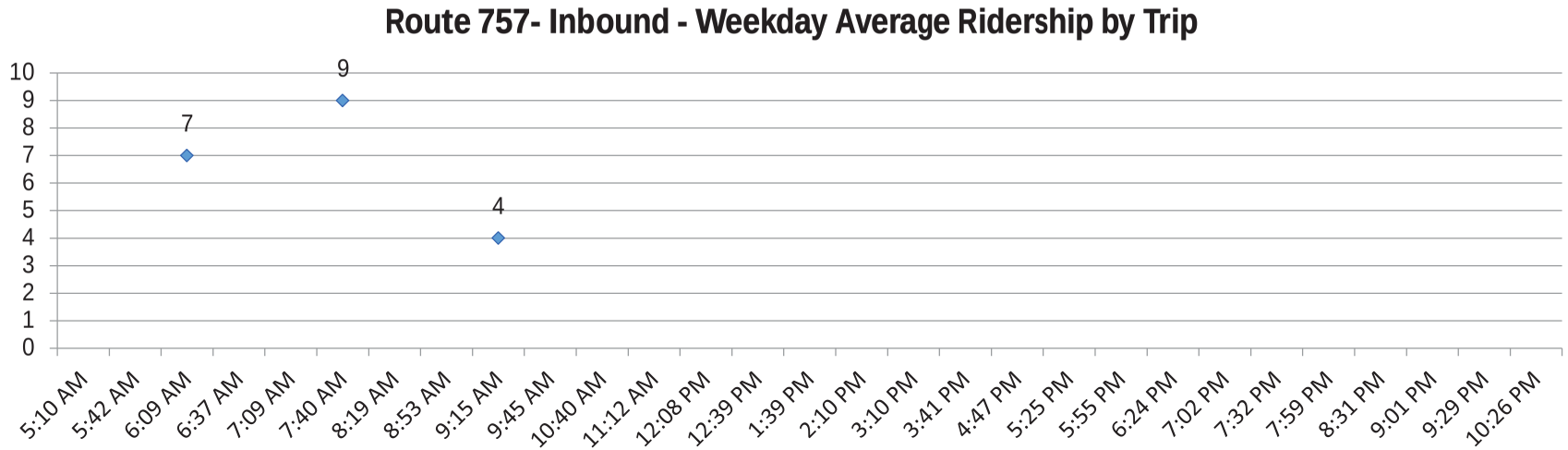
Average ridership by time of day

On weekdays, the outbound service experiences its highest average ridership during the AM Peak day-part (average of 24 riders), after which average ridership drops across the balance of the day. The inbound service peaks during the AM Peak day-part, with an average of 8 riders.

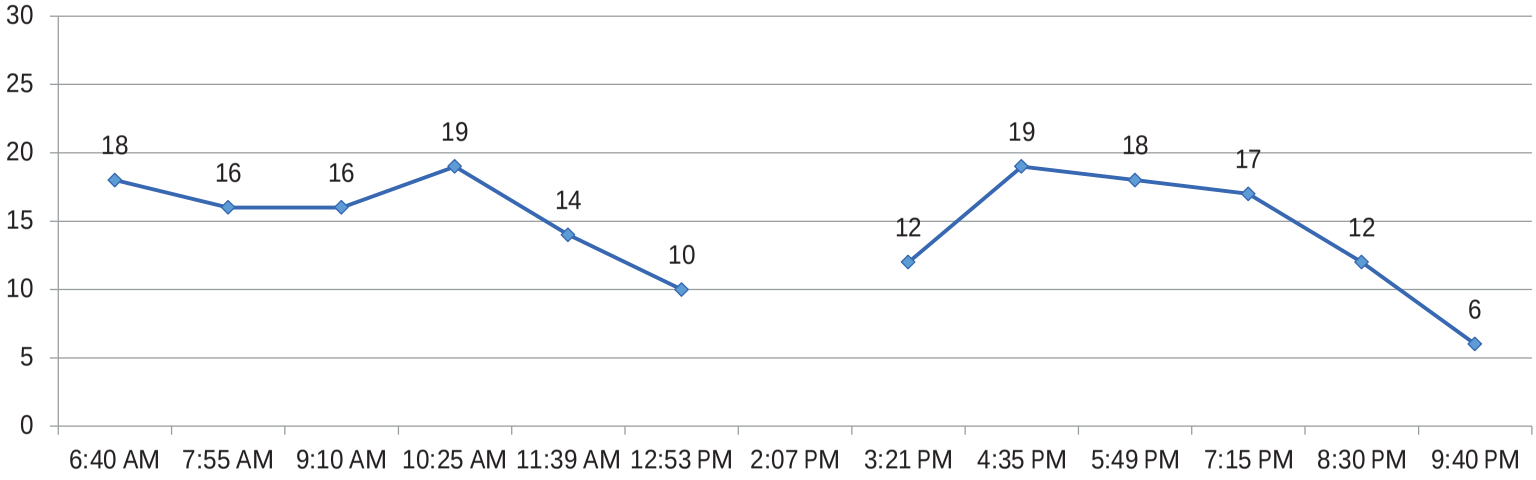
On Saturday, the outbound service sees the highest ridership is during the PM Peak (average of 19 riders), while the inbound service is during Mid-day day-part (average of 12 riders). On Sunday, the outbound service is highest in the AM Peak day-part (average of 12 riders), while mid-day is similar at 11 riders. The inbound service has 8 riders in the AM Peak.

Exhibit 3.12.1 Route 757 Average Ridership by Trip

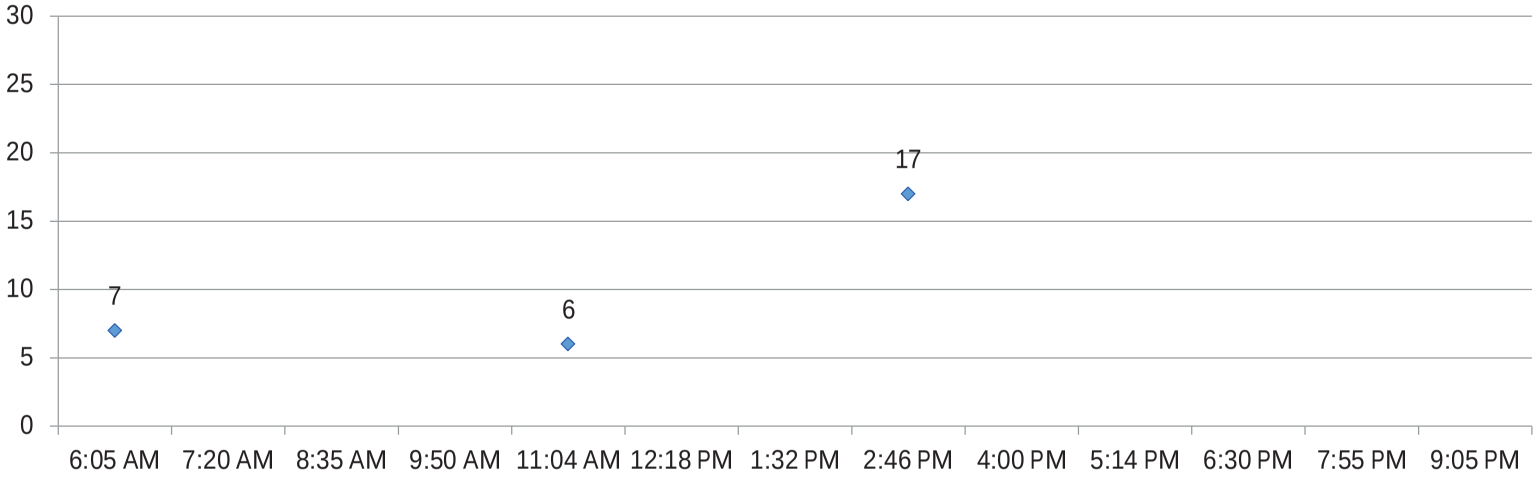


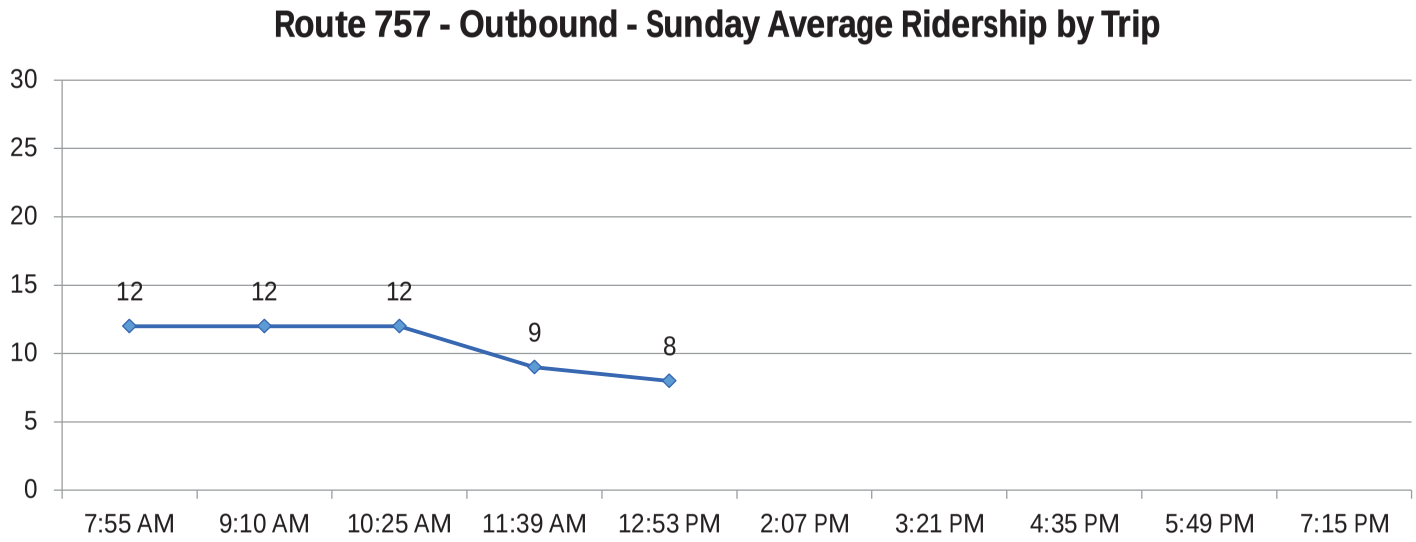


Route 757 - Outbound - Saturday Average Ridership by Trip



Route 757 - Inbound - Saturday Average Ridership by Trip




Route 757 - Outbound - Sunday Average Ridership by Trip
30
25
20
15
10
5
0
12
12
12
9
8
7:55 AM
9:10 AM
10:25 AM
11:39 AM
12:53 PM
2:07 PM
3:21 PM
4:35 PM
5:49 PM
7:15 PM

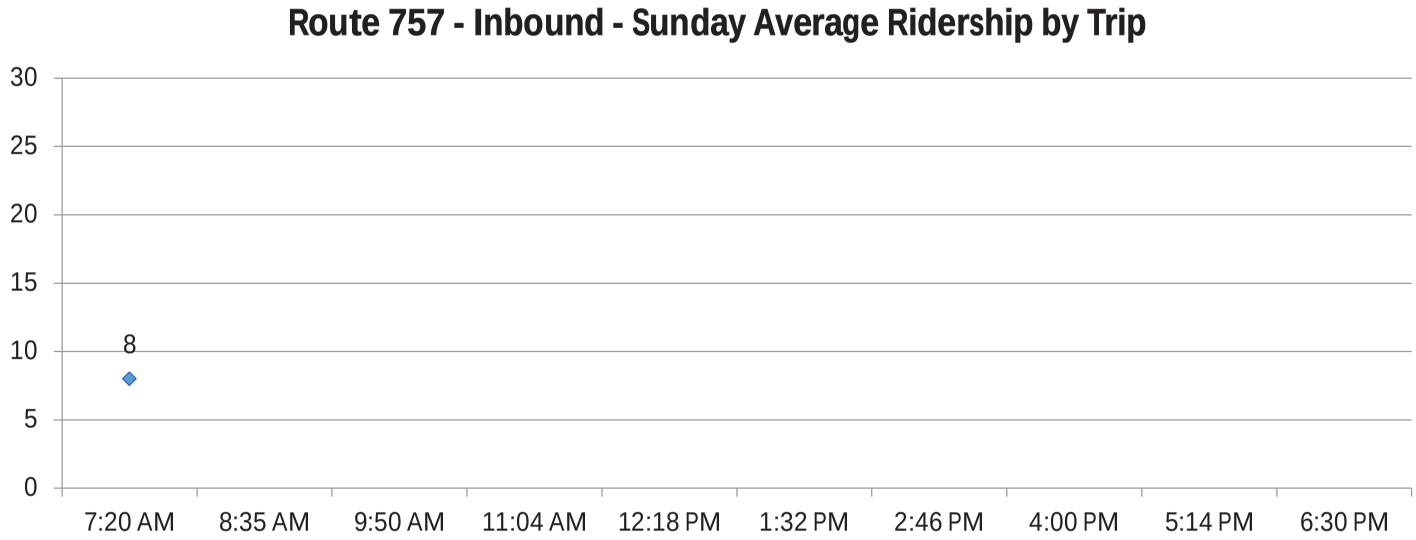
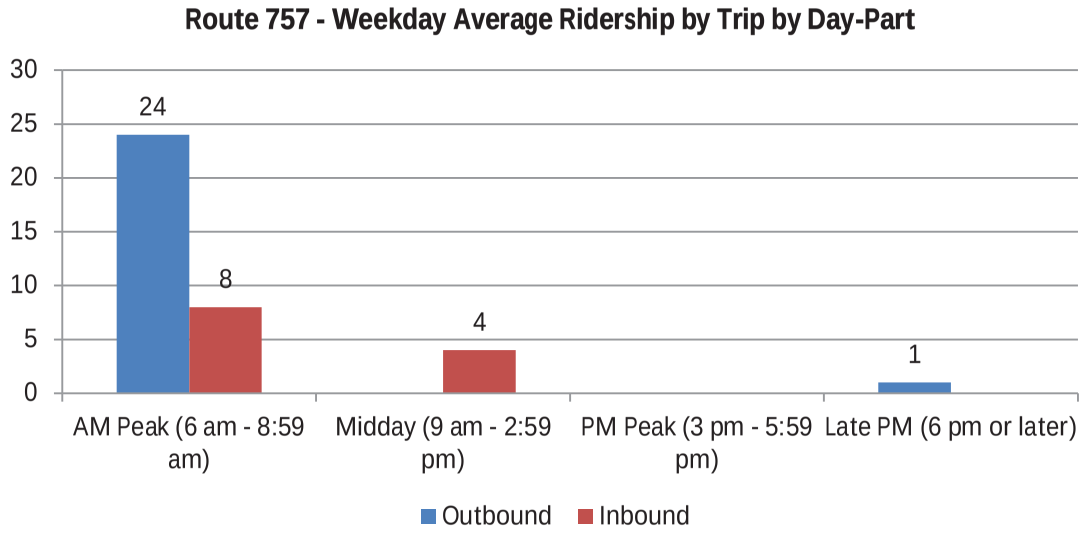
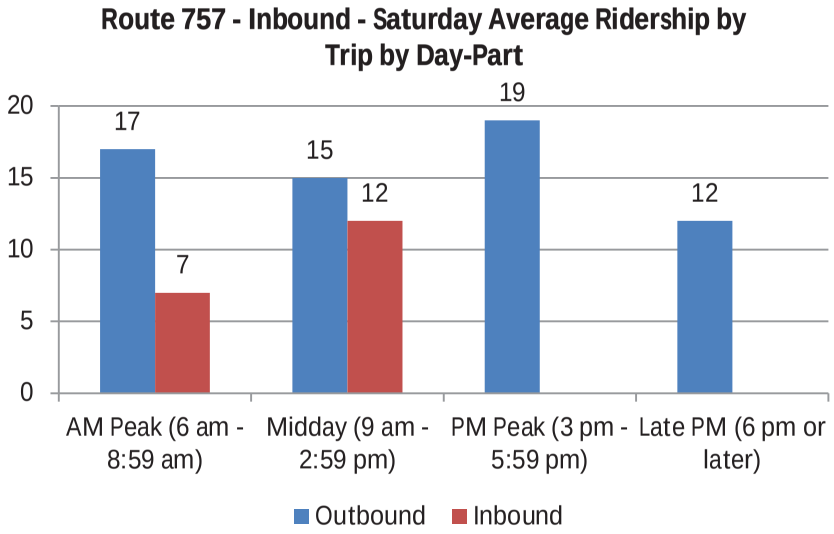
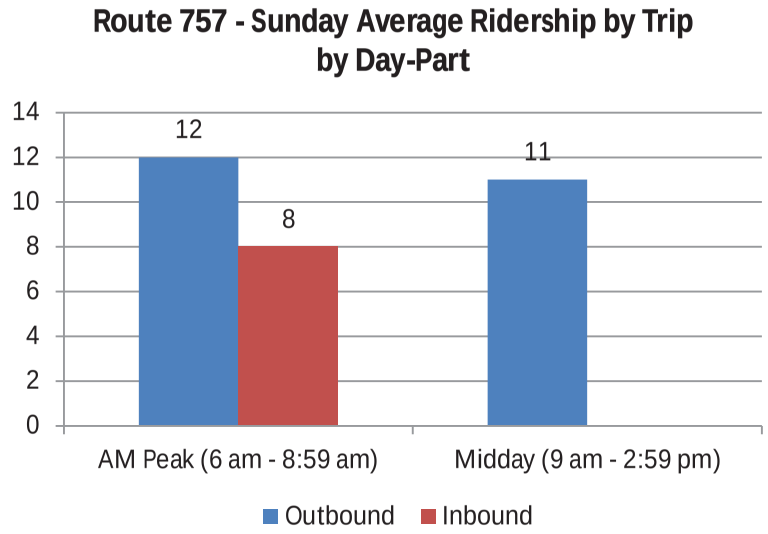

Route 757 - Inbound - Sunday Average Ridership by Trip
30
25
20
15
10
5
0
8
7:20 AM
8:35 AM
9:50 AM
11:04 AM
12:18 PM
1:32 PM
2:46 PM
4:00 PM
5:14 PM
6:30 PM

Exhibit 3.12.2 Route 757 Average Ridership by Day-Part







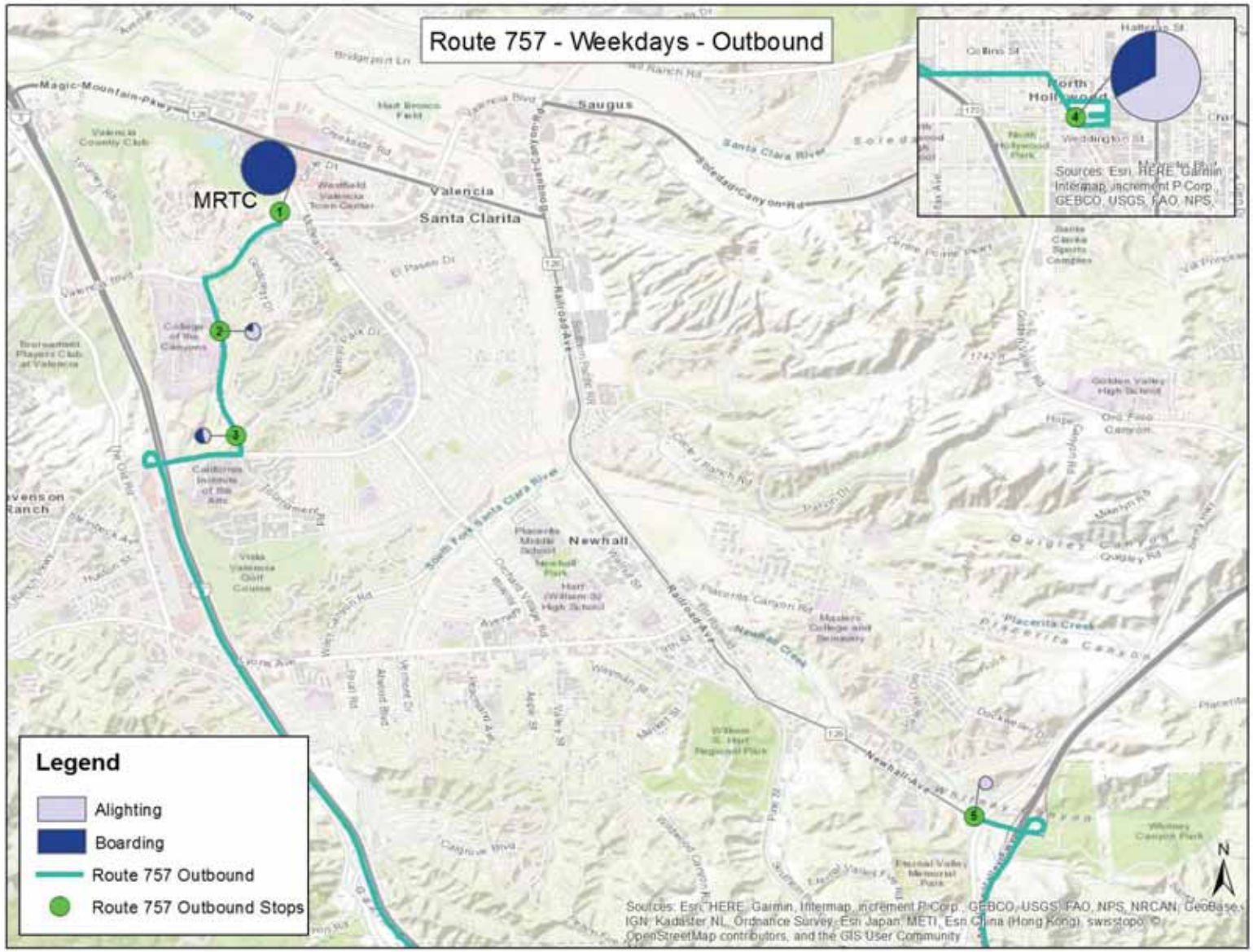
Average boarding and alighting by stop

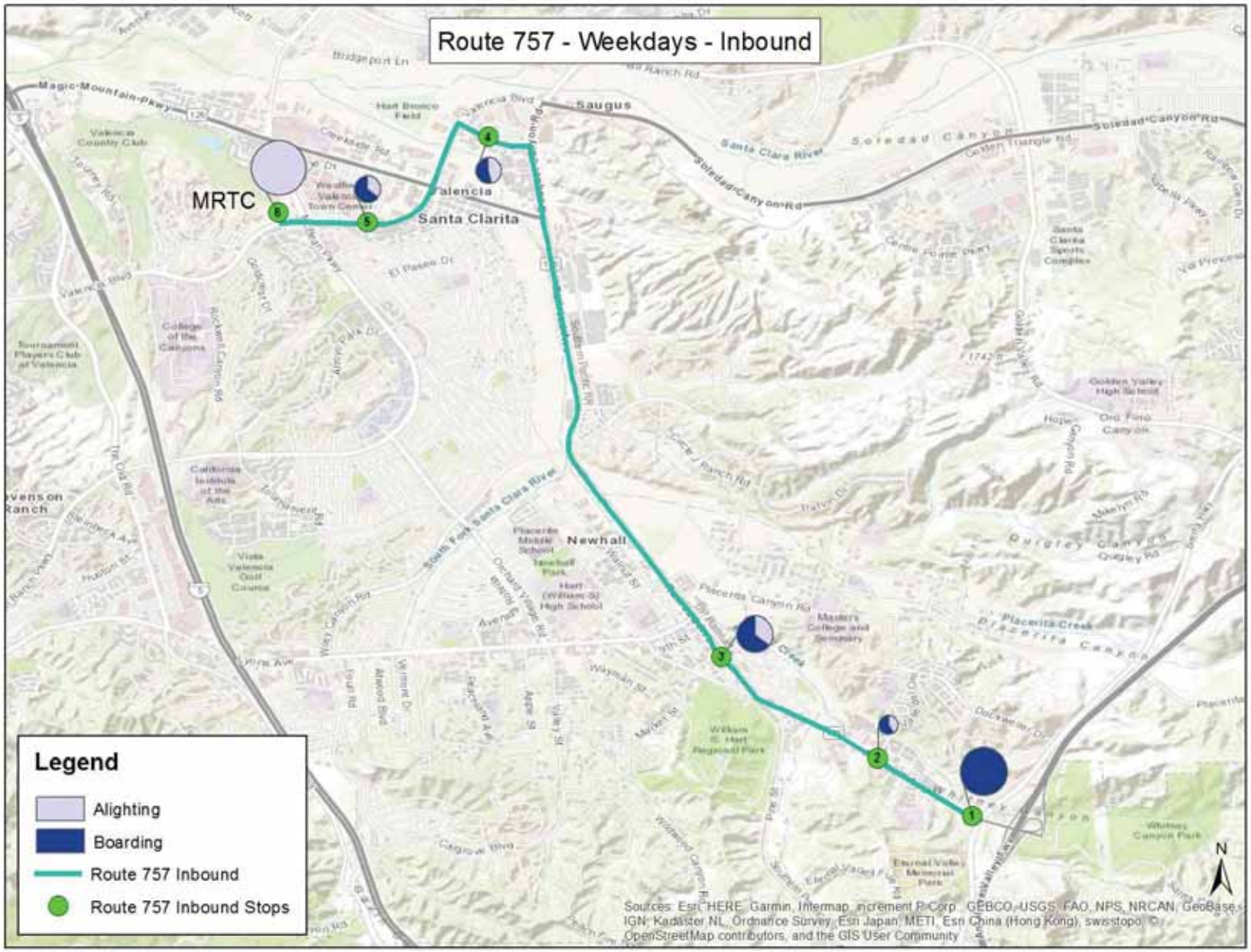
Bubble maps indicate the relative level of activity at each Route 757 bus stop, both inbound and outbound.

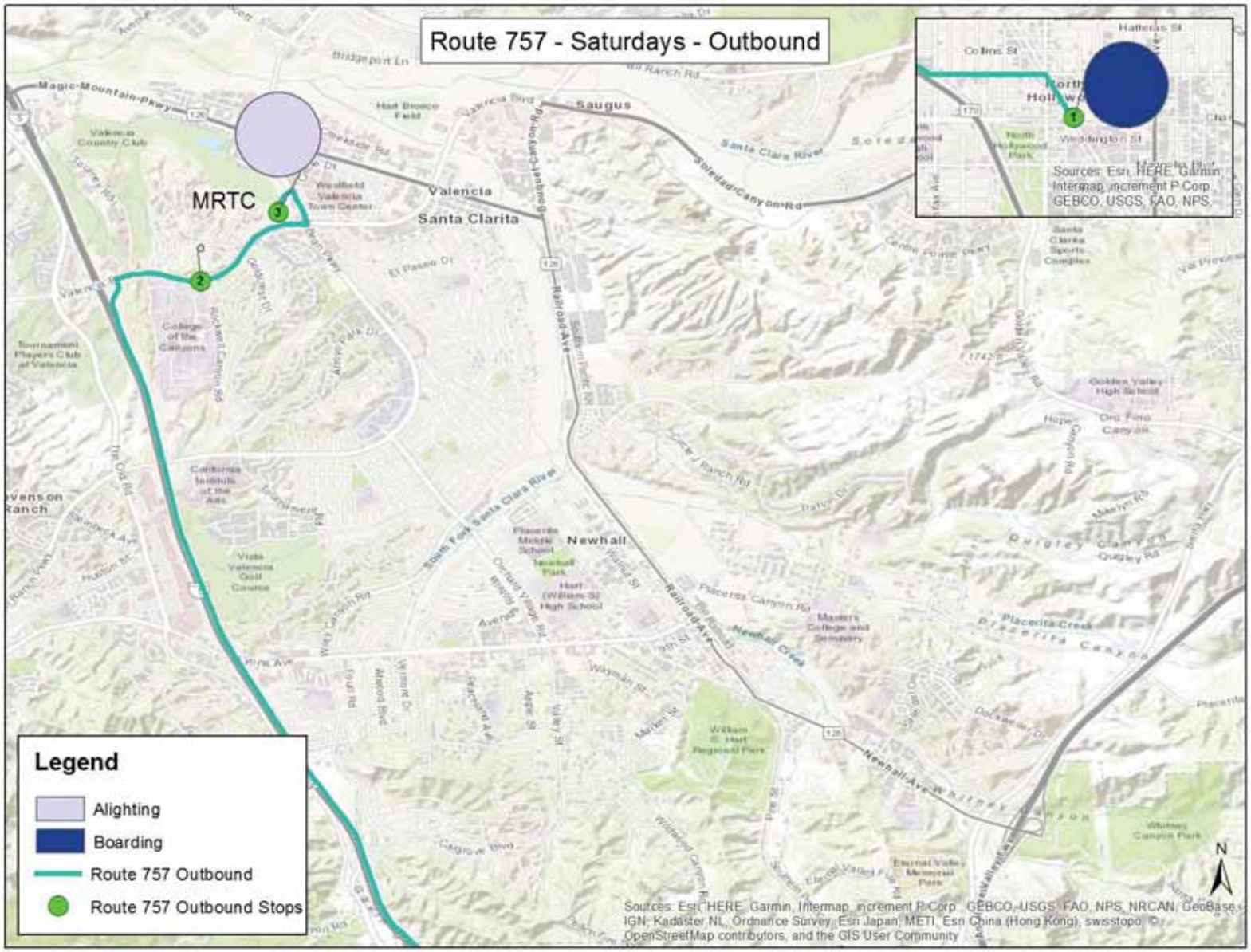
North Hollywood Station and the MRTC are the two stops with the greatest level of activity for all days and directions. On weekdays, the College of the Canyons and California Institute for the Arts experience similar total activity.

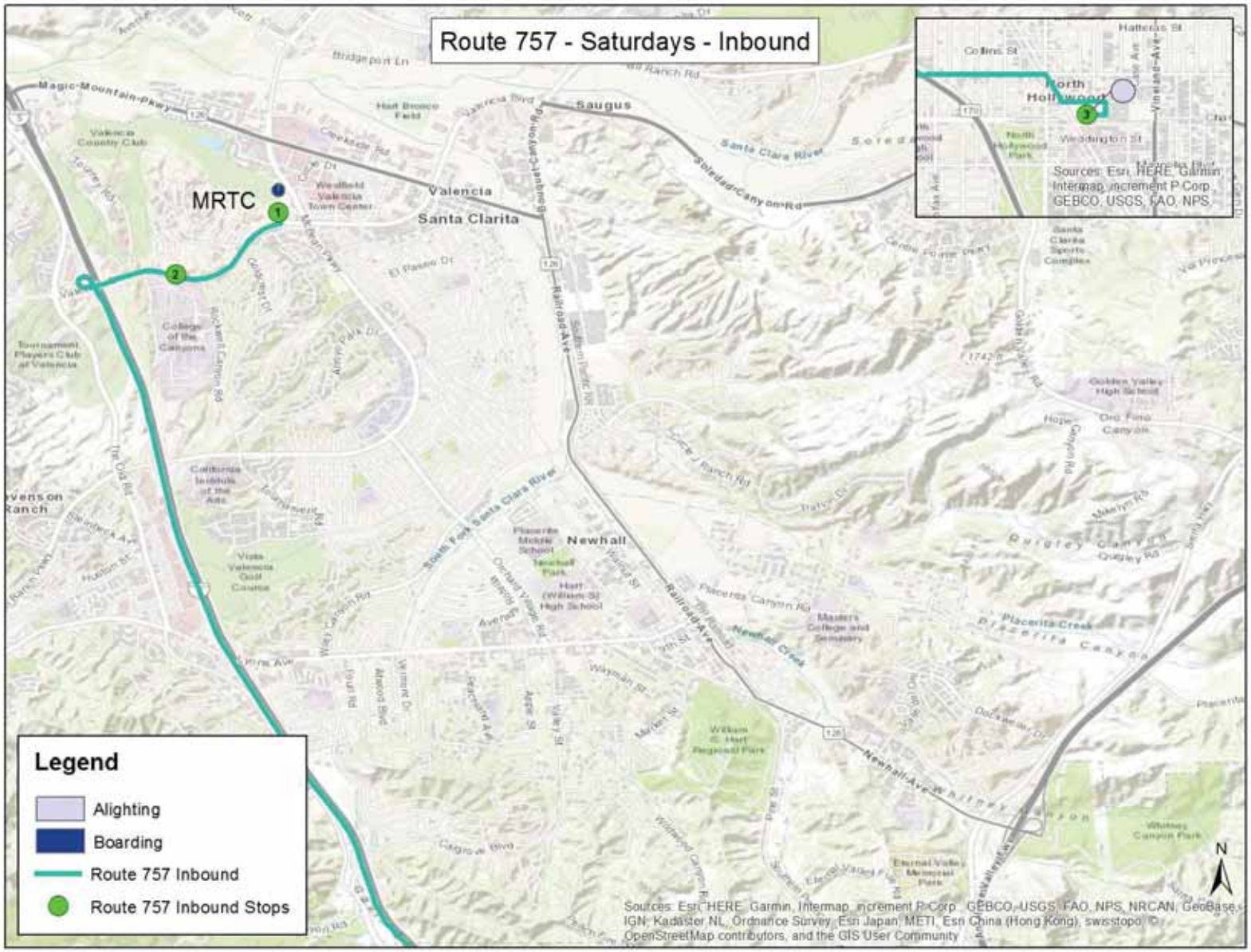
On Saturday and Sunday, service is limited to three stops. MRTC and North Hollywood Station have similarly higher activity on Saturday than Sunday.

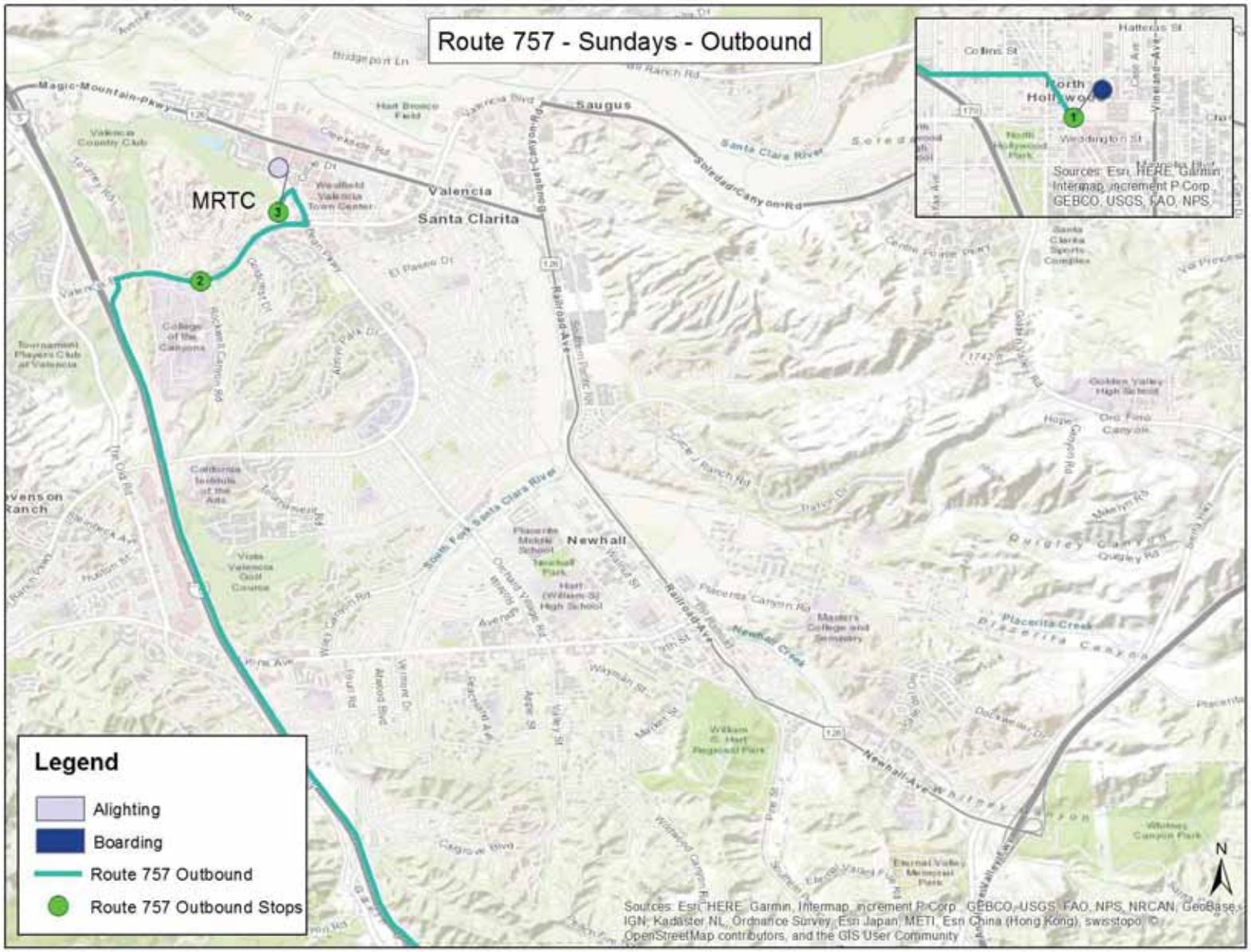
Exhibit 3.12.3 Route 757 Boarding and Alighting Maps




Route 757 - Weekdays - Inbound
MRTC
Valencia
Santa Clarita
Saugus
Newhall
Legend
Alighting
Boarding
Route 757 Inbound
Route 757 Inbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 757 - Saturdays - Outbound
MRTC
Valencia
Santa Clarita
Saugus
Newhall
Legend
Alighting
Boarding
Route 757 Outbound
Route 757 Outbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
N


Route 757 - Saturdays - Inbound
MRTC
Valencia
Santa Clarita
Saugus
Newhall
Legend
Alighting
Boarding
Route 757 Inbound
Route 757 Inbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
N


Route 757 - Sundays - Outbound
MRTC
Valencia
Santa Clarita
Saugus
Newhall
Legend
Alighting
Boarding
Route 757 Outbound
Route 757 Outbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

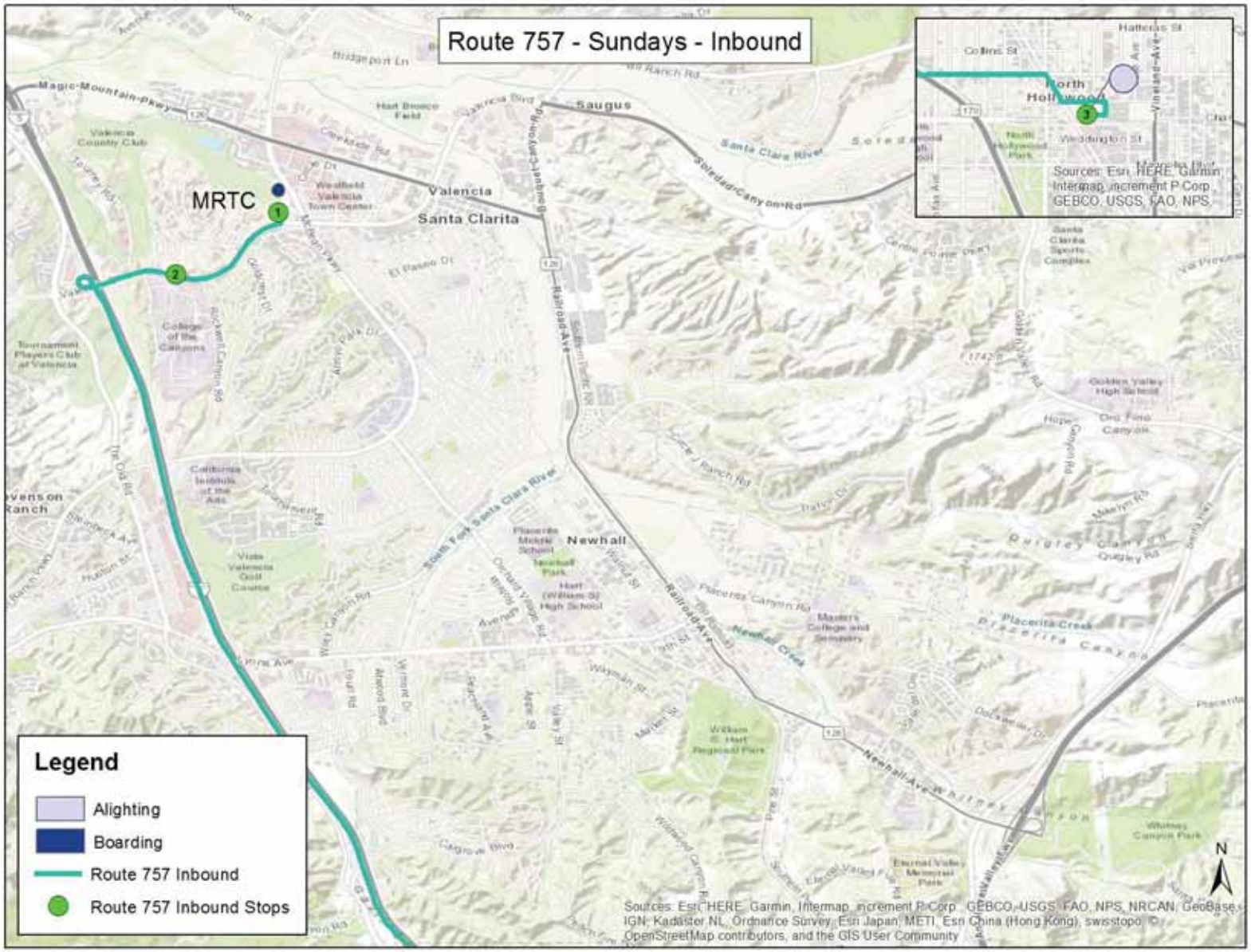

Route 757 - Sundays - Inbound
MRTC
Valencia
Santa Clarita
Saugus
Newhall
Legend
Alighting
Boarding
Route 757 Inbound
Route 757 Inbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS.
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Exhibit 3.12.4 Route 757 Stop Lists

Route 757 Outbound (Weekdays) Stop List	
Stop Number	Stop Name
1	McBean MRTC
2	Rockwell Cyn Rd (COC)
3	Rockwell Cyn Rd (CalArts)
4	Lankershim Blvd & Chandler Blvd
5	Newhall Ave & Sierra Hwy

Route 757 Inbound (Weekdays) Stop List	
Stop Number	Stop Name
1	Newhall Ave & Sierra Hwy
2	Newhall Ave & Valle Del Oro
3	Railroad Ave & Market St
4	Cinema Dr & Academy Pl
5	Valencia Blvd & Citrus Dr
6	McBean MRTC

Route 757 Outbound (Weekends) Stop List	
Stop Number	Stop Name
1	Lankershim Blvd & Chandler Blvd
2	Valencia Blvd & Rockwell Cyn Rd
3	McBean MRTC

Route 757 Inbound (Weekends) Stop List	
Stop Number	Stop Name
1	McBean MRTC
2	Valencia Blvd
3	North Hollywood Station

Average load factor by trip

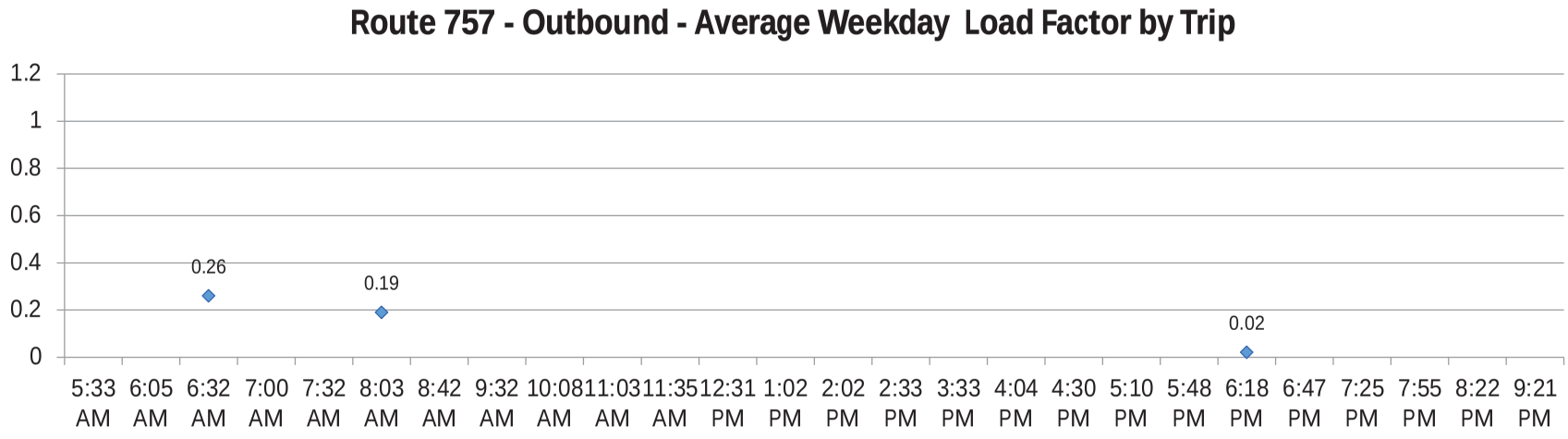
Both inbound and outbound trips on Route 757 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.37. Trips with the highest average peak loads for each day and direction are identified below.

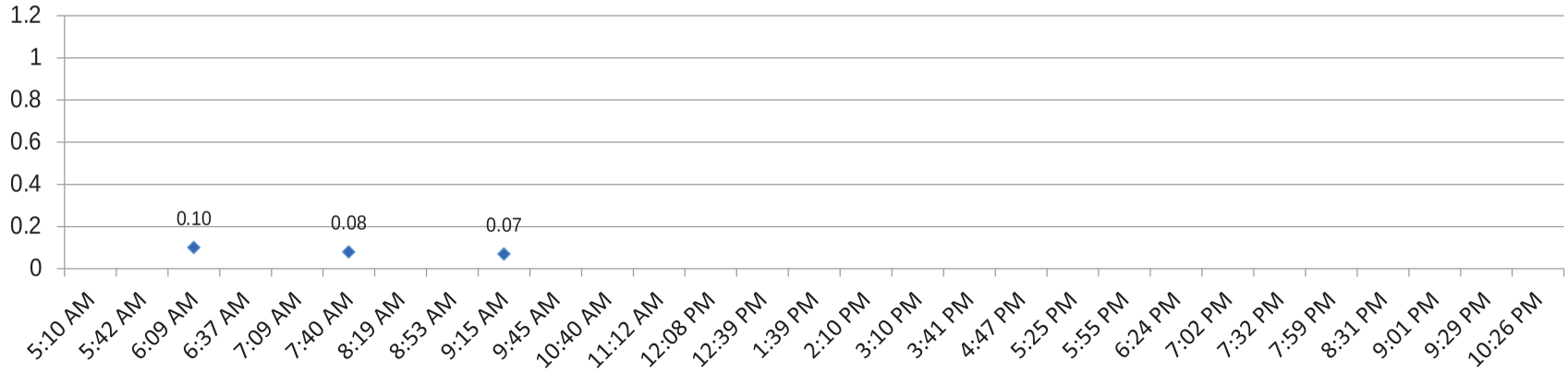
Exhibit 3.12.5 Route 757 Trips with Highest Average Peak Loads

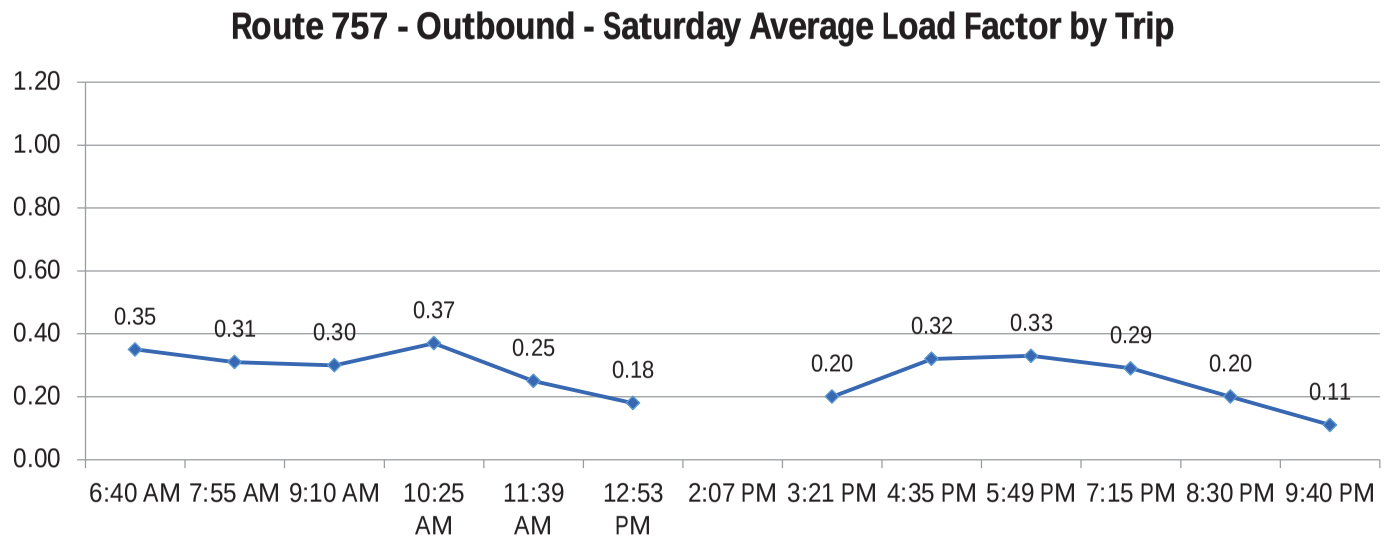
Day of Week	Direction	Trip	Average load factor
Weekday	Outbound	6:32 a.m.	0.26
Weekday	Inbound	6:09 a.m.	0.10
Saturday	Outbound	10:25 a.m.	0.37
Saturday	Inbound	2:46 p.m.	0.37
Sunday	Outbound	9:10 a.m.	0.24
Sunday	Inbound	7:20 a.m.	0.15

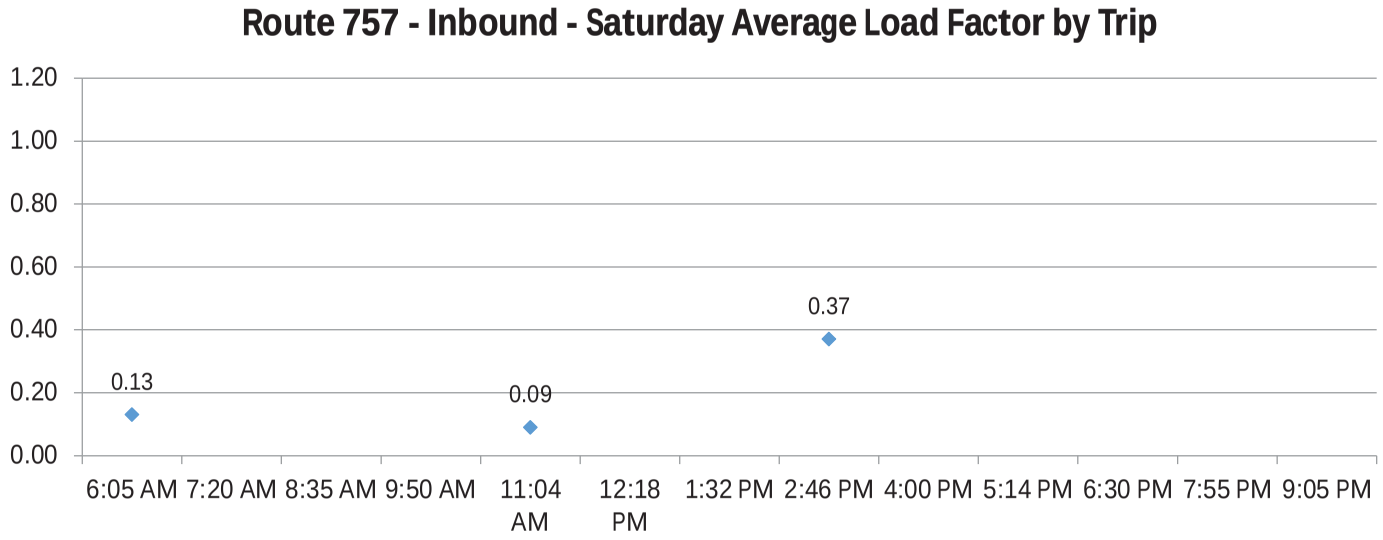
There were no individual trips which exhibited a load factor of at least 0.50.

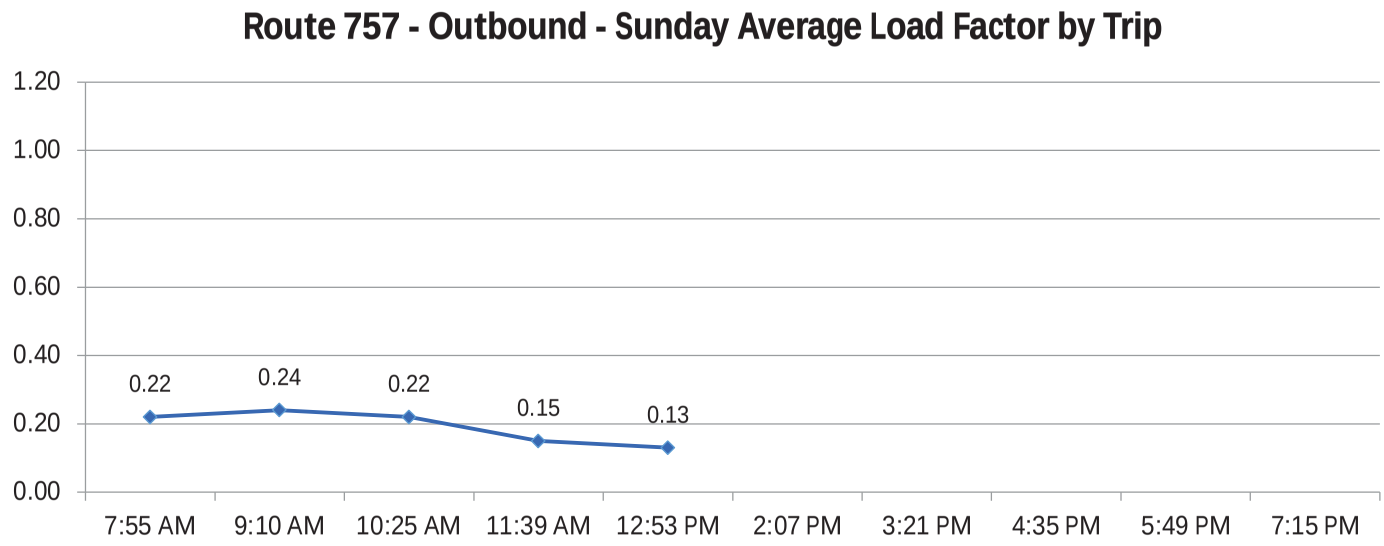
Exhibit 3.12.6 Route 757 Average Load Factor by Trip

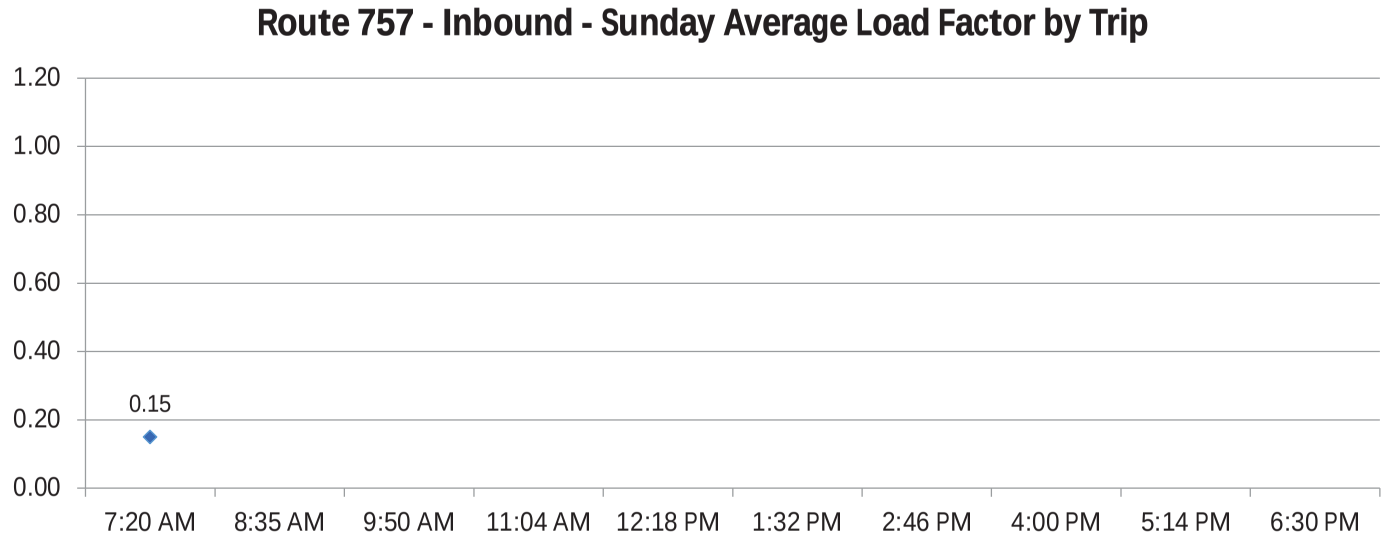





Route 757 - Outbound - Saturday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.35
0.31
0.30
0.37
0.25
0.18
0.20
0.32
0.33
0.29
0.20
0.11
6:40 AM
7:55 AM
9:10 AM
10:25 AM
11:39 AM
12:53 PM
2:07 PM
3:21 PM
4:35 PM
5:49 PM
7:15 PM
8:30 PM
9:40 PM


Route 757 - Inbound - Saturday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.13
0.09
0.37
6:05 AM
7:20 AM
8:35 AM
9:50 AM
11:04 AM
12:18 PM
1:32 PM
2:46 PM
4:00 PM
5:14 PM
6:30 PM
7:55 PM
9:05 PM


Route 757 - Outbound - Sunday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.22
0.24
0.22
0.15
0.13
7:55 AM
9:10 AM
10:25 AM
11:39 AM
12:53 PM
2:07 PM
3:21 PM
4:35 PM
5:49 PM
7:15 PM


Route 757 - Inbound - Sunday Average Load Factor by Trip
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.15
7:20 AM
8:35 AM
9:50 AM
11:04 AM
12:18 PM
1:32 PM
2:46 PM
4:00 PM
5:14 PM
6:30 PM

Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the last time-point on each route, trips were not counted as early if they arrived before the posted time. The exception is the time-point Newhall Avenue and Sierra Highway because for the rider, the route continues to its terminus at the MRTC.

Overall schedule adherence

Route 757's weekday outbound service exhibits better overall schedule adherence (70.8 percent) than the inbound service (63.3 percent).

Schedule adherence for Route 757 was reviewed using the data provided by the City, which calculates only the deviation from the scheduled departure time from the MRTC (not the arrival time). Route 757 runs on weekdays, Saturdays, and Sundays, however only schedule adherence data for weekdays was available.

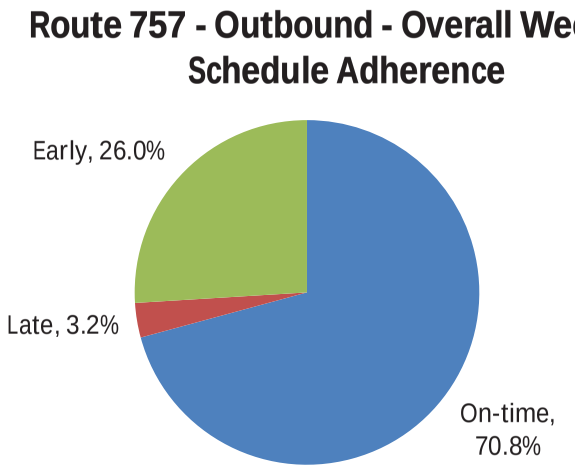
Schedule adherence by time-point

On weekdays, outbound service had the highest schedule adherence at MRTC and Rockwell Canyon Road (100.0 percent). The lowest was at Newhall Ave/Sierra Hwy (9.1 percent). Early trips were the primary issue, though some late departures were noted. The inbound service had its highest schedule adherence at MRTC (100.0 percent) and lowest at the Newhall Ave/Sierra Hwy (43.5 percent). Early departures from Newhall Ave/Sierra Hwy were a significant concern, as discussed above. However, the other inbound stops minus the MRTC struggle with early trips as well.

Schedule adherence by time of day

On weekdays, outbound schedule adherence is highest during the Late PM period (100.0 percent) and lowest during the AM Peak day-part (70.6 percent). For the inbound service, schedule adherence is highest in the AM Peak period (83.3 percent). Mid-day sees the lowest schedule adherence (10.9 percent). Early trips are experienced across both directions.

Exhibit 3.12.7 Route 757 Overall Schedule Adherence



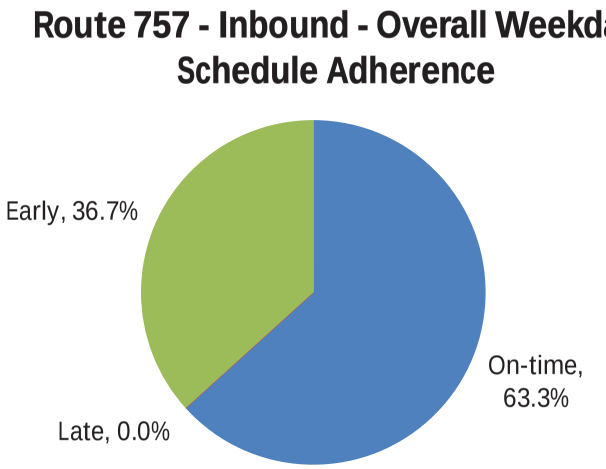
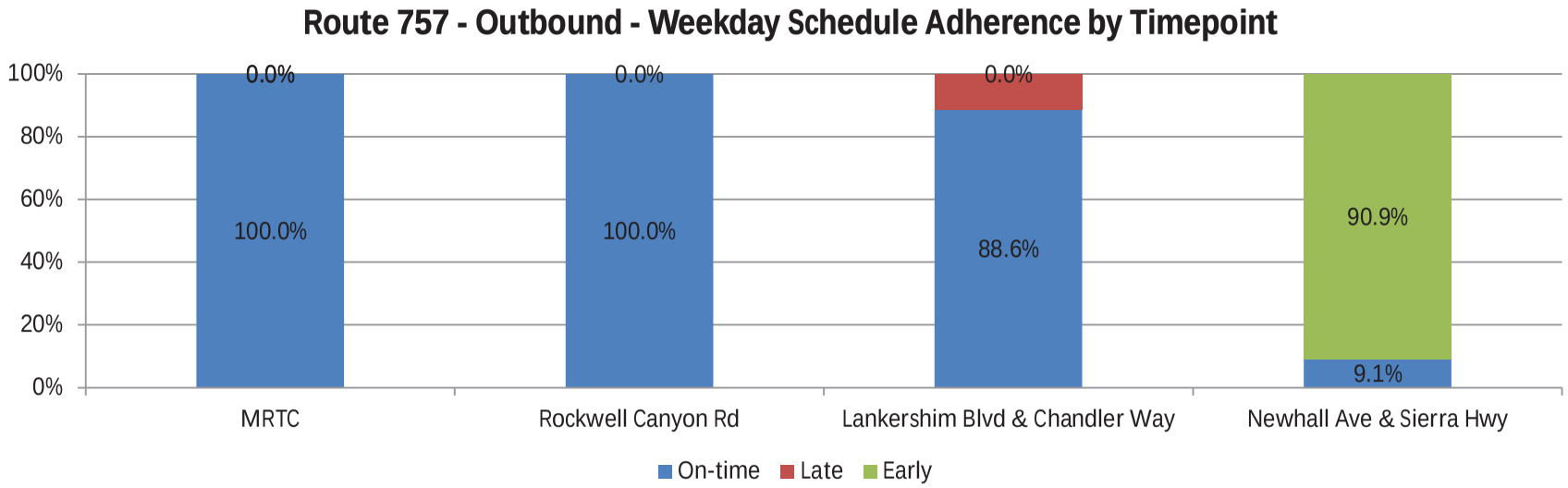


Exhibit 3.12.8 Route 757 Schedule Adherence by Time-point



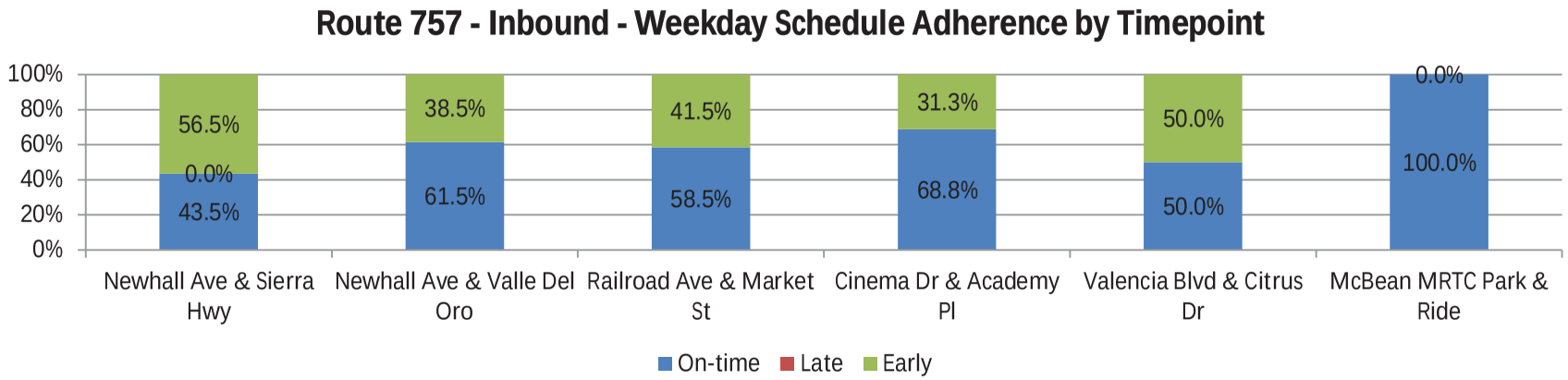
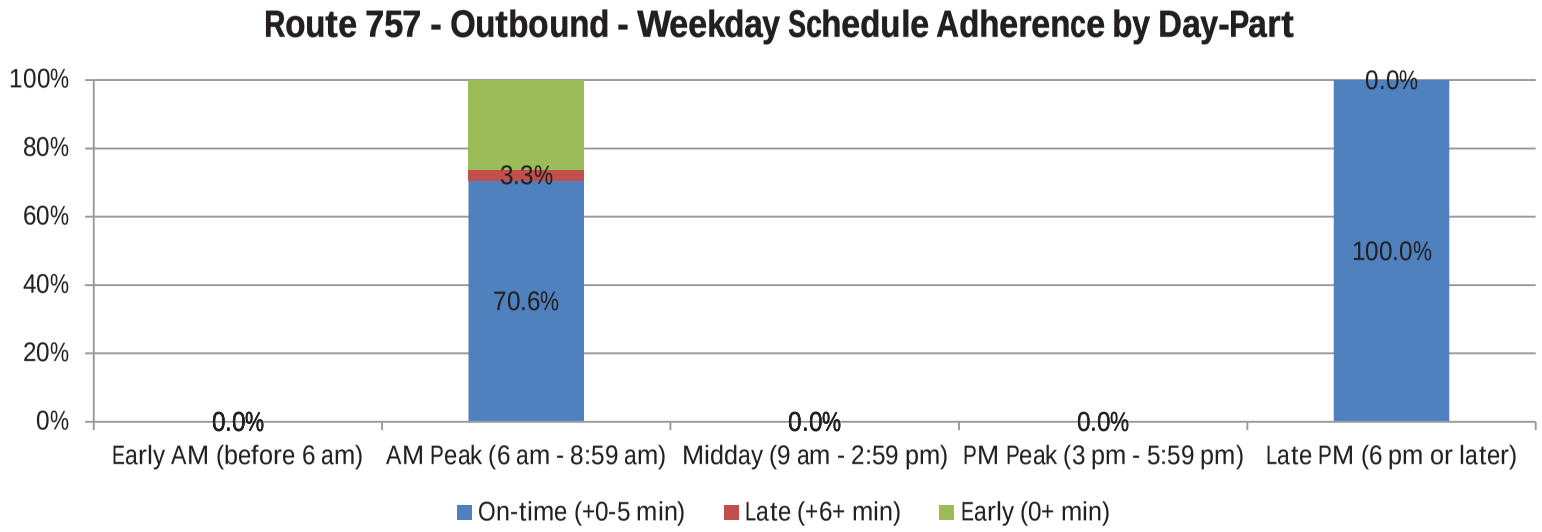
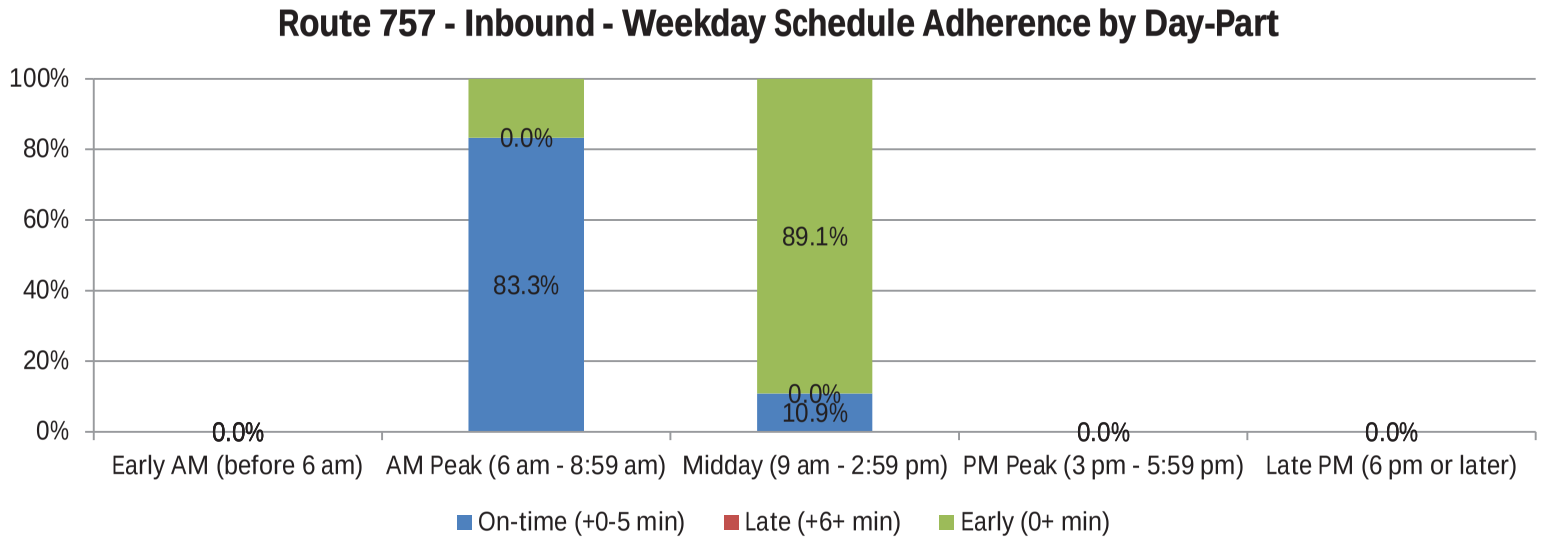


Exhibit 3.12.9 Route 757 Schedule Adherence by Day-Part





Route Performance

Overall ridership

Exhibit 3.12.10 Route 757 Overall Performance

	Weekday	Saturday	Sunday	Overall	Ranking
Route 757	23,173	2,069	1,591	27,575	1
Route 791	1,934	N/A	N/A	1,989	6
Route 792	1,456	N/A	N/A	1,477	7
Route 794	2,369	N/A	N/A	2,402	5
Route 796	6,335	N/A	N/A	6,415	4
Route 797	16,644	N/A	N/A	16,802	3
Route 799	19,956	N/A	N/A	20,122	2

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.12.11 Route 757 Overall Schedule Adherence

	Weekday	Weekend	Overall	Ranking
Route 757	65.5%	N/A	65.5%	4
Route 791	58.1%	N/A	58.1%	6
Route 792	63.3%	N/A	63.3%	5
Route 794	53.4%	N/A	53.4%	7
Route 796	67.1%	N/A	67.1%	3
Route 797	79.1%	N/A	79.1%	2
Route 799	79.3%	N/A	79.3%	1

Route 791 Profile and Performance Analysis

Route Description

Route 791 is an express route connecting Santa Clarita and Warner Center. Like all express routes except Route 757, Route 791 is part of a paired route: Route 796 serves the peak direction of travel (southbound in the morning and northbound in the afternoon), while Route 791 serves reverse commute trips. The peak direction route always has much higher ridership and productivity, but the reverse commute route accommodates passengers working in Santa Clarita (or working a non-traditional shift in Warner Center) while minimizing deadhead travel.

Route 791 runs north from Warner Center to Santa Clarita in the morning and south from Santa Clarita to Warner Center in the afternoon. Primary streets of operation include Topanga Canyon Boulevard, Lassen Street, Interstate 5, Interstate 405, State Route 118 Desoto Avenue, Valencia Boulevard, McBean Parkway, Avenue Tibbits, Avenue Scott, Rye Canyon Road, Avenue Stanford, and Technology Drive. The route operates during peak periods on weekdays only, although the first southbound trip in the afternoon falls in the mid-day period (2:10 p.m.).

AM service is defined as that originating in Warner Center and traveling to Santa Clarita. PM service travels from Santa Clarita to Warner Center. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

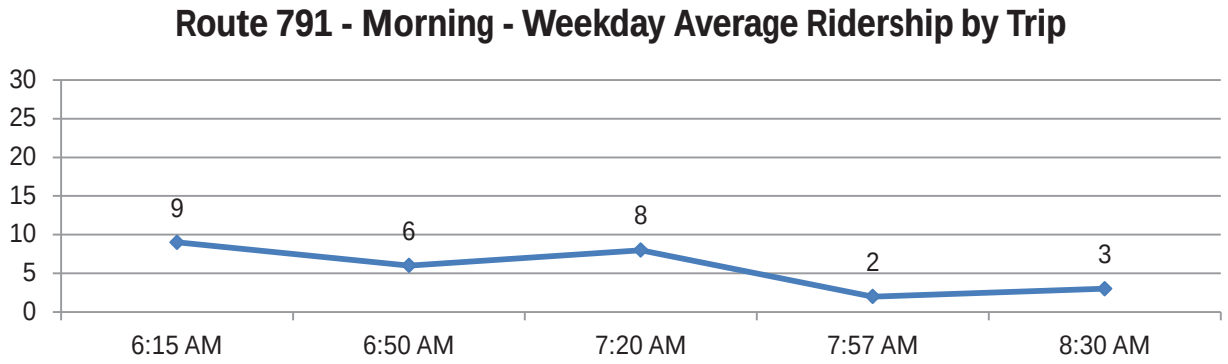
Route Performance

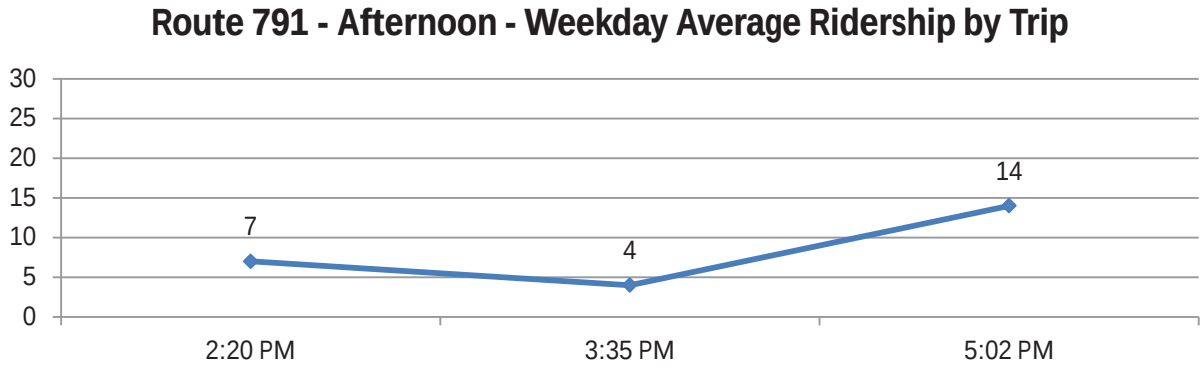
Average ridership by trip

AM service ridership is greatest on the first trip of the morning (6:15 a.m.) with an average of nine riders per trip. The 7:20 a.m. trip sees the next highest ridership, with an average of eight riders per trip. The 7:57 a.m. trip has the lowest ridership, with an average of just two riders per trip.

PM service ridership is greatest on the last trip of the day (5:02 p.m.), with an average of 14 riders per trip. The 3:35 p.m. trip sees the lowest ridership, with an average of four riders per trip.

