

Santa Clara Valley Transportation Authority

Title VI Program

February 13, 2020



Title VI Program

The Santa Clara Valley Transportation Authority (VTA) is an independent special district that is responsible for providing bus, light rail, and paratransit service throughout Santa Clara County, California. VTA also has the distinction of being the county's Congestion Management Agency (CMA) and is responsible for providing oversight on specific highway projects and countywide transportation planning.

Title VI (codified at 42 U.S.C §2000d et seq.) was enacted as part of the landmark Civil Rights Act of 1964 signed by President Lyndon B. Johnson. Title VI prohibits discrimination on the basis of race, color, and national origin by programs and activities receiving federal financial assistance. As a recipient of funding from the federal government, VTA must remain in strict compliance with these Title VI requirements.

In 2012, the Federal Transit Administration released Circular 4702.1B in order to provide specific guidance for funding recipients on maintaining compliance with the requirements of Title VI. In accordance with the FTA Title VI Circular, VTA is required to submit a Title VI Program triennially. This Title VI Program is a compilation of documents, plans, maps, policies and standards which demonstrate VTA's continued compliance with the mandatory requirements of Title VI. Guidance provided by the FTA Title VI Circular requires that VTA's Title VI Program be submitted for approval by its Board of Directors.

THE TABLE OF CONTENTS WAS CREATED FROM FTA TITLE VI CIRCULAR 4702.1B, APPENDIX A-1: TITLE VI PROGRAM CHECKLIST.

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I. General Requirements

Section 1: Title VI Notice to the Public, Including a List of Locations Where Posted

Title 49 CFR Section 21.9(d) requires recipients to provide information to the public regarding the recipient's obligations under DOT's Title VI regulations and apprise members of the public of the protections against discrimination afforded to them by Title VI. At a minimum, recipients shall disseminate this information to the public by posting a Title VI notice on the agency's website and in public areas of the agency's office(s), including the reception desk, meeting rooms, etc. Recipients should also post Title VI notices at stations, stops, and/or on transit vehicles. The notices shall be translated into languages other than English, as needed and consistent with the DOT LEP Guidance and the recipient's language assistance plan.




Exhibit 1: VTA Title VI Notice & Locations

Title VI Notice and Locations

TITLE VI – Know Your Rights



The Santa Clara Valley Transportation Authority (VTA) operates its programs and services without regard to race, color or national origin in accordance with Title VI and other civil rights statutes. To request additional information about VTA's Title VI and other anti-discrimination obligations, or if information is needed in languages other than English, please contact VTA Customer Service Center at:

-  (408) 321-2300; TTY (408) 321-2330
-  (408) 955-0892
-  customer.service@vta.org

Any person who believes that he or she has been subjected to discrimination under Title VI or other civil rights statutes may file a complaint with VTA. Complaints must be filed within 180 days of the alleged discriminatory act. Please call VTA Office of Civil Rights or submit your complaint in writing to the Title VI Unit using the contact information below:

-  (408) 952-8901
-  www.vta.org/titlevi/index.html
-  Office of Civil Rights
Santa Clara Valley Transportation Authority
3331 North First Street, B-1
San Jose, CA 95134

Complaints may also be filed directly with the Federal Transit Administration at www.fta.dot.gov; the Department of Fair Employment and Housing at www.dfeh.ca.gov; the Equal Employment Opportunity Commission at www.eeoc.gov; Caltrans at www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm; or Federal Highway Administration (FHWA) at www.fhwa.dot.gov/civilrights/programs/lecd.htm. Please review information on the respective agency websites for details on filing Title VI complaints.

If information is needed in another language, please contact VTA's Customer Service Center at (408) 321-2300. Si necesita información en Español, por favor comuníquese con el Departamento de Servicio al Cliente de VTA al (408) 321-2300.

如需外語信息服务, 請致電硅谷交通運輸管理局客戶服務中心, (408) 321-2300

Nếu cần có thông tin bằng ngôn ngữ khác, xin liên lạc với Trung Tâm Dịch Vụ Khách Hàng VTA theo số (408) 321-2300.

다른 언어로 된 정보가 필요하신 경우에는 벨리 교통국(VTA) 고객 센터 (408) 321-2300 으로 문의해 주십시오.

Français	አማርኛ	فارسی		日本語	தமிழ்	Tagalog
ગુજરાતી	Italiano	Hrvatski	(408) 321-2300	Srpski	Português	العربية
af Soomaali	עברית	සිංහල	اردو	Русский	हिंदी	Deutsch



Title VI Notice
List of Locations Where Posted

Light Rail Stations/Transit Centers/Administrative Complex:

1. Santa Teresa
2. Cottle
3. Snell
4. Blossom Hill
5. Ohlone/Chynoweth
6. Branham
7. Capitol
8. Curtner
9. Tamien
10. Virginia
11. Children's Discovery Museum
12. Convention Center
13. Paseo de San Antonio (North)
14. Paseo de San Antonio (South)
15. Santa Clara (North)
16. Santa Clara (South)
17. St. James (North)
18. St. James (South)
19. Japantown/Ayer
20. Civic Center
21. Gish
22. Metro
23. Karina
24. Component
25. Bonaventura
26. Orchard
27. River Oaks Administrative Complex
28. Tasman
29. Baypointe
30. Cisco Way
31. I-880 Milpitas
32. Great Mall
33. Montague
34. Cropley
35. Hostetter
36. Berryessa
37. Penitencia Creek
38. McKee

3331 North First Street ● San Jose, CA 95134-1906 ● Administration 408.321.5555 ● Customer Service 408.321.2300



39. Alum Rock
40. Champion
41. Lick Mill
42. Great America
43. Old Ironsides
44. Reamwood
45. Vienna
46. Crossman
47. Fair Oaks
48. Borregas
49. Lockheed Martin
50. Moffet Park
51. Bayshore/NASA
52. Middlefield
53. Whisman
54. Evelyn
55. Downtown Mountain View
56. Oakridge
57. Almaden
58. San Fernando
59. San Jose Diridon
60. Race
61. Fruitdale
62. Bascom
63. Hamilton
64. Downtown Campbell
65. Winchester

Bus Shelters/Transit Centers

1. Eastridge Transit Center
2. Palo Alto Transit Center
3. San Antonio Transit Center (Mountain View)
4. Mountain View Transit Center-Light Rail Station
5. Sunnyvale Transit Center
6. Lockheed Martin Transit Center
7. Santa Clara Transit Center
8. Fremont BART 180
9. Great Mall Transit Center
10. Penitencia Creek Transit Center
11. Alum Rock Transit Center
12. Line 39 at Murillo Stop at Temple
13. Line 39 at Murillo Stop at Catholic Church
14. Gilroy Bus Transit Center
15. Santa Teresa Bus and Light Rail Transit Center

3331 North First Street ● San Jose, CA 95134-1906 ● Administration 408.321.5555 ● Customer Service 408.321.2300



16. VTA Customer Service Center in Downtown San José
17. San José Diridon Transit Center
18. DeAnza College (Cupertino) Line 23, 55, 25

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Section 2: Title VI Complaint Procedure

In order to comply with the reporting requirements established in 49 CFR Section 21.9(b), all recipients shall develop procedures for investigating and tracking Title VI complaints filed against them and make their procedures for filing a complaint available to members of the public. FTA requires direct and primary recipients to report information regarding their complaint procedures in their Title VI Programs in order for FTA to determine compliance with DOT's Title VI regulations.

VTA's complaint process and form are professionally translated into languages that meet the Safe Harbor Provision as defined by the Department of Transportation. This provision indicates that transit agencies must translate vital documents into languages spoken by LEP populations and represented by five percent or 1,000 individuals, whichever is less, of a transit agency's overall service population. Vital documents may include documents such as written notices of rights, consent and complaint forms, and intake and application forms.

VTA used American Community Survey data and community outreach to identify the languages during the development of its 2016 Limited English Proficiency Plan Update. Customers who wish to file complaints can simply click on their language identifier on the VTA webpage to read information in their primary language. A link to the VTA Title VI webpage, which includes the complaint form and process in all safe harbor languages for VTA's service area, is shown as an image on page 10 (Exhibit 2).

Complaint Process

The Santa Clara Valley Transportation Authority (VTA) grants all citizens equal access to its transportation services. It is further the intent of VTA that all citizens are aware of their rights to such access. This site is designed to serve as an educational tool for citizens so that they may understand the civil rights laws which serve to protect their access to VTA programs and services, specifically as it relates to Title VI of the Civil Rights Act of 1964.

What is Title VI?

Title VI is a section of the Civil Rights Act of 1964 requiring that “No person in the United States shall on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.” Note that Title VI does not address gender discrimination. It only covers race, color and national origin. Other Civil Rights laws prohibit gender discrimination.

Who are Limited English Proficient Persons?

Persons who do not speak English as their primary language and who have limited ability to read, speak, write, or understand English are considered limited English proficient, or “LEP.” These individuals may be entitled to language assistance with respect to a particular type of service, benefit, or encounter.

Differential treatment based on a person’s inability to speak, read, write, or understand English may be a type of national origin discrimination.

How do I file a complaint?

If you believe that you have received discriminatory treatment by VTA on the basis of your race, color or national origin, you have the right to file a complaint with VTA’s Office of Civil Rights by completing and submitting the form shown on pages seven to nine. This form is also available on the Title VI portion of VTA’s website. The complaint must be filed no later than 180 calendar days after the alleged discriminatory incident.

Methods of filing a Complaint

The preferred method is to file your complaint in writing using the Title VI Complaint Form and sending it to:

Office of Civil Rights
Santa Clara Valley Transportation Authority
3331 North First Street, Bldg. B-2
San Jose, CA 95134

Verbal complaints will be accepted and transcribed by VTA’s Office of Civil Rights. To make a verbal complaint, you may call (408) 952-8901. Complaints may also be filed with external entities such as the Equal Employment Opportunity Commission (EEOC) www.eeoc.gov; Federal Transit Administration (FTA) www.transit.dot.gov; Department of Fair Employment and Housing (DFEH) www.dfeh.ca.gov; Federal Highway Administration (FHWA) https://www.fhwa.dot.gov/civilrights/contact_us/; or Caltrans at www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm. Please review information on the respective agency websites for details on filing Title VI complaints.

Should a complaint be filed with VTA and an external entity simultaneously, the external complaint shall supersede the VTA complaint and VTA's complaint procedures will be suspended pending the external entity's findings.

Investigations

Within 10 working days of receipt of the formal complaint, the Title VI Coordinator will notify the complainant and begin an investigation (unless the complaint is filed with an external entity first or simultaneously).

The investigations will address complaints against any VTA department(s). The investigation will be conducted in conjunction with and under the advice of the Office of Civil Rights.

The investigation may include discussion(s) of the complaint with all affected parties to determine the problem. The complainant may be represented by an attorney or other representative of his/her own choosing, bring witnesses, and present testimony and evidence in the course of the investigation.

The investigation will be conducted and completed within 60 days of receipt of the formal complaint.

Based upon all the information received, an investigative report will be written by the Office of Civil Rights for submittal to the Director of Business Services.

The complainant will receive a letter stating the final decision by the end of the 60 days time limit. Most investigations are completed within 30 days.

The complainant shall be notified of his/her right to appeal the decision. Appeals may be made to the Federal Transit Administration, the Equal Employment Opportunity Commission, or the Department of Fair Employment and Housing.

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Section 3: Title VI Complaint Form

In addition to developing complaint procedures, recipients must also develop a Title VI complaint form. Both the form and procedure for filing a complaint shall be available on the recipient's website.

http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site_Content/TitleVIComplaintForm.pdf

Complaint Form



Title VI Complaint Form

Santa Clara Valley Transportation Authority (VTA)
Office of Civil Rights

VTA is committed to ensuring that no person is excluded from participation in or denied the benefits of its services on the basis of race, color, or national origin, as provided by Title VI of the Civil Rights Act of 1964, as amended. Title VI complaints must be filed within 180 days from the date of the alleged discrimination.

The following information is necessary to assist us in processing your complaint. If you require any assistance in completing this form, please contact the Office of Civil Rights by calling (408) 952-8901. The completed form must be returned to VTA Office of Civil Rights, 3331 North First Street, Building B-2, San Jose, CA 95134.

Your Name:	Phone:
Street Address:	Alt Phone:
	City, State, & Zip Code:
Person(s) discriminated against (if someone other than complainant):	
Name(s):	
Street Address, City, State & Zip Code:	

Which of the following best describes the reason for the alleged discrimination? (Circle All That Apply)

- Race
- Color
- National Origin

Date of Incident: _____

Please describe the alleged discriminatory incident. Provide the names and titles of all VTA employees involved, if available. Explain what happened and whom you believe was responsible. Please use the back of this form if additional space is required.

Title VI Complaint Form

Santa Clara Valley Transportation
Office of Civil Rights

Please describe the alleged discriminatory incident (continued) _____

Have you filed a complaint with any other federal, state or local agencies? (Circle one) Yes / No
if yes, list agency / agencies and contact information below:

Agency: _____ Contact Name: _____
Street Address, City, State & Zip Code: _____ Phone: _____

Agency: _____ Contact Name: _____
Street Address, City, State & Zip Code: _____ Phone: _____

I affirm that I have read the above charge and that it is true to the best of my knowledge,
information and belief.

Complainant's Signature: _____ Date: _____

Print or Type Name of Complainant

VTA Office Use Only:
Date Received: _____
Received By: _____

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Exhibit 2: VTA Title VI Webpage
(Click Here)

SANTA CLARA
VTA Valley Transportation Authority

Getting Around
News & Media
Projects & Programs
BART Silicon Valley

[Home](#)>[About Us](#)>[Title VI](#)>[Title VI: Organizational Commitment](#)

Title VI: Organizational Commitment

Select Your Language

- Amharic
- العربية Arabic
- Hrvatski
- فارسی Farsi
- Français
- Deutsch
- ગુજરાતી Gujarati
- हिंदी
- 日本語
- Hrvatski
- 한국어
- Português
- ਪੰਜਾਬੀ Punjabi
- Русский
- Srpski
- 简体中文
- Español
- Tagalog
- 繁體中文
- Tiếng Việt

Santa Clara County, the heart of the Silicon Valley, is home to one of the most innovative, creative and diverse communities in the country. With a population of 1.7 million people, more than half of the County's residents speak a language other than English at home compared to 20% of the United States population in that same demographic.

Because of our multicultural customer base, VTA recognizes its opportunities and obligations by proactively ensuring that our policies, services and programs are delivered by communications tools and processes that are inclusive and effective. By these actions, we can make certain that no person, because of their race, color or national origin is denied meaningful access to our transportation services, programs and information.

VTA supports the goal of Title VI and its Executive Orders on Limited English Proficiency (LEP) and Environmental Justice to provide meaningful access to its services, projects and activities by low-income, minority, and limited English proficient persons.

VTA is strongly committed to meeting its regulatory requirements under Title VI. The organization is structured so that oversight and management of policy development, training, regulatory compliance, reporting and monitoring of all anti-discrimination policies as it relates to Title VI and LEP are centralized in one department; the Office of Civil Rights. Employees from every division within the organization work cooperatively to contribute to the success of our Title VI program.

With respect Title VI, VTA will:

- Ensure that the level and quality of transportation service is provided without regard to race, color, or national origin.
- Identify and address, as appropriate, disproportionately high and adverse human health and environmental effects, including social and economic effects of programs and activities on minority populations and low-income populations.
- Promote full and fair participation of all affected populations in transportation decision-making.
- Prevent the denial, reduction, or delay in benefits related to programs and activities that benefit minority populations or low-income populations.
- Ensure meaningful access to programs and activities by persons with limited English proficiency.

Title VI Fact Sheets:

[English Fact Sheet](#)

Español
 Tiếng Việt
 简体中文
 한국어

Complaints may also be filed directly with the [Federal Transit Administration](#), the [Department of Fair Employment and Housing](#) and the [Equal Employment Opportunity Commission](#).

Title VI Pages & Documents

[Title VI Program](#)
[Complaint Process](#)
[LEP Plan](#)

[Notice To The Public](#)
[Public Contact Information](#)
[Public Participation Plan](#)

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Section 4: List of Transit Related-Title VI Investigations, Complaints, and Lawsuits

In order to comply with the requirements of 49 CFR Section 21.9(b), the FTA requires all recipients to prepare and maintain a list of any of the following that allege discrimination on the basis of race, color, or national origin: active investigations conducted by the entities other than FTA; lawsuits; and complaints naming the recipient. This list shall include the date that the investigation, lawsuit, or complaint was filed; summary of the allegation(s); the status of the investigation, lawsuit, or complaint; and actions taken by the recipient in response to, or final findings related to, the investigation, lawsuit, or complaint.

VTA has not had any Title VI lawsuits since the submittal of its last Title VI Program. VTA reviewed complaints from January 1, 2017 through October 18, 2019. The list of complaints and investigations since the submission of VTA's last Title VI Program is shown in Table 1.

Table 1: Title VI Complaints and Investigations

Title VI Complaints and Investigations

VTA - List of Title VI Lawsuits, Investigations and Complaints 2017

	Date	Summary (include basis of complaint: race, color or national origin)	Status	Action Item(s) Taken
<p>Lawsuits</p> <p>Complaints and Investigations</p>		<p>There were no Title VI lawsuits for 2017.</p>		
<p>1</p>	<p>06/20/17</p>	<p>(National Origin) Caller stated that she witnessed a bus driver racially profile a Latino man. The man entered and asked the driver, "Is this bus north or south?" The driver then said, "I don't feel safe with you commenting on gangs." Caller stated that Driver assumed he was talking about gangs, but she feels that the man was not. Driver waived down a sheriff who was in the park, and the man left to avoid an incident.</p> <p>The man already paid the \$2 and also pleaded with the driver about the \$2. The driver did not advise him to call customer service for the \$2. Caller stated that the driver racially profiled him and also stated that the driver felt threatened.</p>	<p>Closed.</p>	<p>OCR determined the bus driver used stereotypes based on the customer's national origin to deny access to bus service. The customer stepped onto the bus with a smile, did not act in a threatening manner, was not slurring, did not seem intoxicated and paid the \$2 bus fare. The behavior of the bus operator was unwarranted as the bus driver felt the need to ask if the customer was "running from something," which seemed to imply that he was asking the customer if he was running from the police as the police car was parked a few feet in front of the bus.</p> <p>The driver denied the customer service because of his national origin, and the Title VI claim is substantiated. OCR recommends that the bus operator attend Title VI training to review Title VI policies and procedures.</p> <p>Transit Division Supervisor Dawn Wright met with the operator to discuss the incident. He stated that he did was not intentionally offensive. He was concerned and then alarmed by the way the passenger boarded the bus (not caring where the bus was going, seeming to be in a hurry, and then swearing and discussing the police). He thought that this would be a problem down the road so he took advantage of the officer at the scene and had the passenger deboard. He was instructed on how to better handle the situation. Copies of the Title VI information provided.</p>

VTA - List of Title VI Lawsuits, Investigations and Complaints 2018

	Date	Summary (include basis of complaint: race, color or national origin)	Status	Action Item(s) Taken
Lawsuits		There were no Title VI lawsuits for 2018.		
Complaints and Investigations		No Violations were found in 2018.		
None for 2018				

VTA - List of Title VI Lawsuits, Investigations and Complaints 2019

	Date	Summary (include basis of complaint: race, color or national origin)	Status	Action Item(s) Taken
<p>Lawsuits</p>		<p>There were no Title VI lawsuits for 2019.</p>		
<p>Complaints and Investigations</p>		<p>1 01/09/19 (Race) Constituent stated she felt that operator was very rude and unpleasant and was unprofessional and felt that operator was racist and seemed to be bothered by the fact that it took her husband an extra minute to get his bus pass out of the sleeve it was in and out of his pocket when they boarded the bus. Constituent does state they were in the wrong for not being completely ready meaning having clipper card in hand and exposed ready to tag on as boarding but despite that the operator was still very rude and unpleasant and very unprofessional with his demeanor and body language and facial expressions. Constituent stated that after she and her husband sat down, an African American customer boarded and the operator waived him by and did not charge him or tag his clipper card. Constituent feels that because operator is African American and the following passenger is African American, that that is why this incident occurred.</p>	<p>Closed.</p>	<p>OCR reviewed CCTV. Passenger boarded at approximately 1:15 PM and tagged an incorrect pass to the farebox machine. The customer's fare media was not working, so passenger stated he will pay cash. He continued to stand by the operator behind the yellow line, searching for money in his pockets. The bus reached its next stop. Passengers boarded including an African American. When this African American passenger boarded, the operator greeted him by saying, "How are you man?" and the passenger seemed to touch his pockets to attempt to take out fare. The passenger said to the operator, "Nothing in there, huh?" signaling to the farebox. The operator responded by stating no and signaled him to come into the bus. The operator then stood at the bus stop and told the passenger, still searching for money, to either pay or get off as he has waited long enough. The customer paid cash and the operator proceeded the moment he paid. Although the African American passenger may be a regular passenger, it can be perceived as discrimination to let him on the bus when he clearly is checking his pockets and being told by the operator no, as in no you do not have to pay. The perception to other passengers and even OCR is that this passenger was let on through favoritism. OCR recommended meeting with operator to discuss how his actions can potentially be seen as discrimination and to be mindful of this in his future encounters with passengers. Supervisor met him to discuss harassment policy, perception of favoritism and the rulebook.</p>


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Section 5: Public Participation Plan

The content and considerations of Title VI, the Executive Order on LEP, and the DOT LEP Guidance shall be integrated into each recipient's established public participation plan, which explicitly describes the proactive strategies, procedures, and desired outcomes that underpin the recipient's public participation activities. Efforts to involve minority and LEP populations in public participation activities can include both comprehensive measures, such as placing notices at all transit stations, stops, and vehicles, as well as targeted measures to address linguistic, institutional, cultural, economic, historical, or other barriers that may prevent minority and LEP persons from effectively participating in a recipient's decision-making process.



VTA's Public Participation Plan (PPP) is a guide for VTA's public participation activities. The purpose of the PPP is to promote the use of effective methods to inform and provide meaningful opportunities for input by all members of the public. In recognition of the importance of having an inclusive process, this plan has a special focus on reaching traditionally under-represented communities such as low-income, minority, and limited English proficient (LEP) populations. The PPP is attached as Exhibit 3.



[Exhibit 3: VTA Public Participation Plan](#)
(Click Here)



January 24, 2013

Public Participation Plan



Prepared by
 **Kimley-Horn and Associates, Inc.** 

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Section 6: Limited English Proficiency Plan Update (2016)

Consistent with Title VI of the Civil Rights Act of 1964, the DOT's implementing regulations, and Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency" (65 FR 50121, Aug. 11, 2000), recipients shall take reasonable steps to ensure meaningful access to benefits, services, information, and other important portions of their programs and activities for individuals who are limited English proficient (LEP). The recipient shall develop an assistance plan to address the identified needs of the LEP population(s) it services.

The four-factor analysis included in the 2016 LEP Plan Update identifies appropriate language assistance measures needed to improve access to Santa Clara Valley Transportation Authority (VTA) services and benefits by limited English proficient persons (LEP). The four-factor analysis is taken from guidance provided by the Department of Transportation, and it is used to ensure that information on VTA's customers who are LEP has been validated amongst several data sources. It further establishes that the needs and concerns of individuals who are LEP and use VTA are taken into account in future projects in order to both maintain and improve their access to services.

VTA supports the goal of the DOT's LEP Guidance to provide meaningful access to its services for LEP persons. This Limited English Proficiency Plan Update, attached as Exhibit 4, reflects LEP compliance by VTA and its continuous efforts to comply fully with the USDOT/FTA guidelines, ***"Implementing the Department of Transportation's Policy Guidance Concerning Recipients' Responsibilities to Limited English Proficient (LEP) Persons; A Handbook for Public Transportation Providers" (April 13, 2007)***. The 2016 LEP Plan Update assesses language needs in the VTA service area which includes Santa Clara countywide transportation planning, including services to the cities of Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale.

[Exhibit 4: Limited English Proficiency Plan Update \(2016\)](#)
(Click Here)



Limited English Proficiency (LEP) Plan Update

Business Services Division
Office of Diversity & Inclusion
Title VI Unit

September 1, 2016



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Section 7: Minority Representation on Planning and Advisory Bodies

Title 49 CFR Section 21.5(b)(1)(vii) states that a recipient may not, on the grounds of race, color, or national origin, “deny a person the opportunity to participate as a member of a planning, advisory, or similar body which is an integral part of the program.” Recipients that have transit-related, non-elected planning boards, advisory councils or committees, or similar committees, the membership of which is selected by the recipient, must provide a table depicting the racial breakdown of the membership of those committees, and a description of efforts made to encourage the participation of minorities on such committees.

The Citizens Advisory Committee (CAC) and the Committee for Transit Mobility and Accessibility (CTMA) are two VTA advisory committees that are comprised of non-elected members who are selected by VTA. VTA does not have any other committees where members are non-elected and selected by VTA. A list of the survey questions used to query members about their racial identity and/or ethnicity, a table depicting the racial breakdown of the committees, and efforts to encourage participation of minorities on those committees are shown below.

Questionnaire

By self-identification, what is your ethnicity (cultural or national origin) and/or race?

- **Hispanic, Latino, or Spanish Origin**
 - A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
- **White (Not Hispanic or Latino)**
 - A person having origins in any of the original peoples of Europe, the Middle East or North Africa.
- **Black or African-American (Not Hispanic or Latino)**
 - A person having origins in any of the black racial groups of Africa.
- **Native Hawaiian or other Pacific Islander (Not Hispanic or Latino)**
 - A person having origins in any of the peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- **American Indian or Alaska Native (Not Hispanic or Latino)**
 - A person having origins in any of the original people of the North and South American Continent (including Central America), and who maintain tribal affiliation or community attachment.
- **Asian (Not Hispanic or Latino)**
 - A person having origins in any of the original people of the Far East, Southeast Asia, or the Indian Subcontinent, including for example, Cambodia, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand or Vietnam.
- **Two or more races (Not Hispanic or Latino)**
 - All persons who identify with more than one of the above listed races.
- **Decline to provide ethnicity and/or race information**

Table 2: Racial Breakdown of the Membership of Advisory Committees

	Santa Clara County	Citizens Advisory Committee (CAC)	Committee for Transit Accessibility (CTA)
Approved Membership Positions		13	17
Filled Membership Positions		12	15
Members Completing Survey			
Responses			
Hispanic, Latino, or Spanish Origin	25.3%	10.0%	16.7%
White	31.0%	60.0%	66.7%
Black or African-American	2.8%	10.0%	0.0%
Native Hawaiian or other Pacific	0.5%	0.0%	0.0%
American Indian or Alaska Native	1.2%	0.0%	0.0%
Asian	38.3%	20.0%	16.7%

Outreach Efforts to Encourage Participation

VTA values the ethnic and cultural diversity of the public it serves in Santa Clara County. Accordingly, VTA actively seeks and encourages the participation of traditionally underrepresented groups on its non-elected committees when filling a vacancy.

VTA makes concerted efforts to provide the opportunity for qualified individuals from underrepresented ethnic groups to join its advisory committees so that these bodies accurately represent the ethnic, gender, and geographic diversity of the county.

VTA utilizes a number of strategies to promote meaningful participation by these groups, including targeted outreach. Methods may include, but are not limited to, one or more of the following:

- Paid and free notices in local media, especially those that are ethnically/culturally based for the targeted group we are trying to reach. This effort includes print, electronic and social media.
- Translating notices into the native language of the targeted group.
- Posting committee vacancies on VTA’s website.
- Placing informational signs on VTA buses, light rail vehicles, bus stops and shelters, light rail stations, Park & Rides, and other facilities.

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Section 8: Description of How Subrecipients are Monitored

In accordance with 49 CFR 21.9(b), and to ensure that subrecipients are complying with the DOT Title VI regulations, primary recipients must monitor their subrecipients for compliance with the regulations. Importantly, if a subrecipient is not in compliance with the Title VI requirements, then the primary recipient is not in compliance.

Currently, VTA does not have any subrecipients.

Section 9: Title VI Equity Analysis for the Construction of a Facility

The recipient shall complete a Title VI equity analysis during the planning stage with regard to where a project is located or sited to ensure the location is selected without regard to race, color, or national origin. Facilities include, but are not limited to, storage facilities, maintenance facilities, operations centers, etc. Facilities do not include bus shelters and transit stations, power substations, etc. which are evaluated during project development of the NEPA process.

VTA has not built any transit facilities since the submittal of its last Title VI Program. To the extent that any transit facilities are planned for construction, VTA is prepared to complete the required analyses and has created a policy to provide guidance for that process.

Section 10: Approval of Title VI Program by Governing Entity

The recipient must provide a copy of board meeting minutes, resolutions, or other appropriate documentation showing the board of directors or appropriate governing entity or official(s) responsible for policy decisions has reviewed and approved the Title VI Program. The approval must occur prior to submission to the FTA.

[Exhibit 5: Resolution Approving the Title VI Program](#)

ATTACHMENT 2

RESOLUTION NO. _____

RESOLUTION OF THE SANTA CLARA VALLEY TRANSPORTATION AUTHORITY TO ADOPT ITS TITLE VI PROGRAM

WHEREAS, Title VI (codified at 42 U.S.C. §2000d et seq.) of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance; and

WHEREAS, the Federal Transit Administration (FTA) issued Title VI Circular 4702.1B, effective October 1, 2012, setting forth requirements and guidelines for Title VI compliance; and

WHEREAS, the above-referenced Circular details required elements of the Title VI Program, which each recipient of FTA assistance must submit to the FTA triennially; and

WHEREAS, the above-referenced Circular requires VTA's Board of Directors to approve VTA's Title VI Program before it is submitted to the FTA; and

WHEREAS, VTA's Title VI Program expires February 13, 2020.

WHEREAS, VTA's Title VI Program must contain numerous elements, including but not limited to, VTA's:

1. Title VI Notice to the Public
2. Title VI Complaint Procedures
3. Title VI Complaint Form
4. List of Transit-Related Title VI Complaints, Investigations, and Lawsuits
5. A Public Participation Plan
6. A Limited English Proficiency/Language Access Plan
7. Table Depicting Racial Breakdown of Non-Elected Boards and Committees
8. Program for Monitoring Subrecipients for Title VI Compliance
9. Evidence of the Board's Review and Approval of the Title VI Program
10. System-wide Service Standards and Policies, Result of Service Monitoring and evidence of the Board's Approval of Such Monitoring
11. Demographic and Service Profile Maps and Charts
12. Demographic Ridership and Travel Patterns, Collected by Surveys
13. Description of the Public Engagement Process used for Adoption of the Major Service Change, Disparate Impact, and Disproportionate Burden Policies
14. Results of Service and/or Fare Equity Analyses Conducted since the Last Title VI Program Submission and Evidence of the Board's Awareness and Approval of the Equity Analyses; and

Whereas, staff has developed a proposed Title VI Program (provided to the Board via staff report), including the above-referenced items and evidencing VTA's compliance with Title VI, for Board consideration and approval.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors of the Santa Clara Valley Transportation Authority hereby adopts the VTA Title VI Program; and

BE IT FURTHER RESOLVED that the Board of Directors authorizes the General Manager, or a designee, to:

1. Include evidence of the Board’s consideration and approval of the final VTA Title VI Program
2. Submit the final VTA Title VI Program to the FTA; and
3. Take any other steps necessary to give effect to this Resolution, including responding to any follow-up inquiries from the FTA.

PASSED AND ADOPTED by the Santa Clara Valley Transportation Authority Board of Directors this 6th day of February 2020, by the following votes:

AYES: DIRECTORS

NOES: DIRECTORS

ABSENT: DIRECTORS

Cindy Chavez, Chairperson
Board of Directors

ATTEST:

Elaine Baltao, Board Secretary

APPROVED AS TO FORM:

Evelynn Tran
General Counsel

II. Requirements of Transit Providers

Section 11: System-wide Service Standards

This requirement applies to all fixed route providers of public transportation service. Appendix C to 49 CFR part 21 provides in Section (3)(iii) that “[n]o person or group of persons shall be discriminated against with regard to the routing, scheduling, or quality of service of transportation service furnished as a part of the project on the basis of race, color, or national origin. Frequency of service, age, and quality of vehicles assigned to routes, quality of stations serving different routes, and location of routes may not be determined on the basis of race, color, or national origin.”

Service standards must include:

- *Vehicle load for each mode*
- *Vehicle headway for each mode*
- *On-time performance for each mode*
- *Service availability for each mode*

Section 12: System-wide Service Policies

FTA requires fixed route transit providers to develop a policy for each of the following service indicators. Transit providers may set policies for additional indicators as appropriate.

Policies must include:

- *Distribution of transit amenities for each mode*
- *Vehicle assignment for each mode*

System-wide Service Standards and Policies

TITLE VI SYSTEM-WIDE SERVICE STANDARDS & POLICIES	POLICY	
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1.0 Purpose:

As outlined in Title VI Circular 4702.1B and Environmental Justice Circular 4703.1, the Federal Transit Administration (FTA) requires that all fixed route transit providers establish and monitor a set of service standards and policies that can be used to measure system performance and ensure that transit services are being provided in a fair and equitable manner. The purpose of this document is to establish the new Title VI standards and policies that will be used by the Santa Clara Valley Transportation Authority (VTA) and submitted to the FTA as part of the triennial Title VI Program.

2.0 Scope:

These standards and policies apply to all VTA transit service and passenger facilities.

3.0 Responsibilities:

General oversight for the following Title VI policies is performed by VTA’s Office of Civil Rights. The Service & Operations Planning Department is responsible for the ongoing implementation and execution of these policies.

4.0 Policy:

In accordance with FTA Title VI requirements, VTA shall regularly monitor the performance of its fixed bus and light rail routes relative to system-wide service standards for the following indicators to ensure that minority and non-minority routes are being operated in a fair and equitable manner.

- Vehicle Load;
- Vehicle Headways;
- On-Time Performance;
- Service Availability; and
- Ridership Productivity

Any significant service deficiencies identified through this process must be evaluated further to determine the extent to which minorities are affected. If the negative effect on minority persons is proportionally higher than the effect on non-minority persons, additional steps may be necessary to address the discrepancy.

VTA shall also monitor its *vehicle assignments* and the distribution of *transit amenities* based on the policies outlined in this document to prevent discriminatory practices.

A. Route Categories

In order to develop appropriate standards for the different types of VTA transit service, each route is classified as belonging to one of the six categories listed below. These classifications are used to identify service standards which are specific to each route category.



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1. **Core.** Core bus routes provide high-frequency service with extended service spans to some of the busiest corridors in the region. The routes are longer and serve major trip generators such as universities, regional shopping malls, and high-density housing and employment areas.
2. **Local.** Local bus service usually operates on medium-length corridors and offers slightly lower levels of service. These routes will often serve smaller trip generators such as schools, hospitals, small shopping centers, and medium-density housing and employment sites.
3. **Community Bus/Shuttles.** Community bus routes are typically shorter and operate with less frequent service. These routes tend to operate within specific neighborhoods and connect smaller trip generators with light rail stations, transit centers, and other nearby destinations. Shuttles which are operated or managed by VTA are included in this category.
4. **Express/Limited Stop.** Express and Limited Stop bus routes provide quicker, more direct service along major corridors and to large employment centers. These routes are designed for commuters and typically only operate during weekday peak periods.
5. **Bus Rapid Transit.** BRT routes provide enhanced, rapid, high-frequency service in major transit corridors. VTA plans to introduce the first of its two planned BRT routes in 2015.
6. **Light Rail.** Light rail trains operate on dedicated tracks in San Jose, Campbell, Santa Clara, Milpitas, Mountain View and Sunnyvale.

B. System-wide Service Standards

The following sections outline the five primary service indicators that will be used to monitor VTA bus and light rail lines and draw comparisons between minority and non-minority routes. Each standard is set based on the six service categories listed above and the specified time periods. VTA defines weekday peak periods as 5:00 to 9:00 AM and 3:00 to 7:00 PM.

The data samples used to compare route performance to these standards should be collected over a representative time period to ensure that they provide an accurate snapshot of each route. To ensure consistency, VTA typically uses data from March, April, September or October, which represent the busiest months of the year in terms of ridership. These months also serve as good comparison points because schools are in session and few major holidays are observed. Data collection time periods may also fluctuate based on data availability.

Vehicle Loads

The FTA Title VI Circular describes vehicle loads as follows:



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Vehicle load can be expressed as the ratio of passengers to the total number of seats on a vehicle. For example, on a 40-seat bus, a vehicle load of 1.3 means all seats are filled and there are approximately 12 standees. A vehicle load standard is generally expressed in terms of peak and off-peak times. Transit providers that operate multiple modes of transit must describe the specific vehicle load standards for peak and off-peak times for each mode of fixed route transit service (i.e., bus, express bus, bus rapid transit, light rail, heavy rail, commuter rail, passenger ferry, etc., as applicable), as the standard may differ by mode.

VTA service planners monitor load factor data on all routes to prevent overcrowding and determine when additional service is needed. The load factor for each route is calculated based on the average maximum load of each trip on a route during the peak and midday weekday periods. Load factors are not typically a major influence on weekend service planning decisions so no weekend load data is included.

The following table outlines the vehicle load factor standards, which are based upon historical data, industry practices, and staff analyses. If a route exceeds its respective load factor standard, VTA staff will review the service to determine if additional capacity should be provided. Express and Limited Stop routes are subject to a reduced load factor standard of to ensure passenger safety on routes that operate on highways.

Table 1 – Vehicle Load Factor Standards

<u>Category</u>	<u>Seated Capacity</u>	<u>Peak</u>		<u>Midday</u>	
		<u>Load Factor</u>	<u>Passengers</u>	<u>Load Factor</u>	<u>Passengers</u>
Core	37	1.2	44.4	1.0	37.0
Local	37	1.2	44.4	1.0	37.0
Community Bus	25	1.2	30.0	1.0	25.0
Express/Limited Stop	39	1.0	39.0	1.0	39.0
Bus Rapid Transit	49	1.2	58.8	1.0	49.0
Light Rail	65	1.2	78.0	1.0	65.0

Vehicle Headways

The FTA Title VI Circular describes vehicle headways as follows:

Vehicle headway is the amount of time between two vehicles traveling in the same direction on a given line or combination of



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lines. A shorter headway corresponds to more frequent service. Vehicle headways are measured in minutes (e.g., every 15 minutes); service frequency is measured in vehicles per hour (e.g., 4 buses per hour). Headways and frequency of service are general indications of the level of service provided along a route. Vehicle headway is one component of the amount of travel time expended by a passenger to reach his/her destination. A vehicle headway standard is generally expressed for peak and off-peak service as an increment of time (e.g., peak: every 15 minutes; and off peak: every 30 minutes). Transit providers may set different vehicle headway standards for different modes of transit service. A vehicle headway standard might establish a minimum frequency of service by area based on population density. For example, service at 15-minute peak headways and 30-minute off-peak headways might be the standard for routes serving the most densely populated portions of the service area, whereas 30-minute peak headways and 45-minute off-peak headways might be the standard in less densely populated areas. Headway standards are also typically related to vehicle load. For example, a service standard might state that vehicle headways will be improved first on routes that exceed the load factor standard or on routes with the highest load factors.

Vehicle headways are largely determined by ridership demand and vary widely by route, time and day. Based on changes in ridership levels, headways may be adjusted during the quarterly schedule change process by agency staff.

Table 2 –Vehicle Headway Standards

Category	Peak	Off-Peak
Core	15	60
Local	60	60
Community Bus	60	60
Express/Limited Stop	*	*
Bus Rapid Transit	15	15
Light Rail	15	60

*Most Express and Limited Stop routes provide one-way service and are only available during peak commuting periods. These lines often operate with fewer than 10 trips each day and are scheduled based on passenger surveys to maximize ridership. As a result, the headways for Express and Limited Stop routes vary based on ridership demand and are not specified.



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VTA calculates headways as the average length of time between the scheduled arrival times of subsequent vehicles on a specific route. The preceding table outlines the vehicle headway standards by route category and time of day. These standards represent typical headways for each route category; however, many routes operate with more frequent service based on ridership demand.

On-Time Performance

The FTA Title VI Circular describes on-time performance as follows:

On-time performance is a measure of runs completed as scheduled. This criterion first must define what is considered to be "on time." For example, a transit provider may consider it acceptable if a vehicle completes a scheduled run between zero and five minutes late in comparison to the established schedule. On-time performance can be measured against route origins and destinations only, or against origins and destinations as well as specified time points along the route. Some transit providers set an on-time performance standard that prohibits vehicles from running early (i.e., ahead of schedule) while others allow vehicles to run early within a specified window of time (e.g., up to five minutes ahead of schedule). An acceptable level of performance must be defined (expressed as a percentage). The percentage of runs completed system-wide or on a particular route or line within the standard must be calculated and measured against the level of performance for the system. For example, a transit provider might define on-time performance as 95 percent of all runs system-wide or on a particular route or line completed within the allowed "on-time" window.

VTA regularly monitors on-time performance to increase service reliability and determine if running time changes are needed. As part of the quarterly schedule update process, running times on each route are reviewed and adjusted as warranted by changing traffic conditions.

VTA has previously established an on-time performance goal of 95 percent for all modes. For bus routes, "on time" is defined as arriving no more than three minutes before or five minutes after the scheduled arrival time. Light rail trips are considered to be "on time" if the train arrives less than one minute before or five minutes after the scheduled arrival time. This 95 percent goal continues to apply as the weekday on-time performance standard for all six route categories.



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Table 3 – On-Time Performance Standards

Category	OTP
Core	95.0%
Local	95.0%
Community Bus	95.0%
Express/Limited Stop	95.0%
Bus Rapid Transit	95.0%
Light Rail	95.0%

Service Availability

The FTA Title VI Circular describes service availability as follows:

Service availability is a general measure of the distribution of routes within a transit provider's service area. For example, a transit provider might set a service standard to distribute routes such that a specified percentage of all residents in the service area are within a one-quarter mile walk of bus service or a one-half mile walk of rail service. A standard might also indicate the maximum distance between stops or stations. These measures related to coverage and stop/station distances might also vary by population density. For example, in more densely populated areas, the standard for bus stop distance might be a shorter distance than it would be in less densely populated areas, and the percentage of the total population within a one-quarter mile walk of routes or lines might be higher in more densely populated areas than it would be in less densely populated areas. Commuter rail service or passenger ferry service availability standards might include a threshold of residents within a certain driving distance as well as within walking distance of the stations or access to the terminal.

The VTA approach to service availability is shaped largely by the *VTA Transit Sustainability Policy*. This policy mandates the use of a market-based approach in determining when and where transit service will be operated. More specifically, it “provides a framework for the efficient and effective expenditure of transit funds, and for realizing the highest return on investment in terms of public good and ridership productivity.” Therefore, instead of requiring VTA to make service available to a larger geographic region, these guidelines enable VTA to provide frequent, high-quality service to the areas with the highest ridership demand. This approach has proven to be



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particularly effective at fulfilling the transit needs of Santa Clara County’s minority and low income populations.

Table 4 – Service Availability Standards

<u>Category</u>	<u>Stop Spacing (mi)</u>
Core	0.25
Local	0.25
Community Bus	0.25
Express	*
Limited Stop	0.50
Bus Rapid Transit	0.75
Light Rail	0.66

**Average stop spacing on VTA Express routes varies significantly between lines. Express Lines typically serve 4-6 pick-up stops in residential areas before traveling long distances to drop-off locations in major employment areas. Due to these large variations, no Express route stop spacing standards are specified.*

Although VTA utilizes this ridership-based approach to service availability, the agency has developed stop-spacing standards for each of the route categories. These standards are based on the current average distance between stops for all of the routes for each category. Distances between individual stops vary significantly based on nearby land uses, development densities, geographic characteristics, ridership demand and other local conditions.

Ridership Productivity

The VTA *Transit Sustainability Policy* identifies a series of ridership-based standards that are used to monitor and evaluate route performance. Based on historical ridership and staff analyses, the primary standard for measuring service performance is boardings per revenue hour. For evaluation purposes, a specific standard is applied to each route category and day. This standard is recalibrated each quarter based on the average boardings per revenue hour for each route category with a minimum standard of 15 boardings per revenue hour. Bus routes that consistently operate below their respective thresholds and are unresponsive to marketing, restructuring, and operational refinements are subject to discontinuation.

A complete summary of the minimum ridership productivity standards by service category is shown below.



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Table 5 – Ridership Productivity Standards

<u>Category</u>	<u>Weekday</u>	<u>Saturday</u>	<u>Sunday</u>
Core	28.5	25.5	23.4
Local	24.8	18.4	18.4
Community Bus	17.2	15.0	15.0
Express/Limited Stop	23.4/15.0*	N/A	N/A
Bus Rapid Transit	28.5	25.5	23.4
Light Rail	77.4	66.7	52.3

**Ridership standard for Express buses (23.4 boardings per hour) based upon 60% peak load factor. Limited Stop standard based upon average boardings per hour and a minimum of 15 boardings per hour.*

C. System-wide Service Policies

These policies are intended to provide guidance and instruction to ensure that vehicle assignment and passenger amenity distribution practices do not result in discrimination on the basis of race, color or national origin.

Vehicle Assignment

The FTA Title VI Circular describes vehicle assignment as follows:

Vehicle assignment refers to the process by which transit vehicles are placed into service in depots and on routes throughout the transit provider’s system. Policies for vehicle assignment may be based on the age of the vehicle, where age would be a proxy for condition. For example, a transit provider could set a policy to assign vehicles to depots so that the age of the vehicles at each depot does not exceed the system-wide average. The policy could also be based on the type of vehicle. For example, a transit provider may set a policy to assign vehicles with more capacity to routes with higher ridership and/or during peak periods. The policy could also be based on the type of service offered. For example, a transit provider may set a policy to assign specific types of vehicles to express or commuter service. Transit providers deploying vehicles equipped with technology designed to reduce emissions could choose to set a policy for how these vehicles will be deployed throughout the service area.

The VTA bus fleet features over 400 active vehicles divided between three different bus divisions – Chaboya, North and Cerone. The bus fleet includes a mix of five different



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vehicle types: standard 40-foot diesel buses, 30-foot gasoline community buses, 40-foot hybrid-powered buses, 40-foot hybrid-powered express buses and 60-foot articulated, diesel-powered buses. Buses are typically assigned to one of the three divisions based on the size of the yard, the operational or ridership characteristics of certain routes located near that division, and the geographical distribution of routes so that the total time required for the buses and operators to travel between the bus yard and the route is minimized as much as possible.

Currently, all articulated buses must operate out of the North Division for maintenance reasons, but staff is planning to move some of these vehicles to the Chaboya Division in the future. Express vehicles operate out of the Cerone Division due to their limited number, but will be redistributed when the next group of vehicles arrives.

VTA maintains extremely high safety standards and closely monitors the age and condition of its vehicles to determine when new buses are needed and to guarantee that buses are equitably distributed between the three bus divisions. As a general policy for vehicle assignment, staff will continue to monitor vehicle age data at each of the three divisions to ensure that the average vehicle age at each division is no more than six months above or below the average vehicle age of the active fleet.

The VTA light rail fleet is maintained at the Guadalupe Yard and includes 99 vehicles. All 99 light rail vehicles were acquired as part of the same series, are roughly the same age, and are distributed between the three light rail lines as needed. When light rail vehicles are replaced or added to the fleet in the future, the use of both new and older vehicles will be distributed equitably between all routes. Light rail trains range in length from one to three cars. The number of cars assigned to each train is determined based on operational and ridership demands.

Transit Amenities

The FTA Title VI Circular describes transit amenities as follows:

Transit amenities refer to items of comfort, convenience, and safety that are available to the general riding public. Fixed route transit providers must set a policy to ensure equitable distribution of transit amenities across the system. Transit providers may have different policies for the different modes of service that they provide. Policies in this area address how these amenities are distributed within a transit system, and the manner of their distribution determines whether transit users have equal access to these amenities. This... is not intended to impact funding decisions for transit amenities. Rather, this... applies after a transit provider has decided to fund an amenity.



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VTA provides a wide array of transit amenities which include bus shelters, benches, trash cans, lighting, and posted stop-specific schedule information. VTA is also in the process of implementing a real-time information system that will inform passengers when the next bus will arrive. These amenities are distributed throughout the service area based on ridership, staff analysis and customer requests. Light rail stations have unique amenities such as enhanced shelters, detailed system maps and schedules, and automated ticket vending machines. Similarly, future BRT stations will also feature enhanced waiting environments with additional transit amenities.

VTA has recently commissioned a Transit Passenger Environment (TPEP) Plan that will provide a comprehensive analysis of the system’s transit amenities and provide specific guidelines for how amenities should be provided in the future. The recommendations from TPEP will form the basis of VTA’s transit amenity distribution procedures. General policies for the distribution of bus shelters, benches, trash cans, lighting fixtures and posted schedule information are outlined below. VTA staff monitors the locations of all transit amenities to ensure that they are equitably distributed to minority and low income areas.

Bus Shelters

Bus shelters are provided at nearly 800 stops throughout the VTA system. The installation of bus shelters is generally based upon ridership and staff input. Spatial constraints may also limit where bus shelters can and cannot be installed.

Benches

Benches are provided at over 2,000 stops throughout the VTA system. The installation of benches is based upon ridership, customer requests and staff input. Stops located near medical and senior facilities are also furnished with benches as much as possible.

Trash Cans

Trash cans are installed and maintained at over 900 stops in the VTA system. The trash cans are distributed based on ridership, customer requests, maintenance considerations and staff input.

Lighting

As part of its focus on passenger safety, VTA installs lighting at many of its bus stop locations. Additional solar-powered lights have been added to stops throughout the service area to promote safety and energy-efficiency. The distribution of lighting fixtures is primarily based upon ridership, customer requests, safety considerations, and staff recommendations.



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Posted Schedule Information

VTA currently features stop-specific “information signs” at over 150 bus stops. These information signs provide scheduled departure times for all trips departing from the stop. The installation of information signs is generally based upon ridership, transfer activity, and staff input. Signs are typically also provided for stops with common interagency transfers.

Real-Time Information Signs

VTA is in the process of implementing an extensive real-time information system that will provide up-to-the-minute information on bus and light rail arrival times. Passengers will be able to use computers or mobile devices to look up when the next bus is due to arrive at a specific bus stop. Every bus stop in the system will have a unique Real Time Stop ID which passengers can use to find out when the next bus is due to arrive.

As part of this project, VTA will also install approximately 80 Real Time Message Signs at various transit centers and bus stops throughout the system. The locations of these real-time signs will be determined based on ridership data, transfer activity, operational considerations, and staff recommendations.

5.0 Definitions:

5.1 Environmental Justice

The overarching objective of environmental justice is a fair distribution of the benefits or burdens associated with Federal programs, policies, and activities.

5.2 Fare Change

An increase or decrease in a transit provider’s fare. All fare changes, except the following, are subject to a fare equity analysis:

- “Spare the air days” or other instances when a local municipality or transit agency has declared that all passengers ride free.
- Temporary fare reductions that are mitigating measures for other actions.
- Promotional fare reductions. If promotional or temporary fare reductions last longer than six months, then FTA considers the fare reduction permanent and the transit provider must conduct a fare equity analysis.

5.3 Low-income Population

Refers to any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FTA program, policy, or activity.



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TITLE VI SYSTEM-WIDE SERVICE STANDARDS & POLICIES	POLICY	
	Document Number:	OPS-PL-0059
	Version Number:	01

5.4 **Minority Population**
Means a readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

5.5 **Title VI**
Title VI of the Civil Rights Act of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participated in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

6.0 **Summary of Changes:**
Initial release of this policy. This policy was approved by the Board of Directors on November 7, 2013.

7.0 **Approval Information:**

<i>Prepared by</i>	<i>Reviewed by</i>	<i>Approved by</i>
 Martin Barna Transit Service Development Specialist	 Jim Unites Deputy Director, Operations	 Michael T. Burns General Manager

11/18/13
Date Signed



Original Date:	Revision Date:	Page 12 of 12
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Section 13: Results of Monitoring Program and Report

In order to ensure compliance with DOT's Title VI regulations, the FTA requires transit agencies to monitor the performance of their transit system relative to their system-wide service standards and service policies (i.e. vehicle load, vehicle assignment, transit amenities, etc.) no less than every three years. Agencies shall submit the results of the monitoring program as well as documentation (e.g., a resolution, copy of meeting minutes, or similar documentation) to verify the Board's consideration, awareness, and approval of the monitoring results to the FTA every three years as part of the Title VI Program.

The results of VTA's monitoring program relative to the system-wide service standards and service policies did not find that VTA discriminated on the basis of race, color, or national origin. The results of the monitoring program are attached as Exhibit 7, and the resolution for Board of Director approval of the monitoring program is attached as Exhibit 7A.

Exhibit 7: Results of Monitoring System-wide Service Standards and Policies

(Inserted See Below)

VTA Title VI Program (2017-2020)

Monitoring of System-Wide Service Standards & Policies

December 2019

1.0 Overview

As outlined in Title VI Circular 4702.1B and Environmental Justice Circular 4703.1, the Federal Transit Administration (FTA) requires that all fixed route transit providers establish and monitor a set of system-wide service standards and policies that can be used to measure system performance and ensure that transit services are being provided in a fair and equitable manner. The purpose of this document is to present the results of VTA's service monitoring program and identify any performance deficiencies that may bear a disproportionately negative effect on VTA's minority passengers.

There are two components of the Title VI monitoring program: The System-Wide Service Standards and the System-Wide Service Policies. The System-Wide Service Standards are used to compare the performance of VTA bus and light rail lines that are primarily used by minority passengers ("minority routes") with lines that serve a greater proportion of non-minority passengers ("non-minority routes"). Conversely, the System-Wide Service Policies are designed to monitor vehicle assignment procedures and the distribution of transit amenities to ensure that such practices are not conducted in a discriminatory manner.

As demonstrated in the subsequent analyses, VTA performs well in terms of the amount and quality of service it provides to minority populations. Due to the high ridership levels on bus and light rail lines serving minority areas, minority passengers generally enjoy shorter average headways, longer service spans, and similar vehicle capacity. Moreover, VTA's vehicle assignment and transit amenity distribution practices, which are also ridership-based, ensure that minority areas benefit from the equitable allocation of transit resources.

2.0 System-Wide Service Standards:

In accordance with FTA Title VI requirements, VTA regularly monitors the performance of its fixed bus and light rail routes relative to its board-adopted System-Wide Service Standards to ensure that minority and non-minority routes are being operated in a fair and equitable manner. The VTA System-Wide Service Standards, which were adopted by the VTA Board of Directors on November 7, 2013, provide a series of performance

benchmarks for the various route categories based on the following five service indicators:

- *Vehicle Load;*
- *Vehicle Headways;*
- *On-Time Performance;*
- *Service Availability; and*
- *Ridership Productivity*

The performance indicators in this report are based on the March 2019 data to represent the monthly average activity. One of the most significant benefits of using March data is that it accounts for the passenger activity while schools are in session and it also avoids the high number of vacations due to the absence of national holidays.

2.1 Route Categories

In order to evaluate the performance of the different types of VTA transit service based on the five indicators listed above, each VTA bus and light rail line is classified as belonging to one of the following six route categories:

1. **Core.** Core bus routes provide high-frequency service with extended hours of operation to some of the busiest corridors in the region. The routes are longer and connect major trip generators such as universities, regional shopping malls, and high-density housing and employment areas.
2. **Local.** Local bus service usually operates on medium-length corridors and offers slightly lower levels of service. These routes will often serve smaller trip generators such as schools, hospitals, small shopping centers, and medium-density housing and employment sites. These routes include the former Community Bus/Shuttles designation. Shuttles which are operated or managed by VTA are included in this category.
3. **Express/Limited Stop.** Express and Limited Stop bus routes provide quicker, more direct service along major corridors and to large employment centers. These routes are designed for commuters and typically only operate during weekday peak periods.
4. **Bus Rapid Transit.** BRT routes provide enhanced, rapid, high-frequency service in major transit corridors and are typically characterized by dedicated transit lanes. VTA currently has one segment of BRT service along Alum Rock Avenue between King Road and Capitol Avenue. In the future, VTA will focus on developing future Rapid service corridors, which is a new class of service established in VTA's 2018 Transit Service Guidelines, which will include service levels similar to BRT but not necessarily include dedicated lanes.
5. **Light Rail.** Light rail trains operate on dedicated tracks in San Jose, Campbell, Santa Clara, Milpitas, Mountain View and Sunnyvale.

Table 1 – Summary of Route Categories & Title VI Designations

Route Category	Minority	Non-Minority	Total
Core	16	2	18
Local	13	22	35
Express	6	7	13
Limited Stop	2	2	4
Light Rail	1	2	3
<i>Bus Subtotals</i>	<i>37</i>	<i>33</i>	<i>70</i>
<i>Light Rail Subtotals</i>	<i>1</i>	<i>2</i>	<i>3</i>
Total	38	35	73
	52%	48%	100%

As shown above in Table 1, the current VTA system is comprised of 18 core routes, 35 local routes, 13 express lines, four limited stop routes, and three light rail lines. A route listing that identifies the route category of each bus and light rail line is included as Table 2.

2.2 Minority Routes

As part of the Title VI service monitoring evaluation procedure, each VTA bus and light rail line is also designated as either a “minority route” or a “non-minority route”. The FTA definition of a “minority route” is “a route that has at least 1/3 of its revenue mileage in a Census Block or block group, or traffic analysis zone(s) with a percentage of minority population that exceeds the percentage of minority population in the transit service area.”

Based on this definition, 38 of the 70 current VTA bus routes and one of the three light rail lines are classified as minority routes. This information is summarized in Table 1 and listed by route in Table 2.

Table 2 – Route Categories & Title VI Designations for All VTA Routes

Line	Route Category	Title VI Designation	Line	Route Category	Title VI Designation
10	Local	Non-Minority	65	Local	Non-Minority
12	Local	Minority	66	Core	Minority
13	Local	Non-Minority	68	Core	Minority
14	Local	Minority	70	Core	Minority
16	Local	Non-Minority	71	Core	Minority
17	Local	Minority	72	Core	Minority
18	Local	Minority	73	Core	Minority
19	Local	Minority	77	Core	Minority
22	Core	Minority	81	Local	Non-Minority
23	Core	Minority	82	Local	Non-Minority
25	Core	Minority	88	Local	Non-Minority
26	Core	Non-Minority	89	Local	Non-Minority
27	Local	Non-Minority	101	Express	Non-Minority
31	Local	Minority	102	Express	Non-Minority
32	Local	Non-Minority	103	Express	Minority
34	Local	Non-Minority	104	Express	Minority
35	Local	Non-Minority	120	Express	Non-Minority
37	Local	Non-Minority	121	Express	Minority
39	Local	Minority	122	Express	Minority
40	Local	Non-Minority	140	Express	Minority
42	Local	Minority	168	Express	Non-Minority
45	Local	Minority	180	Express	Minority
46	Local	Minority	181	Express	Non-Minority
47	Local	Minority	182	Express	Non-Minority
48	Local	Non-Minority	185	Express	Non-Minority
49	Local	Non-Minority	200	Local	Non-Minority
52	Local	Non-Minority	201	Local	Non-Minority
53	Local	Non-Minority	304	Limited Stop	Minority
54	Local	Minority	321	Limited Stop	Minority
55	Core	Minority	323	Core	Minority
57	Local	Non-Minority	328	Limited Stop	Non-Minority
58	Local	Minority	330	Limited Stop	Non-Minority
60	Core	Non-Minority	522	Core	Minority
61	Core	Minority	900	Light Rail	Non-Minority
62	Core	Minority	901	Light Rail	Minority
63	Local	Non-Minority	902	Light Rail	Non-Minority
64	Core	Minority	ACE***	ACE	Minority

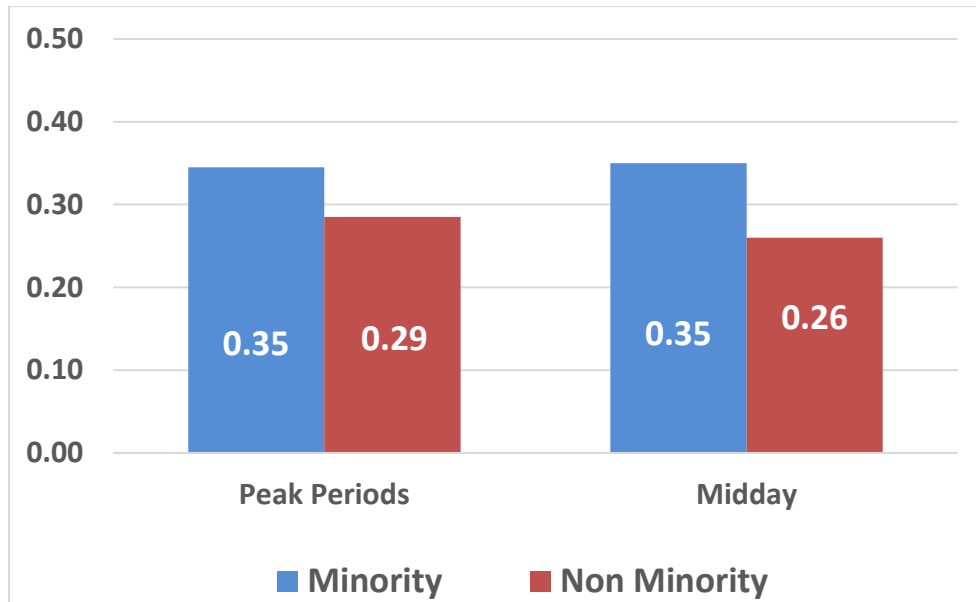
2.3 Vehicle Loads

To prevent overcrowding and identify when additional service may be needed, VTA monitors load factor data for all of its bus and light rail service. The load factor for each route is calculated based on the average peak load of each trip on a route during the specified weekday time periods. Weekend loads are less constrained by vehicle availability, so Saturday and Sunday load factors are not included in this analysis. The average weekday maximum load factors are summarized by time period in Figure 1 and Table 3.

As shown in Figure 1, minority routes demonstrate a slightly higher load factor during both peak periods and middays at the system-wide level. Table 3 depicts the average load factors by route category to provide a more detailed comparison between minority and non-minority routes. This analysis shows that among all bus lines, the minority routes tend to have slightly higher load factors during peak and midday periods. This is most likely due to the higher ridership productivity on minority bus routes as compared to non-minority routes. However, since none of the bus route categories exceed the VTA load factor standards, there are no overcrowding concerns that need to be addressed.

Among the three light rail lines, the two non-minority lines maintain average peak loads of 0.39, while the minority light rail line has a peak load factor of 1.01. Since neither the minority nor non-minority light rail lines surpass the light rail load factor standard of 1.20, this discrepancy is evidence of the healthy ridership productivity on the minority light rail line and is not considered to be a service deficiency for minority riders.

Figure 1 – VTA System-Wide Average Vehicle Loads



Source: VTA APC data, March 2019

Table 3 – Average Vehicle Loads by Route Category and Title VI Designation

Route Category	Title VI Designation	Lines	Seated Vehicle Capacity	Average Max Load Factors (Weekday)			
				Peak Period		Midday	
				Average	Standard	Average	Standard
Core	Minority Routes	16	37/57	0.43	1.20	0.44	1.00
	Non-Minority Routes	2	37/57	0.35	1.20	0.39	1.00
	All Core Routes	18	37/57	0.42	1.20	0.44	1.00
Local	Minority Routes	14	37/57	0.23	1.20	0.23	1.00
	Non-Minority Routes	21	37/57	0.29	1.20	0.23	1.00
	All Local Routes	35	37/57	0.26	1.20	0.23	1.00
Express	Minority Routes	6	37/57	0.31	1.00	0.05	1.00
	Non-Minority Routes	7	37/57	0.32	1.00	0.30	1.00
	All Express Routes	13	37/57	0.31	1.00	0.18	1.00
Limited Stop	Minority Routes	2	37/57	0.26	1.00	--	1.00
	Non-Minority Routes	2	37/57	0.23	1.00	--	1.00
	All Limited Stop Routes	4	37/57	0.25	1.00	--	1.00
All Buses	Minority Routes	37	37/57	0.33	--	0.27	--
	Non-Minority Routes	33	37/57	0.28	--	0.18	--
	All Bus Routes	70	37/57	0.31	--	0.23	--
All Light Rail	Minority Routes	1	65	1.01	1.20	0.82	1.00
	Non-Minority Routes	2	65	0.39	1.20	0.30	1.00
	All Light Rail Routes	3	65	0.60	1.20	0.47	1.00
VTA System	Minority Routes	38	--	0.35	--	0.35	--
	Non-Minority Routes	35	--	0.29	--	0.26	--
	All System Routes	73	--	0.32	--	0.24	--

Notes Lines 12 and 200 were not included in calculations as they do not operate during peak or midday periods
Average max load factors based on March 2019 ridership data
ACE shuttles are not included in the calculations

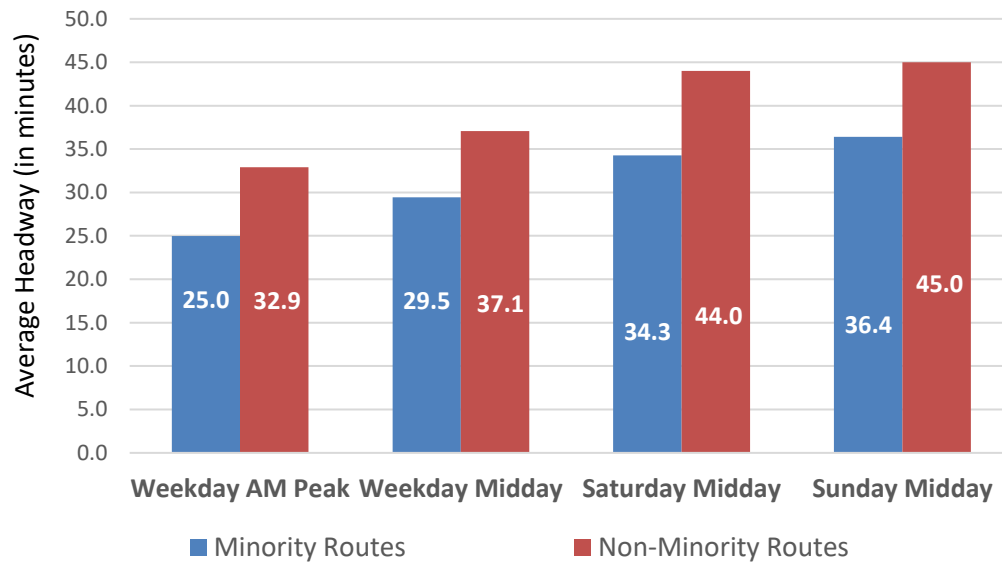
2.4 Vehicle Headways

VTA defines headways as the average length of time between the scheduled arrival times of subsequent vehicles on a specific route. Vehicle headways are set and adjusted based primarily on ridership demand.

The vehicle headways for all VTA bus and light rail lines by route category and Title VI minority designations are summarized in Figure 2 and Table 4. On a system-wide level,

the average vehicle headways for minority routes are significantly lower than the average vehicle headways for non-minority routes. Therefore, minority routes benefit from more frequent service than their corresponding non-minority routes.

Figure 2 – VTA System-Wide Average Vehicle Headways



Source: VTA Bus & Light Rail Schedules, July 2019

As shown in Table 4, minority bus routes operate with comparable or shorter headways than non-minority routes for virtually all of the route categories and service periods. During peak weekday periods, minority bus routes arrive every 25 minutes on average, as compared to every 34 minutes for non-minority bus routes. Each of the bus route categories operates with average headways that are comparable to or below the corresponding vehicle headway standards.

Light rail service also operates with average headways that are consistent with the pre-determined vehicle headway standards. Both the minority and non-minority light rail lines provide service with 15-minute headways during the weekday peak periods. As a result, no discrepancy of service levels between the minority rail line and the non-minority rail lines exists.

Table 4 – Average Vehicle Headways by Route Category and Title VI Designation

Route Category	Title VI Designation	Lines	Span (hours)	Weekday				Saturday			Sunday		
				AM Peak Headway		Midday Headway		Headway (minutes)*			Headway (minutes)*		
				Average	Standard	Average	Standard	Span	Average	Standard	Span	Average	Standard
Core	Minority Routes	16.00	18.03	16.19	15.00	19.00	60.00	16.31	24.06	60.00	15.44	28.75	60.00
	Non Minority Routes	2.00	17.25	15.00	15.00	30.00	60.00	15.50	30.00	60.00	13.00	30.00	60.00
	All Core Routes	18.00	17.94	16.06	15.00	20.22	60.00	16.22	24.72	60.00	15.17	28.89	60.00
Local	Minority Routes	14.00	12.96	37.50	60.00	44.58	60.00	9.65	52.50	60.00	9.00	54.38	60.00
	Non Minority Routes	21.00	13.36	36.50	60.00	40.00	60.00	11.27	50.45	60.00	10.17	53.33	60.00
	All Local Routes	35.00	13.21	36.88	60.00	41.72	60.00	10.50	51.43	60.00	9.62	53.82	60.00
All Buses	Minority Routes	37.00	15.31	25.32	--	29.96	--	13.75	35.00	--	13.29	37.29	--
	Non Minority Routes	33.00	14.88	34.55	--	39.09	--	11.92	47.31	--	10.68	49.09	--
	All Bus Routes	70.00	14.60	29.38	--	33.98	--	13.14	39.10	--	12.47	41.00	--
All Light Rail	Minority Routes	1.00	21.00	15.00	15.00	15.00	60.00	20.50	15.00	60.00	20.00	15.00	60.00
	Non Minority Routes	2.00	17.75	15.00	15.00	15.00	60.00	16.00	22.50	60.00	16.00	22.50	60.00
	All Light Rail Routes	3.00	18.83	15.00	15.00	15.00	60.00	17.50	20.00	60.00	17.33	20.00	60.00
VTA System	Minority Routes	38.00	16.03	24.97	--	29.45	--	14.00	34.26	--	13.56	36.40	--
	Non Minority Routes	35.00	14.02	32.92	--	37.08	--	12.50	44.00	--	11.50	45.00	--
	All System Routes	73.00	15.10	28.57	--	32.91	--	13.45	37.74	--	12.86	39.34	--

* Does not include late night service in the calculations and they are not operated on all routes

1) Average headway based on July 2019 VTA Schedules

2) Express, Limited and ACE shuttles are not included in headway calculations due to the small number of trips that are provided for each line

2.5 On-Time Performance

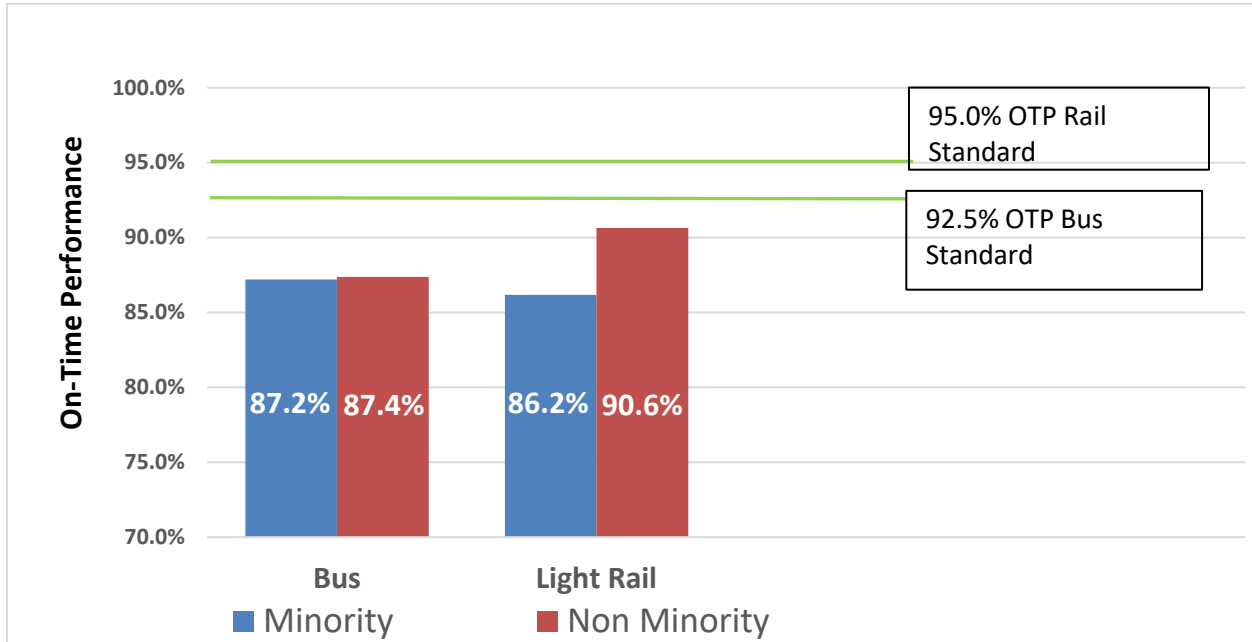
VTA monitors on-time performance on a regular basis to determine if running time changes are needed and to ensure the highest levels of service reliability. As part of the quarterly schedule update process, running times are reviewed and adjusted as warranted by changing traffic conditions. For bus routes, “on time” is defined as arriving no more than three minutes before or five minutes after the scheduled arrival time. Light rail trips are considered to be “on time” if the train arrives less than one minute before or five minutes after the scheduled arrival time.

The on-time performance of the VTA bus and light rail system is summarized in Figure 3 and Table 5. As shown in Figure 3, all bus system and minority routes on the light rail currently do not meet the system-wide on-time performance standard of 92.5 percent for bus and 95% for light rail. From a data analysis perspective, the on-time performance of VTA’s minority bus routes is the same as the on-time performance of the non-minority bus routes, which a difference of less than 0.2%.

As noted in the previous section, the on-time performance discrepancies between the minority and non-minority light rail lines are the result of the operating characteristics of the Almaden-Ohlone/Chynoweth line (non-minority) that travels an extremely short distance and encounters a minimal number of at-grade road crossings. However, the other non-minority rail line (902) experiences similar on-time performance to the minority rail line. VTA continues to work on traffic issues with local jurisdictions, including the City

of San Jose and Santa Clara, to resolve items such as traffic signal priority issues along the North First Street and Tasman Drive where heaviest delays occur on the light rail system. These mitigation measures will increase the on-time performance level for both Mountain View-Winchester and Santa Teresa-Alum Rock lines.

Figure 3 – VTA System-Wide On-Time Performance



Source: VTA APC data, March 2019

Table 5 – On-Time Performance by Route Category and Title VI Designation

Route Category	Title VI Designation	Lines	On Time Performance (Weekday)	
			Average	Standard
Core	Minority Routes	16	87.18%	92.5%
	Non Minority Routes	2	88.00%	92.5%
	All Core Routes	18	86.46%	92.5%
Local	Minority Routes	13	90.30%	92.5%
	Non Minority Routes	22	88.67%	92.5%
	All Local Routes	35	88.83%	92.5%
Express	Minority Routes	6	85.25%	92.5%
	Non Minority Routes	7	83.81%	92.5%
	All Express Routes	13	90.32%	92.5%
Limited Stop	Minority Routes	2	73.05%	92.5%
	Non Minority Routes	2	84.80%	92.5%
	All Limited Stop Routes	4	83.14%	92.5%
All Buses	Minority Routes	37	87.2%	92.5%
	Non Minority Routes	33	87.4%	92.5%
	All Bus Routes	70	87.3%	92.5%
All Light Rail	Minority Routes	1	86.2%	92.5%
	Non Minority Routes	2	90.6%	92.5%
	All Light Rail Routes	3	89.2%	92.5%
VTA System	Minority Routes	38	87.2%	92.5%
	Non Minority Routes	35	87.6%	92.5%
	All System Routes	73	87.2%	92.5%

Notes: Based on March 2019 VTA On-Time Performance Data
ACE shuttles are not included in On-Time Performance Calculations.

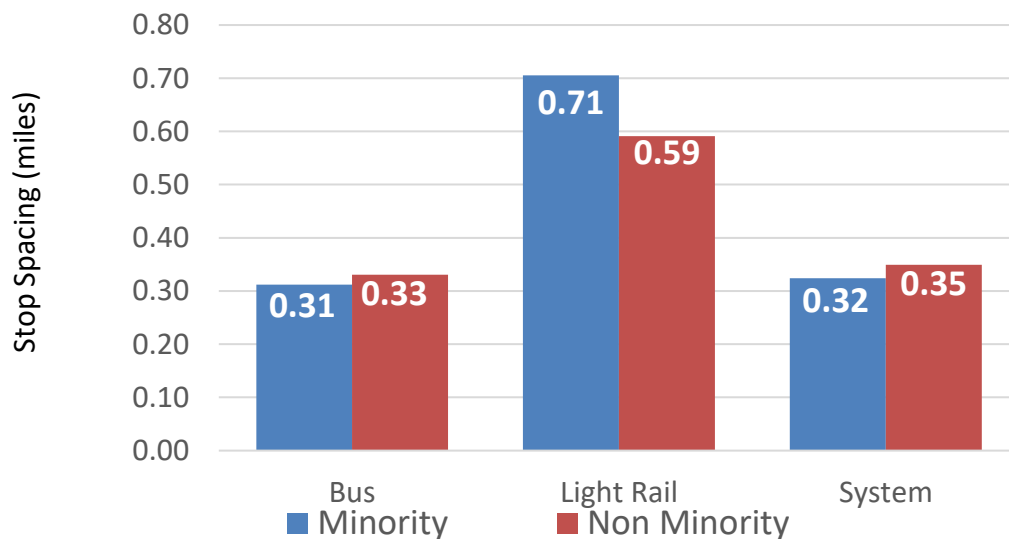
2.6 Service Availability

As outlined in the agency's *Transit Sustainability Policy*, VTA utilizes a ridership-based approach to service provision and availability. To supplement this approach and comply with Title VI monitoring requirements for service availability, VTA also analyzes the average stop spacing distances of minority and non-minority routes. A summary of the results of this analysis is depicted in Figure 4 and Table 6.

As shown in Figure 4 and Table 6, VTA's minority bus lines provide service with average stop spacing distances that are slightly lower than the corresponding non-minority routes. The service availability discrepancy between minority and non-minority bus routes does not represent a reduced level of service for minority populations.

The average stop spacing on the minority light rail line is 0.71 miles, which is slightly higher than the 0.66-mile standard for light rail. The non-minority light rail line features an average stop spacing distance of 0.59 miles due to one of the line's unique operating characteristics described in previous sections. Although the average stop spacing is higher on the minority route, the Santa Teresa-Alum Rock line covers geographically larger areas with substantially higher number of stops. If the number of stops were increased to shorten the stop spacing distance, the light rail service would be considerably slowed down and adversely affect the quality of the service to the riders. Consequently, the difference between the average stop spacing distances of minority and non-minority light rail lines does not reflect a diminished level of service availability for minority populations.

Figure 4 – VTA System-Wide Average Stop Spacing



Source: VTA System data, March 2019

Table 6 – Average Stop Spacing by Route Category and Title VI Designation

Route Category	Title VI Designation	Lines	Stop Spacing	
			Average	Standard
Core	Minority Routes	16	0.32	0.25
	Non Minority Routes	2	0.24	0.25
	All Core Routes	18	0.31	0.25
Local	Minority Routes	13	0.29	0.25
	Non Minority Routes	22	0.31	0.25
	All Local Routes	35	0.31	0.25
Limited Stop	Minority Routes	2	0.41	0.50
	Non Minority Routes	2	0.61	0.50
	All Limited Stop Routes	4	0.51	0.50
All Buses	Minority Routes	37	0.31	--
	Non Minority Routes	33	0.33	--
	All Bus Routes	70	0.32	--
All Light Rail	Minority Routes	1	0.71	0.66
	Non Minority Routes	2	0.59	0.66
	All Light Rail Routes	3	0.63	0.66
VTA System	Minority Routes	32	0.32	--
	Non Minority Routes	28	0.35	--
	All System Routes*	60	0.34	--

Notes Stop spacing distances based on March 2019 VTA system data
 Stop spacing on Express routes varies significantly and is therefore not included
 ACE shuttles are not included in the stop spacing calculations

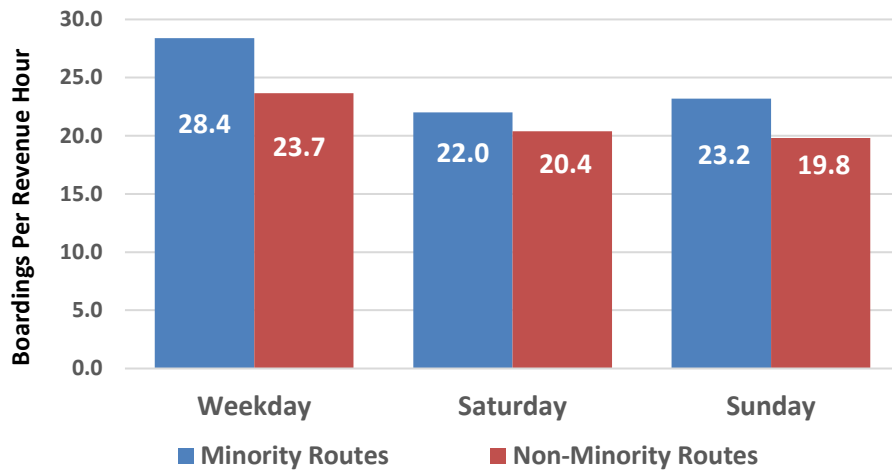
2.7 Ridership Productivity

The VTA *Transit Sustainability Policy*, adopted by the VTA Board of Directors in 2007 and updated in 2010, identifies a series of ridership-based standards that are used to monitor and evaluate route performance. Based on historical ridership and staff analyses, the primary standard for measuring service performance is boardings per revenue hour.

As depicted in Figure 5, VTA's minority routes draw higher overall ridership productivity levels than their corresponding non-minority routes. Although the ridership standards shown in Table 7 are not always met, the minority routes generally perform similarly to non-minority routes on weekdays, Saturdays, and Sundays for every route category, with some minor exceptions on weekday Express routes and Saturday Local routes.

As shown in Table 7, minority bus routes minorly outperform non-minority bus routes by about 13 percent on weekdays, while the minority light rail line records almost 30 percent greater weekday boardings per hour than the non-minority light rail lines. Although the weekend data is more limited, the ridership productivity is still higher for minority routes than it is for non-minority routes. These trends demonstrate that minority routes have consistently higher ridership productivity than their corresponding non-minority routes for most modes, route types, and service days.

Figure 5 – VTA System-Wide Ridership Productivity



Source: VTA APC data, March 2019

Table 7 – Ridership Productivity by Route Category and Title VI Designation

Route Category	Title VI Designation	Lines	Ridership Productivity (Boardings per Revenue Hour)					
			Weekday		Saturday		Sunday	
			Average	Standard	Average	Standard	Average	Standard
Core	Minority Routes	16	22.6	25.7	18.0	22.7	18.07	21.5
	Non-Minority Routes	2	20.0	25.7	15.1	22.7	15.44	21.5
	All Core Routes	18	22.4	25.7	17.8	22.7	17.73	21.5
Local	Minority Routes	14	18.0	18.9	13.5	16.3	19.7	17.8
	Non-Minority Routes	21	14.4	18.9	16.1	16.3	15.8	17.8
	All Local Routes	35	17.6	18.9	15.4	16.3	17.4	17.8
Express	Minority Routes	6	9.5	15.5	--	23.8	--	23.5
	Non-Minority Routes	7	13.2	15.5	12.3	23.8	10.9	23.5
	All Express Routes	13	12.1	15.5	12.3	23.8	10.9	23.5
Limited Stop	Minority Routes	2	13.2	15.0		--		
	Non-Minority Routes	2	9.0	15.0		--		
	All Limited Stop Routes	4	10.9	15.0		--		
All Buses	Minority Routes	37	21.8	18.2	17.6		18.4	
	Non-Minority Routes	33	16.9	18.2	15.4		15.0	
	All Bus Routes	70	20.4	18.2	17.1		17.3	
All Light Rail	Minority Routes	1	73.8	71.0	43.0	64.9	39.0	55.7
	Non-Minority Routes	2	52.2	71.0	37.7	64.9	36.2	55.7
	All Light Rail Routes	3	65.6	71.0	41.2	64.9	38.1	55.7
VTA System	Minority Routes	38	28.4	--	22.0		23.2	
	Non-Minority Routes	35	23.7	--	20.4		19.8	
	All System Routes	73	27.0	--	21.6		22.0	

Notes ACE shuttles not included in calculations
Average productivity based on March 2019 ridership data

3.0 System-wide Service Policies

These policies are intended to provide guidance and instruction to ensure that vehicle assignment and passenger amenity distribution practices do not result in discrimination on the basis of race, color or national origin.

3.1 Vehicle Assignment

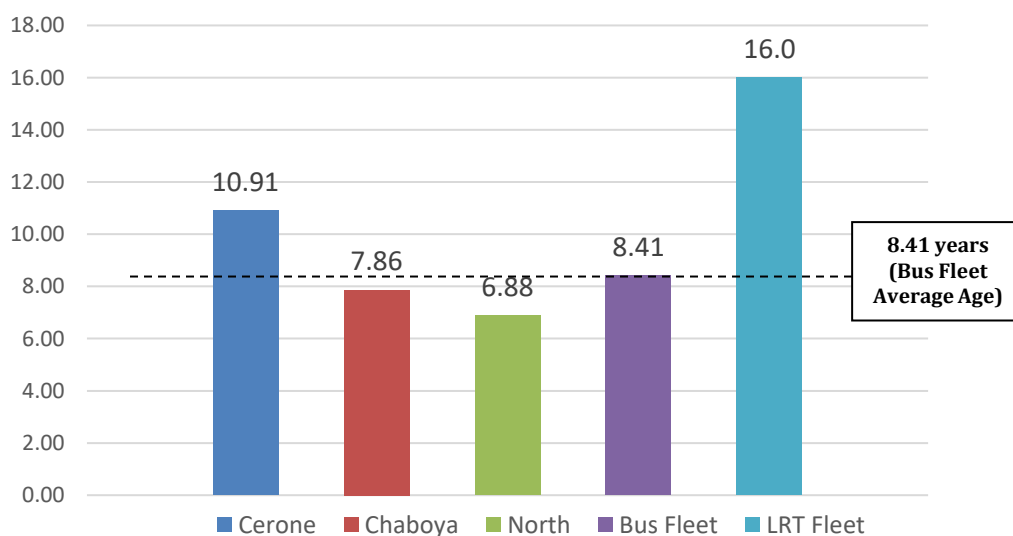
The VTA bus fleet features 473 active vehicles divided between three different bus divisions – Chaboya, North and Cerone. The bus fleet includes a mix of different vehicle types: standard 40-foot diesel buses, 30-foot community buses, 40-foot hybrid-powered buses, 40-foot hybrid-powered express buses, 40-foot electric powered buses, 60-foot articulated, diesel-powered buses, and 60-foot hybrid-powered buses. Buses are assigned to the three divisions based on the operational or ridership characteristics of the nearby routes, division capacity, and geographical distribution so that the total

time required for the buses and operators to travel between the bus yard and the route is minimized as much as possible.

VTA maintains extremely high safety standards and closely monitors the age and condition of its vehicles to determine when new buses are needed, and to guarantee that buses are equitably distributed between the three divisions. As shown in Figure 6, the average vehicle age of the active bus fleet is 8.41 years. The average vehicle age of each of the three bus divisions – Cerone, Chaboya and North – are 10.91 years, 7.86 years, and 6.88 years, respectively. The average vehicle ages at Cerone is higher than the system-wide average fleet age. However, planned vehicle retirements associated with the new service plan and an anticipated vehicle purchase in 2020 will reduce the average age in that division. VTA anticipates further decreases in the average vehicle ages systemwide with the fleet retirements and replacements.

The VTA light rail fleet is maintained at the Guadalupe Yard and includes 99 vehicles. All 99 light rail vehicles were acquired as part of the same series, are roughly the same age, and are distributed between the three light rail lines based on ridership demand. As shown in Figure 6, the average light rail vehicle is 16 years old.

Figure 6 – Average Vehicle Age by Division



Source: VTA System data October 2019

3.2 Transit Amenities

VTA provides a wide array of transit amenities which include bus shelters, benches, trash cans, lighting, and posted stop-specific schedule information. VTA has also been implementing a real-time information system that informs passengers when the next bus or train will arrive. These amenities are distributed throughout the service area based on ridership, staff analysis and customer requests.

VTA staff monitors the locations of all transit amenities to ensure that they are equitably distributed to minority areas. The following sections summarize the findings of these analyses for each type of passenger amenity.

The maps used in this report were created using bus stop data on over 4,000 stops pulled from VTA's Trapeze scheduling system, excluding inactive or proposed bus stops. They represent an accurate depiction of the VTA system as of December 2019. The various fields included for each category of bus stop amenity are based on the "AmigoCloud Inventory Process and Data Dictionary" (updated October 2019) provided by VTA staff.

Bus Shelters

Bus Shelters are provided at over 800 stops throughout the VTA system. The installation of bus shelters is generally based upon ridership levels, staff input and physical constraints that may limit where bus shelters can and cannot be installed.

As depicted in Figure 7, VTA's bus shelters are distributed throughout the service area. The census tracts with minority concentrations that are above the service area average are shown as the two darker shades of orange. The majority of VTA bus stops with shelters appear to be located in these "high" and "highest" minority areas.

Benches

Benches are provided at nearly 2,000 stops throughout the VTA system. The installation of benches is based upon ridership levels, customer requests and staff input. Stops located near medical and senior facilities are also furnished with benches to the greatest extent possible.

Figure 8 shows the locations of all VTA stops with benches relative to the census tracts with minority percentages that are above the service area average. Based on this map, the benches appear to be distributed evenly throughout the service area.

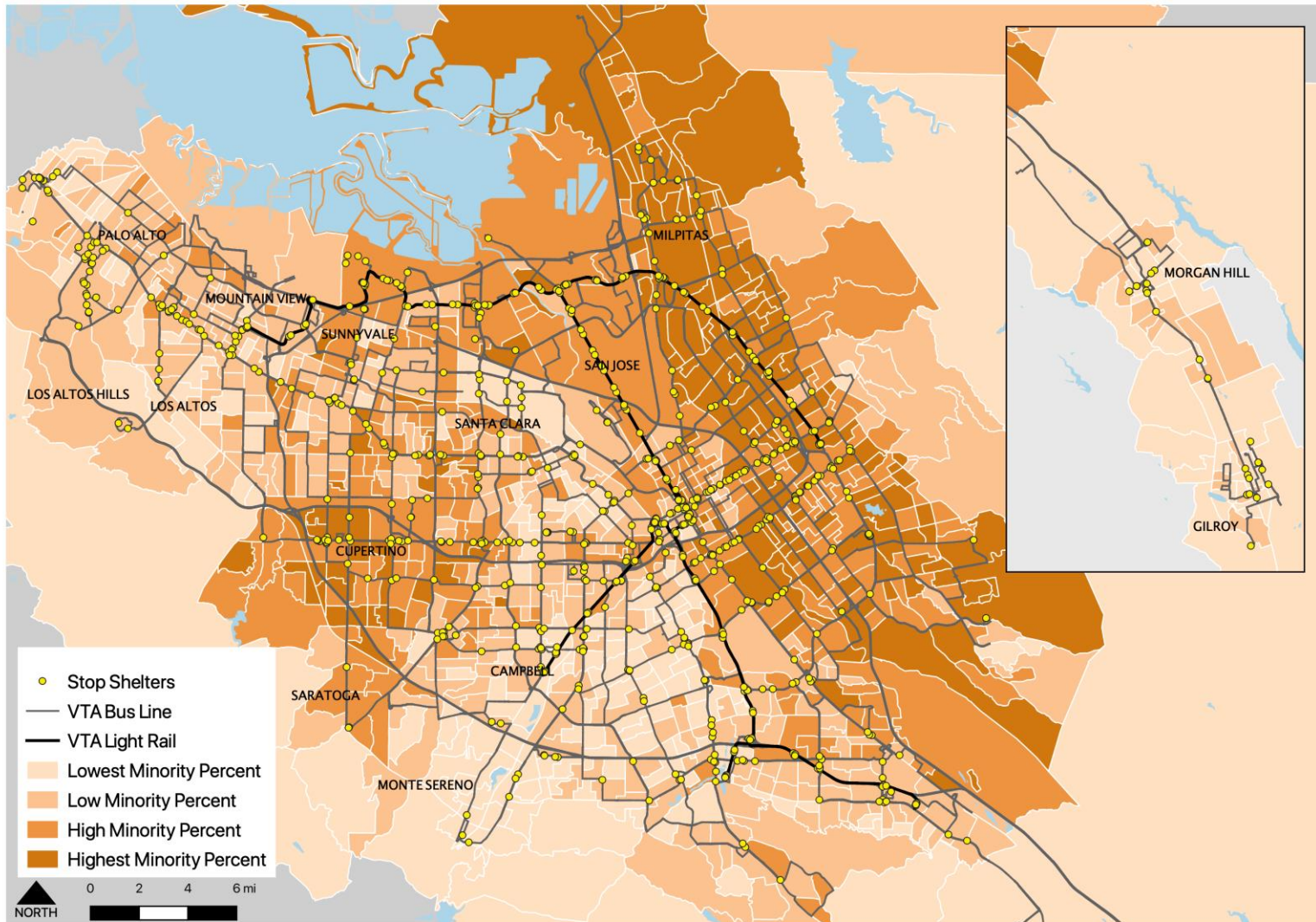
Trash Cans

Trash cans are installed and maintained at over 900 stops in the VTA system. The trash cans are distributed based on ridership levels, customer requests, maintenance considerations and staff input.

Figure 9 shows the locations of all VTA stops with trash cans relative to the census tracts with minority percentages that are above the service area average. Based on this map, the trash cans appear to be distributed evenly throughout the service area.

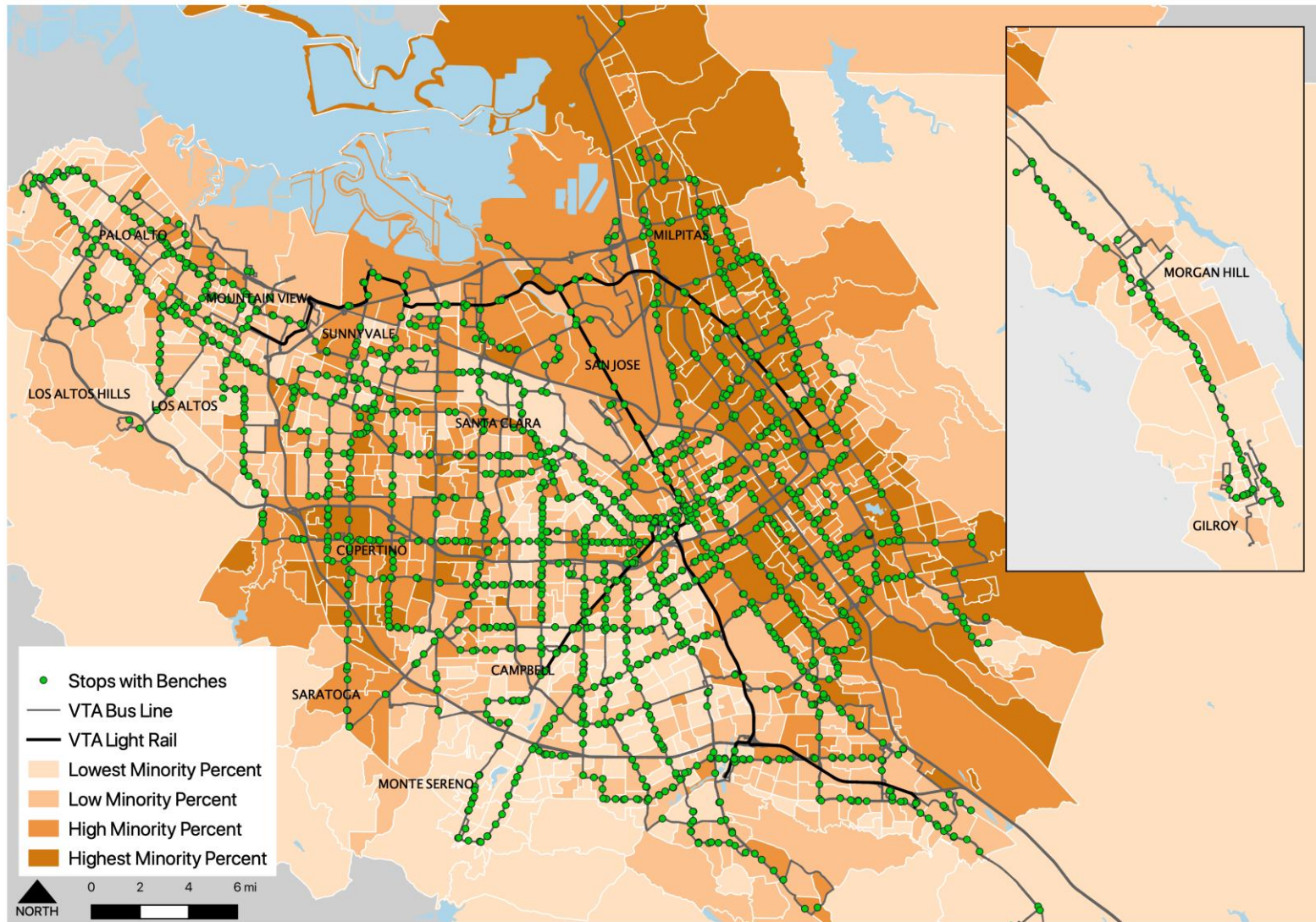
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Figure 7 – VTA Stops with Shelters



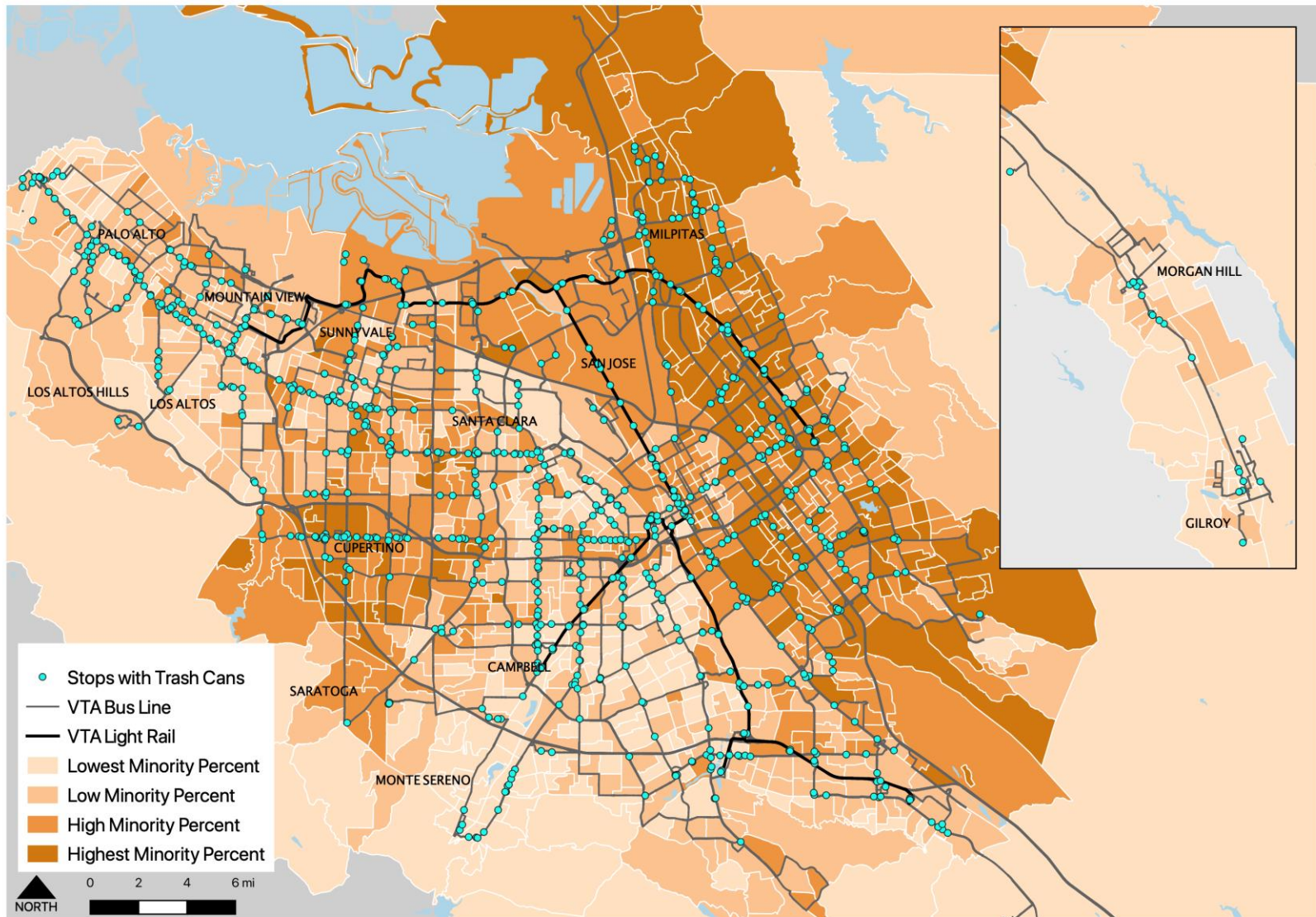
Source: VTA System data, July 2019

Figure 8 – VTA Stops with Benches



Source: VTA System data, July 2019

Figure 9 – VTA Stops with Trash Cans



Source: VTA System data, July 2019

Lighting

As part of its focus on passenger safety, VTA installs lighting at most of its bus stop locations. Additional solar-powered lights have been added to stops throughout the service area to promote safety and energy-efficiency. The distribution of lighting fixtures is primarily based upon ridership, customer requests, safety considerations, staff recommendations and physical constraints. However, lighting is prevalent throughout the service area.

Figure 10 shows the locations of all VTA stops with standard and solar-powered lighting amenities relative to the census tracts with minority percentages that are above the service area average. These standard lighting fixtures appear to be distributed evenly throughout the service area.

Posted Schedule Information

VTA currently features stop-specific “information signs” at over 240 bus stops. These information signs provide scheduled departure times for all trips departing from the stop. The installation of information signs is generally based upon ridership, transfer activity, and staff input. Signs are typically also provided for stops with intermodal or interagency transfers.

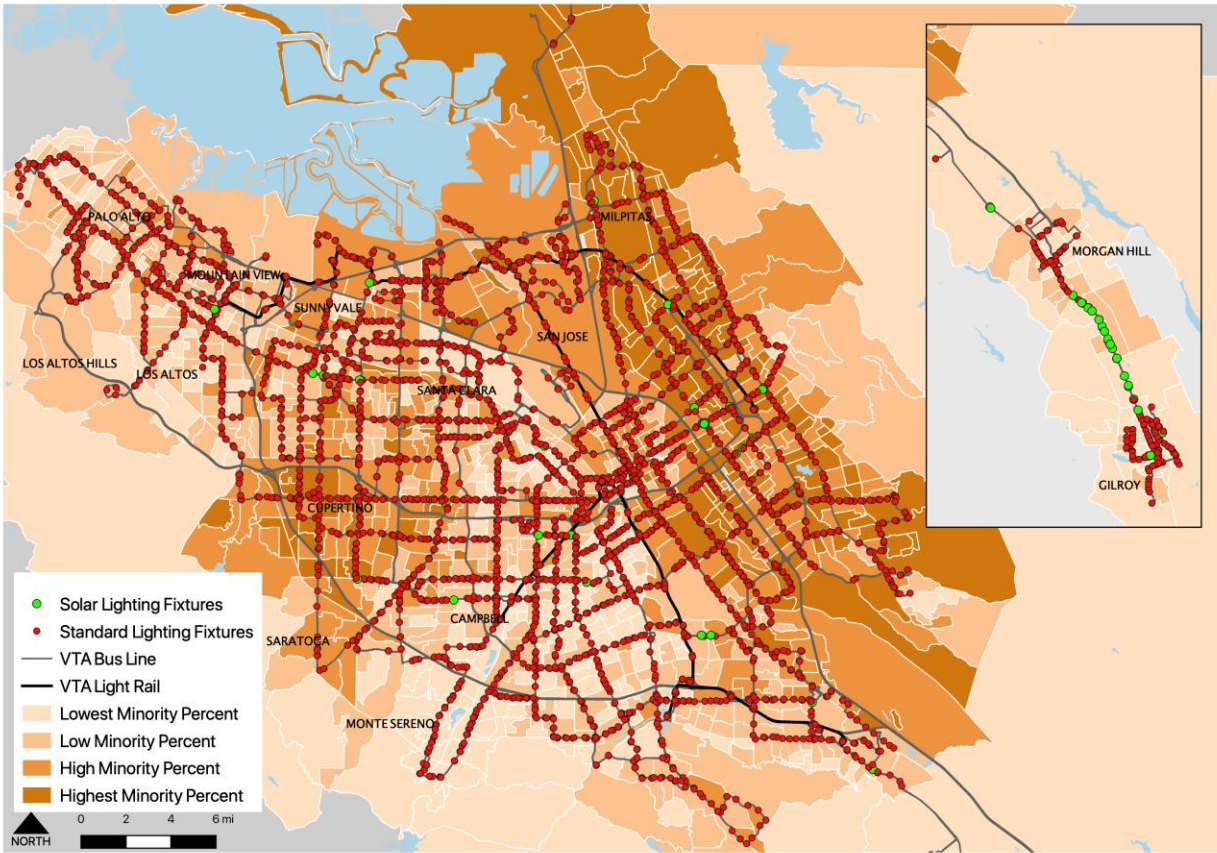
Figure 11 shows the locations of all VTA information signs relative to the census tracts with minority percentages that are above the service area average. These posted schedules appear to be distributed evenly throughout the service area.

Real-Time Information Signs

VTA is continuously implementing a real-time information system that provides up-to-the-minute information on bus and light rail arrival times. Passengers are able to use computers or mobile devices to look up when the next bus is due to arrive at a specific bus stop. Every bus stop in the system has a unique Real Time Stop ID that passengers can use to find out when the next bus is due to arrive.

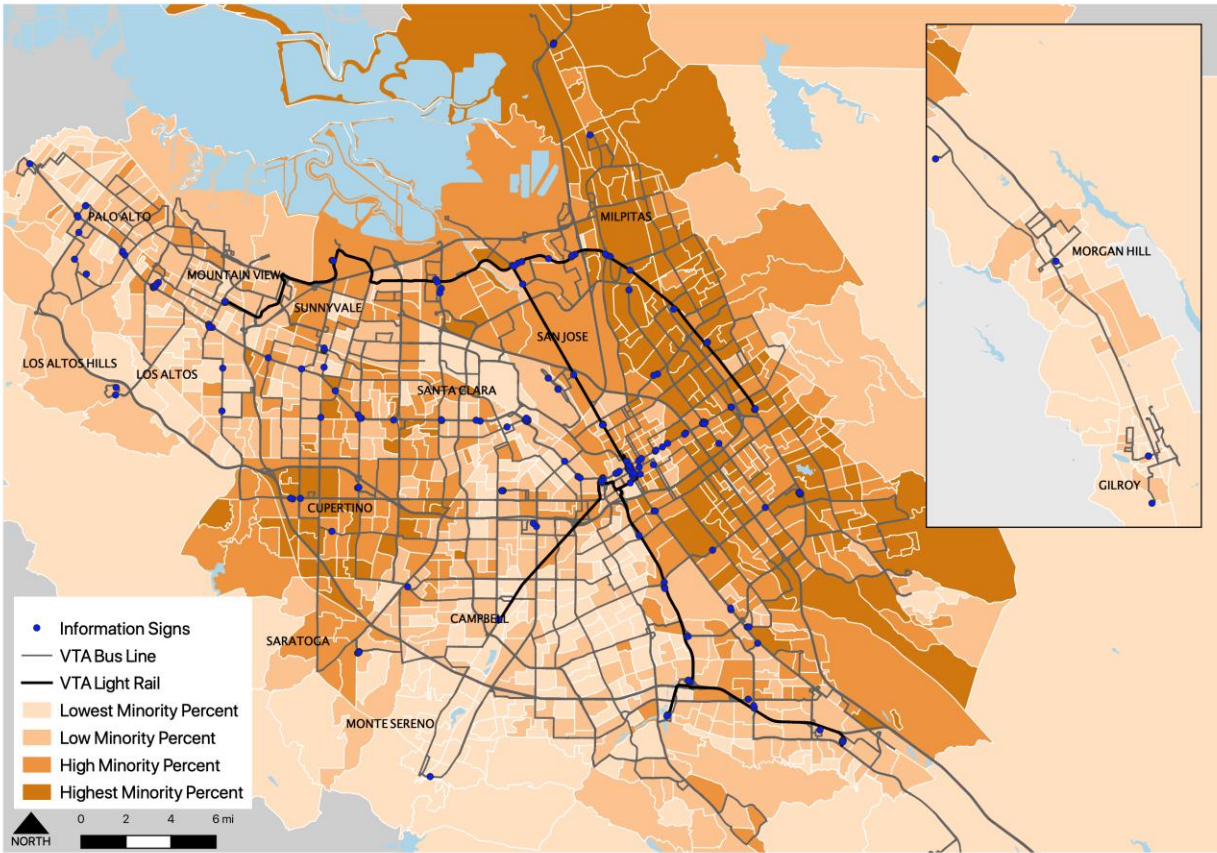
As of October 2019, VTA has installed over 1,800 Real-Time Message Displays at Light Rail Stations and bus stops throughout the system. The locations of these real-time signs, shown in Figure 12, were determined based on ridership data, transfer activity, operational considerations, staff recommendations and physical constraints. The locations of a real-time information displays appear to be distributed evenly throughout the service area and include many above-average minority areas.

Figure 10 – VTA Stops with Lighting Fixtures



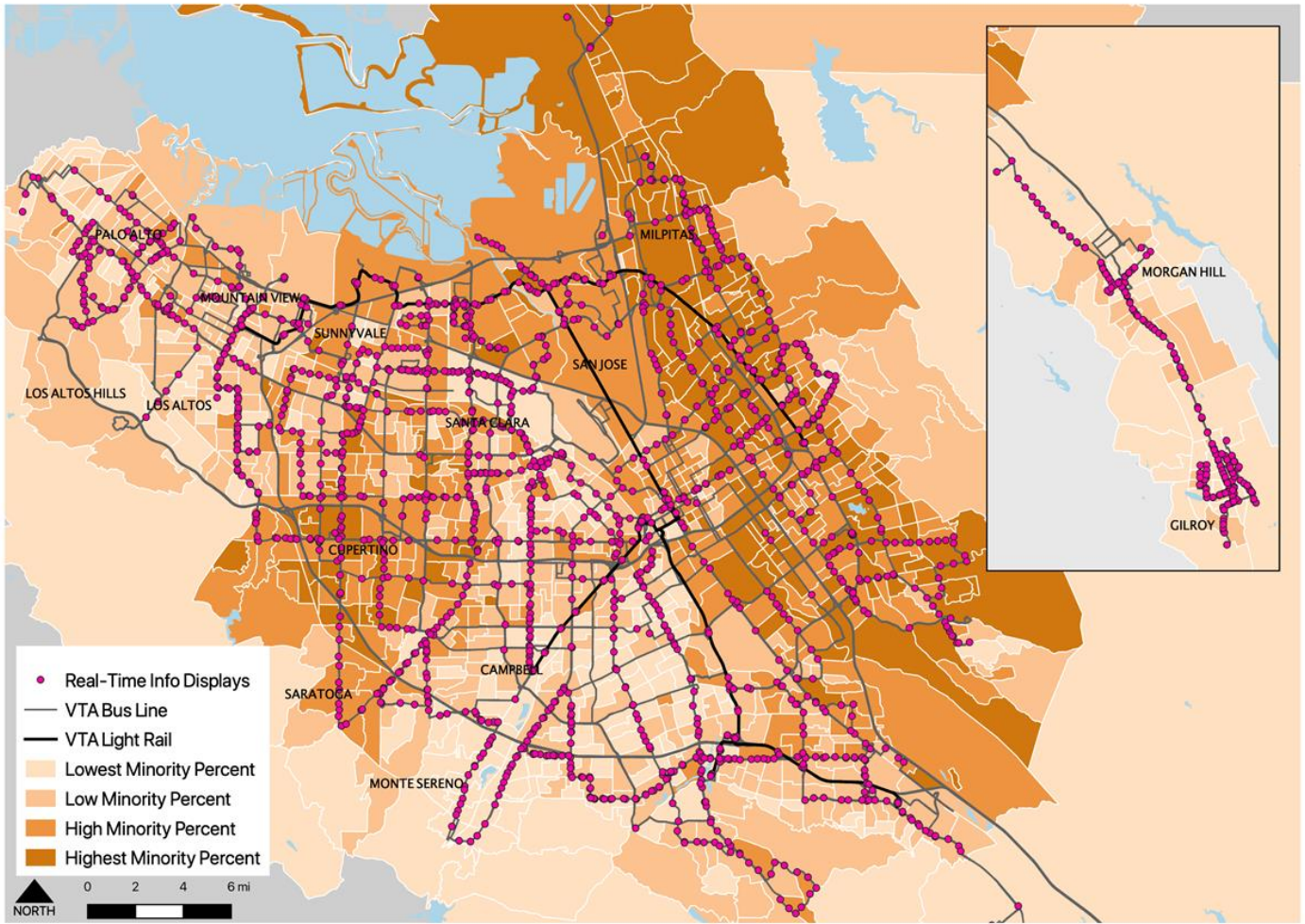
Source: VTA System data 2019

Figure 11 – VTA Stops with Information Signs



Source: VTA System data 2019

Figure 12 – VTA Stops with Real-Time Message Signs



Source: VTA System data 2019

Exhibit 7A: Board Approval of Monitoring Results

ATTACHMENT 1

RESOLUTION NO. _____

RESOLUTION OF THE SANTA CLARA VALLEY TRANSPORTATION AUTHORITY TO ADOPT THE RESULTS OF ITS MONITORING PROGRAM

WHEREAS, Title VI (codified at 42 U.S.C. §2000d et seq.) of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance; and

WHEREAS, the Federal Transit Administration (FTA) issued Title VI Circular 4702.1B, effective October 1, 2012, setting forth requirements and guidelines for Title VI compliance; and

WHEREAS, the above-referenced Circular requires the Santa Clara Valley Transportation Authority (VTA) to monitor compliance with its “System-wide Service Standards and Policies” to ensure non-discrimination on the basis of race, color, or national origin regarding the provision of transit services and benefits, including, but not limited to, routing, scheduling, and quality of service; and

WHEREAS, staff has applied VTA’s “System-wide Services Standards and Policies” to evaluate the performance of the monitoring program attached hereto as Exhibit 7A, confirming that VTA’s services are provided equitably; and

NOW THEREFORE, BE IT RESOLVED that the Board of Directors of the Santa Clara Valley Transportation Authority hereby approves the results of the Service Monitoring Program (Exhibit 7A).

PASSED AND ADOPTED by the Santa Clara Valley Transportation Authority Board of Directors this 6th day of February 2020, by the following votes:

AYES: DIRECTORS
NOES: DIRECTORS
ABSENT: DIRECTORS

Cindy Chavez, Chairperson

Board of Directors

ATTEST:

Elaine Baltao, Board Secretary

APPROVED AS TO FORM:

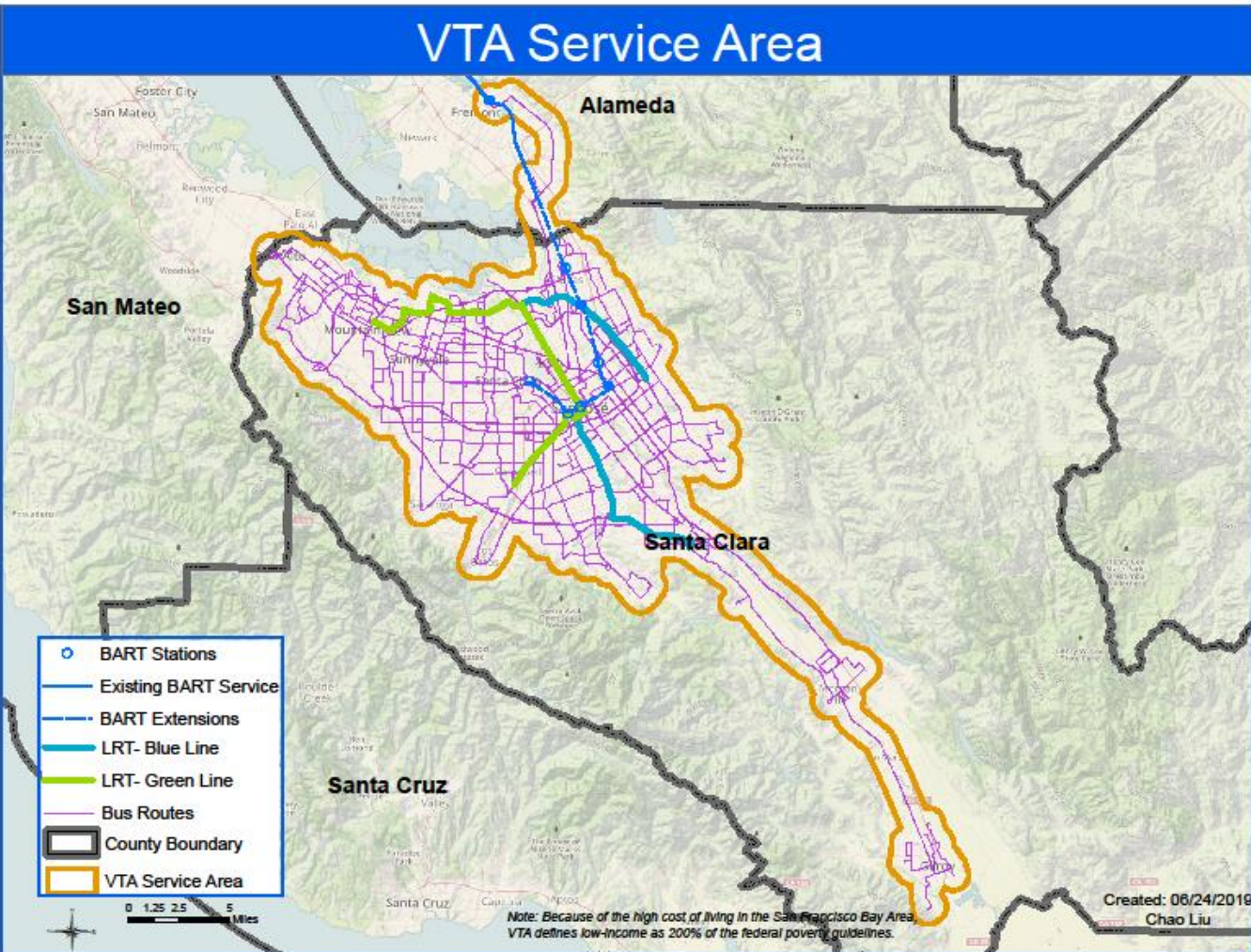
Evelynn Tran
General Counsel

Section 14: Demographic and Service Profile Maps and Charts

Title 49 CFR 21.9(b) states that recipients “should have available for the Secretary racial and ethnic data showing the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance.” FTA requires transit providers to prepare the following maps and charts:

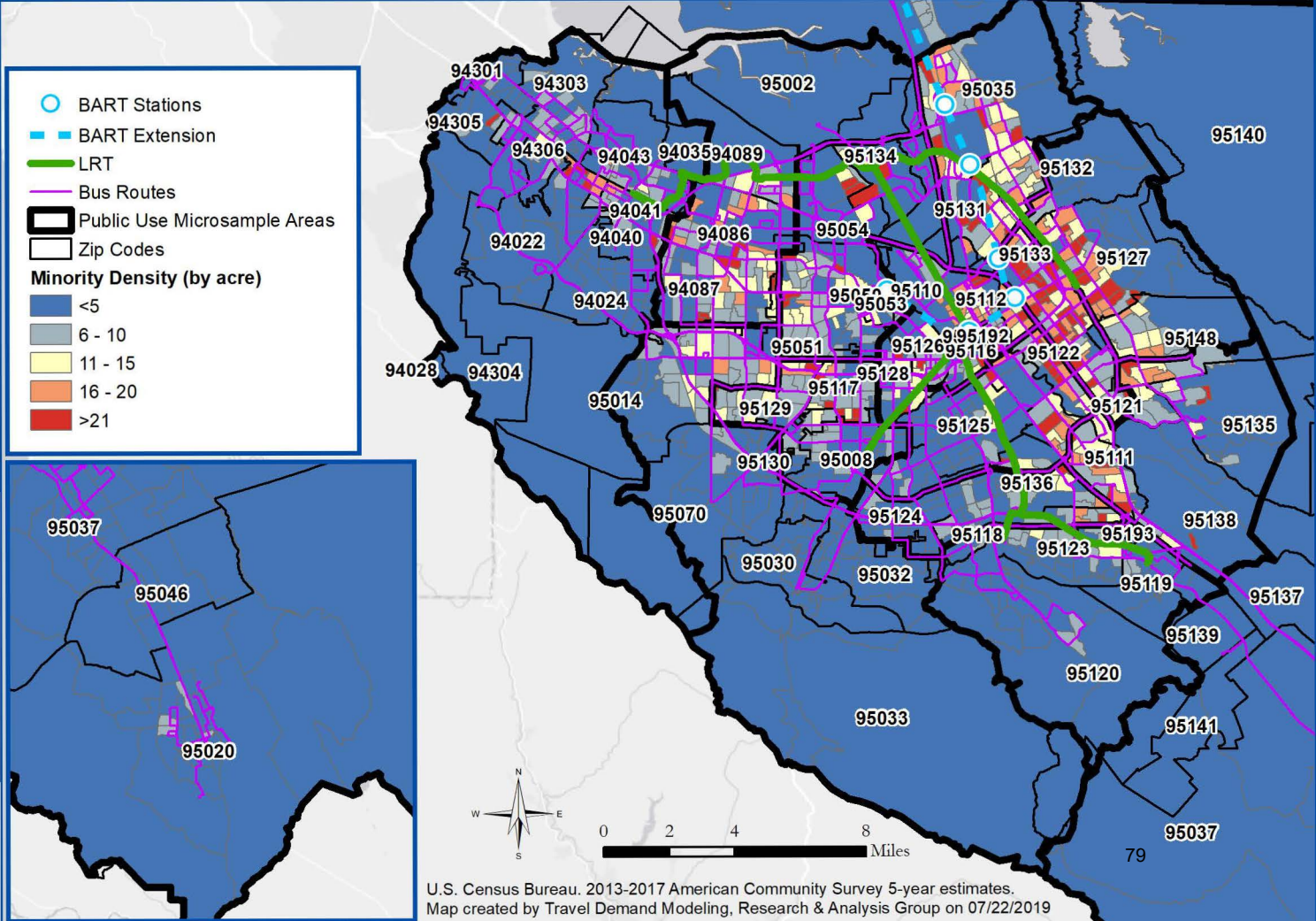
- ***A base map of the service area that overlays Census tract, Census block or block groups, traffic analysis zones (TAZs), or other locally available geographic data with transit facilities including transit routes, fixed guideway alignments, transit stops and stations, maintenance and garage facilities, and administrative buildings as well as major activity centers or trip generators, and major streets and highways.***
- ***A demographic map that plots the information listed in the base map and also shades those Census tracts, blocks, block groups, TAZs, or other geographic zones where the percentage of the total minority population residing in these areas exceeds the average percentage of minority populations for the service area as a whole.***
- ***For purposes of addressing environmental justice, and in order to evaluate the impacts of major service changes on low-income populations, demographic maps shall also depict those Census tracts, blocks, block groups, TAZs, or other geographic zones where the percentage of the total low-income population residing in these areas exceeds the average percentage of low-income populations for the service area as a whole. Note: Because of the high cost of living in the San Francisco Bay Area, VTA defines low-income as 200% of the federal poverty guidelines.***
- ***Although it was not a requirement, VTA also created a map for limited English proficient populations similar to the maps of the minority and low-income populations.***

Map 1: Base Map of VTA Service Area

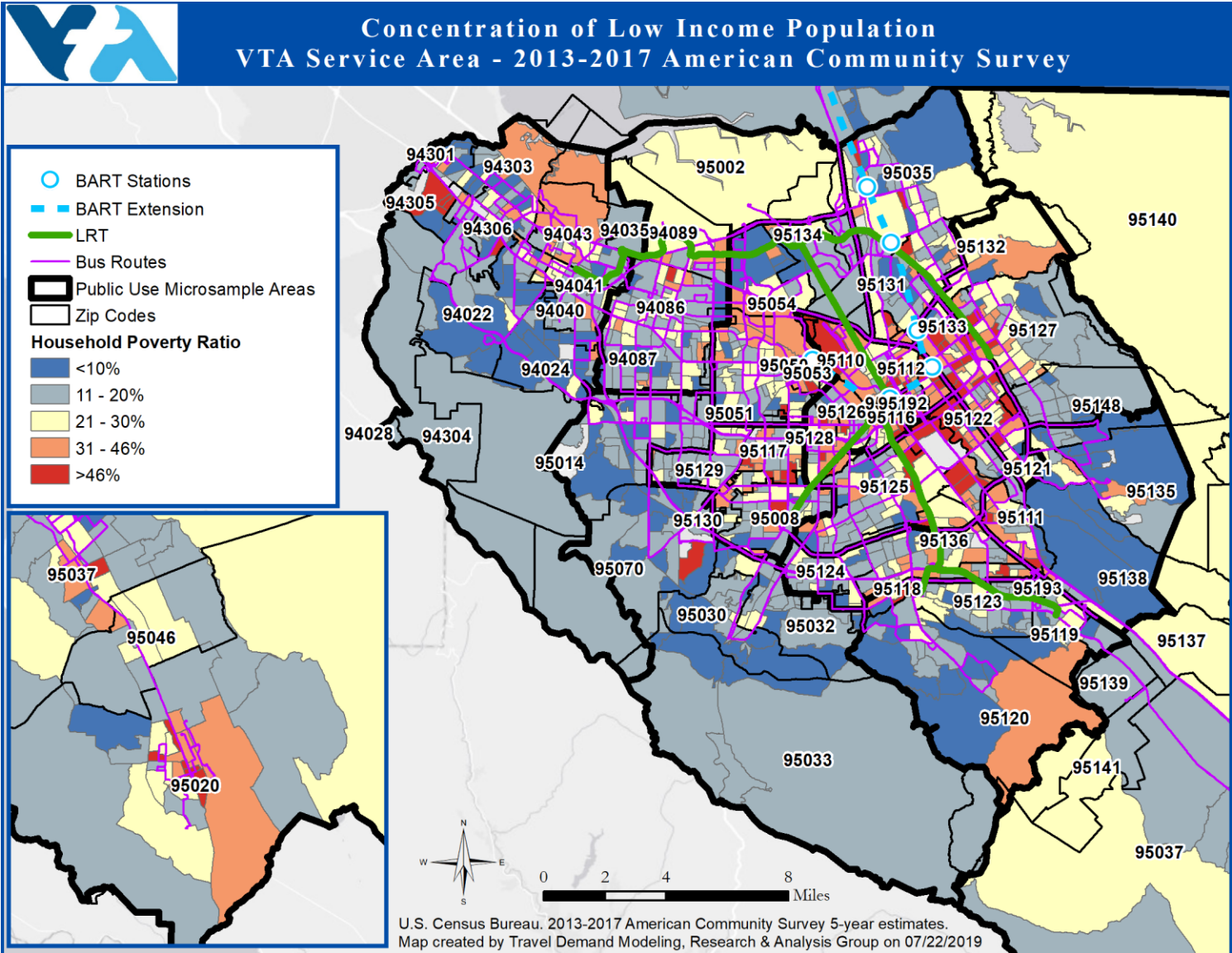




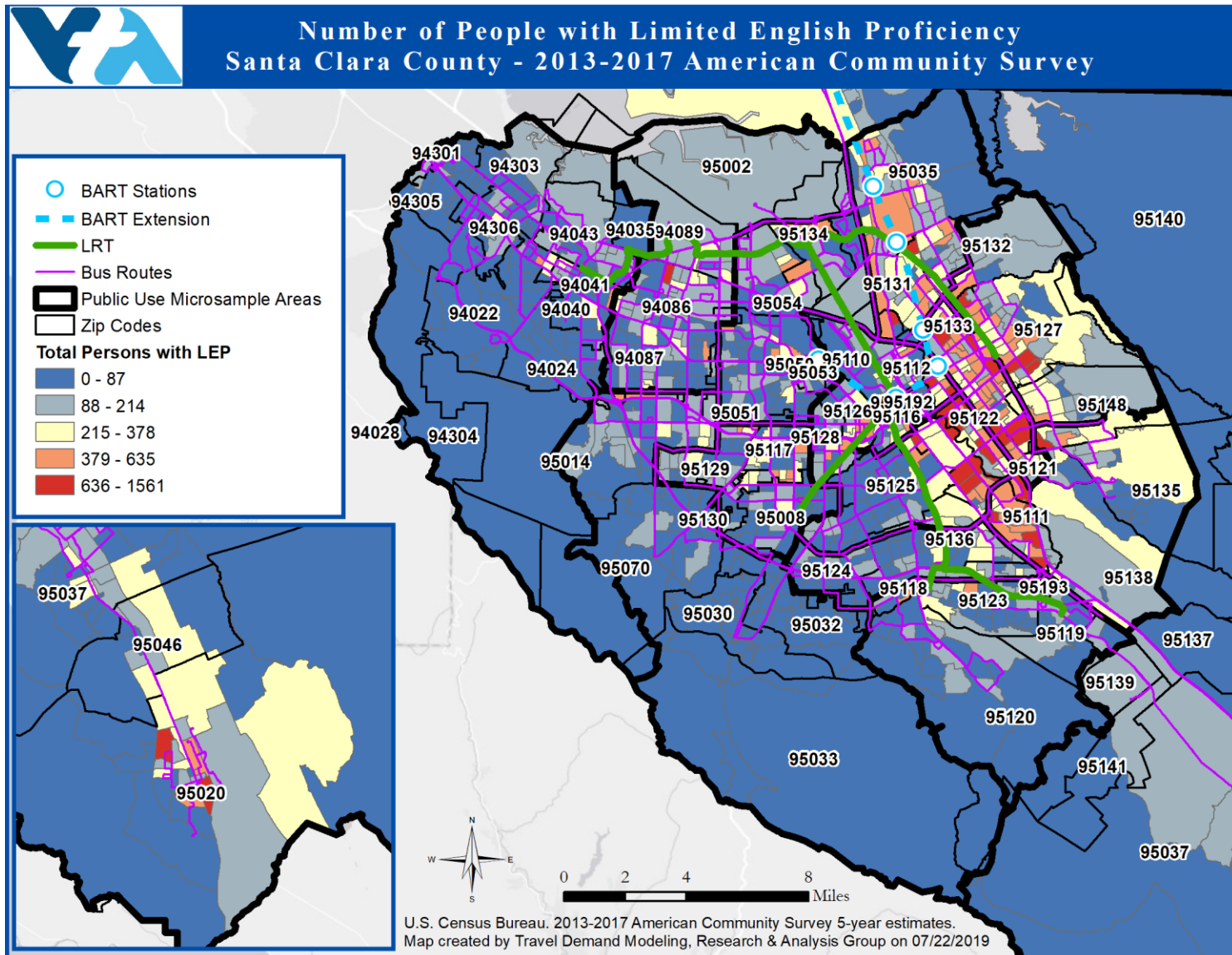
Concentration of Minority Population VTA Service Area - 2013-2017 American Community Survey



Map 3: Low-income Population



Map 4: Limited English Proficient Population



Section 15: Demographic Ridership and Travel Patterns Collected by Surveys

Fixed route providers shall collect information on the race, color, national origin, English proficiency, language spoken at home, household income, and travel patterns of their riders using customer surveys. Transit providers shall use this information to develop a demographic profile comparing minority riders and non-minority riders, and trips taken by minority riders and non-minority riders. Demographic information shall also be collected on fare usage by fare type amongst minority users and low-income users, in order to assist with fare equity analyses.