Exhibit 3.13.1 Route 791 Average Ridership by Trip

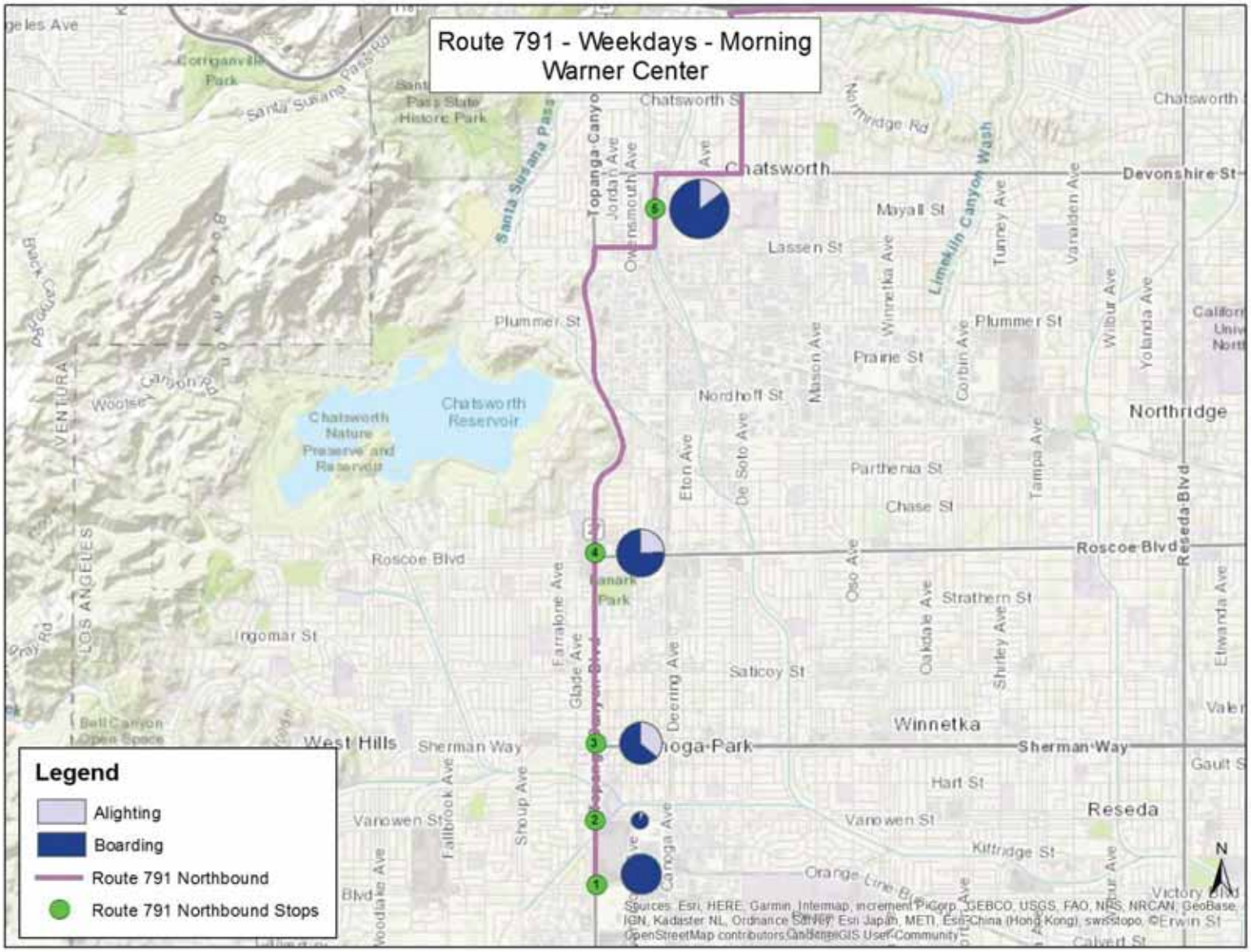


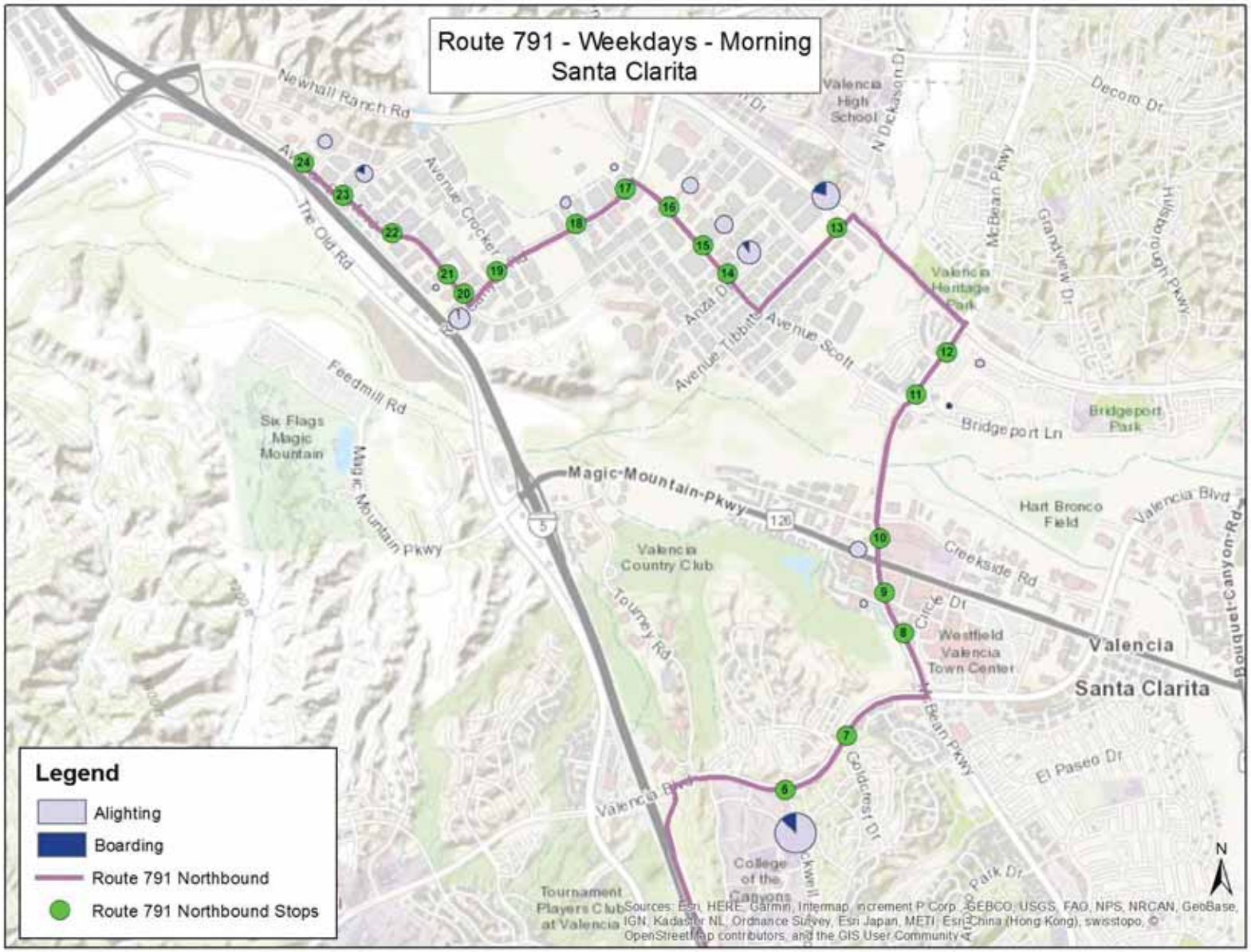


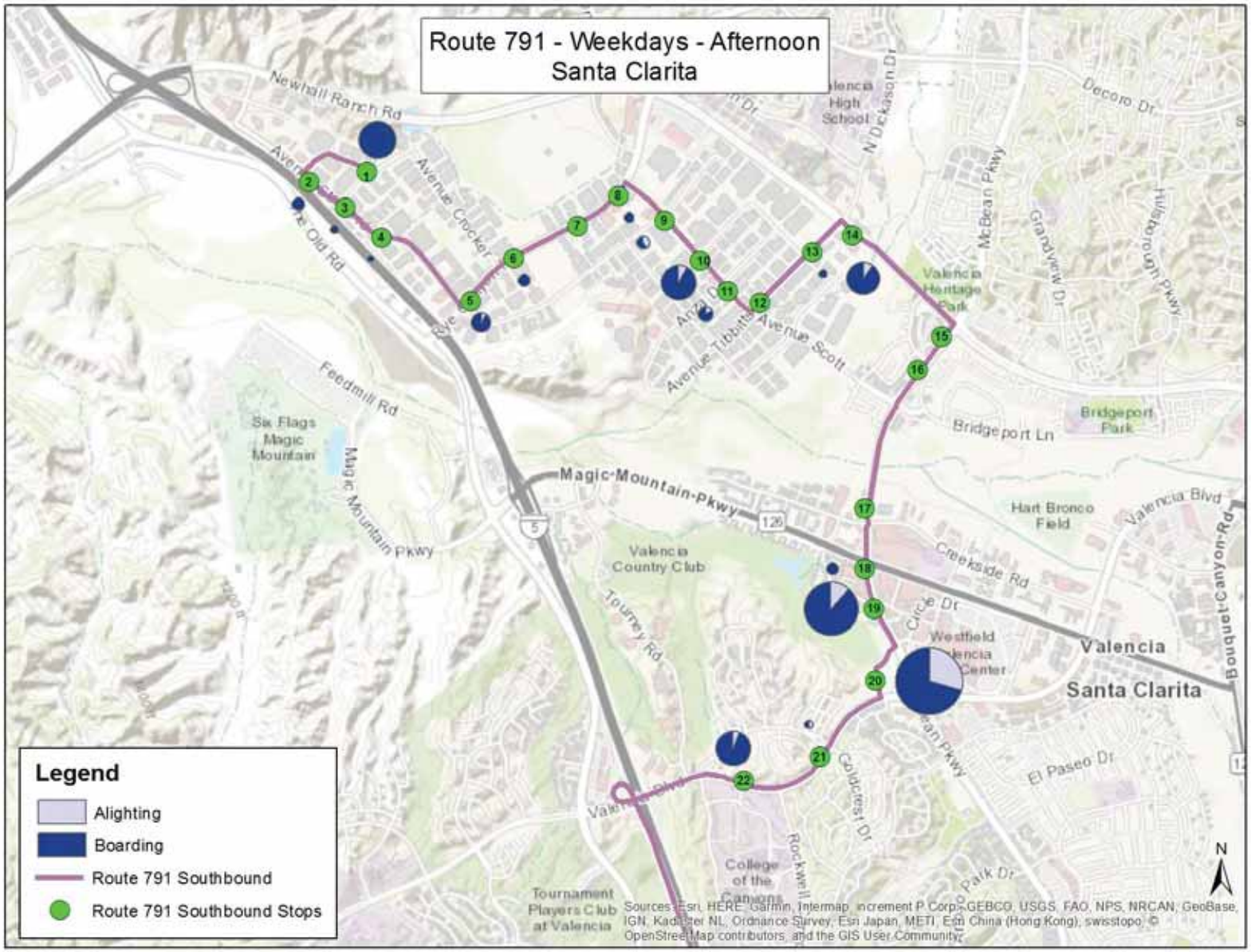
Average boarding and alighting by stop

Beginning on page 3, bubble maps indicate the relative level of activity at each Route791 bus stop. In the AM service, the greatest activity in the Warner Center portion of the route is at Topanga Canyon Blvd and Victory Blvd. In the Santa Clarita portion of the route, the greatest activity is at Valencia Blvd and Rockwell Canyon Rd (College of the Canyons). In the PM service, the greatest activity in the Santa Clarita portion of the route is at McBean Pkwy and Town Center Dr and the MRTC. The greatest activity in the Warner Center portion of the route is at Old Depot Plaza Rd and Lassen St.

Exhibit 3.13.2 Route 791 Boarding and Alighting Maps




Route 791 - Weekdays - Morning
Santa Clarita
Legend
Alighting
Boarding
Route 791 Northbound
Route 791 Northbound Stops
Newhall Ranch Rd
The Old Rd
Avenue Crocker
Feedmill Rd
Six Flags Magic Mountain
Magic Mountain Pkwy
Magic-Mountain-Pkwy
Valencia Country Club
Tourney Rd
Valencia High School
N Dickason Dr
Decoro Dr
McBean Pkwy
Granview Dr
Hillsborough Pkwy
Valencia Heritage Park
Anza Dr
Avenue Tibbitts
Avenue Scott
Bridgeport Ln
Bridgeport Park
Hart Bronco Field
Valencia Blvd
Creekside Rd
Circle Dr
Westfield Valencia Town Center
Valencia
Santa Clarita
Bouquet Canyon Rd
El Paseo Dr
Goldcrest Dr
Valencia Blvd
College of the Canyons
Tournament Players Club at Valencia
Park Dr
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 791 - Weekdays - Afternoon
Santa Clarita
Newhall Ranch Rd
Avenue Tibbitts
Avenue Scott
Avenue Crocker
The Old Rd
Feedmill Rd
Six Flags Magic Mountain
Magic Mountain Pkwy
Magic-Mountain-Pkwy
Valencia Country Club
Tourney Rd
Valencia High School
N Dickason Dr
Decoro Dr
McBean Pkwy
Grandview Dr
Huntington Pkwy
Valencia Heritage Park
Bridgeport Ln
Bridgeport Park
Hart Bronco Field
Valencia Blvd
Creekside Rd
Westfield Valencia Town Center
Valencia
Santa Clarita
Bouquet Canyon Rd
El Paseo Dr
Goldcrest Dr
Rockwell Dr
College of the Canyons
Tournament Players Club at Valencia
Legend
Alighting
Boarding
Route 791 Southbound
Route 791 Southbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

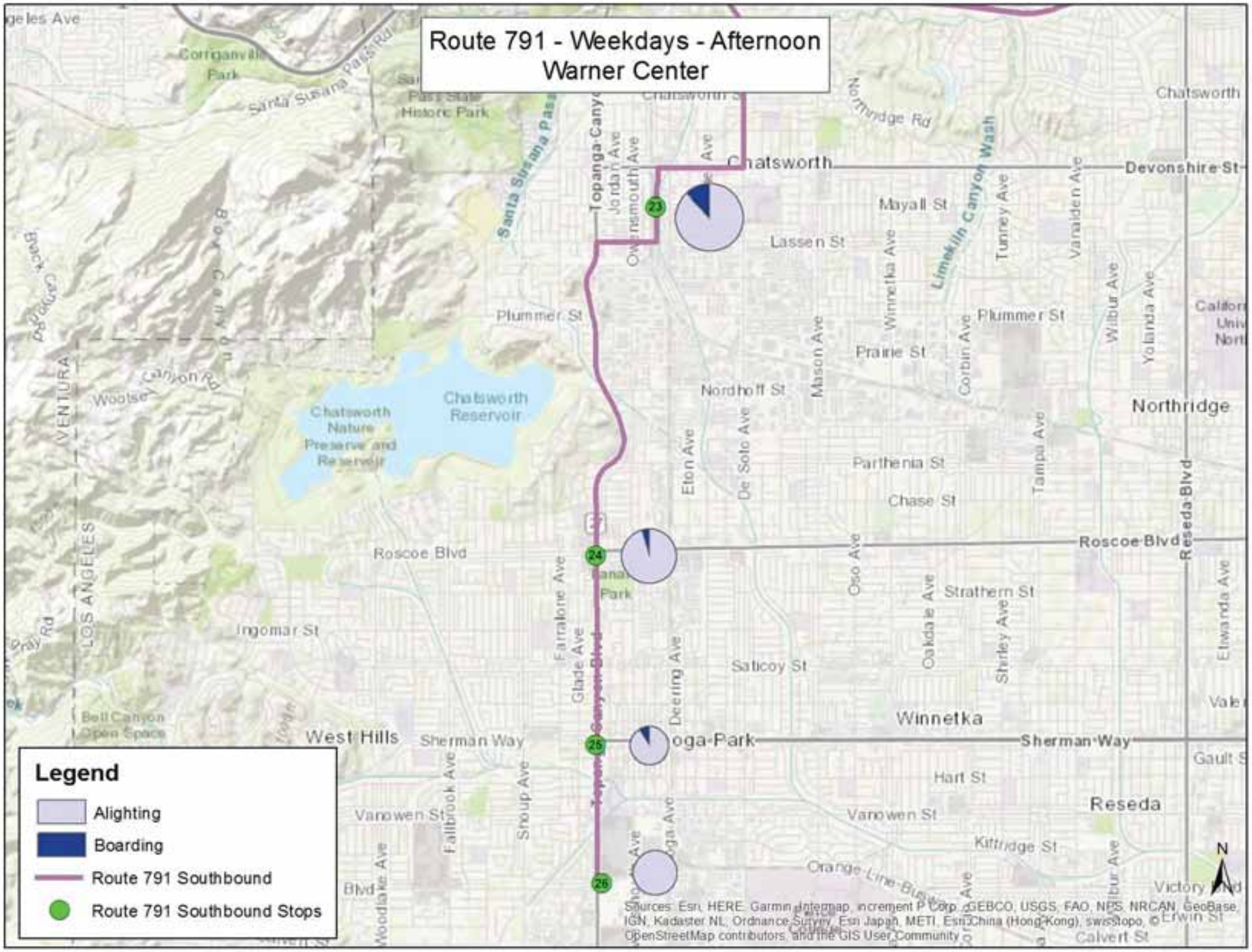

Route 791 - Weekdays - Afternoon
Warner Center
Legend
Alighting
Boarding
Route 791 Southbound
Route 791 Southbound Stops
Chatsworth
Northridge
Winnetka
Reseda
West Hills
Chatsworth Reservoir
Chatsworth Nature Preserve and Reservoir
Devonshire St
Roscoe Blvd
Sherman Way
Reseda Blvd
Topanga Canyon Blvd
23
24
25
26
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.13.3 Route 791 Stop Lists

Route 791 Inbound (Morning) Stop List	
Stop Number	Stop Name
1	Topanga Canyon Blvd & Victory Blvd
2	Topanga Canyon Blvd & Vanowen St
3	Topanga Canyon Blvd & Sherman Wy
4	Topanga Canyon Blvd & Roscoe Blvd
5	Old Depot Plaza Rd & Devonshire St
6	Valencia Blvd & Rockwell Canyon Rd
7	Valencia Blvd & Goldcrest Dr
8	McBean Pky
9	McBean Pky & Town Center Dr
10	McBean Pky & Creekside Rd
11	McBean Pky & Bridgeport Ln
12	McBean Pky & Baywood Ln
13	Ave Tibbitts & Nth Dickason Dr
14	Ave Scott & Anza Dr
15	Ave Scott & Ave Kearny
16	Ave Scott & Ave Stanford
17	Rye Canyon Rd & Ave Scott
18	Rye Canyon Rd & Beale Ct
19	Rye Canyon Rd & Ave Crocker
20	Ave Stanford & Rye Canyon Rd
21	Ave Stanford & Rye Canyon Rd
22	Ave Stanford & Huntington Ln
23	Ave Stanford & Ave Hall
24	Ave Stanford & Technology Dr

Route 791 Outbound (Afternoon) Stop List	
Stop Number	Stop Name
1	Technology Dr & Avenue Hall
2	Ave Stanford & Technology Dr
3	Ave Stanford & Ave Hall
4	Ave Stanford & Huntington Ln
5	Rye Canyon Rd & Ave Stanford
6	Rye Canyon Rd & Ave Crocker
7	Rye Canyon Rd & Beale Ct
8	Rye Canyon Rd & Ave Scott
9	Ave Scott & Ave Stanford
10	Ave Scott & Ave Kearny
11	Ave Scott & Anza Dr
12	Ave Tibbitts & Ave Scott
13	Ave Tibbitts & Ave Mentry
14	Newhall Ranch Rd & Ave Tibbitts
15	McBean Pky & Newhall Ranch Rd
16	McBean Pky & Baywood Ln
17	McBean Pky & Creekside Rd
18	McBean Pky & Magic Mountain Pky
19	McBean Pky & Town Center Dr
20	McBean MRTC Park & Ride
21	Valencia Blvd & Goldcrest Dr
22	Valencia Blvd
23	Old Depot Plaza Rd & Lassen St
24	Topanga Canyon Blvd & Roscoe Blvd
25	Topanga Canyon Blvd & Sherman Wy
26	Victory Blvd & Topanga Canyon Blvd

Average load factor by trip

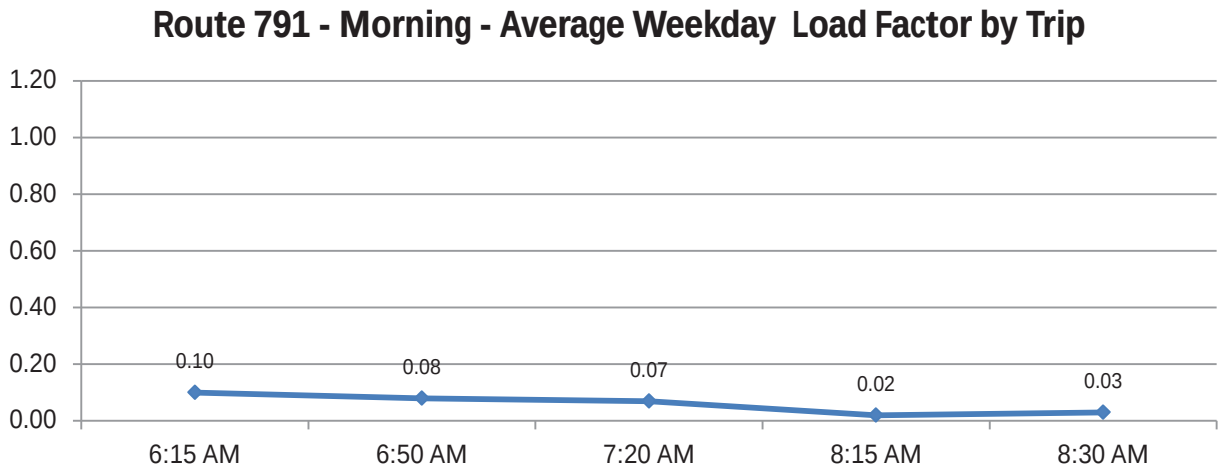
Both AM and PM trips on Route 791 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.14. Trips with the highest average peak loads for AM and PM service are identified below.

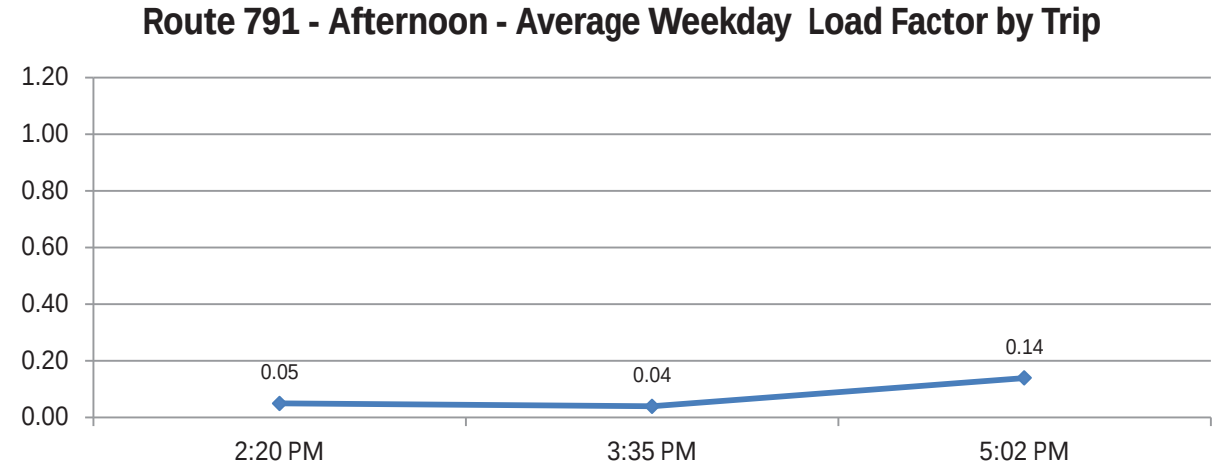
Exhibit 3.13.4 Route 791 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	AM Service	6:53 a.m.	0.10
Weekday	PM Service	3:18 p.m.	0.14

There were no trips which exhibited a load factor of at least 0.50.

Exhibit 3.13.5 Route 791 Average Load Factor by Trip





Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the destination portion of each commuter route (e.g., stops in Santa Clarita for a trip traveling from Warner Center to Santa Clarita), trips were not counted as early if they arrived before the posted time. (Any early departures from the last stop would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

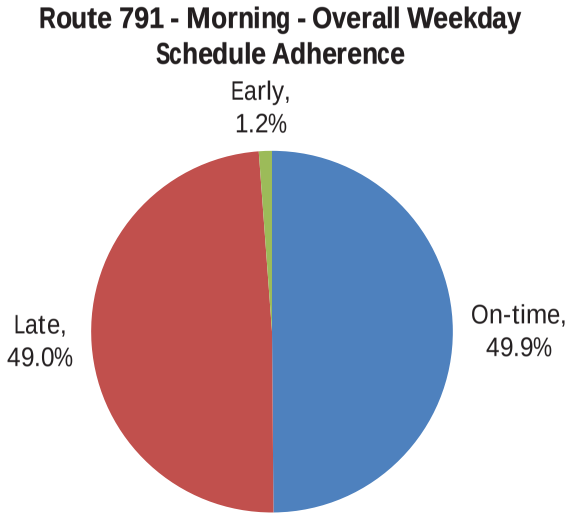
Route 791's PM service exhibits significantly better overall schedule adherence (72.8 percent) than the AM service (49.9 percent). In the AM service, 28.6 percent of trips depart the first time-point (Topanga Canyon Blvd and Victory Blvd) late, 46.9 percent of trips depart Topanga Canyon Blvd and Roscoe Blvd late, and 39.6 percent of trips are still running late when they depart the Chatsworth Metrolink Station. In the PM service, 47.5 percent of trips depart the MRTC late, but the majority of those take place during the 5:16 p.m. trip.

Schedule adherence by time-point

Chaminade High School has the highest schedule adherence in both AM and PM services; however, it should be noted that only one trip in each direction serves the school.

The first time-point (Topanga Canyon Blvd and Victory Blvd) has the highest schedule adherence for the AM service (67.9 percent), while Rye Canyon Rd and Avenue Stanford has the lowest (22 percent). In the PM service, Rye Canyon Rd and Avenue Stanford has the highest schedule adherence (94.9 percent), while the MRTC has the lowest (52.5 percent). Arrivals in the destination portion of the route are much more likely to be on-time during PM travel from Santa Clarita to Warner Center.

Exhibit 3.13.6 Route 791 Overall Schedule Adherence



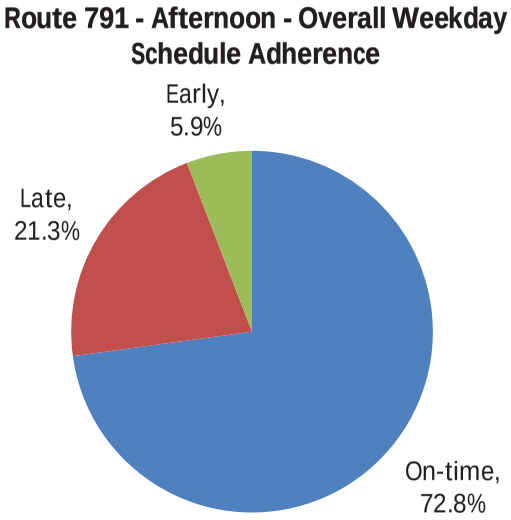
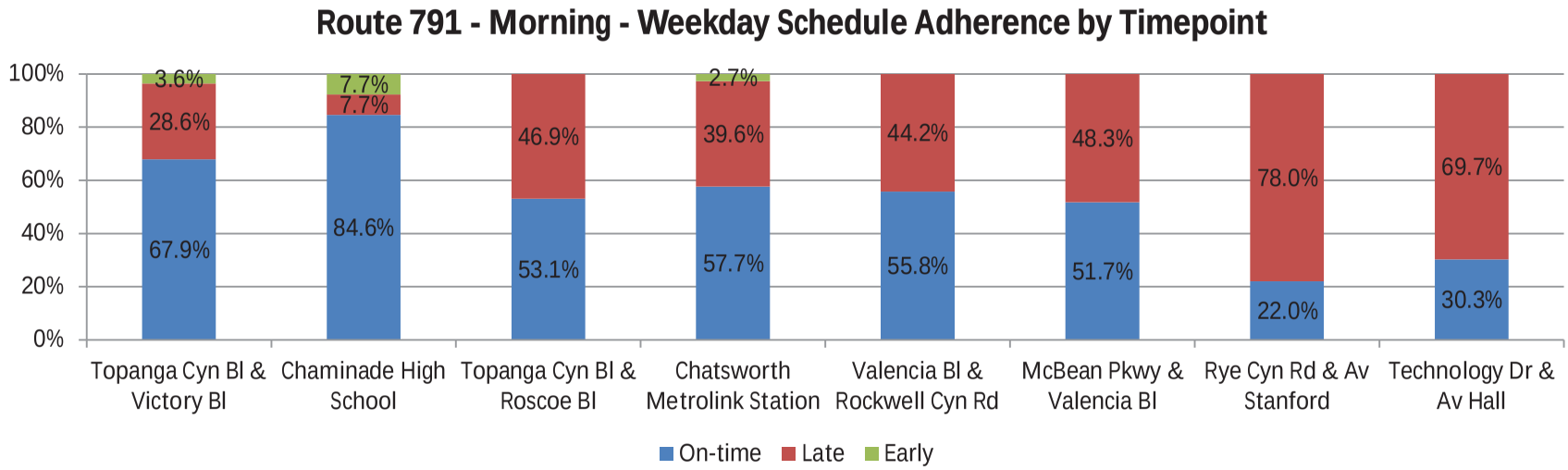
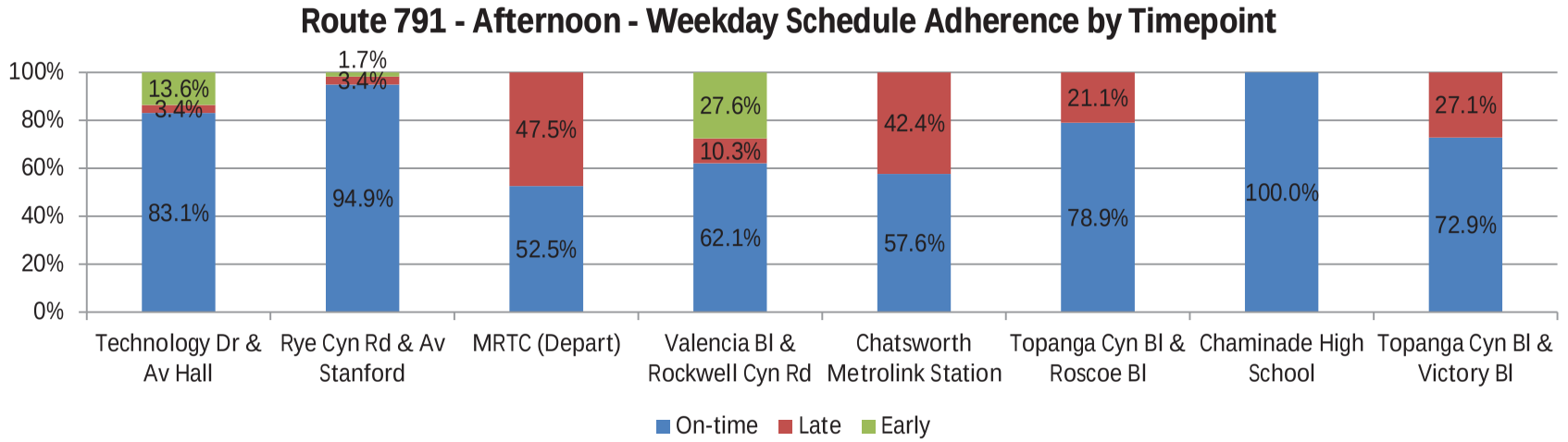


Exhibit 3.13.7 Route 791 Schedule Adherence by Time-point





Route Performance

Overall ridership

Exhibit 3.13.8 Route 791 Overall Ridership

	Weekday	Saturday	Sunday	Overall	Ranking (overall)
Route 757	23,173	2,069	1,591	27,575	1
Route 791	1,934	N/A	N/A	1,989	6
Route 792	1,456	N/A	N/A	1,477	7
Route 794	2,369	N/A	N/A	2,402	5
Route 796	6,335	N/A	N/A	6,415	4
Route 797	16,644	N/A	N/A	16,802	3
Route 799	19,956	N/A	N/A	20,122	2

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.13.9 Route 791 Overall Schedule Adherence

	Weekday	Weekend	Overall	Ranking
Route 757	65.5%	N/A	65.5%	4
Route 791	58.1%	N/A	58.1%	6
Route 792	63.3%	N/A	63.3%	5
Route 794	53.4%	N/A	53.4%	7
Route 796	67.1%	N/A	67.1%	3
Route 797	79.1%	N/A	79.1%	2
Route 799	79.3%	N/A	79.3%	1

Route 792 Profile and Performance Analysis

Route Description

Route 792 is an express route connecting Santa Clarita with Century City, UCLA, and Westwood. Like all express routes (except Route 757), Route 792 is part of a paired route: Route 797 serves the peak direction of travel (southbound in the morning and northbound in the afternoon), while Route 792 serves reverse commute trips. The peak direction route always has much higher ridership and productivity, but the reverse commute route accommodates passengers working in Santa Clarita (or working a non-traditional shift at the other end of the routes) while minimizing deadhead travel.

Primary streets of operation include Valencia Boulevard, McBean Parkway, Avenue Tibbits, Avenue Scott, Rye Canyon Road, Avenue Stanford, Technology Drive, Interstate 5, Interstate 405, Montana Avenue, Gayley Avenue, Westwood Boulevard, Wilshire Boulevard, Beverly Glen Boulevard, Santa Monica Boulevard, Century Park West, Century Park East, and West Olympic Boulevard. The route operates during peak periods on weekdays only, although the first southbound 792 trip in the afternoon falls in the mid-day period (2:59 p.m.).

AM service is defined as that originating in Century City and traveling to Santa Clarita. PM service travels from Santa Clarita to Century City. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

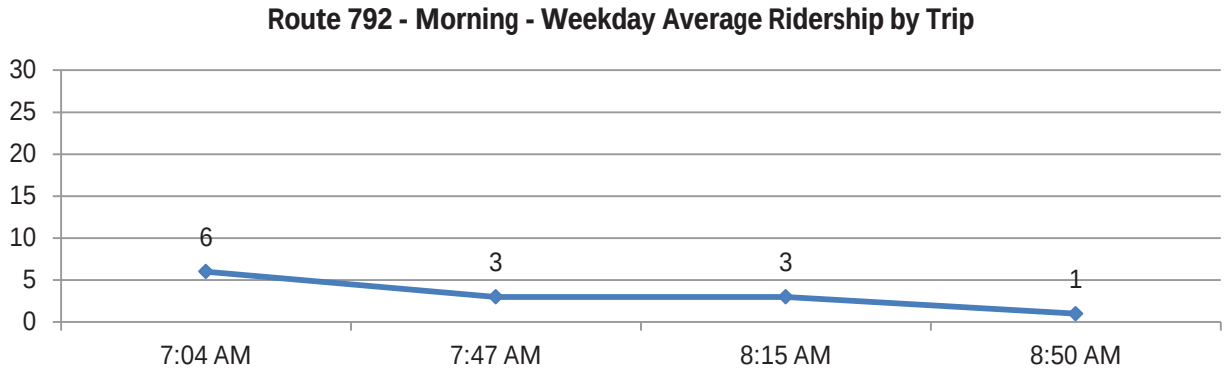
Route Performance

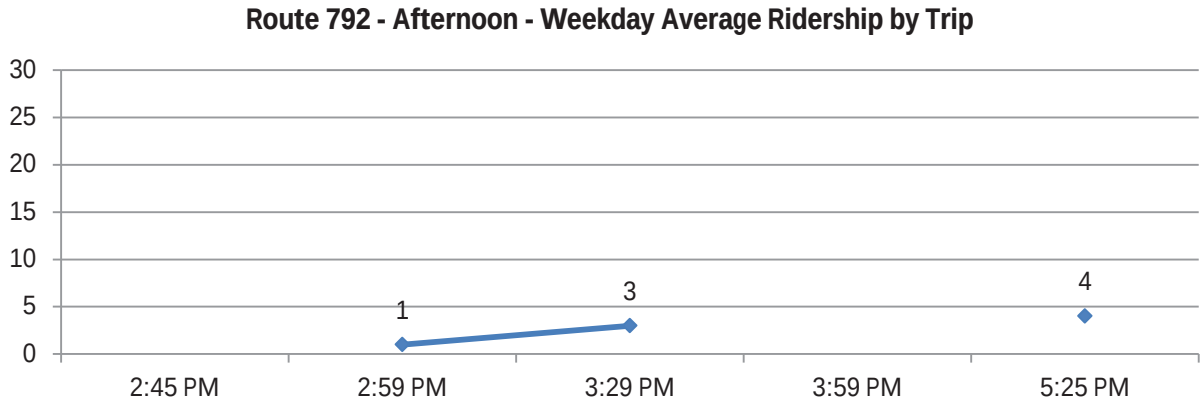
Average ridership by trip

The AM service saw its highest ridership during the first trip of the morning (7:04 a.m.), with an average of six riders per trip. The last trip of the morning (8:50 a.m.) had the fewest riders, with an average of just one rider per trip.

Limited data was available for the PM service. As a result, average ridership was only calculated for three of the five trips. Of the three trips observed, the last trip of the day (5:25 p.m.) had the highest average ridership, with an average of four riders per trip. The 2:59 p.m. trip had the fewest riders, with an average of just one rider per trip.

Exhibit 3.14.1 Route 792 Average Ridership by Trip



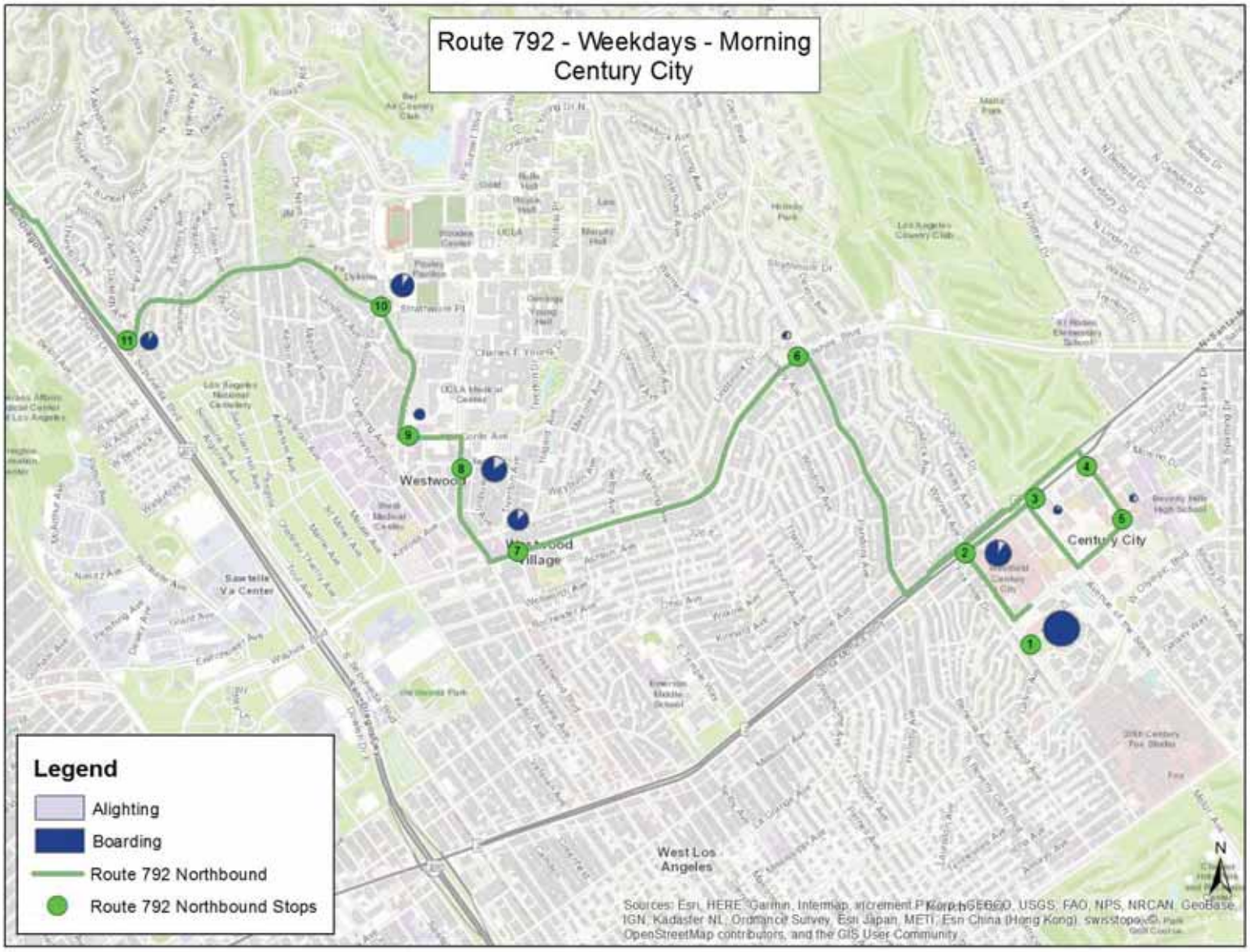


Average boarding and alighting by stop

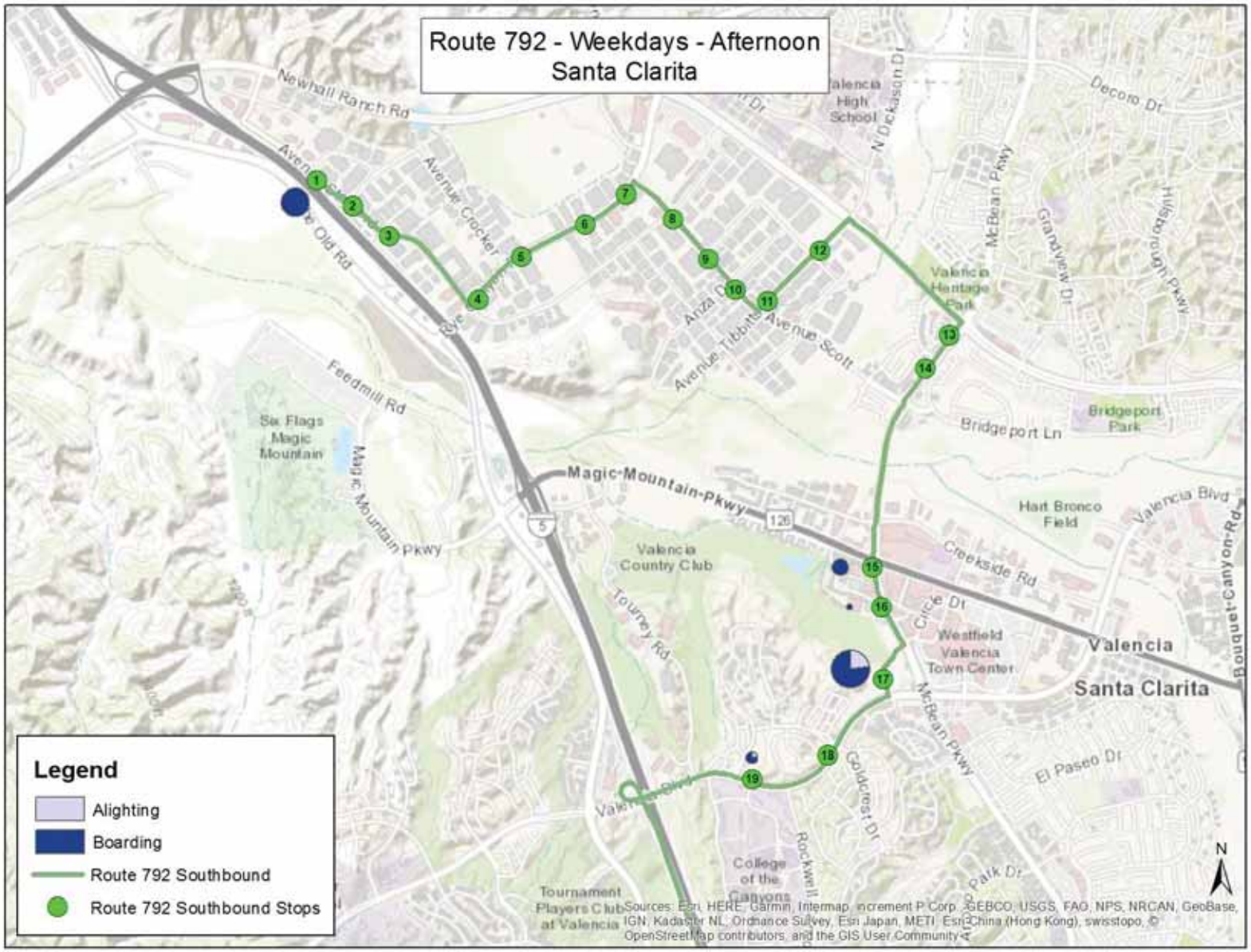
Beginning on page 3, bubble maps indicate the relative level of activity at each Route 792 bus stop.

For the AM service, the stop with the greatest activity in the Century City portion of the route is Century Park West/MGM Dr. The Santa Clarita stop with the greatest activity is McBean Pkwy/Town Center Dr. For the PM service, the stop with the greatest activity in the Santa Clarita portion of the route is the MRTC. The Century City stop with the greatest activity is Century Park West/MGM Dr.

Exhibit 3.14.2 Route 792 Boarding and Alighting Maps




Route 792 - Weekdays - Morning
Santa Clarita
Newhall Ranch Rd
The Old Rd
Avenue Crocker
Feedmill Rd
Six Flags Magic Mountain
Magic Mountain Pkwy
Magic-Mountain-Pkwy
Valencia Country Club
Tourney Rd
Valencia Blvd
Valencia High School
N Dickason Dr
Decoro Dr
McBean Pkwy
Grandview Dr
Hillsborough Pkwy
Valencia Heritage Park
Avenue Tibbitts
Avenue Scott
Anza Dr
Bridgeport Ln
Bridgeport Park
Hart Bronco Field
Creekside Rd
Westfield Valencia Town Center
Valencia
Santa Clarita
Bouquet Canyon Rd
El Paseo Dr
Goldcrest Dr
Rockwell Dr
Park Dr
College of the Canyons
Tournament Players Club at Valencia
Legend
Alighting
Boarding
Route 792 Northbound
Route 792 Northbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 792 - Weekdays - Afternoon
Santa Clarita
Newhall Ranch Rd
Avenue Crocker
Old Rd
Feedmill Rd
Six Flags Magic Mountain
Magic Mountain Pkwy
Magic-Mountain-Pkwy
Valencia Country Club
Tourney Rd
Valencia High School
N Dickason Dr
Decoro Dr
McBean Pkwy
Grandview Dr
Hillsborough Pkwy
Valencia Heritage Park
Avenue Tibbitts
Avenue Scott
Bridgeport Ln
Bridgeport Park
Hart Bronco Field
Valencia Blvd
Creekside Rd
Westfield Valencia Town Center
Valencia
Santa Clarita
Bouquet Canyon Rd
El Paseo Dr
Goldcrest Dr
Rockwell Dr
College of the Canyons
Tournament Players Club at Valencia
Legend
Alighting
Boarding
Route 792 Southbound
Route 792 Southbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

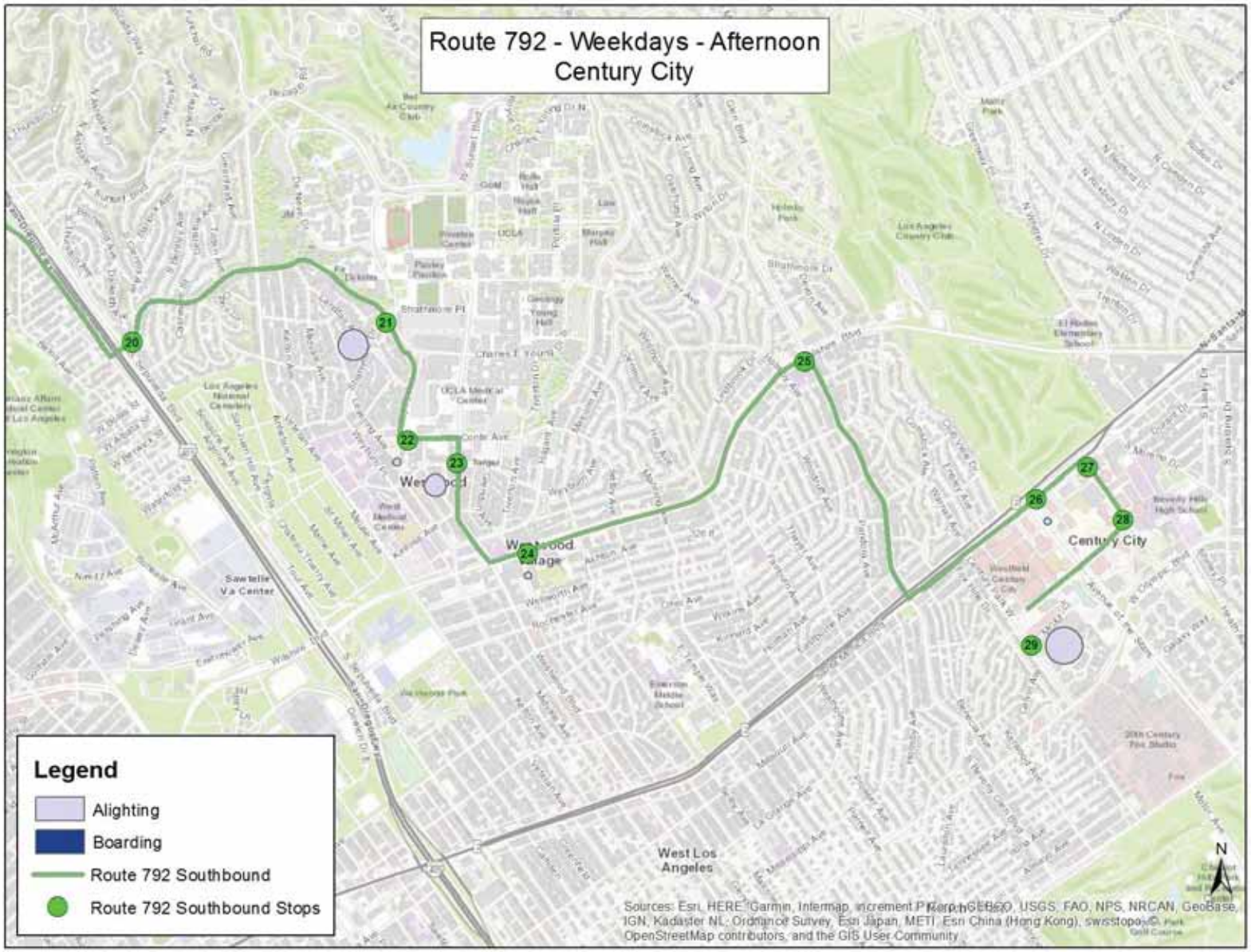

Route 792 - Weekdays - Afternoon
Century City
Legend
Alighting
Boarding
Route 792 Southbound
Route 792 Southbound Stops
West Los Angeles
Century City
Sawtelle V.a Center
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.14.3 Route 792 Stop Lists

Route 792 Inbound (Morning) Stop List	
Stop Number	Stop Name
1	Century Prk West & MGM Dr
2	Century Prk West & Santa Monica Blvd
3	Santa Monica Blvd & Ave Of The Stars
4	Century Prk East & Santa Monica Blvd
5	Century Prk East & Constellation Blvd
6	Wilshire Blvd & Sth Beverly Gln Blvd
7	Glendon Ave & Wilshire Blvd
8	Westwood Blvd & Weyburn Ave
9	Le Conte Ave & Gayley Ave
10	Gayley Ave & Strathmore Pl
11	Montana Ave & Sth Sepulveda Blvd
12	Valencia Blvd & Rockwell Canyon Rd
13	Valencia Blvd & Goldcrest Dr
14	McBean Pky
15	McBean Pky & Town Center Dr
16	McBean Pky & Creekside Rd
17	McBean Pky & Bridgeport Ln
18	McBean Pky & Baywood Ln
19	Newhall Ranch Rd & Baywood Ln
20	Ave Tibbitts & Nth Dickason Dr
21	Ave Tibbitts & Ave Scott
22	Ave Scott & Anza Dr
23	Ave Scott & Ave Kearny
24	Ave Scott & Ave Stanford
25	Rye Canyon Rd & Ave Scott
26	Rye Canyon Rd & Beale Ct
27	Rye Canyon Rd & Ave Crocker
28	Ave Stanford & Rye Canyon Rd
29	Ave Stanford & Rye Canyon Rd
30	Ave Stanford & Huntington Ln
31	Ave Stanford & Ave Hall
32	Ave Stanford & Technology Dr

Route 792 Outbound (Afternoon) Stop List	
Stop Number	Stop Name
1	Ave Stanford & Technology Dr
2	Ave Stanford & Ave Hall
3	Ave Stanford & Huntington Ln
4	Rye Canyon Rd & Ave Stanford
5	Rye Canyon Rd & Ave Crocker
6	Rye Canyon Rd & Beale Ct
7	Rye Canyon Rd & Ave Scott
8	Ave Scott & Ave Stanford
9	Ave Scott & Ave Kearny
10	Ave Scott & Anza Dr
11	Ave Tibbitts & Ave Scott
12	Ave Tibbitts & Ave Mentry
13	McBean Pky & Newhall Ranch Rd
14	McBean Pky & Baywood Ln
15	McBean Pky & Magic Mountain Pky
16	McBean Pky & Town Center Dr
17	McBean MRTC Park & Ride
18	Valencia Blvd & Goldcrest Dr
19	Valencia Blvd
20	Montana Ave & Sth Sepulveda Blvd
21	Gayley Ave & Strathmore Pl
22	Le Conte Ave & Gayley Ave
23	Westwood Blvd & Weyburn Ave
24	Glendon Ave & Wilshire Blvd
25	Wilshire Blvd & Sth Beverly Gln Blvd
26	Santa Monica Blvd & Ave Of The Stars
27	Century Prk East & Santa Monica Blvd
28	Century Prk East & Constellation Blvd
29	Century Prk West & MGM Dr

Average load factor by trip

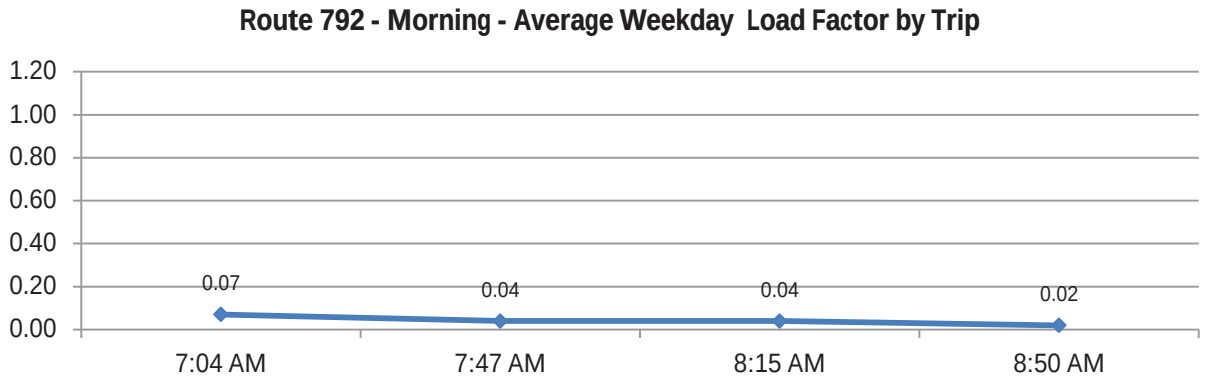
Both inbound and outbound trips on Route 792 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.07. Trips with the highest average peak loads for each direction are identified below.

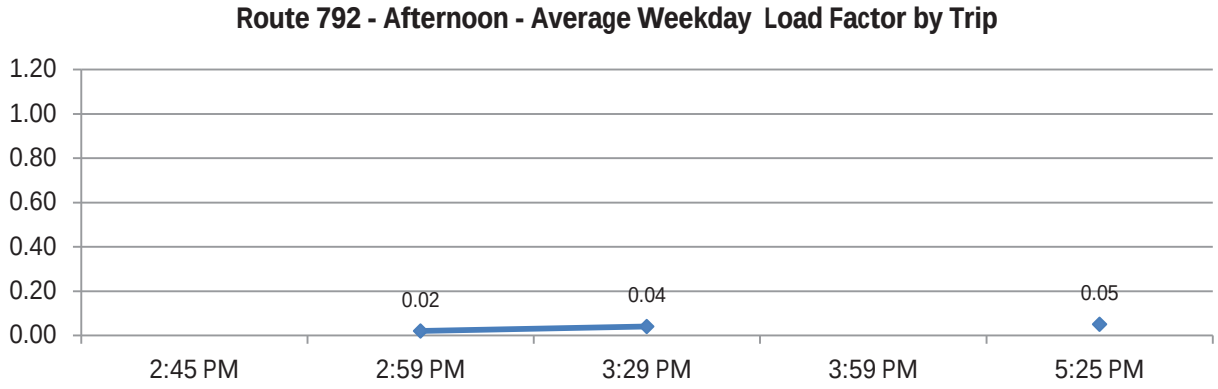
Exhibit 3.14.4 Route 792 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	AM service	7:04 a.m.	0.07
Weekday	PM service	5:25 p.m.	0.05

There were no individual trips which exhibited a load factor of at least 0.50.

Exhibit 3.14.5 Route 792 Average Load Factor by Trip





Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the destination portion of each commuter route (e.g., stops in Santa Clarita for a trip traveling from Century City to Santa Clarita), trips were not counted as early if they arrived before the posted time. (Any early departures from the last stop would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

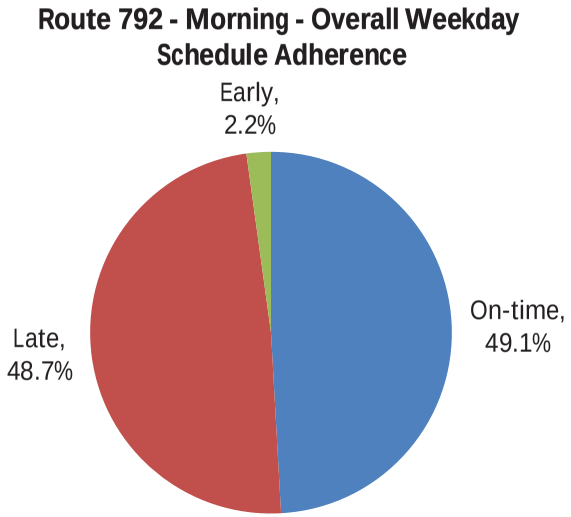
Route 792's PM service exhibits significantly better overall schedule adherence (94.8 percent) than the AM service (49.1 percent). Late trips are the primary challenge for the AM service.

Schedule adherence by time-point

In the AM service, 35.1 percent of trips depart the second time-point (Wilshire Blvd/Glendon Ave) late, though only 1.1 percent depart the first time-point (Century Park West/Solar Way) late. By the last Century City time-point (Montana Ave/Sepulveda Blvd), 52.4 percent of trips are late. As a result, 72.8 percent of arrivals at the first Santa Clarita time-point (COC Campus) are late; while this improves slightly during the balance of the route, the majority of arrivals are still late.

In the PM service, the majority of time-points have a schedule adherence of 96 percent or greater. The single exception is Valencia Blvd/Rockwell Canyon (COC Campus), where 24.1 percent of trips depart early. All of the observed early departures took place during the 3:29 p.m. and 3:59 p.m. trips. However, seven of the 13 early departures actually left the stop less than 30 seconds early. Therefore this may not be as significant an issue as it initially seems.

Exhibit 3.14.6 Route 792 Overall Schedule Adherence



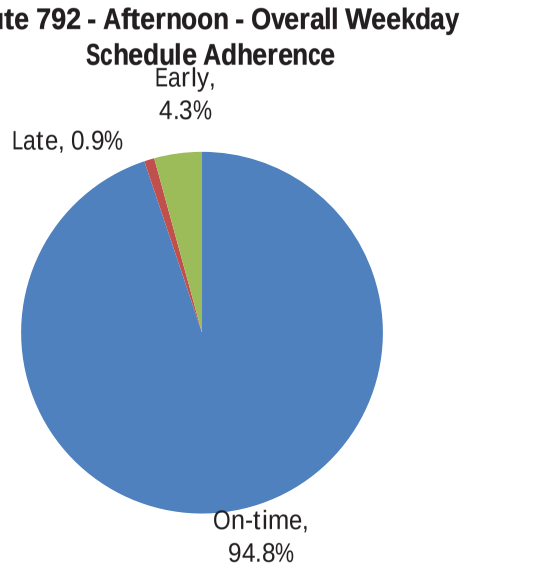
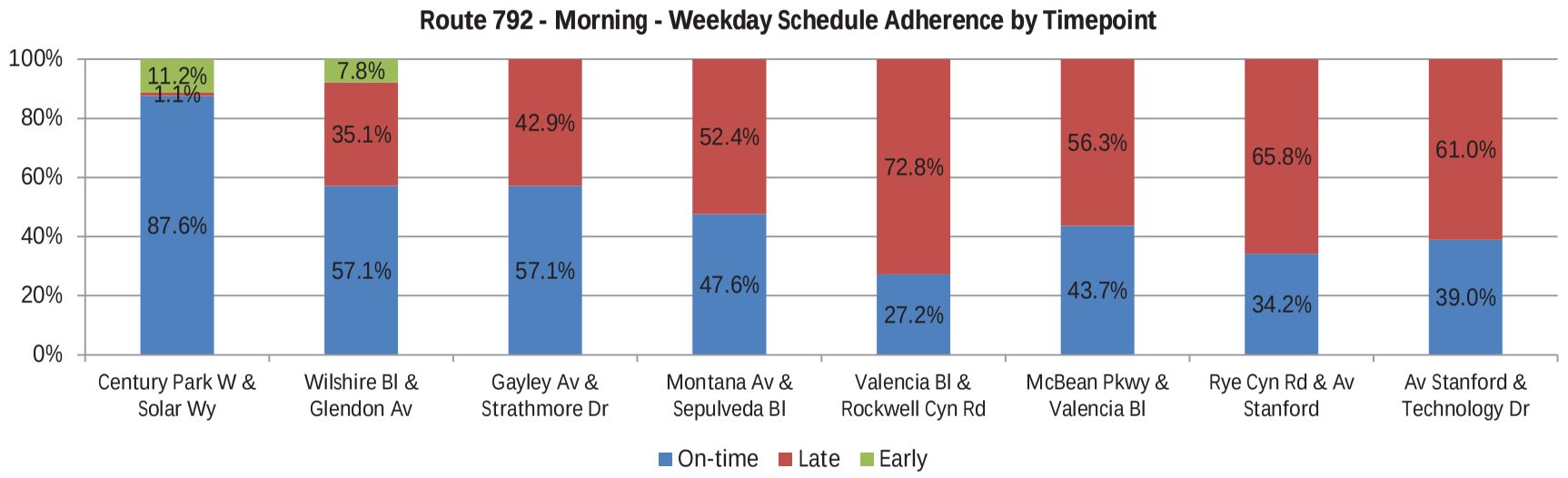
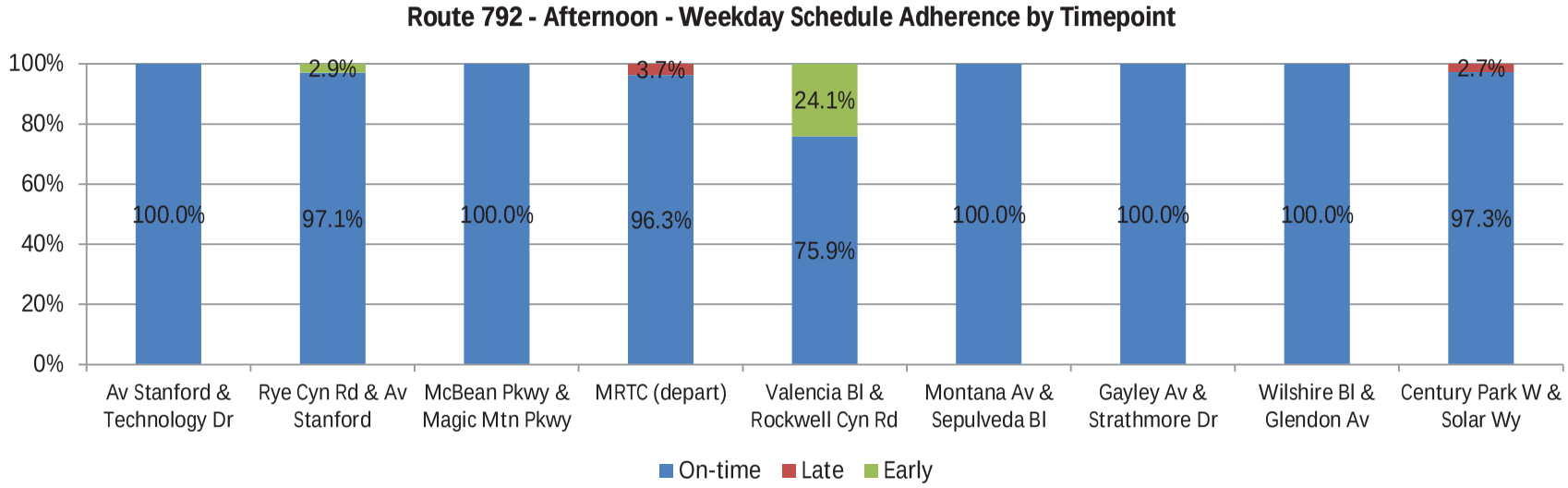


Exhibit 3.14.7 Route 792 Schedule Adherence by Time-point





Route Performance

Overall ridership

Exhibit 3.14.8 Route 792 Overall Ridership

	Weekday	Saturday	Sunday	Overall	Ranking
Route 757	23,173	2,069	1,591	27,575	1
Route 791	1,934	N/A	N/A	1,989	6
Route 792	1,456	N/A	N/A	1,477	7
Route 794	2,369	N/A	N/A	2,402	5
Route 796	6,335	N/A	N/A	6,415	4
Route 797	16,644	N/A	N/A	16,802	3
Route 799	19,956	N/A	N/A	20,122	2

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.14.9 Route 792 Overall Schedule Adherence

	Weekday	Weekend	Overall	Ranking
Route 757	65.5%	N/A	65.5%	4
Route 791	58.1%	N/A	58.1%	6
Route 792	63.3%	N/A	63.3%	5
Route 794	53.4%	N/A	53.4%	7
Route 796	67.1%	N/A	67.1%	3
Route 797	79.1%	N/A	79.1%	2
Route 799	79.3%	N/A	79.3%	1

Route 794 Profile and Performance Analysis

Route Description

Route 794 is a limited-stop/express route connecting Santa Clarita with Downtown Los Angeles. Like all Santa Clarita Transit express routes (except Route 757), Route 794 is part of a paired route: Route 799 serves the peak direction of travel (southbound in the morning and northbound in the afternoon), while Route 794 serves "reverse commute" trips. The peak direction route always has much higher ridership and productivity, but the "reverse commute" route accommodates passengers working in Santa Clarita (or working non-traditional work hours in Downtown Los Angeles) while minimizing deadhead travel.

The route operates during peak periods on weekdays only, although the last northbound morning trip falls in the mid-day period. Route 794 also serves the Burbank Metrolink Station. Primary streets of operation include Valencia Boulevard, McBean Parkway, Avenue Tibbits, Avenue Scott, Rye Canyon Road, Avenue Stanford, Technology Drive, Interstate 5, North Front Street, and North Alameda Street.

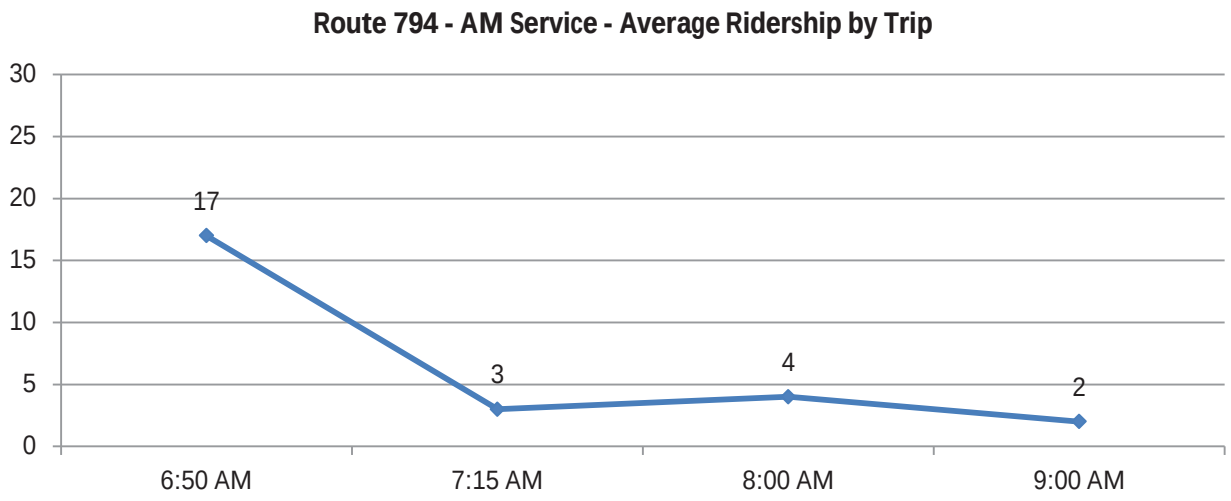
AM service is defined as that originating in Downtown Los Angeles and traveling to Santa Clarita. PM service travels from Santa Clarita to Downtown Los Angeles. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

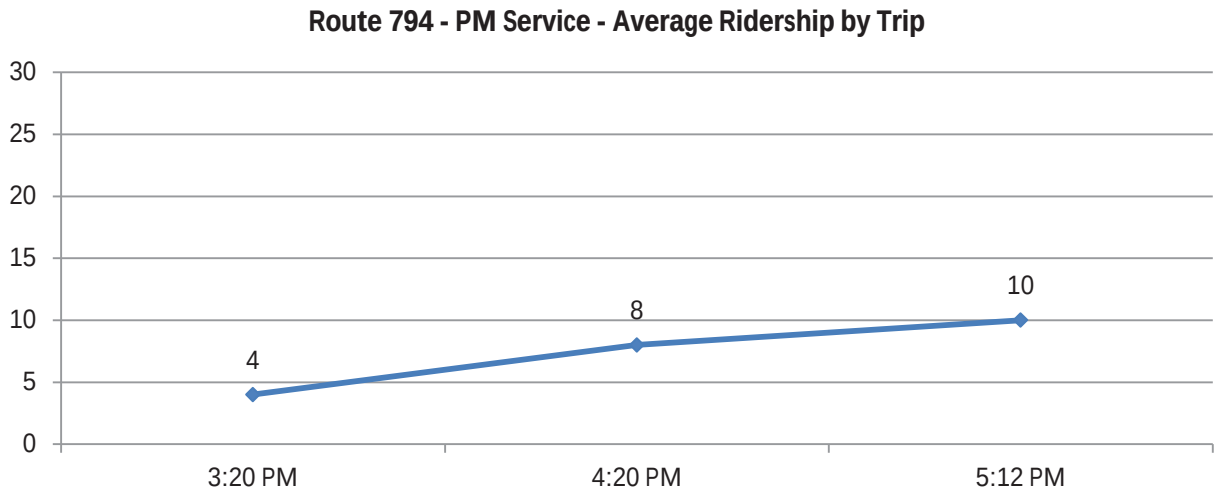
Route Performance

Average ridership by trip

The first trip of the morning (6:50 a.m.) sees the highest average ridership of the AM service (average of 17 riders per trip). The last trip of the afternoon (5:12 p.m.) sees the highest average ridership of the PM service (average of 10 riders per trip).

Exhibit 3.15.1 Route 794 Average Ridership by Trip

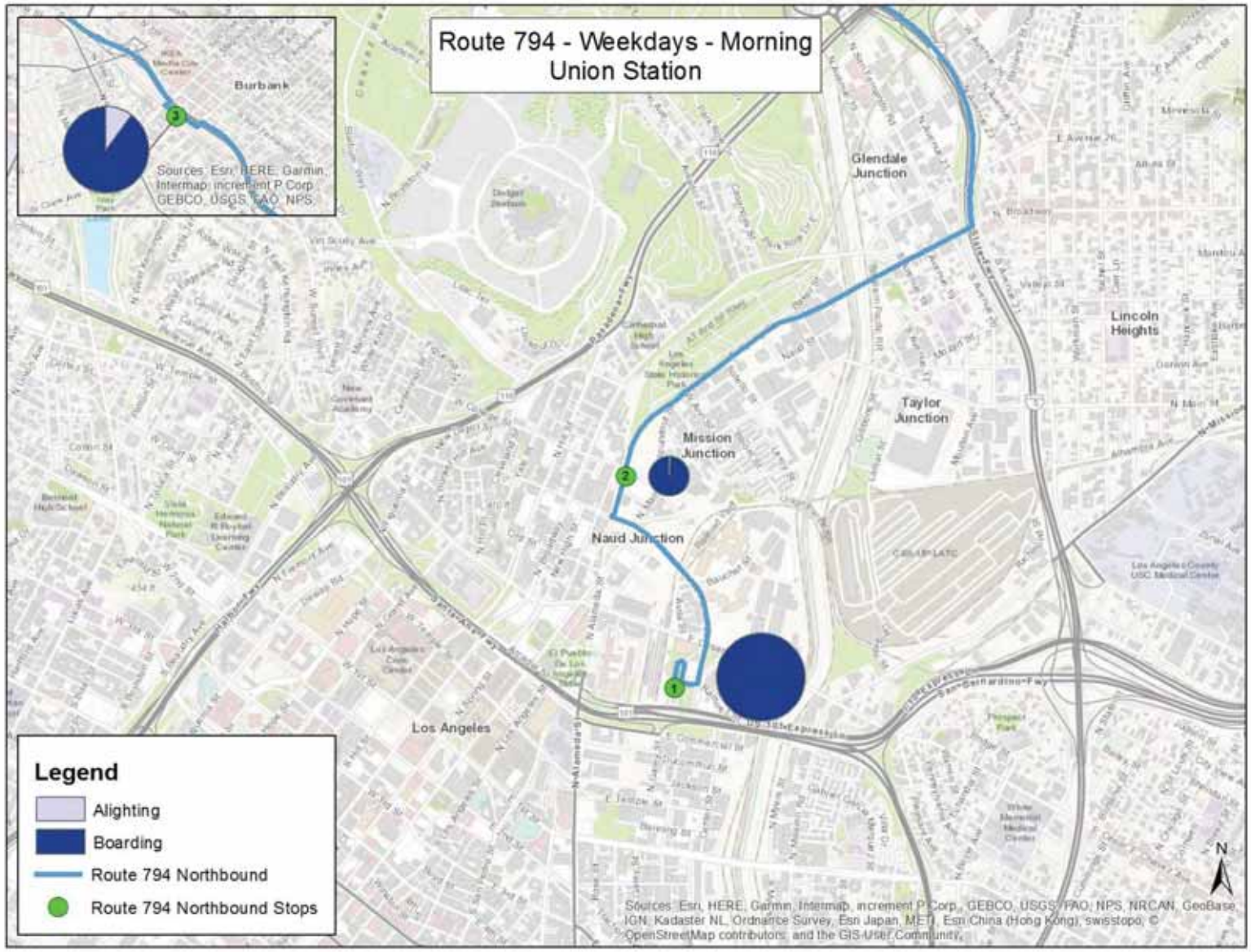




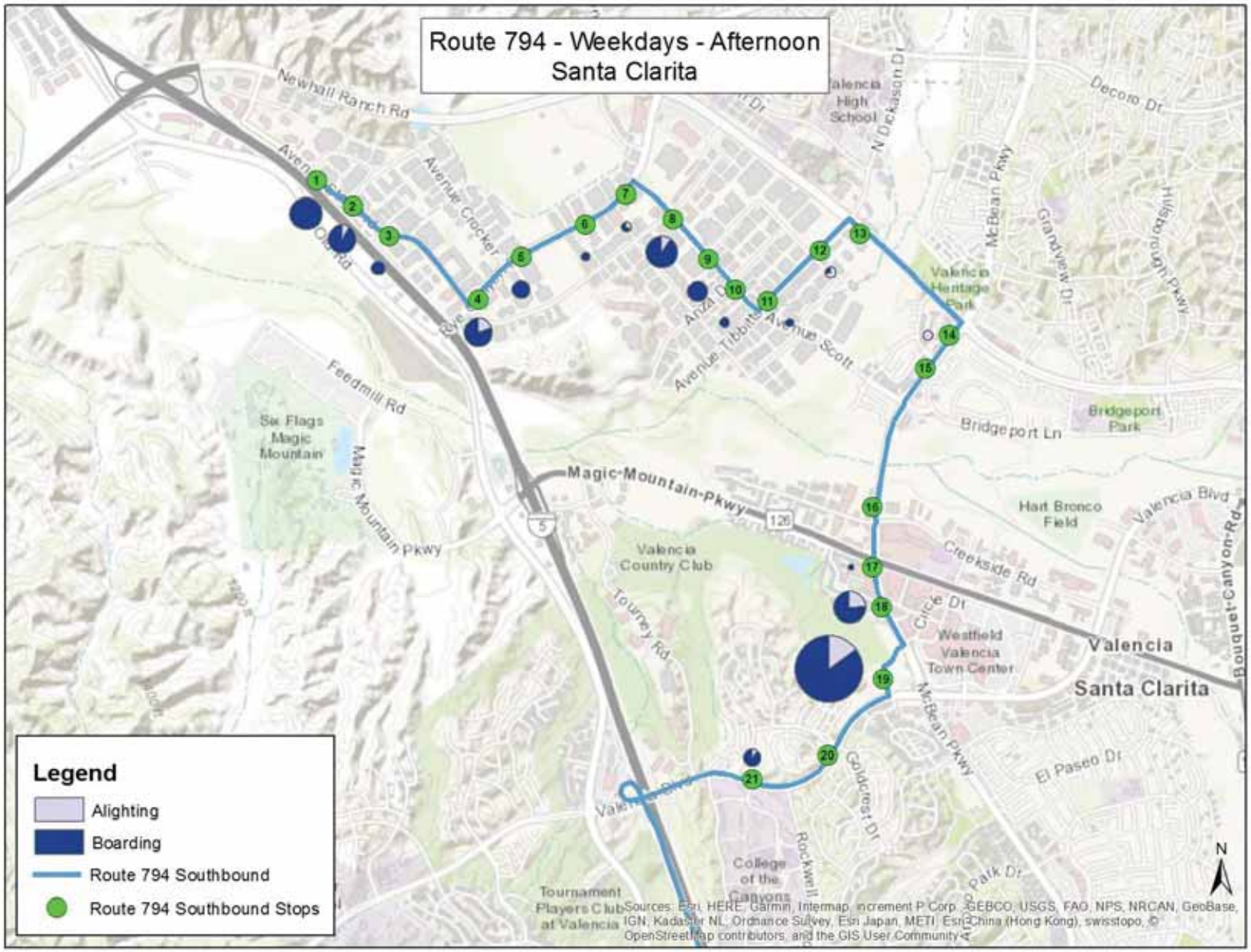
Average boarding and alighting by stop

Beginning on page 3, bubble maps indicate the relative level of activity at each Route 794 bus stop for both the AM and PM service. Not surprisingly, the McBean Regional Transit Center and Union Station have the highest level of activity in both the morning and afternoon.