VTA contracted with ETC Institute, Inc. to complete its current On-Board Survey (OBS), which was completed December 2017. The OBS includes, among other things, the following data:

- Race/Ethnicity
- Age
- Gender
- Household income
- Household size
- Languages spoken in the household
- Vehicles owned per household
- Level of English proficiency
- Boarding and alighting patterns
- Origin-to-Destination survey
- Trip purpose

The information collected from the surveys was used during the planning process for developing service changes and for the Title VI equity analyses of the proposed changes that require approval by VTA's Board of Directors.

Since that time, VTA has used the data from that survey to build a demographic profile of its customer base that includes, but is not limited to, race, ethnicity, income, and primary languages spoken. Data is also collected on ridership travel patterns, types of fares used, and quality of service provided by VTA.

VTA's OBS collected customer demographic information to assist VTA in the shaping of service plans, delivery options, marketing, and fare policies. It also helped VTA gain information to better understand rider needs and expectations. The survey was designed to gather information on rider profiles, characteristics, origins/destinations and travel patterns, perceptions about the quality of service, and suggestions for route and other service enhancements.

Further, the survey collected information on race, color, English proficiency, language spoken at home, household income, and travel patterns of VTA riders. VTA has used this information to develop a demographic profile comparing minority riders and non-minority riders, including trips taken by minority riders and non-minority riders, and it is designed to assist with fare equity analyses.

Key Findings:

The OBS report represents the ridership profile for all bus and rail routes in Santa Clara County. The main objectives of the 2017 OBS analysis were two-fold: (1) examine the demographics, and (2) examine the travel behavior characteristics of transit riders. The survey data used for this analysis was appropriately weighted and expanded to represent the trips by VTA transit riders.

Some important findings from the analysis of VTA transit riders are summarized below (Linked Weight Factor):

- Approximately forty-one percent (40.5%) of VTA riders were on trips between home and work.
- Fifty-four percent (53.8%) of VTA riders are between the ages of 18 and 34.
- Walking all the way is the dominant access and egress mode for all VTA riders, on average 86% and 89% respectively.
- Approximately forty-two percent (41.5%) of VTA transit riders Annual Household Income is below \$40,000 (excluding refusals).
- Thirty-three percent (32.6%) of VTA riders are Hispanic, any race.
- Forty-three percent (43.3%) of VTA riders speak a language other than English at home, but 81.3% indicated they speak English well or very well.

Details of the survey results and a thorough analysis of this data, including an Executive Summary, are contained in the link shown as the image in Exhibit 8. A copy of the OBS is available to view as Exhibits 9A and 9B on the following pages.

Exhibit 8: VTA On-Board Passenger Survey (2017)
(PDF Inserted)

2017 On-Board Transit Passenger Survey

Final Report

December 31, 2017

Prepared by ETC Institute, Inc. for
Santa Clara Valley Transportation Authority and the
Metropolitan Transportation Commission



2017 On-Board Transit Passenger Survey

Final Report

December 31, 2017

Prepared by ETC Institute, Inc. for
Santa Clara Valley Transportation Authority and the
Metropolitan Transportation Commission

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A summary of the total number of OD surveys that were collected for each rail and bus route was developed to guide the data collection. Overall, 13,683 (9,963 bus and 3,720 rail) OD surveys were collected across all services (which was developed to collect 9,824 OD surveys). Table 109 shows the goals and the actual number of completed OD Surveys that were obtained for each bus and rail.	108
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Acronyms and Abbreviations

FTA	Federal Transit Administration
Project	2017 Santa Clara Valley Transportation Authority 2017 On-Board Transit Passenger Survey
QA/QC	Quality Assurance/Quality Control
TRT	Transit Review Team
RTD	Route, time period and direction
VTA	Santa Clara Valley Transportation Authority
MTC	Metropolitan Transportation Commission

Section 1: Overview

The 2017 VTA On-Board Transit Survey involved two types of on-board surveys with bus and rail riders in the Santa Clara County Service area: an on-to-off survey and an origin-destination survey. Surveys were conducted on the Light Rail Service, Community Bus Service, Regular Bus Service, Express Bus Service, and Limited Stop Bus Services.

On-to-Off Count Surveys were intended to identify boarding and alighting patterns of transit riders as well as provide a basis for expanding the results of the Origin-Destination (OD) Survey. The OD Survey element consisted of detailed surveys covering travel behavior and demographics of riders. Both types of surveys were conducted aboard rail and bus routes. Overall, over **33,400** On-to-Off Counts Surveys and over **13,600** OD Surveys were completed.

Both surveys were carried out by ETC Institute on behalf of VTA between October 2016 and July 2017. The primary purpose of the study was to gather travel behavior data from transit users in the Santa Clara County area to update the MTC Regional and VTA Countywide models. Secondary purposes were to provide detailed transit rider information for general transit planning purposes, market and socioeconomic analysis, and fulfill requirements for FTA New Starts 'Before and After' conditions prior to the introduction of the New Starts BART Extension to Milpitas and San Jose/Berryessa.

KEY FINDINGS

This report represents the ridership profile for all bus and rail routes in the Santa Clara County Area. The main objectives of the 2017 On-Board survey analysis were two-fold: (1) examine the demographics, and (2) examine the travel behavior characteristics of transit riders. The survey data used for this analysis was appropriately weighted and expanded to represent the trips made by VTA transit riders.

Some important findings from the analysis of VTA transit riders are summarized below (Linked Weight Factor):

- Approximately forty-one percent (40.5%) of VTA riders were on trips between home and work.
- Fifty-four percent (53.8%) of VTA riders are between the ages of 18 and 34.
- Walking all the way is the dominant access and egress mode for all VTA riders, on average 86% and 89% respectively.
- Approximately forty-two percent (41.5%) of VTA transit riders Annual Household Income is below \$40,000 (excluding refusals).
- Thirty-three percent (32.6%) of VTA riders are Hispanic, any race.
- Forty-three percent (43.3%) of VTA riders speak another language than English at home, but 81.3% indicated they speak English well or very well.

SUMMARY OF METHODOLOGY

The survey instrument for the OD survey was designed to be administered as a face-to-face interview using tablet PCs or printed surveys. The tablet PCs have an on-screen mapping feature that allows for real-time geocoding of addresses and places using either address, intersection, or place searches based on feedback from respondents. The respondents can then confirm the geocoded location based on the on-screen map that shows the searched address/location via a Google Map indicator icon. In addition to using the mapping feature to collect the major survey location's geo coordinates (home address, origin address, destination address, boarding location, alighting location), the tablet PC also allows the surveyor to walk through each question with the respondent to answer

any questions as well as to ensure the quality of the data collected. The respondent can also press the answers to the questions during the demographic section in order to allow for more privacy. (See Tablet/Paper Version Survey: Appendix A).

Respondents who did not have time to complete the survey during their bus trip were also given the option of providing their phone numbers for follow-up. Those who provided their phone numbers were then contacted by ETC Institute's call center within three days of the original attempt to gather the remaining information needed.

Bilingual interviewers were also hired to administer the surveys on tablet PCs in Spanish, Chinese, and Vietnamese. Paper surveys were also available in these various languages. Nearly 5% of all surveys were conducted in language other than English.

For more detail about the Methodology for the 2017 VTA On-Board Transit Passenger Survey, see Appendix B.

ORGANIZATION OF THE REPORT

The report is organized into the following sections:

- Section 2: A comparison of survey findings to the general population
- Section 3: System-level findings with 2013 On-Board Survey comparisons
- Section 4: Survey results with key demographic cross-tabs
- Section 5: Individual route results
- Appendix A: Questionnaires (Tablet Screenshots/Paper Survey)
- Appendix B: Detailed Methodology
- Appendix C: Data Review Process
- Appendix D: Data Expansion Process
- Appendix E: Origins and Destinations by System – Weekday Trips
- Appendix F: Ons and Offs by System and Individual Route – Weekday Trips

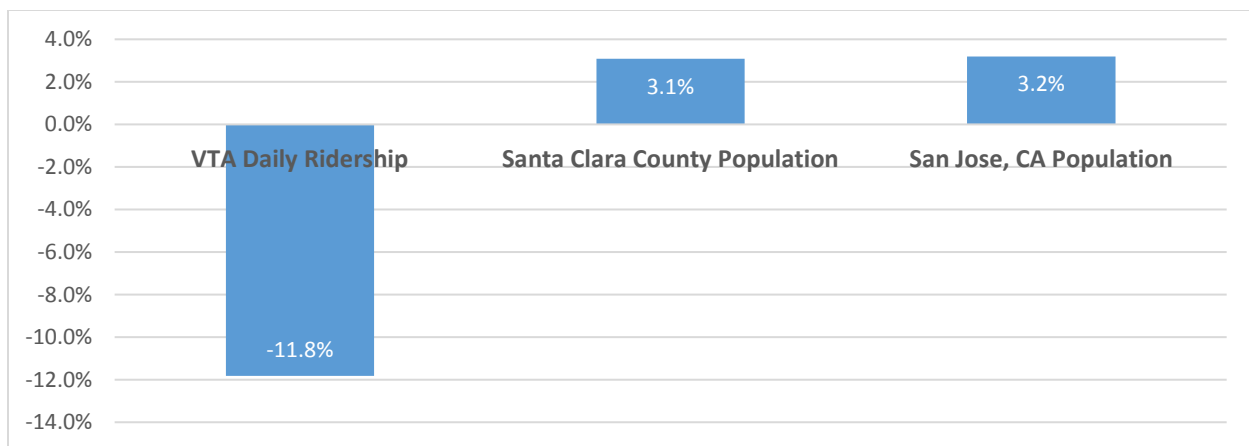
Section 2: Population Comparisons

This section compares VTA transit ridership trends with Santa Clara County population trends. It shows the overall change in boardings, ridership, and population by ethnicity, income, and age. The source used for population trends was the U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates. VTA results were from the Santa Clara Valley Transportation Authority (VTA) 2013 & 2017 On-Board Transit Passenger Survey. All Don't Know/Refusals have been removed for comparison. The percentages in the charts reflect the unlinked weighted data.

Ridership and Population

Between 2013 and 2015 Censuses, population in the City of San Jose increased by 3.2 percent, while the Santa Clara County population increased 3.1 percent. Percentage-wise, ridership growth trailed population growth, with a decrease of 11.8 percent.

Figure 1: Percent Change in Transit Ridership and Population 2013-2017/Census 2015



Ridership Residences

Approximately ninety-six (95.9%) percent of VTA riders said they lived in the Santa Clara County area. Approximately four percent (4.1%) said they were residents in other counties.

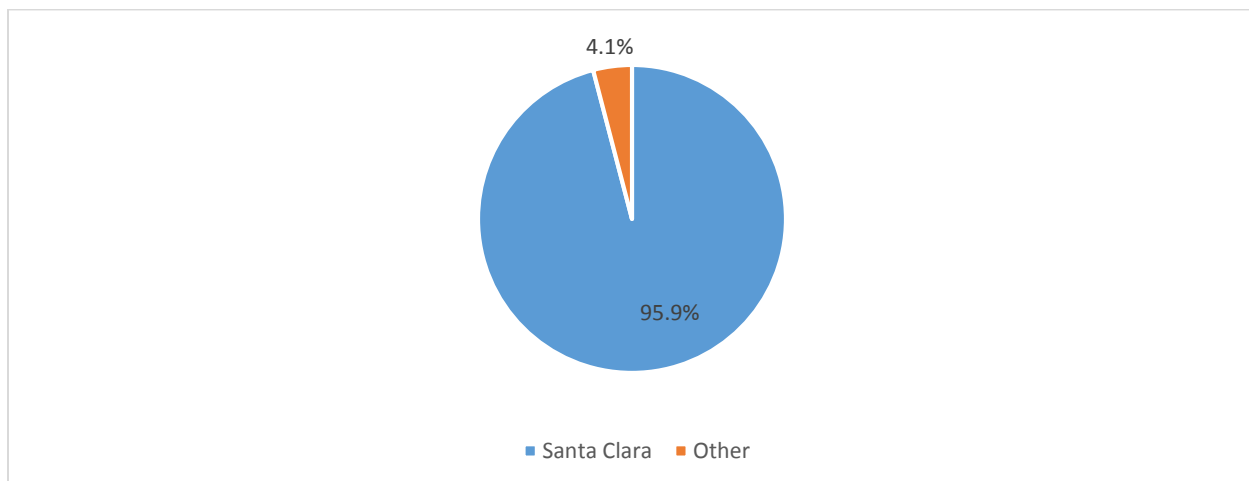


Figure 2: Residence of Santa Clara County Transit Ridership

Income Profile

The figure below shows household incomes of VTA transit riders and of the overall population for the Santa Clara County in 2015 Census.

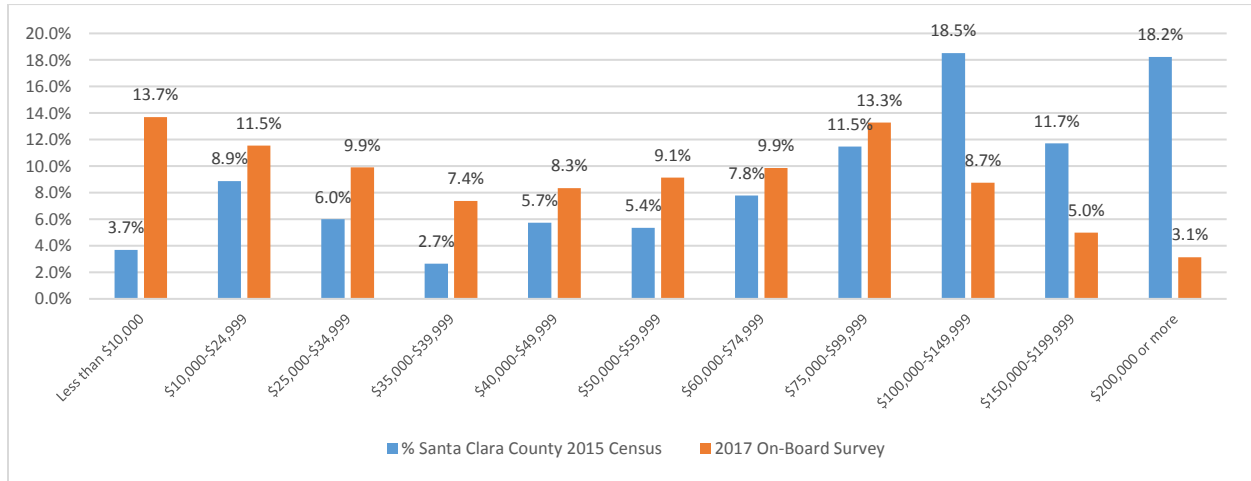


Figure 3: Overall Household Income

Ethnicity Profile

The figure below shows ethnicities of VTA riders and of the overall population for the Santa Clara County in 2015.

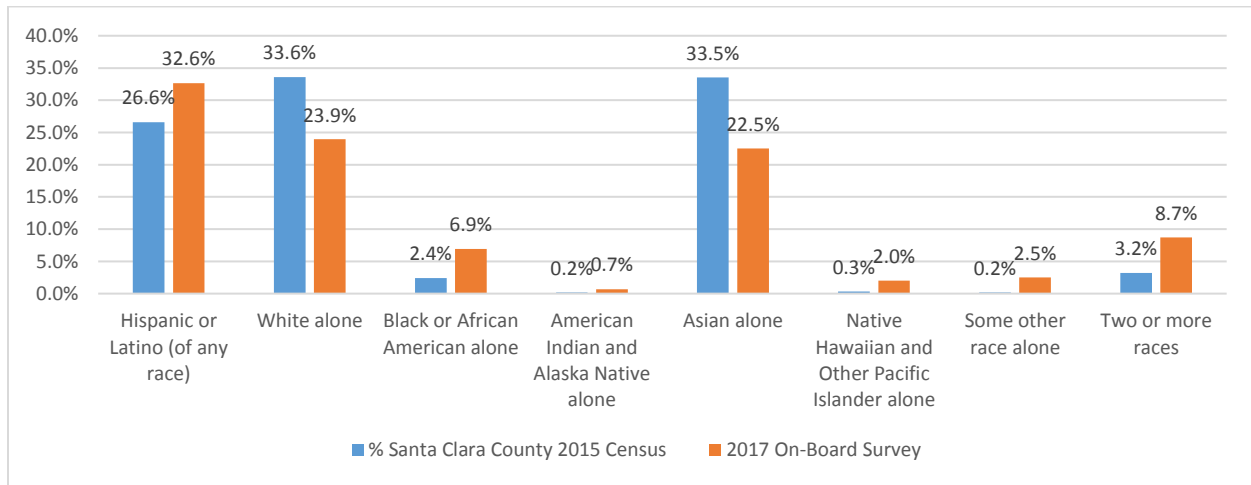


Figure 4: Ethnicity

Age Profile

The figure below shows ages of VTA riders and of the overall population for the Santa Clara County in 2015.

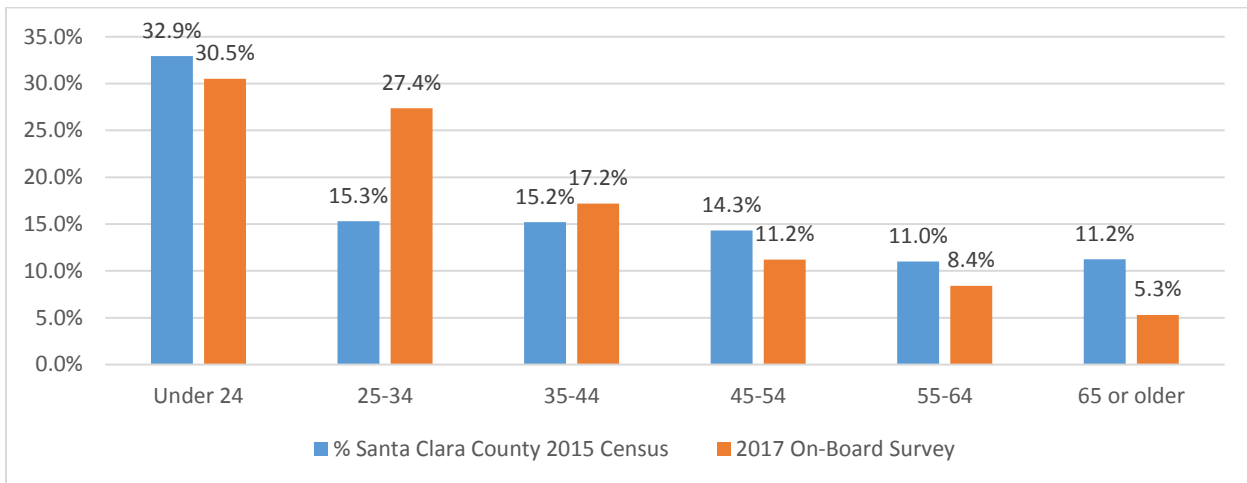


Figure 5: Age

Section 3: System-Level Trend Comparisons

This section contains graphical representations of the weekday survey results for the Santa Clara Valley Transportation compared to previous year 2006 and 2013 surveys and summarized by route service type for the 2017 results. This section is followed by demographic and route-specific breakouts (Sections 4 and 5). All Don't Know/Refusals have been removed for comparison. The percentages in the charts reflect the unlinked weighted data to match the 2006 and 2013 On-Board Study.

Transit Service Categories Level Confidence Intervals			
Transit Service Categories	# of Surveys	Ridership Population (Weighted Value)	CI
	13,683	134,321	0.79%
Community Bus	704	5,546	3.45%
Core	5,834	66,989	1.23%
Express	593	5,257	3.79%
Light Rail	3,720	32,471	1.51%
Local	1,732	13,200	2.19%
Other Speciality Routes	1,100	10,859	2.8%

Table 1: Route Level Confidence Intervals

Trip Purpose Comparisons

Forty-one percent (40.9%) of transit trips were between home and work, while 21.2% of trips were between home and school. The variation between routes regarding trip purpose can be large (see route comparisons in Section 5).

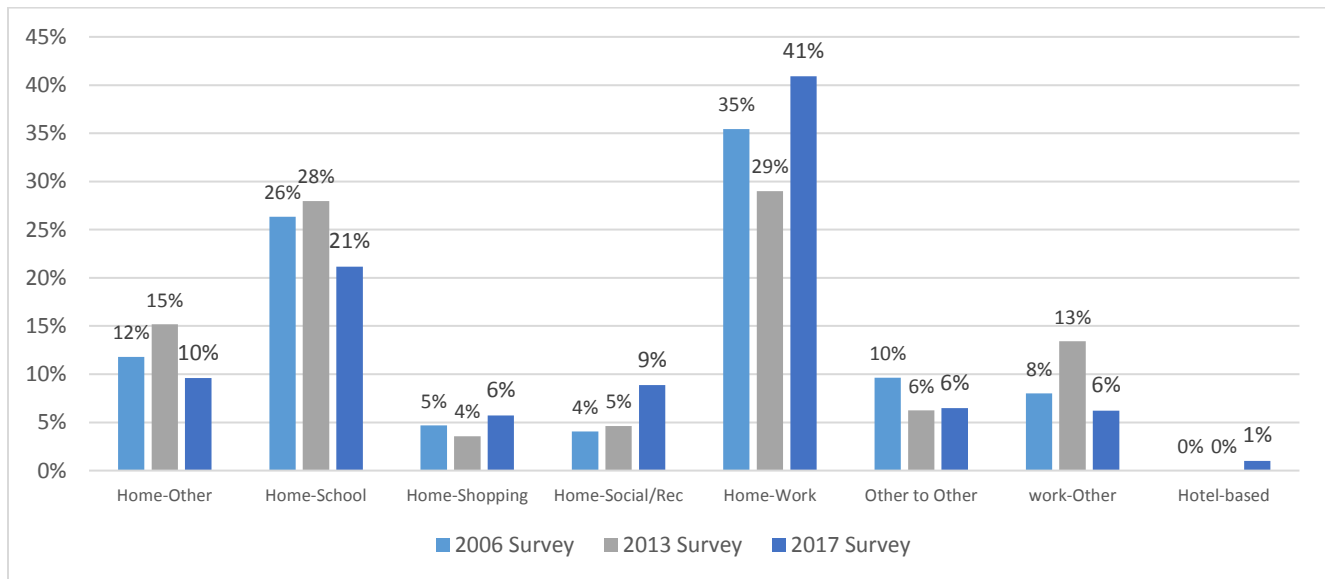


Figure 6: Trip Purpose

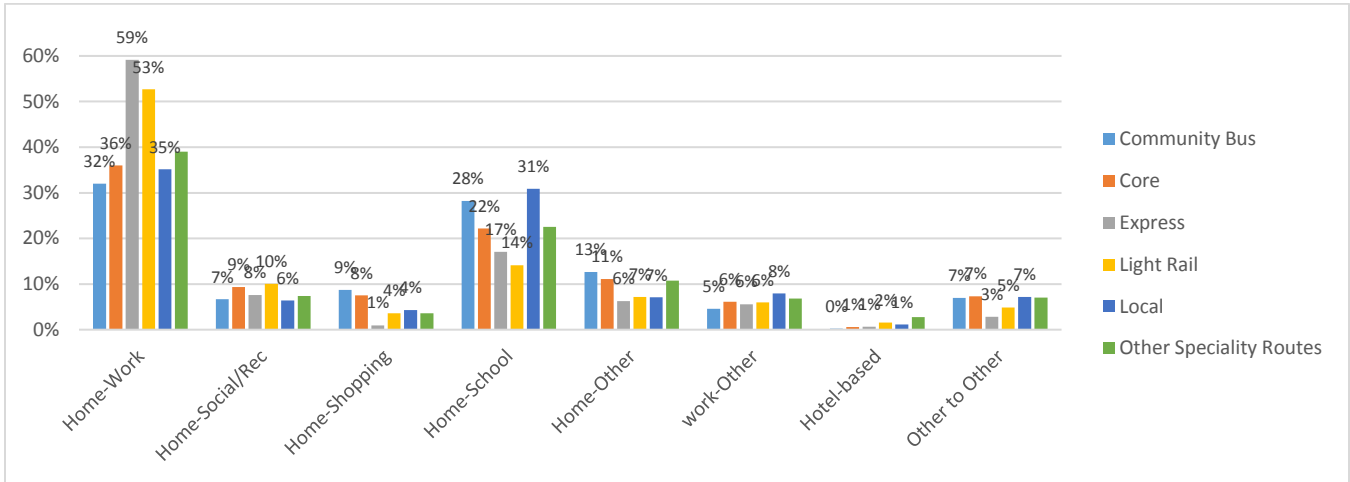


Figure 7: Trip Purpose Across Transit Service Categories

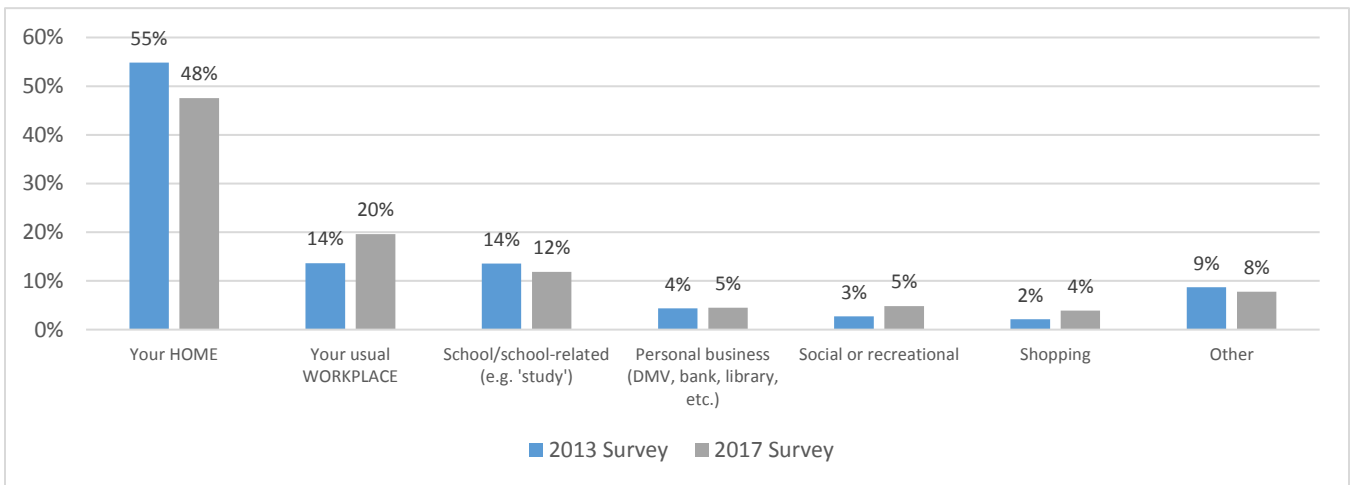


Figure 8: Origin Purpose

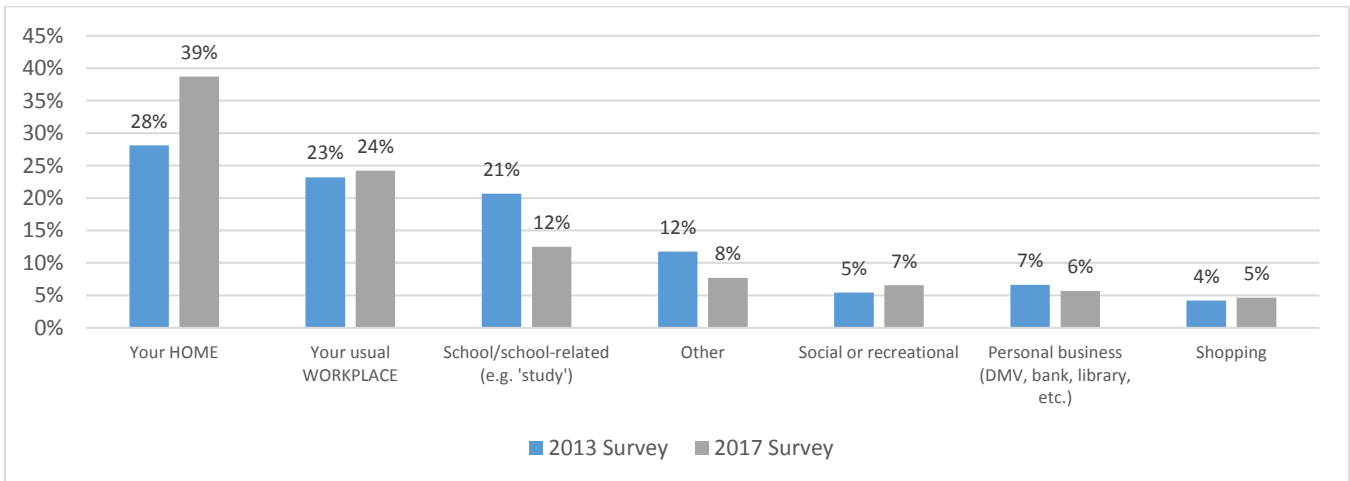


Figure 9: Destination Purpose

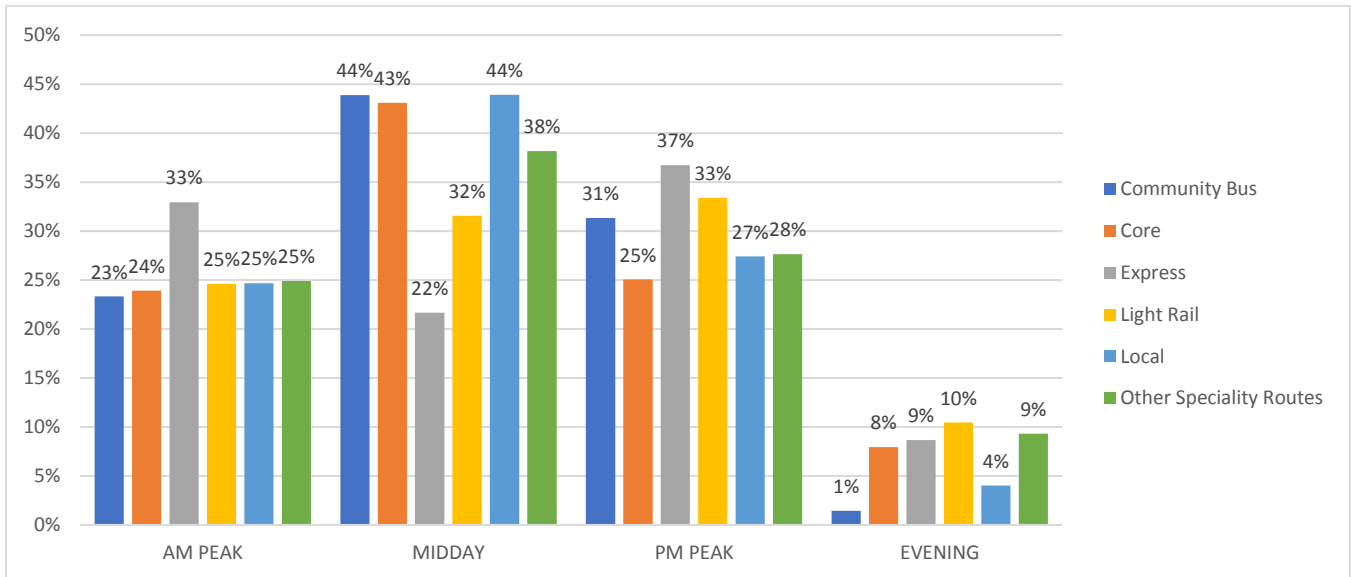


Figure 10: Ridership by Time Period Across Transit Service Categories

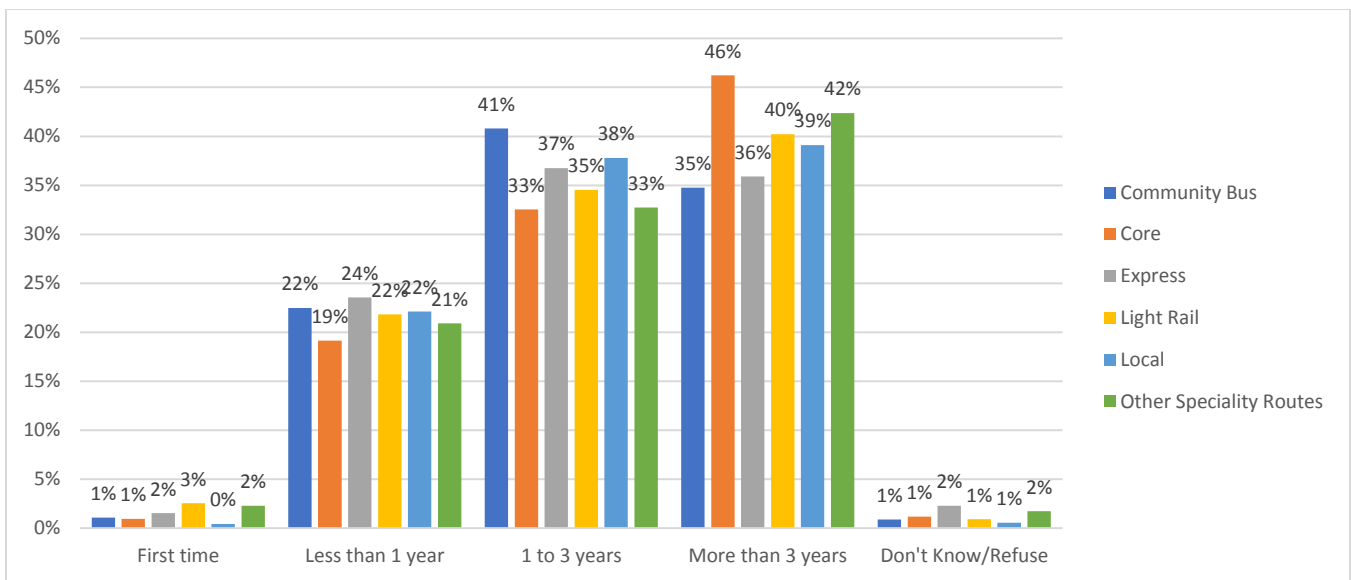


Figure 11: Rider's Length of VTA Usage Across Transit Service Categories

Transfer/Access/Egress Comparison

On average, sixty-three percent (62.9%) of transit riders did not make a transfer along their one-way trip, and 31.0% of transit riders indicated they would make one transfer along their one-way trip.

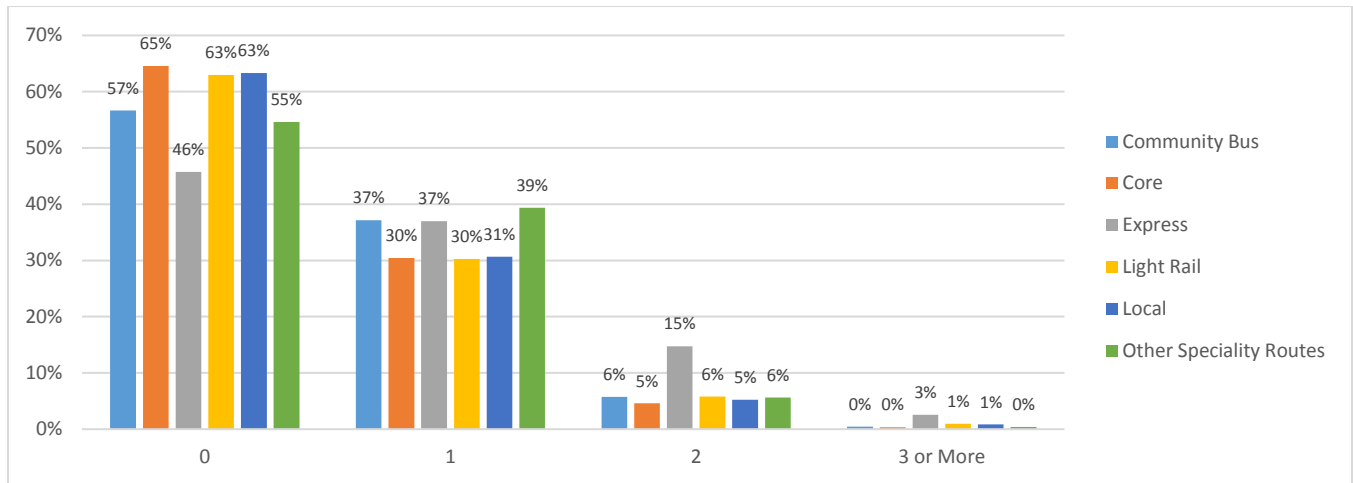


Figure 12: Number of Transfers Across Transit Service Categories

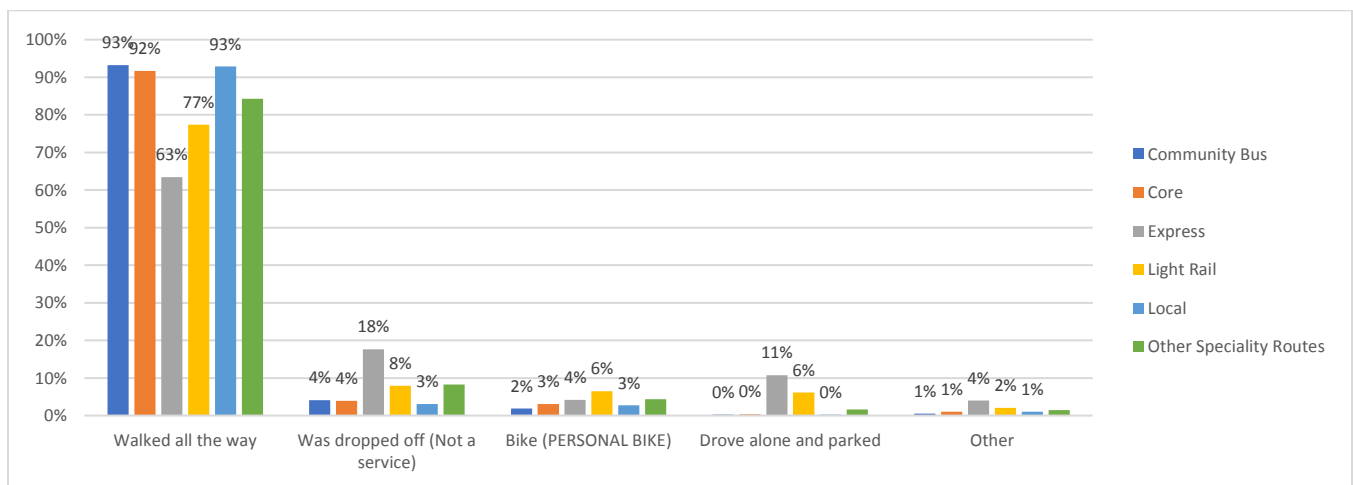


Figure 13: Access Mode by Transit Service Categories

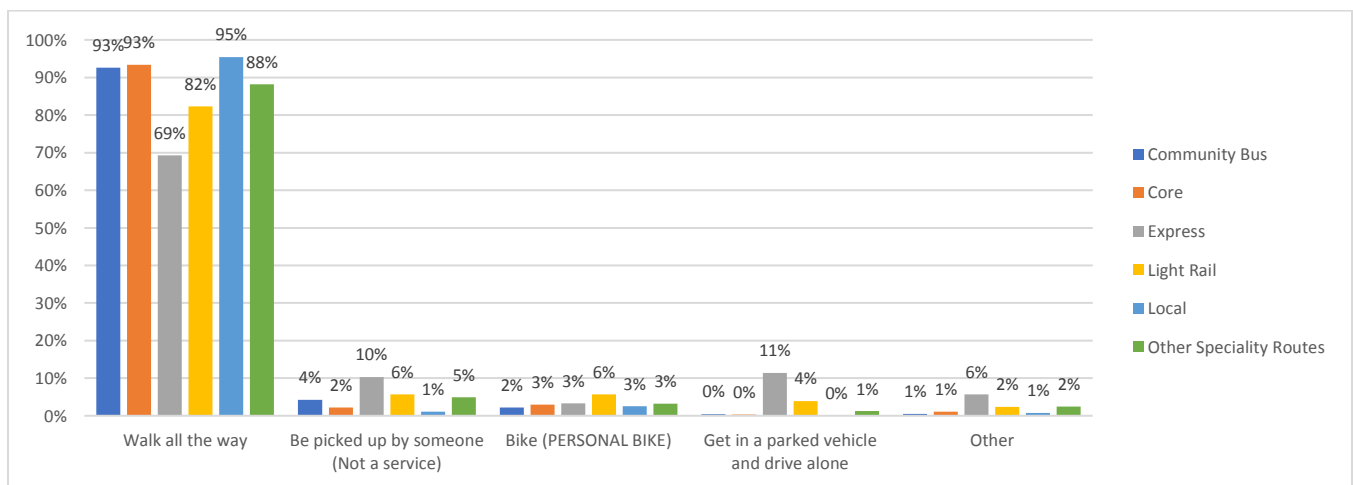


Figure 14: Egress Mode by Transit Service Categories

Vehicle Ownership Comparison

Over twenty-seven percent (27.4%) of transit riders did not have a working vehicle available, compared to 23.0% of transit riders with one vehicle, 30.8% with 2 vehicles, and 18.7% of riders with 3 or more vehicles.

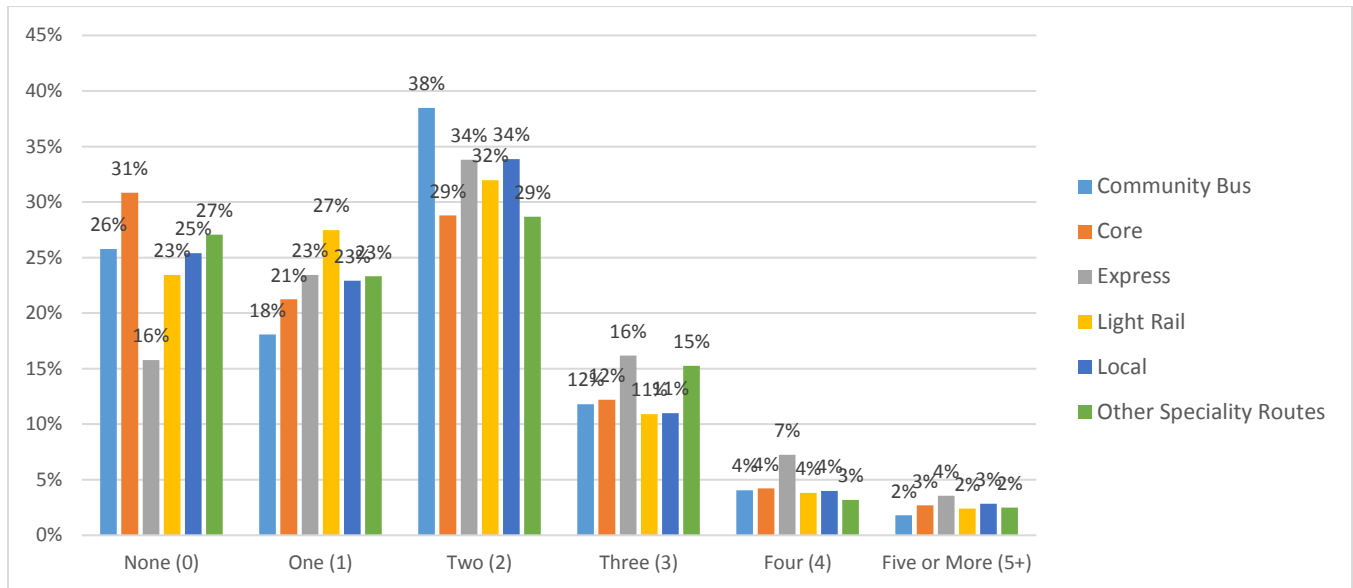


Figure 15: Vehicle Ownership Across Transit Service Categories

Payment Comparisons

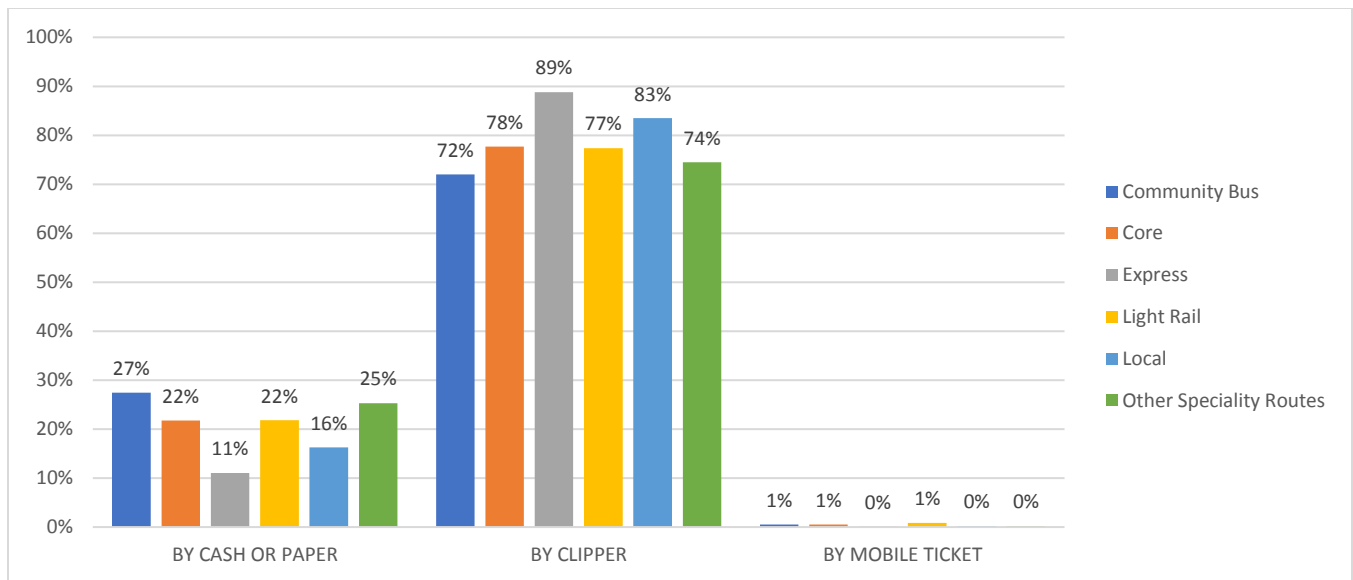


Figure 16: Fare Medium Across Transit Service Categories

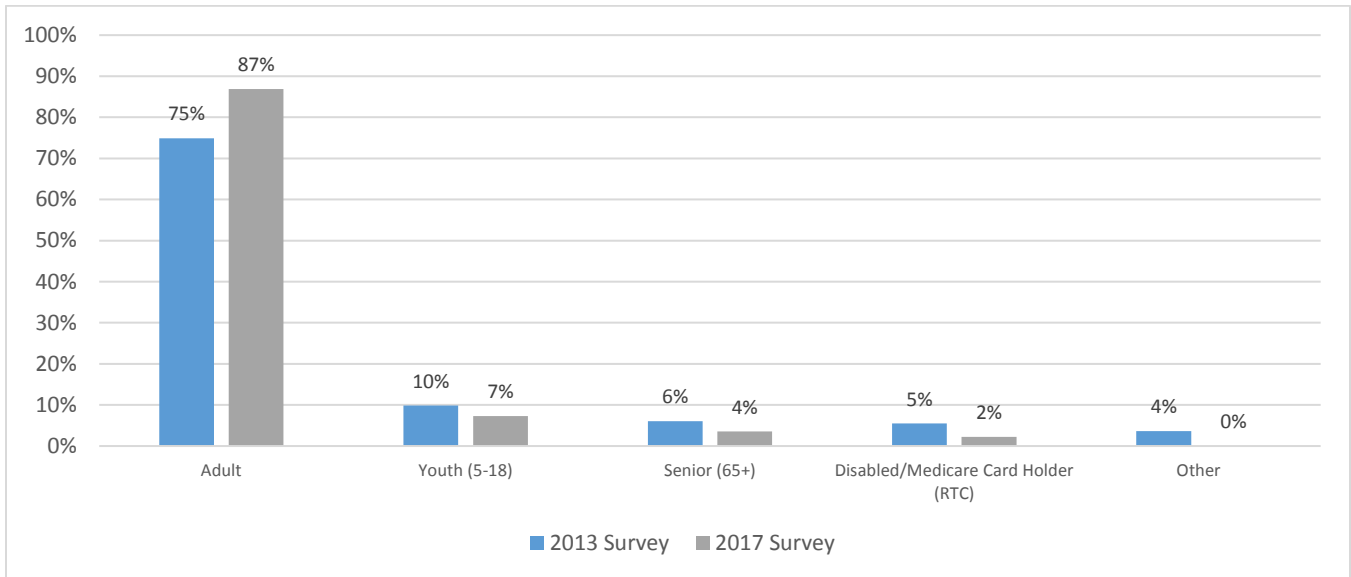


Figure 17: Fare Category

Car Availability

Of those riders with at least one or more vehicles in their house, nearly seventy-one percent (70.8%) of transit riders were unable to use one of their vehicles.

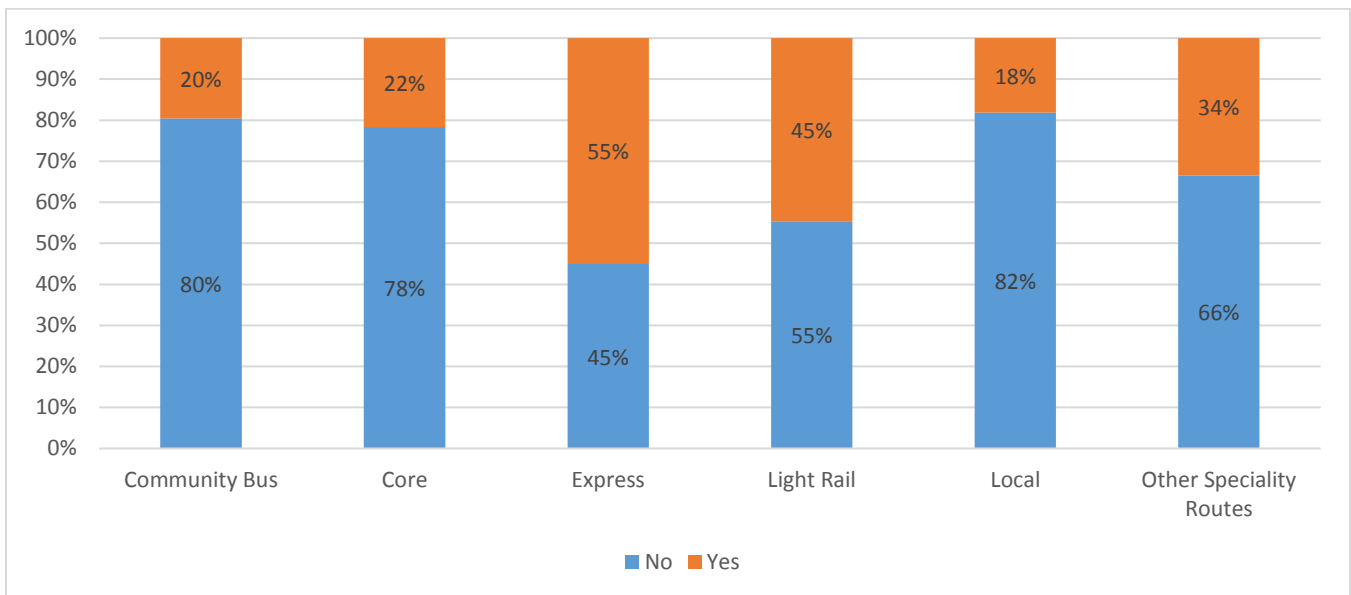


Figure 18: Car Availability Across Transit Service Categories

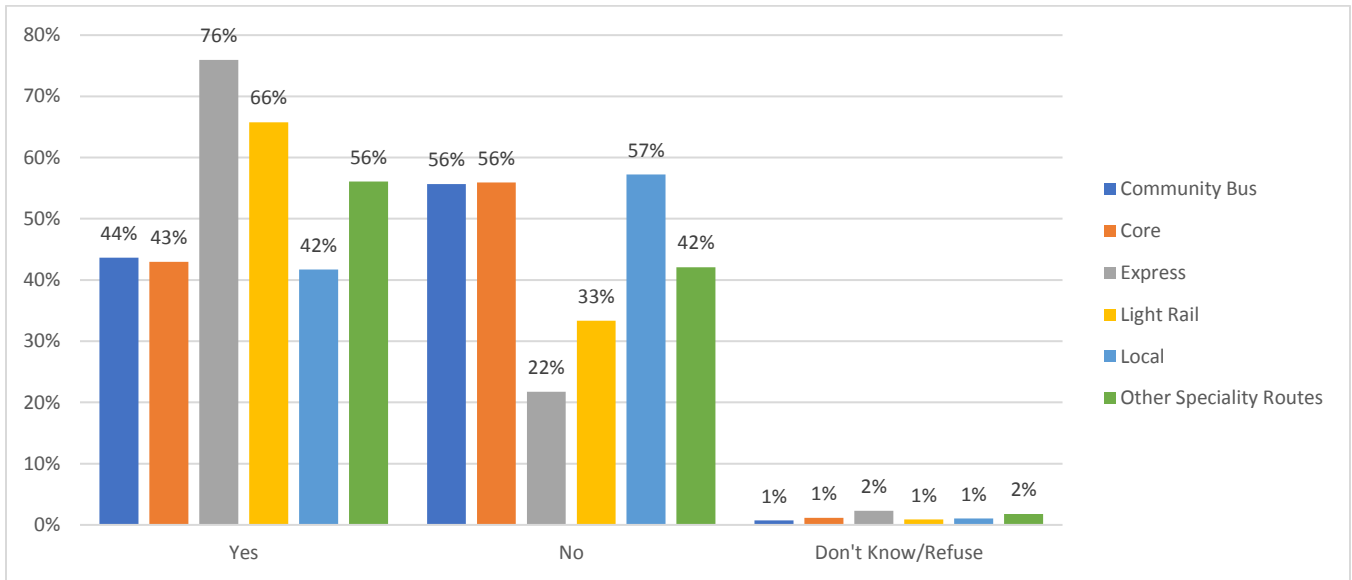


Figure 19: Own a Driver's License Across Transit Service Categories

Rider Comparison

Of all VTA transit passengers, fifty-seven percent (57.2%) were male and forty-three percent (42.8%) were female.

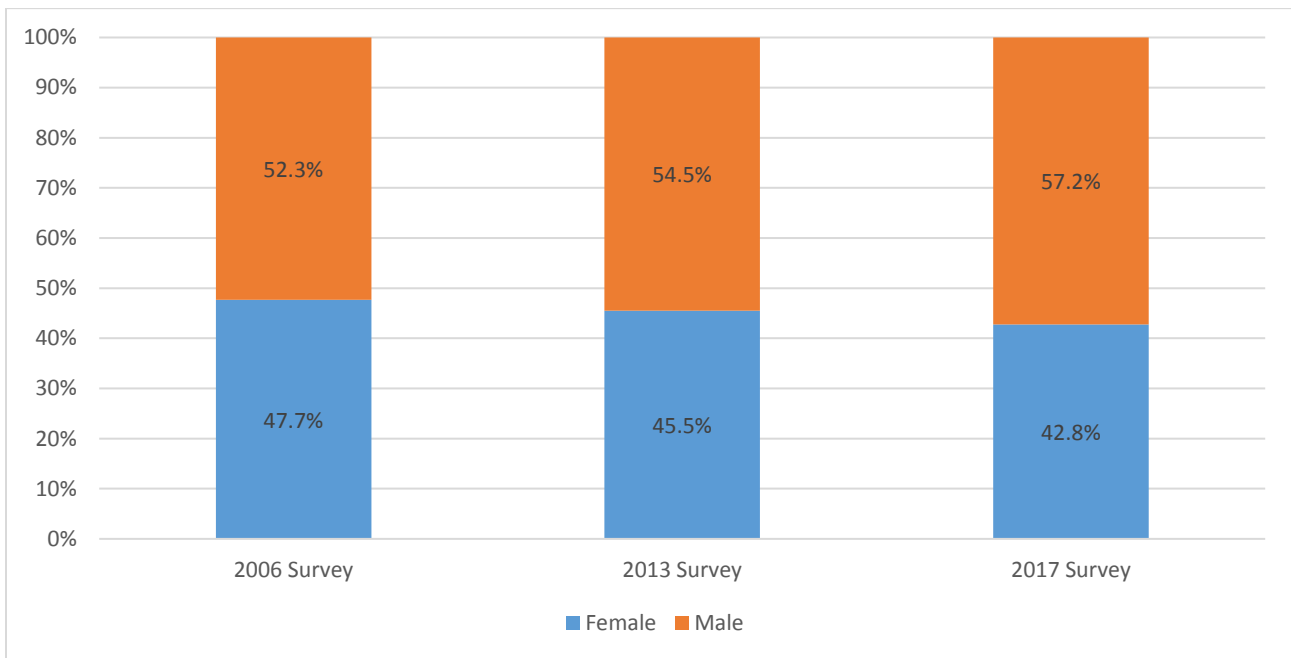


Figure 20: Gender Trend Comparison

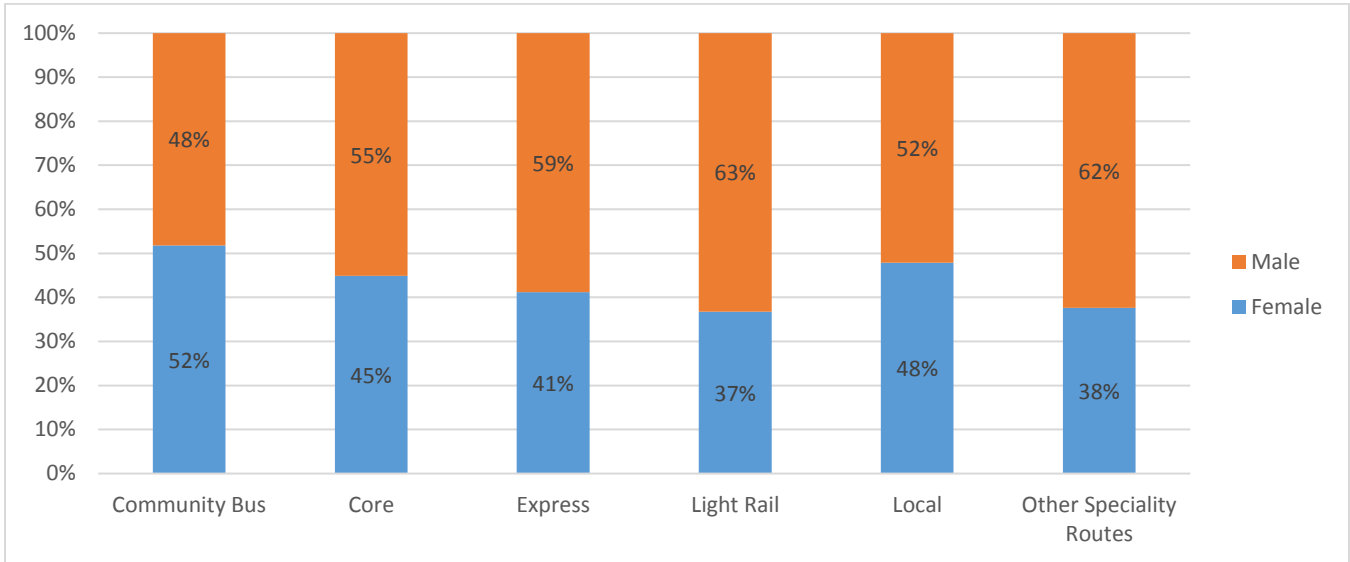


Figure 21: Gender Across Transit Service Categories

Over half (53.1%) of all VTA transit riders indicated that they were between the ages of 18 and 34. Five percent (4.8%) were 17 years of age or younger and twenty-five percent (24.9%) were age 45 or older.

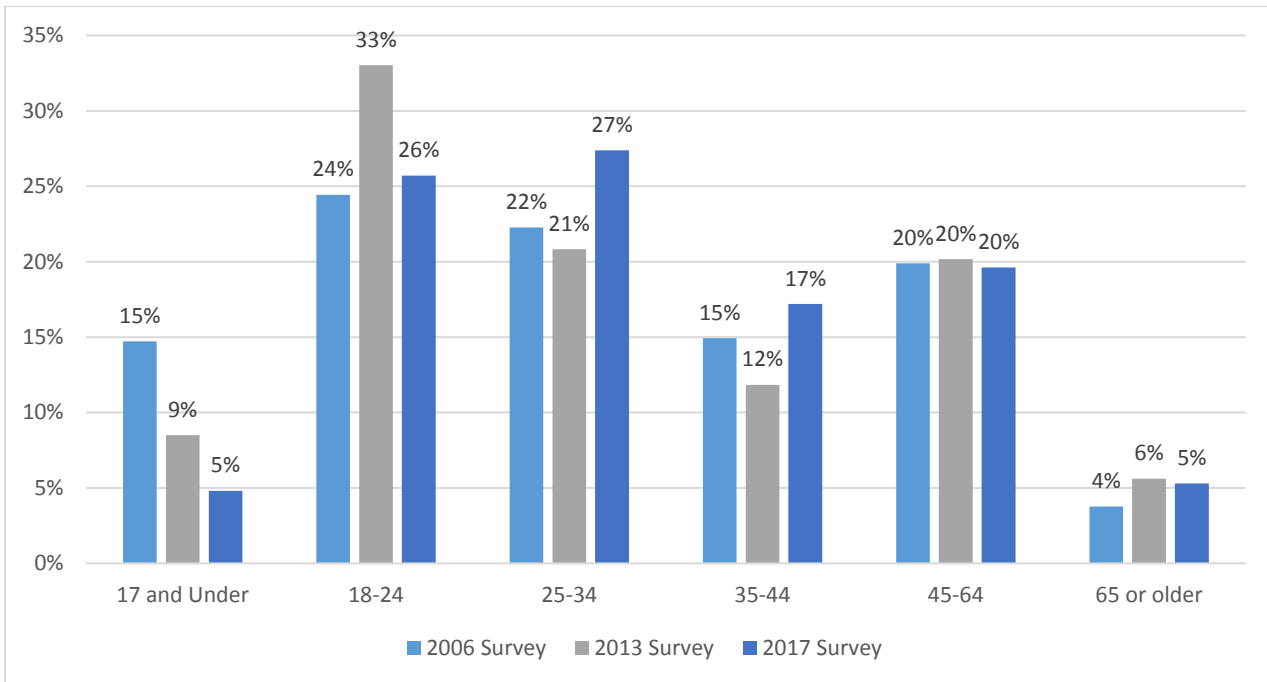


Figure 22: Age

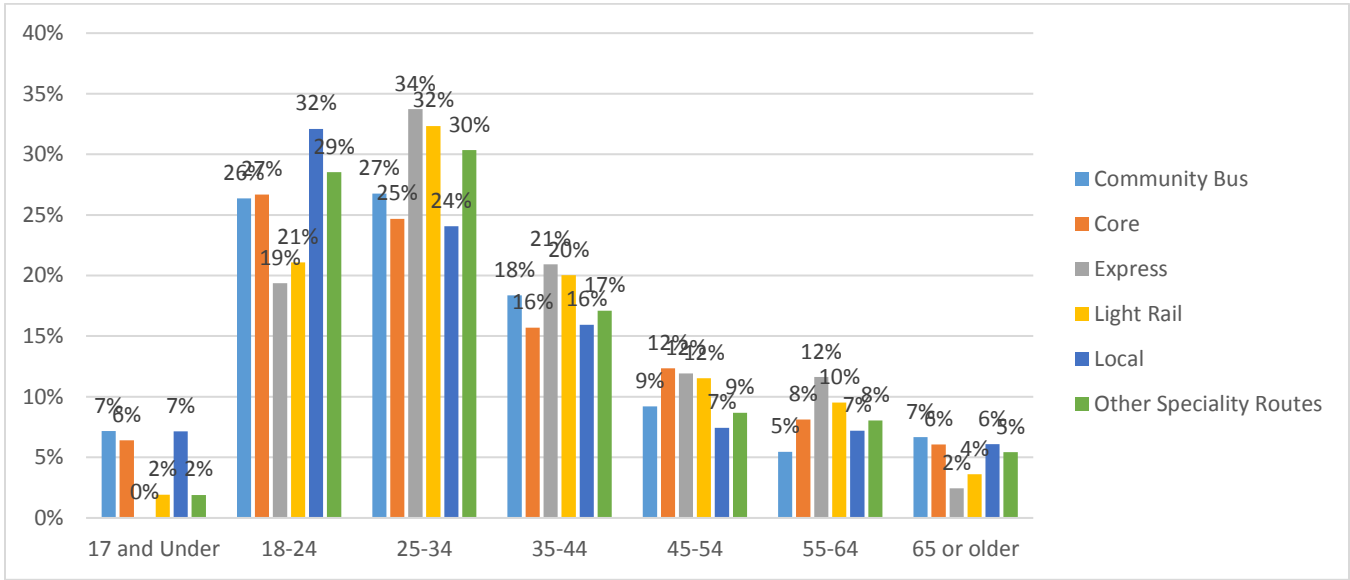


Figure 23: Age Across Transit Service Categories

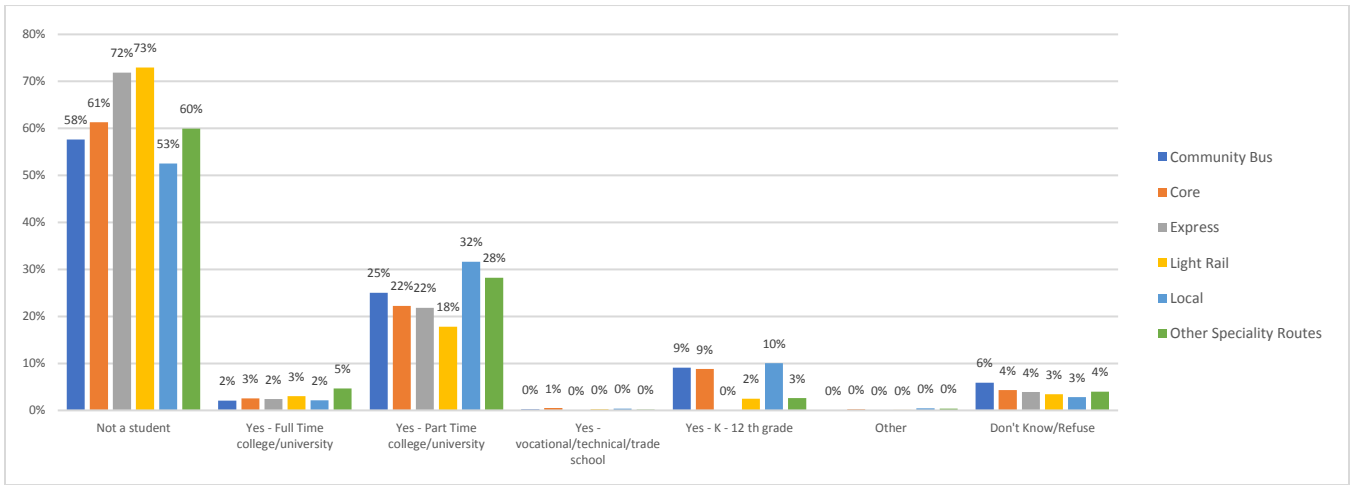


Figure 24: Student Status Across Transit Service Categories

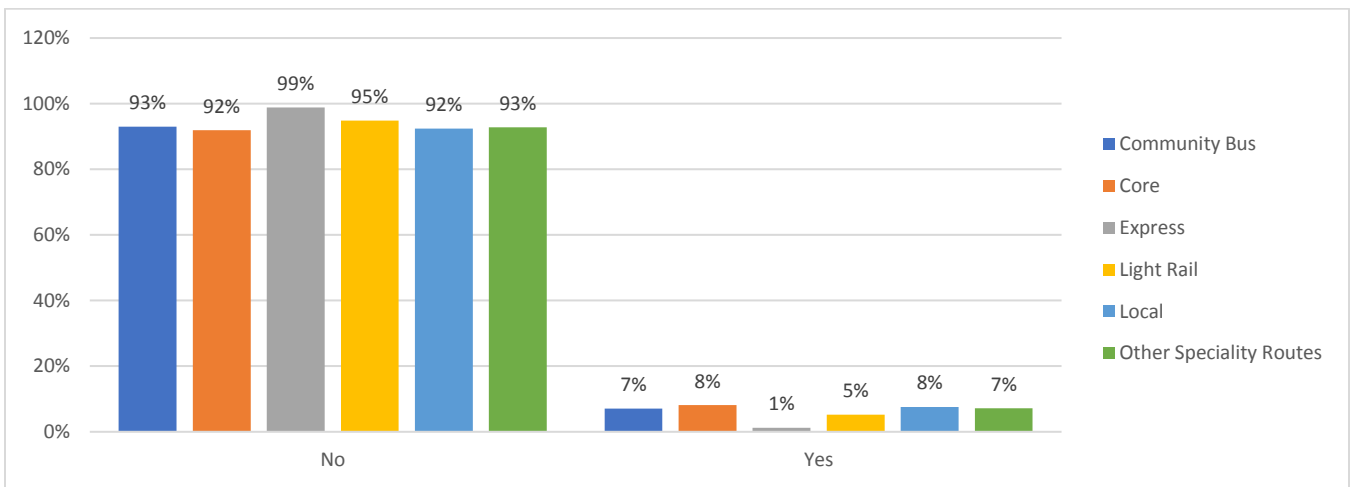


Figure 25: Disabled Status Across Transit Service Categories

Ethnicity Comparison

Thirty-three percent (33.3%) of all VTA transit riders identified themselves as Hispanic, any race., 23.5% identified themselves as White, non-Hispanic, and 22.4% identified themselves as Asian, non-Hispanic.

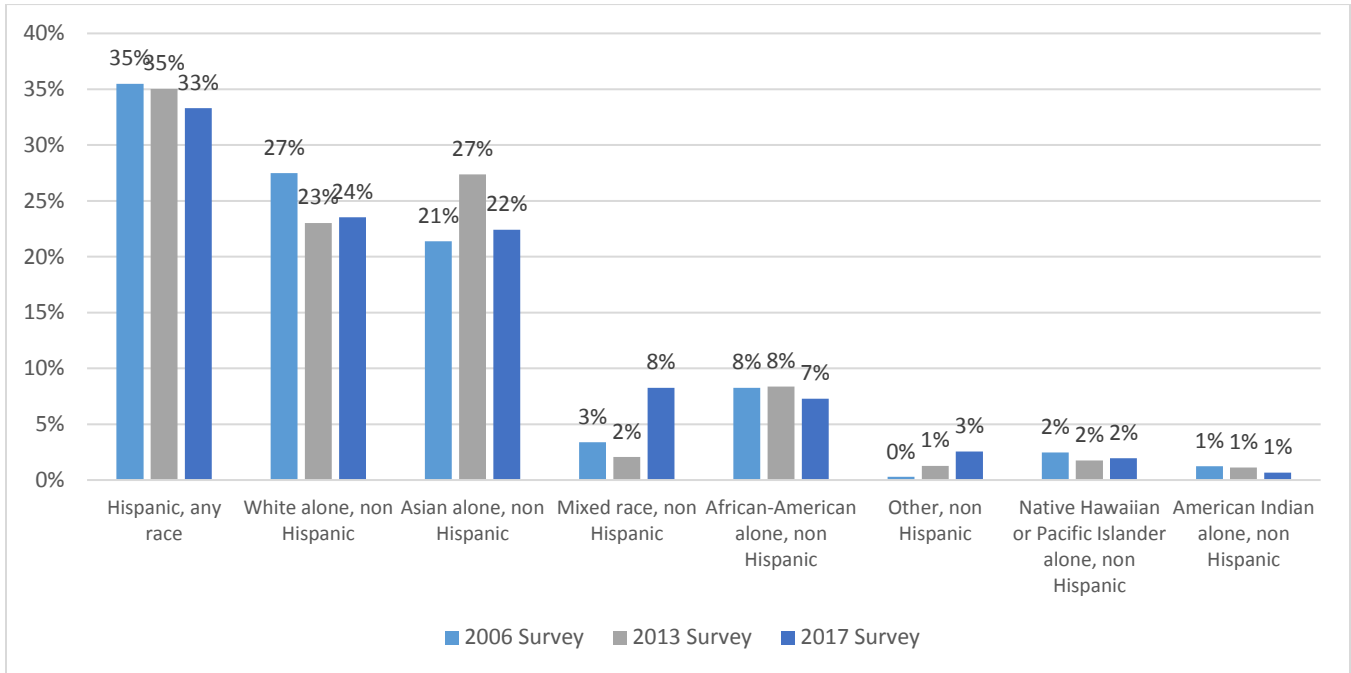


Figure 26: Ethnicity

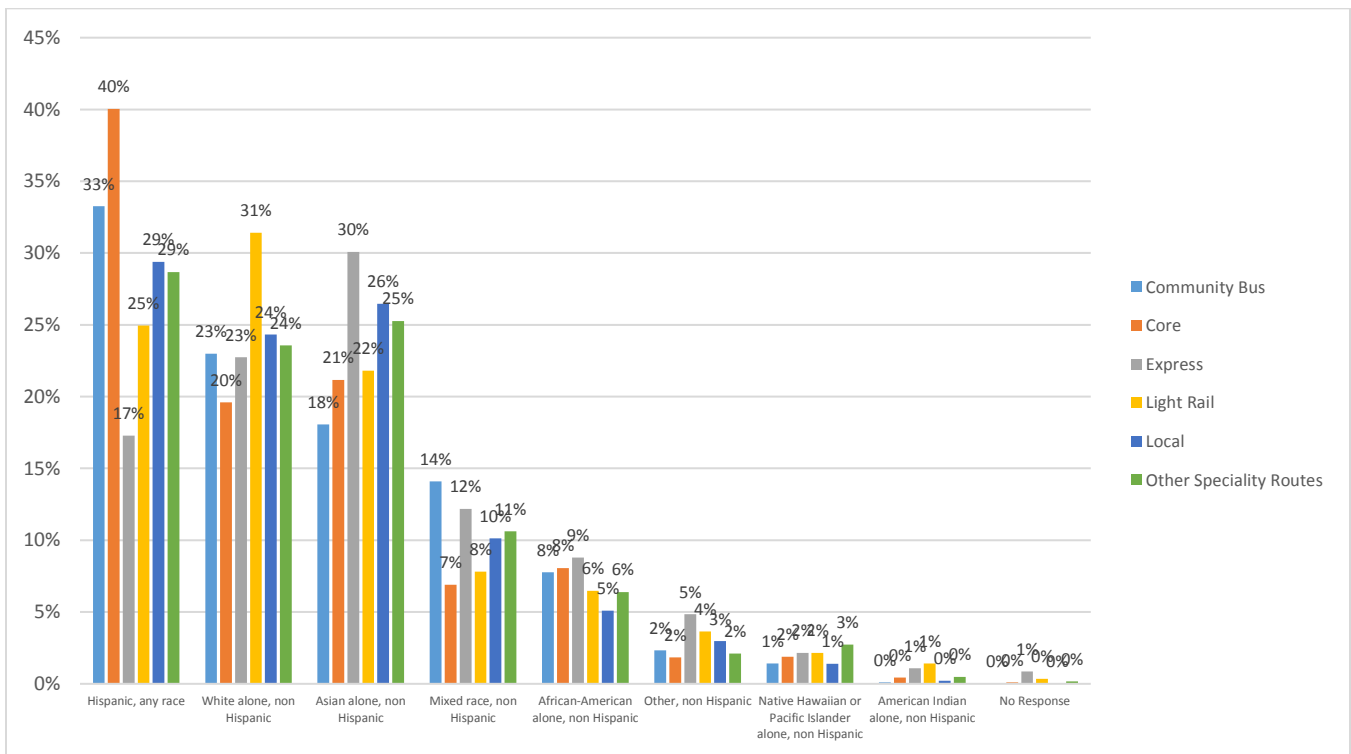


Figure 27: Ethnicity Across Transit Service Categories

Language Comparison

Of those riders that indicated they spoke another language besides English at home, eighty-eight percent (87.6%) indicated they spoke English well or very well, and 12.4% indicated they spoke English not very well or not at all.

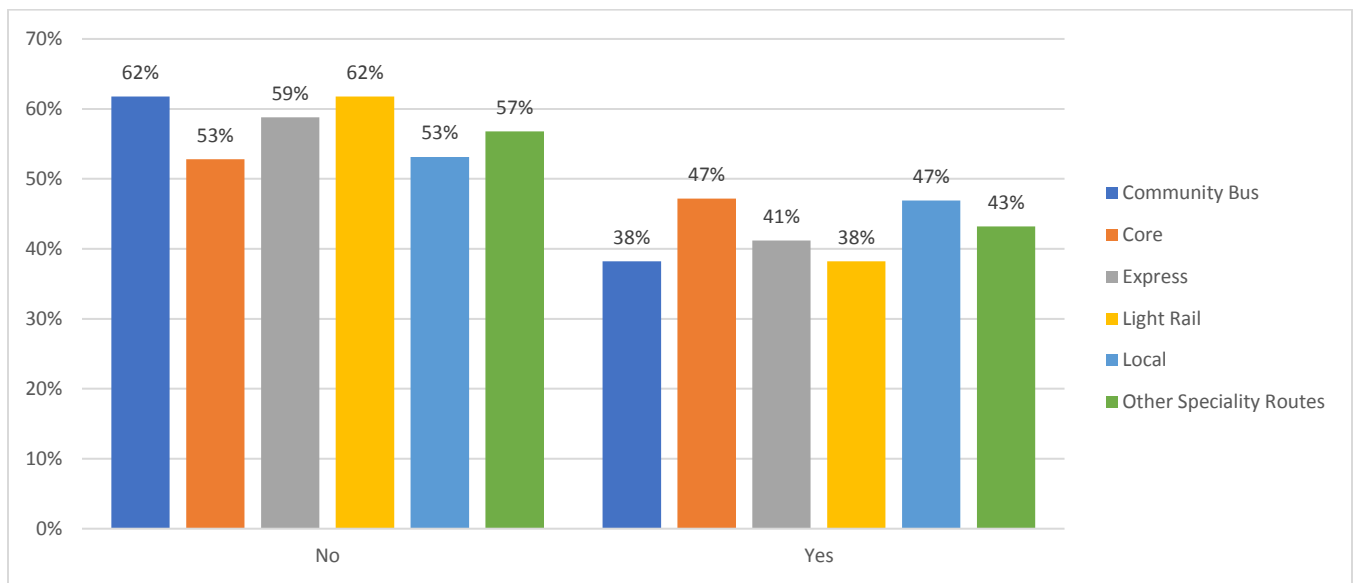


Figure 28: Speaks another Language at Home Across Transit Service Categories

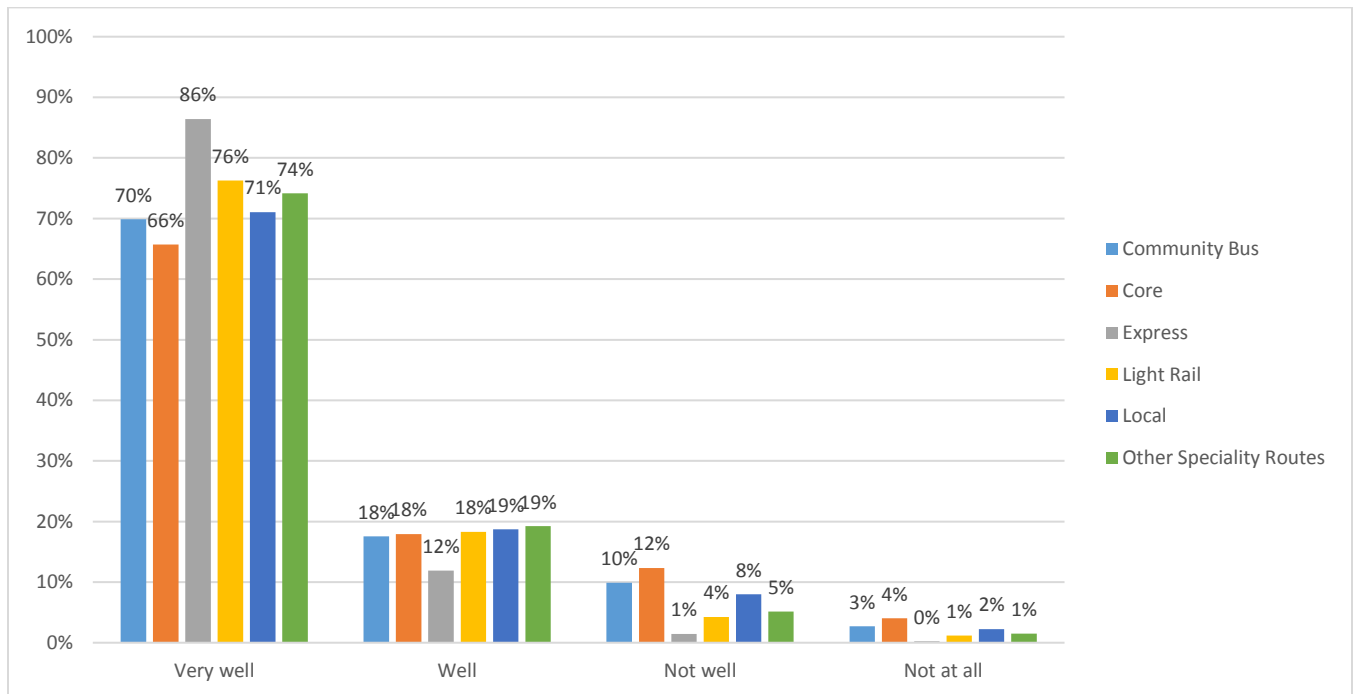


Figure 29: English Language Proficiency Across Transit Service Categories

Household Comparison

Nearly thirty-nine percent (38.5%) indicated they live in a household with three or four people, and twenty-seven percent (27.1%) indicated they live in a house with one or two people total.

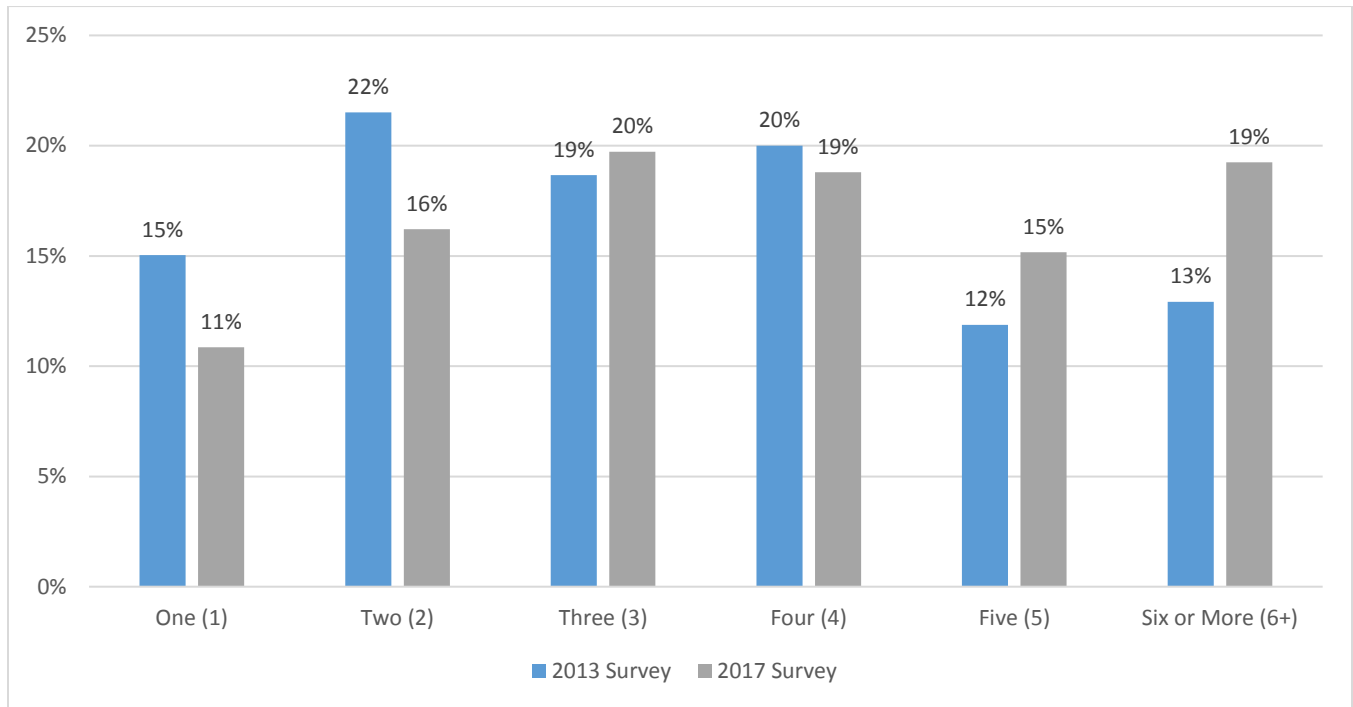


Figure 30: Household Size

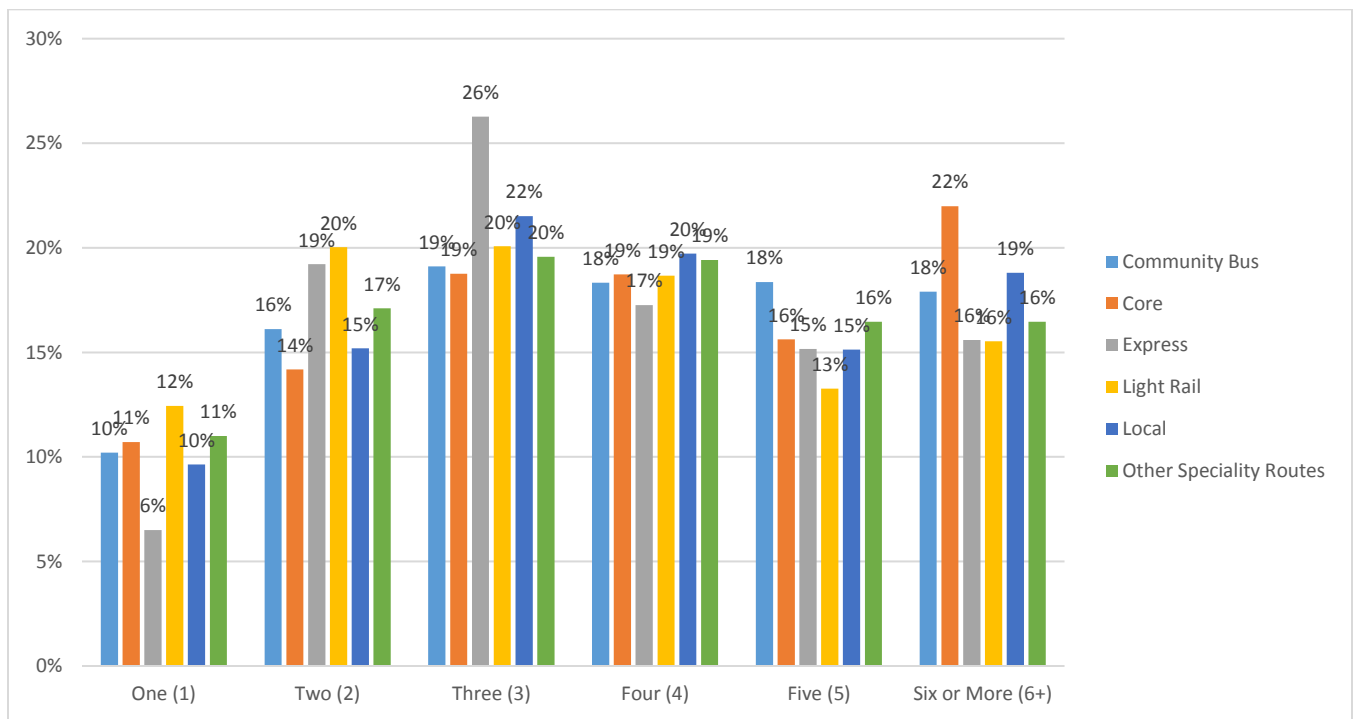


Figure 31: Household Size Across Transit Service Categories

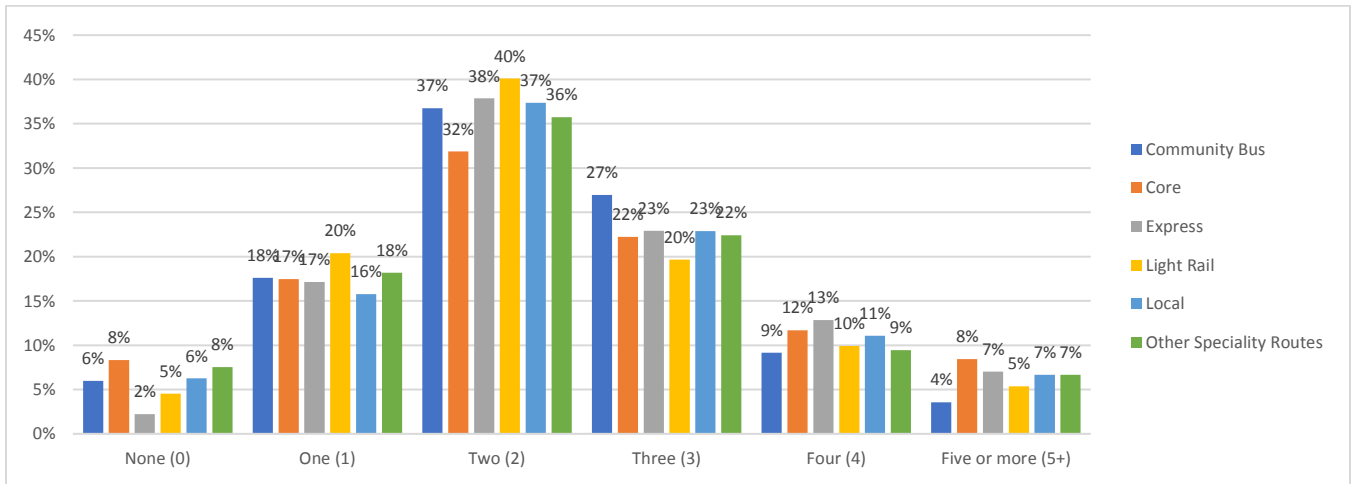


Figure 32: Employed Household Size Across Transit Service Categories

Of all VTA passengers, nearly fifty-one percent (50.9%) reported annual household incomes below \$50,000. Nearly seventeen percent (16.9%) reported an annual household income of \$100,000 or more.

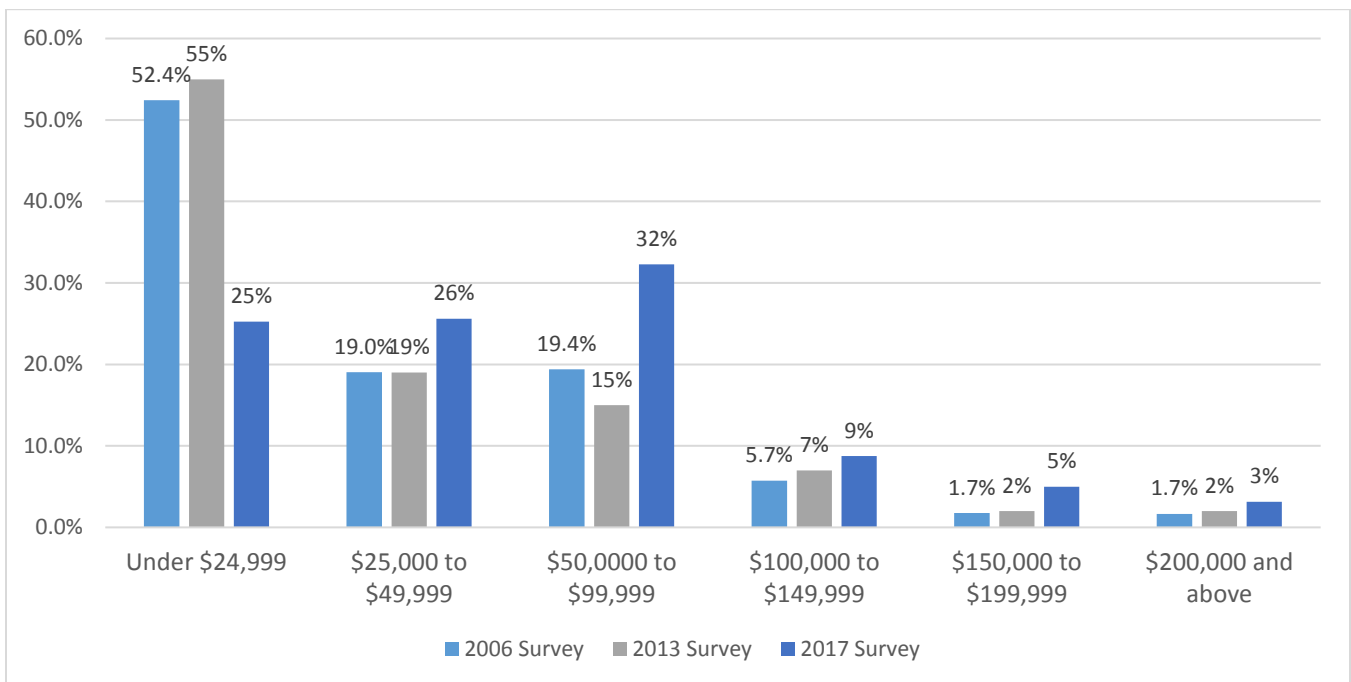


Figure 33: Total Annual Household Income

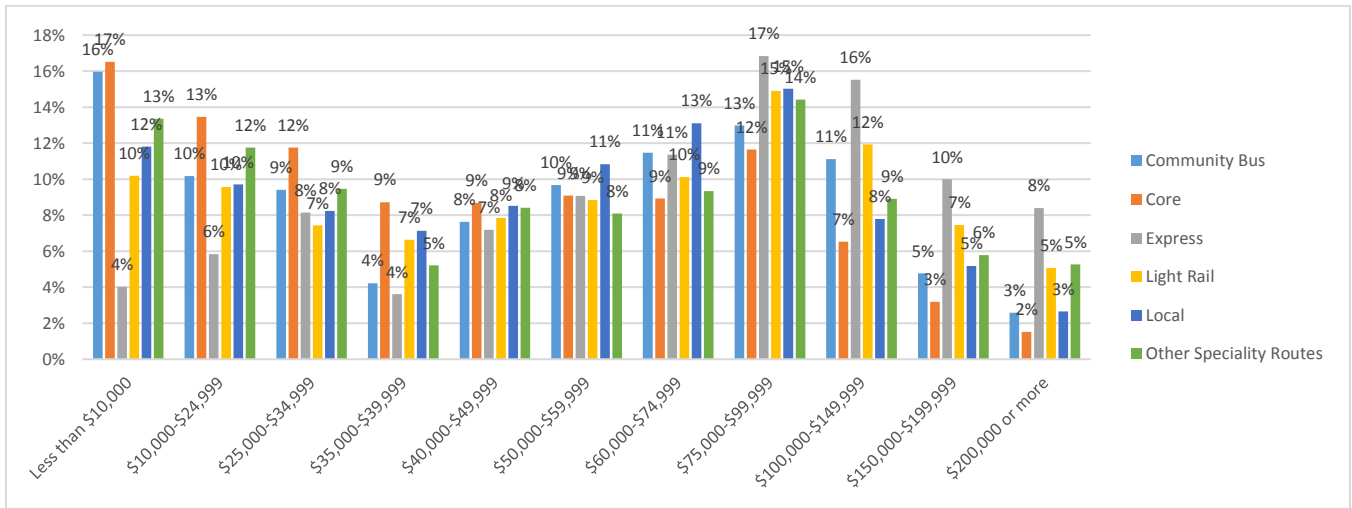


Figure 34: Total Annual Household Income Across Systems

Customer Satisfaction Comparison

Following graphs should the customer satisfaction from a 1(Poor) to 5(Excellent) scale.

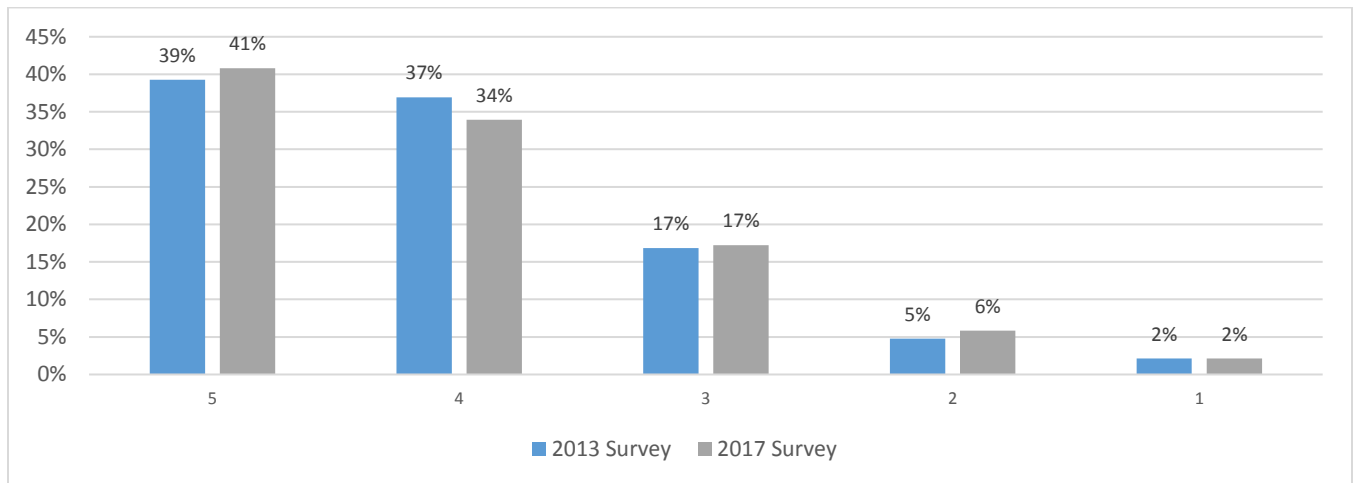


Figure 35: Customer Satisfaction-Frequency of Service

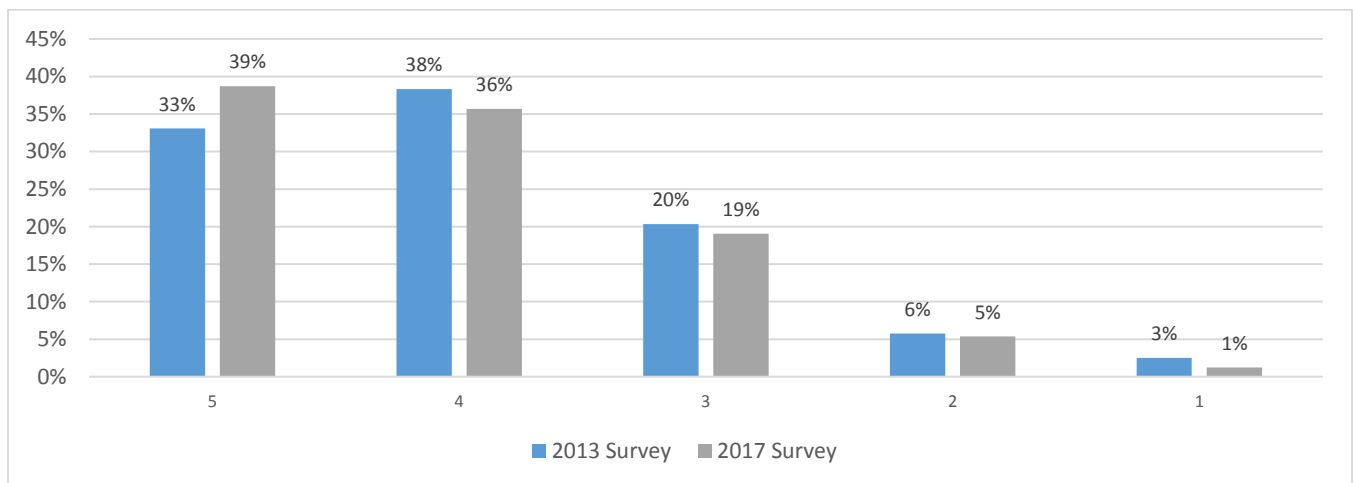


Figure 36: Customer Satisfaction-On-Time Performance

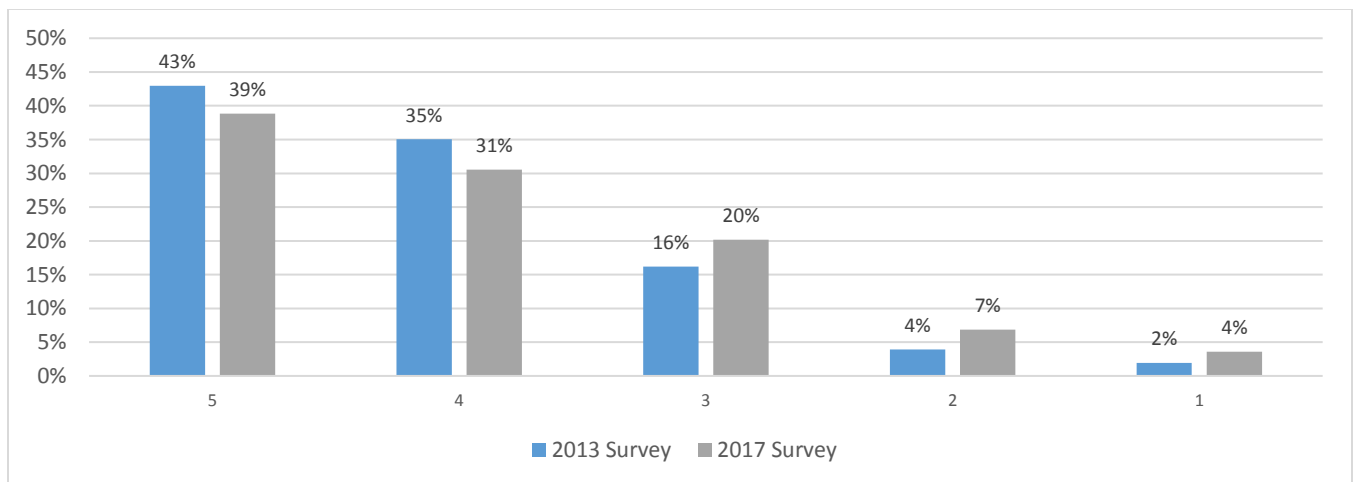


Figure 37: Customer Satisfaction-Personal Security/safety

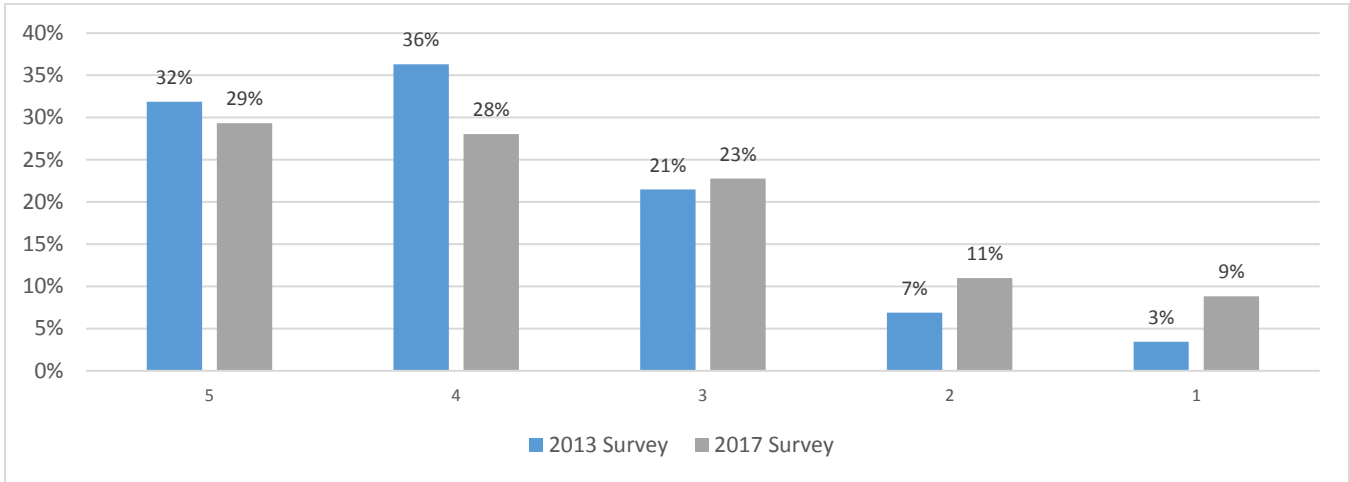


Figure 38: Customer Satisfaction-Vehicle Cleanliness

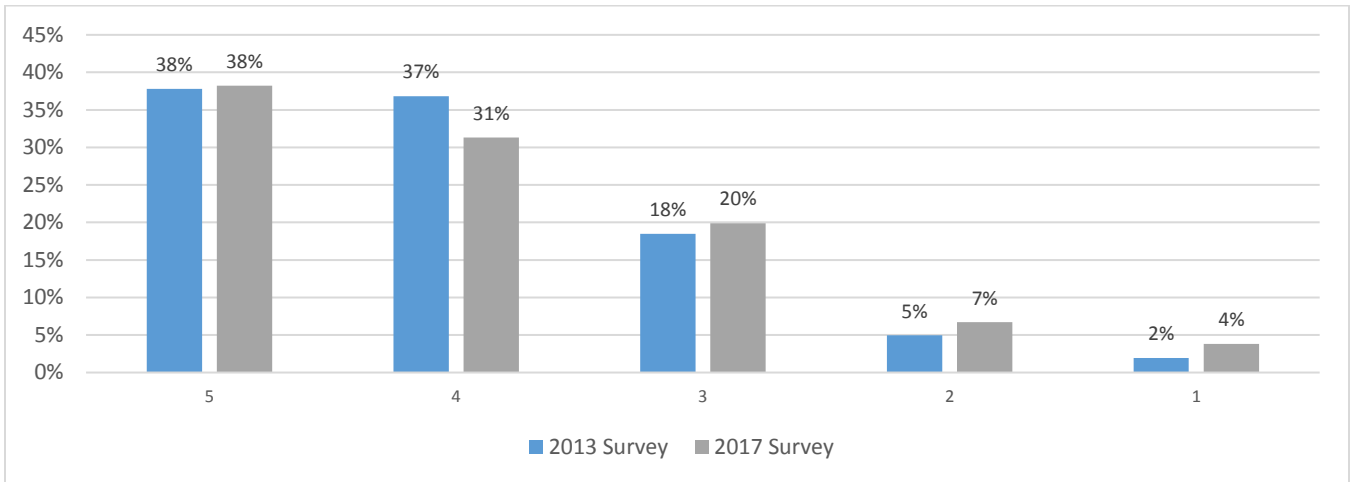


Figure 39: Customer Satisfaction-Quality of Stops

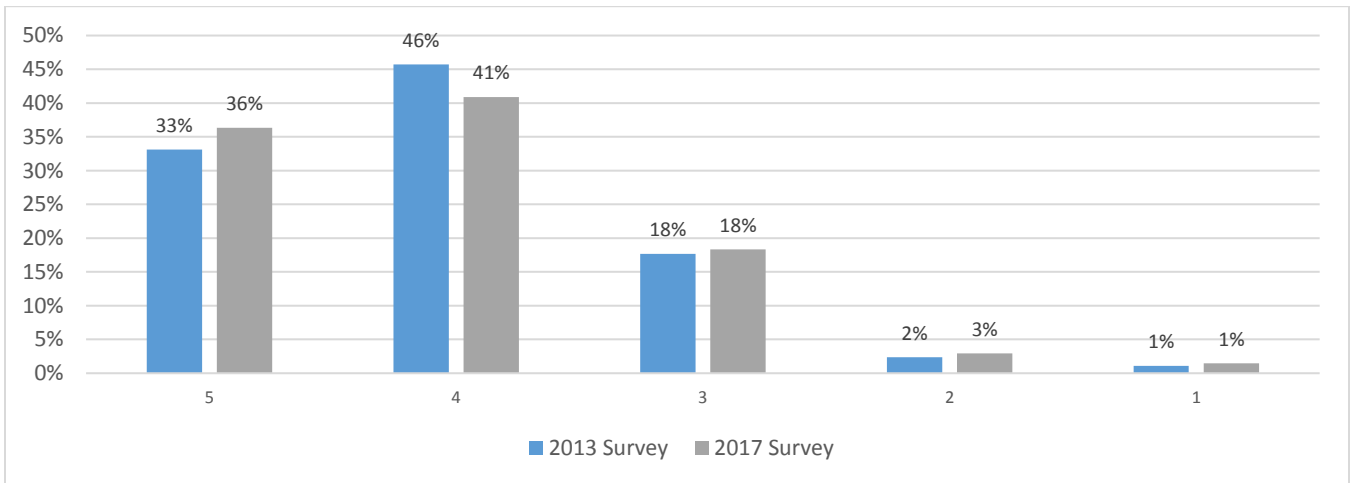


Figure 40: Customer Satisfaction-Overall Experience

Section 4: On-Board Passenger Survey Results by Key Demographics

This section provides the results of the weekday survey by the following demographic variables:

1. Ethnicity
2. Age
3. Income

As described in the introductory section (and expanded upon in Appendix D), the data has been weighted by the number of passengers riding each route. The percentages in the tables reflect the linked weighted data.

Transit On-Board Passenger Survey Results – By Ethnicity

Ethnicity of Transit Passengers	
Hispanic, any race	32.58%
White alone, non Hispanic	23.89%
Asian alone, non Hispanic	22.48%
Mixed race, non Hispanic	8.70%
African-American alone, non Hispanic	6.93%
Other, non Hispanic	2.51%
Native Hawaiian or Pacific Islander alone, non Hispanic	2.02%
American Indian alone, non Hispanic	0.69%
No Response	0.20%
Grand Total	100.00%

Table 2: What is your Race/Ethnicity?

Trip Purpose										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Home-Work	38.09%	43.98%	35.99%	51.93%	38.12%	40.93%	47.02%	46.81%	35.80%	40.54%
Home-Social/Rec	9.80%	9.89%	7.04%	10.21%	9.67%	7.34%	8.65%	6.97%	8.55%	9.12%
Home-Shopping	6.46%	5.30%	6.06%	2.29%	8.61%	6.54%	7.60%	9.91%	1.59%	5.92%
Home-School	21.27%	14.93%	33.03%	13.15%	15.99%	20.04%	15.05%	13.23%	11.48%	21.10%
Home-Other	9.83%	11.93%	6.75%	5.42%	11.02%	4.88%	8.96%	9.19%	22.41%	9.22%
work-Other	6.39%	6.34%	4.07%	10.81%	6.02%	12.24%	4.58%	7.33%	0.00%	6.32%
Hotel-based	0.58%	1.36%	1.69%	0.55%	0.39%	1.21%	1.13%	0.00%	0.00%	1.02%
Other to Other	7.58%	6.27%	5.38%	5.65%	10.16%	6.81%	7.01%	6.56%	20.15%	6.77%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 3: Where are you coming from/going to?

Method of Getting to Transit from Origin										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Walked all the way	87.63%	81.14%	87.62%	85.45%	88.35%	89.09%	77.50%	83.73%	76.98%	85.72%
Was dropped off (Not a service)	5.45%	5.75%	6.34%	7.57%	5.35%	6.24%	7.38%	6.71%	7.08%	5.97%
Bike (PERSONAL BIKE)	4.16%	5.89%	2.70%	4.46%	4.60%	1.32%	9.19%	5.67%	13.34%	4.36%
Drove alone and parked	1.52%	4.92%	2.33%	1.62%	0.79%	1.41%	4.08%	0.70%	2.60%	2.52%
Skateboard/Longboard	0.45%	0.35%	0.24%	0.28%	0.21%	0.00%	0.33%	1.74%	0.00%	0.34%
Drove or rode with others and parked	0.19%	0.43%	0.17%	0.03%	0.00%	1.65%	1.09%	0.00%	0.00%	0.27%
Scooter/Wheelchair	0.15%	0.68%	0.05%	0.07%	0.32%	0.00%	0.00%	0.00%	0.00%	0.25%
Used Uber or similar service	0.17%	0.40%	0.23%	0.20%	0.31%	0.00%	0.00%	0.89%	0.00%	0.25%
Bike (BIKE SHARE)	0.16%	0.31%	0.21%	0.11%	0.00%	0.00%	0.16%	0.56%	0.00%	0.19%
Shuttle	0.11%	0.12%	0.11%	0.07%	0.07%	0.14%	0.27%	0.00%	0.00%	0.11%
School Bus	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
Taxi	0.00%	0.00%	0.00%	0.00%	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 4: How did you get from your origin to the very first bus/train you used for this one-way trip?

Method of Getting from Transit to Destination										
Row Labels	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African- American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Walk all the way	89.74%	84.86%	90.94%	88.96%	91.55%	89.68%	82.62%	88.03%	88.22%	88.74%
Bike (PERSONAL BIKE)	4.03%	5.38%	2.55%	2.60%	4.03%	1.32%	7.20%	2.45%	9.23%	3.89%
Be picked up by someone (Not a service)	3.81%	3.71%	3.13%	5.52%	3.28%	3.86%	8.28%	2.06%	2.55%	3.82%
Get in a parked vehicle and drive alone	1.14%	3.40%	1.88%	0.92%	0.54%	3.35%	0.58%	2.44%	0.00%	1.84%
Skateboard/Longboard	0.42%	0.49%	0.28%	0.28%	0.16%	0.00%	0.33%	1.74%	0.00%	0.37%
Be picked up by Uber or similar service	0.24%	0.51%	0.29%	0.70%	0.15%	0.24%	0.82%	0.89%	0.00%	0.36%
Get in a parked vehicle and drive with others	0.23%	0.29%	0.14%	0.45%	0.09%	1.01%	0.00%	1.44%	0.00%	0.26%
Scooter/Wheelchair	0.14%	0.69%	0.05%	0.07%	0.14%	0.00%	0.00%	0.00%	0.00%	0.24%
Shuttle	0.17%	0.47%	0.24%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%
Bike (BIKE SHARE)	0.07%	0.16%	0.24%	0.00%	0.00%	0.54%	0.16%	0.56%	0.00%	0.14%
Walked all the way	0.00%	0.00%	0.14%	0.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.06%
Taxi	0.00%	0.04%	0.11%	0.00%	0.00%	0.00%	0.00%	0.40%	0.00%	0.04%
School Bus	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 5: How did you get to your destination from your very last bus/train you used for this one-way trip?

Number of Transfers From Origin to Route Surveyed										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
(0) None	87.31%	88.09%	87.81%	94.14%	85.06%	87.83%	89.03%	87.97%	90.67%	88.11%
(1) One	11.81%	11.04%	11.04%	5.44%	13.41%	12.00%	10.39%	11.26%	9.33%	10.98%
(2) Two	0.81%	0.86%	1.07%	0.42%	1.44%	0.17%	0.40%	0.76%	0.00%	0.86%
(3) Three	0.07%	0.01%	0.08%	0.00%	0.09%	0.00%	0.19%	0.00%	0.00%	0.05%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 6: Number of Transfers (Before)

Number of Transfers From Route Surveyed to Destination										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
(0) None	86.50%	86.31%	86.63%	87.33%	82.13%	82.88%	89.47%	93.63%	86.67%	86.27%
(1) One	12.67%	12.80%	12.25%	12.27%	16.24%	16.22%	9.76%	5.93%	13.33%	12.81%
(2) Two	0.78%	0.87%	1.01%	0.40%	1.63%	0.90%	0.77%	0.43%	0.00%	0.88%
(3) Three	0.04%	0.02%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 7: Number of Transfers (After)

Total Number of Transfers for Trip										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
0	75.27%	75.48%	75.69%	82.36%	69.63%	72.31%	79.58%	81.61%	79.52%	75.71%
1	21.70%	21.76%	20.94%	16.21%	25.38%	25.21%	18.13%	17.20%	18.30%	21.30%
2	2.77%	2.63%	3.02%	1.15%	4.32%	2.30%	1.95%	1.20%	2.18%	2.72%
3 or More	0.26%	0.12%	0.35%	0.28%	0.67%	0.18%	0.34%	0.00%	0.00%	0.28%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 8: Number of Transfers (Total)

Boarding Time for Routes Surveyed

	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
1 - 5 am	0.10%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.06%
5 - 6 am	2.72%	3.03%	1.00%	3.42%	2.62%	1.09%	1.92%	2.33%	0.00%	2.40%
6 - 7 am	5.80%	6.69%	5.11%	6.01%	7.97%	2.86%	12.54%	5.23%	2.45%	6.08%
7 - 8 am	7.84%	8.19%	7.60%	7.71%	8.60%	6.85%	8.85%	4.05%	4.07%	7.87%
8 - 9 am	7.20%	7.92%	9.04%	7.26%	7.39%	10.14%	8.10%	8.24%	11.28%	7.91%
9 - 10 am	5.04%	4.72%	7.79%	5.19%	4.13%	7.25%	5.62%	6.74%	0.00%	5.60%
10 - 11 am	5.99%	4.68%	5.18%	5.12%	5.36%	8.07%	7.02%	11.77%	5.88%	5.49%
11 am - 12 pm	5.53%	5.87%	5.23%	3.96%	6.99%	7.01%	3.65%	8.03%	0.00%	5.51%
12 - 1 pm	6.68%	7.22%	7.29%	5.68%	7.61%	5.36%	5.90%	4.15%	9.81%	6.86%
1 - 2 pm	8.17%	8.25%	8.54%	7.76%	7.51%	8.39%	8.64%	2.24%	4.53%	8.16%
2 - 3 pm	7.74%	6.52%	7.31%	7.68%	8.84%	4.46%	6.74%	10.47%	8.43%	7.34%
3 - 4 pm	9.44%	7.85%	7.54%	10.52%	6.56%	6.45%	7.21%	3.73%	9.48%	8.37%
4 - 5 pm	7.40%	7.93%	7.37%	7.61%	6.92%	11.53%	4.62%	12.98%	25.69%	7.63%
5 - 6 pm	7.02%	6.91%	8.48%	7.23%	7.13%	6.08%	4.53%	11.27%	7.27%	7.30%
6 - 7 pm	4.53%	6.23%	5.42%	4.28%	4.34%	6.69%	5.27%	2.31%	1.59%	5.15%
7 - 8 pm	2.10%	2.45%	2.29%	2.73%	1.77%	1.46%	1.69%	2.12%	7.36%	2.25%
8 - 9 pm	2.31%	1.69%	1.93%	2.84%	2.05%	2.18%	1.85%	1.25%	0.00%	2.08%
9 - 10 pm	2.24%	1.96%	1.64%	2.37%	1.95%	3.12%	2.94%	0.00%	0.00%	2.04%
10 - 11 pm	1.50%	1.37%	0.82%	2.17%	1.82%	0.40%	2.42%	3.09%	2.17%	1.40%
11 pm - 12 am	0.58%	0.33%	0.28%	0.42%	0.45%	0.61%	0.03%	0.00%	0.00%	0.42%
12 - 1 am	0.05%	0.10%	0.12%	0.03%	0.00%	0.00%	0.46%	0.00%	0.00%	0.08%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 9: What time did you get on this bus/train?

Fare Type										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
BY CASH OR PAPER	29.67%	21.50%	15.15%	12.89%	24.31%	11.00%	21.90%	23.00%	21.30%	21.94%
BY CLIPPER	69.66%	77.91%	84.49%	87.03%	74.63%	88.51%	77.26%	76.73%	74.03%	77.51%
BY MOBILE TICKET	0.67%	0.59%	0.35%	0.08%	1.06%	0.49%	0.84%	0.28%	4.67%	0.56%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 10: What type of fare did you use for this one-way trip?

Fare Category										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Adult	84.27%	86.57%	88.15%	95.78%	84.87%	93.25%	89.25%	90.43%	94.12%	87.12%
Disabled/Medicare Card Holder (RTC)	1.47%	3.65%	1.06%	0.90%	3.83%	1.16%	0.33%	4.32%	0.00%	2.00%
Senior (65+)	2.39%	5.68%	3.86%	0.12%	3.74%	3.10%	2.89%	0.56%	5.88%	3.43%
Youth (5-18)	11.86%	4.10%	6.94%	3.20%	7.55%	2.49%	7.53%	4.68%	0.00%	7.45%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 11: Type of fare category respondent paid

Vehicle Ownership										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
None (0)	27.80%	28.24%	28.15%	10.15%	38.60%	14.76%	17.63%	27.38%	41.40%	26.69%
One (1)	22.55%	25.30%	24.03%	13.02%	23.32%	30.55%	16.89%	24.37%	32.68%	22.88%
Two (2)	29.08%	31.37%	29.08%	43.26%	27.34%	40.02%	40.91%	30.15%	11.32%	31.22%
Three (3)	12.17%	9.99%	12.21%	25.63%	6.74%	9.16%	17.62%	12.56%	4.58%	12.48%
Four (4)	5.02%	3.36%	4.36%	4.01%	2.46%	2.99%	2.92%	0.00%	8.43%	4.09%
Five or More (5+)	3.38%	1.74%	2.17%	3.93%	1.55%	2.52%	4.04%	5.53%	1.59%	2.64%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 12: How many vehicles (cars, trucks, or motorcycles) are available to your household?

Availability to Use a Vehicle to Complete Trip										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
No	76.62%	58.63%	67.66%	74.49%	70.23%	71.72%	67.67%	67.73%	38.89%	69.38%
Yes	23.38%	41.37%	32.34%	25.51%	29.77%	28.28%	32.33%	32.27%	61.11%	30.62%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 13: Could you have used one of these vehicles to complete this trip?

Household Size										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
One (1)	8.47%	16.91%	8.70%	3.32%	18.57%	2.87%	5.32%	10.75%	40.49%	10.67%
Two (2)	12.63%	22.41%	16.54%	12.81%	16.99%	14.05%	8.15%	16.02%	13.11%	16.13%
Three (3)	18.17%	20.72%	20.93%	20.61%	19.50%	16.71%	20.34%	39.42%	13.44%	19.85%
Four (4)	20.03%	16.87%	21.96%	13.57%	17.98%	20.79%	17.99%	13.45%	17.70%	18.93%
Five (5)	16.66%	10.26%	16.18%	23.33%	10.32%	22.63%	24.85%	12.71%	9.48%	15.44%
Six (6)	10.78%	6.84%	7.83%	22.30%	7.50%	10.77%	12.34%	3.96%	4.18%	9.92%
Seven (7)	4.96%	2.34%	3.04%	1.72%	3.84%	4.17%	3.15%	2.20%	1.59%	3.46%
Eight (8)	3.33%	0.99%	2.03%	1.47%	2.20%	2.60%	4.92%	0.45%	0.00%	2.23%
Nine (9)	2.36%	0.93%	1.59%	0.13%	1.65%	3.54%	1.25%	0.35%	0.00%	1.59%
Ten or More (10+)	2.62%	1.72%	1.20%	0.74%	1.46%	1.86%	1.68%	0.69%	0.00%	1.79%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 14: Including you, how many people live in your household?

Employed in Household										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
None (0)	4.02%	9.61%	8.79%	2.07%	10.77%	2.90%	1.19%	8.42%	19.23%	6.70%
One (1)	15.21%	22.67%	19.68%	7.39%	22.65%	9.30%	13.60%	19.82%	37.07%	17.73%
Two (2)	33.14%	37.45%	34.42%	51.53%	31.44%	29.27%	43.02%	34.42%	17.53%	36.02%
Three (3)	24.92%	18.14%	19.64%	29.53%	20.76%	18.36%	21.75%	33.11%	10.90%	22.02%
Four (4)	13.59%	8.42%	11.08%	6.85%	8.33%	19.36%	13.76%	1.71%	11.66%	10.90%
Five (5)	5.38%	2.45%	4.18%	1.86%	4.00%	14.04%	4.72%	1.70%	0.00%	4.18%
Six (6)	2.17%	0.62%	1.44%	0.41%	0.70%	4.81%	0.87%	0.16%	3.60%	1.41%
Seven (7)	0.68%	0.22%	0.37%	0.10%	0.51%	1.20%	0.62%	0.20%	0.00%	0.44%
Eight (8)	0.43%	0.10%	0.13%	0.00%	0.20%	0.25%	0.46%	0.45%	0.00%	0.23%
Nine (9)	0.11%	0.02%	0.03%	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.06%
Ten or More (10+)	0.36%	0.30%	0.24%	0.26%	0.49%	0.51%	0.00%	0.00%	0.00%	0.31%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 15: Including YOU, how many people in your household are employed full/part-time?

Student Status										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Not a student	60.91%	73.65%	49.71%	74.05%	67.25%	63.34%	72.47%	76.88%	70.84%	63.44%
Yes - Full Time college/university	2.37%	1.74%	5.13%	1.21%	2.63%	3.08%	1.90%	1.49%	8.20%	2.77%
Yes - Part Time college/university	20.22%	17.56%	35.69%	17.85%	15.58%	27.14%	14.21%	7.72%	20.96%	22.50%
Yes - vocational/technical/trade school	0.31%	0.23%	0.29%	0.21%	0.69%	2.62%	0.00%	0.00%	0.00%	0.35%
Yes - K - 12 th grade	11.47%	3.34%	5.52%	2.25%	7.37%	1.47%	6.76%	8.91%	0.00%	6.72%
Other	0.27%	0.14%	0.47%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.24%
Don't Know/Refuse	4.45%	3.34%	3.19%	4.29%	6.48%	2.35%	4.66%	5.00%	0.00%	3.97%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 16: What is your student status?

Driver's License										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
No	62.68%	36.05%	48.56%	21.26%	49.35%	38.55%	36.12%	37.57%	34.99%	47.25%
Yes	37.32%	63.95%	51.44%	78.74%	50.65%	61.45%	63.88%	62.43%	65.01%	52.75%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 17: Do you have a valid driver's license?

Age of Transit Passengers										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
17 and Under	8.11%	2.58%	4.55%	1.95%	5.85%	0.94%	3.70%	1.78%	0.00%	4.97%
18-24	29.31%	18.51%	34.43%	14.91%	20.02%	26.37%	25.91%	15.79%	23.90%	25.74%
25-34	22.28%	25.48%	30.34%	47.58%	29.22%	35.47%	31.74%	18.25%	17.13%	28.02%
35-44	17.80%	17.88%	12.76%	26.37%	12.93%	20.59%	19.36%	34.96%	12.76%	17.30%
45-54	11.53%	14.10%	7.85%	5.59%	14.19%	6.40%	9.22%	16.68%	7.16%	10.84%
55-64	7.24%	13.44%	4.77%	3.01%	10.71%	6.00%	6.82%	10.80%	25.71%	8.06%
65 or older	3.73%	8.00%	5.30%	0.60%	7.08%	4.22%	3.25%	1.73%	13.33%	5.07%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 18: What is your year of birth?

Gender of Transit Passengers										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Female	45.74%	40.33%	44.69%	34.25%	38.09%	43.41%	40.10%	31.44%	31.68%	42.38%
Male	54.11%	59.36%	54.99%	65.55%	61.51%	56.59%	59.90%	68.56%	63.66%	57.37%
Another Gender	0.07%	0.21%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.09%
Refuse	0.08%	0.11%	0.32%	0.00%	0.39%	0.00%	0.00%	0.00%	4.67%	0.16%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 19: What is your Gender?

Annual Household Income										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Less than \$10,000	11.18%	9.66%	10.34%	2.89%	14.46%	4.49%	7.00%	9.67%	7.45%	9.87%
\$10,000-\$24,999	10.46%	8.44%	5.83%	3.56%	9.16%	2.97%	7.76%	7.78%	7.89%	7.98%
\$25,000-\$34,999	9.12%	6.36%	4.69%	3.70%	10.01%	5.00%	7.67%	8.79%	2.45%	6.91%
\$35,000-\$39,999	7.20%	5.24%	3.32%	3.68%	3.83%	4.33%	5.74%	5.35%	1.91%	5.20%
\$40,000-\$49,999	6.74%	5.88%	4.24%	6.36%	6.94%	4.94%	7.69%	6.23%	0.00%	5.91%
\$50,000-\$59,999	6.56%	6.07%	6.43%	5.99%	8.37%	7.09%	5.77%	3.55%	15.86%	6.49%
\$60,000-\$74,999	7.05%	7.23%	7.12%	5.65%	6.31%	11.40%	11.56%	2.60%	4.44%	7.10%
\$75,000-\$99,999	5.95%	9.09%	9.85%	24.01%	6.31%	26.99%	14.76%	6.35%	10.66%	9.89%
\$100,000-\$149,999	3.35%	7.18%	8.43%	12.93%	3.30%	12.97%	7.58%	4.04%	0.00%	6.56%
\$150,000-\$199,999	1.57%	5.66%	3.81%	8.99%	1.84%	1.91%	6.42%	5.52%	4.87%	3.85%
\$200,000 or more	0.68%	4.58%	2.70%	3.47%	1.19%	1.52%	4.60%	1.26%	0.00%	2.45%
Refuse	30.14%	24.60%	33.24%	18.77%	28.27%	16.39%	13.46%	38.86%	44.46%	27.80%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 20: Which of the following best describes your total annual household income before taxes?

Speak a Language Other than English at Home										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
No	38.64%	89.69%	26.62%	89.76%	91.68%	14.09%	73.54%	74.25%	72.28%	56.66%
Yes	61.36%	10.31%	73.38%	10.24%	8.32%	85.91%	26.46%	25.75%	27.72%	43.34%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 21: Do you speak a language other than English at home?

English Ability										
	Hispanic, any race	Asian alone, non Hispanic	White alone, non Hispanic	Other, non Hispanic	Mixed race, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	African-American alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Very well	67.60%	72.51%	84.16%	57.31%	71.96%	85.87%	83.29%	84.59%	71.53%	70.54%
Well	12.45%	22.37%	11.33%	39.70%	24.99%	13.44%	15.74%	15.41%	28.47%	17.73%
Not well	14.02%	4.71%	4.51%	2.75%	3.05%	0.69%	0.97%	0.00%	0.00%	8.80%
Not at all	5.93%	0.41%	0.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	2.94%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 22: How well do you speak English?

Customer Satisfaction-Frequency of Service										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
1	1.93%	1.64%	4.16%	0.00%	4.19%	0.00%	0.00%	0.00%	0.00%	2.31%
2	5.67%	7.16%	6.15%	4.29%	1.33%	3.91%	24.42%	30.60%	0.00%	6.18%
3	17.77%	19.41%	14.85%	9.99%	14.76%	12.07%	22.56%	0.00%	100.00%	16.72%
4	34.40%	35.51%	28.37%	59.86%	35.07%	29.85%	10.43%	59.57%	0.00%	34.50%
5	40.23%	36.28%	46.47%	25.87%	44.65%	54.16%	42.59%	9.83%	0.00%	40.28%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 23: Customer Satisfaction-Frequency of Service

Customer Satisfaction-On-Time Performance										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	African-American alone, non Hispanic	Mixed race, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
1	0.27%	1.66%	2.11%	2.37%	0.00%	0.00%	5.91%	0.00%	0.00%	1.24%
2	5.97%	6.38%	4.34%	5.87%	1.54%	0.00%	9.36%	0.00%	0.00%	5.26%
3	19.88%	23.10%	15.77%	16.70%	14.56%	3.43%	17.30%	0.00%	100.00%	18.66%
4	36.27%	35.06%	29.75%	39.46%	60.65%	34.79%	36.66%	69.40%	0.00%	36.33%
5	37.60%	33.80%	48.03%	35.60%	23.26%	61.78%	30.78%	30.60%	0.00%	38.51%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 24: Customer Satisfaction-On-Time Performance

Customer Satisfaction-Personal Security/safety										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	African-American alone, non Hispanic	Mixed race, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
1	3.87%	3.43%	2.98%	4.26%	1.84%	0.00%	7.85%	9.83%	0.00%	3.45%
2	8.21%	7.71%	5.75%	3.84%	0.76%	6.38%	10.99%	0.00%	0.00%	6.70%
3	21.91%	19.03%	19.36%	12.64%	35.95%	7.24%	16.64%	10.76%	100.00%	20.44%
4	26.32%	31.74%	27.21%	50.35%	36.92%	31.88%	42.33%	48.81%	0.00%	30.55%
5	39.69%	38.09%	44.70%	28.91%	24.54%	54.50%	22.19%	30.60%	0.00%	38.86%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 25: Customer Satisfaction-Personal Security/safety

Customer Satisfaction-Vehicle Cleanliness										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	African-American alone, non Hispanic	Mixed race, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
1	10.88%	9.38%	4.85%	12.28%	8.13%	6.67%	9.82%	9.83%	0.00%	8.86%
2	12.22%	11.47%	8.72%	14.77%	5.43%	5.59%	5.52%	10.76%	0.00%	10.66%
3	25.19%	25.86%	18.73%	20.53%	25.35%	9.10%	31.03%	0.00%	100.00%	23.13%
4	22.73%	26.47%	29.90%	35.15%	37.41%	23.33%	35.97%	40.06%	0.00%	27.37%
5	28.97%	26.82%	37.80%	17.27%	23.68%	55.31%	17.66%	39.36%	0.00%	29.99%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 26: Customer Satisfaction-Vehicle Cleanliness

Customer Satisfaction-Quality of Stops										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	African-American alone, non Hispanic	Mixed race, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
1	4.37%	3.13%	4.60%	4.75%	0.38%	0.73%	0.00%	0.00%	0.00%	3.71%
2	6.75%	7.90%	3.56%	12.41%	2.25%	0.00%	10.99%	31.23%	0.00%	6.39%
3	18.62%	23.62%	17.36%	18.24%	28.11%	25.31%	15.48%	9.83%	100.00%	20.24%
4	30.12%	31.59%	27.69%	41.30%	35.86%	24.86%	36.97%	29.93%	0.00%	30.92%
5	40.15%	33.76%	46.79%	23.31%	33.40%	49.11%	36.55%	29.01%	0.00%	38.74%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 27: Customer Satisfaction-Quality of Stops

Customer Satisfaction-Overall Experience										
	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	African-American alone, non Hispanic	Mixed race, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
1	0.00%	2.94%	2.65%	2.39%	0.00%	0.00%	0.00%	0.00%	0.00%	1.50%
2	2.50%	2.43%	4.05%	4.00%	3.49%	0.00%	0.00%	0.00%	0.00%	2.89%
3	17.67%	20.93%	12.76%	17.52%	24.39%	17.33%	38.34%	9.83%	100.00%	18.07%
4	39.20%	44.55%	36.34%	51.18%	42.17%	30.07%	28.66%	71.29%	0.00%	40.54%
5	40.63%	29.14%	44.20%	24.91%	29.94%	52.60%	33.00%	18.88%	0.00%	36.99%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 28: Customer Satisfaction-Overall Experience

Customer Preference-To receive VTA Information										
	Hispanic, any race	Asian alone, non Hispanic	White alone, non Hispanic	African-American alone, non Hispanic	Mixed race, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
Facebook	1.55%	4.75%	2.41%	12.40%	3.38%	0.00%	0.00%	0.00%	0.00%	3.25%
Instagram	4.62%	1.23%	2.86%	6.68%	5.61%	0.00%	4.93%	29.93%	0.00%	3.66%
LinkedIn	0.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19%
NextDoor	0.00%	0.38%	0.48%	0.25%	9.05%	0.00%	0.00%	0.00%	0.00%	0.79%
Phone messages	4.07%	3.40%	6.70%	6.51%	8.85%	3.45%	6.16%	0.00%	100.00%	5.11%
Snapchat	0.17%	0.00%	0.00%	0.00%	6.12%	0.00%	0.00%	10.76%	0.00%	0.52%
Text messages	5.89%	11.39%	13.93%	19.07%	1.38%	12.66%	7.85%	0.00%	0.00%	9.78%
Twitter	0.72%	0.61%	1.41%	3.47%	1.89%	0.00%	0.00%	0.00%	0.00%	1.07%
VTA website (vta.org)	79.95%	76.21%	69.73%	51.61%	24.22%	83.90%	74.68%	40.43%	0.00%	70.94%
Youtube	2.50%	2.04%	2.48%	0.00%	39.49%	0.00%	6.38%	18.88%	0.00%	4.69%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 29: Customer Preference-To receive VTA Information

Transit On-Board Passenger Survey Results – By Age

Age of Transit Passengers	
17 and Under	4.97%
18-24	25.74%
25-34	28.02%
35-44	17.30%
45-54	10.84%
55-64	8.06%
65 or older	5.07%
Grand Total	100.00%

Table 30: What is your year of birth

Trip Purpose of Transit Passengers								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Home-Work	4.03%	20.03%	51.91%	57.86%	53.25%	48.92%	17.99%	40.54%
Home-Social/Rec	6.75%	7.61%	9.37%	8.98%	8.96%	8.51%	19.52%	9.12%
Home-Shopping	3.58%	4.11%	4.34%	5.45%	6.06%	10.26%	20.49%	5.92%
Home-School	67.87%	49.88%	13.98%	3.07%	2.42%	1.15%	1.66%	21.10%
Home-Other	5.16%	4.49%	7.20%	10.10%	12.57%	17.12%	25.57%	9.22%
work-Other	0.98%	5.57%	6.99%	8.20%	8.22%	5.10%	3.09%	6.32%
Hotel-based	0.24%	0.95%	1.33%	1.15%	0.75%	0.80%	0.96%	1.02%
Other to Other	11.39%	7.36%	4.88%	5.20%	7.75%	8.15%	10.71%	6.77%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 31: Where are you coming from/going to?

Method of Getting to Transit for Origin								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Walked all the way	92.75%	87.93%	85.26%	84.42%	82.25%	82.12%	87.72%	85.72%
Was dropped off (Not a service)	3.67%	6.03%	6.57%	6.83%	5.27%	4.59%	5.35%	5.97%
Bike (PERSONAL BIKE)	1.97%	3.00%	4.69%	5.20%	7.04%	5.29%	1.76%	4.36%
Drove alone and parked	0.00%	1.93%	2.04%	2.20%	3.94%	6.01%	3.08%	2.52%
Skateboard/Longboard	1.41%	0.71%	0.27%	0.08%	0.00%	0.00%	0.00%	0.34%
Drove or rode with others and parked	0.04%	0.15%	0.37%	0.36%	0.43%	0.12%	0.10%	0.27%
Scooter/Wheelchair	0.00%	0.02%	0.01%	0.18%	0.65%	1.12%	1.02%	0.25%
Used Uber or similar service	0.00%	0.12%	0.44%	0.36%	0.11%	0.08%	0.23%	0.25%
Bike (BIKE SHARE)	0.16%	0.08%	0.24%	0.07%	0.18%	0.46%	0.50%	0.19%
Shuttle	0.00%	0.02%	0.09%	0.20%	0.13%	0.21%	0.24%	0.11%
School Bus	0.00%	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%	0.01%
Taxi	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 32: How did you get from your origin to the very first bus/train you used for this one-way trip?

Method of Getting from Transit to Destination								
Row Labels	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Walk all the way	93.89%	90.24%	89.19%	87.23%	85.58%	85.05%	91.42%	88.74%
Bike (PERSONAL BIKE)	2.19%	2.80%	3.71%	4.62%	6.76%	4.36%	2.74%	3.89%
Be picked up by someone (Not a service)	2.01%	3.73%	4.42%	4.59%	3.26%	3.10%	2.52%	3.82%
Get in a parked vehicle and drive alone	0.00%	1.72%	1.18%	1.94%	2.68%	4.33%	1.74%	1.84%
Skateboard/Longboard	1.84%	0.77%	0.24%	0.08%	0.00%	0.00%	0.00%	0.37%
Be picked up by Uber or similar service	0.00%	0.27%	0.48%	0.55%	0.32%	0.25%	0.18%	0.36%
Get in a parked vehicle and drive with others	0.00%	0.24%	0.19%	0.50%	0.45%	0.12%	0.00%	0.26%
Scooter/Wheelchair	0.00%	0.00%	0.05%	0.18%	0.50%	1.09%	1.02%	0.24%
Shuttle	0.00%	0.09%	0.24%	0.27%	0.35%	0.60%	0.14%	0.23%
Bike (BIKE SHARE)	0.07%	0.09%	0.23%	0.04%	0.10%	0.31%	0.08%	0.14%
Walked all the way	0.00%	0.00%	0.00%	0.00%	0.00%	0.79%	0.00%	0.06%
Taxi	0.00%	0.05%	0.06%	0.00%	0.00%	0.00%	0.17%	0.04%

Table 33: How did you get to your destination from your very last bus/train you used for this one-way trip?

Number of Transfers From Origin to Route Surveyed								
Row Labels	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
(0) None	91.09%	88.76%	89.38%	89.39%	85.97%	82.84%	83.39%	88.11%
(1) One	8.02%	10.44%	9.92%	9.83%	12.69%	15.58%	15.42%	10.98%
(2) Two	0.89%	0.78%	0.66%	0.68%	1.29%	1.48%	1.14%	0.86%
(3) Three	0.00%	0.03%	0.04%	0.11%	0.06%	0.09%	0.05%	0.05%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 34: Number of Transfers (Before)

Number of Transfers From Route Surveyed to Destination								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
(0) None	91.31%	87.66%	86.78%	85.57%	83.11%	82.47%	86.68%	86.27%
(1) One	8.09%	11.64%	12.14%	13.76%	15.64%	16.24%	12.24%	12.81%
(2) Two	0.60%	0.67%	1.01%	0.67%	1.15%	1.26%	1.03%	0.88%
(3) Three	0.00%	0.03%	0.07%	0.00%	0.10%	0.04%	0.05%	0.05%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 35: Number of Transfers (After)

Total Number of Transfers for Trip								
Row Labels	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
0	83.01%	77.59%	77.38%	76.10%	70.88%	67.62%	71.63%	75.71%
1	14.90%	19.87%	19.78%	21.43%	24.92%	27.64%	24.97%	21.30%
2	2.09%	2.35%	2.57%	2.24%	3.84%	4.19%	2.86%	2.72%
3 or More	0.00%	0.19%	0.27%	0.23%	0.35%	0.56%	0.54%	0.28%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 36: Number of Transfers (Total)

Boarding Time for Routes Surveyed								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
1 - 5 am	0.00%	0.00%	0.00%	0.12%	0.36%	0.03%	0.00%	0.06%
5 - 6 am	0.17%	0.79%	2.66%	3.26%	4.27%	4.53%	0.92%	2.40%
6 - 7 am	5.21%	3.82%	5.42%	7.18%	8.92%	10.22%	5.66%	6.08%
7 - 8 am	16.69%	6.67%	7.14%	9.36%	8.03%	7.62%	4.44%	7.87%
8 - 9 am	10.51%	7.96%	7.98%	7.88%	8.02%	7.11%	5.91%	7.91%
9 - 10 am	3.40%	6.92%	6.11%	4.60%	4.33%	4.06%	6.85%	5.60%
10 - 11 am	3.02%	6.54%	5.06%	4.81%	4.89%	5.95%	7.74%	5.49%
11 am - 12 pm	1.07%	7.29%	5.17%	4.38%	4.76%	5.00%	8.99%	5.51%
12 - 1 pm	4.03%	8.28%	6.60%	5.43%	6.43%	6.44%	10.36%	6.86%
1 - 2 pm	6.76%	11.01%	7.29%	7.06%	5.91%	6.95%	10.34%	8.16%
2 - 3 pm	12.25%	7.47%	7.31%	6.31%	5.76%	7.60%	8.58%	7.34%
3 - 4 pm	17.26%	9.09%	7.44%	7.36%	7.78%	7.62%	7.02%	8.37%
4 - 5 pm	8.94%	6.76%	7.45%	8.07%	7.79%	8.74%	8.07%	7.63%
5 - 6 pm	4.95%	6.39%	7.61%	8.68%	8.55%	7.31%	5.22%	7.30%
6 - 7 pm	2.62%	4.08%	6.94%	4.89%	6.13%	4.67%	2.74%	5.15%
7 - 8 pm	0.89%	1.76%	2.93%	2.40%	2.46%	1.45%	2.49%	2.25%
8 - 9 pm	0.83%	1.78%	2.52%	2.98%	1.88%	1.49%	0.68%	2.08%
9 - 10 pm	0.52%	2.19%	2.10%	2.89%	1.67%	1.56%	1.18%	2.04%
10 - 11 pm	0.63%	0.89%	1.68%	2.05%	1.38%	1.02%	1.64%	1.40%
11 pm - 12 am	0.24%	0.31%	0.53%	0.18%	0.54%	0.60%	0.72%	0.42%
12 - 1 am	0.00%	0.00%	0.05%	0.13%	0.13%	0.04%	0.46%	0.08%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 37: What time did you get on this bus/train?

Fare Type								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
BY CASH OR PAPER	33.35%	16.03%	21.32%	25.33%	24.16%	24.80%	23.23%	21.94%
BY CLIPPER	65.33%	83.36%	78.39%	74.17%	74.95%	74.89%	75.87%	77.51%
BY MOBILE TICKET	1.33%	0.61%	0.29%	0.50%	0.89%	0.32%	0.90%	0.56%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 38: What type of fare did you use for this one-way trip?

Fare Category								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Adult	0.00%	90.09%	99.37%	98.46%	95.13%	92.52%	25.28%	87.12%
Disabled/Medicare Card Holder (RTC)	0.25%	0.19%	0.63%	1.54%	4.87%	7.48%	7.19%	2.00%
Senior (65+)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	67.53%	3.43%
Youth (5-18)	99.75%	9.72%	0.00%	0.00%	0.00%	0.00%	0.00%	7.45%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 39: Type of fare category respondent paid

Vehicle Ownership								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
None (0)	11.96%	19.10%	26.11%	23.69%	36.98%	39.12%	51.30%	26.69%
One (1)	21.09%	20.45%	24.03%	24.99%	23.31%	23.86%	20.99%	22.88%
Two (2)	44.64%	36.59%	30.83%	32.13%	24.94%	23.22%	16.10%	31.22%
Three (3)	13.27%	16.28%	12.37%	12.84%	9.24%	7.68%	6.30%	12.48%
Four (4)	6.65%	4.92%	3.83%	3.94%	2.82%	3.44%	3.00%	4.09%
Five or More (5+)	2.39%	2.67%	2.82%	2.41%	2.71%	2.68%	2.29%	2.64%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 40: How many vehicles (cars, trucks, or motorcycles) are available to your household?

Ability to Use a Vehicle to Complete Trip								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
No	93.95%	75.00%	65.97%	66.20%	61.37%	58.47%	68.28%	69.38%
Yes	6.05%	25.00%	34.03%	33.80%	38.63%	41.53%	31.72%	30.62%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 41: Could you have used one of these vehicles to complete this trip? (Excludes Don't Know)

Household Size								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
One (1)	0.73%	4.54%	8.92%	8.71%	17.19%	24.91%	31.20%	10.67%
Two (2)	4.36%	8.26%	19.62%	17.31%	19.32%	23.08%	26.43%	16.13%
Three (3)	17.19%	20.86%	21.76%	20.20%	19.75%	16.19%	11.56%	19.85%
Four (4)	27.55%	25.70%	17.34%	17.92%	14.64%	12.08%	8.51%	18.93%
Five (5)	25.26%	20.07%	14.90%	15.21%	10.97%	8.29%	6.94%	15.44%
Six (6)	12.44%	10.61%	10.58%	11.45%	8.25%	5.93%	5.01%	9.92%
Seven (7)	4.94%	4.28%	2.97%	3.24%	3.13%	3.15%	2.53%	3.46%
Eight (8)	2.67%	2.73%	1.86%	2.35%	2.19%	1.57%	1.98%	2.23%
Nine (9)	3.36%	1.43%	0.99%	1.60%	2.24%	1.61%	2.53%	1.59%
Ten or More (10+)	1.49%	1.52%	1.06%	2.00%	2.33%	3.18%	3.31%	1.79%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 42: Including you, how many people live in your household?

Employed in Household								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
None (0)	2.40%	4.60%	3.38%	3.50%	7.70%	13.30%	38.30%	6.70%
One (1)	11.88%	12.15%	16.44%	17.32%	26.01%	29.46%	23.87%	17.73%
Two (2)	45.86%	30.66%	38.84%	45.02%	36.47%	28.69%	17.99%	36.02%
Three (3)	22.62%	29.24%	23.62%	19.37%	14.74%	16.53%	9.36%	22.02%
Four (4)	10.25%	15.93%	11.22%	8.82%	7.86%	6.54%	4.83%	10.90%
Five (5)	5.07%	4.66%	4.72%	3.68%	4.10%	2.51%	2.29%	4.18%
Six (6)	1.58%	1.60%	0.90%	1.39%	1.76%	1.73%	1.89%	1.41%
Seven (7)	0.00%	0.51%	0.36%	0.37%	0.67%	0.73%	0.36%	0.44%
Eight (8)	0.22%	0.29%	0.12%	0.29%	0.25%	0.30%	0.11%	0.23%
Nine (9)	0.12%	0.03%	0.06%	0.08%	0.08%	0.01%	0.00%	0.06%
Ten or More (10+)	0.00%	0.33%	0.35%	0.14%	0.35%	0.20%	1.00%	0.31%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 43: Including YOU, how many people in your household are employed full/part-time?

Student Status								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Not a student	1.60%	21.21%	68.80%	89.03%	95.81%	97.90%	97.53%	63.44%
Yes - Full Time college/university	0.26%	7.26%	2.75%	0.42%	0.24%	0.20%	0.05%	2.77%
Yes - Part Time college/university	5.94%	58.61%	20.33%	5.15%	3.21%	1.60%	1.17%	22.50%
Yes - vocational/technical/trade school	0.25%	0.65%	0.52%	0.04%	0.02%	0.23%	0.00%	0.35%
Yes - K - 12 th grade	88.06%	7.90%	0.53%	0.34%	0.43%	0.08%	1.02%	6.72%
Other	0.00%	0.38%	0.30%	0.08%	0.29%	0.00%	0.24%	0.24%
Don't Know/Refuse	3.89%	4.00%	6.76%	4.95%	0.00%	0.00%	0.00%	3.97%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 44: What is your student status?

Driver's License								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
No	96.78%	54.28%	35.33%	35.80%	48.41%	48.48%	63.73%	47.25%
Yes	3.22%	45.72%	64.67%	64.20%	51.59%	51.52%	36.27%	52.75%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 45 Do you have a valid driver's license?

Ethnicity of Transit Passengers								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Hispanic, any race	53.19%	37.10%	25.90%	33.52%	34.67%	29.25%	23.96%	32.58%
White alone, non Hispanic	12.40%	17.18%	21.73%	24.68%	31.09%	39.84%	37.70%	23.89%
Asian alone, non Hispanic	20.60%	30.07%	24.34%	16.58%	16.29%	13.31%	23.48%	22.48%
Mixed race, non Hispanic	3.41%	5.04%	14.77%	13.26%	4.48%	3.25%	1.03%	8.70%
African-American alone, non Hispanic	8.17%	5.39%	7.23%	5.18%	9.07%	9.21%	9.68%	6.93%
Other, non Hispanic	0.48%	2.57%	3.17%	2.98%	1.48%	1.87%	2.09%	2.51%
Native Hawaiian or Pacific Islander alone, non Hispanic	1.50%	2.03%	2.29%	2.26%	1.72%	1.71%	1.30%	2.02%
American Indian alone, non Hispanic	0.25%	0.42%	0.45%	1.39%	1.06%	0.92%	0.23%	0.69%
No Response	0.00%	0.19%	0.12%	0.15%	0.13%	0.65%	0.53%	0.20%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 46: What is your Race/Ethnicity?

Gender of Transit Passengers								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Female	37.53%	48.17%	39.81%	38.86%	43.30%	40.46%	45.10%	42.38%
Male	62.21%	51.59%	60.01%	60.95%	56.49%	58.86%	54.64%	57.37%
Another Gender	0.27%	0.12%	0.09%	0.05%	0.07%	0.03%	0.00%	0.09%
Refuse	0.00%	0.13%	0.09%	0.14%	0.14%	0.64%	0.26%	0.16%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 47: What is your gender?

Annual Household Income								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Less than \$10,000	9.33%	12.74%	7.27%	6.00%	10.96%	12.14%	17.40%	9.87%
\$10,000-\$24,999	2.04%	7.63%	7.84%	7.29%	10.25%	9.75%	11.14%	7.98%
\$25,000-\$34,999	3.67%	6.22%	6.71%	7.32%	9.40%	7.24%	7.40%	6.91%
\$35,000-\$39,999	4.38%	4.58%	5.53%	5.89%	6.02%	4.35%	4.55%	5.20%
\$40,000-\$49,999	4.26%	5.93%	6.03%	7.22%	5.94%	4.98%	3.64%	5.91%
\$50,000-\$59,999	8.79%	8.02%	5.73%	5.92%	5.38%	6.84%	4.32%	6.49%
\$60,000-\$74,999	9.62%	7.78%	7.46%	6.91%	5.93%	5.08%	5.59%	7.10%
\$75,000-\$99,999	8.34%	7.93%	13.40%	12.02%	7.40%	7.05%	4.50%	9.89%
\$100,000-\$149,999	2.76%	5.18%	8.11%	8.93%	6.06%	5.40%	3.56%	6.56%
\$150,000-\$199,999	1.33%	1.58%	4.66%	6.67%	3.94%	4.60%	2.42%	3.85%
\$200,000 or more	1.65%	1.16%	2.45%	3.54%	3.44%	3.93%	1.55%	2.45%
Refuse	43.84%	31.26%	24.81%	22.29%	25.29%	28.64%	33.94%	27.80%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 48: Which of the following best describes your total annual household income before taxes?

Speak a Language Other than English at Home								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
No	43.87%	48.23%	62.31%	61.77%	58.90%	60.65%	52.19%	56.66%
Yes	56.13%	51.77%	37.69%	38.23%	41.10%	39.35%	47.81%	43.34%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 49: Do you speak a language other than English at home?

English Ability								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Very well	86.07%	79.48%	69.92%	51.15%	49.70%	44.69%	32.23%	65.00%
Well	4.24%	10.86%	17.01%	24.47%	20.20%	17.79%	26.22%	16.34%
Not well	2.15%	2.43%	4.88%	10.23%	16.55%	20.85%	22.17%	8.11%
Not at all	0.00%	0.30%	2.24%	4.04%	3.56%	8.05%	8.86%	2.71%
Don't Know/Refuse	7.54%	6.93%	5.94%	10.11%	9.98%	8.61%	10.53%	7.85%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 50: How well do you speak English?

Customer Satisfaction-Frequency of Service								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
1	0.56%	2.23%	1.88%	2.40%	1.93%	2.35%	6.41%	2.31%
2	0.00%	5.90%	7.97%	9.75%	2.71%	5.54%	3.69%	6.18%
3	17.95%	14.00%	16.54%	15.08%	24.73%	18.78%	11.33%	16.72%
4	37.58%	36.83%	37.81%	33.96%	32.24%	33.79%	16.13%	34.50%
5	43.91%	41.05%	35.80%	38.81%	38.39%	39.54%	62.44%	40.28%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 51: Customer Satisfaction-Frequency of Service

Customer Satisfaction-On-Time Performance								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
1	0.56%	0.62%	1.69%	0.00%	2.74%	2.54%	0.00%	1.24%
2	2.38%	5.40%	8.19%	5.49%	0.87%	6.43%	0.65%	5.26%
3	19.14%	16.57%	19.08%	22.91%	22.63%	15.55%	11.49%	18.66%
4	36.84%	39.71%	35.27%	37.05%	35.65%	36.47%	27.19%	36.33%
5	41.08%	37.70%	35.76%	34.55%	38.10%	39.01%	60.68%	38.51%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 52: Customer Satisfaction-On-Time Performance

Customer Satisfaction-Personal Security/safety								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
1	0.59%	2.42%	2.43%	2.90%	8.70%	4.08%	4.00%	3.45%
2	2.51%	6.42%	9.27%	4.91%	4.51%	8.13%	6.55%	6.70%
3	9.98%	21.79%	20.73%	25.51%	24.45%	16.97%	8.98%	20.44%
4	43.98%	30.21%	30.91%	30.00%	25.13%	30.07%	31.58%	30.55%
5	42.94%	39.16%	36.65%	36.68%	37.20%	40.76%	48.88%	38.86%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 53: Customer Satisfaction-Personal Security/safety

Customer Satisfaction-Vehicle Cleanliness								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
1	6.51%	10.67%	8.09%	8.47%	8.63%	9.74%	7.31%	8.86%
2	4.84%	9.35%	12.65%	12.32%	13.43%	10.00%	3.54%	10.66%
3	20.09%	21.89%	25.79%	28.54%	25.43%	18.88%	8.49%	23.13%
4	44.72%	24.63%	26.88%	22.64%	22.61%	32.38%	36.83%	27.37%
5	23.85%	33.46%	26.60%	28.03%	29.90%	29.00%	43.83%	29.99%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 54: Customer Satisfaction-Vehicle Cleanliness

Customer Satisfaction-Quality of Stops								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
1	0.00%	3.86%	3.49%	5.39%	4.62%	2.51%	3.52%	3.71%
2	6.26%	3.83%	8.79%	6.93%	3.15%	9.59%	5.05%	6.39%
3	16.23%	19.43%	22.51%	20.42%	28.09%	17.29%	6.52%	20.24%
4	35.73%	28.59%	29.28%	35.46%	26.87%	36.01%	29.75%	30.92%
5	41.79%	44.29%	35.93%	31.79%	37.27%	34.60%	55.15%	38.74%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 55: Customer Satisfaction-Quality of Stops

Customer Satisfaction-Overall Experience								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
1	0.00%	1.00%	1.60%	0.86%	2.85%	1.59%	3.03%	1.50%
2	0.60%	0.24%	5.25%	4.36%	2.74%	3.20%	0.64%	2.89%
3	5.29%	15.51%	23.31%	22.28%	22.81%	9.87%	10.98%	18.07%
4	52.08%	44.68%	34.88%	40.79%	36.78%	51.80%	25.97%	40.54%
5	42.03%	38.57%	34.95%	31.71%	34.83%	33.54%	59.39%	36.99%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 56: Customer Satisfaction-Overall Experience

Customer Preference-To receive VTA Information								
	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
Facebook	1.19%	2.43%	4.06%	2.86%	4.28%	1.46%	6.77%	3.25%
Instagram	9.60%	7.31%	3.44%	3.23%	0.45%	0.00%	0.00%	3.66%
LinkedIn	0.00%	0.00%	0.71%	0.00%	0.00%	0.00%	0.00%	0.19%
NextDoor	0.00%	0.34%	2.34%	0.56%	0.11%	0.00%	0.00%	0.79%
Phone messages	0.00%	2.03%	4.05%	5.98%	6.24%	6.29%	18.49%	5.11%
Snapchat	0.00%	1.56%	0.00%	0.45%	0.78%	0.00%	0.00%	0.52%
Text messages	19.26%	9.29%	7.49%	10.43%	8.04%	12.64%	9.41%	9.78%
Twitter	4.02%	1.69%	1.64%	0.22%	0.00%	0.00%	0.00%	1.07%
VTA website (vta.org)	64.77%	73.41%	67.85%	68.12%	76.26%	78.60%	63.65%	70.94%
Youtube	1.16%	1.95%	8.42%	8.16%	3.84%	1.00%	1.68%	4.69%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 57: Customer Preference-To receive VTA Information

Transit On-Board Passenger Survey Results – By Income

Annual Household Income			
Less than \$10,000	9.87%	\$75,000-\$99,999	9.89%
\$10,000-\$24,999	7.98%	\$100,000-\$149,999	6.56%
\$25,000-\$34,999	6.91%	\$150,000-\$199,999	3.85%
\$35,000-\$39,999	5.20%	\$200,000 or more	2.45%
\$40,000-\$49,999	5.91%	Refuse	27.80%
\$50,000-\$59,999	6.49%	Grand Total	100.00%
\$60,000-\$74,999	7.10%		

Table 58: Which of the following best describes your total annual household income before taxes

	Trip Purpose												
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
Home-Work	17.93%	39.81%	44.26%	43.71%	45.78%	40.76%	42.00%	50.14%	53.84%	58.89%	57.54%	35.13%	40.54%
Home-Social/Rec	11.64%	6.52%	7.91%	9.48%	9.67%	6.98%	6.34%	7.94%	7.13%	7.85%	9.17%	11.36%	9.12%
Home-Shopping	8.95%	8.22%	7.54%	6.12%	6.71%	3.57%	4.67%	4.02%	3.05%	2.32%	3.10%	6.54%	5.92%
Home-School	29.55%	15.80%	16.63%	16.71%	17.47%	25.20%	23.62%	17.14%	16.24%	11.08%	12.85%	25.39%	21.10%
Home-Other	16.83%	13.97%	11.30%	10.40%	8.45%	7.61%	7.13%	5.92%	6.53%	5.98%	3.86%	8.21%	9.22%
work-Other	3.79%	6.67%	5.89%	8.00%	4.77%	7.55%	9.28%	8.66%	8.36%	9.49%	8.00%	4.29%	6.32%
Hotel-based	0.46%	0.67%	0.34%	0.67%	0.09%	0.47%	0.54%	0.69%	0.59%	1.21%	2.06%	2.11%	1.02%
Other to Other	10.85%	8.34%	6.13%	4.91%	7.08%	7.87%	6.43%	5.48%	4.25%	3.19%	3.41%	6.98%	6.77%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 59: Where are you coming from/going to?

Method of Getting to Transit from Origin													
	Less than \$10,000	\$10,000- \$24,999	\$25,000- \$34,999	\$35,000- \$39,999	\$40,000- \$49,999	\$50,000- \$59,999	\$60,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	\$200,000 or more	Refuse	Grand Total
Walked all the way	88.94%	87.64%	86.14%	86.33%	84.32%	87.53%	83.57%	81.78%	82.16%	76.50%	69.46%	89.18%	85.72%
Was dropped off (Not a service)	3.57%	4.32%	5.18%	7.39%	6.43%	6.48%	6.95%	8.68%	5.42%	10.07%	11.02%	4.91%	5.97%
Bike (PERSONAL BIKE)	4.61%	4.93%	5.82%	4.53%	4.92%	3.65%	4.91%	5.51%	4.51%	6.88%	5.81%	2.71%	4.36%
Drove alone and parked	1.79%	1.17%	1.28%	1.34%	2.18%	1.73%	2.86%	2.82%	6.55%	5.00%	10.40%	1.76%	2.52%
Skateboard/Longboard	0.15%	0.56%	0.16%	0.07%	0.86%	0.23%	0.47%	0.00%	0.31%	0.63%	0.52%	0.40%	0.34%
Drove or rode with others and parked	0.00%	0.08%	0.16%	0.00%	0.18%	0.07%	0.75%	0.65%	0.42%	0.57%	0.41%	0.22%	0.27%
Scooter/Wheelchair	0.79%	0.58%	0.44%	0.08%	0.00%	0.15%	0.21%	0.00%	0.09%	0.00%	0.00%	0.22%	0.25%
Used Uber or similar service	0.14%	0.37%	0.17%	0.25%	0.73%	0.00%	0.25%	0.10%	0.46%	0.00%	0.54%	0.24%	0.25%
Bike (BIKE SHARE)	0.01%	0.27%	0.48%	0.00%	0.33%	0.05%	0.00%	0.46%	0.00%	0.00%	0.27%	0.22%	0.19%
Shuttle	0.00%	0.07%	0.17%	0.00%	0.05%	0.10%	0.04%	0.00%	0.08%	0.34%	1.05%	0.13%	0.11%
School Bus	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.50%	0.00%	0.01%
Taxi	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%
School Bus	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 60: How did you get from your origin to the very first bus/train you used for this one-way trip?

Method of Getting from Transit to Destination													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
Walk all the way	91.94%	88.91%	88.57%	88.59%	86.13%	90.29%	87.97%	88.72%	85.48%	81.90%	77.59%	90.73%	88.74%
Bike (PERSONAL BIKE)	4.15%	6.26%	5.71%	4.28%	4.82%	3.64%	4.07%	3.20%	3.68%	4.71%	4.42%	2.55%	3.89%
Be picked up by someone (Not a service)	1.73%	2.20%	3.73%	5.02%	5.76%	3.76%	4.50%	4.01%	4.22%	6.97%	9.62%	3.16%	3.82%
Get in a parked vehicle and drive alone	0.65%	1.03%	0.75%	0.72%	0.66%	1.28%	2.22%	2.43%	4.62%	4.35%	5.42%	1.72%	1.84%
Skateboard/Longboard	0.19%	0.56%	0.16%	0.25%	0.86%	0.23%	0.47%	0.00%	0.40%	0.79%	0.52%	0.42%	0.37%
Be picked up by Uber or similar service	0.34%	0.23%	0.46%	0.67%	1.53%	0.09%	0.17%	0.25%	0.08%	0.26%	0.00%	0.35%	0.36%
Get in a parked vehicle and drive with others	0.20%	0.08%	0.05%	0.00%	0.04%	0.06%	0.39%	0.60%	0.32%	0.26%	0.40%	0.35%	0.26%
Scooter/Wheelchair	0.76%	0.51%	0.44%	0.00%	0.00%	0.15%	0.21%	0.00%	0.09%	0.00%	0.00%	0.22%	0.24%
Shuttle	0.00%	0.15%	0.00%	0.13%	0.00%	0.20%	0.00%	0.37%	1.11%	0.76%	0.55%	0.17%	0.23%
Bike (BIKE SHARE)	0.06%	0.07%	0.14%	0.34%	0.20%	0.31%	0.00%	0.39%	0.00%	0.00%	0.00%	0.10%	0.14%
Walked all the way	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.31%	0.12%	0.06%
Taxi	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.15%	0.11%	0.04%
School Bus	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 61: How did you get to your destination from your very last bus/train you used for this one-way trip?

Number of Transfers From Origin to Route Surveyed													
Row Labels	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
(0) None	89.22%	85.93%	84.84%	85.73%	88.30%	87.43%	88.64%	90.88%	90.28%	91.02%	89.81%	87.52%	88.11%
(1) One	9.98%	13.13%	13.57%	13.16%	11.08%	12.15%	10.59%	8.47%	9.06%	8.04%	9.97%	11.31%	10.98%
(2) Two	0.79%	0.91%	1.59%	0.96%	0.61%	0.40%	0.73%	0.65%	0.60%	0.94%	0.22%	1.07%	0.86%
(3) Three	0.01%	0.03%	0.00%	0.14%	0.00%	0.02%	0.05%	0.00%	0.07%	0.00%	0.00%	0.11%	0.05%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 62: Number of Transfers (Before)

Number of Transfers From Route Surveyed to Destination													
Row Labels	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
(0) None	87.08%	85.53%	84.26%	88.00%	85.16%	83.52%	86.22%	87.03%	87.40%	88.34%	88.44%	86.25%	86.27%
(1) One	12.17%	13.49%	14.78%	11.10%	13.85%	15.44%	12.76%	12.07%	11.46%	10.69%	11.43%	12.83%	12.81%
(2) Two	0.74%	0.97%	0.96%	0.82%	0.95%	1.04%	1.02%	0.86%	1.06%	0.95%	0.13%	0.82%	0.88%
(3) Three	0.00%	0.01%	0.00%	0.08%	0.05%	0.00%	0.00%	0.04%	0.08%	0.02%	0.00%	0.10%	0.05%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 63: Number of Transfers (After)

Total Number of Transfers for Trip													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
0	78.06%	73.64%	70.58%	75.10%	74.94%	72.98%	75.76%	78.97%	78.42%	79.86%	79.10%	74.97%	75.71%
1	18.89%	22.46%	25.49%	21.70%	22.05%	23.60%	21.70%	18.77%	19.09%	17.73%	19.81%	21.95%	21.30%
2	2.80%	3.66%	3.85%	2.82%	2.88%	3.33%	2.32%	1.86%	2.28%	2.39%	1.00%	2.65%	2.72%
3 or More	0.26%	0.24%	0.09%	0.39%	0.13%	0.09%	0.21%	0.39%	0.21%	0.02%	0.10%	0.43%	0.28%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 64: Number of Transfers (Total)

Boarding Time for Routes Surveyed													
	Less than \$10,000	\$10,000- \$24,999	\$25,000- \$34,999	\$35,000- \$39,999	\$40,000- \$49,999	\$50,000- \$59,999	\$60,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	\$200,000 or more	Refuse	Grand Total
1 - 5 am	0.19%	0.02%	0.00%	0.05%	0.00%	0.00%	0.06%	0.00%	0.15%	0.00%	0.17%	0.07%	0.06%
5 - 6 am	1.89%	2.41%	3.28%	2.34%	3.27%	2.67%	2.30%	3.69%	3.32%	3.76%	1.93%	1.32%	2.40%
6 - 7 am	5.08%	6.40%	5.99%	7.91%	6.62%	6.70%	7.46%	7.12%	6.24%	9.03%	11.78%	4.09%	6.08%
7 - 8 am	7.05%	6.85%	8.24%	9.93%	10.26%	10.01%	10.04%	10.02%	9.51%	10.15%	10.93%	4.69%	7.87%
8 - 9 am	10.48%	8.28%	8.71%	8.81%	8.07%	8.59%	8.43%	8.99%	11.69%	11.48%	8.30%	4.39%	7.91%
9 - 10 am	7.91%	7.66%	5.71%	7.80%	5.24%	7.19%	6.94%	5.69%	7.89%	6.23%	4.48%	2.56%	5.60%
10 - 11 am	7.71%	8.47%	6.94%	6.68%	4.79%	5.69%	4.81%	6.60%	5.36%	5.40%	3.45%	3.36%	5.49%
11 am - 12 pm	9.28%	6.56%	5.19%	5.75%	5.84%	4.98%	5.36%	6.20%	4.47%	4.20%	1.04%	4.58%	5.51%
12 - 1 pm	9.99%	8.08%	7.96%	5.28%	6.64%	8.54%	5.95%	5.67%	4.74%	5.58%	5.57%	6.53%	6.86%
1 - 2 pm	11.20%	10.93%	10.12%	6.46%	7.87%	7.94%	6.96%	7.06%	7.29%	4.89%	5.72%	7.80%	8.16%
2 - 3 pm	6.94%	6.26%	7.24%	9.11%	9.27%	6.84%	7.08%	5.92%	5.95%	6.34%	6.46%	8.32%	7.34%
3 - 4 pm	6.07%	8.17%	7.50%	7.55%	7.80%	7.45%	7.43%	7.21%	7.68%	4.66%	10.32%	11.10%	8.37%
4 - 5 pm	5.00%	5.30%	5.51%	7.53%	4.08%	7.13%	8.77%	6.54%	8.47%	6.79%	8.11%	10.62%	7.63%
5 - 6 pm	3.07%	5.11%	5.02%	5.65%	6.04%	5.78%	7.25%	7.26%	7.54%	8.64%	11.02%	10.40%	7.30%
6 - 7 pm	2.59%	3.76%	3.19%	2.11%	5.30%	3.72%	4.86%	5.08%	4.23%	7.60%	4.49%	7.85%	5.15%
7 - 8 pm	0.78%	1.10%	1.82%	0.84%	2.23%	1.27%	1.57%	2.12%	1.96%	2.09%	2.46%	3.98%	2.25%
8 - 9 pm	1.05%	1.33%	1.93%	1.94%	2.85%	1.84%	1.69%	1.84%	1.56%	1.11%	1.13%	3.15%	2.08%
9 - 10 pm	1.50%	2.02%	2.78%	2.50%	1.93%	1.92%	1.73%	1.49%	1.18%	0.78%	1.48%	2.74%	2.04%
10 - 11 pm	1.48%	0.74%	2.05%	0.99%	1.30%	1.03%	0.98%	1.23%	0.65%	1.18%	0.90%	2.01%	1.40%
11 pm - 12 am	0.55%	0.44%	0.68%	0.75%	0.59%	0.71%	0.23%	0.24%	0.06%	0.09%	0.24%	0.38%	0.42%
12 - 1 am	0.20%	0.12%	0.16%	0.00%	0.00%	0.00%	0.10%	0.03%	0.05%	0.00%	0.00%	0.09%	0.08%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 65: What time did you get on this bus/train?

Fare Type													
	Less than \$10,000	\$10,000- \$24,999	\$25,000- \$34,999	\$35,000- \$39,999	\$40,000- \$49,999	\$50,000- \$59,999	\$60,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	\$200,000 or more	Refuse	Grand Total
BY CASH OR PAPER	24.78%	24.46%	22.91%	23.91%	22.42%	20.99%	21.25%	14.81%	13.35%	15.28%	16.23%	25.87%	21.94%
BY CLIPPER	74.93%	74.77%	76.79%	75.72%	76.63%	78.86%	77.86%	84.96%	86.36%	83.28%	82.98%	73.47%	77.51%
BY MOBILE TICKET	0.29%	0.77%	0.31%	0.37%	0.95%	0.15%	0.89%	0.23%	0.29%	1.45%	0.80%	0.66%	0.56%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 66: What type of fare did you use for this one-way trip?

Fare Category													
	Less than \$10,000	\$10,000- \$24,999	\$25,000- \$34,999	\$35,000- \$39,999	\$40,000- \$49,999	\$50,000- \$59,999	\$60,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	\$200,000 or more	Refuse	Grand Total
Adult	77.75%	88.27%	90.25%	90.17%	90.18%	87.91%	85.76%	92.15%	94.14%	94.79%	93.27%	83.23%	87.12%
Disabled/M edicare Card Holder (RTC)	6.95%	4.11%	1.30%	1.58%	1.55%	1.34%	0.88%	0.41%	0.34%	0.53%	0.10%	1.75%	2.00%
Senior (65+)	6.70%	5.16%	3.53%	2.26%	1.57%	2.04%	3.00%	1.49%	1.95%	2.02%	2.41%	4.11%	3.43%
Youth (5-18)	8.61%	2.46%	4.92%	5.98%	6.70%	8.71%	10.37%	5.95%	3.57%	2.66%	4.23%	10.91%	7.45%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 67: Type of fare category respondent paid

Vehicle Ownership													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
None (0)	59.52%	50.61%	40.52%	22.48%	20.15%	12.71%	11.80%	9.42%	9.02%	8.23%	7.54%	28.53%	26.69%
One (1)	16.69%	23.32%	25.39%	36.15%	29.16%	27.20%	23.29%	17.88%	18.19%	13.99%	10.83%	24.58%	22.88%
Two (2)	13.10%	16.15%	22.83%	30.30%	35.19%	37.64%	38.92%	40.18%	39.24%	45.58%	41.82%	31.94%	31.22%
Three (3)	6.11%	5.26%	6.74%	7.43%	11.32%	14.54%	16.09%	22.48%	21.91%	21.25%	23.69%	10.03%	12.48%
Four (4)	2.62%	2.93%	2.52%	2.04%	2.54%	4.77%	6.48%	6.46%	7.91%	6.80%	8.42%	2.77%	4.09%
Five or More (5+)	1.97%	1.73%	2.00%	1.61%	1.64%	3.14%	3.42%	3.58%	3.73%	4.15%	7.70%	2.14%	2.64%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 68: How many vehicles (cars, trucks, or motorcycles) are available to your household?

Ability to Use a Vehicle to Complete Trip													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
No	78.13%	70.07%	66.62%	75.97%	73.55%	73.11%	68.19%	70.33%	59.12%	57.77%	41.42%	73.05%	69.38%
Yes	21.87%	29.93%	33.38%	24.03%	26.45%	26.89%	31.81%	29.67%	40.88%	42.23%	58.58%	26.95%	30.62%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 69: Could you have used one of these vehicles to complete this trip?

Household Size													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
One (1)	26.35%	18.88%	13.20%	7.55%	7.20%	3.75%	4.50%	4.10%	4.43%	4.32%	2.54%	12.02%	10.67%
Two (2)	13.50%	19.32%	18.49%	16.67%	16.47%	13.65%	15.00%	13.86%	15.30%	15.64%	18.28%	17.15%	16.13%
Three (3)	16.02%	22.18%	23.17%	22.12%	19.76%	19.94%	16.75%	15.37%	16.97%	16.40%	15.62%	23.19%	19.85%
Four (4)	16.75%	15.77%	17.44%	16.43%	22.44%	20.43%	19.62%	16.41%	18.72%	15.46%	13.48%	22.10%	18.93%
Five (5)	11.52%	10.72%	13.01%	17.75%	14.14%	16.56%	16.94%	22.27%	19.78%	20.64%	20.19%	13.38%	15.44%
Six (6)	7.32%	5.38%	4.87%	8.87%	9.10%	10.12%	11.91%	18.03%	17.59%	21.94%	19.98%	5.97%	9.92%
Seven (7)	2.32%	2.63%	4.30%	5.26%	5.01%	5.20%	5.60%	3.54%	2.55%	3.21%	3.85%	2.47%	3.46%
Eight (8)	1.51%	2.52%	2.27%	2.62%	2.97%	3.29%	3.59%	2.83%	2.36%	1.53%	2.91%	1.35%	2.23%
Nine (9)	1.42%	1.15%	1.15%	1.57%	1.38%	4.44%	3.47%	2.44%	1.62%	0.72%	1.51%	0.60%	1.59%
Ten or More (10+)	3.29%	1.46%	2.10%	1.16%	1.54%	2.61%	2.63%	1.13%	0.67%	0.14%	1.65%	1.77%	1.79%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 70: Including you, how many people live in your household?

Employed in Household													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
None (0)	28.00%	10.58%	3.76%	1.96%	1.86%	1.93%	0.71%	0.65%	0.42%	0.30%	0.15%	8.43%	6.70%
One (1)	24.28%	28.32%	25.26%	16.63%	13.47%	10.68%	11.65%	10.14%	13.03%	17.84%	10.95%	19.18%	17.73%
Two (2)	22.55%	26.40%	30.64%	37.62%	32.42%	35.73%	36.49%	45.38%	41.89%	49.93%	54.27%	37.06%	36.02%
Three (3)	14.05%	18.67%	21.67%	26.78%	32.30%	28.54%	23.76%	24.40%	25.05%	21.51%	20.14%	19.55%	22.02%
Four (4)	5.86%	10.48%	11.98%	12.35%	14.96%	11.86%	17.02%	11.00%	10.87%	5.85%	7.02%	10.64%	10.90%
Five (5)	2.57%	3.94%	3.44%	2.86%	3.87%	7.88%	7.06%	6.04%	5.97%	3.23%	3.62%	2.79%	4.18%
Six (6)	1.77%	0.96%	1.61%	0.49%	0.73%	2.32%	2.56%	1.73%	1.73%	1.28%	1.88%	0.95%	1.41%
Seven (7)	0.24%	0.52%	0.93%	1.01%	0.20%	0.84%	0.46%	0.13%	0.74%	0.07%	1.22%	0.25%	0.44%
Eight (8)	0.28%	0.06%	0.44%	0.06%	0.18%	0.13%	0.12%	0.30%	0.11%	0.00%	0.00%	0.35%	0.23%
Nine (9)	0.00%	0.01%	0.10%	0.02%	0.00%	0.00%	0.00%	0.00%	0.17%	0.00%	0.12%	0.12%	0.06%
Ten or More (10+)	0.39%	0.06%	0.19%	0.22%	0.00%	0.09%	0.16%	0.22%	0.00%	0.00%	0.62%	0.69%	0.31%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 71: Including YOU, how many people in your household are employed full/part-time?

Employment Status													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
Not a student	52.58%	69.44%	68.15%	66.36%	66.39%	56.07%	59.88%	68.49%	72.27%	82.68%	78.38%	58.01%	63.44%
Yes - Full Time college/university	4.18%	3.13%	1.40%	2.17%	2.95%	2.40%	2.16%	2.23%	1.80%	0.29%	1.35%	3.72%	2.77%
Yes - Part Time college/university	28.85%	19.86%	17.96%	19.92%	21.33%	29.28%	24.32%	19.86%	19.39%	12.41%	12.90%	24.74%	22.50%
Yes - vocational/technical/trade school	0.37%	0.00%	0.53%	0.52%	0.42%	0.92%	0.12%	0.48%	0.94%	0.00%	0.00%	0.18%	0.35%
Yes - K - 12 th grade	8.29%	2.25%	5.97%	5.57%	5.48%	7.16%	9.43%	5.20%	2.65%	1.82%	3.76%	9.75%	6.72%
Other	0.38%	0.19%	0.03%	0.27%	0.08%	0.14%	0.11%	0.01%	0.09%	0.20%	0.56%	0.43%	0.24%
Don't Know/Refuse	5.34%	5.13%	5.96%	5.18%	3.35%	4.02%	3.99%	3.73%	2.85%	2.60%	3.04%	3.18%	3.97%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 72: What is your student status?

Driver's License													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
No	71.89%	61.58%	54.55%	49.82%	46.76%	51.91%	40.64%	25.05%	19.36%	13.36%	15.29%	54.79%	47.25%
Yes	28.11%	38.42%	45.45%	50.18%	53.24%	48.09%	59.36%	74.95%	80.64%	86.64%	84.71%	45.21%	52.75%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 73: Do you have a valid driver's license?

Age of Transit Passengers													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
17 and Under	4.70%	1.27%	2.63%	4.18%	3.58%	6.73%	6.73%	4.19%	2.09%	1.72%	3.35%	7.83%	4.97%
18-24	33.23%	24.59%	23.18%	22.67%	25.84%	31.84%	28.20%	20.65%	20.31%	10.54%	12.17%	28.93%	25.74%
25-34	20.66%	27.50%	27.21%	29.81%	28.62%	24.77%	29.43%	37.97%	34.65%	33.90%	28.06%	25.01%	28.02%
35-44	10.52%	15.80%	18.34%	19.60%	21.14%	15.80%	16.84%	21.04%	23.54%	29.96%	25.02%	13.87%	17.30%
45-54	12.04%	13.91%	14.74%	12.55%	10.89%	8.99%	9.05%	8.11%	10.02%	11.07%	15.23%	9.86%	10.84%
55-64	9.92%	9.85%	8.45%	6.75%	6.80%	8.50%	5.77%	5.75%	6.63%	9.63%	12.96%	8.30%	8.06%
65 or older	8.95%	7.08%	5.44%	4.44%	3.12%	3.37%	3.99%	2.31%	2.75%	3.18%	3.21%	6.19%	5.07%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 74: What is your year of birth?

Ethnicity of Transit Passengers													
	Less than \$10,000	\$10,000- \$24,999	\$25,000- \$34,999	\$35,000- \$39,999	\$40,000- \$49,999	\$50,000- \$59,999	\$60,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	\$200,000 or more	Refuse	Grand Total
Hispanic, any race	36.92%	42.70%	43.03%	45.15%	37.14%	32.97%	32.35%	19.59%	16.63%	13.26%	9.03%	35.32%	32.58%
White alone, non Hispanic	23.39%	25.27%	22.00%	24.10%	23.79%	22.36%	24.32%	21.96%	26.14%	35.08%	44.72%	21.14%	23.89%
Asian alone, non Hispanic	23.57%	16.42%	15.27%	14.38%	16.12%	22.28%	22.55%	22.38%	28.87%	22.22%	24.80%	26.87%	22.48%
Mixed race, non Hispanic	2.55%	3.88%	4.66%	6.17%	9.36%	8.03%	6.92%	21.12%	17.15%	20.28%	12.36%	5.87%	8.70%
African- American alone, non Hispanic	10.16%	7.96%	10.04%	5.11%	8.14%	8.94%	6.16%	4.42%	3.49%	3.31%	3.38%	7.05%	6.93%
Other, non Hispanic	1.14%	0.93%	1.81%	2.09%	2.10%	2.74%	4.03%	6.84%	4.96%	1.24%	1.56%	1.48%	2.51%
Native Hawaiian or Pacific Islander alone, non Hispanic	1.43%	1.96%	2.24%	2.23%	2.63%	1.80%	3.29%	3.01%	2.33%	3.36%	3.80%	0.98%	2.02%
American Indian alone, non Hispanic	0.67%	0.67%	0.87%	0.71%	0.73%	0.38%	0.25%	0.44%	0.42%	0.98%	0.36%	0.96%	0.69%
No Response	0.15%	0.20%	0.07%	0.07%	0.00%	0.50%	0.13%	0.22%	0.00%	0.26%	0.00%	0.33%	0.20%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 75: What is your Race/Ethnicity

Gender of Transit Passengers													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
Female	43.55%	45.49%	42.86%	45.73%	41.40%	50.68%	45.96%	37.49%	35.97%	29.66%	28.14%	43.95%	42.38%
Male	55.98%	54.35%	57.07%	54.18%	58.51%	49.28%	53.72%	62.51%	63.95%	70.34%	71.56%	55.53%	57.37%
Another Gender	0.17%	0.15%	0.07%	0.09%	0.00%	0.03%	0.32%	0.00%	0.07%	0.00%	0.31%	0.05%	0.09%
Refuse	0.30%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.46%	0.16%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 76: What is your gender?

Speak a Language Other than English at Home													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
No	57.53%	59.57%	54.47%	56.49%	58.17%	53.39%	50.92%	61.71%	62.15%	73.81%	73.13%	51.08%	56.66%
Yes	42.47%	40.43%	45.53%	43.51%	41.83%	46.61%	49.08%	38.29%	37.85%	26.19%	26.87%	48.92%	43.34%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 77: Do you speak a language other than English at home?

English Ability													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
Very well	65.22%	57.89%	50.01%	48.72%	60.28%	57.31%	65.57%	68.92%	72.40%	81.01%	77.86%	70.97%	65.00%
Well	15.30%	17.84%	20.12%	19.46%	13.43%	14.70%	15.40%	16.55%	14.52%	13.40%	14.84%	16.59%	16.34%
Not well	8.81%	13.35%	19.52%	17.50%	7.65%	6.88%	2.87%	1.29%	0.72%	0.00%	1.37%	8.31%	8.11%
Not at all	7.31%	5.51%	4.59%	4.58%	3.93%	2.98%	1.99%	0.00%	0.00%	0.00%	0.00%	1.35%	2.71%
Don't Know/Refuse	3.35%	5.40%	5.76%	9.73%	14.70%	18.13%	14.17%	13.25%	12.36%	5.59%	5.93%	2.77%	7.85%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 78: How well do you speak English?

Customer Satisfaction-Frequency of Service													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	
1	3.83%	0.00%	0.00%	3.35%	2.76%	1.33%	1.79%	3.17%	1.40%	6.21%	3.48%	2.61%	2.31%
2	2.54%	4.52%	2.02%	8.50%	11.73%	3.85%	0.80%	10.40%	6.25%	5.47%	21.10%	6.23%	6.18%
3	12.04%	28.12%	28.36%	9.19%	12.46%	24.22%	11.52%	9.83%	7.95%	16.26%	22.59%	17.56%	16.72%
4	32.45%	27.34%	34.29%	42.20%	43.69%	21.92%	32.31%	29.45%	52.88%	34.08%	25.39%	34.62%	34.50%
5	49.14%	40.02%	35.33%	36.76%	29.36%	48.68%	53.58%	47.15%	31.52%	37.98%	27.44%	38.99%	40.28%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 79: Customer Satisfaction-Frequency of Service

Customer Satisfaction-On-Time Performance													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	
1	2.57%	1.66%	0.00%	4.13%	0.00%	1.41%	0.00%	3.36%	0.33%	0.00%	1.92%	0.70%	1.24%
2	4.80%	5.62%	2.24%	7.26%	7.11%	0.70%	1.54%	7.18%	3.06%	8.69%	13.94%	5.92%	5.26%
3	18.35%	22.67%	25.35%	7.77%	19.01%	18.66%	17.80%	12.42%	14.85%	31.93%	7.54%	20.41%	18.66%
4	33.15%	35.85%	47.26%	49.10%	52.60%	26.48%	32.85%	31.88%	45.42%	31.96%	36.48%	31.96%	36.33%
5	41.13%	34.20%	25.16%	31.74%	21.28%	52.74%	47.81%	45.15%	36.34%	27.41%	40.11%	41.01%	38.51%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 80: Customer Satisfaction-On-Time Performance

Customer Satisfaction-Personal Security/safety													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	
1	1.45%	5.40%	4.43%	9.49%	5.81%	2.31%	5.90%	5.69%	2.37%	0.00%	1.78%	2.00%	3.45%
2	9.13%	5.27%	6.87%	11.12%	9.80%	9.06%	8.50%	9.69%	1.25%	4.67%	4.61%	5.46%	6.70%
3	11.16%	22.12%	32.79%	18.24%	17.11%	28.36%	12.61%	20.99%	19.90%	23.83%	24.32%	19.81%	20.44%
4	35.61%	32.65%	29.45%	23.88%	40.81%	19.01%	32.55%	24.43%	44.93%	36.20%	28.86%	27.19%	30.55%
5	42.65%	34.55%	26.45%	37.27%	26.46%	41.26%	40.43%	39.20%	31.55%	35.30%	40.43%	45.54%	38.86%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 81: Customer Satisfaction-Personal Security/safety

Customer Satisfaction-Vehicle Cleanliness													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	
1	7.95%	12.89%	11.41%	22.15%	10.68%	9.73%	14.86%	14.40%	3.24%	3.91%	12.68%	3.96%	8.86%
2	19.33%	16.27%	15.80%	8.54%	17.09%	10.80%	12.65%	4.63%	3.91%	6.41%	3.28%	9.11%	10.66%
3	13.40%	21.57%	27.34%	18.95%	24.79%	28.77%	10.24%	18.76%	27.43%	35.58%	22.30%	25.84%	23.13%
4	28.51%	19.22%	24.55%	27.29%	32.40%	16.59%	33.87%	33.62%	40.64%	30.15%	30.09%	23.93%	27.37%
5	30.81%	30.05%	20.89%	23.07%	15.04%	34.11%	28.38%	28.59%	24.78%	23.95%	31.65%	37.15%	29.99%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 82: Customer Satisfaction-Vehicle Cleanliness

Customer Satisfaction-Quality of Stops													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	
1	2.37%	7.15%	1.11%	1.76%	4.43%	10.27%	4.69%	7.17%	4.27%	0.00%	1.71%	1.86%	3.71%
2	6.61%	9.14%	6.54%	5.94%	16.27%	2.52%	3.42%	7.55%	5.23%	2.70%	4.61%	5.85%	6.39%
3	12.12%	17.24%	29.14%	18.44%	29.21%	14.91%	9.79%	18.18%	20.01%	17.48%	31.57%	23.00%	20.24%
4	36.41%	23.33%	38.84%	34.81%	31.41%	32.25%	29.11%	22.06%	37.03%	43.24%	23.85%	29.10%	30.92%
5	42.49%	43.14%	24.36%	39.05%	18.68%	40.05%	52.98%	45.04%	33.47%	36.58%	38.27%	40.19%	38.74%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 83: Customer Satisfaction-Quality of Stops

Customer Satisfaction-Overall Experience													
	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	
1	2.61%	0.39%	1.04%	4.00%	1.74%	1.34%	0.00%	4.30%	1.00%	0.00%	0.00%	1.10%	1.50%
2	0.34%	3.36%	2.31%	0.32%	3.12%	4.82%	2.06%	4.59%	3.53%	0.00%	7.58%	2.88%	2.89%
3	12.88%	20.74%	23.47%	9.55%	23.38%	16.37%	17.07%	17.40%	18.83%	25.45%	23.92%	17.20%	18.07%
4	39.53%	35.07%	53.01%	58.50%	52.62%	39.66%	31.02%	31.39%	46.29%	43.75%	30.08%	38.40%	40.54%
5	44.64%	40.44%	20.17%	27.62%	19.13%	37.81%	49.85%	42.32%	30.35%	30.80%	38.42%	40.42%	36.99%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 84: Customer Satisfaction-Overall Experience

Customer Preference-To receive VTA Information													
	Less than \$10,000	\$10,000- \$24,999	\$25,000- \$34,999	\$35,000- \$39,999	\$40,000- \$49,999	\$50,000- \$59,999	\$60,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	\$200,000 or more	Refuse	
Facebook	0.13%	2.70%	5.99%	0.84%	2.48%	2.90%	2.56%	2.34%	8.66%	0.75%	9.86%	2.79%	3.25%
Instagram	3.23%	1.78%	1.36%	8.94%	0.00%	5.28%	5.41%	5.91%	2.67%	12.42%	11.69%	2.10%	3.66%
LinkedIn	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.13%	0.00%	0.00%	0.00%	0.00%	0.19%
NextDoor	0.00%	0.00%	0.00%	0.00%	0.32%	0.00%	0.00%	3.40%	4.39%	0.00%	0.00%	0.29%	0.79%
Phone messages	5.13%	14.19%	3.32%	1.77%	2.67%	6.09%	0.92%	1.65%	2.64%	15.97%	17.30%	4.12%	5.11%
Snapchat	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.57%	1.34%	0.52%
Text messages	7.73%	8.77%	9.05%	4.81%	10.06%	3.91%	5.13%	3.38%	15.83%	6.43%	4.00%	14.22%	9.78%
Twitter	2.32%	1.85%	0.96%	0.00%	0.00%	0.00%	0.00%	2.63%	0.00%	1.28%	2.80%	0.91%	1.07%
VTA website (vta.org)	80.86%	70.72%	79.32%	79.24%	84.47%	80.01%	81.91%	59.94%	49.26%	58.90%	37.63%	72.54%	70.94%
Youtube	0.60%	0.00%	0.00%	4.40%	0.00%	1.81%	4.07%	18.62%	16.53%	4.26%	13.15%	1.69%	4.69%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 85: Customer Preference-To receive VTA Information

Section 5: Individual Route Results

This section provides the results of the survey by route for weekday trips. As described in the introductory section (and expanded upon in Appendix D), the data has been weighted by the number of passengers riding each route. The percentages in the tables reflect the unlinked weighted data to represent individual route characteristics.

Route	Responses	Route	Responses	Route	Responses
10 Airport Service	158	304 Limited	35	60 Core	192
101 Express	8	31 Local	72	61 Core	172
102 Express	32	32 Community Bus	132	62 Core	145
103 Express	16	321 Limited	6	63 Local	103
104 Express	7	323 Limited	217	64 Core	325
120 Express	24	328 Limited	14	65 Community Bus	82
121 Express	67	330 Limited	10	66 Core	503
122 Express	22	34 Community Bus	6	68 Core	445
13 Community Bus	27	35 Local	115	70 Core	378
14 Community Bus	29	37 Community Bus	73	71 Core	156
140 Express	16	39 Community Bus	40	72 Core	240
16 Community Bus	60	40 Local	105	73 Core	260
168 Express	49	42 Community Bus	63	77 Core	199
17 Community Bus	7	45 Community Bus	21	81 Local	327
18 Community Bus	27	46 Local	80	82 Local	143
180 Express	96	47 Local	72	88 Community Bus	54
181 Express	252	48 Community Bus	42	89 Local	43
182 Express	4	49 Community Bus	21	900	98
19 Community Bus	20	52 Local	78	901	2056
201 DASH	97	522 RAPID	563	902	1566
22 Core	1087	53 Local	131	Grand Total	13683
23 Core	605	54 Local	113		
25 Core	592	55 Core	244		
26 Core	291	57 Local	151		
27 Local	98	58 Local	101		

Trip Purpose									
Row Labels	Home-Work	Home-Social/Rec	Home-Shopping	Home-School	Home-Other	work-Other	Hotel-based	Other to Other	Grand Total
10 Airport Service	30.77%	5.82%	0.83%	3.34%	27.06%	6.86%	12.74%	12.58%	100.00%
101 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
102 Express	67.71%	0.00%	0.00%	0.00%	4.73%	25.85%	0.00%	1.71%	100.00%
103 Express	92.61%	0.00%	0.00%	0.00%	0.00%	7.39%	0.00%	0.00%	100.00%
104 Express	88.83%	0.00%	0.00%	0.00%	0.00%	11.17%	0.00%	0.00%	100.00%
120 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
121 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
122 Express	93.98%	0.00%	0.00%	0.00%	0.00%	6.02%	0.00%	0.00%	100.00%
13 Community Bus	38.41%	18.16%	4.25%	11.12%	1.35%	26.71%	0.00%	0.00%	100.00%
14 Community Bus	5.70%	0.00%	21.47%	0.00%	50.28%	0.95%	0.00%	21.60%	100.00%
140 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	52.92%	2.21%	0.74%	9.51%	9.87%	15.17%	0.00%	9.58%	100.00%
168 Express	72.20%	0.00%	0.00%	4.62%	1.53%	15.46%	0.00%	6.18%	100.00%
17 Community Bus	6.76%	0.00%	0.00%	0.00%	46.62%	0.00%	5.07%	41.55%	100.00%
18 Community Bus	10.69%	3.94%	3.06%	68.83%	3.06%	10.42%	0.00%	0.00%	100.00%
180 Express	57.44%	11.76%	3.64%	10.62%	7.93%	3.10%	2.41%	3.10%	100.00%
181 Express	42.53%	10.97%	0.74%	28.83%	8.84%	4.04%	0.47%	3.58%	100.00%
182 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	21.74%	4.05%	4.25%	35.23%	4.05%	0.00%	0.00%	30.68%	100.00%
201 DASH	37.42%	5.81%	0.00%	24.46%	4.79%	12.82%	3.78%	10.93%	100.00%
22 Core	39.75%	12.64%	8.24%	14.62%	8.99%	6.54%	1.00%	8.22%	100.00%
23 Core	29.78%	6.46%	5.91%	31.02%	9.83%	8.15%	0.76%	8.08%	100.00%
25 Core	32.71%	9.43%	6.32%	26.61%	14.35%	4.43%	0.00%	6.14%	100.00%
26 Core	54.29%	6.50%	8.47%	10.41%	9.42%	5.63%	0.36%	4.93%	100.00%
27 Local	54.23%	10.75%	6.45%	10.47%	11.36%	2.35%	0.45%	3.94%	100.00%
304 Limited	86.86%	0.92%	2.17%	2.26%	3.44%	4.36%	0.00%	0.00%	100.00%
31 Local	24.37%	5.34%	3.04%	43.13%	3.92%	14.51%	0.00%	5.70%	100.00%
32 Community Bus	46.06%	3.48%	15.93%	26.26%	4.26%	0.31%	0.00%	3.71%	100.00%
321 Limited	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
323 Limited	21.79%	4.48%	1.91%	53.44%	3.67%	7.55%	1.19%	5.98%	100.00%
328 Limited	95.93%	0.00%	0.00%	0.00%	4.07%	0.00%	0.00%	0.00%	100.00%
330 Limited	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	0.00%	26.81%	59.78%	0.00%	13.41%	0.00%	0.00%	0.00%	100.00%
35 Local	52.46%	11.51%	7.49%	15.24%	7.52%	1.02%	4.23%	0.53%	100.00%
37 Community Bus	33.35%	4.13%	2.21%	53.84%	2.81%	2.21%	0.00%	1.46%	100.00%
39 Community Bus	28.58%	10.68%	17.18%	31.12%	5.43%	4.75%	0.00%	2.27%	100.00%
40 Local	25.74%	2.47%	2.45%	36.88%	8.00%	7.31%	5.01%	12.13%	100.00%
42 Community Bus	25.15%	4.84%	1.09%	54.96%	8.66%	1.63%	1.29%	2.38%	100.00%
45 Community Bus	46.58%	14.16%	12.76%	11.02%	15.49%	0.00%	0.00%	0.00%	100.00%
46 Local	28.66%	9.84%	5.46%	40.64%	6.69%	2.28%	0.00%	6.44%	100.00%
47 Local	35.52%	7.31%	13.81%	8.38%	5.79%	23.56%	0.00%	5.63%	100.00%
48 Community Bus	34.01%	9.05%	9.48%	5.36%	27.35%	5.12%	0.00%	9.63%	100.00%
49 Community Bus	30.77%	4.64%	0.00%	20.84%	11.62%	32.12%	0.00%	0.00%	100.00%
52 Local	20.76%	3.39%	0.00%	46.33%	1.24%	22.59%	1.08%	4.61%	100.00%
522 RAPID	44.19%	9.58%	5.59%	15.51%	11.82%	5.83%	1.35%	6.13%	100.00%
53 Local	26.69%	1.55%	3.66%	37.51%	8.38%	9.97%	0.00%	12.23%	100.00%
54 Local	34.23%	2.10%	0.81%	37.81%	2.88%	12.67%	0.37%	9.14%	100.00%
55 Core	38.84%	4.10%	6.24%	35.70%	6.46%	4.50%	1.70%	2.46%	100.00%
57 Local	26.17%	3.49%	6.11%	37.14%	6.68%	10.39%	0.00%	10.02%	100.00%
58 Local	47.28%	5.32%	4.15%	23.02%	7.13%	1.98%	3.93%	7.19%	100.00%
60 Core	38.49%	5.72%	8.27%	22.08%	5.98%	13.02%	2.36%	4.09%	100.00%
61 Core	32.59%	7.92%	5.50%	17.55%	18.67%	8.85%	0.00%	8.93%	100.00%
62 Core	38.75%	13.94%	5.51%	17.03%	12.68%	4.86%	0.00%	7.23%	100.00%
63 Local	44.65%	8.69%	2.53%	27.38%	3.13%	7.58%	0.00%	6.03%	100.00%
64 Core	27.02%	11.17%	5.47%	27.52%	14.32%	5.68%	0.00%	8.82%	100.00%
65 Community Bus	30.25%	7.26%	4.86%	24.85%	17.92%	6.56%	0.00%	8.29%	100.00%
66 Core	36.24%	6.60%	5.50%	19.49%	13.06%	8.09%	0.28%	10.76%	100.00%
68 Core	41.32%	13.04%	5.44%	16.78%	13.54%	4.54%	0.79%	4.54%	100.00%
70 Core	31.77%	10.06%	11.67%	25.75%	10.64%	4.67%	0.00%	5.45%	100.00%
71 Core	40.83%	6.66%	13.21%	25.59%	5.35%	2.99%	0.00%	5.36%	100.00%
72 Core	23.77%	7.34%	7.19%	42.44%	9.56%	2.75%	0.66%	6.29%	100.00%
73 Core	25.00%	8.95%	7.19%	22.15%	15.99%	6.41%	0.32%	13.99%	100.00%
77 Core	45.48%	8.81%	14.85%	12.02%	7.76%	3.91%	0.23%	6.92%	100.00%
81 Local	33.09%	7.66%	1.26%	37.30%	7.25%	5.17%	1.40%	6.86%	100.00%
82 Local	37.42%	9.87%	5.76%	26.91%	11.23%	1.95%	0.00%	6.85%	100.00%
88 Community Bus	28.96%	11.58%	10.83%	4.44%	29.80%	0.10%	0.00%	14.29%	100.00%
89 Local	60.64%	0.00%	0.00%	4.98%	22.86%	8.40%	0.00%	3.12%	100.00%
901 Light Rail	49.79%	11.26%	4.19%	15.46%	7.27%	5.43%	1.71%	4.88%	100.00%
902 Light Rail	57.47%	8.31%	2.34%	12.22%	6.96%	6.65%	1.40%	4.66%	100.00%
900 Light Rail	40.90%	9.29%	11.38%	15.01%	9.64%	6.72%	0.00%	7.07%	100.00%
Grand Total	40.92%	8.87%	5.73%	21.16%	9.60%	6.22%	1.02%	6.49%	100.00%

Table 86: Where are you coming from/going to?

Method of Getting to Transit from Origin													
Row Labels	Walked all the way	Was dropped off (Not a service)	Bike (PERSONAL BIKE)	Drove alone and parked	Skateboard/Longboard	Scooter/Wheelchair	Used Uber or similar service	Drove or rode with others and parked	Bike (BIKE SHARE)	Shuttle	School Bus	Taxi	Grand Total
10 Airport Service	84.97%	7.59%	2.04%	3.57%	0.00%	0.00%	1.50%	0.00%	0.00%	0.33%	0.00%	0.00%	100.00%
101 Express	50.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	49.91%	0.00%	0.00%	100.00%
102 Express	63.78%	18.11%	0.00%	18.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
103 Express	71.15%	0.00%	0.00%	21.46%	7.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
104 Express	66.49%	11.17%	0.00%	22.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
120 Express	74.28%	4.29%	0.00%	12.86%	0.00%	0.00%	0.00%	4.29%	0.00%	4.29%	0.00%	0.00%	100.00%
121 Express	42.99%	13.44%	3.07%	31.45%	0.00%	0.00%	0.00%	0.00%	8.10%	0.95%	0.00%	0.00%	100.00%
122 Express	62.41%	37.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
13 Community Bus	74.40%	17.30%	8.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
14 Community Bus	92.20%	6.20%	0.00%	0.00%	0.00%	1.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
140 Express	85.37%	0.00%	0.00%	14.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	97.79%	2.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
168 Express	60.13%	12.28%	3.06%	24.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
17 Community Bus	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
18 Community Bus	75.58%	24.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
180 Express	60.05%	28.63%	4.44%	3.88%	0.00%	0.00%	1.39%	0.00%	1.61%	0.00%	0.00%	0.00%	100.00%
181 Express	65.36%	18.57%	5.87%	6.83%	0.00%	0.00%	2.52%	0.37%	0.00%	0.00%	0.49%	0.00%	100.00%
182 Express	69.41%	15.30%	0.00%	15.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	82.25%	8.97%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.78%	0.00%	0.00%	0.00%	100.00%
201 DASH	77.03%	9.69%	5.02%	7.51%	0.00%	0.00%	0.00%	0.74%	0.00%	0.00%	0.00%	0.00%	100.00%
22 Core	88.05%	5.60%	4.54%	0.77%	0.59%	0.10%	0.30%	0.00%	0.05%	0.00%	0.00%	0.00%	100.00%
23 Core	91.14%	4.79%	2.51%	0.56%	0.06%	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
25 Core	90.03%	4.76%	4.14%	0.28%	0.42%	0.18%	0.00%	0.00%	0.19%	0.00%	0.00%	0.00%	100.00%
26 Core	93.20%	3.64%	2.26%	0.00%	0.41%	0.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
27 Local	91.64%	3.01%	1.66%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.69%	0.00%	0.00%	100.00%
304 Limited	87.43%	9.13%	3.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
31 Local	97.89%	0.57%	1.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
32 Community Bus	99.33%	0.00%	0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
321 Limited	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
323 Limited	89.77%	6.22%	1.80%	1.21%	1.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
328 Limited	69.19%	4.68%	4.07%	17.98%	0.00%	4.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
330 Limited	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
35 Local	94.30%	1.35%	2.65%	1.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.56%	0.00%	0.00%	100.00%
37 Community Bus	90.76%	3.95%	5.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
39 Community Bus	97.52%	2.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
40 Local	95.59%	2.40%	0.93%	0.00%	0.00%	0.38%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	100.00%
42 Community Bus	92.83%	7.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
45 Community Bus	96.11%	0.00%	3.89%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
46 Local	94.91%	0.65%	4.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
47 Local	95.62%	2.77%	1.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
48 Community Bus	93.47%	1.96%	3.78%	0.00%	0.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
49 Community Bus	87.20%	9.78%	3.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
52 Local	99.42%	0.00%	0.00%	0.00%	0.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
522 RAPID	83.03%	9.07%	5.85%	0.38%	0.18%	0.41%	0.58%	0.12%	0.29%	0.10%	0.00%	0.00%	100.00%
53 Local	93.75%	4.42%	0.97%	0.00%	0.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
54 Local	87.47%	8.26%	4.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
55 Core	94.21%	2.94%	1.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.94%	0.00%	0.00%	100.00%
57 Local	92.52%	4.73%	1.57%	0.00%	1.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
58 Local	93.03%	2.13%	3.77%	0.00%	0.00%	0.57%	0.00%	0.00%	0.50%	0.00%	0.00%	0.00%	100.00%
60 Core	95.89%	2.37%	1.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.16%	0.00%	0.00%	100.00%
61 Core	94.93%	1.50%	2.50%	0.00%	0.00%	0.59%	0.00%	0.47%	0.00%	0.00%	0.00%	0.00%	100.00%
62 Core	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
63 Local	92.78%	1.94%	5.06%	0.00%	0.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
64 Core	93.77%	2.14%	2.07%	0.00%	0.78%	0.62%	0.00%	0.62%	0.00%	0.00%	0.00%	0.00%	100.00%
65 Community Bus	92.59%	2.03%	4.27%	1.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
66 Core	91.93%	3.36%	3.11%	0.00%	0.00%	1.09%	0.32%	0.19%	0.00%	0.00%	0.00%	0.00%	100.00%
68 Core	88.59%	6.80%	3.67%	0.48%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
70 Core	95.98%	1.40%	1.61%	0.18%	0.21%	0.37%	0.00%	0.00%	0.25%	0.00%	0.00%	0.00%	100.00%
71 Core	95.57%	0.53%	1.38%	1.12%	0.38%	0.65%	0.00%	0.37%	0.00%	0.00%	0.00%	0.00%	100.00%
72 Core	92.15%	3.27%	3.62%	0.41%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
73 Core	97.04%	0.17%	1.40%	0.55%	0.23%	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
77 Core	86.36%	6.00%	5.69%	0.43%	0.00%	0.00%	0.23%	0.32%	0.97%	0.00%	0.00%	0.00%	100.00%
81 Local	88.69%	2.34%	5.68%	1.09%	0.84%	0.38%	0.00%	0.79%	0.00%	0.20%	0.00%	0.00%	100.00%
82 Local	91.99%	5.02%	1.58%	0.25%	1.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
88 Community Bus	96.34%	1.29%	0.00%	1.19%	0.00%	1.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
89 Local	93.16%	2.22%	0.00%	1.54%	0.00%	1.54%	1.54%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
900 Light Rail	84.58%	7.95%	6.33%	1.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
901 Light Rail	74.00%	9.17%	6.89%	7.84%	0.37%	0.13%	0.47%	0.39%	0.51%	0.23%	0.00%	0.00%	100.00%
902 Light Rail	81.81%	6.09%	5.94%	4.08%	0.17%	0.14%	0.37%	1.05%	0.07%	0.18%	0.00%	0.10%	100.00%
Grand Total	86.70%	5.68%	3.96%	2.27%	0.31%	0.26%	0.25%	0.23%	0.18%	0.13%	0.01%	0.01%	100.00%

Table 87: How did you get from your origin to the very first bus/train you used for this one-way trip?

Method of Getting from Transit to Destination														
Row Labels	Walk all the way	Bike (PERSONAL BIKE)	Be picked up by someone (Not a service)	Get in a parked vehicle and drive alone	Be picked up by Uber or similar service	Skateboard/Longboard	Scoter/Wheelchair	Get in a parked vehicle and drive with others	Shuttle	Bike (BIKE SHARE)	Walked all the way	Taxi	School Bus	Grand Total
10 Airport Service	87.85%	1.29%	7.10%	1.93%	0.00%	1.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.82%	0.00%	100.00%
101 Express	74.91%	0.00%	12.54%	12.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
102 Express	70.28%	0.00%	15.89%	12.13%	1.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
103 Express	55.68%	0.00%	7.39%	29.55%	0.00%	7.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
104 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
120 Express	71.19%	0.00%	0.00%	20.24%	0.00%	0.00%	0.00%	0.00%	8.57%	0.00%	0.00%	0.00%	0.00%	100.00%
121 Express	48.70%	3.07%	4.97%	39.03%	0.00%	0.00%	0.00%	0.00%	2.12%	2.12%	0.00%	0.00%	0.00%	100.00%
122 Express	69.92%	3.01%	9.02%	18.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
13 Community Bus	91.70%	0.00%	8.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
14 Community Bus	98.41%	0.00%	0.00%	0.00%	0.00%	0.00%	1.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
140 Express	88.15%	0.00%	11.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	99.63%	0.00%	0.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
168 Express	69.11%	0.00%	15.46%	13.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.53%	0.00%	100.00%
17 Community Bus	94.93%	0.00%	5.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
18 Community Bus	93.51%	0.00%	6.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
180 Express	71.60%	1.39%	14.79%	5.71%	1.47%	0.00%	0.00%	2.64%	0.00%	2.41%	0.00%	0.00%	0.00%	100.00%
181 Express	70.04%	5.38%	9.78%	7.90%	3.84%	0.00%	0.00%	1.44%	0.54%	0.54%	0.00%	0.54%	0.00%	100.00%
182 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	91.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.78%	0.00%	0.00%	0.00%	100.00%
201 DASH	90.40%	0.00%	5.06%	3.37%	1.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
22 Core	90.09%	3.85%	4.15%	0.32%	0.44%	0.75%	0.10%	0.06%	0.24%	0.00%	0.00%	0.00%	0.00%	100.00%
23 Core	93.37%	3.45%	1.50%	0.55%	0.13%	0.06%	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
25 Core	94.58%	3.82%	1.23%	0.00%	0.00%	0.14%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
26 Core	91.61%	2.78%	3.42%	0.36%	0.93%	0.41%	0.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
27 Local	97.99%	1.66%	0.00%	0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
304 Limited	96.56%	3.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
31 Local	98.10%	1.36%	0.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
32 Community Bus	95.42%	3.42%	1.07%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
321 Limited	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
323 Limited	94.14%	1.48%	1.42%	1.53%	0.00%	1.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
328 Limited	91.85%	4.07%	0.00%	0.00%	0.00%	0.00%	4.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
330 Limited	44.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.89%	0.00%	0.00%	100.00%
34 Community Bus	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
35 Local	96.44%	3.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
37 Community Bus	86.18%	0.73%	9.71%	3.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
39 Community Bus	96.81%	0.00%	3.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
40 Local	95.85%	0.00%	2.38%	0.70%	0.00%	0.00%	0.38%	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	100.00%
42 Community Bus	89.41%	5.29%	5.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
45 Community Bus	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
46 Local	96.21%	2.55%	1.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
47 Local	98.42%	1.19%	0.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
48 Community Bus	86.75%	3.78%	8.68%	0.00%	0.00%	0.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
49 Community Bus	94.42%	4.64%	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
52 Local	97.71%	0.00%	2.12%	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
52 RAPID	86.20%	4.90%	6.11%	0.68%	1.07%	0.18%	0.41%	0.29%	0.00%	0.00%	0.00%	0.16%	0.00%	100.00%
53 Local	94.74%	0.49%	3.42%	0.00%	0.00%	0.86%	0.00%	0.00%	0.00%	0.49%	0.00%	0.00%	0.00%	100.00%
54 Local	95.74%	4.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
55 Core	92.41%	3.21%	2.66%	1.36%	0.00%	0.00%	0.00%	0.00%	0.36%	0.00%	0.00%	0.00%	0.00%	100.00%
57 Local	95.59%	1.57%	1.22%	0.00%	0.00%	1.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
58 Local	94.65%	4.28%	0.50%	0.00%	0.00%	0.00%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
60 Core	96.80%	1.14%	2.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
61 Core	97.37%	2.04%	0.00%	0.00%	0.00%	0.00%	0.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
62 Core	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
63 Local	92.31%	5.61%	0.42%	0.00%	0.00%	0.22%	0.00%	0.00%	1.43%	0.00%	0.00%	0.00%	0.00%	100.00%
64 Core	93.89%	2.18%	1.55%	0.00%	0.00%	0.90%	0.62%	0.62%	0.25%	0.00%	0.00%	0.00%	0.00%	100.00%
65 Community Bus	95.73%	4.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
66 Core	94.09%	2.89%	2.11%	0.00%	0.09%	0.00%	0.74%	0.00%	0.00%	0.09%	0.00%	0.00%	0.00%	100.00%
68 Core	90.76%	3.53%	3.87%	0.75%	0.13%	0.40%	0.00%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
70 Core	95.70%	2.02%	1.25%	0.45%	0.00%	0.21%	0.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
71 Core	96.39%	1.38%	0.69%	0.00%	0.00%	0.38%	0.65%	0.00%	0.52%	0.00%	0.00%	0.00%	0.00%	100.00%
72 Core	95.44%	1.99%	1.61%	0.00%	0.00%	0.53%	0.00%	0.00%	0.41%	0.00%	0.00%	0.00%	0.00%	100.00%
73 Core	97.85%	1.09%	0.05%	0.00%	0.17%	0.23%	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
77 Core	90.73%	5.03%	2.12%	0.83%	0.00%	0.32%	0.00%	0.00%	0.00%	0.97%	0.00%	0.00%	0.00%	100.00%
81 Local	92.32%	5.27%	1.05%	0.00%	0.00%	0.84%	0.38%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
82 Local	96.93%	1.58%	0.34%	0.00%	0.00%	1.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
88 Community Bus	86.59%	0.00%	11.48%	0.74%	0.00%	0.00%	1.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
89 Local	80.72%	0.00%	12.64%	6.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
900 Light Rail	76.47%	5.47%	5.28%	8.18%	0.00%	2.01%	0.00%	2.60%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
901 Light Rail	79.97%	5.98%	7.40%	4.31%	0.68%	0.30%	0.21%	0.23%	0.54%	0.34%	0.00%	0.00%	0.05%	100.00%
902 Light Rail	85.94%	5.36%	3.35%	3.10%	0.35%	0.20%	0.10%	0.97%	0.53%	0.05%	0.00%	0.05%	0.00%	100.00%
Grand Total	89.52%	3.59%	3.58%	1.68%	0.36%	0.34%	0.26%	0.24%	0.22%	0.13%	0.05%	0.03%	0.01%	100.00%

Table 88: How did you get to your destination from your very last bus/train you used for this one-way trip?

Number of Transfers From Origin to Route Surveyed					
Row Labels	(0) None	(1) One	(2) Two	(3) Three	Grand Total
10 Airport Service	67.12%	29.25%	3.63%	0.00%	100.00%
101 Express	100.00%	0.00%	0.00%	0.00%	100.00%
102 Express	79.52%	17.06%	3.42%	0.00%	100.00%
103 Express	83.90%	16.10%	0.00%	0.00%	100.00%
104 Express	100.00%	0.00%	0.00%	0.00%	100.00%
120 Express	66.43%	33.57%	0.00%	0.00%	100.00%
121 Express	94.29%	2.85%	2.85%	0.00%	100.00%
122 Express	93.98%	6.02%	0.00%	0.00%	100.00%
13 Community Bus	92.08%	7.92%	0.00%	0.00%	100.00%
14 Community Bus	87.13%	12.87%	0.00%	0.00%	100.00%
140 Express	77.73%	22.27%	0.00%	0.00%	100.00%
16 Community Bus	91.96%	8.04%	0.00%	0.00%	100.00%
168 Express	96.91%	3.09%	0.00%	0.00%	100.00%
17 Community Bus	63.52%	36.48%	0.00%	0.00%	100.00%
18 Community Bus	61.52%	38.48%	0.00%	0.00%	100.00%
180 Express	47.30%	50.79%	1.91%	0.00%	100.00%
181 Express	67.33%	29.09%	3.57%	0.00%	100.00%
182 Express	84.70%	15.30%	0.00%	0.00%	100.00%
19 Community Bus	87.70%	10.18%	2.12%	0.00%	100.00%
201 DASH	72.07%	25.03%	2.90%	0.00%	100.00%
22 Core	82.09%	17.52%	0.33%	0.05%	100.00%
23 Core	85.04%	13.92%	0.82%	0.22%	100.00%
25 Core	82.50%	16.30%	1.07%	0.14%	100.00%
26 Core	77.34%	19.96%	2.70%	0.00%	100.00%
27 Local	85.39%	12.43%	2.18%	0.00%	100.00%
304 Limited	90.87%	9.13%	0.00%	0.00%	100.00%
31 Local	70.72%	23.49%	5.25%	0.54%	100.00%
32 Community Bus	77.98%	20.23%	1.79%	0.00%	100.00%
321 Limited	74.43%	25.57%	0.00%	0.00%	100.00%
323 Limited	71.68%	27.94%	0.37%	0.00%	100.00%
328 Limited	95.66%	4.34%	0.00%	0.00%	100.00%
330 Limited	100.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	86.59%	13.41%	0.00%	0.00%	100.00%
35 Local	75.71%	16.10%	8.19%	0.00%	100.00%
37 Community Bus	83.77%	12.82%	3.40%	0.00%	100.00%
39 Community Bus	73.20%	12.63%	14.18%	0.00%	100.00%
40 Local	92.64%	7.36%	0.00%	0.00%	100.00%
42 Community Bus	80.68%	13.94%	5.38%	0.00%	100.00%
45 Community Bus	58.92%	41.08%	0.00%	0.00%	100.00%
46 Local	88.79%	6.66%	2.60%	1.95%	100.00%
47 Local	86.41%	13.59%	0.00%	0.00%	100.00%
48 Community Bus	53.81%	46.19%	0.00%	0.00%	100.00%
49 Community Bus	96.98%	3.02%	0.00%	0.00%	100.00%
52 Local	81.85%	13.81%	4.34%	0.00%	100.00%
522 RAPID	78.12%	20.49%	1.22%	0.17%	100.00%
53 Local	81.87%	14.91%	3.22%	0.00%	100.00%
54 Local	80.10%	14.42%	5.48%	0.00%	100.00%
55 Core	85.73%	12.19%	2.08%	0.00%	100.00%
57 Local	85.18%	11.41%	3.42%	0.00%	100.00%
58 Local	83.87%	13.67%	1.89%	0.57%	100.00%
60 Core	81.61%	15.91%	2.21%	0.26%	100.00%
61 Core	82.84%	16.16%	1.00%	0.00%	100.00%
62 Core	79.24%	16.07%	4.68%	0.00%	100.00%
63 Local	74.57%	21.93%	3.50%	0.00%	100.00%
64 Core	86.55%	13.25%	0.21%	0.00%	100.00%
65 Community Bus	90.37%	8.37%	1.26%	0.00%	100.00%
66 Core	83.06%	15.27%	1.67%	0.00%	100.00%
68 Core	80.67%	17.70%	1.56%	0.06%	100.00%
70 Core	81.06%	15.51%	3.39%	0.05%	100.00%
71 Core	75.76%	19.95%	4.29%	0.00%	100.00%
72 Core	83.33%	14.22%	2.45%	0.00%	100.00%
73 Core	90.24%	9.45%	0.31%	0.00%	100.00%
77 Core	81.41%	15.85%	2.10%	0.64%	100.00%
81 Local	86.28%	12.01%	1.70%	0.00%	100.00%
82 Local	79.89%	17.55%	2.56%	0.00%	100.00%
88 Community Bus	73.20%	24.43%	0.00%	2.37%	100.00%
89 Local	56.23%	34.16%	9.61%	0.00%	100.00%
900 Light Rail	61.61%	29.69%	7.83%	0.87%	100.00%
901 Light Rail	83.62%	15.40%	0.84%	0.14%	100.00%
902 Light Rail	77.37%	20.86%	1.77%	0.00%	100.00%
Grand Total	80.86%	17.32%	1.72%	0.10%	100.00%

Table 89: Number of Transfers (Before)

Number of Transfers From Route Surveyed to Destination					
Row Labels	(0) None	(1) One	(2) Two	(3) Three	Grand Total
10 Airport Service	57.67%	38.90%	3.43%	0.00%	100.00%
101 Express	87.46%	12.54%	0.00%	0.00%	100.00%
102 Express	76.51%	20.48%	3.02%	0.00%	100.00%
103 Express	92.61%	7.39%	0.00%	0.00%	100.00%
104 Express	100.00%	0.00%	0.00%	0.00%	100.00%
120 Express	87.86%	8.09%	4.05%	0.00%	100.00%
121 Express	91.53%	8.47%	0.00%	0.00%	100.00%
122 Express	96.99%	3.01%	0.00%	0.00%	100.00%
13 Community Bus	55.40%	36.30%	8.30%	0.00%	100.00%
14 Community Bus	67.83%	32.17%	0.00%	0.00%	100.00%
140 Express	92.69%	7.31%	0.00%	0.00%	100.00%
16 Community Bus	82.93%	15.06%	2.02%	0.00%	100.00%
168 Express	77.00%	23.00%	0.00%	0.00%	100.00%
17 Community Bus	48.31%	51.69%	0.00%	0.00%	100.00%
18 Community Bus	78.25%	20.77%	0.98%	0.00%	100.00%
180 Express	38.09%	53.57%	8.34%	0.00%	100.00%
181 Express	55.66%	39.67%	4.67%	0.00%	100.00%
182 Express	45.89%	54.11%	0.00%	0.00%	100.00%
19 Community Bus	62.49%	28.55%	8.97%	0.00%	100.00%
201 DASH	71.30%	27.58%	1.12%	0.00%	100.00%
22 Core	79.65%	19.73%	0.53%	0.09%	100.00%
23 Core	82.04%	17.02%	0.93%	0.00%	100.00%
25 Core	81.59%	17.45%	0.96%	0.00%	100.00%
26 Core	74.45%	23.43%	2.12%	0.00%	100.00%
27 Local	81.77%	18.23%	0.00%	0.00%	100.00%
304 Limited	97.17%	2.83%	0.00%	0.00%	100.00%
31 Local	78.26%	16.61%	5.12%	0.00%	100.00%
32 Community Bus	89.96%	9.86%	0.18%	0.00%	100.00%
321 Limited	87.21%	0.00%	12.79%	0.00%	100.00%
323 Limited	74.84%	23.78%	1.38%	0.00%	100.00%
328 Limited	91.59%	8.41%	0.00%	0.00%	100.00%
330 Limited	100.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	76.81%	23.19%	0.00%	0.00%	100.00%
35 Local	70.92%	27.83%	1.25%	0.00%	100.00%
37 Community Bus	77.10%	14.56%	8.34%	0.00%	100.00%
39 Community Bus	70.84%	17.29%	11.86%	0.00%	100.00%
40 Local	86.00%	13.30%	0.70%	0.00%	100.00%
42 Community Bus	80.02%	18.89%	1.09%	0.00%	100.00%
45 Community Bus	68.20%	26.28%	5.52%	0.00%	100.00%
46 Local	80.32%	15.51%	0.00%	4.18%	100.00%
47 Local	83.37%	16.63%	0.00%	0.00%	100.00%
48 Community Bus	67.16%	25.08%	7.76%	0.00%	100.00%
49 Community Bus	66.52%	33.48%	0.00%	0.00%	100.00%
52 Local	74.71%	21.63%	2.43%	1.22%	100.00%
522 RAPID	78.95%	20.09%	0.96%	0.00%	100.00%
53 Local	72.50%	27.50%	0.00%	0.00%	100.00%
54 Local	84.73%	13.83%	1.44%	0.00%	100.00%
55 Core	82.24%	15.18%	2.59%	0.00%	100.00%
57 Local	80.51%	16.08%	2.60%	0.81%	100.00%
58 Local	78.68%	16.57%	4.75%	0.00%	100.00%
60 Core	71.71%	24.76%	3.53%	0.00%	100.00%
61 Core	84.43%	15.04%	0.53%	0.00%	100.00%
62 Core	76.32%	20.41%	3.27%	0.00%	100.00%
63 Local	83.68%	16.32%	0.00%	0.00%	100.00%
64 Core	82.39%	16.18%	1.42%	0.00%	100.00%
65 Community Bus	88.09%	11.91%	0.00%	0.00%	100.00%
66 Core	81.28%	17.45%	1.27%	0.00%	100.00%
68 Core	79.03%	19.46%	1.51%	0.00%	100.00%
70 Core	74.80%	24.29%	0.91%	0.00%	100.00%
71 Core	73.29%	23.97%	2.74%	0.00%	100.00%
72 Core	82.80%	14.80%	2.40%	0.00%	100.00%
73 Core	85.16%	12.73%	2.12%	0.00%	100.00%
77 Core	82.65%	14.03%	2.46%	0.86%	100.00%
81 Local	83.42%	15.15%	1.27%	0.17%	100.00%
82 Local	79.38%	18.91%	1.71%	0.00%	100.00%
88 Community Bus	72.54%	25.52%	1.93%	0.00%	100.00%
89 Local	65.36%	24.62%	8.46%	1.56%	100.00%
900 Light Rail	52.80%	35.49%	11.70%	0.00%	100.00%
901 Light Rail	82.64%	15.67%	1.61%	0.08%	100.00%
902 Light Rail	74.03%	23.85%	1.92%	0.20%	100.00%
Grand Total	78.42%	19.75%	1.73%	0.10%	100.00%

Table 90: Number of Transfers (After)

Total Number of Transfers for Trip					
Row Labels	0	1	2	3 or More	Grand Total
10 Airport Service	28.02%	61.68%	10.30%	0.00%	100.00%
101 Express	87.46%	12.54%	0.00%	0.00%	100.00%
102 Express	68.36%	12.87%	18.77%	0.00%	100.00%
103 Express	76.52%	23.48%	0.00%	0.00%	100.00%
104 Express	100.00%	0.00%	0.00%	0.00%	100.00%
120 Express	54.29%	41.67%	4.05%	0.00%	100.00%
121 Express	85.82%	11.32%	2.85%	0.00%	100.00%
122 Express	90.98%	9.02%	0.00%	0.00%	100.00%
13 Community Bus	47.48%	44.22%	8.30%	0.00%	100.00%
14 Community Bus	58.15%	38.67%	3.19%	0.00%	100.00%
140 Express	77.73%	14.96%	7.31%	0.00%	100.00%
16 Community Bus	74.89%	23.09%	2.02%	0.00%	100.00%
168 Express	73.91%	26.09%	0.00%	0.00%	100.00%
17 Community Bus	11.83%	88.17%	0.00%	0.00%	100.00%
18 Community Bus	39.77%	59.25%	0.98%	0.00%	100.00%
180 Express	16.54%	46.68%	32.17%	4.61%	100.00%
181 Express	36.93%	44.37%	15.23%	3.47%	100.00%
182 Express	30.59%	69.41%	0.00%	0.00%	100.00%
19 Community Bus	50.19%	38.72%	11.09%	0.00%	100.00%
201 DASH	44.86%	49.63%	5.51%	0.00%	100.00%
22 Core	65.03%	30.68%	4.15%	0.14%	100.00%
23 Core	67.66%	29.95%	2.01%	0.38%	100.00%
25 Core	66.65%	28.85%	4.14%	0.36%	100.00%
26 Core	56.16%	34.87%	8.76%	0.21%	100.00%
27 Local	67.76%	29.45%	2.78%	0.00%	100.00%
304 Limited	88.04%	11.96%	0.00%	0.00%	100.00%
31 Local	48.98%	40.11%	10.37%	0.54%	100.00%
32 Community Bus	67.93%	30.09%	1.98%	0.00%	100.00%
321 Limited	61.64%	25.57%	12.79%	0.00%	100.00%
323 Limited	48.30%	48.55%	2.78%	0.37%	100.00%
328 Limited	91.59%	4.07%	4.34%	0.00%	100.00%
330 Limited	100.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	63.41%	36.59%	0.00%	0.00%	100.00%
35 Local	48.48%	40.23%	11.29%	0.00%	100.00%
37 Community Bus	60.88%	27.38%	11.74%	0.00%	100.00%
39 Community Bus	44.04%	29.92%	26.04%	0.00%	100.00%
40 Local	78.65%	20.66%	0.70%	0.00%	100.00%
42 Community Bus	62.57%	30.95%	4.60%	1.88%	100.00%
45 Community Bus	27.13%	67.36%	5.52%	0.00%	100.00%
46 Local	69.10%	22.17%	2.60%	6.12%	100.00%
47 Local	69.78%	30.22%	0.00%	0.00%	100.00%
48 Community Bus	20.98%	71.27%	7.76%	0.00%	100.00%
49 Community Bus	63.50%	36.50%	0.00%	0.00%	100.00%
52 Local	56.57%	35.44%	6.77%	1.22%	100.00%
522 RAPID	61.76%	31.57%	6.11%	0.55%	100.00%
53 Local	57.79%	36.09%	5.59%	0.53%	100.00%
54 Local	64.83%	28.26%	6.91%	0.00%	100.00%
55 Core	69.40%	24.51%	6.09%	0.00%	100.00%
57 Local	66.60%	26.57%	5.10%	1.73%	100.00%
58 Local	65.55%	24.79%	9.09%	0.57%	100.00%
60 Core	55.27%	36.78%	7.68%	0.26%	100.00%
61 Core	68.51%	28.73%	2.76%	0.00%	100.00%
62 Core	58.58%	30.61%	10.64%	0.17%	100.00%
63 Local	60.10%	34.56%	5.34%	0.00%	100.00%
64 Core	70.90%	25.50%	3.60%	0.00%	100.00%
65 Community Bus	78.46%	20.28%	1.26%	0.00%	100.00%
66 Core	66.31%	29.26%	3.96%	0.47%	100.00%
68 Core	61.25%	34.95%	2.92%	0.88%	100.00%
70 Core	58.75%	34.00%	7.20%	0.05%	100.00%
71 Core	51.20%	39.61%	9.19%	0.00%	100.00%
72 Core	66.28%	28.70%	5.01%	0.00%	100.00%
73 Core	76.68%	20.28%	2.37%	0.67%	100.00%
77 Core	66.01%	27.22%	4.04%	2.73%	100.00%
81 Local	70.80%	25.41%	3.17%	0.62%	100.00%
82 Local	60.00%	35.48%	4.04%	0.48%	100.00%
88 Community Bus	45.74%	49.95%	1.93%	2.37%	100.00%
89 Local	21.59%	58.78%	18.07%	1.56%	100.00%
900 Light Rail	17.44%	60.37%	20.10%	2.10%	100.00%
901 Light Rail	69.31%	25.39%	4.64%	0.65%	100.00%
902 Light Rail	56.57%	35.44%	6.69%	1.29%	100.00%
Grand Total	62.21%	31.67%	5.48%	0.64%	100.00%

Table 91: Number of Transfers (Total)

Boarding Time Period for Routes Surveyed

Row Labels	AM PEAK	MIDDAY	PM PEAK	EVENING	Grand Total
10 Airport Service	19.89%	41.45%	25.86%	12.80%	100.00%
101 Express	49.83%	0.00%	50.17%	0.00%	100.00%
102 Express	51.32%	0.00%	48.68%	0.00%	100.00%
103 Express	48.29%	0.00%	51.71%	0.00%	100.00%
104 Express	55.84%	0.00%	44.16%	0.00%	100.00%
120 Express	51.43%	0.00%	48.57%	0.00%	100.00%
121 Express	44.46%	8.59%	40.90%	6.05%	100.00%
122 Express	51.87%	0.00%	48.13%	0.00%	100.00%
13 Community Bus	19.42%	57.91%	22.67%	0.00%	100.00%
14 Community Bus	2.85%	73.60%	23.55%	0.00%	100.00%
140 Express	51.20%	0.00%	48.80%	0.00%	100.00%
16 Community Bus	31.19%	4.55%	64.26%	0.00%	100.00%
168 Express	50.53%	0.00%	49.47%	0.00%	100.00%
17 Community Bus	0.00%	56.76%	43.24%	0.00%	100.00%
18 Community Bus	16.62%	55.10%	26.33%	1.95%	100.00%
180 Express	26.94%	33.01%	29.00%	11.04%	100.00%
181 Express	24.74%	30.30%	32.53%	12.43%	100.00%
182 Express	45.89%	0.00%	54.11%	0.00%	100.00%
19 Community Bus	37.35%	37.53%	25.12%	0.00%	100.00%
201 DASH	26.58%	32.12%	34.61%	6.69%	100.00%
22 Core	23.05%	39.98%	20.84%	16.12%	100.00%
23 Core	21.17%	45.72%	25.58%	7.54%	100.00%
25 Core	24.13%	45.92%	25.18%	4.77%	100.00%
26 Core	28.19%	40.08%	25.42%	6.32%	100.00%
27 Local	22.35%	42.49%	32.76%	2.40%	100.00%
304 Limited	52.28%	0.00%	47.72%	0.00%	100.00%
31 Local	21.28%	54.40%	19.77%	4.55%	100.00%
32 Community Bus	27.30%	43.21%	26.96%	2.53%	100.00%
321 Limited	63.93%	0.00%	36.07%	0.00%	100.00%
323 Limited	19.24%	45.76%	26.13%	8.86%	100.00%
328 Limited	48.55%	0.00%	51.45%	0.00%	100.00%
330 Limited	55.89%	0.00%	44.11%	0.00%	100.00%
34 Community Bus	0.00%	100.00%	0.00%	0.00%	100.00%
35 Local	22.53%	42.74%	27.80%	6.93%	100.00%
37 Community Bus	26.35%	43.49%	27.08%	3.08%	100.00%
39 Community Bus	22.23%	42.50%	33.08%	2.19%	100.00%
40 Local	21.26%	47.79%	26.38%	4.57%	100.00%
42 Community Bus	25.67%	49.00%	23.45%	1.88%	100.00%
45 Community Bus	26.03%	44.07%	29.90%	0.00%	100.00%
46 Local	23.96%	39.04%	35.69%	1.31%	100.00%
47 Local	20.65%	45.95%	26.86%	6.55%	100.00%
48 Community Bus	27.59%	43.26%	27.19%	1.96%	100.00%
49 Community Bus	29.22%	40.27%	30.51%	0.00%	100.00%
52 Local	21.42%	49.28%	23.64%	5.66%	100.00%
522 RAPID	25.98%	38.01%	26.20%	9.81%	100.00%
53 Local	28.88%	46.25%	22.71%	2.17%	100.00%
54 Local	21.22%	40.69%	33.02%	5.08%	100.00%
55 Core	35.48%	32.32%	27.51%	4.69%	100.00%
57 Local	17.67%	50.90%	24.11%	7.31%	100.00%
58 Local	35.07%	21.91%	41.09%	1.94%	100.00%
60 Core	24.71%	37.96%	30.96%	6.37%	100.00%
61 Core	24.73%	47.74%	23.91%	3.62%	100.00%
62 Core	24.37%	44.84%	24.42%	6.37%	100.00%
63 Local	25.61%	39.90%	30.17%	4.31%	100.00%
64 Core	22.48%	47.43%	24.79%	5.29%	100.00%
65 Community Bus	25.04%	51.21%	22.99%	0.77%	100.00%
66 Core	23.84%	45.00%	25.56%	5.60%	100.00%
68 Core	25.44%	39.21%	25.45%	9.91%	100.00%
70 Core	23.25%	46.59%	25.36%	4.79%	100.00%
71 Core	25.27%	39.62%	29.30%	5.81%	100.00%
72 Core	23.73%	42.82%	26.27%	7.18%	100.00%
73 Core	21.66%	49.07%	25.77%	3.50%	100.00%
77 Core	21.52%	43.56%	31.70%	3.22%	100.00%
81 Local	36.55%	39.25%	22.81%	1.38%	100.00%
82 Local	20.48%	50.37%	25.25%	3.89%	100.00%
88 Community Bus	10.57%	23.95%	65.49%	0.00%	100.00%
89 Local	34.86%	34.12%	31.01%	0.00%	100.00%
900 Light Rail	12.71%	39.14%	33.90%	14.24%	100.00%
901 Light Rail	22.78%	35.51%	31.30%	10.41%	100.00%
902 Light Rail	27.84%	25.48%	36.34%	10.34%	100.00%
Grand Total	24.56%	39.17%	28.22%	8.04%	100.00%

Table 92: What time did you get on this bus/train?

Fare Type				
Row Labels	BY CASH OR PAPER	BY CLIPPER	BY MOBILE TICKET	Grand Total
10 Airport Service	67.28%	32.72%	0.00%	100.00%
101 Express	0.00%	100.00%	0.00%	100.00%
102 Express	0.00%	100.00%	0.00%	100.00%
103 Express	5.37%	94.63%	0.00%	100.00%
104 Express	22.08%	77.92%	0.00%	100.00%
120 Express	0.00%	100.00%	0.00%	100.00%
121 Express	0.00%	100.00%	0.00%	100.00%
122 Express	0.00%	100.00%	0.00%	100.00%
13 Community Bus	19.30%	80.70%	0.00%	100.00%
14 Community Bus	58.01%	33.01%	8.98%	100.00%
140 Express	14.80%	85.20%	0.00%	100.00%
16 Community Bus	34.94%	63.04%	2.02%	100.00%
168 Express	1.53%	95.38%	3.09%	100.00%
17 Community Bus	46.62%	53.38%	0.00%	100.00%
18 Community Bus	39.74%	60.26%	0.00%	100.00%
180 Express	16.60%	83.40%	0.00%	100.00%
181 Express	14.39%	85.61%	0.00%	100.00%
182 Express	0.00%	100.00%	0.00%	100.00%
19 Community Bus	24.65%	73.22%	2.12%	100.00%
201 DASH	39.45%	59.76%	0.79%	100.00%
22 Core	22.89%	76.71%	0.40%	100.00%
23 Core	17.69%	82.00%	0.31%	100.00%
25 Core	24.35%	75.19%	0.46%	100.00%
26 Core	21.47%	78.34%	0.19%	100.00%
27 Local	26.31%	73.69%	0.00%	100.00%
304 Limited	17.34%	82.66%	0.00%	100.00%
31 Local	7.26%	91.21%	1.53%	100.00%
32 Community Bus	36.42%	63.58%	0.00%	100.00%
321 Limited	0.00%	100.00%	0.00%	100.00%
323 Limited	13.24%	86.76%	0.00%	100.00%
328 Limited	4.68%	95.32%	0.00%	100.00%
330 Limited	0.00%	100.00%	0.00%	100.00%
34 Community Bus	26.81%	73.19%	0.00%	100.00%
35 Local	15.38%	84.62%	0.00%	100.00%
37 Community Bus	24.04%	75.96%	0.00%	100.00%
39 Community Bus	31.42%	68.58%	0.00%	100.00%
40 Local	9.13%	90.56%	0.31%	100.00%
42 Community Bus	19.49%	78.64%	1.87%	100.00%
45 Community Bus	19.41%	80.59%	0.00%	100.00%
46 Local	19.76%	80.24%	0.00%	100.00%
47 Local	25.72%	71.97%	2.32%	100.00%
48 Community Bus	17.41%	82.59%	0.00%	100.00%
49 Community Bus	7.45%	92.55%	0.00%	100.00%
52 Local	9.34%	90.66%	0.00%	100.00%
522 RAPID	20.09%	79.65%	0.26%	100.00%
53 Local	13.02%	86.98%	0.00%	100.00%
54 Local	8.43%	91.57%	0.00%	100.00%
55 Core	24.81%	74.42%	0.77%	100.00%
57 Local	11.59%	88.41%	0.00%	100.00%
58 Local	25.34%	74.66%	0.00%	100.00%
60 Core	17.06%	82.94%	0.00%	100.00%
61 Core	24.31%	75.69%	0.00%	100.00%
62 Core	14.47%	85.53%	0.00%	100.00%
63 Local	16.71%	83.29%	0.00%	100.00%
64 Core	16.77%	82.86%	0.37%	100.00%
65 Community Bus	31.96%	68.04%	0.00%	100.00%
66 Core	22.76%	76.47%	0.77%	100.00%
68 Core	27.87%	71.14%	0.99%	100.00%
70 Core	25.17%	73.21%	1.62%	100.00%
71 Core	23.52%	75.25%	1.23%	100.00%
72 Core	9.63%	90.37%	0.00%	100.00%
73 Core	20.71%	79.08%	0.22%	100.00%
77 Core	24.52%	74.61%	0.88%	100.00%
81 Local	17.25%	82.75%	0.00%	100.00%
82 Local	25.14%	74.86%	0.00%	100.00%
88 Community Bus	15.48%	84.52%	0.00%	100.00%
89 Local	5.32%	94.68%	0.00%	100.00%
900 Light Rail	35.54%	64.46%	0.00%	100.00%
901 Light Rail	21.68%	77.31%	1.01%	100.00%
902 Light Rail	21.25%	78.16%	0.59%	100.00%
Grand Total	21.35%	78.11%	0.54%	100.00%

Table 93: What type of fare did you use for this one-way trip?

Fare Category					
Row Labels	Adult	Disabled/Medicare Card Holder (RTC)	Senior (65+)	Youth (5-18)	Grand Total
10 Airport Service	96.44%	0.00%	2.42%	1.14%	100.00%
101 Express	100.00%	0.00%	0.00%	0.00%	100.00%
102 Express	98.29%	1.71%	0.00%	0.00%	100.00%
103 Express	100.00%	0.00%	0.00%	0.00%	100.00%
104 Express	100.00%	0.00%	0.00%	0.00%	100.00%
120 Express	100.00%	0.00%	0.00%	0.00%	100.00%
121 Express	100.00%	0.00%	0.00%	0.00%	100.00%
122 Express	100.00%	0.00%	0.00%	0.00%	100.00%
13 Community Bus	94.28%	0.00%	2.90%	2.82%	100.00%
14 Community Bus	82.15%	3.54%	12.72%	1.59%	100.00%
140 Express	100.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	62.69%	0.00%	4.60%	32.71%	100.00%
168 Express	100.00%	0.00%	0.00%	0.00%	100.00%
17 Community Bus	100.00%	0.00%	0.00%	0.00%	100.00%
18 Community Bus	97.89%	0.00%	0.00%	2.11%	100.00%
180 Express	100.00%	0.00%	0.00%	0.00%	100.00%
181 Express	98.42%	0.00%	1.19%	0.39%	100.00%
182 Express	100.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	53.14%	8.97%	4.78%	33.11%	100.00%
201 DASH	95.86%	0.00%	4.14%	0.00%	100.00%
22 Core	88.95%	2.41%	3.17%	5.47%	100.00%
23 Core	85.53%	3.69%	5.04%	5.75%	100.00%
25 Core	83.96%	3.21%	5.97%	6.85%	100.00%
26 Core	85.90%	1.77%	3.95%	8.37%	100.00%
27 Local	78.44%	3.21%	10.63%	7.72%	100.00%
304 Limited	95.64%	0.00%	3.44%	0.92%	100.00%
31 Local	84.23%	0.00%	6.28%	9.49%	100.00%
32 Community Bus	88.28%	1.14%	2.72%	7.86%	100.00%
321 Limited	100.00%	0.00%	0.00%	0.00%	100.00%
323 Limited	94.81%	0.00%	1.63%	3.55%	100.00%
328 Limited	95.93%	4.07%	0.00%	0.00%	100.00%
330 Limited	100.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	86.59%	0.00%	13.41%	0.00%	100.00%
35 Local	88.36%	0.35%	7.49%	3.79%	100.00%
37 Community Bus	91.66%	0.00%	0.75%	7.59%	100.00%
39 Community Bus	77.48%	0.00%	7.15%	15.37%	100.00%
40 Local	86.33%	3.40%	1.25%	9.01%	100.00%
42 Community Bus	83.25%	0.00%	5.94%	10.81%	100.00%
45 Community Bus	89.23%	10.77%	0.00%	0.00%	100.00%
46 Local	63.63%	0.00%	3.49%	32.87%	100.00%
47 Local	86.48%	3.29%	2.92%	7.30%	100.00%
48 Community Bus	91.77%	2.07%	2.86%	3.29%	100.00%
49 Community Bus	88.94%	0.00%	0.00%	11.06%	100.00%
52 Local	98.93%	0.00%	0.00%	1.07%	100.00%
522 RAPID	87.99%	2.91%	4.05%	5.05%	100.00%
53 Local	75.88%	3.29%	3.66%	17.18%	100.00%
54 Local	88.34%	2.13%	0.00%	9.53%	100.00%
55 Core	84.43%	1.33%	1.44%	12.80%	100.00%
57 Local	82.44%	1.79%	4.92%	10.85%	100.00%
58 Local	83.01%	0.57%	4.11%	12.32%	100.00%
60 Core	90.54%	3.12%	1.82%	4.52%	100.00%
61 Core	73.76%	3.06%	5.16%	18.02%	100.00%
62 Core	75.88%	1.13%	10.69%	12.30%	100.00%
63 Local	90.99%	0.00%	2.65%	6.36%	100.00%
64 Core	77.79%	5.82%	6.83%	9.56%	100.00%
65 Community Bus	84.15%	2.52%	3.67%	9.66%	100.00%
66 Core	79.05%	2.90%	5.02%	13.02%	100.00%
68 Core	90.10%	1.58%	3.86%	4.46%	100.00%
70 Core	73.75%	1.66%	4.42%	20.16%	100.00%
71 Core	64.26%	0.96%	3.72%	31.06%	100.00%
72 Core	85.17%	2.49%	1.01%	11.33%	100.00%
73 Core	75.89%	10.39%	5.41%	8.31%	100.00%
77 Core	87.23%	1.62%	3.44%	7.71%	100.00%
81 Local	80.12%	1.01%	4.18%	14.69%	100.00%
82 Local	79.07%	6.16%	5.16%	9.60%	100.00%
88 Community Bus	49.54%	15.71%	20.77%	13.98%	100.00%
89 Local	80.35%	11.56%	3.10%	4.98%	100.00%
900 Light Rail	87.68%	0.00%	0.00%	12.32%	100.00%
901 Light Rail	93.93%	0.99%	1.98%	3.09%	100.00%
902 Light Rail	93.75%	1.60%	2.33%	2.33%	100.00%
Grand Total	86.92%	2.21%	3.59%	7.28%	100.00%

Table 94: Type of fare category respondent paid

Vehicle Ownership						
Row Labels	None (0)	One (1)	Two (2)	Three (3)	Four (4)	Five or More (5+)
10 Airport Service	30.24%	34.12%	20.44%	13.90%	0.86%	0.43%
101 Express	0.00%	24.91%	75.09%	0.00%	0.00%	0.00%
102 Express	0.00%	13.84%	34.00%	10.76%	38.38%	3.02%
103 Express	12.75%	0.00%	54.36%	14.77%	10.73%	7.39%
104 Express	0.00%	11.17%	22.34%	55.32%	11.17%	0.00%
120 Express	4.05%	42.14%	41.19%	12.62%	0.00%	0.00%
121 Express	0.95%	19.58%	54.19%	20.31%	1.90%	3.07%
122 Express	0.00%	17.67%	49.62%	17.67%	15.04%	0.00%
13 Community Bus	10.56%	16.33%	32.78%	32.04%	0.00%	8.30%
14 Community Bus	89.67%	5.49%	2.90%	1.95%	0.00%	0.00%
140 Express	16.21%	42.52%	33.95%	0.00%	0.00%	7.31%
16 Community Bus	4.97%	30.80%	29.36%	10.09%	17.66%	7.12%
168 Express	13.90%	9.22%	39.90%	21.58%	12.34%	3.06%
17 Community Bus	94.93%	0.00%	5.07%	0.00%	0.00%	0.00%
18 Community Bus	8.57%	27.58%	53.79%	10.06%	0.00%	0.00%
180 Express	17.12%	35.18%	26.24%	13.97%	4.42%	3.08%
181 Express	21.65%	22.53%	30.07%	16.80%	4.96%	3.99%
182 Express	0.00%	69.41%	30.59%	0.00%	0.00%	0.00%
19 Community Bus	56.49%	35.40%	5.99%	0.00%	0.00%	2.12%
201 DASH	17.91%	17.20%	29.84%	31.07%	2.16%	1.83%
22 Core	34.12%	22.65%	25.85%	11.09%	2.62%	3.67%
23 Core	32.56%	19.29%	26.38%	15.15%	3.27%	3.35%
25 Core	23.50%	20.98%	34.36%	12.32%	5.33%	3.51%
26 Core	30.59%	28.31%	28.38%	8.47%	3.52%	0.74%
27 Local	32.92%	24.43%	32.83%	9.33%	0.49%	0.00%
304 Limited	14.90%	22.14%	44.98%	17.99%	0.00%	0.00%
31 Local	17.59%	14.60%	27.61%	25.57%	12.77%	1.86%
32 Community Bus	41.41%	18.91%	30.13%	8.05%	1.21%	0.28%
321 Limited	0.00%	61.64%	38.36%	0.00%	0.00%	0.00%
323 Limited	21.12%	26.28%	31.01%	12.03%	6.75%	2.81%
328 Limited	41.83%	23.48%	22.20%	8.41%	4.07%	0.00%
330 Limited	0.00%	4.74%	90.38%	4.87%	0.00%	0.00%
34 Community Bus	26.81%	36.59%	36.59%	0.00%	0.00%	0.00%
35 Local	44.47%	32.03%	18.01%	4.16%	0.84%	0.50%
37 Community Bus	8.53%	11.40%	54.35%	23.13%	2.59%	0.00%
39 Community Bus	13.89%	20.70%	33.04%	10.20%	11.77%	10.40%
40 Local	9.74%	12.28%	51.41%	22.25%	3.96%	0.35%
42 Community Bus	12.69%	13.55%	54.07%	8.96%	8.86%	1.88%
45 Community Bus	41.24%	2.88%	40.93%	9.70%	0.00%	5.25%
46 Local	22.11%	8.87%	35.82%	12.86%	8.54%	11.80%
47 Local	10.45%	13.49%	48.23%	15.20%	8.91%	3.72%
48 Community Bus	8.59%	23.26%	51.00%	10.45%	6.71%	0.00%
49 Community Bus	8.55%	0.94%	48.46%	36.46%	4.64%	0.94%
52 Local	11.08%	35.00%	24.61%	15.33%	8.53%	5.45%
522 RAPID	31.20%	21.43%	27.43%	14.23%	2.65%	3.05%
53 Local	22.22%	24.77%	28.54%	13.89%	5.22%	5.36%
54 Local	21.04%	32.59%	34.90%	10.57%	0.00%	0.90%
55 Core	30.30%	24.03%	30.18%	10.89%	2.50%	2.09%
57 Local	15.02%	24.88%	41.30%	10.03%	4.37%	4.41%
58 Local	25.81%	31.20%	30.67%	5.23%	1.70%	5.39%
60 Core	27.07%	25.00%	32.12%	10.31%	4.05%	1.45%
61 Core	30.12%	21.10%	22.77%	15.80%	9.22%	0.99%
62 Core	35.97%	18.34%	28.79%	12.79%	0.87%	3.24%
63 Local	27.65%	20.75%	42.88%	4.27%	2.87%	1.58%
64 Core	27.24%	24.04%	25.46%	16.17%	6.31%	0.78%
65 Community Bus	14.78%	24.27%	36.54%	18.36%	5.27%	0.77%
66 Core	36.14%	16.70%	29.32%	10.55%	5.59%	1.71%
68 Core	34.66%	19.13%	30.85%	10.26%	3.68%	1.42%
70 Core	27.42%	17.41%	29.91%	17.53%	4.87%	2.86%
71 Core	24.55%	25.14%	34.62%	8.75%	5.37%	1.57%
72 Core	29.23%	24.11%	28.20%	10.32%	3.90%	4.25%
73 Core	25.51%	19.87%	28.36%	11.49%	8.07%	6.70%
77 Core	30.97%	22.68%	31.74%	10.98%	2.57%	1.05%
81 Local	22.03%	27.57%	35.82%	9.87%	2.69%	2.03%
82 Local	56.92%	18.77%	18.29%	4.29%	1.74%	0.00%
88 Community Bus	38.33%	17.95%	41.60%	0.94%	1.19%	0.00%
89 Local	19.63%	18.72%	47.47%	7.53%	2.22%	4.43%
900 Light Rail	20.67%	20.95%	40.13%	15.96%	0.00%	2.29%
901 Light Rail	21.45%	27.02%	32.72%	11.64%	4.47%	2.70%
902 Light Rail	26.40%	28.48%	30.44%	9.58%	3.10%	2.00%
Grand Total	27.41%	23.04%	30.65%	12.16%	4.13%	2.62%

Table 95: How many vehicles (cars, trucks, or motorcycles) are available to your household?

Ability to Use a Vehicle to Complete Trip							
	No	Yes	Grand Total		No	Yes	Grand Total
10 Airport Service	69.98%	30.02%	100.00%	40 Local	80.04%	19.96%	100.00%
101 Express	37.46%	62.54%	100.00%	42 Community Bus	82.37%	17.63%	100.00%
102 Express	42.20%	57.80%	100.00%	45 Community Bus	68.68%	31.32%	100.00%
103 Express	0.00%	100.00%	100.00%	46 Local	95.74%	4.26%	100.00%
104 Express	33.25%	66.75%	100.00%	47 Local	79.28%	20.72%	100.00%
120 Express	4.40%	95.60%	100.00%	48 Community Bus	84.95%	15.05%	100.00%
121 Express	14.87%	85.13%	100.00%	49 Community Bus	100.00%	0.00%	100.00%
122 Express	33.33%	66.67%	100.00%	52 Local	83.50%	16.50%	100.00%
13 Community Bus	89.21%	10.79%	100.00%	522 RAPID	69.46%	30.54%	100.00%
14 Community Bus	90.80%	9.20%	100.00%	53 Local	91.68%	8.32%	100.00%
140 Express	27.88%	72.12%	100.00%	54 Local	71.05%	28.95%	100.00%
16 Community Bus	92.24%	7.76%	100.00%	55 Core	81.22%	18.78%	100.00%
168 Express	35.70%	64.30%	100.00%	57 Local	87.58%	12.42%	100.00%
17 Community Bus	100.00%	0.00%	100.00%	58 Local	78.93%	21.07%	100.00%
18 Community Bus	80.07%	19.93%	100.00%	60 Core	83.97%	16.03%	100.00%
180 Express	57.01%	42.99%	100.00%	61 Core	87.19%	12.81%	100.00%
181 Express	56.86%	43.14%	100.00%	62 Core	90.49%	9.51%	100.00%
182 Express	0.00%	100.00%	100.00%	63 Local	76.64%	23.36%	100.00%
19 Community Bus	100.00%	0.00%	100.00%	64 Core	77.54%	22.46%	100.00%
201 DASH	45.24%	54.76%	100.00%	65 Community Bus	80.54%	19.46%	100.00%
22 Core	70.39%	29.61%	100.00%	66 Core	80.80%	19.20%	100.00%
23 Core	79.00%	21.00%	100.00%	68 Core	80.50%	19.50%	100.00%
25 Core	83.21%	16.79%	100.00%	70 Core	77.04%	22.96%	100.00%
26 Core	71.15%	28.85%	100.00%	71 Core	81.95%	18.05%	100.00%
27 Local	74.96%	25.04%	100.00%	72 Core	78.33%	21.67%	100.00%
304 Limited	70.87%	29.13%	100.00%	73 Core	85.37%	14.63%	100.00%
31 Local	74.56%	25.44%	100.00%	77 Core	74.27%	25.73%	100.00%
32 Community Bus	82.70%	17.30%	100.00%	81 Local	81.72%	18.28%	100.00%
321 Limited	85.34%	14.66%	100.00%	82 Local	87.30%	12.70%	100.00%
323 Limited	68.92%	31.08%	100.00%	88 Community Bus	70.30%	29.70%	100.00%
328 Limited	31.16%	68.84%	100.00%	89 Local	51.78%	48.22%	100.00%
330 Limited	57.56%	42.44%	100.00%	900 Light Rail	56.30%	43.70%	100.00%
34 Community Bus	31.68%	68.32%	100.00%	901 Light Rail	54.70%	45.30%	100.00%
35 Local	85.43%	14.57%	100.00%	902 Light Rail	56.08%	43.92%	100.00%
37 Community Bus	75.94%	24.06%	100.00%	Grand Total	70.42%	29.58%	100.00%
39 Community Bus	73.37%	26.63%	100.00%				

Table 96: Could you have used one of these vehicles to complete this trip?

Household Size

Row Labels	One (1)	Two (2)	Three (3)	Four (4)	Five (5)	Six (6)	Seven (7)	Eight (8)	Nine (9)	Ten or More (10+)	Grand Total
10 Airport Service	12.27%	26.14%	19.57%	12.45%	14.44%	10.79%	0.21%	0.13%	0.00%	3.99%	100.00%
101 Express	0.00%	37.46%	50.00%	0.00%	0.00%	0.00%	12.54%	0.00%	0.00%	0.00%	100.00%
102 Express	0.00%	24.40%	15.29%	4.73%	4.73%	15.35%	14.18%	7.54%	10.76%	3.02%	100.00%
103 Express	5.37%	23.48%	20.14%	38.26%	0.00%	5.37%	7.39%	0.00%	0.00%	0.00%	100.00%
104 Express	0.00%	22.08%	22.08%	22.34%	0.00%	22.34%	0.00%	0.00%	11.17%	0.00%	100.00%
120 Express	8.57%	29.05%	41.67%	12.62%	8.09%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
121 Express	6.14%	27.83%	45.41%	8.78%	7.09%	4.76%	0.00%	0.00%	0.00%	0.00%	100.00%
122 Express	3.01%	28.94%	29.32%	12.03%	14.66%	6.02%	3.01%	3.01%	0.00%	0.00%	100.00%
13 Community Bus	0.00%	37.28%	12.42%	2.77%	9.00%	35.64%	2.90%	0.00%	0.00%	0.00%	100.00%
14 Community Bus	14.23%	28.90%	21.10%	31.28%	3.54%	0.00%	0.00%	0.95%	0.00%	0.00%	100.00%
140 Express	14.80%	18.99%	25.10%	22.12%	14.63%	4.36%	0.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	0.20%	13.51%	4.61%	13.54%	28.42%	7.28%	5.76%	12.09%	14.22%	0.37%	100.00%
168 Express	10.78%	18.43%	18.49%	12.28%	12.31%	9.22%	7.72%	7.69%	3.09%	0.00%	100.00%
17 Community Bus	10.14%	0.00%	41.55%	6.76%	0.00%	41.55%	0.00%	0.00%	0.00%	0.00%	100.00%
18 Community Bus	5.51%	14.03%	41.25%	26.86%	9.29%	3.06%	0.00%	0.00%	0.00%	0.00%	100.00%
180 Express	7.05%	12.93%	27.91%	21.60%	13.32%	8.62%	2.60%	3.36%	2.60%	0.00%	100.00%
181 Express	6.87%	17.15%	24.53%	18.02%	20.91%	5.91%	1.69%	1.69%	1.30%	1.92%	100.00%
182 Express	0.00%	69.41%	15.30%	15.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	42.08%	6.85%	22.44%	6.18%	16.29%	4.05%	2.12%	0.00%	0.00%	0.00%	100.00%
201 DASH	7.31%	16.75%	11.60%	16.27%	23.60%	20.10%	2.16%	1.09%	0.00%	1.12%	100.00%
22 Core	11.85%	15.10%	21.28%	18.97%	14.91%	6.61%	2.83%	2.74%	2.37%	3.34%	100.00%
23 Core	13.51%	16.08%	13.37%	17.48%	18.13%	11.30%	3.84%	1.84%	0.66%	3.78%	100.00%
25 Core	7.26%	11.11%	19.37%	17.80%	15.18%	14.12%	6.23%	2.73%	2.62%	3.59%	100.00%
26 Core	12.80%	20.79%	22.87%	19.78%	11.38%	6.35%	1.45%	2.28%	1.55%	0.74%	100.00%
27 Local	13.52%	12.00%	29.26%	17.07%	14.85%	9.61%	0.00%	0.00%	0.00%	3.69%	100.00%
30A Limited	2.26%	12.89%	36.87%	27.65%	12.47%	3.44%	4.43%	0.00%	0.00%	0.00%	100.00%
31 Local	4.88%	5.22%	17.52%	26.75%	10.17%	11.81%	8.55%	4.74%	8.81%	1.54%	100.00%
32 Community Bus	18.68%	23.11%	16.82%	12.68%	18.07%	7.96%	2.09%	0.00%	0.00%	0.59%	100.00%
321 Limited	0.00%	0.00%	12.79%	25.57%	48.85%	12.79%	0.00%	0.00%	0.00%	0.00%	100.00%
323 Limited	10.55%	13.61%	22.45%	25.92%	15.76%	4.86%	1.88%	2.53%	0.32%	2.12%	100.00%
328 Limited	44.71%	10.19%	32.26%	8.76%	0.00%	4.07%	0.00%	0.00%	0.00%	0.00%	100.00%
330 Limited	0.00%	4.74%	20.13%	37.56%	37.56%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	0.00%	13.41%	23.19%	50.00%	13.41%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
35 Local	20.47%	24.77%	21.13%	17.84%	8.89%	2.56%	0.50%	1.77%	0.00%	2.07%	100.00%
37 Community Bus	1.11%	13.21%	21.45%	15.07%	31.88%	13.22%	3.33%	0.73%	0.00%	0.00%	100.00%
39 Community Bus	0.00%	5.63%	17.32%	14.50%	25.90%	7.28%	16.51%	12.25%	0.62%	0.00%	100.00%
40 Local	4.14%	7.83%	15.51%	23.47%	12.82%	18.23%	5.40%	6.51%	5.78%	0.31%	100.00%
42 Community Bus	5.29%	5.75%	26.68%	22.30%	26.55%	4.76%	2.72%	2.92%	0.00%	3.03%	100.00%
45 Community Bus	27.38%	32.80%	5.52%	16.42%	12.37%	0.00%	0.00%	0.00%	0.00%	5.52%	100.00%
46 Local	2.79%	6.96%	29.33%	21.14%	22.64%	12.76%	1.24%	3.14%	0.00%	0.00%	100.00%
47 Local	0.00%	13.50%	14.78%	13.59%	23.30%	15.69%	7.61%	6.23%	5.30%	0.00%	100.00%
48 Community Bus	0.79%	21.23%	13.53%	39.88%	9.52%	6.64%	4.21%	0.79%	1.71%	1.71%	100.00%
49 Community Bus	0.00%	6.47%	6.47%	17.67%	27.99%	41.40%	0.00%	0.00%	0.00%	0.00%	100.00%
52 Local	0.18%	16.36%	20.41%	15.37%	14.01%	24.01%	3.12%	1.09%	5.45%	0.00%	100.00%
522 RAPID	11.81%	17.18%	19.23%	18.28%	15.64%	8.24%	3.55%	2.18%	0.74%	3.16%	100.00%
53 Local	4.30%	18.49%	21.14%	15.27%	11.76%	10.43%	11.27%	0.00%	4.66%	2.68%	100.00%
54 Local	7.78%	20.88%	35.73%	26.82%	5.67%	1.07%	0.00%	0.00%	1.68%	0.37%	100.00%
55 Core	6.75%	21.14%	19.13%	22.65%	18.41%	6.41%	3.14%	1.16%	1.00%	0.22%	100.00%
57 Local	9.97%	16.17%	19.31%	16.22%	20.17%	9.99%	4.16%	1.19%	1.57%	1.25%	100.00%
58 Local	7.56%	23.36%	20.96%	15.56%	25.28%	3.95%	2.12%	0.00%	1.21%	0.00%	100.00%
60 Core	13.31%	13.12%	19.90%	18.95%	11.08%	9.92%	5.15%	3.56%	4.60%	0.41%	100.00%
61 Core	12.20%	13.57%	18.89%	18.80%	10.86%	8.11%	8.89%	2.86%	3.26%	2.57%	100.00%
62 Core	12.30%	15.06%	23.22%	11.87%	15.15%	15.60%	3.53%	1.37%	0.00%	1.90%	100.00%
63 Local	10.42%	12.94%	15.77%	23.89%	18.20%	9.42%	2.55%	2.41%	1.93%	2.48%	100.00%
64 Core	11.65%	13.35%	17.34%	20.12%	17.23%	6.26%	7.02%	2.83%	1.44%	2.76%	100.00%
65 Community Bus	7.59%	13.75%	19.18%	18.38%	10.13%	16.49%	1.56%	7.17%	4.20%	1.54%	100.00%
66 Core	13.82%	10.98%	16.70%	15.66%	16.37%	13.53%	4.03%	3.73%	3.88%	1.28%	100.00%
68 Core	12.72%	17.13%	22.40%	19.07%	12.86%	7.84%	4.03%	0.83%	1.11%	2.00%	100.00%
70 Core	6.36%	15.70%	16.15%	20.85%	16.79%	13.74%	4.04%	2.48%	1.82%	2.07%	100.00%
71 Core	7.41%	7.39%	17.10%	32.23%	15.09%	7.84%	5.65%	1.85%	2.64%	2.81%	100.00%
72 Core	6.61%	11.03%	19.04%	22.87%	15.84%	12.60%	3.71%	5.39%	1.93%	0.97%	100.00%
73 Core	7.08%	10.87%	9.48%	16.79%	14.89%	15.70%	10.33%	5.91%	4.57%	4.38%	100.00%
77 Core	6.41%	9.28%	26.85%	10.42%	24.84%	13.45%	3.92%	3.21%	1.39%	0.23%	100.00%
81 Local	12.00%	14.12%	16.95%	24.28%	19.24%	10.21%	2.09%	0.44%	0.08%	0.58%	100.00%
82 Local	20.23%	16.09%	23.93%	16.78%	9.30%	6.65%	1.96%	1.00%	0.25%	3.80%	100.00%
88 Community Bus	17.52%	23.24%	17.02%	23.71%	14.86%	1.19%	1.19%	0.00%	0.00%	1.29%	100.00%
89 Local	14.29%	30.01%	28.68%	7.53%	3.76%	7.53%	2.22%	3.76%	0.00%	2.22%	100.00%
900 Light Rail	9.37%	15.81%	37.93%	15.63%	16.75%	2.01%	1.23%	0.56%	0.00%	0.71%	100.00%
901 Light Rail	10.75%	17.22%	19.98%	19.24%	14.21%	10.68%	2.91%	2.54%	1.45%	1.04%	100.00%
902 Light Rail	15.01%	24.26%	19.20%	18.03%	11.73%	6.01%	2.38%	1.48%	0.93%	0.98%	100.00%
Grand Total	10.86%	16.21%	19.72%	18.80%	15.17%	9.58%	3.63%	2.36%	1.75%	1.92%	100.00%

Table 97: Including you, how many people live in your household?