Exhibit 3.15.2 Route 794 Boarding and Alighting Maps




Route 794 - Weekdays - Morning
Santa Clarita
Legend
Alighting
Boarding
Route 794 Northbound
Route 794 Northbound Stops
Newhall Ranch Rd
The Old Rd
Feedmill Rd
Six Flags Magic Mountain
Magic Mountain Pkwy
Magic-Mountain-Pkwy
Valencia Country Club
Tourney Rd
Valencia Blvd
Hart Bronco Field
Creekside Rd
Valencia Town Center
Valencia
Santa Clarita
Bouquet-Canyon-Rd
McBean Pkwy
El Paseo Dr
Goldcrest Dr
Park Dr
College of the Canyons
Tournament Players Club at Valencia
Valencia High School
Valencia Heritage Park
Bridgeport Ln
Bridgeport Park
Avenue Tibbitts
Avenue Scott
Decoro Dr
Grandview Dr
Hillsborough Pkwy
N Dickason Dr
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
N


Route 794 - Weekdays - Afternoon
Santa Clarita
Legend
Alighting
Boarding
Route 794 Southbound
Route 794 Southbound Stops
Newhall Ranch Rd
Avenue Crocker
Old Rd
Feedmill Rd
Six Flags Magic Mountain
Magic Mountain Pkwy
Magic-Mountain-Pkwy
Valencia Country Club
Tourney Rd
Avenue Tibbitts
Avenue Scott
Anza Dr
Valencia High School
N Dickason Dr
Decoro Dr
McBean Pkwy
Grandview Dr
Hillsborough Pkwy
Valencia Heritage Park
Bridgeport Ln
Bridgeport Park
Hart Bronco Field
Valencia Blvd
Creekside Rd
Circle Dr
Westfield Valencia Town Center
Valencia
Santa Clarita
Bouquet-Canyon-Rd
El Paseo Dr
Goldcrest Dr
Rockwell Dr
Park Dr
College of the Canyons
Tournament Players Club at Valencia
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

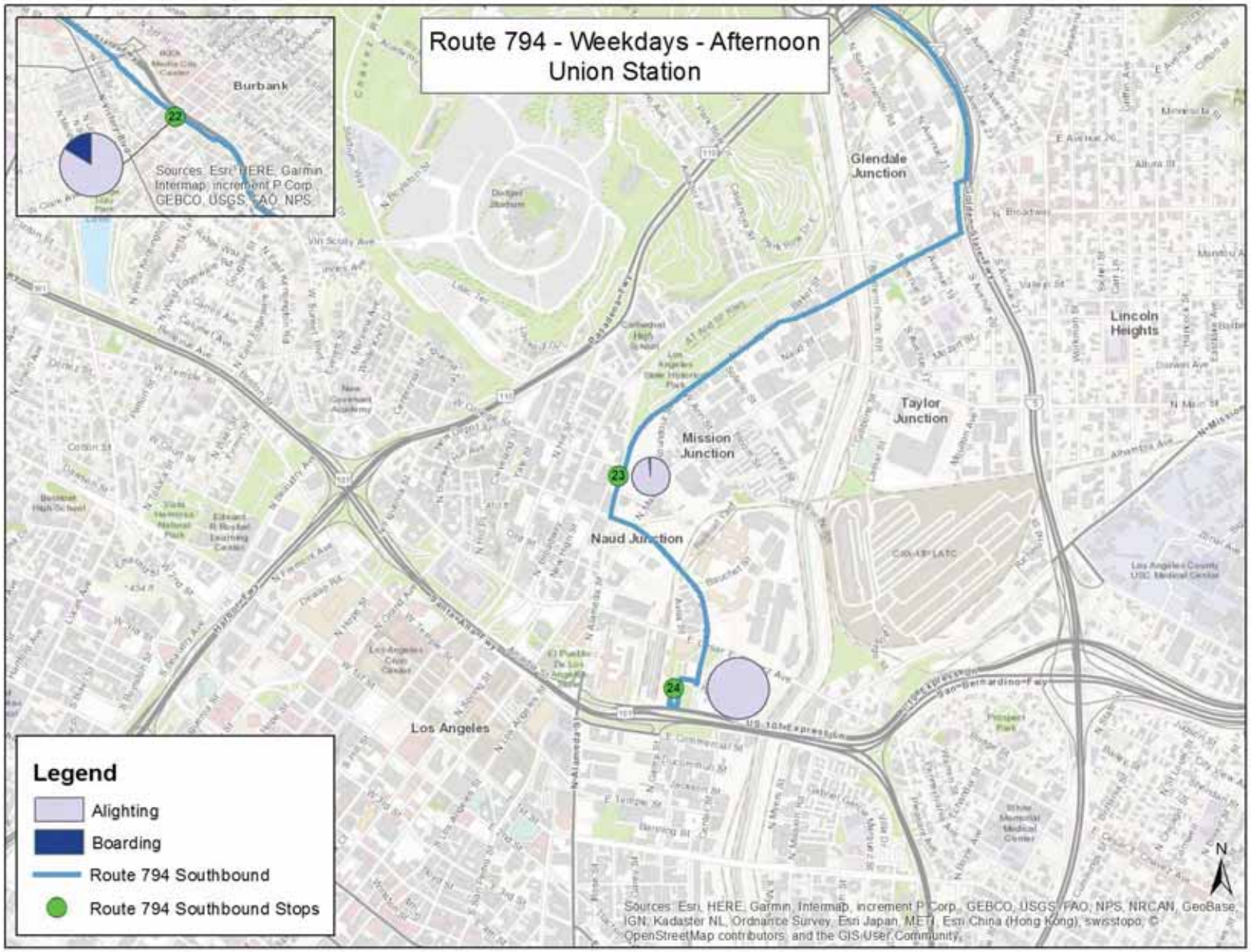

Route 794 - Weekdays - Afternoon
Union Station
Burbank
22
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS
Glendale Junction
Lincoln Heights
Taylor Junction
Mission Junction
23
Naud Junction
24
Los Angeles
Legend
Alighting
Boarding
Route 794 Southbound
Route 794 Southbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.15.3 Route 794 Stop Lists

Route 794 Inbound (Morning) Stop List	
Stop Number	Stop Name
1	Union Station (Gateway Plaza)
2	N Alameda St & W College St
3	N Front St & W Magnolia Blvd
4	Valencia Blvd & Rockwell Canyon Rd
5	Valencia Blvd & Goldcrest Dr
6	McBean Pky
7	McBean Pky & Town Center Dr
8	McBean Pky & Creekside Rd
9	McBean Pky & Bridgeport Ln
10	McBean Pky & Baywood Ln
11	Ave Tibbitts & N Dickason Dr
12	Ave Scott & Anza Dr
13	Ave Scott & Ave Kearny
14	Ave Scott & Ave Stanford
15	Rye Canyon Rd & Ave Scott
16	Rye Canyon Rd & Beale Ct
17	Rye Canyon Rd & Ave Crocker
18	Ave Stanford & Rye Canyon Rd
19	Ave Stanford & Rye Canyon Rd
20	Ave Stanford & Huntington Ln
21	Ave Stanford & Ave Hall
22	Ave Stanford & Technology Dr

Route 794 Outbound (Afternoon) Stop List	
Stop Number	Stop Name
1	Ave Stanford & Technology Dr
2	Ave Stanford & Ave Hall
3	Ave Stanford & Huntington Ln
4	Rye Canyon Rd & Ave Stanford
5	Rye Canyon Rd & Ave Crocker
6	Rye Canyon Rd & Beale Ct
7	Rye Canyon Rd & Ave Scott
8	Ave Scott & Ave Stanford
9	Ave Scott & Ave Kearny
10	Ave Scott & Anza Dr
11	Ave Tibbitts & Ave Scott
12	Ave Tibbitts & Ave Mentry
13	Newhall Ranch Rd & Ave Tibbitts
14	McBean Pky & Newhall Ranch Rd
15	McBean Pky & Baywood Ln
16	McBean Pky & Creekside Rd
17	McBean Pky & Magic Mountain Pky
18	McBean Pky & Town Center Dr
19	McBean MRTC Park & Ride
20	Valencia Blvd & Goldcrest Dr
21	Valencia Blvd
22	N Front St & W Magnolia Blvd
23	N Alameda St & W College St
24	Union Station (Gateway Plaza)

Average load factor by trip

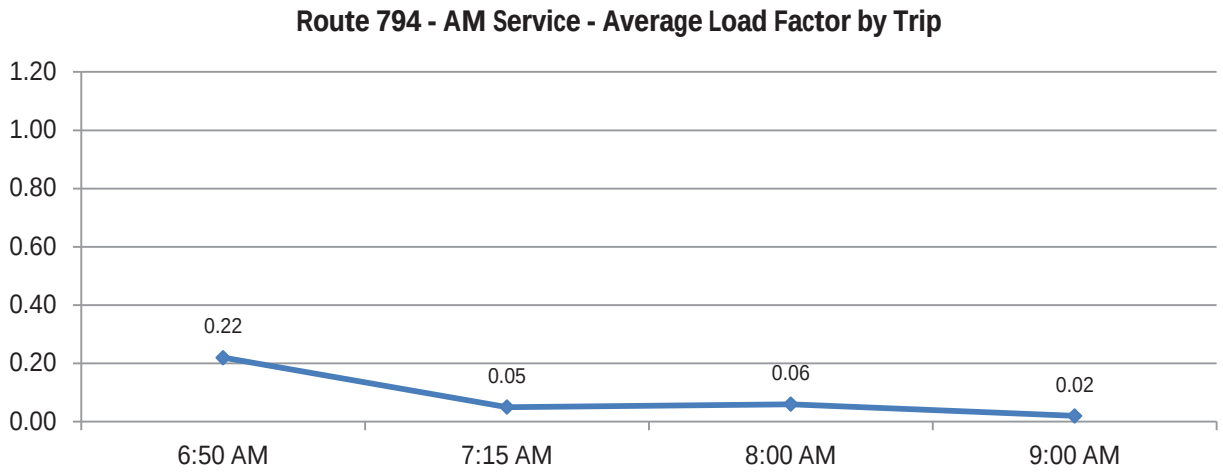
Both Am and PM trips on Route 794 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.22. Trips with the highest average peak loads for each direction are identified below.

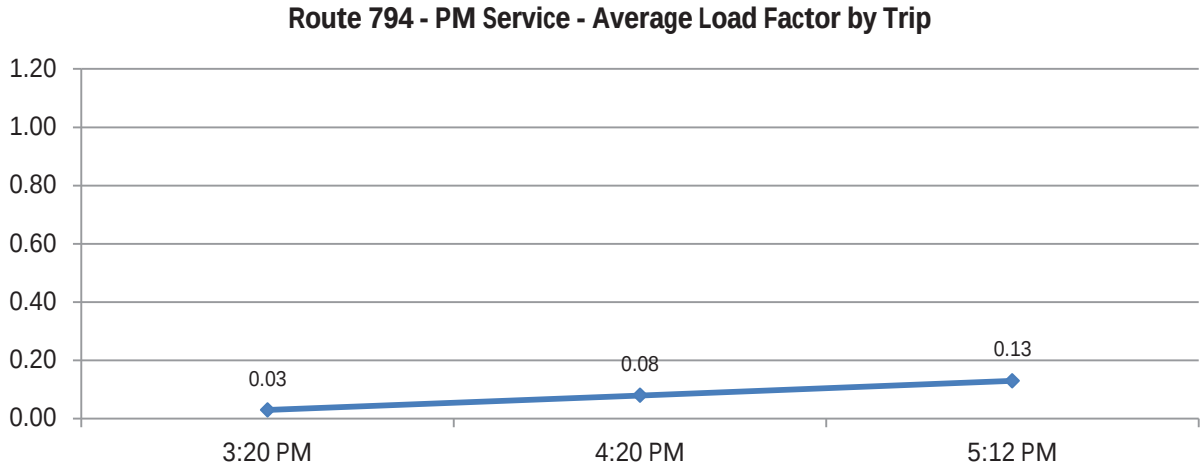
Exhibit 3.15.4 Route 794 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	AM Service	6:50 a.m.	0.22
Weekday	PM Service	5:12 p.m.	0.13

There were no individual trips which exhibited a load factor of at least 0.50.

Exhibit 3.15.5 Route 794 Average Load Factor by Trip





Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the destination portion of each commuter route (e.g., stops in Santa Clarita for a trip traveling from Downtown Los Angeles to Santa Clarita), trips were not counted as early if they arrived before the posted time. (Any early departures from the last stop would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 794's PM service experienced significantly higher schedule adherence (78.2 percent) than the AM service (42.3 percent). Late trips are the primary challenge for the AM service, while the PM service struggles with both late and early trips.

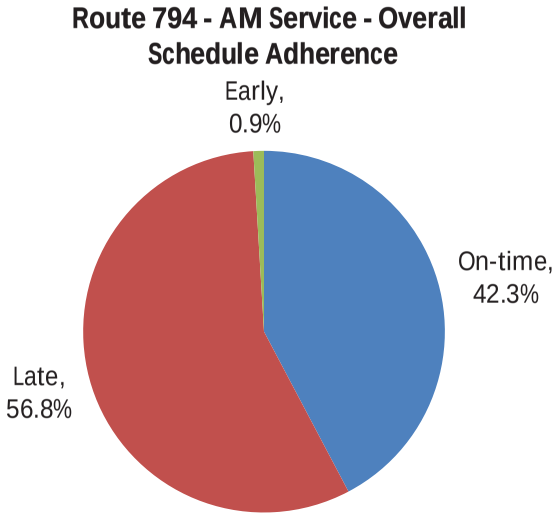
Schedule adherence by time-point

In the AM service, schedule adherence starts high at Union Station (96.3 percent) and gradually erodes as the trip progresses. Upon reaching the Burbank Metrolink Station, on-time performance has dropped to 77.5 percent. The first Santa Clarita stop (Valencia Blvd/Rockwell Canyon Rd) has schedule adherence of just 51 percent, and it drops to just 3.4 percent at Avenue Stanford/Rye Canyon Rd. Traffic congestion on the highways as well as on local surface streets is the most likely cause of the chronically late running.

In the PM service, the first time-point (Avenue Stanford/Technology Drive) sees a significant number of early trips (35.7 percent). Early trips are noted at all Santa Clarita stops except the MRTC. Stops at the Burbank Metrolink Station and Union Station suffer from late trips likely caused by traffic congestion. Union Station has the lowest on-time performance of the PM service (53.8 percent).

All of the early departures at Avenue Stanford/Technology Drive and Avenue Stanford/Rye Canyon Rd took place during the 3:20 p.m. and 4:20 p.m. trips. The 5:12 p.m. trip did not experience any hot running. In several cases, the bus left as many as five or six minutes ahead of the posted schedule. Given these trips typically have lower ridership, it may be a case of the driver not expecting anyone to board at those stops, or only expecting regular riders, and departing if no one is waiting or if regular riders have already boarded.

Exhibit 3.15.6 Route 794 Overall Schedule Adherence



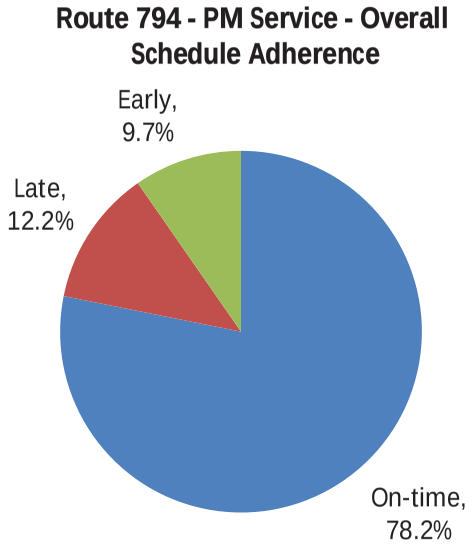
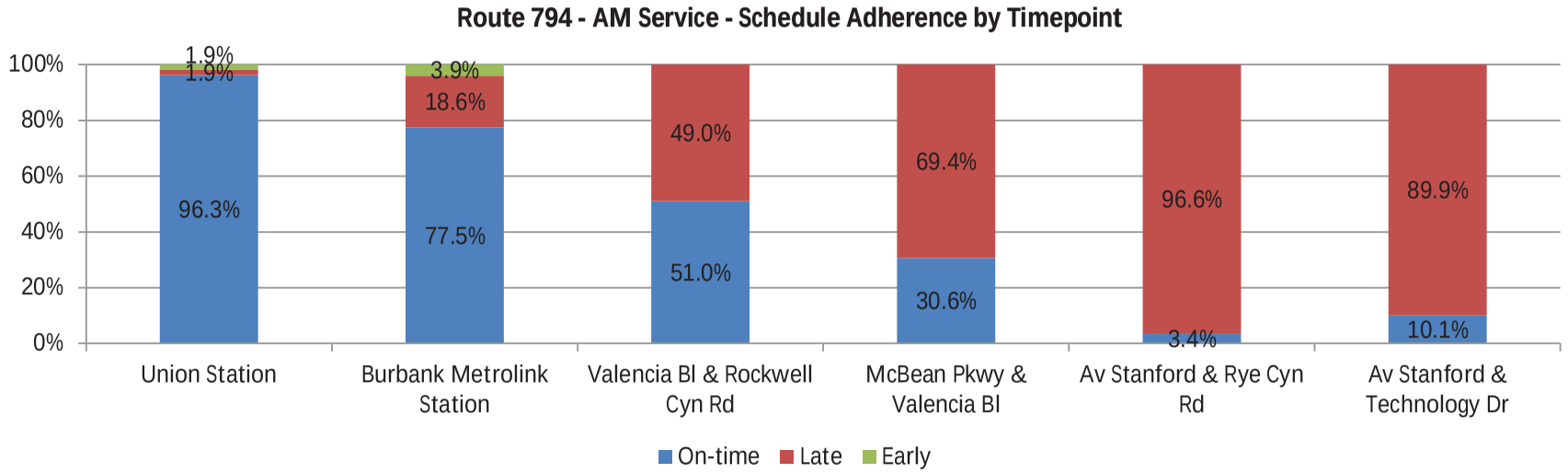
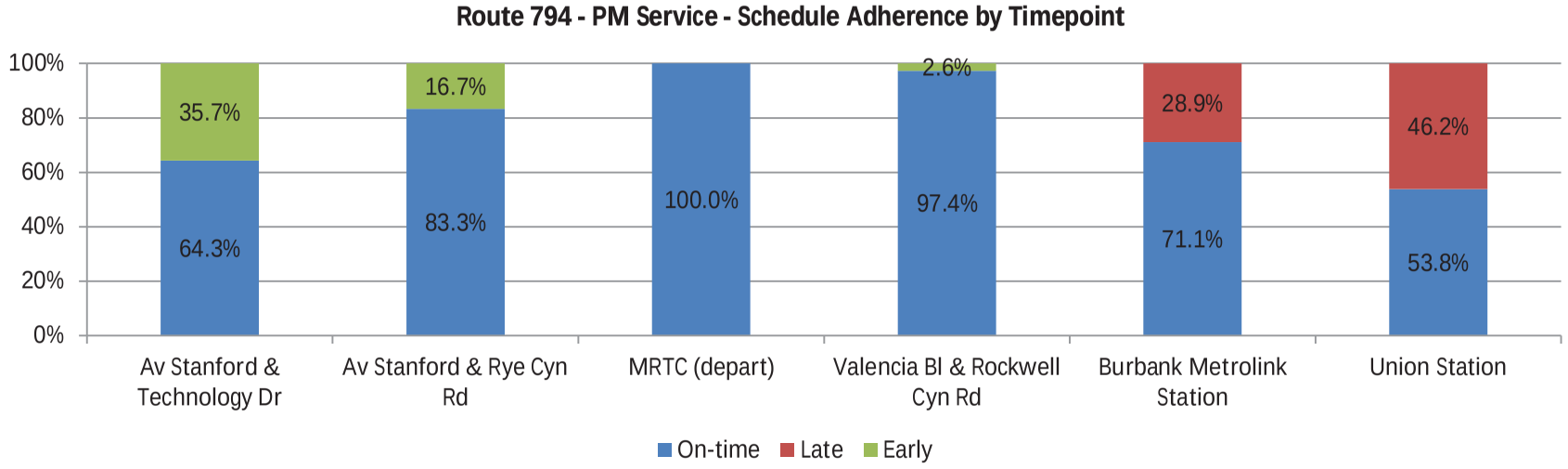


Exhibit 3.15.7 Route 794 Schedule Adherence by Time-point





Route Performance

Overall ridership

Exhibit 3.15.8 Route 794 Overall Ridership

	Weekday	Saturday	Sunday	Overall	Ranking
Route 757	23,173	2,069	1,591	27,575	1
Route 791	1,934	N/A	N/A	1,989	6
Route 792	1,456	N/A	N/A	1,477	7
Route 794	2,369	N/A	N/A	2,402	5
Route 796	6,335	N/A	N/A	6,415	4
Route 797	16,644	N/A	N/A	16,802	3
Route 799	19,956	N/A	N/A	20,122	2

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.15.9 Route 794 Overall Schedule Adherence

	Weekday	Weekend	Overall	Ranking
Route 757	65.5%	N//A	65.5%	4
Route 791	58.1%	N/A	58.1%	6
Route 792	63.3%	N/A	63.3%	5
Route 794	53.4%	N/A	53.4%	7
Route 796	67.1%	N/A	67.1%	3
Route 797	79.1%	N/A	79.1%	2
Route 799	79.3%	N/A	79.3%	1

Route 796 Profile and Performance Analysis

Route Description

Route 796 is an express route connecting Santa Clarita and Warner Center. Like all express routes except Route 757, Route 796 is part of a paired route: Route 796 serves the peak direction of travel (southbound in the morning and northbound in the afternoon), while Route 791 serves reverse commute trips. The peak direction route always has much higher ridership and productivity, but the reverse commute route accommodates passengers working in Santa Clarita (or working a non-traditional shift in Warner Center) while minimizing deadhead travel.

Route 796 is the peak-direction route, running south from Santa Clarita to Warner Center in the morning and north from Warner Center to Santa Clarita in the afternoon. Primary streets of operation include Soledad Canyon Road, Valencia Boulevard, McBean Parkway, Orchard Village Road, Lyons Avenue, Newhall Avenue, State Route 14, Interstate 5, Interstate 405, State Route 118, Burbank Boulevard, Desoto Avenue, Canoga Avenue, and Victory Boulevard. The route operates during peak periods on weekdays only.

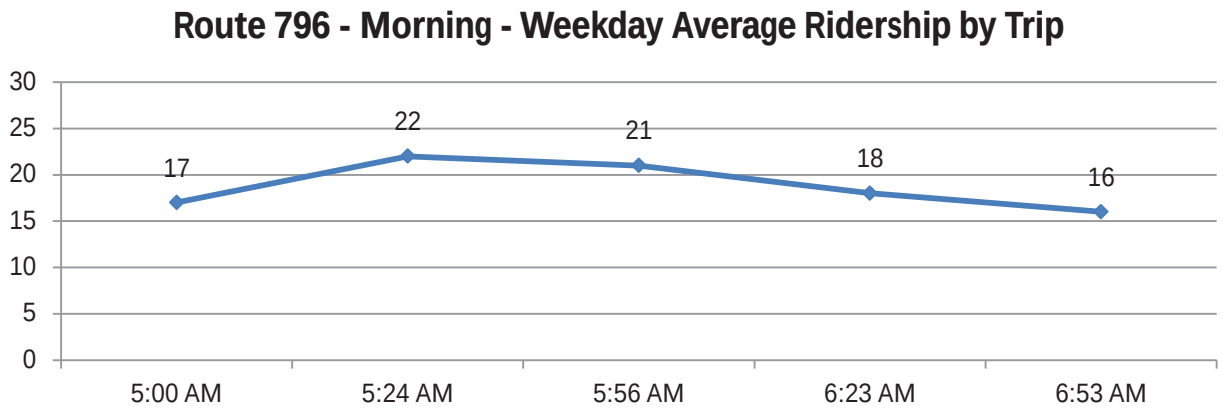
AM service travels from Santa Clarita to Warner Center. PM service is defined as that originating in Warner Center and traveling to Santa Clarita. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

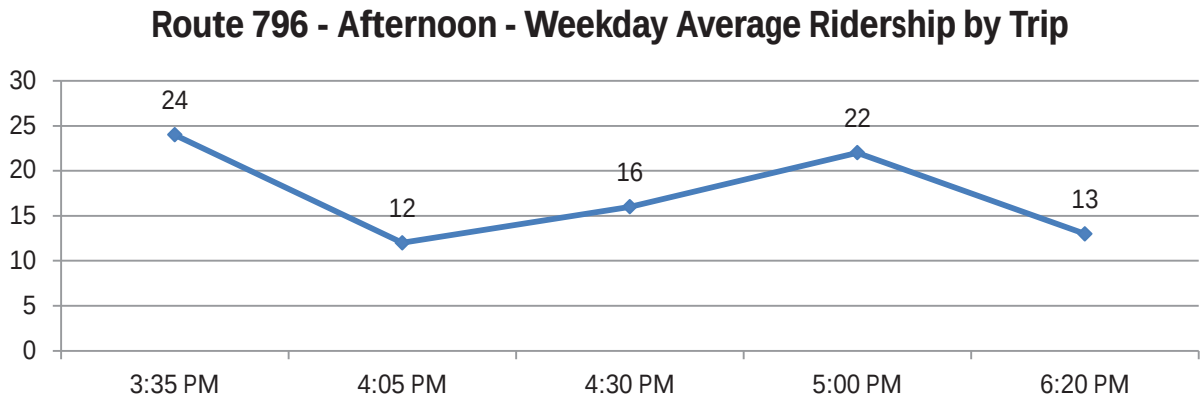
Route Performance

Average ridership by trip

In the AM service, trips at 5:24 a.m. and 5:56 a.m. see the highest average number of riders per trip (22 and 21, respectively). In the PM service, ridership peaks at 3:35 p.m. with an average of 24 riders per trip, then again at 5:00 p.m. with an average of 22 riders per trip.

Exhibit 3.16.1 Route 796 Average Ridership by Trip

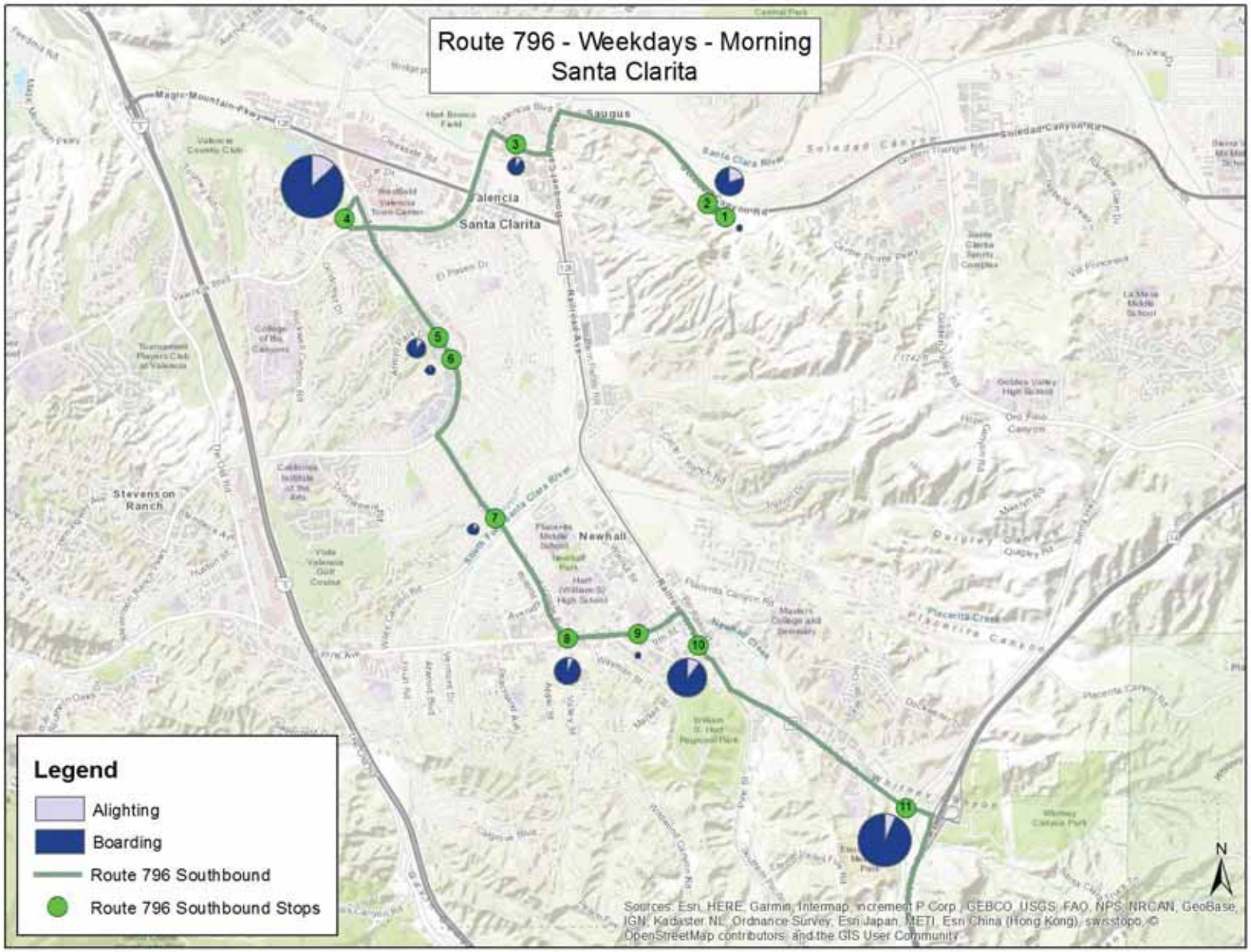


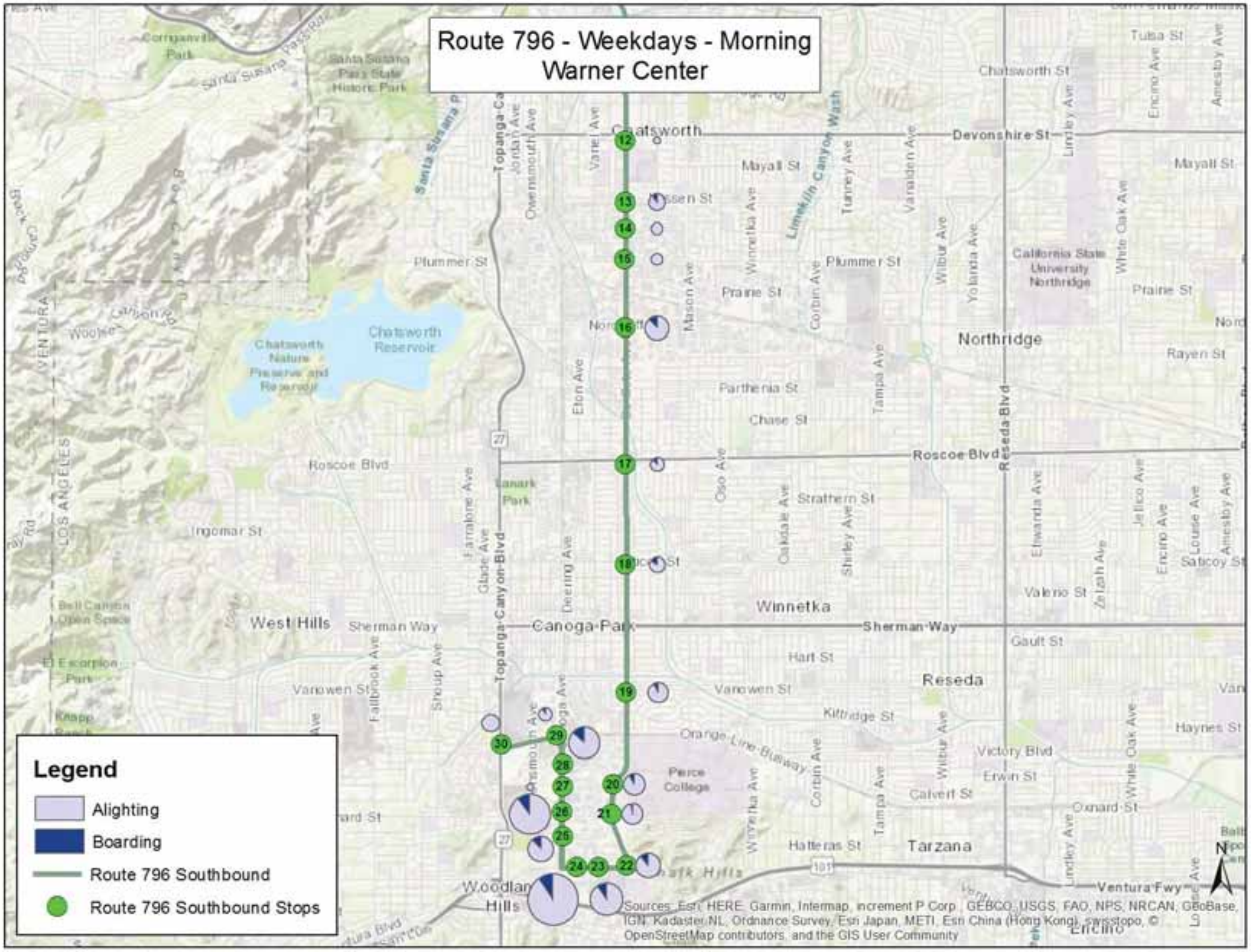


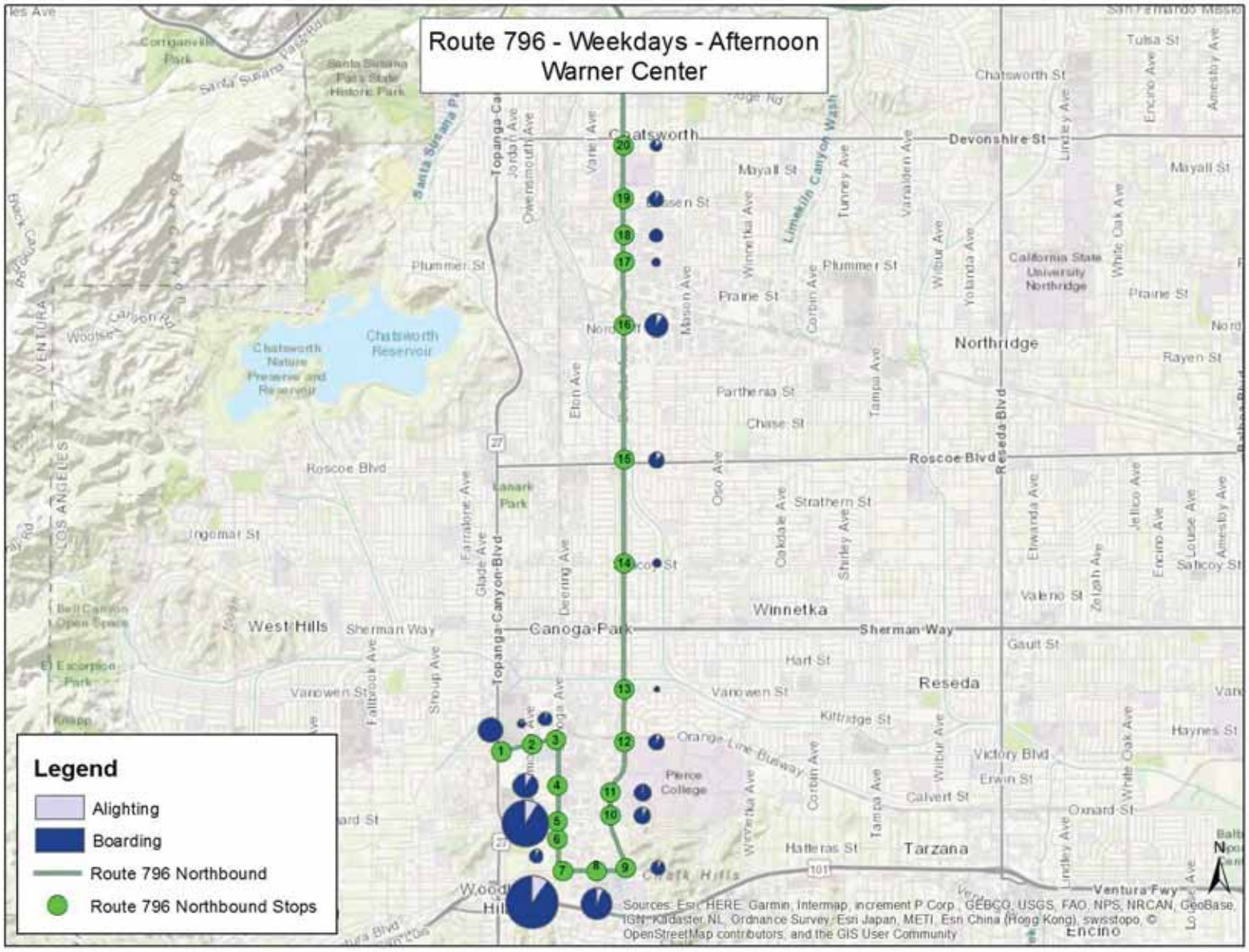
Average boarding and alighting by stop

Beginning on page 3, bubble maps indicate the relative level of activity at each Route 796 bus stop. In the AM service, the MRTC and Newhall Ave/Sierra Highway are the two stops in the Santa Clarita portion of the route with the greatest activity. In the Warner Center portion of the route, stops at Burbank Blvd and Canoga Ave/Oxnard St have the greatest activity. In the PM service, stops at Canoga Ave/Oxnard St and Burbank Blvd/Canoga Ave have the greatest activity in the Warner Center portion of the route, while stops at Newhall Ave/Sierra Highway and Valencia Blvd/Citrus Dr have the greatest activity in the Santa Clarita portion.

Exhibit 3.16.2 Route 796 Boarding and Alighting Maps




Route 796 - Weekdays - Morning
Warner Center
Legend
Alighting
Boarding
Route 796 Southbound
Route 796 Southbound Stops
Chatsworth
Northridge
Winnetka
Canoga Park
West Hills
Reseda
Tarzana
Woodland Hills
Chatsworth Reservoir
Devonshire St
Roscoe Blvd
Sherman Way
Reseda Blvd
Topanga Canyon Blvd
Ventura Fwy
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 796 - Weekdays - Afternoon
Warner Center
Legend
Alighting
Boarding
Route 796 Northbound
Route 796 Northbound Stops
Chatsworth
Devonshire St
Northridge
Roscoe Blvd
Winnetka
Ganoga Park
Sherman Way
West Hills
Reseda
Tarzana
Encino
Ventura Fwy
Topanga Canyon Blvd
Orange Line Busway
Chatsworth Reservoir
Pierce College
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

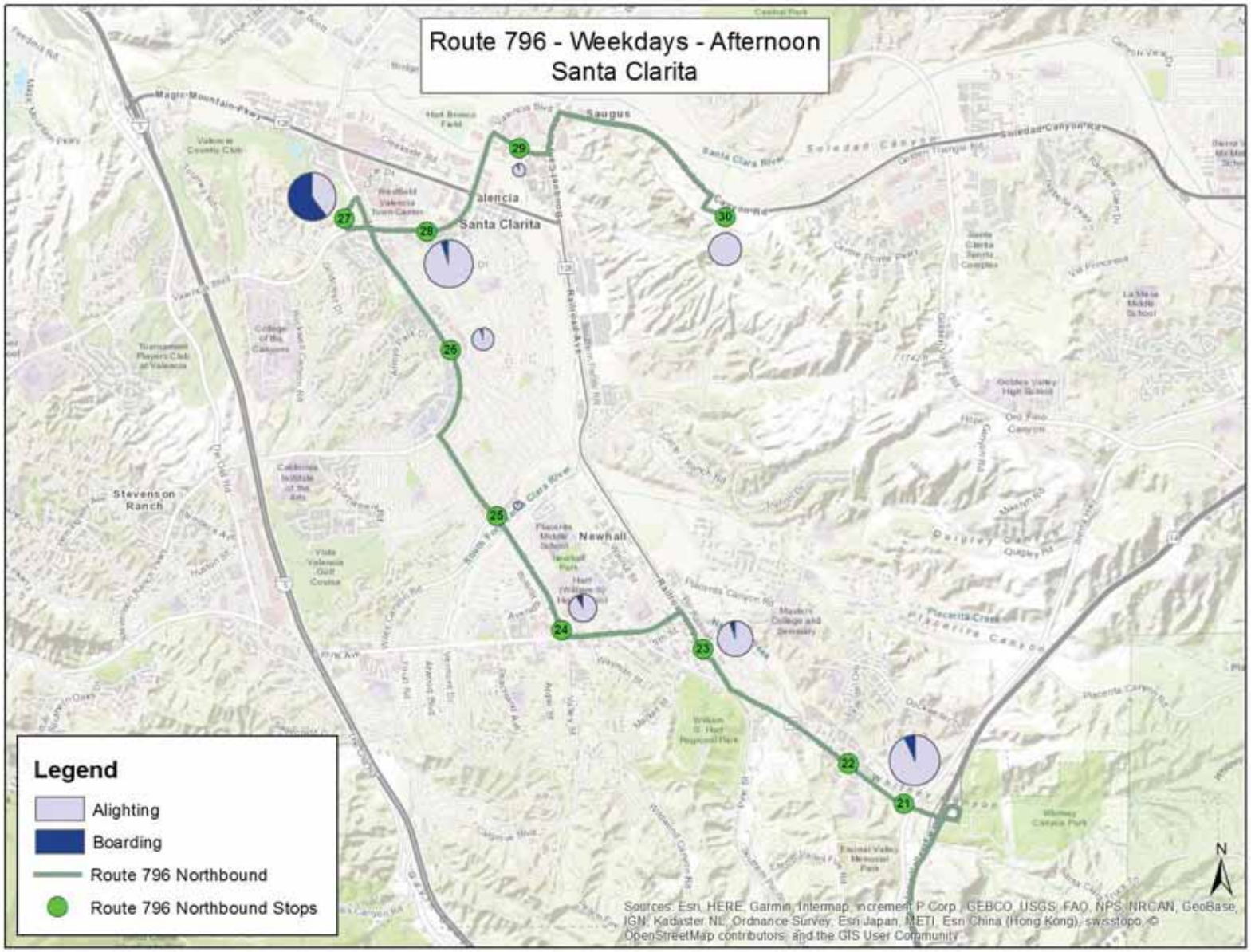

Route 796 - Weekdays - Afternoon
Santa Clarita
Legend
Alighting
Boarding
Route 796 Northbound
Route 796 Northbound Stops
Valencia
Santa Clarita
Saugus
Newhall
Stevenson Ranch
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.16.3 Route 796 Stop Lists

Route 796 Inbound (Morning) Stop List		Route 796 Outbound (Afternoon) Stop List	
Stop Number	Stop Name	Stop Number	Stop Name
1	Commuter Wy & Soledad Canyon Rd	1	Victory Blvd & Topanga Canyon Blvd
2	Commuter Wy & Soledad Canyon Rd	2	Victory Blvd & Owensmouth Ave
3	Cinema Dr & Academy Pl	3	Victory Blvd & Conoga Ave
4	McBean MRTC Park & Ride	4	Canoga Ave & Erwin St
5	McBean Pky & Arroyo Prk Dr	5	Canoga Ave & Oxnard St
6	McBean Pky & Arroyo Prk Dr	6	Canoga Ave & Califa St
7	Orchard Village Rd & Wiley Canyon Rd	7	Burbank Blvd & Canoga Ave
8	Lyons Ave & Valley St	8	Burbank Blvd & Warner Center Ln
9	Lyons Ave & Newhall Ave	9	De Soto Ave & Burbank Blvd
10	Railroad Ave & Market St	10	De Soto Ave & Oxnard St
11	Newhall Ave & Sierra Hwy	11	De Soto Ave & Erwin St
12	De Soto Ave & Devonshire St	12	De Soto Ave & Victory Blvd
13	De Soto Ave & Lassen St	13	De Soto Ave & Vanowen St
14	De Soto Ave & Superior St	14	De Soto Ave & Saticoy St
15	De Soto Ave & Plummer St	15	De Soto Ave & Roscoe Blvd
16	De Soto Ave & Nordhoff St	16	De Soto Ave & Nordhoff St
17	De Soto Ave & Roscoe Blvd	17	De Soto Ave & Plummer St
18	De Soto Ave & Saticoy St	18	De Soto Ave & Superior St
19	De Soto Ave & Vanowen St	19	De Soto Ave & Lassen St
20	De Soto Ave & Erwin St	20	De Soto Ave & Devonshire St
21	De Soto Ave & Oxnard St	21	Newhall Ave & Sierra Hwy
22	De Soto Ave & Burbank Blvd	22	Newhall Ave & Judah Ln
23	Burbank Blvd & Warner Center Ln	23	Railroad Ave & Market St
24	Burbank Blvd	24	Orchard Village Rd & Lyons Ave
25	Canoga Ave & Califa St	25	Orchard Village Rd & Wiley Canyon Rd
26	Canoga Ave & Oxnard St	26	McBean Pky & Arroyo Prk Dr
27	Canoga Ave & Erwin St	27	McBean MRTC Park & Ride
28	Canoga Ave & Trillium Drwy	28	Valencia Blvd & Citrus Dr
29	Victory Blvd & Conoga Ave	29	Cinema Dr & Academy Pl
30	Topanga Canyon Blvd & Victory Blvd	30	Commuter Wy & Soledad Canyon Rd

Average load factor by trip

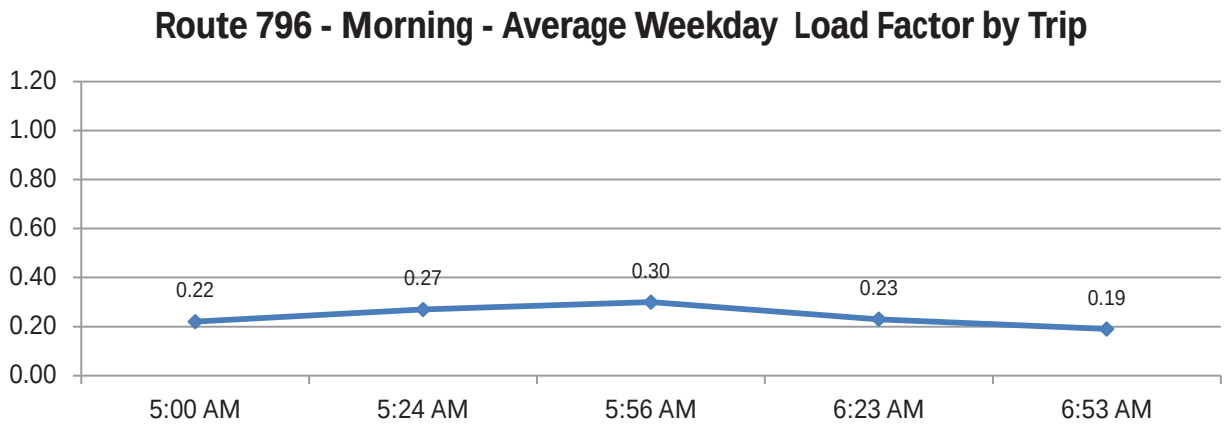
Both inbound and outbound trips on Route 796 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.30. Trips with the highest average peak loads for each direction are identified below.

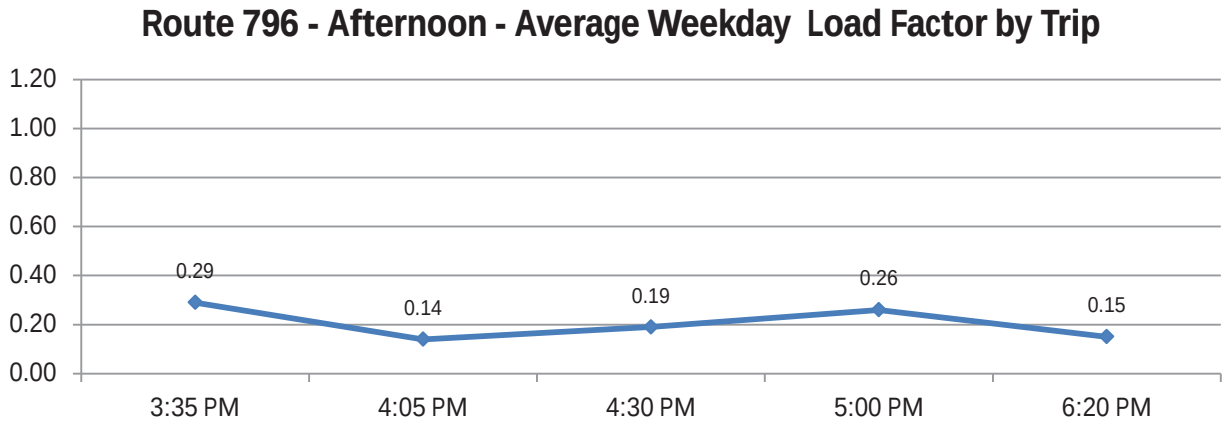
Exhibit 3.16.4 Route 796 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	AM Service	5:56 a.m.	0.30
Weekday	PM Service	3:35 p.m.	0.29

There were no trips which exhibited a load factor of at least 0.50.

Exhibit 3.16.5 Route 796 Average Load Factor by Trip





Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the destination portion of each commuter route (e.g., stops in Santa Clarita for a trip traveling from Warner Center to Santa Clarita), trips were not counted as early if they arrived before the posted time. (Any early departures from the last stop would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

AM service on Route 796 exhibits a significantly higher schedule adherence (77.5 percent) that the PM service (53.4 percent).

Schedule adherence by time-point

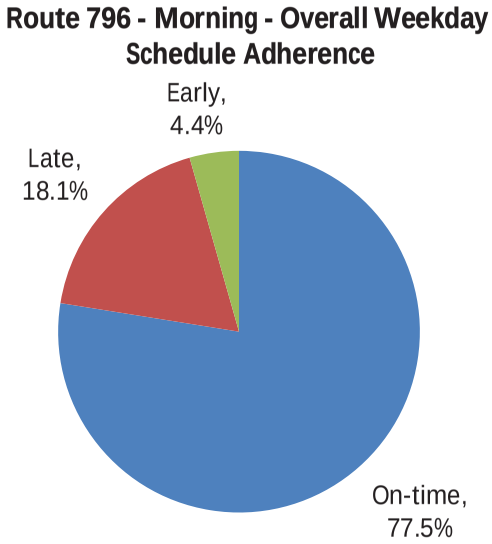
Santa Clarita Metrolink Station has the lowest schedule adherence of any time-point on the AM service (43.7 percent), due largely to early departures. Given the AM trips are scheduled to depart within a few minutes of a Metrolink train arrival, it is possible drivers are leaving once the train has arrived and any arriving passengers have boarded, without waiting until the published departure time. For example, for the 6:23 a.m. trip (Metrolink arrival at 6:21 a.m.), 25 out of 27 observed trips departed the time-point early. It is unclear as to whether this occurs in an effort to stay on time elsewhere in the route or if drivers simply do not dwell at the station long enough.

The MRTC has the highest on-time performance in the AM service (95.6 percent), followed by Newhall Ave/Sierra Highway. Schedule adherence drops significantly between DeSoto Ave/Nordhoff St and DeSoto Ave/Erwin St and remains around 65 percent throughout the rest of the route.

Similar to the AM service, the PM service experiences the most early departures at its second stop, Victory Blvd/Canoga Ave (23 percent early; 76 percent on-time). This may also reflect the regular nature of commuter bus riders, and drivers may depart once all of the regular riders are on board. The trip with the biggest issue with "hot-running" is the 4:30 p.m. trip, where 15 of the 24 observed trips departed the time-point early. (It is interesting to note that none of those trips departed Topanga Canyon Blvd/Victory Blvd early.)

The greatest schedule adherence in the PM service is at Topanga Canyon Blvd/Victory Blvd (89.9 percent). On-time performance erodes throughout the trip, dropping to zero at the MRTC (though it should be noted that data for the MRTC was only available for two trips). However, arrivals at Cinema Dr/Academy Pl and the Santa Clarita Metrolink Station were also low (13.6 percent and 12.8 percent, respectively).

Exhibit 3.16.6 Route 796 Overall Schedule Adherence



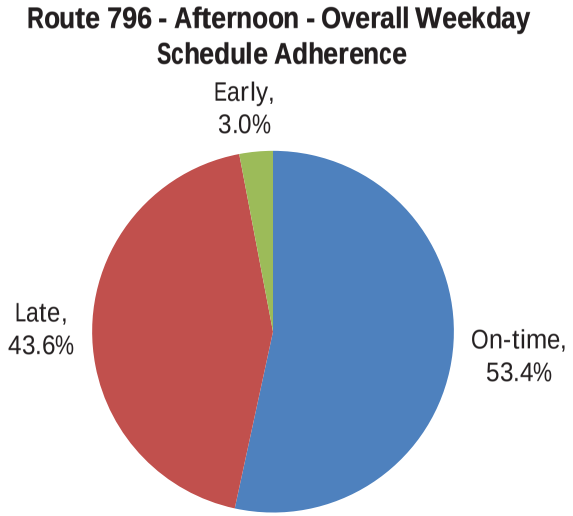
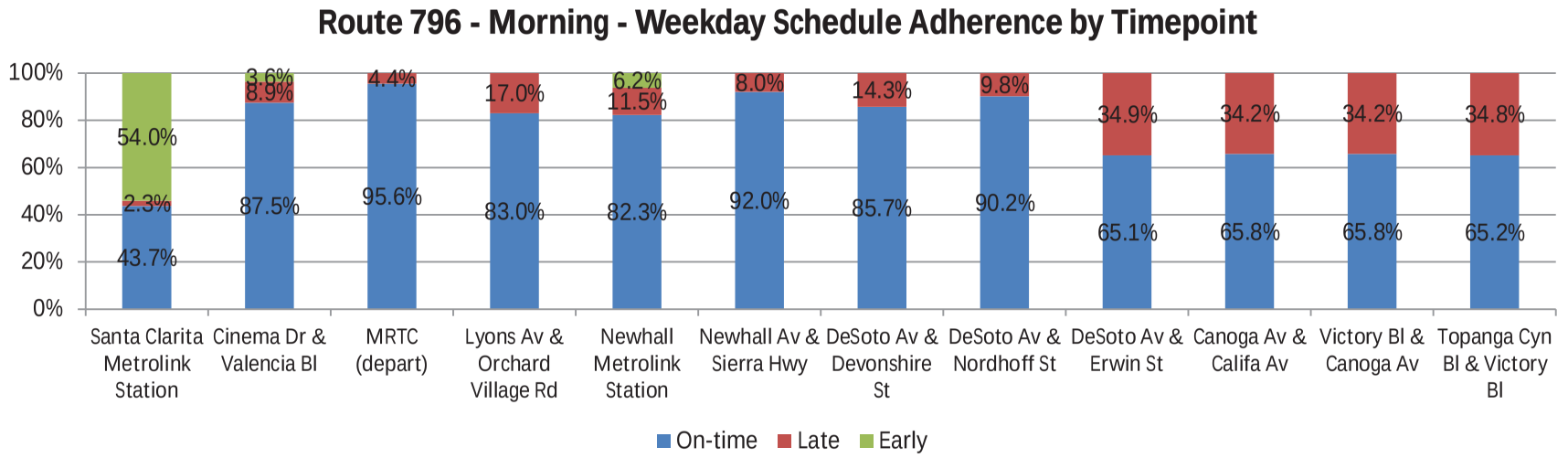
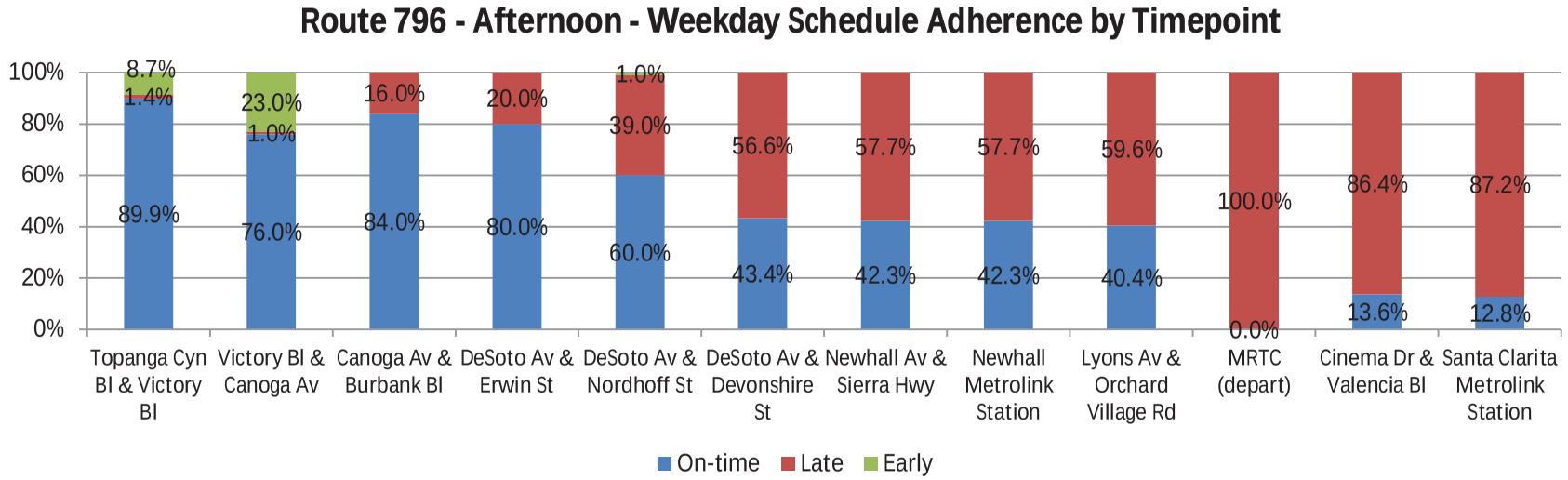


Exhibit 3.16.7 Route 796 Schedule Adherence by Time-point





Route Performance

Overall ridership

Exhibit 3.16.8 Route 796 Overall Ridership

	Weekday	Saturday	Sunday	Overall	Ranking
Route 757	23,173	2,069	1,591	27,575	1
Route 791	1,934	N/A	N/A	1,989	6
Route 792	1,456	N/A	N/A	1,477	7
Route 794	2,369	N/A	N/A	2,402	5
Route 796	6,335	N/A	N/A	6,415	4
Route 797	16,644	N/A	N/A	16,802	3
Route 799	19,956	N/A	N/A	20,122	2

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.16.9 Route 796 Overall Schedule Adherence

	Weekday	Weekend	Overall	Ranking
Route 757	65.5%	N/A	65.5%	4
Route 791	58.1%	N/A	58.1%	6
Route 792	63.3%	N/A	63.3%	5
Route 794	53.4%	N/A	53.4%	7
Route 796	67.1%	N/A	67.1%	3
Route 797	79.1%	N/A	79.1%	2
Route 799	79.3%	N/A	79.3%	1

Route 797 Profile and Performance Analysis

Route Description

Route 797 is an express route connecting Santa Clarita with Century City, UCLA, and Westwood. Like all express routes (except Route 757), Route 797 is part of a paired route: Route 797 serves the peak direction of travel (southbound in the morning and northbound in the afternoon), while Route 792 serves reverse commute trips. The peak direction route always has much higher ridership and productivity, but the reverse commute route accommodates passengers working in Santa Clarita (or working a non-traditional shift at the other end of the routes) while minimizing deadhead travel.

Primary streets of operation include Soledad Canyon Road, Valencia Boulevard, McBean Parkway, Orchard Village Road, Lyons Ave, Newhall Avenue, State Route 14, Interstate 5, Interstate 405, Montana Avenue, Gayley Avenue, Westwood Boulevard, Wilshire Boulevard, Beverly Glen Boulevard, Santa Monica Boulevard, Century Park West, Century Park East, and West Olympic Boulevard. The route operates during peak periods on weekdays only, although the last northbound 797 trip in the afternoon falls in the Late PM period (7:45 p.m.).

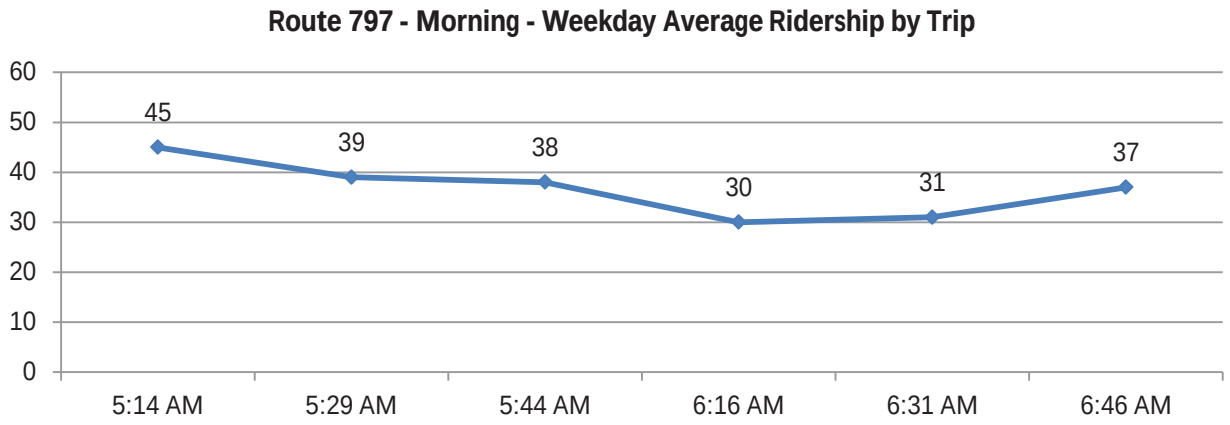
AM service is defined as that originating in Santa Clarita and traveling to Century City. PM service travels from Century City to Santa Clarita. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

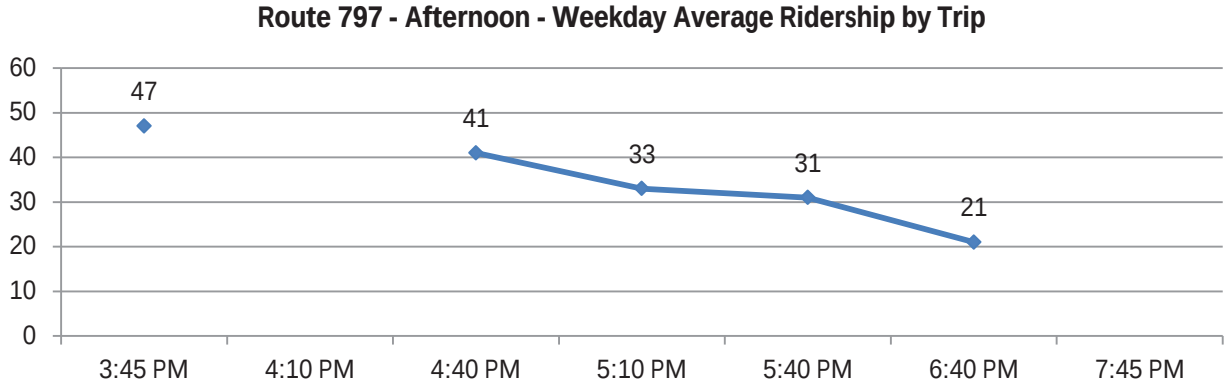
Route Performance

Average ridership by trip

Route 797 AM service peaks on the first trip of the day, with an average of 45 riders per trip on the 5:14 a.m. trip. Ridership generally declines on subsequent trips, with a slight upswing at the end of the AM service period. However, no trip drops below an average of 30 riders per trip. For the PM service, ridership also peaks during the first trip of the afternoon, with an average of 47 riders per trip on the 3:45 p.m. trip. Ridership declines through the end of the service day. No data was available for two of the PM service trips.

Exhibit 3.17.1 Route 797 Ridership by Trip



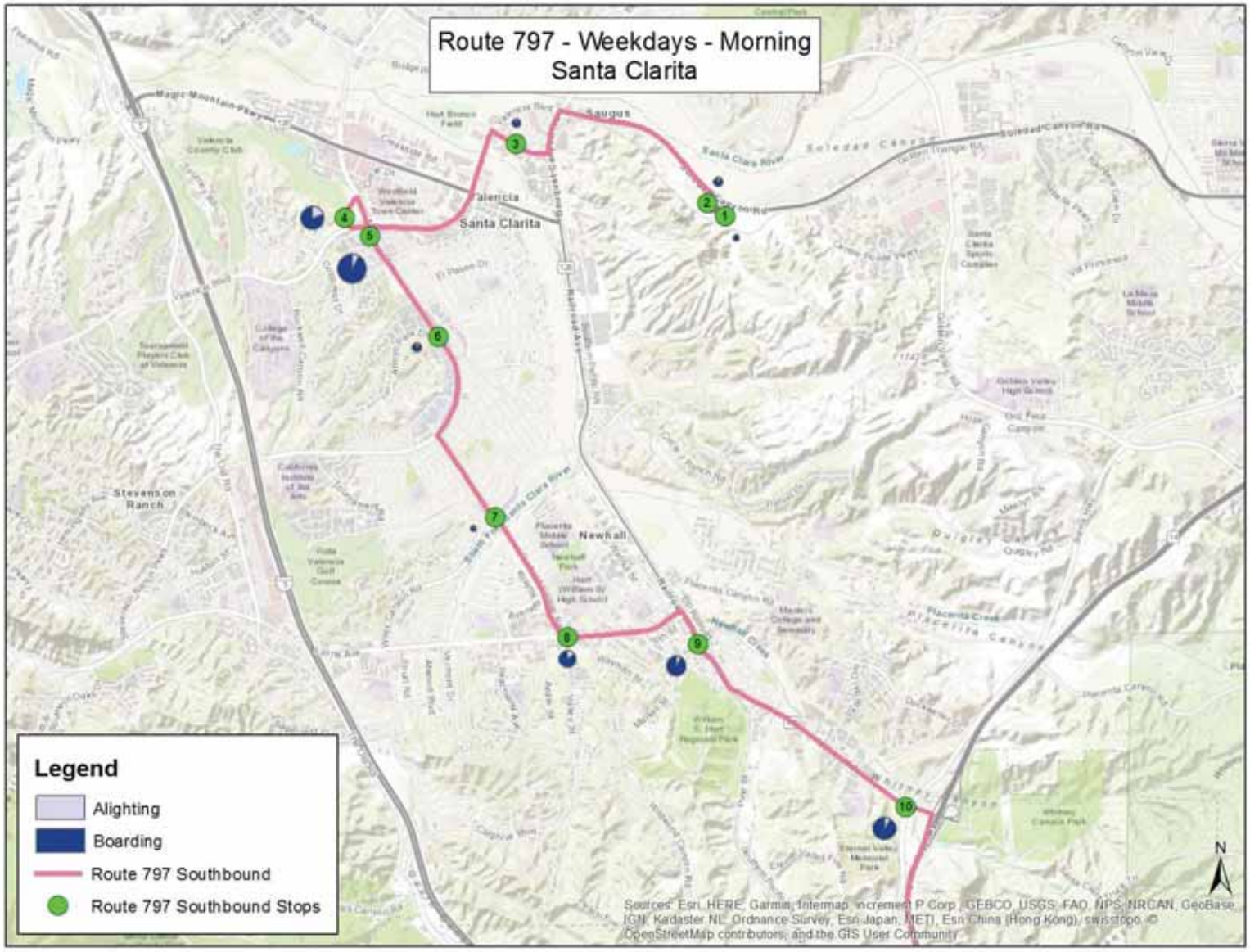


Average boarding and alighting by stop

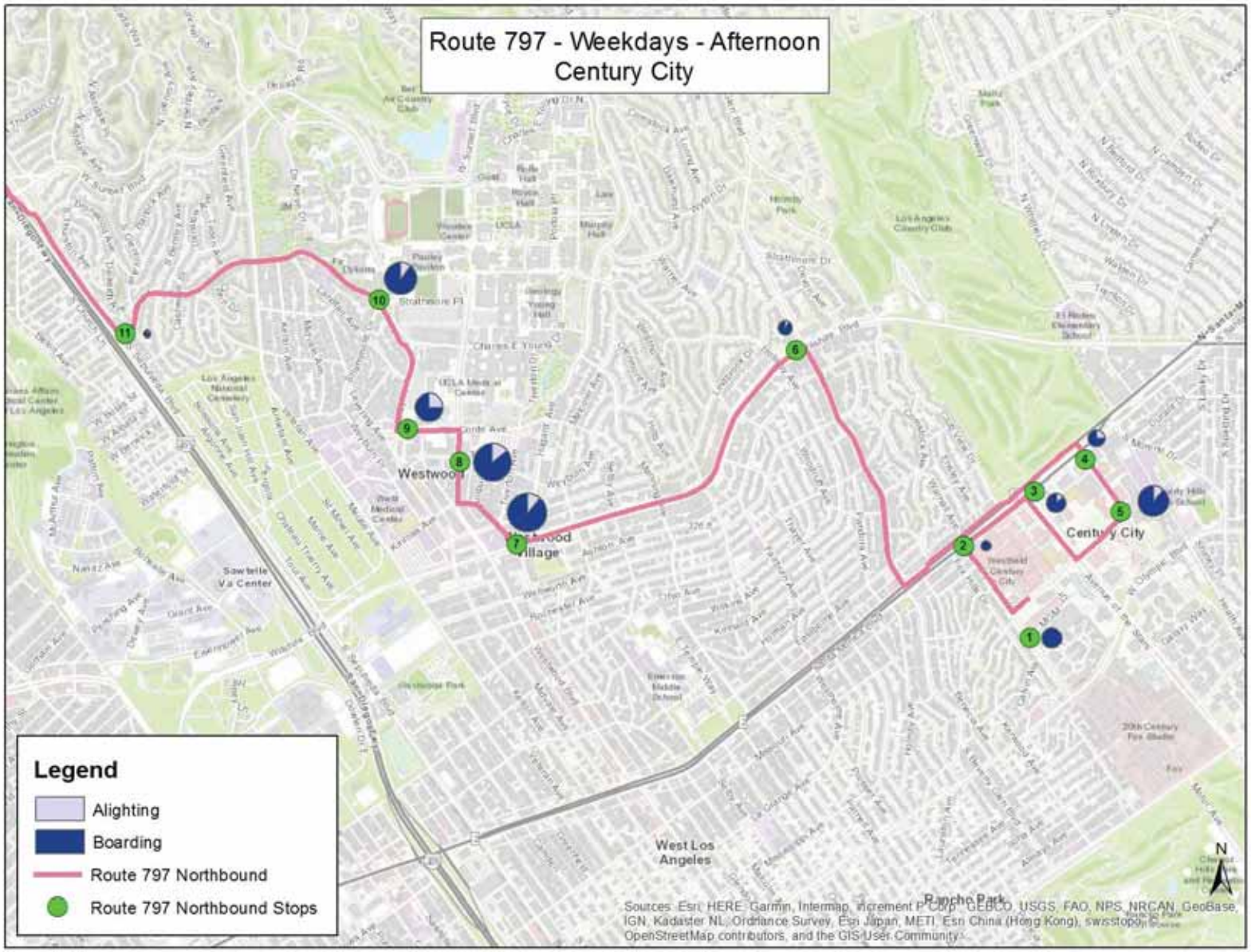
Beginning on page 3, bubble maps indicate the relative level of activity at each Route 797 bus stop.

For the AM service, the Santa Clarita bus stop with the greatest level of activity is McBean Pkwy/Valencia Blvd. The Century City location with the greatest level of activity is Gayley Ave/Strathmore Pl. For the PM service, the Century City bus stops with the greatest level of activity are Glendon Ave/Wilshire Blvd and Westwood Blvd/Weyburn Ave. The Santa Clarita stops with the greatest level of activity are Newhall Ave/Sierra Highway and the McBean Regional Transit Center.

Exhibit 3.17.2 Route 797 Boarding and Alighting Maps




Route 797 - Weekdays - Morning
Century City
Legend
Alighting
Boarding
Route 797 Southbound
Route 797 Southbound Stops
Sawtelle Va Center
West Los Angeles
Rancho Park
Century City
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community


Route 797 - Weekdays - Afternoon
Century City
Legend
Alighting
Boarding
Route 797 Northbound
Route 797 Northbound Stops
Westwood
Century City
West Los Angeles
Rancho Park
Sawtelle Va Center
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

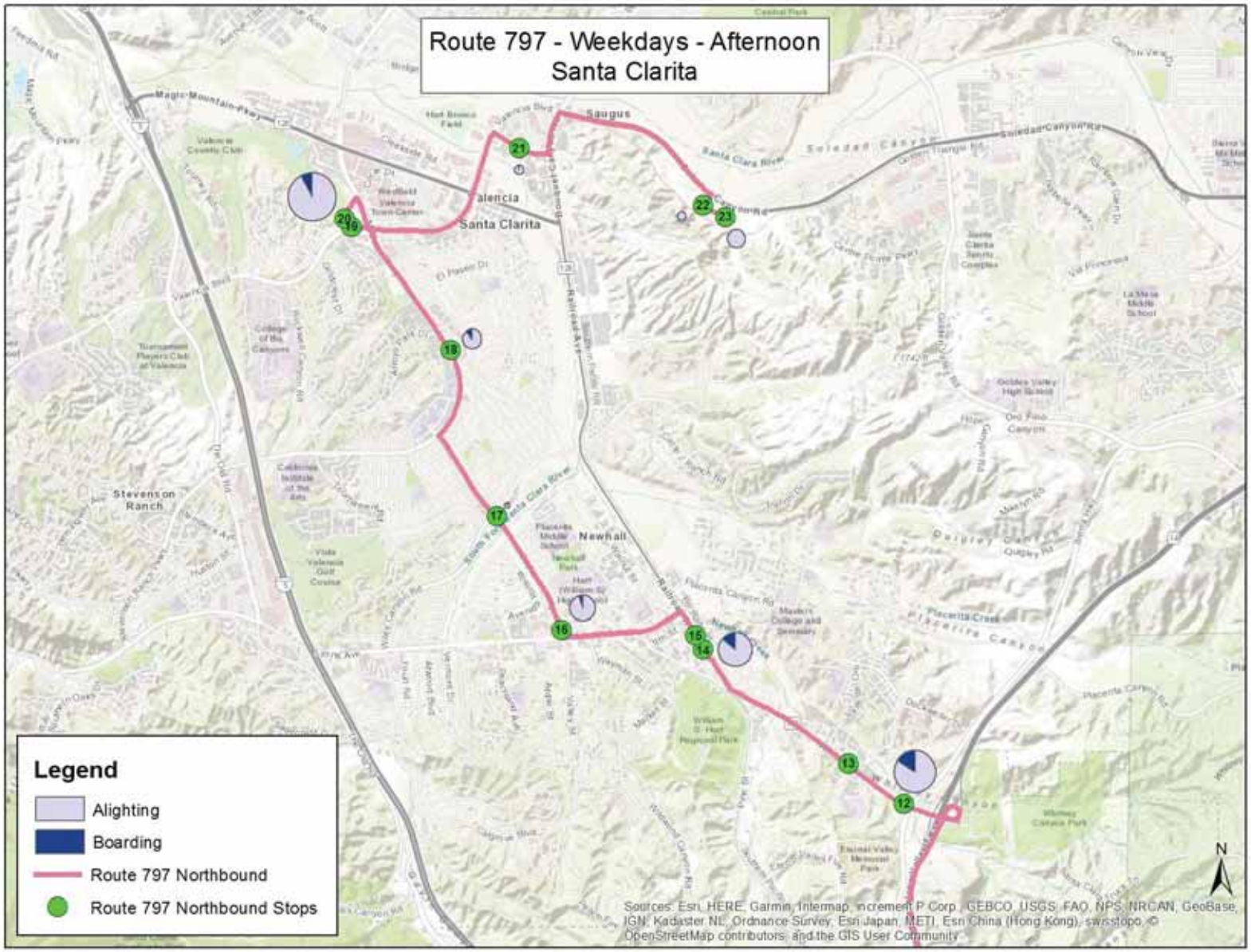

Route 797 - Weekdays - Afternoon
Santa Clarita
Legend
Alighting
Boarding
Route 797 Northbound
Route 797 Northbound Stops
Saugus
Valencia
Santa Clarita
Stevenson Ranch
Newhall
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.17.3 Route 797 Stop Lists

Route 797 Inbound (Morning) Stop List	
Stop Number	Stop Name
1	Commuter Wy & Soledad Canyon Rd
2	Commuter Wy & Soledad Canyon Rd
3	Cinema Dr & Academy Pl
4	McBean MRTC Park & Ride
5	McBean Pky & Valencia Blvd
6	McBean Pky & Arroyo Prk Dr
7	Orchard Village Rd & Wiley Canyon Rd
8	Lyons Ave & Valley St
9	Railroad Ave & Market St
10	Newhall Ave & Sierra Hwy
11	Montana Ave & Sth Sepulveda Blvd
12	Gayley Ave & Strathmore Pl
13	Le Conte Ave & Gayley Ave
14	Westwood Blvd & Weyburn Ave
15	Glendon Ave & Wilshire Blvd
16	Wilshire Blvd & Sth Beverly Gln Blvd
17	Santa Monica Blvd & Ave Of The Stars
18	Century Prk East & Santa Monica Blvd
19	Century Prk East & Constellation Blvd
20	Century Prk West & MGM Dr

Route 797 Outbound (Afternoon) Stop List	
Stop Number	Stop Name
1	Century Prk West & MGM Dr
2	Century Prk West & Santa Monica Blvd
3	Santa Monica Blvd & Ave Of The Stars
4	Century Prk East & Santa Monica Blvd
5	Century Prk East & Constellation Blvd
6	Wilshire Blvd & Sth Beverly Gln Blvd
7	Glendon Ave & Wilshire Blvd
8	Westwood Blvd & Weyburn Ave
9	Le Conte Ave & Gayley Ave
10	Gayley Ave & Strathmore Pl
11	Montana Ave & Sth Sepulveda Blvd
12	Newhall Ave & Sierra Hwy
13	Newhall Ave & Judah Ln
14	Railroad Ave & Market St
15	Railroad Ave & 8th St
16	Orchard Village Rd & Lyons Ave
17	Orchard Village Rd & Wiley Canyon Rd
18	McBean Pky & Arroyo Prk Dr
19	Valencia Blvd & McBean Pky
20	McBean MRTC Park & Ride
21	Cinema Dr & Academy Pl
22	Commuter Wy & Soledad Canyon Rd
23	Commuter Wy & Soledad Canyon Rd

Average load factor by trip

Many inbound and outbound trips on Route 797 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.60. Trips with the highest average peak loads for each direction are identified below.

Exhibit 3.17.4 Route 797 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	AM Service	5:14 a.m.	0.55
Weekday	PM Service	3:45 p.m.	0.60

There were 82 individual trips which exhibited a load factor of at least 0.50. Twelve of those trips had a load factor of 0.70 or higher.[3] Those trips are as follows:

Exhibit 3.17.5 Route 797 Trips with Load Factor at least 0.50

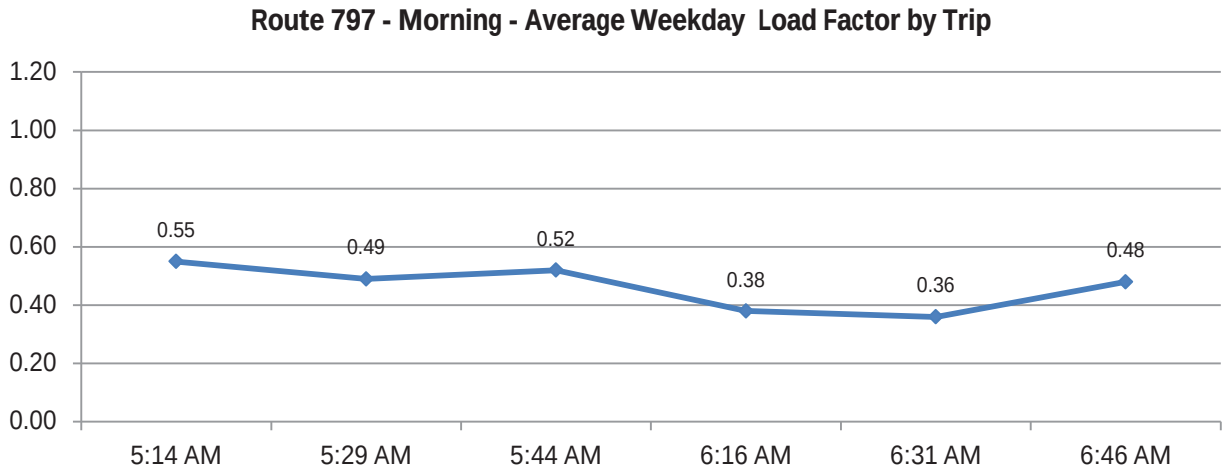
Date	Direction	Trip	Load factor
April 23	AM Service	5:14 a.m.	0.79
April 19	AM Service	5:14 a.m.	0.76
April 9	AM Service	5:29 a.m.	0.75
May 8	AM Service	5:29 a.m.	0.75
May 15	AM Service	6:46 a.m.	0.73
May 2	AM Service	5:14 a.m.	0.72
May 1	AM Service	5:14 a.m.	0.72
May 8	AM Service	5:14 a.m.	0.72
April 25	AM Service	5:29 a.m.	0.72
April 23	AM Service	3:45 p.m.	0.71
April 17	AM Service	5:44 a.m.	0.70
April 13	AM Service	5:14 a.m.	0.70
April 12	AM Service	5:44 a.m.	0.69
May 16	AM Service	5:44 a.m.	0.69
April 25	AM Service	5:44 a.m.	0.68
April 12	AM Service	5:14 a.m.	0.67
May 3	AM Service	5:29 a.m.	0.67
May 7	AM Service	5:44 a.m.	0.66
April 17	AM Service	5:14 a.m.	0.66
May 9	AM Service	5:44 a.m.	0.65
April 24	PM Service	5:10 p.m.	0.65
April 23	AM Service	5:44 a.m.	0.64
April 11	PM Service	5:40 p.m.	0.64
May 17	PM Service	5:40 p.m.	0.64
April 27	AM Service	6:46 a.m.	0.63
April 20	AM Service	5:29 a.m.	0.63
May 2	AM Service	5:44 a.m.	0.63
May 18	AM Service	5:14 a.m.	0.63

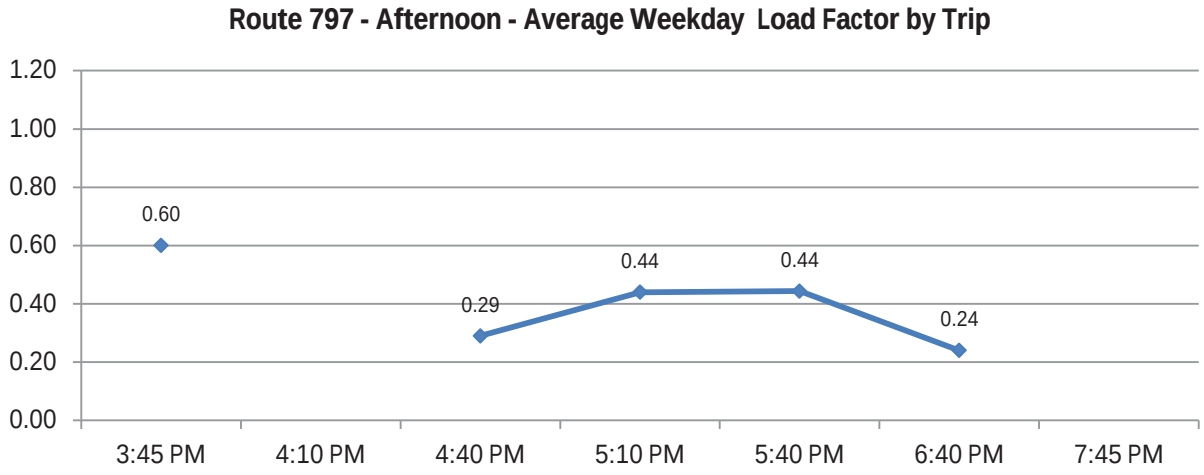
[3] It is possible there are more trips exhibiting high load factors, given no load data was available for two PM service trips.

Date	Direction	Trip	Load factor
May 15	AM Service	5:14 a.m.	0.62
April 11	AM Service	6:31 a.m.	0.62
April 10	AM Service	5:44 a.m.	0.61
April 18	AM Service	5:44 a.m.	0.61
May 10	AM Service	6:16 a.m.	0.60
April 11	AM Service	5:14 a.m.	0.60
May 16	AM Service	5:29 a.m.	0.60
May 10	AM Service	5:44 a.m.	0.60
April 26	AM Service	5:14 a.m.	0.60
May 14	AM Service	5:14 a.m.	0.60
April 11	PM Service	5:10 p.m.	0.59
April 24	AM Service	5:29 a.m.	0.59
May 14	AM Service	6:46 a.m.	0.59
May 17	AM Service	5:14 a.m.	0.59
May 15	PM Service	5:10 p.m.	0.58
April 19	AM Service	6:16 a.m.	0.58
May 3	AM Service	6:31 a.m.	0.58
May 10	AM Service	6:46 a.m.	0.58
May 10	PM Service	5:40 p.m.	0.57
April 16	PM Service	3:45 p.m.	0.57
May 17	AM Service	6:16 a.m.	0.57
May 17	AM Service	5:29 a.m.	0.57
April 19	AM Service	5:29 a.m.	0.56
April 12	AM Service	6:16 a.m.	0.54
May 14	AM Service	5:44 a.m.	0.54
May 7	AM Service	5:14 a.m.	0.54
April 10	PM Service	5:40 p.m.	0.53
April 24	AM Service	6:46 a.m.	0.53
May 7	PM Service	5:40 p.m.	0.53
May 8	AM Service	6:46 a.m.	0.53
April 16	AM Service	6:46 a.m.	0.53
May 7	PM Service	3:45 p.m.	0.52
April 17	AM Service	6:46 a.m.	0.52
April 11	AM Service	5:29 a.m.	0.52
April 17	AM Service	5:29 a.m.	0.52
April 26	AM Service	6:16 a.m.	0.52
April 27	AM Service	5:14 a.m.	0.52
May 1	AM Service	5:29 a.m.	0.52
April 30	AM Service	6:46 a.m.	0.52
April 26	PM Service	5:40 p.m.	0.51
April 20	AM Service	5:44 a.m.	0.51
May 9	AM Service	5:14 a.m.	0.51
May 16	AM Service	5:14 a.m.	0.51
April 18	AM Service	5:29 a.m.	0.51

Date	Direction	Trip	Load factor
May 7	AM Service	5:29 a.m.	0.51
April 30	AM Service	5:44 a.m.	0.51
April 16	AM Service	5:29 a.m.	0.51
April 26	AM Service	5:44 a.m.	0.51
April 23	AM Service	6:46 a.m.	0.51
May 15	AM Service	6:31 a.m.	0.51
May 17	AM Service	5:44 a.m.	0.51
May 1	AM Service	5:44 a.m.	0.50
April 23	AM Service	5:29 a.m.	0.50
May 10	AM Service	5:14 a.m.	0.50

Exhibit 3.17.6 Route 797 Average Load Factor by Trip





Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the destination portion of each commuter route (e.g., stops in Santa Clarita for a trip traveling from Century City to Santa Clarita), trips were not counted as early if they arrived before the posted time. (Any early departures from the last stop would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

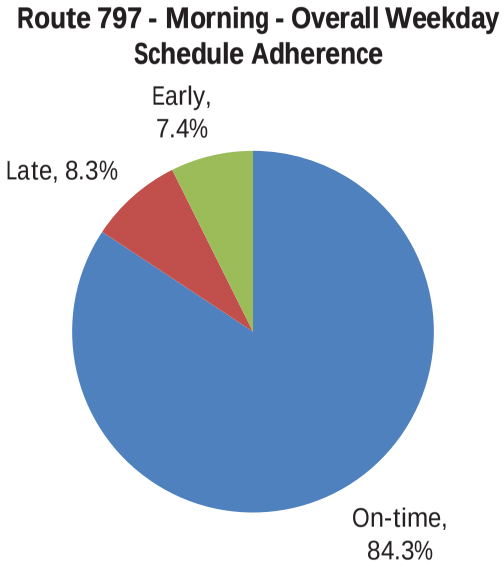
Route 797's AM service exhibits better overall schedule adherence (84.3 percent) than the PM service (67.7 percent). Late trips are the primary challenge for the PM service, while the AM service has challenges with both late and early trips.

Schedule adherence by time-point

The AM service experiences its lowest schedule adherence at the Santa Clarita Metrolink Station, where 53.1 percent of trips depart early. A similar trend was noted on Route 796, and it was posited that drivers are departing after Metrolink trains arrive, not waiting for the scheduled departure time. However, Route 797 departures are not as close to the arrival times for Metrolink trains traveling from Palmdale/Lancaster, so it is unlikely this is a significant factor for this route. Overall, schedule adherence is high with the exception of this and two other time-points – MRTC (66.7 percent on-time) and Century Park West/Solar Way (61.6 percent on-time).

The PM service exhibits very high schedule adherence prior to departing for Santa Clarita. On-time performance drops to 61.4 percent at Newhall Ave/Sierra Highway, eroding further through Lyons Ave/Orchard Village Rd (44.4 percent), and climbing slightly by the end of the route (54.7 percent). Late trips are the significant issue for the PM service. Given the majority of late trips happen once the bus returns to Santa Clarita, it is likely highway traffic congestion is a significant factor in the late trips. The City may wish to add some running time to the Route 797 schedule to accommodate more realistic travel times from the Century City/UCLA/Westwood area.

Exhibit 3.17.7 Route 797 Overall Schedule Adherence



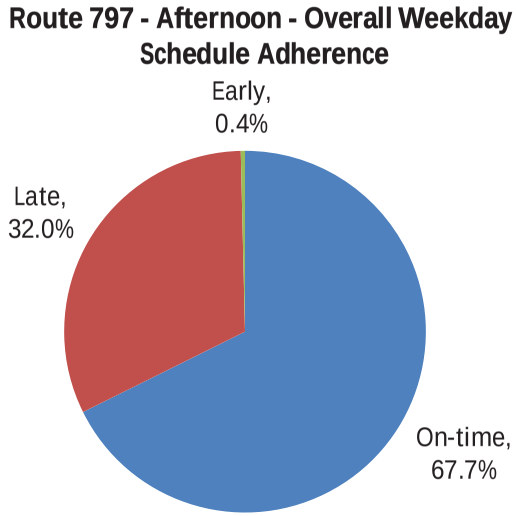
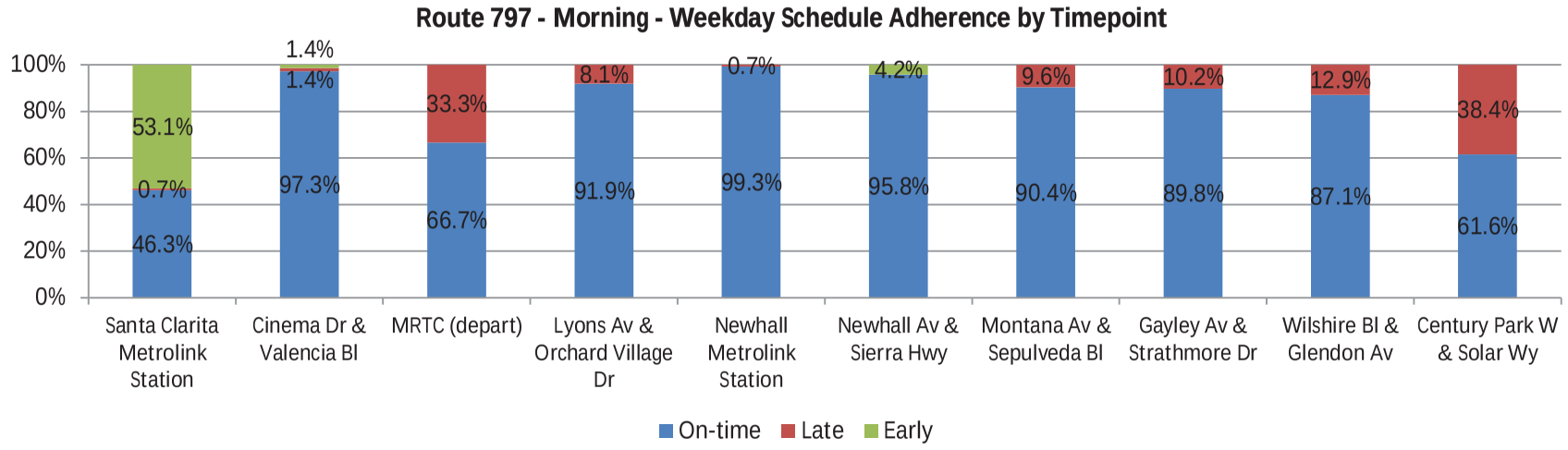
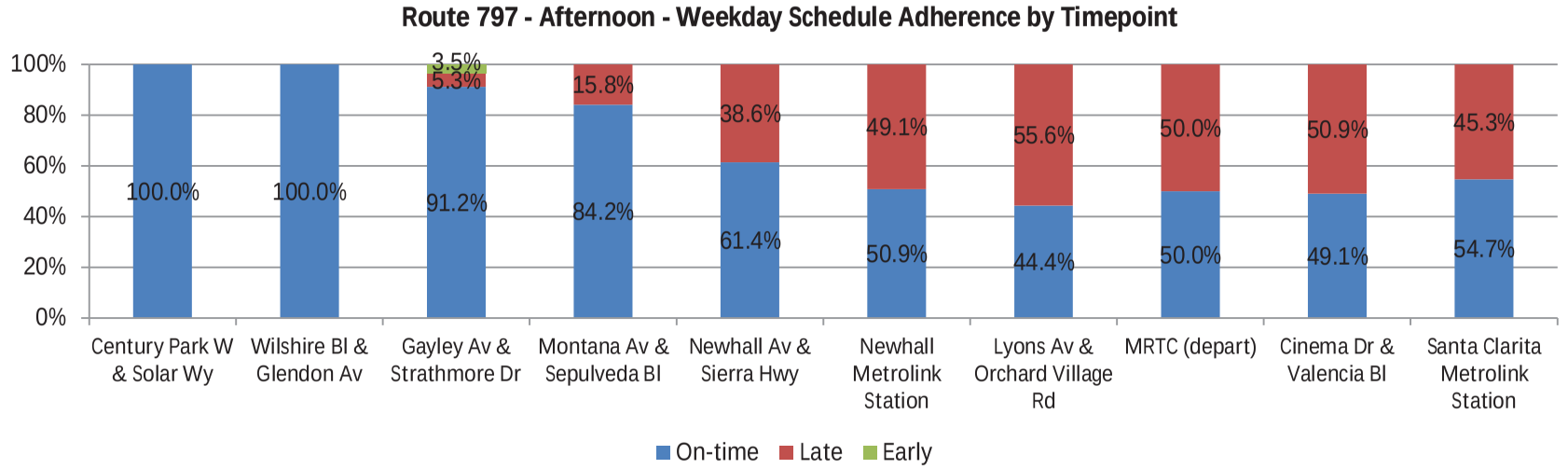


Exhibit 3.17.8 Route 797 Schedule Adherence by Time-point





Route Performance

Overall ridership

Exhibit 3.17.9 Route 797 Overall Ridership

	Weekday	Saturday	Sunday	Overall	Ranking
Route 757	23,173	2,069	1,591	27,575	1
Route 791	1,934	N/A	N/A	1,989	6
Route 792	1,456	N/A	N/A	1,477	7
Route 794	2,369	N/A	N/A	2,402	5
Route 796	6,335	N/A	N/A	6,415	4
Route 797	16,644	N/A	N/A	16,802	3
Route 799	19,956	N/A	N/A	20,122	2

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.17.10 Route 797 Overall Schedule Adherence

	Weekday	Weekend	Overall	Ranking
Route 757	65.5%	N/A	65.5%	4
Route 791	58.1%	N/A	58.1%	6
Route 792	63.3%	N/A	63.3%	5
Route 794	53.4%	N/A	53.4%	7
Route 796	67.1%	N/A	67.1%	3
Route 797	79.1%	N/A	79.1%	2
Route 799	79.3%	N/A	79.3%	1

Route 799 Profile and Performance Analysis

Route Description

Route 799 is a limited-stop/express route connecting Santa Clarita with Downtown Los Angeles. Like all express routes (except Route 757), Route 799 is part of a paired route: Route 799 serves the peak direction of travel (southbound in the morning and northbound in the afternoon), while Route 794 serves "reverse commute" trips. The peak direction route always has much higher ridership and productivity, but the "reverse commute" route accommodates passengers working in Santa Clarita (or working non-traditional work hours in Downtown Los Angeles) while minimizing deadhead travel.

The route operates during peak periods on weekdays only, although the last two northbound trips fall within the Late PM period. Primary streets of operation include Soledad Canyon Road, Valencia Boulevard, McBean Parkway, Orchard Village Road, Lyons Ave, Newhall Avenue, State Route 14, Interstate 5, Spring Street, First Street, Grand Street, Seventh Street, Eighth Street, and Figueroa Street.

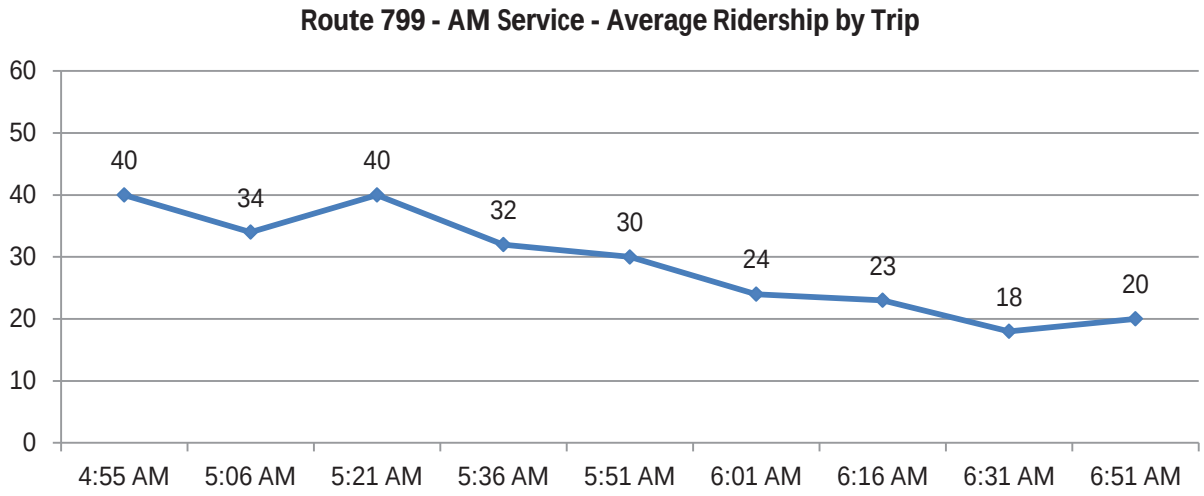
AM service is defined as that originating in Santa Clarita and traveling to Downtown Los Angeles. PM service travels from Downtown Los Angeles to Santa Clarita. This route productivity analysis includes data for all trips recorded by the City's onboard monitoring platform between April 9 and May 18, 2018.

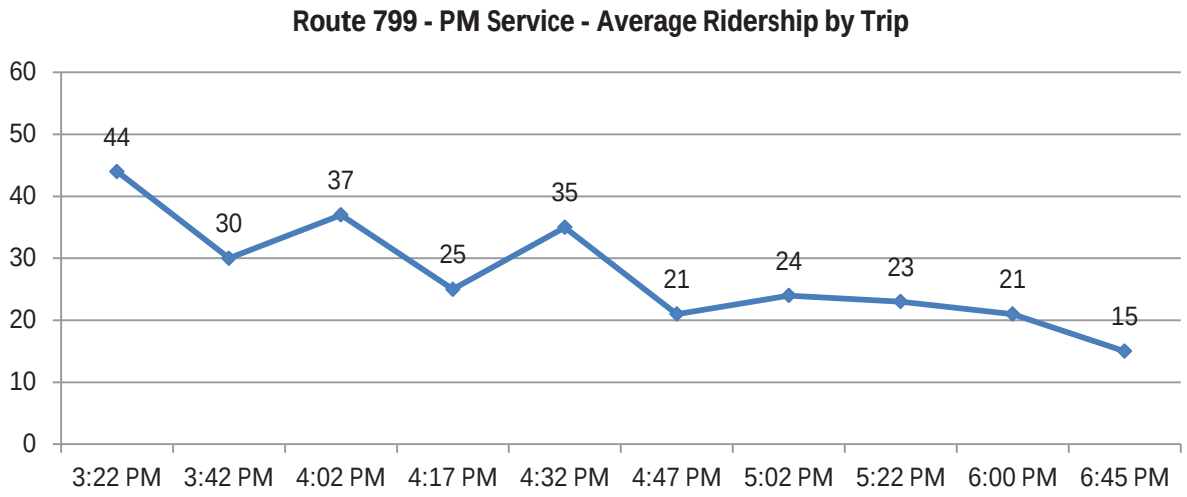
Route Performance

Average ridership by trip

During the AM service, ridership is highest during the 4:55 a.m. and 5:21 a.m. trips (average of 40 riders per trip), then generally declines throughout the remainder of the morning service. PM service ridership peaks during the first trip of the afternoon (3:22 p.m.) and has two additional "spikes" (4:02 p.m. and 4:32 p.m., which have an average of 37 and 35 riders per trip, respectively). Ridership generally declines throughout the remainder of the afternoon service.

Exhibit 3.18.1 Route 799 Average Ridership by Trip





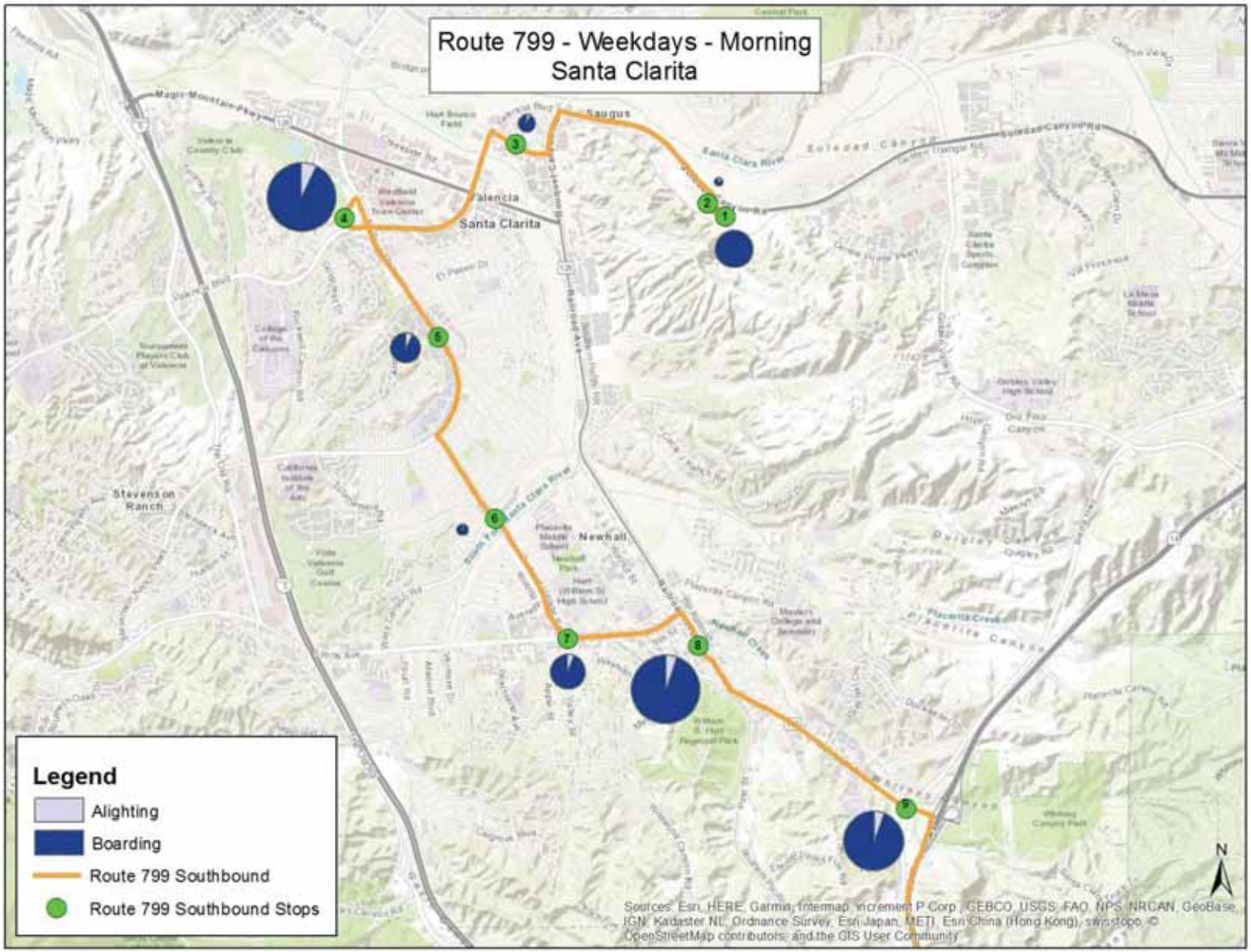
Average boarding and alighting by stop

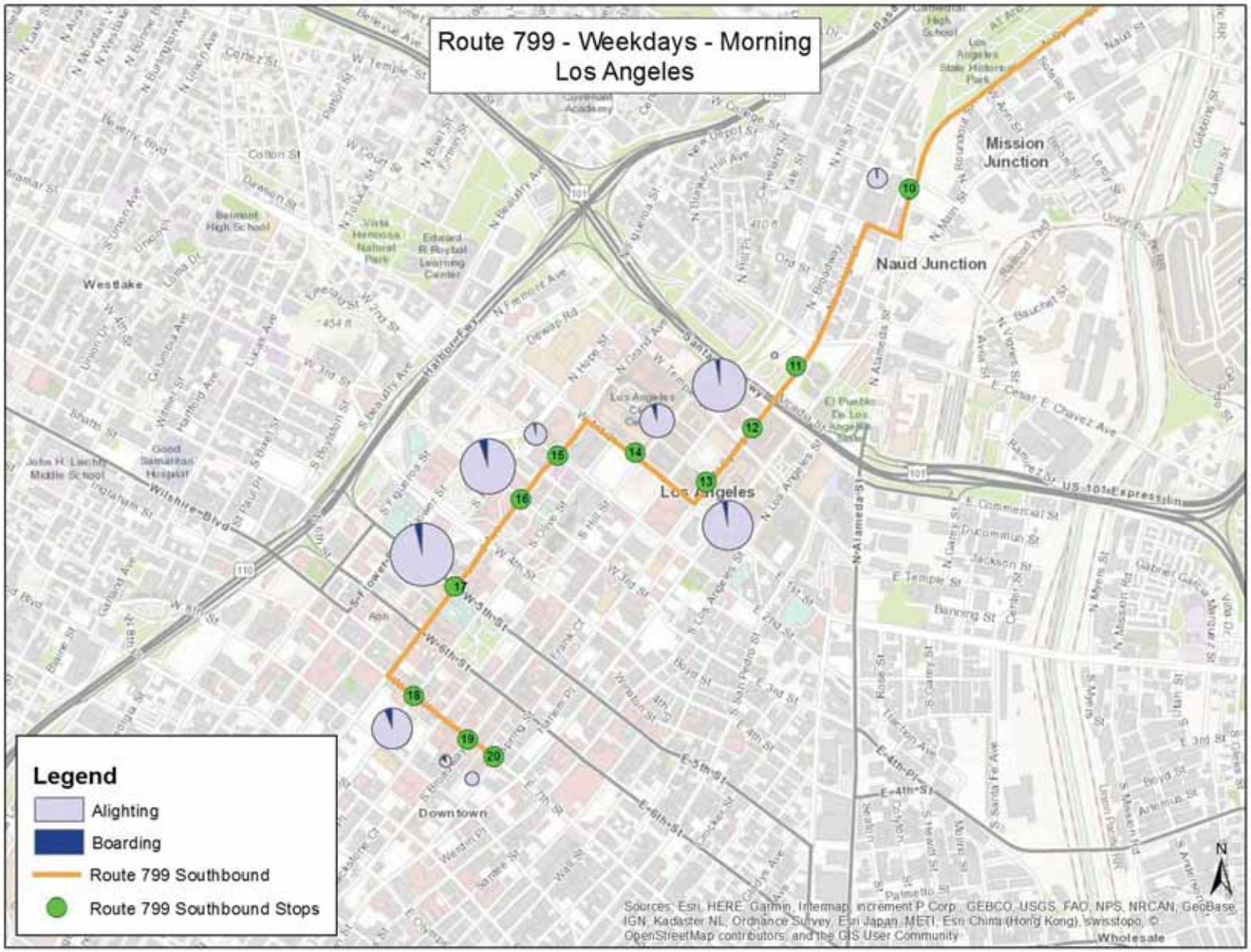
Beginning on page 4, bubble maps indicate the relative level of activity at each Route 799 bus stop during both the AM and PM services.

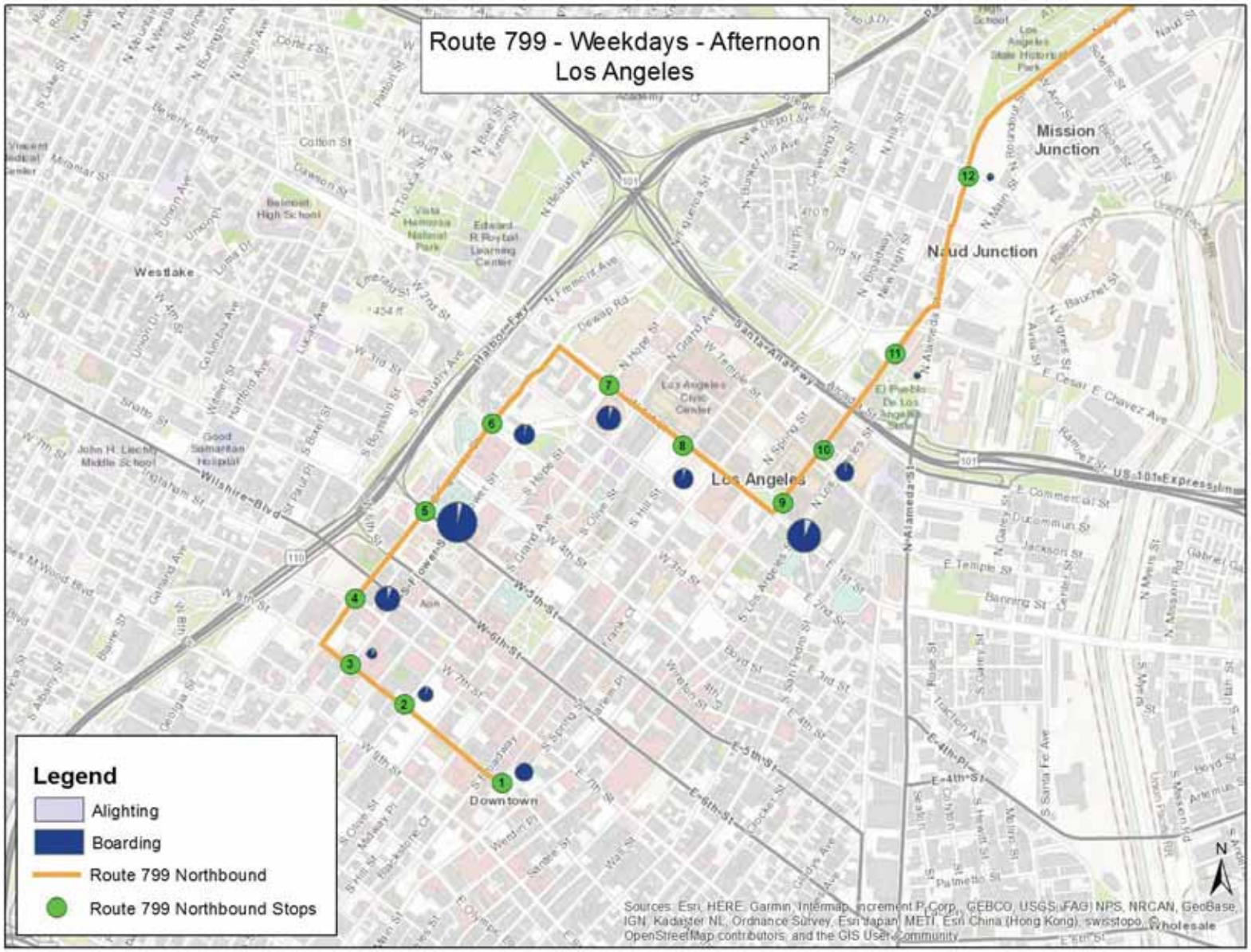
For the AM service, the bus stops with the highest activity in Santa Clarita are the MRTC, Newhall Metrolink Station, and Newhall Avenue/Sierra Highway (Park & Ride). In the Los Angeles portion of the route, the highest activity stops are N Spring St/W Temple St, N Spring St/S Spring St, S Grand Ave/W 3rd St, and S Grand Ave/W 5th St.

For the PM service, the bus stops with the highest activity in Downtown Los Angeles is S Figueroa St/W 5th St. In Santa Clarita, the stops with the highest activity mirror the morning service: Newhall Ave/Sierra Highway (Park & Ride), Newhall Metrolink Station, and the McBean Regional Transit Center.

Exhibit 3.18.2 Route 799 Boarding and Alighting Maps




Route 799 - Weekdays - Morning
Los Angeles
Mission Junction
Naud Junction
Westlake
Los Angeles
Downtown
Legend
Alighting
Boarding
Route 799 Southbound
Route 799 Southbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Route 799 - Weekdays - Afternoon
Los Angeles
Mission Junction
Naud Junction
Westlake
Los Angeles
Downtown
Legend
Alighting
Boarding
Route 799 Northbound
Route 799 Northbound Stops
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © Wholesale OpenStreetMap contributors, and the GIS User Community

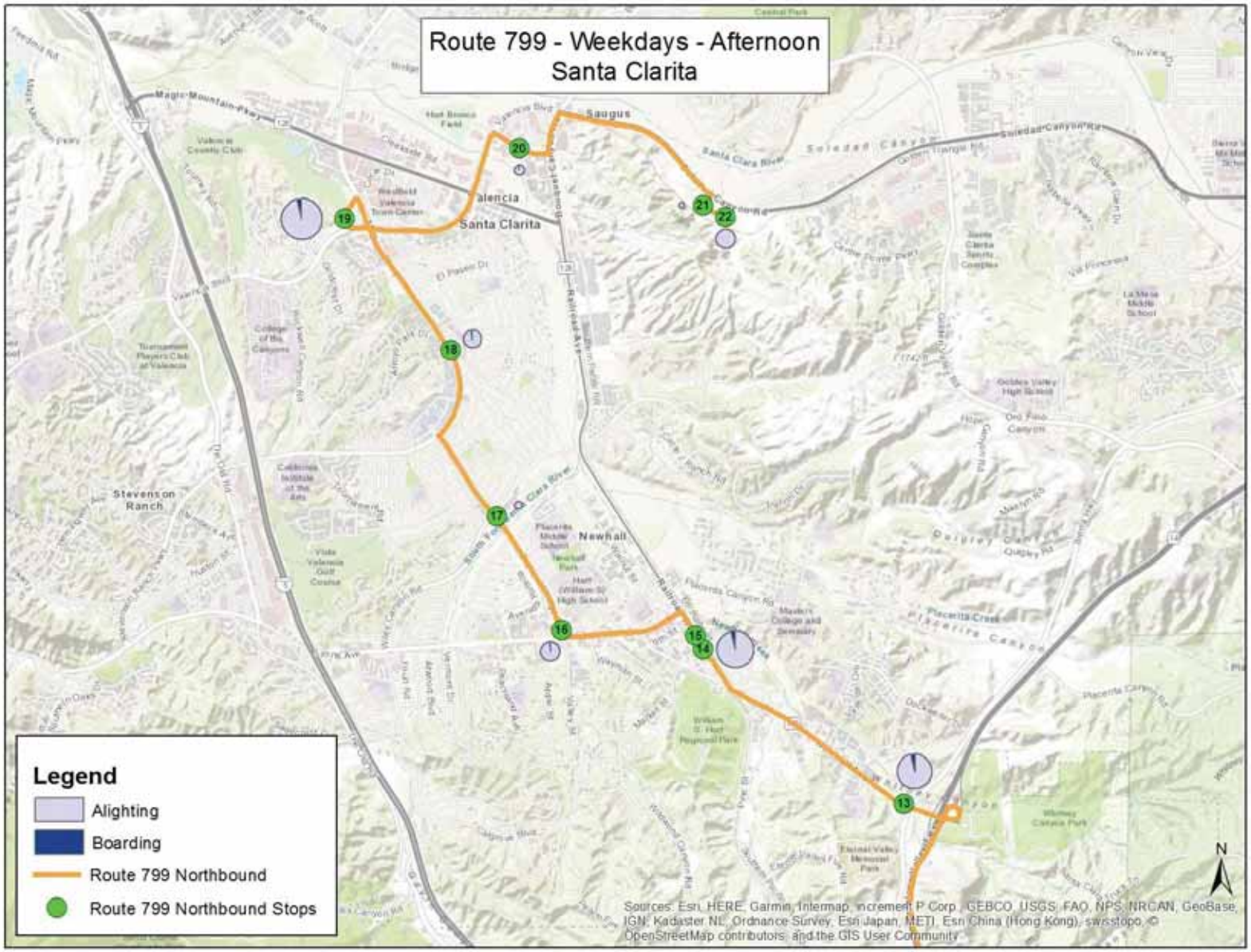

Route 799 - Weekdays - Afternoon
Santa Clarita
Saugus
Valencia
Santa Clarita
Stevenson Ranch
Newhall
Legend
Alighting
Boarding
Route 799 Northbound
Route 799 Northbound Stops
N
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Exhibit 3.18.3 Route 799 Stop Lists

Route 799 Inbound (Morning) Stop List	
Stop Number	Stop Name
1	Commuter Wy & Soledad Canyon Rd (Santa Clarita Metrolink Station)
2	Commuter Wy & Soledad Canyon Rd (Park & Ride)
3	Cinema Dr & Academy Pl
4	McBean MRTC Park & Ride
5	McBean Pky & Arroyo Park Dr
6	Orchard Village Rd & Wiley Canyon Rd
7	Lyons Ave & Valley St
8	Railroad Ave & Market St (Newhall Metrolink Station)
9	Newhall Ave & Sierra Hwy
10	N Alameda St & W College St
11	N Spring St
12	N Spring St & W Temple St
13	N Spring St & S Spring St
14	W 1st St & S Hill St
15	S Grand Ave & 2nd St
16	S Grand Ave & W 3rd St
17	S Grand Ave & W 5th St
18	W 7th St & S Olive St
19	W 7th St & S Broadway
20	W 7th St & S Spring St

Route 799 Outbound (Afternoon) Stop List	
Stop Number	Stop Name
1	W 8th St & S Spring St
2	W 8th St & S Grand Ave
3	W 8th St & S Flower St
4	S Figueroa St & W 7th St
5	S Figueroa St & W 5th St
6	S Figueroa St & W 3rd St
7	W 1st St & S Hope St
8	W 1st St & S Hill St
9	N Main St & S Main St
10	N Main St & E Temple St
11	N Main St (Olvera St)
12	N Alameda St & W College St
13	Newhall Ave & Sierra Hwy
14	Railroad Ave & Market St (Newhall Metrolink Station)
15	Railroad Ave & 8th St
16	Orchard Village Rd & Lyons Ave
17	Orchard Village Rd & Wiley Canyon Rd
18	McBean Pky & Arroyo Park Dr
19	McBean MRTC Park & Ride
20	Cinema Dr & Academy Pl
21	Commuter Wy & Soledad Canyon Rd (Park & Ride)
22	Commuter Wy & Soledad Canyon Rd (Santa Clarita Metrolink Station)

Average load factor by trip

Both inbound and outbound trips on Route 799 appear to be well within the current capacity of the vehicles. When calculating average load factor by trip, there were no trips that exceeded an average load factor of 0.59. Trips with the highest average peak loads for each day and direction are identified below.

Exhibit 3.18.4 Route 799 Trips with Highest Average Peak Loads

Day of Week	Direction	Trip	Average load factor
Weekday	AM Service	4:55 a.m. 5:21 a.m.	0.51
Weekday	PM Service	3:22 p.m.	0.59

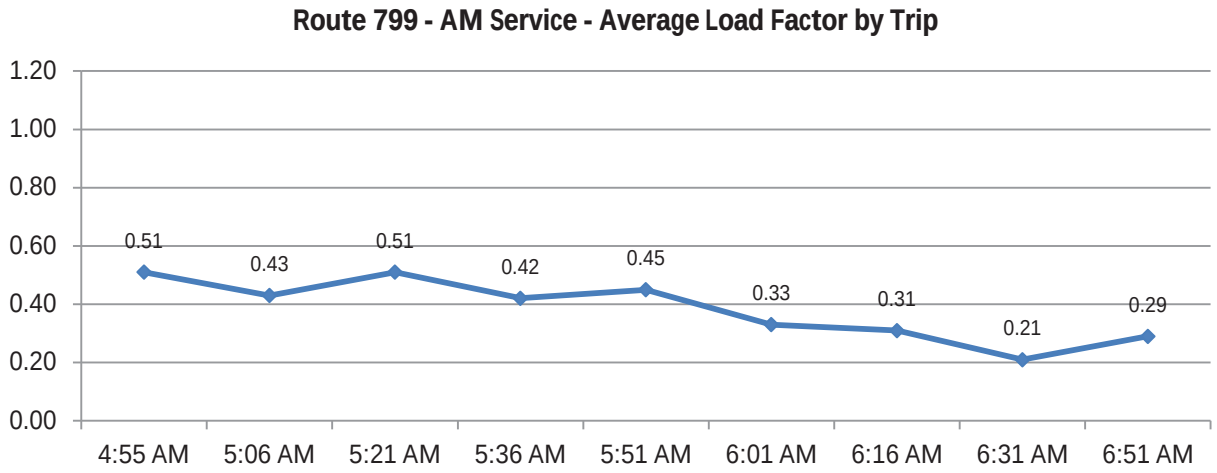
There were 56 individual trips which exhibited a load factor of at least 0.50. Of those, 10 had a load factor of at least 0.70. Those trips are as follows:

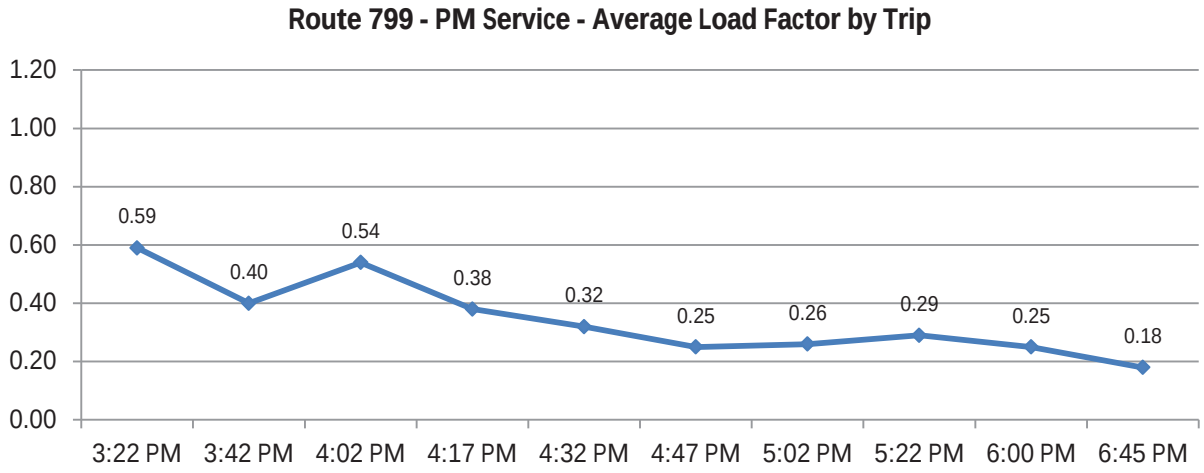
Exhibit 3.18.5 Route 799 Trips with Load Factor at least 0.50

Date	Direction	Trip	Load factor
April 19	AM Service	4:55 a.m.	0.78
April 30	AM Service	5:21 a.m.	0.75
May 8	AM Service	5:06 a.m.	0.75
May 8	AM Service	4:55 a.m.	0.73
April 19	AM Service	5:21 a.m.	0.72
May 8	AM Service	5:21 a.m.	0.72
May 1	AM Service	5:06 a.m.	0.72
April 24	AM Service	5:21 a.m.	0.72
May 15	AM Service	4:55 a.m.	0.71
April 16	PM Service	4:02 p.m.	0.70
April 23	AM Service	5:21 a.m.	0.67
May 17	AM Service	4:55 a.m.	0.66
May 16	AM Service	5:21 a.m.	0.66
April 18	PM Service	3:22 p.m.	0.66
April 30	AM Service	5:06 a.m.	0.64
April 30	AM Service	4:55 a.m.	0.64
April 24	AM Service	4:55 a.m.	0.64
May 15	AM Service	5:51 a.m.	0.63
April 11	PM Service	3:22 p.m.	0.63
May 3	AM Service	5:21 a.m.	0.63
May 7	AM Service	5:36 a.m.	0.62
April 9	AM Service	5:36 a.m.	0.61
April 19	PM Service	4:02 p.m.	0.60
April 24	AM Service	5:06 a.m.	0.60
April 25	AM Service	5:21 a.m.	0.60
May 16	AM Service	5:36 a.m.	0.59
May 16	AM Service	4:55 a.m.	0.58

Date	Direction	Trip	Load factor
April 18	AM Service	4:55 a.m.	0.58
May 18	AM Service	5:21 a.m.	0.58
April 17	AM Service	5:36 a.m.	0.58
April 17	AM Service	5:21 a.m.	0.57
May 10	AM Service	4:55 a.m.	0.57
April 23	AM Service	5:06 a.m.	0.56
April 17	AM Service	4:55 a.m.	0.56
April 9	AM Service	5:21 a.m.	0.55
May 14	PM Service	4:02 p.m.	0.55
April 26	AM Service	5:21 a.m.	0.55
April 25	AM Service	5:51 a.m.	0.54
April 26	AM Service	4:55 a.m.	0.54
May 8	PM Service	3:42 p.m.	0.54
May 1	AM Service	4:55 a.m.	0.54
May 15	PM Service	3:42 p.m.	0.53
April 25	AM Service	5:36 a.m.	0.53
May 7	PM Service	5:02 p.m.	0.53
April 10	AM Service	5:21 a.m.	0.52
May 7	AM Service	6:01 a.m.	0.52
May 16	AM Service	5:51 a.m.	0.51
April 16	AM Service	5:51 a.m.	0.51
May 17	AM Service	5:51 a.m.	0.51
May 1	AM Service	6:16 a.m.	0.51
May 15	AM Service	5:21 a.m.	0.50
April 12	AM Service	5:21 a.m.	0.50
April 16	AM Service	5:06 a.m.	0.50
April 23	AM Service	5:51 a.m.	0.50
May 18	AM Service	5:36 a.m.	0.50
May 3	AM Service	4:55 a.m.	0.50

Exhibit 3.18.6 Route 799 Average Load Factor by Trip





Schedule Adherence

"On-time" is defined as departing the stop no more than five minutes past and not before the posted time. "Late" trips are any trips that depart six minutes or more past the posted time. "Early" trips are those which depart at any point before the posted time. For the destination portion of each commuter route (e.g., stops in Santa Clarita for a trip traveling from Downtown Los Angeles to Santa Clarita), trips were not counted as early if they arrived before the posted time. (Any early departures from the last stop would be captured as part of the analysis of travel in the opposite direction.)

Overall schedule adherence

Route 799's AM service experienced significantly higher schedule adherence (90 percent percent) than the PM service (50.2 percent). Late trips are the primary challenge for the PM service, though there are some early trips during both times of day.

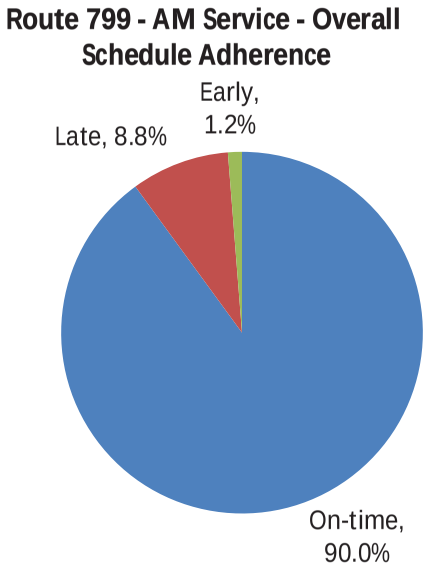
Schedule adherence by time-point

In the AM service, schedule adherence is higher within Santa Clarita than after arriving in Los Angeles. Departures at the McBean Regional Transit Center have the highest schedule adherence (97.6 percent), while 7th St/Spring St (the end of the route) sees the lowest (79.6 percent). Early trips take place at the Santa Clarita Metrolink Station and Cinema Drive/Valencia Blvd.

In the PM service, the first time-point (8th St/Spring St) sees a significant number of early trips (30.8 percent), as does the Metro Gold Line Station (16.2 percent). In Los Angeles, Main St/Temple St has the lowest on-time performance (54 percent), while Figueroa St/5th St has the highest (80.6 percent). Schedule adherence declines dramatically upon reaching Santa Clarita, which indicates performance is likely affected significantly by traffic congestion. In Santa Clarita, the Newhall Metrolink Station has the highest on-time performance (52.6 percent), while Cinema Drive/Valencia Blvd has the lowest (23.6 percent). Additional travel time between Downtown Los Angeles and Santa Clarita during the PM service may be warranted.

The majority of the early departures at 8th St/Spring St occurred during the 5:22 p.m. and 6:45 p.m. trips. The majority of the early departures at the Metro Gold Line Station (N Alameda St/W College St) occurred during the 6:45 p.m. trip. The 6:45 p.m. trip also had fewer arrivals at stops in Santa Clarita.

Exhibit 3.18.7 Route 799 Overall Schedule Adherence



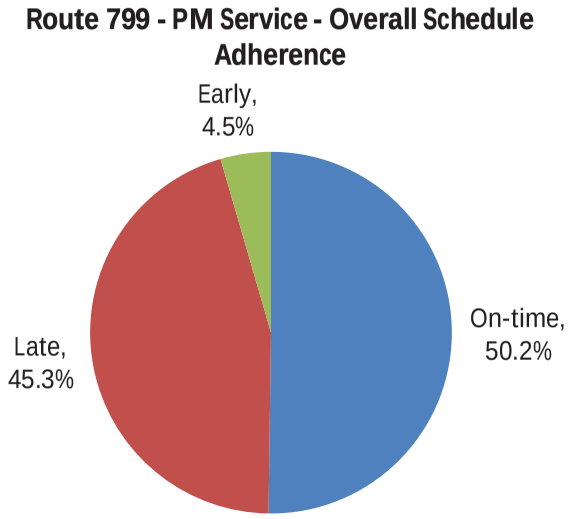
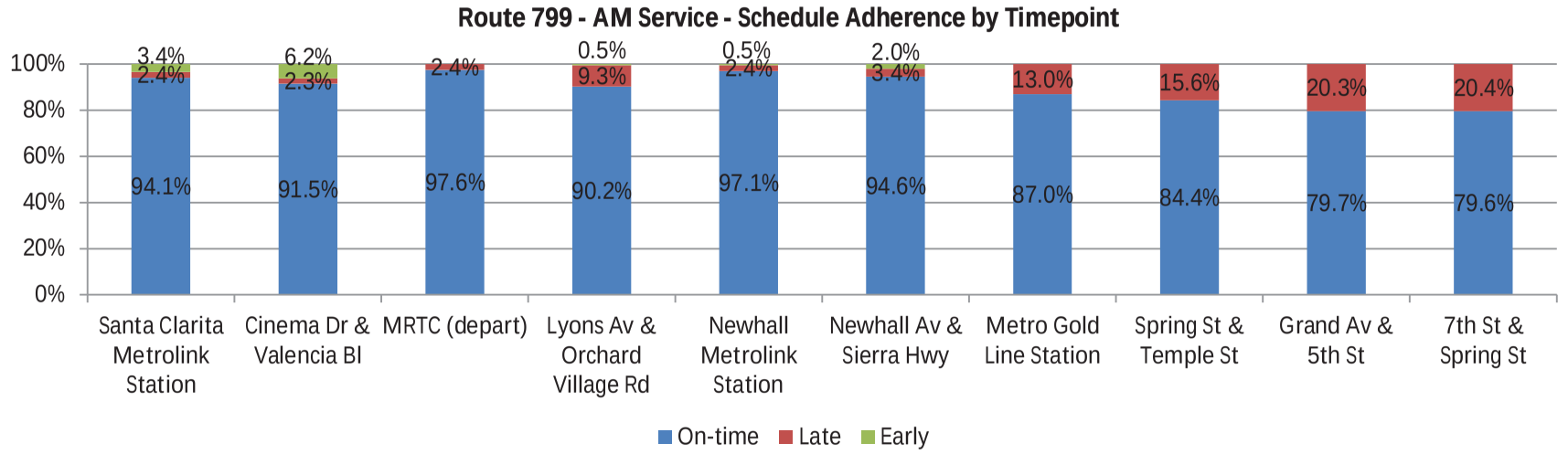
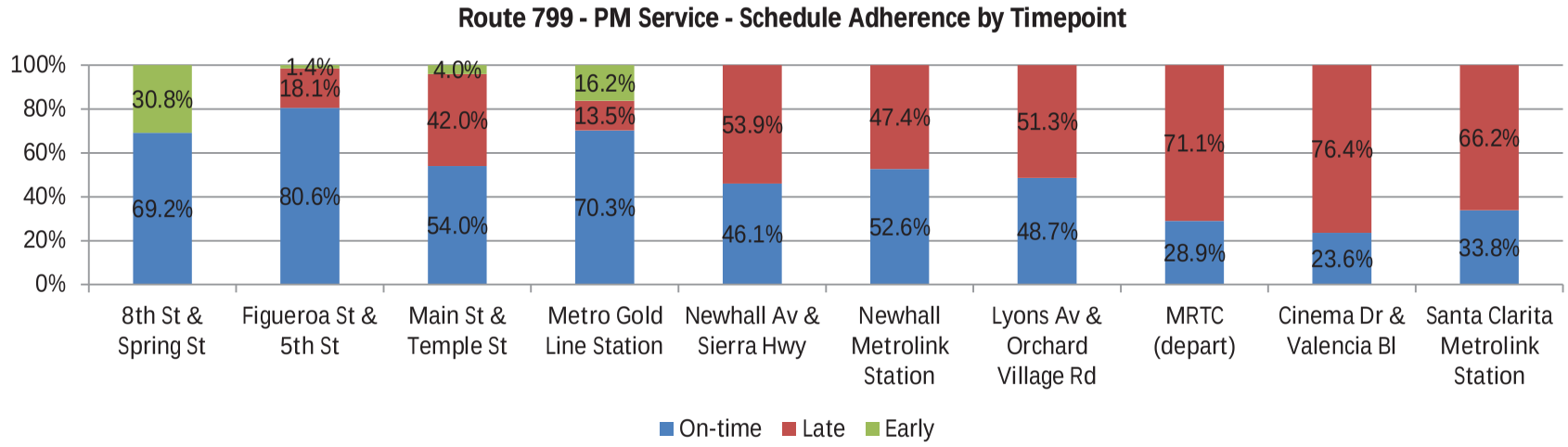


Exhibit 3.18.8 Route 799 Schedule Adherence by Time-point





Route Performance

Overall ridership

Exhibit 3.18.9 Route 799 Overall Ridership

	Weekday	Saturday	Sunday	Overall	Ranking
Route 757	23,173	2,069	1,591	27,575	1
Route 791	1,934	N/A	N/A	1,989	6
Route 792	1,456	N/A	N/A	1,477	7
Route 794	2,369	N/A	N/A	2,402	5
Route 796	6,335	N/A	N/A	6,415	4
Route 797	16,644	N/A	N/A	16,802	3
Route 799	19,956	N/A	N/A	20,122	2

Ridership for full months of April and May 2018. Totals include "unclassified" riders and may not exactly reflect the sum of weekday, Saturday, and Sunday riders.

Overall schedule adherence

Exhibit 3.18.10 Route 799 Overall Schedule Adherence

	Weekday	Weekend	Overall	Ranking
Route 757	65.5%	N/A	65.5%	4
Route 791	58.1%	N/A	58.1%	6
Route 792	63.3%	N/A	63.3%	5
Route 794	53.4%	N/A	53.4%	7
Route 796	67.1%	N/A	67.1%	3
Route 797	79.1%	N/A	79.1%	2
Route 799	79.3%	N/A	79.3%	1

Fare Structure Analysis

Overview of Current Fare Structure

Santa Clarita Transit offers a variety of full and reduced fares based on mode. The regular base fare for local fixed-route service is $1.00. The regular base fixed-route fare for the commuter service ranges from $3.00 to $4.50. The regular base Dial-A-Ride fare is $2.00. Reduced fares on local bus and commuter services are available to seniors (age 60 and older) and persons with disabilities. Children under five years old ride free on all modes.

Santa Clarita Transit also offers day and monthly passes (loaded on TAP cards) which are valid on local bus and commuter services as well as the EZ Transit Pass for commuter services. Token Transit mobile fare payment is accepted on local and commuter fixed-route services, as well as the special Beach Bus service.

Santa Clarita Transit offers several special services. Supplemental school day and Station Link services are part of the local fixed-route service and all local fares apply. There is no student discount available. Fares for the Beach Bus and Hometown Trolley are set separately from the local fixed-route service.

A breakdown of the fare structure for each mode is provided below.

Exhibit 3.19.1 Local Fare Structure

	Local
Regular (base fare)	$1.00
Reduced	Free
Children under 5	Free
ASI card holders	Free
Personal Care Attendants (PCAs)	$1.00
Day pass	$2.50
Monthly pass	$34.00

Exhibit 3.19.2 Commuter Fare Structure

	Route 757	Routes 791/796	Routes 792/797 & 794/799
Regular (base fare)	$3.00	$4.00	$4.50
Reduced	$1.50	$2.00	$2.25
Children under 5	Free	Free	Free
Interagency transfer	$0.55	$0.55	$0.55
Monthly pass (SCT only)	$110.00	$150.00	$170.00
Monthly pass (SCT only) – reduced	$55.00	$75.00	$85.00
EZ Transit Pass	$176.00 (Zone 3)	$198.00 (Zone 4)	$220.00 (Zone 5)
EZ Transit Pass – reduced*	$70.50 (Zone 3)	$80.00 (Zone 4)	$89.50 (Zone 5)

**Note: Senior eligibility is age 62 and older for the EZ Transit Pass.*

Exhibit 3.19.3 Dial-A-Ride Fare Structure

	Local
General public	$2.00
Senior/disabled	$2.00
Children under 5	Free
Personal Care Attendants (PCAs)	Free
Companions	$2.00

Exhibit 3.19.4 Special Services Fare Structure

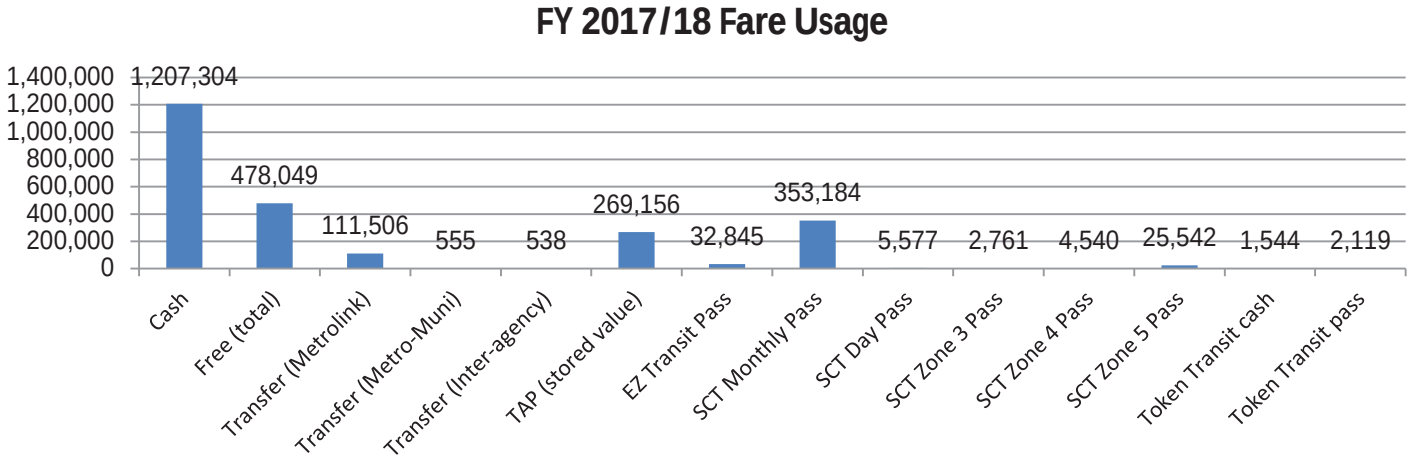
	Regular	Reduced
Beach Bus	$3.00	$1.50
Hometown Trolley	Free	Free

Fare Usage Overview

In FY 2017/18 (specifically July 2017 – May 2018), nearly half of the nearly 2.5 million fixed-route riders (local and commuter combined) used cash to pay their fares.[4] More than 19 percent of all patrons rode fare-free. Out of those nearly 480,000 trips, 82.4 percent used the senior/disabled discount, while 6.8 percent were children under the age of five. The SCT local monthly pass was used on 14.2 percent of trips, while 10.8 percent of trips used stored value on a TAP card. Only 4.5 percent of trips used a transfer from a connecting transit system.

Token Transit mobile ticketing was introduced in February 2018, and as such comprised only 0.1 percent of all trips. Surprisingly, day pass usage comprised just 0.2 percent of trips, which may indicate customers using more than one bus to complete trip are either willing to pay the one dollar fare for each trip or use a monthly pass.

Exhibit 3.19.5 FY 2017/18 Fare Usage



[4] This figure is inferred based on total ridership minus all other identified fare types, as documented by Santa Clarita Transit in its monthly reports.

Peer Review

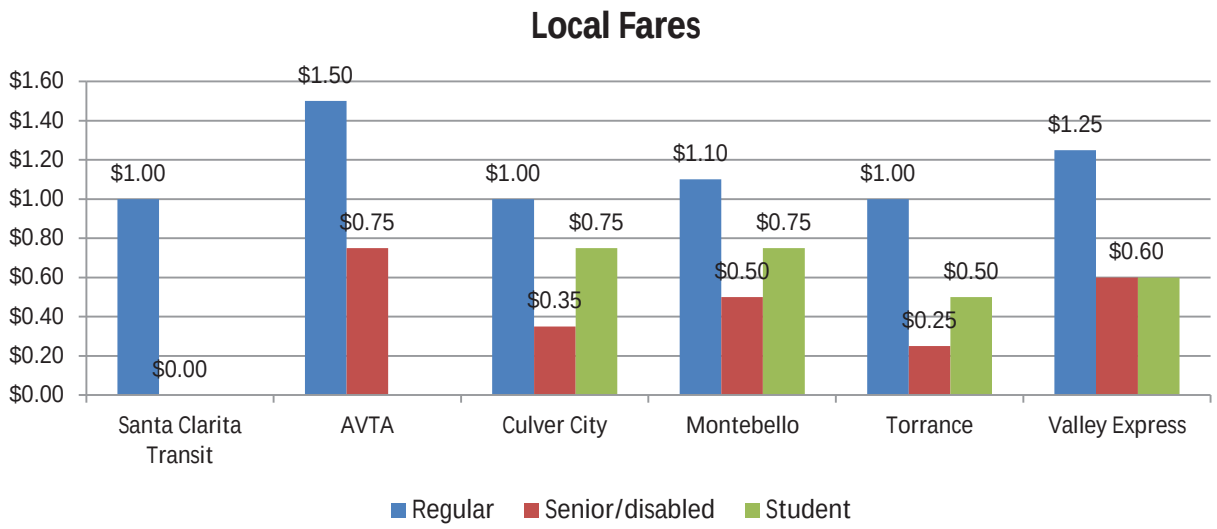
In evaluating the City's transit fare structure, it was useful to compare Santa Clarita Transit to like-peers across the region. In doing so Moore & Associates reviewed various fare characteristics separately, noting where Santa Clarita Transit falls in relation to peers as well as the average (mean) among all entities reviewed (including Santa Clarita Transit). The selected peers are Antelope Valley Transit Authority (AVTA), City of Culver City, City of Montebello, City of Torrance, and Valley Express (Ventura County).

Base Fare

Of the six entities examined, Santa Clarita Transit has the lowest regular local fare, along with Culver City and Torrance. AVTA had the most expensive, which is not surprising given the size of its service area. The average of all local regular fares was $1.14. All entities have a lower base fare than LA Metro, which charges $1.75 per ride.

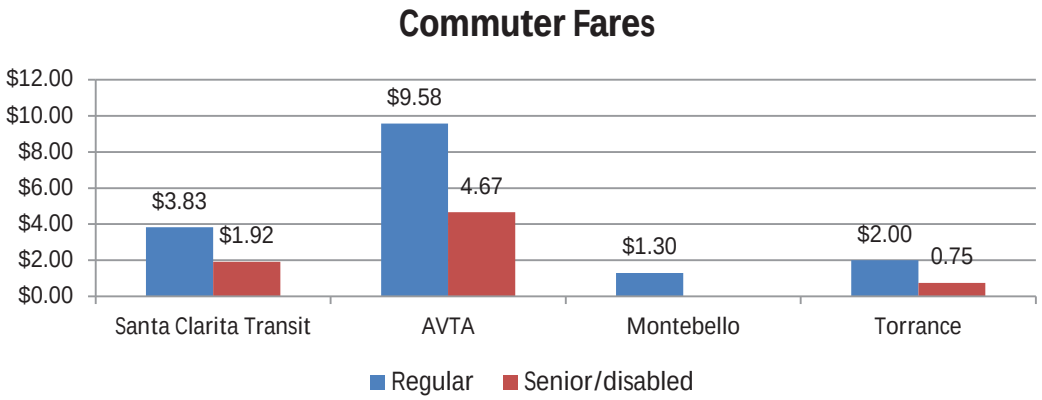
Santa Clarita also had the lowest reduced fare for seniors/persons with disabilities (free). Peer fares ranged from $0.25 to $0.75, with the average being $0.41. Four entities also offered a discounted student fare, which ranged from $0.50 to $0.75.

Exhibit 3.19.6 Peer Review Local Fares



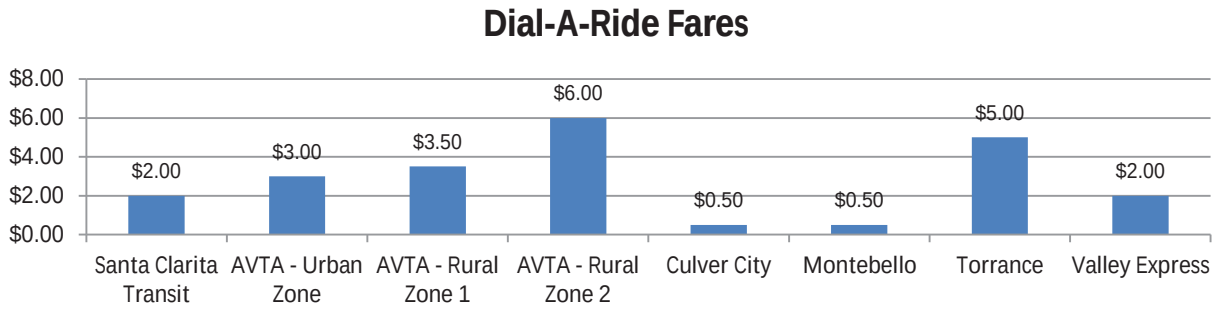
Only Santa Clarita and AVTA offer true commuter service; Montebello and Torrance both offer Express service, but with base fares of $1.30 and $2.00, respectively. The average of the three commuter fares offered by Santa Clarita Transit is $3.83, compared to $9.58, which is the average of the commuter fares offered by AVTA. Again, it is not surprising that AVTA's fare would be at least twice the fare charged by Santa Clarita, given the distance traveled by AVTA is roughly twice that traveled by Santa Clarita Transit. Only Montebello does not offer a reduced fare for seniors and persons with disabilities on its commuter/express service.

Exhibit 3.19.7 Peer Review Commuter Fares



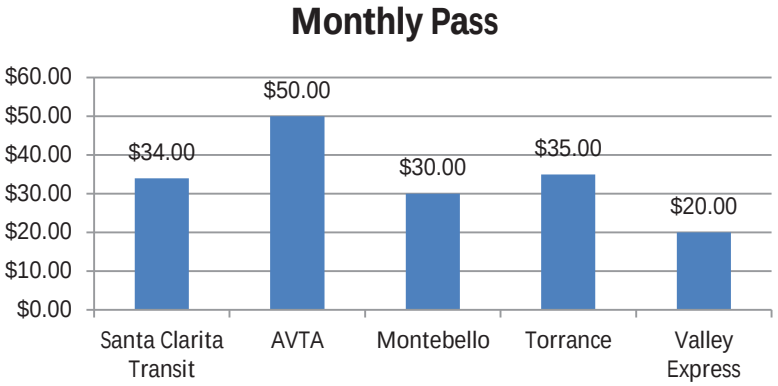
Dial-A-Ride fares range from fifty cents in Culver City and Montebello to $6.00 for Rural Zone 2 in AVTA. Culver City asks for a suggested donation of fifty cents, while Montebello and Torrance both offer Dial-A-Taxi programs. Santa Clarita Transit is generally in line with the in-town fares charged by its nearest neighbors (AVTA and Valley Express).

Exhibit 3.19.8 Peer Review Dial-A-Ride Fares



Santa Clarita Transit's non-cash fare offerings are in line with its peers. A day pass is available in lieu of an intra-agency transfer. All entities except for Culver City offer a monthly pass (though Montebello's is available to students only). Three of the five entities price their monthly pass between $30 and $35. The average price among all five peers is $33.80, roughly the same price as Santa Clarita Transit's pass.

Exhibit 3.19.9 Peer Review Monthly Pass Fares



Regional Fare Agreements

Santa Clarita Transit participates in regional fare agreements for TAP, EZ Pass, Metrolink, and Metro's LIFE Program. The TAP (Transit Access Pass) program enables riders to store a day or monthly pass or interagency transfers on a TAP card, or to store cash value on the card. EZ Transit Pass is a regional pass program valid on Santa Clarita's commuter routes. Commuter customers may also use an inter-agency transfer to and from connecting services outside of Santa Clarita. Metrolink customers ride Santa Clarita Transit for free with a valid Metrolink ticket or pass as part of the EZ Transit Pass program. The Low-Income Fare is Easy (LIFE) Program is Metro's Rider Relief Program, offering coupons that can be used toward the purchase of fare for Santa Clarita Transit and other municipal transit operators.

Farebox Recovery Ratio

Exhibit 3.19.10 Farebox Recovery Ratio Table

Farebox	FY 16-17	FY 17-18
Contract transportation services	$18,848,994	$19,332,460
Passengers	2,863,500	2,579,268
Fare Revenue	$3,448,209	$3,373,080
Farebox Recovery	18.3%	17.4%
Cost per passenger	$6.58	$7.50

Conclusions

Santa Clarita Transit's fare structure is largely consistent with its peers and appears to be functioning well. Fares tend to be at the lower end of the peer range, yet not unreasonably low. A free fare for seniors and persons with disabilities on the fixed-route service offers a significant savings for qualified riders. Token Transit should be well-promoted, especially among school-age youth and their parents, as an alternative to carrying cash or needing to load a TAP card.

With respect to the TAP program, Moore & Associates recommends the City follow up with local TAP pass sales locations on a periodic basis to ensure their equipment remains in working order and that they are able to sell passes and add stored value. It can be frustrating for a customer when it is difficult to load money onto a TAP card, though as Token Transit becomes more widely used, it may mitigate this issue.

Given the affordability of Santa Clarita Transit's fares, we recommend maintaining the current fare structure provided the system is meeting farebox recovery ratio requirements. Should SCT be at risk for not meeting farebox recovery requirements, we recommend identifying local funds with which to supplement farebox revenue before considering a fare increase to maintain service affordability.

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4 PUBLIC OUTREACH

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CHAPTER 4 | PUBLIC OUTREACH

Public involvement is a critical and necessary part of the planning process. Input from the community gives transit providers insight into those locations that warrant service as well as indications of where shortcomings within the overall system may exist. For the purpose of the Transit Development Plan (TDP), numerous public outreach efforts were pursued. Key stakeholders will identified and targeted to provide insight for the development of public transportation in the Santa Clarita Valley. Outreach efforts were conducted at various points throughout the project to gain a more representative sample of public input. An interactive map was set up so anyone can pinpoint their feedback online. Onboard and community surveys were conducted.

This section discusses the methodology used and outcome of all community outreach efforts conducted for the Plan.

Five surveys were conducted, each reflecting a different outreach effort:

1. Supplemental School Day Survey,
2. On Board Survey,
3. Commuter Survey,
4. Dial-A-Ride Survey, and
5. Community Survey.

Community Outreach

In support of the Santa Clarita TDP project, Moore & Associates facilitated two rounds of community workshops. The first round of workshops took place in June 2018, and the second in February 2019. Workshops were promoted through direct mail, social media, posters at high activity centers throughout the Santa Clarita Valley, and the project webpage.

Workshops Round 1, June 2018

In addition to fostering public discussion regarding the TDP, the objectives for Round One were:

1. Introduce the project,
2. Promote the project webpage, and
3. Encourage participation in the community survey.

Workshops were held on:

- Thursday, June 7, 2018: Canyon Country Jo Anne Darcy Library
- Monday, June 11, 2018: Oak Room, The Centre
- Saturday, June 16, 2018: Valencia Public Library
- Saturday, June 16, 2018: Old Town Newhall Library

Although there was modest attendance at the workshops, the attendees had valuable insight to share:

- Is the City receiving its "fair share" of transit dollars (from LACMTA)?
- City has been talking about rail connection with San Fernando Valley for 15 years. Need better connections with San Fernando Valley.
- If (when?) Metrolink increases service frequency (presumably with San Fernando Valley and downtown Los Angeles), reallocate bus resources.
- "Coordinate with Bart Reed."
- A lot of people have jobs at night. Could use later evening/night bus service.
- More capacity for school trippers.
- Using transit as an out-of-town visitor (disabled) can be challenging.
- Make (transit) more economical and efficient. Get people out of cars.
- Partner with Uber/Lyft as backup to transit.
- Going eight miles across the SCV takes 35-40 minutes via SCT. (Presumably a comment re current commuter bus routing.)
- Signal prioritization (along main roads such as Soledad Canyon) for buses.
- Prefer smaller vehicles operating in neighborhoods (versus walking to arterials). Even if it involves a transfer (two-seat trip).
- Greater promotion of service information for/on Smartphones.
- Comment re DAR driver not accepting Medical card for passage.
- Greater promotion of TAP card. Ideas for SCV card designs.
- SCV topography often makes walking to the bus stop difficult.

Workshops Round 2, February 2019

In February 2019, the second round of workshops were held. Six community workshops were convened at locations throughout the city. The objectives for Round Two were:

1. Share recommendations arising from the project with the community,
2. Assess public support for each recommendation, and
3. Present findings from the community outreach efforts.

Workshops were held on:

- Thursday, February 7, 2019 - Valencia Public Library
- Thursday, February 7, 2019 – Valencia High School Library
- Friday, February 8, 2019 – Canyon Country Jo Anne Darcy Library
- Friday, February 8, 2019 – Canyon County Community Center
- Saturday, February 9, 2019 – Canyon Country Jo Anne Darcy Library
- Saturday, February 9, 2019 – Old Town Newhall Library

The following discussion arising during the workshops has been incorporated into the project report:

- Importance of regional connections between Heritage Valley and Santa Clarita Valley.
- Discussion of possible SCT service on Highway 126 when Newhall Ranch development opens.
- Six Flags not enthusiastic about transit service to its Magic Mountain park.

- Plans for SCT to service new housing developments across the Valley.
- Participant interested in a beach bus from SCV to Ventura County beaches.
- SCT service on Bouquet is consistent at 30-minute frequency.
- "SCT weekend service has bad connections."
- Request to sync all routes or run on an every 30-minute frequency.
- "Routes 5 and 6 have too many vehicles in service with several running empty."
- Discussion of the "recommendations" matrix including signal synchronization and prioritization along Soledad and introducing limited-stop express shuttle on Soledad.
- Request to add service down Golden Valley Rd where there currently isn't any service.
- Need more service options to LA sporting events.
- Request to extend commuter bus to Expo Line.
- Request for service from SCV to SFV (for Veteran's Services).
- Likes the idea of neighborhood shuttles. Likes the idea of (also) expanding paratransit service area.
- Likes idea of express bus along Soledad.
- Would like to see Routes 5 and 6 split.
- Likes idea of neighborhood shuttles.
- Increased service near Golden Valley Target and Walmart.
- Enthusiastic about Uber/Lyft to supplement evening service.
- Request for a bus to Golden Valley Plaza (Target, etc.). Starting from McBean Regional Transit Center to Newhall Ranch to Golden Valley to Whites/Plum (large loop).
- Likes the idea of express route on Soledad which could also help with service from Canyon Country COC to Valencia COC campus.
- Santa Clarita Metrolink needs more parking. People are currently parking in the dirt/mud.
- Adjust bus "layover zone" at Newhall Station.
- Increase service on Newhall Ranch Rd near the hotels.
- Increase in bicycles increases the need for secure bike parking- especially at the new developments.
- Bus shelters are needed near Needham Ranch.
- Bus stops near schools and adjacent to senior housing need shelters installed.

Acton/Agua Dulce Outreach:

In July 2018, the City requested additional community outreach in both Acton and Agua Dulce. Therefore, Moore & Associates under took the following activities:

1. Household mailer. A color postcard was designed, produced, and distributed to approximately 3,000 households in Acton and Agua Dulce promoting the community workshops, online survey, and project webpage.

2. Online survey. The project's community survey was modified to include Acton and Agua Dulce ZIP codes as response options. The survey garnered 121 responses.

Town Council meetings. Project presentations were made at a Town Council meeting in each community. Similar to efforts within Santa Clarita, the City's Transit Development Plan project was

introduced, community participation was solicited, and both the online survey and community workshops were promoted.