Employed in Household												
	None (0)	One (1)	Two (2)	Three (3)	Four (4)	Five (5)	Six (6)	Seven (7)	Eight (8)	Nine (9)	Ten or More (10+)	Grand Total
10 Airport Service	2.94%	21.50%	42.63%	22.02%	3.28%	4.56%	3.08%	0.00%	0.00%	0.00%	0.00%	100.00%
101 Express	0.00%	12.54%	87.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
102 Express	0.00%	0.00%	33.65%	23.09%	12.87%	22.64%	4.73%	3.02%	0.00%	0.00%	0.00%	100.00%
103 Express	0.00%	5.37%	51.01%	32.89%	10.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
104 Express	0.00%	11.17%	44.16%	22.34%	22.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
120 Express	0.00%	25.24%	58.09%	4.29%	8.33%	4.05%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
121 Express	0.95%	31.91%	52.01%	14.18%	0.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
122 Express	0.00%	43.60%	35.34%	9.02%	9.02%	0.00%	3.01%	0.00%	0.00%	0.00%	0.00%	100.00%
13 Community Bus	4.25%	9.65%	59.40%	26.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
14 Community Bus	30.66%	26.78%	12.28%	16.61%	13.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
140 Express	0.00%	39.90%	26.48%	11.68%	7.31%	14.63%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	0.76%	9.01%	16.98%	28.89%	18.44%	25.16%	0.75%	0.00%	0.00%	0.00%	0.00%	100.00%
168 Express	3.09%	16.90%	43.05%	10.72%	18.52%	3.09%	0.00%	4.62%	0.00%	0.00%	0.00%	100.00%
17 Community Bus	51.69%	36.48%	5.07%	6.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
18 Community Bus	5.51%	20.81%	39.17%	30.57%	3.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
180 Express	5.52%	16.46%	24.33%	31.91%	16.10%	2.29%	2.71%	0.69%	0.00%	0.00%	0.00%	100.00%
181 Express	2.19%	16.97%	36.30%	24.48%	13.76%	4.43%	0.37%	0.86%	0.37%	0.00%	0.28%	100.00%
182 Express	0.00%	15.30%	84.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	8.97%	37.90%	15.81%	32.13%	5.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
201 DASH	7.72%	15.32%	47.64%	20.62%	6.84%	1.86%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
22 Core	8.59%	18.40%	28.66%	21.55%	13.70%	5.60%	1.88%	0.78%	0.22%	0.08%	0.54%	100.00%
23 Core	11.87%	20.17%	32.01%	18.52%	9.23%	3.84%	2.00%	1.09%	0.00%	0.00%	1.27%	100.00%
25 Core	5.75%	13.59%	34.00%	25.78%	11.65%	5.60%	1.91%	1.07%	0.65%	0.00%	0.00%	100.00%
26 Core	8.15%	20.72%	32.59%	20.71%	10.61%	5.15%	1.57%	0.21%	0.00%	0.00%	0.31%	100.00%
27 Local	3.48%	19.00%	33.60%	28.26%	11.38%	0.60%	0.00%	0.00%	3.69%	0.00%	0.00%	100.00%
304 Limited	0.00%	15.65%	32.25%	32.60%	17.34%	2.17%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
31 Local	2.46%	11.97%	24.28%	26.18%	21.67%	11.03%	2.40%	0.00%	0.00%	0.00%	0.00%	100.00%
32 Community Bus	6.44%	24.93%	42.10%	18.46%	4.89%	3.18%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
321 Limited	0.00%	0.00%	12.79%	25.57%	12.79%	48.85%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
323 Limited	6.88%	22.09%	32.70%	21.10%	11.05%	4.72%	0.86%	0.00%	0.00%	0.60%	0.00%	100.00%
328 Limited	0.00%	58.98%	26.75%	14.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
330 Limited	0.00%	0.00%	22.12%	73.00%	4.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	0.00%	23.19%	50.00%	13.41%	13.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
35 Local	17.01%	15.91%	36.25%	20.46%	7.25%	1.04%	0.00%	0.00%	0.00%	0.00%	2.07%	100.00%
37 Community Bus	0.00%	5.72%	42.99%	35.73%	13.96%	0.73%	0.87%	0.00%	0.00%	0.00%	0.00%	100.00%
39 Community Bus	2.48%	8.56%	37.29%	29.50%	17.03%	4.53%	0.00%	0.00%	0.00%	0.62%	0.00%	100.00%
40 Local	2.25%	10.36%	31.16%	25.67%	21.04%	7.77%	1.74%	0.00%	0.00%	0.00%	0.00%	100.00%
42 Community Bus	2.97%	16.14%	23.06%	39.78%	15.61%	0.00%	1.29%	1.15%	0.00%	0.00%	0.00%	100.00%
45 Community Bus	9.97%	39.97%	25.52%	20.30%	0.00%	4.25%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
46 Local	2.14%	15.24%	45.99%	26.68%	8.53%	1.43%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
47 Local	0.00%	4.85%	40.19%	30.65%	11.35%	10.10%	2.87%	0.00%	0.00%	0.00%	0.00%	100.00%
48 Community Bus	6.21%	9.40%	39.47%	30.40%	7.81%	4.21%	0.79%	1.71%	0.00%	0.00%	0.00%	100.00%
49 Community Bus	0.00%	0.00%	47.11%	48.93%	0.94%	3.02%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
52 Local	5.14%	6.48%	45.26%	24.42%	11.10%	7.59%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
522 RAPID	9.16%	16.72%	33.94%	21.99%	10.47%	3.17%	2.40%	0.96%	0.27%	0.00%	0.91%	100.00%
53 Local	2.17%	11.02%	46.65%	12.70%	11.71%	12.47%	3.27%	0.00%	0.00%	0.00%	0.00%	100.00%
54 Local	4.77%	25.81%	43.55%	15.70%	8.49%	1.07%	0.61%	0.00%	0.00%	0.00%	0.00%	100.00%
55 Core	4.59%	18.72%	36.57%	25.02%	11.15%	3.14%	0.81%	0.00%	0.00%	0.00%	0.00%	100.00%
57 Local	7.46%	12.40%	31.33%	25.11%	14.64%	6.25%	1.91%	0.00%	0.91%	0.00%	0.00%	100.00%
58 Local	6.42%	21.56%	34.44%	21.05%	8.32%	5.93%	2.28%	0.00%	0.00%	0.00%	0.00%	100.00%
60 Core	8.40%	18.39%	30.55%	24.03%	10.80%	6.00%	1.42%	0.41%	0.00%	0.00%	0.00%	100.00%
61 Core	9.97%	14.05%	24.18%	22.29%	15.74%	6.61%	5.41%	1.55%	0.00%	0.19%	0.00%	100.00%
62 Core	11.71%	14.37%	30.53%	33.61%	6.48%	0.83%	0.56%	0.00%	0.00%	0.35%	1.55%	100.00%
63 Local	2.10%	17.15%	38.01%	21.02%	16.87%	0.61%	0.59%	1.76%	0.00%	0.42%	1.47%	100.00%
64 Core	10.00%	15.11%	31.86%	21.68%	11.65%	5.09%	2.73%	0.74%	0.44%	0.00%	0.70%	100.00%
65 Community Bus	5.63%	17.26%	29.25%	26.10%	14.93%	4.69%	1.37%	0.00%	0.00%	0.00%	0.77%	100.00%
66 Core	8.48%	17.69%	31.17%	23.30%	12.66%	4.56%	1.43%	0.16%	0.37%	0.00%	0.17%	100.00%
68 Core	7.55%	20.00%	32.26%	21.63%	11.85%	2.53%	3.08%	0.58%	0.28%	0.24%	0.00%	100.00%
70 Core	6.02%	16.95%	38.05%	18.60%	10.31%	6.86%	2.14%	0.80%	0.00%	0.00%	0.29%	100.00%
71 Core	5.43%	20.41%	31.45%	20.78%	11.68%	7.46%	1.89%	0.00%	0.00%	0.90%	0.00%	100.00%
72 Core	9.67%	17.10%	32.65%	20.79%	12.21%	3.91%	1.28%	0.16%	2.00%	0.00%	0.22%	100.00%
73 Core	7.53%	10.47%	31.01%	23.87%	12.43%	9.16%	4.18%	0.75%	0.00%	0.00%	0.60%	100.00%
77 Core	7.06%	15.23%	34.75%	26.98%	10.80%	2.10%	0.82%	1.19%	1.06%	0.00%	0.00%	100.00%
81 Local	5.06%	21.56%	42.14%	22.83%	5.16%	2.47%	0.39%	0.00%	0.00%	0.38%	0.00%	100.00%
82 Local	17.16%	17.92%	30.40%	24.91%	6.38%	1.98%	0.00%	1.24%	0.00%	0.00%	0.00%	100.00%
88 Community Bus	5.93%	17.31%	58.86%	15.33%	2.47%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	100.00%
89 Local	8.46%	14.27%	53.36%	5.32%	2.22%	8.19%	6.65%	1.54%	0.00%	0.00%	0.00%	100.00%
900 Light Rail	1.31%	18.37%	45.11%	25.75%	8.01%	1.46%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
901 Light Rail	4.37%	18.25%	39.59%	20.76%	11.38%	4.04%	0.78%	0.25%	0.30%	0.00%	0.29%	100.00%
902 Light Rail	4.99%	23.57%	40.61%	17.74%	7.89%	3.57%	0.89%	0.17%	0.30%	0.08%	0.18%	100.00%
Grand Total	6.81%	18.05%	35.15%	21.91%	10.95%	4.43%	1.53%	0.50%	0.27%	0.06%	0.33%	100.00%

Table 98: Including YOU, how many people in your household are employed full/part-time?

Student Status								
	Not a student	Yes - Full Time college/university	Yes - Part Time college/university	Yes - vocational/technical/trade school	Yes - K - 12 th grade	Other	Don't Know/Refuse	Grand Total
10 Airport Service	79.12%	4.11%	9.06%	0.00%	0.33%	0.00%	7.37%	100.00%
101 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
102 Express	84.11%	0.00%	3.42%	0.00%	0.00%	0.00%	12.47%	100.00%
103 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
104 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
120 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
121 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
122 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
13 Community Bus	86.17%	1.35%	8.30%	0.00%	2.82%	0.00%	1.35%	100.00%
14 Community Bus	76.35%	0.00%	1.95%	0.00%	2.54%	1.95%	17.21%	100.00%
140 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	59.04%	0.00%	14.02%	0.00%	26.75%	0.00%	0.20%	100.00%
168 Express	75.29%	0.00%	20.08%	0.00%	0.00%	0.00%	4.62%	100.00%
17 Community Bus	63.52%	0.00%	0.00%	0.00%	0.00%	0.00%	36.48%	100.00%
18 Community Bus	29.05%	0.00%	70.95%	0.00%	0.00%	0.00%	0.00%	100.00%
180 Express	73.82%	3.98%	17.31%	0.00%	0.00%	0.00%	4.90%	100.00%
181 Express	58.56%	3.36%	34.08%	0.00%	0.00%	0.00%	4.01%	100.00%
182 Express	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	36.69%	2.12%	6.37%	0.00%	33.11%	0.00%	21.71%	100.00%
201 DASH	64.54%	0.79%	32.24%	0.00%	0.00%	0.00%	2.43%	100.00%
22 Core	65.81%	4.22%	19.74%	0.71%	4.55%	0.19%	4.77%	100.00%
23 Core	52.32%	3.21%	36.14%	0.63%	4.17%	0.35%	3.18%	100.00%
25 Core	63.58%	2.63%	24.31%	0.00%	6.61%	0.00%	2.86%	100.00%
26 Core	71.25%	1.17%	13.63%	1.69%	8.92%	0.31%	3.04%	100.00%
27 Local	81.17%	1.40%	3.19%	0.00%	12.69%	0.14%	1.40%	100.00%
304 Limited	87.78%	0.92%	10.39%	0.00%	0.00%	0.00%	0.92%	100.00%
31 Local	31.13%	4.61%	52.75%	0.00%	5.75%	0.00%	5.76%	100.00%
32 Community Bus	65.23%	2.16%	22.00%	0.00%	8.81%	0.00%	1.80%	100.00%
321 Limited	63.93%	36.07%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
323 Limited	29.16%	7.61%	58.21%	0.00%	2.26%	0.60%	2.16%	100.00%
328 Limited	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
330 Limited	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
35 Local	74.90%	2.01%	17.84%	0.00%	3.29%	0.94%	1.02%	100.00%
37 Community Bus	38.52%	0.00%	51.08%	0.00%	8.32%	0.00%	2.08%	100.00%
39 Community Bus	59.96%	4.13%	18.02%	0.00%	15.37%	0.00%	2.53%	100.00%
40 Local	36.17%	0.00%	52.13%	0.00%	10.50%	1.20%	0.00%	100.00%
42 Community Bus	29.21%	5.63%	53.79%	0.00%	9.19%	0.00%	2.18%	100.00%
45 Community Bus	83.47%	5.52%	6.77%	0.00%	4.25%	0.00%	0.00%	100.00%
46 Local	44.78%	2.93%	11.34%	0.00%	38.67%	0.00%	2.28%	100.00%
47 Local	79.33%	3.61%	7.28%	0.00%	7.30%	0.00%	2.48%	100.00%
48 Community Bus	83.67%	0.00%	14.75%	0.00%	1.59%	0.00%	0.00%	100.00%
49 Community Bus	73.11%	0.00%	9.78%	0.00%	11.06%	0.00%	6.04%	100.00%
52 Local	30.29%	0.18%	69.53%	0.00%	0.00%	0.00%	0.00%	100.00%
522 RAPID	65.07%	4.45%	21.27%	0.36%	3.88%	0.45%	4.52%	100.00%
53 Local	41.54%	2.15%	41.52%	1.64%	11.28%	0.00%	1.87%	100.00%
54 Local	45.53%	1.00%	39.42%	0.00%	8.99%	0.00%	5.06%	100.00%
55 Core	51.55%	0.93%	32.89%	0.00%	11.46%	0.90%	2.28%	100.00%
57 Local	41.26%	1.79%	46.98%	1.79%	5.10%	0.00%	3.10%	100.00%
58 Local	52.47%	4.33%	25.21%	0.00%	12.19%	0.00%	5.80%	100.00%
60 Core	62.03%	2.50%	31.16%	0.00%	2.74%	0.00%	1.57%	100.00%
61 Core	63.45%	0.99%	11.21%	0.52%	16.23%	0.00%	7.60%	100.00%
62 Core	73.75%	0.52%	9.77%	0.00%	12.06%	0.00%	3.89%	100.00%
63 Local	59.12%	2.58%	32.39%	0.00%	2.05%	0.00%	3.85%	100.00%
64 Core	58.05%	0.79%	26.62%	1.29%	9.82%	0.52%	2.91%	100.00%
65 Community Bus	54.13%	3.78%	27.29%	0.77%	9.66%	0.00%	4.37%	100.00%
66 Core	64.75%	0.73%	13.65%	0.00%	13.56%	0.16%	7.15%	100.00%
68 Core	67.51%	2.72%	19.80%	0.84%	4.30%	0.00%	4.82%	100.00%
70 Core	52.47%	4.31%	16.36%	0.25%	20.70%	1.15%	4.76%	100.00%
71 Core	56.07%	1.40%	18.13%	0.59%	20.92%	0.00%	2.89%	100.00%
72 Core	41.96%	3.23%	39.15%	0.25%	10.53%	0.00%	4.88%	100.00%
73 Core	61.74%	1.74%	20.60%	0.00%	8.73%	0.00%	7.19%	100.00%
77 Core	68.75%	1.20%	16.25%	0.52%	8.91%	0.42%	3.95%	100.00%
81 Local	47.31%	2.86%	30.59%	0.48%	13.74%	1.40%	3.62%	100.00%
82 Local	65.10%	1.25%	21.56%	0.00%	8.28%	1.05%	2.76%	100.00%
88 Community Bus	70.88%	0.00%	1.19%	1.19%	4.44%	0.00%	22.31%	100.00%
89 Local	89.70%	1.56%	0.00%	1.54%	4.98%	0.00%	2.22%	100.00%
900 Light Rail	65.00%	1.81%	16.85%	0.00%	11.25%	0.00%	5.09%	100.00%
901 Light Rail	71.74%	2.73%	19.07%	0.37%	2.61%	0.05%	3.41%	100.00%
902 Light Rail	75.08%	3.47%	16.06%	0.06%	1.80%	0.21%	3.31%	100.00%
Grand Total	63.40%	2.76%	22.68%	0.37%	6.57%	0.23%	3.98%	100.00%

Table 99: What is your student status?

Driver's License							
	No	Yes	Grand Total		No	Yes	Grand Total
10 Airport Service	24.33%	75.67%	100.00%	40 Local	64.22%	35.78%	100.00%
101 Express	0.00%	100.00%	100.00%	42 Community Bus	63.26%	36.74%	100.00%
102 Express	16.64%	83.36%	100.00%	45 Community Bus	49.35%	50.65%	100.00%
103 Express	0.00%	100.00%	100.00%	46 Local	66.33%	33.67%	100.00%
104 Express	0.00%	100.00%	100.00%	47 Local	35.89%	64.11%	100.00%
120 Express	8.09%	91.91%	100.00%	48 Community Bus	39.32%	60.68%	100.00%
121 Express	2.14%	97.86%	100.00%	49 Community Bus	20.34%	79.66%	100.00%
122 Express	6.02%	93.98%	100.00%	52 Local	52.93%	47.07%	100.00%
13 Community Bus	17.56%	82.44%	100.00%	522 RAPID	48.32%	51.68%	100.00%
14 Community Bus	57.14%	42.86%	100.00%	53 Local	73.97%	26.03%	100.00%
140 Express	8.73%	91.27%	100.00%	54 Local	54.98%	45.02%	100.00%
16 Community Bus	91.84%	8.16%	100.00%	55 Core	70.16%	29.84%	100.00%
168 Express	22.27%	77.73%	100.00%	57 Local	61.25%	38.75%	100.00%
17 Community Bus	56.76%	43.24%	100.00%	58 Local	59.45%	40.55%	100.00%
18 Community Bus	25.11%	74.89%	100.00%	60 Core	60.59%	39.41%	100.00%
180 Express	29.00%	71.00%	100.00%	61 Core	61.31%	38.69%	100.00%
181 Express	28.42%	71.58%	100.00%	62 Core	55.74%	44.26%	100.00%
182 Express	0.00%	100.00%	100.00%	63 Local	47.76%	52.24%	100.00%
19 Community Bus	100.00%	0.00%	100.00%	64 Core	60.18%	39.82%	100.00%
201 DASH	17.13%	82.87%	100.00%	65 Community Bus	62.22%	37.78%	100.00%
22 Core	48.29%	51.71%	100.00%	66 Core	63.08%	36.92%	100.00%
23 Core	56.29%	43.71%	100.00%	68 Core	50.34%	49.66%	100.00%
25 Core	60.65%	39.35%	100.00%	70 Core	65.03%	34.97%	100.00%
26 Core	48.92%	51.08%	100.00%	71 Core	66.00%	34.00%	100.00%
27 Local	61.99%	38.01%	100.00%	72 Core	58.98%	41.02%	100.00%
304 Limited	22.08%	77.92%	100.00%	73 Core	49.57%	50.43%	100.00%
31 Local	66.33%	33.67%	100.00%	77 Core	55.24%	44.76%	100.00%
32 Community Bus	54.49%	45.51%	100.00%	81 Local	55.64%	44.36%	100.00%
321 Limited	48.85%	51.15%	100.00%	82 Local	56.85%	43.15%	100.00%
323 Limited	54.18%	45.82%	100.00%	88 Community Bus	64.95%	35.05%	100.00%
328 Limited	32.21%	67.79%	100.00%	89 Local	23.56%	76.44%	100.00%
330 Limited	4.74%	95.26%	100.00%	900 Light Rail	37.68%	62.32%	100.00%
34 Community Bus	63.41%	36.59%	100.00%	901 Light Rail	33.47%	66.53%	100.00%
35 Local	56.51%	43.49%	100.00%	902 Light Rail	33.68%	66.32%	100.00%
37 Community Bus	42.62%	57.38%	100.00%	Grand Total	48.68%	51.32%	100.00%
39 Community Bus	70.77%	29.23%	100.00%				

Table 100: Do you have a valid driver's license?

Age of Transit Passengers

Row Labels	17 and Under	18-24	25-34	35-44	45-54	55-64	65 or older	Grand Total
10 Airport Service	0.00%	13.63%	35.88%	21.36%	15.90%	9.09%	4.13%	100.00%
101 Express	0.00%	0.00%	24.91%	50.00%	0.00%	25.09%	0.00%	100.00%
102 Express	0.00%	9.65%	44.76%	25.91%	9.06%	10.62%	0.00%	100.00%
103 Express	0.00%	5.37%	32.89%	27.53%	10.73%	23.48%	0.00%	100.00%
104 Express	0.00%	0.00%	66.49%	0.00%	22.34%	11.17%	0.00%	100.00%
120 Express	0.00%	0.00%	24.76%	12.86%	33.33%	29.05%	0.00%	100.00%
121 Express	0.00%	0.00%	10.43%	25.28%	32.13%	26.24%	5.92%	100.00%
122 Express	0.00%	0.00%	9.02%	20.68%	37.97%	32.33%	0.00%	100.00%
13 Community Bus	2.82%	11.01%	46.13%	26.04%	8.40%	1.35%	4.25%	100.00%
14 Community Bus	1.59%	0.00%	24.78%	31.96%	15.31%	13.64%	12.72%	100.00%
140 Express	0.00%	0.00%	45.47%	24.77%	0.00%	14.96%	14.80%	100.00%
16 Community Bus	23.97%	23.14%	29.78%	17.57%	0.57%	0.37%	4.60%	100.00%
168 Express	0.00%	12.34%	23.09%	21.55%	26.18%	10.72%	6.12%	100.00%
17 Community Bus	0.00%	6.76%	0.00%	88.17%	0.00%	5.07%	0.00%	100.00%
18 Community Bus	0.00%	42.89%	38.11%	15.94%	3.06%	0.00%	0.00%	100.00%
180 Express	0.00%	15.79%	41.15%	22.66%	8.36%	11.24%	0.80%	100.00%
181 Express	0.00%	29.36%	33.61%	19.01%	8.06%	7.40%	2.56%	100.00%
182 Express	0.00%	0.00%	69.41%	30.59%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	0.00%	63.31%	5.00%	20.54%	4.24%	2.12%	4.78%	100.00%
201 DASH	0.00%	24.91%	35.49%	16.09%	9.34%	8.61%	5.56%	100.00%
22 Core	3.54%	23.56%	28.47%	18.46%	13.24%	7.89%	4.85%	100.00%
23 Core	2.74%	35.67%	21.51%	12.63%	13.28%	7.87%	6.31%	100.00%
25 Core	5.05%	29.56%	24.91%	15.05%	11.29%	7.03%	7.12%	100.00%
26 Core	5.18%	17.98%	29.37%	19.60%	14.70%	7.09%	6.08%	100.00%
27 Local	6.19%	19.61%	19.05%	15.60%	11.45%	14.42%	13.68%	100.00%
304 Limited	0.92%	6.36%	41.23%	7.19%	21.71%	19.17%	3.44%	100.00%
31 Local	5.85%	53.40%	22.44%	7.36%	1.99%	2.10%	6.85%	100.00%
32 Community Bus	6.07%	12.12%	35.35%	20.77%	17.09%	4.52%	4.08%	100.00%
321 Limited	0.00%	0.00%	0.00%	61.64%	38.36%	0.00%	0.00%	100.00%
323 Limited	2.23%	53.12%	23.77%	8.32%	4.16%	3.90%	4.50%	100.00%
328 Limited	0.00%	9.85%	32.25%	14.27%	30.81%	12.83%	0.00%	100.00%
330 Limited	0.00%	0.00%	0.00%	22.12%	4.87%	73.00%	0.00%	100.00%
34 Community Bus	0.00%	0.00%	0.00%	36.59%	0.00%	50.00%	13.41%	100.00%
35 Local	3.79%	19.46%	23.25%	14.21%	11.19%	15.78%	12.31%	100.00%
37 Community Bus	6.72%	37.26%	27.31%	13.15%	5.82%	8.98%	0.75%	100.00%
39 Community Bus	15.37%	22.40%	17.84%	16.14%	5.61%	15.50%	7.15%	100.00%
40 Local	7.11%	44.80%	20.81%	16.36%	2.38%	5.74%	2.80%	100.00%
42 Community Bus	8.09%	56.70%	12.38%	8.26%	7.54%	1.09%	5.94%	100.00%
45 Community Bus	0.00%	5.75%	37.31%	23.25%	14.22%	9.70%	9.76%	100.00%
46 Local	24.69%	30.45%	22.62%	12.63%	1.96%	2.73%	4.92%	100.00%
47 Local	7.30%	9.00%	36.82%	33.60%	7.60%	2.76%	2.92%	100.00%
48 Community Bus	1.59%	12.57%	32.21%	39.68%	5.36%	3.66%	4.93%	100.00%
49 Community Bus	11.06%	5.53%	62.78%	11.35%	4.64%	4.64%	0.00%	100.00%
52 Local	0.45%	58.45%	20.23%	6.54%	4.40%	9.93%	0.00%	100.00%
522 RAPID	2.57%	24.16%	31.21%	19.94%	8.31%	7.58%	6.23%	100.00%
53 Local	7.91%	39.96%	18.80%	9.90%	5.60%	9.91%	7.92%	100.00%
54 Local	8.37%	29.44%	18.93%	24.37%	6.49%	6.84%	5.57%	100.00%
55 Core	7.93%	37.28%	24.85%	9.50%	9.12%	6.57%	4.75%	100.00%
57 Local	5.89%	37.57%	27.66%	13.15%	5.91%	4.90%	4.92%	100.00%
58 Local	8.96%	31.41%	30.99%	8.21%	12.46%	2.65%	5.32%	100.00%
60 Core	1.80%	29.86%	23.67%	15.64%	14.82%	9.79%	4.43%	100.00%
61 Core	16.03%	17.94%	19.18%	17.85%	11.75%	10.26%	7.00%	100.00%
62 Core	5.48%	18.13%	21.28%	13.16%	21.03%	9.95%	10.98%	100.00%
63 Local	1.14%	29.54%	25.25%	21.86%	10.68%	8.88%	2.65%	100.00%
64 Core	5.89%	31.42%	16.95%	15.64%	9.93%	9.88%	10.29%	100.00%
65 Community Bus	6.30%	32.50%	20.96%	17.39%	11.73%	4.93%	6.19%	100.00%
66 Core	10.74%	19.68%	26.43%	17.65%	11.10%	8.36%	6.04%	100.00%
68 Core	3.01%	22.85%	23.61%	18.46%	14.03%	12.07%	5.96%	100.00%
70 Core	13.81%	28.22%	24.53%	13.01%	9.86%	5.97%	4.60%	100.00%
71 Core	19.61%	34.49%	15.16%	10.17%	9.89%	3.90%	6.78%	100.00%
72 Core	6.55%	37.35%	25.58%	12.04%	9.27%	6.13%	3.08%	100.00%
73 Core	7.81%	23.79%	18.46%	16.22%	14.19%	10.70%	8.83%	100.00%
77 Core	5.58%	19.78%	38.35%	14.69%	10.18%	7.10%	4.31%	100.00%
81 Local	9.42%	31.42%	25.39%	14.27%	8.64%	4.37%	6.49%	100.00%
82 Local	2.94%	28.01%	21.83%	21.69%	9.33%	9.47%	6.73%	100.00%
88 Community Bus	13.24%	22.54%	26.37%	2.67%	9.29%	0.62%	25.27%	100.00%
89 Local	4.98%	1.54%	40.94%	9.77%	20.60%	15.30%	6.86%	100.00%
900 Light Rail	8.71%	24.79%	29.13%	13.53%	8.48%	11.56%	3.80%	100.00%
901 Light Rail	2.00%	23.10%	31.88%	19.97%	10.70%	8.92%	3.42%	100.00%
902 Light Rail	1.39%	17.98%	33.19%	20.45%	12.88%	10.26%	3.85%	100.00%
Grand Total	4.81%	25.70%	27.37%	17.20%	11.22%	8.39%	5.30%	100.00%

Table 101: What is your year of birth?

Ethnicity of Transit Passengers										
Row Labels	Hispanic, any race	White alone, non Hispanic	Asian alone, non Hispanic	Mixed race, non Hispanic	African-American alone, non Hispanic	Other, non Hispanic	Native Hawaiian or Pacific Islander alone, non Hispanic	American Indian alone, non Hispanic	No Response	Grand Total
10 Airport Service	15.89%	32.18%	27.00%	9.76%	8.73%	1.44%	4.55%	0.45%	0.00%	100.00%
101 Express	0.00%	37.46%	37.54%	12.46%	0.00%	12.54%	0.00%	0.00%	0.00%	100.00%
102 Express	9.06%	33.86%	31.04%	4.52%	7.54%	13.98%	0.00%	0.00%	0.00%	100.00%
103 Express	0.00%	18.12%	58.40%	0.00%	5.37%	0.00%	5.37%	7.39%	5.37%	100.00%
104 Express	22.08%	0.00%	33.51%	22.08%	0.00%	22.34%	0.00%	0.00%	0.00%	100.00%
120 Express	4.29%	16.67%	79.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
121 Express	18.10%	63.91%	8.78%	3.07%	2.12%	0.00%	2.12%	0.95%	0.95%	100.00%
122 Express	28.94%	41.35%	18.05%	0.00%	8.65%	0.00%	3.01%	0.00%	0.00%	100.00%
13 Community Bus	22.26%	44.03%	5.01%	27.34%	0.00%	0.00%	1.35%	0.00%	0.00%	100.00%
14 Community Bus	58.58%	10.18%	0.95%	27.39%	2.90%	0.00%	0.00%	0.00%	0.00%	100.00%
140 Express	4.36%	0.00%	73.19%	7.64%	14.80%	0.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	48.95%	39.34%	4.79%	0.20%	6.72%	0.00%	0.00%	0.00%	0.00%	100.00%
168 Express	29.21%	40.08%	16.90%	13.81%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
17 Community Bus	51.69%	0.00%	0.00%	0.00%	48.31%	0.00%	0.00%	0.00%	0.00%	100.00%
18 Community Bus	30.97%	37.31%	3.06%	21.66%	7.00%	0.00%	0.00%	0.00%	0.00%	100.00%
180 Express	19.46%	10.45%	41.90%	9.09%	11.68%	6.04%	0.69%	0.00%	0.69%	100.00%
181 Express	19.35%	19.81%	22.52%	17.07%	11.00%	4.81%	3.17%	1.37%	0.91%	100.00%
182 Express	0.00%	15.30%	84.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	79.66%	12.04%	0.00%	4.25%	2.12%	0.00%	0.00%	1.93%	0.00%	100.00%
201 DASH	15.16%	33.31%	21.68%	24.68%	2.63%	0.00%	2.54%	0.00%	0.00%	100.00%
22 Core	37.28%	23.34%	19.33%	6.26%	7.35%	3.27%	2.40%	0.61%	0.17%	100.00%
23 Core	34.24%	18.99%	27.96%	7.65%	7.20%	1.94%	1.96%	0.00%	0.06%	100.00%
25 Core	49.72%	16.35%	17.12%	8.47%	6.18%	0.41%	1.28%	0.19%	0.28%	100.00%
26 Core	27.42%	23.96%	28.22%	6.27%	8.77%	2.87%	1.42%	1.06%	0.00%	100.00%
27 Local	50.79%	20.48%	14.11%	9.21%	2.69%	0.91%	0.00%	1.81%	0.00%	100.00%
304 Limited	22.17%	31.02%	29.74%	12.56%	2.26%	2.26%	0.00%	0.00%	0.00%	100.00%
31 Local	45.24%	13.21%	31.08%	2.85%	6.30%	0.00%	1.32%	0.00%	0.00%	100.00%
32 Community Bus	29.82%	25.33%	25.46%	10.08%	7.20%	0.00%	2.02%	0.09%	0.00%	100.00%
321 Limited	12.79%	25.57%	0.00%	0.00%	0.00%	25.57%	0.00%	36.07%	0.00%	100.00%
323 Limited	36.17%	16.01%	34.35%	3.76%	5.84%	1.73%	1.72%	0.42%	0.00%	100.00%
328 Limited	0.00%	20.64%	79.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
330 Limited	0.00%	7.63%	59.68%	32.69%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	23.19%	53.62%	23.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
35 Local	27.57%	34.37%	19.86%	6.71%	8.90%	0.97%	1.14%	0.00%	0.47%	100.00%
37 Community Bus	33.89%	26.63%	8.96%	21.36%	6.98%	0.73%	1.46%	0.00%	0.00%	100.00%
39 Community Bus	22.94%	11.60%	43.46%	1.40%	15.59%	1.40%	3.61%	0.00%	0.00%	100.00%
40 Local	25.36%	22.16%	26.85%	14.49%	4.31%	2.26%	4.57%	0.00%	0.00%	100.00%
42 Community Bus	39.46%	13.03%	33.80%	2.97%	9.65%	0.00%	1.09%	0.00%	0.00%	100.00%
45 Community Bus	47.69%	5.52%	5.52%	27.90%	8.13%	0.00%	5.25%	0.00%	0.00%	100.00%
46 Local	25.78%	6.19%	48.78%	15.29%	2.67%	0.00%	1.30%	0.29%	0.00%	100.00%
47 Local	17.02%	20.48%	23.39%	27.18%	2.43%	9.50%	0.00%	0.00%	0.00%	100.00%
48 Community Bus	14.60%	25.12%	32.29%	17.94%	6.28%	3.78%	0.00%	0.00%	0.00%	100.00%
49 Community Bus	11.57%	20.34%	0.94%	67.15%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
52 Local	14.10%	43.70%	23.85%	14.18%	1.52%	2.66%	0.00%	0.00%	0.00%	100.00%
522 RAPID	31.79%	23.17%	20.78%	10.54%	7.12%	2.76%	2.97%	0.57%	0.31%	100.00%
53 Local	25.30%	29.28%	22.68%	10.03%	2.91%	6.80%	2.99%	0.00%	0.00%	100.00%
54 Local	25.49%	19.52%	42.53%	4.04%	2.44%	4.14%	1.83%	0.00%	0.00%	100.00%
55 Core	32.19%	22.37%	30.50%	1.49%	7.29%	2.48%	3.68%	0.00%	0.00%	100.00%
57 Local	27.38%	23.21%	28.81%	10.24%	4.19%	5.75%	0.42%	0.00%	0.00%	100.00%
58 Local	37.15%	17.84%	32.76%	3.27%	4.46%	3.96%	0.00%	0.57%	0.00%	100.00%
60 Core	34.99%	17.72%	24.65%	8.92%	7.68%	4.11%	1.92%	0.00%	0.00%	100.00%
61 Core	33.29%	30.48%	20.96%	4.79%	9.64%	0.60%	0.23%	0.00%	0.00%	100.00%
62 Core	35.61%	29.25%	10.54%	9.45%	8.99%	1.10%	4.77%	0.29%	0.00%	100.00%
63 Local	24.38%	38.09%	12.44%	17.53%	5.12%	0.42%	1.47%	0.56%	0.00%	100.00%
64 Core	42.45%	23.35%	22.50%	1.79%	7.92%	1.83%	0.15%	0.00%	0.00%	100.00%
65 Community Bus	37.64%	20.74%	19.94%	4.83%	7.44%	7.07%	2.33%	0.00%	0.00%	100.00%
66 Core	34.18%	20.23%	23.75%	7.78%	10.54%	1.43%	1.61%	0.47%	0.00%	100.00%
68 Core	54.58%	21.48%	7.70%	7.33%	7.80%	0.21%	0.75%	0.16%	0.00%	100.00%
70 Core	48.08%	9.16%	20.42%	8.13%	10.20%	0.48%	2.51%	1.02%	0.00%	100.00%
71 Core	39.76%	18.69%	24.74%	3.05%	7.09%	1.80%	4.43%	0.42%	0.00%	100.00%
72 Core	42.80%	9.12%	29.27%	5.80%	9.11%	1.65%	0.79%	0.55%	0.91%	100.00%
73 Core	39.07%	17.80%	17.81%	8.89%	10.55%	4.23%	1.32%	0.33%	0.00%	100.00%
77 Core	44.93%	12.77%	20.90%	11.46%	5.10%	0.00%	2.96%	1.71%	0.16%	100.00%
81 Local	24.95%	27.47%	31.32%	7.84%	3.40%	2.15%	2.87%	0.00%	0.00%	100.00%
82 Local	42.69%	23.94%	12.22%	6.93%	12.47%	1.23%	0.00%	0.52%	0.00%	100.00%
88 Community Bus	20.43%	34.91%	5.80%	23.28%	4.84%	10.73%	0.00%	0.00%	0.00%	100.00%
89 Local	9.66%	26.57%	29.64%	5.32%	18.40%	10.40%	0.00%	0.00%	0.00%	100.00%
900 Light Rail	37.08%	23.30%	12.55%	11.67%	11.66%	1.23%	0.87%	1.66%	0.00%	100.00%
901 Light Rail	28.04%	29.20%	20.61%	7.31%	6.41%	3.23%	2.94%	1.81%	0.46%	100.00%
902 Light Rail	19.89%	35.01%	24.04%	8.31%	6.25%	4.37%	1.08%	0.85%	0.18%	100.00%
Grand Total	33.25%	23.50%	22.39%	8.25%	7.27%	2.54%	1.95%	0.66%	0.19%	100.00%

Table 102: What is your Race/Ethnicity?

Gender of Transit Passengers					
Row Labels	Female	Male	Another Gender	Refuse	Grand Total
10 Airport Service	34.14%	65.34%	0.52%	0.00%	100.00%
101 Express	12.46%	87.54%	0.00%	0.00%	100.00%
102 Express	76.91%	23.09%	0.00%	0.00%	100.00%
103 Express	25.51%	74.49%	0.00%	0.00%	100.00%
104 Express	66.49%	33.51%	0.00%	0.00%	100.00%
120 Express	16.19%	83.81%	0.00%	0.00%	100.00%
121 Express	28.54%	71.46%	0.00%	0.00%	100.00%
122 Express	32.71%	67.29%	0.00%	0.00%	100.00%
13 Community Bus	29.87%	70.13%	0.00%	0.00%	100.00%
14 Community Bus	82.01%	17.99%	0.00%	0.00%	100.00%
140 Express	41.11%	58.89%	0.00%	0.00%	100.00%
16 Community Bus	74.80%	25.20%	0.00%	0.00%	100.00%
168 Express	43.08%	56.92%	0.00%	0.00%	100.00%
17 Community Bus	94.93%	5.07%	0.00%	0.00%	100.00%
18 Community Bus	46.77%	53.23%	0.00%	0.00%	100.00%
180 Express	40.25%	59.75%	0.00%	0.00%	100.00%
181 Express	42.06%	57.94%	0.00%	0.00%	100.00%
182 Express	0.00%	100.00%	0.00%	0.00%	100.00%
19 Community Bus	79.19%	20.81%	0.00%	0.00%	100.00%
201 DASH	26.52%	73.48%	0.00%	0.00%	100.00%
22 Core	42.31%	57.49%	0.20%	0.00%	100.00%
23 Core	42.96%	56.86%	0.00%	0.18%	100.00%
25 Core	49.83%	50.03%	0.14%	0.00%	100.00%
26 Core	44.82%	55.18%	0.00%	0.00%	100.00%
27 Local	53.12%	45.97%	0.91%	0.00%	100.00%
304 Limited	25.68%	74.32%	0.00%	0.00%	100.00%
31 Local	53.57%	46.43%	0.00%	0.00%	100.00%
32 Community Bus	44.42%	55.58%	0.00%	0.00%	100.00%
321 Limited	12.79%	87.21%	0.00%	0.00%	100.00%
323 Limited	41.28%	58.41%	0.00%	0.32%	100.00%
328 Limited	4.68%	95.32%	0.00%	0.00%	100.00%
330 Limited	34.62%	32.69%	0.00%	32.69%	100.00%
34 Community Bus	86.59%	13.41%	0.00%	0.00%	100.00%
35 Local	52.16%	47.84%	0.00%	0.00%	100.00%
37 Community Bus	36.68%	63.32%	0.00%	0.00%	100.00%
39 Community Bus	60.37%	39.63%	0.00%	0.00%	100.00%
40 Local	45.93%	54.07%	0.00%	0.00%	100.00%
42 Community Bus	51.95%	46.96%	1.09%	0.00%	100.00%
45 Community Bus	42.98%	57.02%	0.00%	0.00%	100.00%
46 Local	51.72%	48.28%	0.00%	0.00%	100.00%
47 Local	41.20%	58.80%	0.00%	0.00%	100.00%
48 Community Bus	64.71%	35.29%	0.00%	0.00%	100.00%
49 Community Bus	21.79%	78.21%	0.00%	0.00%	100.00%
52 Local	49.56%	50.44%	0.00%	0.00%	100.00%
522 RAPID	39.33%	60.67%	0.00%	0.00%	100.00%
53 Local	54.09%	45.91%	0.00%	0.00%	100.00%
54 Local	48.52%	51.48%	0.00%	0.00%	100.00%
55 Core	53.89%	46.11%	0.00%	0.00%	100.00%
57 Local	48.42%	51.58%	0.00%	0.00%	100.00%
58 Local	40.51%	58.98%	0.00%	0.50%	100.00%
60 Core	49.20%	50.80%	0.00%	0.00%	100.00%
61 Core	54.79%	44.66%	0.00%	0.55%	100.00%
62 Core	46.26%	52.84%	0.00%	0.90%	100.00%
63 Local	41.68%	58.32%	0.00%	0.00%	100.00%
64 Core	44.68%	55.32%	0.00%	0.00%	100.00%
65 Community Bus	46.35%	53.65%	0.00%	0.00%	100.00%
66 Core	41.96%	58.04%	0.00%	0.00%	100.00%
68 Core	43.89%	55.71%	0.23%	0.17%	100.00%
70 Core	44.59%	55.41%	0.00%	0.00%	100.00%
71 Core	45.62%	54.38%	0.00%	0.00%	100.00%
72 Core	43.28%	56.72%	0.00%	0.00%	100.00%
73 Core	46.58%	53.42%	0.00%	0.00%	100.00%
77 Core	40.15%	59.62%	0.23%	0.00%	100.00%
81 Local	44.52%	55.23%	0.25%	0.00%	100.00%
82 Local	46.38%	52.87%	0.75%	0.00%	100.00%
88 Community Bus	61.45%	38.55%	0.00%	0.00%	100.00%
89 Local	52.22%	47.78%	0.00%	0.00%	100.00%
900 Light Rail	40.08%	59.92%	0.00%	0.00%	100.00%
901 Light Rail	36.78%	62.67%	0.12%	0.43%	100.00%
902 Light Rail	36.17%	63.47%	0.08%	0.28%	100.00%
Grand Total	42.68%	57.07%	0.09%	0.16%	100.00%

Table 103: What is your gender?

Annual Household Income

Row Labels	Less than \$10,000	\$10,000-\$24,999	\$25,000-\$34,999	\$35,000-\$39,999	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$74,999	\$75,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000 or more	Refuse	Grand Total
10 Airport Service	4.50%	4.31%	8.79%	4.47%	4.65%	8.77%	7.15%	12.31%	5.89%	9.84%	4.77%	24.54%	100.00%
101 Express	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.37%	62.63%	0.00%	100.00%
102 Express	0.00%	0.00%	0.00%	3.02%	1.71%	7.75%	20.27%	33.60%	30.64%	0.00%	3.02%	0.00%	100.00%
103 Express	0.00%	5.37%	10.73%	0.00%	0.00%	10.73%	10.73%	0.00%	10.73%	22.16%	29.55%	0.00%	100.00%
104 Express	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.08%	11.17%	33.25%	11.17%	22.34%	0.00%	100.00%
120 Express	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.05%	25.00%	20.95%	24.76%	8.57%	16.67%	100.00%
121 Express	0.95%	0.00%	0.00%	0.00%	2.12%	0.00%	0.95%	4.02%	10.89%	12.06%	8.04%	60.97%	100.00%
122 Express	0.00%	0.00%	0.00%	0.00%	0.00%	3.01%	11.65%	12.03%	43.98%	29.32%	0.00%	0.00%	100.00%
13 Community Bus	2.06%	9.00%	0.71%	8.30%	0.00%	0.00%	8.30%	26.64%	4.25%	9.00%	0.00%	31.74%	100.00%
14 Community Bus	6.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	93.94%	100.00%
140 Express	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.80%	38.49%	16.04%	0.00%	26.31%	4.36%	100.00%
16 Community Bus	2.59%	2.76%	15.83%	7.48%	19.88%	14.21%	17.07%	14.42%	2.59%	0.20%	2.40%	0.58%	100.00%
168 Express	3.09%	1.53%	3.06%	3.09%	6.15%	9.22%	10.78%	16.93%	23.06%	12.31%	7.69%	3.09%	100.00%
17 Community Bus	53.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	46.62%	100.00%
18 Community Bus	33.69%	3.06%	3.06%	0.00%	0.00%	3.94%	13.82%	0.00%	0.00%	0.00%	0.00%	42.43%	100.00%
180 Express	9.65%	3.79%	9.67%	3.98%	9.75%	12.08%	9.08%	14.84%	6.64%	3.25%	0.80%	16.47%	100.00%
181 Express	2.51%	6.75%	7.78%	3.35%	6.40%	6.81%	7.64%	9.94%	8.58%	4.69%	3.88%	31.67%	100.00%
182 Express	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	84.70%	15.30%	0.00%	100.00%
19 Community Bus	46.32%	2.12%	2.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	49.44%	100.00%
201 DASH	5.88%	0.74%	2.23%	0.74%	1.09%	2.51%	2.54%	20.46%	4.34%	6.90%	9.54%	43.03%	100.00%
22 Core	12.91%	12.72%	12.90%	9.26%	8.27%	7.15%	6.74%	7.47%	3.85%	2.54%	0.90%	15.28%	100.00%
23 Core	9.45%	9.15%	7.14%	6.16%	4.01%	5.68%	5.96%	9.60%	5.22%	4.69%	0.72%	32.23%	100.00%
25 Core	10.96%	7.88%	6.94%	4.94%	6.06%	8.23%	7.27%	7.81%	5.63%	1.52%	0.81%	31.96%	100.00%
26 Core	12.35%	10.77%	7.68%	4.62%	4.46%	5.14%	8.19%	8.33%	4.42%	0.00%	2.18%	31.85%	100.00%
27 Local	3.95%	12.42%	14.92%	8.48%	6.21%	9.92%	1.96%	5.99%	3.85%	2.00%	0.00%	30.29%	100.00%
304 Limited	0.00%	0.00%	3.69%	3.44%	0.00%	14.08%	3.44%	20.44%	11.48%	0.00%	2.26%	41.18%	100.00%
31 Local	2.46%	6.86%	5.18%	3.40%	10.08%	11.86%	19.39%	14.25%	1.86%	0.82%	2.59%	21.26%	100.00%
32 Community Bus	7.69%	10.13%	10.16%	2.07%	6.89%	9.70%	3.50%	13.51%	8.79%	2.61%	1.26%	23.69%	100.00%
321 Limited	0.00%	0.00%	0.00%	0.00%	0.00%	12.79%	12.79%	0.00%	38.36%	0.00%	0.00%	36.07%	100.00%
323 Limited	14.38%	9.29%	5.75%	2.12%	6.60%	3.88%	7.58%	5.62%	6.03%	1.03%	3.57%	34.15%	100.00%
328 Limited	0.00%	4.07%	0.00%	4.34%	0.00%	0.00%	0.00%	37.76%	18.34%	22.05%	4.07%	9.37%	100.00%
330 Limited	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.75%	0.00%	4.87%	32.69%	52.69%	100.00%
34 Community Bus	13.41%	36.59%	13.41%	0.00%	0.00%	13.41%	23.19%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
35 Local	7.67%	4.90%	4.64%	9.84%	1.65%	4.36%	5.00%	6.51%	5.08%	2.05%	1.51%	46.78%	100.00%
37 Community Bus	0.73%	7.16%	2.21%	3.61%	3.29%	5.71%	17.59%	16.38%	8.27%	6.51%	0.75%	27.79%	100.00%
39 Community Bus	1.40%	0.00%	14.51%	9.85%	8.15%	10.40%	10.71%	3.42%	0.00%	0.00%	16.38%	25.18%	100.00%
40 Local	2.25%	1.20%	7.07%	1.20%	7.32%	19.82%	13.33%	14.82%	3.84%	0.70%	3.42%	25.05%	100.00%
42 Community Bus	25.61%	11.40%	8.46%	3.47%	5.99%	4.35%	4.60%	9.55%	1.88%	0.00%	1.88%	22.81%	100.00%
45 Community Bus	23.61%	16.27%	20.25%	0.00%	0.00%	0.00%	4.25%	10.50%	8.70%	0.00%	0.00%	16.42%	100.00%
46 Local	12.28%	4.14%	3.63%	1.89%	0.65%	3.51%	16.04%	13.21%	6.07%	8.42%	0.00%	30.14%	100.00%
47 Local	1.99%	0.00%	3.29%	5.55%	9.03%	10.60%	15.41%	22.91%	10.23%	5.55%	0.00%	15.43%	100.00%
48 Community Bus	2.07%	7.00%	0.79%	3.66%	7.92%	4.21%	9.46%	3.78%	7.22%	23.32%	2.50%	28.07%	100.00%
49 Community Bus	20.34%	5.53%	3.02%	0.00%	0.00%	0.94%	0.00%	19.26%	35.55%	15.36%	0.00%	0.00%	100.00%
52 Local	1.54%	0.00%	2.97%	6.88%	2.71%	4.09%	10.25%	6.85%	14.90%	5.50%	4.69%	39.63%	100.00%
52 RAPID	10.27%	11.02%	8.11%	4.93%	7.52%	6.60%	7.48%	9.80%	6.99%	3.82%	2.20%	21.24%	100.00%
53 Local	11.64%	1.84%	8.29%	1.99%	7.72%	10.11%	15.61%	12.63%	3.65%	3.80%	0.00%	22.73%	100.00%
54 Local	15.81%	1.56%	1.99%	4.34%	8.12%	1.07%	0.92%	7.45%	5.88%	7.01%	0.61%	45.26%	100.00%
55 Core	11.11%	6.68%	7.48%	4.16%	8.37%	6.90%	6.33%	7.67%	3.48%	4.20%	1.04%	32.58%	100.00%
57 Local	7.57%	4.70%	2.82%	4.73%	8.70%	6.76%	9.32%	8.03%	8.01%	3.91%	1.38%	34.07%	100.00%
58 Local	8.95%	8.14%	5.26%	5.24%	5.89%	6.76%	4.74%	6.01%	3.23%	1.21%	1.77%	42.80%	100.00%
60 Core	2.08%	5.05%	1.75%	6.04%	6.94%	11.29%	8.44%	8.15%	6.16%	2.60%	2.38%	39.11%	100.00%
61 Core	11.65%	9.38%	10.26%	3.14%	5.06%	8.17%	5.24%	8.21%	8.21%	0.00%	2.38%	31.09%	100.00%
62 Core	4.93%	4.42%	5.04%	3.11%	4.72%	4.12%	3.81%	11.20%	5.27%	4.75%	1.22%	47.40%	100.00%
63 Local	7.71%	5.21%	3.11%	7.12%	2.94%	6.28%	5.06%	15.95%	6.39%	5.09%	0.94%	34.21%	100.00%
64 Core	7.50%	12.09%	4.81%	4.73%	4.78%	5.71%	4.89%	5.15%	2.72%	1.06%	0.88%	45.68%	100.00%
65 Community Bus	7.44%	4.09%	2.03%	4.20%	13.16%	11.18%	2.63%	12.20%	7.33%	2.33%	0.00%	33.40%	100.00%
66 Core	12.65%	11.11%	5.39%	7.82%	5.50%	3.85%	7.48%	10.84%	4.98%	2.77%	1.46%	26.14%	100.00%
68 Core	12.97%	11.83%	10.93%	6.09%	4.54%	6.42%	5.70%	5.58%	3.53%	1.56%	0.86%	29.99%	100.00%
70 Core	17.55%	5.17%	5.62%	4.47%	5.84%	7.59%	4.50%	12.82%	5.49%	0.90%	1.62%	28.41%	100.00%
71 Core	8.61%	6.32%	10.59%	8.22%	8.99%	4.27%	8.62%	5.90%	3.34%	0.87%	0.00%	34.26%	100.00%
72 Core	10.07%	5.30%	5.87%	2.60%	7.57%	4.49%	4.67%	5.73%	6.72%	0.83%	0.28%	45.84%	100.00%
73 Core	27.24%	12.77%	6.50%	3.88%	6.79%	8.31%	5.74%	9.55%	2.79%	1.72%	0.72%	13.99%	100.00%
77 Core	4.52%	6.62%	15.62%	8.13%	7.75%	5.66%	5.92%	8.52%	4.69%	4.24%	1.15%	27.19%	100.00%
81 Local	6.99%	6.36%	4.06%	4.90%	6.58%	8.66%	9.63%	14.33%	5.12%	4.28%	5.50%	23.59%	100.00%
82 Local	17.66%	25.86%	13.58%	6.53%	4.99%	4.34%	6.17%	2.63%	1.57%	0.48%	1.49%	14.70%	100.00%
88 Community Bus	3.89%	11.35%	10.04%	1.19%	1.32%	11.48%	22.65%	1.59%	24.04%	0.13%	0.00%	12.32%	100.00%
89 Local	2.22%	10.00%	0.00%	0.00%	3.78%	6.52%	9.63%	9.06%	13.29%	10.95%	0.00%	34.55%	100.00%
900 Light Rail	3.65%	2.83%	7.06%	9.87%	3.68%	4.46%	5.39%	6.19%	1.13%	0.00%	0.00%	55.73%	100.00%
901 Light Rail	8.65%	8.17%	5.98%	5.69%	6.43%	7.02%	8.02%	10.05%	7.48%	5.02%	3.28%	24.21%	100.00%
902 Light Rail	6.14%	5.75%	4.72%	3.52%	5.01%	5.97%	6.84%	12.66%	11.14%	6.52%	4.61%	27.12%	100.00%
Grand Total	9.88%	8.33%	7.15%	5.32%	6.01%	6.59%	7.12%	9.58%	6.31%	3.60%	2.26%	27.86%	100.00%

Table 104: Which of the following best describes your total annual household income before taxes?

Speak a Language Other than English at Home							
	No	Yes	Grand Total		No	Yes	Grand Total
10 Airport Service	62.00%	38.00%	100.00%	40 Local	53.02%	46.98%	100.00%
101 Express	62.37%	37.63%	100.00%	42 Community Bus	41.04%	58.96%	100.00%
102 Express	29.27%	70.73%	100.00%	45 Community Bus	79.48%	20.52%	100.00%
103 Express	48.99%	51.01%	100.00%	46 Local	45.17%	54.83%	100.00%
104 Express	22.08%	77.92%	100.00%	47 Local	60.23%	39.77%	100.00%
120 Express	33.57%	66.43%	100.00%	48 Community Bus	54.62%	45.38%	100.00%
121 Express	79.84%	20.16%	100.00%	49 Community Bus	99.06%	0.94%	100.00%
122 Express	73.31%	26.69%	100.00%	52 Local	61.09%	38.91%	100.00%
13 Community Bus	83.92%	16.08%	100.00%	522 RAPID	59.42%	40.58%	100.00%
14 Community Bus	58.10%	41.90%	100.00%	53 Local	47.20%	52.80%	100.00%
140 Express	31.17%	68.83%	100.00%	54 Local	48.36%	51.64%	100.00%
16 Community Bus	52.50%	47.50%	100.00%	55 Core	43.38%	56.62%	100.00%
168 Express	61.54%	38.46%	100.00%	57 Local	49.74%	50.26%	100.00%
17 Community Bus	89.86%	10.14%	100.00%	58 Local	45.19%	54.81%	100.00%
18 Community Bus	78.58%	21.42%	100.00%	60 Core	48.60%	51.40%	100.00%
180 Express	49.96%	50.04%	100.00%	61 Core	60.99%	39.01%	100.00%
181 Express	66.92%	33.08%	100.00%	62 Core	62.68%	37.32%	100.00%
182 Express	15.30%	84.70%	100.00%	63 Local	65.10%	34.90%	100.00%
19 Community Bus	35.68%	64.32%	100.00%	64 Core	52.93%	47.07%	100.00%
201 DASH	78.25%	21.75%	100.00%	65 Community Bus	63.19%	36.81%	100.00%
22 Core	56.69%	43.31%	100.00%	66 Core	57.01%	42.99%	100.00%
23 Core	48.18%	51.82%	100.00%	68 Core	64.38%	35.62%	100.00%
25 Core	45.40%	54.60%	100.00%	70 Core	47.22%	52.78%	100.00%
26 Core	54.26%	45.74%	100.00%	71 Core	59.56%	40.44%	100.00%
27 Local	50.39%	49.61%	100.00%	72 Core	39.09%	60.91%	100.00%
304 Limited	71.02%	28.98%	100.00%	73 Core	54.43%	45.57%	100.00%
31 Local	49.83%	50.17%	100.00%	77 Core	45.33%	54.67%	100.00%
32 Community Bus	52.42%	47.58%	100.00%	81 Local	56.16%	43.84%	100.00%
321 Limited	12.79%	87.21%	100.00%	82 Local	55.57%	44.43%	100.00%
323 Limited	38.06%	61.94%	100.00%	88 Community Bus	74.11%	25.89%	100.00%
328 Limited	12.83%	87.17%	100.00%	89 Local	65.91%	34.09%	100.00%
330 Limited	45.19%	54.81%	100.00%	900 Light Rail	67.34%	32.66%	100.00%
34 Community Bus	76.81%	23.19%	100.00%	901 Light Rail	64.33%	35.67%	100.00%
35 Local	52.94%	47.06%	100.00%	902 Light Rail	57.84%	42.16%	100.00%
37 Community Bus	76.99%	23.01%	100.00%	Grand Total	55.93%	44.07%	100.00%
39 Community Bus	45.18%	54.82%	100.00%				


Table 105: Do you speak a language other than English at home?

English Ability of Transit Passengers

	Very well	Well	Not well	Not at all	Don't Know/Refuse	Grand Total
10 Airport Service	65.93%	23.83%	6.92%	1.19%	2.13%	100.00%
101 Express	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
102 Express	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%
103 Express	89.48%	0.00%	0.00%	0.00%	10.52%	100.00%
104 Express	0.00%	42.67%	0.00%	0.00%	57.33%	100.00%
120 Express	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
121 Express	89.50%	10.50%	0.00%	0.00%	0.00%	100.00%
122 Express	66.19%	0.00%	0.00%	0.00%	33.81%	100.00%
13 Community Bus	81.99%	0.00%	0.00%	0.00%	18.01%	100.00%
14 Community Bus	57.40%	38.80%	3.80%	0.00%	0.00%	100.00%
140 Express	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
16 Community Bus	0.80%	4.25%	0.00%	4.25%	90.70%	100.00%
168 Express	51.84%	0.00%	0.00%	3.98%	44.18%	100.00%
17 Community Bus	50.00%	0.00%	0.00%	50.00%	0.00%	100.00%
18 Community Bus	81.61%	18.39%	0.00%	0.00%	0.00%	100.00%
180 Express	76.08%	16.18%	3.73%	0.00%	4.02%	100.00%
181 Express	84.13%	12.46%	1.11%	0.00%	2.29%	100.00%
182 Express	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19 Community Bus	85.22%	3.00%	11.78%	0.00%	0.00%	100.00%
201 DASH	89.98%	5.01%	0.00%	0.00%	5.01%	100.00%
22 Core	57.39%	20.17%	13.84%	3.98%	4.63%	100.00%
23 Core	64.38%	14.51%	13.76%	3.65%	3.70%	100.00%
25 Core	57.65%	18.59%	7.35%	3.79%	12.63%	100.00%
26 Core	60.26%	23.28%	9.21%	2.13%	5.13%	100.00%
27 Local	55.53%	21.04%	16.92%	3.31%	3.20%	100.00%
304 Limited	81.57%	18.43%	0.00%	0.00%	0.00%	100.00%
31 Local	59.12%	6.43%	4.63%	0.00%	29.82%	100.00%
32 Community Bus	71.02%	23.20%	0.00%	5.78%	0.00%	100.00%
321 Limited	41.35%	0.00%	0.00%	0.00%	58.65%	100.00%
323 Limited	76.94%	18.73%	1.50%	0.00%	2.83%	100.00%
328 Limited	95.02%	0.00%	0.00%	0.00%	4.98%	100.00%
330 Limited	68.53%	31.47%	0.00%	0.00%	0.00%	100.00%
34 Community Bus	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
35 Local	49.31%	20.91%	21.70%	8.09%	0.00%	100.00%
37 Community Bus	78.16%	9.63%	3.17%	9.04%	0.00%	100.00%
39 Community Bus	55.41%	21.44%	23.15%	0.00%	0.00%	100.00%
40 Local	55.18%	13.39%	1.40%	6.58%	23.44%	100.00%
42 Community Bus	88.89%	3.70%	7.40%	0.00%	0.00%	100.00%
45 Community Bus	73.12%	26.88%	0.00%	0.00%	0.00%	100.00%
46 Local	71.69%	17.67%	8.39%	2.25%	0.00%	100.00%
47 Local	46.72%	3.12%	0.00%	0.00%	50.17%	100.00%
48 Community Bus	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%
49 Community Bus	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
52 Local	41.34%	2.52%	2.07%	0.00%	54.07%	100.00%
522 RAPID	66.80%	18.65%	7.45%	2.54%	4.56%	100.00%
53 Local	50.19%	24.28%	3.96%	4.11%	17.46%	100.00%
54 Local	66.93%	29.53%	1.75%	0.00%	1.79%	100.00%
55 Core	69.23%	11.86%	5.97%	1.05%	11.90%	100.00%
57 Local	66.64%	21.90%	6.67%	0.00%	4.80%	100.00%
58 Local	65.80%	20.32%	13.87%	0.00%	0.00%	100.00%
60 Core	45.83%	20.60%	6.13%	4.92%	22.51%	100.00%
61 Core	39.89%	13.53%	7.20%	0.00%	39.39%	100.00%
62 Core	64.24%	7.12%	24.46%	0.00%	4.18%	100.00%
63 Local	63.07%	22.54%	7.43%	2.06%	4.91%	100.00%
64 Core	65.78%	11.54%	9.31%	6.64%	6.73%	100.00%
65 Community Bus	48.44%	32.49%	10.57%	0.00%	8.50%	100.00%
66 Core	55.73%	12.37%	16.61%	2.50%	12.79%	100.00%
68 Core	53.04%	17.96%	13.41%	2.35%	13.24%	100.00%
70 Core	67.07%	14.08%	8.92%	1.88%	8.04%	100.00%
71 Core	81.91%	8.19%	6.60%	2.37%	0.92%	100.00%
72 Core	73.23%	13.79%	2.75%	2.50%	7.72%	100.00%
73 Core	51.42%	15.63%	9.38%	12.96%	10.61%	100.00%
77 Core	50.71%	23.15%	18.65%	7.06%	0.43%	100.00%
81 Local	77.53%	10.37%	7.16%	0.00%	4.95%	100.00%
82 Local	78.66%	10.08%	4.83%	2.33%	4.11%	100.00%
88 Community Bus	12.33%	2.88%	38.77%	0.00%	46.03%	100.00%
89 Local	74.31%	25.69%	0.00%	0.00%	0.00%	100.00%
900 Light Rail	76.55%	23.45%	0.00%	0.00%	0.00%	100.00%
901 Light Rail	72.23%	17.87%	5.36%	0.42%	4.11%	100.00%
902 Light Rail	71.69%	16.29%	2.61%	2.03%	7.37%	100.00%
Grand Total	64.22%	16.47%	8.35%	2.61%	8.34%	100.00%

Table 106: How well do you speak English?

Appendix A: Questionnaires



(for office use only) Route Code: Time: Interviewer: Serial #:

Please take a few moments to help VTA plan for your transit needs by filling out this survey. All responses to this survey will be kept strictly confidential and WILL NOT be shared or sold.

What is your HOME ADDRESS: (please be specific, ex: 123 W. Main St):
(if you are visiting the area, please list the address where you are staying)

Street Address: _____ City: _____ State: _____ Zip Code: _____

COMING FROM?

1. What type of place are you **COMING FROM NOW?** (the starting place for your one-way trip)

- Your usual WORKPLACE
- Work related
- Your HOME → Go to Question #3
- Your hotel Hotel Residence (Visitor Only)
- Social or recreational
- Shopping
- School (K-12) (student only)
- College or University (student only)
- Airport (airline passenger only)
- Medical / dental
- Dining / coffee
- Escorting others (escorting children and/or elderly)
- Personal business
- Other: _____

2. What is the **EXACT ADDRESS** of that place? (OR Intersection OR Place name if you do not know the exact address:)

Address: _____

City: _____ State: _____ Zip: _____

Intersection Cross Streets: _____

Place name: _____

3. How did you **GET FROM** the place in Question #1 TO THE VERY FIRST bus or train you used for this one-way trip?

- Walked all the way; how far did you walk? _____ blocks
- BIKE → BIKE SHARE Personal Bike
- Mobility Device for person with a disability ~~mobility device~~
- Was dropped off using Uber, Lyft, or similar service
- Taxi
- Was dropped off by someone – not a service
- Drove alone and parked
- Drove or rode with _____ others including yourself

3a. Where did you get on the **VERY FIRST** bus or train you used for this one-way trip (Write the nearest Intersection / park-and-ride lot / rail station below):

4. Where did you get on **THIS** bus/train if it was not the VERY FIRST bus or train you used? Please provide the nearest Intersection / station name / park-and-ride lot: _____

GOING TO?

5. What type of place are you **GOING TO NOW?** (the ending place for your one-way trip)

- Your usual WORKPLACE
- Work related
- Your HOME → Go to Question #7
- Your hotel Hotel Residence (Visitor Only)
- Social or recreational
- Shopping
- School (K-12) (student only)
- College or University (student only)
- Airport (airline passenger only)
- Medical / dental
- Dining / coffee
- Escorting others (escorting children and/or elderly)
- Personal business
- Other: _____

6. What is the **EXACT ADDRESS** of that place? (OR Intersection OR Place name if you do not know the exact address:)

Address: _____

City: _____ State: _____ Zip: _____

Intersection Cross Streets: _____

Place name: _____

7. How will you **GET TO** your destination (listed in Question #6) after you get off the **LAST** bus or train you will use for this one-way trip?

- Walk all the way; how far did you walk? _____ blocks
- BIKE → BIKE SHARE Personal Bike
- Mobility Device for person with a disability ~~mobility device~~
- Dropped off using Uber, Lyft, or similar service
- Taxi
- Dropped off by someone – not a service
- Drive alone
- Drive or ride with _____ others including yourself

7a. Where will you get off the **VERY LAST** bus or train you are using for this one-way trip (Write the nearest Intersection / park-and-ride lot / rail station below):

8. Where will you get off **THIS** bus/train if it is not the VERY LAST bus or train used? Please provide the nearest Intersection / station name / park-and-ride lot: _____

9. INCLUDING THIS BUS/TRAIN, how many TOTAL BUSES/TRAINS will you use to make THIS ONE-WAY TRIP?

One, only this bus/train Two Three Four or more

9a. Please list the routes and/or rail stations in the exact order you use them for this one-way trip.

START → → → → → → **END**

1st route/rail station 2nd route/rail station 3rd route/rail station 4th route/rail station 5th route/rail station

10. Will you (or did you) make this same trip on exactly the same routes in the opposite direction today?

No Yes At what time did you leave for this trip in the opposite direction? _____ am/pm (circle one)

Please continue on next page

11. How did you pay for this one-way trip?

BY CLIPPER

- Cash value on Clipper
- VTA Monthly Pass on Clipper
- VTA EcoPass on Clipper
- ~~Caltrans~~ Monthly Pass on Clipper
- ACE Monthly Pass on Clipper
- SamTrans Monthly Pass on Clipper
- Other Monthly Pass on Clipper _____

BY CASH / PAPER / OTHER

- Cash
- Light Rail Single Ticket Ride
- Light Rail 8-Hour Excursion ticket
- Day Pass Token Exchange
- Other Transfer _____
- Other Pass _____
- VTA Employee/Dependent/Lifetime Pass
- Did not buy ticket

BY MOBILE TICKET

- 8-Hour Excursion Pass—Light Rail Only
- Express Bus Round Trip Pass
- Day Pass (Bus and Rail)
- 49ers Express Light Rail Pass
- Other mobile ticket _____

12. What type of fare did you pay?

- Adult
- Senior (65+ years of age)
- Youth (5-18 years of age)
- Disabled/Medicare Card Holder (RTC)

13. How many working vehicles (auto or motorcycles) are available to your household? _____ vehicles

13a. [If #13 is more than NONE] Could you have used one of these vehicles for this trip? Yes No

14. Including YOU, how many people live in your household? _____ people

15. Including YOU, how many adults (age 16 and older) that are employed full or part time live in your household? _____ people

16. Are you a student? (check the one response that BEST describes you)

- Not a student
- Yes – Full Time college/university
- Yes – K - 12th grade
- Yes – Part Time college/university
- Yes – vocational/technical/trade school
- Yes – other

16a. [If #16 is Yes] What is your college / university / school name:- _____

17. Are you a person with a disability? Yes No

17a. If #17 is Yes] Which of the following types of disabilities apply, if any (mark all that apply)?

- Vision Impairment or Blindness
- Hearing Impairment
- Mobility disability
- declined
- Intellectual/cognitive Impairment
- Psychiatric disability
- Other

18. What year were you born? _____

19. Are you of Hispanic, Latino, or Spanish Origin? Yes No

20. Are you? (mark all that apply)

- American Indian / Alaska Native
- Black/African American
- Asian
- Native Hawaiian / Pacific Islander
- White
- Other: _____

21. What is your gender? Male Female Other: _____

22. Do you speak a language other than English at home? No Yes - Which language?

IF YES: How well do you speak English? Very Well Well Less than well Not at all

23. In an average week, how often do you use VTA transit?

- 6 – 7 days a week
- 5 days a week
- 2 – 4 days a week
- 1 day a week

24. How long have you been using VTA transit?

- More than 3 years
- 1 to 3 years
- Less than 1 year
- First time

25. If transit did not exist, how would you have made this trip?

- Drive alone
- Bike
- Walk
- Get a ride/carpool
- Paratransit/Outreach
- Would not have made this trip
- Other means (describe) _____

26. Do you have a valid driver's license?

- Yes
- No

27. Please Rate VTA on the following features (Circle your choice for each feature)

	1	2	3	4	5
27a. Frequency of Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27b. On-time Performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27c. Personal Security/Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27d. Vehicle Cleanliness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27e. Quality of Stops/Stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27f. Overall Transit Experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28. How do you prefer to receive information from VTA (mark one)?

- VTA website (vta.org)
- Facebook
- Twitter
- Instagram
- LinkedIn
- Snapchat
- YouTube
- NextDoor
- Text messages
- Phone messages
- Other

29. Which of the following BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME in 2017 before taxes?

- Below \$10,000
- \$10,000-\$24,999
- \$25,000-\$34,999
- \$40,000 - \$49,999
- \$50,000 - \$59,999
- \$60,000 - \$74,999
- \$100,000 - \$149,999
- \$150,000 - \$199,999
- \$200,000 or more

THANK YOU FOR YOUR PARTICIPATION!

Tablet Survey Instrument Examples

Figure 41: On-Line Survey Instrument (Route Selection)

VTA2 2016 Onboard Survey (Draft 1c) © ETC Institute 2017

STARTUP

Select the ROUTE and [DIRECTION] you are working:
 Click to select last used route: 10 Airport Service [Eastbound]

10 Airport Service [Eastbound]	39 Community Bus [Northbound]
10 Airport Service [Westbound]	39 Community Bus [Southbound]
101 Express [Northbound]	40 Local [Northbound]
101 Express [Southbound]	40 Local [Southbound]
102 Express [Northbound]	42 Community Bus [Northbound]
102 Express [Southbound]	42 Community Bus [Southbound]
103 Express [Eastbound]	45 Community Bus [Northbound]
103 Express [Westbound]	45 Community Bus [Southbound]
104 Express [Eastbound]	46 Local [Northbound]
104 Express [Westbound]	46 Local [Southbound]
120 Express [Northbound]	47 Local [Northbound]
120 Express [Southbound]	47 Local [Southbound]
121 Express [Northbound]	48 Community Bus [Northbound]
121 Express [Southbound]	48 Community Bus [Southbound]

Exit and clear survey
Previous
Callback
Next

Figure 42: On-Line Survey Instrument (Origin Location Selection)

VTA2 2016 Onboard Survey (Draft 1c) © ETC Institute 2017

ORIGIN ADDRESS

What is the EXACT STREET ADDRESS of this place [Your usual WORKPLACE]? (or nearest intersection or landmark)

Place Name	City	Zip Code	Longitude
Valley Transportation Aut	San Jose	95113	-121.89130940000001
Street Address	State	Latitude	
55-A West Santa Clara S	CA	37.3360628	

VTA Address Place Clear Me User Data

Unnamed Road, Livermore, CA 94550, USA

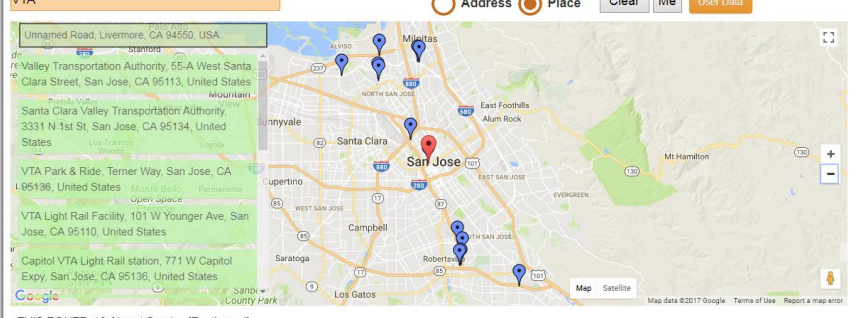
Valley Transportation Authority, 55-A West Santa Clara Street, San Jose, CA 95113, United States

Santa Clara Valley Transportation Authority, 3331 N 1st St, San Jose, CA 95134, United States

VTA Park & Ride, Turner Way, San Jose, CA 95136, United States

VTA Light Rail Facility, 101 W Younger Ave, San Jose, CA 95110, United States

Capitol VTA Light Rail station, 771 W Capitol Expy, San Jose, CA 95136, United States



THIS ROUTE: 10 Airport Service [Eastbound]

Exit and clear survey
Previous
Callback
Next

Figure 43: On-Line Survey Instrument (Destination Type Selection)

VTA2 2016 Onboard Survey (Draft 1c) © ETC Institute 2017

DESTINATION PLACE TYPE

What's your final destination on this trip?

Your usual WORKPLACE	College or University (students only)
Work related	Airport (airline passengers only)
Your HOME	Medical or dental
Your Hotel	Dining or coffee
Hotel Residence (VISITOR ONLY)	Escorting others (e.g. children or elderly)
Social or recreational	Personal business (DMV, bank, library, etc.)
Shopping	Other: <input type="text"/>
School (K-12) (student only)	

*THIS ROUTE: 10 Airport Service [Eastbound]
Resident*

Exit and clear survey
Previous
Callback
Next

Figure 44: On-Line Survey Instrument (Alighting Location Selection)

VTA2 2016 Onboard Survey (Draft 1c) © ETC Institute 2017

ALIGN SURVEY ROUTE

Where will you GET OFF [10 Airport Service [Eastbound]] on this one-way trip?

Street Address Stop ID Latitude Longitude User Stop

Enter a location here Distance: 0.3mi Address Place

[10 Airport Service \[Eastbound\]](#) >>>>>>

Exit and clear survey
Previous
Callback
Next

Figure 45: On-Line Survey Instrument (Demographic Selections Example #1)

VTA2 2016 Onboard Survey (Draft 1c) © ETC Institute 2017

PAYMENT METHOD

How did you pay for this one-way trip?

How did you pay for this trip with CLIPPER?

What fare categories apply to you?

Figure 46: On-Line Survey Instrument (Demographic Selections Example #2)

VTA2 2016 Onboard Survey (Draft 1c) © ETC Institute 2017

AGE / ETHNICITY / RACE

What YEAR were you born?

Each answer must be between 1920 and 2002

Are you of Hispanic, Latino, or Spanish Origin?

Are you? (check all that apply)

In an average week, how often do you use VTA transit?

Choose one of the following answers

How long have you been using VTA transit

Choose one of the following answers

Appendix B: Detailed Methodology and Procedures

Detailed Methodology and Procedures

This Appendix describes the methodology used for carrying out the sampling of bus/rail riders and procedures for each survey type.

Sampling Design and Goals

In order to ensure that the distribution of completed surveys mirrored the actual passenger volumes on all fixed route services (based on Tuesday – Thursday average ridership), ETC Institute developed a sampling plan that would ensure completion of at least 22,500 On-to-Off counts of the system’s riders, and 9,800 complete weekday OD survey interviews. All sampling goals were stratified by route, direction, and time-of-day period. The time periods for this project were based on the Council’s definitions and are as follows: “AM Peak” time period (5am-9am), “Midday” time period (9am-3pm), “PM Peak” time period (3pm-7pm), and “Evening” time period (7pm-5am).

Sampling Goals for On-to-Off Survey

The sampling plan for the On-to-Off counts was designed to obtain completed counts from a minimum of 20% of the daily ridership on each route operated by VTA that has a minimum daily ridership of 2,000.

On-to-Off sample goals were developed for each route based on estimated proportional passenger volumes, which are based on average weekday ridership figures collected during March 2017. The goals set based on these figures were maintained through the data collection effort.

All bus routes in the On-to-Off sampling plan had goals established from overall ridership by route, time-of-day, and direction. Goals for VTA bus and rail combined were to collect 22,557 matching On-to-Off pairs. ETC Institute collected 25,815 matching On-to-Off bus pairs and 7,587 matching ON-TO-OFF rail pairs, totaling 33,402 On-to-Off pairs collected. Table 107: On-to-Off Counts - Sampling Goals and Completes shows the goals and the actual number of completed On-to-Off counts that were obtained for each bus route/rail line, time-of-day, and direction. VTA provided the total estimated weekday ridership. Table 108 displays each individual route by time-of-day and direction.

Table 107: On-to-Off Counts - Sampling Goals and Completes

	Sampling Goal	Pairs Collected
Rail	6,294	7,587
Bus	16,263	25,815
Total	22,557	33,402

Table 108: On-to-Off Counts (By Route)- Sampling Goals and Completes

ON-TO-OFF_ROUTE	UPDATED WEEKDAY RIDERSHIP (3/15/2017)					UPDATED ON-TO-OFF Goals (20%)					ON-TO-OFF Completed				
	5-9A	9A-3P	3-7P	7P-5A	Dir Tot	5-9A	9A-3P	3-7P	7P-5A	Dir Tot	5-9A	9A-3P	3-7P	7P-5A	Dir Tot
10 Airport Service [Eastbound]	211	416	165	150	942	42	83	33	30	188	55	161	69	55	340
10 Airport Service [Westbound]	184	421	147	156	908	37	84	29	31	182	44	110	114	44	312
22 Core [Eastbound]	1,232	2,433	1,371	880	5,916	246	487	274	176	1,183	510	595	564	174	1,843
22 Core [Westbound]	1,744	2,474	1,226	931	6,375	349	495	245	186	1,275	394	902	330	188	1,814
23 Core [Eastbound]	591	1,782	1,136	436	3,946	118	356	227	87	789	166	380	456	90	1,092
23 Core [Westbound]	1,004	1,705	800	214	3,723	201	341	160	43	745	223	442	299	82	1,046
25 Core [Eastbound]	635	1,711	947	160	3,453	127	342	189	32	691	250	394	275	36	955
25 Core [Westbound]	922	1,514	703	140	3,279	184	303	141	28	656	306	325	157	79	867
26 Core [Eastbound]	423	765	567	99	1,854	85	153	113	20	371	174	204	187	42	607
26 Core [Westbound]	619	750	415	101	1,884	124	150	83	20	377	125	243	121	36	525
81 Local [Eastbound]	425	400	180	9	1,014	85	80	36	2	203	99	221	104	12	436
81 Local [Westbound]	270	746	299	11	1,326	54	149	60	2	265	182	237	98	5	522
323 Limited [Eastbound]	103	478	351	108	1,040	21	96	70	22	208	44	127	162	49	382
323 Limited [Westbound]	309	592	260	91	1,253	62	118	52	18	251	107	147	144	55	453
522 RAPID [Eastbound]	607	1,289	924	313	3,133	121	258	185	63	627	192	313	489	115	1,109
522 RAPID [Westbound]	1,057	1,296	759	281	3,392	211	259	152	56	678	281	507	308	56	1,152
55 Core [Northbound]	211	535	605	74	1,424	42	107	121	15	285	96	124	152	64	436
55 Core [Southbound]	785	401	299	52	1,538	157	80	60	10	308	160	116	132	12	420
60 Core [Northbound]	283	439	315	59	1,094	57	88	63	12	219	91	250	64	29	434
60 Core [Southbound]	225	427	363	101	1,117	45	85	73	20	223	95	202	140	44	481
64 Core [Northbound]	356	887	491	119	1,854	71	177	98	24	371	91	254	170	65	580
64 Core [Southbound]	506	869	393	70	1,838	101	174	79	14	368	145	182	208	37	572
66 Core [Northbound]	828	1,242	730	190	2,990	166	248	146	38	598	257	342	281	91	971
66 Core [Southbound]	720	1,752	811	221	3,504	144	350	162	44	701	152	373	217	169	911
68 Core [Northbound]	796	1,042	504	197	2,539	159	208	101	39	508	189	411	139	115	854
68 Core [Southbound]	488	1,059	803	259	2,609	98	212	161	52	522	218	534	213	67	1,032
70 Core [Northbound]	522	1,117	670	116	2,426	104	223	134	23	485	127	275	145	69	616
70 Core [Southbound]	546	985	638	134	2,303	109	197	128	27	461	153	205	201	44	603
71 Core [Northbound]	262	380	309	61	1,011	52	76	62	12	202	82	236	128	4	450
71 Core [Southbound]	222	373	282	67	944	44	75	56	13	189	87	142	124	16	369
72 Core [Northbound]	363	536	241	76	1,217	73	107	48	15	243	152	227	92	22	493
72 Core [Southbound]	195	585	462	138	1,380	39	117	92	28	276	81	151	121	38	391
73 Core [Northbound]	361	649	240	35	1,285	72	130	48	7	257	102	221	174	10	507
73 Core [Southbound]	197	707	363	91	1,358	39	141	73	18	272	48	248	218	25	539
77 Core [Northbound]	254	544	377	47	1,221	51	109	75	9	244	78	197	101	14	390
77 Core [Southbound]	240	580	452	56	1,327	48	116	90	11	265	45	120	188	25	378
181 Express [Northbound]	272	434	493	298	1,497	54	87	99	60	299	143	128	144	72	487
181 Express [Southbound]	489	457	338	120	1,403	98	91	68	24	281	139	175	105	27	446
901 Light Rail [Northbound]	2,246	3,375	2,842	1,291	9,754	449	675	568	258	1,951	319	1,050	578	23	1,970
901 Light Rail [Southbound]	1,508	3,344	2,937	1,248	9,037	302	669	587	250	1,807	316	781	594	59	1,750
902 Light Rail [Northbound]	1,910	1,759	1,797	671	6,138	382	352	359	134	1,228	441	951	437	58	1,887
902 Light Rail [Southbound]	1,229	1,705	2,632	973	6,539	246	341	526	195	1,308	516	549	722	193	1,980
Grand Total	26,346	44,955	30,638	10,846	112,785	5,269	8,991	6,128	2,169	22,557	7,475	13,752	9,665	2,510	33,402

Sampling Goals for Weekday Origin-Destination Survey

A summary of the total number of OD surveys that were collected for each rail and bus route was developed to guide the data collection. Overall, 13,683 (9,963 bus and 3,720 rail) OD surveys were collected across all services (which was developed to collect 9,824 OD surveys). Table 109 shows the goals and the actual number of completed OD Surveys that were obtained for each bus and rail.

Table 110 displays each individual route by time-of-day and direction.

A survey was considered “complete” if all of the contractually required information was collected. A survey was considered “useable” if it met 100% of the quality assurance and quality control measures that were developed for the project. See Appendix C for definitions of “complete” and “useable” surveys.

Table 109: OD Survey - Sampling Goals and Completes

	Sampling Goal	Pairs Collected
Rail	2,253	3,720
Bus	7,571	9,963
Total	9,824	13,683

Table 110: OD Survey (By Route) - Sampling Goals and Completes

OD ROUTE	GOALS					COMPLETED				
	5-9A	9-3P	3-7P	7-5A	Dir Tot	5-9A	9-3P	3-7P	7-5A	Dir Tot
10 Airport Service [Eastbound]	15	29	12	10	66	15	30	26	14	85
10 Airport Service [Westbound]	13	29	10	11	64	16	26	23	8	73
22 Core [Eastbound]	86	170	96	62	414	101	202	129	83	515
22 Core [Westbound]	122	173	86	65	446	135	220	130	87	572
23 Core [Eastbound]	41	125	80	30	276	38	112	101	47	298
23 Core [Westbound]	70	119	56	15	261	73	128	51	55	307
25 Core [Eastbound]	44	120	66	11	242	51	152	77	19	299
25 Core [Westbound]	65	106	49	10	230	60	159	50	24	293
26 Core [Eastbound]	30	54	40	7	130	31	71	45	7	154
26 Core [Westbound]	43	53	29	7	132	43	56	22	16	137
27 Local [Eastbound]	5	10	9	1	24	13	13	18	6	50
27 Local [Westbound]	7	12	9	0	29	12	14	19	3	48
32 Community Bus [Eastbound]	9	15	15	1	40	11	22	21	9	63
32 Community Bus [Westbound]	14	15	8	1	38	18	31	17	3	69
34 Community Bus [Eastbound]	-	3	-	-	3	0	2	0	0	2
34 Community Bus [Westbound]	-	2	-	-	2	0	4	0	0	4
37 Community Bus [Eastbound]	3	11	8	1	24	4	20	6	4	34
37 Community Bus [Westbound]	11	10	5	0	26	16	11	9	3	39
81 Local [Eastbound]	30	28	13	1	71	27	86	43	5	161
81 Local [Westbound]	19	52	21	1	93	43	91	28	4	166
103 Express [Eastbound]	-	-	7	-	7	0	0	7	0	7
103 Express [Westbound]	7	-	-	-	7	9	0	0	0	9
104 Express [Eastbound]	-	-	2	-	2	0	0	2	0	2
104 Express [Westbound]	3	-	-	-	3	5	0	0	0	5
201 DASH [Eastbound]	16	16	10	2	44	15	20	18	4	57
201 DASH [Westbound]	4	8	16	3	30	7	11	19	3	40
321 Limited [Eastbound]	-	-	1	-	1	0	0	1	0	1
321 Limited [Westbound]	1	-	-	-	1	5	0	0	0	5
323 Limited [Eastbound]	7	33	25	8	73	14	53	40	11	118
323 Limited [Westbound]	22	41	18	6	88	18	47	16	18	99
522 RAPID [Eastbound]	42	90	65	22	219	58	98	72	24	252
522 RAPID [Westbound]	74	91	53	20	237	83	132	60	36	311
13 Community Bus [Northbound]	1	1	1	-	3	5	6	2	0	13
13 Community Bus [Southbound]	2	5	2	0	10	7	6	1	0	14
14 Community Bus [Northbound]	1	4	1	-	5	3	13	2	0	18
14 Community Bus [Southbound]	0	2	1	-	4	0	4	7	0	11
16 Community Bus [Northbound]	2	0	1	-	3	15	2	9	0	26
16 Community Bus [Southbound]	1	0	6	-	7	14	10	10	0	34
17 Community Bus [Northbound]	0	2	1	-	3	0	1	1	0	2
17 Community Bus [Southbound]	0	2	0	-	2	0	4	1	0	5
18 Community Bus [Northbound]	1	5	5	0	11	0	5	5	2	12
18 Community Bus [Southbound]	2	4	2	1	9	2	9	4	0	15
19 Community Bus [Northbound]	0	4	3	0	7	1	8	4	0	13
19 Community Bus [Southbound]	3	4	1	0	8	3	3	1	0	7
31 Local [Northbound]	2	9	5	1	18	5	13	11	5	34
31 Local [Southbound]	7	10	5	2	24	8	14	12	4	38
35 Local [Northbound]	8	17	10	3	37	12	24	18	13	67
35 Local [Southbound]	10	15	10	2	38	10	13	17	8	48
39 Community Bus [Northbound]	3	6	3	0	12	9	6	4	0	19
39 Community Bus [Southbound]	3	7	6	1	16	3	9	8	1	21
40 Local [Northbound]	2	21	17	2	43	11	27	16	3	57
40 Local [Southbound]	14	21	6	1	41	14	24	8	2	48
42 Community Bus [Northbound]	7	8	3	0	19	6	24	7	1	38
42 Community Bus [Southbound]	4	11	5	-	20	3	14	8	0	25
45 Community Bus [Northbound]	2	3	2	-	7	1	4	4	0	9
45 Community Bus [Southbound]	2	2	2	-	6	3	5	4	0	12
46 Local [Northbound]	10	6	7	-	22	13	15	11	2	41
46 Local [Southbound]	5	12	15	-	31	10	14	15	0	39
47 Local [Northbound]	10	14	7	3	33	11	18	8	3	40
47 Local [Southbound]	4	13	9	1	27	7	13	7	5	32
48 Community Bus [Northbound]	1	5	3	-	9	1	12	4	0	17
48 Community Bus [Southbound]	4	4	4	-	13	8	11	5	1	25
49 Community Bus [Northbound]	1	2	2	0	6	2	6	3	0	11
49 Community Bus [Southbound]	3	4	2	0	10	2	5	3	0	10
52 Local [Northbound]	1	11	7	2	20	8	19	14	7	48
52 Local [Southbound]	6	8	1	0	16	9	16	4	1	30
53 Local [Northbound]	5	17	13	-	35	10	26	29	1	66
53 Local [Southbound]	25	9	7	-	41	26	22	17	0	65
54 Local [Northbound]	10	13	12	2	37	8	31	11	4	54
54 Local [Southbound]	9	16	11	3	38	12	24	16	7	59
55 Core [Northbound]	15	37	42	5	100	27	44	54	7	132

55 Core [Southbound]	55	28	21	4	108	45	33	27	7	112
57 Local [Northbound]	10	32	12	4	58	16	33	19	7	75
57 Local [Southbound]	10	29	13	3	55	14	29	27	6	76
58 Local [Northbound]	11	6	12	-	29	11	22	16	0	49
58 Local [Southbound]	10	4	12	1	27	11	14	26	1	52
60 Core [Northbound]	20	31	22	4	77	26	33	23	3	85
60 Core [Southbound]	16	30	25	7	78	22	38	41	6	107
61 Core [Northbound]	11	27	17	2	56	22	38	27	7	94
61 Core [Southbound]	17	28	13	2	60	22	35	14	7	78
62 Core [Northbound]	11	27	17	3	57	10	31	26	2	69
62 Core [Southbound]	14	26	14	2	55	17	37	18	4	76
63 Local [Northbound]	8	14	8	-	30	12	22	7	2	43
63 Local [Southbound]	8	14	11	2	35	17	24	14	5	60
64 Core [Northbound]	25	62	34	8	130	27	62	41	35	165
64 Core [Southbound]	35	61	27	5	129	39	60	30	31	160
65 Community Bus [Northbound]	5	12	5	-	22	9	15	8	0	32
65 Community Bus [Southbound]	7	14	6	-	27	11	22	16	1	50
66 Core [Northbound]	58	87	51	13	209	58	100	57	19	234
66 Core [Southbound]	50	123	57	15	245	55	122	76	16	269
68 Core [Northbound]	56	73	35	14	178	59	75	54	25	213
68 Core [Southbound]	34	74	56	18	183	36	82	81	33	232
70 Core [Northbound]	37	78	47	8	170	42	75	42	21	180
70 Core [Southbound]	38	69	45	9	161	38	90	60	10	198
71 Core [Northbound]	18	27	22	4	71	24	25	28	7	84
71 Core [Southbound]	16	26	20	5	66	19	23	22	8	72
72 Core [Northbound]	25	38	17	5	85	32	55	24	13	124
72 Core [Southbound]	14	41	32	10	97	24	45	38	9	116
73 Core [Northbound]	25	45	17	2	90	27	59	20	12	118
73 Core [Southbound]	14	49	25	6	95	25	68	29	20	142
77 Core [Northbound]	18	38	26	3	85	23	40	28	8	99
77 Core [Southbound]	17	41	32	4	93	17	40	28	15	100
82 Local [Northbound]	10	26	15	2	53	13	35	14	7	69
82 Local [Southbound]	15	21	14	2	52	21	28	20	5	74
88 Community Bus [Northbound]	1	11	14	-	26	1	7	11	0	19
88 Community Bus [Southbound]	5	2	1	-	8	13	16	6	0	35
89 Local [Northbound]	-	2	6	-	8	0	10	14	0	24
89 Local [Southbound]	5	4	0	-	9	7	12	0	0	19
101 Express [Northbound]	3	-	-	-	3	4	0	0	0	4
101 Express [Southbound]	-	-	3	-	3	0	0	4	0	4
102 Express [Northbound]	12	-	-	-	12	17	0	0	0	17
102 Express [Southbound]	-	-	14	-	14	0	0	15	0	15
120 Express [Northbound]	-	-	10	-	10	0	0	12	0	12
120 Express [Southbound]	9	-	-	-	9	12	0	0	0	12
121 Express [Northbound]	15	-	-	1	17	21	0	0	1	22
121 Express [Southbound]	-	-	16	-	16	0	2	43	0	45
122 Express [Northbound]	2	-	-	-	2	6	0	0	0	6
122 Express [Southbound]	-	-	1	-	1	0	0	16	0	16
140 Express [Northbound]	-	-	8	-	8	0	0	9	0	9
140 Express [Southbound]	7	-	-	-	7	7	0	0	0	7
168 Express [Northbound]	17	-	-	-	17	33	0	0	0	33
168 Express [Southbound]	-	-	11	-	11	0	0	16	0	16
180 Express [Northbound]	9	7	9	5	30	13	11	11	8	43
180 Express [Southbound]	6	12	7	2	27	14	29	8	2	53
181 Express [Northbound]	19	30	35	21	105	23	31	40	21	115
181 Express [Southbound]	34	32	24	8	98	32	43	39	23	137
182 Express [Northbound]	-	-	1	-	1	0	0	1	0	1
182 Express [Southbound]	1	-	-	-	1	3	0	0	0	3
304 Limited [Northbound]	11	-	-	-	11	13	0	0	0	13
304 Limited [Southbound]	-	-	14	-	14	0	0	22	0	22
328 Limited [Northbound]	3	-	-	-	3	7	0	0	0	7
328 Limited [Southbound]	-	-	4	-	4	0	0	7	0	7
330 Limited [Northbound]	9	-	-	-	9	2	0	0	0	2
330 Limited [Southbound]	-	-	7	-	7	0	0	8	0	8
900 NORTHBOUND Almaden to Ohlone/Chynoweth	4	9	7	4	24	10	18	10	12	50
900 SOUTHBOUND Ohlone/Chynoweth to Almaden	2	10	10	3	26	4	18	16	10	48
901 NORTHBOUND Santa Teresa to Alum Rock	157	236	199	90	683	219	370	311	131	1031
901 SOUTHBOUND Alum Rock to Santa Teresa	106	234	206	87	633	168	375	329	153	1025
902 NORTHBOUND Winchester to Mountain View	134	123	126	47	430	194	243	225	118	780
902 SOUTHBOUND Mountain View to Winchester	86	119	184	68	458	192	236	250	108	786
TOTAL	2,365	3,884	2,746	829	9,824	3069	5266	3839	1509	13683

Sampling Goals for Weekend Origin-Destination Survey

The goals for the number of completed weekend surveys by transit service categories and time of day were 1,400 surveys with allocating 800 Saturday and 600 Sunday surveys. This number was constructed by three objects:

- Statistically valid data for the Weekend’s System overall
- Statistically valid data for Sunday and Saturday separately
- Statistically significant data for the 3 different types of service categories (CORE, EXPRESS, and RAIL)

A survey was considered “complete” if all of the contractually required information was collected. A survey was considered “useable” if it met 100% of the quality assurance and quality control measures that were developed for the project. See Appendix C for definitions of “complete” and “useable” surveys.

Table 111: OD Weekend (Saturday) Survey (By Route) - Sampling Goals

Weekend Route Information (Saturday)			AVERAGE WEEKDAY RIDERSHIP PER CLIENT --- UPDATED 4-5 (BASED ON MARCH RIDERSHIP)					Survey Goals	Ridership Proportion				For Distributing Interviewers Only			
Line	Type	Direction	5AM-859 AM	9 AM-559 PM	After 6 PM	Directional Totals	Route Totals	AM Peak 5 AM- 9 AM	Midday 9 AM - 3 PM	PM Peak 3 PM - 7 PM	Directional Totals	AM Peak 5 AM- 9 AM	Midday 9 AM - 3 PM	PM Peak 3 PM - 7 PM	Directional Totals	
901	RAIL	NORTH	595	3,181	1,343	5,119	10,352	80	1.2%	6.2%	2.6%	10.1%	9	50	21	80
901	RAIL	SOUTH	476	3,324	1,433	5,233		82	0.9%	6.5%	2.8%	10.3%	7	52	23	82
902	RAIL	NORTH	310	1,758	795	2,862	5,499	45	0.6%	3.5%	1.6%	5.6%	5	28	12	45
902	RAIL	SOUTH	227	1,583	827	2,637		41	0.4%	3.1%	1.6%	5.2%	4	25	13	41
22	CORE	EAST	953	2,707	1,022	4,682	9,623	74	1.9%	5.3%	2.0%	9.2%	15	43	16	74
22	CORE	WEST	1,280	2,705	957	4,941		78	2.5%	5.3%	1.9%	9.7%	20	43	15	78
23	CORE	EAST	283	1,468	532	2,282	4,615	36	0.6%	2.9%	1.0%	4.5%	4	23	8	36
23	CORE	WEST	470	1,521	342	2,333		37	0.9%	3.0%	0.7%	4.6%	7	24	5	37
25	CORE	EAST	266	1,253	187	1,705	3,459	27	0.5%	2.5%	0.4%	3.3%	4	20	3	27
25	CORE	WEST	397	1,226	131	1,754		28	0.8%	2.4%	0.3%	3.4%	6	19	2	28
26	CORE	EAST	207	694	103	1,004	2,006	16	0.4%	1.4%	0.2%	2.0%	3	11	2	16
26	CORE	WEST	189	686	127	1,002		16	0.4%	1.3%	0.2%	2.0%	3	11	2	16
66	CORE	NORTH	341	1,215	178	1,734	3,407	27	0.7%	2.4%	0.3%	3.4%	5	19	3	27
66	CORE	SOUTH	295	1,143	235	1,673		26	0.6%	2.2%	0.5%	3.3%	5	18	4	26
68	CORE	NORTH	431	930	202	1,563	3,245	25	0.8%	1.8%	0.4%	3.1%	7	15	3	25
68	CORE	SOUTH	233	1,149	299	1,682		26	0.5%	2.3%	0.6%	3.3%	4	18	5	26
70	CORE	NORTH	245	928	155	1,328	2,650	21	0.5%	1.8%	0.3%	2.6%	4	15	2	21
70	CORE	SOUTH	257	876	188	1,322		21	0.5%	1.7%	0.4%	2.6%	4	14	3	21
522	CORE	EAST	183	1,419	267	1,869	3,902	29	0.4%	2.8%	0.5%	3.7%	3	22	4	29
522	CORE	WEST	265	1,546	223	2,033		32	0.5%	3.0%	0.4%	4.0%	4	24	3	32
181	EXPRESS	NORTH	108	626	317	1,051	2,154	17	0.2%	1.2%	0.6%	2.1%	2	10	5	17
181	EXPRESS	SOUTH	230	737	137	1,103		17	0.5%	1.4%	0.3%	2.2%	4	12	2	17
							50,912	800.00					129	513	157	800

Table 112: OD Weekend (Sunday) Survey (By Route) - Sampling Goals

Weekend Route Information (Sunday)			AVERAGE WEEKDAY RIDERSHIP PER CLIENT --- UPDATED 4-5 (BASED ON MARCH RIDERSHIP)					Survey Goals	Ridership Proportion				For Distributing Interviewers Only			
Line	Type	Direction	5AM-859 AM	9 AM-559 PM	After 6 PM	Directional Totals	Route Totals	AM Peak 5 AM- 9 AM	Midday 9 AM - 3 PM	PM Peak 3 PM - 7 PM	Directional Totals	AM Peak 5 AM- 9 AM	Midday 9 AM - 3 PM	PM Peak 3 PM - 7 PM	Directional Totals	
22	CORE	EAST	681	2,381	1,093	4,156	8,803	60	1.6%	5.7%	2.6%	10.0%	10	34	16	60
22	CORE	WEST	1,033	2,508	1,106	4,648		67	2.5%	6.0%	2.7%	11.2%	15	36	16	67
23	CORE	EAST	257	1,184	472	1,913	3,708	28	0.6%	2.8%	1.1%	4.6%	4	17	7	28
23	CORE	WEST	322	1,232	241	1,794		26	0.8%	3.0%	0.6%	4.3%	5	18	3	26
25	CORE	EAST	175	997	175	1,347	2,683	19	0.4%	2.4%	0.4%	3.2%	3	14	3	19
25	CORE	WEST	235	968	132	1,336		19	0.6%	2.3%	0.3%	3.2%	3	14	2	19
26	CORE	EAST	167	657	64	888	1,852	13	0.4%	1.6%	0.2%	2.1%	2	9	1	13
26	CORE	WEST	184	685	95	964		14	0.4%	1.6%	0.2%	2.3%	3	10	1	14
66	CORE	NORTH	274	884	134	1,292	2,592	19	0.7%	2.1%	0.3%	3.1%	4	13	2	19
66	CORE	SOUTH	167	927	206	1,300		19	0.4%	2.2%	0.5%	3.1%	2	13	3	19
68	CORE	NORTH	312	862	189	1,363	2,792	20	0.7%	2.1%	0.5%	3.3%	4	12	3	20
68	CORE	SOUTH	168	969	292	1,429		21	0.4%	2.3%	0.7%	3.4%	2	14	4	21
70	CORE	NORTH	193	792	205	1,191	2,322	17	0.5%	1.9%	0.5%	2.9%	3	11	3	17
70	CORE	SOUTH	162	803	167	1,131		16	0.4%	1.9%	0.4%	2.7%	2	12	2	16
181	EXPRESS	NORTH	66	547	304	917	1,826	13	0.2%	1.3%	0.7%	2.2%	1	8	4	13
181	EXPRESS	SOUTH	96	604	209	909		13	0.2%	1.5%	0.5%	2.2%	1	9	3	13
522	CORE	EAST	65	1,085	0	1,150	2,520	17	0.2%	2.6%	0.0%	2.8%	1	16	0	17
522	CORE	WEST	92	1,278	0	1,370		20	0.2%	3.1%	0.0%	3.3%	1	18	0	20
901	RAIL	NORTH	420	2,660	1,110	4,190	8,501	60	1.0%	6.4%	2.7%	10.1%	6	38	16	60
901	RAIL	SOUTH	276	2,869	1,066	4,311		62	0.9%	6.9%	2.6%	10.4%	5	41	15	62
902	RAIL	NORTH	248	1,268	535	2,050	4,024	30	0.6%	3.0%	1.3%	4.9%	4	18	8	30
902	RAIL	SOUTH	188	1,175	611	1,974		28	0.5%	2.8%	1.5%	4.7%	3	17	9	28
							41,623	600.00					85	394	121	600

Table 113: OD Weekend Survey (By Transit Service Categories) - Sampling Goals and Results

Saturday Collection Summary				
	Ridership	Goal	Surveys Collected	CI %
CORE	32,907	517	642	3.8%
EXPRESS	2,154	34	45	14.5%
RAIL	15,851	249	260	7.3%
Total	50,912	800	947	3.2%
Sunday Collection Summary				
	Ridership	Goal	Surveys Collected	CI %
CORE	27,272	393	476	4.5%
EXPRESS	1,826	26	30	17.8%
RAIL	12,525	181	179.00	7.27%
Total	41,623	600	685	3.7%
Weekend Collection Summary				
	Ridership	Goal	Surveys Collected	CI %
CORE	60,179	910	1,118	2.9%
EXPRESS	3,980	60	75	11.2%
RAIL	28,375	430	439	4.6%
Total	92,534	1,400	1,632	2.4%

Methods for Selecting Survey Participants

For every sampled trip or individual bus/rail trip that was surveyed for the On-to-Off counts, every passenger that boarded the vehicle was offered a barcoded card that was scanned when the passenger boarded and scanned again when the passenger alighted the vehicle. For the light rail, a tablet program was used that allowed survey staff to ask all respondents what station they boarded and alighted the sampled rail line.

For the OD tablet survey, a random number generator was used to determine which passengers were asked to participate in the survey after boarding a bus. If seven people boarded a bus, the tablet PC randomly generated a number from 1 to 6. If the answer was 2, the second person who boarded the bus was asked to participate in the survey. If the answer was 1, the first person was asked to participate in the survey, and so forth. The selection was limited to the first six people who boarded a bus or train at any given stop to ensure the interviewer could keep track of the passengers as they boarded. For example, if 20 people boarded a bus or train, the tablet PC program would randomly pick one of the first six people for the survey. If the interview was refused by the randomly selected rider, then the rider who boarded prior to the initially-selected rider would be attempted.

Additionally, if there were no current boardings, interviewers were instructed to attempt to interview those already on the vehicle by first randomly selecting a zone in the bus and then a rider in that zone using the same random number generator.

Other Techniques Used to Manage the Sampling Process

Some of the other techniques that were used to manage the sampling of bus and rail riders are described below:

- Daily Reviews of Interviewer Performance**—During each day, the ETC Institute data collection team evaluated the performance of each interviewer. This included a review of the characteristics of the passengers who were interviewed with regard to demographics and trip characteristics. These reviews were completed while the interviewer was on the bus/rail car and the findings were discussed with that interviewer when they checked in. This allowed the research team to provide immediate feedback to interviewers to improve their overall performance. It also allowed the research team to quickly identify and remove interviewers who were not conducting the survey properly.

- **Management of the Sample by Time-of-Day**—In addition to managing the total number of surveys that were completed for each route/station, ETC Institute also managed the number of surveys that were completed during each of the following four time periods: “AM Peak” time period (5am-9am), “Midday” time period (9am-3pm), “PM Peak” time period (3pm-7pm), and “Evening” time period (7pm-5am). This was done to ensure that the number of completed surveys for each time period would adequately support data expansion requirements for travel demand forecasting. The data expansion process is further described in Appendix D of this report.

On-to-Off Administration Methodology

Before administering the OD survey using an interviewer and a tablet PC, the On-to-Off counts were conducted on the bus routes and rail lines. On-to-Off counts are meant to capture the ridership flow of the bus routes and rail lines. In other words, the On-to-Off counts capture where the individual rider boarded the vehicle and the corresponding location where that rider alighted. This allows for a more comprehensive understanding of the true ridership flow of the route/line, which then allows the OD survey data to be more accurately expanded.

Recruiting and Training Interviewers

Assembling a team of high-quality interviewers was one of the most important steps in the On-to-Off administration process. ETC Institute collaborated with the staffing firm A Plus Staffing to provide surveyors and interviewers for the data collection effort.

Each surveyor was required to attend ETC Institute’s training session. During this training session, surveyors were taught how to operate the tablet PCs and the On-to-Off software, execute the On-to-Off counting procedures, and deal with various situations that could be encountered during their surveying period.

The surveyor training was conducted in a classroom-style setting. The classroom provided ETC Institute a quiet and convenient location to train its team efficiently. The training provided to all personnel who participated in the administration of the On-to-Off counts to ensure that they were fully prepared for the project is described below:

- | | |
|--|--|
| • Overview of the on-board survey objectives | • How to approach passengers |
| • On-to-Off equipment/software overview and training | • Distribution and collection of bus On-to-Off cards |
| • On-to-Off barcode administrating procedures | • How to handle refusals |
| • One-on-one tutoring/mock interview with an ETC Institute supervisor | • How to react in various situations that may be encountered |
| • Methodologies for collecting rail and bus boarding and alighting pairs | |

Once the training was completed and an ETC Institute supervisor approved of each surveyor’s abilities in the classroom, the surveyors then spent time under the supervision of an ETC Institute field supervisor who assessed each surveyor’s ability to properly conduct the On-to-Off procedures. Surveyors who did not demonstrate proficiency in all of the required tasks were released.

ETC Institute On-to-Off Program Procedure

The purpose of the On-to-Off software program was to identify ridership patterns based on an individual’s boarding and alighting locations; these were used to help develop the sampling plan for the OD survey. This was accomplished by using ETC Institute’s custom Android®-based On-to-Off software which records

the latitude and longitude of an individual's boarding and alighting location using a barcode system. The software also records route, time-of-day, and direction.

The On-to-Off software was complemented with a barcode scanning system method as described below:

- Upon boarding, riders were handed a barcode card which was scanned by a surveyor.
- Riders were told to keep the barcode card during the duration of their trip.
- Riders were reminded to hand their cards back to the surveyor as they exited the bus.
- As riders alighted the bus, the surveyor requested that they return the barcode cards and then scanned them.
- The software then paired the boarding and the alighting location of each rider based on the unique barcode on the card.

A screenshot of the interface of the On-to-Off boarding/alighting software that was used to record the information and a picture of a barcode card is shown in Figure 47.

Rail On-to-Off Counts

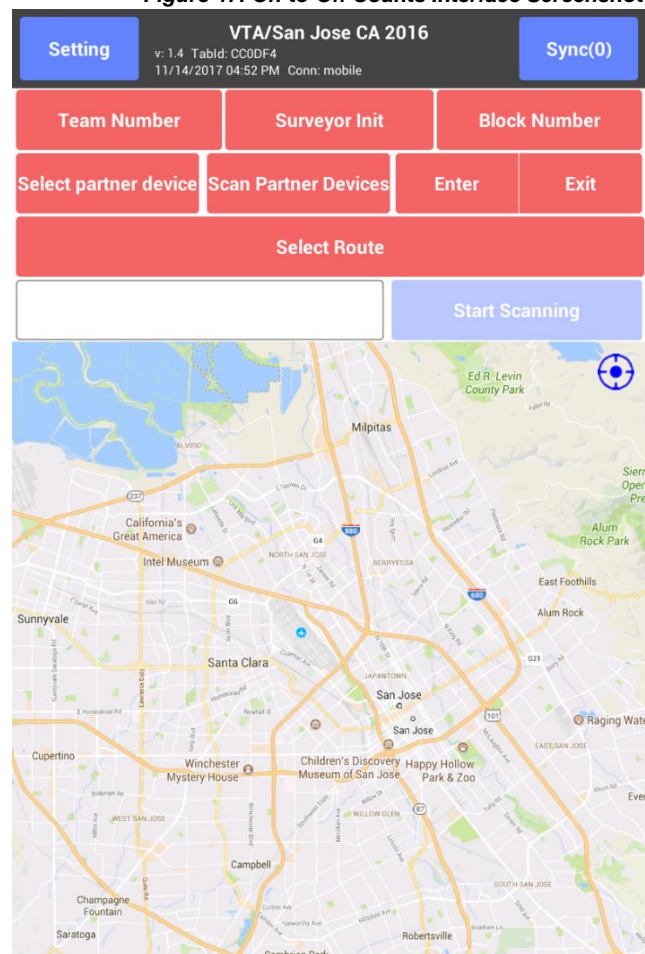
Rail On-to-Off counts consisted of using survey software with a GPS-equipped tablet PC to record the rider's boarding and alighting station (with latitude/longitude), time of usage, rail line used, and direction. Survey staff rode on rail lines and asked passengers as they boarded the train what stop the passenger was getting off. Surveyors were assigned individual sides of each car with two surveyors per rail car.

Organization of the Survey Team

The On-to-Off counts were administered by teams that were directly supervised by ETC Institute supervisors. The supervisors were responsible for reviewing the performance of each team and ensuring that all parts of the On-to-Off procedure were being followed and that the sampling goals for each route were met. The supervisors operated from centralized locations, such as transit centers, so that the performance of all teams could be evaluated.

Team sizes for the On-to-Off counts were determined by route ridership levels and bus size (articulated [3+ doors] or standard [1-2 doors]). A typical team consisted of two members, based on a

Figure 47: On-to-Off Counts Interface Screenshot



medium to high ridership level and a standard-size bus. For rail, surveyors were assigned individual sides of each car with two surveyors per car.

The responsibilities of each of the positions on the On-to-Off teams are described below:

- The **team leader** was responsible for route and direction selection for On-to-Off software, offering riders an opportunity to participate in the survey, scanning barcode cards for boarding riders, answering rider questions, and overseeing On-to-Off operations of his/her bus.
- The **support surveyor** was responsible for collecting and scanning barcode cards for alighting riders, reminding riders to keep their cards ready to hand in to a surveyor when they exited at their bus stop, and answering rider questions.

Timing of the On-to-Off Count

The On-to-Off count was administered during weekdays (Tuesday through Thursday) with the exceptions of holidays and breaks for colleges/schools. Administration of the On-to-Off counts began as early as 5 am and continued as late as 1 am. This was to ensure that the On-to-Off data would provide the OD survey with an accurate sampling plan for administration and for the data expansion.

The bulk of the On-to-Off counts were administered during Oct-Dec 2016 with some additional On-to-Off counts and targeting was carried out between Feb-Apr of 2017.

OD Survey Administration Methodology

The following sections describe the methodology used for the OD survey. This methodology includes recruiting and training of interviewers, procedures used for the survey, and organization of the survey teams.

Recruiting and Training Interviewers

ETC Institute conducted two major training sessions for the OD data collection. The first major training was for the winter OD collection and the second major training session was for the spring OD collection. There were additional training sessions conducted throughout the data collection process on an as-needed basis but with smaller groups.

Interviewers recruited by A Plus Staffing were required to have a familiarity with the service area. They were also required to document a solid work history, show a professional attitude and appearance, prove to supervisors the ability to interact with the public, display an ability to operate a tablet PC, and show proficiency with ETC Institute's surveying program.

Each interviewer was required to attend an ETC Institute training session. During these training sessions, interviewers were presented with the following:

- An overview of the on-board survey objectives
- How to operate the tablet PC and surveying software
- How to approach riders and sampling procedures
- Survey etiquette
- How to deal with various situations that could be encountered during a survey
- Role-playing and one-on-one tutoring with an ETC Institute supervisor

In addition to the training provided, the project also required all interviewers to go through safety training, so that interviewers would be as safe as possible while conducting surveys. Once all training was completed, each interviewer who was approved by an ETC Institute supervisor spent several days under the direction of a supervisor, who assessed each interviewer's ability to properly conduct surveys. Those who did not demonstrate proficiency in all of the required tasks for the OD survey were released.

Prior to the OD Survey Administration

Prior to the administration of the survey, some key preparatory tasks were performed; ETC Institute:

- Ensured that the stops previously identified matched the route actually being driven.
- Identified large employers and schools along the route, which may impact ridership patterns at certain times of the day.
- Worked with VTA Transit staff to assess whether a route had an expected high percentage of the riders do not speak English; if more than 10% of the riders were expected to not speak English, ETC Institute

used bilingual interviewers on these identified routes. ETC Institute employed a diverse team of interviewers. The majority of the interviewers spoke English only, however, Chinese, Cantonese, Mandarin, Korean, Spanish, and Russian were all among the languages spoken by the bilingual field interviewers.

OD Survey Administration Procedure

Procedure During Survey Administration

All routes classified as fixed routes were surveyed using the tablet PC's. Fixed routes are routes that provide regular/continuous service throughout the day or during peak services. Interviewers selected people for the survey in accordance with the sampling procedures described earlier of this report.

Once an interviewer had selected a person for the survey, the interviewer:

- Approached the person who was selected and asked him or her to participate in the survey.
- If the person refused, the interviewer ended the survey and the protocol to select the next participant was used as previously described.
- If the person agreed to participate, the interviewer asked the respondent if he/she had at least 5 minutes to complete the survey.
- If the person did not have at least 5 minutes on the bus, the interviewer asked the person to provide his/her name and phone number first, then conducted the interview and collected as much data as possible prior to the alighting. Most were able to complete the interview on the vehicle. For those who were not able to complete the interview, a phone interviewer from ETC Institute's call center contacted the respondent and asked him/her to provide the remaining information by phone. This methodology ensured that people who completed "short-trips" on public transit were well represented.
- If the person had at least 5 minutes on the bus or train, the interviewer began administering the survey to the respondent as a face-to-face interview using a tablet PC.

After the Administration of the Survey

On a daily basis, ETC Institute's field supervisor reviewed each employee's data with regard to the following issues to assess whether or not the employee was conducting the survey properly:

- Distribution of surveys by demographics and trip characteristics to identify if the interviewer was appropriately using the random selection method
- Length of each interview in minutes
- Percentage of refusals
- Percentage of short trips to ensure that survey staff was capturing passengers that were only on the bus or rail for a shorter distance in comparison to longer trips

ETC Institute's field supervisor also conducted checks on the locations of where the interviews took place. These checks ensured data integrity and identified if an interviewer was being negligent. The field supervisors were able to verify if an interviewer was on their assigned route by viewing the displayed geographic locations of where the interviews actually were taking place.

If any key element from the passengers' one-way trip was missing or incomplete, the supervisor flagged the record for review. ETC Institute's project manager then forwarded all flagged survey records and the corresponding name and phone number to ETC Institute's call center. Interviewers working in ETC Institute's call center then called respondents who had provided their names and phone numbers to retrieve the missing information by phone.

Organization of the OD Survey Team

The OD survey was administered by teams who were directly supervised by ETC Institute supervisors. The supervisors were responsible for reviewing the performance of each interviewer, ensuring that all parts of the surveying procedure were being followed and that the sampling goals for each route were met. The supervisors operated from centralized locations, such as transit centers, so that the performance of all interviewers could be evaluated.

The responsibilities for each of the positions on the OD survey team are described below.

- The supervisors were responsible for ensuring that interviewers were properly trained, equipping interviewers to conduct surveys, scheduling interviewers, inspecting work, and reviewing the data collected.
- The interviewer was responsible for administering surveys following surveying procedures.

Timing of the OD Survey Administration

The OD survey was administered throughout most of the operational hours of each route. This was to ensure that the administration of the survey began prior to peak ridership levels in the morning and continued after peak ridership levels in the evening. Administration of the OD survey began as early as 5 am and continued until as late as 1 am.

The bulk of the OD survey was administered during weekdays (Tuesday through Thursday) during the Spring 2017 with the exceptions of holidays and breaks for colleges/schools. Collection did begin as soon as December 2016 and as late as July 2017.

Appendix C: Data Review Process

Data Review Process

Many of the processes described already were essential elements of the overall quality assurance/quality control (QA/QC) process that was implemented throughout the survey administration process. The establishment of specific sampling goals and procedures for managing the goals ensured that a representative sample was obtained from each route. Training of interviewers and the high levels of oversight provided by team leaders and the project manager ensured that the survey was administered properly. Also, the use of the latest geocoding tools contributed to the high quality of geocoding accuracy that was achieved.

The following sections describe the QA/QC processes that were implemented after the data was collected.

Process for Identifying Complete Records

To classify a survey as being completed, the record must have contained all elements of the one-way trip. ETC Institute has classified required trip data as containing the complete answers to the following:

- Route / Direction
- Time of trip
- Transfers made
- Home address
- Origin address
- Destination address
- Origin type place
- Destination type place
- Access mode
- Egress mode
- Boarding location
- Alighting location

In addition to the required trip data questions, a survey must be marked as complete by the online survey program which occurs only if the interviewer has navigated through every required question on the online survey instrument including demographic questions.

Online Visual Review Tool

ETC Institute has created an online visual review tool that allows for the review of all completed records within the database. This tool shows all components of each individual trip as well as a series of preprogrammed distance and ratio checks as described on subsequent pages. After directions were finalized, the next step was to run each record through the Speed/Distance/Time checks. Figure 48 below shows an example of the online visual review tool.

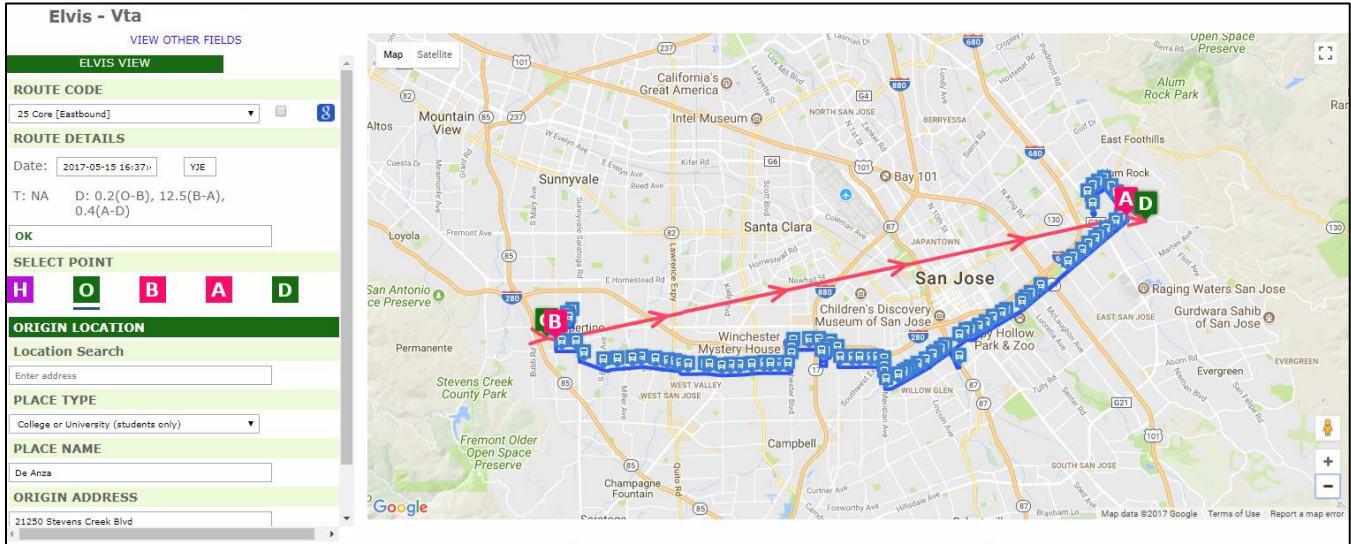


Figure 48: Online Visual Review Tool (Editable Version)

Pre-Processing Distance Checks

A series of distance and ratio checks are preprogrammed into the online visual review tool in order to allow for ETC Institute's Transit Review Team (TRT) to take a more systematic approach in reviewing complete records. The TRT process for editing surveys is described later in this section. *Note: The distance and ratio checks described were meant to alert the reviewer that closer evaluation was needed. It did not necessarily indicate that the record was inaccurate or unusable.*

The distances used for the checks were created using the great-circle distance formula which is based on a straight line from point A to point B that takes into account the curvature of the earth.

Access/Egress Mode Distance Check

Table C-1 on the following page shows the distance checks for access (Origin to Boarding) and egress modes (Alighting to Destination).

Distance Check Name	Check	Condition 1	Condition 2	Flag?
Origin to Boarding	Origin to Boarding distance is greater than 1.75 linear miles	Access Mode - ANY USE OF A VEHICLE (ie, dropped off, rode with others, drove, taxi...)		No
		Access Mode - Walk/Wheelchair/Skateboard	There is at least one transfer from origin to boarding	No
		Access Mode - Walk/Wheelchair/Skateboard	There are no transfers from origin to boarding	Yes
	Origin to Boarding distance is less than .25 linear miles	Access Mode - ANY USE OF A VEHICLE (ie, dropped off, rode with others, drove, taxi...)		Yes
		Access Mode - Every mode	There is at least one transfer from origin to boarding	Yes
		Access Mode - Walk/Wheelchair/Skateboard	There are no transfers from origin to boarding	No
Alighting to Destination	Alighting to Destination distance is greater than 1.75 linear miles	Egress Mode - ANY USE OF A VEHICLE (i.e., will get picked up, ride with others, drive, taxi...)		No
		Egress Mode - Walk/Wheelchair/Skateboard	There is at least one transfer from alighting to destination	No
		Egress Mode - Walk/Wheelchair/Skateboard	There are no transfers from alighting to destination	Yes
	Alighting to Destination distance is less than .25 linear miles	Egress Mode - ANY USE OF A VEHICLE (i.e., will get picked up, ride with others, drive, taxi...)		Yes
		Egress Mode - Every mode	There is at least one transfer from alighting to destination	Yes
		Egress Mode - Walk/Wheelchair/Skateboard	There are no transfers from alighting to destination	No

Table C-1: Origin to Boarding and Alighting to Destination Distance Checks

Origin to Destination Distance Check

Table C-2 below shows the distance checks based on the origin and destination locations.

Distance Check Name	Check	Flag?
Origin to Destination	Origin equals the Destination	Yes
	Origin to Destination is greater than 50 miles	Yes
	Origin to Destination is less than .25 miles	Yes

Table C-2. Origin to Destination Distance Checks

Boarding and Alighting Distance Check

Table C-3 below shows the distance checks based on the boarding and alighting locations.

Distance Check Name	Check	Flag?
Boarding to Alighting	Boarding equals the Alighting	Yes
	Boarding to Alighting is less than .25 miles	Yes

Table C-3. Boarding to Alighting Distance Checks

Pre-Processing Ratio Checks

After all transfer checks were completed, the next step in this process involved the application of a series of QA/QC Ratio Checks.

Three ratio checks were conducted for each record. First, the distance between boarding and alighting was divided by the distance between origin and destination. If the rider had a high ratio, then the rider was on the bus for an extensive time compared to the origin to destination distance. If the check created an extremely low ratio, the use of transit seemed unnecessary.

Second, the distance between origin and boarding was divided by the distance between origin and destination. If the rider had a high ratio, the origin to boarding distance was excessive compared to the origin to destination.

Third, the distance between alighting and destination was divided by the distance between origin and destination. If the rider had a high ratio, the alighting to destination distance was excessive compared to the origin to destination.

Table C-4 below describes in more detail the ratio checks used, and the conditions in which a record would be flagged.