Exhibit 4.0.1 Public Input Map

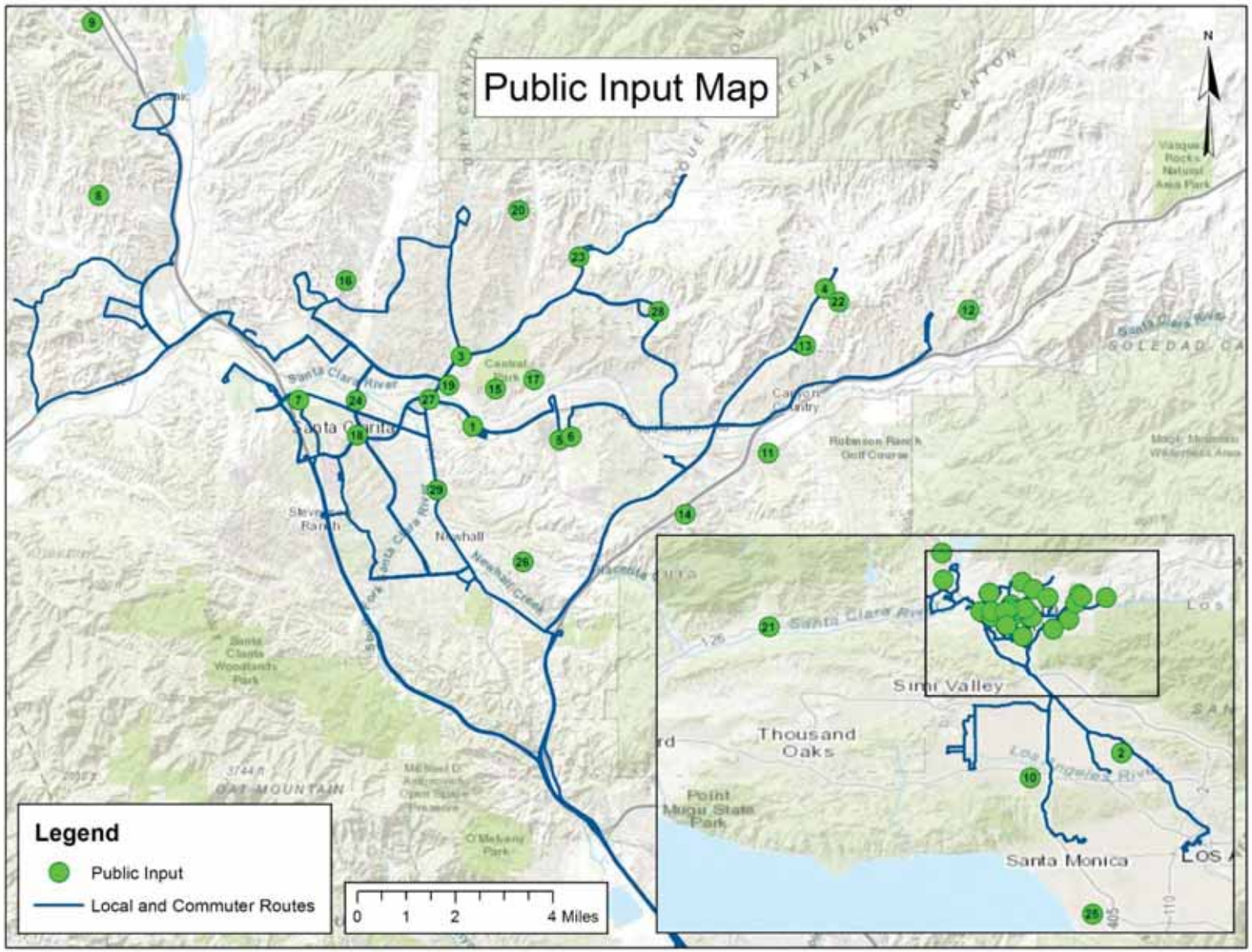


Exhibit 4.0.2 Public Input Matrix

Number	Point Location	Description
1	Saugas Speedway	
2	Burbank Airport	
3	Bouquet Canyon Rd & Seco Canyon Rd	This is a really scary pedestrian crossing. The signal for crossing Bouquet should not show "walk" when the left turn arrow from Seco is on. Too many drivers not paying attention to whether there is someone in the crosswalk.
4	Sierra Hwy & San Canyon Rd	Bus stop (#15887) in front of the Gothic landscaping does not have a canopy shelter to protect waiting bus passengers from the scorching sun in the summer and the rain in the winter. It is needed for this stop because there is absolutely no relief from the sun besides standing behind a powerline pole. Wooden bench needs to be updated as well.
5		Bus stop needs to be closer to the intersection for people who needs to go to the Walmart Supercenter.
6	Golden Valley Rd & Centre Pointe Pkwy	Sidewalk needed from the bus stop to the stop light going to Walmart shopping center. Uncomfortable walking on uneven grass, and not fully comfortable walking on the street. Not accessible for any individuals with and without disabilities that need to go to shopping.
7	Tourney Rd & Wayne Mills Pl	NB bus stop. Bus stop should be moved from its current location inside the right turn lane to just before the right turn pocket to prevent accident of vehicles cutting in front of merging bus.
8	Hillcrest Pkwy	Is it possible to add a bus service along Hillcrest Pkwy? There are numerous areas where a bus can turn around. Its a long uphill climb and a long walk to the current bus top at the Old Road.
9	The Old Rd & Ridge Top Ln	Any possibility of extending current route to service this area. Bus can easily turn around through numerous connecting streets.
10	Ventura Blvd & Balboa Blvd	Commuter bus stop needed. Can Santa Clarita Transit add a commuter service bus that travels to Ventura Blvd and Balboa Blvd? Many people from Santa Clarita work in this general area.
11	Lost Canyon Rd & Medley Ridge Rd	Jumpstart daycare.
12	Mammoth Ln & Arches Ln	
13	COC Canyon Country Campus	Where the bus stop (#14271) is located, there is very little to no room for individuals in wheelchairs and with walkers to enter or exit the bus safely.
14	Golden Valley Rd & Lost Canyon Rd	Bus service needed to this shopping center. One of the biggest shopping centers in the City and no way to get to it. Stops are already built along Golden Valley Road.
15	Newhall Ranch Rd	Bus service on Newhall Ranch Road from Bouquet Canyon to Walmart.
16	Copper Hill Dr & Camino del Arte Dr	We need bus routes serving the newly incorporated West Creek and West Hills community. Ideally have several bus stops on Copperhill Dr. between Camino del Arte Dr. and Tesoro del Valle Dr.
17	Newhall Ranch Rd & Fairfield Way	Rivervillage. Need bus service along Newhall Ranch Rd from Bouquet Canyon Rd to Sierra Hwy.
18	MRTC	757 NO HO Express needs exterior bike racks. The internal ones are too small and damage bikes.
19	Bouquet Canyon Rd & Newhall Canyon Rd	We need a pedestrian bridge spanning Newhall Ranch Road. Very dangerous riding in front of Vons on Bouquet Canyon Road until you reach the wide bike lane. It needs to connect Bouquet Creek Trail with the Cross Country Course trail at Central Park. Then the you could safely get to the wide bike lane over by Saugus High.
20	Rock Canyon Rd & Phantom Trl	Bus service needed. Bus stop is already here but only for one bus in the morning for kids. If reliable service was offered more people would use it.
21	Fillmore Active Adult Center	This is the connection location to gtr the GoVentura bus that goes to Ventura/Oxnard. There has never been a bus schedule to connect Santa Clarita with Fillmore so that these coastal cities can be reached directly...
22	Bouquet Canyon Rd & Seco Canyon Rd	Bus stop # 15887 was not served because of heavy rains, buses need to make a way to pick up passengers in those situation.
23	Benz Rd & Robin Ave	
24	McBean Pkwy & Creekside Rd	Home Goods
25	LAX	Los Angeles International Airport
26	Placerita Canyon Mobile Home Park	
27	Soledad Canyon Rd & Bouquet Canyon Rd	Synchronize Transfers. Allow bus transfers, 5/6 West should come before 4/14 North, 5/6 East should come after 4/14 South, 4/14 bus stops every 30 minutes. Schedule is Great. 5/6 bus stops random times. Sometimes 5 minutes sometimes 40 minutes
28	Whites Canyon Rd & Heller Cir	Transfer Synchronization. Adjust bus time to synchronize transfers, North Bus 14 to South Bus 12, North Bus 12 to South Bus 14. Sometimes during the day the buses are synchronized. Other times the wait is 30 minutes.
29	Railroad Ave & Oak Ridge Dr	Bus Transfer Synchronization. Transfer synchronization, 4/14 To Transit Center to 12 Whites Canyon, 12 to Transit Center to 4/14 North.

Community Survey Findings

Moore & Associates also conducted a survey of the general community to:

1. Assess (unaided) awareness of Santa Clarita Transit and its services,
2. Gauge public perception of Santa Clarita Transit and its services, and
3. Identify barriers and opportunities regarding potential transit usage.

A bilingual survey (English and Spanish) was created through discussions with City Transit staff. Survey fielding included three components:

1. Intercept at locations throughout the community (e.g., retail centers, public buildings, etc.),
2. First Class mailing to a random selection of households throughout Santa Clarita, and
3. Online.

Surveys were fielded across the entire Santa Clarita Valley including high activity centers in Acton, Agua Dulce, Canyon Country, Castaic, Hasley Canyon, Newhall, Saugus, Stevenson Ranch, Valencia, and Val Verde.

The survey was open from June 1, 2018 through December 31, 2018. Collectively these fielding efforts resulted in 1,536 valid surveys ensuring a 95-percent confidence level with a ±5 percent margin of error.

Most respondents have lived in the Santa Clarita Valley for six years or more (70.2 percent). The majority have not used any Santa Clarita Transit service (fixed-route, dial-a-ride, etc.) within the last 90 days nor have members of their household. However, they overwhelmingly believe it represents a valuable service to the community (78.3 percent). Most find the commuter bus Park & Ride availability to be good or excellent (70.0 percent).

Approximately two-thirds of respondents are either employed or attend school within in the Santa Clarita Valley. Respondents have a valid driver license (76.8 percent) and primarily drive alone (62.0 percent). Nearly all have at least one vehicle available in their household (95.0 percent), and more than three-quarters have two or more (76.7 percent).

Of respondents who regularly ride Santa Clarita Transit, the most commonly cited service is the local fixed-route. “Increased service frequency” was the most preferred or desired service enhancement (49.4 percent). Approximately two-thirds make six one-way trips per week (67.2 percent). The most frequently cited new destinations were along Golden Valley Road (such as Golden Valley High School and The Plaza at Golden Valley), and increased service to the San Fernando Valley, particularly the North Hollywood Red Line Station on the weekends as well as Encino.

Respondents who have not ridden Santa Clarita Transit within the prior 90 days were more likely to consider riding Santa Clarita Transit if commuter services were expanded to new destinations such as to the San Fernando Valley and Los Angeles; particularly Burbank Airport, the Flyaway station in Van Nuys, and the North Hollywood Red Line Station.

More detailed survey findings can be found on the following pages.

Question 1: What are the cross streets nearest to your home?

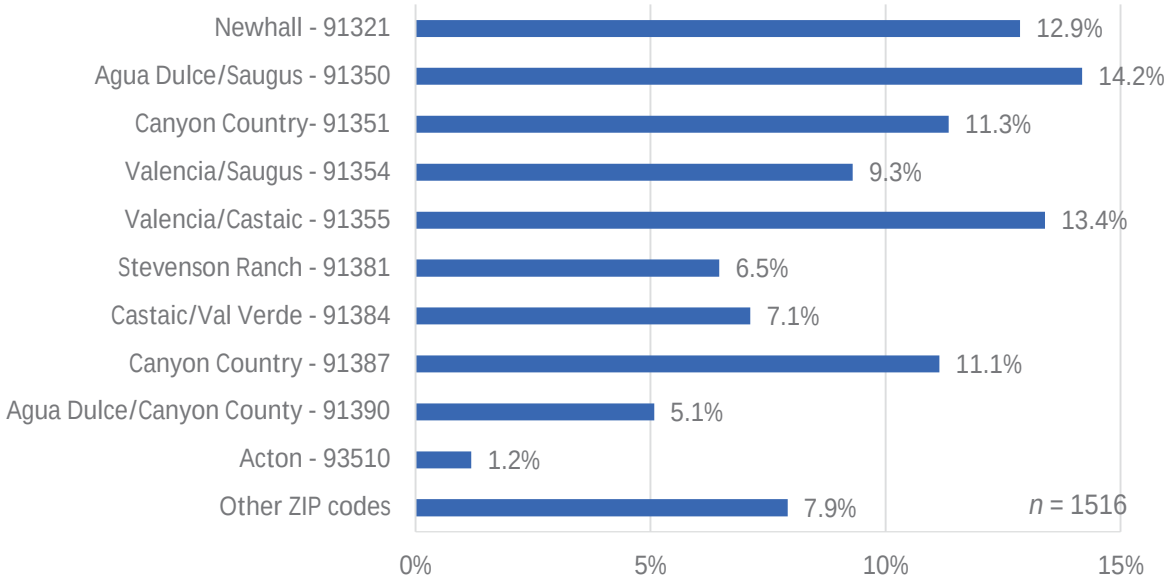
The top twelve most commonly cited cross-streets are listed below:

Exhibit 4.1.1 Most Commonly Cited Cross-Streets

Cross-streets	City	ZIP
Soledad Canyon Rd & Sierra Hwy	Canyon Country	91351
Seco Canyon Rd & Copper Hill Dr	Saugus/Agua Dulce	91350
Sand Canyon Rd & Soledad Canyon Rd	Canyon Country	91387
Valencia Blvd & McBean Pkwy	Valencia	91355
McBean Pkwy & Decoro Dr	Valencia/Saugus	91354
Newhall Ave & Valle Del Oro	Newhall	91321
Bouquet Canyon Rd & Seco Canyon Rd	Saugus/Agua Dulce	91350
Copper Hill Dr & McBean Pkwy	Valencia	91354
Peachland Ave & Lyons Ave	Newhall	91321
Seco Canyon Rd & Pamplico Dr	Saugus/Agua Dulce	91350
McBean Pkwy & Arroyo Park Dr	Valencia/Castaic	91355
Lyons Ave & Wiley Canyon Rd	Newhall	91321

Question 2: What is your home ZIP code?

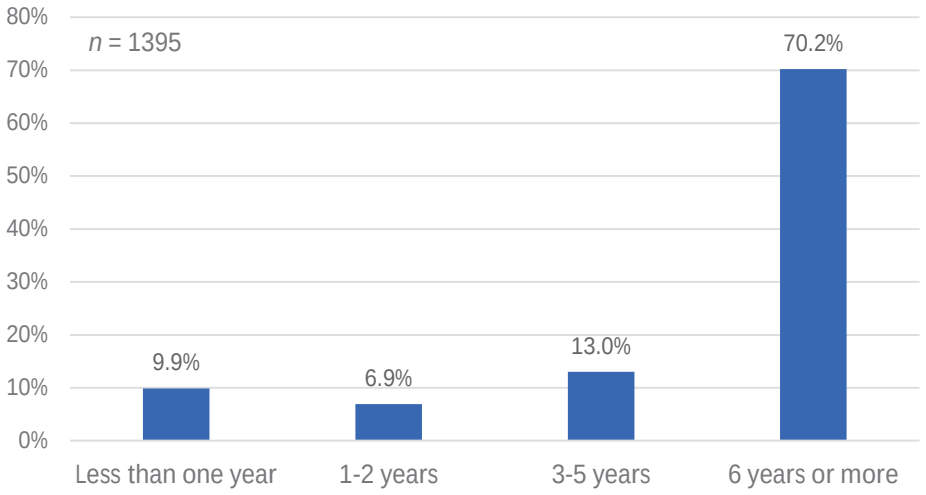
Exhibit 4.1.2 ZIP Code



Question 3: How long have you lived in the Santa Clarita Valley?

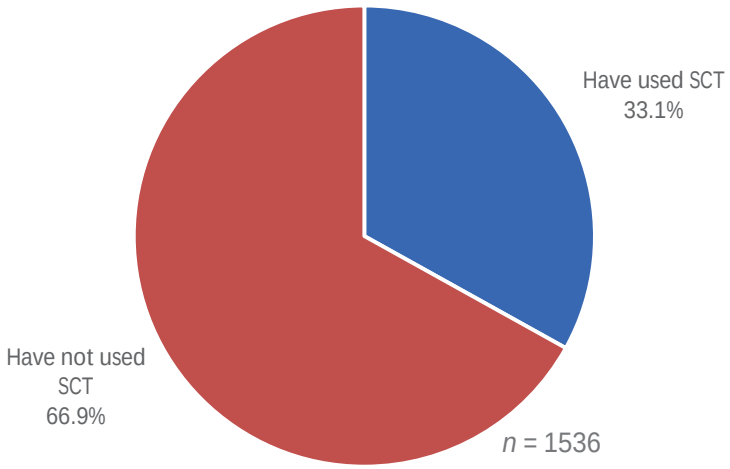
The majority of respondents were long time Santa Clarita residents with over 70 percent claiming residence for over six years.

Exhibit 4.1.3 Tenure of residence



Question 4: Have you used Santa Clarita Transit in the past 90 days?

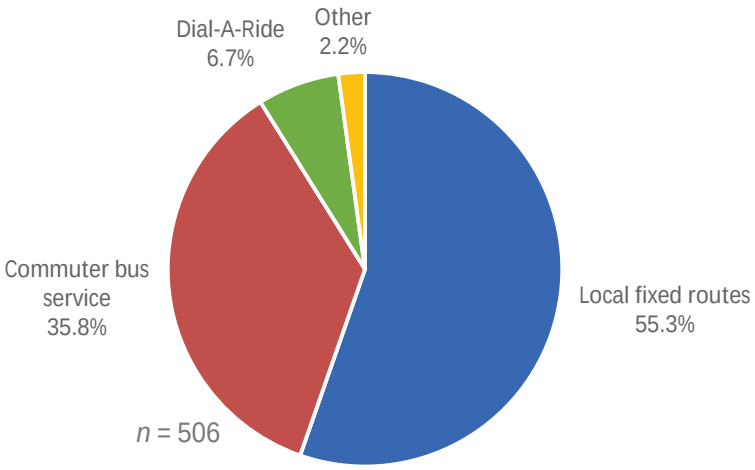
Exhibit 4.1.4 Previous use of SCT



Questions 5 through 9 were answered only by respondents who cited some use of Santa Clarita Transit within 90 days of survey contact.

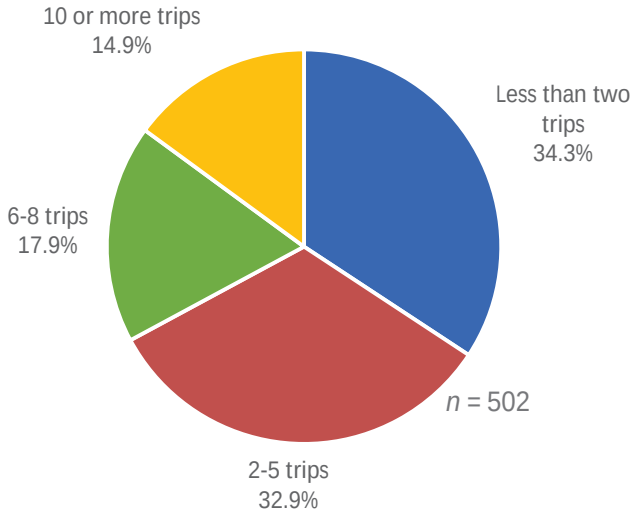
Question 5: (RIDERS ONLY) Which Santa Clarita Transit services do you use?

Exhibit 4.1.5 Mode of transit



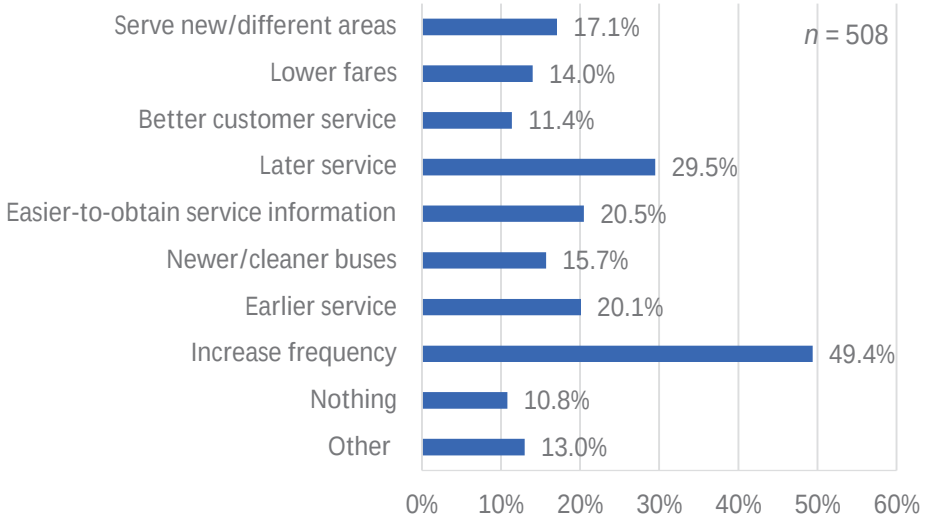
Question 6: (RIDERS ONLY) How many one-way trips do you make on Santa Clarita Transit in a typical week?

Exhibit 4.1.6 Trips per week



Question 7: (RIDERS ONLY) Is there a service improvement which would encourage you to use Santa Clarita Transit more often?

Exhibit 4.1.7 Service improvements

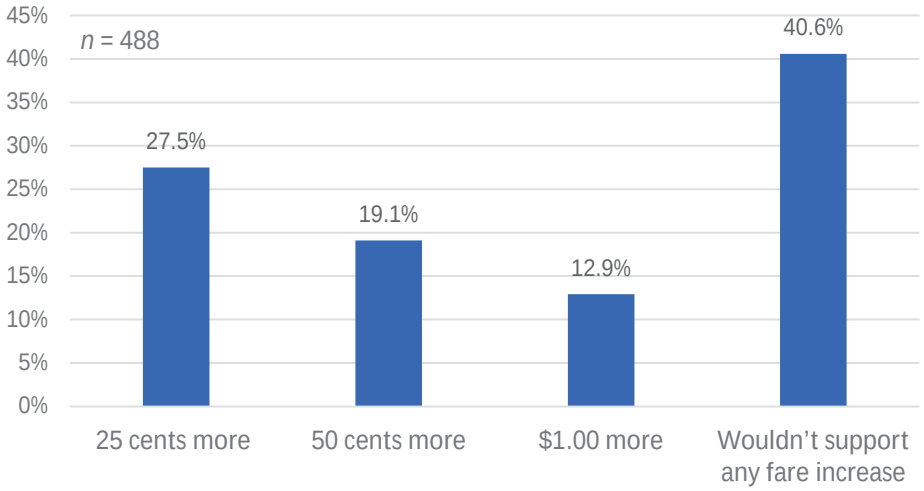


The most frequently cited new destinations were along Golden Valley Road (such as Golden Valley High School and The Plaza at Golden Valley), and increased service to the San Fernando Valley, particularly Encino and increased service to the North Hollywood Red Line Station (including weekends and evenings).

Question 8: (RIDERS ONLY) If a fare increase was needed to implement your preferred service improvement, would you be willing to pay…?

Nearly 60 percent of respondents (59.5 percent) would support a fare increase of 25 cents.

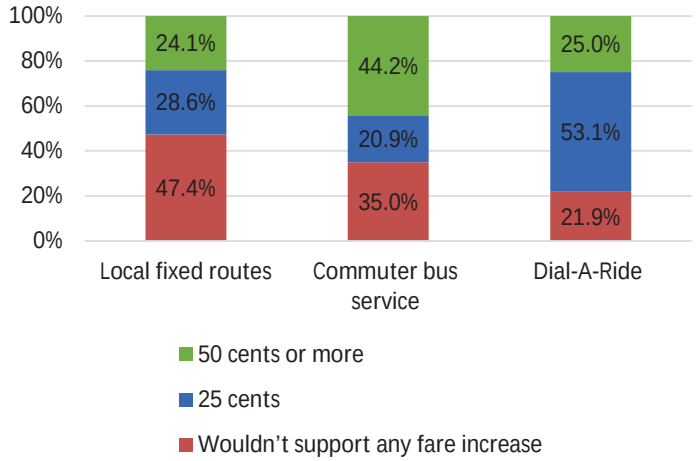
Exhibit 4.1.8 Fare increase for preferred service

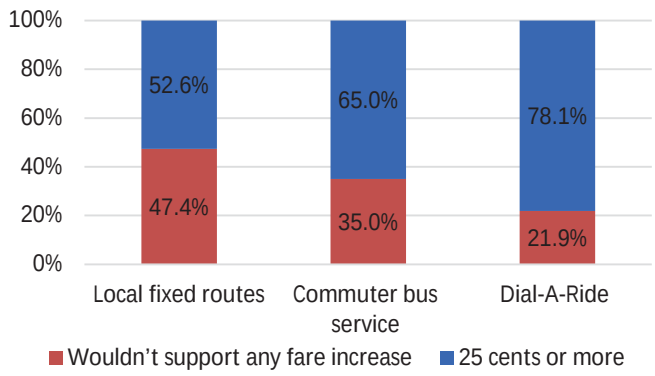


Cross-tabulations between Question 8 and Questions 5 and 6 were run to see if support for a proposed fare increase corresponded with a particular service or frequency of usage.

Cross-tabulation Question 5 (SCT service used) vs. Question 8 (fare increase).
Users of the Dial-A-Ride service were more likely to support a fare increase however riders of the Commuter bus service were more likely to support a higher fare increase.

Exhibit 4.1.8.a SCT service used vs fare increase

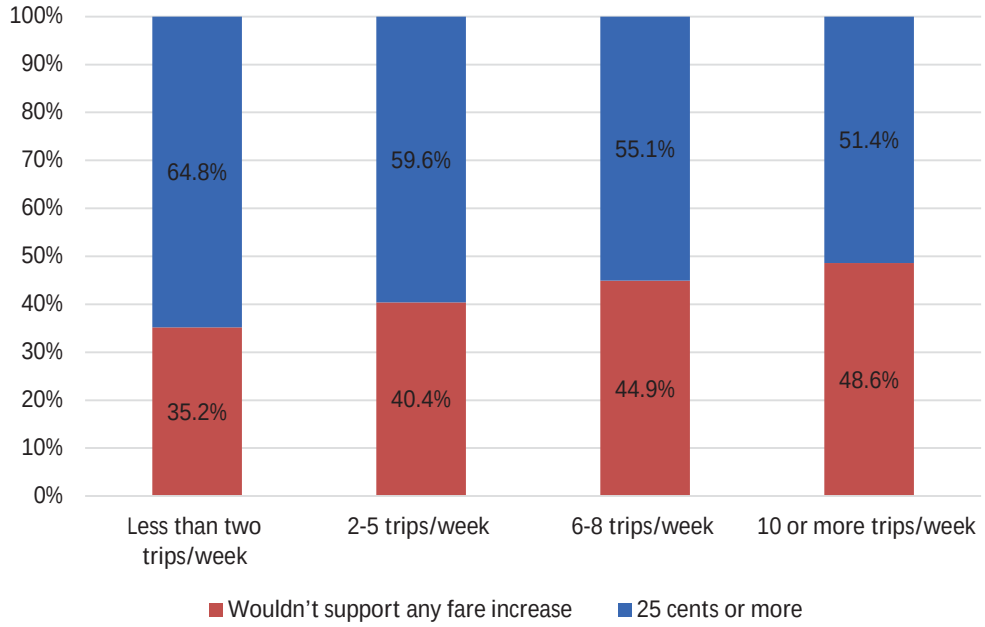




Cross-tabulation Question 6 (trips per week) vs. Question 8 (fare increase).

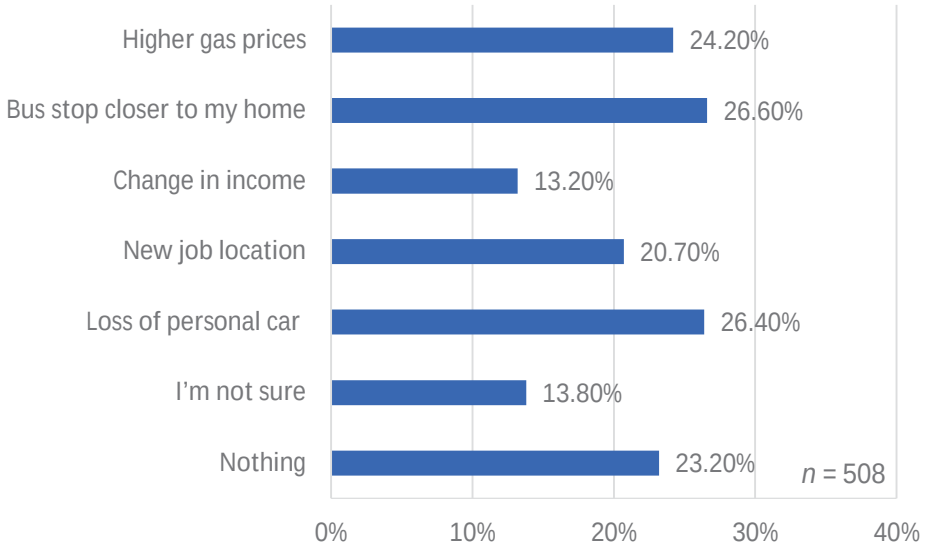
Respondents who cited utilizing SCT less than two times per week were most likely to support a fare increase of at least 25 cents.

Exhibit 4.1.8.b Trips per week vs fare increase



Question 9: (RIDERS ONLY) Is there a change in your personal circumstances which would encourage you to use Santa Clarita Transit more often?

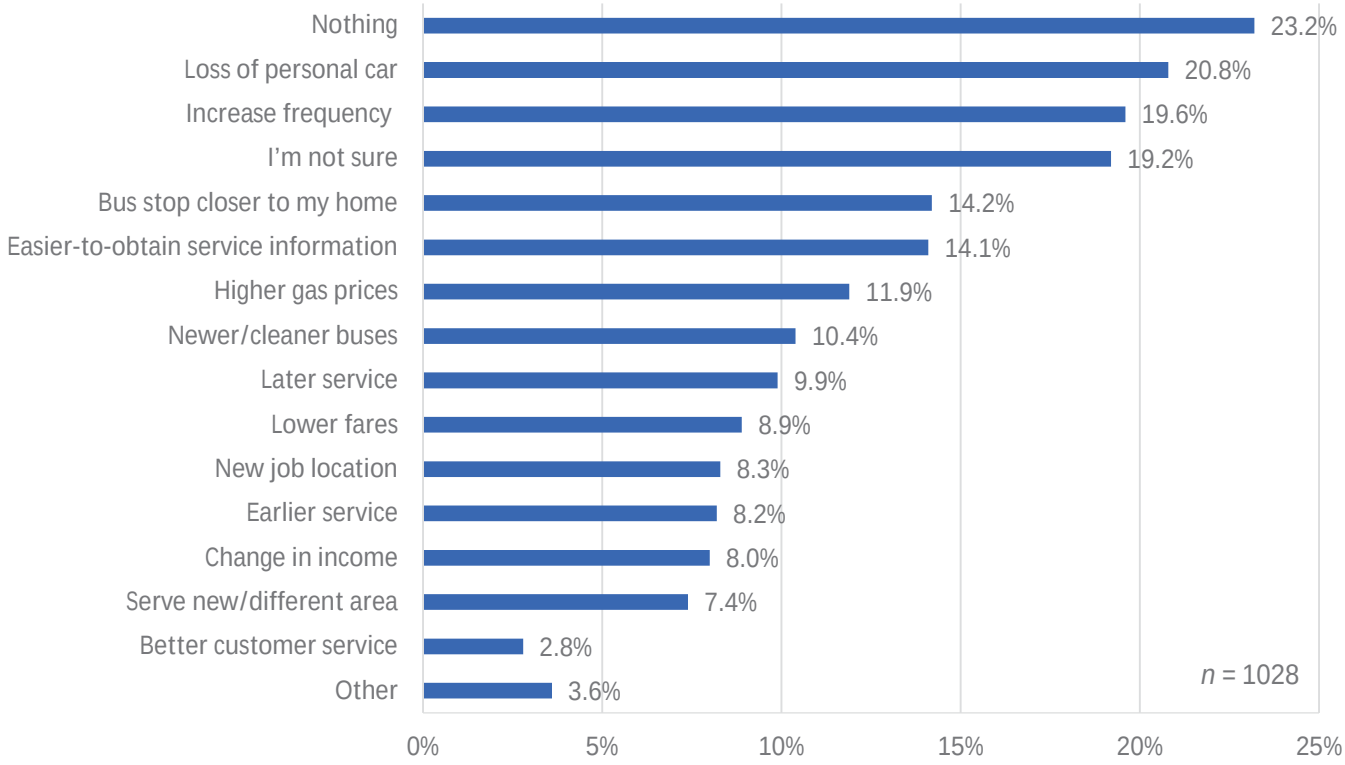
Exhibit 4.1.9 Rider personal circumstance change



Question 10 was answered only by respondents who cited no use of Santa Clarita Transit within 90 days of survey contact.

Question 10: (NON-RIDERS ONLY) Is there a service improvement or change in your personal circumstances which would encourage you to use Santa Clarita Transit?

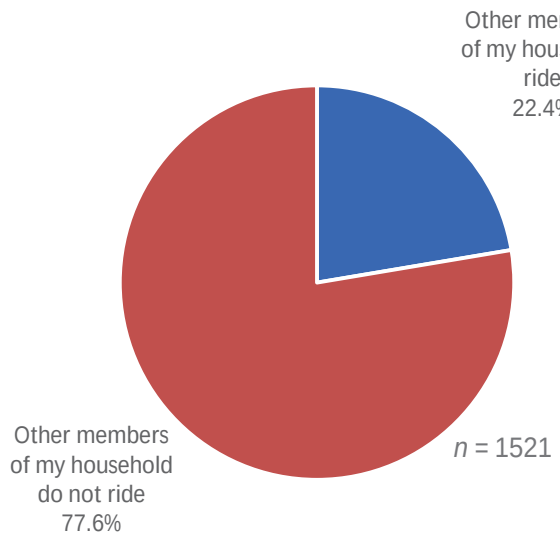
Exhibit 4.1.10 Non-rider personal circumstance change



The most frequently-cited new service/destination among non-riders was extended service on commuter routes to the San Fernando Valley and Los Angeles, particularly Burbank Airport, the Flyaway, station in Van Nuys, and increased service to the North Hollywood Red Line Station. Nearly a quarter of respondents (23.2 percent) claimed nothing would encourage them to ride while another 40.7 percent claimed only an unforeseen circumstance would cause them to ride such as the loss of their personal vehicle, a change in income, or a significant increase in gas prices.

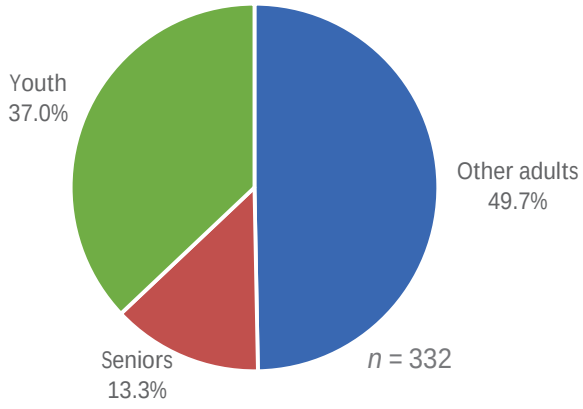
Question 11: Do other members of your household ride Santa Clarita Transit?

Exhibit 4.1.11 Household ridership



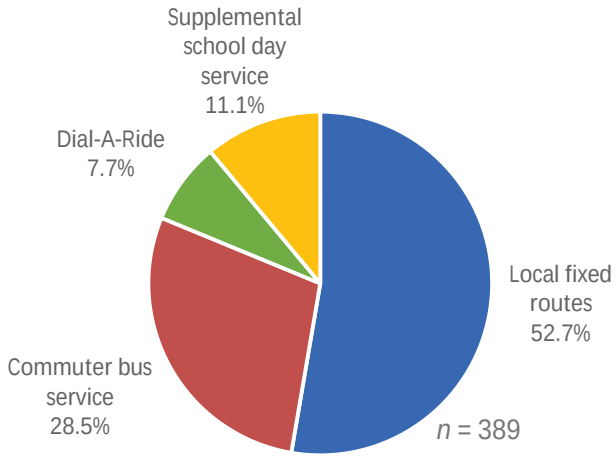
Question 11a: If yes, who in your household rides?

Exhibit 4.1.11.a Household rider age



Question 11b: If yes, which services do they use?

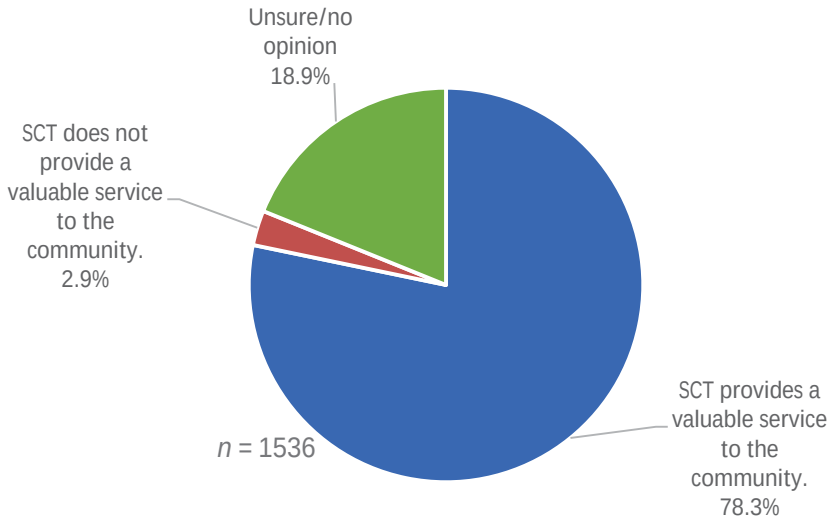
Exhibit 4.1.11.b Household service mode



Question 12: Do you feel Santa Clarita Transit provides a valuable service to the community?

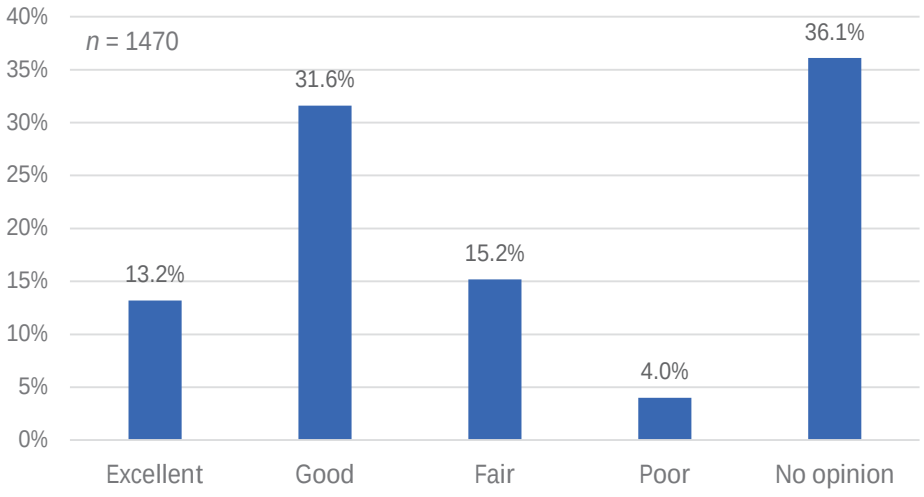
Though most respondents do not use Santa Clarita Transit themselves, they overwhelmingly believe it represents a valuable service to the community (78.3 percent).

Exhibit 4.1.12 Public perception



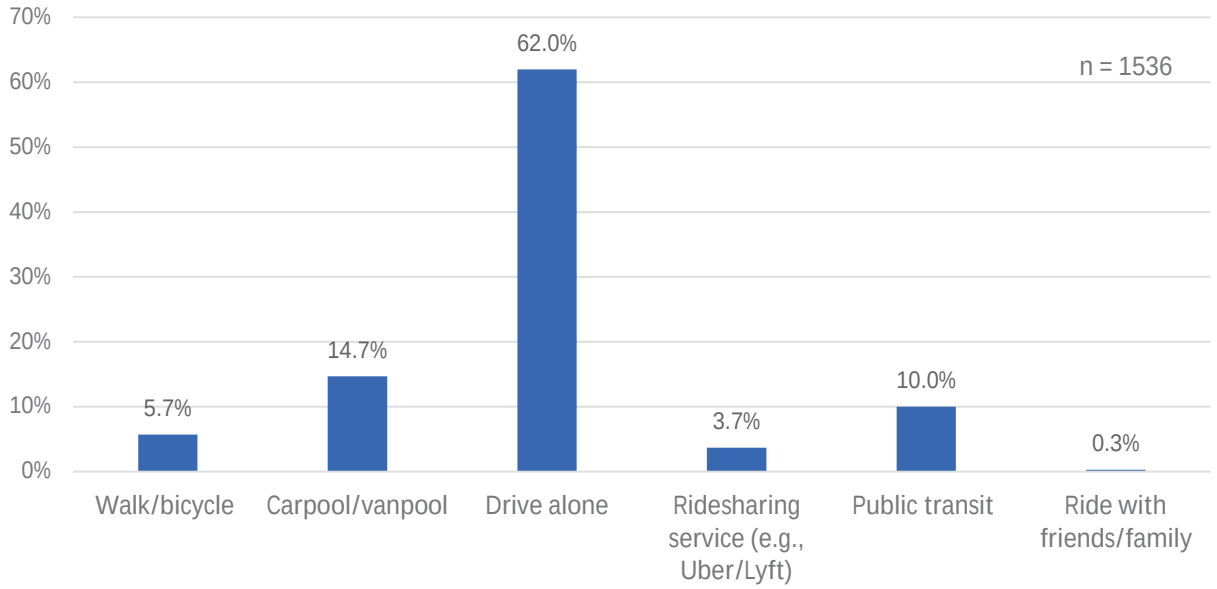
Question 13: Please rate Park & Ride availability in the Santa Clarita Valley.

Exhibit 4.1.13 Park & Ride availability



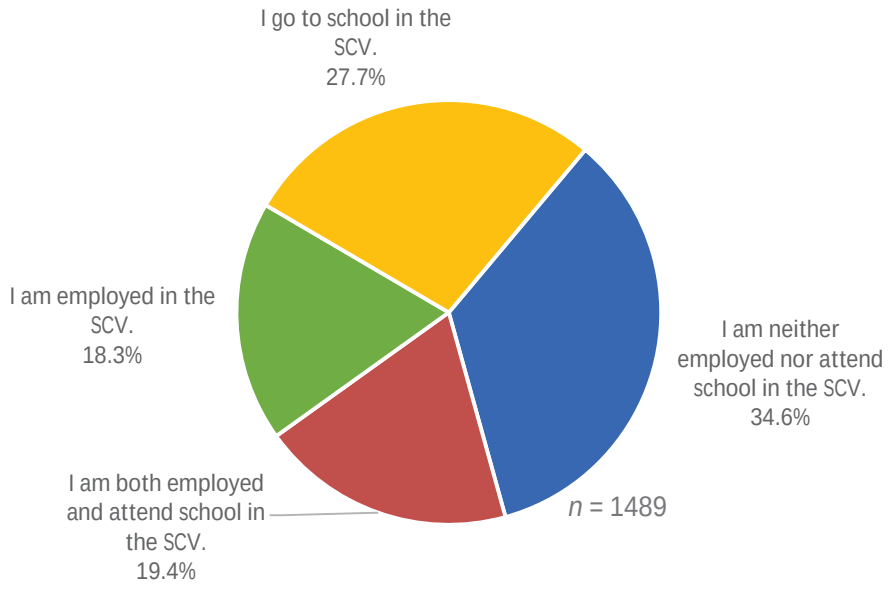
Question 14: What is your primary mode of transportation within the Santa Clarita Valley?

Exhibit 4.1.14 Primary mode of transportation



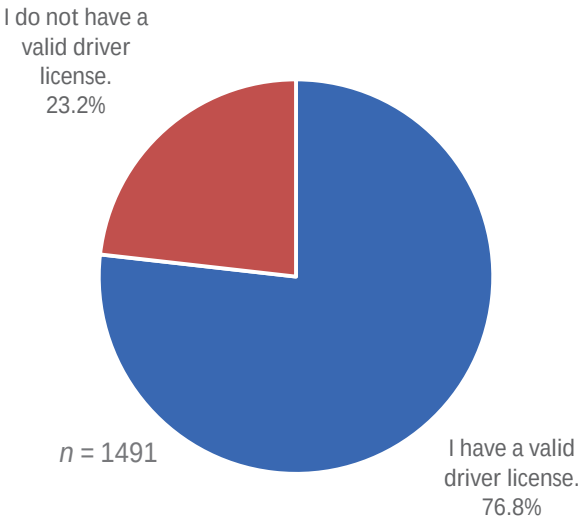
Question 15: Are you employed in the Santa Clarita Valley?
Question 16: Do you attend school in the Santa Clarita Valley?

Exhibit 4.1.15 Work and/or live in Santa Clarita Valley



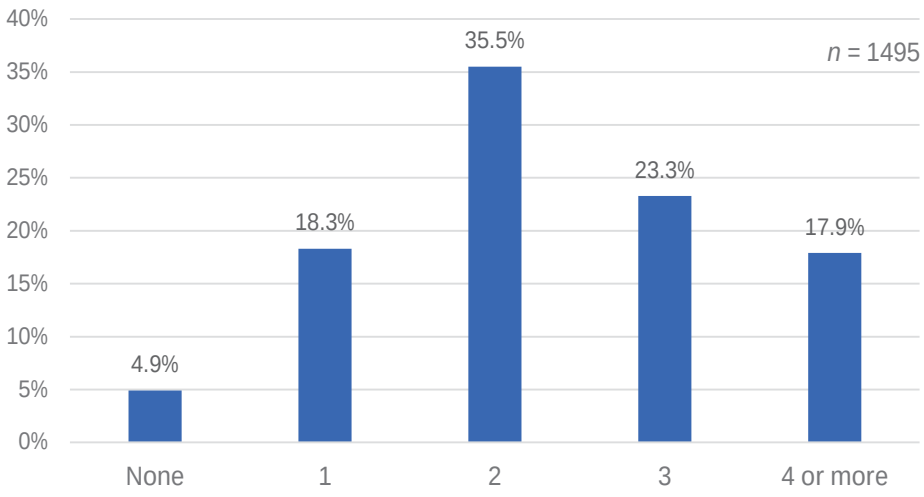
Question 17: Do you have a valid driver license?

Exhibit 4.1.16 Valid Driver license



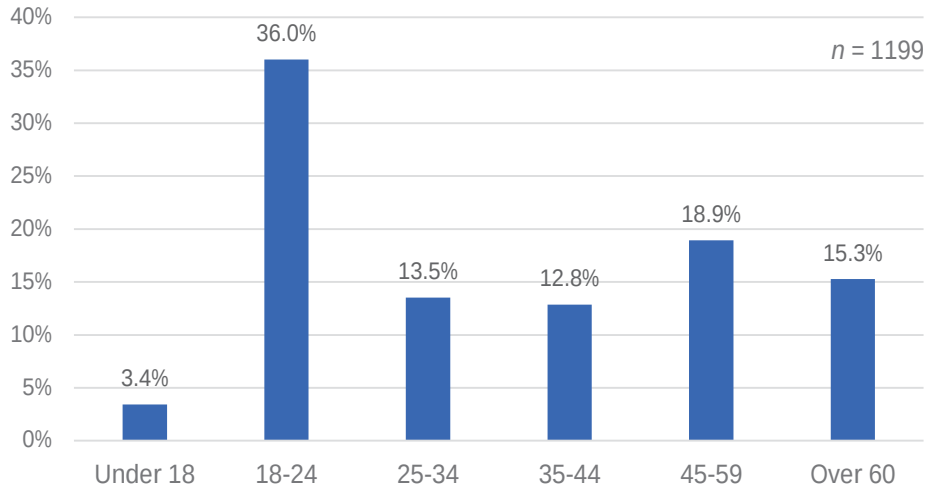
Question 18: How many working vehicles are available to members of your household?

Exhibit 4.1.17 Household vehicles



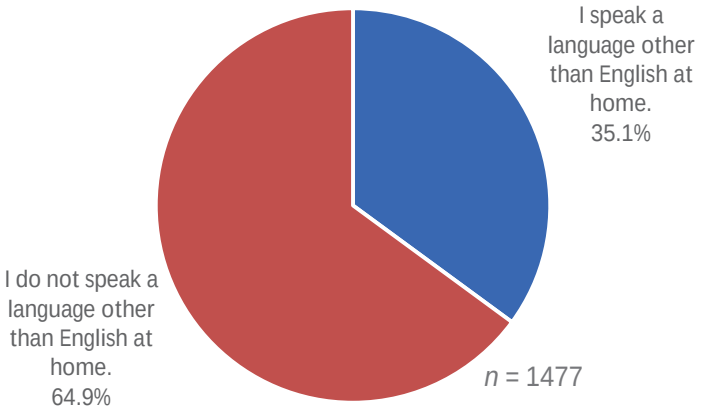
Question 19: What is your age?

Exhibit 4.1.18 Age



Question 20: Do you speak a language other than English at home?

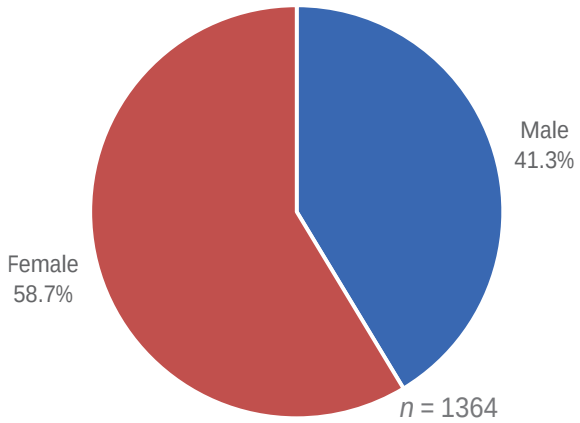
Exhibit 4.1.19 Language at home



Of the 518 respondents who report speaking a language other than English at home, nearly 63 percent speak Spanish.

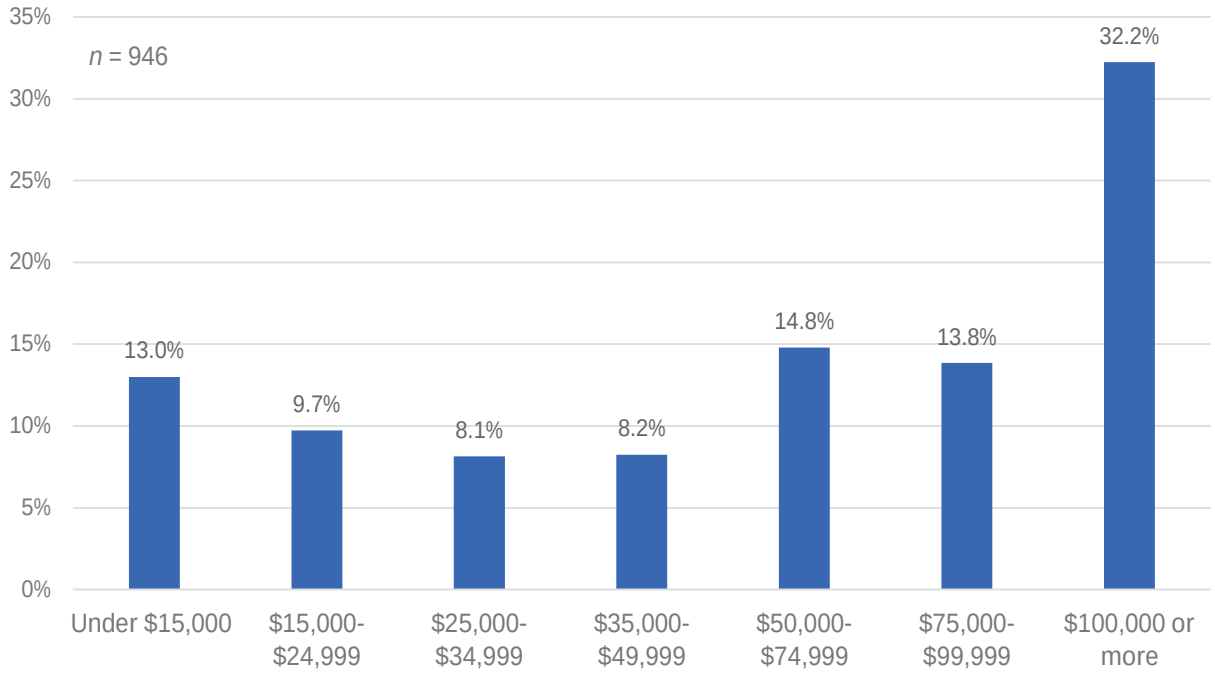
Question 21: Are you...?

Exhibit 4.1.20 Gender



Question 22: What was your total household income in 2017?

Exhibit 4.1.21 Household income



On Board Survey Findings

Overview

In 2018, the City of Santa Clarita retained Moore & Associates, Inc. to conduct a passenger survey onboard its local service, which operates in Santa Clarita, Castaic, Hasley Canyon, Stevenson Ranch, and Val Verde.

Survey Development

Development of the survey instrument used in the 2018 survey was created to reflect aspects of the ridership onboard the local routes.

Methodology

Moore & Associates utilized an in-person intercept methodology onboard the vehicles. In-person data collection occurred with a gap due to summer vacation. Collection began June 14, however ridership was lower than expected due to the schoolyear ending. Moore & Associates and the city agreed to post-pone on board survey collection until local schools began the next schoolyear on August 16. Collection resumed August 30 and concluded on September 12 across seven days.

Survey Sample

The on board survey was conducted on Routes 1, 2, 3, 4, 5, 6, 7, 12, 14, 501, 502, and 757. A total of 1,330 valid surveys was collected.

Data Collection

The survey questionnaire was printed on 100-pound cardstock, thereby eliminating the need for clipboards. The one-page survey instrument was printed on 8 ½ x 14 inch paper with English on one side and Spanish on the other.

Surveyors were identified by an identification badge worn on a laminated clip as well as a reflective vest. Prior to boarding the assigned vehicle, each surveyor was provided with a surveyor bag containing survey forms, pens, route-specific map and schedule, and individual surveyor "paddle."

Surveyors offered the survey to all customers boarding the vehicle while also making themselves available to assist with survey taking as requested. Survey participants were requested to return the completed instrument to the surveyor or leave it on their seat for retrieval by a surveyor. At the conclusion of each day's data collection, all surveys were reviewed for completeness, bundled by route, and returned to our office for data entry.

Data Processing

Data Entry

All survey data was entered into an online database using trained data entry personnel. Moore & Associates' staff monitored the data entry process, reviewing data entry work on a daily basis while also conducting spot-checks throughout.

Data Cleaning

Data cleaning was undertaken by trained personnel following completion of data entry. This process addressed differing data formatting that resulted in identical responses being sorted as different. The cleaned data was then imported into a Statistical Package for the Social Sciences (SPSS) database for further analysis. Following data cleaning, simple frequencies were compiled.

Analytical Methods

The SPSS database allowed our project team to compile simple frequencies as well as data cross-tabulations within each dataset. Such cross-tabulations allow comparisons between survey responses that can provide additional insight into customer profiles, travel patterns, perceptions of service, and demographics.

"Typical" Customer Profile

- Is travelling to work or school (65.5 percent),
- Rides one bus per one-way trip (54.3 percent),
- Waits 20 minutes or less between buses (50.3 percent),
- Pays cash fare (53.3 percent),
- Pays full fare (82.0 percent),
- Rides five one-way trips or less per week (55.8 percent),
- Rates "price/cost" highest (4.25),
- Rates "service hours" lowest (3.79),
- Has not used Token Transit (86.2 percent),
- Has not used Santa Clarita Transit app (52.6 percent),
- Is between the ages of 18 to 34 (50.2 percent),
- Identifies as Hispanic/Latino (43.6 percent),
- Speaks English "very well" (65.6 percent),
- Lives in household of 3 to 5 people (58.0 percent),
- Has a household income of under $35,000 (66.8 percent),
- Does not have a valid driver license (69.5 percent), and
- Identifies as male (51.3 percent).

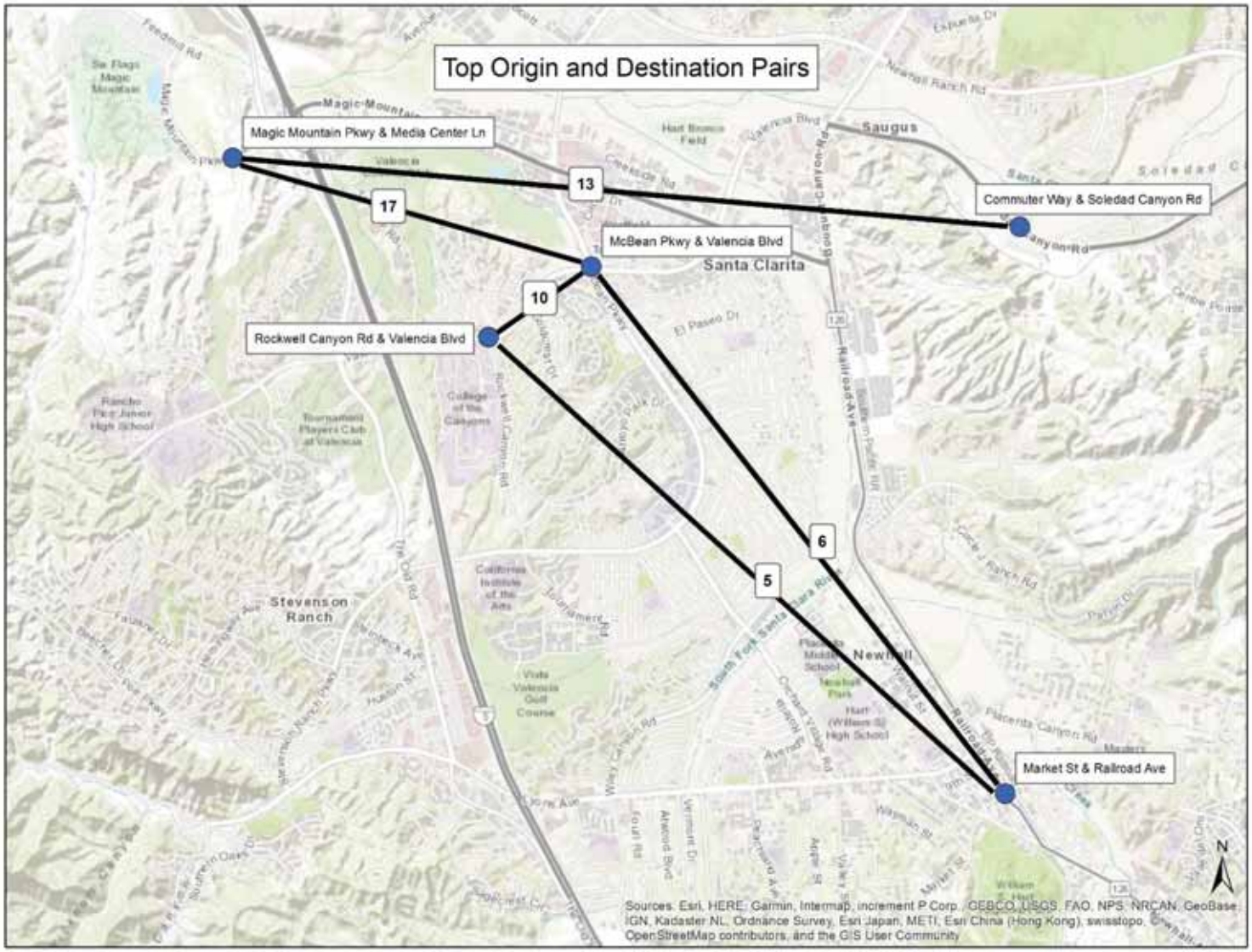
Findings

Top Origin and Destination Pairs

Exhibit 4.2.1 Top Origin and Destination Pairings

Frequency	Origin	Destination
13	Soledad Canyon Rd & Commuter Way	Magic Mountain Pkwy & Media Center Ln
12	Valencia Blvd & McBean Pkwy	Magic Mountain Pkwy & Media Center Ln
6	Market St & Railroad Ave	McBean Pkwy & Valencia Blvd
5	Magic Mountain Pkwy & Media Center Ln	McBean Pkwy & Valencia Blvd
5	Market St & Railroad Ave	Rockwell Canyon Rd & Valencia Blvd
5	Valencia Blvd & McBean Pkwy	Rockwell Canyon Rd & Valencia Blvd
5	Valencia Blvd & Rockwell Canyon Rd	McBean Pkwy & Valencia Blvd

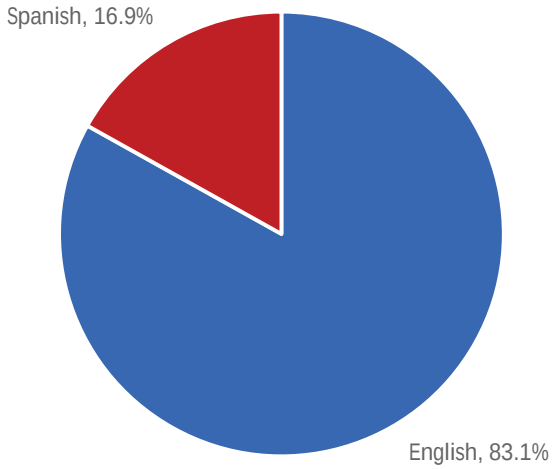
Exhibit 4.2.2 Top Origin and Destination Pairings Map



Preferred survey language.
One-sixth (16.9 percent) of respondents answered the survey in Spanish.

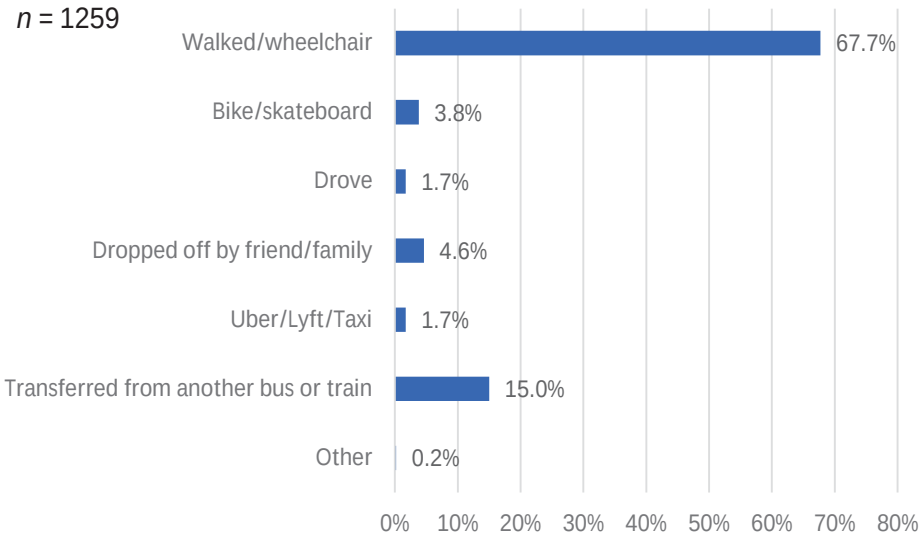
Exhibit 4.2.3 Survey language

n = 1321



How did you get to the stop where you boarded this bus?
Two-thirds (67.7 percent) of respondents walked to their bus.

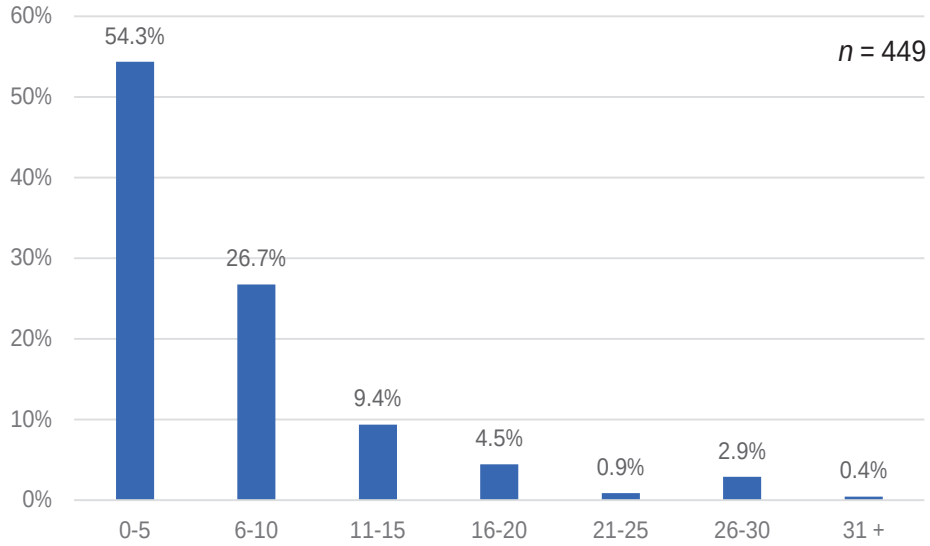
Exhibit 4.2.4 Travel to bus



How many minutes did it take you to reach the stop?

More than half (54.3 percent) of respondents who chose "walked/wheelchair" or "bike/skateboard" spent no more than five minutes traveling to their bus stop.

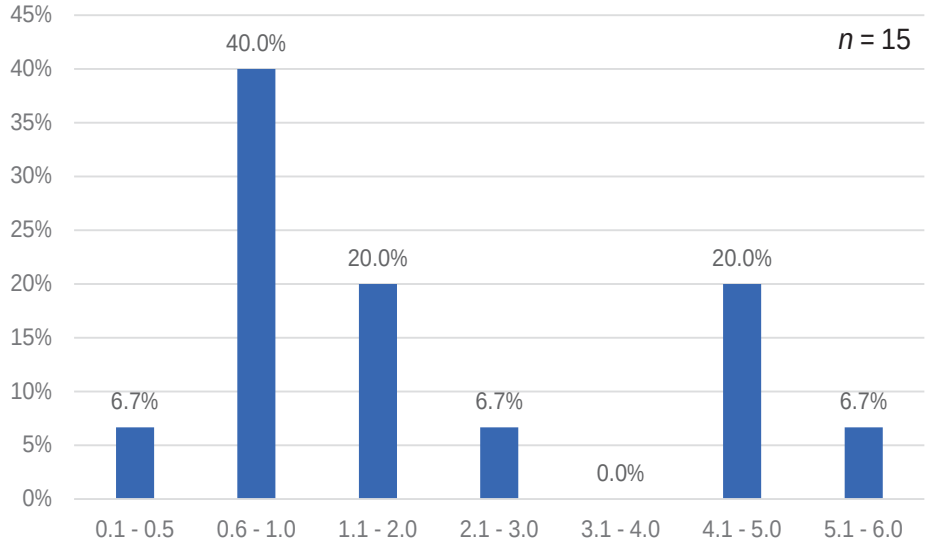
Exhibit 4.2.5 Minutes to stop



How many miles did you travel to reach the stop?

Two thirds (66.7 percent) of respondents who chose "drove," "dropped off by friend/family," or "Uber/Lyft/Taxi" traveled two miles or less to their bus stop.

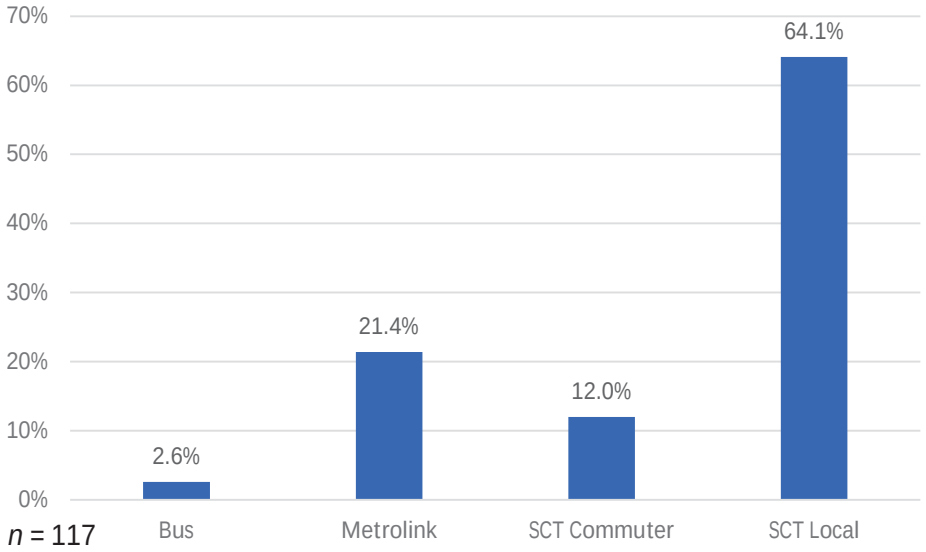
Exhibit 4.2.6 Miles to stop



Specify what other bus or train you transferred from.

Nearly two-thirds (64.1 percent) of transfers to the respondents current bus were local Santa Clarita Transit routes.

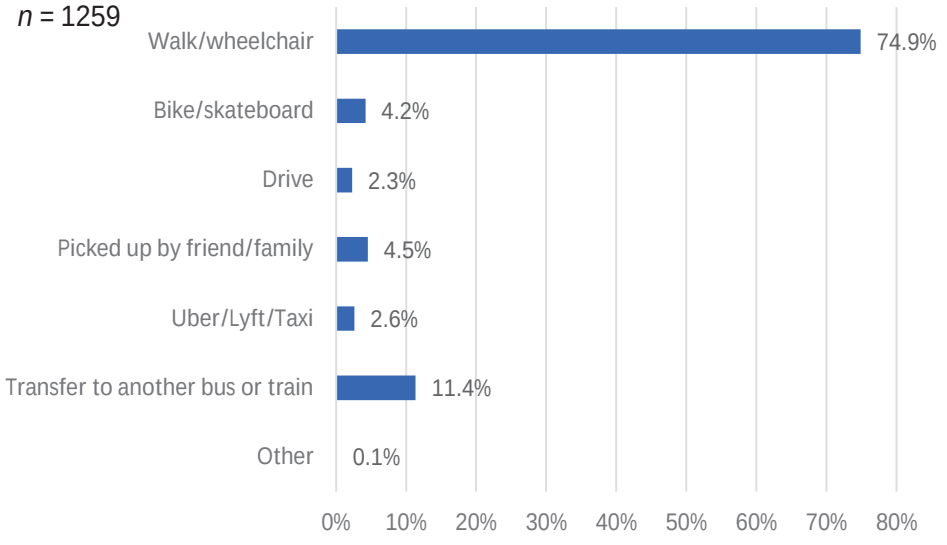
Exhibit 4.2.7 Transfer before bus



How will you get to your destination from the bus stop where you will get off THIS bus?

Three-quarters (74.9 percent) of respondents walked to their final destination from the bus they were surveyed on.

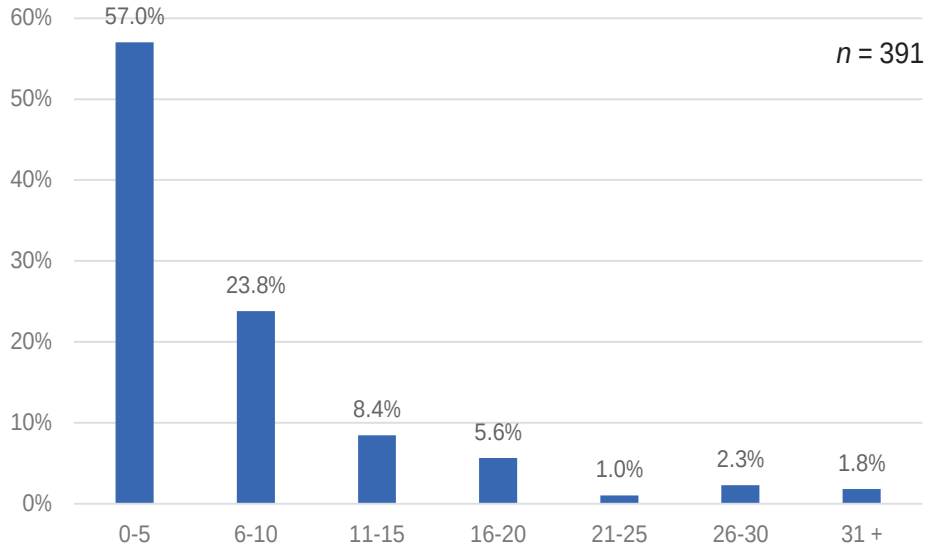
Exhibit 4.2.8 Travel after bus



How many minutes will it take to reach your destination?

More than half (57.0 percent) of respondents who chose "walked/wheelchair" or "bike/skateboard" spent no more than five minutes traveling to their bus stop.

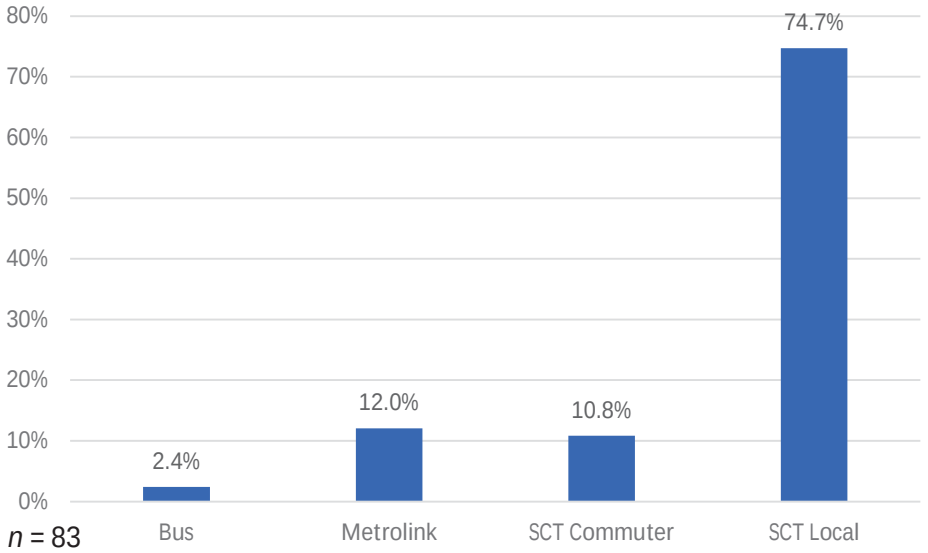
Exhibit 4.2.9 Minutes after bus



Specify what other bus or train you will transfer to.

Nearly three-quarters (74.7 percent) of transfers to the respondents' current bus were local Santa Clarita Transit routes.

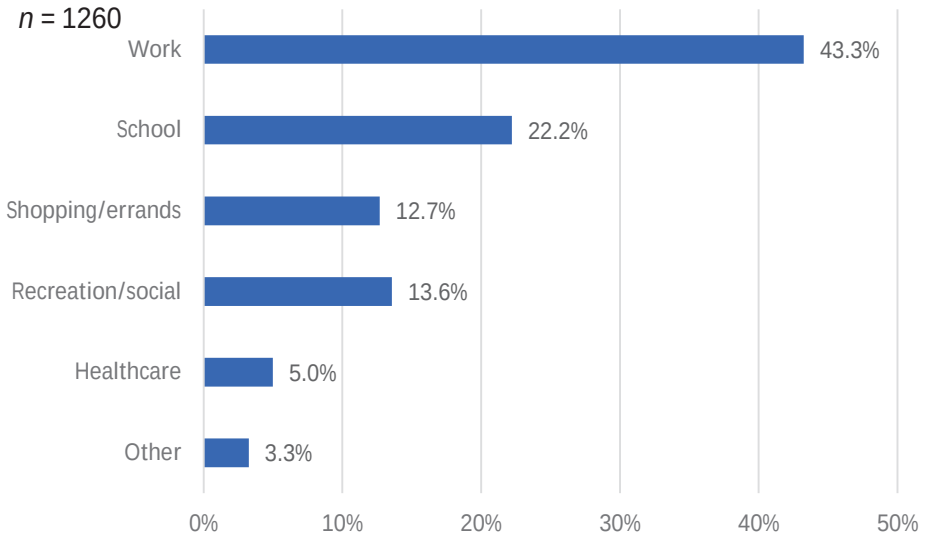
Exhibit 4.2.10 Transfer after bus



What is the primary purpose of your trip?

Nearly two-thirds (65.5 percent) of respondents were travelling to work or school. The most common response written in "other" was "church" (0.6 percent).

Exhibit 4.2.11 Primary purpose

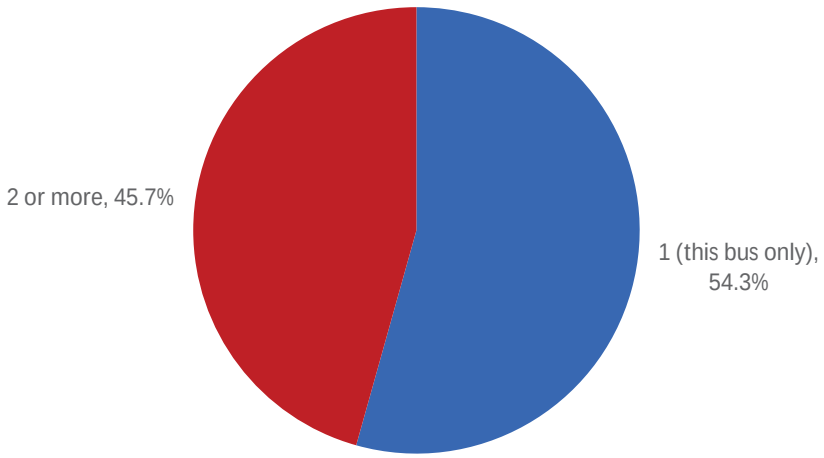


How many Santa Clarita Transit buses (including this one) will you use to make THIS one-way trip?

The majority (54.3 percent) of respondents ride one bus per one-way trip.

Exhibit 4.2.12 Buses per trip

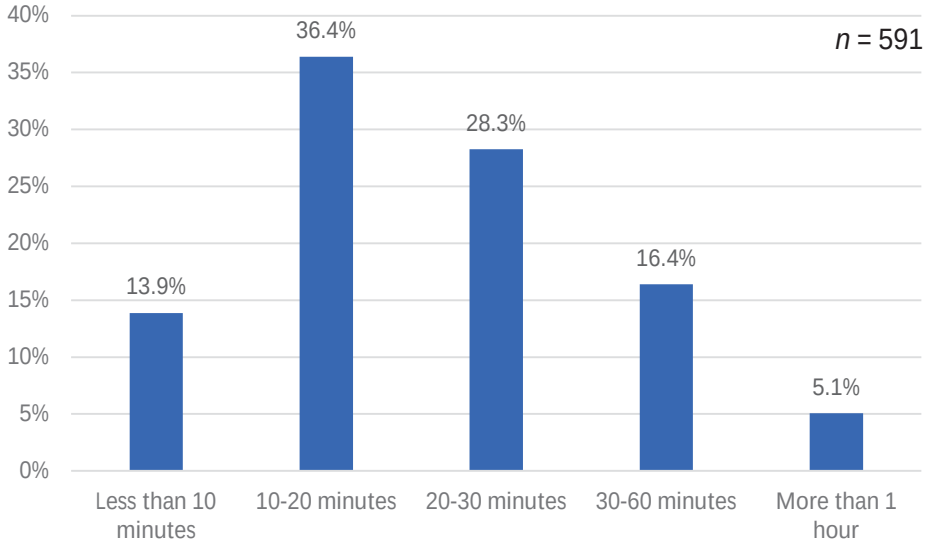
n = 1253



How long do you typically wait between buses?

Half (50.3 percent) of respondents wait 20 minutes or less between buses.

Exhibit 4.2.13 Wait between buses



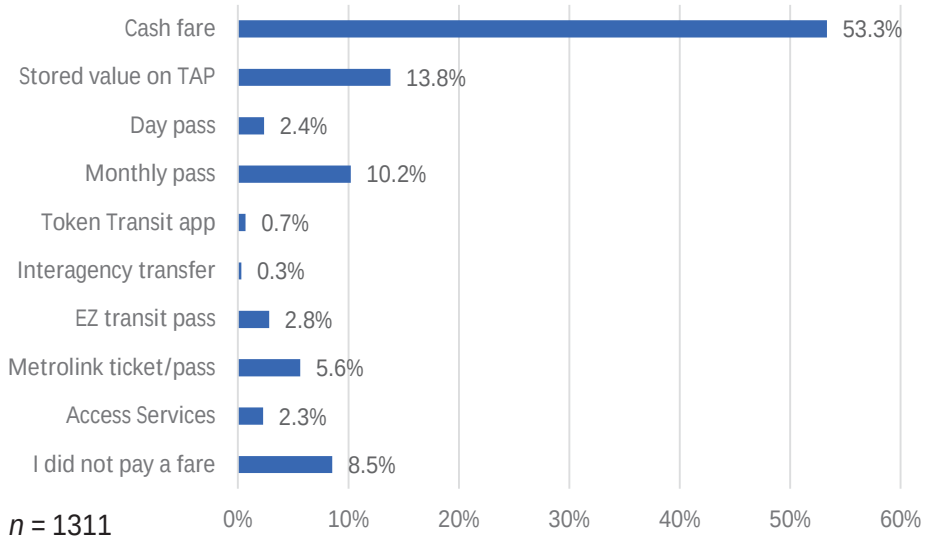
Which routes are you typically transferring between?

Most respondents reported transferring to or from Routes 5/6 or Route 12.

How did you pay for this trip?

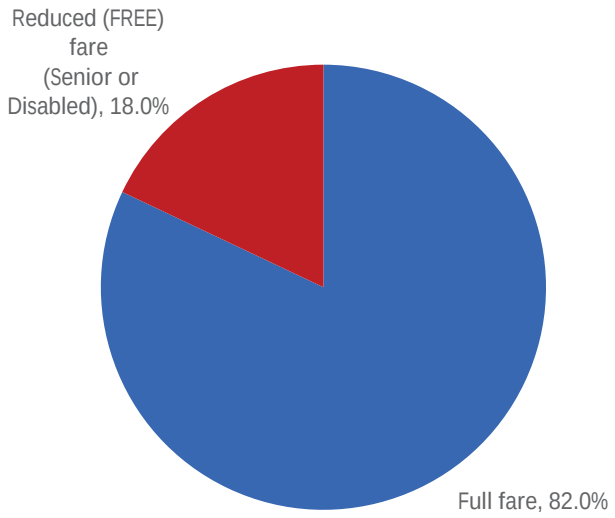
More than half (53.3 percent) of respondents pay with cash. Around one-tenth (10.2 percent) of respondents use monthly passes.

Exhibit 4.2.14 Payment



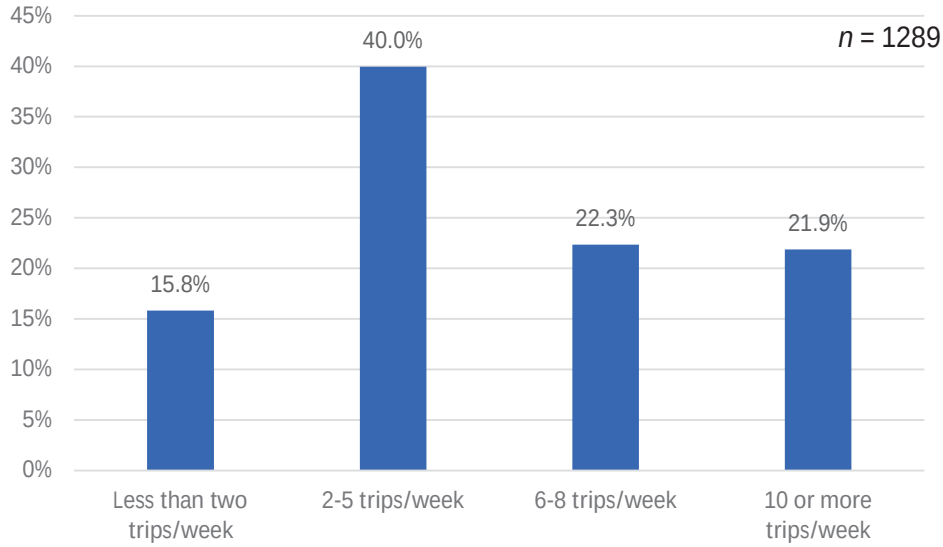
What TYPE of fare did you use on this trip?
Nearly one-fifth (18.0 percent) of have reduced (free) fares.

Exhibit 4.2.15 Fare type
n = 1119



How many one-way trips do you make on Santa Clarita Transit in a typical week?
The majority (55.8) of respondents ride five one-way trips or less per week.

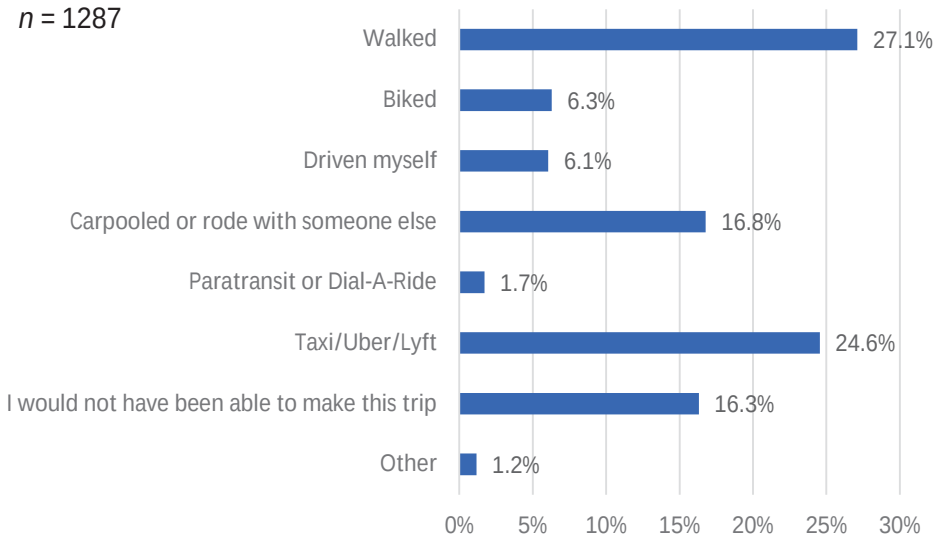
Exhibit 4.2.16 One-way trips per week
n = 1289



If Santa Clarita Transit were not available, how would you have made this trip?

Around one-sixth (16.3 percent) of respondents would not be able to make their trip without Santa Clarita Transit.

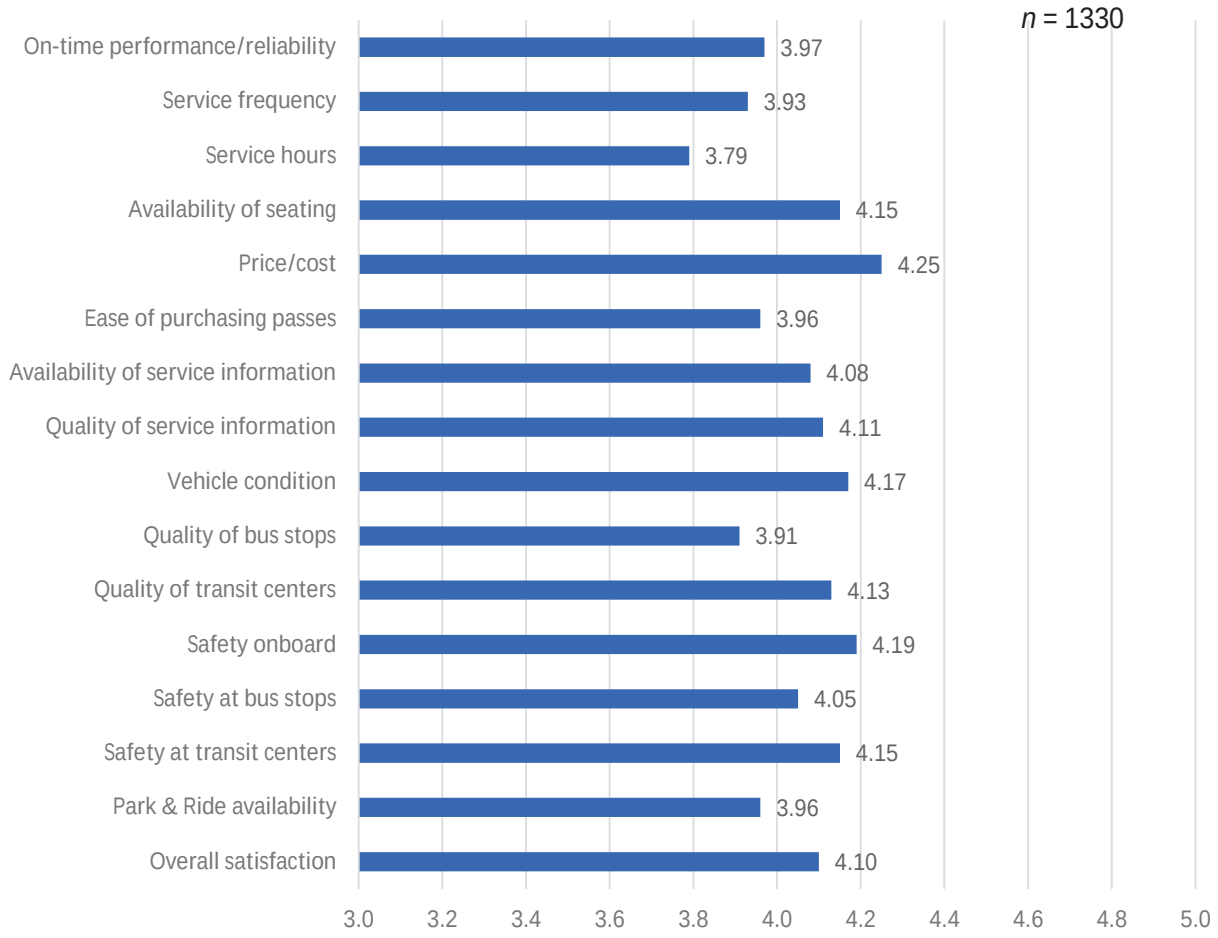
Exhibit 4.2.17 Alternative travel mode



Please rate Santa Clarita Transit on the following attributes:

The ratings are on a five-point scale, with all scores positive. The highest rated attribute was "price/cost" (4.25). The lowest rated attribute is "service hours" (3.79). The overall satisfaction was near the average of all scores (4.10).

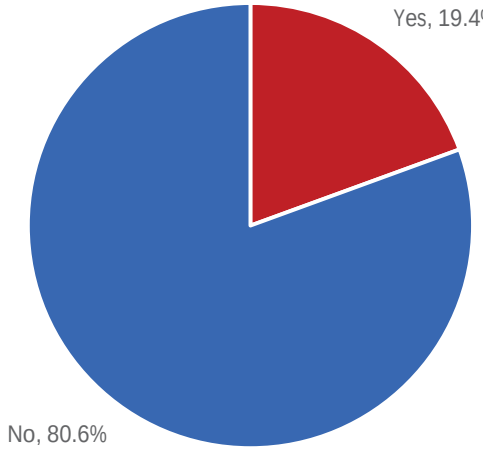
Exhibit 4.2.18 Attributes ratings



Is there a location not currently served by Santa Clarita Transit that you would like to be served?
Approximately one-fifth (19.4 percent) of respondents believe Santa Clarita Transit service is needed elsewhere. The top destinations requested were "Golden Valley," "The Plaza at Golden Valley," and "Golden Valley Walmart."

Exhibit 4.2.19 Locations service

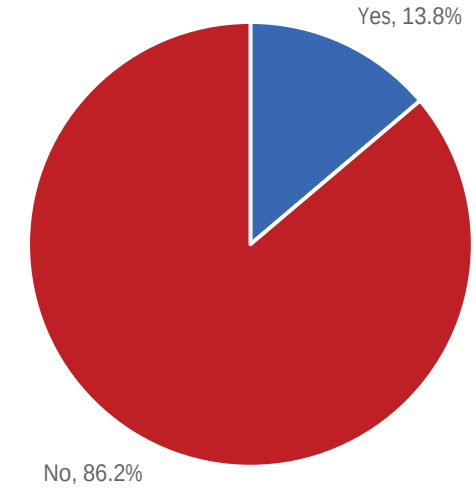
n = 1173



Have you ever used Token Transit to pay your fare?
Most respondents (86.2 percent) have not used Token Transit to pay their fare.

Exhibit 4.2.20 Token Transit usage

n = 1245

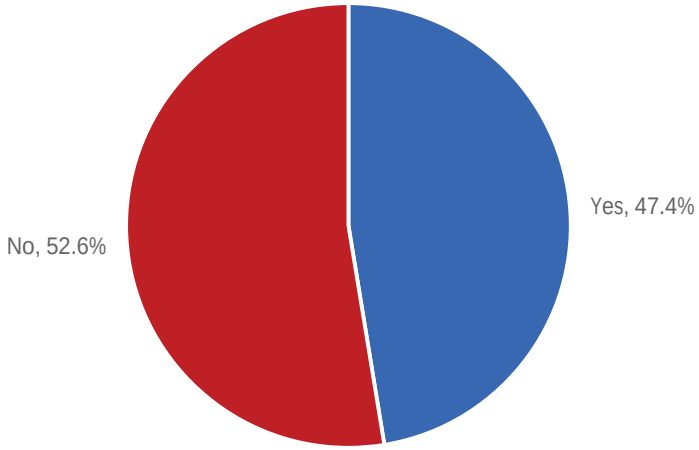


Have you ever used the Santa Clarita Transit app to see realtime bus arrival information or plan your trip?

Nearly half (47.4 percent) of respondents have used the Santa Clarita Transit app.

Exhibit 4.2.21 SCT app usage

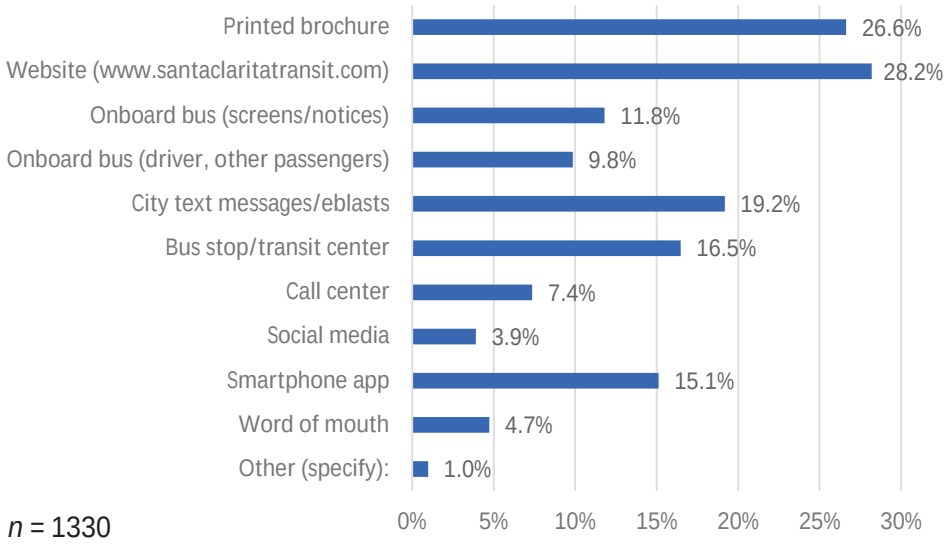
n = 1238



Where do you typically get SCT information?

The most common information sources are "website" (28.2 percent) and "printed brochure" (26.6 percent).

Exhibit 4.2.22 SCT information

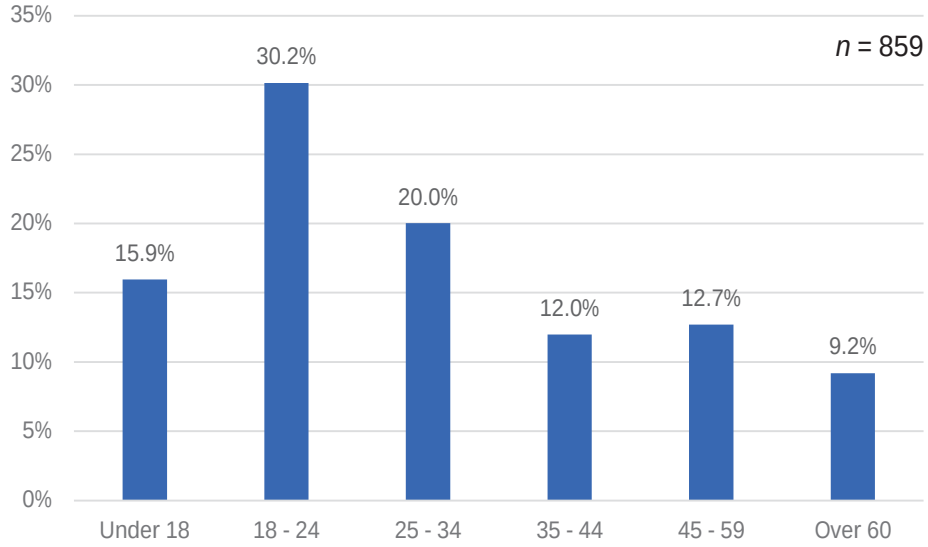


n = 1330

What year were you born?

Half of respondents (50.2 percent) are ages 18 to 34.

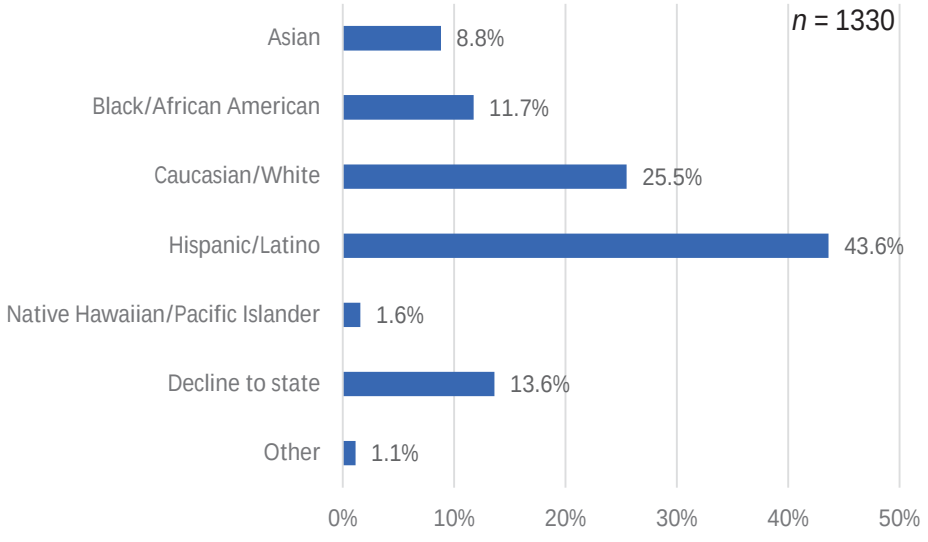
Exhibit 4.2.23 Age



What is your race/ethnicity?

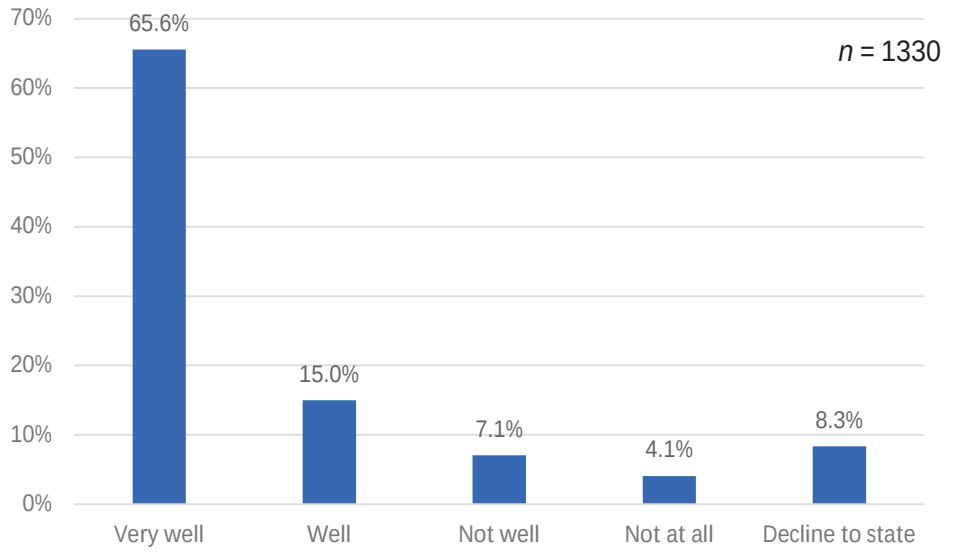
The most common response identified as Hispanic/Latino (43.6 percent).

Exhibit 4.2.24 Race/ethnicity



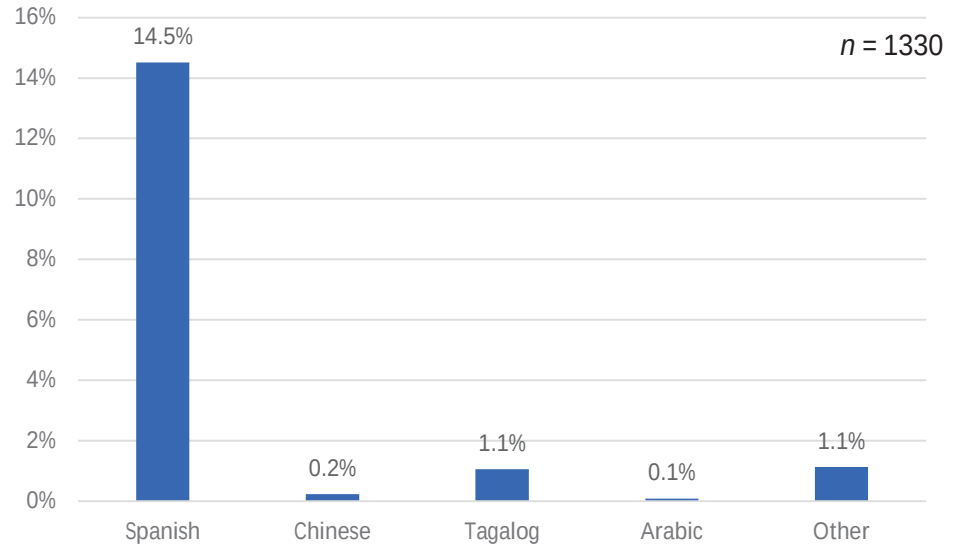
How well do you speak English?
Nearly two-thirds (65.6 percent) of respondents speak English "very well."

Exhibit 4.2.25 English proficiency



What language(s) are spoken in your home?
Respondents' most common language other than English spoken at home is Spanish (14.5 percent).

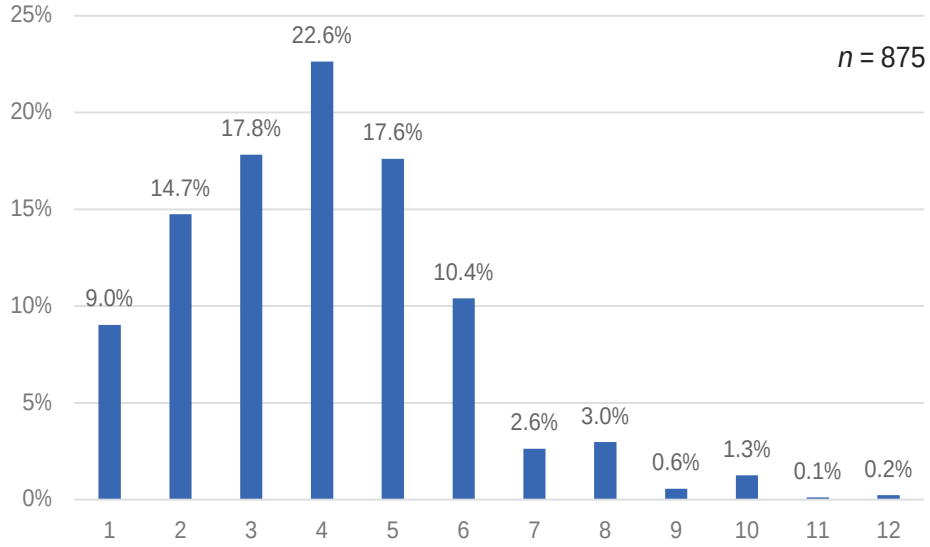
Exhibit 4.2.26 Other languages at home



How many people live in your household?

The majority (58.0 percent) of respondents live in a three to five person household.

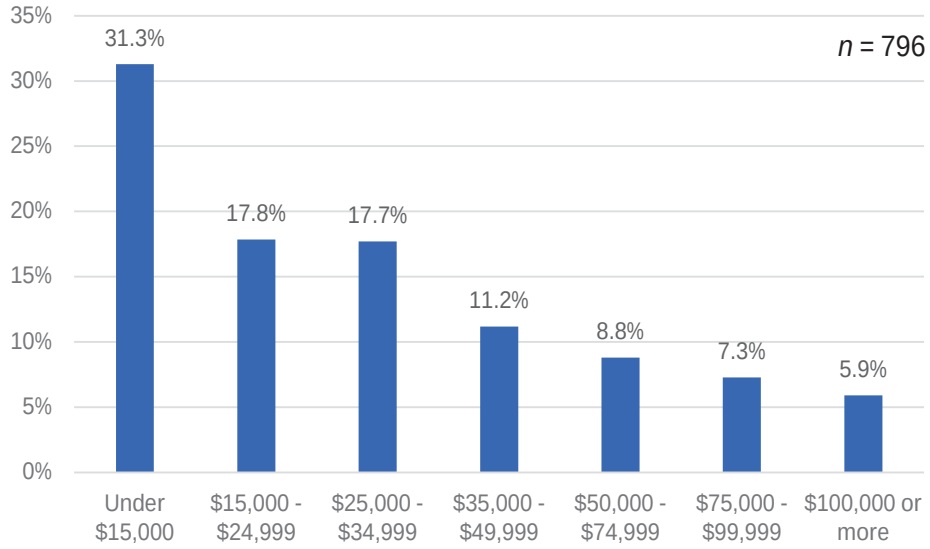
Exhibit 4.2.27 Household size



What is your approximate household income?

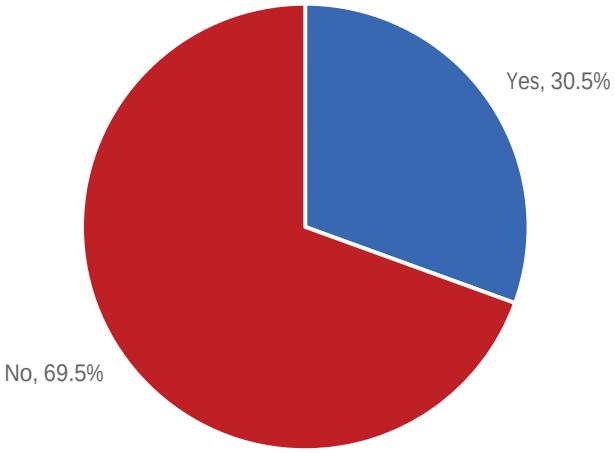
Nearly half (49.1 percent) of respondents have household incomes below $25,000.

Exhibit 4.2.28 Household income



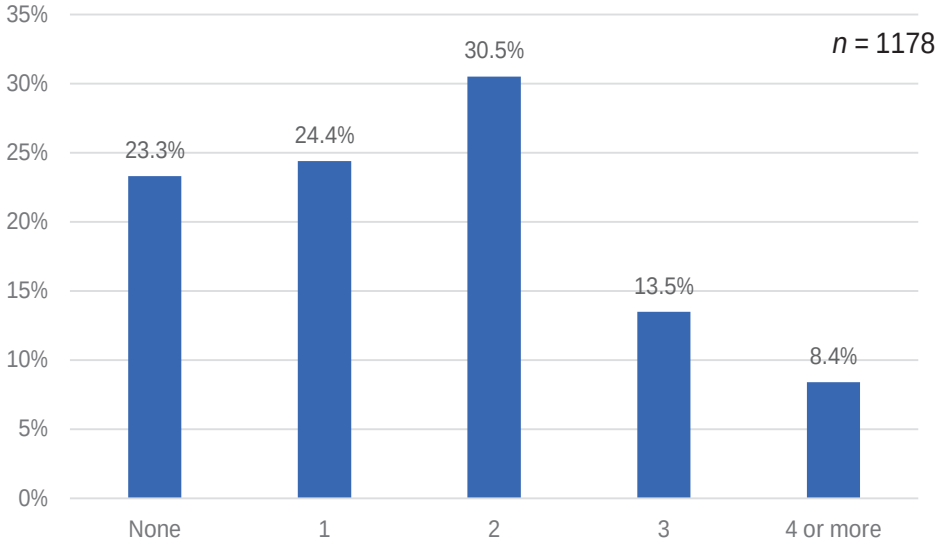
Do you have a valid driver license?
More than two-thirds (69.5 percent) of respondents do not have a valid driver license.

Exhibit 4.2.29 Valid driver license



How many working vehicles are available to members of your household?
Nearly half (47.7 percent) of respondents live in households with zero to one vehicles.

Exhibit 4.2.30 Vehicle access

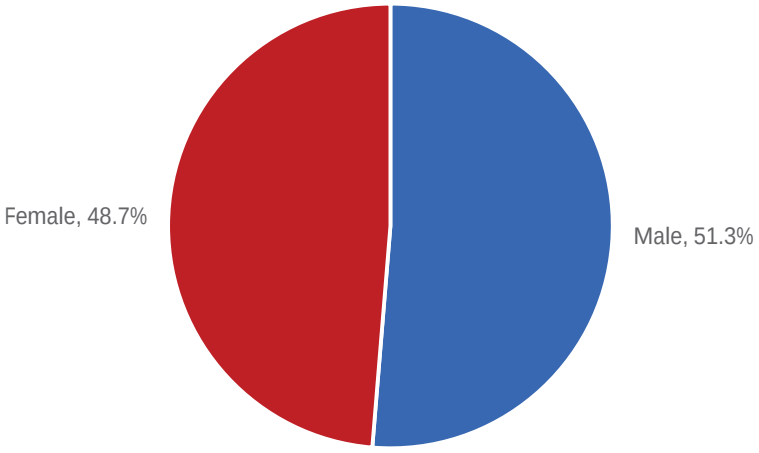


Are you...?

A slight majority (51.3 percent) of respondents identified as male.

Exhibit 4.2.31 Gender

n = 1037



Commuter Survey Findings

Overview

A survey of commuter route riders was conducted by the City of Santa Clarita to determine origin and destination, customer behavior, customer satisfaction, and customer demographics. Moore & Associates processed the data collected by the city.

A total of 156 valid surveys was collected.

Data Processing

Data Cleaning

Data cleaning was undertaken by trained personnel following completion of data entry. This process addressed differing data formatting that resulted in identical responses being sorted as different. The cleaned data was then imported into a Statistical Package for the Social Sciences (SPSS) database for further analysis. Following data cleaning, simple frequencies were compiled.

Analytical Methods

The SPSS database allowed our project team to compile simple frequencies as well as data cross-tabulations within each dataset. Such cross-tabulations allow comparisons between survey responses that can provide additional insight into customer profiles, travel patterns, perceptions of service, and demographics.

Customer Profile

- Drives to their boarding location (58.0 percent),
- Rides five days per week (51.0 percent),
- Rides primarily for work (86.0 percent),
- Pays with TAP Cash (48.6 percent),
- Has a valid driver license (88.3 percent),
- Has access to a personal vehicle (81.8 percent),
- Is age 50 and above (53.3 percent),
- Only speaks English at home (76.8 percent),
- Has a household income of $55,000 or more (78.0 percent), and
- Rides in the Santa Clarita Valley (92.5 percent).

Findings

How did you travel to the location where you boarded this bus?

A slight majority (58.0 percent) of respondents indicated driving to their boarding location. Of those, nearly 64 percent cited the McBean Transit Center.

Exhibit 4.3.1 Access mode

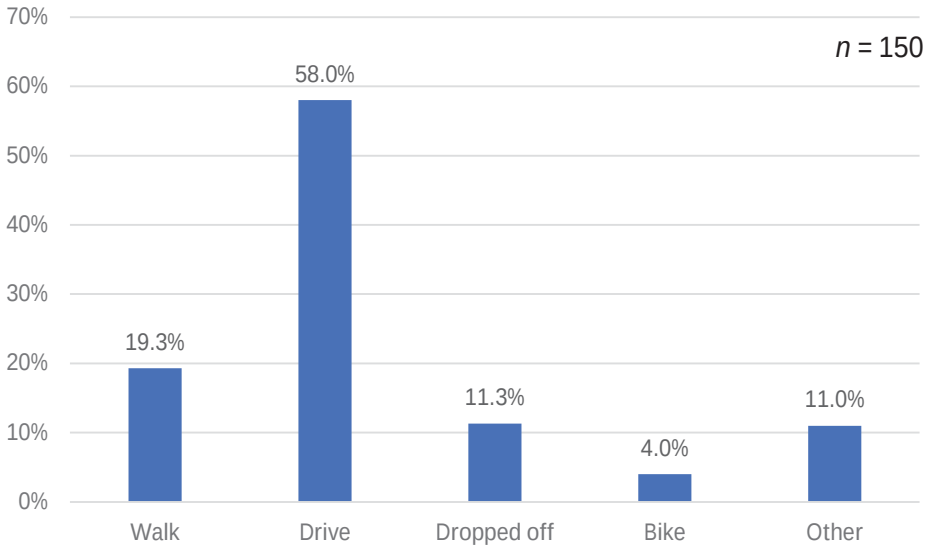
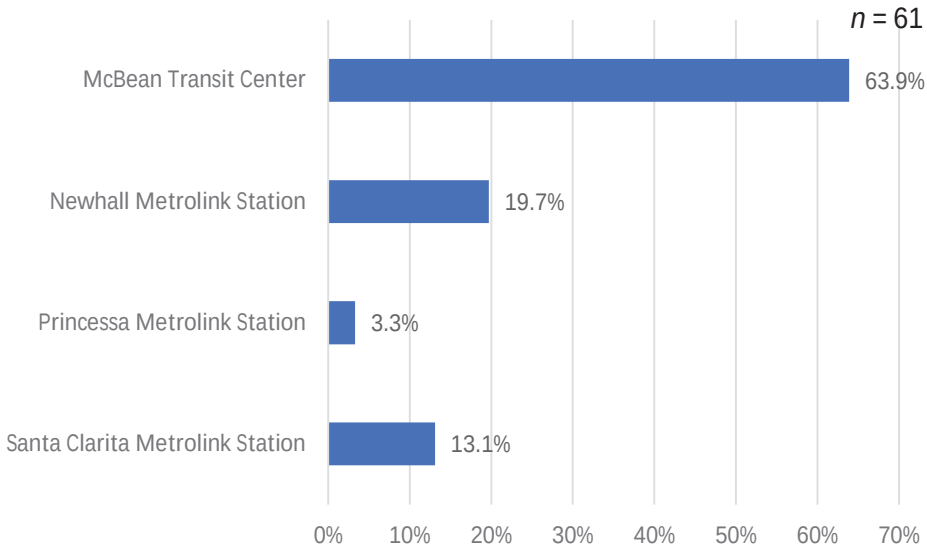


Exhibit 4.3.2 Parking location



How will you travel to your final destination once you leave this bus?

Nearly three-quarters (72.9 percent) of respondents indicated walking to their destination after alighting the bus, while a quarter (25.7 percent) indicated making a connection to/with public transit. LA Metro is the most popular connection (13.9 percent) with a ten-point gap over the next most common connection: Metrolink (2.9 percent).

Exhibit 4.3.3 Travel-mode after bus

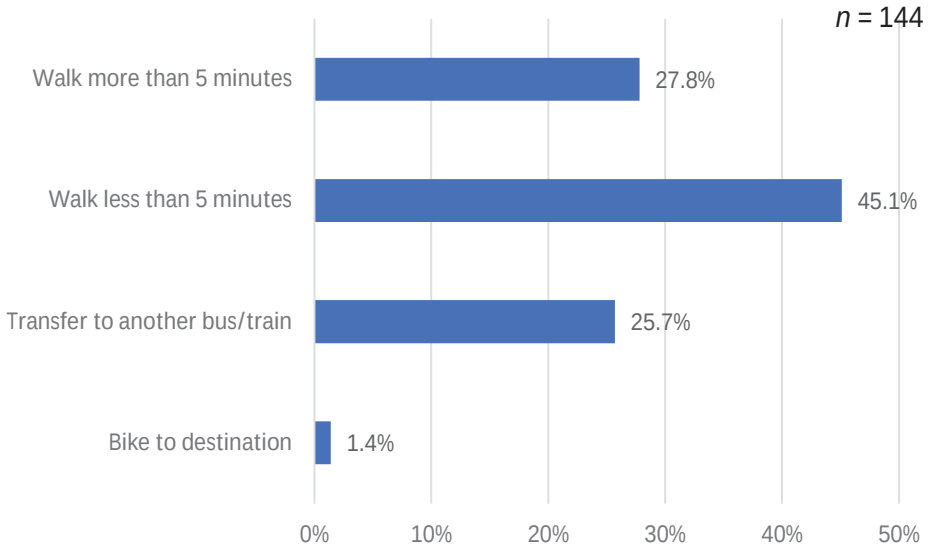
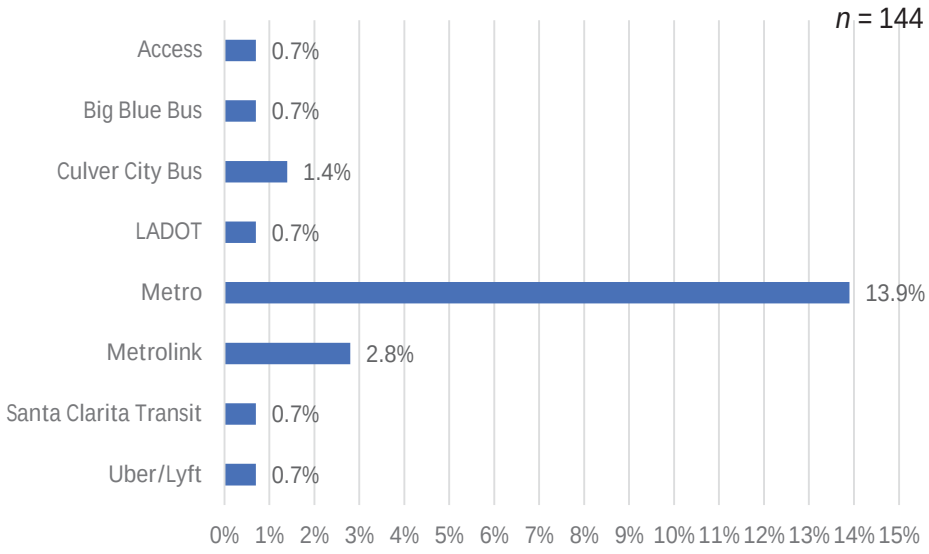
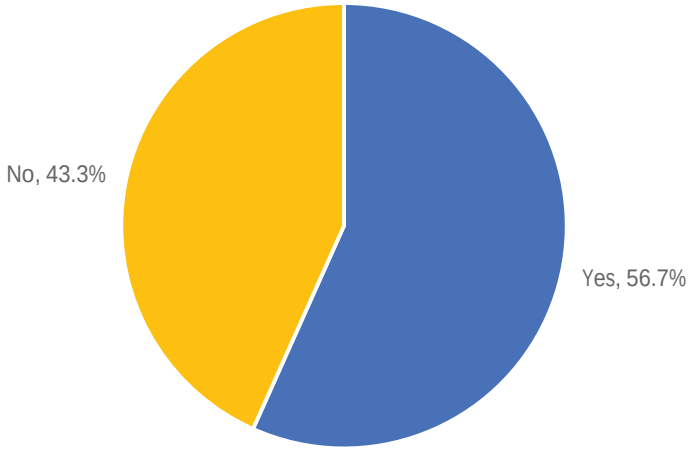


Exhibit 4.3.4 Transit transfer



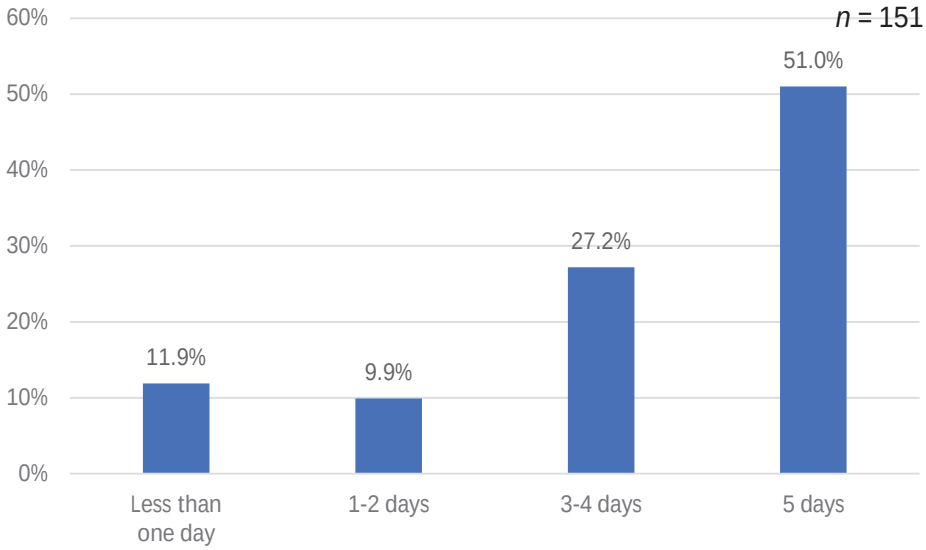
Is your afternoon boarding location the same as where you will exit the bus this morning?
A majority (56.7 percent) of respondents cited a different boarding location (for the afternoon trip) then the morning drop-off point.

Exhibit 4.3.5 Boarding location change
n = 150



How many days did you ride Santa Clarita Transit's commuter bus service in the past week?
Approximately half of all respondents ride five-days per week.

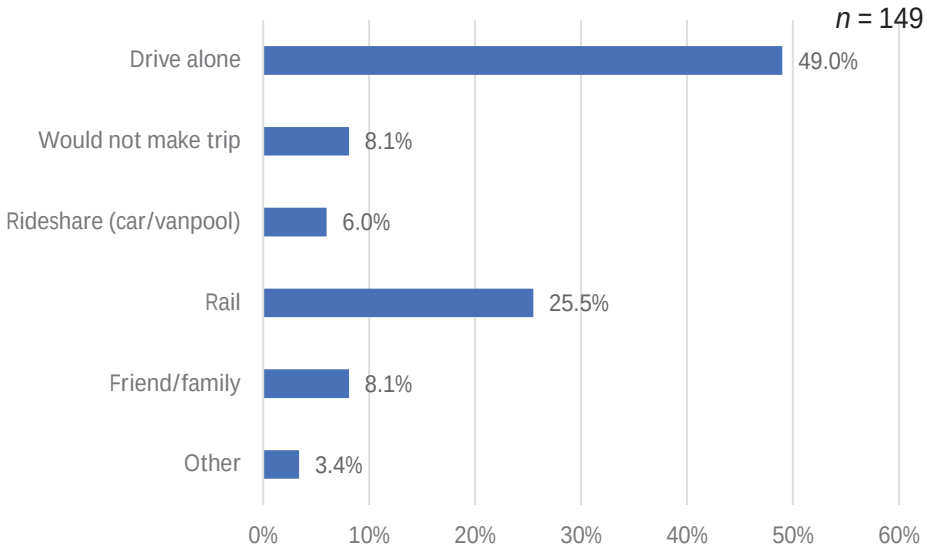
Exhibit 4.3.6 Rider frequency
n = 151



If Santa Clarita Transit's commuter bus service was not available, how would you travel to today's destination?

Nearly half of all respondents (49.0 percent) would drive solo if the City's commuter bus service was not available. This suggests that the current customer base is comprised chiefly of "choice riders."

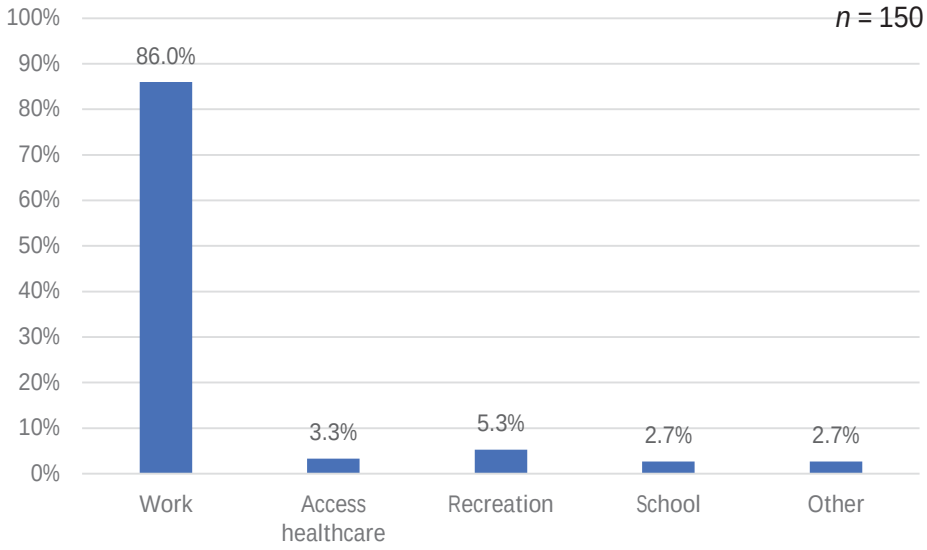
Exhibit 4.3.7 Mobility options



What is the primary purpose for your trip today?

Not surprisingly, nearly 90 percent those surveyed use the bus to travel to/from work.

Exhibit 4.3.8 Primary trip purpose



How did you pay for this trip?

Nearly half (48.6 percent) pay using TAP Cash, followed by Santa Clarita Transit monthly pass.

Exhibit 4.3.9 Fare payment

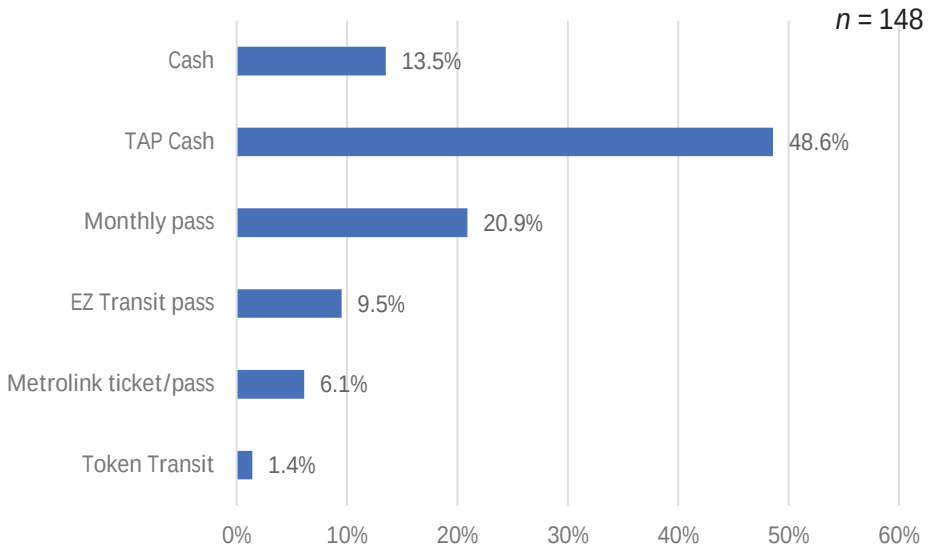
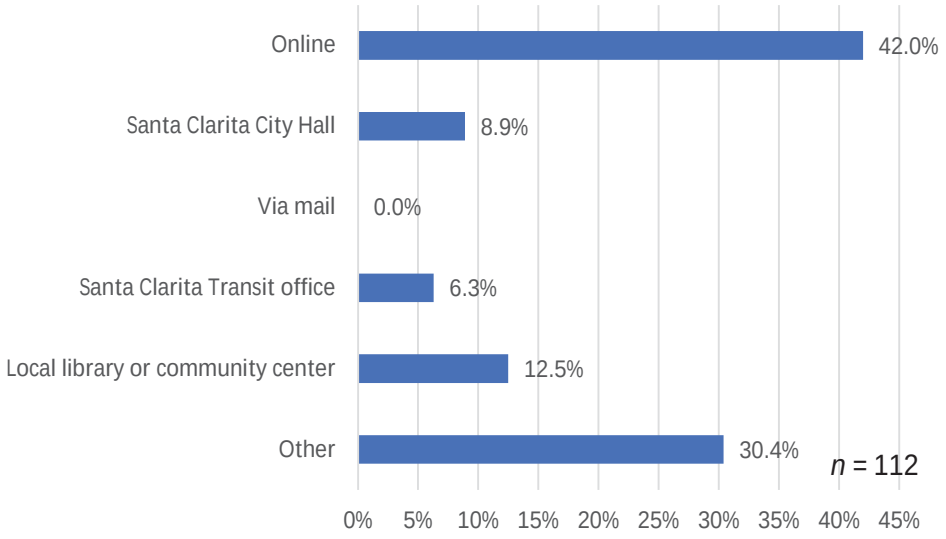
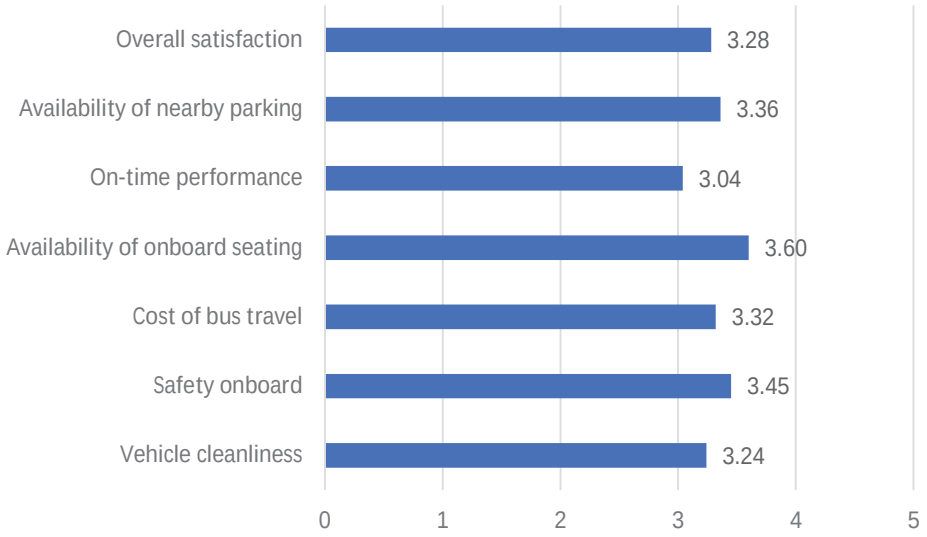


Exhibit 4.3.10 Purchase location



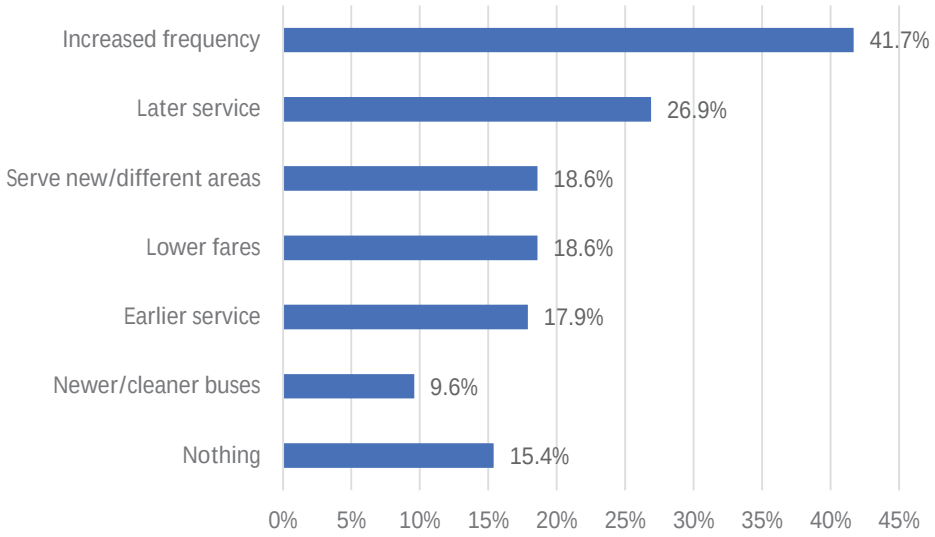
Please indicate your satisfaction with Santa Clarita Transit's commuter bus service characteristics.
All scores are positive. The highest is "availability of onboard seating" (3.60) while the lowest is "on-time performance" (3.04).

Exhibit 4.3.11 Satisfaction



What service change would encourage you to use the service more often?
The most desired service change/improvement is "increased service frequency."

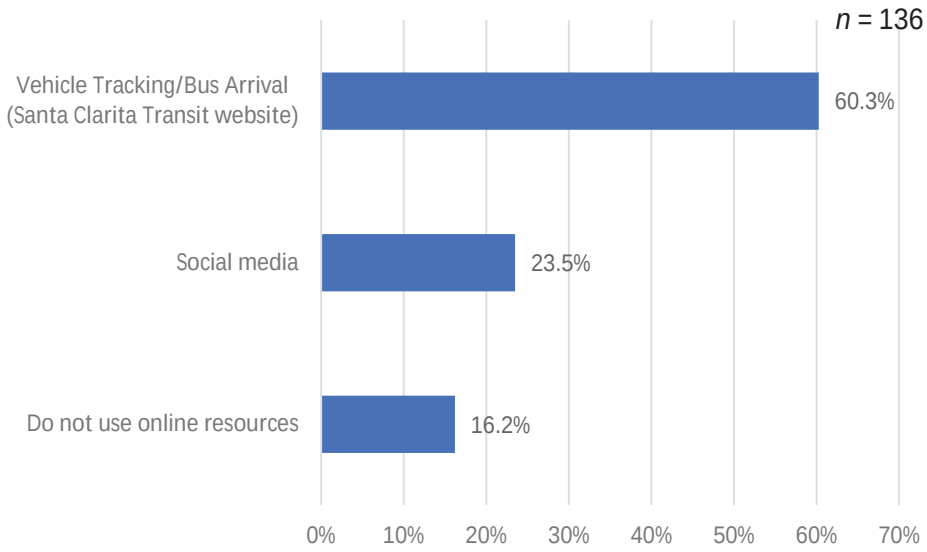
Exhibit 4.3.12 Service improvement



If applicable, which online resource do you use most to receive news and information about Santa Clarita Transit services?

A majority of respondents use Santa Clarita Transit's vehicle tracking website/application (60.3 percent).

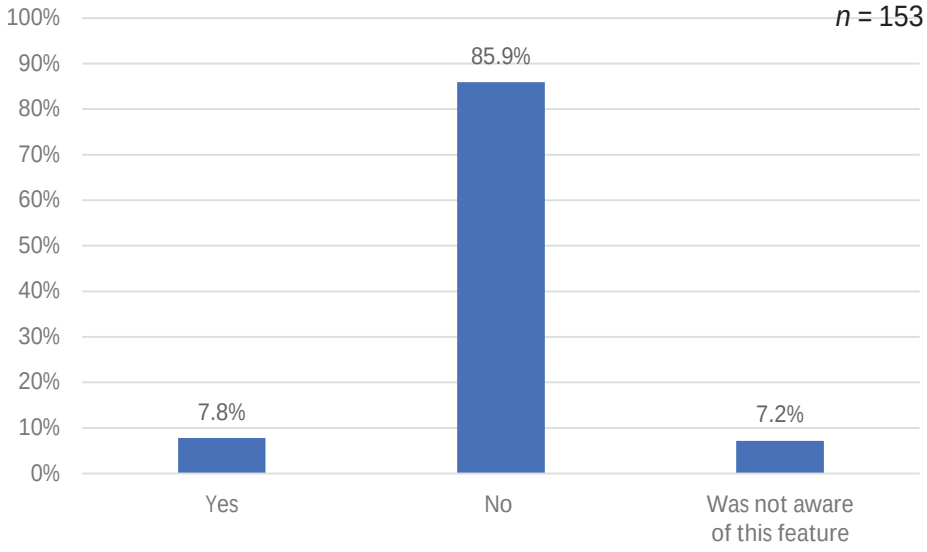
Exhibit 4.3.13 Information source



Do you use the luggage compartments (located on the side of the commuter bus)? If so, what items do you store in these compartments (e.g. luggage, bicycles, etc.)?

Use of the storage compartment by current riders is very limited. Two-thirds of items stored below cited by respondents were bicycles.

Exhibit 4.3.14 Luggage compartment

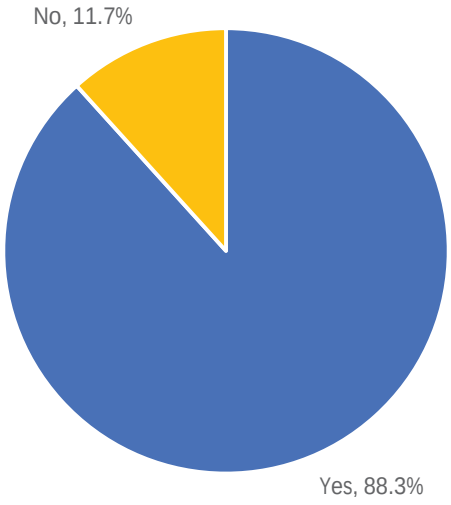


Do you have a valid driver license?

Most respondents (88.3 percent) have a valid driver license. This supports the findings from the "mobility options" question that customers are chiefly "choice riders."

Exhibit 4.3.15 Valid driver license

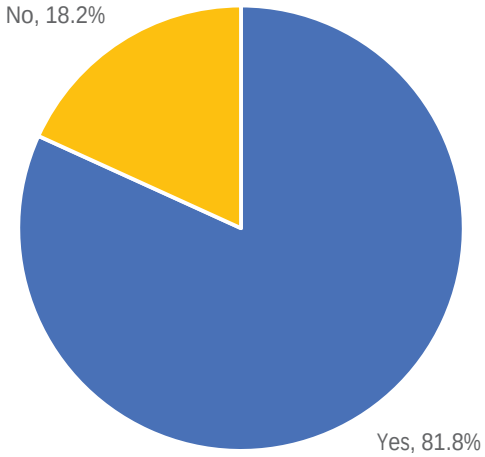
n = 154



Did you have a car available to make this trip?

Exhibit 4.3.16 Access to vehicle

n = 154

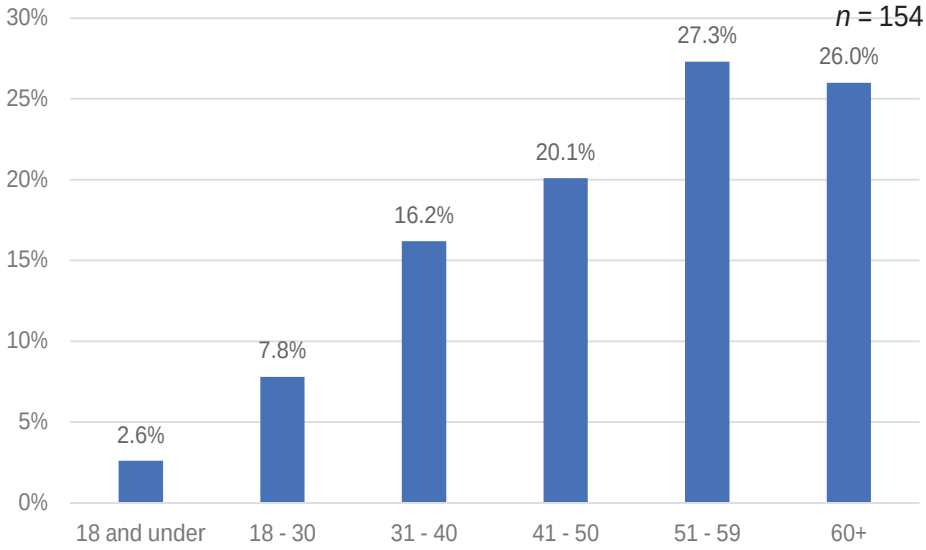


What is your age?

While it is not surprising that the vast majority of current riders is age 18 and older (i.e., work-age adults) the overall demographic skews "older" (age 51 and above).

Exhibit 4.3.17 Age

n = 154

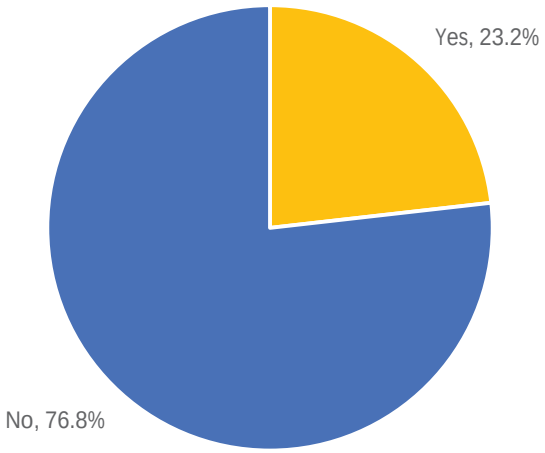


Do you speak a language other than English at home?

Three-quarters (76.8 percent) only speak English at home.

Exhibit 4.3.18 Language at home

n = 155



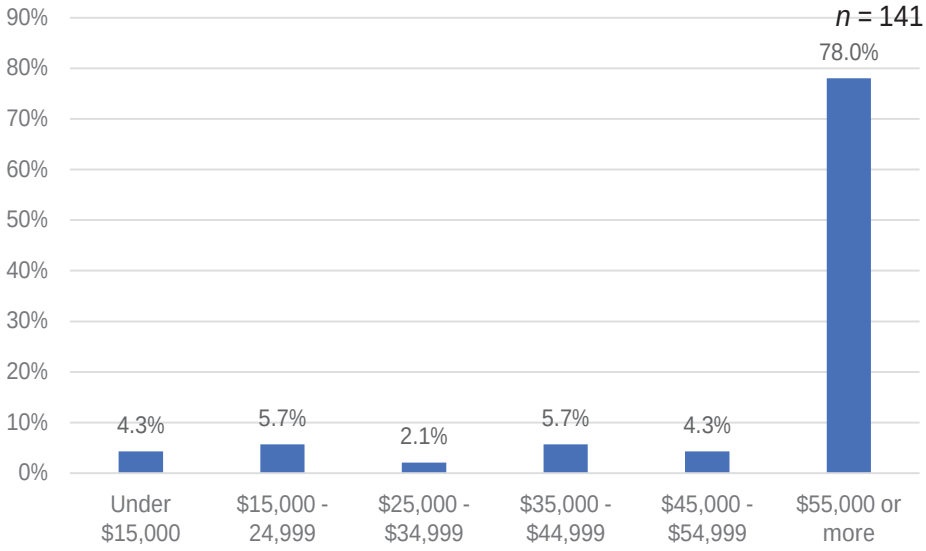
Gender

Exhibit 4.3.19 Gender
n = 150

What was your total household income in 2017?

More than three-quarters (78.0 percent) of respondents cited a household income of $55,000 or more.

Exhibit 4.3.20 Household income
n = 141

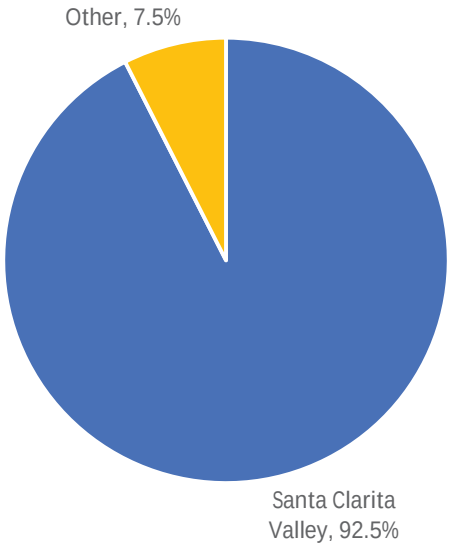


ZIP Code

The Santa Clarita Valley accounts for most (92.5 percent) of home ZIP codes.

Exhibit 4.3.21 ZIP code

n = 147



Dial-A-Ride Survey Findings

Overview

In May 2018, the City of Santa Clarita conducted a survey of current/recent customers of its Dial-A-Ride service and/or Access Services. The City's DAR service provides curb-to-curb service for qualified elderly, special needs customers, as well as the general public.

Residents of Santa Clarita who are at least 60 years of age or have a certified disability are eligible to use DAR during regular service hours. The DAR service is open to the general public after 6:00 pm, seven days a week. Service hours are 5:00 am until 10:30 pm Monday through Friday, 7:00 am until 10:30 pm on Saturday, and 8:00 am until 8:00 pm on Sunday. Access Services provides ADA-complimentary paratransit service throughout Los Angeles County. The City is the Access Service operator within the Santa Clarita Valley. Service is provided on a "complementary" basis; in other words, those areas where fixed-route service is also available. Certified riders may travel to the Antelope Valley, San Fernando Valley, and the Los Angeles Basin via transfer trips.

Working with City staff, Moore & Associates prepared an 18-question survey instrument intended to assess travel behavior, satisfaction regarding a range of service attributes, propensity to use the City's fixed-route bus service, and core demographics.

A random sampling of recent patrons (i.e., some use of DAR and/or Access Services within the prior 6 months) patrons was selected from the combined DAR/AS registrant database. Seven hundred patrons were sent a survey form and a prepaid response envelope via first class mail. The survey stipulated a three-week response period and included a response incentive (e.g., random drawing).

Of the 700 mailers, 95 were returned as "non-deliverable." Therefore, the survey had an active sample of 605. Approximately 25 percent (151 responses) of the surveys were returned and deemed valid.

All survey data was entered into an online database using trained data entry staff. Data entry was monitored on an ongoing basis and quality control "spot checks" were conducted. The resulting data was exported into a Statistical Package for the Social Sciences (SPSS) database for further analysis. Following data cleaning simple frequencies were completed.

Customer Profile

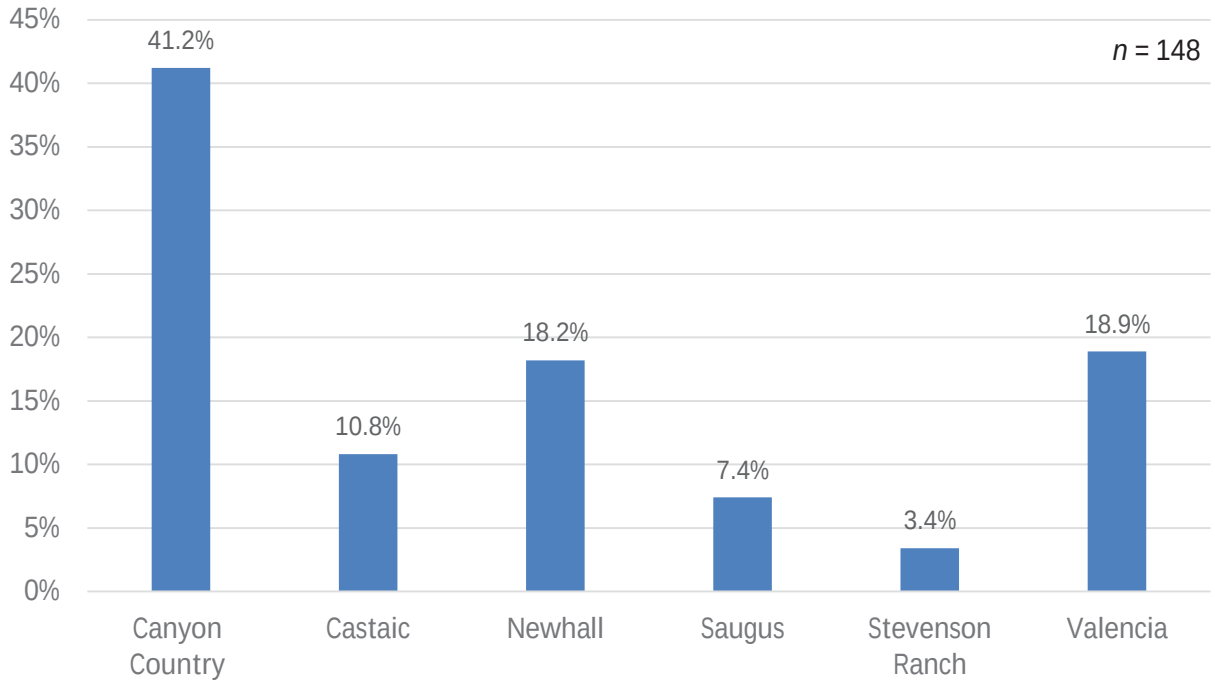
The "typical" Dial-A-Ride customer:

- Resides in Canyon Country (41.2 percent),
- Uses the City's DAR service more than Access Services (65.5 percent versus 27.7 percent),
- Can be considered a "current" rider (68.9 percent within prior 90 days),
- Rides less than once weekly (61.4 percent),
- Gave high (overall) satisfaction ratings (59.7 percent "excellent," 30.6 percent "good," 90.3 percent combined),
- Most common travel destinations: "doctor's office" (61.6 percent) and "shopping" (25.8 percent),
- Primary reasons for riding: "Do not drive/no longer drive" (57 percent) and "No/limited access to vehicle" (35.8 percent),
- Female (68 percent),
- Household income below $25,000 per year (48.6 percent), and
- Age 60 and above (84.8 percent).

Findings

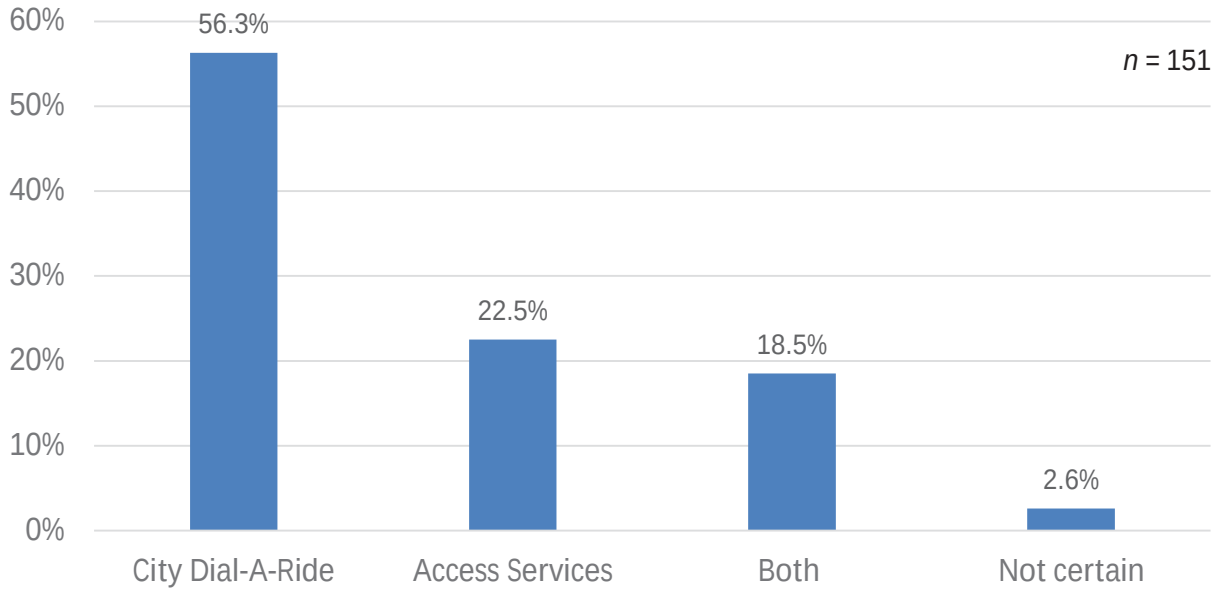
Question 1: In which community do you reside?

Exhibit 4.4.1 Home community



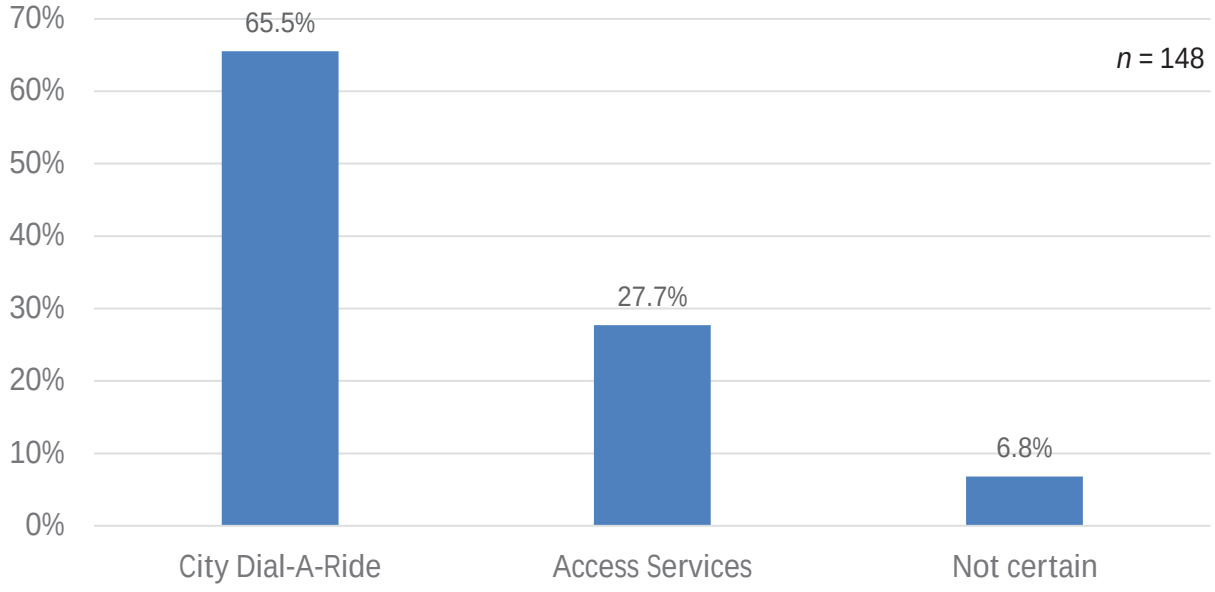
Question 2: Which service are you registered with?

Exhibit 4.4.2 Registered services



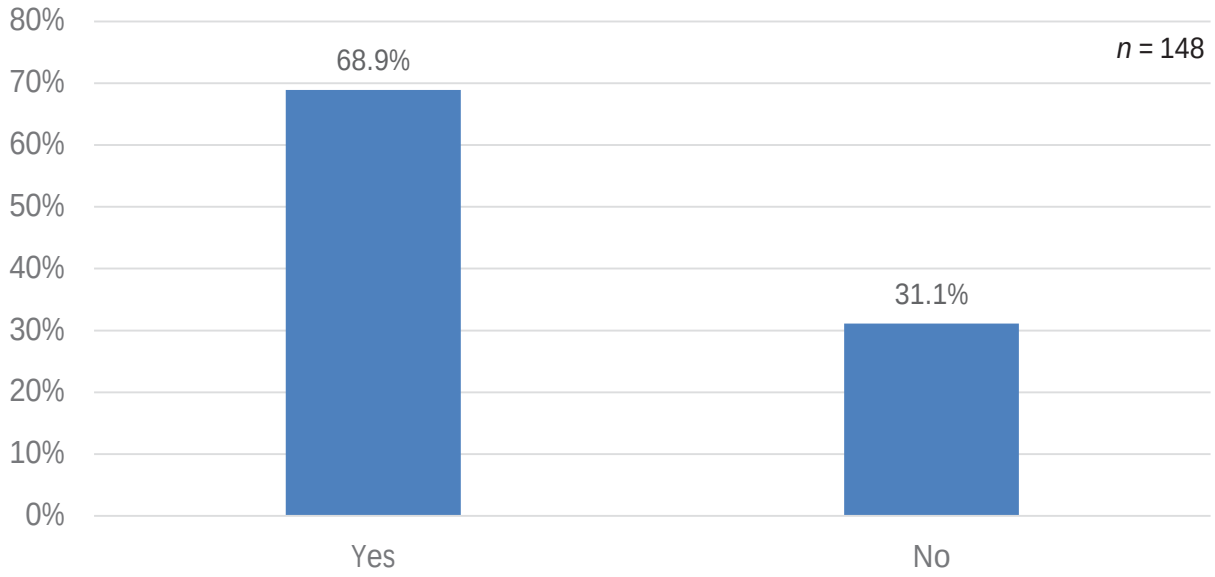
Question 3: Which of the following do you use most frequently?

Exhibit 4.4.3 Frequency of use



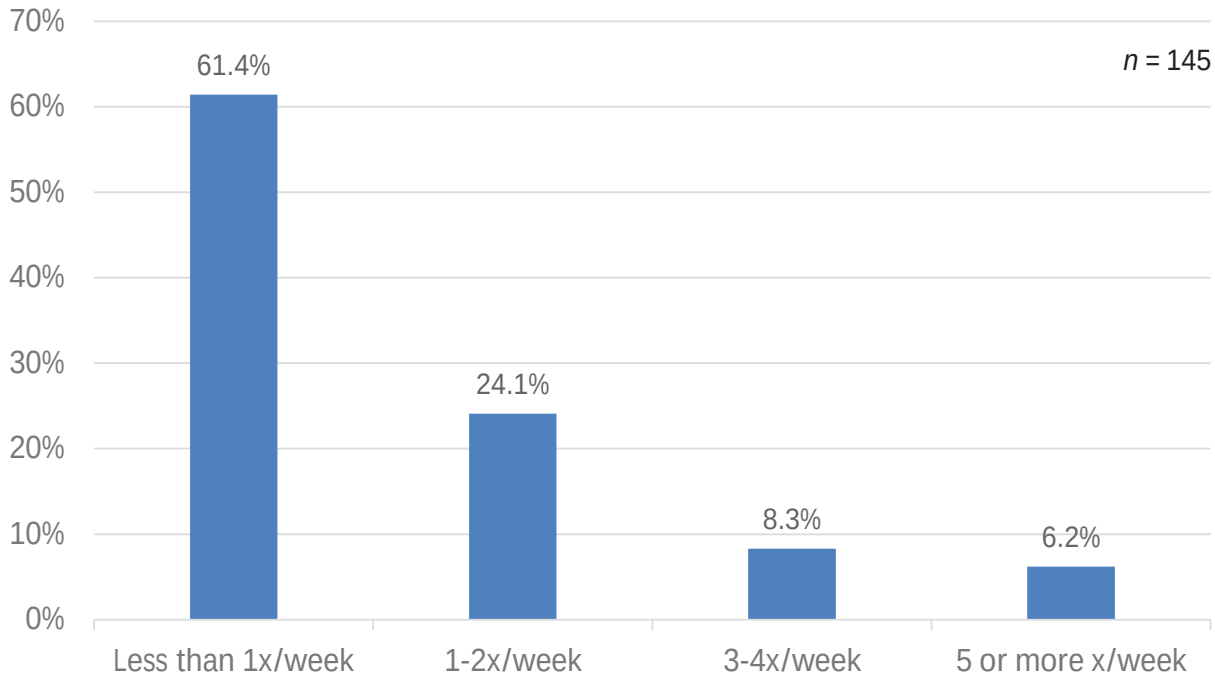
Question 4: Have you ridden the City of Santa Clarita's Dial-A-Ride/Access Services in the past 90 days?

Exhibit 4.4.4 DAR or Access in past 90 days



Question 5: How often do you use the Santa Clarita Dial-A-Ride/Access Services?

Exhibit 4.4.5 Rider frequency



Question 6: Survey participants were asked to provide feedback on six service attributes as well as "overall service." Response options included excellent, good, fair and poor. Using this four-point scale, individual service attributes scores were calculated.