Ratio Checks	Check	Result of Formula	Condition 1	Condition 2	Flag?
Boarding to Alighting distance divided by Origin to Destination distance	Boarding to Alighting Distance/Origin to Destination Distance	the result of this formula is 1.5 or greater			Yes
	Boarding to Alighting Distance/Origin to Destination Distance	the result of this formula is less than .3	Access and Egress modes are both Walk/Wheelchair/Skateboard	There are NO transfers involved in the trip	Yes
	Boarding to Alighting Distance/Origin to Destination Distance	the result of this formula is less than .3	Access or Egress mode - <u>ANY USE OF A VEHICLE</u>		No
	Boarding to Alighting Distance/Origin to Destination Distance	the result of this formula is less than .3	There is at least one transfer involved in the trip		No

Table C-4. Ratio Checks

Ratio Checks	Check	Result of Formula	Condition 1	Condition 2	Flag?
Origin to Boarding distance divided by Origin to Destination distance	Origin to Boarding Distance/Origin to Destination Distance	the result of this formula is 1 or greater	there is at least one transfer from origin to boarding		No
	Origin to Boarding Distance/Origin to Destination Distance	the result of this formula is 1 or greater	Access Mode - <u>ANY USE OF A VEHICLE</u> (i.e., dropped off, rode with others, drove, taxi...)		No
	Origin to Boarding Distance/Origin to Destination Distance	the result of this formula is 1 or greater	Access Mode - Walk/Wheelchair/Skateboard	there are no transfers from origin to boarding	Yes
Alighting to Destination divided by Origin to Destination	Alighting to Destination Distance/Origin to Destination Distance	the result of this formula is 1 or greater	there is at least one transfer from alighting to destination		No
	Alighting to Destination Distance/Origin to Destination Distance	the result of this formula is 1 or greater	Egress Mode - <u>ANY USE OF A VEHICLE</u> (i.e., will get picked up, ride with others, drive, taxi...)		No
	Alighting to Destination Distance/Origin to Destination Distance	the result of this formula is 1 or greater	Egress Mode - Walk/Wheelchair/Skateboard	There are no transfers from alighting to destination	Yes

Table C-4. (Continued) Ratio Checks

Transit Review Team (TRT)

ETC Institute has a dedicated team whose priority is reviewing and editing completed records through the use of an online visual review tool. One of their other key responsibilities is the process of calling and completing “Callback” surveys. Callback surveys are surveys that were unable to be completed in the field. The “Callback” surveys were conducted within a week of when the initial survey began so that the information of the trip could more easily be recalled by the respondent.

The TRT reviewed all complete records collected for the survey, paying special attention to records that were automatically flagged by the online visual review tool. Typically around 10% of all records receive an automatic flag. Prior to making edits to any survey, they first attempted to contact the respondent to clarify any questionable answer choices regarding the trip. If no contact was made, or if contact was not possible, which occurs in the vast majority of cases the following actions were taken.

Pre-Processing General Issues and Actions

Table C-5 describes the general issues that could occur within a trip where changes may have been appropriate.

Issue	Description of Issue	Action
Origin/Destination Condition 1	Origin/Destination appears incorrect because the wrong location of a multiple-location organization was selected	If for example, an Origin/Destination appears illogical based on the college campus that was selected, but an appropriate campus of the same college does appear logical given the other points and answer choices of the trip, then the appropriate campus will be selected.
Origin/Destination Condition 2	Origin/Destination appears to have been geocoded to the incorrect city/state	If for example, an Origin/Destination appears illogical based on the city/state that was geocoded, but the address/intersection is logical within the trip if the city/state are changed. This occurs occasionally because the surveyor selects the wrong choice from the list of possible address choices that appear in the online survey instrument, then the appropriate address information will be inserted.
Access/Egress Mode	Access/Egress Mode seems illogical based on trip	If the access/egress mode involves the use of a vehicle and the distance from either origin to boarding or alighting to destination is less than .2 miles then the access/egress mode is recoded to walk/walked and that change will be reflected in the database.
Directionality of Record	Boarding and alighting locations indicate that the trip is going in the opposite direction of what was selected by the surveyor.	Change Direction of Route Selected and if necessary update boarding and alighting locations based on appropriate direction.

Table C-5. General Issues

Transfer Issues and Actions

Table C-6 below describes the transfer issues that could occur within a trip where changes may have been appropriate.

Issue #	Description of Issue	Action
Transfer Issue - 1	The transfer(s) seems illogical based on either the origin to boarding or alighting to destination	If the transfer appears to have been selected incorrectly based on surveyor misselection error (IE Route 24 selected which is illogical but Route 23 is logical) or passenger error (passenger gives inaccurate transfer), then an appropriate transfer(s) will be inserted based on the geocoded points of the trip (origin and destination), the time of day of the trip and the direction of travel. If no appropriate transfers can be found, then the record will be removed from the database.
Transfer Issue - 2	The transfer(s) seems unnecessary based on either the origin to boarding or alighting to destination	If the transfer(s) appears to be unnecessary because the distance from the origin to boarding or alighting to destination is less than 0.2 miles then the trip will be reviewed in further detail to determine if the transfer(s) are inappropriate. Aspects that will determine appropriateness are: the landscape (0.1 miles for example is a very short distance but a river in-between the origin and boarding location could require an individual to use a transfer as opposed to being able to walk), disability, age, and alternate access/egress modes (IE if someone indicates walking 1 mile from origin to boarding but then indicates taking 2 transfers from alighting to destination to travel a total of 0.1 miles they have likely indicated transfers for a future trip later in the day). <i>NOTE: The 0.2 distance is only used as guideline to create a flag for closer review. Typically only extreme distances have transfers removed</i>
Transfer Issue - 3	The passenger indicated that they did not use a transfer but based on their access/egress mode and the distance between either the origin to boarding or alighting to destination suggests that a transfer should have been used.	If the access/egress mode is "walked/walk" and no transfer is indicated, and the distance between either origin to boarding or alighting to destination is greater than 2 miles, then an appropriate transfer(s) will be inserted based on the geocoded points of the trip (origin and destination), the time of day of the trip and the direction of travel. If no appropriate transfers can be found, then the record will be removed from the database.
Transfer Issue - 4	Duplicate Transfers in the Route Path	If duplicate transfers exist in the route path, the trip path is reviewed visually to determine which route(s) were incorrectly entered. If a review of the record suggests that the transfer route(s) is/are unnecessary then they will be removed. If the transfers suggest that trip is a round trip (IE home to home) and not a one-way trip then the record will be removed from the database.

Table C-6. Transfer Issues

Post-Processing Additional Checks

After all records were reviewed by the TRT, the next step in this process involved the application of a series of QA/QC “non-trip” Checks. Non-trip checks are described as anything not pertaining to the respondent’s actual trip, i.e. demographic information.

Non-trip related checks included:

- Ensuring the respondents who indicated that they were employed also reported that at least one member of their household was employed.
- Ensuring the time of day a survey was completed was reasonable given the published operating schedule for the route.
- Ensuring that the appropriate fare type was used in response to the age of respondent.
- Checking that there is a representative demographic distribution based on age, gender, and income status.
- Removing any personal contact information used for quality control purposes during the data collection portion of the project in order to protect the anonymity of the respondents.

Once all records had gone through the pre-processing and post-processing QA/QC checks, those that were deemed complete and usable were then used to update the completion report used by the Field Staff to ensure that all contractual goals had been met. After the final high-level review was completed, metadata (a codebook) was created in order to suitably explain the data in the database.

Appendix D: Data Expansion Process

Data Expansion Process

While the “goals” described in Appendix B of this report were based upon the most current ridership levels provided at the time of the surveying effort, revised ridership figures were used to expand the data. The revised estimated ridership was based on more comprehensive and up-to-date ridership information that was available during the time of the data expansion process.

Sources of Ridership Data and Segmentation for Expansion

The Ridership data used to fine tune the collection and conduct the expansion was from APC Data from March 2017. Segments were provided by VTA based on utilizing boarding percentages of the route from ridership data.

Data Expansion Overview

When survey goals are created, they are typically based off of a percentage of the average weekday ridership for the routes in the system. That is further broken down by time periods and directions. The time periods that are created (6am to 9am for example) are based off of the specific needs of the client, generally aligning with the travel demand model. Once a sample percentage is agreed upon, the goals for the survey collection are based off of the ridership for each route by time period and direction, and then multiplied by the sampling percentage. For “Circular” or “Loop” routes, the ridership is typically only broken down into time period as there are many riders that will board going in one direction but alight going the other direction due to the functionality of the route. This typically is also the case if there are directional routes where many riders travel through the terminus and alight going the opposite direction of initial boarding.

The purpose of developing survey goals is to collect an appropriate number of survey records that will be “Expanded” to represent the total average weekday ridership of each route by time period and direction. To further increase the specificity of the expansion process, segments were created for each route. Stops were grouped into segments along route so that boarding segments could be paired with alighting segments when creating the expansion factor. Segmentation occurs on bus routes because it is unrealistic to expand bus survey data at the stop level. Stop, or station, level expansion is generally reserved for rail lines.

Types of Bus Data Expansion

The type of bus data expansion conducted depended on the data available for the specific bus route. The three types of data that created the combinations that guided the type of expansion used were: APC data (from Client), On-to-Off Counts Data (collected by ETC Institute), and Origin Destination (OD) Survey Data (collected by ETC Institute). The figure below shows the data combinations, the corresponding route segmentation, and type of expansion used.

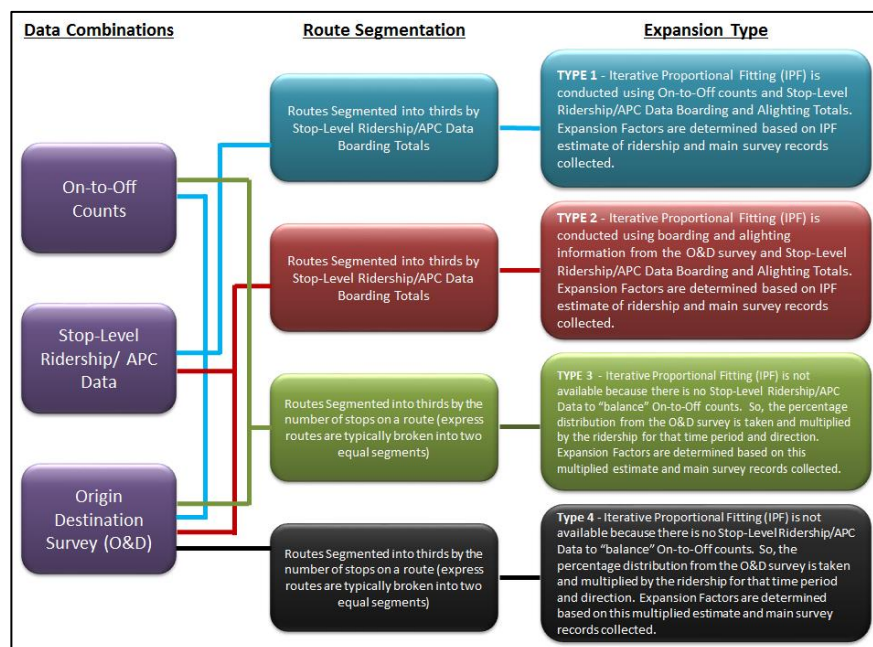


Figure 49: Overall Bus Expansion Methodology

Type 1 Expansion: Bus Routes with APC data, On-to-Off Counts Data, and OD Survey Data

Of the four types of bus expansion discussed, Type 1 expansion was the preferred method as it incorporated all three types of data that were available. Typically On-to-Off data collection is reserved for more heavily traveled routes. These heavier ridership routes are also typically more likely to have available APC data. This type of expansion was conducted on the more heavily traveled routes in the system and occurred after route stops were divided into three segments based on total boarding and alighting distribution by direction, as described previously. The segments were then appended to both the On-to-Off counts and OD data based on the boarding and alighting locations. The methodology for Type 1 expansion is as follows:

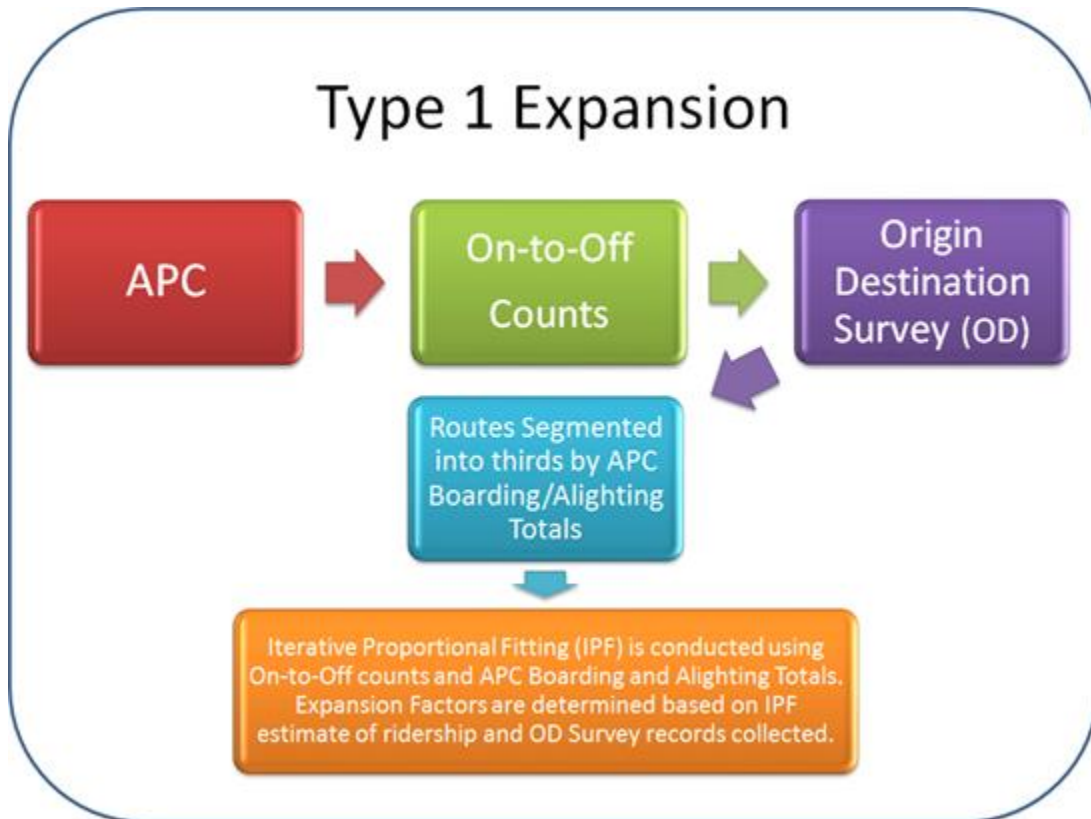


Figure D-1: Type 1 Bus Expansion Methodology

Type 1 Expansion: Expansion Methodology for Bus Routes with APC data, On-to-Off Data and OD Survey Data

Once the segments were appended to the On-to-Off counts and OD survey databases, the records were ready for expansion. The process for how the data was expanded in Type 1 expansion is explained below:

Figure D-1 on the following page shows the segmented results for the On-to-Off counts that was administered for a certain route, direction, and time period. Each row in the table identifies the segment where passengers boarded the bus. The columns in the table identify the segments where people alighted the bus. For example, 20 of the On-to-Off counts had riders board on segment 2 and alight on segment 3.

TABLE 1: RESULTS OF THE ON-TO-OFF				
<u>Route: Example Eastbound (6am - 9am)</u>		ACTUAL RIDERSHIP COUNTS FROM THE ON/OFF		
Segment	Total	1	2	3
1	63	3	20	40
2	37	2	15	20
3	15	0	5	10
Total	115	5	40	70

Figure D-1: Bus Data Expansion Table Results of On-to-Off Counts

Figure D-2 shows the distribution of the data in Figure D-1 expressed as a percentage of all boardings for the specific time period and direction. Figure D-2 was created by dividing each On-to-Off cell in Figure D-1 by the sum of all On-to-Off counts in Figure D-1, which is 115. For example, 20/115 (17.4%) of all trips boarded on segment 2 and alighted at segment 3 as shown in Figure D-2.

TABLE 2: DISTRIBUTION OF THE ON-TO-OFF				
<u>Route: Example Eastbound (6am - 9am)</u>		PERCENTAGE DISTRIBUTION OF RIDERSHIP COUNTS FROM THE ON/OFF		
Segment	Total	1	2	3
1	54.8%	2.6%	17.4%	34.8%
2	32.2%	1.7%	13.0%	17.4%
3	13.0%	0.0%	4.3%	8.7%
Total	100.0%	4.3%	34.8%	60.9%

Figure D-2: Bus Data Expansion Table Distribution of On-to-Off Counts

The total APC ridership for the route, time period, and direction was applied to the On-to-Off distribution percentages shown in Figure D-2. This produces an estimate of the ridership flow for the boarding segment to the alighting segment as shown in Figure D-3. Applying the actual ridership of 320 creates an initial estimate of 56 trips (17.4% x 320) boarding on segment 2 and alighting at segment 3.

TABLE 3: INITIAL ESTIMATE OF RIDERSHIP FLOWS				
<u>Route: Example Eastbound (6am - 9am)</u>		PROJECTED RIDERSHIP BASED ON THE ON/OFF		
Segment	Total	1	2	3
1	175	8	56	111
2	103	6	42	56
3	42	0	14	28
Total	320	14	111	195

Figure D-3: Bus Data Expansion Table Initial Estimate of Ridership Flows Between Segments

In order to develop a more accurate estimate of the ridership flows between segments on each route, ETC Institute developed an Iterative Proportional Fitting (IPF) Algorithm to balance the differences between the ridership projected from the On-to-Off counts (shown in Figure D-3) and the APC ridership for each segment (shown in Figure D-4). The IPF process is described below:

TABLE 4: BOARDINGS and ALIGHTINGS BY SEGMENT				
Route: Example Eastbound (6am - 9am)				
Average Weekday Ridership	Total	1	2	3
BOARDINGS	320	100	100	120
ALIGHTINGS	320	20	100	200
DIFFERENCE FROM PROJECTED				
BOARDINGS	0	-75	-3	78
ALIGHTINGS	0	6	-11	5

Figure D-4: APC Data

Step 1: Correction for the Boardings. The estimated ridership from the On-to-Off counts for each route (as shown in Figure D-3) was multiplied by the ratio of the actual boardings from APC data for each segment by the estimated boardings for each segment. For example, if the actual boardings for Segment 1 were 120 and the estimated boardings were 100, each cell associated with Segment 1 would have been multiplied by 1.2 (120 / 100) to adjust the estimated boardings to actual boardings.

Step 2: Correction for the Alightings. Once the correction in Step 1 was applied, the estimated boardings would be equal to the actual boardings. However, the adjustment to the boardings total may have changed the alighting estimates. In order to correct the alighting estimates, the new values calculated in Step 1 were adjusted by multiplying the ratio of the actual alightings from the APC data for each stop by the estimated alightings for each segment from Step 1. For example, if the actual alightings for Segment 2 were 220 and the estimated alightings from Step 1 were 200, each cell associated with Segment 2 would have been multiplied by 1.1 (220 / 200) to adjust the estimated alightings from Step 1 to actual alightings.

The processes described in Steps 1 and Steps 2 were repeated sequentially until the difference between the actual and estimated boardings and alightings was zero. Figure D-5 shows that after seven balancing iterations in this algorithm, there were no differences between the projected distribution and the actual boardings and alightings.

7th STEP of ITERATIVE BALANCING TO CORRECT DISTRIBUTION OF RIDERSHIP BY ALIGHTING LOCATION					
Segment	Total	DIFFERENCE FROM ACTUAL BOARDINGS	1	2	3
1	100	0	9	28	63
2	100	0	11	36	54
3	120	0	0	37	83
Total	320	0	20	100	200
DIFFERENCE FROM ACTUAL ALIGHTINGS	0		0	0	0

7th STEP of ITERATIVE BALANCING TO CORRECT DISTRIBUTION OF RIDERSHIP BY BOARDING LOCATION					
Segment	Total	DIFFERENCE FROM ACTUAL BOARDINGS	1	2	3
1	100	0	9	28	63
2	100	0	11	36	54
3	120	0	0	37	83
Total	320	0	20	100	200
DIFFERENCE FROM ACTUAL ALIGHTINGS	0		0	0	0

Figure D-5: Iterative Balance Process

The final estimate for ridership flows is shown in Figure D-6.

TABLE 6: FINAL ESTIMATE OF RIDERSHIP FLOWS				
Route: Example Eastbound (6am - 9am)				
Segment	Total	1	2	3
1	100	9	28	63
2	100	11	36	54
3	120	0	37	83
Total	320	20	100	200
DIFFERENCE FROM ACTUAL ALIGHTINGS	0	0	0	0

Figure D-6: Final Estimate of Ridership Flows between Segments

The actual number of OD records completed for each boarding to alighting segment pair is shown in Figure D-7. To calculate the expansion factors, the final estimate of ridership between segments shown in Figure D-6 was divided by the actual number of OD records collected, as shown in Figure D-7. This calculation produces the expansion factors shown in Figure D-8. For example, the 54 estimated riders projected to board on segment 2 and alight on segment 3 were divided by the 10 OD records to produce an expansion factor of 5.38 to be applied to records who board at segment 2 and alighting at segment 3 as shown in Figure D-8.

TABLE 7: NUMBER OF COMPLETED SURVEYS				
Route: Example Eastbound (6am - 9am)				
Segment	Total	1	2	3
1	26	2	4	20
2	17	1	6	10
3	14	0	6	8
Total	57	3	16	38

Figure D-7: Number of Completed Surveys (Vehicle)

TABLE 8: WEIGHTING FACTORS				
Route: Example Eastbound (6am - 9am)				
Segment	Total	1	2	3
1	3.85	4.67	6.93	3.15
2	5.88	10.65	5.93	5.38
3	8.57	0.00	6.12	10.41

Figure D-8: Weighting Factors (Vehicle)

Type 2 Expansion: Vehicle Routes with APC Data, OD Survey Data, but no On-to-Off Counts Data

On-to-Off counts are not collected for lower ridership routes. However, sometimes these routes will have APC data available. In this case, Type 2 expansion is appropriate. This type of expansion also divided stops into three segments based on total boarding and alighting distribution by direction. These segments were then appended to the OD records based on the boarding and alighting locations. The expansion method is similar to Type 1 expansion, the only difference being that the distribution of OD records was substituted for the On-to-Off counts data in Table 1. The methodology for Type 2 expansion is as follows:

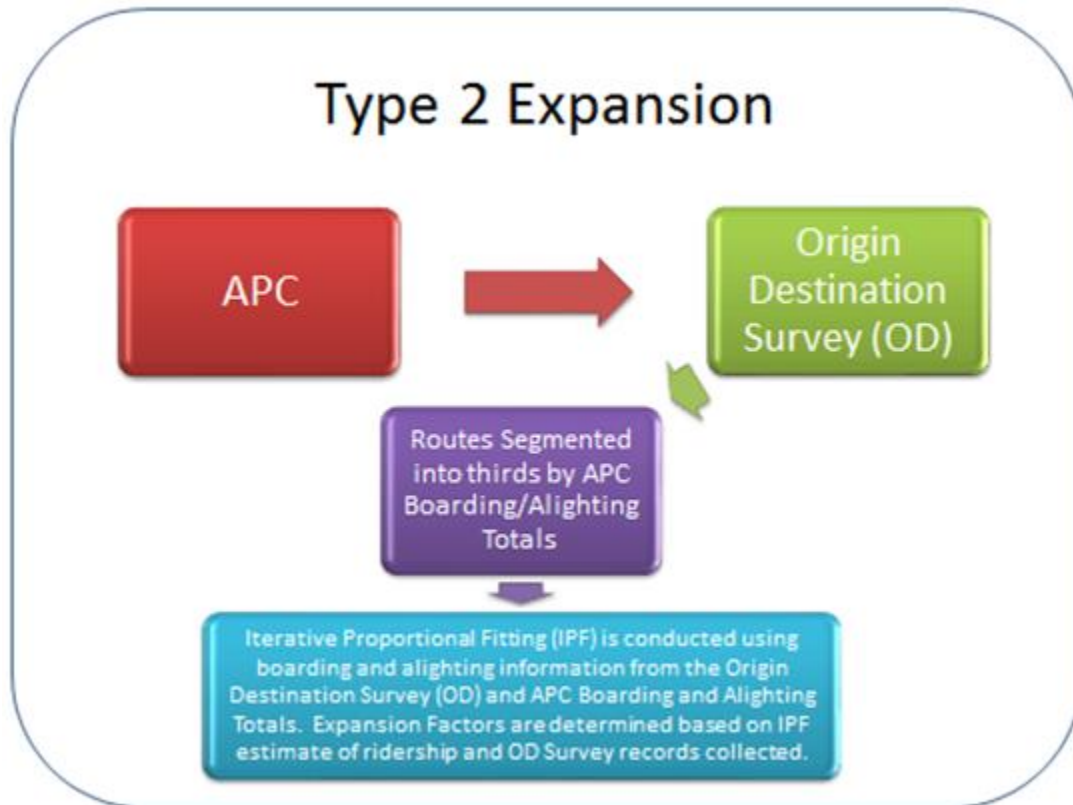


Figure D-9: Type 2 Vehicle Expansion Methodology

Type 2: Expansion Methodology for Vehicle Routes with APC Data, OD Survey Data, but no On-to-Off Counts Data

Figure D-10 shows the segmented results from the OD survey that replaced the On-to-Off counts. Each row in the table identifies the segment where passengers boarded the Vehicle. The columns in the table identify the segments where people alighted. For example, 10 OD surveys had riders board on segment 2 and alight on segment 3.

TABLE 1: RESULTS OF THE ORIGIN DESTINATION SURVEY				
<u>Route: Example Eastbound (6am - 9am)</u>		REPLACING COUNTS FROM THE ON/OFF SURVEY		
Segment	Total	1	2	3
1	26	2	4	20
2	17	1	6	10
3	14	0	6	8
Total	57	3	16	38

Figure D-10: Vehicle Data Expansion Table Results of Origin Destination Survey to Replace On-to-Off Counts

Figure D-11 shows the distribution of the data in Figure D-10, expressed as a percentage of all boardings for the time period and direction. Figure D-11 was created by dividing each cell in Figure D-10 by the sum of all records in Figure D-10, which is 57. For example, 10/57 (17.5%) of all trips boarded on segment 2 and alighted at segment 3 as shown in Figure D-11.

TABLE 2: DISTRIBUTION OF THE ON-TO-OFF REPLACEMENT				
<u>Route: Example Eastbound (6am - 9am)</u>		PERCENTAGE DISTRIBUTION OF RIDERSHIP COUNTS FROM THE ON/OFF SURVEY REPLACEMENT		
Segment	Total	1	2	3
1	45.6%	3.5%	7.0%	35.1%
2	29.8%	1.8%	10.5%	17.5%
3	24.6%	0.0%	10.5%	14.0%
Total	100.0%	5.3%	28.1%	66.7%

Figure D-11: Vehicle Data Expansion Table Distribution of On-to-Off Replacement

The ridership for the route by time period and direction was applied to the “On-to-Off” (boarding to alighting information from the OD survey) distribution shown in Figure D-11. This produces an estimate of the ridership flow on the route based on the boarding segment to the alighting segment as shown in Figure D-12. Applying the actual ridership of 320 to the distribution created an initial estimate that 56 trips (17.5% x 320) boarded on segment 2 and alighted on segment 3.

TABLE 2: DISTRIBUTION OF THE ON-TO-OFF REPLACEMENT				
<u>Route: Example Eastbound (6am - 9am)</u>		PERCENTAGE DISTRIBUTION OF RIDERSHIP COUNTS FROM THE ON/OFF SURVEY REPLACEMENT		
Segment	Total	1	2	3
1	45.6%	3.5%	7.0%	35.1%
2	29.8%	1.8%	10.5%	17.5%
3	24.6%	0.0%	10.5%	14.0%
Total	100.0%	5.3%	28.1%	66.7%

Figure D-12: Vehicle Data Expansion Table Initial Estimate of Ridership Flows Between Segments

In order to develop a more accurate estimate of ridership flows between segments for each route, ETC Institute developed an Iterative Proportional Fitting Algorithm to balance the differences between the initial estimated ridership (shown in Figure D-12) and the ridership observed by APC data at each segment (shown in Figure D-13).

TABLE 4: BOARDINGS and ALIGHTINGS BY SEGMENT				
Route: Example Eastbound (6am - 9am)				
Average Weekday Ridership	Total	1	2	3
BOARDINGS	320	100	100	120
ALIGHTINGS	320	20	100	200
DIFFERENCE FROM PROJECTED				
BOARDINGS	0	-46	5	41
ALIGHTINGS	0	3	10	-13

Figure D-13: APC Data

The key steps to the iterative process are described below:

Step 1: Correction for the Boardings. The estimated ridership from the “On-to-Off” data (boarding to alighting information from the OD survey) for each route (shown in Figure D-12) was multiplied by the ratio of the actual boardings from the APC data for each segment by the estimated boardings for each segment. For example, if the actual boardings for Segment 1 were 120 and the estimated boardings were 100, each cell associated with Segment 1 would have been multiplied by 1.2 (120 / 100) to adjust the estimated boardings to actual boardings.

Step 2: Correction for the Alightings. Once the correction in Step 1 was applied, the estimated boardings would equal the actual boardings. However, the adjustment to the boardings total may change the alighting estimates. In order to correct the alighting estimate, the new values calculated in Step 1 were adjusted by multiplying the ratio of the actual alightings from the APC data for each segment by the estimated alightings for each segment from Step 1. For example, if the actual alightings for Segment 2 were 220 and the estimated alightings from Step 1 were 200, each cell associated with Segment 2 would have been multiplied by 1.1 (220 / 200) to adjust the estimated alightings from Step 1 to actual alightings.

The processes described in Step 1 and Step 2 were repeated sequentially until the difference between the actual and estimated boardings and alightings was zero. Figure D-14 shows that after seven balancing iterations in this algorithm, there were no differences between the projected distribution and the actual boardings and alightings.

7th STEP of ITERATIVE BALANCING TO CORRECT DISTRIBUTION OF RIDERSHIP BY ALIGHTING LOCATION					
Segment	Total	DIFFERENCE FROM ACTUAL BOARDINGS	1	2	3
1	100	0	11	15	74
2	100	0	9	34	57
3	120	0	0	51	69
Total	320	0	20	100	200
DIFFERENCE FROM ACTUAL ALIGHTINGS	0		0	0	0

7th STEP of ITERATIVE BALANCING TO CORRECT DISTRIBUTION OF RIDERSHIP BY BOARDING LOCATION					
Segment	Total	DIFFERENCE FROM ACTUAL BOARDINGS	1	2	3
1	100	0	11	15	74
2	100	0	9	34	57
3	120	0	0	51	69
Total	320	0	20	100	200
DIFFERENCE FROM ACTUAL ALIGHTINGS	0		0	0	0

Figure D-14. Iterative Balance Process

The final estimate for ridership flows is shown in Figure D-15 below.

TABLE 6: FINAL ESTIMATE OF RIDERSHIP FLOWS					
Route: Example Eastbound (6am - 9am)					
Segment	Total	1	2	3	
1	100	11	15	74	
2	100	9	34	57	
3	120	0	51	69	
Total	320	20	100	200	
DIFFERENCE FROM ACTUAL ALIGHTINGS	0	0	0	0	

Figure D-15: Final Estimate of Ridership Flows between Segments

The actual number of OD records that were completed for each boarding to alighting segment is shown in Figure D-16. To calculate the expansion factors, the final estimate of ridership between segments shown in Figure D-15 was divided by the actual number of OD records that were completed as shown in Figure D-16. This calculation produces the expansion expansions shown in Figure D-17. So, the 57 estimated riders were divided by the 10 completed surveys to produce a factor of 5.72 to be applied to riders who board at segment 2 and alighting at segment 3, as shown Figure D-17.

TABLE 7: NUMBER OF COMPLETED SURVEYS				
Route: Example Eastbound (6am - 9am)				
Segment	Total	1	2	3
1	26	2	4	20
2	17	1	6	10
3	14	0	6	8
Total	57	3	16	38

Figure D-16: Number of Completed Surveys (Vehicle)

TABLE 8: WEIGHTING FACTORS				
Route: Example Eastbound (6am - 9am)				
Segment	Total	1	2	3
1	3.85	5.64	3.67	3.70
2	5.88	8.72	5.68	5.72
3	8.57	0.00	8.54	8.60

Figure D-17: Weighting Factors (Vehicle)

Type 3 Expansion: Vehicle Routes with On-to-Off Counts and OD Survey Data, but without APC Data

Expansion Type 3 is utilized for routes where On-to-Off counts are collected, but APC data is not available. Routes without APC data are segmented into three segments based on number of stops along a route. These segments were then appended to the On-to-Off and OD Survey databases. The expansion method is less complex than the two previously discussed types of expansion. The methodology for Type 3 expansion is as follows:

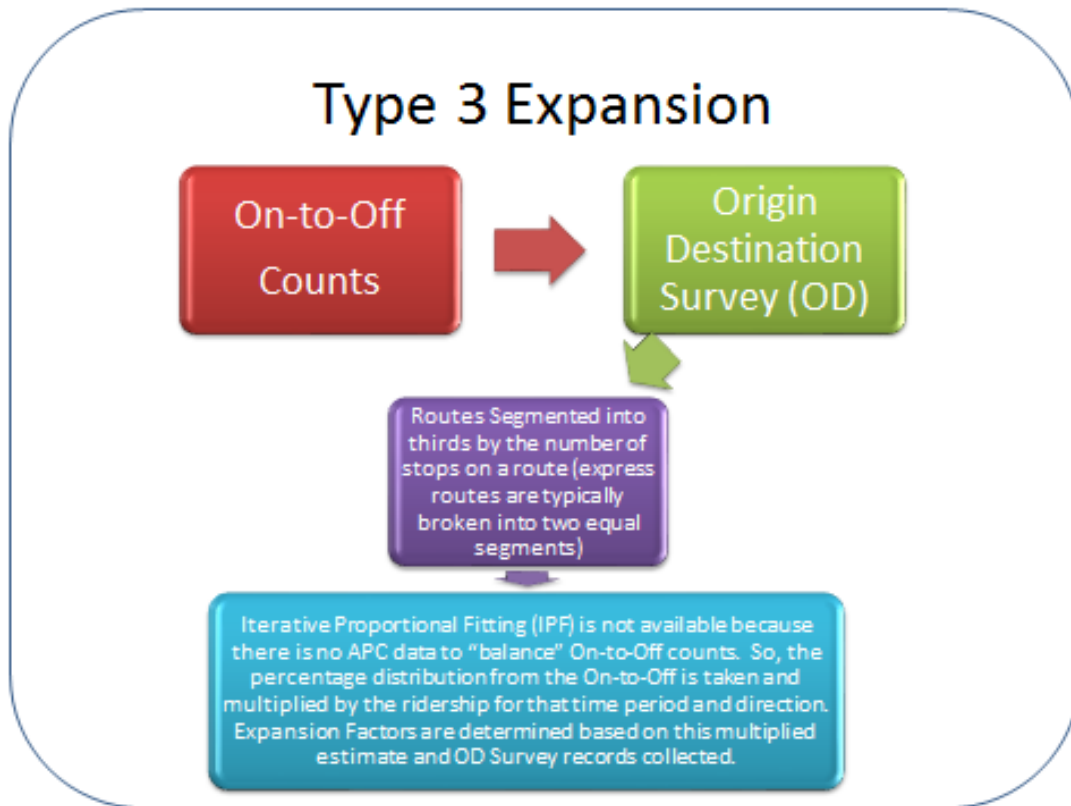


Figure D-18: Type 3 Vehicle Expansion Methodology

Type 3 Expansion: Expansion Methodology for Vehicle Routes with On-to-Off Counts and OD Survey Data but without APC Data

Figure D-19 displays the results for the On-to-Off counts. Each row in the table identifies the segment where passengers board the Vehicle. The columns in the table identify the segments where people alight the Vehicle. For example, 20 of the On-to-Off counts captured riders boarding on segment 2 and alighting on segment 3.

TABLE 1: ON-TO-OFF COUNTS COMPLETED		Total Boardings this Direction During this Time Period = 300		
<u>Route: Example Eastbound (6-9am)</u>		DISTRIBUTION OF COMPLETED ON2OFF :		
Segment		1	2	3
1	55	5	20	30
2	30		10	20
3	15			15
Total	100	5	30	65

Figure D-19: Vehicle Data Expansion Table Results of On-to-Off Counts

Figure D-20 shows the distribution of the data in Figure D-19 expressed as a percentage of all boardings for the route, time period, and direction. Figure D-20 was created by dividing each On-to-Off cell in Figure D-19 by the sum of all On-to-Off counts in Figure D-19, 100. For example, 20/100 (20.00%) of all trips board on segment 2 and alight on segment 3 as shown in Figure D-20.

TABLE 2: DISTRIBUTION OF THE ON-TO-OFF				
Route: Example Eastbound (6-9am)				
DISTRIBUTION OF ON-TO-OFF COUNTS AS % OF ALL COMPLETED ON-TO-OFF COUNTS				
Segment		1	2	3
1	55.00%	5.00%	20.00%	30.00%
2	30.00%	0.00%	10.00%	20.00%
3	15.00%	0.00%	0.00%	15.00%
Total	100%	5.00%	30.00%	65.00%

Table D-20. Vehicle Data Expansion Table Distribution of On-to-Off Counts

The total ridership for the route, time period, and direction was applied to the On-to-Off distribution shown in Figure D-20. This produces an estimate of the ridership flow on the route based on the boarding to the alighting segment, shown in Figure D-21. Applying the actual ridership, 300, to the distribution creates an estimate that 60 trips (20.00% x 300) boarded on Segment 2 and alighted on Segment 3.

TABLE 3: ESTIMATE OF RIDERSHIP FLOWS BETWEEN SEGMENTS				
(percentages in table 2 were applied to the total boardings for this time period in this direction)				
Route: Example Eastbound (6-9am)				
ESTIMATED RIDERSHIP BASED ON THE ON-TO-OFF				
Segment		1	2	3
1	165	15	60	90
2	90	0	30	60
3	45	0	0	45
Total	300	15	90	195

Figure D-21. Vehicle Data Expansion Table Initial Estimate of Ridership Flows Between Segments

The actual number of OD records completed for each boarding to alighting segment is shown in Figure D-22. To calculate the expansion factors, the estimate of ridership between segments, shown in Figure D-21, was divided by the actual number of OD records completed between segments, shown in Figure D-22. The calculation produces the expansion factors shown in Figure D-23. So, the 60 estimated riders were divided by the 7 OD records to produce a factor of 8.57 to be applied to riders who board at segment 2 and alighting at segment 3 as shown in Figure D-23.

TABLE 4: NUMBER OF COMPLETED ORIGIN DESTINATION SURVEYS		Total Number of Surveys = 30		
Route: Example Eastbound (6-9am)		NUMBER OF COMPLETED SURVEYS		
Segment		1	2	3
1	16	4	4	8
2	10		3	7
3	4			4
Total	30	4	7	19

Figure D-22. Number of Completed Origin Destination Surveys

TABLE 5: Weighting Factors				
Route: Example Eastbound (6-9am)				
Segment		1	2	3
1	10.312500	3.750000	15.000000	11.250000
2	9.000000		10.000000	8.571429
3	11.250000			11.250000
Total	10.000000	3.750000	12.857143	10.263158

Figure D-23. Weighting Factors

Once all the expansion factors were calculated, each factor was applied to all surveys with the same route, direction, time of day, boarding segment, and alighting segment.

Type 4 Expansion: Vehicle Routes with OD Survey Data, without On-to-Off Counts Data or APC Data

For routes that only have OD Survey data, Type 4 expansion is utilized. Routes are divided into three segments based on number of stops along a route. These segments were then appended to the OD Survey database. The methodology for Type 4 expansion is as follows:

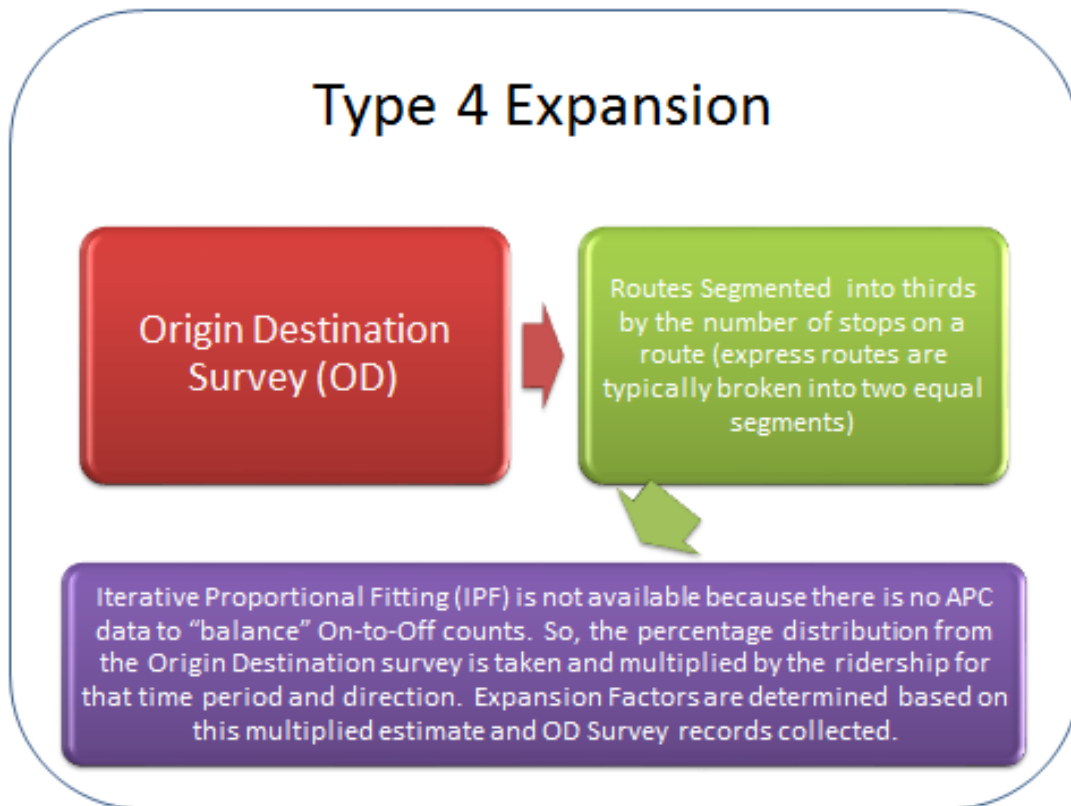


Figure D-24: Type 4 Vehicle Expansion Methodology

Type 4 Expansion: Expansion Methodology for Vehicle Routes with OD Survey Data, without On-to-Off Counts Data or APC Data

Figure D-25 shows the segmented results from the OD survey that replaced the On-to-Off counts. Each row in the table identifies the segment where passengers boarded the Vehicle. The columns in the table identify the segments where people alighted. For example, 7 of the OD surveys had riders board on segment 2 and alight on segment 3.

TABLE 1: ORIGIN DESTINATION SURVEY RESULTS (REPLACING ON-TO-OFF RESULTS)		Total Boardings this Direction During this Time Period =		300
Route: Example Eastbound (6-9am)		DISTRIBUTION OF COMPLETED ON2OFF		
Segment		1	2	3
1	16	4	4	8
2	10		3	7
3	4			4
Total	30	4	7	19

Figure D-25: Vehicle Data Expansion Table Results of Origin Destination Survey Results (Replacing On-to-Off Survey)

Figure D-26 shows the distribution of the data in Figure D-1 as a percentage of all boardings for the route. Figure D-2 was created by dividing each individual cell in Figure D-1 by the sum of all OD records replacement data in Figure D-25, which is 30. For example, 7/30 (23.33%) of all trips boarded on segment 2 and alighted on segment 3 as shown in Figure D-26.

TABLE 2: DISTRIBUTION OF THE ON-TO-OFF				
Route: Example Eastbound (6-9am)				
DISTRIBUTION OF ON-TO-OFF COUNTS AS % OF ALL COMPLETED ON-TO-OFF COUNTS				
Segment	1	2	3	
1	53.33%	13.33%	13.33%	26.67%
2	33.33%	0.00%	10.00%	23.33%
3	13.33%	0.00%	0.00%	13.33%
Total	100%	13.33%	23.33%	63.33%

Table D-26. Vehicle Data Expansion Table Distribution of Origin Destination Survey Results (Replacing On-to-Off Survey)

The total ridership for the route, time period, and direction was applied to the OD records replacement data distribution shown in Figure D-27. This produces an estimate of the ridership flow on the route based on the boarding segment to the alighting segment as shown in Figure D-27. Applying the actual ridership of 300 to the distribution, creates an estimate that 70 trips (23.33% x 300) board on Segment 2 and alight on Segment 3.

TABLE 3: ESTIMATE OF RIDERSHIP FLOWS BETWEEN SEGMENTS				
(percentages in table 2 were applied to the total boardings for this time period in this direction)				
Route: Example Eastbound (6-9am)				
ESTIMATED RIDERSHIP BASED ON THE ON-TO-OFF				
Segment	1	2	3	
1	160	40	40	80
2	100	0	30	70
3	40	0	0	40
Total	300	40	70	190

Figure D-27. Vehicle Data Expansion Table Initial Estimate of Ridership Flows Between Segments

The actual number of OD records that were completed for each boarding to alighting segment pair is shown in Figure D-28. To calculate the expansion factors, the estimate of ridership between segments, shown in Figure D-27, was divided by the actual number of OD records that were completed between segments shown in Figure D-28. This calculation produces the expansion factors shown in Figure D-29. So, the 70 estimated riders were divided by the 7 completed OD records to produce a factor of 10.00 to be applied to riders who boarded on segment 2 and alighted on segment 3 as shown in Figure D-29.

TABLE 4: NUMBER OF COMPLETED ORIGIN DESTINATION SURVEYS		Total Number of Surveys = 30		
Route: Example Eastbound (6-9am)		NUMBER OF COMPLETED SURVEYS		
Segment		1	2	3
1	16	4	4	8
2	10		3	7
3	4			4
Total	30	4	7	19

Figure D-28. Number of Completed Surveys

TABLE 5: Weighting Factors				
Route: Example Eastbound (6-9am)				
Segment		1	2	3
1	10.00	10.00	10.00	10.00
2	10.00		10.00	10.00
3	10.00			10.00
Total	10.00	10.00	10.00	10.00

Figure D-29. Weighting Factors

Once all the expansion factors are calculated, each factor is applied to all surveys with the same route, direction, time of day, boarding segment, and alighting segment.

General Rule for Expansion Factors

While there are no specific guidelines for the expansion factor values, ETC Institute uses a guideline of keeping expansion factors below 3 times the average expansion factor based on the sampling percentage. This is done in order to keep any one record from representing a markedly high number of riders in the system. The formula for determining this guideline is:

$$1 / (\text{Sampling \%}) \times 3 = \text{Guideline Weight Factor}$$

If the expansion factor for a boarding segment to alighting segment pair is greater than 3 times the average expansion factor then it is aggregated into the adjacent boarding to alighting segment where it will have the least impact on the previously existing expansion factors. This guideline is standard for all the various expansion types.

Summary

After all the factors are appended to the OD survey database (regardless of type of expansion) the factors are summed by route, time period, and direction. If expansion was done properly, the summed factors will equal the boarding ridership provided in the APC data by route, time period, and direction.

Linked Trip Expansion Factors for All Records

The linked trip expansion factor helps to account for the number of transfers that were made by each passenger, so the linked expansion factors can better represent the overall system. Linked expansion factors are generated after the unlinked expansion factors are created.

The equation that is used to calculate the linked trip multiplying factor is shown below:

$$\text{Linked Trip Multiplying Factor} = [1 / (1 + \# \text{ of transfers})]$$

If a passenger did not make a transfer, the linked trip multiplying factor would be 1.0 because the person would have only boarded one vehicle. If a person made two transfers, the linked trip expansion factor would be 0.33 because the person would have boarded three transit vehicle during his/her one-way trip. An example of how the linked trip expansion factors were calculated is provided in Figure D-30 below.

Number of Transfers	Calculation [1/(1+Number of Transfers)]	Linked Trip Multiplying Factor
0	[1/(1+0)]	1
1	[1/(1+1)]	0.5
2	[1/(1+2)]	0.33
3	[1/(1+3)]	0.25

Figure D-30: Sample Calculations of Linked Trip Multiplying Factors

Once the linked trip multiplier is created it is multiplied by the unlinked expansion factor to create the linked expansion factor.

Appendix E: Survey On and Offs Maps

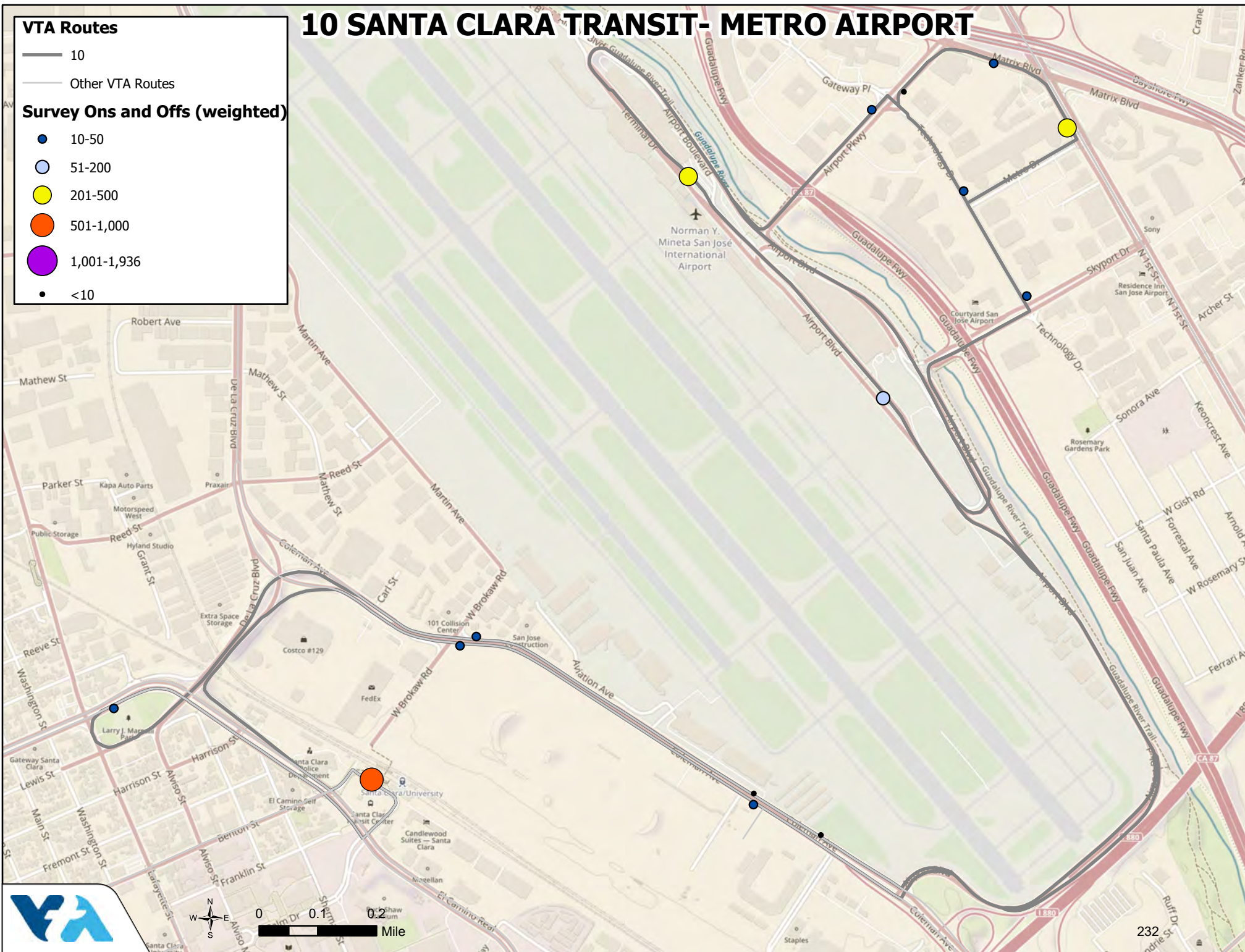
10 SANTA CLARA TRANSIT- METRO AIRPORT

VTA Routes

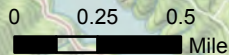
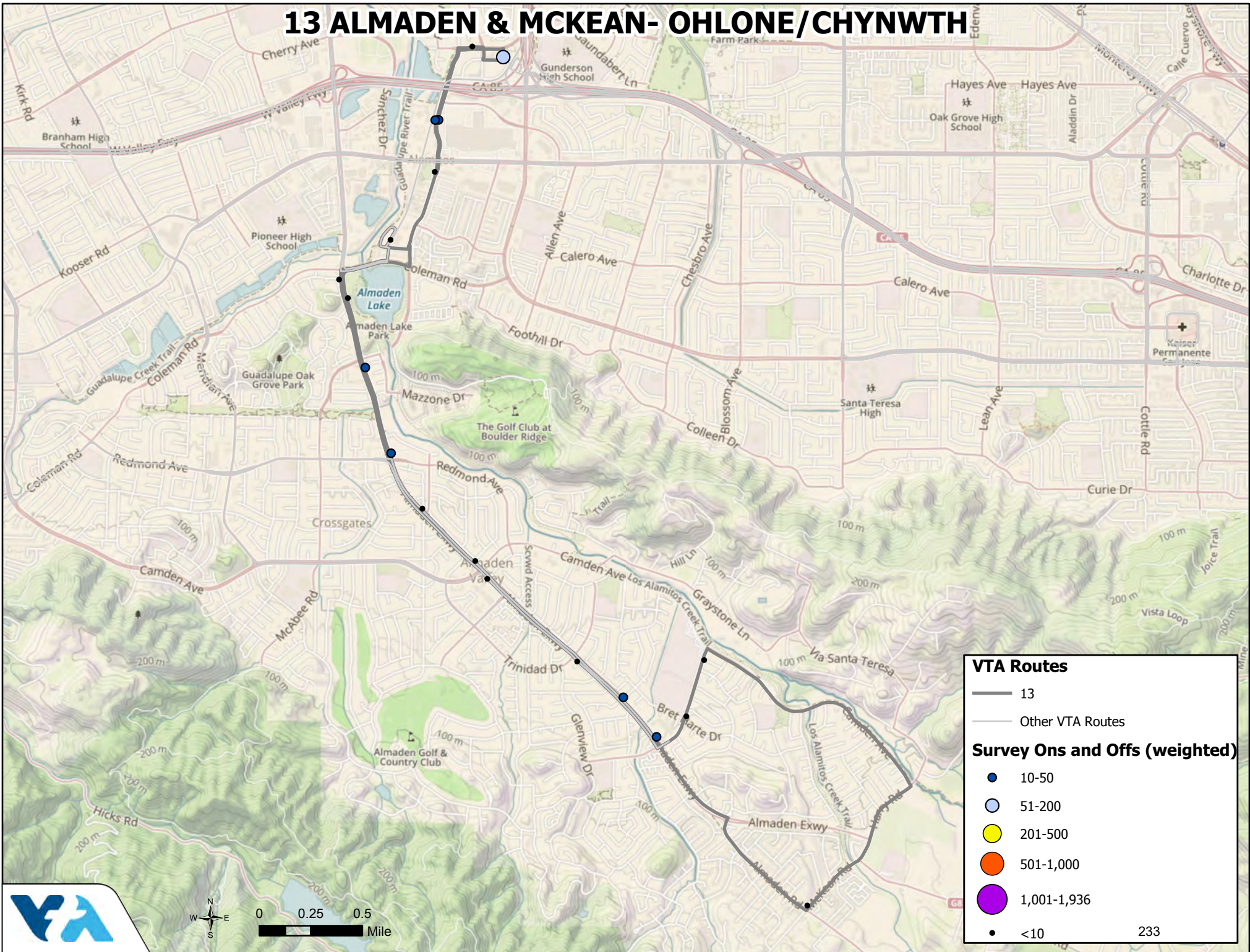
- 10
- Other VTA Routes

Survey Ons and Offs (weighted)

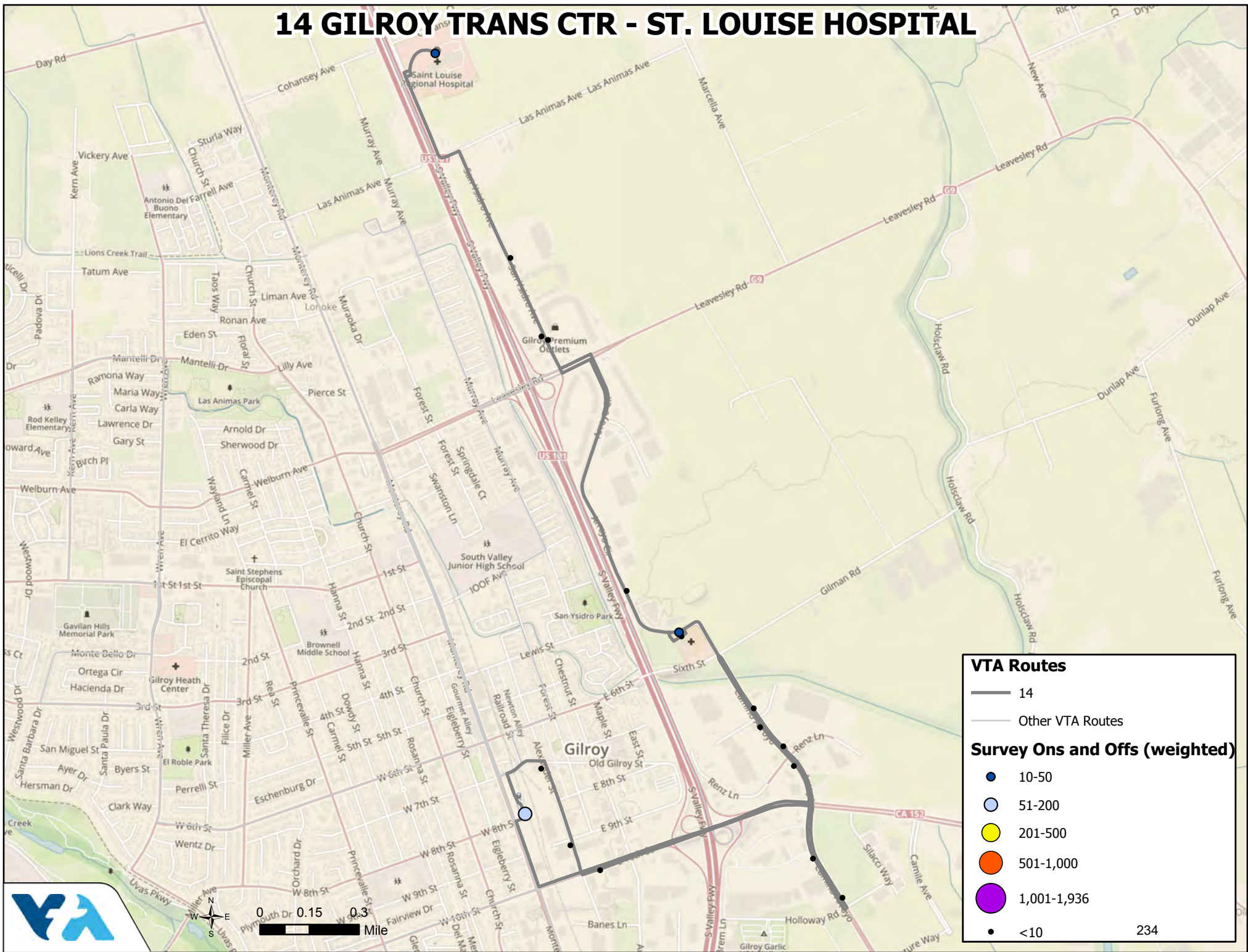
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



13 ALMADEN & MCKEAN- OHLONE/CHYNWTH



14 GILROY TRANS CTR - ST. LOUISE HOSPITAL



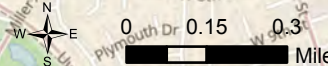
VTA Routes

- 14
- Other VTA Routes

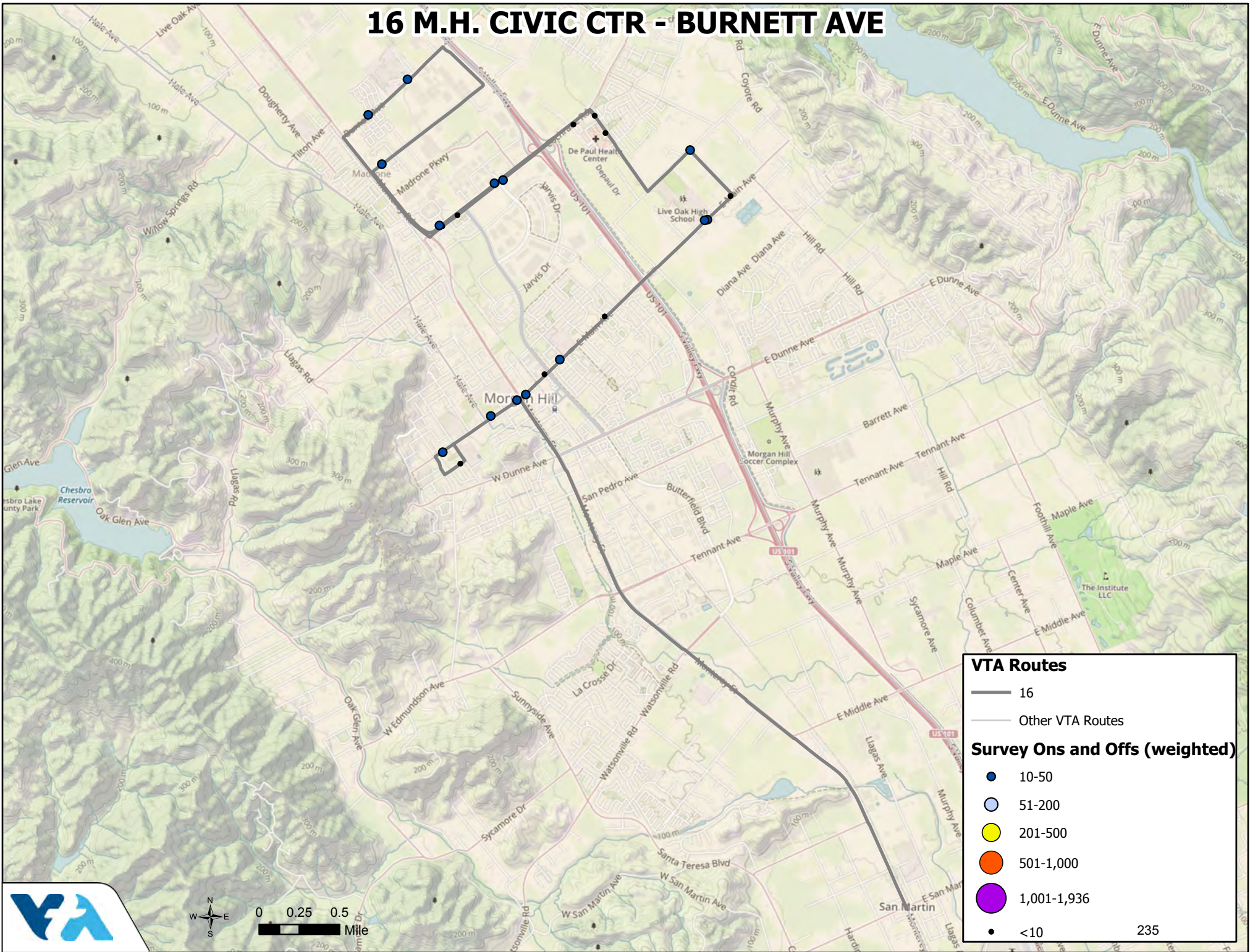
Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10

234



16 M.H. CIVIC CTR - BURNETT AVE



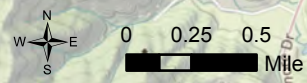
VTA Routes

- 16
- Other VTA Routes

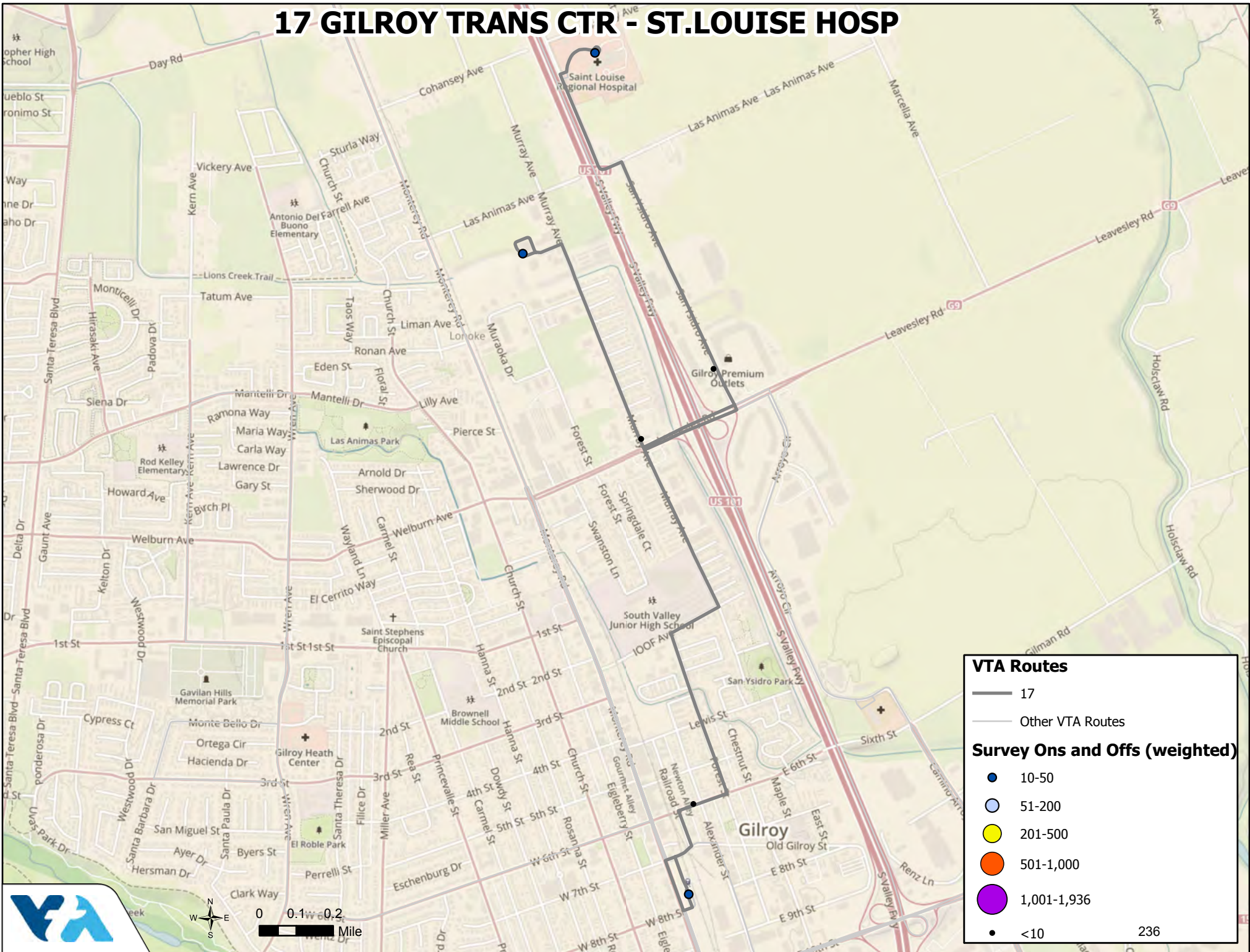
Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10

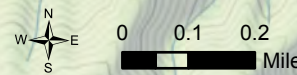
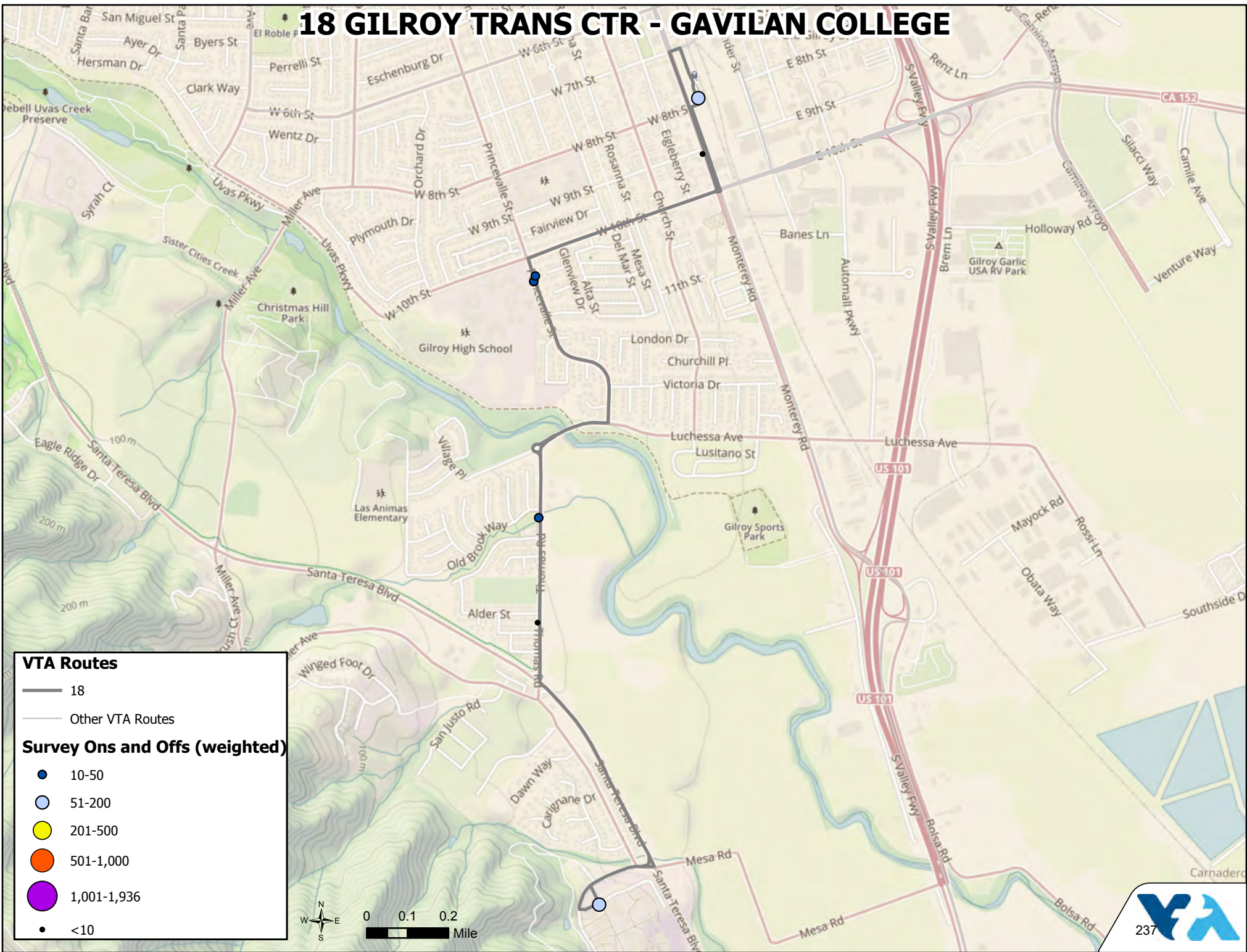
235



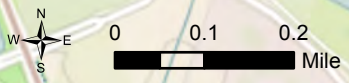
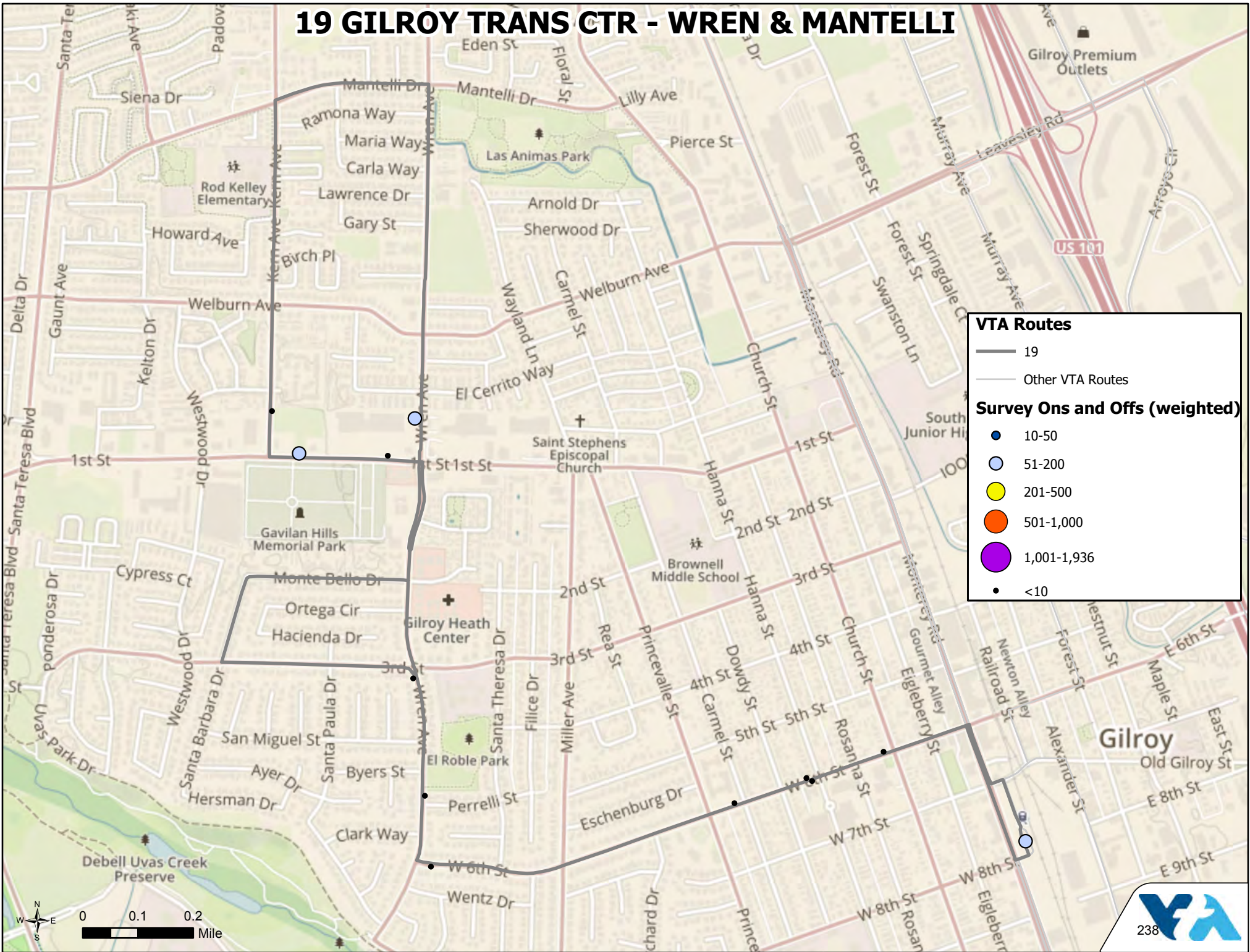
17 GILROY TRANS CTR - ST. LOUISE HOSP



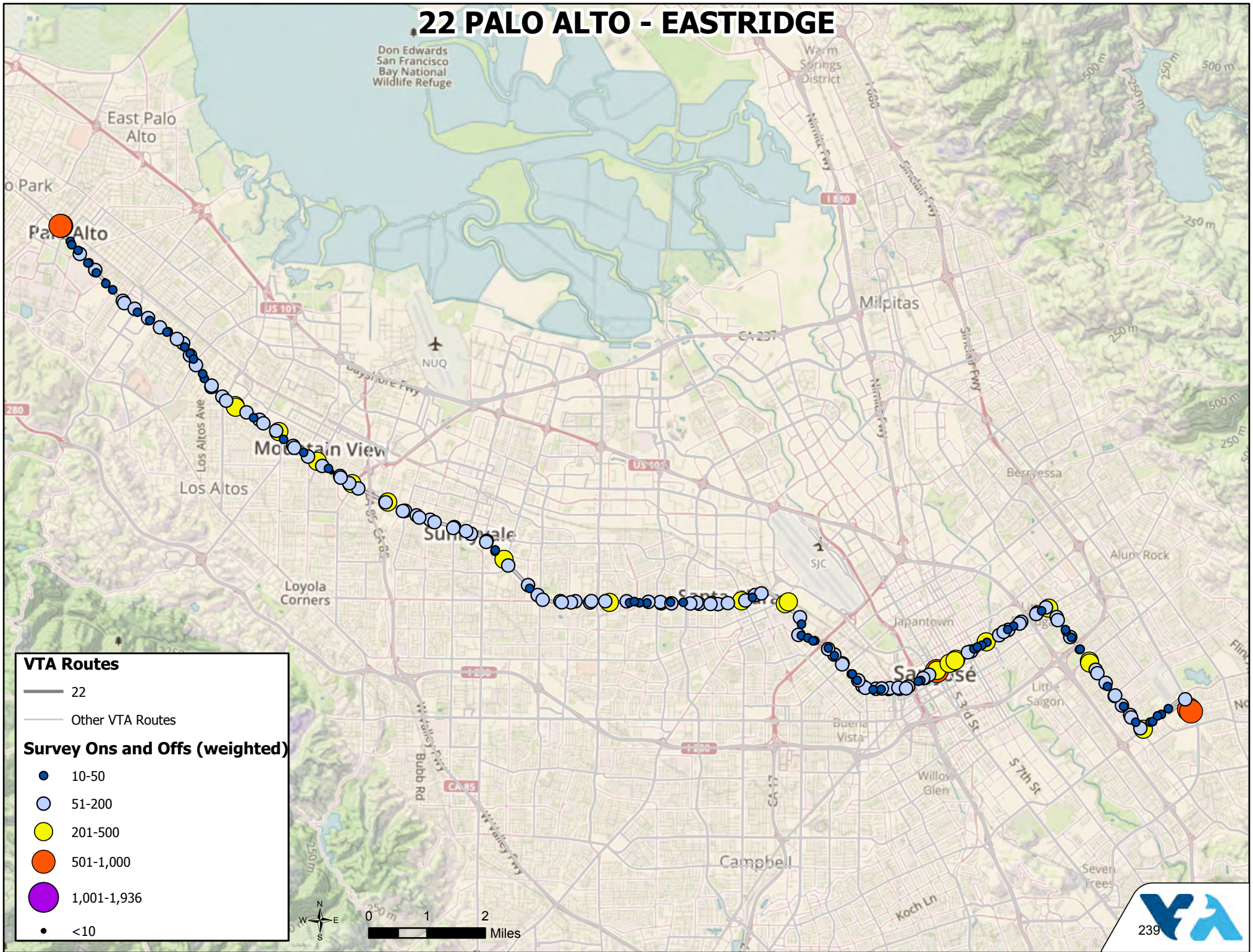
18 GILROY TRANS CTR - GAVILAN COLLEGE



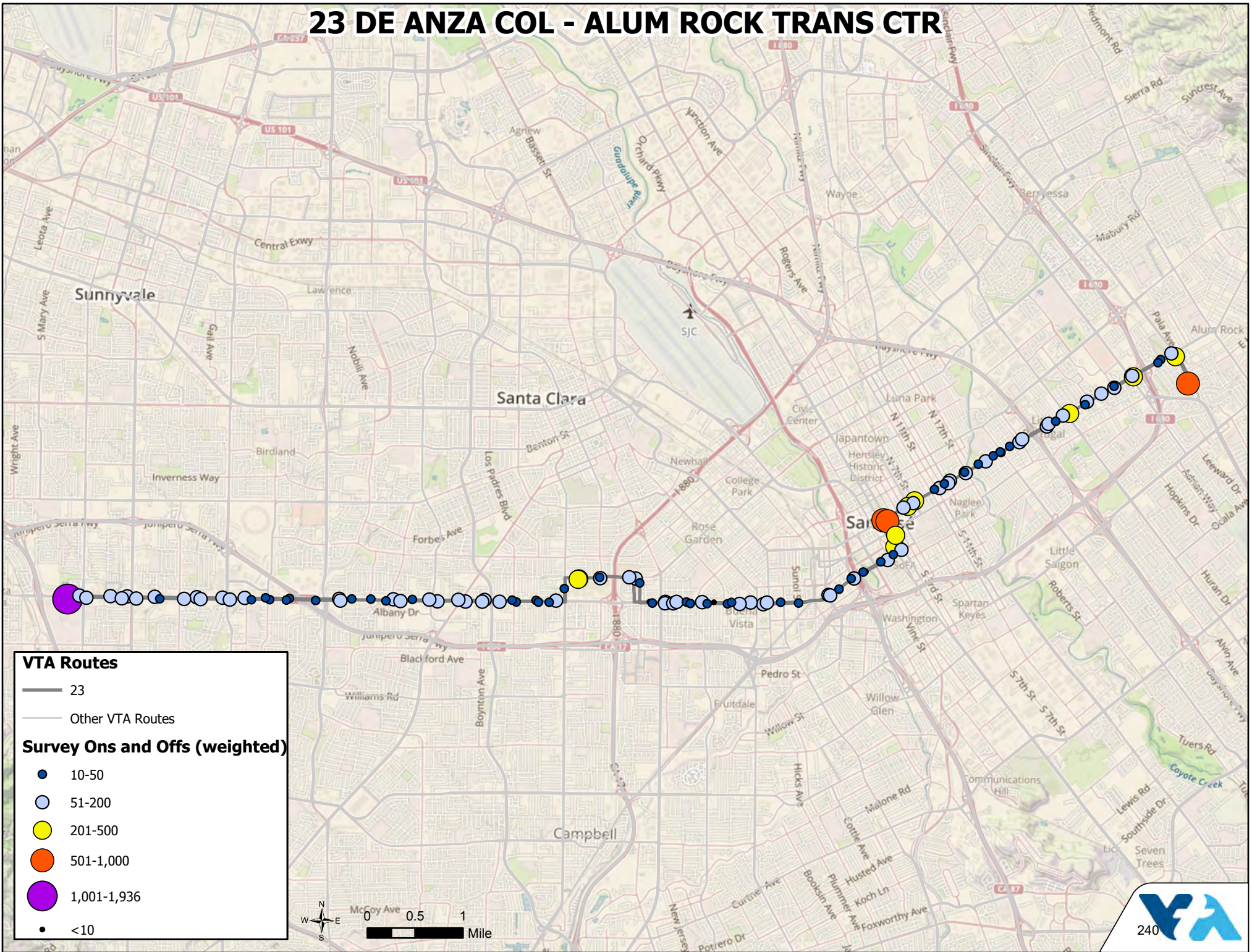
19 GILROY TRANS CTR - WREN & MANTELLI



22 PALO ALTO - EASTRIDGE



23 DE ANZA COL - ALUM ROCK TRANS CTR



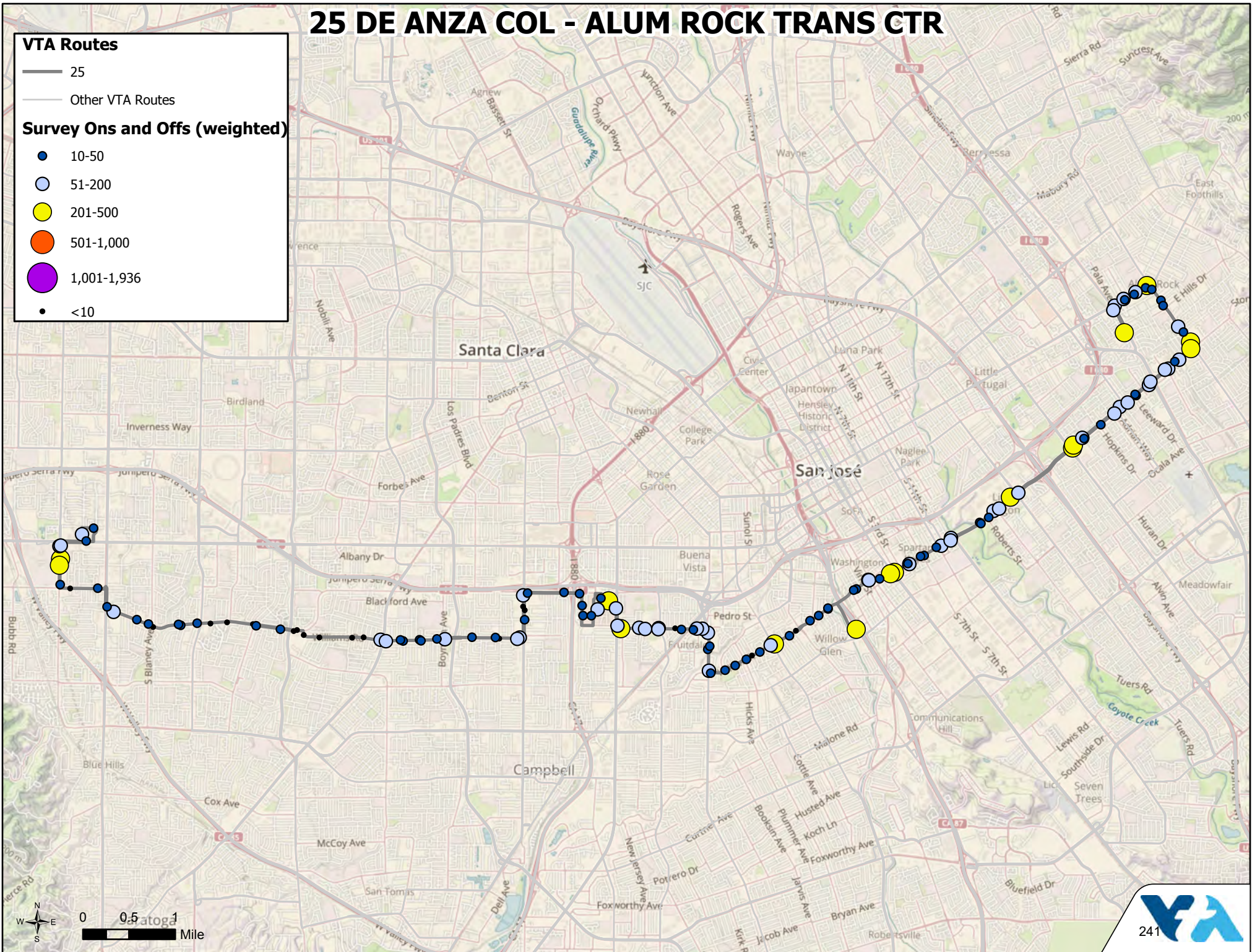
25 DE ANZA COL - ALUM ROCK TRANS CTR

VTA Routes

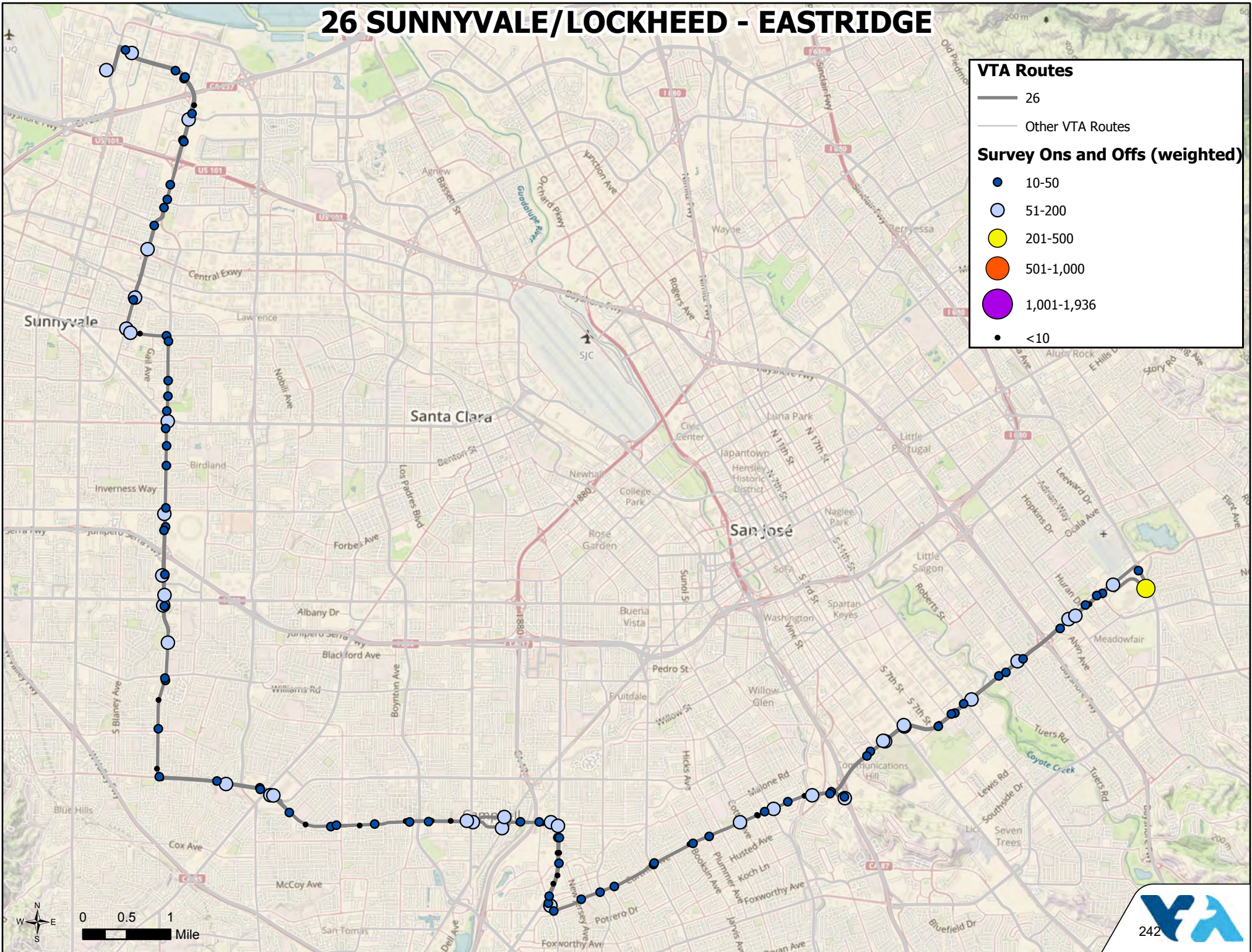
- 25
- Other VTA Routes

Survey Ons and Offs (weighted)

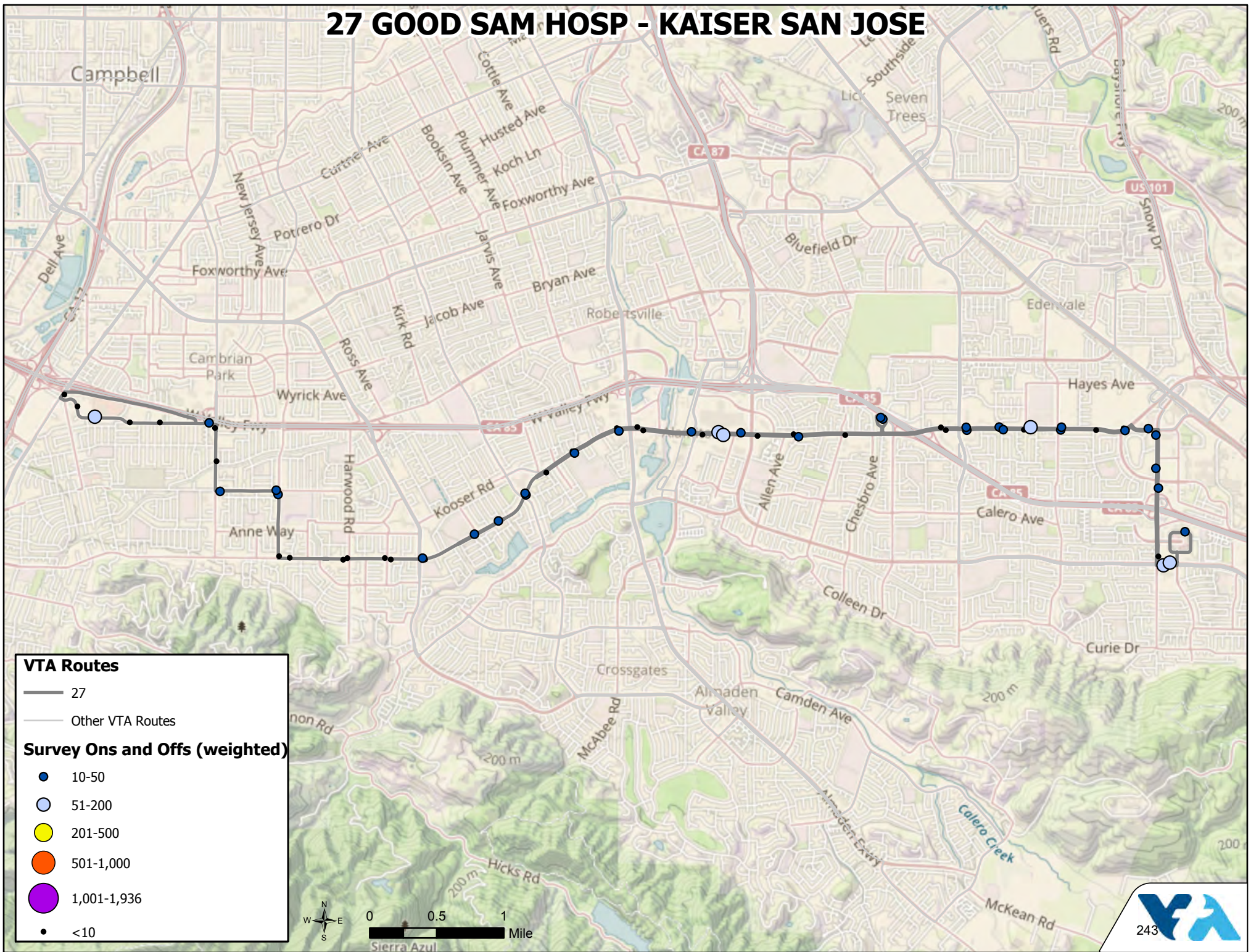
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



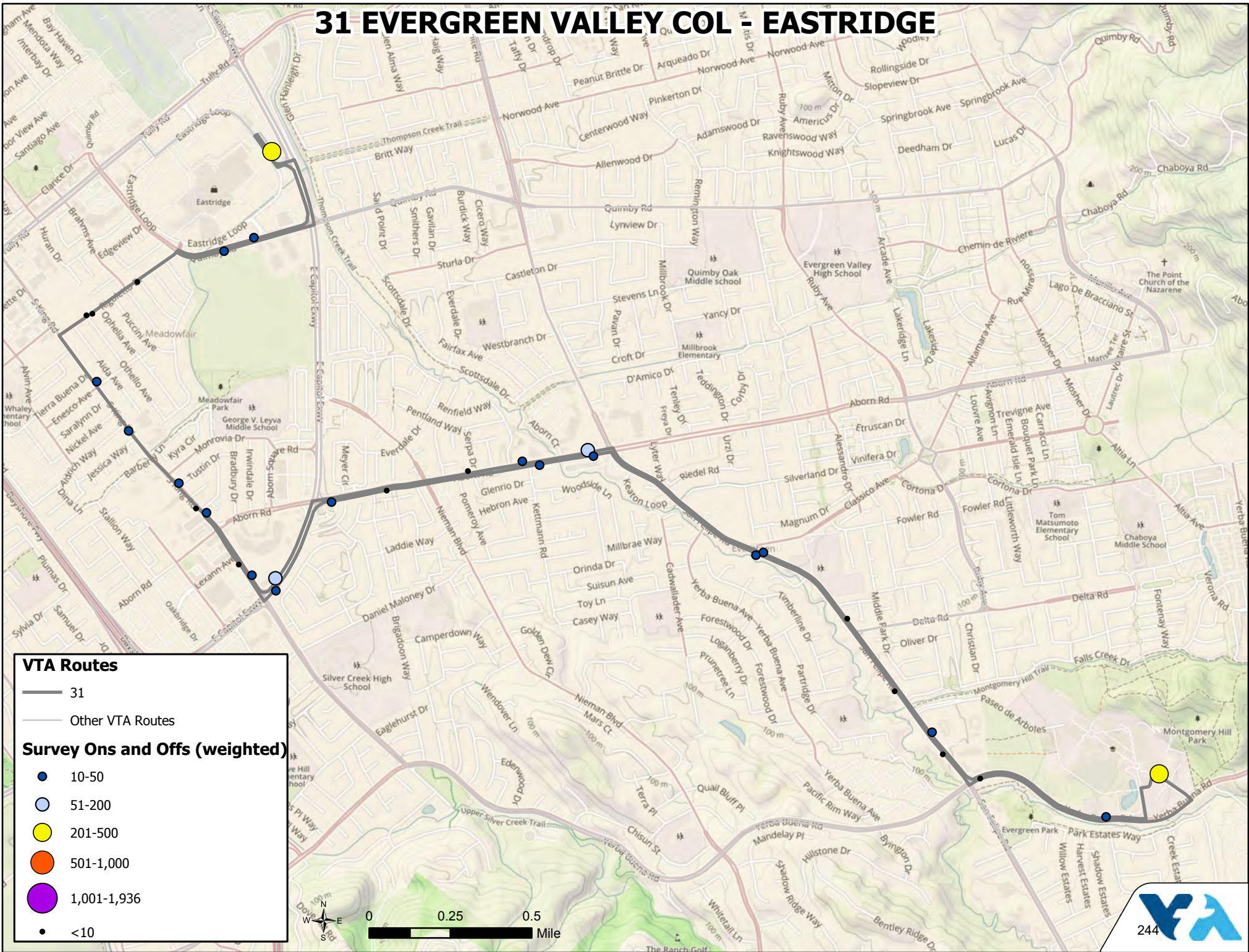
26 SUNNYVALE/LOCKHEED - EASTRIDGE



27 GOOD SAM HOSP - KAISER SAN JOSE



31 EVERGREEN VALLEY COL - EASTRIDGE



32 SN ANTONIO SHOP CTR - STA CLARA TC



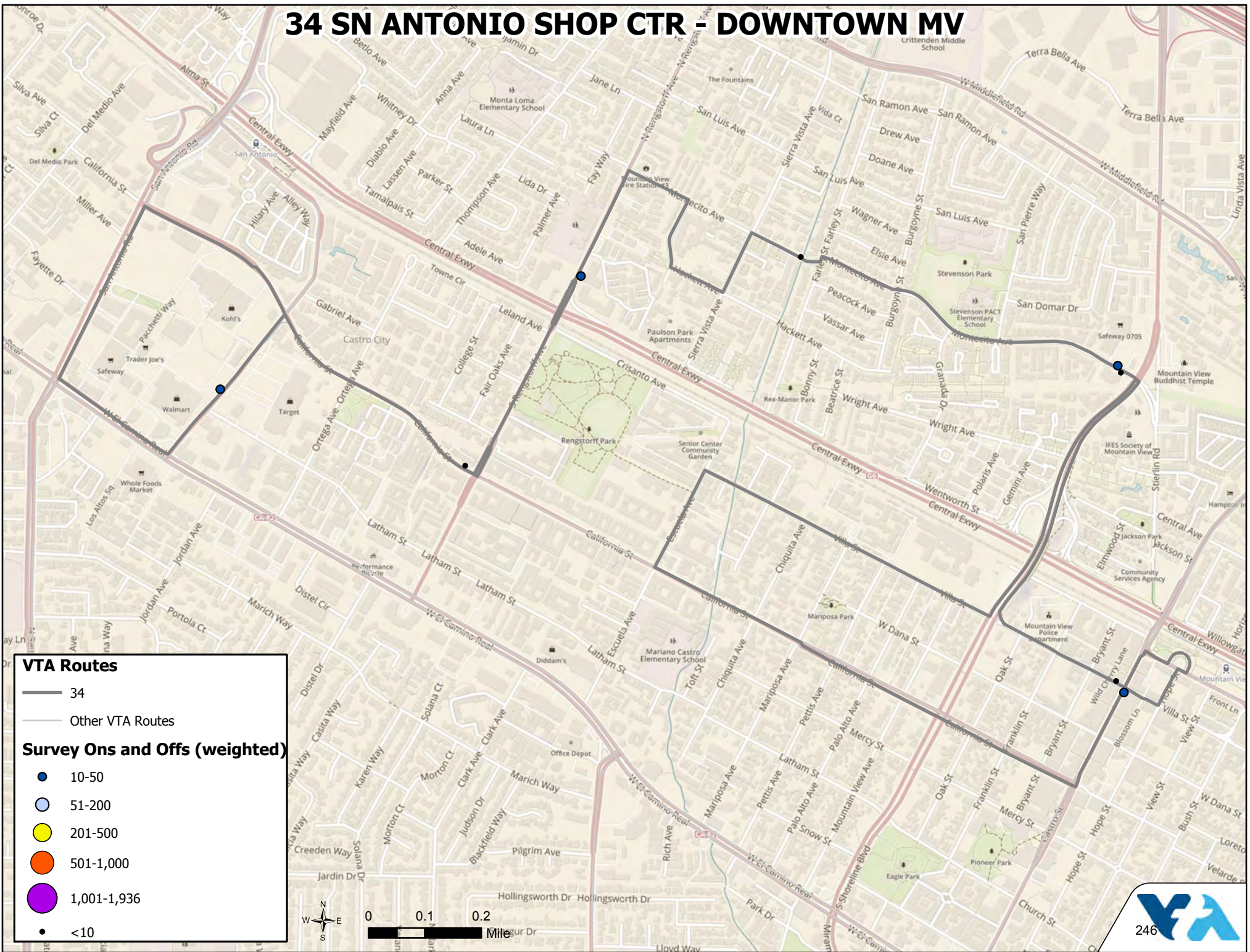
VTA Routes

- 32
- Other VTA Routes

Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10

34 SN ANTONIO SHOP CTR - DOWNTOWN MV

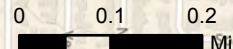


VTA Routes

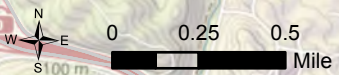
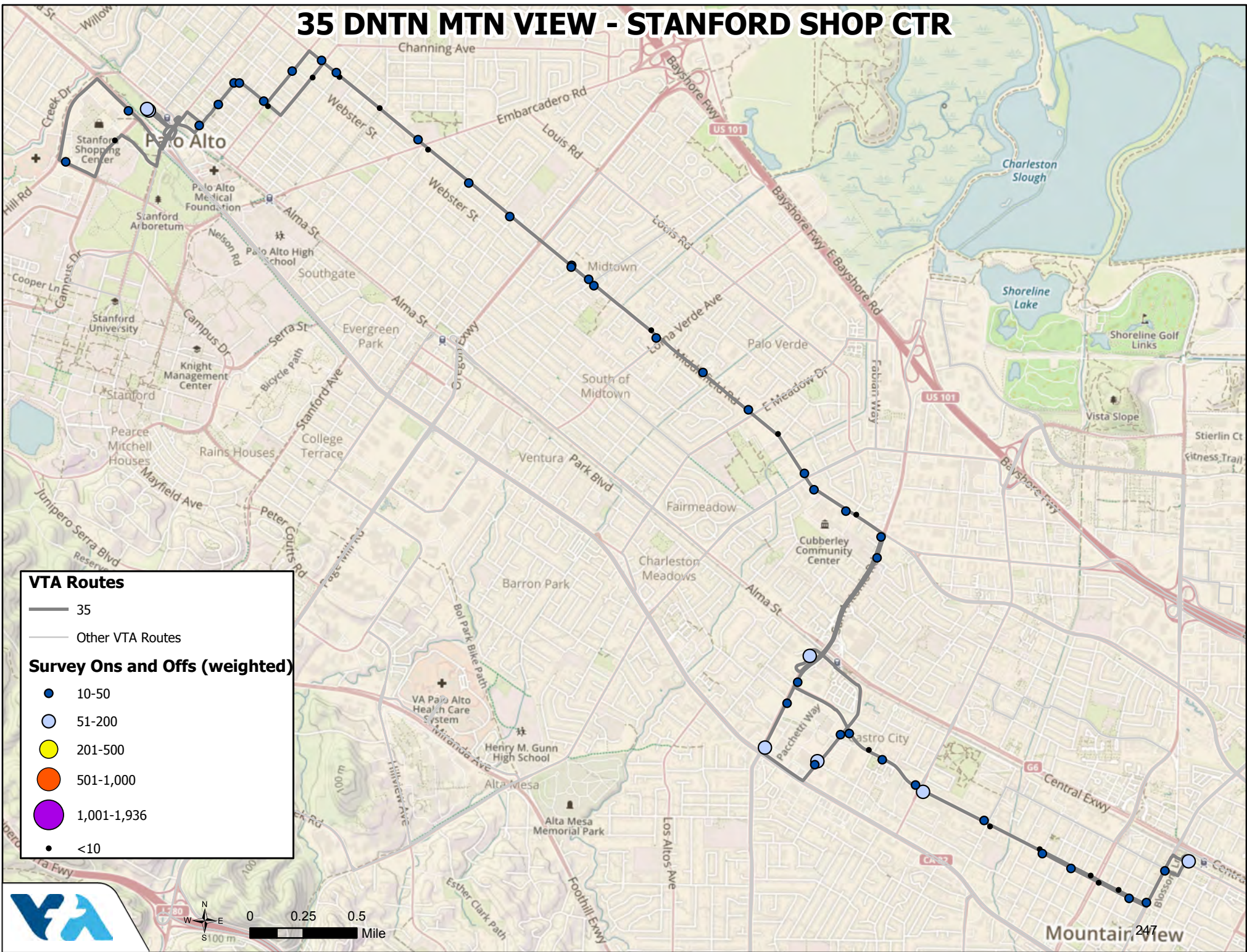
- 34
- Other VTA Routes

Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10

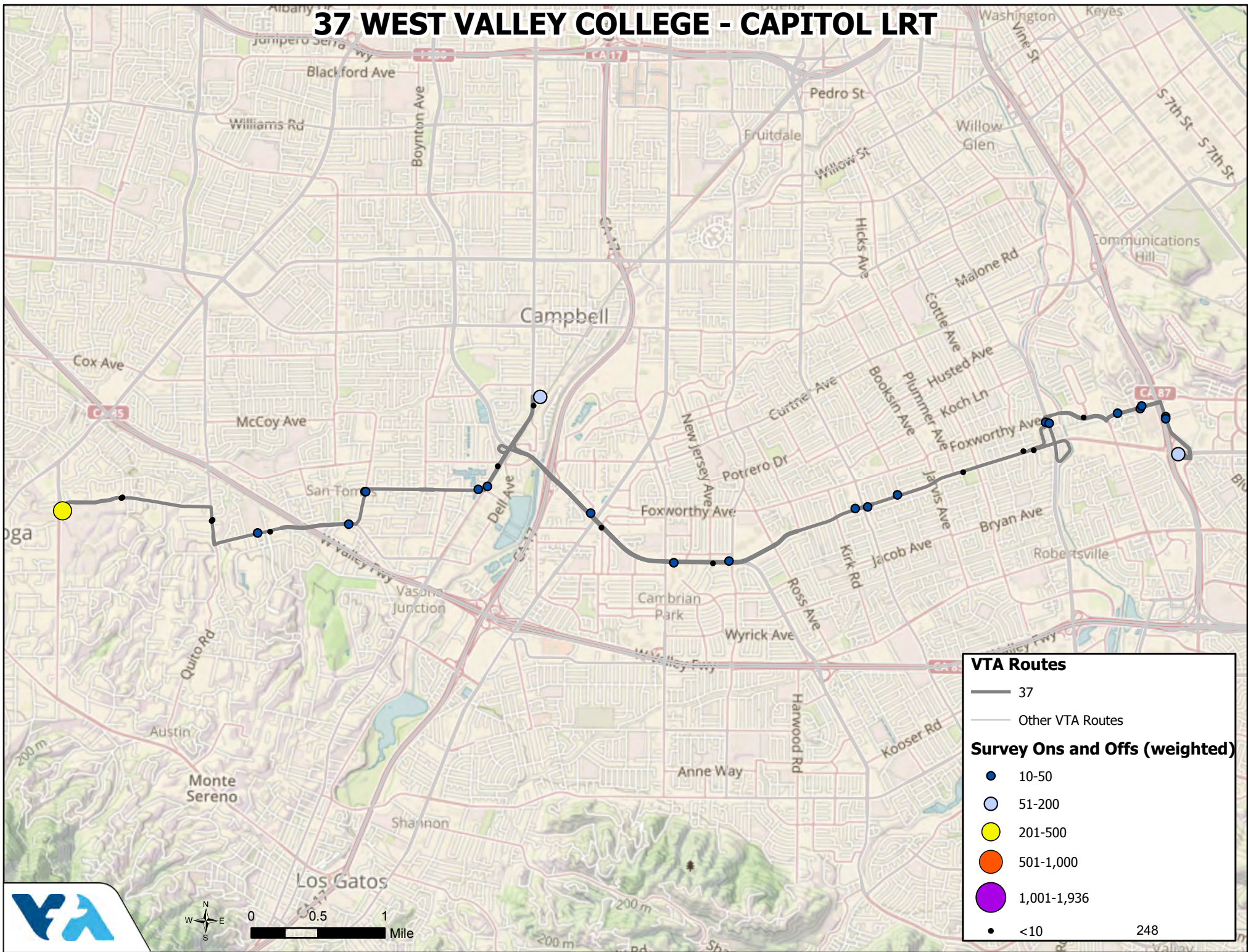


35 DNTN MTN VIEW - STANFORD SHOP CTR

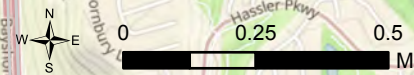
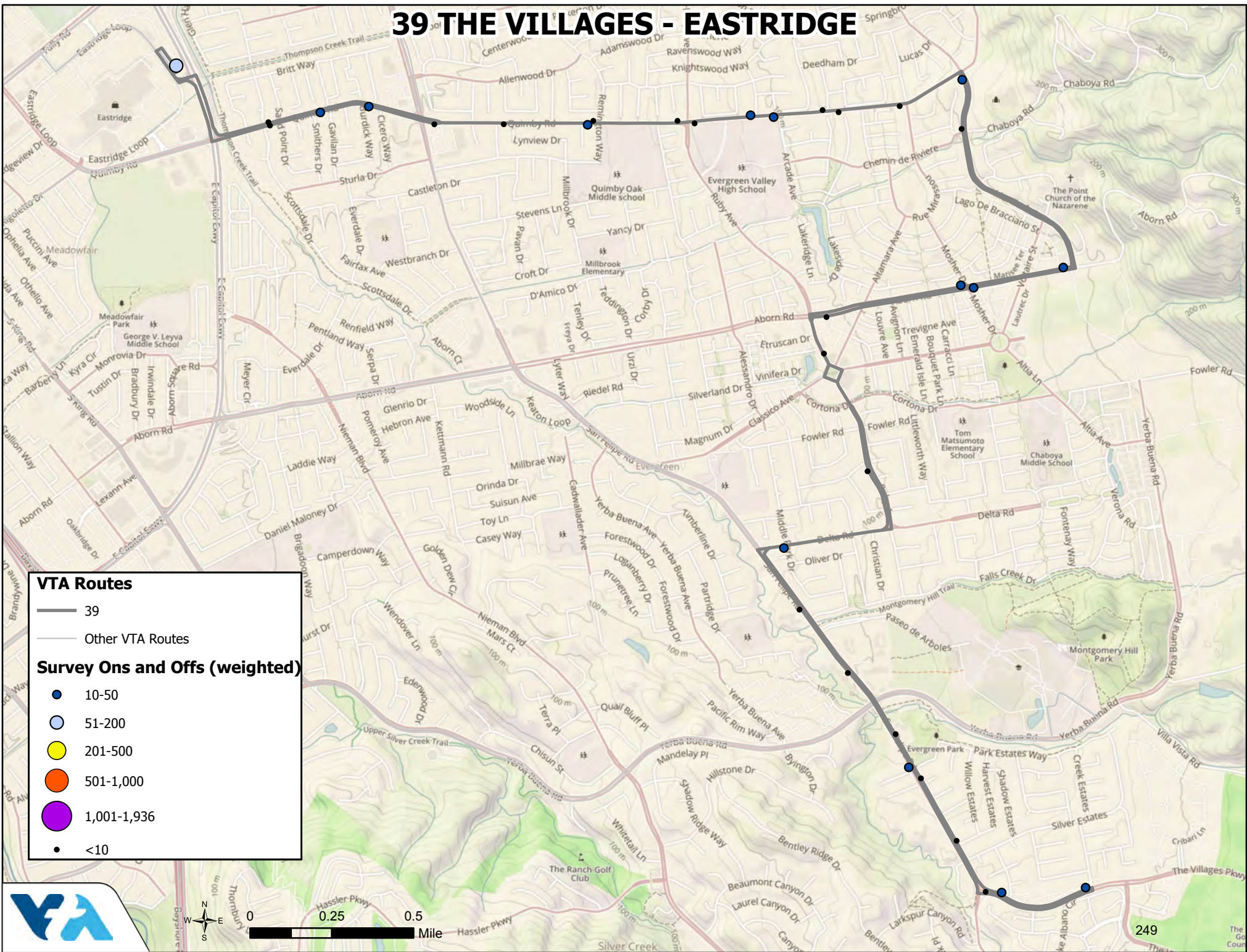


Mountain View 247

37 WEST VALLEY COLLEGE - CAPITOL LRT



39 THE VILLAGES - EASTRIDGE



40 Foothill COL - LA AVENIDA & SHOR

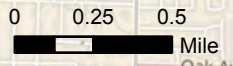


VTA Routes

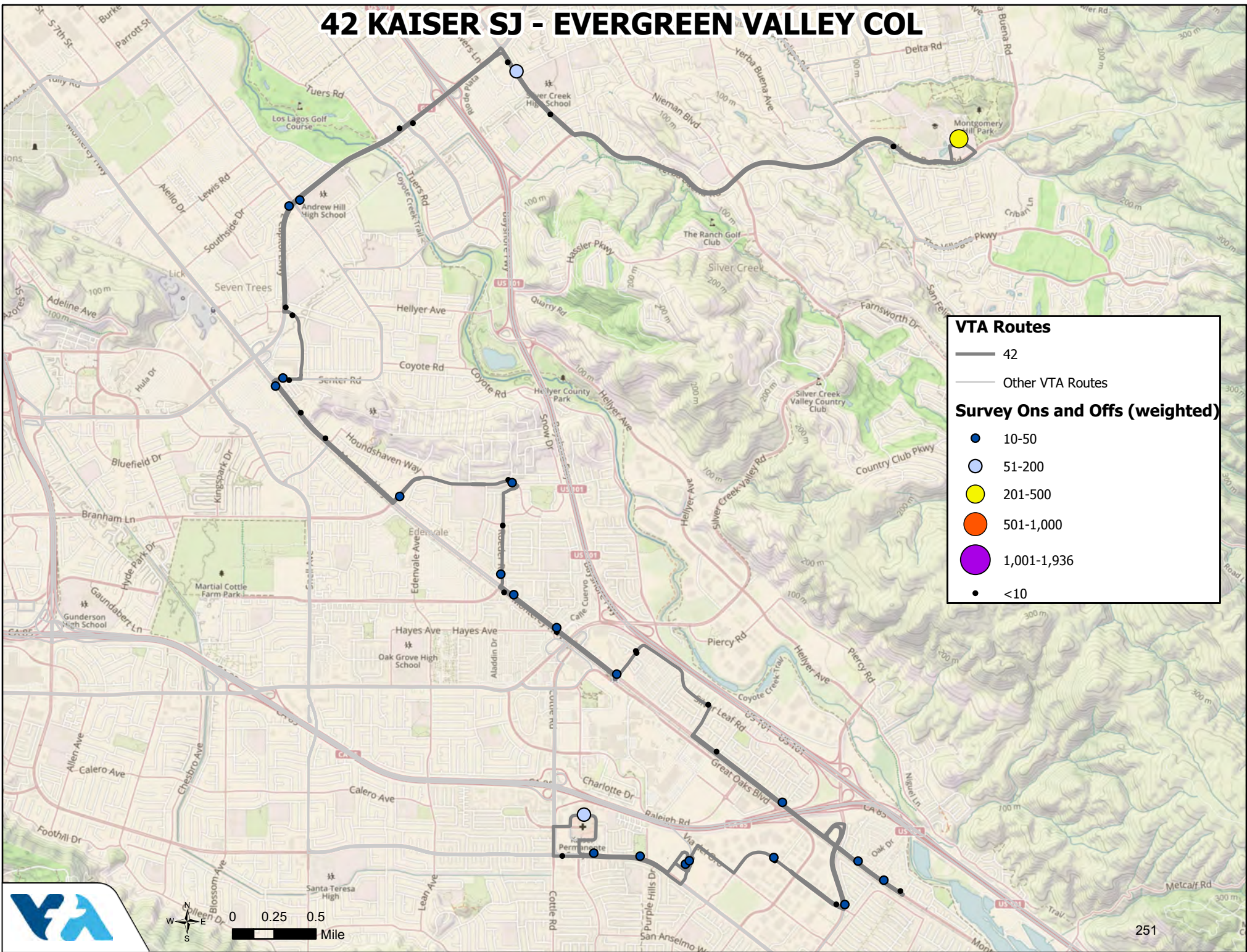
- 40
- Other VTA Routes

Survey Ons and Offs (weighted)

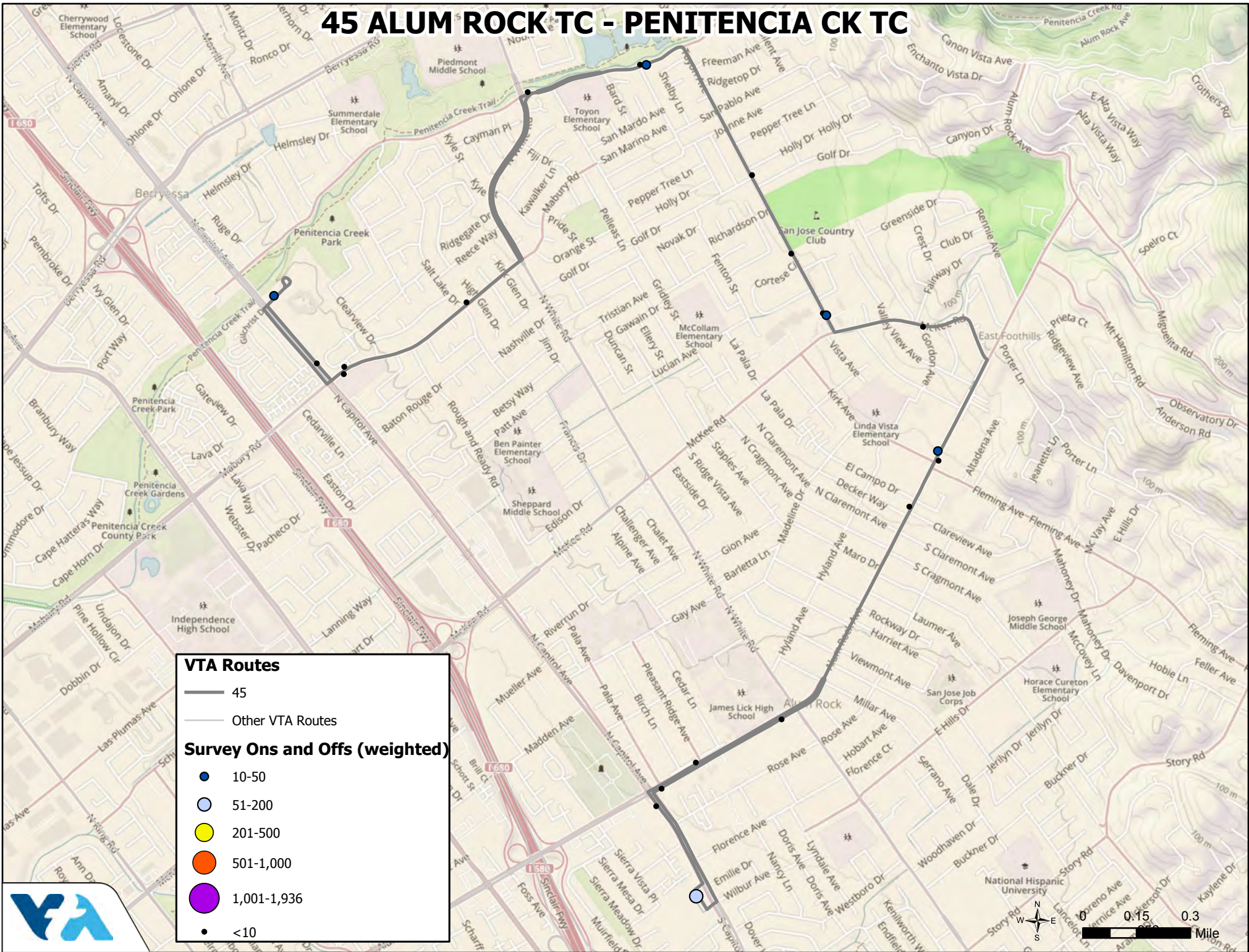
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10
- 250



42 KAISER SJ - EVERGREEN VALLEY COL



45 ALUM ROCK TC - PENITENCIA CK TC

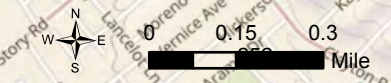


VTA Routes

- 45
- Other VTA Routes

Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



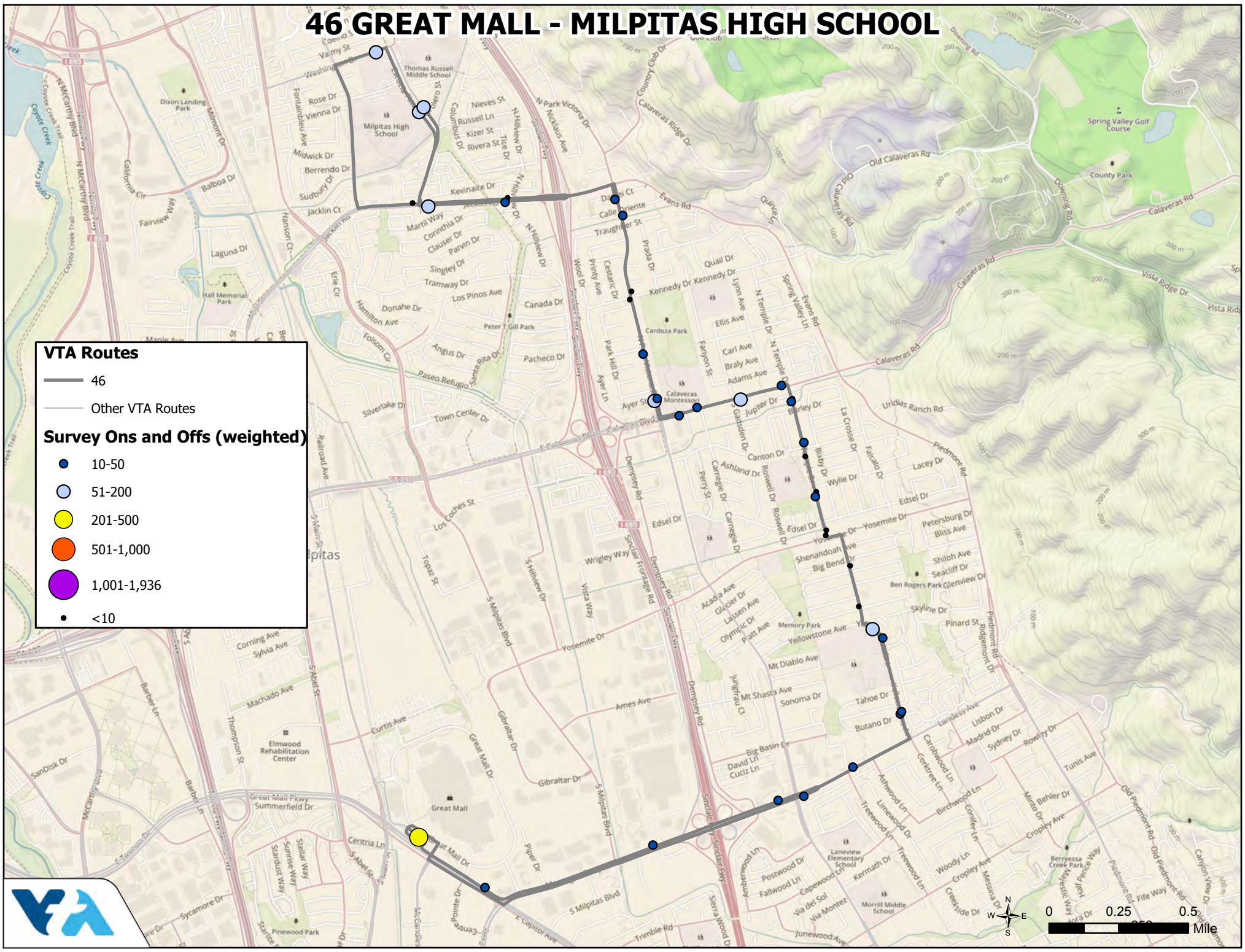
46 GREAT MALL - MILPITAS HIGH SCHOOL

VTA Routes

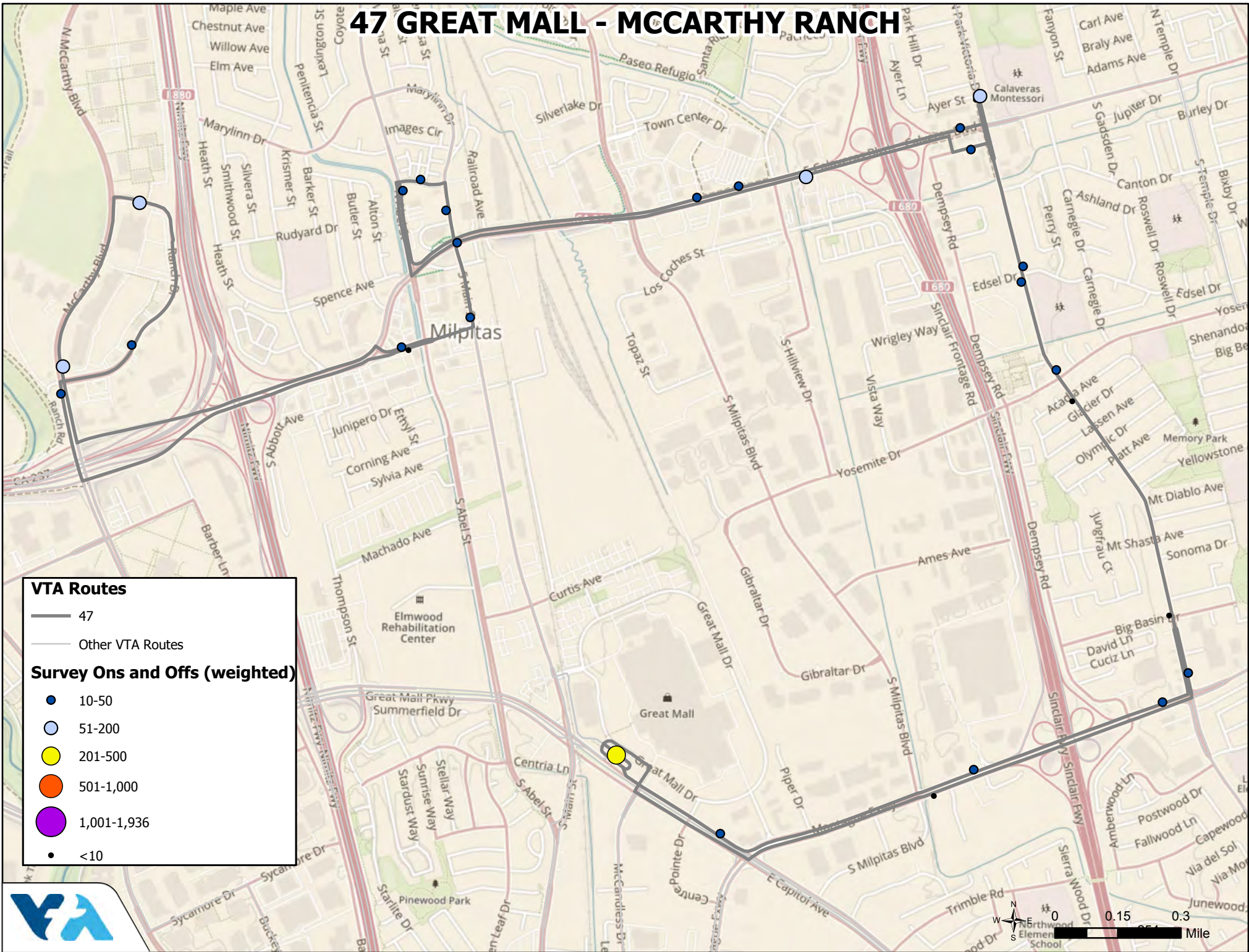
- 46
- Other VTA Routes

Survey Ons and Offs (weighted)

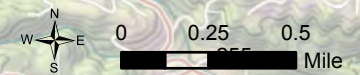
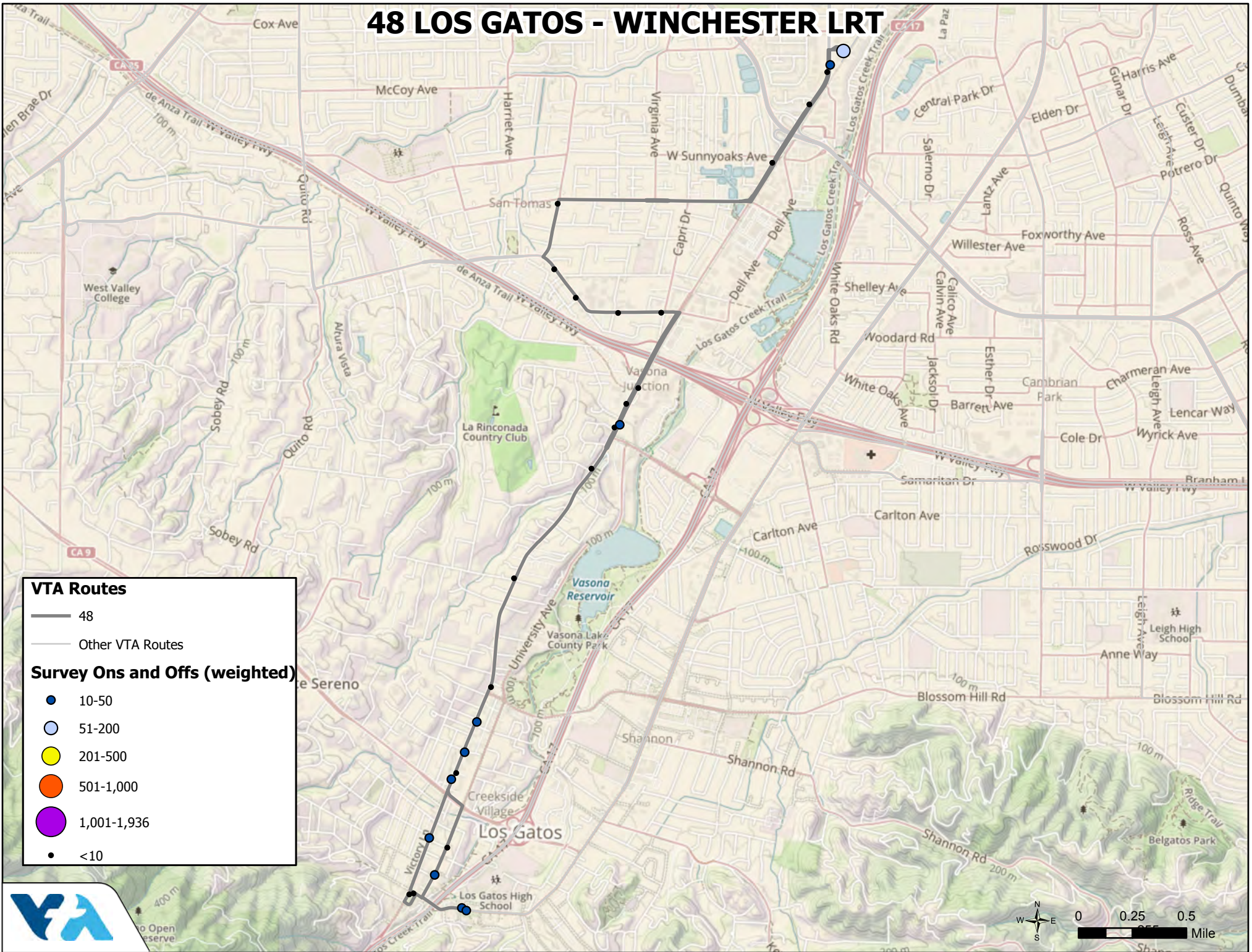
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