Exhibit 4.4.6 On-time performance

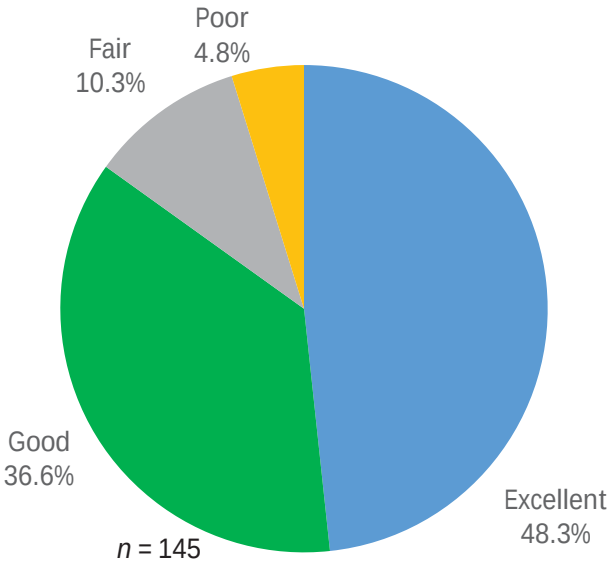


Exhibit 4.4.7 Office/dispatch staff

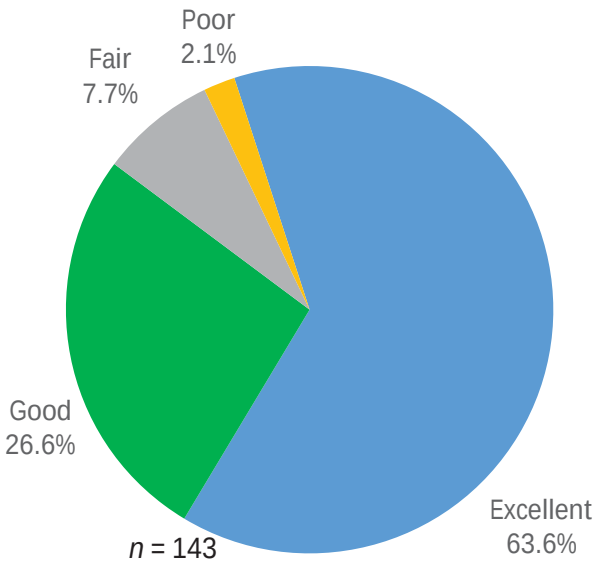


Exhibit 4.4.8 Drivers

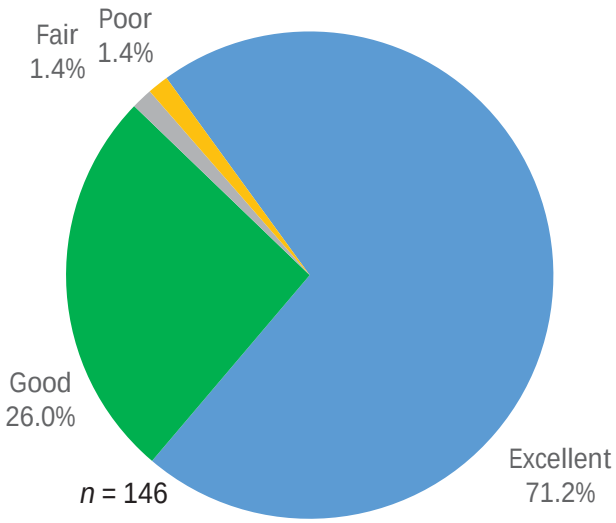


Exhibit 4.4.9 Ease of making reservation

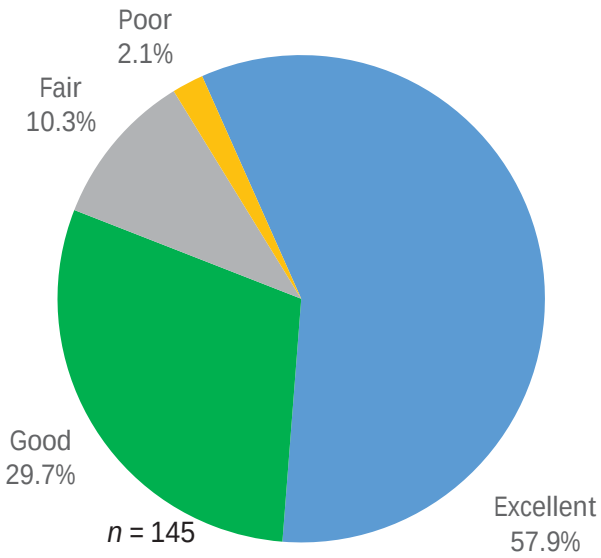


Exhibit 4.4.10 Service dependability

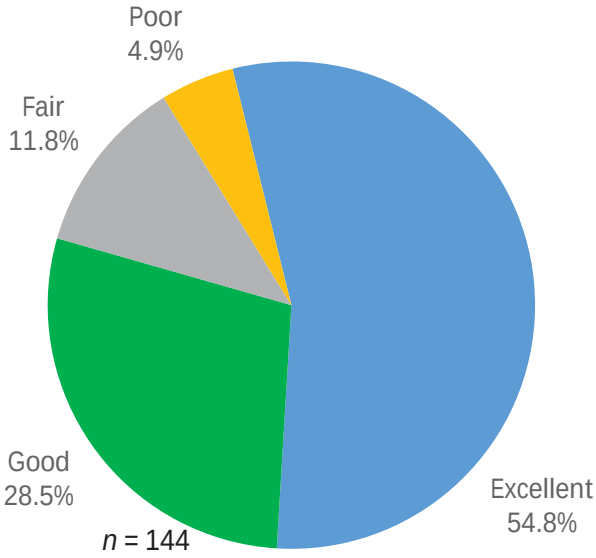


Exhibit 4.4.11 Cost/price

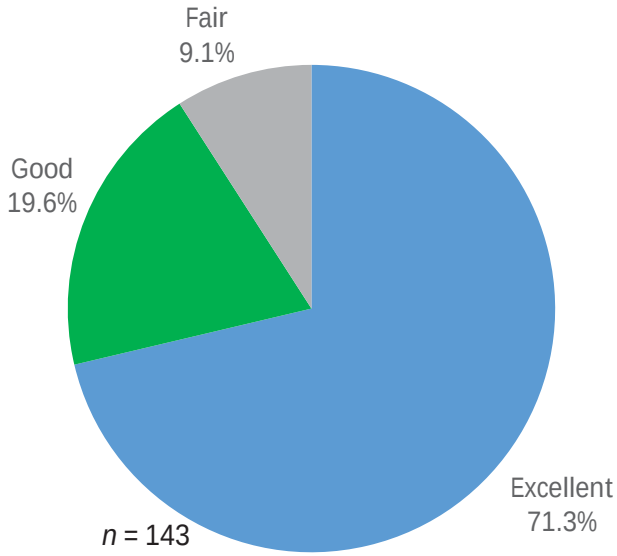
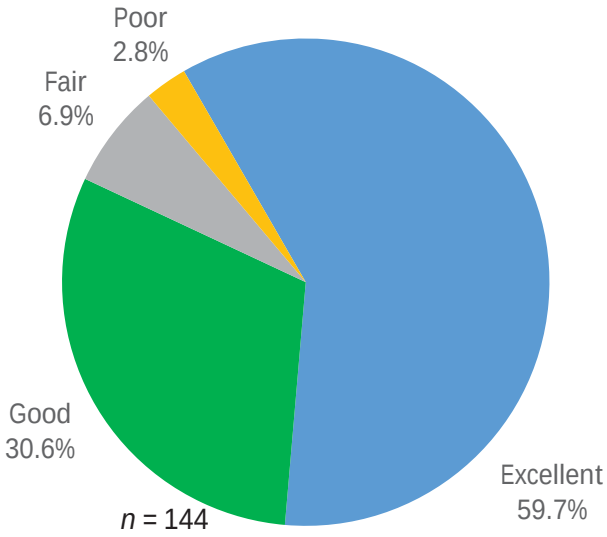
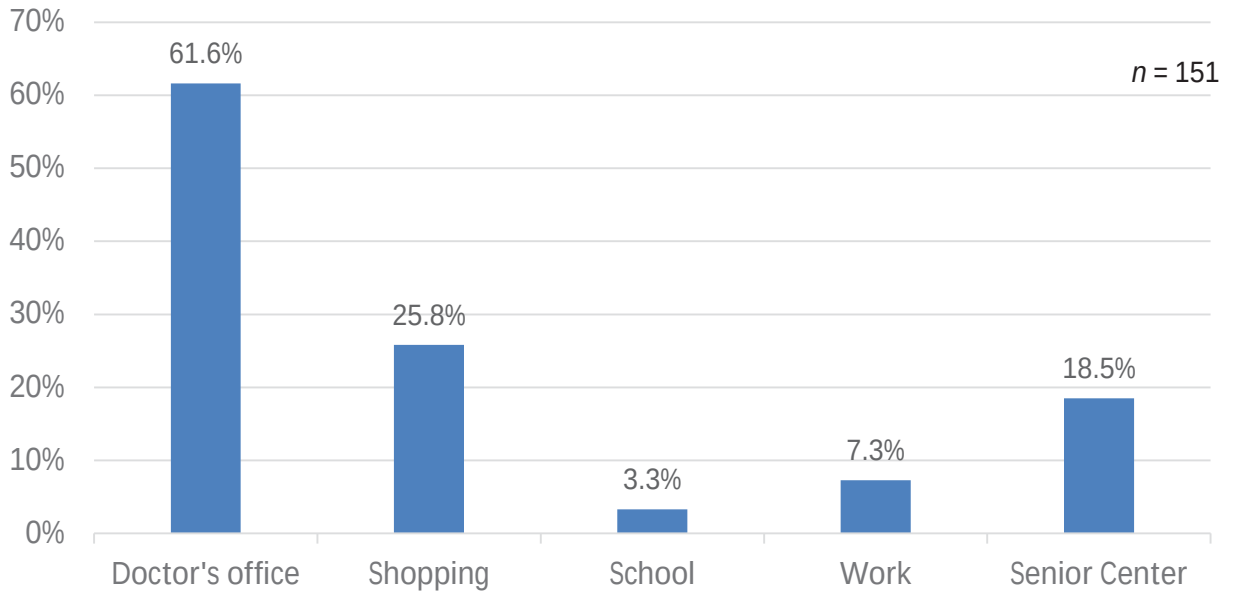


Exhibit 4.4.12 Overall service



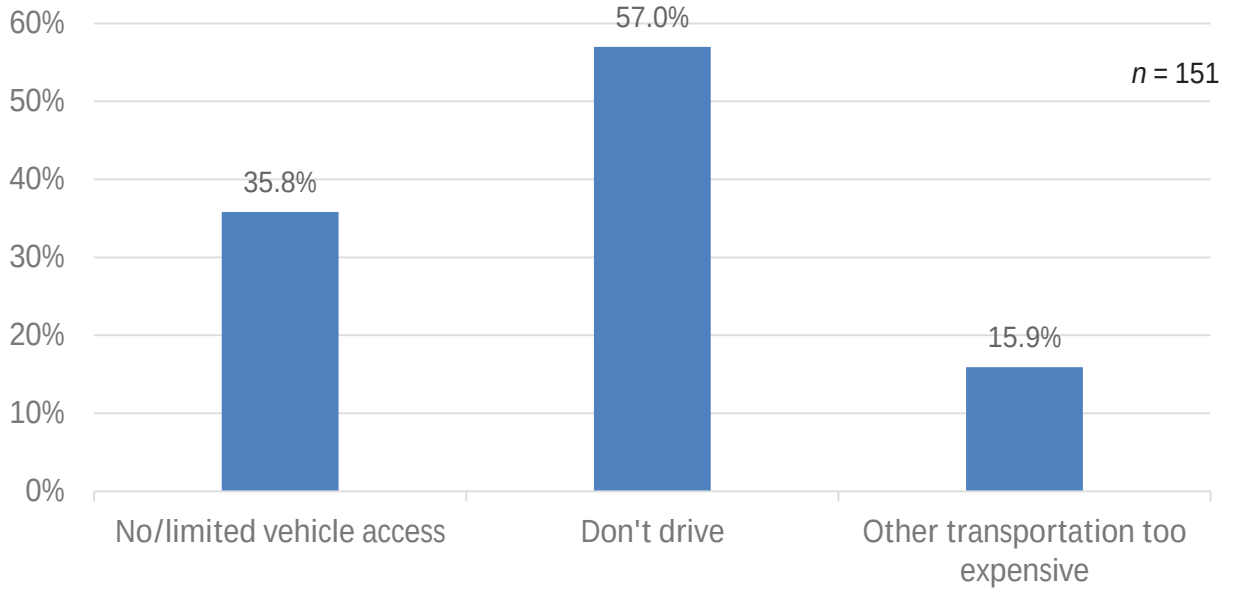
Question 7: What is your most common travel destination when using the City's Dial-A-Ride/Access Services?

Exhibit 4.4.13 Travel destinations



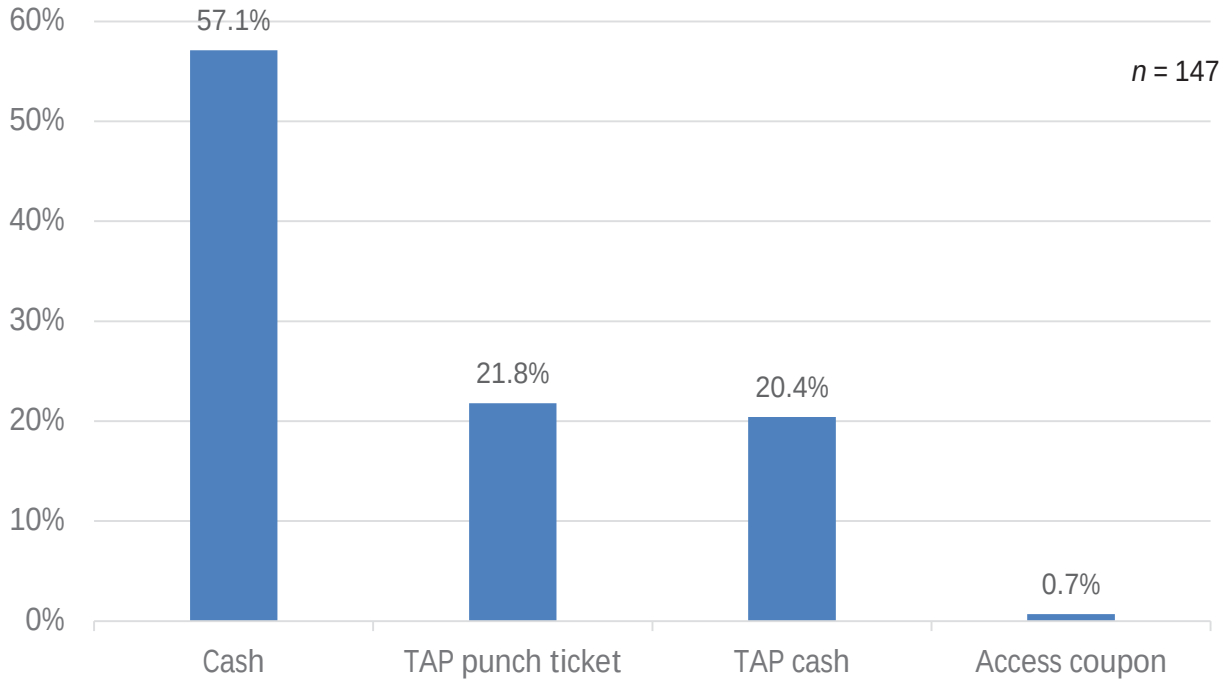
Question 8: What is your main reason for using the City's Dial-A-Ride/Access Services?

Exhibit 4.4.14 Reason for using DAR/Access



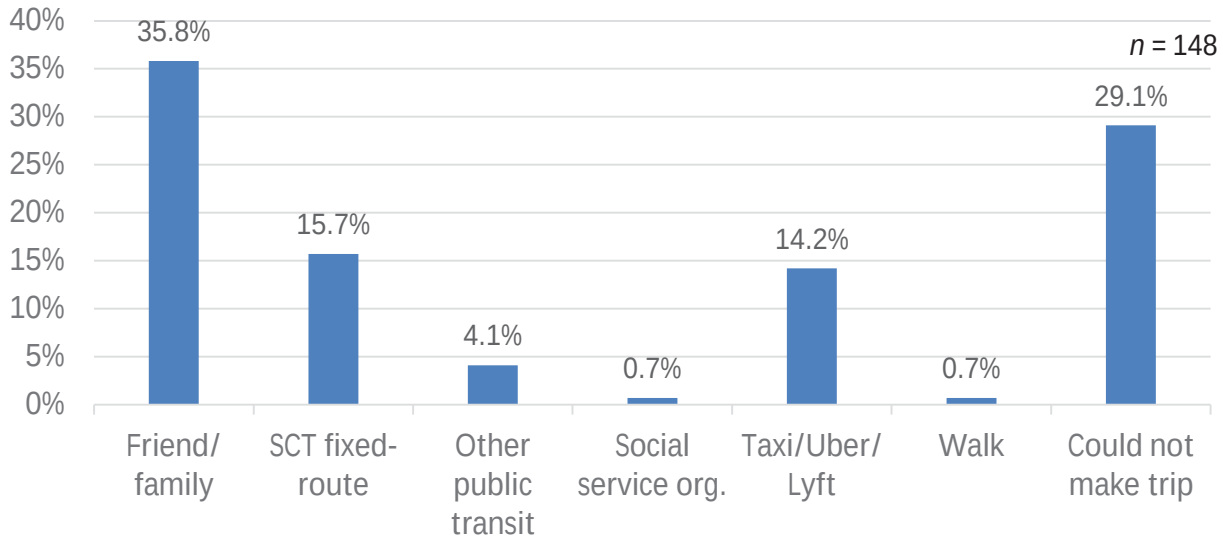
Question 9: How do you typically pay for your Dial-A-Ride/Access Services trip?

Exhibit 4.4.15 Fare payment



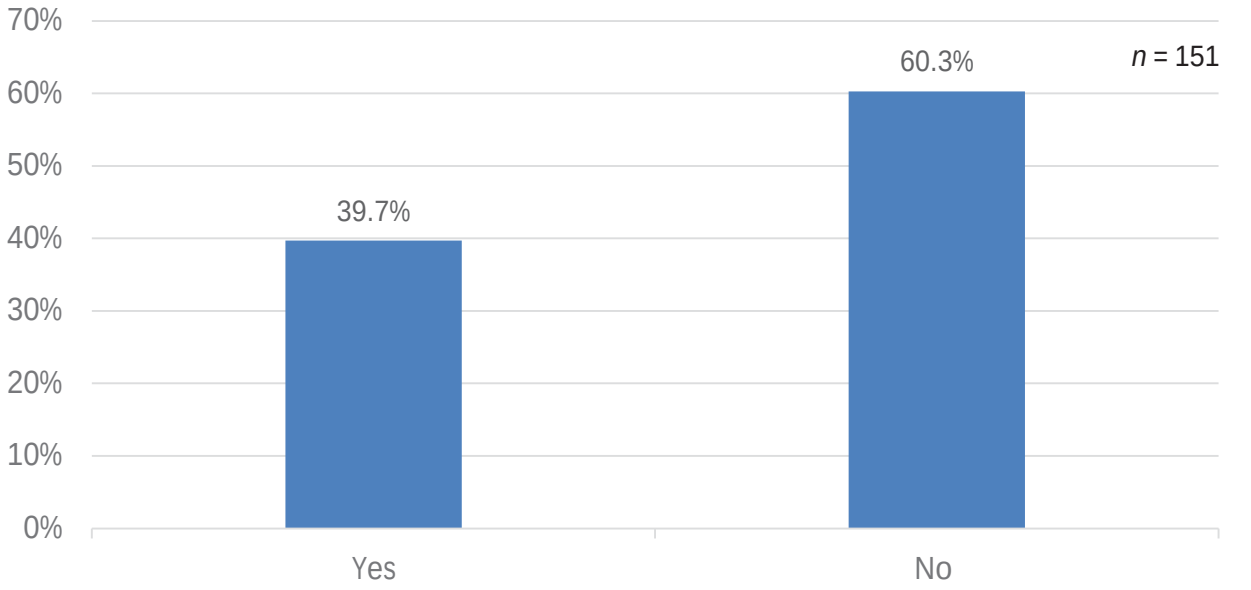
Question 10: Regarding your most recent Dial-A-Ride/Access Services trip: If the City's DAR and/or Access Services had not been available, how would you have made that trip? (Select only one)

Exhibit 4.4.16 Other transportation options



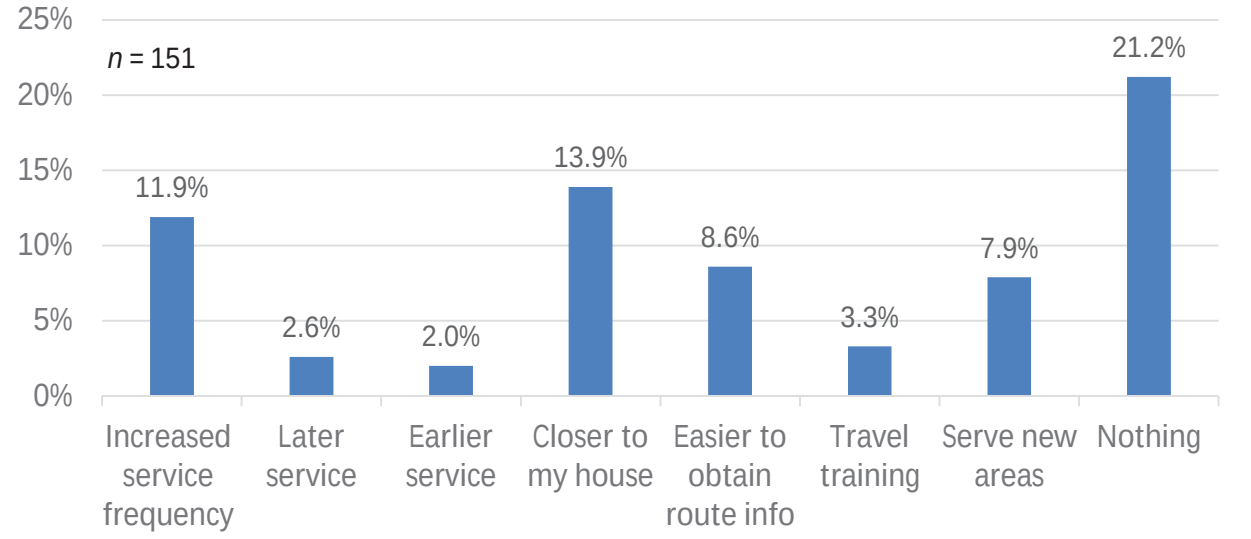
Question 11: Have you ridden Santa Clarita Transit's local fixed-route service within the past 90 days?

Exhibit 4.4.17 Use of SCT bus past 90 days



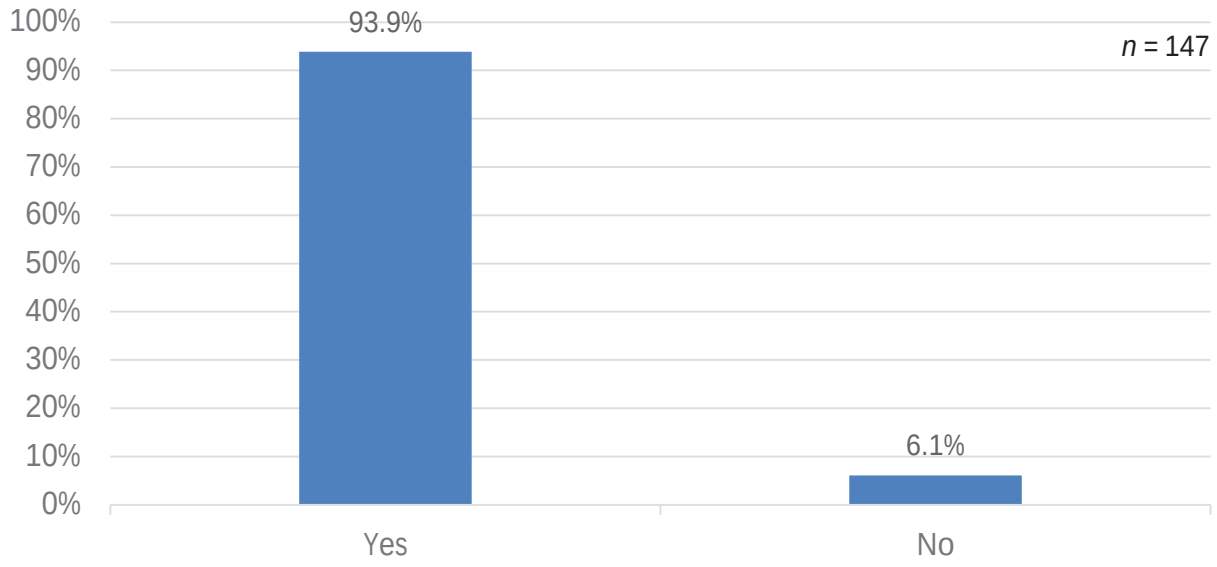
Question 11a: If you answered "no," what might encourage you to try Santa Clarita Transit's local fixed-route bus service?

Exhibit 4.4.18 SCT bus service possible motivators



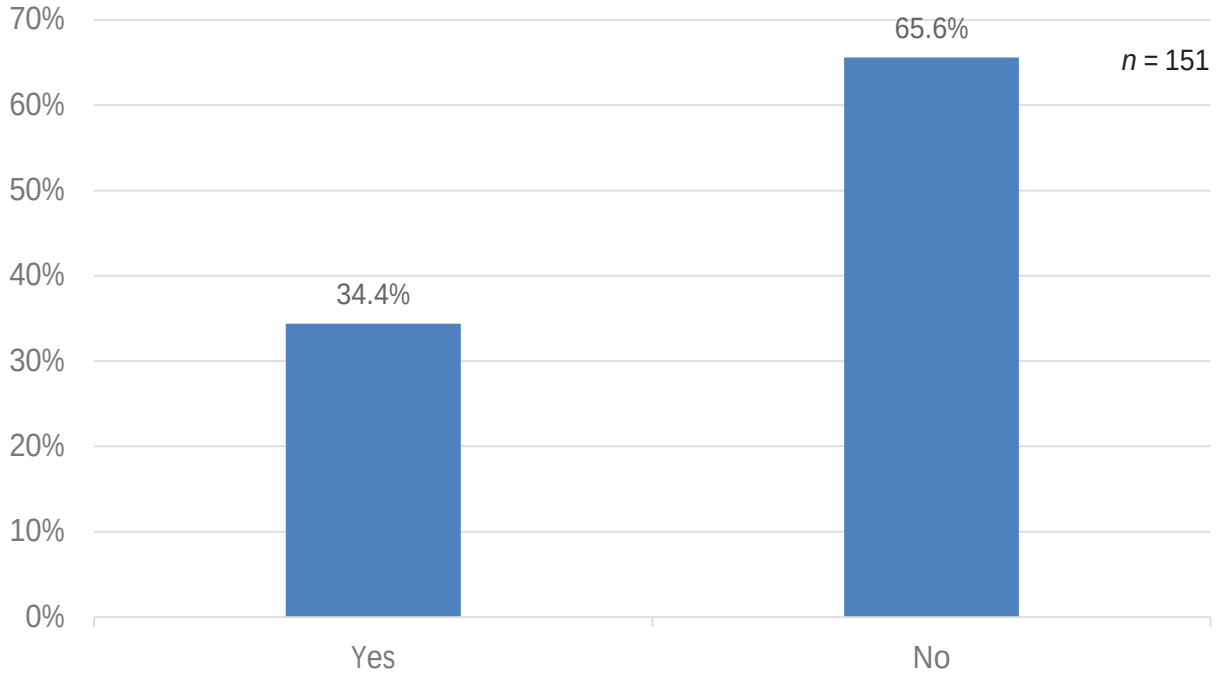
Question 12: When calling to place your Dial-A-Ride/Access Services trip request, are you able to promptly reach a Customer Service Representative?

Exhibit 4.4.19 Prompt customer service



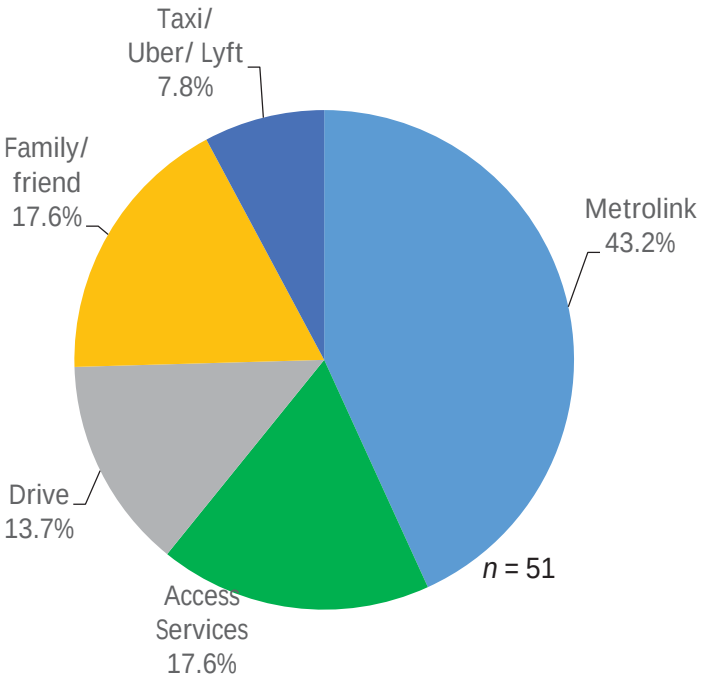
Question 13: Do you travel frequently outside the Santa Clarita Valley?

Exhibit 4.4.20 Frequently travel outside SCV



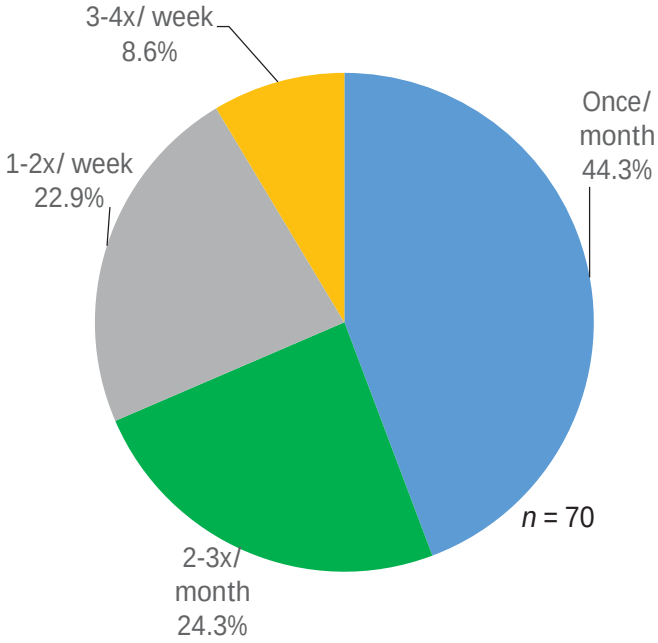
Question 13a: If you answered "yes," how do you typically make that trip?

Exhibit 4.4.21 How do you travel?



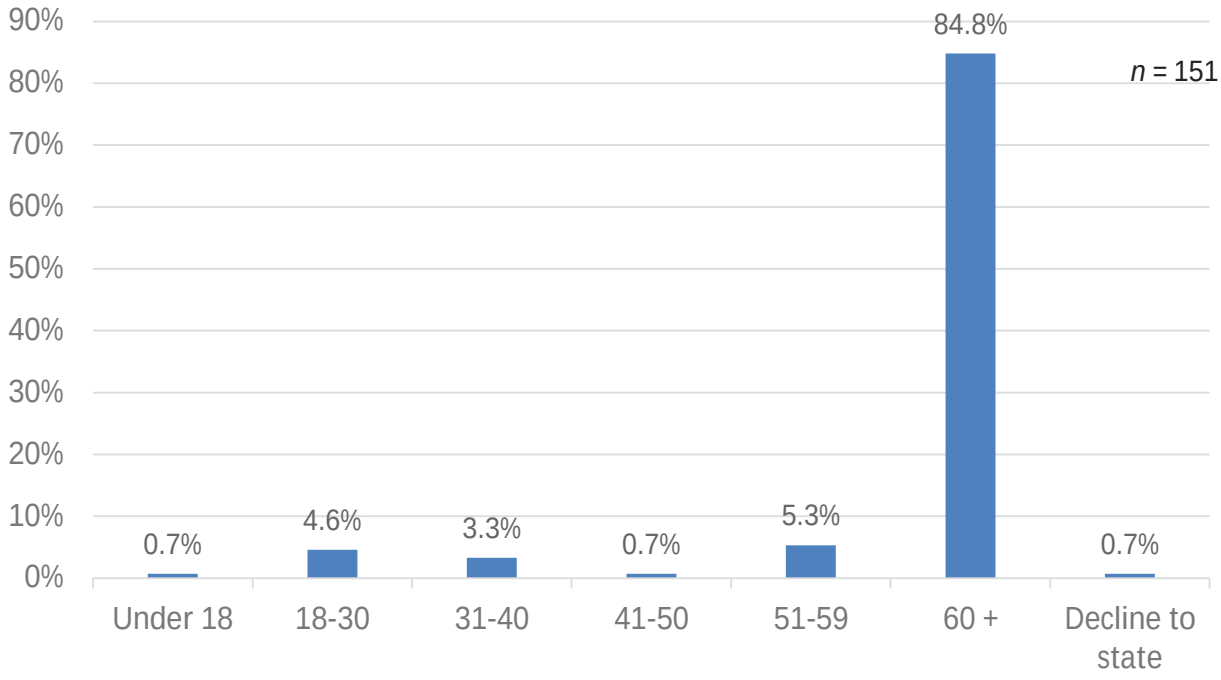
Question 13b: How often do you make that trip?

Exhibit 4.4.22 How often?



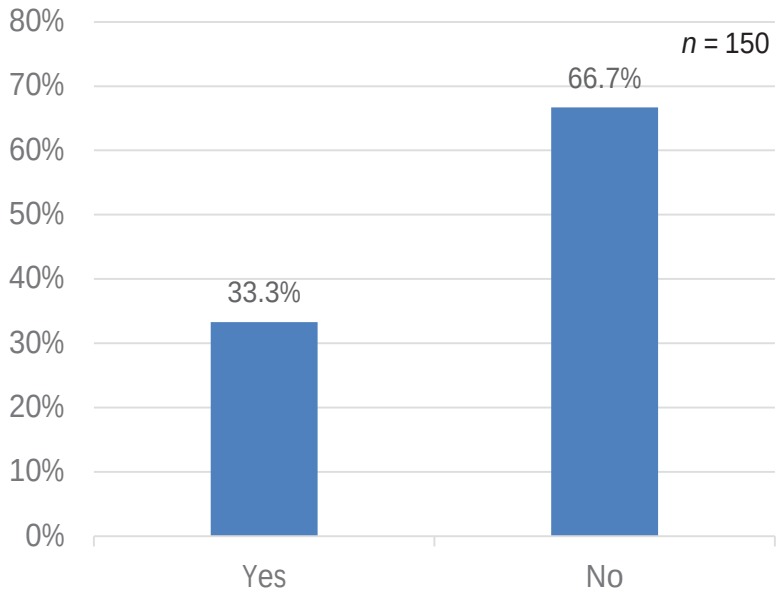
Question 14: What is your age category?

Exhibit 4.4.23 Age



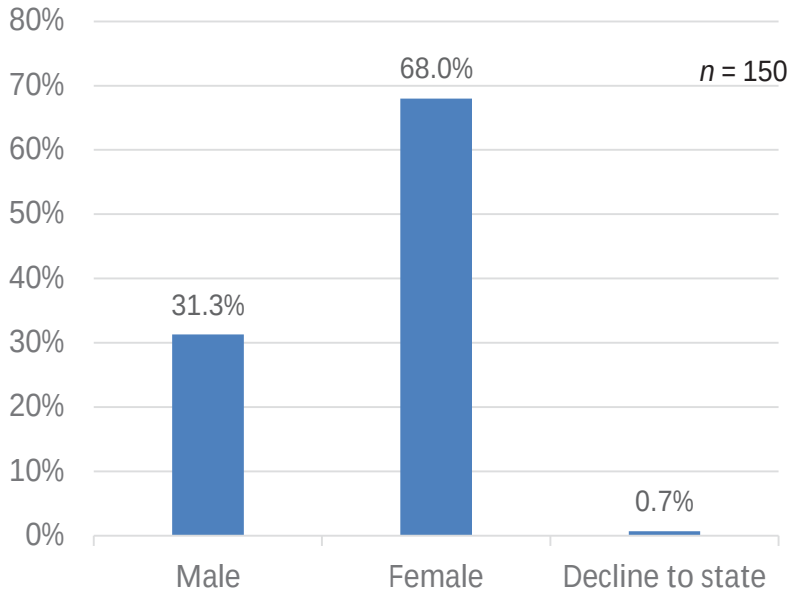
Question 15: Do you speak a language other than English at home?

Exhibit 4.4.24 Another language at home



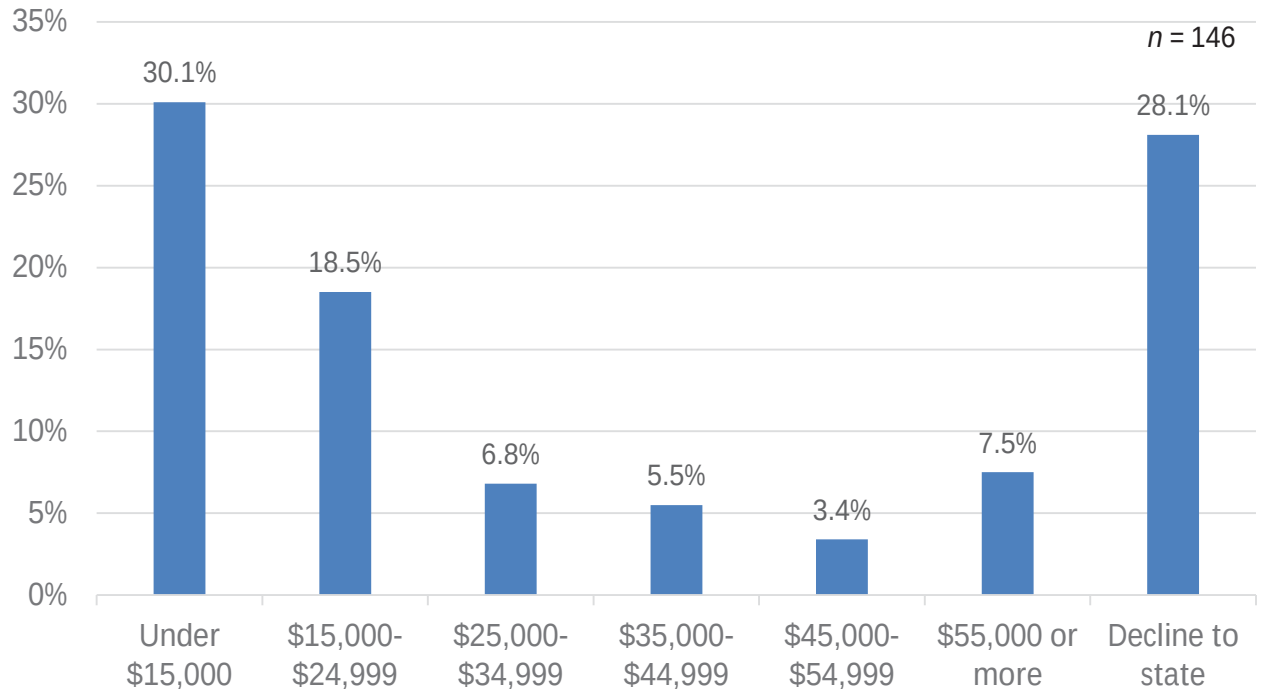
Question 16: How do you identify?

Exhibit 4.4.25 Gender



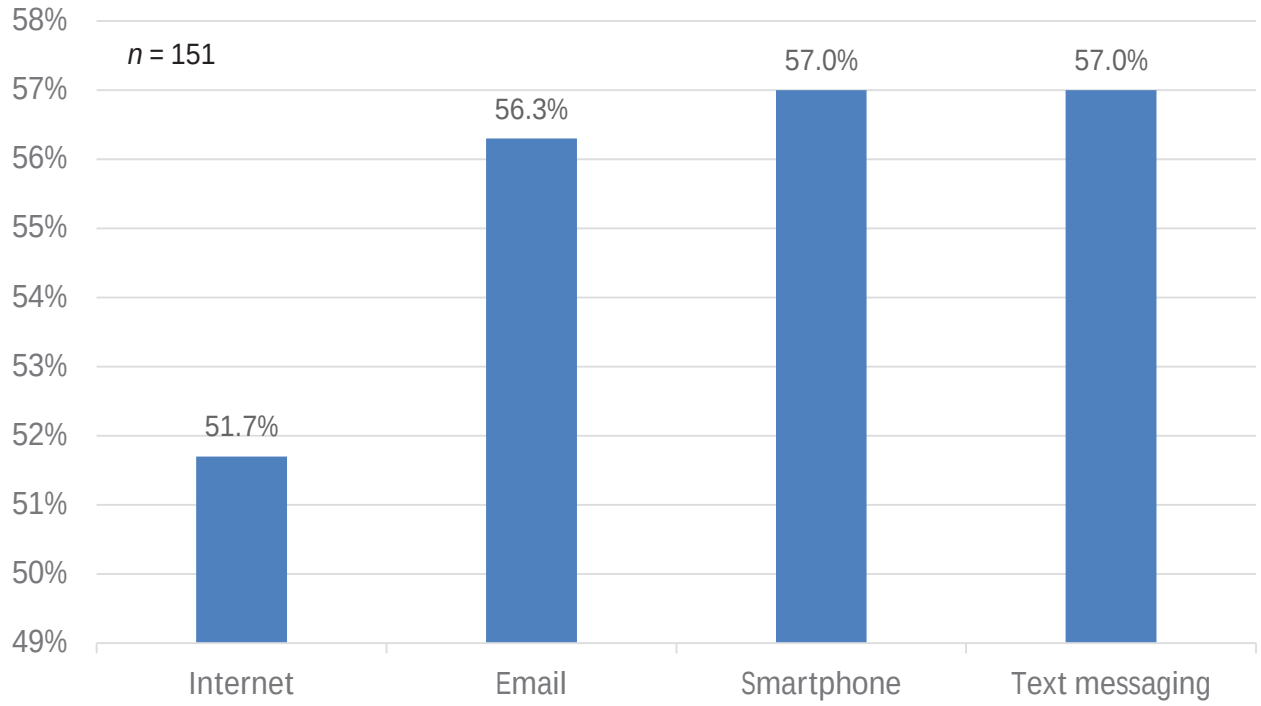
Question 17: What was your total household income last year?

Exhibit 4.4.26 Household income



Question 18: Which of the following do you have access to?

Exhibit 4.4.27 Technology access



Supplemental School Day Survey Findings

Overview

In 2018, the City of Santa Clarita retained Moore & Associates, Inc. to conduct a passenger survey onboard its Supplemental School Day service. While the Supplemental School Day service focuses on providing service to local secondary schools, the service is open to the public.

Survey Development

Development of the survey instrument used in the 2018 survey was created to reflect aspects of the ridership onboard the supplemental school day routes.

Methodology

Moore & Associates utilized an in-person intercept methodology onboard the vehicles along with an online form the schools sent to parents of riders. Every school which is served by this program was included. In-person data collection occurred across two consecutive weekdays: Thursday, April 19, and Friday, April 20, 2018.

Survey Sample

The Supplemental School Day survey was conducted on Routes 620 AM, 620 PM, 621 AM, 622 AM, 622 PM, 624 AM, 624 PM, 625 AM, 625 PM, 626 AM, 626 PM, 627 AM, 627 PM, 628 AM, 628 PM, 629 AM, 629 PM, 630 AM, 631 PM, 632 AM, 633 PM, 634 AM, 634 PM, 636 AM, 636 PM, 637 PM, 638 PM, 640 AM, 640 PM, 641 AM, 641 PM, and 642 AM. A total of 628 surveys was collected, exceeding the sample target by 93 percent.

Data Collection

The survey questionnaire was printed on 100-pound cardstock, thereby eliminating the need for clipboards. The one-page survey instrument was printed on 4 ¼ x 11 inch paper in English.

Surveyors were identified by identification badges worn on a laminated clip as well as reflective vests. Prior to boarding the assigned vehicle, each surveyor was provided with a surveyor bag containing survey forms, pens, route-specific map and schedule, and individual surveyor "paddle."

Surveyors offered the questionnaire to all customers boarding the vehicle while also making themselves available to assist with completion of the form as requested. Participants were requested to return the completed instrument to the surveyor or leave it on their seat for later retrieval. At the conclusion of each day's data collection, all questionnaires were reviewed for completeness, bundled by route, and returned to our office for data entry.

Data Processing

Data Entry

All survey data was entered into an online database using trained data entry personnel. Moore & Associates' staff monitored the data entry process, reviewing data entry work on a daily basis while also conducting spot-checks throughout.

Data Cleaning

Data cleaning was undertaken by trained personnel following completion of data entry. This process addressed differing data formatting that resulted in identical responses being sorted as different. The cleaned data was then imported into a Statistical Package for the Social Sciences (SPSS) database for further analysis. Following data cleaning, simple frequencies were compiled.

Analytical Methods

The SPSS database allowed our project team to compile simple frequencies as well as data cross-tabulations within each dataset. Such cross-tabulations allow comparisons between survey responses that can provide additional insight into customer profiles, travel patterns, perceptions of service, and demographics.

"Typical" Customer Profile

The "typical" Supplemental School Day customer:

- Pays their fare using cash (52.4 percent),
- Rides SCT to and from school five days per week (63.9 percent),
- Rates "fare/price" the highest (2.98) and "availability of seating" the lowest (2.34),
- Does not ride SCT for other purposes (72.5 percent),
- Is in junior high school (66.2 percent), and
- Speaks English at home (86.0 percent).

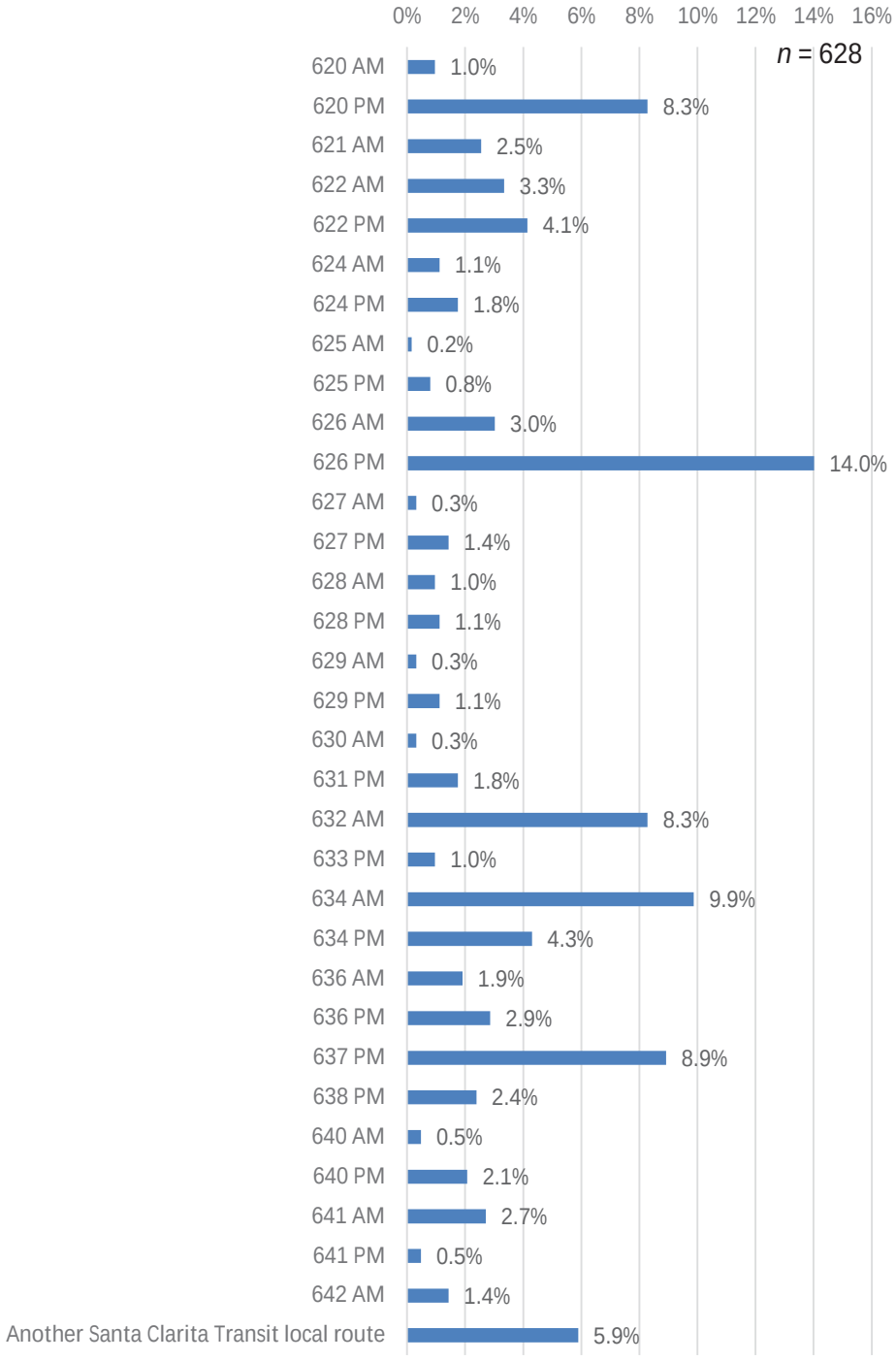
Findings

Respondent

More than two-thirds of respondents (70.2 percent) were student riders and the balance (29.8 percent) parents of student riders.

Route

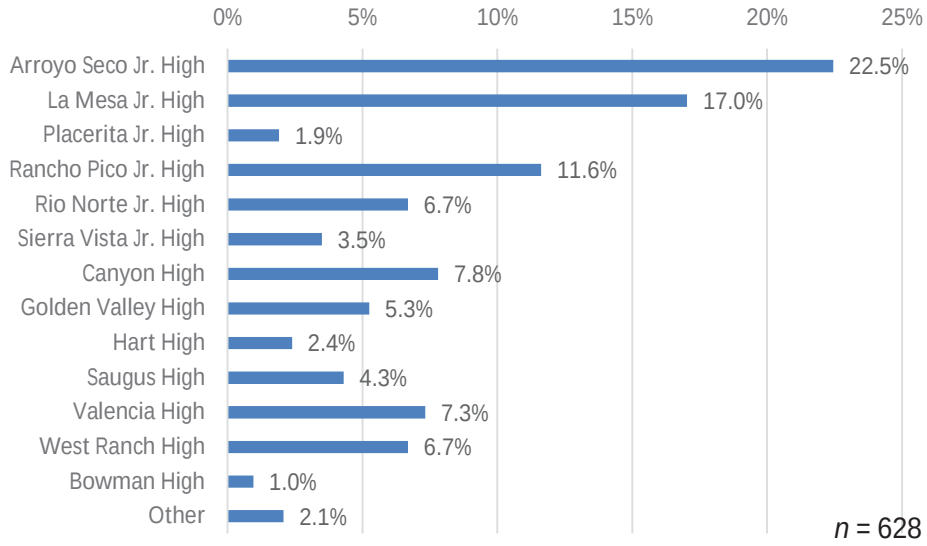
Exhibit 4.5.1 Route



Question 1: What school are you going to or coming from?

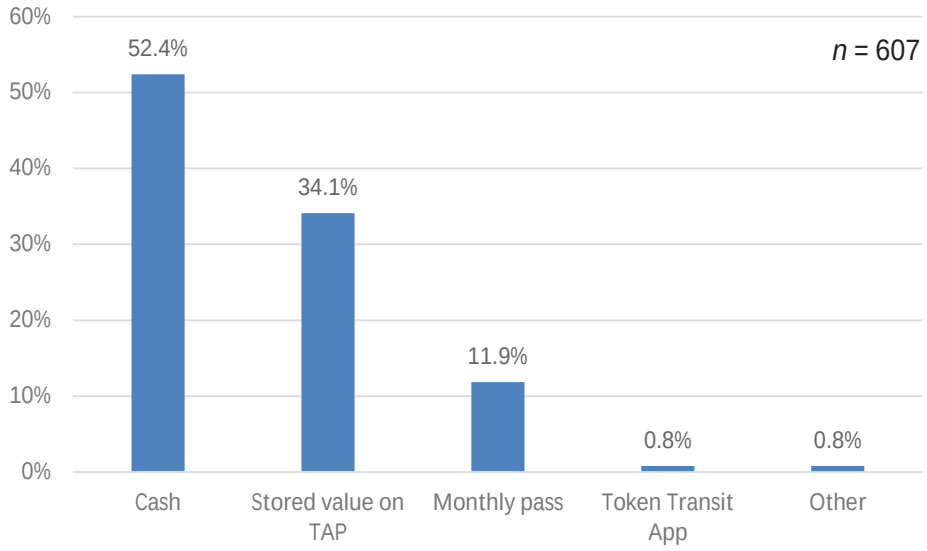
More than (51.1 percent) of all responses can be attributed to one of three junior high schools: Arroyo Seco (22.1 percent), La Mesa (17.0 percent), and Rancho Pico (11.6 percent).

Exhibit 4.5.2 School



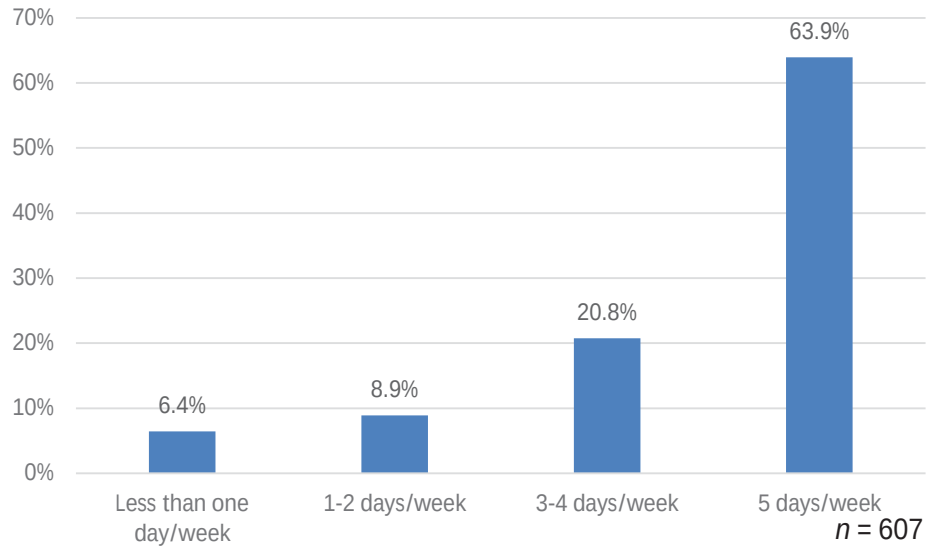
Question 2: How did you pay for this trip?

Exhibit 4.5.3 Fare type



Question 3: How often do you ride the bus to or from school in a typical week?

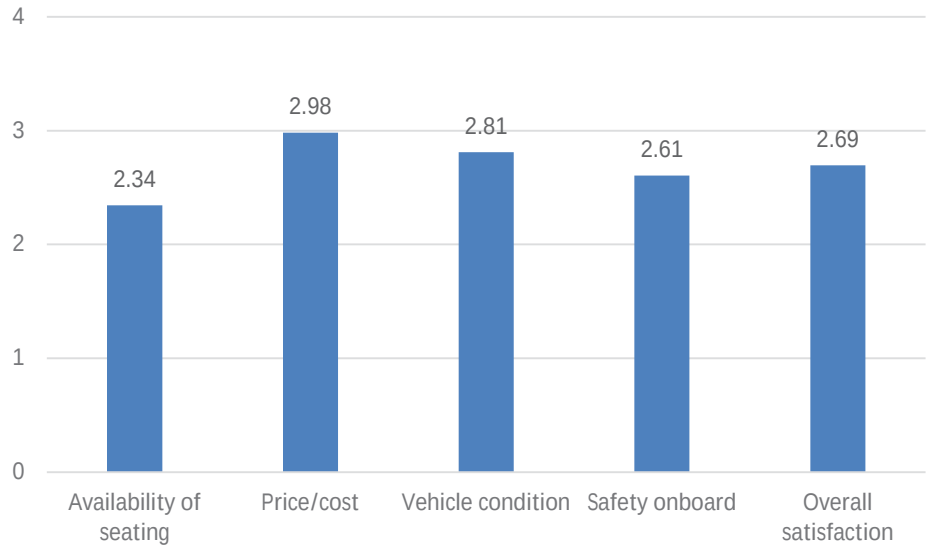
Exhibit 4.5.4 Frequency of use



Question 4: Please rate the bus route on the following attributes.

On a four-point scale, the highest rated attribute was "fare" (2.98) and the lowest was "availability of seating" (2.34).

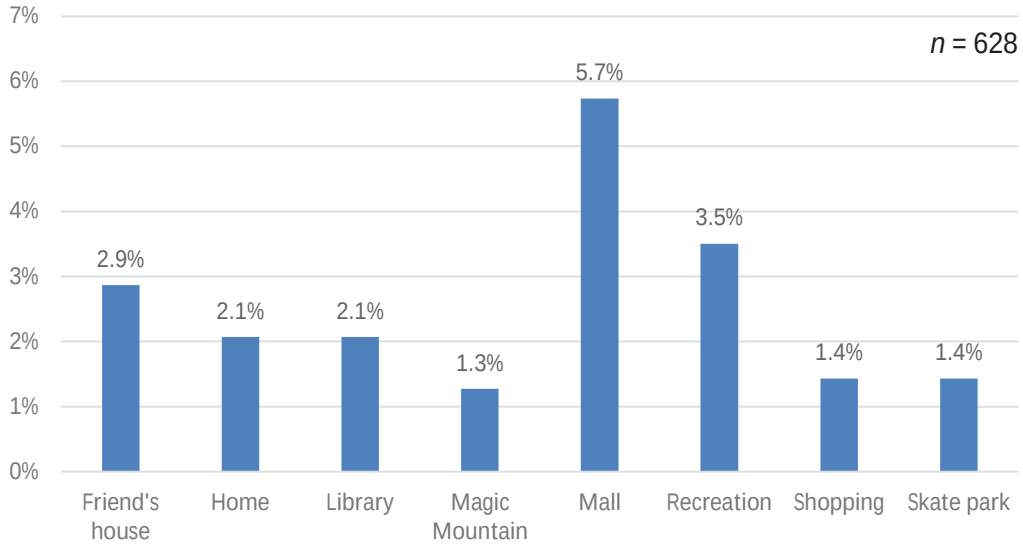
Exhibit 4.5.5 Attribute ratings



Question 5: Do you ride Santa Clarita Transit to go places other than school? If yes, where do you go? (For example: library, friend's house, skate park, soccer practice, etc.)

Slightly more than one-quarter (27.5 percent) of respondents indicated riding Santa Clarita Transit to go places other than school.

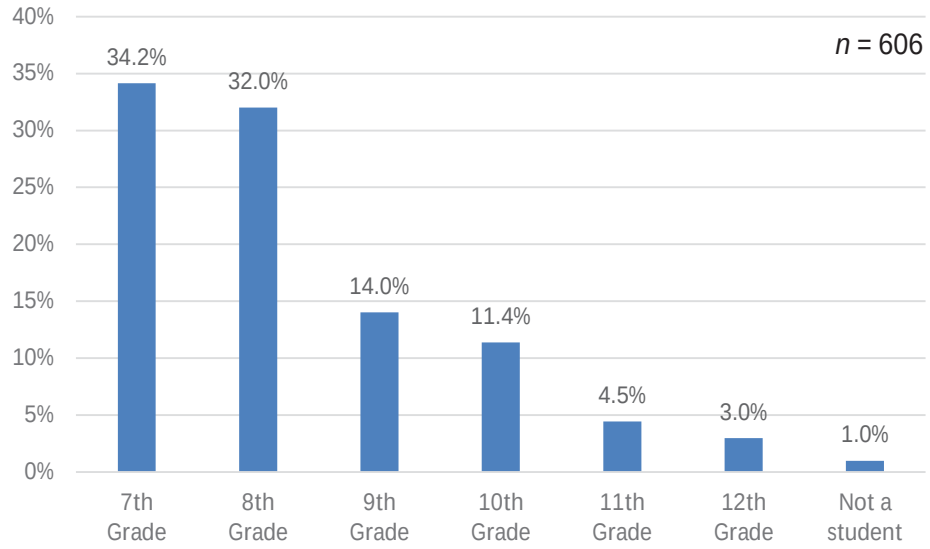
Exhibit 4.5.6 Other destinations



Question 6: What grade are you in?

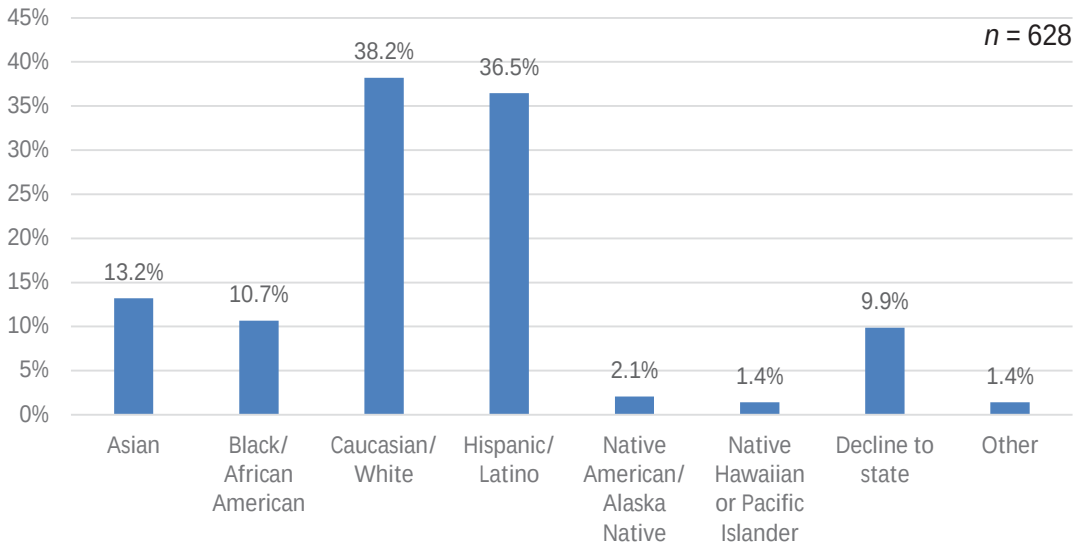
Nearly two-thirds (66.2 percent) of respondents indicated being enrolled in junior high school.

Exhibit 4.5.7 Grade



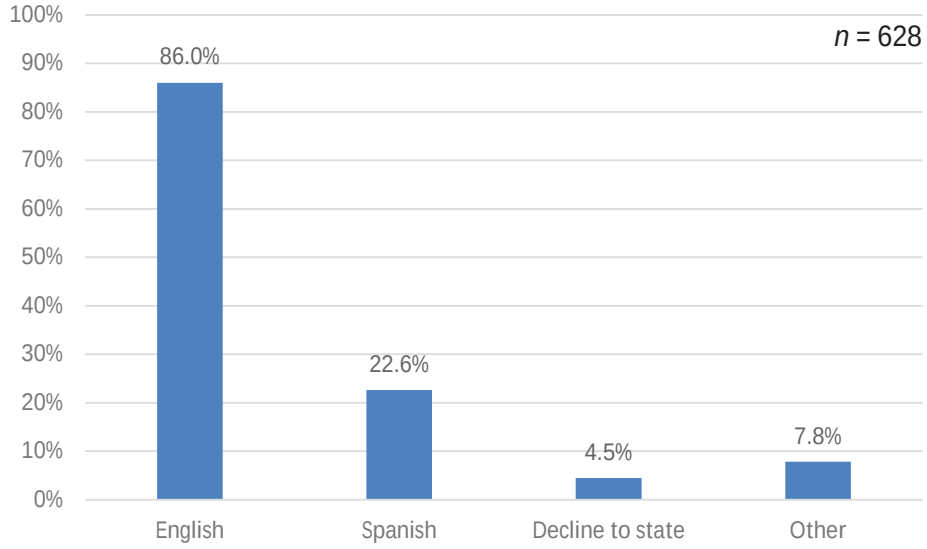
Question 7: What is your race/ethnicity? (check all that apply)

Exhibit 4.5.8 Race/ethnicity



Question 8: What language(s) are spoken in your home? (check all that apply)

Exhibit 4.5.9 Languages spoken at home

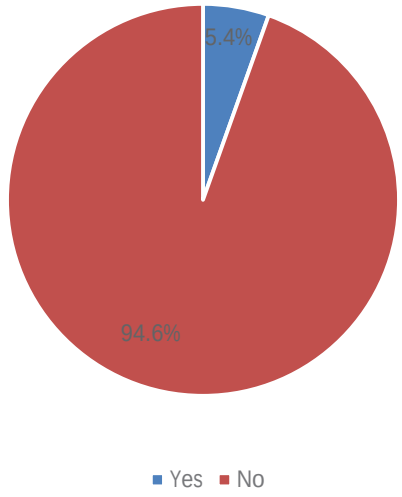


Question 9: Do you have a valid driver license?

Nearly all (94.6 percent) respondents indicated not having a valid driver license.

Exhibit 4.5.10 Driver license

n = 606



5 OPERATIONS PLAN

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CHAPTER 5 | OPERATIONS PLAN

Recommendation 1: Provide fixed-route service to the new Senior Center at Five Knolls (scheduled for completion in Spring 2019).

Transit is especially valuable to seniors. The current Senior Center, located in Newhall, is served by Santa Clarita Transit Routes 4 and 14 and is in proximity to two other routes. The new Senior Center location is on Golden Valley Road and is currently not served by transit. In the near-term, the new Senior Center could be served via a spur off Routes 5 and 6 at the intersection of Golden Valley Road & Valley Center Drive (connecting to Soledad Canyon Road). These routes already travel on Golden Valley (at Soledad) to serve the Aquatic Center, etc. A turnaround location would need to be identified for the bus to return to the route. A spur from Routes 5 and 6 to the new senior center adds just under one mile per trip and approximately three minutes of travel time (or possibly slightly longer depending upon where the turnaround location is).

This recommendation could be implemented within the existing resources of the fixed-route service. The location is near current Routes 5 and 6. Serving the Senior Center will require adjustments to other service variants to compensate. (Note: The new Center opened in early May 2019. Upon opening, the Center was served by the City's dial-a-ride as well as Access Services ADA-complementary. Expansion of the fixed-route service to this location is still planned.)

In the long-term, a new route would be needed to serve the Senior Center as well as new residential developments in the Five Knolls/Plum Canyon area. The proposed Golden Valley Neighborhood Shuttle is discussed in Recommendation 4.

Recommendation 2: Provide limited-stop service on Soledad Canyon Road connecting the MRTC to the Vista Canyon Transit Center.

The request for limited-stop service along Soledad Canyon Road (Soledad Canyon Express) arose during a community workshop. Vista Canyon is a new development on the city's northeast side that will include a transit hub and Metrolink station. Transit service to Vista Canyon should be implemented as soon as possible following occupancy of the development. An express connection between the MRTC and the Vista Canyon Transit Center would reduce the average travel time for many existing riders as well as enhance the attractiveness of transit as a mobility alternative.

A limited-stop service could provide a faster connection between Vista Canyon, Canyon Country, and Valencia, a trip which currently can take as long as 45 minutes depending on time of day. This recommendation would provide express service along key arterials, primarily Soledad Canyon Road. It would increase the number of daily runs for Routes 5 and 6 with stops limited to major destinations along Soledad Canyon Road such as MRTC, Santa Clarita Station, Soledad Canyon Road & Whites Canyon Road, and Soledad Canyon Road & Sierra Highway. It would also help address the request by College of the Canyons' staff for a link between the east and west campuses.

The proposed service would have broad appeal. Currently, Route 6 travels along Soledad Canyon directly opposite the location of the new Vista Canyon Transit Center (VCTC). Rather than solely diverting Route 6, all routes serving the east side of the Santa Clarita Valley should be assessed for potential service to the VCTC, as well as for additional service south of SR 14.

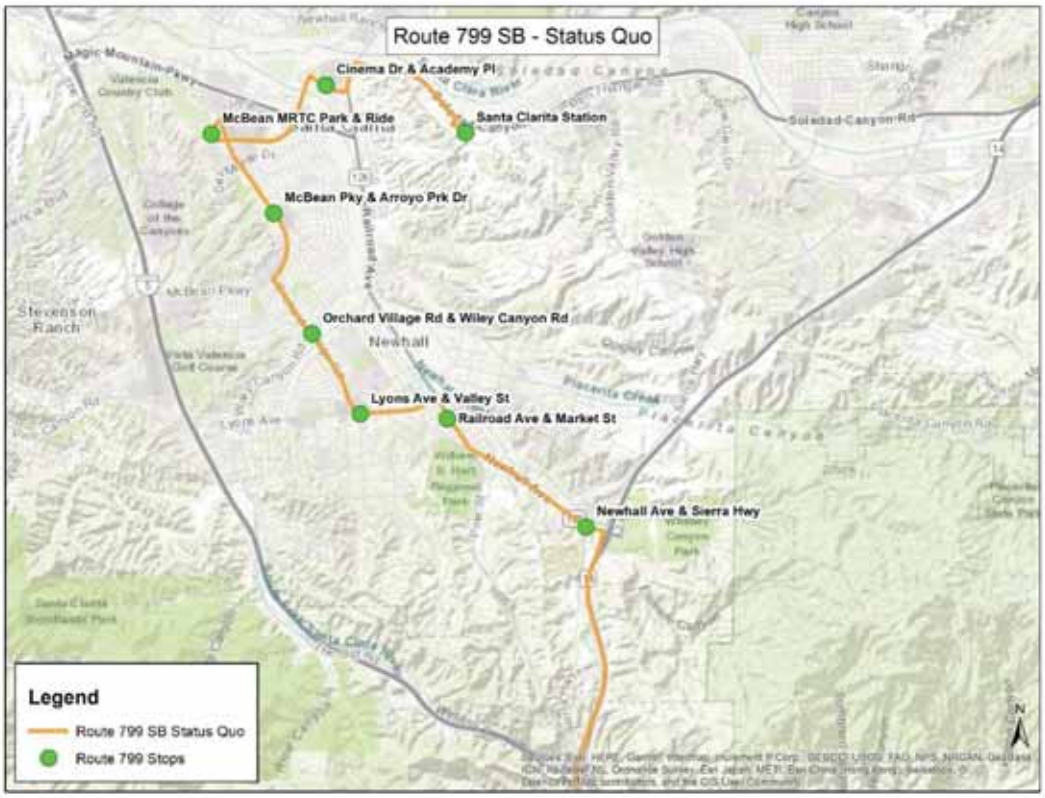
Exhibit 5.1 Soledad Canyon Express

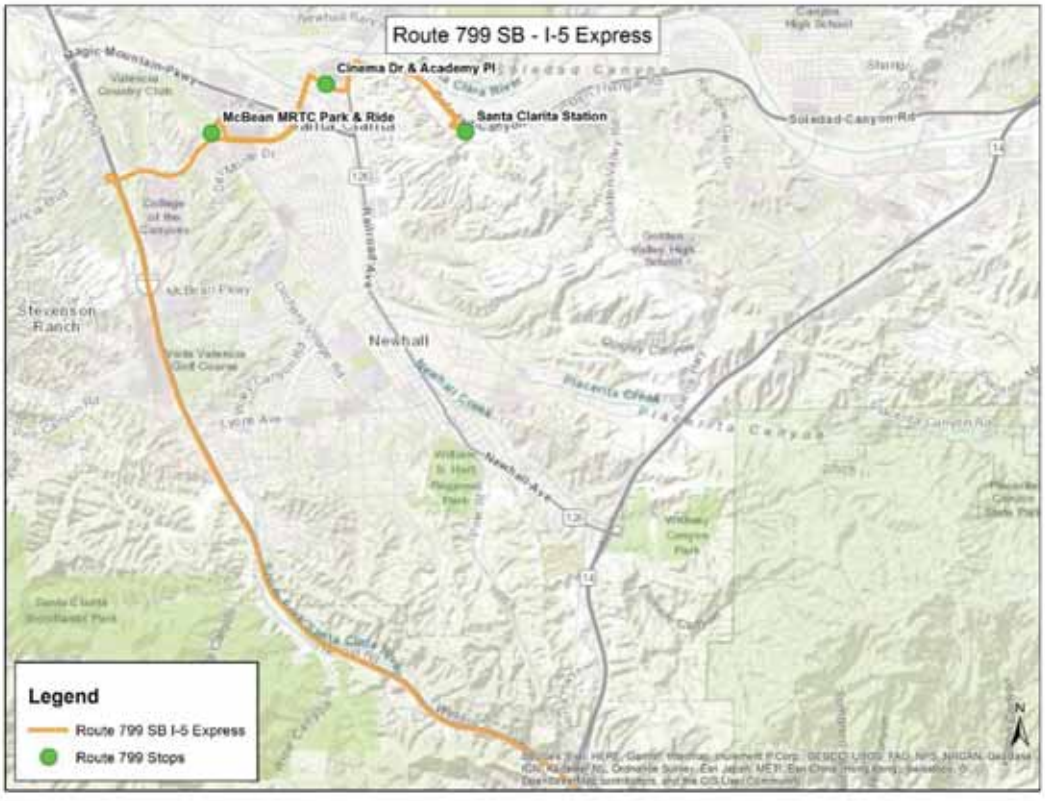
Recommendation 3: Divide the commuter bus service into two legs – west side and east side.

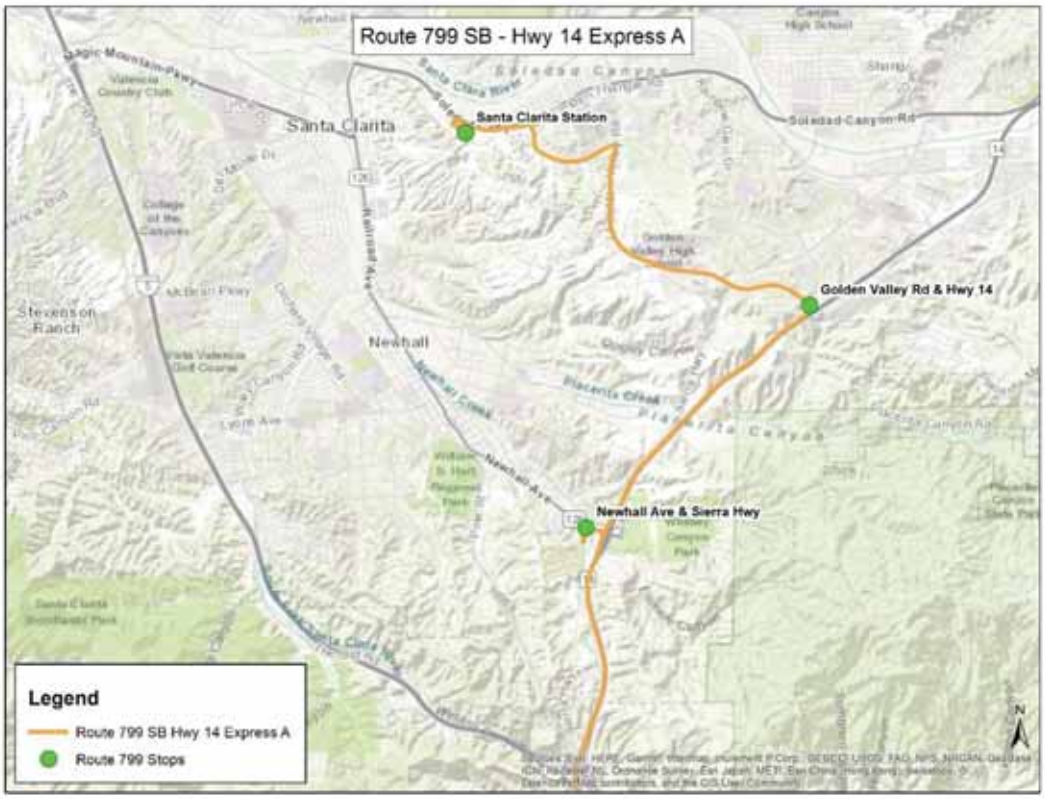
The objective of this recommendation is to reduce average travel time, thereby enhancing commuter bus attractiveness. It also includes a possible route alternative and potential new service. There may be a need to invest in additional park and ride capacity at the MRTC as well as in the east side of the Santa Clarita Valley. A short questionnaire could be fielded to help determine how this hypothetical change would affect current riders. This recommendation could be implemented within existing resources for commuter service.

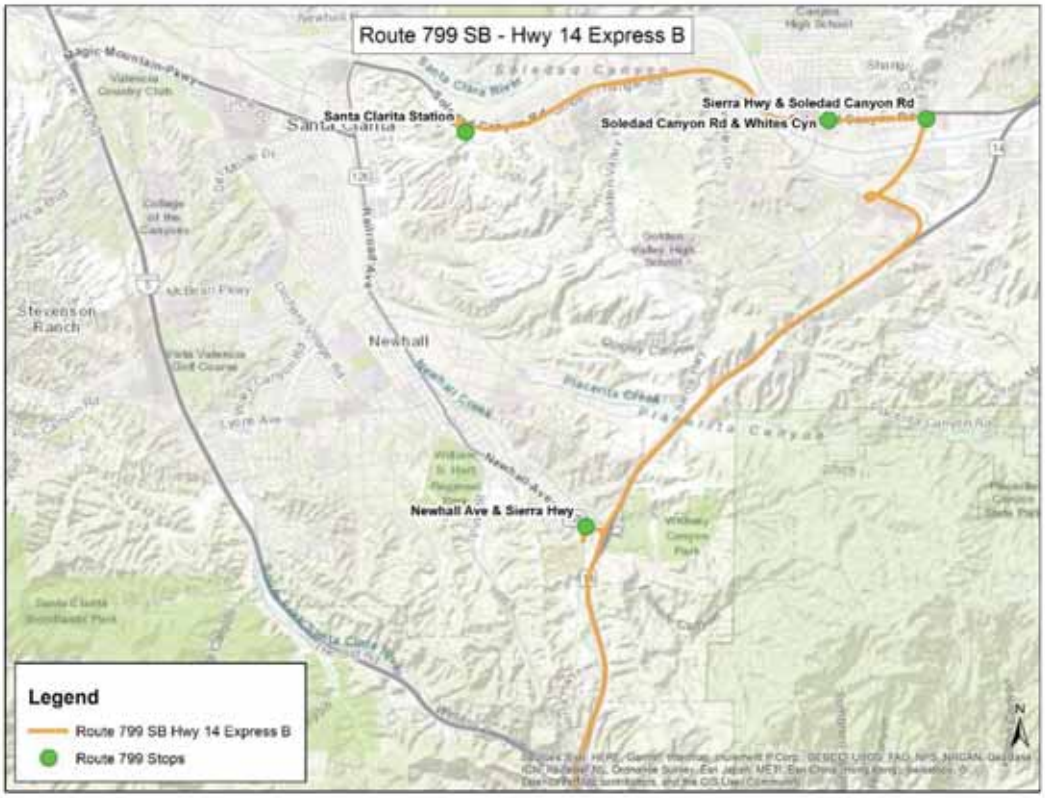
Route 799 has the highest commuter bus ridership. It currently links Santa Clarita Station, McBean Regional Transit Center, and Newhall Station (among others) with downtown Los Angeles. This recommendation could reduce average travel time by serving select popular stops before getting onto the freeway. West side commuter service could also be extended north to serve Castaic residents via I-5. East side commuter service could originate at Santa Clarita Station and include pick-up points along Soledad Canyon Road before heading south. Ultimate routing needs to be directed by a survey of current commuter riders.

Exhibit 5.2 Commuter Route Alternatives






Route 799 SB - Hwy 14 Express A
Santa Clarita Station
Golden Valley Rd & Hwy 14
Newhall Ave & Sierra Hwy
Santa Clarita
Newhall
Legend
Route 799 SB Hwy 14 Express A
Route 799 Stops


Route 799 SB - Hwy 14 Express B
Santa Clarita Station
Sierra Hwy & Soledad Canyon Rd
Soledad Canyon Rd & Whites Cyn
Newhall Ave & Sierra Hwy
Santa Clarita
Newhall
Legend
Route 799 SB Hwy 14 Express B
Route 799 Stops

Recommendation 4: Utilize smaller vehicles as "neighborhood shuttles" with connections to trunk routes.

Shortening distance and time on key arterials would likely enhance service reliability. Smaller vehicles would be used to go deeper into neighborhoods to provide connections with "trunk routes" traveling along key arterials such as Soledad Canyon Road, Bouquet Canyon Road, Valencia Boulevard, Newhall Ranch Road, and Lyons Avenue. Doing so would likely reduce travel times on the trunk routes, but could also increase the incidence of bus-to-bus transfers. Transitioning to this service configuration would underscore the need for a (local service) transfer policy so support public transit as a competitive travel alternative. Trunk routes travel longer distances on larger streets while neighborhood shuttles would remain in the neighborhood to move riders between trunk stops and within the neighborhood.

Implementation of one vehicle operating a 12-hour service day (Monday through Friday) translates to an annual cost of approximately $229,000 for each neighborhood shuttle. Reductions to VSH from existing routes could offset the cost accordingly.

A pilot program could begin in neighborhoods that are in proximity to but are not served by transit such as the Fair Oaks Ranch development. Shuttles can connect residents with nearby stops such as Via Princessa Metrolink or Soledad Canyon/Sierra Hwy intersection, providing connections with three fixed routes.

A demonstration project would likely need to be implemented in conjunction with Recommendation 5 to provide free transfers between the neighborhood shuttle and the existing fixed-route service. Areas for initial consideration include Fair Oaks Ranch, Needham Ranch, and the Bouquet Canyon/Seco Canyon area; where long-line service can be eliminated or a neighborhood shuttle could be introduced without a full-day fixed-route schedule.

A Golden Valley Neighborhood Shuttle would travel south on Golden Valley Road, east on Newhall Ranch Road, north on Bouquet Canyon Road, east on Plum Canyon Road, before returning south again on Golden Valley Road. A shuttle could substitute for the current Route 14, and could connect with Santa Clarita Transit Routes 3, 4, and 12, as well as a potential Saugus Neighborhood Shuttle.

A potential Saugus Neighborhood Shuttle could connect residents with trunk routes by traveling south on Bouquet Canyon Road, east on Newhall Ranch Road, north on Hillsborough Parkway, east on Decoro Road, north on Seco Canyon Road, circling around Tamarack Road, and east on Copper Hill Drive, before returning South on Bouquet Canyon Rd.

Introducing the pilot program in two neighborhoods would require a minimum of two vehicles. The estimated cost to procure two cutaway vehicles is approximately $372,000. (This assumes an existing Santa Clarita Transit vehicle would be available as a spare.)

Exhibit 5.3 Golden Valley Neighborhood Shuttle

Exhibit 5.4 Saugus Neighborhood Shuttle

Exhibit 5.5 Recommendation 4 Cost Estimate (Operations)

	Daily VSH	Weekly VSH (M-F)	Max. annual VSH	Cost/hour (FY 2020)	Total annual cost	Considerations
Golden Valley Shuttle	12.0	60.0	3,120.00	$76.90	$239,928.00	Some of the costs of the shuttle will likely be offset by the reduction in VSH from other routes currently serving the Saugus and Plum Canyon areas
Saugus Shuttle	12.0	60.0	3,120.00	$76.90	$239,928.00	Some of the costs of the shuttle will likely be offset by the reduction in VSH from other routes currently serving the Saugus area

Recommendation 5: Introduce a local transfer policy.

The City's current transit program does not include a free or reduced (local service) transfer. Rather, each ride must be paid for individually. A free or reduced fee transfer between all local fixed-route services (along with a separate reduced "neighborhood shuttles" one-way fare if implemented) would encourage riders to take advantage of a "hub service" approach. This could potentially be launched as a demonstration project along with the proposed shuttles.

Transfers between fixed-route services will require a change in fare media. At a minimum, a TAP card with a one-way fare can be programed to allow a free or reduced fare within a defined time of the original purchase. For example, LA Metro currently provides a free transfer valid up to two hours for customers purchasing a one-way trip using a TAP card. (Note: Riders using a cash fare do not qualify for a transfer.)

Token Transit can accommodate transfers for mobile purchases in a couple of ways, which include designating a one-ride pass or a single-ride with transfer, which remain active for a designated period of time but must be obtained at the time of purchase.

As Santa Clarita Transit has transitioned to more of a "hub"-oriented service plan, (local service) transfers are essential on many routes. A transfer policy among local fixed routes would encourage current riders to utilize the service more, and give potential riders a better incentive to use public transit. Making a transfer with a second full fare can discourage patronage. Any change in the City's transfer policy should be promoted heavily throughout the local service area.

Recommendation 6: Improve late-night transportation options.

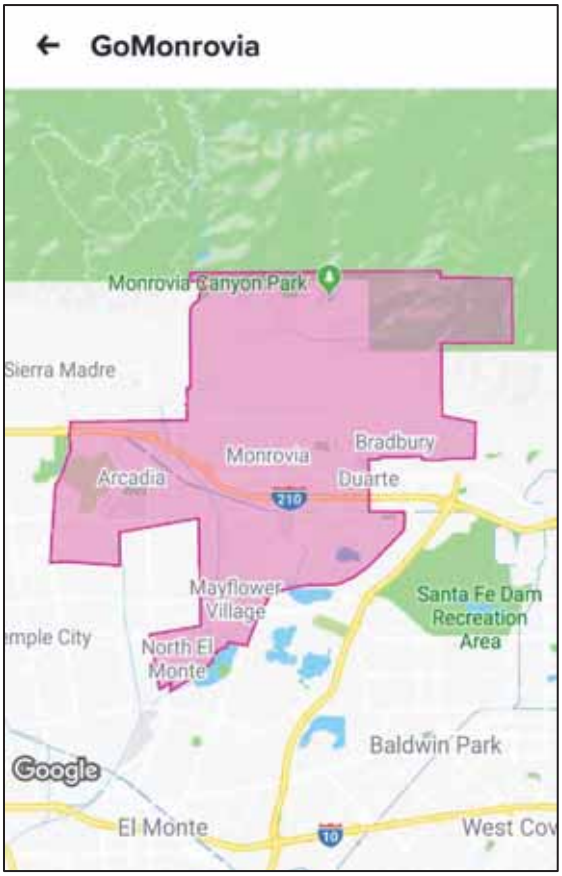
In addition to concerns being raised during a community meeting, "service hours" was the lowest-ranked attribute in the Onboard Survey. Reducing and reallocating service from fixed-route to on-demand would increase service to passengers without expanding "low-ridership" service hours. We recommend introducing a demonstration project where the City shares the cost with riders, with a limit on the number of eligible monthly rides per individual.

This recommendation would reduce evening and Sunday fixed-route service while provide alternative options for travel during those period. The City should consider taxi or Uber/Lyft vouchers as a replacement for bus service during early mornings, late evenings, and Sundays. Providing alternatives to traditional bus service during low ridership periods could also help the City reallocate its resources to potentially provide increased service during these days and times with high demand. Limits can be placed on the number of rides per person per day. A code is used to then subsidize up to a certain price, then customer pays overage on top of initial flat fee.

For example, the GoMonrovia program subsidizes rides of up to $15 with base fares of one dollar for a shared ride (one to two passengers) and $3.50 for a regular Lyft ride (up to four passengers in a group). Charges above $15 as well as tips are charged to the passenger's personal account. Shared rides to and from Old Town or the Monrovia Gold Line Station cost just fifty cents. A limit is placed on the number of rides one passenger can have.

We recommend the City begin by defining (via geo-fencing) the projects service area. The City would then negotiate the cost/ride and the ride subsidy budget for the proposed trial period. Given there is no formal demand forecast, we recommend the City limit both the number of eligible users as well as the number of subsidized rides which each program participant can take. Our experience with similar micro-transit trial reveals demand for the subsidized ride is often much greater than demand for traditional public transit. While Monrovia opted to include travel neighboring communities in its micro-transit experiment, we recommend starting with a much smaller defined area within Santa Clarita.

Exhibit 5.6 GoMonrovia Geofencing



GoMonrovia

Recommendation 7: Link COC's Canyon Country campus with future Vista Canyon Transit Center and Metrolink station.

College of the Canyons is the second largest employer and largest post-secondary school in Santa Clarita. Connecting the Canyon Country campus to Vista Canyon Transit Center will create a vital connection to the satellite campus.

The COC Canyon Country campus is currently served by Santa Clarita Transit Route 5, while Route 6 is closest to the site of the Vista Canyon Transit Center. A direct connection between the two sites would best serve future students, staff, and faculty at the campus.

Service between campuses could be achieved by bifurcating Routes 5 and 6. The eastern routing would remain unchanged up to the MRTC. The route would then continue to COC's Valencia campus, where it would terminate. Limited-stop (express) runs on a re-imagined new Route 5 would serve high-ridership stops along Sierra Highway and Soledad Canyon Road. The western portion of Routes 5 and 6 would remain unchanged, from the Santa Clarita Metrolink Station to Stevenson Ranch via Newhall.

Limited-stop and more direct express runs on a new Route 5 could enhance access to the Canyon Country campus. This would include a few high-ridership stops such as Soledad Canyon Road & Sierra Highway and the MRTC, then altering course to terminate at the College of the Canyons.

Another neighborhood shuttle (as discussed in Recommendation 4) could connect the Canyon Country campus with the new Vista Canyon Transit Center. A route departing the campus would travel north on Vasquez Canyon Road, south on Sand Canyon Road, west on Soledad Canyon Road, south on Lost Canyon Road to the Vista Canyon Transit Center, back north on Lost Canyon Road, west on Soledad Canyon Road, and north on Vasquez Canyon Road back to the Canyon Country campus. Assuming a 12-hour service day with one vehicle, the estimated annual cost of the neighborhood shuttle would be $239,928.

Implementation of this recommendation would be contingent upon funding support from College of the Canyons.

Exhibit 5.7 Routes 5 and 6 Bifurcation East

Exhibit 5.8 Routes 5 and 6 Bifurcation West

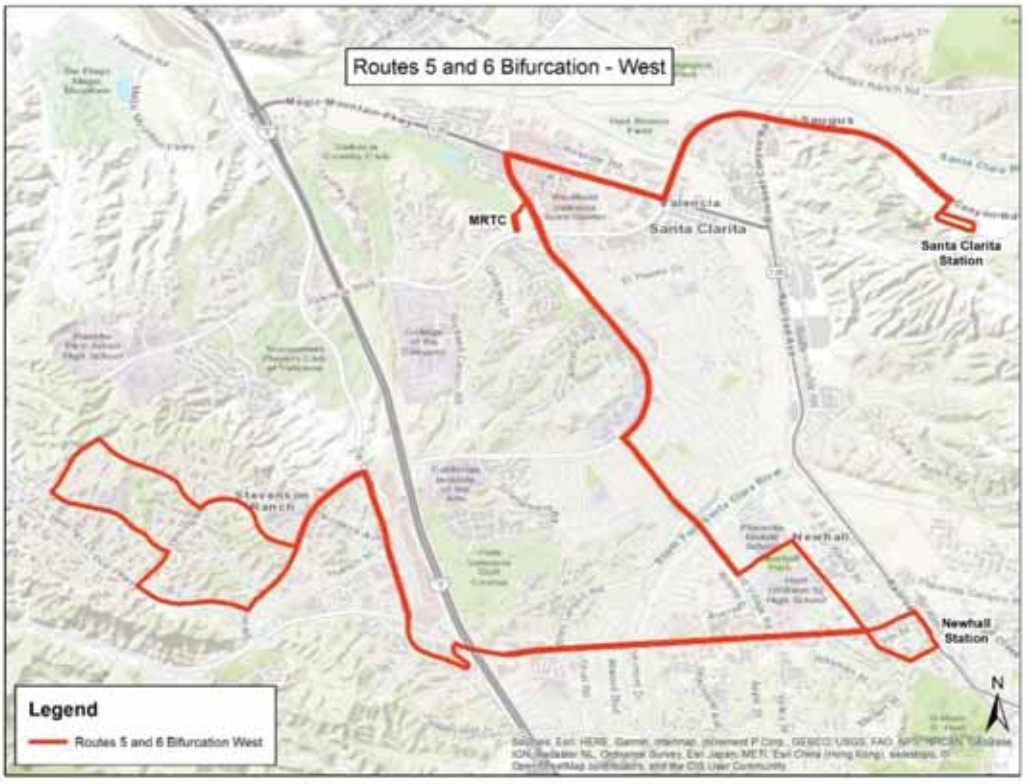
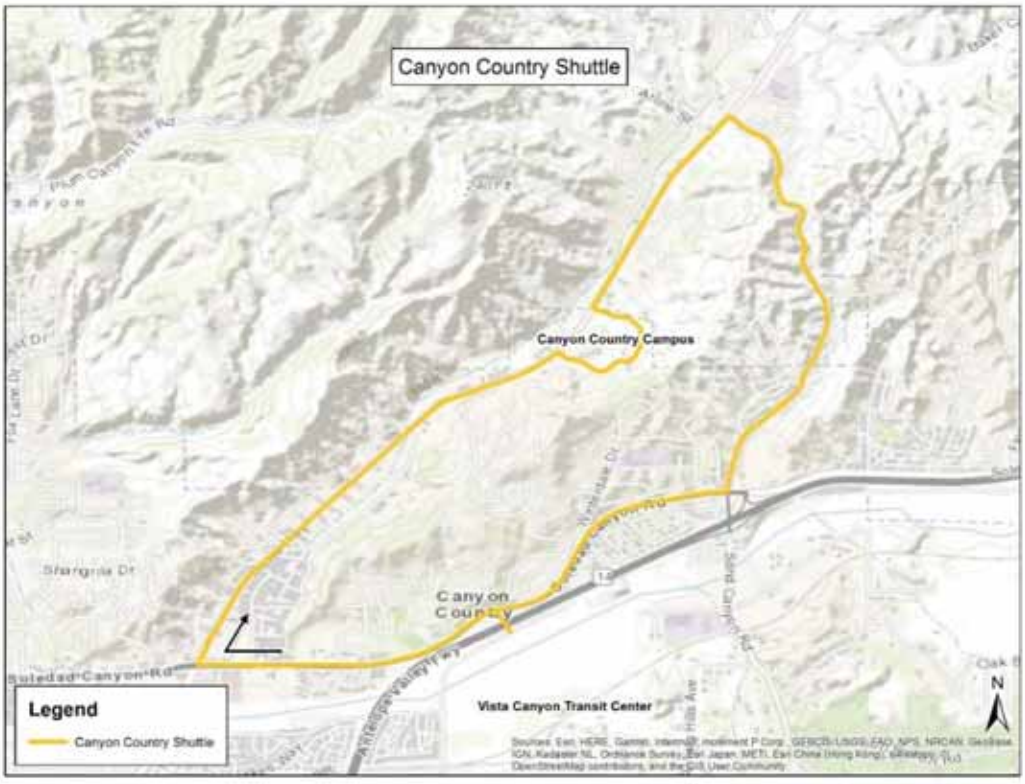


Exhibit 5.9 Canyon Country Neighborhood Shuttle



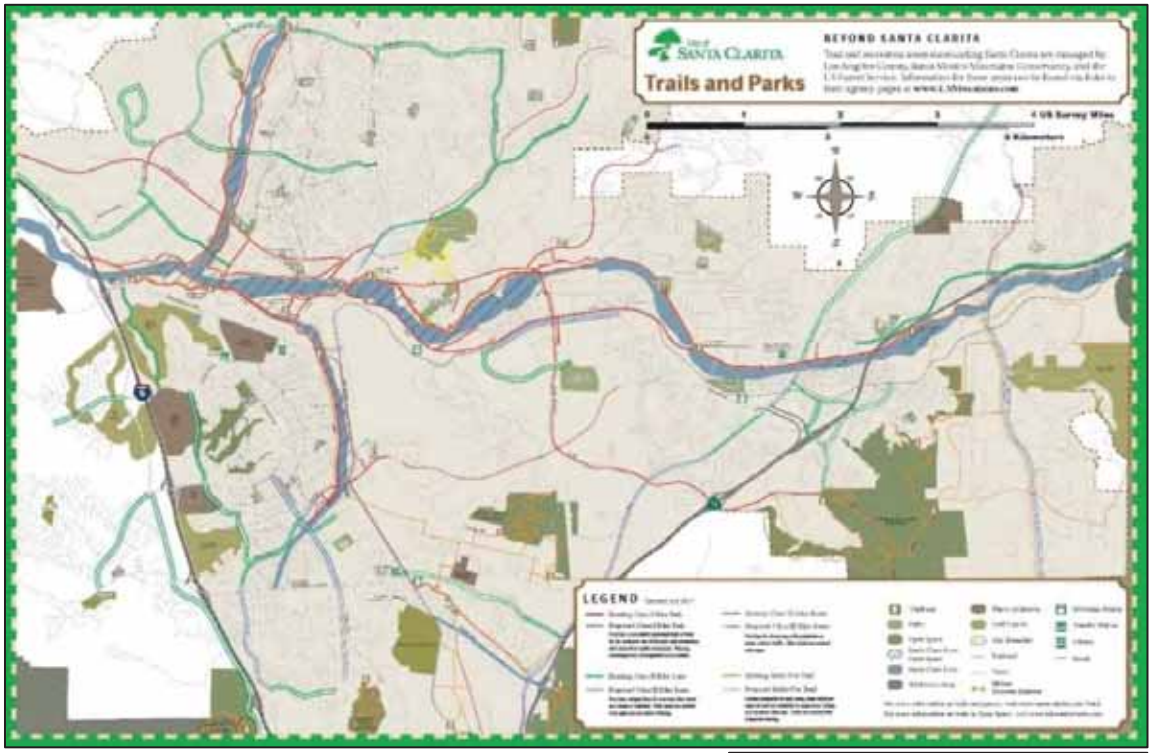
Recommendation 8: Promote the link between transit and cycling to make transit more attractive.

Connecting and enhancing complementary mobility options can increase use of public transit. Many people assess their access to transit by the proximity of the nearest bus stop. Bicycles are a common "first and last mile" solution. Using a bike can make transit more attractive, and bikes travel on the bus for free. The promotion may include Santa Clarita's bicycle infrastructure itself, particularly the Class I lane network. At the time of the TDP project, the City was also preparing its Active Transportation Plan.

The City already has a webpage on the transit website and a brochure. Increasing presence of bike services can be onboard buses, in social media, within transit schedules, and within apps (for example, the transit app includes city bike paths).

The link between transit and cycling should also include promotion of the City's Pace bikeshare program. By locating bike hubs near transit lines (as well as recreational areas and other activity centers), transit riders can expand their reach via bicycle. If possible, providing a free hour of bike rental with a transit pass could further encourage use of the bikes. However, there must be effective cross-promotion between current and potential transit users and bike enthusiasts in order to leverage this combined mobility option.

Exhibit 5.10 Bicycle Infrastructure

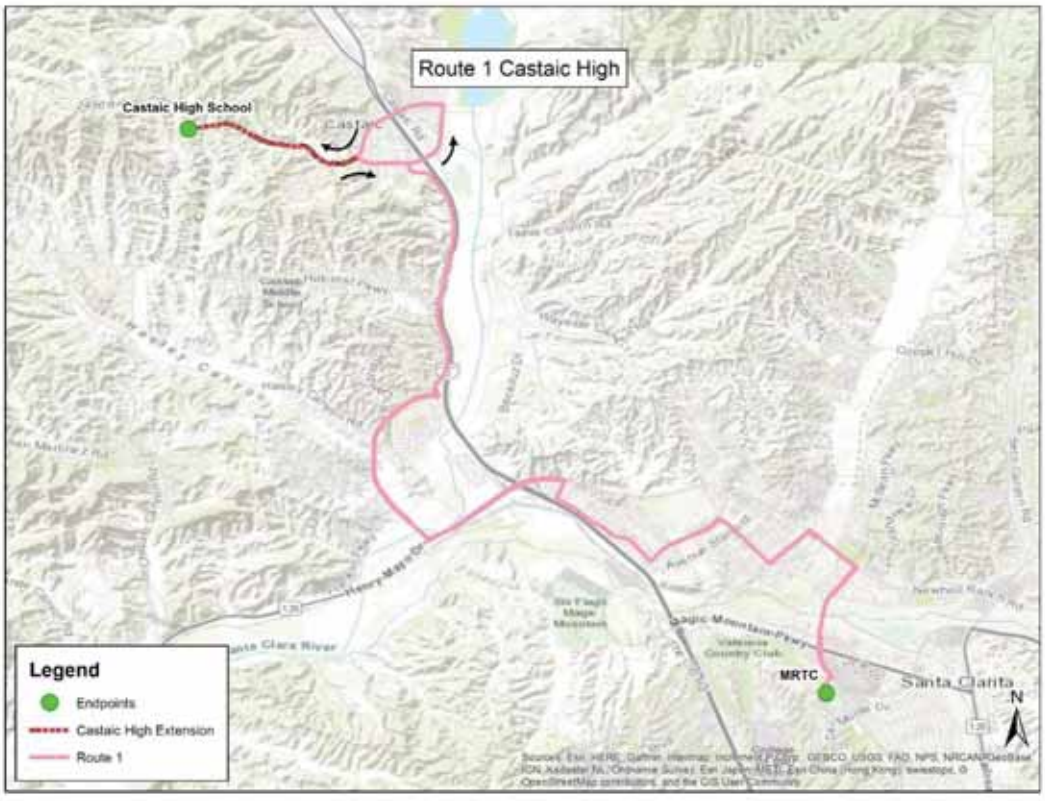


Santa Clarita Transit

Recommendation 9: Provide service to the new Castaic High School.

Castaic High School is slated to open in late Summer 2019. Other junior high and high schools are already served by Supplemental School Day routes or other Santa Clarita Transit services. As part of the TDP process, we originally recommended a service extension timed to the school day. In other words, Route 1 would have an extension operating on Sloan Canyon Road to serve the new Castaic High School without creating a new Supplemental School Day route. Select runs would be timed to the school's bell schedule as is the case with other Supplemental School Day routes.

Exhibit 5.11 Proposed Route 1 Castaic High Extension



The City has already opted to move ahead with a Supplemental Shuttle rather than the proposed route-deviation service. This is due in part to a decision by the William S. Hart Union School District to operate its own student bus service to pick up students throughout the Santa Clarita Valley wishing to attend Castaic High School. As a result, the connection between the MRTC and the new high school is not as critical.

Recommendation 10: Determine how to integrate service to Newhall Ranch/FivePoint into the transit system.

The new Newhall Ranch development will be designed to house more than 20,000 residential units in a series of Villages. Initial move-ins in the first Village are tentatively slated for late 2020/early 2021. Any alterations to the western routes, or introduction of new routes, should be considered alongside other service refinements in Castaic and Val Verde areas. Given several of these options include service that

would operate within the footprint of existing Routes 1 and 2, any changes should take into account overall service frequency at key locations as well as frequency of the individual routes in the shared route segments.

Implementation of this recommendation is contingent on County funding support. Four possible service options are detailed below. Operational cost estimates are provided in Exhibit 5.15. Option A would provide service for the lowest cost (given it extends an existing route), but would also provide the least amount of service in the Newhall Ranch area. The other options envision introduction of a considerable amount of new service.

Option A: Route 7 Extension

The easiest short-term solution to serve Newhall Ranch is to extend Route 7 from its current terminus on Magic Mountain Parkway into Newhall Ranch. Route 7 already connects Magic Mountain with the MRTC. This would add approximately 6.5 miles to the current route, and would affect the current practice of interlining with Route 3. It would result in the addition of approximately 1,770 VSH annually.

Option B: Add Routes 1B and 2B

Another option is to add frequency to Santa Clarita Transit Routes 1 and 2, but differentiate as Route 1B and 2B traveling between MRTC and Newhall Ranch before continuing their respective routes, while Routes 1A and 2A are the same as Routes 1 and 2. Residents in the Newhall Ranch have service to MRTC (and Castaic and Val Verde). Residents of Castaic and Val Verde now have more frequency for trips that terminate at the MRTC and would have direct access to Newhall Ranch and Magic Mountain.

For this option, we assumed the addition of new trips, adding approximately one-third of the number of current trips for each route on all service days. This would result in the addition of approximately 10,700 VSH annually. Replacing existing trips with the "B" routing through Newhall Ranch, however, would reduce this figure considerably.

Option C: Bi-directional Loop

Option C would add a bi-directional loop serving Newhall Ranch, the MRTC, and the Valencia Commerce Center, which can be rerouted to serve Commerce Center Drive, future development along Highway 126, and connect with Routes 1 and 2. Assuming approximately the same span of service as Routes 1 and 2, this would add approximately 5,900 VSH annually and would require at least two vehicles, but more likely at least four.

Option D: Separate Route

Finally, a separate route could be created to connect Newhall Ranch to MRTC. It can connect to the MRTC via Magic Mountain Parkway or Valencia Boulevard. This route can continue south along The Old Road and can replace the westernmost section of Santa Clarita Transit Routes 5 and 6 along with a Stevenson Ranch neighborhood shuttle. Assuming the new route would serve the Newhall Ranch development as well as Stevenson Ranch before returning to the MRTC, this option would add approximately 5,700 VSH annually. However, costs could be offset if Route 5 and 6 service within Stevenson Ranch was replaced by the new route.

Exhibit 5.12 Newhall Ranch Route 7 Extension

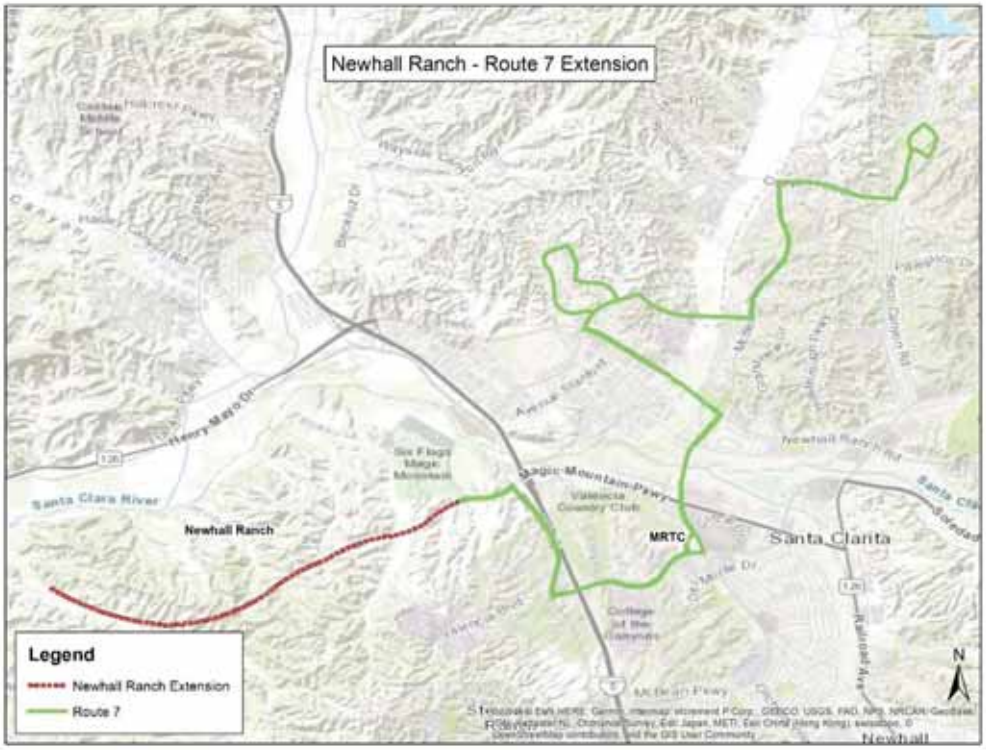


Exhibit 5.13 Newhall Ranch Route 1 and 2

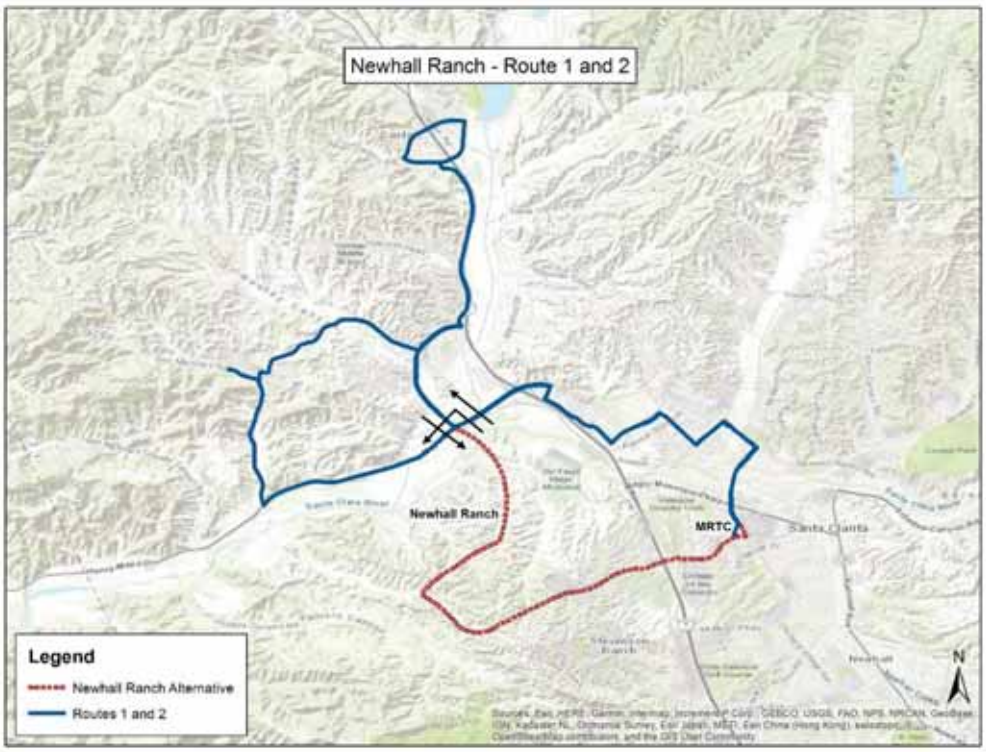


Exhibit 5.14 Newhall Ranch Loop

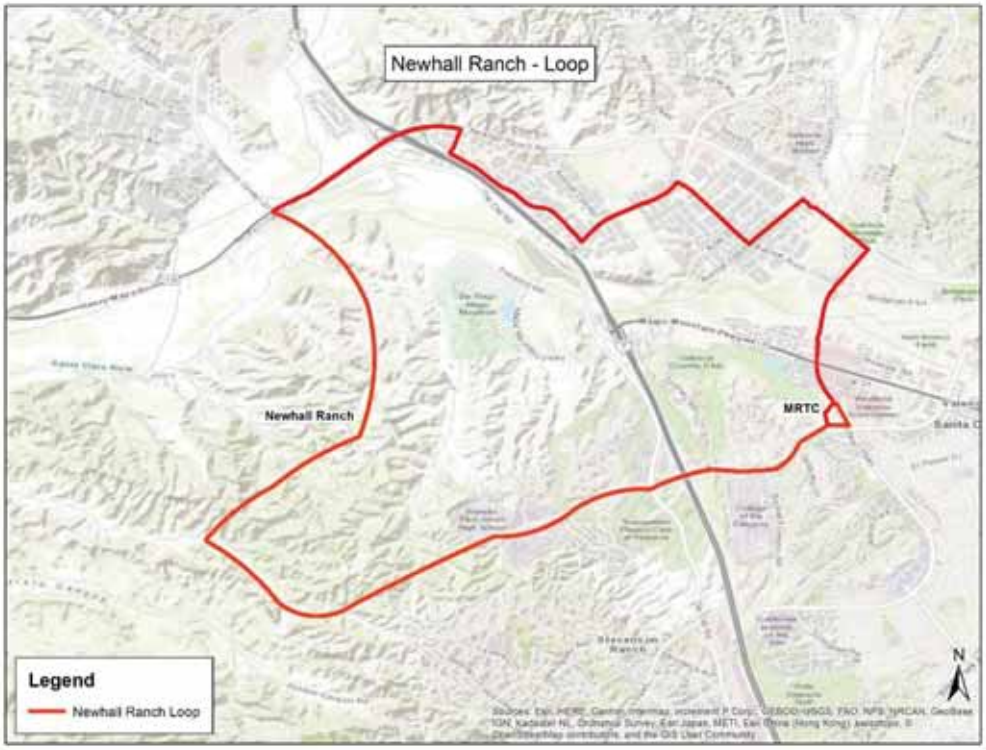


Exhibit 5.15 Recommendation 10 Cost Estimate (Operations)

	Add'l mileage	Weekly trips	Travel time @14 mph (min)	Weekly VSH	Max. annual VSH	Cost/hour (FY 2020)	Total annual cost	Considerations
Option A: Route 7 Extension	6.50	73	28	34.1	1,771.47	$76.90	$136,225.79	Would affect interlining with Route 3
Option B: Routes 1B and 2B	1B: 23.50	76	101	127.6	6,633.71	$76.90	$510,132.63	Frequency increased by adding approximately one-third more trips on Routes 1 and 2
	2B: 21.25	51	91	77.4	4,025.36	$76.90	$309,549.96	
Option C: Bi-directional Loop	15		64	113.6	5,905.71	$76.90	$454,149.43	Assumes 2 vehicles; approximately same span of service as Routes 1 and 2
Option D: Separate Route	14.5		62	109.8	5,708.86	$76.90	$439,011.11	Assumes service to Stevenson Ranch; cost would be offset by a reduction in VSH for Routes 5 and 6

Recommendation 11: Improve/enhance bus stops.

Bus stops are an important part of a rider's transit experience. They also serve to increase service awareness. This recommendation would be an ongoing process to keep the City's bus stops an attractive and functional "front door" to the transit service. Ideally, bus stops should be equipped with signage, service information, clear access and loading surfaces, and seating or shelters appropriate to the activity level of the stop. Also important is a connecting sidewalk. Recommendations for bus stop amenities should be based on a combination of bus stop activity/productivity and the availability of appropriate space at the location.

The example below illustrates a bus stop with most amenities discussed above, and serves as a goal for future bus stop development, where appropriate. Seating is available, a shelter protects from the elements, and a trash can keeps the site in a cleaner state.

Exhibit 5.16 Bus Stop Amenities

EB Magic Mountain & FS Valencia

An example of bus stop criteria is provided in Exhibit 5.17. The City should adjust the categories as appropriate to meet its needs, and may wish to add other amenities (such as concrete pads or sidewalks) if appropriate.

Exhibit 5.17 Sample Bus Stop Amenity Criteria

Amenities	Class I *21+ daily boardings*	Class II *10-20 daily boardings*	Class III *<10 daily boardings*
Pole with bus stop sign and QR code	Required		
Red curb or no parking restriction	Required		
Lighting	Desired		
Bench	Provide*	Recommended	Optional
Trash can	Provide	Recommended	Optional
Service information	Provide	Recommended	Optional
Shelter	Recommended*	Optional	Optional
Bike rack	Recommended	Optional	Optional

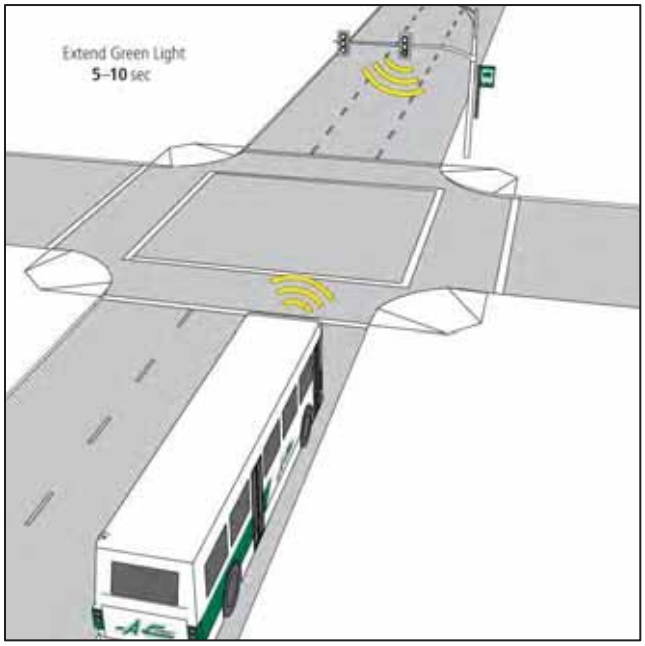
**Stops with 50 or more daily boardings may require more than one shelter and/or bench.*

Recommendation 12: Implement bus/signal prioritization along Soledad Canyon Road.

Riders along the busy Soledad Canyon corridor already typically stop more frequently than if they were driving in a single-occupant vehicle. Furthermore, riders are making better use of the roadway space. Therefore, bus/signal prioritization would move the most amount of people efficiently through the busy corridor.

When implemented in conjunction with a limited-stop service along Soledad Canyon, signal prioritization could further reduce travel times between the MRTC and Canyon Country. A reduction in travel time would be perceived as a service improvement.

Exhibit 5.18 Bus/Signal Prioritization



AC Transit

Recommendation 13: Bring FlyAway service (to LAX) to the McBean Regional Transit Center.

In recent years, FlyAway bus service to LAX has expanded to six locations. Currently, Van Nuys is the closest location to the Santa Clarita Valley. Extension of FlyAway service to Santa Clarita would provide a convenient travel alternative for SCV residents, as well as a much closer connection for residents of the Antelope Valley or southern Kern County.

FlyAway fares may be purchased online or using stored value on TAP. As a result, no ticketing infrastructure would be needed in order to initiate service. Several FlyAway locations utilize existing transit hubs, though one stop is located on the street. The initial service would likely be similar to the FlyAway service provided in Westwood, which offers service on the hour between 8:00 a.m. and 8:00 p.m.

We recommend using the Via Princessa rail station as the FlyAway service point. Even if rail service should be transitioned away from this station in the future, it will have the parking necessary for FlyAway customers. Given the MRTC's role as the primary transit hub, introducing FlyAway service there could potentially result in issues with parking.

Prior to introducing FlyAway service, we recommend conducting a community-wide survey to quantify demand (in terms of number of potential users as well as service frequency). This question can be included as part of another survey or surveyed on its own. Ideally, the survey would include residents of the Antelope Valley (and possibly Fillmore) as well. If it is determined there is likely sufficient demand to support a FlyAway service to the northern part of the county, then we recommend moving forward with implementation.

Exhibit 5.19 LAX FlyAway Locations

LAX FlyAway Bus

Recommendation 14: Extend service into Needham Ranch.

It is optimal to plan for the new Needham Ranch development before it opens, therefore being able to begin service to the area as soon as possible. Doing so would position public transit as an attractive travel option. Transit staff would need to partner with Planning staff and the developer to time the addition of service into Needham Ranch. This will also enable the identification of stops and placement of bus stop amenities during the development and construction phase. Service type and frequency would be determined based on the type of businesses that locate nearby.

A pilot, peak-hour weekday service could link Needham Ranch with the Newhall Station. This will open transit access to Needham Ranch through various local routes, commuter routes, and Metrolink. A few trips in the morning and again in the evening to serve peak travel within the new development and increasing transit options early in the new development. For a roughly 3.5-mile round-trip between Needham Ranch and the Newhall Station (given an average speed of 14 miles per hour), travel time is approximately 15 minutes. Therefore it may be possible to provide 15-minute frequency with a single vehicle. Such frequency would especially be required to make lunch service appealing to and usable by Needham Ranch employees.

Exhibit 5.20 Recommendation 14 Cost Estimate (Operations)

	Daily VSH	Weekly VSH	Annual VSH	Cost/VSH*	Annual cost
AM Peak (6 a.m. - 9 a.m.)	3.0	15.0	780.0		
Lunch (11 a.m. - 1 p.m.)	2.0	10.0	520.0		
PM Peak (4 p.m. - 7 p.m.)	3.0	15.0	780.0		
Total	**8.0**	**40.0**	**2,080.0**	**$76.90**	**$159,952.00**

**Cost/VSH based on MV cost per hour for local service, FY 2019/20.*

6 CAPITAL AND FINANCIAL PLANS

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CHAPTER 6 | CAPITAL AND FINANCIAL PLANS

This chapter presents capital requirements and ten-year operating budget projections required to support the recommendations presented within the Operations Plan chapter (Chapter 5).

This chapter is composed of four sections – the Capital Improvement Program (Section 6.1) presenting recommendations for improvement and expansion of transit infrastructure, a Capital Plan (Section 6.2) forecasting capital costs, and a Funding Plan (Section 6.3) that identifies the potential and recommended revenue sources and operating expenses expected in the next ten years.

Capital Improvement Program

The Capital Improvement Program (CIP) presents a framework for the ongoing development of the infrastructure necessary for the efficient provision of public transit service throughout the Santa Clarita Valley and beyond. This element includes an inventory of all vehicles, amenities, and facilities currently in use, as well as a strategy for recurring additional capital resources across the next five years to support service enhancements for Santa Clarita Transit.

The CIP is divided into three elements: fleet, bus stops, and facilities. Each plays a critical role in the efficient provision of public transit services. For each element, we first discuss the existing conditions/inventory. We then discuss the actions necessary for future development.

The City operates local, commuter, and paratransit services using a mix of fixed route transit, over the road, and paratransit vehicles. The City owns and operates three Metrolink rail stations: Santa Clarita Metrolink Station (SCML), Newhall Metrolink Station (NML), and Via Princessa Metrolink Station (VPMS). Stations are also served by Metrolink and operate as regional Park and Ride lots for local vanpool and carpool groups. The City also owns and operates the McBean Regional Transit Center (MRTC). The center is also served by Antelope Valley Transit Authority and Kern County Transit.

The City owns and operates the Transit Maintenance Facility (TMF) which houses Santa Clarita Transit's administration and maintenance functions. City staff and the bus operations and maintenance contractor staff work at this facility to operate transit services.

State of Good Repair (SOGR) is a condition in which assets are fit for their intended purpose at full performance. SOGR is measured to optimize the use of assets through proper maintenance and plan ahead for their decline in performance. Useful Life Benchmark (ULB) is the expected lifecycle of a capital asset for a transit provider's operating environment. An asset in need of immediate repair or replacement is scored as one and a new asset with no visible defect is scored as a five. Assets with a score of three or greater is considered "in good repair."

Exhibit 6.1.1 FTA Transit Economic Requirements Model (TERM) Scale

Rating		Condition
5	Excellent	New asset; no visible defects
4	Good	Some slightly defective/deteriorating component(s)
3	Adequate	Some moderately defective/deteriorating component(s)
2	Marginal	Increasing number of defective/deteriorated component(s) and maintenance needs
1	Poor	In need of immediate repair or replacement; may have critically damaged component(s)

Fleet Element

Fleet development is crucial to the continued success of Santa Clarita Transit. The cleanliness and reliability of rolling stock plays a vital role in attracting and retaining customers. While ride-dependent customers may exhibit a greater tolerance for an outdated fleet, "choice riders" expect newer vehicles with more amenities. Given the City owns the transit fleet, maintenance and timing of vehicle replacement is critical to effective resource management and program sustainability.

Exhibit 6.1.2 presents detailed information for each vehicle in the Santa Clarita Transit fleet. The fleet is composed of 110 revenue vehicles ranging in size from 23- to 60-foot buses. Thirteen are diesel-powered (DSL), ninety-three compressed natural gas (CNG) and four are gasoline (UNL). Every transit vehicle is fully accessible (ADA-compliant) and most include two wheelchair positions.

Exhibit 6.1.2 Santa Clarita Transit Fleet List

Use	In-Service Date	Age as of June 30, 2018	Make	Model	Length	Fuel	Quantity	In-Service FY	Useful Life	Replacement FY
Local	Feb-07	11yr, 04mo	Chance	AH28	28'	DSL	1	2007	7	2014
Commuter	Feb-04	14yr, 04mo	MCI	D4500	45'	DSL	1	2004	12	2016
Commuter	Feb-04	14yr, 04mo	MCI	D4000	40'	DSL	1	2004	12	2016
Local	Aug-05	12yr, 10mo	Newflyer	C40LF	40'	CNG	14	2006	12	2018
Paratransit	Feb-12	06yr, 04mo	Ford	E-450 Elkhart	23'	UNL	4	2012	7	2019
Local	Aug-07	10yr, 02mo	Nabi	60	60'	CNG	2	2008	12	2020
Local	Sep-08	09yr, 09mo	Nabi	LFW-41	40	CNG	8	2009	12	2021
Commuter	Jul-10	07yr, 12mo	MCI	D4500	45'	DSL	4	2011	12	2023
Local	Oct-10	07yr, 08mo	Newflyer	C40LFR	40'	CNG	7	2011	12	2023
Paratransit	Nov-16	01yr, 07mo	Glaval	Universal	23'	CNG	2	2017	7	2024
Paratransit	May-17	01yr, 01mo	Glaval	Universal	23'	CNG	1	2017	7	2024
Local	Dec-17	00yr, 06mo	Hometown	Trolley	35'	CNG	1	2018	7	2025
Paratransit	Dec-17	00yr, 06mo	Glaval	Universal	23'	CNG	6	2018	7	2025
Paratransit	May-18	00yr, 01mo	Glaval	Universal	23'	CNG	5	2018	7	2025
Commuter	Jul-13	04yr, 11mo	MCI	D4500	45'	DSL	6	2014	12	2026
Local	Mar-14	04yr, 04mo	Gillig	Low Floor CNG	40'	CNG	21	2014	12	2026
Paratransit	Dec-18	N/A	Glaval	Universal	23'	CNG	3	2019	7	2026
Paratransit	Jan-19	N/A	Glaval	Universal	23'	CNG	1	2019	7	2026
Commuter	Feb-16	02yr, 04mo	MCI	D4500	45'	CNG	4	2016	12	2028
Commuter	Apr-16	02yr, 03mo	MCI	D4500	45'	CNG	1	2016	12	2028
Commuter	Nov-16	01yr, 07mo	MCI	D4500	45'	CNG	5	2017	12	2029
Commuter	Jun-17	00yr, 12mo	MCI	D4500	45'	CNG	5	2017	12	2029
Commuter	Dec-18	N/A	MCI	D4500	45'	CNG	3	2019	12	2031
Local	Jan-19	N/A	Gillig	Low Floor CNG	40'	CNG	4	2019	12	2031

The City of Santa Clarita Transit Division is responsible for managing the City's fleet of transit rolling stock. City staff coordinate with the bus operations and maintenance contractor to: develop vehicle and equipment specifications; develop vehicle and equipment replacement schedules; acquire vehicle equipment; and reassign and dispose of vehicles and equipment. An ongoing schedule is used to track current in service vehicles as well as planned or on order vehicle purchases.

The City's current guidelines adhere to Federal Transit Administration (FTA) Useful Life Policy. The useful life in years refers to total time in revenue transit service. The minimum useful life for buses, vans, and trolleys is determined by years of service or mileage, whichever occurs first:

Exhibit 6.1.3 Santa Clarita Transit Useful Life Definition

Size	Years	Mileage
Large, heavy-duty transit buses including over the road buses (approximately 35'-40', and articulated buses)	At least 12 years	At least 500,000 miles
Medium-size, medium duty transit buses (approximately 25'-35')	At least 7 years	At least 200,000 miles

As vehicles approach their useful life age, City staff works through the budget and transit forecasting process to identify funding and gain approvals for replacement or refurbishment.

The City took delivery of three over-the-road buses in October 2018. These buses replaced older vehicles and brought the performance to 10 percent. Additionally, new rolling stock is on order to replace fourteen of the buses and four of the cutaways that past their useful life. The first set of vehicles was scheduled to be delivered in April 2019 and would bring the "bus" performance measure down.

Exhibit 6.1.4 Santa Clarita Transit Fleet Performance Condition

Asset Class	Performance Measure	Target	Actual Performance
Articulated Bus	Age	No more than 10% of assets will exceed its useful life	0%
Over-the-Road Bus	Age	No more than 10% of assets will exceed its useful life	17%
Bus	Age	No more than 10% of assets will exceed its useful life	25%
Cutaway	Age	No more than 10% of assets will exceed its useful life	22%

Exhibit 6.1.5 Santa Clarita Transit Fleet Replacement Plan

Make	Model	Replacement FY	Quantity	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Chance	AH28	2014	1	*$280,227.98*										
MCI	D4500	2016	1	*$848,720.00*										
MCI	D4000	2016	1	*$848,720.00*										
New Flyer	C40LF	2018	14	*$8,035,823.25*										
Ford	E-450 Elkhart	2019	4	*$742,424.00*										
NABI	60	2020	2		$618,000.00									
NABI	LFW-41	2021	8			$5,208,458.68								
New Flyer	C40LFR	2023	7					$4,522,194.93						
MCI	D4500	2023	4					$3,820,967.35						
Glaval	Universal	2024	2						$338,131.73					
Glaval	Universal	2024	1						$164,141.62					
Hometown	Trolley	2025	1							$417,918.30				
Glaval	Universal	2025	6							$1,014,395.19				
Glaval	Universal	2025	5							$845,329.32				
Gillig	Low-Floor CNG	2026	21								$14,824,573.50			
MCI	D4500	2026	6								$6,262,911.28			
Glaval	Universal	2026	4								$696,551.36			
MCI	D4500		4										$4,429,548.39	
MCI	D4500		1										$1,107,387.10	
MCI	D4500		5											$5,703,043.55
MCI	D4500		5											$5,703,043.55
			Yearly Total	***$10,755,915***	**$618,000**	**$5,208,459**	**$0**	**$8,343,162**	**$502,273**	**$2,277,643**	**$21,784,036**	**$0**	**$5,536,935**	**$11,406,087**

Exhibit 6.1.6 Santa Clarita Transit Fleet Expansion Plan based on Recommendations

Use	Make	Model	Year of Purchase	Quantity	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Recommendation #4	Ford	E-450 Elkhart	2020	2				$372,000								$372,000	
Recommendation #7	New Flyer	C40LFR	2020	1				$646,500									
Recommendation #10B	New Flyer	C40LFR	2020	1				$646,500									
Recommendation #10C or D	New Flyer	C40LFR	2020	2				$1,293,000									
Recommendation #14	Ford	E-450 Elkhart	2020	1				$186,000								$186,000	
				Yearly Total	**$0**	**$0**	**$0**	**$3,144,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$558,000**	**$0**

Bus Stop Element

The Bus Stop Improvement Project (BSIP) does not have a set annual budget. Allocation is based on an as-needed basis determined through an annual review of the bus stop inventory.

Facilities Element

Facilities refer to the Transit Maintenance Facility and the four transit stations in the city. These include the Newhall, Santa Clarita, and Via Princessa Metrolink stations, as well as the McBean Regional Transit Center. One-hundred percent of transit facilities have a condition rating of 3 or higher based on the TERM scale.

Exhibit 6.1.7 Santa Clarita Transit Facilities Performance Condition

Facility	Current Condition (TERM scale)
Transit Maintenance Facility	4
McBean Regional Transit Center – Station	3
McBean Regional Transit Center – Parking	4
Santa Clarita Metrolink – Station	4
Santa Clarita Metrolink – Parking	3
Newhall Metrolink – Station	3
Newhall Metrolink –Parking	3
Via Princessa Metrolink – Station	3
Via Princessa Metrolink – Parking	3

Capital Plan

The Capital Plan identifies cost projections of expected capital purchases in the next ten-years. The expected fiscal year or replacement for existing vehicles is based on the useful life benchmark the City utilizes. Stations & Facilities, Technology, and Stop Improvements are based on the City's Transit Capital Forecast.

The Vista Canyon development entails a future Metrolink and bus transfer station in the city. The construction is anticipated to begin in Fiscal Year 2020. The estimated cost for the Metrolink station is $32,700,000 and the bus transfer station is $5,200,000. The Vista Canyon bus transfer center will operate as a hub for the east side of the city. The future of the Via Princessa rail station remains unknown.

Exhibit 6.2.1 Santa Clarita Transit Baseline Capital Expenditures

Capital	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Expenditures													
Capital Expenditures													
Buses	$0		$10,755,915	$618,000	$5,208,459	$0	$8,343,162	$502,273	$2,277,643	$21,784,036	$0	$5,536,935	$11,406,087
Stations & Facility	$1,784,212	$1,198,412	$2,127,478	$37,900,000	$0	$0	$0	$0					
Technology	$218,762	$419,638	$323,905	$750,000	$0	$0	$0	$0					
Stop Improvements	$0	$0	$0	$0	$0	$0	$0	$0					
Total	**$2,002,974**	**$1,618,050**	**$13,207,298**	**$39,268,000**	**$5,208,459**	**$0**	**$8,343,162**	**$502,273**	**$2,277,643**	**$21,784,036**	**$0**	**$5,536,935**	**$11,406,087**

Exhibit 6.2.2 Santa Clarita Transit Capital Expenditures with Recommendations

Capital	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Expenditures													
Capital Expenditures													
Transit Buses - Planned	$0		$10,755,915	$618,000	$5,208,459	$0	$8,343,162	$502,273	$2,277,643	$21,784,036	$0	$5,536,935	$11,406,087
Transit Buses - Recommendation #4				$372,000								$372,000	
Transit Buses - Recommendation #7				$646,500								$186,000	
Transit Buses - Recommendation #10B				$646,500									
Transit Buses - Recommendation #10C or D				$1,293,000									
Transit Buses - Recommendation #14				$186,000								$186,000	
Transit Stations & Facility	$1,784,212	$1,198,412	$2,127,478	$37,900,000	$0	$0	$0	$0					
Transit Technology	$218,762	$419,638	$323,905	$750,000	$0	$0	$0	$0					
Transit Bus Stop Improvements	$0	$0	$0	$0	$0	$0	$0	$0					
Total Capital Expenses	**$2,002,974**	**$1,618,050**	**$13,207,298**	**$42,412,000**	**$5,208,459**	**$0**	**$8,343,162**	**$502,273**	**$2,277,643**	**$21,784,036**	**$0**	**$6,280,935**	**$11,406,087**

Funding Plan

The Funding Plan (Exhibit 6.3.1) addresses projected operational expenditures. The first section entails both operating and non-operating revenues. The second section covers operating expenses and transfers to the City.

Passenger fares are estimated as stagnant. Ridership is currently declining for Santa Clarita Transit and the vast majority of operators in the United States. Various non-passenger funding sources also directly contribute to the operating revenues. Non-operating revenues come from various local and state programs. Capital Contributions are project-based funding sources which require grant applications for specific projects.

Operating expenses cover all costs associated with administering a transit service such as paying employees, the operating contract, or insurance. Projections are based on the Transit Expenditure Forecast.

Exhibits 6.3.2 through 6.3.8 include a summary of the baseline Financial Plan as well as the operating cost of one of the recommendations. Exhibit 6.3.9 includes the baseline Financial Plan as well as all three recommendations.

Exhibit 6.3.1 Santa Clarita Transit Baseline Financial Table

Operating	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Fixed-Route Passenger Fares	$3,135,404	$3,039,419	$3,544,255	$3,544,255	$3,544,255	$3,544,255	$3,544,255	$3,544,255	$3,544,255	$3,544,255	$3,544,255	$3,544,255	$3,544,255
Dial-A-Ride PassengerFares	$115,905	$114,467	$103,500	$103,500	$103,500	$103,500	$103,500	$103,500	$103,500	$103,500	$103,500	$103,500	$103,500
Metrolink & EZ Pass Revenues	$196,900	$219,194	$181,368	$181,368	$181,368	$181,368	$181,368	$181,368	$181,368	$181,368	$181,368	$181,368	$181,368
LA County Operating Assistance	$2,223,854	$2,029,458	$1,800,000	$1,800,000	$1,800,000	$1,800,000	$1,800,000	$1,800,000	$1,800,000	$1,800,000	$1,800,000	$1,800,000	$1,800,000
Specialized Transit Services	$1,017,089	$1,026,929	$996,156	$1,006,118	$1,016,179	$1,026,341	$1,036,604	$1,046,970	$1,062,675	$1,078,615	$1,094,794	$1,111,216	$1,127,884
Miscellaneous Revenues	$541,982	$558,021	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Proposition A Discretionary	$4,427,993	$4,160,387	$4,280,806	$4,366,422	$4,453,751	$4,542,826	$4,633,682	$4,726,356	$4,820,883	$4,917,301	$5,015,647	$5,115,960	$5,218,279
Proposition A Specialized Tranpsortation	$806,544	$651,738	$671,290	$684,716	$698,410	$712,378	$726,626	$741,159	$755,982	$771,102	$786,524	$802,254	$818,299
Proposition C Service Expansion	$193,792	$197,183	$203,098	$207,160	$211,304	$215,530	$219,840	$224,237	$228,722	$233,296	$237,962	$242,721	$247,576
Proposition C BSIP	$50,302	$46,918	$52,718	$53,772	$54,848	$55,945	$57,064	$58,205	$59,369	$60,556	$61,768	$63,003	$64,263
Proposition C Foothill Transit Mitigation	$12,384	$5,899	$6,076	$6,197	$6,321	$6,448	$6,577	$6,708	$6,842	$6,979	$7,119	$7,261	$7,406
Proposition C MOSIP	$8,390	$48,851	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Proposition C Security Allocation	$208,461	$203,699	$209,810	$214,006	$218,286	$222,652	$227,105	$231,647	$236,280	$241,006	$245,826	$250,742	$255,757
Measure R Bus Operations	$2,488,096	$2,598,832	$2,489,007	$2,538,788	$2,589,563	$2,641,355	$2,694,182	$2,748,065	$2,803,026	$2,859,087	$2,916,269	$2,974,594	$3,034,086
Measure M Bus Operations		$2,301,490	$2,370,535	$2,417,945	$2,466,304	$2,515,630	$2,565,943	$2,617,262	$2,669,607	$2,722,999	$2,777,459	$2,833,009	$2,889,669
Intergovernmental Revenues	$260,377	$36,788	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transit Mitigation Fees	$23,400	$60,800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Unrealized Loss on Investments	-$28,735	-$1,242	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Gain on Disposal of Capital Assets	$53,223	$20,238	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
FTA Capital Grants	$8,716,021	$2,958,875	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000
Proposition C MOSIP	$402,119	$57,755	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Transfers In	$3,788,081	$7,634,532	$12,706,090	$12,078,218	$12,932,564	$13,579,198	$14,283,290	$15,012,492					
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Salaries and Benefits	$1,348,603	$1,200,651	$1,342,856	$1,407,314	$1,474,865	$1,545,659	$1,619,849	$1,697,603	$1,779,088	$1,864,484	$1,953,979	$2,047,770	$2,146,063
Administrative Services	$3,095,692	$1,526,045	$4,641,292	$4,780,531	$4,923,947	$5,071,665	$5,223,815	$5,380,529	$5,541,945	$5,708,203	$5,879,449	$6,055,833	$6,237,508
Contract Transportation Services	$18,848,994	$19,332,460	$20,567,730	$21,502,233	$22,471,470	$23,126,080	$23,800,326	$24,494,801	$25,210,110	$25,946,879	$26,705,750	$27,487,388	$28,292,475
Insurance	$90,558	$94,098	$109,740	$111,935	$114,173	$116,457	$118,786	$121,162	$123,585	$126,057	$128,578	$131,150	$133,773
Supplies, Utilities, and Other	$1,103,326	$1,233,583	$1,094,997	$1,125,481	$1,157,025	$1,189,672	$1,223,467	$1,258,456	$1,294,692	$1,332,225	$1,371,110	$1,411,403	$1,453,164
Transportation Development Plan	$79,120	$40,592	$159,408	$0	$0	$0	$0	$100,000	$100,000	$0	$0	$0	$0
Depreciation	$5,371,324	$4,923,033	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Transfers to the City													
Transfers Out	$185,638	$1,710,254	$180,112	$179,201	$178,265	$177,218	$176,062	$174,967	$175,000	$175,000	$175,000	$175,000	$175,000
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

Exhibit 6.3.2 Santa Clarita Transit Financial Table with Recommendation 4

Operating	FY 2017 Audit	FY 2018 Audit	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Operating Expenses (Baseline)	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Recommendation 4 operating expenses				$479,856	$494,252	$509,079	$524,352	$540,082	$556,285	$572,973	$590,162	$607,867	$626,103
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$34,407,350**	**$35,635,732**	**$36,558,612**	**$37,510,595**	**$38,592,633**	**$39,605,705**	**$40,550,821**	**$41,629,029**	**$42,741,411**	**$43,889,085**
Transfers to the City													
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

Exhibit 6.3.3 Santa Clarita Transit Financial Table with Recommendation 7

Operating	FY 2017 Audit	FY 2018 Audit	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Operating Expenses (Baseline)	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Recommendation 10D operating expenses				$239,928	$247,126	$254,540	$262,176	$270,041	$278,142	$286,487	$295,081	$303,934	$313,052
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$34,167,422**	**$35,388,606**	**$36,304,073**	**$37,248,419**	**$38,322,592**	**$39,327,562**	**$40,264,334**	**$41,333,948**	**$42,437,477**	**$43,576,034**
Transfers to the City													
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

Exhibit 6.3.4 Santa Clarita Transit Financial Table with Recommendation 10A

Operating	FY 2017 Audit	FY 2018 Audit	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Operating Expenses (Baseline)	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Recommendation 10A operating expenses				$136,226	$140,313	$144,522	$148,858	$153,323	$157,923	$162,661	$167,541	$172,567	$177,744
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$34,063,720**	**$35,281,793**	**$36,194,055**	**$37,135,101**	**$38,205,874**	**$39,207,343**	**$40,140,509**	**$41,206,407**	**$42,306,110**	**$43,440,726**
Transfers to the City													
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

Exhibit 6.3.5 Santa Clarita Transit Financial Table with Recommendation 10B

Operating	FY 2017 Audit	FY 2018 Audit	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Operating Expenses (Baseline)	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Recommendation 10B operating expenses				$819,683	$844,273	$869,601	$895,689	$922,560	$950,237	$978,744	$1,008,106	$1,038,349	$1,069,500
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$34,747,177**	**$35,985,753**	**$36,919,134**	**$37,881,932**	**$38,975,111**	**$39,999,657**	**$40,956,592**	**$42,046,973**	**$43,171,893**	**$44,332,482**
Transfers to the City													
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

Exhibit 6.3.6 Santa Clarita Transit Financial Table with Recommendation 10C

Operating	FY 2017 Audit	FY 2018 Audit	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Operating Expenses (Baseline)	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Recommendation 10C operating expenses				$454,149	$467,774	$481,807	$496,261	$511,149	$526,484	$542,278	$558,547	$575,303	$592,562
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$34,381,643**	**$35,609,254**	**$36,531,340**	**$37,482,504**	**$38,563,700**	**$39,575,904**	**$40,520,126**	**$41,597,413**	**$42,708,846**	**$43,855,544**
Transfers to the City													
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

Exhibit 6.3.7 Santa Clarita Transit Financial Table with Recommendation 10D

Operating	FY 2017 Audit	FY 2018 Audit	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Operating Expenses (Baseline)	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Recommendation 10D operating expenses				$439,011	$452,181	$465,747	$479,719	$494,111	$508,934	$524,202	$539,928	$556,126	$572,810
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$34,366,505**	**$35,593,661**	**$36,515,280**	**$37,465,962**	**$38,546,662**	**$39,558,354**	**$40,502,050**	**$41,578,795**	**$42,689,669**	**$43,835,792**
Transfers to the City													
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

Exhibit 6.3.8 Santa Clarita Transit Financial Table with Recommendation 14

Operating	FY 2017 Audit	FY 2018 Audit	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Operating Expenses (Baseline)	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Recommendation 14 operating expenses				$159,952	$164,751	$169,693	$174,784	$180,027	$185,428	$190,991	$196,721	$202,622	$208,701
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$34,087,446**	**$35,306,231**	**$36,219,226**	**$37,161,027**	**$38,232,578**	**$39,234,848**	**$40,168,839**	**$41,235,587**	**$42,336,166**	**$43,471,683**
Transfers to the City													
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

Exhibit 6.3.9 Santa Clarita Transit Financial Table with Recommendations 4, 7, 10A, and 14

Operating	FY 2017 Audit	FY 2018 Audit	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenue													
Operating Revenues													
Total Operating Revenues	**$7,231,134**	**$6,987,488**	**$7,125,279**	**$7,135,241**	**$7,145,302**	**$7,155,464**	**$7,165,727**	**$7,176,093**	**$7,191,798**	**$7,207,738**	**$7,223,917**	**$7,240,339**	**$7,257,007**
Non-Operating Revenues													
Total Non-Operating Revenues	**$8,504,227**	**$10,331,581**	**$10,283,340**	**$10,489,006**	**$10,698,787**	**$10,912,764**	**$11,131,019**	**$11,353,639**	**$11,580,712**	**$11,812,326**	**$12,048,573**	**$12,289,544**	**$12,535,335**
Capital Contributions													
Total Capital Contributions	**$9,118,140**	**$3,016,630**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**	**$6,000,000**
Transfers from the City													
Total Transfers	**$3,788,081**	**$7,634,532**	**$12,706,090**	**$12,078,218**	**$12,932,564**	**$13,579,198**	**$14,283,290**	**$15,012,492**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Revenue	**$28,641,582**	**$27,970,231**	**$36,114,709**	**$35,702,465**	**$36,776,653**	**$37,647,426**	**$38,580,036**	**$39,542,224**	**$24,772,509**	**$25,020,064**	**$25,272,489**	**$25,529,883**	**$25,792,342**
Expenditures													
Operating Expenses													
Operating Expenses (Baseline)	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$33,927,494**	**$35,141,480**	**$36,049,533**	**$36,986,243**	**$38,052,551**	**$39,049,420**	**$39,977,848**	**$41,038,866**	**$42,133,543**	**$43,262,982**
Recommendation 4 operating expenses				$479,856	$494,252	$509,079	$524,352	$540,082	$556,285	$572,973	$590,162	$607,867	$626,103
				$239,928	$247,126	$254,540	$262,176	$270,041	$278,142	$286,487	$295,081	$303,934	$313,052
Recommendation 10A operating expenses				$136,226	$140,313	$144,522	$148,858	$153,323	$157,923	$162,661	$167,541	$172,567	$177,744
Recommendation 14 operating expenses				$159,952	$164,751	$169,693	$174,784	$180,027	$185,428	$190,991	$196,721	$202,622	$208,701
Total Operating Expenses	**$29,937,617**	**$28,350,462**	**$32,916,023**	**$34,943,456**	**$36,187,921**	**$37,127,367**	**$38,096,412**	**$39,196,025**	**$40,227,198**	**$41,190,959**	**$42,288,371**	**$43,420,533**	**$44,588,582**
Transfers to the City													
Total Transfers	**$185,638**	**$1,710,254**	**$180,112**	**$179,201**	**$178,265**	**$177,218**	**$176,062**	**$174,967**	**$175,000**	**$175,000**	**$175,000**	**$175,000**	**$175,000**
Total Expenses	**$30,123,255**	**$30,060,716**	**$33,096,135**	**$34,106,695**	**$35,319,745**	**$36,226,751**	**$37,162,305**	**$38,227,518**	**$39,224,420**	**$40,152,848**	**$41,213,866**	**$42,308,543**	**$43,437,982**
Surplus (Deficit)	($1,481,673)	($2,090,485)	$3,018,574	$1,595,770	$1,456,908	$1,420,675	$1,417,731	$1,314,706	($14,451,911)	($15,132,784)	($15,941,377)	($16,778,660)	($17,645,640)

The four main sources of revenue for Santa Clarita include:

- Farebox revenue,
- Local revenues from Propositions and Measures,
- State of California under LAMCA Formula Allocation Program, and
- Federal government.

The most recent federal funding source, Fixing America's Surface Transportation (FAST) Act was passed in December 2015. Funding will last until fiscal year 2020. After Moving Ahead for Progress in the 21st Century (MAP-21) passed, The City has received more consistent formula-based funding. Recent increases of transit funding include Los Angeles County Measure M in 2016 and the California gas tax (SB-1) passed in 2017 to provide additional transportation and transit funding. The following are potential funding sources:

Exhibit 6.3.10 Santa Clarita Transit Potential Funding Sources

Program Name	Description	Eligibility	Grant Type (Lead Agency)
5307 – Urbanized Area Formula Program	Makes Federal resources available to urbanized areas for transportation-related planning. Funding goes directly to the local Metropolitan Planning Organization	Projects may include planning activities, capital investments in bus-related activities, security equipment, and in some cases, operating assistance. Former Job Access and Reverse Commute activities (JARC) are eligible	Formula-Based
5339 – Bus and Bus Facility Program	Provides capital assistance for new and replacement buses and related equipment and facilities.	All capital projects.	Formula-Based
5537 – State of Good Repair	Provides funding for replacement of fixed-guideway systems.	Projects must be related to fixed-guideways (rail/BRT) or high-intensity buses using high-occupancy vehicle lanes.	Formula-Based
5324 – Emergency Relief	Assists States and public transportation systems with emergency-related expenses.	Both capital and operations expenditures. Expenses must not be covered by FEMA.	Discretionary – FTA
5310 – Enhanced Mobility of Seniors and Individuals with Disablities	A combination of SAFETEA-LU Sections 5310 and 5317. Intended to increase the mobility of seniors and persons with disabilities	55 percent is for projects designed to meet the transit needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable. Remaining 45 percent is for projects that exceed ADA requirements or projects that decrease reliance on paratransit services. Local match required.	Formula-Based
Proposition A – Local	Appropriates sales tax revenue to cities for developing or improving public transit. Funds are allocated based upon applicant's percentage of Los Angeles County residents.	Operations funding specific to fixed-route service, paratransit service, Transportation Demand Management, and fare subsidies.	Formula-Based
Proposition A – Discretionary	Also referred to as State Transit Assistance (STA). Allocates 50 percent of the State's Public Transportation Account's gasoline tax revenue for public transportation.	Any project historically associated with bus capital and operation expenditures. LACMTA has the discretion to allocate funding to any project or operating expense it sees as necessary.	Discretionary – LACMTA
Transit Service Expansion (TSE)	Part of Local Proposition C. Grants funding for fixed-route bus service in LA Metro-designated "congested areas."	Projects providing new service to congested areas of Los Angeles County.	Discretionary – LCAMTA

Program Name	Description	Eligibility	Grant Type (Lead Agency)
Bus Stop Improvement Program (BSIP)	Part of Local Proposition C. Provides capital for bus stop improvements.	Bus stops must be in non-Metro areas. Funds are intended to be used after all other capital resources have been exhausted.	Discretionary – LCAMTA
Municipal Operators Service Improvement Program (MOSIP)	Part of Local Proposition C. Provides funding for transit-dependent County residents. Funding is allocated by LACMTA, and includes a built-in 3-percent annual increase.	Both capital and operations expenditures.	Formula-Based
Measure R	A county-wide ½-cent sales tax for transportation-related projects.	Both capital and operations expenditures.	Formula-Based
Congestion Mitigation and Air Quality (CMAQ)	A funding source for State and local governments to help meet Clean Air Act requirements. Funding is distributed to LACMTA via the State Highway Account.	Capital or operations projects relating to public transit improvements, HOV lanes, fringe parking facilities, shared-ride services, bicycle/pedestrian facilities, employer-based transportation management plans, and traffic flow improvement programs.	Discretionary – Caltrans
Transit Development Act (TDA) Article 8	A separate local transportation fund that can be used for public transportation, passenger rail service operations, and pedestrian/bicycle facilities. Funding is derived from a ¼ cent state-wide sales tax.	Projects may include payments to contractors for providing public transportation services, vehicle and shelter procurement, rail operations and capital improvements, and project relating to pedestrian/bicycle facilities. If there are not unmet transit needs requiring expenditures, funding can be used for local street and road maintenance.	Formula-Based
Measure M	A county-wide ½-cent sales tax in addition to Measure R for transportation-related projects.		

7 OTHER TRANSPORTATION CONSIDERATIONS

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CHAPTER 7 | OTHER TRANSPORTATION CONSIDERATIONS

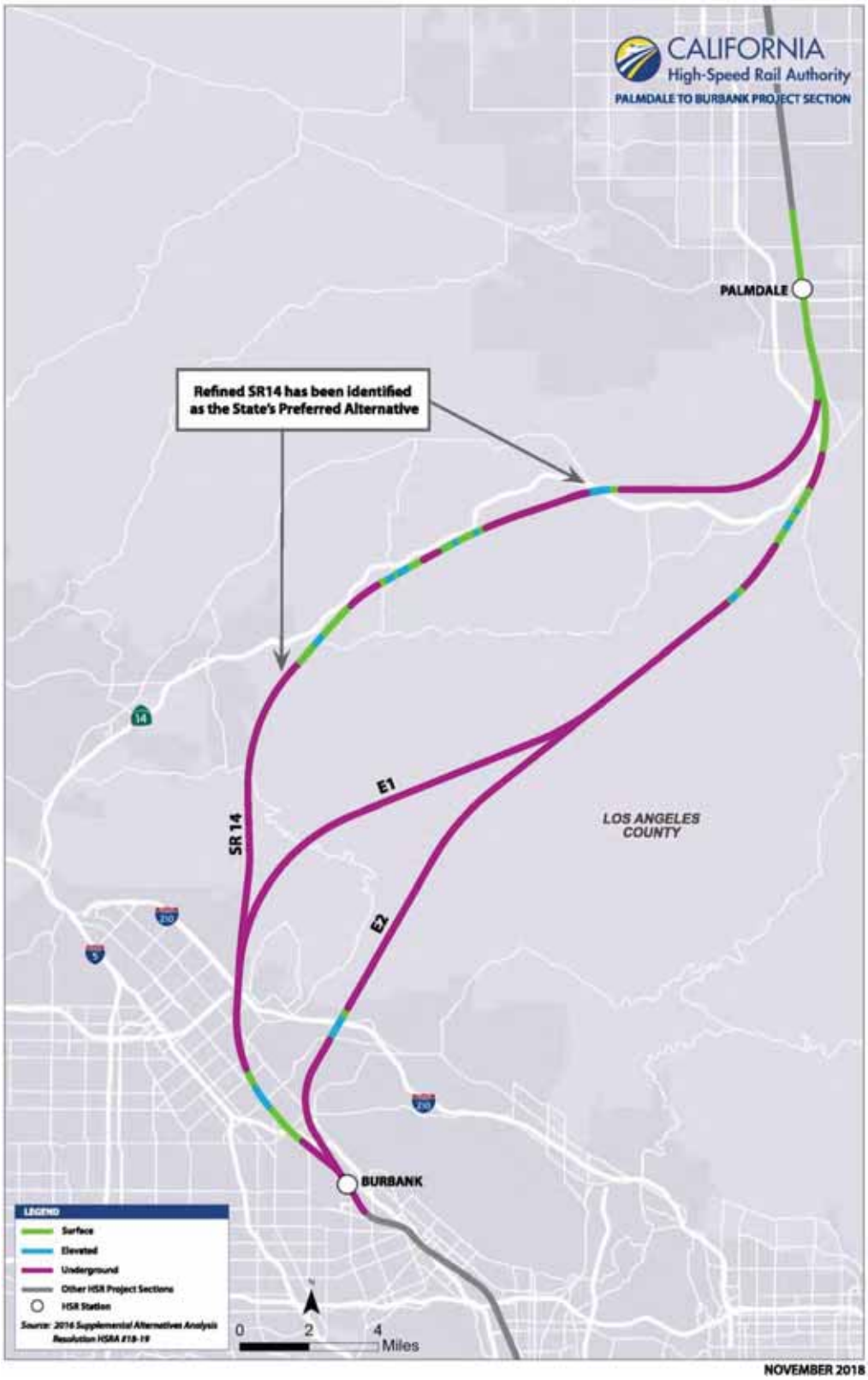
California High Speed Rail

During the preparation of this report, there have been uncertainties raised by both the state and federal governments which will likely not resolve prior to completion of this project. The City will determine potential connectivity/service levels between transit and rail at a future time.

Exhibit 7.1.1 California High-Speed Rail Statewide System Map

California High-Speed Rail Authority (extent indicator added)

Exhibit 7.1.2 California High-Speed Rail Palmdale to Burbank Map



California High-Speed Rail Authority

According to the Palmdale to Burbank Project Section Update from September 2018, the Palmdale to Burbank section is currently under environmental review. The preferred alternative was decided in advance of the draft environmental documents as encouraged under Federal NEPA. After staff recommendations are presented, the High Speed Rail governing board will direct how to proceed. After direction from the Board, staff will prepare the Draft EIR/EIS.

Kern Route 130

In April 2019, Kern Transit inaugurated its Route 130, connecting Bakersfield, Grapevine, and Frazier Park with Santa Clarita. There was previously no direct public transportation connection between Bakersfield and Santa Clarita. Options included Amtrak Thruway buses which requires a train ticket, using Metrolink's Antelope Valley Line to connect with Kern Transit Route 100, or private bus services.

Exhibit 7.2.1 Kern Route 130 Santa Clarita Extension

Kern Transit

Pace Bike Share

Pace bikes, the bike share brand from Zagster, is operating a pilot program with the City of Santa Clarita to implement a docked bike-sharing program in Santa Clarita. While dock-less scooter and bike-share companies cannot operate within city limits, this pilot project will assess a bike-sharing service that keeps bikes from being abandoned by only ending rides when locked in one of the following twelve docked locations:

- Camp Plenty Trailhead,
- Iron Horse Trailhead,
- Old Town Newhall Library,
- Promenade Trailhead,
- Valencia Heritage Park,
- Jan Heidt Newhall Metrolink Station,
- McBean Regional Transit Center,
- Santa Clarita Metrolink Station,

- Hyatt Regency Valencia,
- Holiday Inn Express,
- Citrus Street/Valencia Boulevard Bus Stop, and
- South Fork Trailhead.

Exhibit 7.3.1 Santa Clarita Pace Bike Share

McBean Regional Transit Center

Santa Clarita Metrolink Station

Newhall Transit Center

Newhall Transit Center – locking mechanism

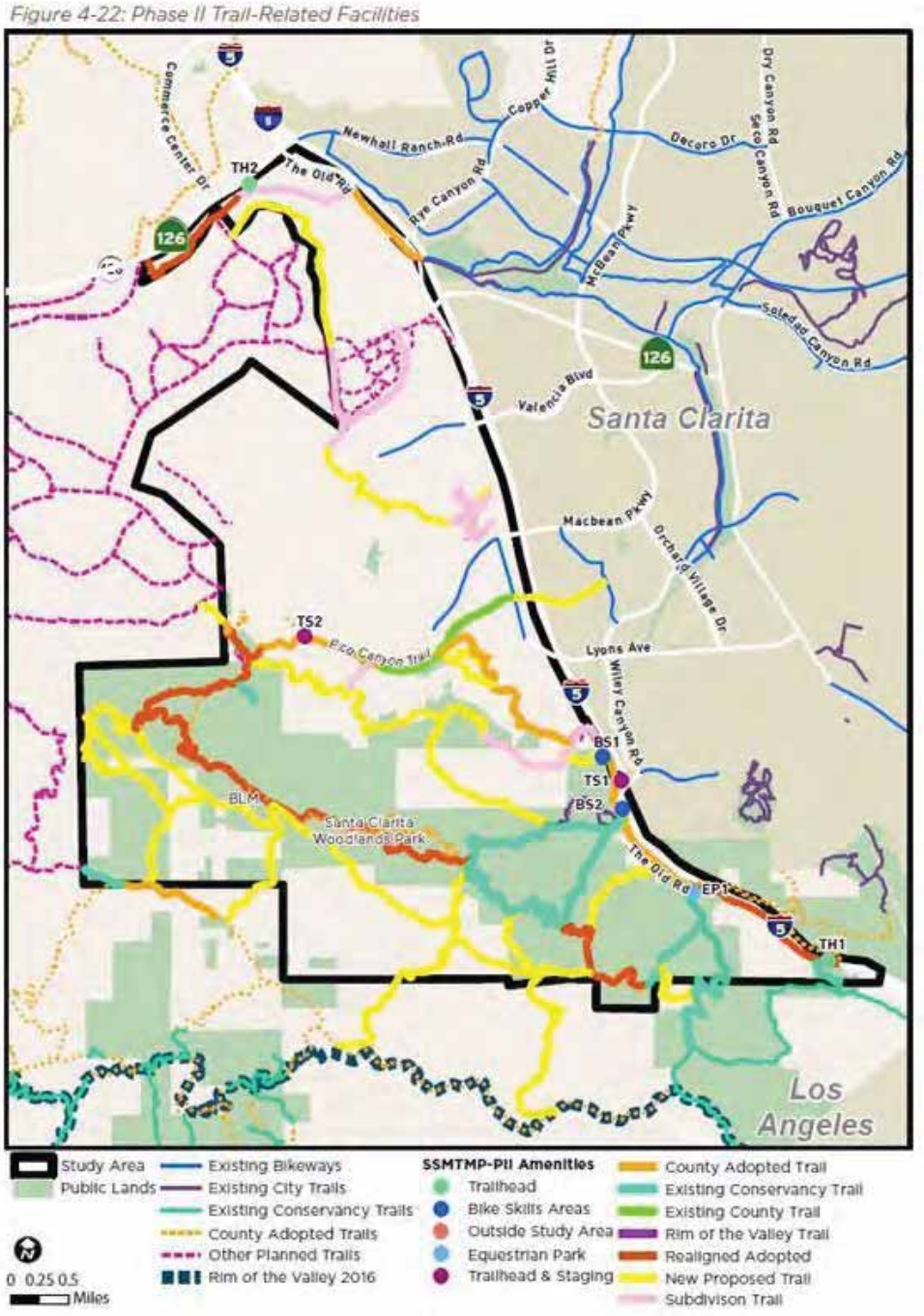
To unlock a bike, a rider uses the Pace application to secure payment, find a bike, and unlock it. To complete the trip a rider must dock the bike to rack and complete the trip with the application. Riders are billed at the end of each ride. Rates during the pilot are one-dollar per half hour. Students can receive discounts and Santa Clarita residents may use the code "RIDESC" for a two-dollar credit on the first ride.

Los Angeles County Trails

In December 2018, the Los Angeles County Board of Supervisors adopted the second phase of the Santa Susana Master Plan. The network will expand by up to 57.8 miles to the existing 9.7 miles of trails. The planning process included the interaction of 62 public agencies, community groups, and non-profit organizations. The Plan acts as a framework for implementing new multi-use trails improve connectivity,

and recommend improvements on existing trails. The goal of the Plan is to accommodate population growth of the Santa Clarita Valley through 2035. The multi-use trails will include equestrian, hiking, and mountain-biking in a 22-square-mile area located in the scenic Santa Susana Mountains in the Stevenson Ranch community. The adopted Plan removes the proposed trails in proximity to the Santa Susana Field Lab due to health concerns and ongoing cleanup activities.

Exhibit 7.4.1 Los Angeles County Phase-II Trail Network Map



County of Los Angeles Department of Parks and Recreation

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A. APPENDIX

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Appendix

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