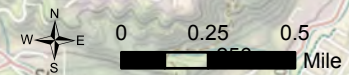
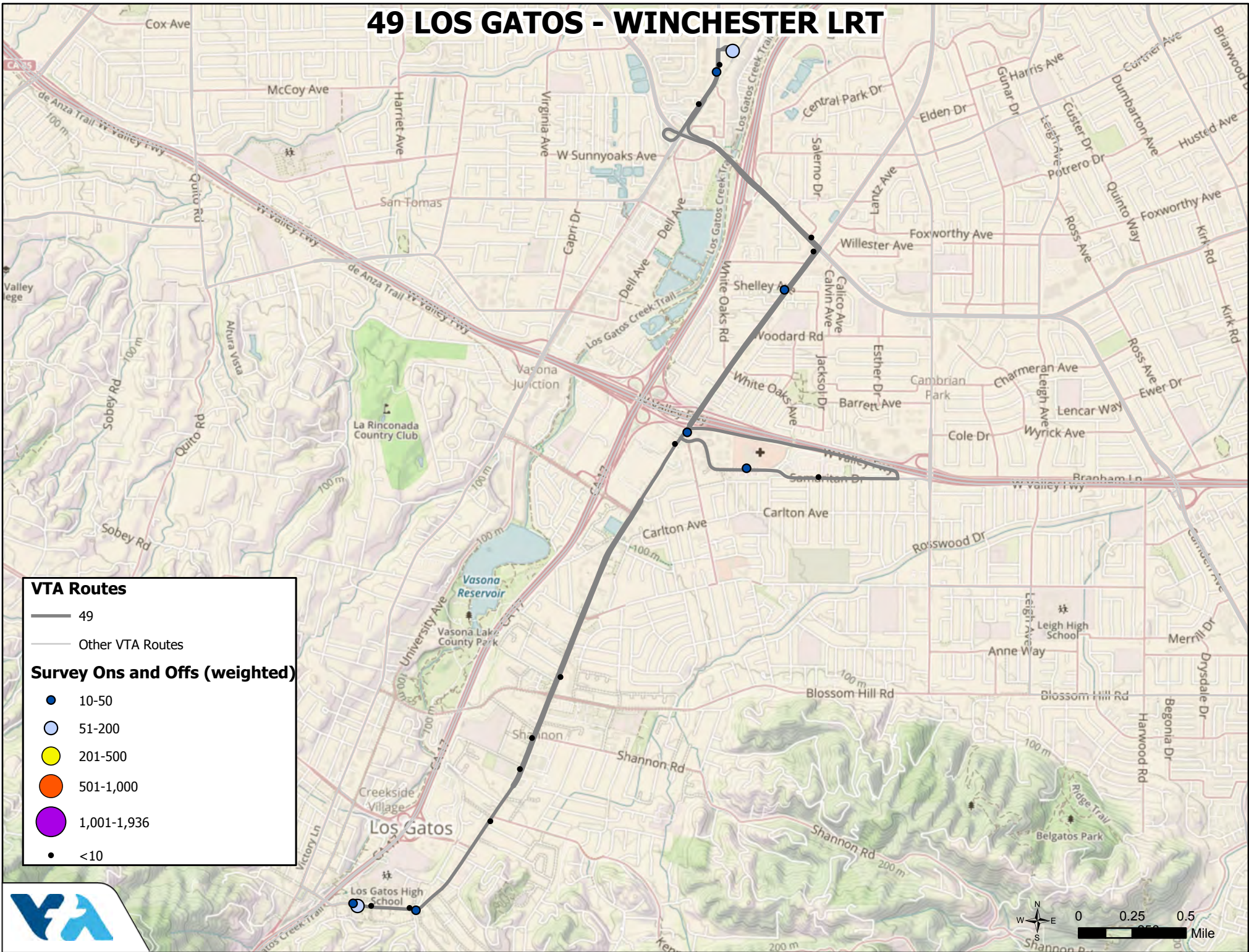
47 GREAT MALL - MCCARTHY RANCH



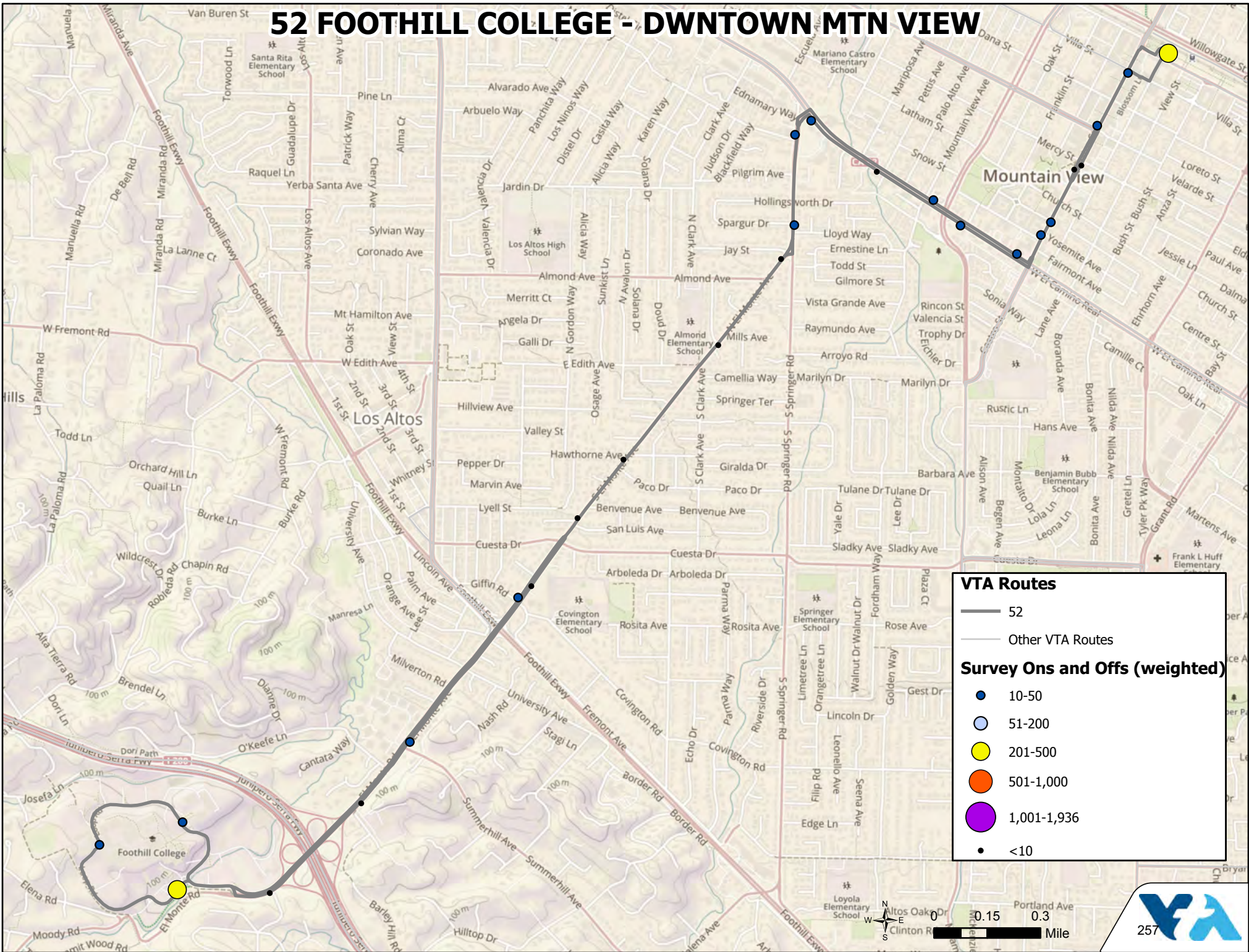
48 LOS GATOS - WINCHESTER LRT



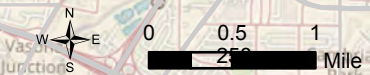
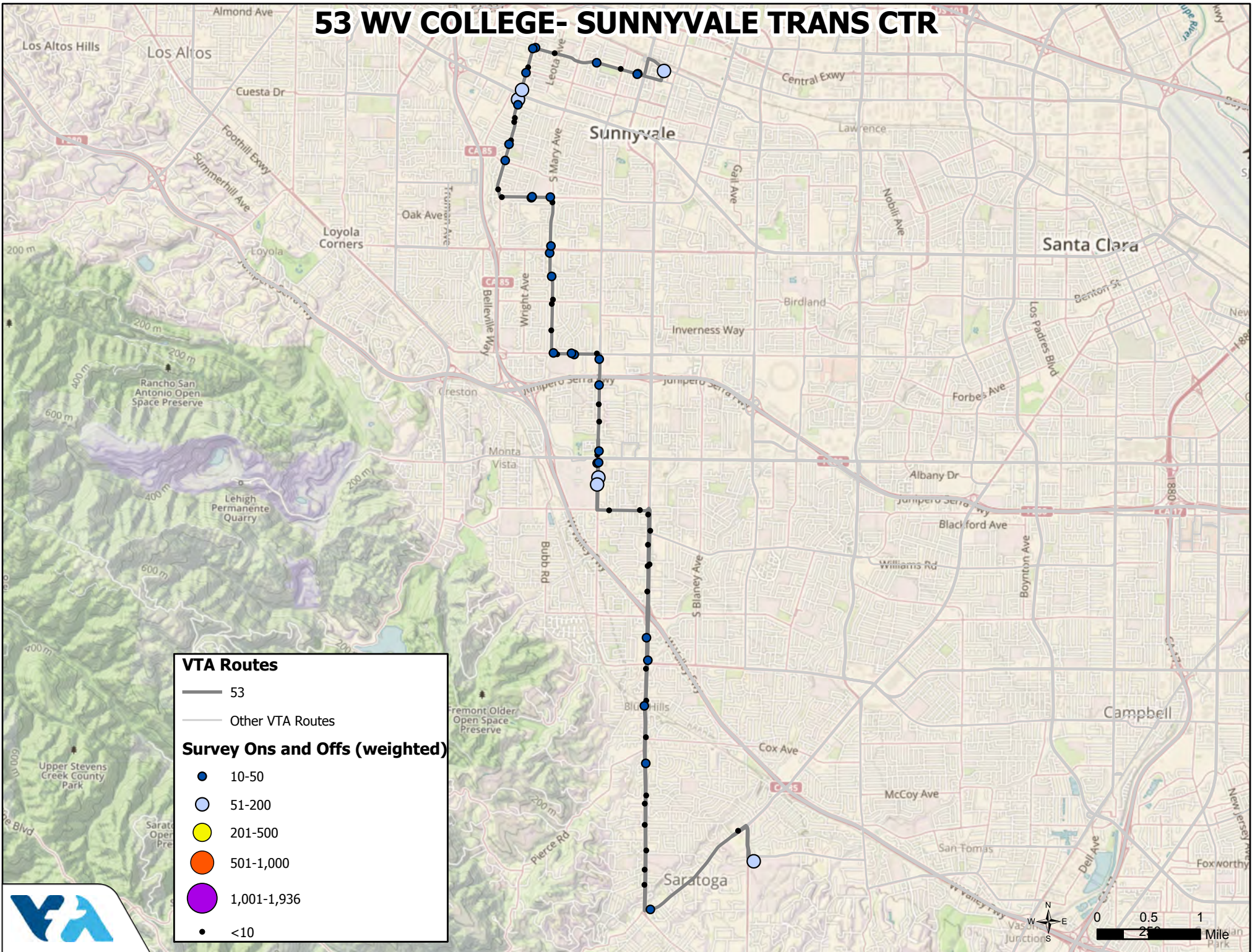
49 LOS GATOS - WINCHESTER LRT



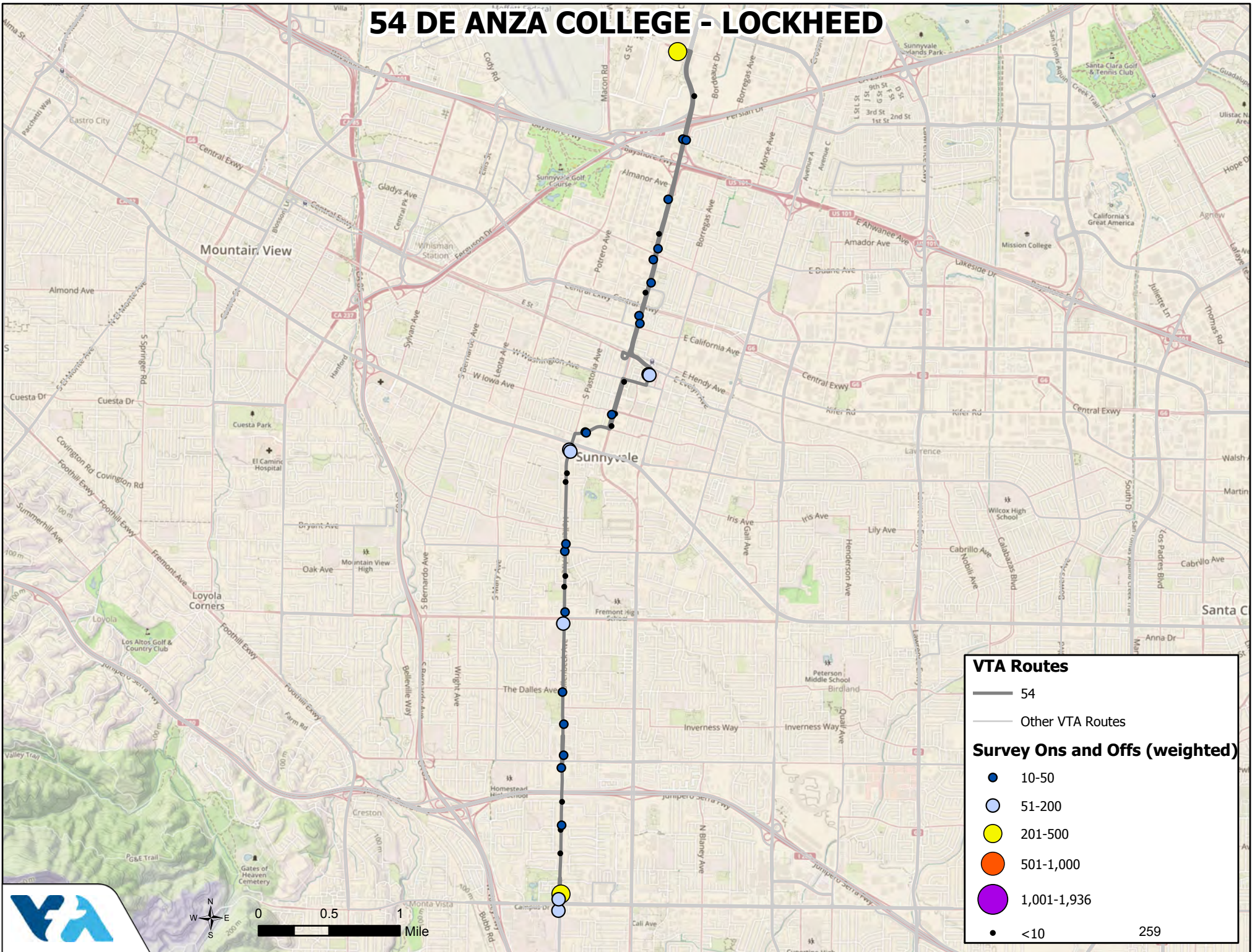
52 FOOTHILL COLLEGE - DWNTOWN MTN VIEW



53 WV COLLEGE- SUNNYVALE TRANS CTR



54 DE ANZA COLLEGE - LOCKHEED



VTA Routes

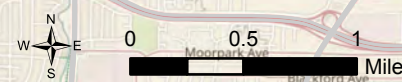
- 54
- Other VTA Routes

Survey Ons and Offs (weighted)

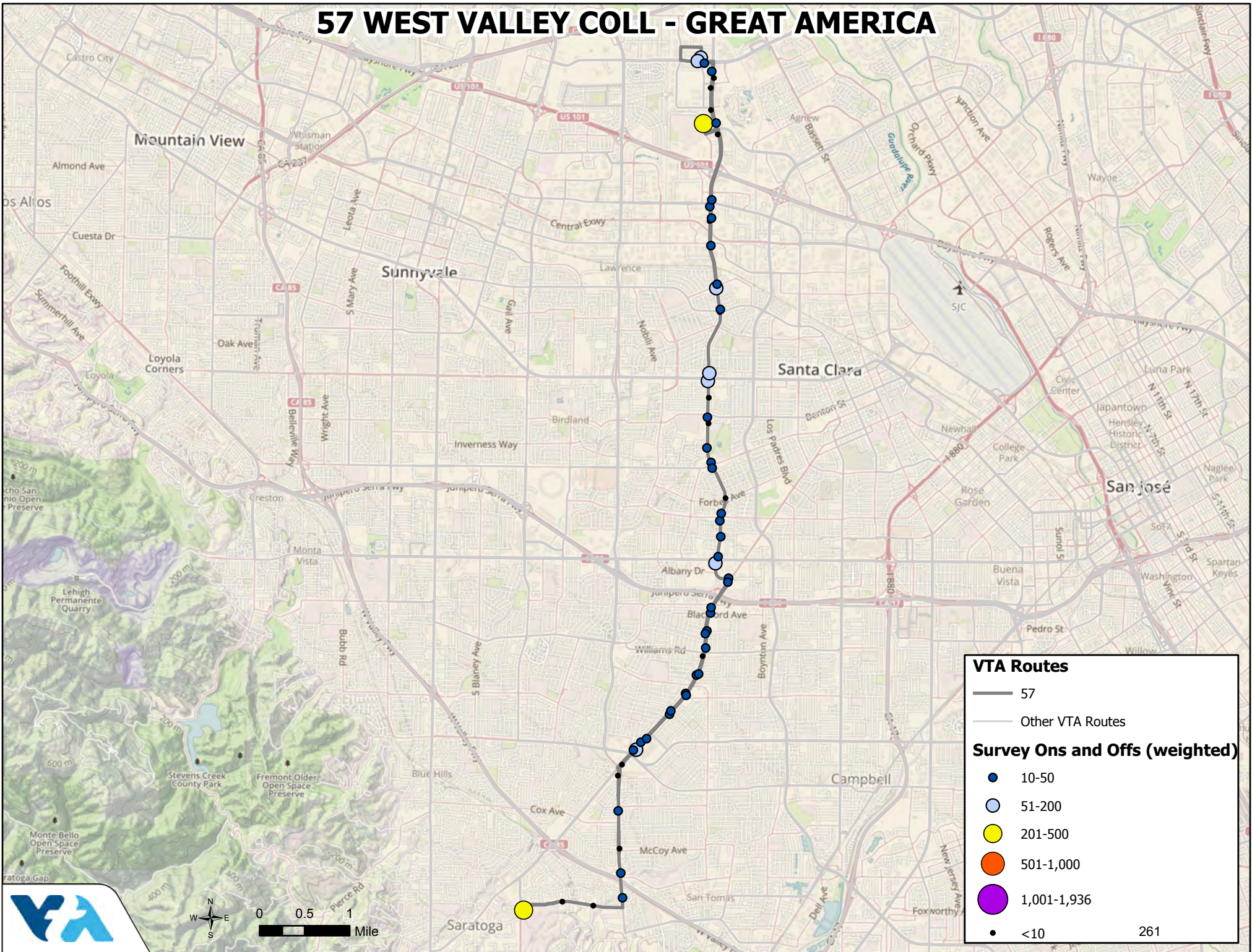
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10

259

55 DE ANZA COLLEGE - GREAT AMERICA



57 WEST VALLEY COLL - GREAT AMERICA



VTA Routes

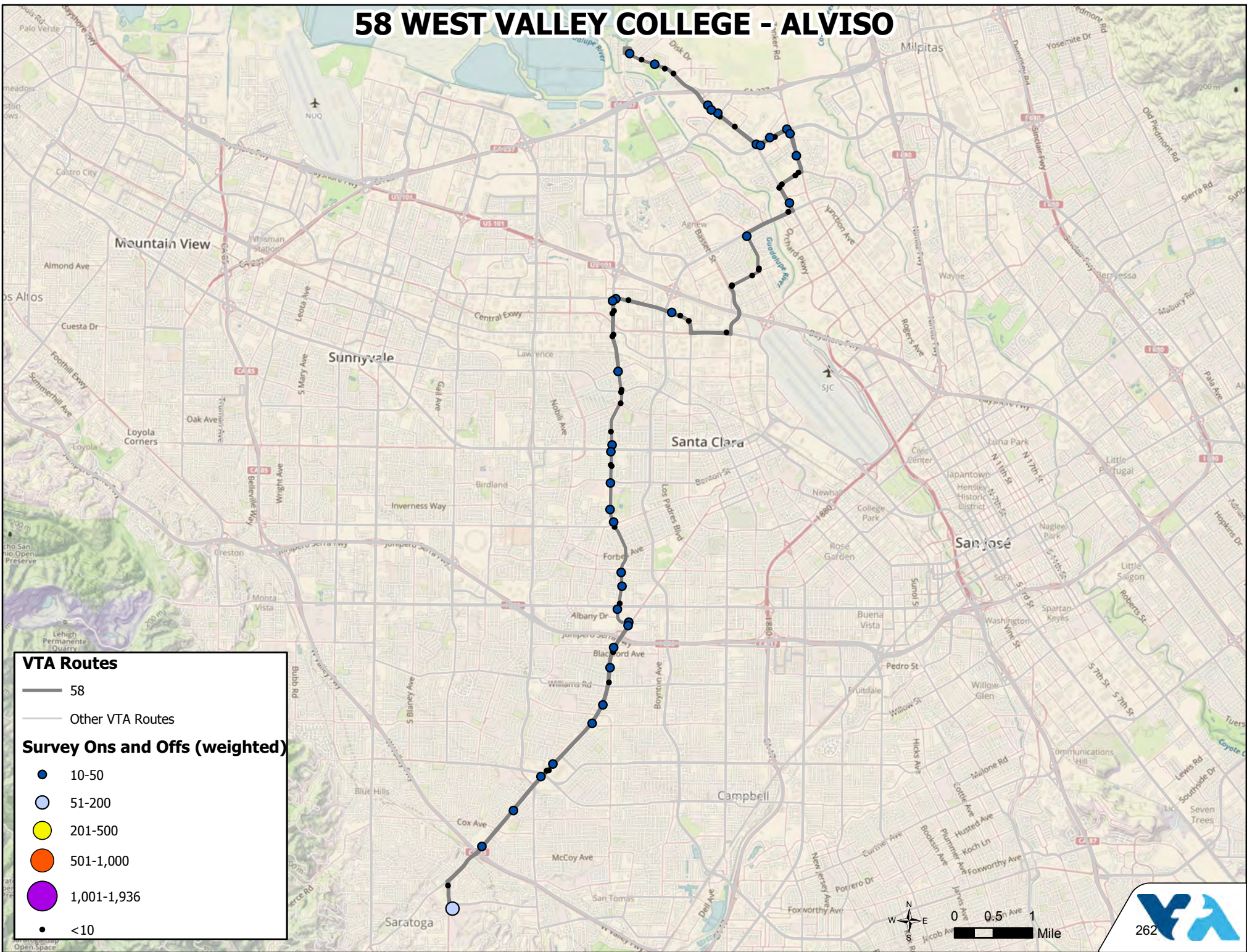
- 57
- Other VTA Routes

Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <math><10</math>

261

58 WEST VALLEY COLLEGE - ALVISO



VTA Routes

- 58
- Other VTA Routes

Survey Ons and Offs (weighted)

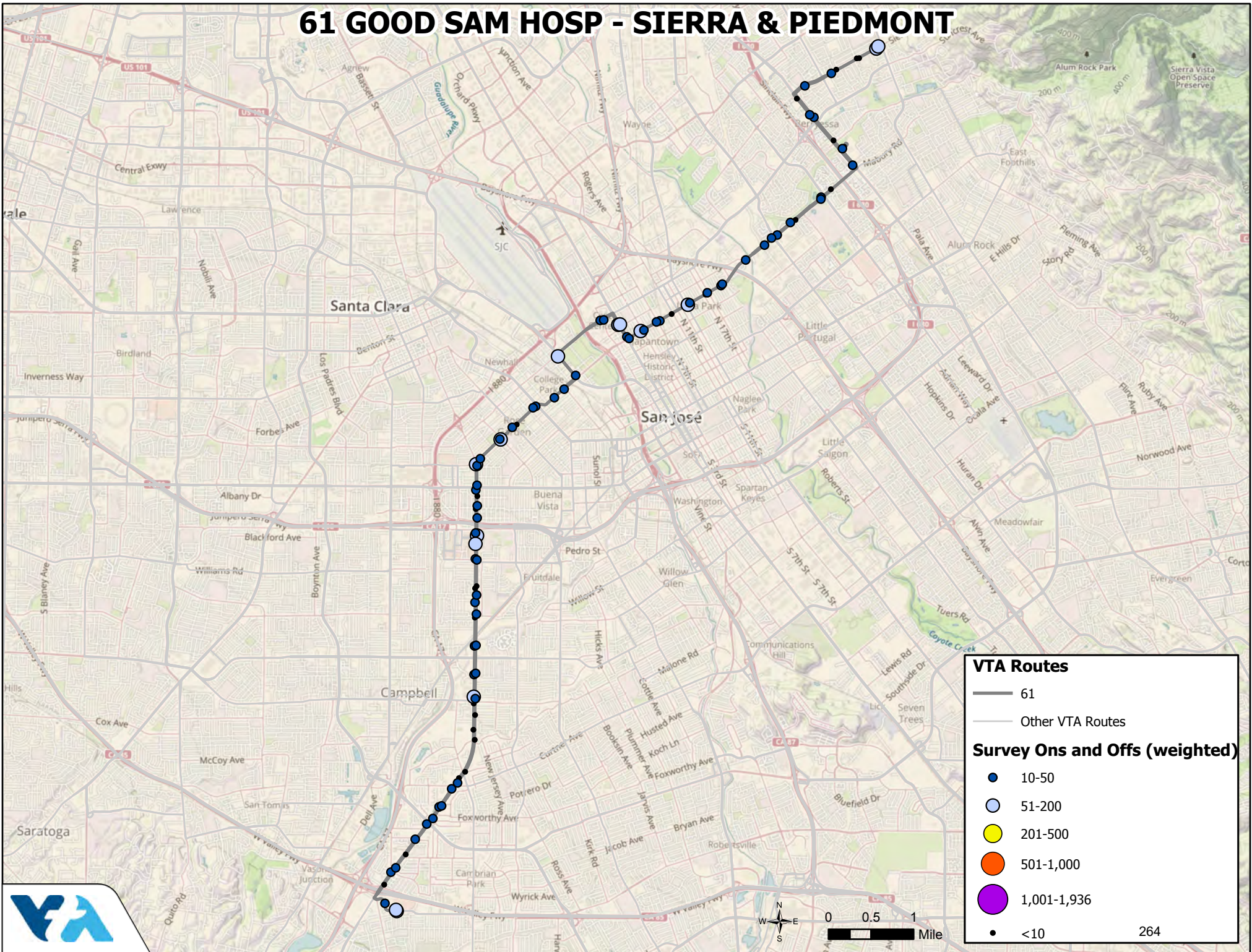
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



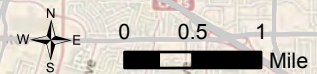
60 WINCHESTER TC - GT AMERICA



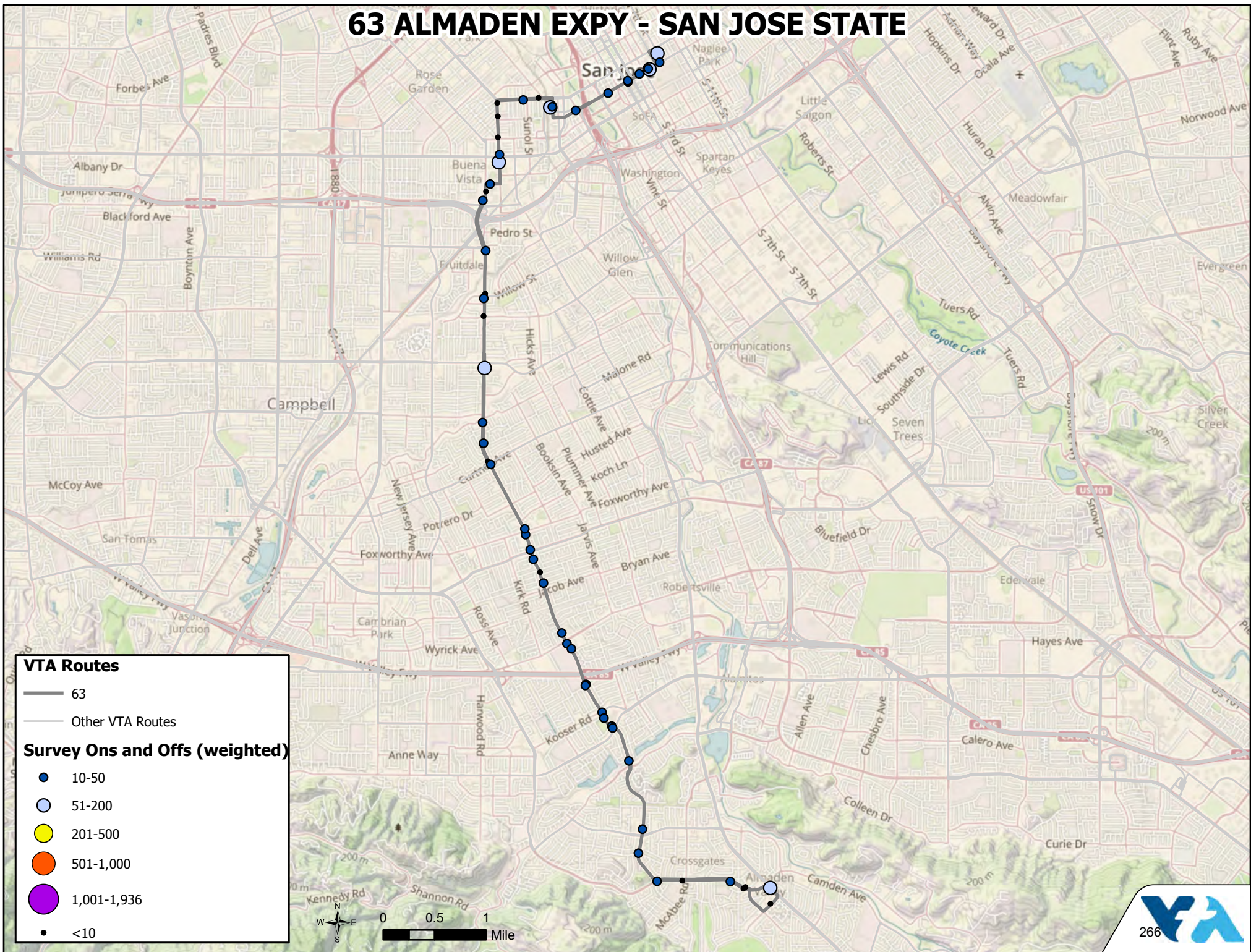
61 GOOD SAM HOSP - SIERRA & PIEDMONT



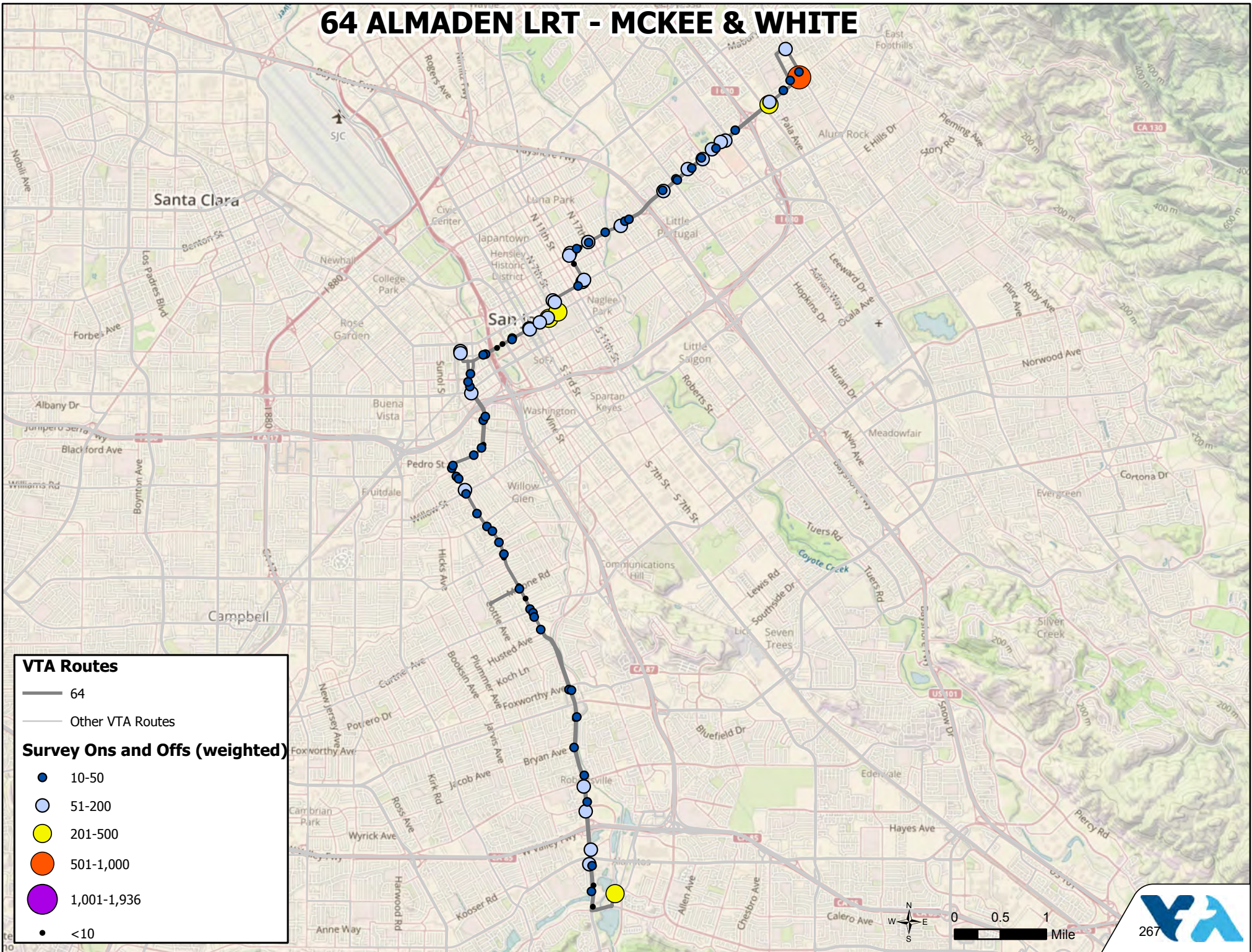
62 GOOD SAM HOSP - SIERRA & PIEDMONT



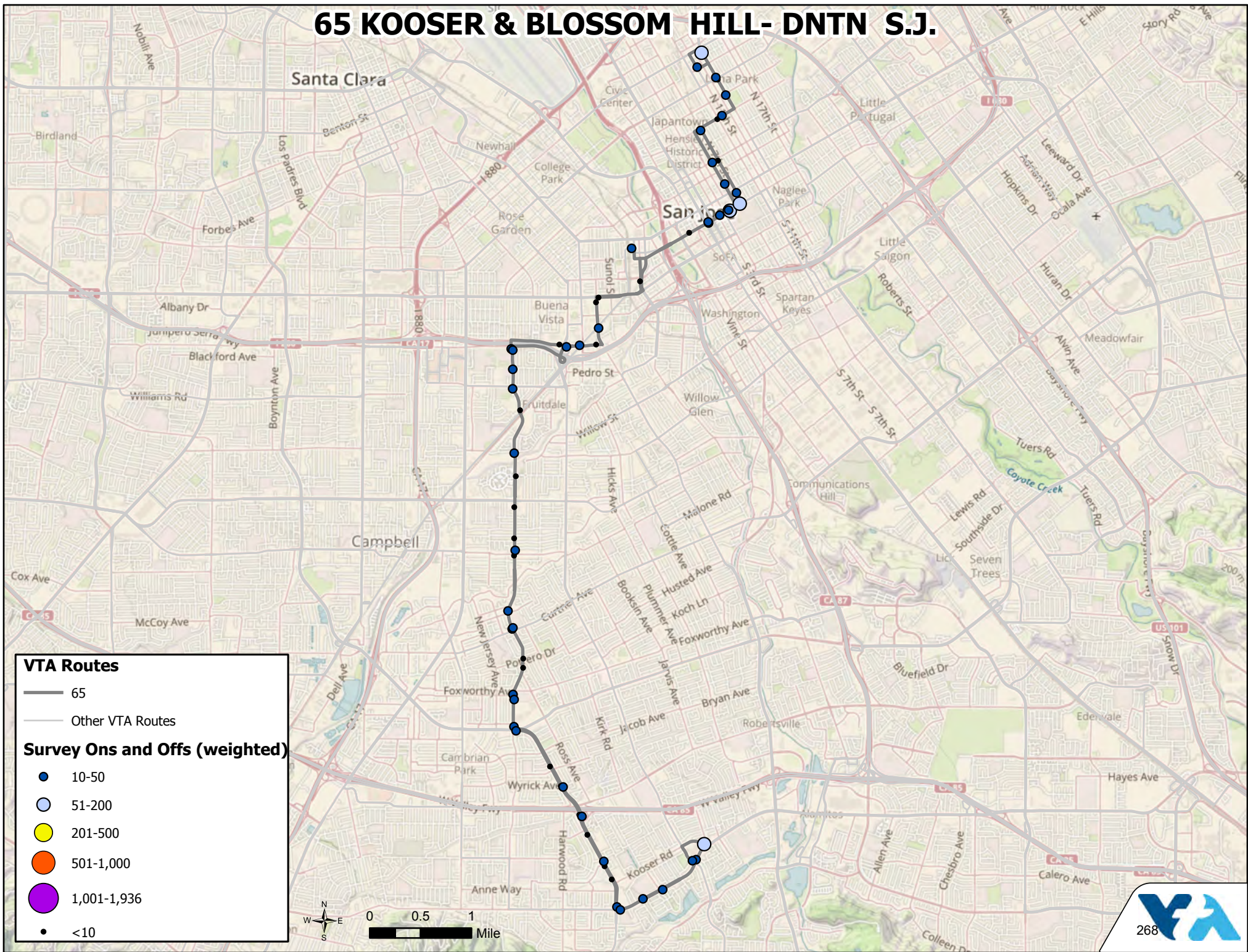
63 ALMADEN EXPY - SAN JOSE STATE



64 ALMADEN LRT - MCKEE & WHITE



65 KOOSER & BLOSSOM HILL- DNTN S.J.

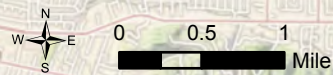


VTA Routes

- 65
- Other VTA Routes

Survey Ons and Offs (weighted)

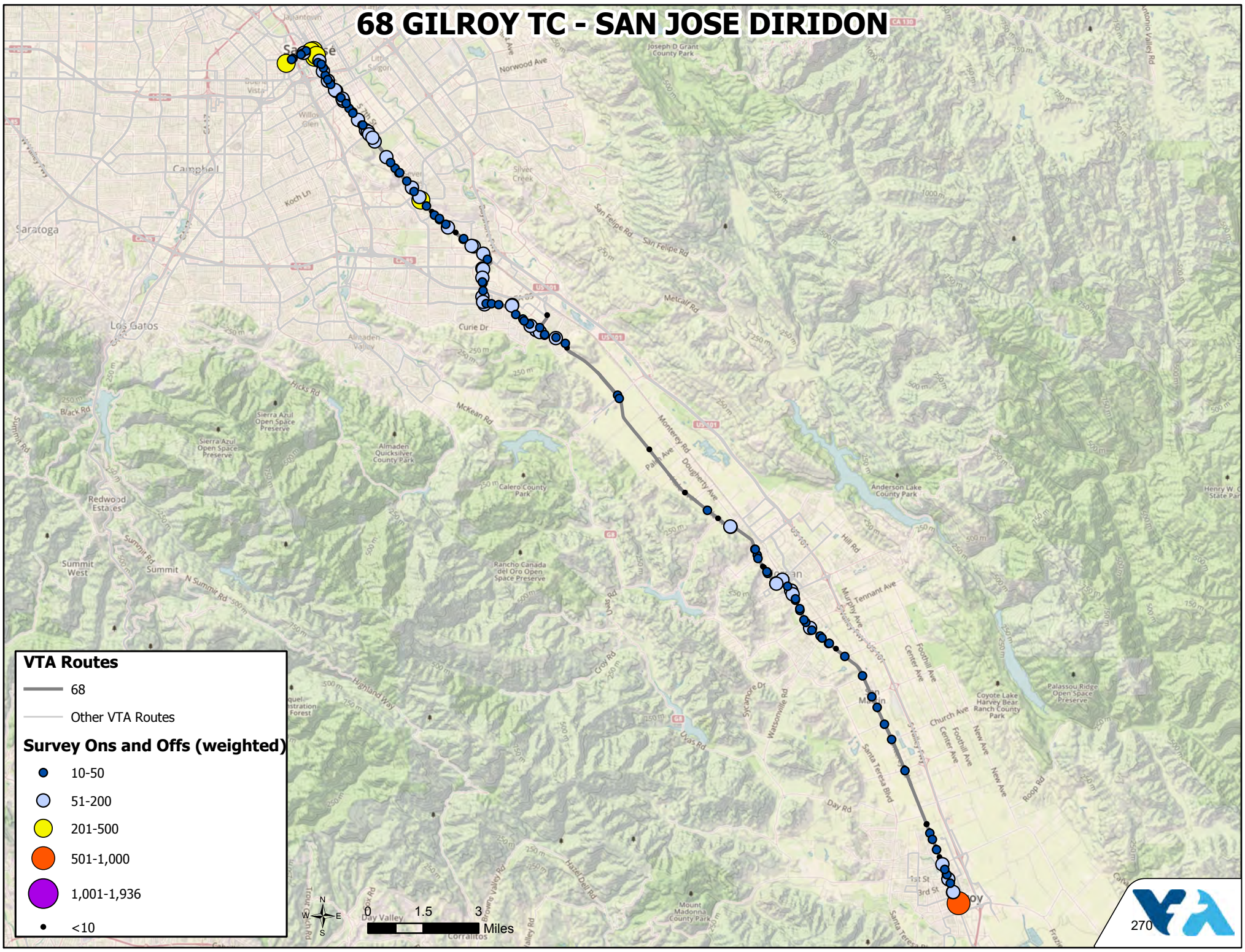
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



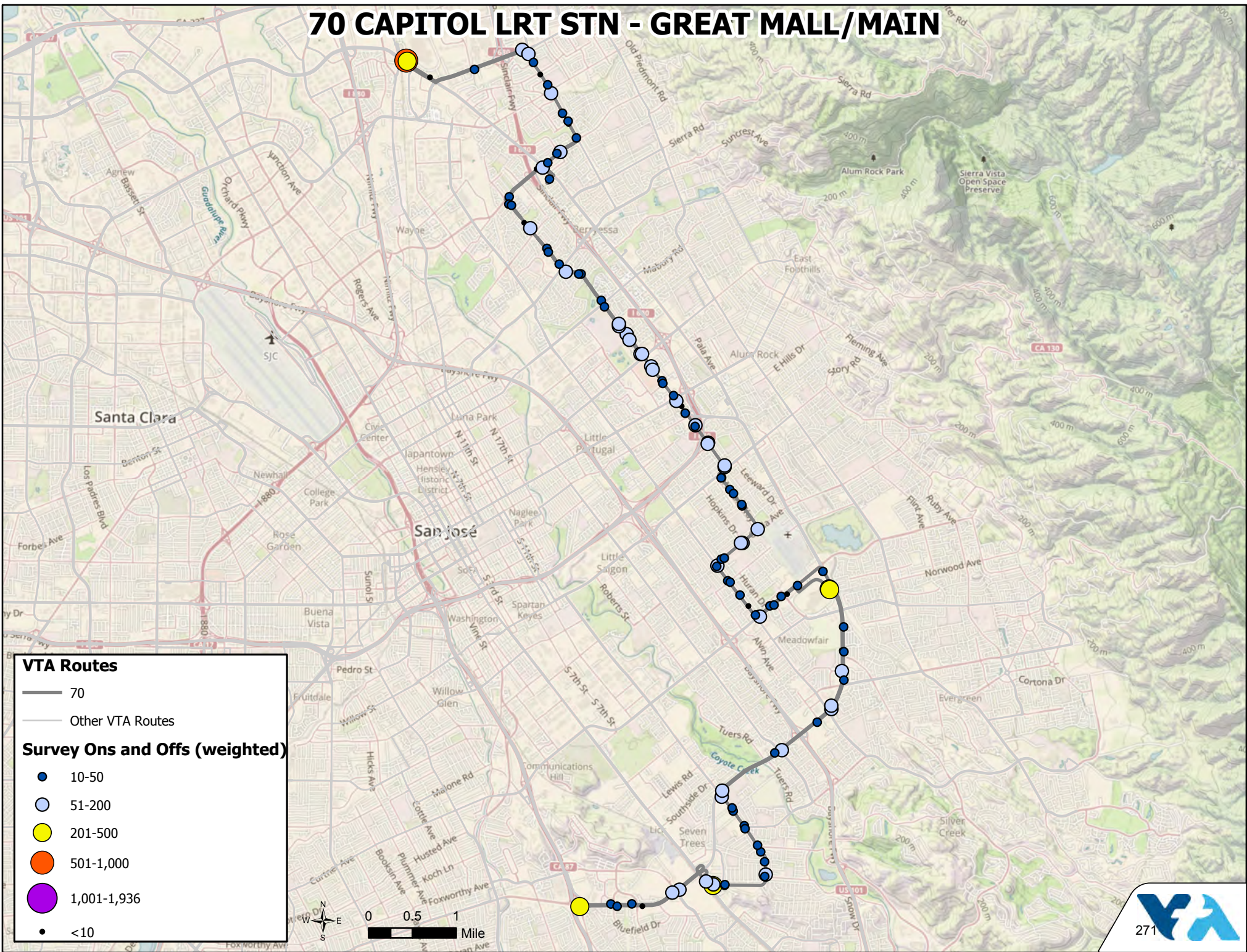
66 KAISER SAN JOSE - MILPITAS/DIXON



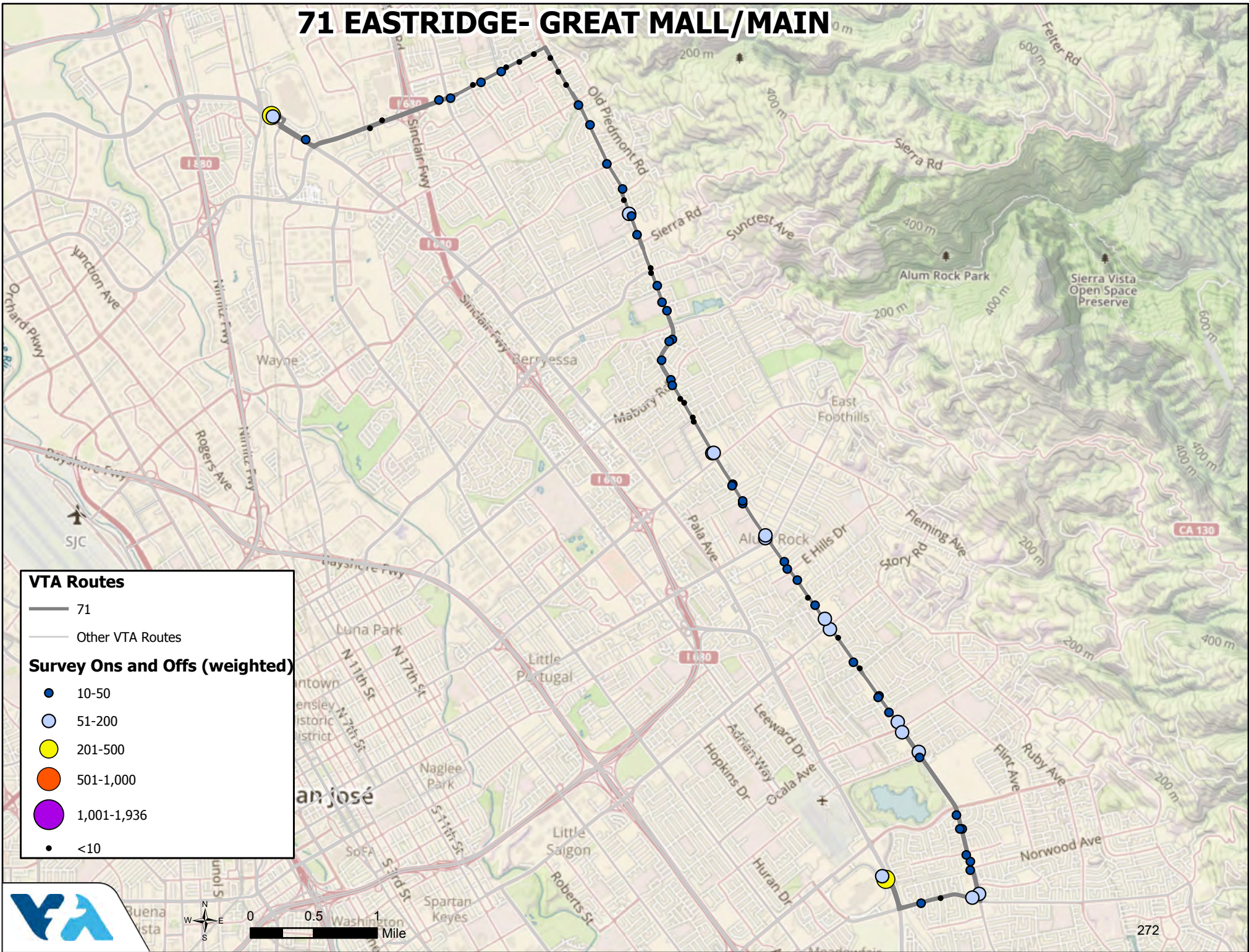
68 GILROY TC - SAN JOSE DIRIDON



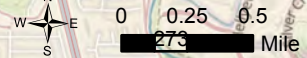
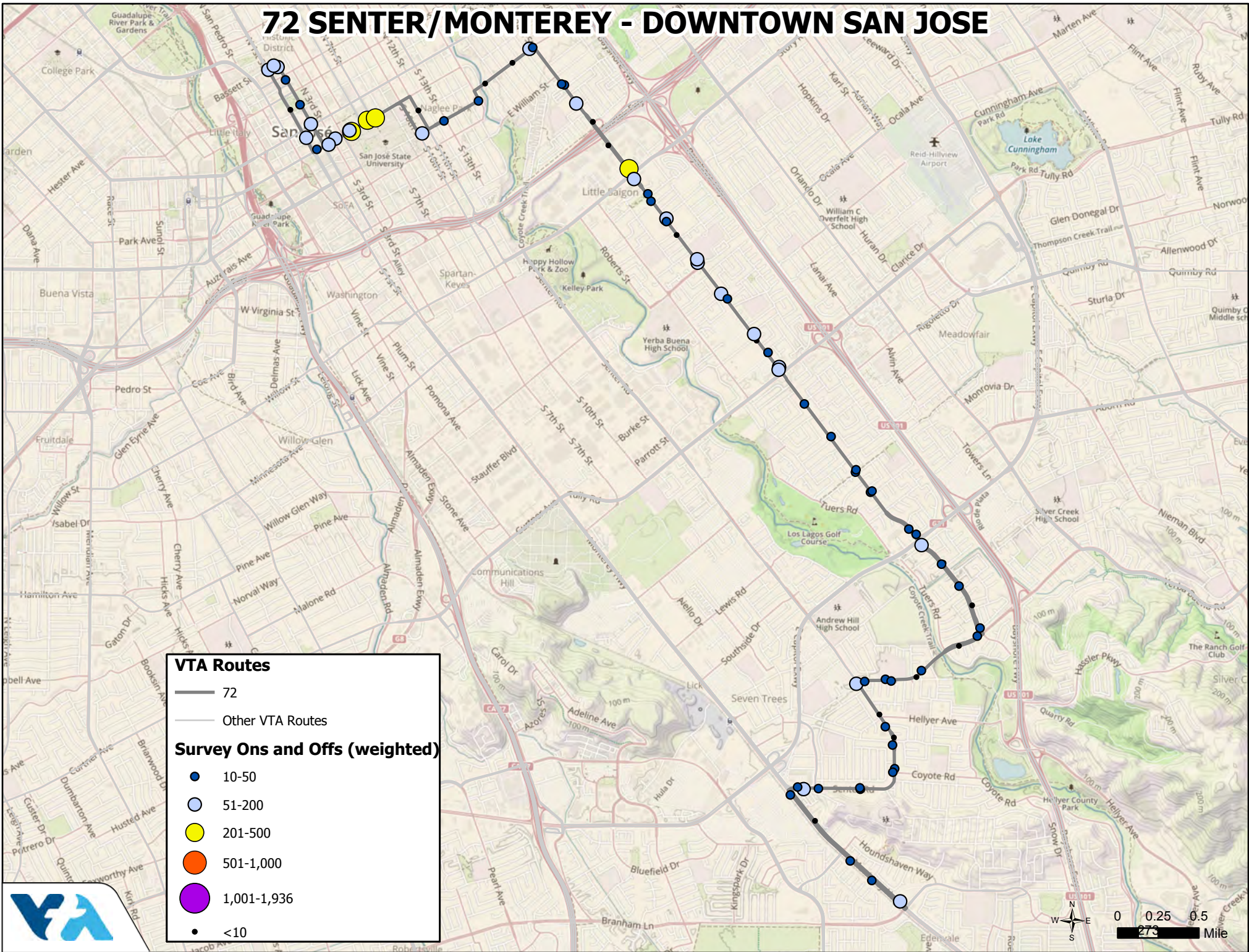
70 CAPITOL LRT STN - GREAT MALL/MAIN



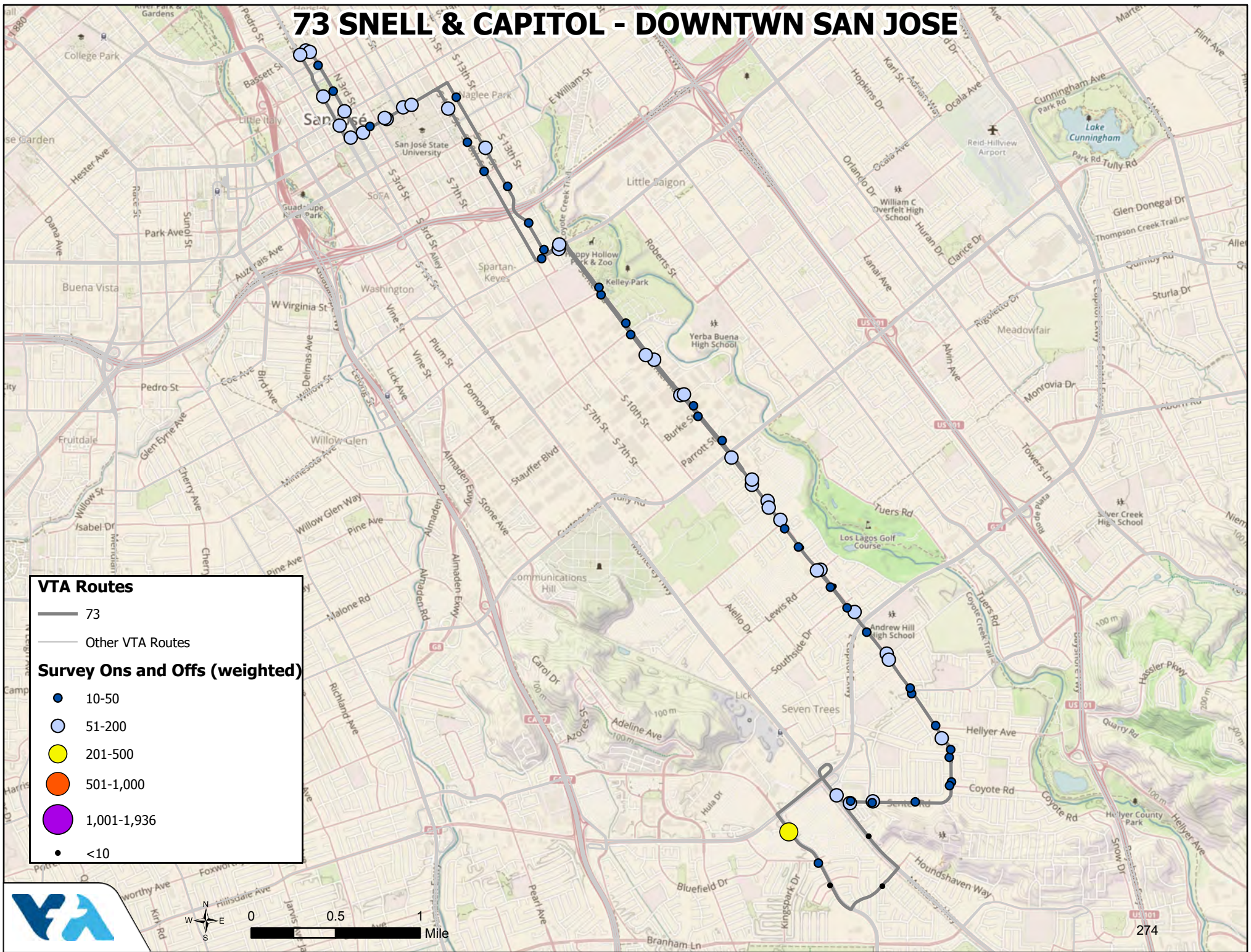
71 EASTRIDGE- GREAT MALL/MAIN



72 SENTER/MONTEREY - DOWNTOWN SAN JOSE



73 SNELL & CAPITOL - DOWNTOWN SAN JOSE

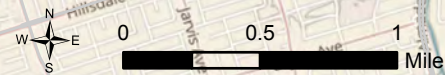


VTA Routes

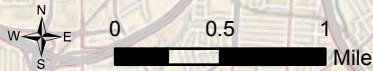
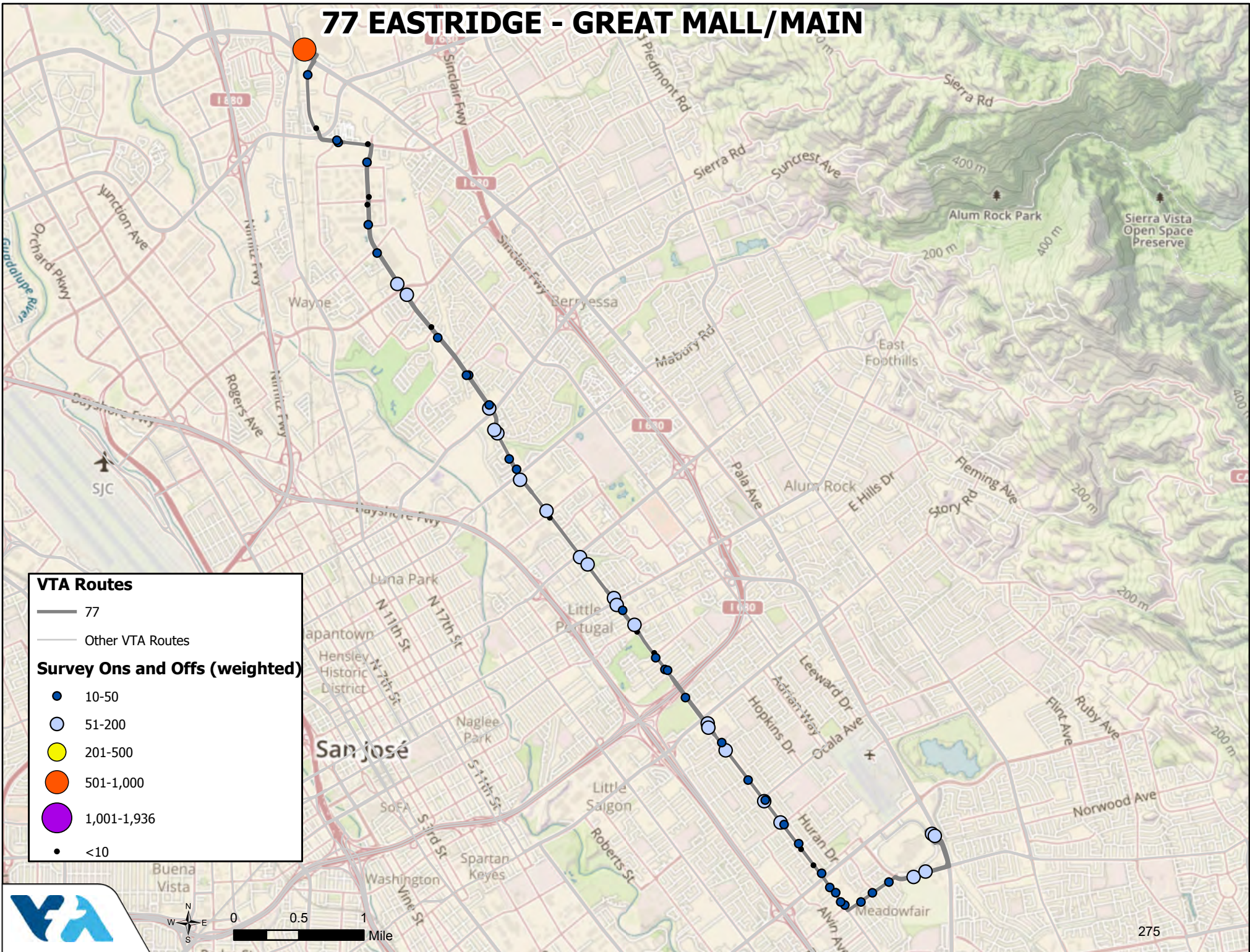
- 73
- Other VTA Routes

Survey Ons and Offs (weighted)

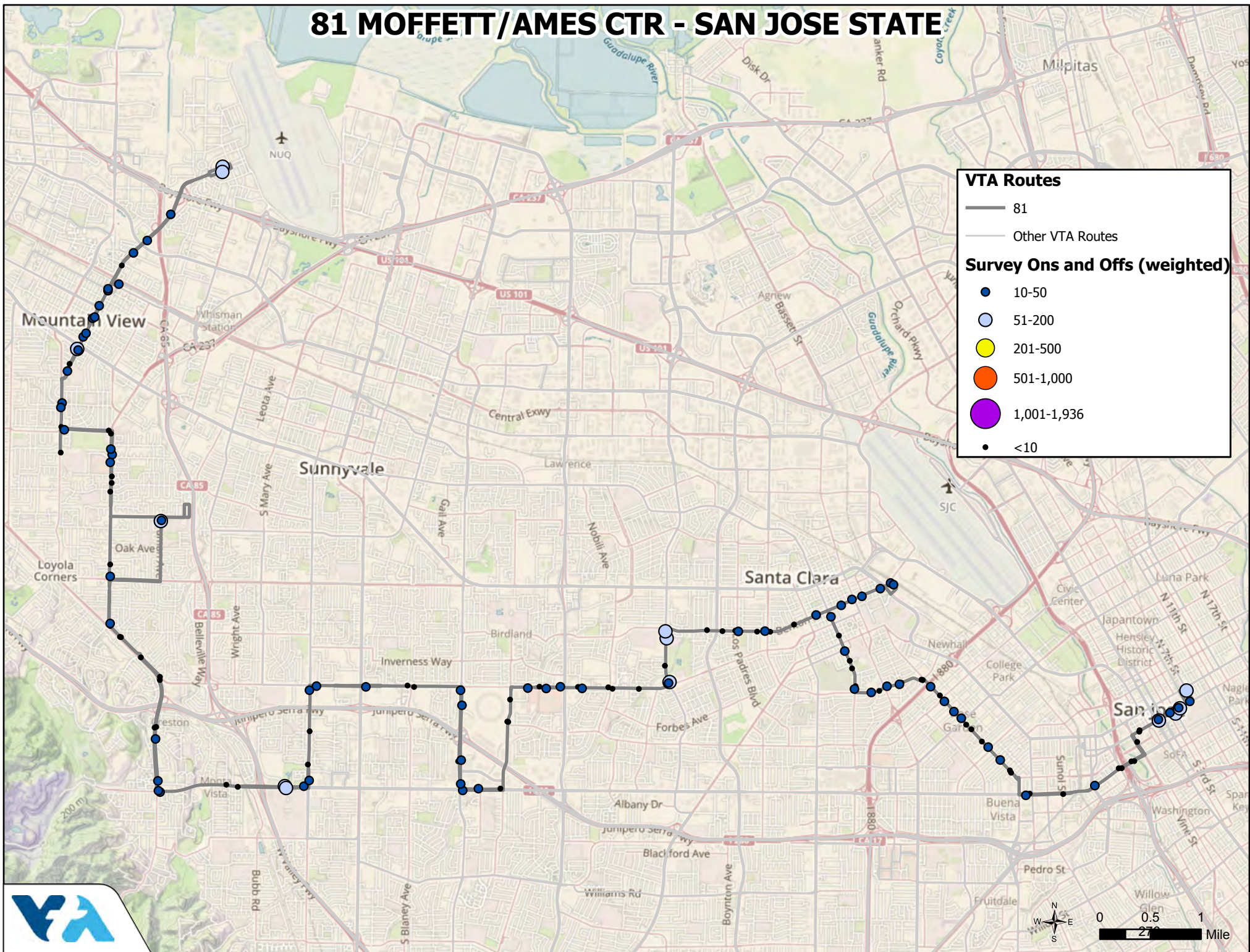
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



77 EASTRIDGE - GREAT MALL/MAIN



81 MOFFETT/AMES CTR - SAN JOSE STATE



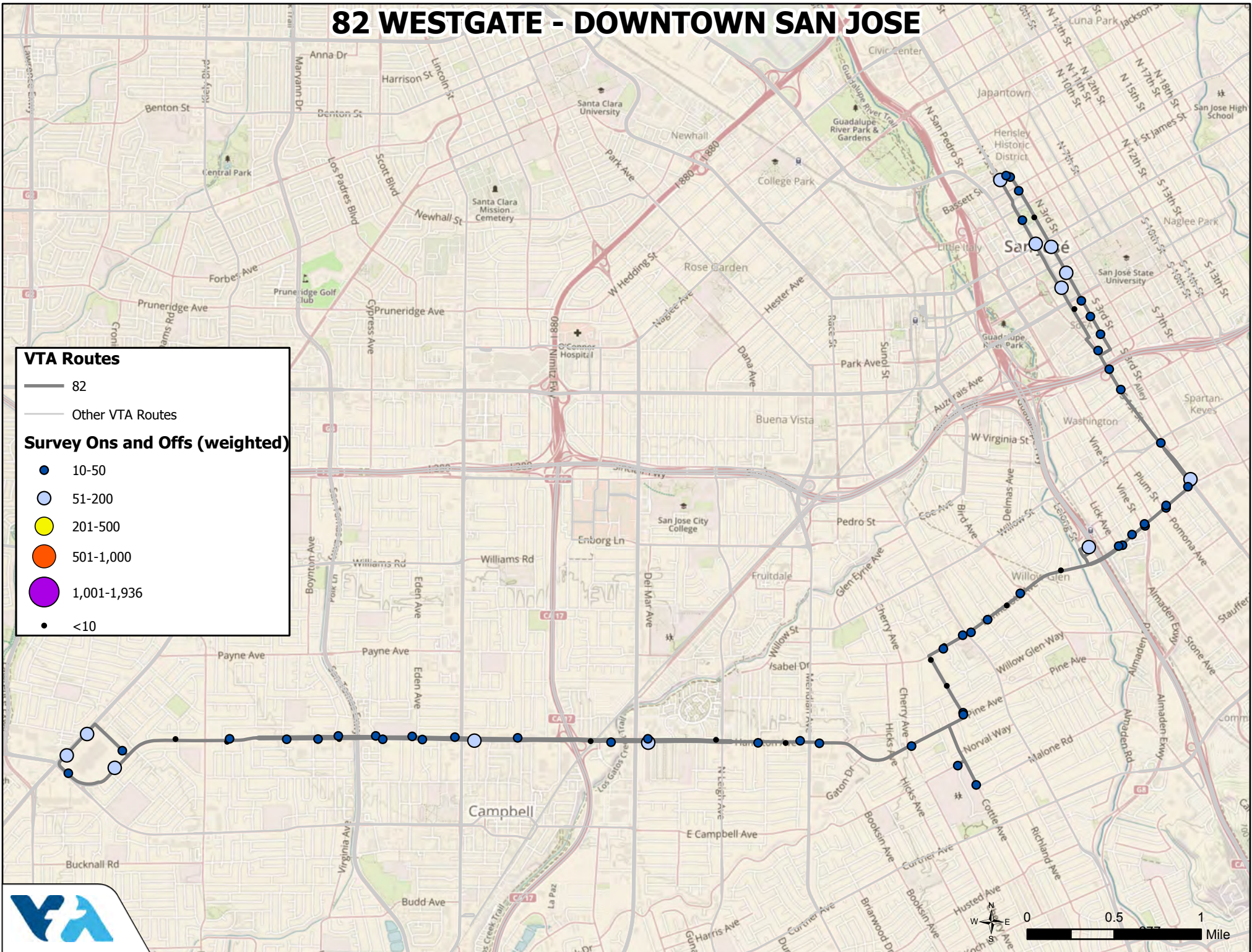
82 WESTGATE - DOWNTOWN SAN JOSE

VTA Routes

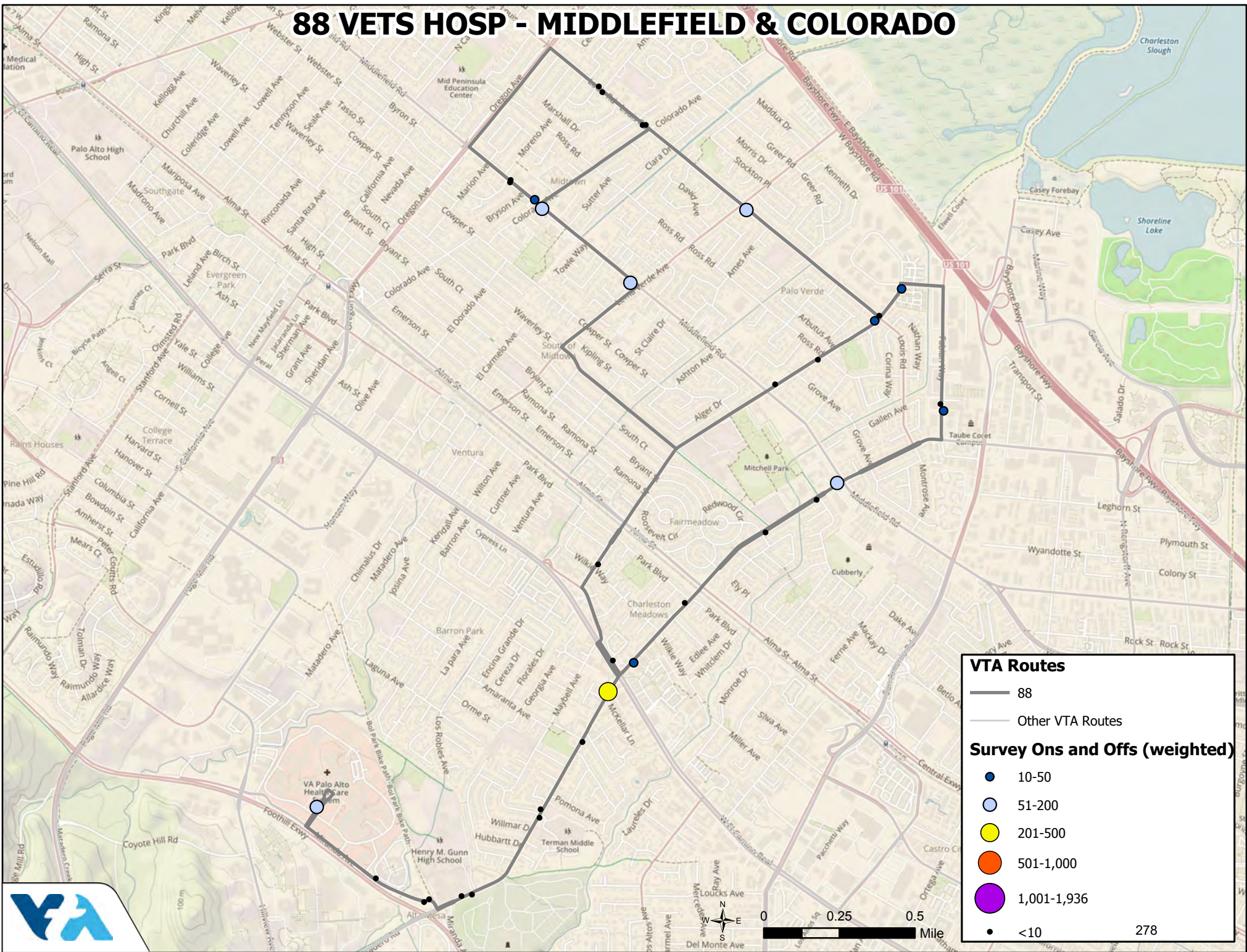
- 82
- Other VTA Routes

Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



88 VETS HOSP - MIDDLEFIELD & COLORADO



VTA Routes

- 88
- Other VTA Routes

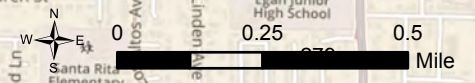
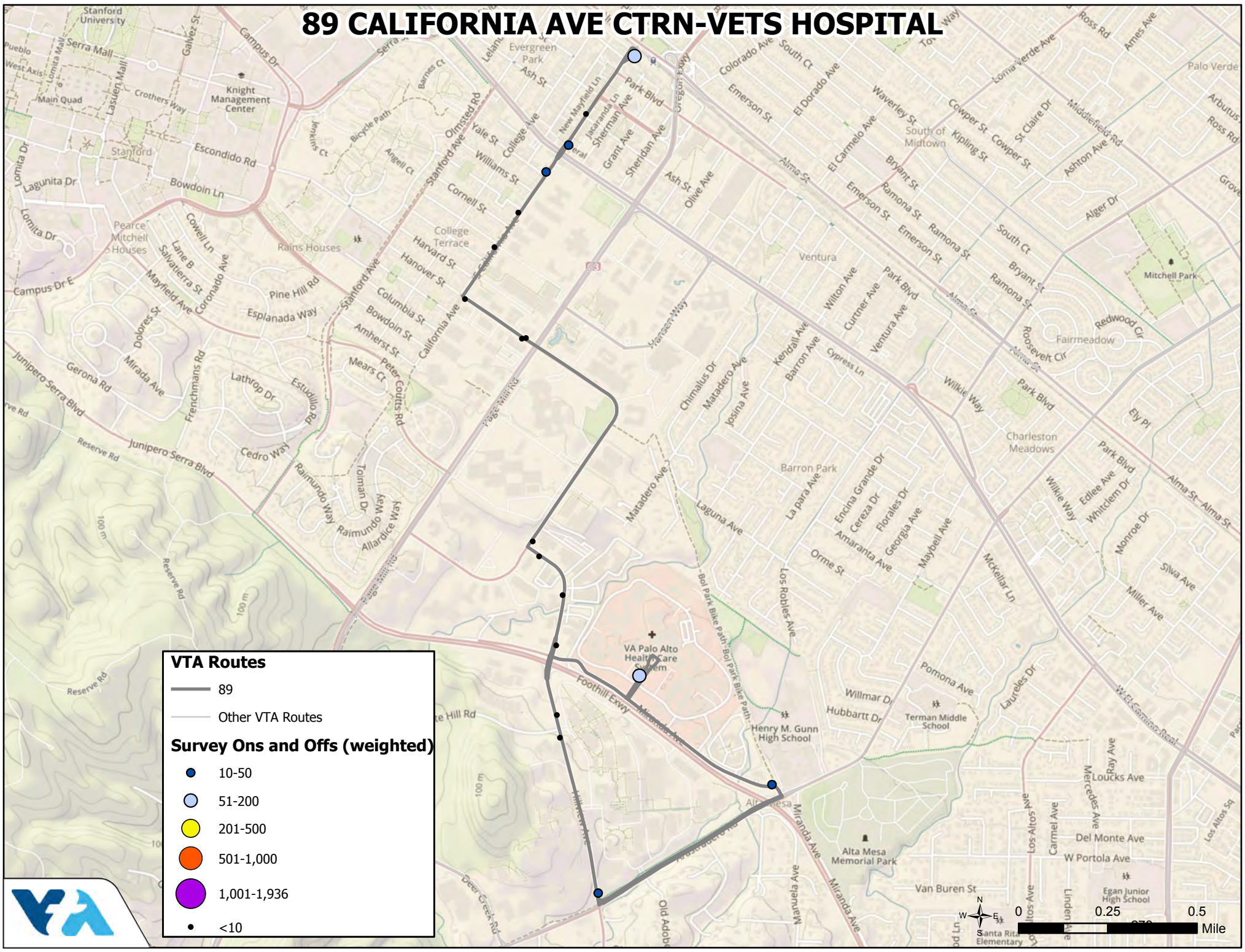
Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10

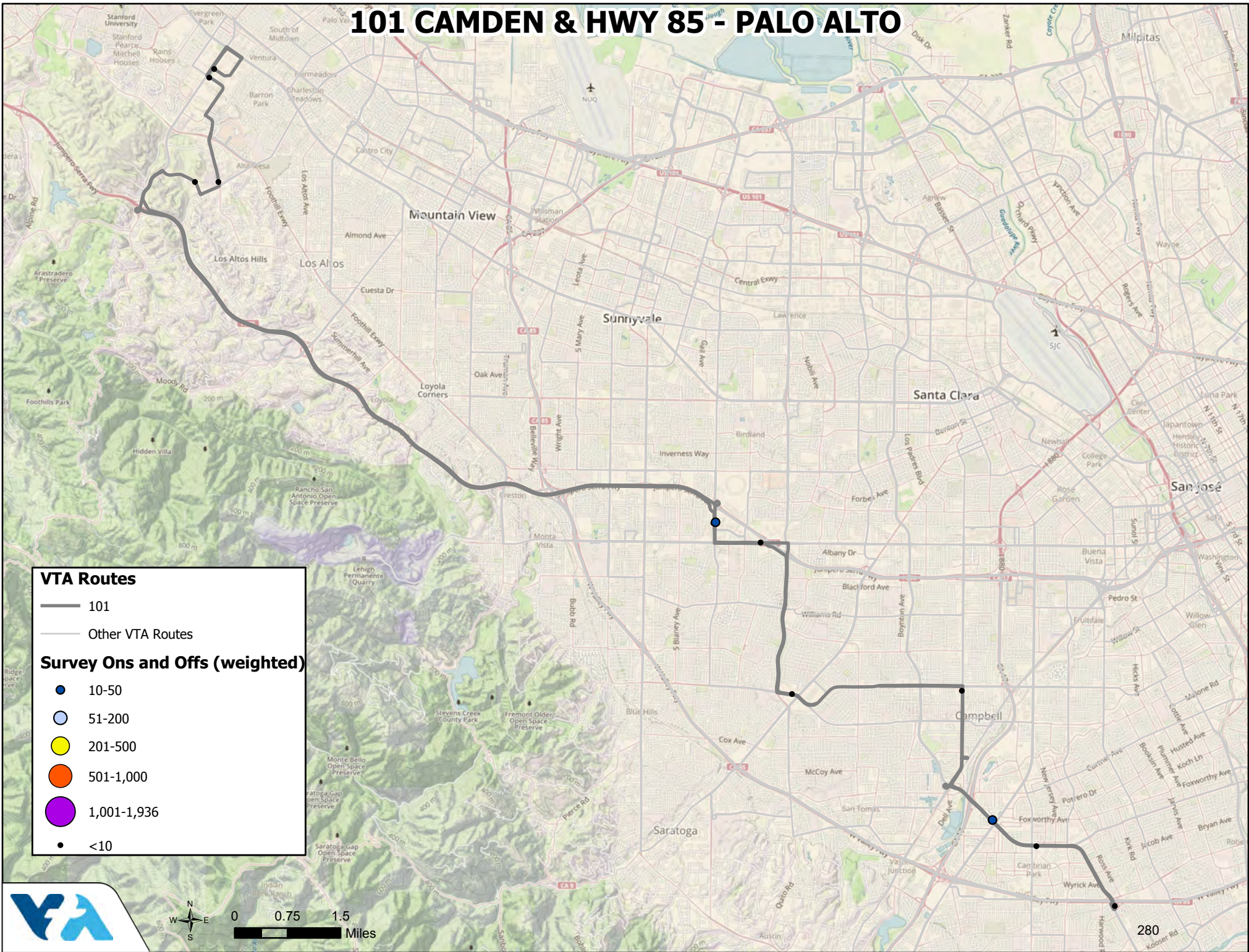
278



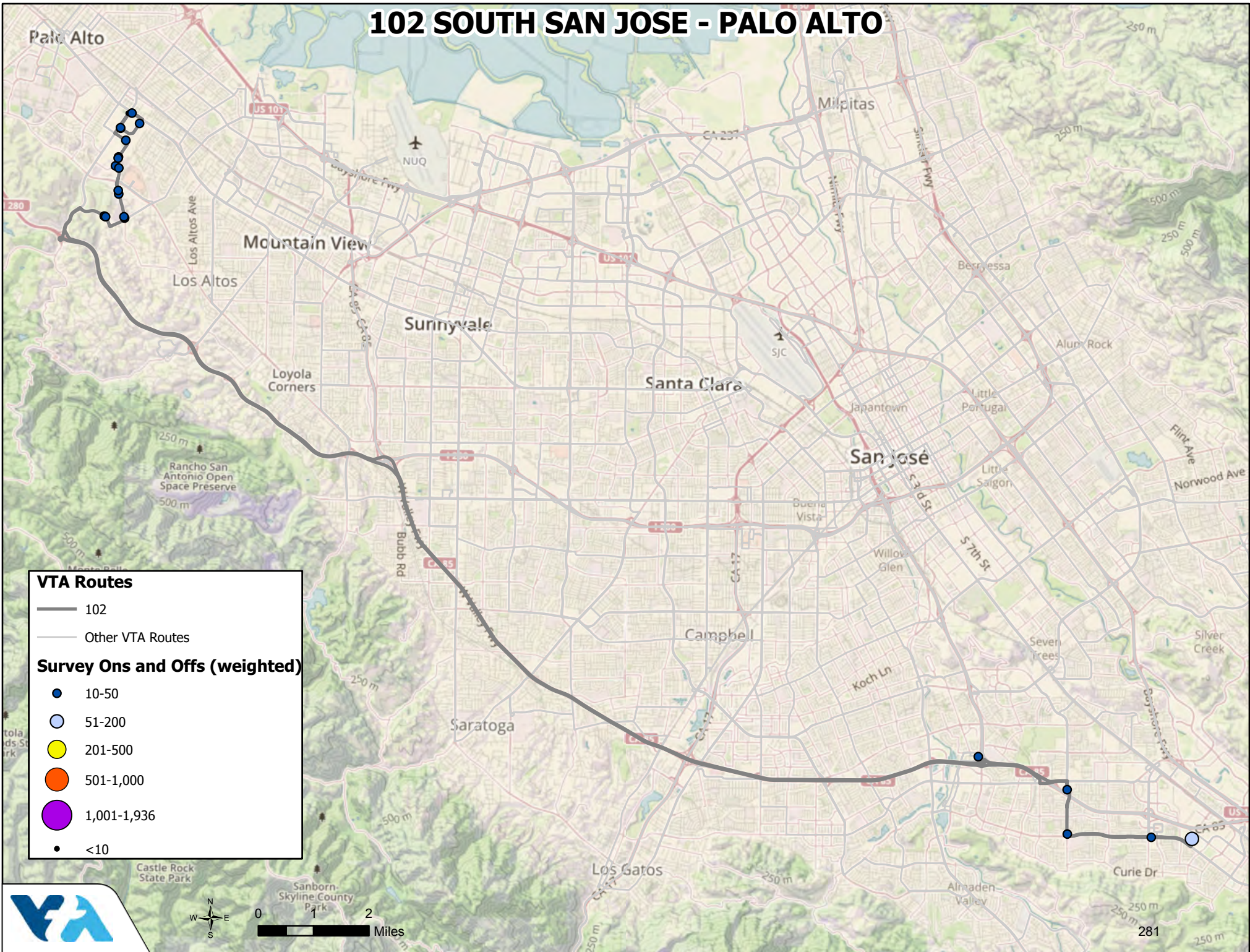
89 CALIFORNIA AVE CTRN-VETS HOSPITAL



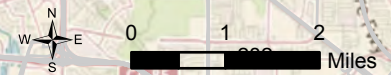
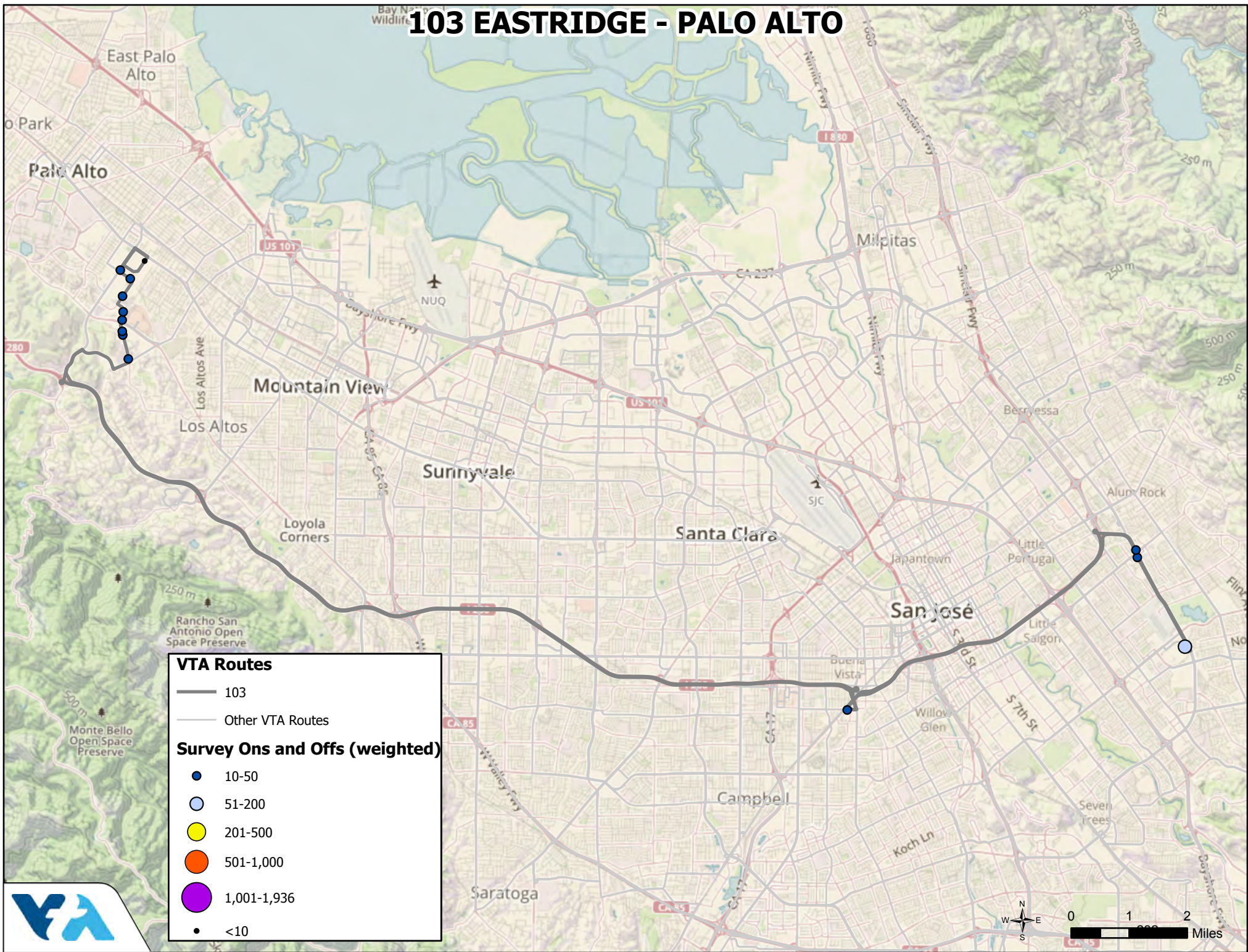
101 CAMDEN & HWY 85 - PALO ALTO



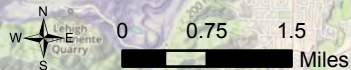
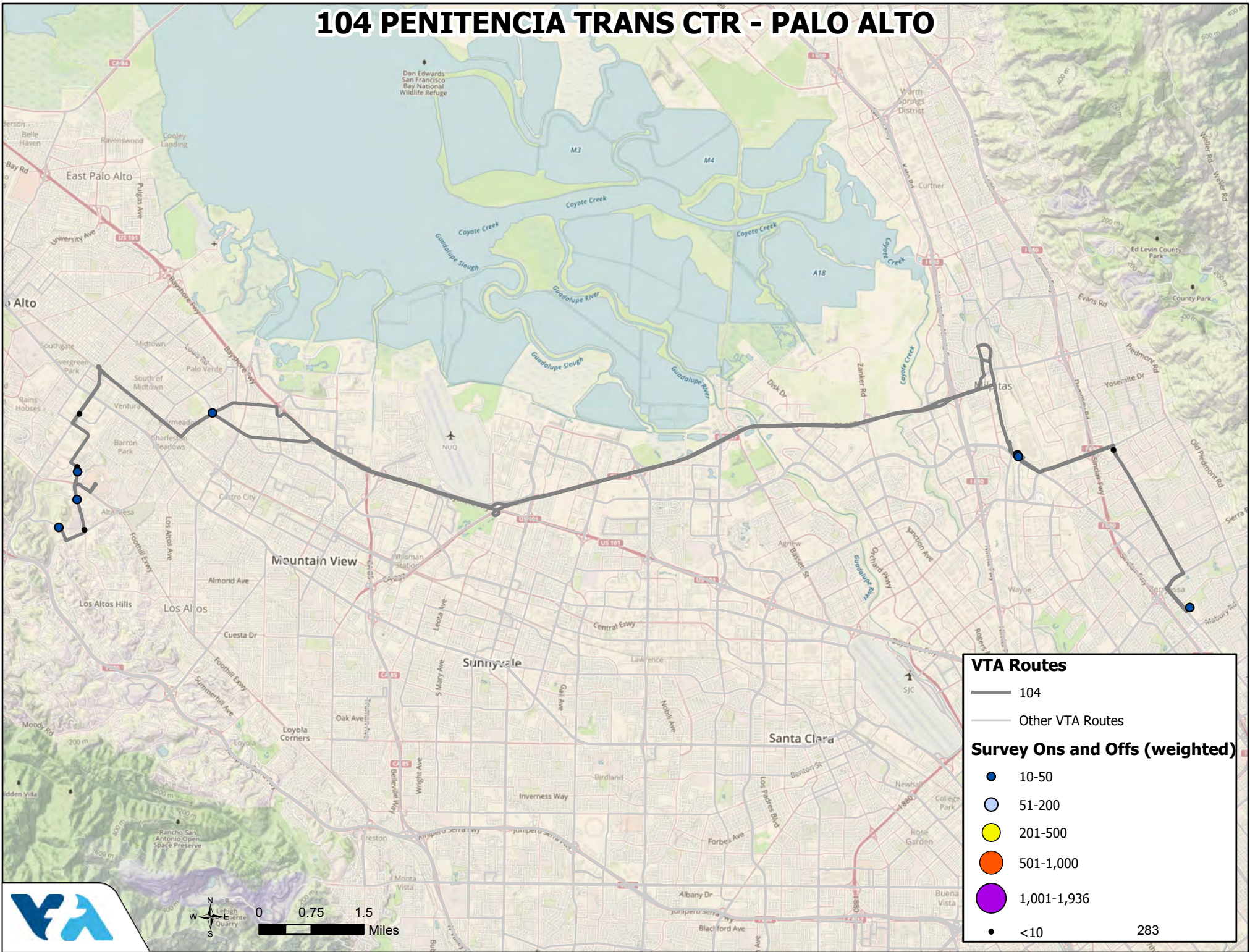
102 SOUTH SAN JOSE - PALO ALTO



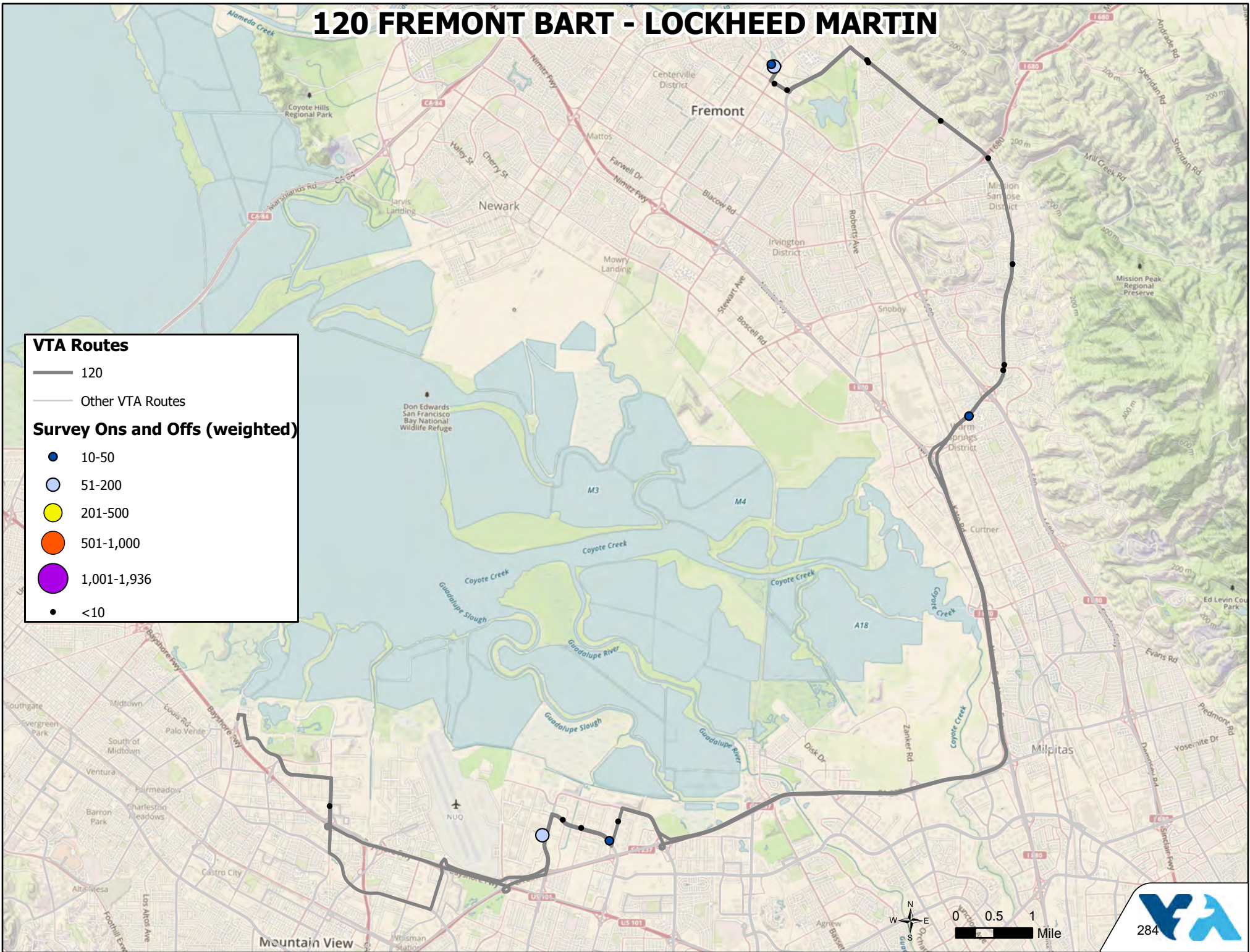
103 EASTRIDGE - PALO ALTO



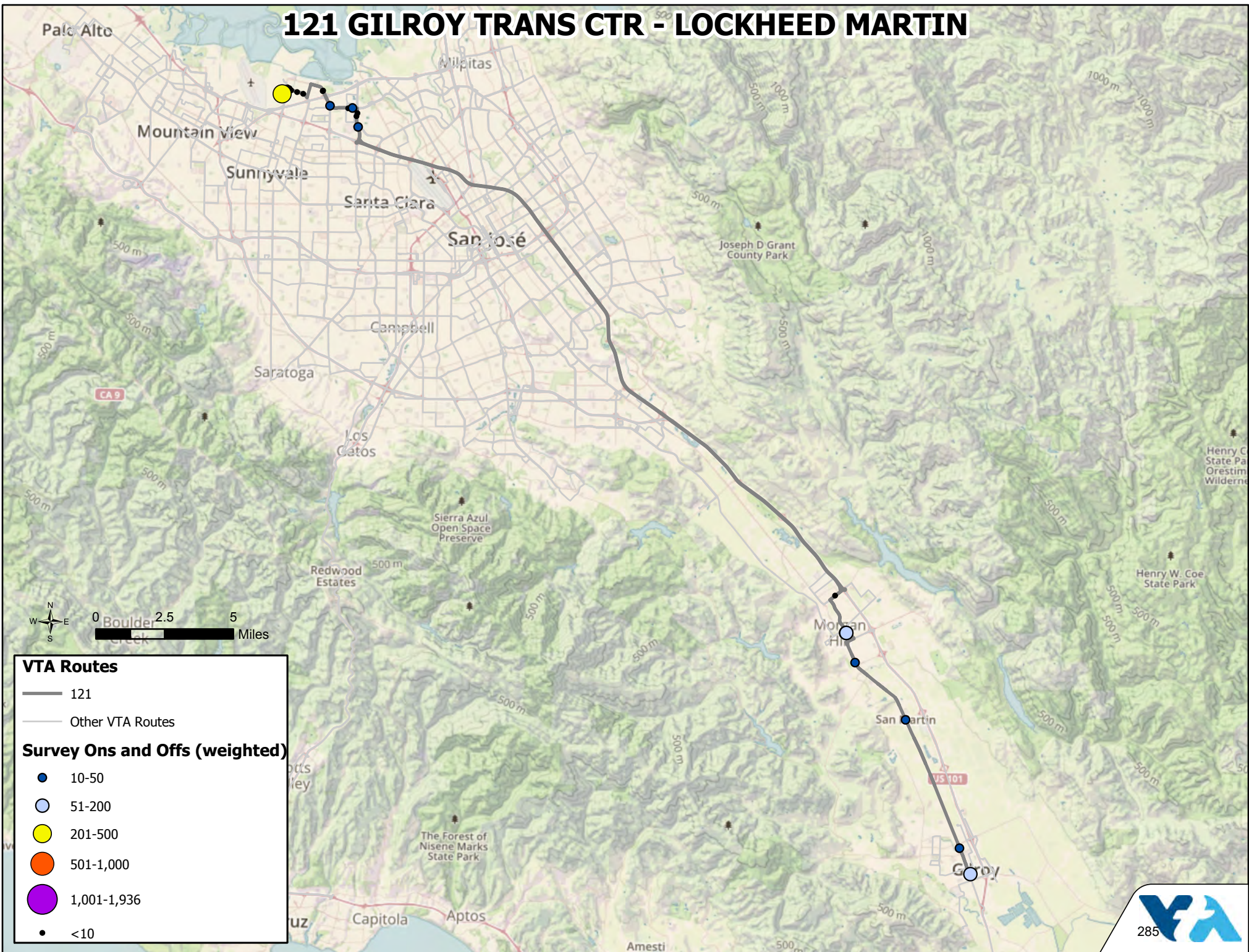
104 PENITENCIA TRANS CTR - PALO ALTO



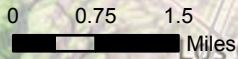
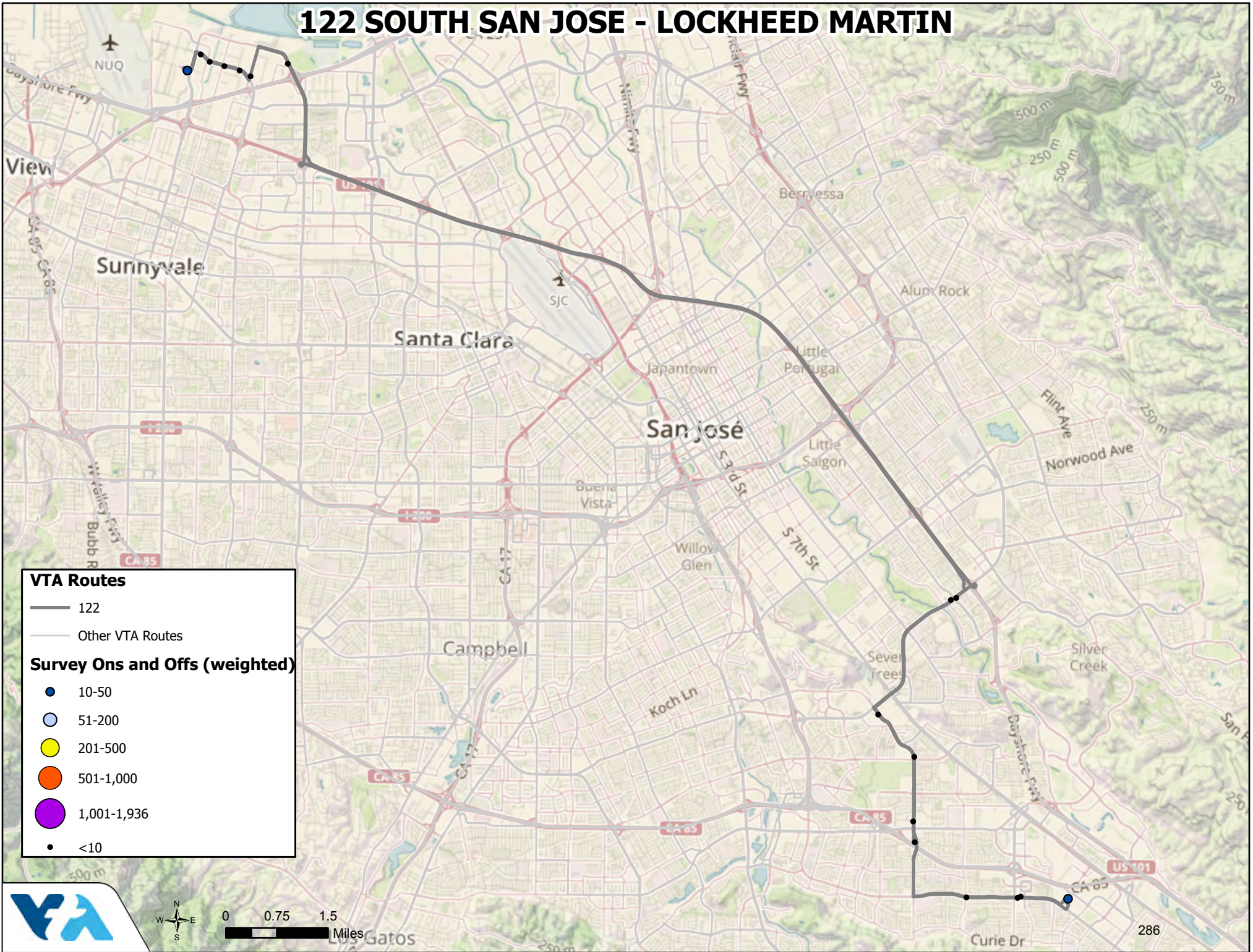
120 FREMONT BART - LOCKHEED MARTIN



121 GILROY TRANS CTR - LOCKHEED MARTIN

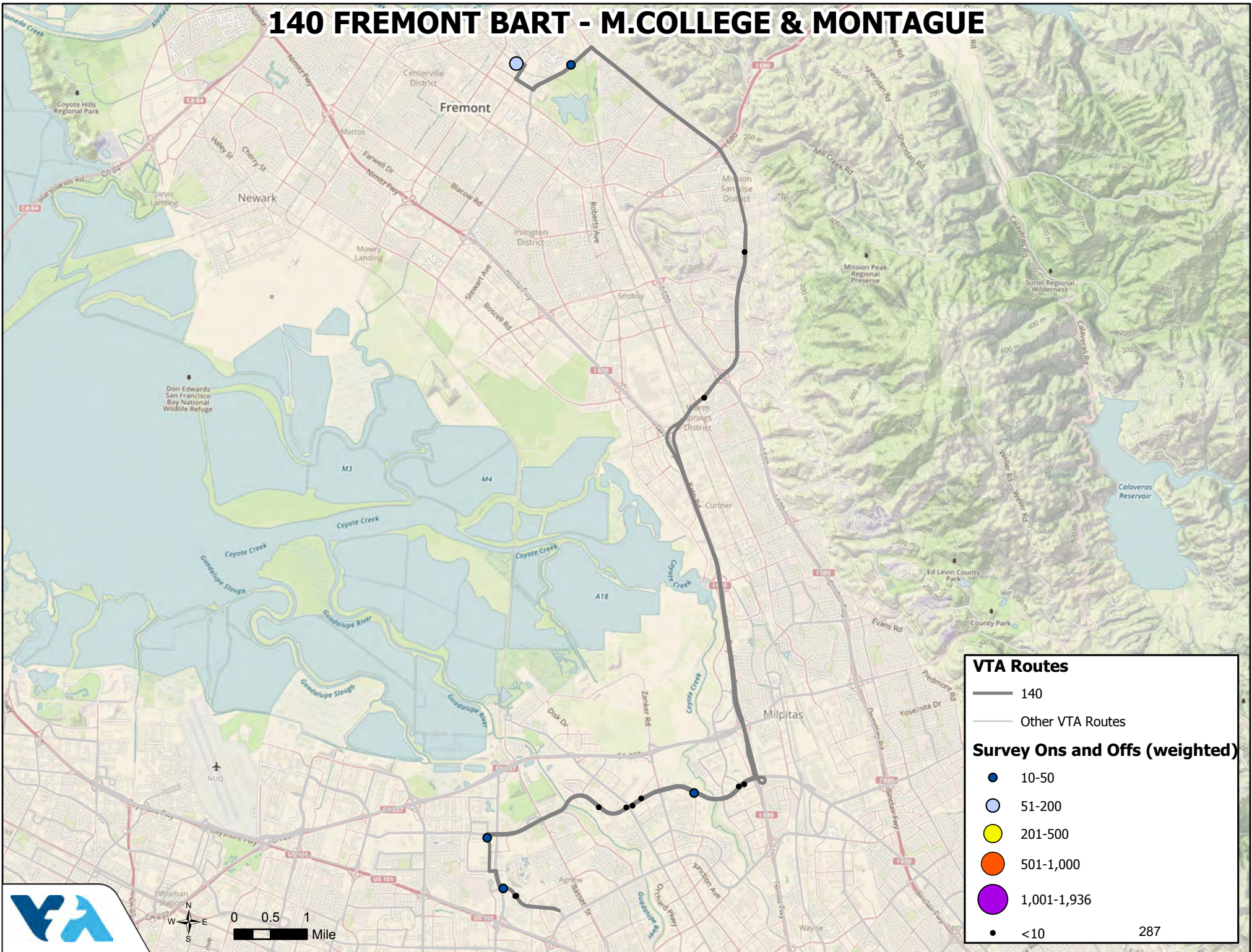


122 SOUTH SAN JOSE - LOCKHEED MARTIN



286

140 FREMONT BART - M.COLLEGE & MONTAGUE



0 0.5 1 Mile

VTA Routes

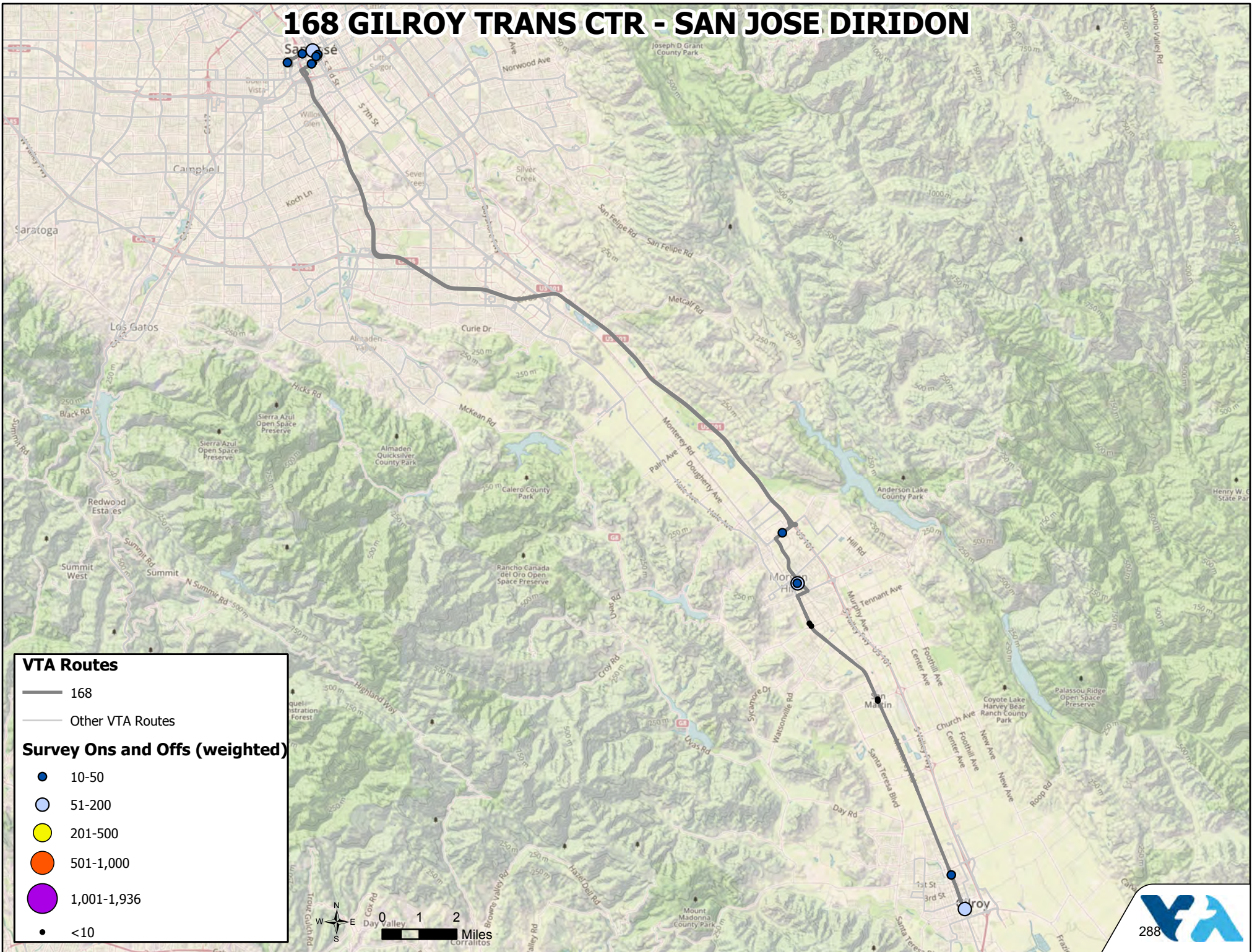
- 140
- Other VTA Routes

Survey Ons and Offs (weighted)

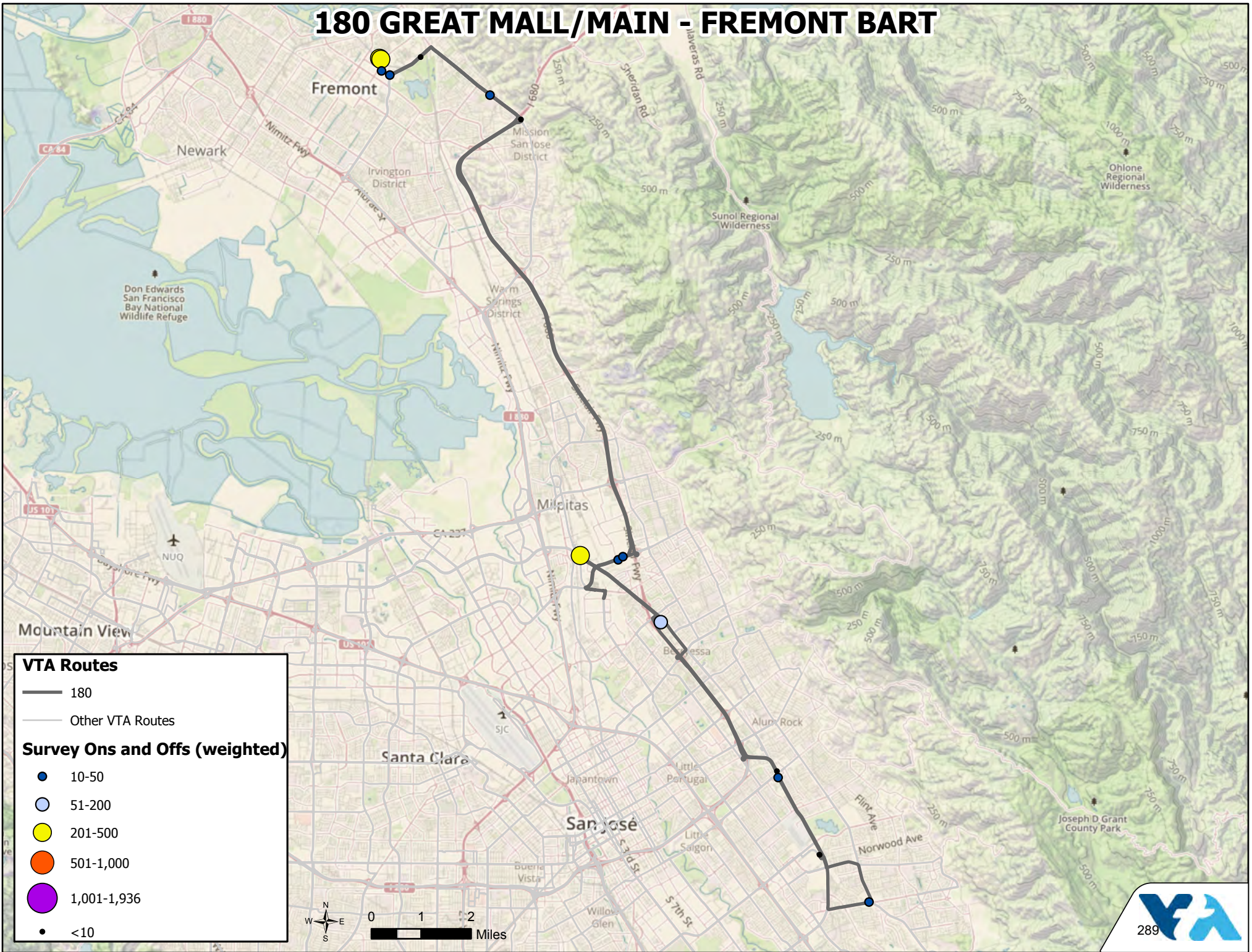
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10

287

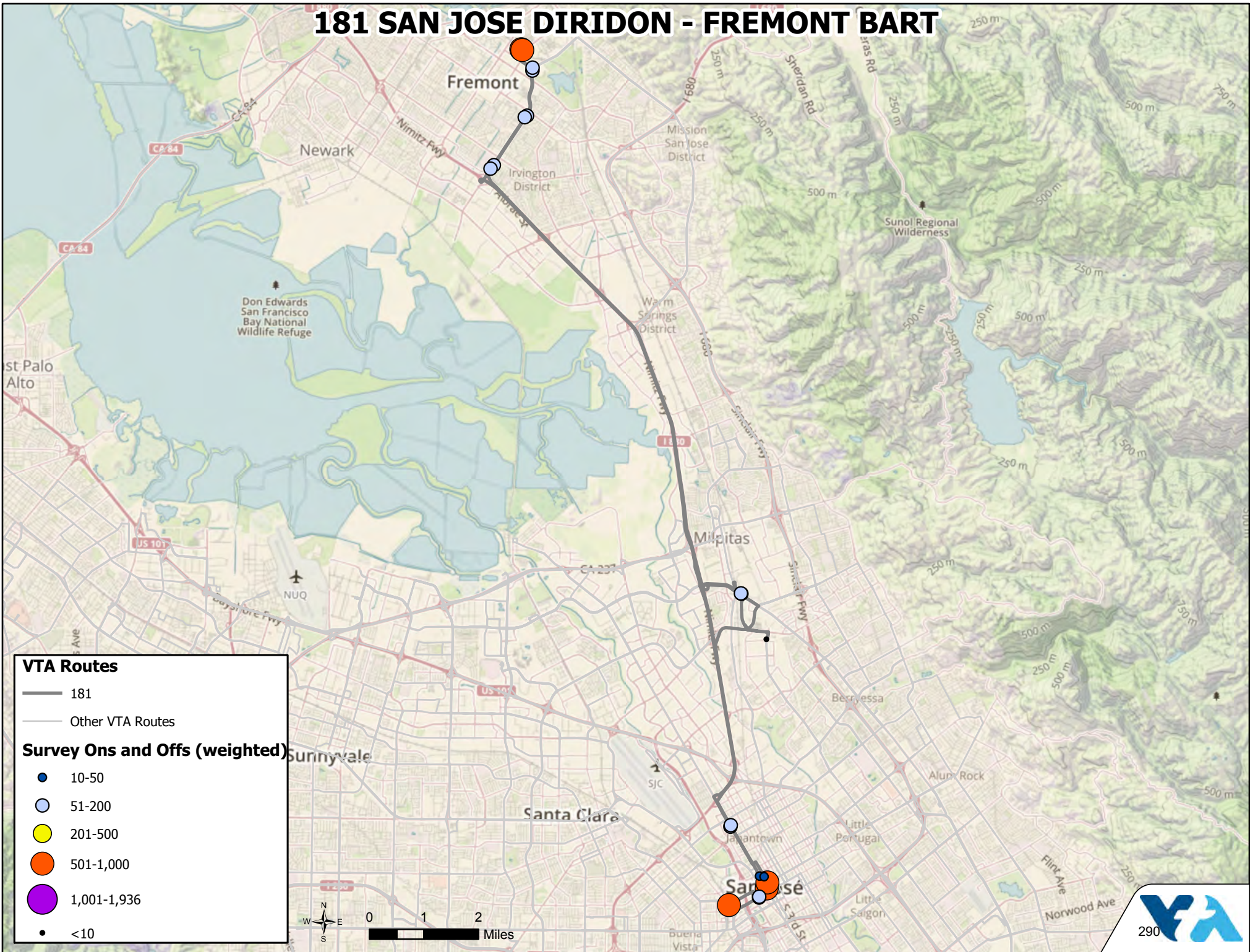
168 GILROY TRANS CTR - SAN JOSE DIRIDON



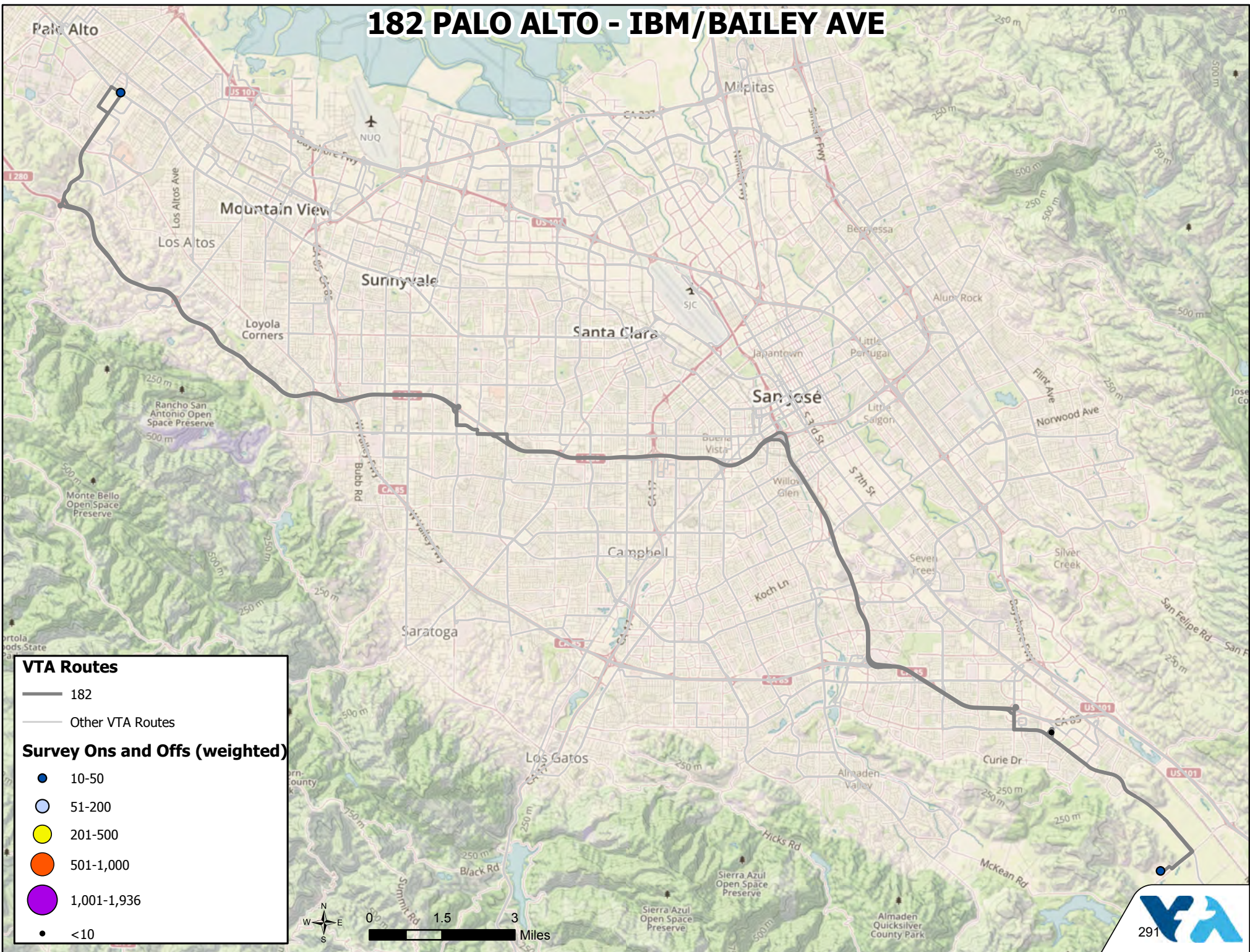
180 GREAT MALL/MAIN - FREMONT BART



181 SAN JOSE DIRIDON - FREMONT BART



182 PALO ALTO - IBM/BAILEY AVE



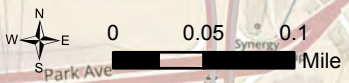
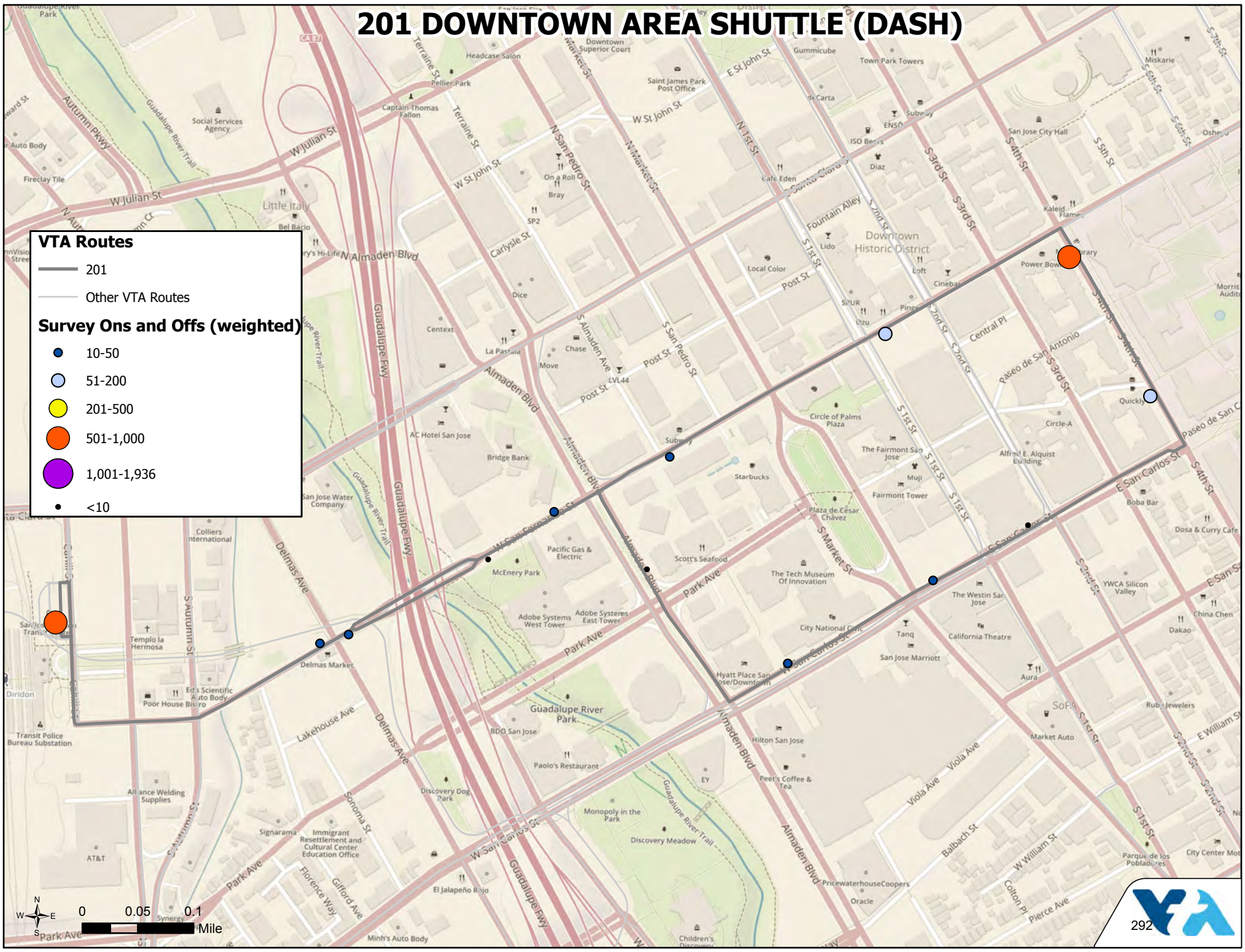
201 DOWNTOWN AREA SHUTTLE (DASH)

VTA Routes

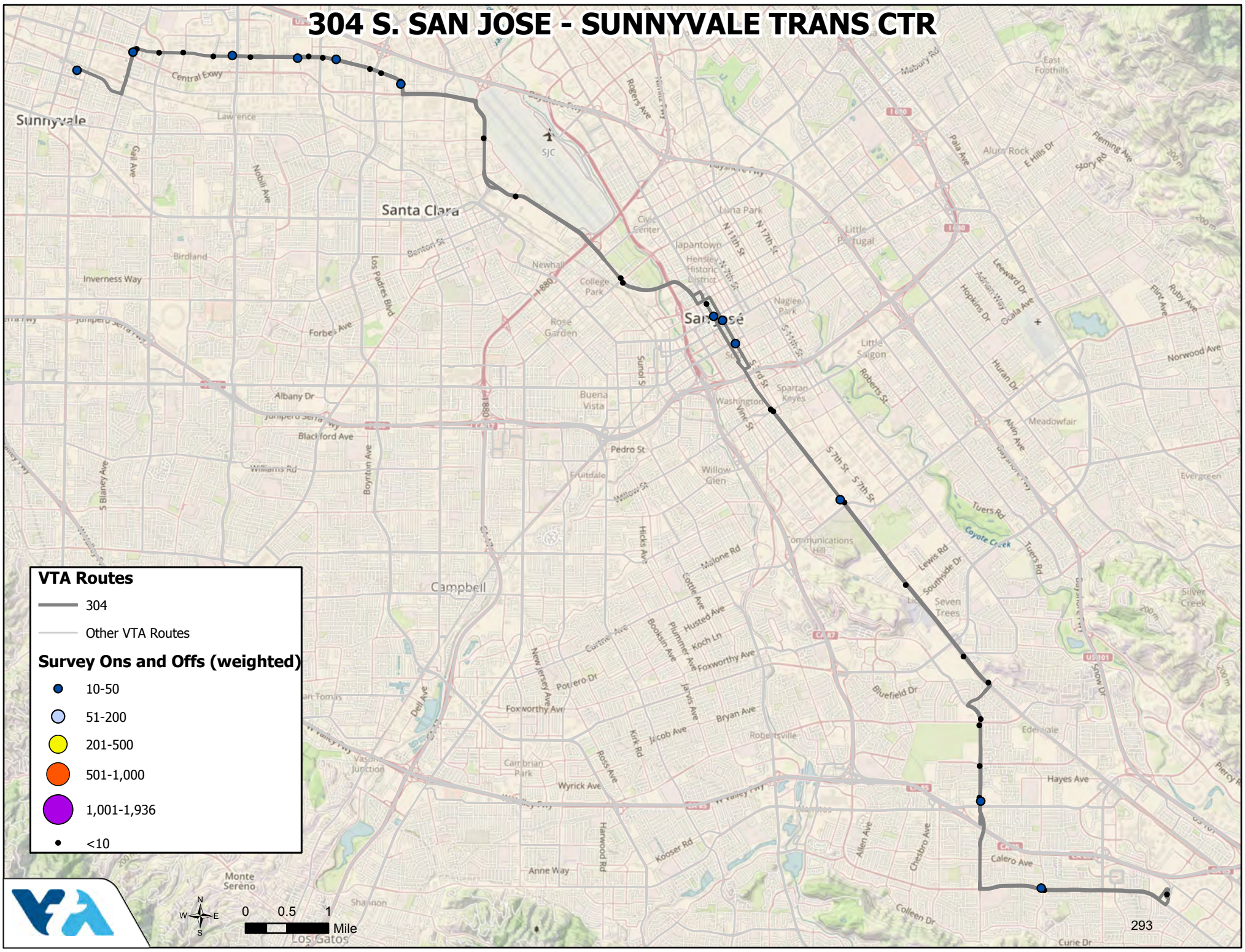
- 201
- Other VTA Routes

Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



304 S. SAN JOSE - SUNNYVALE TRANS CTR

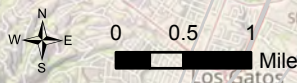


VTA Routes

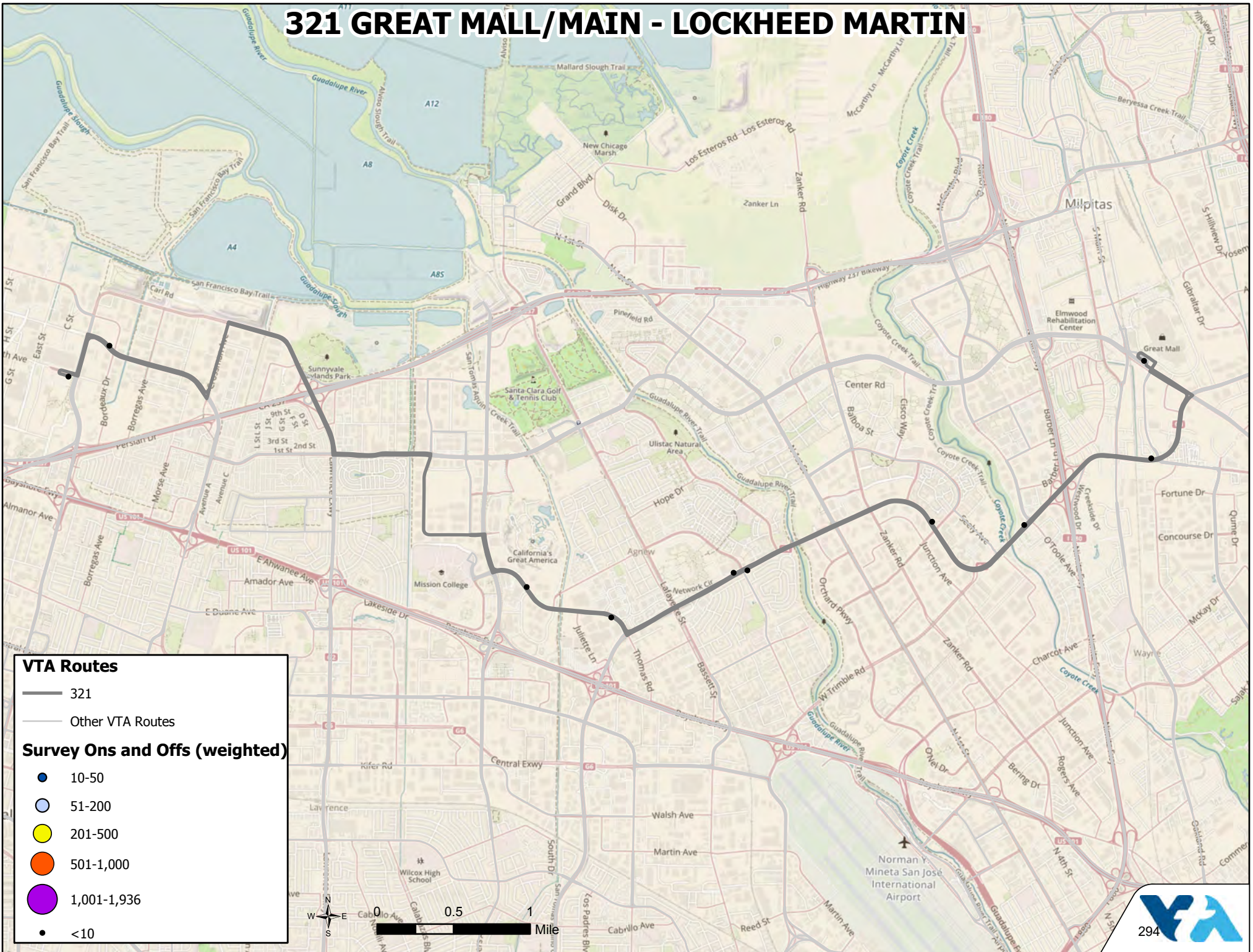
- 304
- Other VTA Routes

Survey Ons and Offs (weighted)

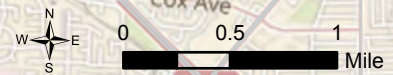
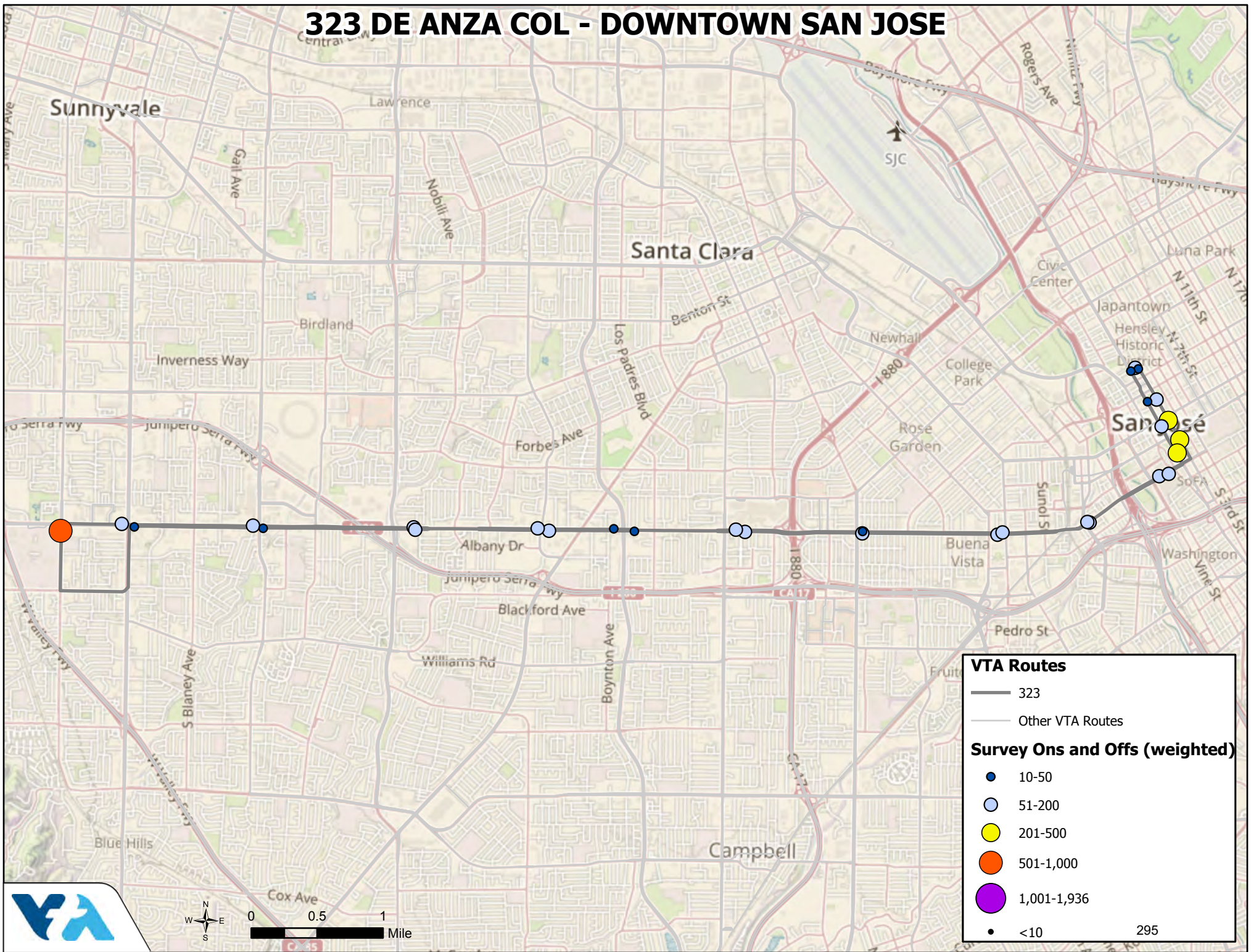
- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



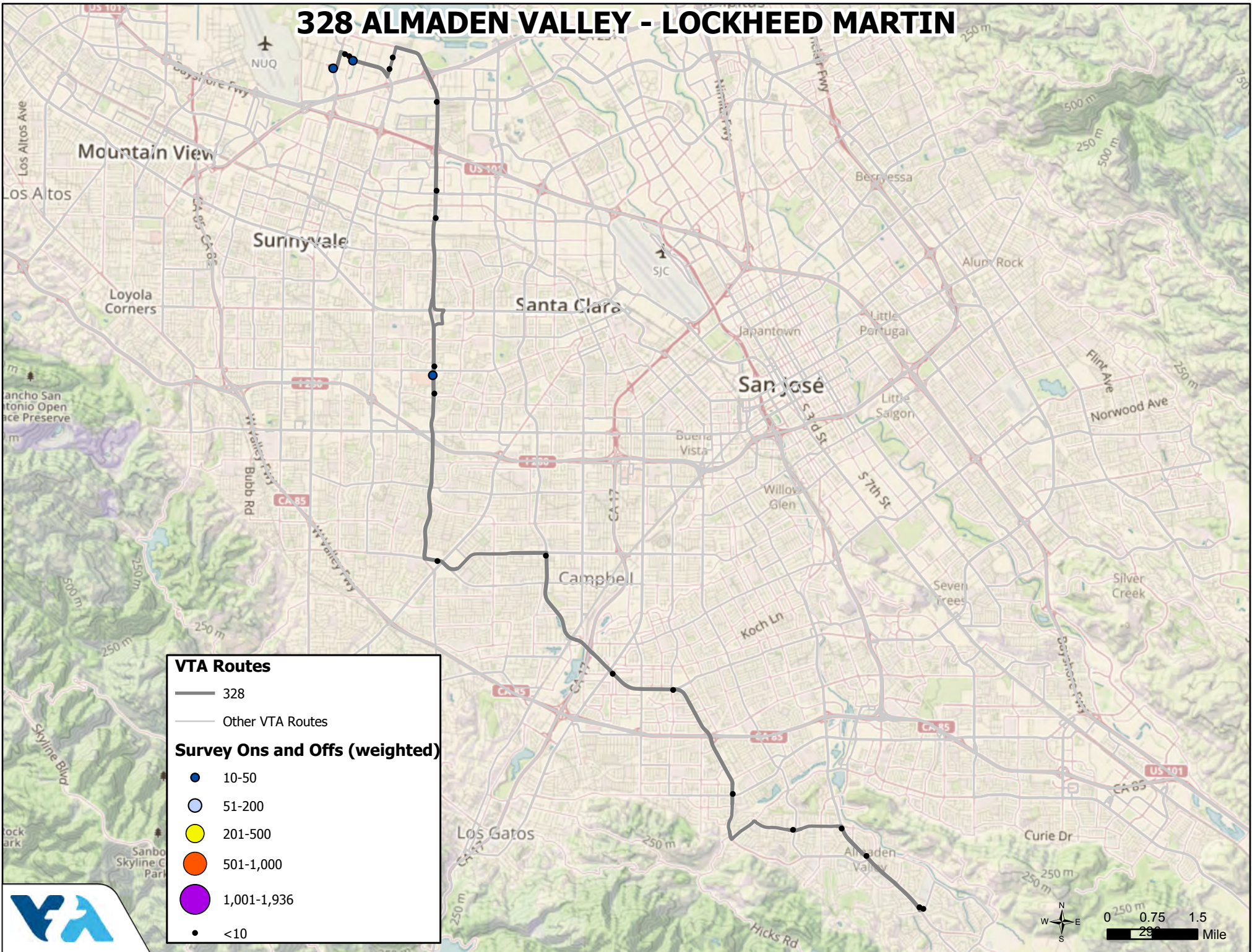
321 GREAT MALL/MAIN - LOCKHEED MARTIN



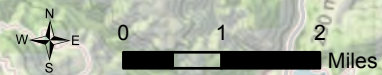
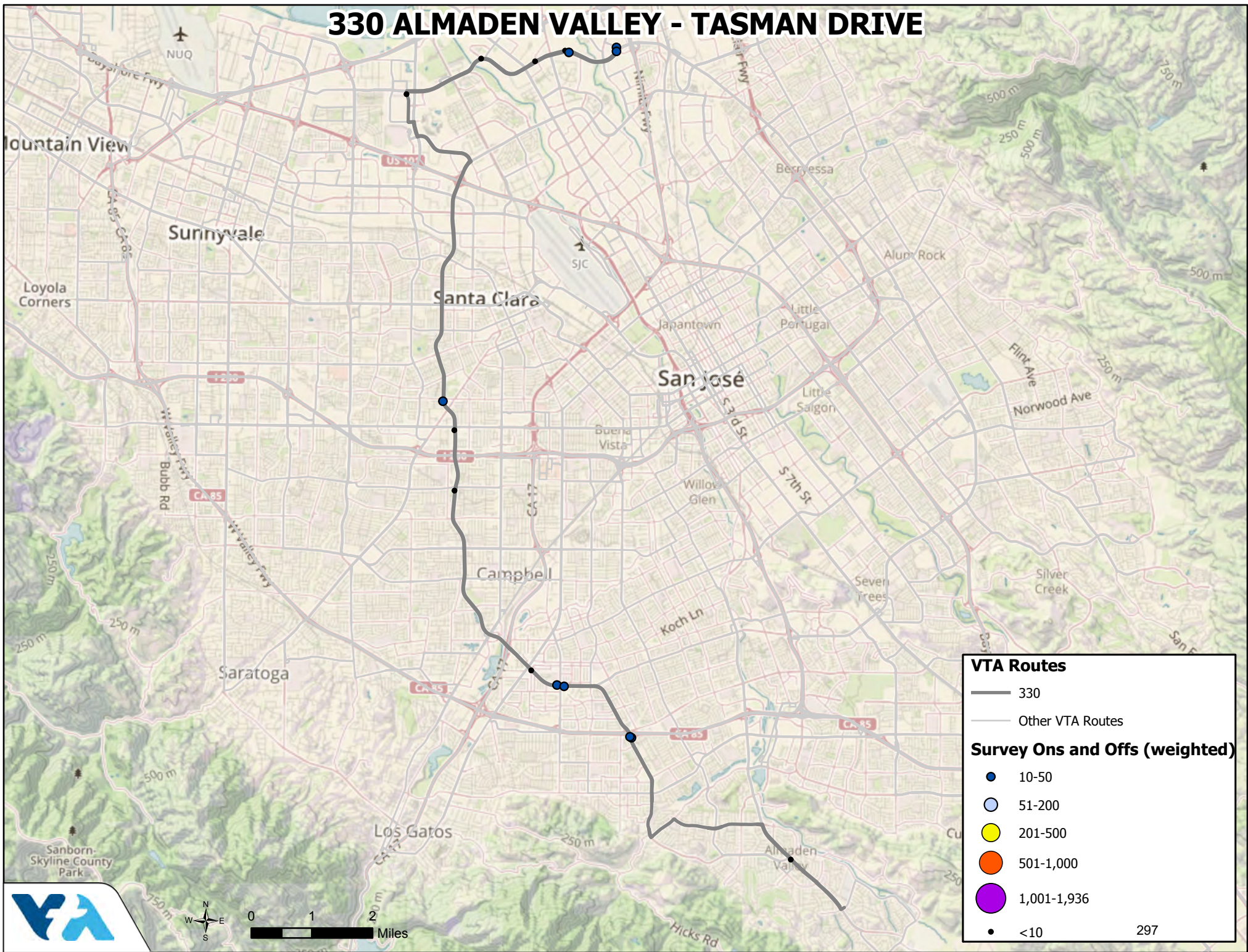
323 DE ANZA COL - DOWNTOWN SAN JOSE



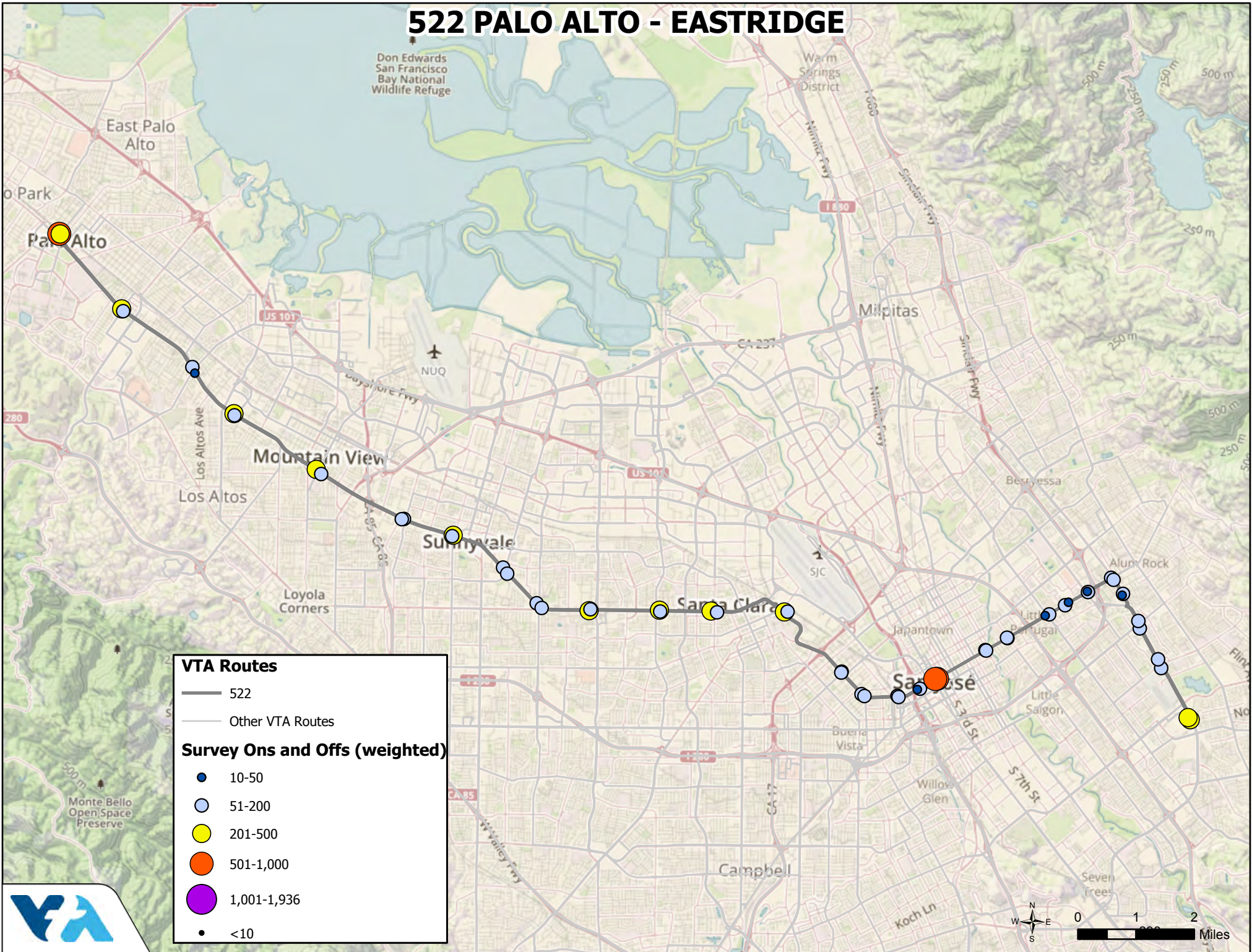
328 ALMADEN VALLEY - LOCKHEED MARTIN



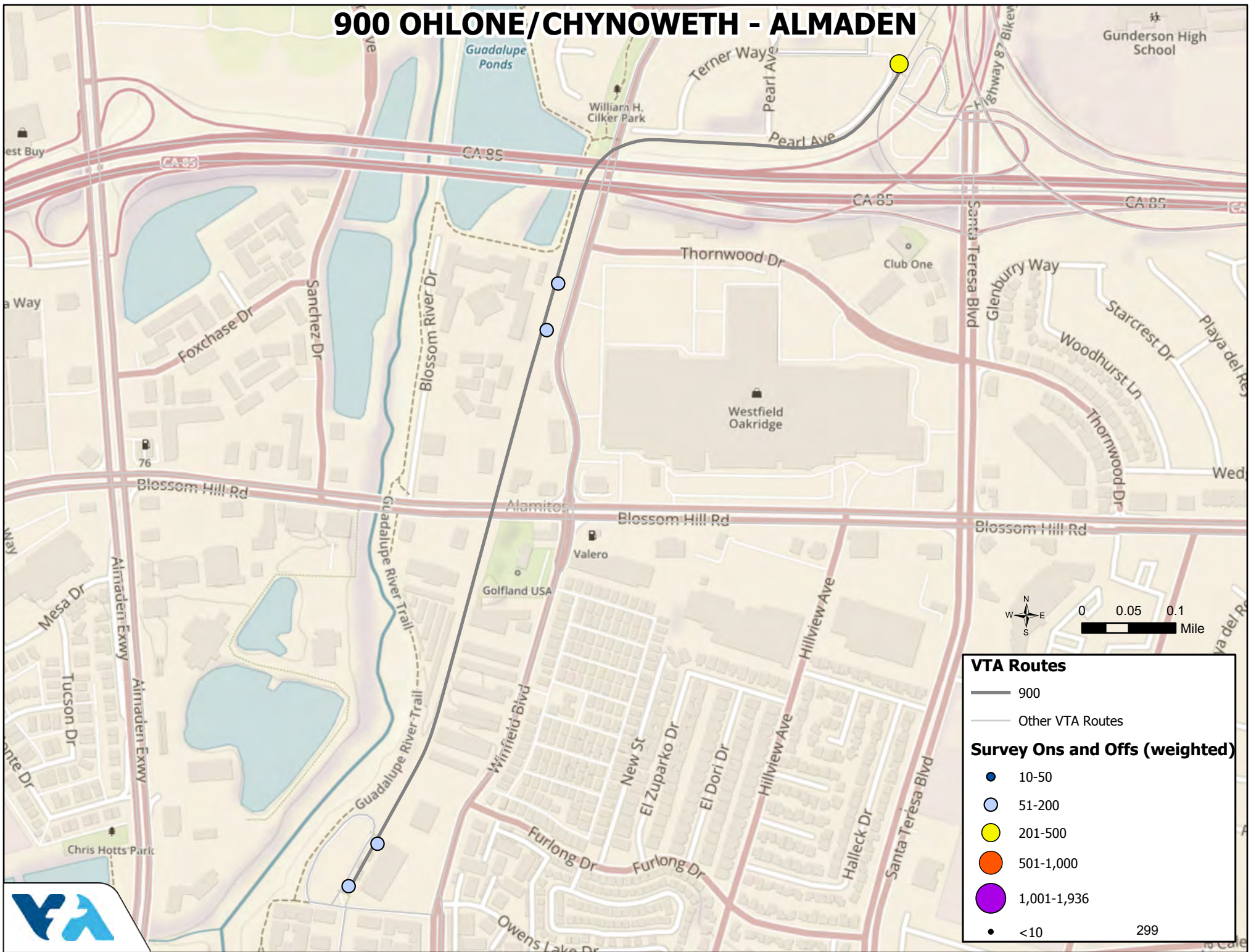
330 ALMADEN VALLEY - TASMAN DRIVE



522 PALO ALTO - EASTRIDGE



900 OHLONE/CHYNOWETH - ALMADEN



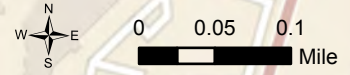
VTA Routes

- 900
- Other VTA Routes

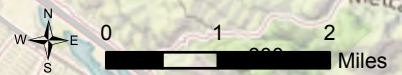
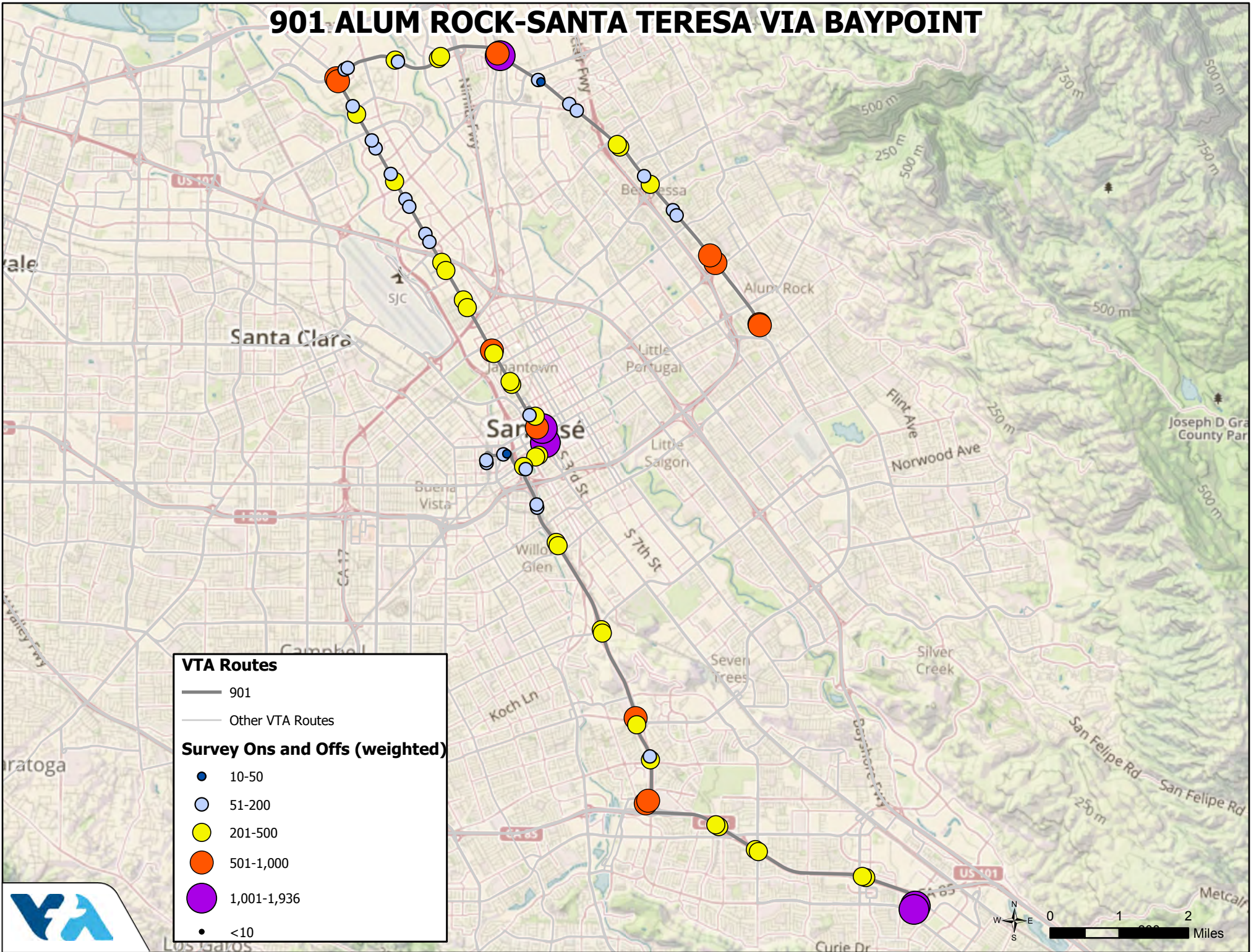
Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10

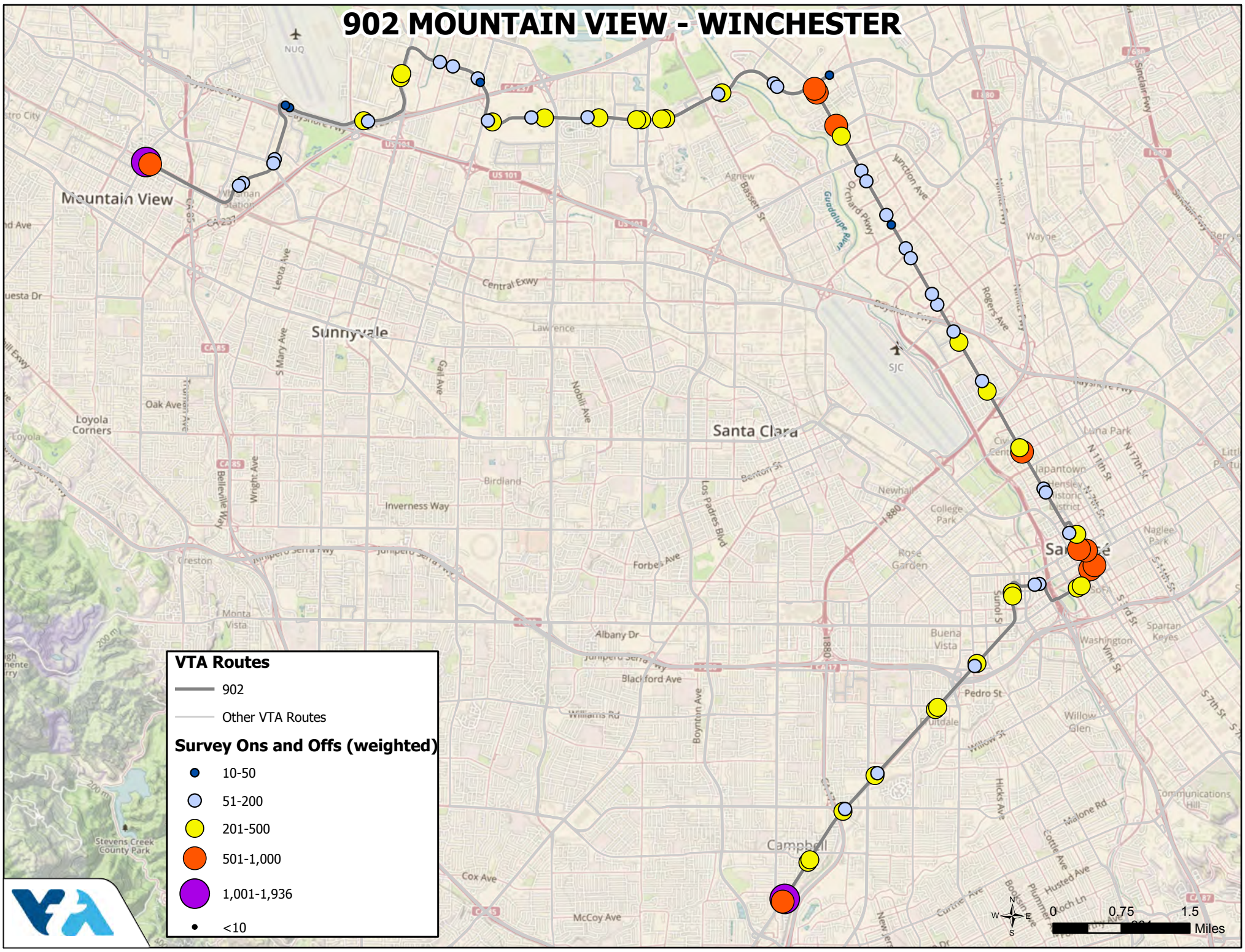
299



901 ALUM ROCK-SANTA TERESA VIA BAYPOINT



902 MOUNTAIN VIEW - WINCHESTER

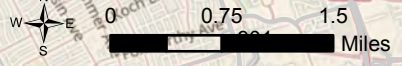


VTA Routes

- 902
- Other VTA Routes

Survey Ons and Offs (weighted)

- 10-50
- 51-200
- 201-500
- 501-1,000
- 1,001-1,936
- <10



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Section 16: Description of the Public Engagement Process for Setting the Major Service Change, Disparate Impact, and Disproportionate Burden Policies

The transit provider shall engage the public in the decision-making process to develop major service change, disparate impact, and disproportionate burden policies.

VTA Public Engagement Process

VTA obtained input from the public for the development of policies that will guide how we define and analyze the impacts of major service changes and fare changes on low-income and minority customers. VTA emailed proposed major service change, disparate impact and disproportionate burden policies to approximately 30 representatives from community-based organizations (CBOs) and transit advocates for their review and comment. Staff also gave presentations and teleconferenced with members of several organizations as well.

In response to comments made by the public, VTA made the following changes to its Major Service Change, Disparate Impact, and Disproportionate Burden Policies:

1. Changed the definition of a Major Service Change to Include:
 - “A series of changes on a single route which are included in the two-year Transit Service Plan and cumulatively meet any of the above criteria”;
 - “A system-wide change concurrently affecting 5 percent or more of the total system revenue hours”; and
 - Revised criteria for “proposed changes that are anticipated to be controversial” to clarify that the decision will be based upon public feedback.

2. Revised Disparate Impact and Disproportionate Burden policies to clarify which data sources are used for equity analyses, as follows: “Analyses shall be based on the most recent VTA passenger survey data, but may also use US Census data if survey data is inadequate or unavailable.”

Public Comments and Schedule:

- September 13-October 4, 2013: Comment Period
- September 13-October 28, 2013: Posted draft documents on VTA’s website for public comment
- September 10: Notified CBOs and advocates that VTA will ask for their input on the development of policies that require VTA to analyze the impacts of fare and major service changes on minority and low-income customers.
- September 13: Emailed proposed major service change, disparate impact, and disproportionate burden policies to CBOs and advocates
- September 18, 2013: Gave presentation at the Refugee and Immigrant Forum
- September 20, 2013: Gave presentation to community-based organization at VTA, River Oaks Administrative Offices.
- September 26, 2013: Emailed examples of fare and service change equity analyses and PowerPoint presentation of proposed policies in advance of teleconference

- October 2, 2013: Teleconferenced with transit advocates from the following organizations:
 - Public Advocates
 - Urban Habit
 - TransForm
 - The City Project

VTA received the following questions and comments during the public comment period:

1. How did VTA come up with a minority ridership of 70%?
2. The senior monthly pass is not shown in your fare equity analysis example.
3. How did you previously conduct a service equity analysis; is the analysis on-line?
4. What was the threshold before?
5. Based on past analyses, would the difference have been greater than 10%?
6. Has VTA considered lowering the fare to increase ridership?
7. How does this affect the Transit Assistance Program (TAP)?
8. If VTA decreases the age for senior passes from 65 years to 58 years, VTA will get more riders and more revenue because of the reduced fare.
9. Using the smaller community buses instead of the large buses might increase ridership because the smaller buses can maneuver through neighborhoods and senior communities better.
10. Consider trial bus service for 6 months to a year, especially in areas of Milpitas that do not currently receive bus service and around places of worship so that seniors can worship during the week.
11. The 10% threshold is okay.

See Joint Comment Letter on Next Three Pages as Exhibits 10A, 10B, and 10C.

Exhibit 9A: Joint Comment Letter on VTA Title VI Policies



October 7, 2013

Camille C. Williams
Accessible Services Program Manager
Title VI/LEP Project Manager
Employee Relations
Santa Clara Valley Transportation Authority (VTA)
SENT VIA E-MAIL: camille.williams@vta.org

Dear Ms. Williams:

The following comments are submitted by Public Advocates Inc., Urban Habitat, TransForm and The City Project in response to VTA's proposed Title VI policies and procedures governing major service changes and assessing disparate impacts/disproportionate burdens on minority and low-income populations. We appreciate the opportunity to give input to the VTA Board, and thank VTA staff for reaching out to us and meeting with us by phone on Wednesday, October 2, 2013.

A. Major Service Change Definition

1. The Major Service Change definition should account for cumulative service changes within a three-year period. Evaluating service changes implemented over multiple years allows VTA to identify significant impacts that may not be apparent when looking at each quarter in isolation. A service reduction of 25 percent in route miles or vehicle hours will have a significant impact on minority and low-income populations regardless of whether it is implemented in one quarter or as a result of multiple rounds of service cuts over 3-years. A multi-year horizon is important to ensure that the impacts of smaller service cuts implemented on a quarterly basis are evaluated as they accrue over time and become significant. In recognition of this concern, the Bay Area Rapid Transit District (BART) adopted a Major Service Change definition that accounts for cumulative changes over a 3-year period. We recommend that VTA do the same, and modify its definition as follows:

“A route change that impacts 25 percent or more of a line's route miles over a three-year period;

Span of service frequency changes affecting 25 percent or more of a line's revenue vehicle hours over a three-year period.”

Accounting for cumulative service changes is particularly important because a threshold of 25 percent for route changes per quarter is quite high and will not capture significant impacts of

Exhibit 9B: Joint Comment Letter on VTA Title VI Policies

Page 2 of 3

service changes that fall underneath it. For example, if a route is cut by 15% in Q1, 20% in Q2, 5% in Q3 and 10% in Q4, such changes will have a significant cumulative impact on minority and low-income populations (a total loss of 50% of service on a route in a year) but none of those cuts would be analyzed individually or as a whole under the proposed policy. Similarly, smaller service cuts over a period of several years could have significant and potentially discriminatory impacts but would not trigger an analysis unless VTA's policy accounts for cumulative service changes.

2. VTA's Major Service Change definition should address system-wide service changes. Like changes to individual lines or routes, across-the-board service changes can have an adverse impact on minority and low-income populations. In fact, changes to individual lines or routes that fall under the proposed 25 percent threshold can nevertheless have a significant impact when aggregated across VTA's entire system. Recognizing that system-wide changes must be evaluated, the San Francisco Municipal Transit Authority (SFMTA) and BART adopted Major Service Change thresholds that address aggregate changes across all lines. SFMTA, for example, recognizes an annual change in revenue hours of 5 percent or more across the system as a Major Service Change. VTA should modify its definition to include:

“A system-wide change in revenue hours or miles of five percent or more.”

3. VTA's Major Service Change definition should include the factors it will consider in determining whether or not a proposed service change is “anticipated to be controversial with a particular community or interested parties.” We support this flexible component of the policy and request that VTA expressly state in the definition the factors it will consider (e.g., complaints, passenger comments and concerns, etc.). We understand some of these judgments will necessarily be subjective and based on the agency's experience, but it is also important that the public know in advance how they can communicate to VTA staff whether or not a proposed change is anticipated to be controversial. Pursuant to its Public Participation Plan, VTA should continue its robust outreach to minority, Limited English Proficient (LEP) and low-income populations and partnerships with community-based organizations when considering service changes. Such sustained outreach encourages and facilitates engagement by those who might not otherwise have the means to express their concerns.

B. Disparate Impact Policy (DIP) and Disproportionate Burden Policy (DBP)

1. We recommend reassessing the proposed DIP and DBP thresholds every three years in order to ensure they are sufficiently sensitive to protect minority and low-income populations from adverse impacts.

2. We support VTA's proposal to assess service and fare change impacts by analyzing ridership data. By using ridership data (as opposed to Census data), the agency will be better able to assess who is actually impacted by changes in existing transit service. When providing new

Exhibit 9C: Joint Comment Letter on VTA Title VI Policies

Page 3 of 3

service to an area previously not serviced by any transit mode, we support the use of Census data until ridership data is collected for that new service.

3. We encourage VTA to pursue the development of robust ridership data by bolstering the results of its on-board survey with additional data gleaned through its community partnerships and effective outreach to minority, LEP and low-income populations. Such outreach will enhance VTA's ability to carry out meaningful service and fare equity analyses and adequately measure disparities.

4. VTA must ensure inter-modal equity. VTA's bus service likely carries a greater concentration of minority and low-income riders compared to its light rail service. This is also likely to be true with the new service BART will operate in Santa Clara County paid by VTA. If funding BART service operations causes VTA to funnel money away from its bus system, such a move could have an adverse impact on minority and low-income populations. As such, the service equity analyses should determine if major service changes in any mode VTA funds will adversely impact or come at the expense of other modes utilized by a disproportionate share of minority and low-income passengers. Such an analysis would help prevent the type of intermodal discrimination that led to the Title VI consent decree in the case against LA Metro in the 1990s.

Again, we appreciate the opportunity to submit these comments. Please feel free to contact any of the organizations below if you have any questions.

Sincerely,



Guillermo Mayer
Senior Staff Attorney
Public Advocates Inc.



Marybelle Nzegwu
Staff Attorney
Public Advocates Inc.



Bob Allen
Acting Executive Director
Urban Habitat



Clarrissa Cabansagan
Transportation Advocate
TransForm



Chris Lepe
Community Planner
TransForm



Robert Garcia
Founding Director & Counsel
The City Project



Ramya Sivasubramanian
Assistant Director & Counsel
The City Project



Daphne Hsu
Staff Attorney
The City Project

Exhibit 10: Service and Fare Change Policies
(PDF Inserted)

1.0 Purpose:

Title VI (codified at 42 U.S.C. §2000 et seq.) was enacted as part of the landmark Civil Rights Act of 1964. It prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

In order to comply with Federal Transit Administration’s (FTA) Title VI Circular 4702.1B and Environmental Justice Circular 4703.1 requirements, VTA is required to create and adopt Major Service Change, Disparate Impact, and Disproportionate Burden Policies. These policies are used during the planning process to evaluate the impact of major service and fare changes on minority and low income passengers.

In the development of these policies, VTA was also required to seek input from the community, including low-income, minority, and limited English proficient populations, which are traditionally under-represented in the transit decision-making process.

2.0 Scope:

These policies apply to all “major” service changes, and to all fare changes, regardless of magnitude, except as specifically defined herein.

3.0 Responsibilities:

All VTA employees are required to comply with federal and state Title VI and environmental justice laws, regulations, and administrative directives with regard to policies, projects, programs, services, and activities. The Title VI and Environmental Justice Procedures describe divisional and departmental responsibilities.

4.0 Policy:

In accordance with FTA Title VI requirements, VTA shall perform a Service or Fare Equity Analysis to evaluate the positive and negative impacts of all major service and fare changes on minority and low income passengers. The Major Service Change policy determines which proposed service changes require an Equity Analysis. The Disparate Impact and Disproportionate Burden policies contained provide guidance to staff in their analysis of the effects of the proposed changes. As previously noted, all fare changes proposals are subject to a Fare Equity Analysis.

VTA’s Board of Directors must approve the Major Service Change, Disparate Impact, and Disproportionate Burden policies before they can be incorporated into the Title VI Program and submitted to the FTA. Any future amendments to the policies are also subject to Board review.



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4.1 Major Service Change Policy

VTA implements service changes on a quarterly basis in January, April, July and October. Proposed “major” service changes must be submitted to the VTA Board of Directors for review and approval. For Title VI purposes, all “major” service changes will require a Service Equity Analysis.

The following modifications shall be considered “major” service changes:

- The establishment of a new transit line or service;
- The elimination of a transit line or service;
- A route change that impacts 25 percent or more of a line’s route miles;
- Span of service or frequency changes affecting 25 percent or more of a line’s revenue vehicle hours;
- A series of changes on a single route which are included in the two-year Transit Service Plan and cumulatively meet any of the above criteria;
- Proposed changes that are anticipated to be controversial with a particular community or interested parties based on public feedback; and
- A system-wide change concurrently affecting 5 percent or more of the total system revenue hours.

The following types of modifications are not classified as “major” service changes and shall not require Service Equity Analyses:

- Special event service;
- Routing changes due to construction or other road closures; and
- Special service operated during emergencies;

Service change proposals that do not meet the criteria for “major” service changes are still subject to an appropriate level of public review and comment.

4.2 Disparate Impact Policy

The Disparate Impact Policy establishes a threshold for determining if a given service or fare change would result in a fair distribution of positive and negative effects on minority passengers.

As defined by FTA Title VI Circular 4702.1B:

Disparate impact refers to a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists



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TITLE VI AND ENVIRONMENTAL JUSTICE POLICIES	POLICY	
	Document Number:	AS-HR-PL-2582
	Version Number:	01

one or more alternatives that would service the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.

The policy shall establish a threshold for determining when adverse effects of fare/service changes are borne disproportionately by minority populations. The disparate impact threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by minority populations compared to impacts borne by non-minority populations. The disparate impact threshold must be applied uniformly... and cannot be altered until the next Title VI Program submission.

For Service or Fare Equity Analyses conducted by VTA, a disparate impact threshold of 10 percent shall be used to determine if minority riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference between the aggregate impacts of the proposed change(s) on minority passengers and the aggregate impacts of the proposed change(s) on overall VTA ridership. Analyses shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

If VTA finds that a disparate impact exists, it shall analyze alternatives to determine if another alternative could serve the same legitimate objective with less of a disparate impact. If a less discriminatory alternative does not exist **and** VTA has substantial legitimate justification that cannot otherwise be accomplished, VTA shall mitigate the impact of the change on affected minority riders.

4.3 Disproportionate Burden Policy

The Disproportionate Burden Policy establishes a threshold for determining if a given service or fare change would result a fair distribution of positive and negative effects on low-income riders.

As defined by FTA Title VI Circular 4702.1B:

Disproportionate burden refers to a neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate where practicable.

The policy shall establish a threshold for determining when



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adverse effects of service or fare changes are borne disproportionately by low-income populations. The disproportionate burden threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by low-income populations as compared to impacts born by non-low-income populations. The disproportionate burden threshold must be applied uniformly... and cannot be altered until the next Title VI Program submission.

For Service or Fare Equity Analyses conducted by VTA, a disproportionate burden threshold of 10 percent shall be used to determine if low-income riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference in the aggregate impacts of the proposed change(s) on low-income passengers compared to the aggregate impacts of the proposed change(s) on overall VTA ridership. Analyses shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

If VTA finds that low-income populations will incur a disproportionate burden from a proposed service or fare change, VTA shall identify alternatives available to affected low-income riders and take steps to avoid, minimize, or mitigate impacts where practicable.

5.0 Definitions:

5.1 Environmental Justice

The overarching objective of environmental justice is a fair distribution of the benefits or burdens associated with Federal programs, policies, and activities.

5.2 Fare Change

An increase or decrease in a transit provider’s fare. All fare changes, except the following, are subject to a fare equity analysis:

- “Spare the air days” or other instances when a local municipality or transit agency has declared that all passengers ride free.
- Temporary fare reductions that are mitigating measures for other actions.
- Promotional fare reductions. If promotional or temporary fare reductions last longer than six months, then FTA considers the fare reduction permanent and the transit provider must conduct a fare equity analysis.

5.3 Limited English Proficient (LEP) persons

Refers to persons for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English. It includes people who



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<i>TITLE VI AND ENVIRONMENTAL JUSTICE POLICIES</i>	POLICY	
	Document Number:	AS-HR-PL-2582
	Version Number:	01

reported to the U.S. Census that they speak English less than very well, not well, or not at all.

5.4 Low-income Population

Refers to any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FTA program, policy, or activity.

5.5 Minority Population

Means a readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

5.6 National Origin

Means the particular nation in which a person was born, or where the person's parents or ancestors were born.

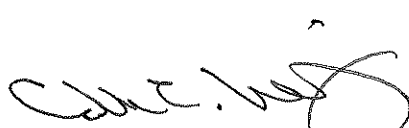
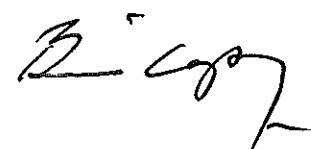
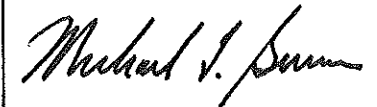
5.7 Title VI

Title VI of the Civil Rights Act of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participated in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

6.0 Summary of Changes:

Initial release of this policy. This policy was approved by the Board of Directors on November 7, 2013.

7.0 Approval Information:

<i>Prepared by</i>	<i>Reviewed by</i>	<i>Approved by</i>
 Camille Williams Title VI/LEP Project Manager	 Bill Lopez Chief Administrative Officer	 Michael T. Burns General Manager

11/19/13
Date Signed



Original Date:	Revision Date:	Page 5 of 5
11/7/2013	N/A	

Exhibit 11: Board Adoption of Major Service Change, Disparate Impact and Disproportionate Burden Policies

(PDF Inserted: November 7, 2013 Board of Director Minutes Pages 9-10 of 13)

Board Approval of Service and Fare Change Policies

From: [Baltao, Elaine](#)
To: [Board.Secretary;](#)
Subject: November 7, 2013 Board of Directors Meeting
Date: Friday, November 08, 2013 1:06:27 PM

The VTA Board of Directors met last night and took the following actions:

Removed from agenda: Item #3.4 – TAEA labor contract

Approved all remaining items on the Consent and Regular Agenda.

The Board of Directors adjourned the meeting in memory of VTA Employee, Anita Jacobson.

Office of the Board Secretary
Santa Clara Valley Transportation Authority
3331 N. First Street
San Jose, CA 95134
408.321.5680
board.secretary@vta.org



BOARD OF DIRECTORS MEETING

Thursday, November 7, 2013

5:30 PM

Board of Supervisors' Chambers
County Government Center
70 West Hedding Street
San Jose, CA 95110

****REVISED AGENDA****

To help you better understand, follow, and participate in the meeting, the following information is provided:

- Persons wishing to address the Board of Directors on any item on the agenda or not on the agenda should complete a blue card located at the public information table and hand it to the Board Secretary staff prior to the meeting or **before the item is heard**.
- Speakers will be called to address the Board when their agenda item(s) arise during the meeting and are asked to limit their comments to 2 minutes. The amount of time allocated to speakers may vary at the Chairperson's discretion depending on the number of speakers and length of the agenda. **If presenting handout materials, please provide 25 copies to the Board Secretary for distribution to the Board of Directors.**
- The Consent Agenda items may be voted on in one motion at the beginning of the meeting under Orders of the Day. If you wish to discuss any of these items, please request the item be removed from the Consent Agenda by completing a blue card at the public information table and handing it to the Board Secretary staff prior to Orders of the Day, Agenda Item #1.2.

***Changes from previous version:*


- *Agenda Item #7.7- 2014 STIP Program Adoption requires 2/3 vote*
- *Agenda language updated for Agenda Item #8.2 –Santa Clara Alum Rock Bus Rapid Transit Project- Civil and Station Improvements Contract, to reflect the recommended contractor and contract amount.*

- Disclosure of Campaign Contributions to Board Members (Government Code Section 84308)

In accordance with Government Code Section 84308, no VTA Board Member shall accept, solicit, or direct a contribution of more than \$250 from any party, or his or her agent, or from any participant, or his or her agent, while a proceeding involving a license, permit, or other entitlement for use is pending before the agency. Any Board Member who has received a contribution within the preceding 12 months in an amount of more than \$250 from a party or from any agent or participant shall disclose that fact on the record of the proceeding and shall not make, participate in making, or in any way attempt to use his or her official position to influence the decision.

A party to a proceeding before VTA shall disclose on the record of the proceeding any contribution in an amount of more than \$250 made within the preceding 12 months by the party, or his or her agent, to any Board Member. No party, or his or her agent, shall make a contribution of more than \$250 to any Board Member during the proceeding and for three months following the date a final decision is rendered by the agency in the proceeding. The foregoing statements are limited in their entirety by the provisions of Section 84308 and parties are urged to consult with their own legal counsel regarding the requirements of the law.

- All reports for items on the open meeting agenda are available for review in the Board Secretary's Office, 3331 North First Street, San Jose, California, (408) 321-5680, the Monday, Tuesday, and Wednesday prior to the meeting. This information is available on our website, www.vta.org, and also at the meeting. Any document distributed less than 72-hours prior to the meeting will also be made available to the public at the time of distribution. Copies of items provided by members of the public at the meeting will be made available following the meeting upon request.

In accordance with the Americans with Disabilities Act (ADA) and Title VI of the Civil Rights Act of 1964, VTA will make reasonable arrangements to ensure meaningful access to its meetings for persons who have disabilities and for persons with limited English proficiency who need translation and interpretation services. Individuals requiring ADA accommodations should notify the Board Secretary's Office at least 48-hours prior to the meeting. Individuals requiring language assistance should notify the Board Secretary's Office at least 72-hours prior to the meeting. The Board Secretary may be contacted at ☎(408) 321-5680 or ✉: board.secretary@vta.org or ☎ (408) 321-2330 (TTY only). VTA's home page is on the web at: www.vta.org or visit us on  Facebook at: www.facebook.com/scvta. ☎(408) 321-2300: 中文 / Español / 日本語 / 한국어 / tiếng Việt / Tagalog.

**NOTE: THE BOARD OF DIRECTORS MAY ACCEPT, REJECT OR MODIFY
ANY ACTION RECOMMENDED ON THIS AGENDA.**

[70 West Hedding St.](#), San Jose, California is served by bus lines *61, 62, 66, 181, and Light Rail. (*61 Southbound last trip is at 8:55 pm for this location.)

For trip planning information, contact our Customer Service Department at (408) 321-2300 between the hours of 6:00 a.m. to 7:00 p.m. Monday through Friday and 7:30 a.m. to 4:00 p.m. on Saturday. Schedule information is also available on our website, www.vta.org.

1. CALL TO ORDER AND ROLL CALL

- 1.1. ROLL CALL
- 1.2. Orders of the Day - approve Consent Agenda (Item #7)

2. AWARDS AND COMMENDATION

- 2.1. INFORMATION ITEM -Recognize Maria Luisa Sanchez-Ku, Human Resources Analyst, River Oaks Administration; Ronald Langston, Coach Operator, Chaboya Division; and Jose Hernandez, Senior Track Worker, Guadalupe Division, as Employees of the Month for November 2013.

3. CLOSED SESSION

- 3.1. Recess to Closed Session
 - A. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)
 - B. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Truck Rail Handling, Inc., et al. v. Santa Clara Valley Transportation Authority, et al.
(Alameda County Superior Court Case No.: RG12628077)
 - C. Anticipated Litigation - Conference with Legal Counsel
Initiation of litigation pursuant to Government Code Section 54956.9(c).

Number of potential cases: 1
Name of potential opposing party: Union Pacific
 - D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1
 - E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives
Bill Lopez, Chief Administrative Officer
Robert L. Escobar, Deputy Director, Administrative Services
Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

3.2. Reconvene to Open Session

3.3. Closed Session Report

3.4. ACTION ITEM - Approve and authorize the General Manager to execute the amended successor labor agreement negotiated between the Santa Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA), IFPTE, Local 21.

4. PUBLIC COMMENT

This portion of the meeting is reserved for persons desiring to address the Board of Directors on any item within the Board's jurisdiction. Speakers are **limited to 2 minutes**. The law does not permit Board action or extended discussion of any item not on the agenda except under special circumstances. If Board action is requested, the matter can be placed on a subsequent agenda. All statements that require a response will be referred to staff for reply in writing.

5. PUBLIC HEARINGS

There are no public hearings.

6. REPORTS

6.1. Citizens Advisory Committee (CAC) Chairperson's Report. (Verbal Report)
(Brownley)

6.2. Policy Advisory Committee (PAC) Chairperson's Report. (Verbal Report)
(Price)

6.3. General Manager Report. (Verbal Report)

6.3.A. INFORMATION ITEM -Receive Silicon Valley Rapid Transit (SVRT)
Program Update.

6.3.B. Receive updates regarding Metropolitan Transportation Commission
(MTC) and California Transportation Commission (CTC) activities.

6.4. Chairperson's Report. (Verbal Report)

7. CONSENT AGENDA

7.1. Approve the Board of Directors Workshop Meeting Minutes of
September 27, 2013.

- 7.2. Approve the Board of Directors Regular Meeting Minutes of October 3, 2013.
- 7.3. ACTION ITEM -Review and accept the Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the period ending June 30, 2013.
- 7.4. ACTION ITEM -Revise the VTA Permit Policy to authorize the General Manager to waive fees for parties making transit improvements for VTA and adopt a resolution amending the VTA Permit Fee Schedule, adjusting fees to be collected for Construction Access Permits and Restricted Access Permits to be consistent with the revision of VTA allocated rates.
- 7.5. ACTION ITEM -Adopt the 2013 VTA Congestion Management Program (CMP).
- 7.6. ACTION ITEM -Approve the allocation of \$5,460,000 of Local Program Reserve (LPR) to:
- | | |
|--|---------------|
| SR 680 Corridor Study | \$250,000 |
| I-280 Corridor Study | \$250,000 |
| I-280/Winchester Blvd Off-Ramp | \$250,000 |
| US 101 Auxiliary Lanes Project | \$260,000 and |
| SR 237, SR 85 and US 101 Express Lanes | \$4,450,000 |
- 7.7. ACTION ITEM -Adopt a resolution to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds.
- Note: Motion must be approved by at least 2/3 of the Board (8 members).**
- 7.8. ACTION ITEM -Authorize the General Manager to execute a contract with GECMS Inc. dba Gyeron Construction, the second lowest responsible bidder, in the amount of \$337,400 for the construction of Pedestrian Swing Gates Replacement, and relieve the low bidder of its obligation to perform the contract.
- 7.9. ACTION ITEM -Review and receive the Auditor General's internal audit report on Investment Program Controls.
- 7.10. ACTION ITEM -Approve the following Internal Audit Work Plans developed and recommended by the VTA Auditor General:
1. Fiscal Year (FY) 2014 for a maximum amount of \$358,800. This item replaces the Interim FY 2014 Internal Audit Work Plan approved by the Board on June 6, 2013 for a maximum amount of \$290,500.
 2. FY 2015 for a maximum amount of \$364,500.
- 7.11. ACTION ITEM -Review and receive the Auditor General's report on the Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment.

- 7.12. ACTION ITEM -Review and receive the Auditor General's report on the Sheriff's Office Contract Compliance Internal Audit.
- 7.13. INFORMATION ITEM -Review the Monthly Legislative History Matrix.
- 7.14. INFORMATION ITEM -Review VTA's adopted Sound Barrier Program.
- 7.15. INFORMATION ITEM -Receive a status update on implementation of the VTA Integrity Helpline.

8. REGULAR AGENDA

- 8.1. ACTION ITEM -Adopt the proposed Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies as mandated by Federal Transit Administration (FTA) Title VI guidelines.
- 8.2. ACTION ITEM -Authorize the General Manager to execute a contract with Goodfellow Top Grade, the lowest responsible bidder, in the amount of \$54,163,685 for the construction of the Santa Clara Alum Rock Bus Rapid Transit Project - Civil and Station Improvements.

9. OTHER ITEMS

- 9.1. ITEMS OF CONCERN AND REFERRAL TO ADMINISTRATION
- 9.2. Reports from VTA Committees, Joint Powers Boards (JPB), and Regional Commissions
 - 9.2.A. VTA Standing Committees
 - 9.2.B. VTA Advisory Committees
 - 9.2.C. VTA Policy Advisory Boards (PAB)
 - 9.2.D. Joint Powers Boards and Regional Commissions
- 9.3. Announcements

- 10. **ADJOURN** in memory of Anita Jacobson, former VTA Employee.
-

BOARD OF DIRECTORS MEETING

Thursday, November 7, 2013

MINUTES

1. CALL TO ORDER AND ROLL CALL

The Regular Meeting of the Santa Clara Valley Transportation Authority's (VTA) Board of Directors was called to order by Chairperson Pirzynski at 5:41 p.m. in the Board of Supervisors' Chambers, County Government Center, 70 West Hedding Street, San José, California.

1.1. ROLL CALL

Attendee Name	Title	Status
Margaret Abe-Koga	Board Member	Present
Xavier Campos	Board Member	Absent
Larry Carr	Alternate Board Member	Absent
Cindy Chavez	Board Member	Present
Jose Esteves	Board Member	Present
Rose Herrera	Board Member	Absent
Ash Kalra	Vice Chairperson	Present
Johnny Khamis	Alternate Board Member	Absent
Sam Liccardo	Board Member	Present
Jamie Matthews	Board Member	Absent
Chuck Page	Alternate Board Member	Absent
Joe Pirzynski	Chairperson	Present
Gail A. Price	Alternate Board Member	Absent
Donald Rocha	Board Member	Present
David Whittum	Alternate Board Member	Present
Perry Woodward	Board Member	Present
Ken Yeager	Board Member	Absent

* Alternates do not serve unless participating as a Member.

A quorum was not present and a Committee of the Whole was declared.

1.2. Orders of the Day

Chairperson Pirzynski, noted that the Agenda was revised to reflect the following: **Agenda Item #7.7:** 2014 Stated Transportation Improvement Program Adoption needs 2/3 vote; **Agenda Item #8.2:** Authorize the General Manager to execute a contract with the lowest responsible bidder for the Santa Clara Alum Rock Bus Rapid Transit Project- Civil and Station Improvements; and added **Addendum #3.1.E.X:** Conference with Real Property Negotiators.

Chairperson Pirzynski, noted that staff requested the following items be removed from Agenda: **Agenda Item #3.1.B:** Existing Litigation-Conference with Legal Counsel; **Agenda Item #3.1.C:** Anticipated Litigation-Conference with Legal Counsel; and **Agenda Item 3.4:** Labor Agreement negotiation between the Santa

Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA).

Chairperson Pirzynski, noted that the Board Meeting will adjourn in memory of Anita Jacobson.

Board Member Liccardo and Board Member Rocha arrived and took their seats at 5:44 p.m. and a quorum was established.

Public Comment

The following public citizens expressed support for Sound Wall barriers in the Capitol/680/Alum Rock area for noise reduction, safety of the community and safety of homes located close to the freeway.

- Alofa Talivaa
- Ulitafa Mariner

Board Member Kalra expressed support for soundwalls.

Board Member Esteves expressed his support for soundwalls but expressed concern that soundwalls along I-680 in the City of Milpitas should be completed first. Board Member Esteves noted he will oppose Agenda Items #7.6 and #7.7.

M/S/C (Woodward/Chavez) on a vote of 7 ayes, 1 no and 0 abstention to accept the Orders of the Day and approve the Consent Agenda. Board Member Esteves opposed Agenda Items #7.6 and #7.7. Motion for Agenda Item 7.7 failed.

M/S/C (Liccardo/Chavez) to reconsider Agenda Item #7.7.

Vice Chairperson Kalra recommended removing Agenda Item #7.7 from Consent Agenda and place it on the Regular Agenda.

On order of Chairperson Pirzynski and there being no objection, the Board of Directors removed Agenda Item 7.7 from the Consent Agenda and placed it on the Regular Agenda.

2. AWARDS AND COMMENDATION

2.1 Employees of the Month for October 2013

Chairperson Pirzynski recognized Maria Luisa Sanchez-Ku, Human Resources Analyst, River Oaks Administration; Ronald Langston, Coach Operator, Chaboya Division; Jose Hernandez, Senior Track Worker, Guadalupe Division.

NOTE: M/S/C MEANS MOTION SECONDED AND CARRIED AND, UNLESS OTHERWISE INDICATED, THE MOTION PASSED UNANIMOUSLY.

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3. CLOSED SESSION

Public Comment

The following VTA Employees and members of Transportation Authority Engineers and Architects Association (TAEA) addressed the Board of Directors and stressed the importance of realigning wages of TAEA members to attract and retain qualified employees. Members of TAEA commented that VTA Engineers make 12.5% under the average in salary compensation when compared to other counterparts at other local agencies and cities in the county.

- Harry Yip
- Franceen Weisert Anderson
- John Duesterhaus
- Bob Magliocco
- Manjit Singh Khalsa
- Kris Sabherwal
- Raj Sehdev
- Rachel Martinez

Board Member Abe Koga arrived and took her seat at 6:02 p.m.

3.1. **Recess to Closed Session at 6:11 p.m.**

A. Existing Litigation - Conference with Legal Counsel [Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

B. **(Removed from the Agenda)**

Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Truck Rail Handling, Inc., et al. v. Santa Clara Valley Transportation Authority, et al.
(Alameda County Superior Court Case No.: RG12628077)

C. **(Removed from the Agenda)**

Anticipated Litigation - Conference with Legal Counsel
Initiation of litigation pursuant to Government Code Section 54956.9(c).

Number of potential cases: 1
Name of potential opposing party: Union Pacific

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- D. Anticipated Litigation - Conference with Legal Counsel**
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

- E. Conference with Labor Negotiators**
[Government Code Section 54957.6]

VTA Designated Representatives

Bill Lopez, Chief Administrative Officer

Robert L. Escobar, Deputy Director, Administrative Services

Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

- 3.1.E.X Conference with Real Property Negotiators**
[Government Code Section 54956.8]

Property: Partial fee interest, permanent utility easements and a temporary construction easement on the property located at 3501 Tasman Drive in Santa Clara, California (APN: 104-49-029)

Agency Negotiator: Bijal Patel, Deputy Director, Property Development & Management

Negotiating Party: Michael Pelletier, Lake Marriott, LLC c/o Divco West

Under Negotiation: Price and terms of payment

- 3.2. Reconvened to Open Session at 7:40 p.m.**

- 3.3. Closed Session Report**

- A. Existing Litigation - Conference with Legal Counsel**
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

Robert Fabela, General Counsel, reported that no reportable action was taken during Closed Session.

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- D. Anticipated Litigation - Conference with Legal Counsel**
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

Mr. Fabela reported that no reportable action was taken during Closed Session.

- E. Conference with Labor Negotiators**
[Government Code Section 54957.6]

VTA Designated Representatives

Bill Lopez, Chief Administrative Officer
Robert L. Escobar, Deputy Director, Administrative Services
Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

Mr. Fabela reported that no reportable action was taken during Closed Session.

- 3.1.E.X Conference with Real Property Negotiators**
[Government Code Section 54956.8]

Property: Partial fee interest, permanent utility easements and a temporary construction easement on the property located at 3501 Tasman Drive in Santa Clara, California (APN: 104-49-029)

Agency Negotiator: Bijal Patel, Deputy Director, Property Development & Management

Negotiating Party: Michael Pelletier, Lake Marriott, LLC c/o Divco West

Under Negotiation: Price and terms of payment

Robert Fabela reported that no reportable action was taken during Closed Session.

3.4 (Removed from the Agenda)

ACTION ITEM - Approve and authorize the General Manager to execute the amended successor labor agreement negotiated between the Santa Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA), IFPTE, Local 21.

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4. PUBLIC COMMENT

Ron Roberts, VTA employee and member of Service Employees International Union (SEIU) provided a brief overview of the handout that was distributed to all Board members.

Bill Hawthorne, Interested Citizen, expressed concern about VTA liability due to projects related to BART.

Marc DeLong, VTA Employee and TAEA member addressed the Board of Directors and stressed the importance of realigning wages of TAEA members to attract and retain qualified employees.

5. PUBLIC HEARINGS

There are no public hearings.

6. REPORTS

6.1. Citizens Advisory Committee (CAC) Chairperson's Report

Clinton Brownley provided a verbal report that highlighted the October 9, 2013 Citizens Advisory Committee meeting: 1) Caltrain Budget and Ridership Update; 2) Local Program Reserve Programming Actions; and 3) Adoption of VTA Title VI Policies and Standards.

6.2. Policy Advisory Committee (PAC) Chairperson's Report

A written report was provided and distributed to the Board Members.

6.3. General Manager's Report

Michael Burns, General Manager, provided a report highlighting the following: 1) Average weekday Ridership; and 2) VTA Hispanic Heritage Celebration on October 31, 2103.

6.3.A Silicon Valley Rapid Transit (SVRT) Program Update

Carolyn Gonot, Chief SVRT Program Officer, distributed a presentation entitled, "Bart Silicon Valley Update," highlighting: 1) Current Project Activities Fremont; 2) Current Project Activities Milpitas; 3) Current Project Activities San Jose; 4) Design-Build Parking Structures Contract & Parking Technology Procurement; and 5) Residential Noise Insulation Program (RNIP) Update and Next Steps.

6.3.B. Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) updates.

There were no reports from the Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) Activities.

On order of Chairperson Pirzynski and there being no objection to receive the General Manager's Report

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6.4. Chairperson's Report

Chairperson Pirzynski noted Michael Hursh, Chief Operating Officer, will provide a brief presentation on VTA Rail Safety.

Mr. Hursh provided a presentation entitled, "VTA Roadway Worker Protection," highlighting: 1) Track Access – Program Elements; 2) Light Rail Operator Training; 3) Work Zones; 4) Accessing the right of way; 5) VTA Compliance; 6) On Board Cameras; 7) Pocket Guides; and 8) Summary. Mr. Hursh noted advanced warning signs are going to be installed when trains are going at high speeds. Mr. Hursh added that the Board meeting will also adjourn in memoriam of the BART employees who passed away last month.

Chairperson Pirzynski noted the 2014 Chair & Vice Chair Election will be held during the December 2013 meeting. Chair Pirzynski noted that Board Member Kalra submitted a letter showing interest as the Chairperson for 2014 while Board Member Woodward and Alternate Board Member Price submitted letters showing interest as the Vice Chair for 2014. These letters are available on the dais.

Chairperson Pirzynski noted that the 2014 Board of Directors Meeting schedule is provide and advised all members to review.

7. CONSENT AGENDA

7.1. Board of Directors Workshop Meeting Minutes of September 27, 2013

M/S/C (Woodward/Chavez) to approve the Board of Directors Workshop Meeting Minutes of September 27, 2013.

7.2. Board of Directors Workshop Regular Minutes of October 3, 2013

M/S/C (Woodward/Chavez) to approve the Board of Directors Regular Meeting Minutes of October 3, 2013.

7.3. Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the Period Ending June 30, 2013

M/S/C (Woodward/Chavez) to review and accept the Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the period ending June 30, 2013.

7.4. VTA Permit Fee Schedule Revisions

M/S/C (Woodward/Chavez) to revise the VTA Permit Policy to authorize the General Manager to waive fees for parties making transit improvements for VTA and adopt **Resolution No. 2013.11.24** amending the VTA Permit Fee Schedule, adjusting fees to be collected for Construction Access Permits and Restricted Access Permits to be consistent with the revision of VTA allocated rates.

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7.5. Adopt the 2013 VTA Congestion Management Program (CMP)

M/S/C (Woodward/Chavez) to adopt the 2013 VTA Congestion Management Program (CMP).

7.6. Local Program Reserve Programming Actions

M/S/C (Woodward/Chavez) to approve the allocation of \$5,460,000 of Local Program Reserve (LPR) to:

SR 680 Corridor Study	\$250,000
I-280 Corridor Study	\$250,000
I-280/Winchester Blvd Off-Ramp	\$250,000
US 101 Auxiliary Lanes Project	\$260,000
SR 237, SR 85 and US 101 Express Lanes	\$4,450,000

7.7. (Removed from the Consent Agenda and placed on the Regular Agenda)

Adopt a resolution to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds.

7.8. Pedestrian Swing Gates Replacement

M/S/C (Woodward/Chavez) to authorize the General Manager to execute a contract with GECMS Inc. dba Gyeron Construction, the second lowest responsible bidder, in the amount of \$337,400 for the construction of Pedestrian Swing Gates Replacement, and relieve the low bidder of its obligation to perform the contract.

7.9. Investment Program Controls Internal Audit

M/S/C (Woodward/Chavez) to review and receive the Auditor General's internal audit report on Investment Program Controls.

7.10. Auditor General Recommended FY 2014 & FY 2015 Internal Audit Work Plans

M/S/C (Woodward/Chavez) to approve the following Internal Audit Work Plans developed and recommended by the VTA Auditor General:

1. Fiscal Year (FY) 2014 for a maximum amount of \$358,800. This item replaces the Interim FY 2014 Internal Audit Work Plan approved by the Board on June 6, 2013 for a maximum amount of \$290,500.
2. FY 2015 for a maximum amount of \$364,500.

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7.11. Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment

M/S/C (Woodward/Chavez) to review and receive the Auditor General's report on the Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment.

7.12. Sheriff's Office Contract Compliance Internal Audit

M/S/C (Woodward/Chavez) to review and receive the Auditor General's report on the Sheriff's Office Contract Compliance Internal Audit.

7.13. Monthly Legislative History Matrix

M/S/C (Woodward/Chavez) to review the Monthly Legislative History Matrix.

7.14. VTA Noise Barrier Program

M/S/C (Woodward/Chavez) to review VTA's adopted Sound Barrier Program.

7.15. VTA Integrity Helpline Program Status Update

M/S/C (Woodward/Chavez) to receive a status update on implementation of the VTA Integrity Helpline.

8. REGULAR AGENDA

8.1. Adoption of VTA Title VI Policies and Standards

Michael Burns, General Manager, noted that the Title VI policies are a continuation of comprehensive discussions that began at the Board of Directors Workshop and continued throughout VTA's various committee meetings. Mr. Burns noted the Title VI policies are required and mandated by Federal Transit Administration (FTA). Mr. Burns stated Sylvester Fadal, Human Resources Manager, will review the following: Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies.

Mr. Fadal reviewed the Title VI presentation included in the agenda packet. He referenced Slide 5 – Public Engagement, and noted that staff conducted extensive outreach including community meetings and presentations to the organizations and stakeholders within the area where VTA service is provided. The feedback gathered through this outreach process was considered in the policies being presented for approval.

Mr. Fadal stated the Disparate Impact Policy is designed to address the effects that fare or major service changes have on minority populations, which VTA has always done. The proposed Disparate Impact Policy documents the processes and the application of a threshold that is used when analyzing proposed fare or major service changes.

The Disproportionate Burden Policy is similar to the Disparate Impact Policy but focuses on the effects that fare and major services changes have on low-income populations. The same 10 percent threshold is applied to determine if the low-income riders are more negatively affected or less positively affected by the proposed change than VTA riders as a whole.

Mr. Fadal referred to slide 14 - Service Equity Analysis example, which presents a graphic layout of how VTA conducts equity analysis for proposed major services changes to determine if disparate impacts to minority riders exist. An equity analysis is conducted for proposed major services changes whether the changes are a reduction or an improvement of service. When analyzing changes for disparate impacts, VTA evaluates the impact of those changes to minority riders compared to the overall ridership. If the impacts are significant and higher than the set threshold, VTA will make every effort to mitigate those impacts and address the needs of the community.

The System-Wide Service Standards & Policies are used to track, monitor, and evaluate VTA's service performance to prohibit discrimination on the basis of race, color, or national origin. Critical areas that are evaluated include: peak load factors, headways, on-time performance, service availability, and ridership productivity. Mr. Fadal noted that this policy ensures that VTA services and resources are distributed equitably.

Board Member Chavez recommended that in future reports regarding service related changes, staff should indicate Title VI policies compliance and the benchmarks used.

Mr. Burns noted that in general, transit agencies note that but it is not as prominent. If the policies discussed are adopted by the Board, the future reports would prominently outline the analysis and the compliance to the policies and regulations.

Upon inquiry of Board Member Chavez, Mr. Burns responded that when VTA conducted the Comprehensive Operations Analysis, staff studied and evaluated each route in the system and made appropriate changes. When the services were rebalanced, the analysis showed that VTA provided more services to transit dependent and lower-income neighborhoods.

Alternate Board Member Whittum, inquired about the specific bus change in January 2008 in the City of Sunnyvale. Staff noted the inquiry and stated a response will be prepared.

M/S/C (Chavez/Woodward) to adopt the proposed Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies as mandated by Federal Transit Administration (FTA) Title VI guidelines.

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7.7. 2014 STIP Program Adoption

John Ristow, Chief CMA Officer presented a brief overview of the staff report.

Public Comment

Art Calderon, Interested Citizen, expressed support for Sound Wall barriers in the Capitol/680/Alum Rock area for safety of the community and safety of homes located close to the area.

Board Member Esteves expressed his opposition to Agenda Item #7.7.

M/S/C (**Liccardo/Kalra**) on a vote of 8 ayes, 1 no and 0 abstention to adopt **Resolution No. 2013.11.25** to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds. Board Member Esteves opposed.

Board Member Kalra left his seat at 8: 27 pm.

8.2. Santa Clara Alum Rock Bus Rapid Transit Project – Civil and Station Improvements Contract

Mark Robinson, Chief Engineering & Construction Officer, presented a brief overview of the staff report.

Public Comment

Paul Cianciarulo, Graniterock Company, expressed opposition to awarding the Santa Clara – Alum Rock Bus Rapid Transit Bid Project to Goodfellow Top Grade Construction.

Brian Gates, Goodfellow Top Grade Construction, expressed his thanks and appreciation to VTA Staff and the Board of Directors. Mr. Gates commended VTA Staff for the professionalism that was carried out through the process.

M/S/C (**Chavez/ Woodward**) to authorize the General Manager to execute a contract with Goodfellow Top Grade, the lowest responsible bidder, in the amount of \$54,163,685 for the construction of the Santa Clara Alum Rock Bus Rapid Transit Project - Civil and Station Improvements.

9. OTHER ITEMS

9.1. ITEMS OF CONCERN AND REFERRAL TO ADMINISTRATION

There were no Items of Concern and Referral to Administration.

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9.2. Reports from VTA Committees, Joint Powers Boards (JPB), and Regional Commissions.

9.2.A. VTA Standing Committees

- Committee of the Whole (COW) – October 17, 2013, Minutes as contained in the Agenda Packet.
- Administration and Finance Committee (A&F) – There was no report.
- Congestion Management Program and Planning Committee (CMPP) – There was no report.
- Transit Planning and Operations Committee (TP&O) – There was no report.
- Audit Committee – There was no report.
- Silicon Valley Rapid Transit Program Working Committee – There was no report.

9.2.B. VTA Advisory Committees

- Committee for Transit Accessibility (CTA) – October 9, 2013, Minutes as contained in the Agenda Packet.
- Citizens Advisory Committee (CAC) and 2000 Measure A Citizens Watchdog Committee (CWC) – October 9, 2013, Minutes as contained in the Agenda Packet.
- Bicycle & Pedestrian Advisory Committee (BPAC) – There was no report.
- Technical Advisory Committee (TAC) – There was no report.
- Policy Advisory Committee (PAC) – October 10, 2013, Minutes as contained in the Agenda Packet.

9.2.C. VTA Policy Advisory Boards (PAB)

- Diridon Station Joint Policy Advisory Board - There was no report.
- Downtown East Valley PAB - There was no report.
- El Camino Real Rapid Transit PAB - There was no report.
- Silicon Valley Rapid Transit Corridor and BART Warm Springs Extension PAB - There was no report.

9.2.D. Joint Powers Boards and Regional Commissions

- Peninsula Corridor JPB – November 7, 2013, Summary Notes were accepted as contained on the dais.
- Capitol Corridor JPB – There was no report.
- Dumbarton Rail Corridor Policy Committee - There was no report.
- Metropolitan Transportation Commission (MTC) – October 23, 2013, Summary Notes were accepted as contained on the dais.
- Sunol Smart Carpool Lane Joint Powers Authority - There was no report.
- SR 152 Mobility Partnership - There was no report.

9.3. ANNOUNCEMENTS

Board Member Rocha expressed his thanks to Michael Burns, General Manager and Jim Lawson, Executive Policy Advisor for addressing a referral submitted in a timely manner.

10. ADJOURNMENT

On order of Chairperson Pirzynski and there being no objection, the meeting was adjourned in memory of Anita Jacobson, Laurence Daniels, and David Sheppard at 8:35 p.m.

Respectfully submitted,



Theadora Travers, Board Assistant
VTA Office of the Board Secretary

I certify that the foregoing instrument
is a true and exact copy of the original
on file in the Secretary of the Board of
Director's office.


Date 12/17/13

Section 17: Results of Service and/or Fare Equity Analyses

Transit agencies are required to conduct equity analyses for major service changes and fare changes to ensure that those changes do not result in disparate impacts to minority riders or a disproportionate burden on low-income riders. Transit agencies shall submit the results of any major service change and/or fare equity analyses conducted since the submission of its last Title VI Program. Agencies shall also submit documentation such as a board resolution, copy of meeting minutes, or similar documentation with the Title VI Program as evidence of the board or governing entity or official's consideration, awareness, and approval of the analysis.

Major Service Change Equity Analyses

The 2019 New Transit Service Plan (TSP), attached as Exhibit 12, is a complete redesign of VTA's transit system. It is a modification of the Board-adopted 2017 Next Network transit service plan. The Title VI Service Equity Analysis is included as part of the TSP in Exhibit 12. The Plan was adopted by VTA's Board of Directors on May 2, 2019. A certified copy of the Board of Directors' meeting minutes showing adoption of the major service changes is included as Exhibit 12.

The 2017 Next Network Final Plan, attached as Exhibit 12A, is the original plan that redesigned VTA's transit network in order to connect to BART at the Milpitas and Berryessa Transit Stations. The redesign is intended to increase overall ridership and improve cost-effectiveness. Due to the enormity of the redesign, VTA initiated a community-based planning process, known as Next Network in early 2016. A certified copy of the Board of Directors' meeting minutes showing the adoption of the Next Network Final Plan and its Service Equity Analysis is included as Exhibit 12A.

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ÁÁthe June 1, 2017 VTA Board of Directors meeting, the Board adopted a resolution to increase fares for VTA bus, light rail, and ADA complementary paratransit services effective January 1, 2019. A certified copy of the Board of Directors' meeting { ^ { [and Fare Equity Analysis is attached and included as Exhibit FI .

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Exhibit 12: Board Adoption of 2019 Transit Service Plan
(PDF Inserted Below)



Date: April 23, 2019
Current Meeting: May 2, 2019
Board Meeting: May 2, 2019

BOARD MEMORANDUM

TO: Santa Clara Valley Transportation Authority
Board of Directors

THROUGH: General Manager, Nuria I. Fernandez

FROM: Director - Planning & Programming, Chris Augenstein,
Chief Operating Officer, Inez Evans

SUBJECT: 2019 New Transit Service Plan

APPROVED ACCEPTED ADOPTED AMENDED DEFERRED REVIEWED *
Santa Clara Valley Transportation Authority
Board of Directors
Elaine F. Baltao, Board Secretary
BY: Elaine F. Baltao
DATE: 5/2/19

Policy-Related Action: Yes **Government Code Section 84308 Applies: No**

ACTION ITEM

RECOMMENDATION:

Adopt the final 2019 New Transit Service Plan for implementation in late 2019 coincident with the opening of the BART extension to Berryessa.

BACKGROUND:

At its December 2018 meeting, the VTA Board directed staff to revise the 2017 Next Network transit service plan based on recommendations from the Ad Hoc Financial Stability Committee. Per VTA's Transit Service Guidelines and the Title VI Major Service Change policy, all major service changes must be developed as part of a comprehensive service plan development process. This process must include engagement with the community, an analysis of ADA paratransit impacts, a CEQA environmental analysis, and a Title VI service equity analysis.

Working within a very short timeline to develop and implement a new service plan to coincide with the expected opening of BART service at Milpitas and Berryessa, the process needed to move very quickly with no margin for delay. As a first step, staff immediately developed a draft service plan that was presented to the Board and discussed with the community throughout January and February 2019. Following further analysis, extensive engagement and input from the community, an analysis of ADA paratransit impacts, a CEQA environmental analysis, and a Title VI service equity analysis, staff has revised the draft plan into this final recommended service plan, called the 2019 New Transit Service Plan.

* See Page 14X of 14X for motion approved by the VTA Board of Directors at their May 2, 2019, Regular Meeting.

DISCUSSION:

This 2019 New Transit Service Plan is a modification of the Board-adopted 2017 Next Network transit service plan. In addition to the plan's original goals of better connecting VTA transit with the Milpitas and Berryessa BART stations, increasing overall system ridership, and improving VTA's farebox recovery rate, this new plan adds three new parameters set by the Board of Directors:

1. Reduce the plan's overall service level equal to today's service level (the Next Network plan would have incurred a \$14.7M increase in annual net operating costs over today).
2. Adjust the network's ridership/coverage balance to 90% ridership and 10% coverage.
3. Minimize service cuts in South County.

As with the draft version, the final plan presented here meets all three of these new parameters.

Community Engagement

During January and February, staff conducted an extensive community engagement effort to gather feedback on the draft plan. The effort included:

- Six VTA-hosted community meetings
- YouTube live virtual meeting, subsequently available as a recorded webinar
- Presentations at 26 community-hosted public and organization meetings (Attachment A)
- vta.org blog posts on hot topics, each with commentary discussion
- Email blasts to transit subscribers
- Multilingual flyers onboard buses and trains
- Multilingual advertisements in local publications (*Viet Nam Daily*, *Philippines Today*, *Sing Tao*, *Korea 24 News Media*, *El Observador*, *San Jose Mercury News*)
- A multilingual dedicated website for details on the plan and for feedback submission

The engagement effort was considerably accelerated due to the short timeline of the project but was a big success as staff were able to engage with thousands of riders and residents to hear their concerns and ideas. Staff received 1,520 comments and suggestions via email and from direct in-person conversations, 6,400 engagements on Twitter, 1,500 engagements on Facebook, 50 engagements on LinkedIn, 130 engagements on Nextdoor, 1,200 engagements on Instagram, and several thousand views of vta.org features on the plan. In addition, VTA received official letters from the Cambrian Community Council, the Cupertino Union School District, the Fremont Unified School District, the City of Los Altos, the City of Morgan Hill, the City of Palo Alto, the Veterans Administration, and the City of Saratoga & West Valley College (see Attachment H). The feedback was helpful to staff to better understand the community's concerns.

The feedback spanned a range of topics related to the proposed changes, but as expected was comprised overwhelmingly of objections to proposed cuts on some routes. The overwhelming majority of all the comments received can be grouped into five topical areas:

1. The proposed discontinuation of **Route 22 trips between 1 and 4 am**
2. The proposed shortening of the **Blue Line** from Alum Rock to Baypointe Station

3. The proposed discontinuation of Route 83 in **Almaden Valley**
4. The proposed reduction in service across VTA's **Express Bus** network
5. The proposed discontinuation of **Route 65** (Leigh Avenue)

The feedback was used to revise the draft plan to create this final plan. Even though the majority of feedback took the form of requests to keep and/or improve service (i.e. additional service which would increase the total network cost), staff was able to use the feedback to make a set of revisions that would greatly improve the draft plan but not increase its overall network cost.

Changes from the Draft Plan

The original Next Network transit service plan was used as the baseline for the draft and final versions of this plan, and as such, this plan is presented by prescribing changes as compared to the original Next Network plan. While service cuts are always difficult because the loss of transit service impacts real riders, staff focused cuts on the lowest ridership services in the network to minimize the impact to riders and maintain as much of the Next Network's projected ridership increase as possible.

A map of the final plan's complete transit network is included as Attachment B. This final service plan includes seven changes *as compared to the draft plan*:

1. **Continue to provide Route 22 overnight service.** The final plan would continue overnight service on Route 22 between 1 and 4 am as offered today (one trip per hour in each direction). Originally proposed to be discontinued in the draft plan due to low ridership (200-220 total daily boardings across all six trips) and high costs (\$500,000 annually), subsequent analysis has revealed a significant number of riders on these overnight trips use the service for mobility purposes unrelated to a need for shelter. While the plan would continue to offer the overnight service, VTA staff will continue collaborating with social service groups to identify short, mid, and long-term alternative solutions for unhoused riders on these trips, a task force process initiated by VTA following the draft plan's proposal to discontinue these overnight trips. There is broad consensus that Route 22 is not an ideal overnight housing solution, and staff will continue discussions with the social service task force partners to develop more appropriate shelter solutions.
2. **Maintain VTA's current Express Bus network unchanged through the end of 2019 (excluding the four Fremont BART routes), then transition to a third-party partnership model for long-distance commute service in early 2020.** The adopted Next Network plan includes a continuation of VTA's nine Express Bus routes that serve long-distance commuters. Given the direction to trim \$15 million annually from the Next Network's total service level, the draft plan proposed to reduce the Express Bus program's cost by approximately \$2.5 million, due to their low ridership and high cost per rider (over \$30/rider, compared to \$7 for core routes). The reductions proposed in the draft plan included the discontinuation of four routes:
 - Express 101 (Camden & Hwy 85 – Stanford Research Park)
 - Express 122 (South San Jose – Lockheed Martin)

- Express 182 (Palo Alto – IBM/Bailey Ave)
- Express 185 (South County – Mountain View)

The reductions proposed in the draft plan would have also included reductions in the number of trips on four of the remaining five routes:

- Express 102 (South San Jose – Stanford Research Park)
- Express 103 (Eastridge – Stanford Research Park)
- Express 121 (South County – Lockheed Martin)
- Express 168 (South County – San Jose Diridon Station)

However, this final plan defers all the draft plan’s proposed cuts until staff implements a new Express Bus program model in early 2020. Staff is currently studying the Express Bus program and collaborating with employer partners with the goal of transitioning these routes to a new service model that includes third-party funding partnerships in order to offset their high cost, bring the routes into compliance with VTA performance standards (such as VTA’s Board-adopted farebox recovery goal of 20-25%), and achieve a net annual cost reduction of \$2.5 million as proposed in the draft plan. VTA will transition to this new service model in early 2020, shortly after the implementation of this service plan. In the meantime, this final plan proposes no changes to VTA’s current Express Bus network, aside from the longstanding plan to discontinue the four Express Bus routes that serve Fremont and Warm Springs BART stations as adopted in the Next Network (routes 120, 140, 180, 181). This plan assumes the transition to the new partnership model shortly thereafter in order to reduce VTA’s net cost. The deferment of Express Bus changes also respects the financial contributions that VTA’s employer partners have made to the SmartPass Express Bus program through the end of 2018, with an understanding that service would remain unchanged.

3. **Modify southern end of Route 42 to provide new service to the VA Clinic, the Mexican Consulate, Carrington College, Northeastern University, and the San Andreas Regional Center.** The Next Network plan proposed a change to Route 42 to serve Cottle Road and Raleigh Road near Santa Teresa Station. Instead, Route 42 will serve Silver Creek Valley Road, Hellyer Avenue, Silicon Valley Boulevard, Bernal Road, and San Ignacio Avenue (see map in Attachment D). During the draft plan’s outreach period, staff received numerous requests for new service for the VA clinic, the consulate, the colleges, and the San Andreas center. This change would forego providing new service along Cottle Road and Raleigh Road, areas which are already within a half-mile to light rail service and to frequent service that would remain on Cottle Road, and instead would serve these regional community-oriented destinations.
4. **Consolidate the segment of Route 63 south of Diridon Station into Route 64 so that Route 64 has two distinct “branches” of service south of Diridon, serving the same areas as originally proposed plus an area of Almaden Valley.** This service improvement stemmed from suggestions made by Almaden Valley community members.

As shown in the map in Attachment C, the new Route 64 will provide the same service as originally planned east of Diridon (along Julian and McKee), but south of Diridon:

- **Route 64a** will serve Bird, Lincoln, Almaden Expressway, Almaden Station, Oakridge Station, and Ohlone/Chynoweth Station.
 - **Route 64b** will serve Race, Meridian, and will be extended further south to Almaden Expressway and Camden, adding more service to Almaden Valley.
5. **Restructure service in Almaden Valley.** In addition to the above item, instead of operating Route 64 south of Almaden Station to Camden as originally proposed, the final plan would use Route 64 service in place of the Almaden spur light rail (also illustrated in Attachment C). This would free up resources to put into keeping Route 83 in Almaden Valley, instead of discontinuing it. Route 83's service level would match what was adopted in the Next Network plan (hourly service on weekdays).
 6. **Defer the draft plan's proposal for early morning and evening frequency improvements on Rapid 522 (delayed for future implementation when demand warrants).** The draft proposal included improvements to early morning and evening frequency on Rapid 522 (from every 20 minutes to every 15 minutes). The final plan does not include these improvements. Current service levels have been determined to be adequate, so staff recommends these improvements be deferred for future implementation when demand along the corridor increases and resources permit.
 7. **Improve midday frequency on Route 66 north of Milpitas BART to every 15 minutes.** This change would complete the northern parts of VTA's Frequent Network in Milpitas and would offer an additional frequent transit connection to BART service. The Next Network plan had 30-minute midday service (between 9:30 am and 3:30 pm on weekdays) on Route 66; this final plan would improve midday frequency to every 15 minutes, which would make the route frequent all day on weekdays.

The changes above represent the changes from the draft plan to the final plan; all other elements of the draft plan remain part of this final plan. For reference, a complete list of all the changes *from the original Next Network plan* is included as Attachment E. Again, Attachment B shows a map of the final network in its entirety.

As described in the changes above, the final plan resolves three of the five most common feedback topics referenced earlier in the Community Engagement section. However, the draft plan's proposals to shorten the Blue Line and to discontinue Route 65 remain unchanged in the final plan. Staff considered both topics at length and a full analysis for each is included as Attachment F.

Service Levels

As shown in Table 1, the final plan includes approximately 1.5M annual hours of bus service and 171K annual hours of rail service, which is 125,000 fewer hours of service than adopted in the original Next Network plan.

Table 1: Summary of Revised Plan Service Level

	Original Next Network Plan	Draft Plan	Final Plan	% Reduction from Original Plan
Annual Hours (Bus)	1,601,000	1,499,713	1,497,723	- 6.5%
Annual Hours (Rail)	192,000	171,081	171,081	- 10.9%

Ridership Impact

The reduction in service from the Next Network will have a projected negative impact on VTA forecasted transit ridership, as well as ridership on BART trains in Santa Clara County. At the same time, the transition to a 90/10 ridership/coverage network through additional investments in VTA's Frequent Network will have a positive impact on ridership that will offset some of the losses. Table 2 provides a planning-level estimate of the final plan's net change in ridership as compared to the original Next Network plan and estimated ridership if VTA kept operating the current network into the future ("Future Year Ridership with Current Network"). Note the ridership estimates do not include any impact related to the transition of VTA's Express Bus to a private partnership program that will occur separately in early 2020.

Table 2: Estimated Impact on VTA Transit Ridership

	<u>Annual Boardings</u>
Year 2018 Ridership, For Reference	36,121,406
Future Year Ridership with Current Network	35,259,670
Original Next Network Ridership	37,841,000
Impact of Light Rail Reductions	- 681,000
Impact of Bus Reductions	- 217,000
Impact of Bus Improvements	+ 669,000
Net Impact	- 229,000 <i>(-0.6% from original plan)</i>
2019 Transit Service Plan Ridership (after 24 mo.)	37,612,000 <i>(+7% over current network)</i>

As shown above, staff projects the plan will increase transit ridership by 7% over the current network. As with all major transit service redesigns, these ridership improvements will occur gradually over the 18-24 months following the first day of service. Under VTA's new Transit Performance Monitoring Program, staff will closely monitor the transit network following implementation and conduct regular reporting to VTA's committees and the Board. Due to the introduction of BART service and its significant impact on travel behaviors, staff expect some routes to overperform expectations and others to underperform. The performance monitoring program will include regular staff service change recommendations to continually adjust service according to performance.

Analyses Conducted on the Final Plan

ADA Paratransit Analysis

VTA Access paratransit service provides curb-to-curb and door-to-door service for eligible individuals for trips made within $\frac{3}{4}$ -mile of VTA's fixed route transit network at the standard fare of \$4. VTA also offers service for trips within a premium zone extending an additional mile beyond the $\frac{3}{4}$ -mile standard zone, at a premium fare of \$16. Paratransit service is offered on the same days and at the same times as the corresponding fixed route service. As such both zones follow the transit network, changes to the fixed route transit network can impact the geographical footprint of paratransit service. For example, the introduction of transit service to new areas would result in an expansion of the area eligible for paratransit service. Likewise, the elimination of transit service would result in a contraction of the area eligible for paratransit service.

VTA staff conducted a geographic analysis of the final plan to determine how it would impact the geographic footprint of paratransit service on weekdays. Because the final plan includes the elimination of just a single route in the middle of VTA's transit network and the other route alignment changes are minor, the weekday daytime impacts remain identical to the Next Network plan. **This plan would have no impact to the VTA Access overall paratransit service area for weekday daytime trips as compared to the adopted Next Network plan.** However, there may be minor impacts to the geographic availability of service late at night and on weekends due to changes in the fixed route network's service span (hours and days of operation for each route). For example, Route 52 currently provides service until 9:30 pm on weekdays, but would end at 9:00 pm in the plan; this reduction in 30 minutes of fixed route service would have a corresponding impact to *VTA Access* hours of service along that route.

Title VI Service Equity Analysis

Title VI of the 1964 Civil Rights Act states that agencies that receive federal funding may not discriminate on the basis of race, color, or national origin. Federal guidance encourages transit agencies to uphold Title VI in two ways: by involving Title VI communities in the planning process so that their input may inform decisions as early as possible, and a metric-based analysis that evaluates the impact to minority and low-income communities compared to the overall population of the service area. VTA's Board-adopted Title VI Service Standards and Public Participation Plan outlines the process by which staff engage Title VI communities throughout the planning process to develop all major service changes, including a full Title VI Service Equity Analysis.

VTA engaged Title VI communities in the Next Network planning process by working with VTA's Title VI office and following VTA's Public Participation Plan. This included specific outreach to organizations that represent minority, low-income, and immigrant communities, and hosting community meetings throughout the county. Additionally, a multilingual project website and advertising campaign spread awareness of the plan.

A metric-based Service Equity Analysis for this final plan was conducted and found **there would be no disparate impacts on minority residents or disproportionate burden on low-income residents as a result of the plan.** The analysis evaluates the impact of the service changes in

two ways: 1) Disproportionate Impact, which measures the impact to minority residents, and 2) Disproportionate Burden, which measures the impact to low-income residents. VTA's Board-adopted threshold for determining Title VI impacts is 10 percent, meaning that a service change that decreases the provision of transit for minority or low-income residents at a rate of 10 percent or greater than for the average resident is presumed to be non-compliant with the mandates of Title VI. The full Title VI service equity analysis is included as Attachment G.

California Environmental Quality Act (CEQA)

Environmental Planning staff analyzed the plan and it was determined to be Categorical Exempt from CEQA under Section 15301(c) of the CEQA Guidelines.

Next Steps

Downtown San Jose Route 64 Refinement

Through the summer of 2019, VTA staff will conduct further analysis and collaborate with stakeholders to refine the exact alignment of Route 64 through downtown San Jose. The downtown portion of Route 64 will provide service between Diridon Station and Julian Street, originally proposed via San Fernando to 6th/7th streets, though staff will explore an alternative option via Santa Clara to 10th/11th streets to improve transit service downtown and give city staff additional flexibility in building a Better Bikeways corridor along San Fernando. The final alignment will be determined in the next few months following further analysis and discussion with the community and stakeholders.

Implementation

Upon adoption of the final service plan, VTA staff will begin the large task of turning a high-level service plan into service ready to hit the streets on day one of BART service in late 2019. This will involve an array of concurrent preparation activities, including:

- Creating finely-tuned schedules for every transit route
- Driver and customer service training
- Development of a robust multilingual marketing campaign to inform riders and residents of the new transit network
- Training of VTA staff to serve as ambassadors to assist riders in the field during the initiation of service
- Design, print, and install new bus stop signage
- Development of new passenger materials such as time guides and system map
- Update transit schedule information on vta.org

Transit Performance Monitoring Program

After implementation, staff will monitor the new transit network and will make changes in a continuous cycle of iterative improvements. The Transit Performance Monitoring Program is a new VTA program to monitor transit performance continually, regularly report performance to the public through VTA's Open Data portal, conduct quarterly performance discussions at

VTA's committees, then develop and implement service changes to iteratively improve the network. As such, VTA's transit network will be continually adjusted, and all routes held to minimum performance standards, particularly the minimum standard of 15 boardings per hour, in order to justify their continued operation. The performance monitoring program, minimum standards, and the cycle of continual improvements are detailed in VTA's Transit Service Guidelines, adopted by the Board of Directors in 2018.

Fast Transit Program

The 2019 New Transit Plan is a bold plan that would significantly increase VTA's investment and service throughout the core frequent transit network in order to achieve the goal of faster, more frequent, and more reliable transit. However, the investment in better service is, by itself, insufficient to achieve this goal; the plan's service investments are only a start. *The success of the transit plan will also require bold action by VTA's municipal partners to prioritize buses and trains over cars.* Without action to speed up transit through true prioritization, transit will continue to suffer from its downward spiral:

1. Slower transit, which leads to...
2. Increased cost of service, which leads to...
3. Service cuts to balance the operating budget, which leads to...
4. Fewer riders, who turn to driving more, which leads to...
5. Increased congestion, which leads back to slower transit and the cycle continues...

The persistent downward trend in transit speeds has become an existential threat to the viability of transit service throughout Santa Clara County. Because VTA trains and buses spend more time stuck in congested travel lanes and more time waiting at red lights, the speed of service has fallen 20% over the last 30 years, and as a result VTA has had to cut 20% of service miles to maintain a balanced budget. In fact, VTA now operates less service than it did 30 years ago, in 1988, despite the county's tremendous growth in jobs and population over the same period. The continuous cycle of transit service cuts and deeper reliance on cars will continue unless we adopt and implement policies that truly prioritize transit over cars.

Changing our course towards a more multimodal mobility future will not be easy because it will require us to make difficult tradeoffs such as retiming traffic signals to genuinely prioritize transit over cars, despite the county's auto-oriented development patterns. Absent bold action with our municipal partners through the Fast Transit program, however, this plan will fail to achieve VTA's goal of faster, more frequent, and more reliable transit.

ALTERNATIVES:

Alternatively, the Board could elect to not adopt this proposed service plan, in which case staff would implement the original Next Network transit service plan as adopted in 2017. However, implementing the service levels in the original Next Network transit service plan would not achieve the desired \$14.7M net annual operating cost savings and would jeopardize VTA's long-term financial stability.

The Board could also direct staff to make minor changes to this plan in the interim period before the start of service. However, direction to pursue any changes that could be considered “major” per VTA’s Transit Service Guidelines would require a full analysis and Title VI community outreach process, which could push implementation out beyond the start of BART service to Berryessa.

FISCAL IMPACT:

If the final plan is implemented as presented, the updated service levels and VTA ridership impacts discussed above are anticipated to result in annual net savings of \$14.7M versus the cost of the original Next Network plan.

ADVISORY COMMITTEE DISCUSSION:

The Technical Advisory Committee considered this item at their April 10, 2019 meeting and voted unanimously to recommend approval. Committee members expressed appreciation to staff for the robust community engagement process, expressed appreciation for proposing to maintain Route 22 overnight service, encouraged staff to consider additional frequent service between BART and downtown San Jose, expressed appreciation for Route 27 service at 30-minute frequency, expressed a desire for Route 27 to work with Los Gatos High's school schedule, expressed appreciation for the data-driven analysis and visualizations, and expressed a desire to engage during the development of the new Express Bus partnership program.

The Citizens Advisory Committee considered this item at their April 10, 2019 meeting and voted unanimously to recommend approval. Committee members engaged in a very robust discussion and asked several questions: 1) what are the walking, wait time, and transfer assumptions behind the "Jane" visualization tool, 2) what is VTA's definition of "major" service changes, 3) could capital improvements along the Alum Rock (Capitol Avenue) rail line be made in order to make a turnback just east of Milpitas Station possible? Staff replied: 1) the software assumes an average of half the frequency for initial wait times and the wait to transfer, plus an industry-average walking speed, 2) the definition of what makes any change major is specifically described in VTA's Transit Service Guidelines adopted in April 2018 but generally include anything that could be considered controversial, and 3) yes, as staff monitor demand on the new light rail network, we could explore the potential for an infrastructure improvement to make a turnback possible. The committee also expressed appreciation for keeping the Route 22 overnight trips, expressed a desire to engage on the development of the Express Bus partnership program's parameters, appreciated staff monitoring the Blue Line after BART opens, appreciate the intense public engagement efforts, expressed that the performance monitoring program should present ideas to improve speed and ridership, noted that the "Jane" visualizations would be smaller if she had limited mobility, appreciated the visuals to describe the plan, asked staff to keep thinking about the transfer experience, appreciated the increase in Route 68 service to South County, expressed a desire for an overall increase in the entire network's service level, appreciate restoring Route 13 (83) in Almaden, and expressed a vision where our Frequent Network offers service much more frequently, like every 5 minutes.

The Bicycle and Pedestrian Advisory Committee considered this item at their April 10, 2019 meeting and on a vote of 6 ayes and 7 noes, the committee did not reach a consensus on the

recommendation to adopt the final 2019 New Transit Service Plan. Committee members asked several questions: 1) what kind of ridership activity will staff monitor at Milpitas BART, 2) who are the Express Bus program partners, 3) asked how long it takes ridership to materialize on such a plan, 4) and could there be some stated expectation of when the next major redesign would likely take place. Staff responded: 1) staff will monitor transfer activity at Baypointe between the Blue and Orange lines plus demand on Orange Line trains at Milpitas, 2) partners such as Stanford Research Park, Stanford University & Medical Center, Moffett Park Business Group, 3) typically it takes 24 months for ridership to materialize, 4) typically redesigns occur about every 10 years. Committee members expressed appreciation for the staff effort and community engagement process, expressed concern about the impact of Route 65 riders, expressed a desire to revisit the community discussion about the future vision and values of transit, asked for consideration of the first/last-mile issues on both the work and home end, emphasized the cost-effectiveness of transit service, asked for more consideration of connections with partners such as Caltrain, asked staff to collaborate with the private employer shuttle providers, and objected to the foundation of the new service plan to provide good connections for BART riders because they're not county residents.

The Committee for Transit Mobility and Accessibility considered this item at their April 11, 2019 meeting and voted unanimously to recommend approval. Committee members engaged in a robust discussion and asked several questions: 1) what kind of partners would VTA work with on the new Express Bus program, 2) what are the plan's impacts on Route 40 service, 3) asked staff to reach out to impacted riders (particularly disabled individuals) along Route 65, and 4) asked if there is a possibility that Route 65 service could return in the future. Staff responded: 1) VTA will work with our employer partners in the SmartPass program and other employer groups, 2) the plan would extend Route 40 to new areas of northern Mountain View and offer service from 6:30am to 10:00pm on weekdays, 3) staff will reach out to riders on Route 65, 4) yes, staff will monitor all routes' performance and suggest changes to meet changing conditions, including watching future development activity along Route 65 which could warrant reintroduction of service. Committee members also expressed appreciation to staff for the robust community engagement effort, expressed appreciation for preparing materials to help members better understand the plan, and expressed a concern that Route 51 will not meet performance standards in the future.

The Policy Advisory Committee considered this item at their April 11, 2019 meeting and voted to recommend approval. Committee members engaged in a robust discussion and asked several questions: 1) clarification on Route 22 ridership figures, 2) what happened to the changes that were voted on in the Next Network, 3) will staff watch development activity and adjust transit accordingly, 4) where can community members get more information, 5) will staff add service to the Social Services office in Gilroy back into the plan, 6) asked for more detail on the Express partnership program, 7) asked for clarification on school service, and 8) asked staff to bring the rider and public marketing plan to the committee. Staff responded: 1) initial ridership figures were limited due to the quick timeline of the project and staff subsequently gathered more detailed information and talked to riders and drivers, 2) the Next Network plan and all of its changes from today's network were used as the foundation and therefore not re-opened during this process, 3) yes, staff regularly monitors development activity and coordinates with city staff on developments and will adjust transit accordingly, 4) the plan has a detailed website in six languages, 5) the plan does not include additional service that would serve Tompkins Court, 6)

staff explained the financial goals of the program, 7) staff explained that school service was not adjusted specifically for this plan, but this will be addressed in the future, and 8) staff confirmed. Committee members also appreciated the community engagement effort and presentations to city councils, advocated for more service in North County, appreciated keeping the Route 22 overnight trips, appreciative of the increased service in Campbell, appreciated the modification of Route 42, expressed concern for reduction in Route 56 and 51 service, expressed a desire for better north-south connections in Cupertino and Santa Clara, expressed a desire for faster service along Stevens Creek, acknowledged Express Bus service is very expensive per hour, discussed the role of the committee in not picking "winners and losers" but rather focusing on policy, and urged staff to develop a robust marketing plan to explain the new service to riders.

STANDING COMMITTEE DISCUSSION

The Congestion Management, Planning, & Programming Committee considered this item at their April 18, 2019 meeting and voted unanimously to recommend approval. Committee members engaged in a robust discussion and asked several questions: 1) what are the performance figures for Route 65, 2) did staff examine alternative creative solutions to serve Route 65 area at no net cost increase, 3) do some Route 22 overnight riders use the service for mobility purposes, 4) what services are available for seniors who may not have service under the plan, 5) how did the ridership justification for Route 22 overnight trips change from the draft to final plan, 6) is the net change in service hours higher or lower from the draft plan, 7) are there options for the Board to allocate additional funding for transit operations, 8) how fast will the new network respond to changes in travel patterns and transit performance, 9) how will the plan decrease congestion, 10) why is staff recommending not improving service frequency on Rapid 522, 11) what is the ridership impact of turning the Blue Line back at Baypointe instead of Alum Rock? Staff responded: 1) Route 65 currently carries 13.1 boardings per hour, 2) yes, staff explored all possible options to preserve service along the corridor but none could be accomplished without an increase in service hours, 3) yes, a significant portion of riders on the overnight trips are riding for mobility purposes, 4) VTA Access paratransit may be available if the customer has a qualifying disability, plus the County offers senior transportation services, 5) staff conducted a deeper analysis of ridership data, discussed the service with social service partners, and discussed the service with operators and riders in order to more accurately report ridership on the trips, 6) the net change in service hours is slightly lower in the final plan, 7) yes, but the options would require Board action, 8) the performance monitoring program will monitor and respond to changes quarterly, 9) the plan's projected 7-9% increase in ridership will include some trips that were previously made by car, 10) staff received no comments on the proposal to increase service frequency during the feedback period, and a detailed look at ridership on the relevant trips does not justify the increase at this time, 11) turning the Blue Line back at Baypointe is projected to result in a loss of approximately 560,000 annual riders. Committee members also expressed appreciation for the project's intense community engagement, expressed appreciation for proposing to maintain Route 22 overnight trips, shared an experience of personally riding the Route 22 overnight trips, appreciate the proposal to defer Express Bus service cuts, appreciated staff efforts to work with social service agencies on the issue of unhoused residents on Route 22, expressed appreciation for working with the community to restore Almaden Valley service, implored staff to be more thoughtful and thorough when recommending service cuts, and asked staff to be more mindful that service cuts can have a life-changing impact on peoples' lives.

The Administration & Finance committee considered this item at their April 18, 2019 meeting and voted unanimously to recommend approval. Committee members engaged in a robust discussion and asked several questions: 1) can staff look at extending Route 42 to serve Kaiser San Jose, 2) why turn back the Blue Line at Baypointe instead of the Orange Line, 3) why have some routes provide service between Milpitas BART and downtown San Jose when BART riders can ride to Berryessa which is closer, 4) does staff have access to details about the type/income/etc. of the jobs data and also the demographics of the population data, 5) does VTA have a clear definition of what constitutes a major service change, 6) asked staff to clarify the proposed loss of service to the Social Services office in Gilroy, 7) asked how seniors may be served in the proposal, 8) and asked if employers have expressed a willingness to participate in the new partnership Express Bus program? Staff responded: 1) it is possible to extend Route 42, at additional cost however, and the hospital is already well-served by two other routes, 2) the Orange Line is new service designed to provide direct service between BART and the jobs along Tasman west and the Blue Line turnback at Baypointe would take advantage of the station as designed to be a transfer station, 3) yes many BART riders heading to downtown would stay on BART to Berryessa, but there are routes from Milpitas BART that serve good transit corridors along the way to San Jose, 4) the jobs data has very limited additional detail, but staff do have good demographic data on population data such as income, age, etc. 5) yes, the major service change policy is precise and outlined in the Board-adopted Transit Service Guidelines document in April 2018, 6) Route 17 is a very low-ridership route that was consolidated into Routes 84/85 in the Next Network plan but the office is in a difficult-to-serve location that would not have service in the proposal due to very low ridership that wouldn't justify the additional operating cost, 7) seniors could get service through VTA Access if they have an eligible disability plus the County offers senior transportation services, 8) yes, employers have so far expressed an interest in partnering with VTA. Committee members also appreciated staff's outreach efforts, appreciated staff's considerable thought and hard work to "do more with less," appreciated the creative solution to maintain service in Almaden Valley, and asked staff to have additional details about some of the major topics ready for the Board meeting.

The Safety, Security, Transit Planning & Operations committee considered this item at their April 19, 2019 meeting and voted unanimously to recommend approval. Committee members engaged in robust discussion and asked staff for the cost and ridership information for Route 22 overnight service and what is the assumed (typical) walking distance to transit. Staff replied the marginal cost of the six Route 22 trips in question is between \$400,000 and \$500,000 annually and carries approximately 200-220 riders across all six trips. Committee members also asked staff to emphasize that service hours in the new plan remain constant from today's service (not a service cut), asked staff to highlight some of the Next Network changes, asked staff to emphasize the budget element of the plan and the impact if the plan were not adopted, asked staff to come back with a review of school service, suggested some visual changes for the presentation, expressed a desire to not consider the Route 22 riders that ride for shelter any differently than riders that ride for mobility, expressed appreciation for the collaboration with community groups, expressed appreciation for including Route 22 overnight service in the plan, implored staff to be more thorough with recommendations in the draft version of plans, expressed that it appears the numbers on the Route 22 trips are justified for mobility purposes, and expressed a desire to collaborate on a better solution for the unhoused riders of Route 22.

Prepared by: Jay Tyree

Memo No. 6839

ATTACHMENTS:

- Attachment A: List of Engagement Meetings (PDF)
- Attachment B: Network Map (PDF)
- Attachment C: Almaden Map (PDF)
- Attachment D: Route 42 Map (PDF)
- Attachment E: List of All Changes from NN (PDF)
- Attachment F: Route 65 and Blue Line (PDF)
- Attachment G: Title VI Analysis (PDF)
- Attachment H: Letters Received (PDF)

8.2 **2019 New Transit Service Plan**

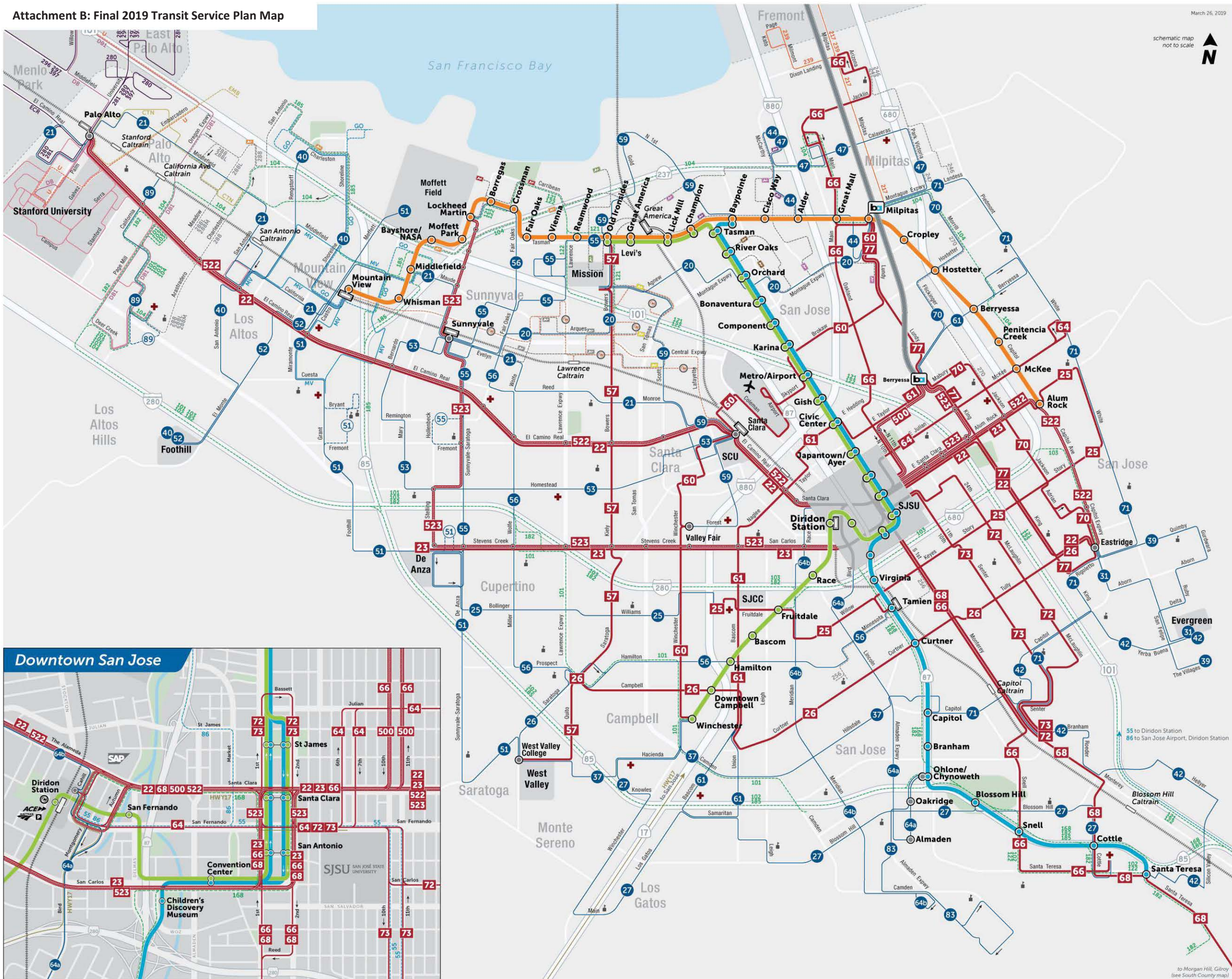
M/S/C (Chavez/Jones) to adopt the final 2019 New Transit Service Plan for implementation in late 2019 coincident with the opening of the BART extension to Berryessa. The Board requested staff look at the following items and report back at a future meeting: 1) for Route 17 explore developing first/last mile solutions and Vice Chairperson Chavez will work with the County to determine if there is a more easily accessible location for the social service facility on Tompkins Court; 2) explore developing first/last mile solutions, alternative service, and alternate routing options for Route 65 and work with residents along the route to market it; 3) examine options that can address the transportation needs of middle school students along Route 51; and 4) evaluate and present all options for a future Express Bus system.

Attachment A: List of Community Engagement Meetings

VTA-Led Community Meetings				
	<u>Date</u>	<u>Time</u>	<u>Meeting</u>	<u>Participants</u>
1.	30-Jan	6:00 PM	Santa Clara Mission Branch Library	27
2.	31-Jan	6:00 PM	East San Jose Alum Rock Library	19
3.	5-Feb	6:00 PM	Campbell Campbell Community Center	25
4.	6-Feb	6:00 PM	Mountain View Mountain View Senior Center	30
5.	11-Feb	7:00 PM	Almaden Valley Almaden Valley Community Center	76
6.	12-Feb	2:30 PM	YouTube Live Virtual Meeting	150-200 participated live 603 viewed recording
7.	19-Feb	11:00 AM	Downtown San Jose SJSU-MLK Library	84

Other Meetings				
	<u>Date</u>	<u>Time</u>	<u>Meeting</u>	
8.	24-Jan	1:00 PM	City of San Jose Staff Coordination Meeting	
9.	31-Jan	11:30 AM	Stanford Research Park TMA Meeting	
10.	2-Feb	9:30 AM	VTA-Labor Joint Workforce Investment Meeting	
11.	4-Feb	7:00 PM	Cambrian Community Association	
12.	6-Feb	2:00 PM	City of Santa Clara Staff Coordination Meeting	
13.	8-Feb	3:00 PM	Conference Call with CTMA Vice-Chair	
14.	12-Feb	6:00 PM	Los Altos City Council	
15.	14-Feb	10:30 AM	Moffett Park Business Group	
16.	14-Feb	11:00 AM	City of San Jose Councilmember Jimenez Briefing	
17.	14-Feb	1:00 PM	City of San Jose Senior Commission	
18.	20-Feb	9:15 AM	Vista Center for Blind and Visually Impaired	
19.	20-Feb	12:00 PM	Refugee Immigrant Forum	
20.	20-Feb	11:30 AM	Route 22 Safety Net Task Force Meeting	
21.	20-Feb	6:00 PM	Morgan Hill City Council	
22.	13-Feb	1:30 PM	VTA TAC Advisory Committee	
23.	13-Feb	4:00 PM	VTA CAC Advisory Committee	
24.	13-Feb	6:30 PM	VTA BPAC Advisory Committee	
25.	14-Feb	4:00 PM	VTA PAC Advisory Committee	
26.	21-Feb	10:00 AM	VTA CMPP Standing Committee	
27.	21-Feb	12:00 PM	VTA A&F Standing Committee	
28.	22-Feb	12:00 PM	VTA SSTPO Standing Committee	
29.	26-Feb	6:00 PM	Palo Alto City Council Study Session	
30.	1-Mar	12:30 PM	Cupertino Legislative Action Committee	
31.	12-Mar	10:00 AM	SJC Airport Transit Meeting	
32.	13-Mar	11:30 AM	SCC City Manager's Association	
33.	1-Apr	6:00 PM	Gilroy City Council	

schematic map
not to scale



Legend

VTA Transit Services

Light Rail

- BLUE LINE** Baypointe-Santa Teresa
- GREEN LINE** Winchester-Old Ironsides
- ORANGE LINE** Alum Rock-Mountain View
- Transfer Station

Bus

- 522 Rapid Bus** Limited-stop service at frequent intervals - every 15 minutes or better during day times
- 61 Frequent Bus** Local service every 12-15 minutes on weekdays, every 15-30 minutes on weekends
Less frequent part of route
- 42 Local Bus** Less frequent local service, usually every 30-60 minutes
Selected trips or part-time service
- 102 Express Bus** Direct commute-hour service to major employment centers
- 247 School Service** Seasonal service oriented to school bell times

Partners & Neighbors

- BART
- Caltrain - ACE - Amtrak
- ACE

Municipal bus and shuttle services:

- Stanford Marguerite
- Mountain View Shuttle
- MVgo Shuttle
- Palo Alto Shuttle
- ACE Shuttle
- Caltrain Shuttle
- Connecting transit bus services to neighboring cities and counties:
 - AC Transit
 - SamTrans
 - Dumbarton Express
 - Amtrak Highway 17 Express
 - Monterey-Salinas Transit



South County

schematic map
not to scale

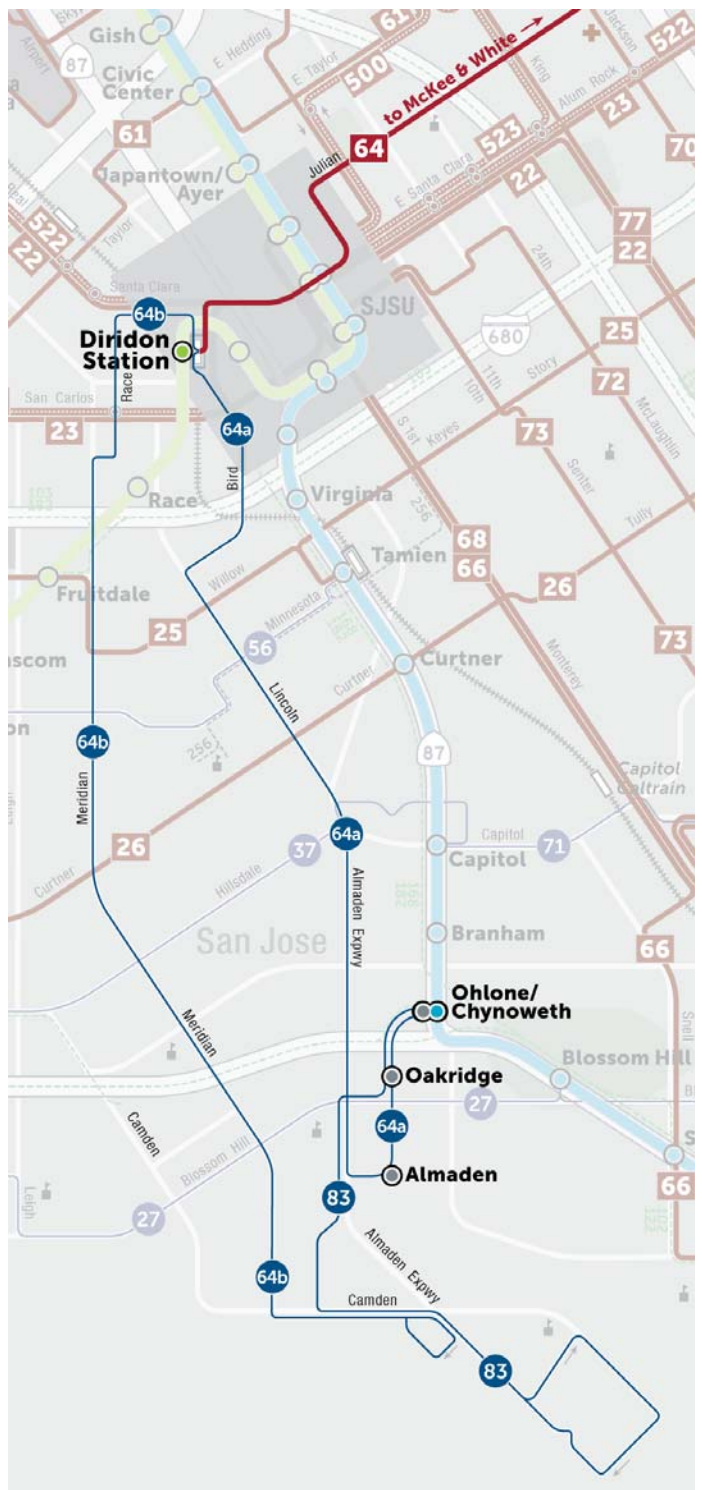
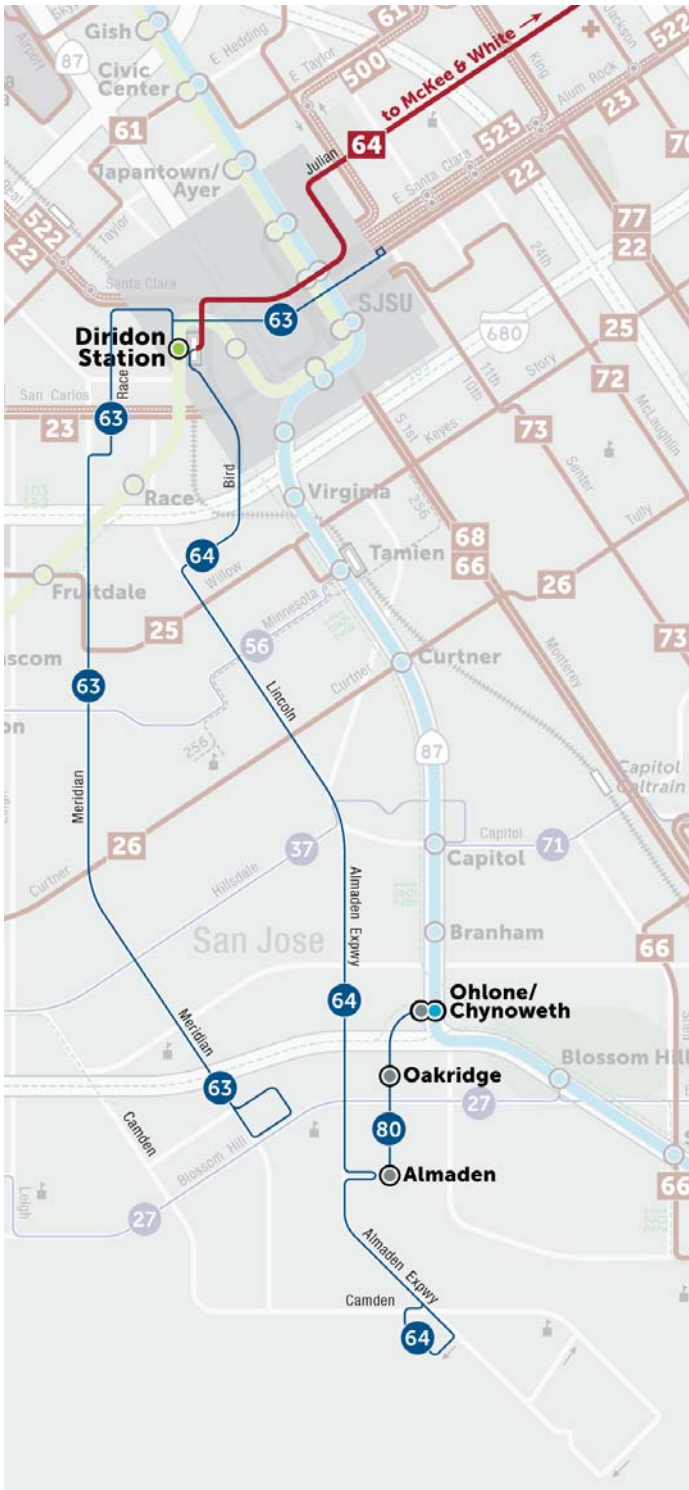


to Morgan Hill, Gilroy (see South County map)

Almaden Valley Service in **Draft Plan**



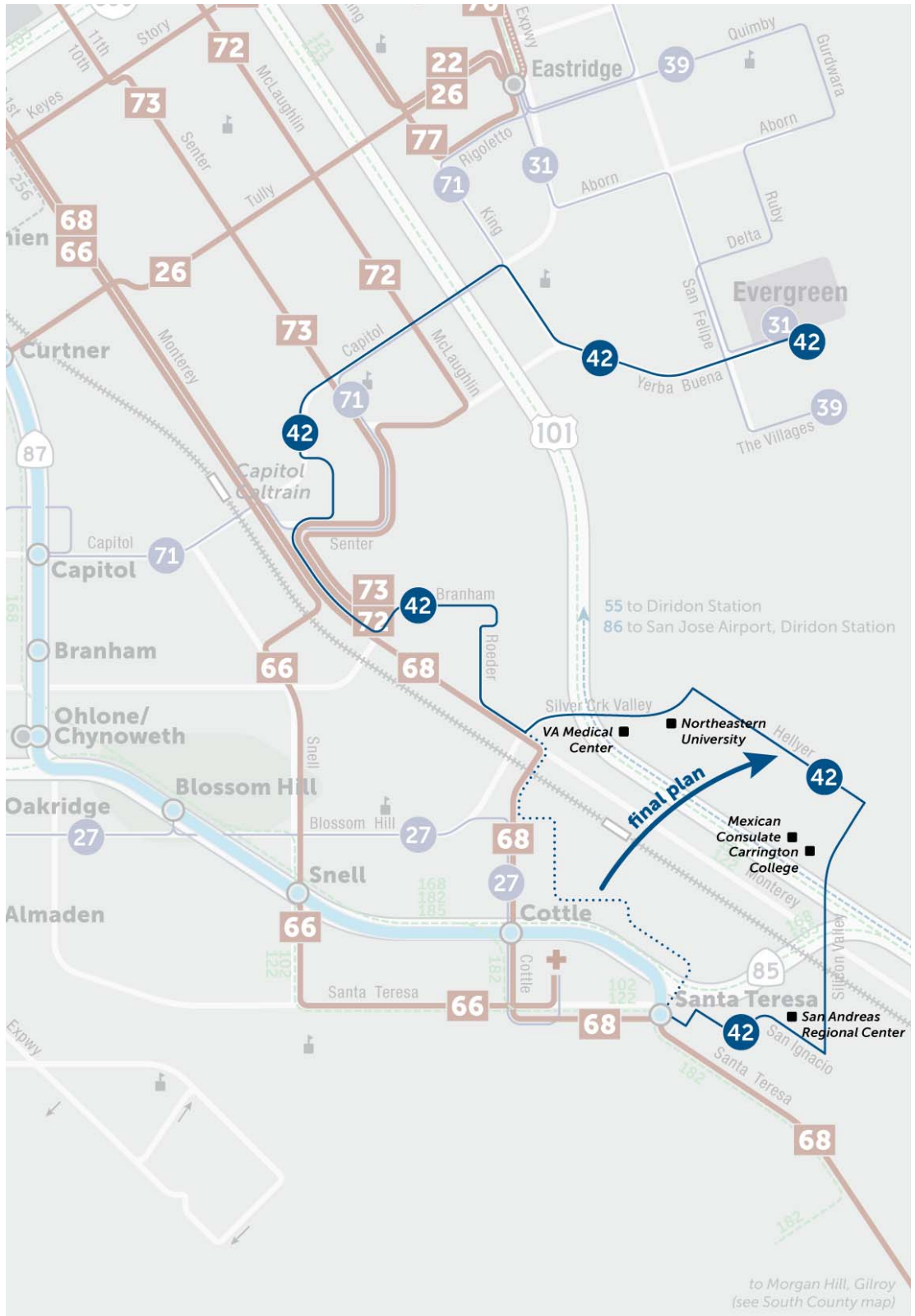
Almaden Valley Service in **Final Plan**



Route	Frequency	Span
63 weekdays	30 min	6:00 am – 9:00 pm
63 Saturdays	60 min	8:00 am – 7:00 pm
63 Sundays	60 min	9:00 am – 6:00 pm
64 weekdays	30 min	5:30 am – 11:00 pm
64 Saturdays	30 min	6:30 am – 11:00 pm
64 Sundays	30 min	7:00 am – 11:00 pm
80 weekdays	30 min	6:00 am – 10:30 pm
80 Saturdays	30 min	8:00 am – 10:00 pm
80 Sundays	30 min	8:00 am – 8:00 pm

Route	Frequency	Span
64b weekdays	30 min	6:00 am – 9:00 pm
64b Saturdays	60 min	8:00 am – 7:00 pm
64b Sundays	60 min	9:00 am – 6:00 pm
64a weekdays	30 min	5:30 am – 11:00 pm
64a Saturdays	30 min	6:30 am – 11:00 pm
64a Sundays	30 min	7:00 am – 11:00 pm
83 weekdays	60 min	6:00 am – 9:00 pm
83 Saturdays	no service	
83 Sundays	no service	

Attachment D: Route 42 Map



<u>Route</u>	<u>Frequency</u>	<u>Span</u>
42 weekdays	60 min	6:30 am – 6:30 pm
42 Saturdays	no service	
42 Sundays	no service	

Attachment E: List of All Changes from Next Network Plan
(items in bold represent change from the draft plan)

Change from Next Network Plan		Municipalities Impacted by Change															
		Cam	Cup	Gil	LA	LAH	LG	Mil	MS	MH	MV	PA	SJ	SC	Sar	Sun	
RAIL REDUCTIONS	<u>Purple Line (Almaden)</u>																
	- Discontinue Purple Line Almaden rail service (replace with Route 64a)												X				
	<u>Blue Line (Alum Rock – Santa Teresa)</u>																
	- Shorten to end at Baypointe instead of Alum Rock; stations east of Baypointe would be served by the Orange Line (Mountain View – Alum Rock) only							X					X				
	<u>All Light Rail Lines</u>	X						X			X		X	X		X	
	- Change weekend frequency to every 20 minutes on all lines (to provide better connections with BART's 20-minute weekend train frequency)																
	-																
	<u>Rapid 523 (Berryessa – Lockheed Martin)</u>																X
	- End Saturday service at Sunnyvale Transit Center instead of Lockheed Martin after 8:00 PM																X
	- End Sunday service at Sunnyvale Transit Center instead of Lockheed Martin after 7:30 PM																
<u>Route 20 (Milpitas BART – Sunnyvale Transit Center)</u>																	
- End weekday service at 8:30 PM instead of 10:00 PM							X					X	X			X	
<u>Route 21 (Stanford Shopping Center – Santa Clara Transit Center)</u>																	
- End weekday service at 9:30 PM instead of 10:00 PM										X	X		X			X	
<u>Route 22 (Palo Alto – Eastridge)</u>																	
- No change from Next Network plan (maintain overnight service)				X						X	X	X	X			X	
<u>Route 27 (Winchester Station – Kaiser San Jose)</u>																	
- Start weekday service at 6:00 AM instead of 5:30 AM	X					X		X				X					
- End weekday service at 9:00 PM instead of 10:00 PM	X					X		X				X					
- Reduce Saturday frequency to every 40 minutes from every 30 minutes	X					X		X				X					
- End Saturday service at 8:00 PM instead of 9:00 PM	X					X		X				X					
- End Sunday service at 7:30 PM instead of 8:00 PM	X					X		X				X					
<u>Route 31 (Evergreen Valley College – Eastridge)</u>																	
- Discontinue Sunday service													X				
- Start Saturday service at 8:30 AM instead of 7:30 AM													X				
<u>Route 40 (Foothill College – Mountain View Transit Center)</u>																	
- Start Saturday service at 8:00 AM instead of 7:00 AM				X	X					X							
<u>Route 42 (Evergreen Valley College – Santa Teresa Station)</u>																	
- Modify route to serve Silver Creek Valley, Hellyer, Silicon Valley, Bernal, San Ignacio													X				
<u>Route 44/47 (Milpitas BART – McCarthy Ranch)</u>																	
- Start weekday service at 6:00 AM instead of 5:30 AM								X									
- End weekday service at 9:00 PM instead of 10:00 PM								X									
- Reduce Saturday frequency to every 40 minutes from 30								X									
- Reduce Sunday frequency to every 60 minutes from 30								X									
- Start Saturday service at 8:00 AM instead of 7:00 AM								X									
- End Saturday service at 8:00 PM instead of 9:00 PM								X									
- End Sunday service at 7:00 PM instead of 8:00 PM								X									
<u>Route 52 (Foothill College – Mountain View Transit Center)</u>																	
- End weekday service at 9:00 PM instead of 10:00 PM				X	X					X							
<u>Route 53 (Sunnyvale Transit Center – Santa Clara Transit Center)</u>																	
- Start weekday service at 6:30 AM instead of 5:30 AM		X											X			X	
- Discontinue Saturday service		X											X			X	
- Eliminate deviation to Stevens Creek (stay on Homestead)		X														X	
<u>Route 56 (Lockheed Martin – Tamien Station)</u>																	
- Eliminate deviation to downtown Sunnyvale (stay on Fair Oaks)																X	
- Start Saturday service at 7:00 AM instead of 6:30 AM	X	X										X		X		X	
- Start Sunday service at 8:00 AM instead of 7:30 AM	X	X										X		X		X	
<u>Route 57 (Old Ironsides Station – West Valley College)</u>																	
- End weekday service at 11:00 PM instead of 12:00 midnight												X	X	X			
<u>Route 59 (Valley Fair – Baypointe Station)</u>																	
- Start weekday service at 6:00 AM instead of 5:30 AM												X	X				
- Reduce Saturday frequency to every 60 minutes from 30												X	X				
- Start Saturday service at 8:00 AM instead of 7:00 AM												X	X				
- End Saturday service at 8:00 PM instead of 10:00 PM												X	X				
- Start Sunday service at 8:00 AM instead of 7:30 AM												X	X				
<u>Route 61 (Sierra & Piedmont – Good Samaritan Hospital)</u>																	
- End weekday service at 11:00 PM instead of 12:00 midnight	X						X					X					
- End Saturday service at 10:00 PM instead of 11:00 PM	X						X					X					
<u>Route 63 (San Jose State – Kooser & Blossom Hill)</u>																	
- End weekday service at 9:00 PM instead of 10:00 PM													X				
- Consolidate to become a branch of Route 64; extend into Almaden Valley													X				
<u>Route 64 (McKee & White -- Almaden & Camden)</u>																	
- Change southern end to serve Purple Line rail stations													X				
<u>Route 65 (San Jose State – Kooser & Blossom Hill)</u>																	
- Discontinue route	X											X					
<u>Route 71 (Milpitas BART – Capitol Station)</u>																	
- Start Saturday service at 7:00 AM instead of 6:30 AM							X					X					
<u>Route 72 (Downtown San Jose – Senter & Monterey via McLaughlin)</u>																	
- Reduce weekday frequency to every 30 minutes from every 20 between 8:00 PM and 9:00 PM													X				
- Reduce Saturday frequency to every 30 minutes from every 20 between 7:00 PM and 9:00 PM													X				
- Reduce Sunday frequency to every 60 minutes from every 30 between 8:00 PM and 9:00 PM													X				
<u>Route 73 (Downtown San Jose – Senter & Monterey via Senter)</u>																	
- Reduce weekday frequency to every 30 minutes from every 20 between 8:00 PM and 9:00 PM													X				
- Reduce Saturday frequency to every 30 minutes from every 20 between 7:00 PM and 9:00 PM													X				

Change from Next Network Plan	Municipalities Impacted by Change														
	Cam	Cup	Gil	LA	LAH	LG	Mil	MS	MH	MV	PA	SJ	SC	Sar	Sun
BUS REDUCTIONS (cont.)	<u>Route 77 (Milpitas BART – Eastridge)</u>														
	- End weekday service at 11:00 PM instead of 12:00 midnight														
	- End Saturday service at 11:00 PM instead of 12:00 midnight														
	- End Sunday service at 10:00 PM instead of 11:00 PM														
	<u>Route 83 (Ohlone/Chynoweth Station – Almaden & McKean)</u>														
	- No change from Next Network plan (maintain service)														
	<u>Route 251 (St. Francis High School – Mountain View Transit Center)</u>														
	- Discontinue route														
	<u>Route 255 (Fremont High School – Lawrence & Tasman)</u>														
	- Discontinue route (regular Route 55 trips would remain)														
<u>Route 266 (Santa Teresa High School – Bernal & Via Serena)</u>															
- Discontinue route															
<u>Express Bus Routes 101, 102, 103, 121, 122, 168, 182, 185</u>															
- Maintain current service until transition to private partnership program in early 2020															
BUS IMPROVEMENTS	<u>Rapid 500 (Berryessa BART – Diridon Station)</u>														
	- Improve weekday frequency to every 7.5 minutes all day (average) from every 10-15 min														
	<u>Route 23 (De Anza College – Alum Rock Station)</u>														
	- Improve weekday and weekend service frequency between 7:00 PM and 11:00 PM														
	<u>Route 26 (West Valley College – Eastridge)</u>														
	- Improve weekday frequency between Curtner Station and Westgate to every 15 minutes from 30, extending the all-day Frequent segment of the route west beyond Curtner Station														
	- Improve weekend frequency between Curtner Station and Westgate to every 20 from 30														
	<u>Route 66 (North Milpitas -- Kaiser San Jose)</u>														
	- Improve weekday midday service in Milpitas to every 15 minutes														
	<u>Route 68 (San Jose Diridon Station – Gilroy Transit Center)</u>														
- Improve weekday midday service frequency between Santa Teresa Station and Gilroy to every 15 minutes from 30, which would make the entire route from San Jose to Gilroy frequent all day															
<u>Rapid 522 (Palo Alto – Eastridge)</u>															
- No change from Next Network plan															

DISCUSSION OF ROUTE 65 AND LIGHT RAIL BLUE LINE

Feedback on the draft plan overwhelmingly concerned the five proposed changes listed below. This attachment provides additional detail on the two changes, #2 and #5, that were ultimately not included in the final plan:

1. The proposed discontinuation of Route 22 trips between 1 and 4 am
2. **The proposed discontinuation of Route 65 (Leigh Avenue**
3. The proposed discontinuation of Route 83 in Almaden Valley
4. The proposed reduction in service across VTA's Express Bus network
5. **The proposed shortening of the Blue Line from Alum Rock to Baypointe Station**

ROUTE 65 (DOWNTOWN SAN JOSE – LEIGH AVENUE)

Route 65 provides service between Kooser & Blossom Hill and Downtown San Jose via Leigh Avenue on weekdays. The route has low ridership and does not meet VTA's minimum productivity standard (boardings per hour). After proposing to discontinue the route in the Next Network draft plan and receiving community support to retain the route, the Next Network final plan included Route 65 service but at a reduced service level (by discontinuing service north of San Fernando and reducing frequency from every 45 minutes to every 60 minutes).

Due to the need to make additional coverage (low ridership routes) reductions in the 2019 New Transit Service Plan, the draft plan proposed to discontinue the route due to very low ridership and productivity. Although staff again received many comments from community members and San Jose State University students concerned about the loss of Route 65 service, *the final plan does not include Route 65 service.*

As shown below, Route 65 service does not currently have sufficient ridership to meet VTA's minimum standard for productivity. Staff projected ridership on the Next Network proposed service on the route to determine whether the revised route would meet VTA's standard. As shown, ridership would decline due to the reduction in service. Again, the projected service would not have sufficient ridership to meet VTA's minimum productivity standard. Staff are aware of future developments slated for the corridor and will monitor their progress, with the hope that someday the corridor will develop to a sufficient density to support transit service.

Route 65 Service

Current Service	Next Network Service
<i>Kooser & Blossom Hill – Downtown San Jose (13th & Hedding) via Leigh</i>	<i>Kooser & Blossom Hill – Downtown San Jose (6th & San Fernando) via Leigh</i>
Daily Boardings: 535	Daily Boardings: 339
Daily Service Hours: 41	Daily Service Hours: 28
Boardings per Hour: 13.1 (VTA minimum 15)	Boardings per Hour: 12.3 (VTA minimum 15)
Annual Operating Cost: \$1.25 million (FY19 marginal)	Annual Operating Cost: \$830,000 (FY19 marginal)

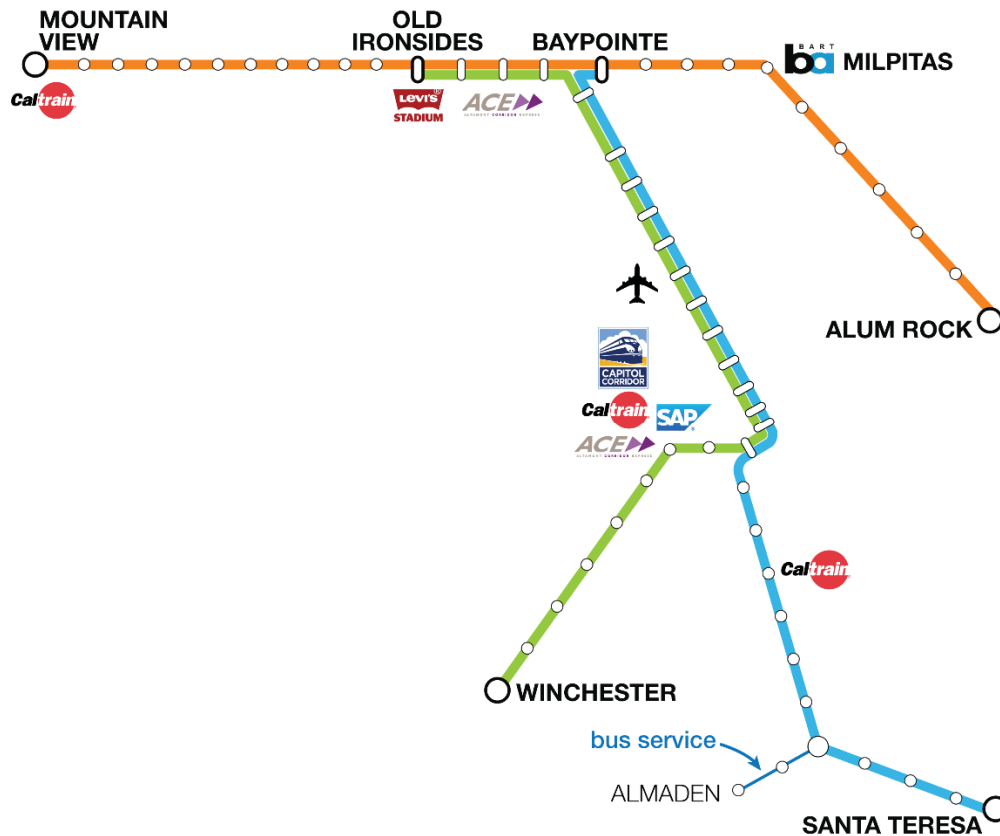
LIGHT RAIL BLUE LINE

The Blue Line light rail service currently operates between Alum Rock and Santa Teresa stations daily. The Next Network plan included Blue Line service with no major changes from today, however the draft 2019 New Transit Service Plan includes a cost reduction strategy to shorten the route to end at Baypointe Station instead of Alum Rock Station. Staff received many community comments objecting to the plan to shorten the line, however *the final plan maintains this cost reduction strategy due to insufficient resources to restore the original plan.*

Annual Operating Savings by Shortening Blue Line to Baypointe:
\$3.2 million (FY19 marginal)

The source of concern for many community members is the loss of one light rail line of service at the Milpitas Transit Center for BART connections. Previous plans have included both Blue and Orange lines of service as BART connections, each operating at every 15 minutes each direction, for a net light rail service frequency of every 7.5 minutes each direction. The final plan would only offer the Orange Line of service every 15 minutes each direction. However, due to a lack of track infrastructure (switches, pocket tracks for train storage, etc.), it is not possible to use any station between Milpitas and Alum Rock as an endpoint. Therefore, the only options are to use Alum Rock or Baypointe as the Blue Line's northern endpoint.

Riders traveling between BART Milpitas and areas south of Tasman on light rail would have to transfer to/from the Blue Line at Baypointe. Staff will make every possible effort to schedule trains so that this transfer is timed and as seamless as possible. Fortunately, Baypointe Station was designed as a transfer station and has ample capacity.



Title VI Service Equity Analysis

2019 New Transit Service Plan

Transit Service Planning
April 2019



Solutions that move you

TABLE OF CONTENTS

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Appendix A: VTA Title VI Policy and Adoption Record

Appendix B: Matrix of People-Trips by Route

Appendix C: Map of Low-income Population and Change in People-Trips

Appendix D: Map of Minority Population and Change in People-Trips

Appendix E: Map of Proposed Transit Network

1 INTRODUCTION

Title VI (codified at 42 U.S.C. §2000 et seq.) was enacted as part of the landmark Civil Rights Act of 1964. It prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

In order to comply with Federal Transit Administration's (FTA) Title VI Circular 4702.1B and Environmental Justice Circular 4703.1 requirements, VTA is required to perform a Service Equity Analysis to evaluate the impacts of all major service changes on minority and low-income passengers. The Service Equity Analysis must be conducted in accordance with the VTA Major Service Change, Disparate Impact, and Disproportionate Burden policies, which were adopted by the VTA Board of Directors on November 7, 2013 (see Appendix A), after extensive public outreach.

After completing a Service Equity Analysis for the proposed 2019 New Transit Service Plan, VTA staff concludes that this service plan would not impose a disparate impact on minority passengers or a disproportionate burden on low-income passengers.

2 BACKGROUND

Following an intense two-year planning effort in collaboration with Jarrett Walker + Associates, the community and transit stakeholders, the VTA Board of Directors adopted the Next Network transit service plan in May 2017. The plan was to be implemented with the start of BART service to Milpitas and Berryessa. As adopted, the Next Network plan comprised 1,601,000 annual bus hours and 192,000 annual rail hours of service, with an 83% ridership and 17% coverage mix. Since adoption, VTA's existing service network (in place and largely unchanged since 2008) remains in effect until the introduction of BART service.

To help address VTA's structural deficit and improve its long-term financial stability, in December 2018 the Board of Directors adopted the Ad Hoc Financial Stability Committee's recommendations. Included in these recommendations was direction to develop a 2019 New Transit Service Plan that would replace the original Next Network plan at approximately the same service level as FY2018, but with a higher ridership focus, in order to achieve a \$14.7M annual operating cost savings.

Per VTA's Transit Service Guidelines and the Title VI Major Service Change policy, any major service change must be developed as part of a comprehensive service plan development process, which must include outreach/engagement with the community, an analysis of ADA paratransit impacts, a CEQA environmental analysis, and a Title VI service equity analysis.

Accordingly, staff embarked on a comprehensive and community-oriented process to develop the proposed transit service plan. As a first step, staff developed a draft service plan that was presented to the Board and discussed with the community throughout January and February 2019. The development of the draft plan also involved analyses by staff to identify areas of significant low-income and minority populations, and service changes were proposed with an effort to minimize service reductions in these areas.

Title VI Service Equity Analysis of VTA's 2019 New Transit Service Plan

Community engagement included several meetings targeted at low-income and minority populations to ensure these groups had ample input and involvement in the development of the service plan. The extensive community engagement effort included:

- Six VTA-hosted community meetings
- YouTube live virtual meeting, subsequently available as a recorded webinar
- Presentations at 26 community-hosted public and organization meetings
- vta.org blog posts on hot topics, each with commentary discussion
- Email blasts to transit subscribers
- Multilingual flyers onboard buses and trains
- Multilingual advertisements in local publications (Viet Nam Daily, Philippines Today, Sing Tao, Korea 24 News Media, El Observador, San Jose Mercury News)
- A multilingual dedicated website for details on the plan and for feedback submission

The engagement effort was a big success as staff were able to engage with thousands of riders and residents to hear their concerns and ideas. Staff received 1,520 comments and suggestions via email and from direct in-person conversations, 6,400 engagements on Twitter, 1,500 engagements on Facebook, 50 engagements on LinkedIn, 130 engagements on Nextdoor, 1,200 engagements on Instagram, and several thousand views of vta.org features on the plan. In addition, VTA received official letters from the Cambrian Community Council, the Cupertino Union School District, the Fremont Unified School District, the City of Los Altos, the City of Morgan Hill, the City of Palo Alto, the Town of Los Gatos, and the City of Saratoga & West Valley College. The feedback was helpful to staff to better understand the community's concerns.

The feedback spanned a range of topics related to the proposed changes, but as expected was comprised overwhelmingly of objections to proposed cuts on some routes. In addition, a preliminary service equity analysis was calculated on the draft plan in order to make sure it would not have a disproportionate burden or disparate impact, so that any issues could be identified early in the process. The community's feedback and conclusions from further analysis were used to revise the draft plan to create the final plan:

- **Route 22** trips between 1:00 and 4:00 am were proposed for elimination in the draft plan, but the final plan would maintain these trips.
- Various cuts in VTA's **Express Bus** program were proposed in the draft plan, but the final plan defers these cuts until early 2020 so that staff has time to collaborate with employer partners to transition the program to a new partnership model.
- The final plan includes a modification of **Route 42** to serve several regional institutions such as the San Jose VA clinic.
- The final plan restores coverage service in the heart of **Almaden Valley** by restructuring several routes in the area.
- The final plan defers the draft plan's proposed frequency improvements on **Rapid 522** until demand and resources warrant.
- The final plan includes improved midday frequencies for **Route 66** in Milpitas.

Following adoption by the Board of Directors, the new service plan is scheduled to be implemented coincident with the start of BART service at Milpitas and Berryessa in late 2019.

Consideration of potential impacts on low-income and minority communities was an integrated part of the entire planning process. Building on that integration to the planning process, this Service Equity Analysis is an additional key component of the plan, as it determines whether the service plan will result in negative impacts to minority and/or low-income communities. As described in this report, the 2019 New Transit Service Plan will not disproportionately burden low-income communities or have a disparate impact on minority communities. This analysis was conducted per VTA's Title VI policies.

3 TITLE VI POLICIES

DISPARATE IMPACT POLICY

The Disparate Impact Policy establishes a threshold for determining if a given service or fare change would result in a fair distribution of positive and negative effects on minority passengers. VTA's Disparate Impact Policy states:

For Service or Fare Equity Analyses conducted by VTA, a disparate impact threshold of 10 percent shall be used to determine if minority riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference between the aggregate impacts of the proposed change(s) on minority passengers and the aggregate impacts of the proposed change(s) on overall VTA ridership. Analysis shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

DISPROPORTIONATE BURDEN POLICY

The Disproportionate Burden Policy establishes a threshold for determining if a given service or fare change would result in a fair distribution of positive and negative effects on low-income passengers. VTA's Disproportionate Burden Policy states:

For Service or Fare Equity Analyses conducted by VTA, a disproportionate burden threshold of 10 percent shall be used to determine if low-income riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference between the aggregate impacts of the proposed change(s) on low-income passengers and the aggregate impacts of the proposed change(s) on overall VTA ridership. Analysis shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

MAJOR SERVICE CHANGE POLICY

All major service changes – both improvements and reductions – are subject to a Title VI Service Equity Analysis. As approved by the VTA Board of Directors on November 7, 2013, VTA defines "major" service changes as those which meet any of the following criteria:

- The establishment of a new transit line or service;
- The elimination of a transit line or service;
- A route change that impacts 25 percent or more of a line's route miles;

- Span of service or frequency changes affecting 25 percent or more of a line's revenue vehicle hours;
- A series of changes on a single route which are included in the two-year Transit Service Plan and cumulatively meet any of the above criteria;
- Proposed changes that are anticipated to be controversial with a particular community or interested parties based on public feedback; and
- A systemwide change concurrently affecting 5 percent or more of the total system revenue hours.

Based on the *systemwide change affecting 5% or more and potentially controversial changes criteria*, the 2019 New Transit Service Plan is considered a major service change. As such, this service equity analysis accompanies the service plan in order to describe the impacts on Title VI communities. This analysis uses the adopted thresholds for determining Disproportionate Burden and Disparate Impacts.

4 NEW TRANSIT SERVICE PLAN OVERVIEW

This 2019 New Transit Service Plan is a modification of the Board-adopted 2017 Next Network transit service plan. In addition to the plan's original goals of better connecting VTA transit with the Milpitas and Berryessa BART stations, increasing overall system ridership, and improving VTA's farebox recovery rate, this new plan adds three new parameters set by the Board of Directors:

1. Reduce the plan's overall service level equal to today's service level (the Next Network plan would have incurred a \$14.7M increase in annual net operating costs over today).
2. Adjust the network's ridership/coverage balance to 90% ridership and 10% coverage.
3. Minimize service cuts in South County.

The original Next Network transit service plan was used as the baseline for the draft and final versions of this plan, and as such, this plan has been presented by prescribing changes as compared to the original Next Network plan. While service cuts are always difficult because the loss of transit service impacts real riders, staff focused cuts on the lowest ridership services in the network to minimize the impact to riders and maintain as much of the Next Network's projected ridership increase as possible.

A map of the final plan's complete transit network is included as Appendix E.

5 ADVERSE EFFECTS

The 2019 New Transit Service Plan is a comprehensive redesign of VTA's transit network and involves changes to most of VTA's service. This includes both service eliminations as well as service and frequency increases. As such, many riders may be impacted, both positively and negatively:

Potential Positive Impacts

- Shorter travel times
- Increased reliability
- Better connections
- Increased off-peak and weekend service
- Better regional mobility

Potential Adverse Effects

- Reduced access to transit in outlying, low-density, and other areas not transit-supportive, due to route eliminations and reductions in service
- Longer walk distances due to route eliminations or route re-alignments
- Longer wait times due to service reductions
- More transfers due to changes in network structure

PARATRANSIT IMPACTS

VTA Access paratransit service provides curb-to-curb and door-to-door service for eligible individuals for trips made within 3/4-mile of VTA's fixed route transit network at the standard fare of \$4. VTA also offers service for trips within a premium zone extending an additional mile beyond the 3/4-mile standard zone, at a premium fare of \$16. Paratransit service is offered on the same days and at the same times as the corresponding fixed route service. As such both zones follow the transit network, changes to the fixed route transit network can impact the geographical footprint of paratransit service. For example, the introduction of transit service to new areas would result in an expansion of the area eligible for paratransit service. Likewise, the elimination of transit service would result in a contraction of the area eligible for paratransit service.

*VTA staff conducted a geographic analysis of the final plan to determine how it would impact the geographic footprint of paratransit service on weekdays. Because the final plan includes the elimination of just a single route in the middle of VTA's transit network and the other route alignment changes are minor, the weekday daytime impacts remain identical to the Next Network plan. **This plan would have no impact to the VTA Access overall paratransit service area for weekday daytime trips as compared to the adopted Next Network plan.** However, there may be minor impacts to the geographic availability of service late at night and on weekends due to changes in the fixed route network's service span (hours and days of operation for each route). For example, Route 52 currently provides service until 9:30 pm on weekdays, but would end at 9:00 pm in the plan; this reduction in 30 minutes of fixed route service would have a corresponding impact to VTA Access hours of service along that route.*

6 METHODOLOGY AND DATA

The methodology used to conduct this analysis is based on VTA Title VI policies and designed per the Federal Transit Administration's October 2012 4702.1B Circular Appendix K (Title VI Requirements and Guidelines for Federal Transit Administration Recipients).

In many service change cases, VTA uses passenger survey data as the basis of assessing the impact of service changes. However, in other cases where the service changes are comprehensive, complex, and affect a large number of routes (changes in route alignment, frequency, span, additions, and eliminations), it is more effective to use Census data to determine impacts because passenger survey data would not yield accurate results. Accordingly, this Service Equity Analysis uses Census demographic data:

Demographic Data: US American Community Survey 2012–2016 Block Group data

Low-Income Status: 200% of the U.S. poverty level (consistent with VTA's definition as adopted in the VTA Title VI program)

Minority Status: [Total Population] minus [White Non-Hispanic Population]

Staff used Remix, a software service used across the transit planning industry, to calculate the impacts associated with the proposed service plan on a systemwide basis. Remix software has a nationally-accepted automated geospatial analysis process that calculates a service proposal's impacts on low-income and minority populations, per Title VI regulations.

The methodology to calculate impacts by population groups was to:

- Program both VTA's current transit network (March 2019) and the proposed network into Remix, including route alignments, service spans, service frequencies, and days of service to account for both increases and decreases in service.
- Determine the population living within ¼-mile of a route's bus stops, including the low-income and minority percentage.
- Determine the amount of service on the route by calculating the number of annual trips.
- Determine each route's "people-trips," a measurement of the number of residents served by a route and the amount of service it provides, by multiplying the route's population by the route's annual trip count (service level).¹
- Determine the net impact of the proposal – positive or negative – by comparing the number of people-trips in each network, then calculate the percent change from the existing network to the proposed network for the total population, the minority populations, and the low-income populations.
- Compare the change in total people-trips to the change in minority people-trips and low-income people-trips.

¹ Note "people-trips" is not an estimate of the number of transit trips taken by the population in question.

- Use the comparison of each population's percentage change to the percentage change of the total population to determine if a disparate impact or disproportionate burden exists, based on the established threshold.

The findings present how the proposed transit service plan's aggregate impacts for the total population would compare to the aggregate impacts for low-income and minority populations. If the percentage change between total people-trips and low-income people-trips is greater than 10%, a Disproportionate Burden would exist. Similarly, if the percentage change between total people-trips and minority people-trips is greater than 10%, a Disparate Impact would exist.

7 FINDINGS

Using the impact thresholds established under the VTA Title VI and Environmental Justice policies and based on a service equity analysis performed on the proposed 2019 New Transit Service Plan, **the network changes would not impose a disparate impact on minority populations or a disproportionate burden on low-income populations.**

DETAILED RESULTS

The proposed service plan will result in an increase of approximately 2.7 trillion annual people-trips, as shown in Table 1. This represents a 4.8% increase in people-trips for the total population and serves as the baseline change to which the minority and low-income impacts were compared.

As shown, minority populations will also benefit from the new service plan over the existing network, with a net increase of 1.9 trillion people-trips – a 4.5% increase. This increase is only 0.3% lower than the percentage change anticipated for the total population. **This negligible difference is well below the 10% threshold established by the Title VI policies and indicates no disparate impact to minority populations.**

Similar to minority populations, low-income populations will also benefit from the new service plan compared to the existing network, with a net increase of 770 million people-trips – a 4.7% increase. This increase is only 0.1% lower than the percentage change anticipated for the total population. **This negligible difference is also well below the 10% threshold established by the Environmental Justice policies and indicates no disproportionate burden to low-income populations.**

Title VI Service Equity Analysis of VTA's 2019 New Transit Service Plan

TABLE 1 – DISPARATE IMPACT AND DISPROPORTIONATE BURDEN ANALYSIS

	People-trips	Net Change	Percent Change	Difference from Total Change	Exceed -10% Threshold
Total Population					
Existing Network	56,950,365,330				
Proposed Network	59,666,431,553	+ 2,716,066,223	+ 4.8%		
Minority Population					
Existing Network	41,749,420,110				
Proposed Network	43,626,306,613	+ 1,876,886,503	+ 4.5%	- 0.3%	NO
Low-Income Population					
Existing Network	16,494,923,823				
Proposed Network	17,265,343,521	+ 770,419,698	+ 4.7%	- 0.1%	NO

For additional detail and corroboration of the previous findings, Appendix B presents a matrix showing the route-by-route and cumulative impacts of the proposed plan. This matrix provides the source figures for the calculations in Table 1, but the figures can also be used to provide an additional check to ensure the proposed network would have no disparate impact or disproportionate burden.

Each row in Appendix B represents a unique pattern for all VTA transit routes, either in the current network and/or in the proposed network. The green columns reflect current service levels (measured in annual bus trips), the total population living within 1/4-mile of each route's bus stops, the percent of that population reported as low-income, and the percent of that population reported as minority. The blue columns report the same information for the routes in the proposed plan. The light gray columns show the impact on people-trips (population x service level) for the total population and for the low-income and minority populations. The final dark gray and red columns show the percentage change in impacted people-trips borne by low-income and minority populations (positive values indicate an improvement in people-trips and negative values indicate a reduction in people-trips). The cells are gray when the impact is *more beneficial than the total population*, while the cells are red when the impact is *less beneficial than the total population*. The cumulative impacts of the systemwide changes are calculated at the bottom and are also shown in Table 2.

TABLE 2 – CHANGES BORNE BY LOW-INCOME AND MINORITY COMMUNITIES

	Low-Income	Minority
Changes Borne By	28.4%	69.1%
Area Average	21.7%	66.8%
Difference	6.7%	2.3%

The cumulative impacts indicate that low-income populations will receive 28.4% of the benefits in service improvements, which is 6.7% higher than the percentage of low-income population across the entire service area. This means that **the service improvements will be**

more than proportionally distributed to the low-income population. Similarly, minority populations will receive 69.1% of the benefits in service improvements, which is 2.3% higher than the percentage of minority population across the entire service area. This means that **the service improvements will be more than proportionally distributed to the minority population.** Taken together, these results provide additional detail that corroborates the findings from Table 1 indicating no disproportionate burden or disparate impact, and further indicate that low-income and minority populations will receive a greater than proportional share of the benefits of the proposed plan.

Appendices C and D are maps showing the percentage of low-income and minority populations as compared to the area average, as well as the percentage change in people-trips.

Resolution for Board Adoption of Major Service Change, Disparate Impact, and Disporportionate Burden Policies

VTA Title VI Program
November 2016

From: [Baltao, Elaine](#)
To: [Board.Secretary;](#)
Subject: November 7, 2013 Board of Directors Meeting
Date: Friday, November 08, 2013 1:06:27 PM

The VTA Board of Directors met last night and took the following actions:

Removed from agenda: Item #3.4 – TAEA labor contract

Approved all remaining items on the Consent and Regular Agenda.

The Board of Directors adjourned the meeting in memory of VTA Employee, Anita Jacobson.

Office of the Board Secretary
Santa Clara Valley Transportation Authority
3331 N. First Street
San Jose, CA 95134
408.321.5680
board.secretary@vta.org



BOARD OF DIRECTORS MEETING

Thursday, November 7, 2013

5:30 PM

Board of Supervisors' Chambers
 County Government Center
 70 West Hedding Street
 San Jose, CA 95110

****REVISED AGENDA****

To help you better understand, follow, and participate in the meeting, the following information is provided:

- Persons wishing to address the Board of Directors on any item on the agenda or not on the agenda should complete a blue card located at the public information table and hand it to the Board Secretary staff prior to the meeting or **before the item is heard**.
- Speakers will be called to address the Board when their agenda item(s) arise during the meeting and are asked to limit their comments to 2 minutes. The amount of time allocated to speakers may vary at the Chairperson's discretion depending on the number of speakers and length of the agenda. **If presenting handout materials, please provide 25 copies to the Board Secretary for distribution to the Board of Directors.**
- The Consent Agenda items may be voted on in one motion at the beginning of the meeting under Orders of the Day. If you wish to discuss any of these items, please request the item be removed from the Consent Agenda by completing a blue card at the public information table and handing it to the Board Secretary staff prior to Orders of the Day, Agenda Item #1.2.

***Changes from previous version:*

- *Agenda Item #7.7- 2014 STIP Program Adoption requires 2/3 vote*
- *Agenda language updated for Agenda Item #8.2 –Santa Clara Alum Rock Bus Rapid Transit Project- Civil and Station Improvements Contract, to reflect the recommended contractor and contract amount.*

AGENDA


VTA Board of Directors
Thursday, November 7, 2013

- Disclosure of Campaign Contributions to Board Members (Government Code Section 84308)

In accordance with Government Code Section 84308, no VTA Board Member shall accept, solicit, or direct a contribution of more than \$250 from any party, or his or her agent, or from any participant, or his or her agent, while a proceeding involving a license, permit, or other entitlement for use is pending before the agency. Any Board Member who has received a contribution within the preceding 12 months in an amount of more than \$250 from a party or from any agent or participant shall disclose that fact on the record of the proceeding and shall not make, participate in making, or in any way attempt to use his or her official position to influence the decision.

A party to a proceeding before VTA shall disclose on the record of the proceeding any contribution in an amount of more than \$250 made within the preceding 12 months by the party, or his or her agent, to any Board Member. No party, or his or her agent, shall make a contribution of more than \$250 to any Board Member during the proceeding and for three months following the date a final decision is rendered by the agency in the proceeding. The foregoing statements are limited in their entirety by the provisions of Section 84308 and parties are urged to consult with their own legal counsel regarding the requirements of the law.

- All reports for items on the open meeting agenda are available for review in the Board Secretary's Office, 3331 North First Street, San Jose, California, (408) 321-5680, the Monday, Tuesday, and Wednesday prior to the meeting. This information is available on our website, www.vta.org, and also at the meeting. Any document distributed less than 72-hours prior to the meeting will also be made available to the public at the time of distribution. Copies of items provided by members of the public at the meeting will be made available following the meeting upon request.

In accordance with the Americans with Disabilities Act (ADA) and Title VI of the Civil Rights Act of 1964, VTA will make reasonable arrangements to ensure meaningful access to its meetings for persons who have disabilities and for persons with limited English proficiency who need translation and interpretation services. Individuals requiring ADA accommodations should notify the Board Secretary's Office at least 48-hours prior to the meeting. Individuals requiring language assistance should notify the Board Secretary's Office at least 72-hours prior to the meeting. The Board Secretary may be contacted at ☎(408) 321-5680 or ✉: board.secretary@vta.org or ☎ (408) 321-2330 (TTY only). VTA's home page is on the web at: www.vta.org or visit us on  Facebook at: www.facebook.com/scvta. ☎(408) 321-2300: 中文 / Español / 日本語 / 한국어 / tiếng Việt / Tagalog.

**NOTE: THE BOARD OF DIRECTORS MAY ACCEPT, REJECT OR MODIFY
ANY ACTION RECOMMENDED ON THIS AGENDA.**

[70 West Hedding St.](#), San Jose, California is served by bus lines *61, 62, 66, 181, and Light Rail. (*61 Southbound last trip is at 8:55 pm for this location.)

For trip planning information, contact our Customer Service Department at (408) 321-2300 between the hours of 6:00 a.m. to 7:00 p.m. Monday through Friday and 7:30 a.m. to 4:00 p.m. on Saturday. Schedule information is also available on our website, www.vta.org.

1. CALL TO ORDER AND ROLL CALL

- 1.1. ROLL CALL
- 1.2. Orders of the Day - approve Consent Agenda (Item #7)

2. AWARDS AND COMMENDATION

- 2.1. INFORMATION ITEM -Recognize Maria Luisa Sanchez-Ku, Human Resources Analyst, River Oaks Administration; Ronald Langston, Coach Operator, Chaboya Division; and Jose Hernandez, Senior Track Worker, Guadalupe Division, as Employees of the Month for November 2013.

3. CLOSED SESSION

3.1. Recess to Closed Session

- A. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

- B. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Truck Rail Handling, Inc., et al. v. Santa Clara Valley Transportation Authority, et al.
(Alameda County Superior Court Case No.: RG12628077)

- C. Anticipated Litigation - Conference with Legal Counsel
Initiation of litigation pursuant to Government Code Section 54956.9(c).

Number of potential cases: 1
Name of potential opposing party: Union Pacific

- D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

- E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives
Bill Lopez, Chief Administrative Officer
Robert L. Escobar, Deputy Director, Administrative Services
Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

- 3.2. Reconvene to Open Session
- 3.3. Closed Session Report
- 3.4. ACTION ITEM - Approve and authorize the General Manager to execute the amended successor labor agreement negotiated between the Santa Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA), IFPTE, Local 21.

4. PUBLIC COMMENT

This portion of the meeting is reserved for persons desiring to address the Board of Directors on any item within the Board's jurisdiction. Speakers are **limited to 2 minutes**. The law does not permit Board action or extended discussion of any item not on the agenda except under special circumstances. If Board action is requested, the matter can be placed on a subsequent agenda. All statements that require a response will be referred to staff for reply in writing.

5. PUBLIC HEARINGS

There are no public hearings.

6. REPORTS

- 6.1. Citizens Advisory Committee (CAC) Chairperson's Report. (Verbal Report) (Brownley)
- 6.2. Policy Advisory Committee (PAC) Chairperson's Report. (Verbal Report) (Price)
- 6.3. General Manager Report. (Verbal Report)
 - 6.3.A. INFORMATION ITEM -Receive Silicon Valley Rapid Transit (SVRT) Program Update.
 - 6.3.B. Receive updates regarding Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) activities.
- 6.4. Chairperson's Report. (Verbal Report)

7. CONSENT AGENDA

- 7.1. Approve the Board of Directors Workshop Meeting Minutes of September 27, 2013.

- 7.2. Approve the Board of Directors Regular Meeting Minutes of October 3, 2013.
- 7.3. ACTION ITEM -Review and accept the Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the period ending June 30, 2013.
- 7.4. ACTION ITEM -Revise the VTA Permit Policy to authorize the General Manager to waive fees for parties making transit improvements for VTA and adopt a resolution amending the VTA Permit Fee Schedule, adjusting fees to be collected for Construction Access Permits and Restricted Access Permits to be consistent with the revision of VTA allocated rates.
- 7.5. ACTION ITEM -Adopt the 2013 VTA Congestion Management Program (CMP).
- 7.6. ACTION ITEM -Approve the allocation of \$5,460,000 of Local Program Reserve (LPR) to:
- | | |
|--|---------------|
| SR 680 Corridor Study | \$250,000 |
| I-280 Corridor Study | \$250,000 |
| I-280/Winchester Blvd Off-Ramp | \$250,000 |
| US 101 Auxiliary Lanes Project | \$260,000 and |
| SR 237, SR 85 and US 101 Express Lanes | \$4,450,000 |
- 7.7. ACTION ITEM -Adopt a resolution to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds.
- Note: Motion must be approved by at least 2/3 of the Board (8 members).**
- 7.8. ACTION ITEM -Authorize the General Manager to execute a contract with GECMS Inc. dba Gyeron Construction, the second lowest responsible bidder, in the amount of \$337,400 for the construction of Pedestrian Swing Gates Replacement, and relieve the low bidder of its obligation to perform the contract.
- 7.9. ACTION ITEM -Review and receive the Auditor General's internal audit report on Investment Program Controls.
- 7.10. ACTION ITEM -Approve the following Internal Audit Work Plans developed and recommended by the VTA Auditor General:
1. Fiscal Year (FY) 2014 for a maximum amount of \$358,800. This item replaces the Interim FY 2014 Internal Audit Work Plan approved by the Board on June 6, 2013 for a maximum amount of \$290,500.
 2. FY 2015 for a maximum amount of \$364,500.
- 7.11. ACTION ITEM -Review and receive the Auditor General's report on the Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment.

- 7.12. ACTION ITEM -Review and receive the Auditor General's report on the Sheriff's Office Contract Compliance Internal Audit.
- 7.13. INFORMATION ITEM -Review the Monthly Legislative History Matrix.
- 7.14. INFORMATION ITEM -Review VTA's adopted Sound Barrier Program.
- 7.15. INFORMATION ITEM -Receive a status update on implementation of the VTA Integrity Helpline.

8. REGULAR AGENDA

- 8.1. ACTION ITEM -Adopt the proposed Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies as mandated by Federal Transit Administration (FTA) Title VI guidelines.
- 8.2. ACTION ITEM -Authorize the General Manager to execute a contract with Goodfellow Top Grade, the lowest responsible bidder, in the amount of \$54,163,685 for the construction of the Santa Clara Alum Rock Bus Rapid Transit Project - Civil and Station Improvements.

9. OTHER ITEMS

- 9.1. ITEMS OF CONCERN AND REFERRAL TO ADMINISTRATION
- 9.2. Reports from VTA Committees, Joint Powers Boards (JPB), and Regional Commissions
 - 9.2.A. VTA Standing Committees
 - 9.2.B. VTA Advisory Committees
 - 9.2.C. VTA Policy Advisory Boards (PAB)
 - 9.2.D. Joint Powers Boards and Regional Commissions
- 9.3. Announcements

10. ADJOURN in memory of Anita Jacobson, former VTA Employee.



BOARD OF DIRECTORS MEETING

Thursday, November 7, 2013

MINUTES

1. CALL TO ORDER AND ROLL CALL

The Regular Meeting of the Santa Clara Valley Transportation Authority's (VTA) Board of Directors was called to order by Chairperson Pirzynski at 5:41 p.m. in the Board of Supervisors' Chambers, County Government Center, 70 West Hedding Street, San José, California.

1.1. ROLL CALL

Attendee Name	Title	Status
Margaret Abe-Koga	Board Member	Present
Xavier Campos	Board Member	Absent
Larry Carr	Alternate Board Member	Absent
Cindy Chavez	Board Member	Present
Jose Esteves	Board Member	Present
Rose Herrera	Board Member	Absent
Ash Kalra	Vice Chairperson	Present
Johnny Khamis	Alternate Board Member	Absent
Sam Liccardo	Board Member	Present
Jamie Matthews	Board Member	Absent
Chuck Page	Alternate Board Member	Absent
Joe Pirzynski	Chairperson	Present
Gail A. Price	Alternate Board Member	Absent
Donald Rocha	Board Member	Present
David Whittum	Alternate Board Member	Present
Perry Woodward	Board Member	Present
Ken Yeager	Board Member	Absent

* Alternates do not serve unless participating as a Member.

A quorum was not present and a Committee of the Whole was declared.

1.2. Orders of the Day

Chairperson Pirzynski, noted that the Agenda was revised to reflect the following: **Agenda Item #7.7:** 2014 Stated Transportation Improvement Program Adoption needs 2/3 vote; **Agenda Item #8.2:** Authorize the General Manager to execute a contract with the lowest responsible bidder for the Santa Clara Alum Rock Bus Rapid Transit Project- Civil and Station Improvements; and added **Addendum #3.1.E.X:** Conference with Real Property Negotiators.

Chairperson Pirzynski, noted that staff requested the following items be removed from Agenda: **Agenda Item #3.1.B:** Existing Litigation-Conference with Legal Counsel; **Agenda Item #3.1.C:** Anticipated Litigation-Conference with Legal Counsel; and **Agenda Item 3.4:** Labor Agreement negotiation between the Santa

Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA).

Chairperson Pirzynski, noted that the Board Meeting will adjourn in memory of Anita Jacobson.

Board Member Liccardo and Board Member Rocha arrived and took their seats at 5:44 p.m. and a quorum was established.

Public Comment

The following public citizens expressed support for Sound Wall barriers in the Capitol/680/Alum Rock area for noise reduction, safety of the community and safety of homes located close to the freeway.

- Alofa Talivaa
- Ulitafa Mariner

Board Member Kalra expressed support for soundwalls.

Board Member Esteves expressed his support for soundwalls but expressed concern that soundwalls along I-680 in the City of Milpitas should be completed first. Board Member Esteves noted he will oppose Agenda Items #7.6 and #7.7.

M/S/C (Woodward/Chavez) on a vote of 7 ayes, 1 no and 0 abstention to accept the Orders of the Day and approve the Consent Agenda. Board Member Esteves opposed Agenda Items #7.6 and #7.7. Motion for Agenda Item 7.7 failed.

M/S/C (Liccardo/Chavez) to reconsider Agenda Item #7.7.

Vice Chairperson Kalra recommended removing Agenda Item #7.7 from Consent Agenda and place it on the Regular Agenda.

On order of Chairperson Pirzynski and there being no objection, the Board of Directors removed Agenda Item 7.7 from the Consent Agenda and placed it on the Regular Agenda.

2. AWARDS AND COMMENDATION

2.1 Employees of the Month for October 2013

Chairperson Pirzynski recognized Maria Luisa Sanchez-Ku, Human Resources Analyst, River Oaks Administration; Ronald Langston, Coach Operator, Chaboya Division; Jose Hernandez, Senior Track Worker, Guadalupe Division.

NOTE: M/S/C MEANS MOTION SECONDED AND CARRIED AND, UNLESS OTHERWISE INDICATED, THE MOTION PASSED UNANIMOUSLY.

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3. CLOSED SESSION

Public Comment

The following VTA Employees and members of Transportation Authority Engineers and Architects Association (TAEA) addressed the Board of Directors and stressed the importance of realigning wages of TAEA members to attract and retain qualified employees. Members of TAEA commented that VTA Engineers make 12.5% under the average in salary compensation when compared to other counterparts at other local agencies and cities in the county.

- Harry Yip
- Franceen Weisert Anderson
- John Duesterhaus
- Bob Magliocco
- Manjit Singh Khalsa
- Kris Sabherwal
- Raj Sehdev
- Rachel Martinez

Board Member Abe Koga arrived and took her seat at 6:02 p.m.

3.1. **Recess to Closed Session at 6:11 p.m.**

A. Existing Litigation - Conference with Legal Counsel [Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

B. **(Removed from the Agenda)**

Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Truck Rail Handling, Inc., et al. v. Santa Clara Valley Transportation Authority, et al.
(Alameda County Superior Court Case No.: RG12628077)

C. **(Removed from the Agenda)**

Anticipated Litigation - Conference with Legal Counsel
Initiation of litigation pursuant to Government Code Section 54956.9(c).

Number of potential cases: 1
Name of potential opposing party: Union Pacific

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- D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

- E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives

Bill Lopez, Chief Administrative Officer
Robert L. Escobar, Deputy Director, Administrative Services
Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

- 3.1.E.X Conference with Real Property Negotiators
[Government Code Section 54956.8]

Property: Partial fee interest, permanent utility easements and a temporary construction easement on the property located at 3501 Tasman Drive in Santa Clara, California (APN: 104-49-029)

Agency Negotiator: Bijal Patel, Deputy Director, Property Development & Management

Negotiating Party: Michael Pelletier, Lake Marriott, LLC c/o Divco West

Under Negotiation: Price and terms of payment

3.2. Reconvened to Open Session at 7:40 p.m.

3.3. Closed Session Report

- A. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

Robert Fabela, General Counsel, reported that no reportable action was taken during Closed Session.

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8.2.9

D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

Mr. Fabela reported that no reportable action was taken during Closed Session.

E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives

Bill Lopez, Chief Administrative Officer

Robert L. Escobar, Deputy Director, Administrative Services

Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

Mr. Fabela reported that no reportable action was taken during Closed Session.

3.1.E.X Conference with Real Property Negotiators
[Government Code Section 54956.8]

Property: Partial fee interest, permanent utility easements and a temporary construction easement on the property located at 3501 Tasman Drive in Santa Clara, California (APN: 104-49-029)

Agency Negotiator: Bijal Patel, Deputy Director, Property Development & Management

Negotiating Party: Michael Pelletier, Lake Marriott, LLC c/o Divco West

Under Negotiation: Price and terms of payment

Robert Fabela reported that no reportable action was taken during Closed Session.

3.4 (Removed from the Agenda)

ACTION ITEM - Approve and authorize the General Manager to execute the amended successor labor agreement negotiated between the Santa Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA), IFPTE, Local 21.

4. PUBLIC COMMENT

Ron Roberts, VTA employee and member of Service Employees International Union (SEIU) provided a brief overview of the handout that was distributed to all Board members.

Bill Hawthorne, Interested Citizen, expressed concern about VTA liability due to projects related to BART.

Marc DeLong, VTA Employee and TAEA member addressed the Board of Directors and stressed the importance of realigning wages of TAEA members to attract and retain qualified employees.

5. PUBLIC HEARINGS

There are no public hearings.

6. REPORTS

6.1. Citizens Advisory Committee (CAC) Chairperson's Report

Clinton Brownley provided a verbal report that highlighted the October 9, 2013 Citizens Advisory Committee meeting: 1) Caltrain Budget and Ridership Update; 2) Local Program Reserve Programming Actions; and 3) Adoption of VTA Title VI Policies and Standards.

6.2. Policy Advisory Committee (PAC) Chairperson's Report

A written report was provided and distributed to the Board Members.

6.3. General Manager's Report

Michael Burns, General Manager, provided a report highlighting the following: 1) Average weekday Ridership; and 2) VTA Hispanic Heritage Celebration on October 31, 2103.

6.3.A Silicon Valley Rapid Transit (SVRT) Program Update

Carolyn Gonot, Chief SVRT Program Officer, distributed a presentation entitled, "Bart Silicon Valley Update," highlighting: 1) Current Project Activities Fremont; 2) Current Project Activities Milpitas; 3) Current Project Activities San Jose; 4) Design-Build Parking Structures Contract & Parking Technology Procurement; and 5) Residential Noise Insulation Program (RNIP) Update and Next Steps.

6.3.B. Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) updates.

There were no reports from the Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) Activities.

On order of Chairperson Pirzynski and there being no objection to receive the General Manager's Report

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6.4. Chairperson's Report

Chairperson Pirzynski noted Michael Hursh, Chief Operating Officer, will provide a brief presentation on VTA Rail Safety.

Mr. Hursh provided a presentation entitled, "VTA Roadway Worker Protection," highlighting: 1) Track Access – Program Elements; 2) Light Rail Operator Training; 3) Work Zones; 4) Accessing the right of way; 5) VTA Compliance; 6) On Board Cameras; 7) Pocket Guides; and 8) Summary. Mr. Hursh noted advanced warning signs are going to be installed when trains are going at high speeds. Mr. Hursh added that the Board meeting will also adjourn in memoriam of the BART employees who passed away last month.

Chairperson Pirzynski noted the 2014 Chair & Vice Chair Election will be held during the December 2013 meeting. Chair Pirzynski noted that Board Member Kalra submitted a letter showing interest as the Chairperson for 2014 while Board Member Woodward and Alternate Board Member Price submitted letters showing interest as the Vice Chair for 2014. These letters are available on the dais.

Chairperson Pirzynski noted that the 2014 Board of Directors Meeting schedule is provide and advised all members to review.

7. CONSENT AGENDA

7.1. Board of Directors Workshop Meeting Minutes of September 27, 2013

M/S/C (Woodward/Chavez) to approve the Board of Directors Workshop Meeting Minutes of September 27, 2013.

7.2. Board of Directors Workshop Regular Minutes of October 3, 2013

M/S/C (Woodward/Chavez) to approve the Board of Directors Regular Meeting Minutes of October 3, 2013.

7.3. Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the Period Ending June 30, 2013

M/S/C (Woodward/Chavez) to review and accept the Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the period ending June 30, 2013.

7.4. VTA Permit Fee Schedule Revisions

M/S/C (Woodward/Chavez) to revise the VTA Permit Policy to authorize the General Manager to waive fees for parties making transit improvements for VTA and adopt **Resolution No. 2013.11.24** amending the VTA Permit Fee Schedule, adjusting fees to be collected for Construction Access Permits and Restricted Access Permits to be consistent with the revision of VTA allocated rates.

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7.5. Adopt the 2013 VTA Congestion Management Program (CMP)

M/S/C (Woodward/Chavez) to adopt the 2013 VTA Congestion Management Program (CMP).

7.6. Local Program Reserve Programming Actions

M/S/C (Woodward/Chavez) to approve the allocation of \$5,460,000 of Local Program Reserve (LPR) to:

SR 680 Corridor Study	\$250,000
I-280 Corridor Study	\$250,000
I-280/Winchester Blvd Off-Ramp	\$250,000
US 101 Auxiliary Lanes Project	\$260,000
SR 237, SR 85 and US 101 Express Lanes	\$4,450,000

7.7. (Removed from the Consent Agenda and placed on the Regular Agenda)

Adopt a resolution to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds.

7.8. Pedestrian Swing Gates Replacement

M/S/C (Woodward/Chavez) to authorize the General Manager to execute a contract with GECMS Inc. dba Gyeron Construction, the second lowest responsible bidder, in the amount of \$337,400 for the construction of Pedestrian Swing Gates Replacement, and relieve the low bidder of its obligation to perform the contract.

7.9. Investment Program Controls Internal Audit

M/S/C (Woodward/Chavez) to review and receive the Auditor General's internal audit report on Investment Program Controls.

7.10. Auditor General Recommended FY 2014 & FY 2015 Internal Audit Work Plans

M/S/C (Woodward/Chavez) to approve the following Internal Audit Work Plans developed and recommended by the VTA Auditor General:

1. Fiscal Year (FY) 2014 for a maximum amount of \$358,800. This item replaces the Interim FY 2014 Internal Audit Work Plan approved by the Board on June 6, 2013 for a maximum amount of \$290,500.
2. FY 2015 for a maximum amount of \$364,500.

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7.11. Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment

M/S/C (Woodward/Chavez) to review and receive the Auditor General's report on the Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment.

7.12. Sheriff's Office Contract Compliance Internal Audit

M/S/C (Woodward/Chavez) to review and receive the Auditor General's report on the Sheriff's Office Contract Compliance Internal Audit.

7.13. Monthly Legislative History Matrix

M/S/C (Woodward/Chavez) to review the Monthly Legislative History Matrix.

7.14. VTA Noise Barrier Program

M/S/C (Woodward/Chavez) to review VTA's adopted Sound Barrier Program.

7.15. VTA Integrity Helpline Program Status Update

M/S/C (Woodward/Chavez) to receive a status update on implementation of the VTA Integrity Helpline.

8. REGULAR AGENDA**8.1. Adoption of VTA Title VI Policies and Standards**

Michael Burns, General Manager, noted that the Title VI policies are a continuation of comprehensive discussions that began at the Board of Directors Workshop and continued throughout VTA's various committee meetings. Mr. Burns noted the Title VI policies are required and mandated by Federal Transit Administration (FTA). Mr. Burns stated Sylvester Fadal, Human Resources Manager, will review the following: Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies.

Mr. Fadal reviewed the Title VI presentation included in the agenda packet. He referenced Slide 5 – Public Engagement, and noted that staff conducted extensive outreach including community meetings and presentations to the organizations and stakeholders within the area where VTA service is provided. The feedback gathered through this outreach process was considered in the policies being presented for approval.

Mr. Fadal stated the Disparate Impact Policy is designed to address the effects that fare or major service changes have on minority populations, which VTA has always done. The proposed Disparate Impact Policy documents the processes and the application of a threshold that is used when analyzing proposed fare or major service changes.

The Disproportionate Burden Policy is similar to the Disparate Impact Policy but focuses on the effects that fare and major services changes have on low-income populations. The same 10 percent threshold is applied to determine if the low-income riders are more negatively affected or less positively affected by the proposed change than VTA riders as a whole.

Mr. Fadal referred to slide 14 - Service Equity Analysis example, which presents a graphic layout of how VTA conducts equity analysis for proposed major services changes to determine if disparate impacts to minority riders exist. An equity analysis is conducted for proposed major services changes whether the changes are a reduction or an improvement of service. When analyzing changes for disparate impacts, VTA evaluates the impact of those changes to minority riders compared to the overall ridership. If the impacts are significant and higher than the set threshold, VTA will make every effort to mitigate those impacts and address the needs of the community.

The System-Wide Service Standards & Policies are used to track, monitor, and evaluate VTA's service performance to prohibit discrimination on the basis of race, color, or national origin. Critical areas that are evaluated include: peak load factors, headways, on-time performance, service availability, and ridership productivity. Mr. Fadal noted that this policy ensures that VTA services and resources are distributed equitably.

Board Member Chavez recommended that in future reports regarding service related changes, staff should indicate Title VI policies compliance and the benchmarks used.

Mr. Burns noted that in general, transit agencies note that but it is not as prominent. If the policies discussed are adopted by the Board, the future reports would prominently outline the analysis and the compliance to the policies and regulations.

Upon inquiry of Board Member Chavez, Mr. Burns responded that when VTA conducted the Comprehensive Operations Analysis, staff studied and evaluated each route in the system and made appropriate changes. When the services were rebalanced, the analysis showed that VTA provided more services to transit dependent and lower-income neighborhoods.

Alternate Board Member Whittum, inquired about the specific bus change in January 2008 in the City of Sunnyvale. Staff noted the inquiry and stated a response will be prepared.

M/S/C (Chavez/Woodward) to adopt the proposed Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies as mandated by Federal Transit Administration (FTA) Title VI guidelines.

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8.2.9

7.7. 2014 STIP Program Adoption

John Ristow, Chief CMA Officer presented a brief overview of the staff report.

Public Comment

Art Calderon, Interested Citizen, expressed support for Sound Wall barriers in the Capitol/680/Alum Rock area for safety of the community and safety of homes located close to the area.

Board Member Esteves expressed his opposition to Agenda Item #7.7.

M/S/C (**Liccardo/Kalra**) on a vote of 8 ayes, 1 no and 0 abstention to adopt **Resolution No. 2013.11.25** to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds. Board Member Esteves opposed.

Board Member Kalra left his seat at 8: 27 pm.

8.2. Santa Clara Alum Rock Bus Rapid Transit Project – Civil and Station Improvements Contract

Mark Robinson, Chief Engineering & Construction Officer, presented a brief overview of the staff report.

Public Comment

Paul Cianciarulo, Graniterock Company, expressed opposition to awarding the Santa Clara – Alum Rock Bus Rapid Transit Bid Project to Goodfellow Top Grade Construction.

Brian Gates, Goodfellow Top Grade Construction, expressed his thanks and appreciation to VTA Staff and the Board of Directors. Mr. Gates commended VTA Staff for the professionalism that was carried out through the process.

M/S/C (**Chavez/ Woodward**) to authorize the General Manager to execute a contract with Goodfellow Top Grade, the lowest responsible bidder, in the amount of \$54,163,685 for the construction of the Santa Clara Alum Rock Bus Rapid Transit Project - Civil and Station Improvements.

9. OTHER ITEMS**9.1. ITEMS OF CONCERN AND REFERRAL TO ADMINISTRATION**

There were no Items of Concern and Referral to Administration.

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8.2.9

9.2. Reports from VTA Committees, Joint Powers Boards (JPB), and Regional Commissions.**9.2.A. VTA Standing Committees**

- Committee of the Whole (COW) – October 17, 2013, Minutes as contained in the Agenda Packet.
- Administration and Finance Committee (A&F) – There was no report.
- Congestion Management Program and Planning Committee (CMPP) – There was no report.
- Transit Planning and Operations Committee (TP&O) – There was no report.
- Audit Committee – There was no report.
- Silicon Valley Rapid Transit Program Working Committee – There was no report.

9.2.B. VTA Advisory Committees

- Committee for Transit Accessibility (CTA) – October 9, 2013, Minutes as contained in the Agenda Packet.
- Citizens Advisory Committee (CAC) and 2000 Measure A Citizens Watchdog Committee (CWC) – October 9, 2013, Minutes as contained in the Agenda Packet.
- Bicycle & Pedestrian Advisory Committee (BPAC) – There was no report.
- Technical Advisory Committee (TAC) – There was no report.
- Policy Advisory Committee (PAC) – October 10, 2013, Minutes as contained in the Agenda Packet.

9.2.C. VTA Policy Advisory Boards (PAB)

- Diridon Station Joint Policy Advisory Board - There was no report.
- Downtown East Valley PAB - There was no report.
- El Camino Real Rapid Transit PAB - There was no report.
- Silicon Valley Rapid Transit Corridor and BART Warm Springs Extension PAB - There was no report.

9.2.D. Joint Powers Boards and Regional Commissions

- Peninsula Corridor JPB – November 7, 2013, Summary Notes were accepted as contained on the dais.
- Capitol Corridor JPB – There was no report.
- Dumbarton Rail Corridor Policy Committee - There was no report.
- Metropolitan Transportation Commission (MTC) – October 23, 2013, Summary Notes were accepted as contained on the dais.
- Sunol Smart Carpool Lane Joint Powers Authority - There was no report.
- SR 152 Mobility Partnership - There was no report.

9.3. ANNOUNCEMENTS

Board Member Rocha expressed his thanks to Michael Burns, General Manager and Jim Lawson, Executive Policy Advisor for addressing a referral submitted in a timely manner.

10. ADJOURNMENT

On order of Chairperson Pirzynski and there being no objection, the meeting was adjourned in memory of Anita Jacobson, Laurence Daniels, and David Sheppard at 8:35 p.m.

Respectfully submitted,



Theadora Travers, Board Assistant
VTA Office of the Board Secretary

I certify that the foregoing instrument is a true and exact copy of the original on file in the Secretary of the Board of Director's office.


Date 12/17/13

Major Service Change, Disparate Impact, & Disproportionate Burden Policies

VTA Title VI Program (2011-2014)
October 24, 2013

1.0 Purpose:

Title VI (codified at 42 U.S.C. §2000 et seq.) was enacted as part of the landmark Civil Rights Act of 1964. It prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

In order to comply with Federal Transit Administration’s (FTA) Title VI Circular 4702.1B and Environmental Justice Circular 4703.1 requirements, VTA is required to create and adopt Major Service Change, Disparate Impact, and Disproportionate Burden Policies. These policies are used during the planning process to evaluate the impact of major service and fare changes on minority and low income passengers.

In the development of these policies, VTA was also required to seek input from the community, including low-income, minority, and limited English proficient populations, which are traditionally under-represented in the transit decision-making process.

2.0 Scope:

These policies apply to all “major” service changes, and to all fare changes, regardless of magnitude, except as specifically defined herein.

3.0 Responsibilities:

All VTA employees are required to comply with federal and state Title VI and environmental justice laws, regulations, and administrative directives with regard to policies, projects, programs, services, and activities. The Title VI and Environmental Justice Procedures describe divisional and departmental responsibilities.

4.0 Policy:

In accordance with FTA Title VI requirements, VTA shall perform a Service or Fare Equity Analysis to evaluate the positive and negative impacts of all major service and fare changes on minority and low income passengers. The Major Service Change policy determines which proposed service changes require an Equity Analysis. The Disparate Impact and Disproportionate Burden policies contained provide guidance to staff in their analysis of the effects of the proposed changes. As previously noted, all fare changes proposals are subject to a Fare Equity Analysis.

VTA’s Board of Directors must approve the Major Service Change, Disparate Impact, and Disproportionate Burden policies before they can be incorporated into the Title VI Program and submitted to the FTA. Any future amendments to the policies are also subject to Board review.



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4.1 Major Service Change Policy

VTA implements service changes on a quarterly basis in January, April, July and October. Proposed “major” service changes must be submitted to the VTA Board of Directors for review and approval. For Title VI purposes, all “major” service changes will require a Service Equity Analysis.

The following modifications shall be considered “major” service changes:

- The establishment of a new transit line or service;
- The elimination of a transit line or service;
- A route change that impacts 25 percent or more of a line’s route miles;
- Span of service or frequency changes affecting 25 percent or more of a line’s revenue vehicle hours;
- A series of changes on a single route which are included in the two-year Transit Service Plan and cumulatively meet any of the above criteria;
- Proposed changes that are anticipated to be controversial with a particular community or interested parties based on public feedback; and
- A system-wide change concurrently affecting 5 percent or more of the total system revenue hours.

The following types of modifications are not classified as “major” service changes and shall not require Service Equity Analyses:

- Special event service;
- Routing changes due to construction or other road closures; and
- Special service operated during emergencies;

Service change proposals that do not meet the criteria for “major” service changes are still subject to an appropriate level of public review and comment.

4.2 Disparate Impact Policy

The Disparate Impact Policy establishes a threshold for determining if a given service or fare change would result in a fair distribution of positive and negative effects on minority passengers.

As defined by FTA Title VI Circular 4702.1B:

Disparate impact refers to a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists



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one or more alternatives that would service the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.

The policy shall establish a threshold for determining when adverse effects of fare/service changes are borne disproportionately by minority populations. The disparate impact threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by minority populations compared to impacts borne by non-minority populations. The disparate impact threshold must be applied uniformly... and cannot be altered until the next Title VI Program submission.

For Service or Fare Equity Analyses conducted by VTA, a disparate impact threshold of 10 percent shall be used to determine if minority riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference between the aggregate impacts of the proposed change(s) on minority passengers and the aggregate impacts of the proposed change(s) on overall VTA ridership. Analyses shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

If VTA finds that a disparate impact exists, it shall analyze alternatives to determine if another alternative could serve the same legitimate objective with less of a disparate impact. If a less discriminatory alternative does not exist **and** VTA has substantial legitimate justification that cannot otherwise be accomplished, VTA shall mitigate the impact of the change on affected minority riders.

4.3 Disproportionate Burden Policy

The Disproportionate Burden Policy establishes a threshold for determining if a given service or fare change would result a fair distribution of positive and negative effects on low-income riders.

As defined by FTA Title VI Circular 4702.1B:

Disproportionate burden refers to a neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate where practicable.

The policy shall establish a threshold for determining when



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adverse effects of service or fare changes are borne disproportionately by low-income populations. The disproportionate burden threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by low-income populations as compared to impacts born by non-low-income populations. The disproportionate burden threshold must be applied uniformly... and cannot be altered until the next Title VI Program submission.

For Service or Fare Equity Analyses conducted by VTA, a disproportionate burden threshold of 10 percent shall be used to determine if low-income riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference in the aggregate impacts of the proposed change(s) on low-income passengers compared to the aggregate impacts of the proposed change(s) on overall VTA ridership. Analyses shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

If VTA finds that low-income populations will incur a disproportionate burden from a proposed service or fare change, VTA shall identify alternatives available to affected low-income riders and take steps to avoid, minimize, or mitigate impacts where practicable.

5.0 Definitions:

5.1 Environmental Justice

The overarching objective of environmental justice is a fair distribution of the benefits or burdens associated with Federal programs, policies, and activities.

5.2 Fare Change

An increase or decrease in a transit provider’s fare. All fare changes, except the following, are subject to a fare equity analysis:

- “Spare the air days” or other instances when a local municipality or transit agency has declared that all passengers ride free.
- Temporary fare reductions that are mitigating measures for other actions.
- Promotional fare reductions. If promotional or temporary fare reductions last longer than six months, then FTA considers the fare reduction permanent and the transit provider must conduct a fare equity analysis.

5.3 Limited English Proficient (LEP) persons

Refers to persons for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English. It includes people who



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<i>TITLE VI AND ENVIRONMENTAL JUSTICE POLICIES</i>	POLICY	
	Document Number:	AS-HR-PL-2582
	Version Number:	01

reported to the U.S. Census that they speak English less than very well, not well, or not at all.

5.4 Low-income Population

Refers to any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FTA program, policy, or activity.

5.5 Minority Population

Means a readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

5.6 National Origin

Means the particular nation in which a person was born, or where the person's parents or ancestors were born.

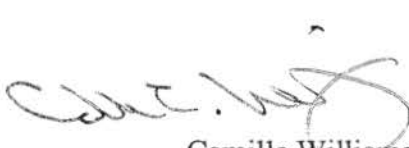
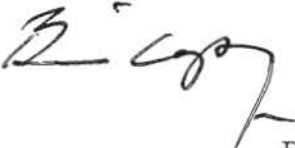

5.7 Title VI

Title VI of the Civil Rights Act of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participated in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

6.0 Summary of Changes:

Initial release of this policy. This policy was approved by the Board of Directors on November 7, 2013.

7.0 Approval Information:

<i>Prepared by</i>	<i>Reviewed by</i>	<i>Approved by</i>
 Camille Williams Title VI/LEP Project Manager	 Bill Lopez Chief Administrative Officer	 Michael T. Burns General Manager

11/18/13
Date Signed



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Appendix B: Matrix of People-Trips by Route

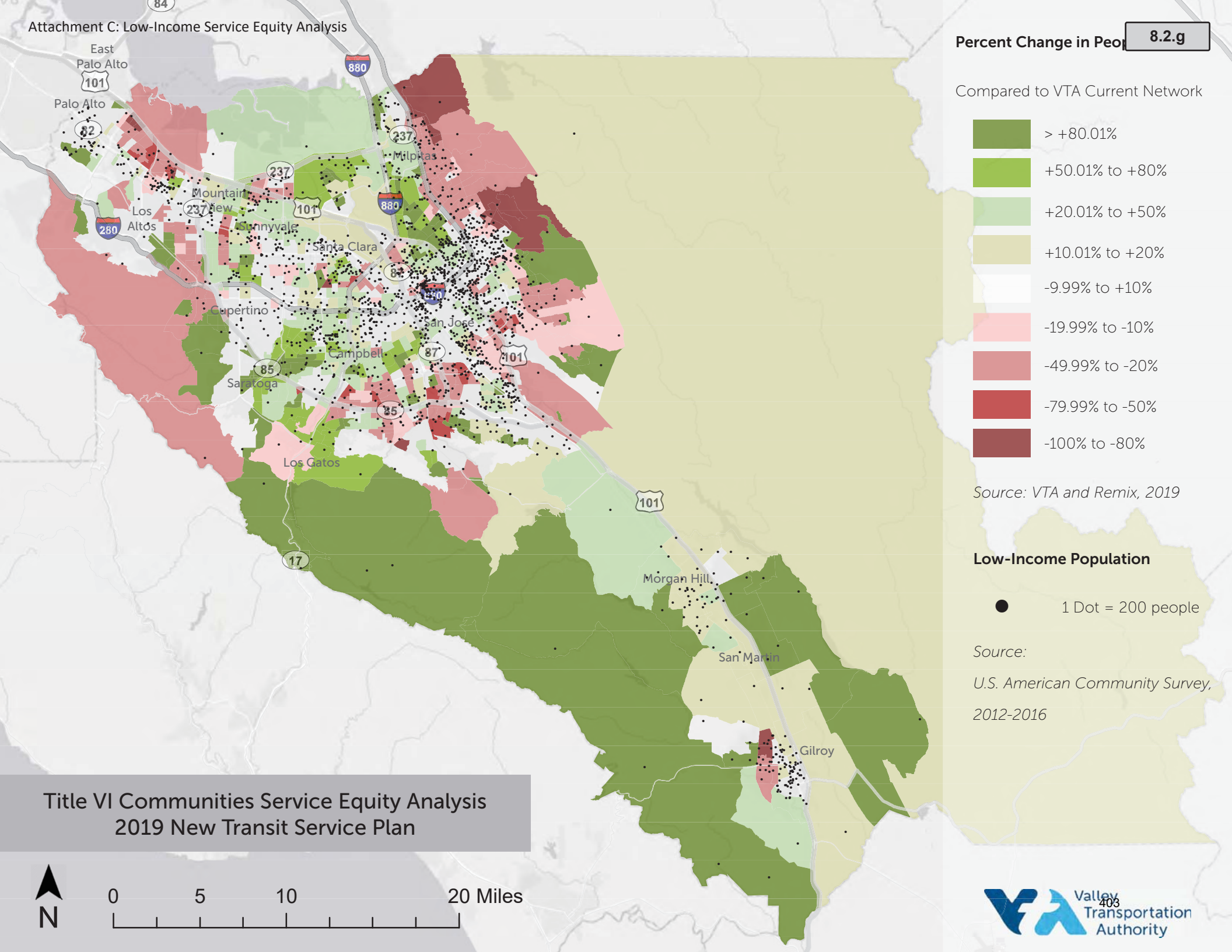
Route New Comparable Route	Current Service								2019 New Transit Service Plan (2019 NTSP)								Change from Current Service to 2019 NTSP					
	Inbound Trips				Outbound Trips				Inbound Trips				Outbound Trips				People-Trips			Change Borne by Title VI Communities (red: less beneficial than average)		
	Demographics of Population Served (within 0.25 mi)		Amount of Service Bus Trips (Annual)		Demographics of Population Served (within 0.25 mi)		Amount of Service Bus Trips (Annual)		Demographics of Population Served (within 0.25 mi)		Amount of Service Bus Trips (Annual)		Demographics of Population Served (within 0.25 mi)		Amount of Service Bus Trips (Annual)		(population x trips)			Change Borne by Low Income	Change Borne by Minorities	
Population	Low Income	Minority	Population	Low Income	Minority	Population	Low Income	Minority	Population	Low Income	Minority	Population	Low Income	Minority	Population	Low Income	Minority	Total People-Trips	Low Income People-Trips	Minority People-Trips		
10 Santa Clara Transit- Metro Airport	2,775	33.0%	68.2%	20,280	3,758	35.0%	63.8%	19,915										-131,117,570	-44,736,038	-86,086,100	34.1%	65.7%
12 San Jose Civic Center - Eastridge	42,097	39.9%	92.0%	1,870	38,090	39.7%	93.1%	1,870										-149,949,690	-59,732,421	-138,679,200	39.8%	92.5%
13 Almaden & Mckean- Ohlone / Chynwth	12,625	16.4%	51.1%	3,060	16,982	14.3%	53.1%	3,315										-94,927,830	-14,349,179	-49,617,900	15.1%	52.3%
14 Gilroy Trans Ctr - St. Louise Hosp	3,663	57.1%	88.6%	4,195	3,230	56.0%	88.0%	4,450										-29,739,785	-16,834,354	-26,268,065	56.6%	88.3%
16 87 M. H. Civic Ctr - Burnett Ave (A)	6,665	20.6%	53.2%	1,785	6,512	21.2%	53.5%	1,785	6,835	21.1%	53.4%	2,040	6,747	21.8%	53.8%	2,040		4,186,335	1,029,346	2,301,885	24.6%	55.0%
16 287 school M. H. Civic Ctr - Burnett Ave (B)					6,912	25.7%	53.9%	255	6,833	25.1%	53.3%	255						-20,145	-15,180	-22,185	75.4%	110.1%
16 M. H. Civic Ctr - Burnett Ave (C)					4,517	25.3%	55.5%	255										-1,151,835	-291,212	-639,285	25.3%	55.5%
17 Gilroy Trans Ctr - St. Louise Hosp (A)	5,914	57.6%	90.4%	880	5,945	57.6%	90.3%	880										-10,435,920	-6,012,999	-9,426,560	57.6%	90.3%
17 Gilroy Trans Ctr - St. Louise Hosp (B)	6,736	56.5%	90.6%	3,570	6,770	56.5%	90.5%	3,315										-46,490,070	-26,271,491	-42,101,775	56.5%	90.6%
18 86 Gilroy Trans Ctr - Gavilan College	5,280	46.7%	79.5%	5,355	5,175	46.3%	79.1%	5,355	6,197	46.0%	79.3%	6,885	5,610	45.6%	78.9%	6,885		25,304,670	11,186,368	19,907,595	44.2%	78.7%
19 Gilroy Trans Ctr - Wren & Mantelli (A)	9,141	42.6%	71.2%	5,435	12,809	39.4%	71.5%	5,015										-113,918,470	-46,473,767	-81,305,045	40.8%	71.4%
19 Gilroy Trans Ctr - Wren & Mantelli (B)					6,229	35.9%	72.5%	475										-2,958,775	-1,060,756	-2,143,675	35.9%	72.5%
19 Gilroy Trans Ctr - Wren & Mantelli (C)					12,162	39.9%	71.2%	765										-9,303,930	-3,714,511	-6,627,960	39.9%	71.2%
20 Milpitas BART - Sunnyvale TC									21,057	14.8%	76.1%	10,455	19,295	15.2%	75.8%	10,455		421,880,160	63,286,628	320,435,295	15.0%	76.0%
21 Stanford Shopping Center - Santa Clara TC									84,377	20.7%	59.5%	9,230	83,343	20.7%	59.9%	9,230		1,548,055,600	319,966,965	924,624,480	20.7%	59.7%
22 Palo Alto - Eastridge (A)	118,507	27.7%	68.8%	24,875	116,882	27.9%	68.9%	24,835	119,030	27.7%	69.0%	27,508	116,849	27.9%	68.8%	27,508		637,933,437	177,140,701	442,577,601	27.8%	69.4%
22 Palo Alto - Eastridge (B)	118,507	27.7%	68.8%	1,150	116,882	27.9%	68.9%	2,155										-388,163,760	-108,100,002	-267,211,730	27.8%	68.8%
22 Palo Alto - Eastridge (C)	102,537	29.0%	71.9%	1,020														-104,587,740	-30,321,300	-75,152,580	29.0%	71.9%
22 Palo Alto - Eastridge (D)					82,815	20.4%	60.3%	55										-4,554,825	-930,529	-2,746,095	20.4%	60.3%
23 De Anza Col - Alum Rock Trans Ctr (A)	65,788	31.7%	75.4%	25,230	65,361	31.8%	75.2%	25,395	64,436	31.9%	75.7%	24,270	63,640	32.0%	75.6%	24,270		-211,269,315	-60,554,875	-147,184,605	28.7%	69.7%
23 De Anza Col - Alum Rock Trans Ctr (B)	65,788	31.7%	75.4%	1,515														-99,668,820	-31,632,222	-75,107,640	31.7%	75.4%
23 De Anza Col - Alum Rock Trans Ctr (C)	50,371	37.4%	74.8%	110														-5,540,810	-2,074,493	-4,141,940	37.4%	74.8%
23 De Anza Col - Alum Rock Trans Ctr (D)	11,325	16.7%	76.1%	255														-2,887,875	-483,104	-2,197,845	16.7%	76.1%
23 De Anza Col - Alum Rock Trans Ctr (E)					41,255	23.6%	70.0%	255										-10,520,025	-2,483,627	-7,359,555	23.6%	70.0%
25 De Anza Col - Alum Rock Trans Ctr (A)	58,624	40.4%	82.0%	14,170	56,096	40.0%	81.8%	13,350	59,725	40.7%	82.4%	25,563	58,497	40.6%	82.2%	25,563		1,442,525,306	593,557,443	1,193,610,439	41.1%	82.7%
25 De Anza Col - Alum Rock Trans Ctr (B)	87,483	32.6%	77.7%	11,490	84,048	32.2%	77.4%	11,545										-1,975,513,830	-639,554,363	-1,532,301,030	32.4%	77.6%
25 De Anza Col - Alum Rock Trans Ctr (C)					56,096	40.0%	81.8%	1,440										-80,778,240	-32,317,964	-66,048,480	40.0%	81.8%
25 De Anza Col - Alum Rock Trans Ctr (D)	72,714	37.2%	78.3%	365	69,861	36.9%	78.0%	110										-34,225,320	-12,717,033	-26,768,345	37.2%	78.2%
25L De Anza College - Valley Med									28,529	17.0%	67.6%	11,964	30,032	16.8%	68.5%	11,964		700,623,804	118,411,461	476,861,112	16.9%	68.1%
26 Sunnyvale / Lockheed - Eastridge (A)	82,209	21.5%	66.3%	9,670	80,470	21.2%	65.4%	9,670	42,493	25.1%	62.7%	21,113	40,450	24.5%	60.8%	21,113		178,069,629	97,750,450	45,326,511	54.9%	25.5%
26 Sunnyvale / Lockheed - Eastridge (B)	82,028	21.5%	66.4%	1,095	80,179	21.2%	65.5%	1,715										-227,327,645	-48,485,125	-149,627,295	21.3%	65.8%
26 Sunnyvale / Lockheed - Eastridge (C)	23,053	24.4%	70.9%	765	24,355	24.0%	70.3%	765										-36,267,120	-8,760,202	-25,610,670	24.2%	70.6%
26L Westgate to WVC									4,839	9.5%	49.9%	7,650	5,016	10.3%	51.1%	7,650		75,390,750	7,467,157	38,074,050	9.9%	50.5%
27 Good Sam Hosp - Kaiser San Jose	40,272	19.5%	55.5%	7,020	41,103	19.7%	55.4%	7,020	63,004	17.3%	47.0%	8,824	62,473	17.2%	47.0%	8,824		535,956,548	79,476,414	203,562,564	14.8%	38.0%
31 Evergreen Valley Col - Eastridge (A)	19,830	26.1%	90.9%	8,695	21,071	26.2%	90.9%	8,805	16,569	25.6%	88.9%	7,967	15,837	25.7%	89.4%	7,967		-99,773,403	-27,425,285	-95,229,063	27.5%	95.4%
31 Evergreen Valley Col - Eastridge (B)	15,772	29.8%	95.3%	310														-4,889,320	-1,458,875	-4,661,470	29.8%	95.3%
32 Sn Antonio Shop Ctr - Sta Clara Tc	56,699	19.8%	63.4%	7,380	57,496	20.0%	64.2%	7,380										-842,759,100	-167,566,767	-537,603,480	19.9%	63.8%
34 Sn Antonio Shop Ctr - Downtown Mv	28,923	26.6%	59.7%	1,530	19,535	28.7%	58.6%	1,530										-74,140,740	-20,341,335	-43,912,530	27.4%	59.2%
35 Dntn Mtn View - Stanford Shop Ctr (A)	39,056	20.3%	51.6%	8,260	38,752	20.4%	51.8%	7,440										-610,917,440	-124,320,680	-315,718,440	20.3%	51.7%
35 Dntn Mtn View - Stanford Shop Ctr (B)	38,207	20.4%	52.0%	620	37,826	20.6%	52.2%	1,695										-87,803,410	-18,039,208	-45,815,245	20.5%	52.2%
37 West Valley College - Capitol Lrt (A)	31,639	17.0%	48.5%	4,590	31,749	17.4%	49.0%	4,845	34,783	17.4%	48.8%	3,315	34,373	17.2%	48.3%	3,315		-69,794,775	-11,844,028	-34,564,485	17.0%	49.5%
37 West Valley College - Capitol Lrt (B)	10,279	11.4%	36.2%	2,550	10,765	12.6%	38.0%	2,295										-50,917,125	-6,098,481	-18,873,570	12.0%	37.1%
37 West Valley College - Capitol Lrt (C)	23,182	19.5%	53.6%	255														-5,911,410	-1,152,528	-3,168,885	19.5%	53.6%
39 The Villages - Eastridge	19,154	16.3%	85.6%	5,945	18,671	16.5%	85.7%	6,200	18,821	16.6%	85.6%	4,415	19,654	16.6%	85.6%	4,415		-59,763,605	-9,423,496	-51,307,140	15.8%	85.9%
40 Foothill Col - La Avenida & Shor (A)	21,548	22.8%	54.1%	8,165	21,462	23.0%	54.2%	8,165	27,912	21.9%	53.9%	8,175	28,067	22.1%	54.0%	8,175		106,451,675	20,267,941	56,550,565	19.0%	53.1%
40 Foothill Col - La Avenida & Shor (B)	20,007	23.9%	56.1%	495	20,149	24.0%	56.0%	495										-19,877,220	-4,760,558	-11,137,995	23.9%	56.0%
40 Foothill Col - La Avenida & Shor (C)					20,410	22.6%	53.3%	765										-15,613,650	-3,531,458	-8,323,965	22.6%	53.3%
40 Foothill Col - La Avenida & Shor (D)	18,153	25.7%	58.2%	510														-9,258,030	-2,377,608	-5,391,210	25.7%	58.2%
40 Foothill Col - La Avenida & Shor (E)	21,358	22.9%	54.1%	255														-5,446,290	-1,244,749	-2,946,015	22.9%	54.1%
40 Sunday									25,735	22.5%	54.7%	696	26,722	22.9%	55.5%	696		36,510,072	8,300,715	20,133,888	22.7%	55.1%
42 Kaiser Sj - Evergreen Valley Col (A)	43,818	31.3%	82.8%	3,825	40,882	31.8%	82.7%	3,825	40,404	32.9%	84.8%	3,315	39,683	33.5%	84.9%	3,315		-58,489,095	-13,902,137	-42,739,785	23.8%	73.1%
42 Kaiser Sj - Evergreen Valley Col (B)	26,483	31.3%	79.1%	495	24,280	32.5%	78.8%	495														

Route New Comparable Route	Current Service								2019 New Transit Service Plan (2019 NTSP)								Change from Current Service to 2019 NTSP																				
	Inbound Trips				Outbound Trips				Inbound Trips				Outbound Trips				People-Trips																				
	Demographics of Population Served (within 0.25 mi)			Amount of Service Bus Trips (Annual)	Demographics of Population Served (within 0.25 mi)			Amount of Service Bus Trips (Annual)	Demographics of Population Served (within 0.25 mi)			Amount of Service Bus Trips (Annual)	(population x trips)			Change Borne by Title VI Communities (red: less beneficial than average)																					
Population	Low Income	Minority	Population		Low Income	Minority	Population		Low Income	Minority	Total People-Trips		Low Income People-Trips	Minority People-Trips	Change Borne by Low Income	Change Borne by Minorities																					
46 Great Mall - Milpitas High School (D)	18,630	18.1%	85.4%	255	18,607	18.4%	85.4%	510										-14,240,220	-2,608,483	-12,163,500	18.3%	85.4%															
47 Great Mall - Mccarthy Ranch (A)	14,964	23.2%	89.0%	8,555	16,075	23.3%	89.2%	8,555	16,479	22.5%	88.3%	8,772	16,549	22.5%	88.5%	8,772		24,182,971	3,667,579	19,466,806	15.2%	80.5%															
47 Great Mall - Mccarthy Ranch (B)	13,780	23.9%	89.5%	365	14,957	23.9%	89.8%	565										-13,480,405	-3,217,674	-12,085,975	23.9%	89.7%															
47 Great Mall - Mccarthy Ranch (C)	9,289	24.8%	88.3%	255	9,385	24.6%	88.4%	510										-7,155,045	-1,762,456	-6,324,255	24.6%	88.4%															
47 Great Mall - Mccarthy Ranch (D)					12,227	24.3%	89.6%	310										-3,790,370	-919,592	-3,395,430	24.3%	89.6%															
47 Great Mall - Mccarthy Ranch (E)	11,565	24.0%	89.3%	255														-2,949,075	-706,706	-2,634,915	24.0%	89.3%															
48 Los Gatos - Winchester Lrt (A)	14,525	13.9%	31.9%	5,235	15,345	14.6%	33.2%	5,125										-154,681,500	-22,016,776	-50,402,165	14.2%	32.6%															
48 Los Gatos - Winchester Lrt (B)					7,100	13.5%	38.6%	55										-390,500	-52,781	-150,700	13.5%	38.6%															
49 Los Gatos - Winchester Lrt (A)	12,458	13.5%	33.7%	990	12,834	13.6%	34.0%	1,100										-26,450,820	-3,579,464	-8,964,560	13.5%	33.9%															
49 Los Gatos - Winchester Lrt (B)	15,309	12.9%	33.8%	4,080	15,790	13.0%	34.0%	4,080										-126,883,920	-16,398,508	-43,015,440	12.9%	33.9%															
51																																					
51L																																					
52 Foothill College - Dwn town Mtn View (A)	12,756	12.1%	41.5%	6,885	12,473	11.8%	41.6%	6,375	25,743	10.0%	52.6%	5,355	25,840	9.8%	51.2%	5,355		276,226,965	27,332,986	143,422,965	9.9%	51.9%															
52 Foothill College - Dwn town Mtn View (B)					9,928	10.6%	40.7%	255	16,635	11.2%	73.4%	3,315	19,758	14.2%	69.5%	3,315		120,642,795	15,491,810	85,994,415	12.8%	71.3%															
52 Foothill College - Dwn town Mtn View (C)					12,612	11.8%	41.6%	255	12,986	12.0%	41.4%	6,630	12,625	11.7%	41.5%	6,630		2,460,495	108,940	795,345	4.4%	32.3%															
53 Wv College- Sunnyvale Trans Ctr (A)	43,424	12.2%	67.1%	3,060	43,310	12.0%	67.0%	3,060										-2,531,640	-268,905	-1,029,945	10.6%	40.7%															
53 Wv College- Sunnyvale Trans Ctr (B)	28,949	12.6%	64.3%	255	28,916	12.4%	64.3%	1,530										-3,216,060	-378,300	-1,336,455	11.8%	41.6%															
53 Wv College- Sunnyvale Trans Ctr (C)	23,266	12.2%	60.8%	765					50,857	15.6%	61.9%	6,630	51,013	15.5%	61.8%	6,630		409,992,060	72,832,420	239,882,580	17.8%	58.5%															
53 Wv College- Sunnyvale Trans Ctr (D)	19,901	13.2%	62.1%	255														-51,623,475	-6,426,045	-33,196,920	12.4%	64.3%															
54 De Anza College - Lockheed (A)	25,415	13.6%	70.0%	8,680	24,916	13.4%	69.9%	7,345										-17,798,490	-2,164,930	-10,816,335	12.2%	60.8%															
54 De Anza College - Lockheed (B)					25,028	13.4%	69.9%	1,280										-5,074,755	-668,048	-3,149,505	13.2%	62.1%															
55 De Anza College - Great America (A)	49,198	17.7%	73.0%	8,465	46,497	18.2%	72.7%	10,050										-403,610,220	-54,422,864	-282,356,415	13.5%	70.0%															
55 De Anza College - Great America (B)	37,504	19.0%	70.3%	2,550	36,668	19.3%	71.4%	2,805	45,161	16.3%	71.5%	10,226	44,879	18.0%	70.6%	10,226		-32,035,840	-4,281,110	-22,392,320	13.4%	69.9%															
55 De Anza College - Great America (C)	36,552	19.0%	70.5%	1,530														36,993,120	-693,352	10,187,900	-1.9%	27.5%															
55 De Anza College - Great America (D)	29,214	19.9%	69.8%	1,530														-198,488,940	-38,013,837	-140,686,815	19.2%	70.9%															
55 De Anza College - Great America (E)	50,392	17.3%	72.0%	1,530														-55,924,560	-10,629,589	-39,399,030	19.0%	70.5%															
55 De Anza College - Great America (F)					27,333	20.6%	71.5%	1,530										-44,697,420	-8,887,179	-31,193,640	19.9%	69.8%															
55 De Anza College - Great America (G)					34,982	19.5%	71.9%	765										-77,099,760	-13,354,352	-55,490,040	17.3%	72.0%															
55 De Anza College - Great America (H)					27,134	19.7%	73.9%	510										-41,819,490	-8,596,835	-29,913,030	20.6%	71.5%															
57 West Valley Coll - Great America (A)	33,264	16.9%	64.8%	8,185	33,753	16.8%	65.3%	8,295										-26,761,230	-5,221,778	-19,252,755	19.5%	71.9%															
57 West Valley Coll - Great America (B)	33,134	16.9%	64.8%	1,100	33,661	16.8%	65.3%	1,100	34,436	16.9%	65.4%	19,618	34,304	16.7%	65.5%	19,618		-13,838,340	-2,728,492	-10,221,420	19.7%	73.9%															
57 West Valley Coll - Great America (C)	27,960	17.8%	67.8%	620	28,494	17.7%	68.3%	110										796,294,345	133,814,314	523,467,701	16.8%	65.7%															
57 West Valley Coll - Great America (D)	27,831	17.8%	67.8%	55	28,401	17.7%	68.3%	55										-73,474,500	-12,382,183	-47,784,000	16.9%	65.0%															
57 West Valley Coll - Great America (E)					28,494	17.7%	68.3%	255										-20,469,540	-3,639,822	-13,897,190	17.8%	67.9%															
57 West Valley Coll - Great America (F)	33,264	16.9%	64.8%	255														-3,092,760	-549,254	-2,104,080	17.8%	68.0%															
58 West Valley College - Alviso (A)	44,825	17.3%	68.5%	3,060	46,423	17.0%	68.8%	2,550										-7,265,970	-1,284,343	-4,964,085	17.7%	68.3%															
58 West Valley College - Alviso (B)	19,572	18.9%	72.8%	1,275	20,757	18.4%	72.8%	1,530										-8,482,320	-1,432,696	-5,498,055	16.9%	64.8%															
58 West Valley College - Alviso (C)	40,847	18.3%	70.2%	510	42,427	17.9%	70.6%	765										-255,543,150	-43,883,427	-175,386,450	17.2%	68.6%															
59																		-56,712,510	-10,557,636	-41,302,095	18.6%	72.8%															
59 weekend									28,086	28.7%	63.8%	7,395	26,652	28.7%	63.7%	7,395		404,787,510	116,195,260	257,959,785	28.7%	63.7%															
60 Winchester Tc - Gt America (A)	36,014	29.6%	60.1%	9,335	35,854	29.5%	60.1%	9,335	17,446	25.9%	70.7%	1,314	16,818	25.6%	70.6%	1,314		45,022,896	11,605,250	31,797,486	25.8%	70.6%															
60 Winchester Tc - Gt America (B)	35,886	29.7%	60.0%	1,320	35,734	29.6%	60.0%	1,265										38,457	27.1%	64.8%	22,585	37,398	27.1%	65.0%	22,585								1,042,297,395	265,687,206	708,021,115	25.5%	67.9%
60 Winchester Tc - Gt America (C)	27,682	29.6%	56.7%	2,805	27,667	29.3%	56.7%	2,040											-92,573,030	-27,443,648	-55,560,560	29.6%	60.0%														
61 Good Sam Hosp - Sierra & Piedmont (A)	55,265	25.7%	68.9%	8,625	55,207	25.4%	68.9%	8,680										-134,088,690	-39,564,649	-76,023,660	29.5%	56.7%															
61 Good Sam Hosp - Sierra & Piedmont (B)	15,799	29.3%	72.7%	255					35,018	27.9%	66.2%	20,395	35,202	28.2%	66.7%	20,395		476,279,515	157,308,913	292,604,430	33.0%	61.4%															
61 Good Sam Hosp - Sierra & Piedmont (C)	51,026	26.6%	71.4%	255														-4,028,745	-1,178,442	-2,928,675	29.3%	72.7%															
61 Good Sam Hosp - Sierra & Piedmont (D)					47,667	26.6%	66.1%	255										-13,011,630	-3,459,873	-9,285,825	26.6%	71.4%															
61L																																					
61T																																					
62 Good Sam Hosp - Sierra & Piedmont (A)	51,263	23.5%	66.0%	9,300	53,424	23.0%	66.1%	9,190										-12,155,085	-3,230,311	-8,039,130	26.6%	66.1%															
62 Good Sam Hosp - Sierra & Piedmont (B)	18,576	25.2%	83.3%	1,100					13,671	18.1%	85.2%	10,406	14,042	18.2%	85.8%	10,406		288,381,478	52,317,434	246,580,576	18.1%	85.5%															
62 Good Sam Hosp - Sierra & Piedmont (C)					19,655	24.7%	83.7%	990										303,654,816	43,984,061	121,863,744	14.5%	40.1%															
62 Good Sam Hosp - Sierra & Piedmont (D)	41,020	26.1%	72.4%	55														-967,712,460	-225,101,927	-639,366,250	23.3%	66.1%															
62 Good Sam Hosp - Sierra & Piedmont (E)					49,396	23.3%	64.7%	255										-20,433,600	-5,153,279	-17,028,000	25.2%	83.3%															
63 Almaden Expy - San Jose State	42,817	20.0%	49.5%	6,455	42,728	20.5%	49.9%	7,220										-19,458,450	-4,812,813	-16,280,550	24.7%	83.7%															
64 Almaden Lrt - Mckee & White (A)	55,810	33.1%	68.0%	10,200	54,587	33.3%	67.0%	10,310										-2,256,100	-588,319	-1,634,380	26.1%	72.4%															
64 Almaden Lrt - Mckee & White (B)	34,458	41.6%	82.0%	5,865	32,193	43.3%	82.0%	5,865										-12,595,980	-2,934,249	-8,145,720	23.3%	64.7%															
64 Almaden Lrt - Mckee & White (C)	55,659	33.1%	68.1%	930	54,587	33.3%	67.0%	675	32,352	43.1%	83.4%	18,959	35,831	41.5%	83.4%	18,959		-584,879,895	-118,342,780	-290,993,335	20.2%	49.8%															
64a																			160,627,527	171,024,399	314,072,843	106.5%	195.5%														
																			-390,908,115	-165,913,872	-320,580,900	42.4%	82.0%														
																			-88,609,095	-29,399,297	-59,918,490	33.2%	67.6%														
									30,777	20.0%	48.1%	12,277	30,529	20.3%	48.5%	12,277		752,653,762	151,588,046	363,521,970	20.1%	48.3%															

Route New Comparable Route	Current Service								2019 New Transit Service Plan (2019 NTSP)								Change from Current Service to 2019 NTSP				
	Inbound Trips				Outbound Trips				Inbound Trips				Outbound Trips				People-Trips			Change Borne by Title VI Communities (red: less beneficial than average)	
	Demographics of Population Served (within 0.25 mi)			Amount of Service Bus Trips (Annual)	Demographics of Population Served (within 0.25 mi)			Amount of Service Bus Trips (Annual)	Demographics of Population Served (within 0.25 mi)			Amount of Service Bus Trips (Annual)	(population x trips)			Change Borne by Low Income	Change Borne by Minorities				
Population	Low Income	Minority		Population	Low Income	Minority		Population	Low Income	Minority		Population	Low Income	Minority		Total People-Trips	Low Income People-Trips	Minority People-Trips			
64b																643,005,328	112,889,269	305,106,704	17.6%	47.5%	
65 Kooser & Blossom Hill- Dntn S. J.	57,278	27.3%	60.7%	4,080	57,433	27.8%	60.8%	4,335	38,374	17.7%	47.6%	8,344	38,688	17.4%	47.3%	8,344	-482,666,295	-133,009,414	-293,264,535	27.6%	60.8%
66 Kaiser San Jose - Milpitas / Dixon (A)	82,820	30.0%	79.3%	15,925	84,201	30.3%	79.4%	16,910	89,215	31.3%	79.8%	22,023	89,848	31.6%	80.0%	22,023	1,200,757,039	413,981,935	975,352,550	34.5%	81.2%
66 Kaiser San Jose - Milpitas / Dixon (B)	82,820	30.0%	79.3%	785	84,201	30.3%	79.4%	930									-143,320,630	-43,210,333	-113,733,515	30.1%	79.4%
66 Kaiser San Jose - Milpitas / Dixon (C)	62,271	34.7%	84.4%	930													-57,912,030	-20,108,160	-48,898,470	34.7%	84.4%
66 Kaiser San Jose - Milpitas / Dixon (D)					8,294	12.2%	57.3%	765									-6,344,910	-772,531	-3,637,575	12.2%	57.3%
66 Kaiser San Jose - Milpitas / Dixon (E)					69,450	32.4%	77.2%	365									-25,349,250	-8,219,759	-19,559,255	32.4%	77.2%
66 Kaiser San Jose - Milpitas / Dixon (F)					12,544	18.4%	89.6%	510									-6,397,440	-1,177,316	-5,732,400	18.4%	89.6%
66 Kaiser San Jose - Milpitas / Dixon (G)					69,450	32.4%	77.2%	55									-3,819,750	-1,238,594	-2,947,285	32.4%	77.2%
66 Kaiser San Jose - Milpitas / Dixon (H)					63,190	33.3%	76.0%	255									-16,113,450	-5,360,785	-12,245,355	33.3%	76.0%
66 Kaiser San Jose - Milpitas / Dixon (I)	48,839	39.0%	83.0%	55													-2,686,145	-1,047,082	-2,229,920	39.0%	83.0%
68 Gilroy Tc - San Jose Diridon (A)	69,600	36.7%	76.1%	17,440	69,136	36.3%	75.4%	18,515	69,325	36.2%	75.3%	22,133	68,619	36.6%	75.8%	22,133	559,237,512	201,954,233	416,802,579	36.1%	74.5%
68 Gilroy Tc - San Jose Diridon (B)					66,335	36.8%	76.2%	730									-48,424,550	-17,816,691	-36,885,440	36.8%	76.2%
68 Gilroy Tc - San Jose Diridon (C)					6,143	14.7%	61.0%	765									-4,699,395	-692,963	-2,867,220	14.7%	61.0%
68 Gilroy Tc - San Jose Diridon (D)	38,401	40.0%	80.9%	510													-19,584,510	-7,836,770	-15,848,250	40.0%	80.9%
70 Capitol Lrt Stn - Great Mall / Main (A)	88,051	31.2%	90.8%	18,825	85,012	31.3%	90.9%	19,025	29,362	37.2%	94.7%	20,945	29,522	37.1%	94.7%	20,945	-2,041,587,995	-566,408,375	-1,807,402,580	27.7%	88.5%
70 Capitol Lrt Stn - Great Mall / Main (B)	80,499	31.6%	93.1%	365													-29,382,135	-9,297,702	-27,346,895	31.6%	93.1%
70 Capitol Lrt Stn - Great Mall / Main (C)	21,303	16.3%	87.8%	510													-10,864,530	-1,768,157	-9,541,080	16.3%	87.8%
70 Capitol Lrt Stn - Great Mall / Main (D)					76,240	33.0%	91.4%	255									-19,441,200	-6,424,939	-17,777,325	33.0%	91.4%
70L									24,059	16.2%	87.8%	10,522	23,528	16.2%	87.8%	10,522	500,710,414	81,091,703	439,745,946	16.2%	87.8%
71 Eastridge- Great Mall / Main	48,857	29.0%	90.0%	13,530	47,874	29.0%	90.0%	12,965	85,594	30.5%	89.1%	10,904	85,567	30.4%	89.3%	10,904	584,617,924	196,628,326	511,472,493	33.6%	87.5%
72 Senter / Monterey - Downtown San Jose (A)	59,281	40.7%	87.0%	19,990	67,495	40.0%	85.6%	18,185	59,047	40.8%	87.1%	19,374	67,779	40.0%	85.6%	19,374	44,703,159	17,391,454	37,860,710	38.9%	84.7%
72 Senter / Monterey - Downtown San Jose (B)					64,400	41.0%	86.4%	930									-59,892,000	-24,555,590	-51,759,150	41.0%	86.4%
72 Senter / Monterey - Downtown San Jose (C)					64,384	40.1%	86.5%	55									-3,541,120	-1,421,501	-3,064,655	40.1%	86.5%
73 Snell & Capitol - Downtwn San Jose (A)	51,228	40.5%	79.8%	15,995	48,768	43.8%	81.5%	14,500	43,197	44.5%	81.3%	19,374	49,221	43.0%	81.2%	19,374	263,978,472	140,510,281	224,224,800	53.2%	84.9%
73 Snell & Capitol - Downtwn San Jose (B)	44,005	44.3%	81.2%	3,740	46,097	44.9%	82.1%	4,360									-365,561,620	-163,091,164	-298,663,700	44.6%	81.7%
73 Snell & Capitol - Downtwn San Jose (C)					45,657	44.3%	82.5%	510									-23,285,070	-10,319,429	-19,216,800	44.3%	82.5%
77 Eastridge - Great Mall / Main	42,966	36.5%	94.4%	14,260	42,135	37.2%	94.4%	14,205	43,356	37.0%	94.5%	19,844	44,767	36.7%	94.4%	19,844	537,489,977	198,551,247	507,553,104	36.9%	94.4%
81 Moffett / Ames Ctr - San Jose State (A)	77,944	18.9%	58.7%	5,795	79,668	19.0%	59.0%	3,500									-730,523,480	-138,468,770	-429,624,465	19.0%	58.8%
81 Moffett / Ames Ctr - San Jose State (B)	79,254	18.7%	58.4%	1,530	80,050	18.9%	58.9%	3,060									-366,211,620	-69,055,375	-215,009,370	18.9%	58.7%
81 Moffett / Ames Ctr - San Jose State (C)					14,571	11.5%	45.6%	2,550									-37,156,050	-4,270,398	-16,954,950	11.5%	45.6%
81 Moffett / Ames Ctr - San Jose State (D)	43,171	25.2%	58.6%	255	45,229	24.9%	59.3%	565									-36,562,990	-9,149,975	-21,619,815	25.0%	59.1%
81 Moffett / Ames Ctr - San Jose State (E)	14,807	11.2%	45.3%	765													-11,327,355	-1,273,358	-5,127,795	11.2%	45.3%
81 Moffett / Ames Ctr - San Jose State (F)	36,038	11.4%	59.3%	55	35,605	11.4%	59.2%	310									-13,019,640	-1,487,305	-7,706,170	11.4%	59.2%
81 Moffett / Ames Ctr - San Jose State (G)					14,594	11.5%	46.1%	510									-7,442,940	-859,333	-3,432,300	11.5%	46.1%
81 Moffett / Ames Ctr - San Jose State (H)					8,126	11.3%	44.6%	255									-2,072,130	-234,359	-923,610	11.3%	44.6%
81 Moffett / Ames Ctr - San Jose State (I)					56,924	13.7%	60.1%	255									-14,515,620	-1,993,505	-8,730,180	13.7%	60.1%
81 Moffett / Ames Ctr - San Jose State (J)	12,640	28.6%	57.5%	255													-3,223,200	-922,670	-1,854,615	28.6%	57.5%
81 Moffett / Ames Ctr - San Jose State (K)	13,497	10.6%	43.7%	255													-3,441,735	-363,663	-1,503,735	10.6%	43.7%
82 Westgate - Downtown San Jose (A) 56	47,190	31.9%	61.6%	8,880	47,754	32.9%	62.4%	8,570	69,103	19.8%	61.5%	10,446	68,939	19.6%	61.5%	10,446	613,687,752	15,626,339	373,240,980	2.5%	60.8%
82 Westgate - Downtown San Jose (B) 256 school	14,080	35.4%	62.1%	765					14,697	35.3%	61.9%	510	14,799	35.4%	62.0%	510	4,271,760	1,508,987	2,638,485	35.3%	61.8%
82 Westgate - Downtown San Jose (C)					14,768	35.5%	62.2%	510									-7,531,680	-2,670,142	-4,682,820	35.5%	62.2%
82 Westgate - Downtown San Jose (D)					44,344	32.5%	62.0%	55									-2,438,920	-793,306	-1,511,730	32.5%	62.0%
83									19,132	16.1%	52.4%	3,315	14,326	18.6%	53.1%	3,315	110,913,270	19,062,884	58,476,600	17.2%	52.7%
84									4,322	58.5%	90.2%	4,415	4,559	57.4%	89.1%	4,415	39,209,615	22,728,539	35,130,155	58.0%	89.6%
85									17,149	40.8%	74.7%	4,415	16,587	40.7%	74.5%	4,415	148,944,440	60,727,817	111,112,305	40.8%	74.6%
88 Vets Hosp - Middlefield & Colorado (A) 288	14,727	9.8%	48.9%	3,060	16,411	9.2%	48.8%	3,060	14,774	9.8%	48.9%	510	15,848	9.1%	48.7%	255	-83,706,300	-7,934,603	-40,869,870	9.5%	48.8%
88 Vets Hosp - Middlefield & Colorado (B) 288L	11,899	13.2%	49.4%	1,020	12,236	13.0%	49.0%	255	13,973	11.6%	51.7%	255	13,760	11.5%	51.6%	255	-8,185,245	-1,187,650	-3,877,275	14.5%	47.4%
88 Vets Hosp - Middlefield & Colorado (C) 288M	13,822	11.6%	51.7%	1,020	13,593	11.6%	51.6%	255	11,899	13.2%	49.4%	255	11,689	13.3%	49.5%	255	-11,549,715	-1,243,988	-6,094,245	10.8%	52.8%
88 Vets Hosp - Middlefield & Colorado (D)	15,331	9.7%	48.9%	1,020													-15,637,620	-1,512,297	-7,639,800	9.7%	48.9%
89 California Ave Ctrn-Vets Hospital (A)	4,062	9.9%	39.8%	2,805	4,130	10.0%	40.0%	2,550	4,081	9.9%	39.8%	3,315	4,202	9.9%	39.8%	3,315	5,532,735	539,927	2,175,915	9.8%	39.3%
89 California Ave Ctrn-Vets Hospital (B)	4,719	9.3%	40.1%	1,530	4,826	9.3%	40.3%	2,295	4,643	9.4%	40.0%	3,570	4,908	9.2%	40.0%	3,570	15,801,330	1,471,454	6,279,885	9.3%	39.7%
101 Camden & Hwy 85 - Palo Alto	18,509	18.5%	56.2%	510	18,117	16.8%	55.6%	510	18,509	18.5%	56.2%	510	18,117	16.8%	55.6%	510	0	0	0	0.0%	0.0%
102 South San Jose - Palo Alto	10,116	14.9%	57.8%	1,785	10,213	15.0%	58.2%	1,785	10,116	14.9%	57.8%	1,785	10,213	15.0%	58.2%	1,785	0	0	0	0.0%	0.0%
103 Eastridge - Palo Alto	8,729	34.1%	77.7%	1,020	8,610	32.0%	77.4%	1,020	8,729	34.1%	77.7%	1,020	8,610	32.0%	77.4%	1,020	0	0	0	0.0%	0.0%
104 Penitencia Trans Ctr - Palo Alto	18,244	18.3%	76.7%	510	18,149	18.4%	77.2%	510	18,244	18.3%	76.7%	510	18,149	18.4%	77.2%	510	0	0	0	0.0%	0.0%
120 Fremont Bart - Lockheed Martin (A)	354	27.4%	55.4%	1,020	285	28.1%	55.8%	1,020									-651,780	-180,540	-362,100	27.7%	55.6%
120 Fremont Bart - Lockheed Martin (B)	767	27.2%	60.2%	510	732	26.0%	57.7%	510									-764,490	-203,490	-450,840	26.6%	59.0%
121 Gilroy Trans Ctr - Lockheed Martin	7,206	32.5%	67.5%	2,295	7,022	32.3%	69.2%	2,295	7,206	32.5%	67.5%	2,295	7,022	32.3%	69.2%	2,295	0	0	0	0.0%	0.0%

Route New Comparable Route	Current Service								2019 New Transit Service Plan (2019 NTSP)								Change from Current Service to 2019 NTSP					
	Inbound Trips				Outbound Trips				Inbound Trips				Outbound Trips				People-Trips			Change Borne by Title VI Communities (red: less beneficial than average)		
	Demographics of Population Served (within 0.25 mi)		Amount of Service Bus Trips (Annual)		Demographics of Population Served (within 0.25 mi)		Amount of Service Bus Trips (Annual)		Demographics of Population Served (within 0.25 mi)		Amount of Service Bus Trips (Annual)		Demographics of Population Served (within 0.25 mi)		Amount of Service Bus Trips (Annual)		(population x trips)			Change Borne By Low Income	Change Borne by Minorities	
Population	Low Income	Minority	Population	Low Income	Minority	Population	Low Income	Minority	Population	Low Income	Minority	Population	Low Income	Minority	Population	Low Income	Minority	Total People-Trips	Low Income People-Trips	Minority People-Trips		
122 South San Jose - Lockheed Martin	22,431	22.9%	71.1%	255	22,739	23.6%	71.4%	255	22,431	22.9%	71.1%	255	22,739	23.6%	71.4%	255	0	0	0	0.0%	0.0%	
140 Fremont Bart - M. College & Montague	10,560	18.2%	75.7%	765	10,384	18.4%	75.8%	765	10,560	18.2%	75.7%	765	10,384	18.4%	75.8%	765	-16,022,160	-2,933,960	-12,138,255	18.3%	75.8%	
168 Gilroy Trans Ctr - San Jose Diridon	10,774	33.0%	67.4%	1,785	11,008	34.3%	68.0%	1,785	10,774	33.0%	67.4%	1,785	11,008	34.3%	68.0%	1,785	0	0	0	0.0%	0.0%	
180 Great Mall / Main - Warm Springs Bart (A)	956	25.4%	92.1%	2,550	956	25.4%	92.1%	2,295	956	25.4%	92.1%	2,550	956	25.4%	92.1%	2,295	-4,631,820	-1,177,335	-4,263,600	25.4%	92.1%	
180 Great Mall / Main - Warm Springs Bart (B)	9,411	29.5%	94.5%	765	9,608	31.8%	94.5%	765	9,411	29.5%	94.5%	765	9,608	31.8%	94.5%	765	-14,549,535	-4,467,708	-13,746,285	30.7%	94.5%	
181 San Jose Diridon-Warm Springs Bart (A)	7,953	28.1%	68.2%	5,350	7,847	30.4%	69.5%	4,765	7,953	28.1%	68.2%	5,350	7,847	30.4%	69.5%	4,765	-79,939,505	-23,330,945	-55,017,410	29.2%	68.8%	
181 San Jose Diridon-Warm Springs Bart (B)	6,997	28.5%	65.0%	15,300	6,891	31.1%	66.4%	15,555	6,997	28.5%	65.0%	15,300	6,891	31.1%	66.4%	15,555	-214,243,605	-63,897,550	-140,717,670	29.8%	65.7%	
181 San Jose Diridon-Warm Springs Bart (C)					5,398	34.1%	75.8%	1,095					5,398	34.1%	75.8%	1,095	-5,910,810	-2,017,588	-4,480,740	34.1%	75.8%	
182 Palo Alto - Ibm / Bailey Ave	5,166	12.8%	65.7%	255	5,259	12.4%	65.6%	255	5,166	12.8%	65.7%	255	5,259	12.4%	65.6%	255	0	0	0	0.0%	0.0%	
185 Gilroy Tc - Mountain View	9,317	26.0%	63.8%	765	9,441	25.8%	64.2%	765	9,317	26.0%	63.8%	765	9,441	25.8%	64.2%	765	0	0	0	0.0%	0.0%	
200 Baypointe Lrt - Mountain View Lrt	13,205	18.3%	63.5%	730					13,205	18.3%	63.5%	730					5,139,930	1,257,481	4,370,510	24.5%	85.0%	
201 Downtown Area Shuttle (Dash) Rapid 500	6,360	31.7%	65.1%	17,595	8,296	34.0%	66.6%	17,595	6,360	31.7%	65.1%	17,595	8,296	34.0%	66.6%	17,595	453,135,396	154,334,789	346,527,929	34.1%	76.5%	
246 school																		26,794,890	4,961,223	22,866,360	18.5%	85.3%
247 school																		8,047,800	1,647,172	7,077,015	20.5%	87.9%
270 school																		5,449,350	890,843	4,786,350	16.3%	87.8%
304 S. San Jose - Sunnyvale Trans Ctr	44,316	32.2%	75.6%	1,020	44,781	32.1%	75.8%	1,020	44,316	32.2%	75.6%	1,020	44,781	32.1%	75.8%	1,020	-90,878,940	-29,242,929	-68,803,080	32.2%	75.7%	
321 Great Mall / Main - Lockheed Martin	10,894	19.0%	75.0%	255	12,200	18.9%	74.9%	255	10,894	19.0%	75.0%	255	12,200	18.9%	74.9%	255	-5,888,970	-1,115,213	-4,414,560	18.9%	75.0%	
323 De Anza Col - Downtown San Jose (A) 523 Rapid Berryessa - Lockheed Martin (A)	24,987	26.0%	70.0%	17,585	24,912	26.7%	70.6%	17,255	24,987	26.0%	70.0%	17,585	24,912	26.7%	70.6%	17,255	1,347,099,843	364,073,882	1,044,615,747	27.0%	77.5%	
323 De Anza Col - Downtown San Jose (B) 523 Rapid Berryessa - Lockheed Martin (B)					21,634	25.1%	71.1%	1,040					21,634	25.1%	71.1%	1,040	114,582,320	32,752,192	85,286,320	28.6%	74.4%	
328 Almaden Valley - Lockheed Martin	34,709	15.9%	54.0%	510	34,277	15.2%	53.9%	510	34,709	15.9%	54.0%	510	34,277	15.2%	53.9%	510	-35,182,860	-5,472,667	-18,972,510	15.6%	53.9%	
330 Almaden Valley - Tasman Drive	41,260	16.6%	57.1%	1,020	40,677	15.8%	56.7%	1,020	41,260	16.6%	57.1%	1,020	40,677	15.8%	56.7%	1,020	-83,575,740	-13,516,153	-47,533,020	16.2%	56.9%	
522 Palo Alto - Eastridge (A)	52,668	28.8%	72.0%	26,435	54,068	28.2%	72.1%	26,690	52,668	28.8%	72.0%	26,435	54,068	28.2%	72.1%	26,690	87,817,036	40,575,970	93,111,691	46.2%	106.0%	
522 Palo Alto - Eastridge (B)	48,291	30.1%	74.3%	620					48,291	30.1%	74.3%	620					-29,940,420	-9,000,154	-22,253,660	30.1%	74.3%	
522 Palo Alto - Eastridge (C)					32,941	19.1%	61.8%	55					32,941	19.1%	61.8%	55	-1,811,755	-345,433	-1,120,515	19.1%	61.8%	
900 Ohlone / Chynoweth - Almaden	3,902	27.0%	53.3%	22,735	3,901	27.9%	53.5%	22,735	3,902	27.0%	53.3%	22,735	3,901	27.9%	53.5%	22,735	-177,401,205	-48,654,719	-94,782,215	27.4%	53.4%	
901 Alum Rock-Santa Teresa Via Baypoint (A)	48,688	27.0%	76.4%	20,365	47,878	27.3%	76.0%	20,400	48,688	27.0%	76.4%	20,365	47,878	27.3%	76.0%	20,400	-434,273,670	-115,794,077	-430,985,241	26.7%	99.2%	
901 Alum Rock-Santa Teresa Via Baypoint (B)	48,688	27.0%	76.4%	2,115	47,878	27.3%	76.0%	3,230	48,688	27.0%	76.4%	2,115	47,878	27.3%	76.0%	3,230	-257,621,060	-70,064,426	-196,234,655	27.2%	76.2%	
901 Alum Rock-Santa Teresa Via Baypoint (C)					25,029	30.6%	68.0%	1,570					25,029	30.6%	68.0%	1,570	-39,295,530	-12,035,280	-26,722,970	30.6%	68.0%	
901 Alum Rock-Santa Teresa Via Baypoint (D)	48,688	27.0%	76.4%	550					48,688	27.0%	76.4%	550					-26,778,400	-7,232,030	-20,448,450	27.0%	76.4%	
901 Alum Rock-Santa Teresa Via Baypoint (E)	48,688	27.0%	76.4%	1,240					48,688	27.0%	76.4%	1,240					-60,373,120	-16,304,939	-46,101,960	27.0%	76.4%	
901 Alum Rock-Santa Teresa Via Baypoint (F)	32,171	26.6%	69.7%	365	31,718	28.0%	69.7%	220	32,171	26.6%	69.7%	365	31,718	28.0%	69.7%	220	-18,720,375	-5,079,104	-13,047,420	27.1%	69.7%	
901 Alum Rock-Santa Teresa Via Baypoint (G)					20,577	34.2%	68.8%	365					20,577	34.2%	68.8%	365	-7,510,605	-2,570,724	-5,164,750	34.2%	68.8%	
901 Alum Rock-Santa Teresa Via Baypoint (H)	23,810	24.5%	85.2%	110					23,810	24.5%	85.2%	110					-2,619,100	-641,812	-2,232,010	24.5%	85.2%	
902 Mountain View - Winchester (A)	40,945	23.8%	63.1%	15,395	40,927	24.6%	63.3%	19,805	40,945	23.8%	63.1%	15,395	40,927	24.6%	63.3%	19,805	32,446,862	28,909,865	59,924,712	89.1%	184.7%	
902 Mountain View - Winchester (B)	23,007	28.5%	62.1%	2,480	23,561	29.4%	62.5%	1,750	23,007	28.5%	62.1%	2,480	23,561	29.4%	62.5%	1,750	-98,289,110	-28,410,313	-61,201,240	28.9%	62.3%	
902 Mountain View - Winchester (C)	40,945	23.8%	63.1%	3,060					40,945	23.8%	63.1%	3,060					-125,291,700	-29,850,922	-79,033,680	23.8%	63.1%	
902 Mountain View - Winchester (D)	17,937	17.9%	64.3%	985					17,937	17.9%	64.3%	985					-17,667,945	-3,160,377	-11,366,900	17.9%	64.3%	
902 Mountain View - Winchester (E)	30,300	25.8%	65.4%	620					30,300	25.8%	65.4%	620					-18,786,000	-4,842,937	-12,290,880	25.8%	65.4%	
902 Mountain View - Winchester (F)					32,050	26.2%	65.9%	255					32,050	26.2%	65.9%	255	-8,172,750	-2,137,909	-5,387,640	26.2%	65.9%	
903 Orange Line																		1,434,049,877	326,449,529	1,093,497,626	22.8%	76.3%
All Changes (both directions)	1,229,451	24.1%	69.2%	1,330,250					1,192,314	24.2%	69.5%	1,415,105					2,716,066,223	770,419,698	1,876,886,503	28.4%	69.1%	

Change Borne By Area Average	Low Income	Minority
Delta	28.4%	69.1%
	21.7%	66.8%
	6.7%	2.3%



Percent Change in Population

Compared to VTA Current Network

- > +80.01%
- +50.01% to +80%
- +20.01% to +50%
- +10.01% to +20%
- 9.99% to +10%
- 19.99% to -10%
- 49.99% to -20%
- 79.99% to -50%
- 100% to -80%

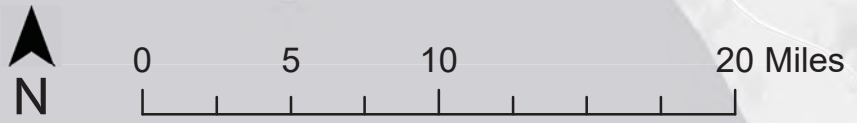
Source: VTA and Remix, 2019

Low-Income Population

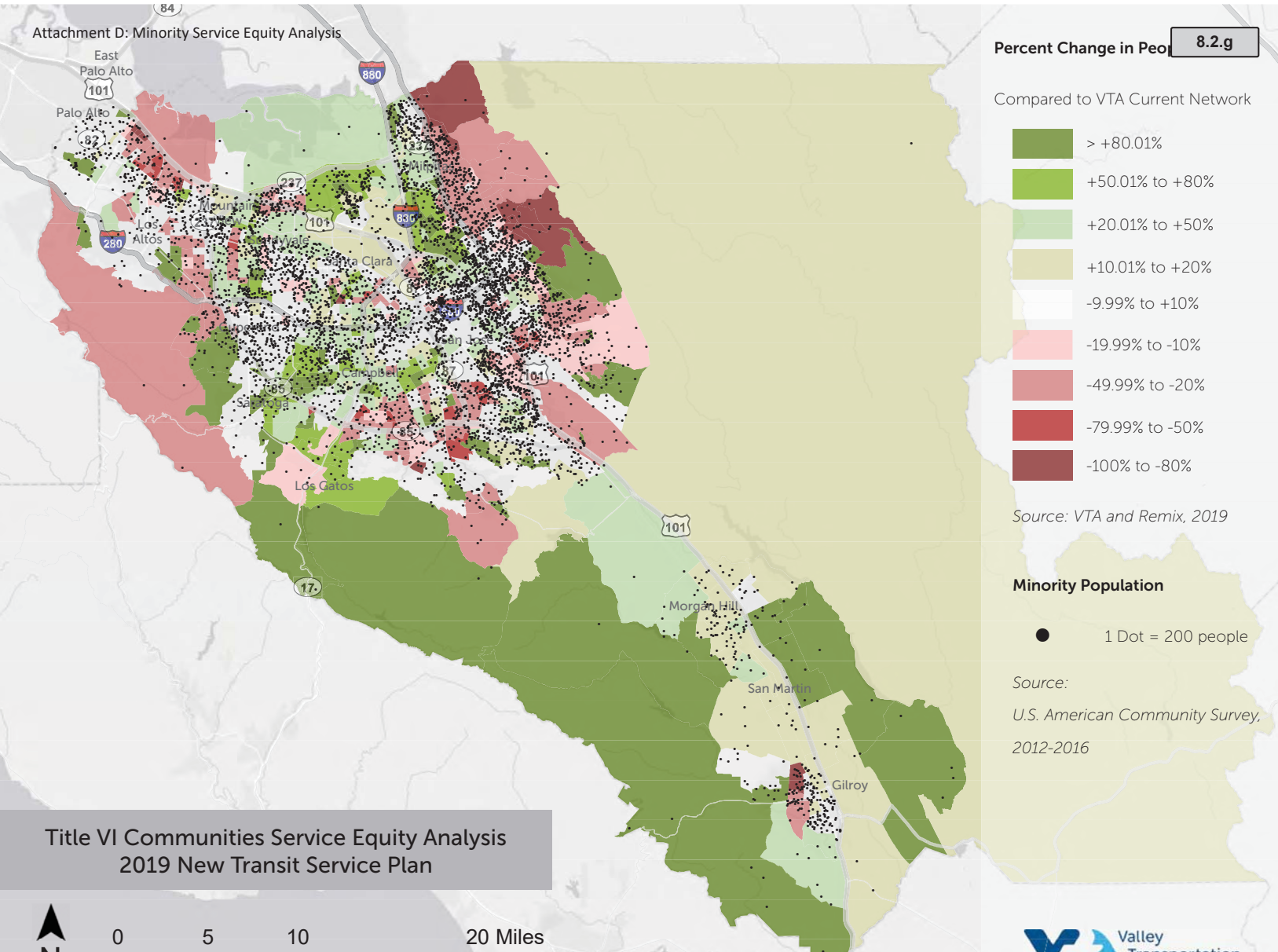
● 1 Dot = 200 people

Source:
U.S. American Community Survey,
2012-2016

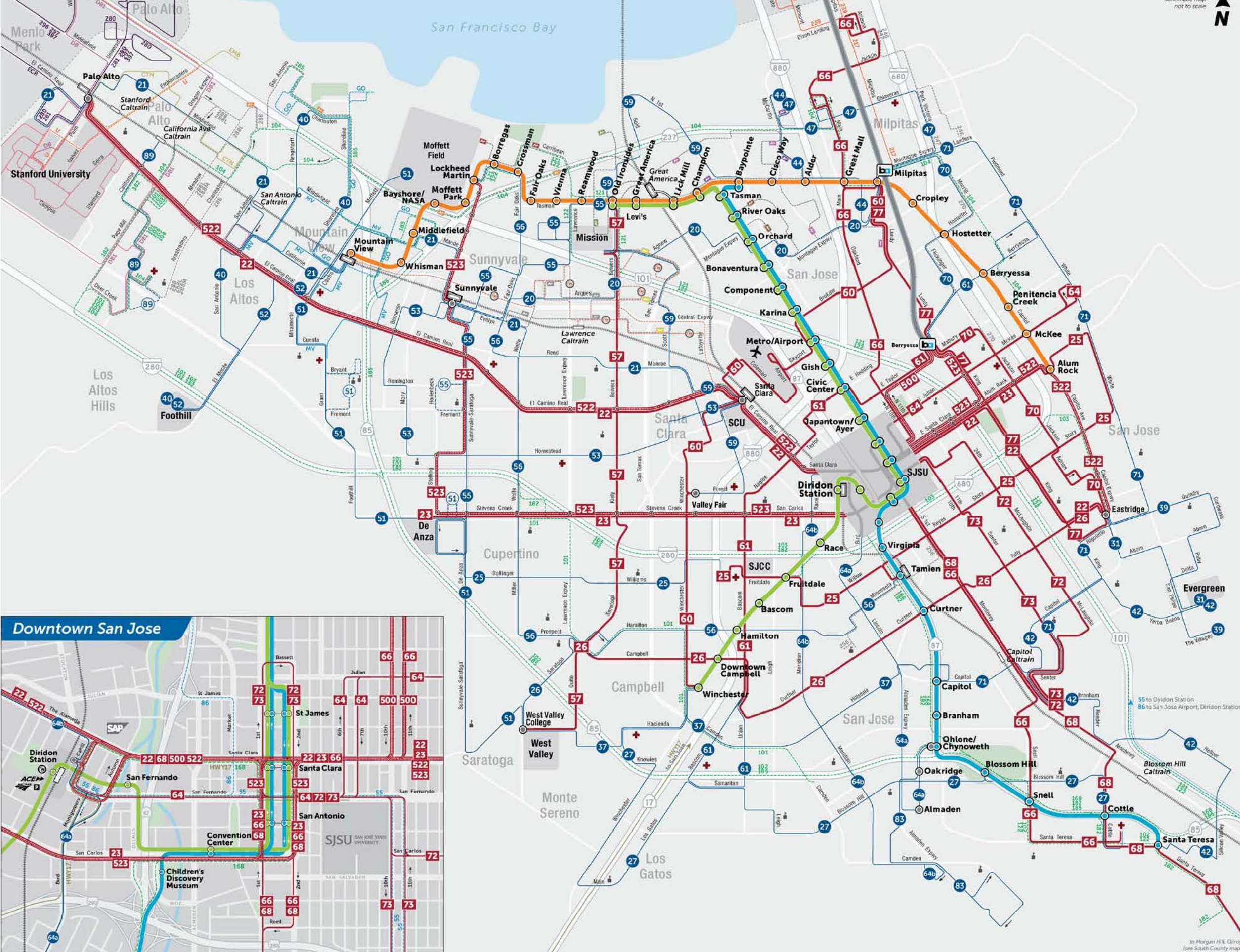
**Title VI Communities Service Equity Analysis
2019 New Transit Service Plan**



Attachment D: Minority Service Equity Analysis



Appendix E: System Map



schematic map not to scale



Legend

VTA Transit Services

- Light Rail**
 - BLUE LINE** Baypointe-Santa Teresa
 - GREEN LINE** Winchester-Old Ironsides
 - ORANGE LINE** Alum Rock-Mountain View
 - Transfer Station
- Bus**
 - 522 Rapid Bus** Limited-stop service at frequent intervals - every 15 minutes or better during day times
 - 61 Frequent Bus** Local service every 12-15 minutes on weekdays, every 15-30 minutes on weekends. Less frequent part of route
 - 42 Local Bus** Less frequent local service, usually every 30-60 minutes. Selected trips or part-time service
 - 102 Express Bus** Direct commute-hour service to major employment centers
 - 247 School Service** Seasonal service oriented to school bell times

Partners & Neighbors

- BART** (Bay Area Rapid Transit)
- Caltrain · ACE · Amtrak** (California High-Speed Rail)
- ACE** (Alameda Corridor Express)
- Municipal bus and shuttle services:**
 - Stanford Marguerite
 - Mountain View Shuttle
 - MVGo Shuttle
 - Palo Alto Shuttle
 - ACE Shuttle
 - Caltrain Shuttle
- Connecting transit bus services to neighboring cities and counties:**
 - AC Transit
 - SamTrans
 - Dumbarton Express
 - Amtrak Highway 17 Express
 - Monterey-Salinas Transit

Downtown San Jose



South County



**DEPARTMENT OF VETERANS AFFAIRS**

Palo Alto Health Care System
3801 Miranda Avenue
Palo Alto, CA 94304

APR 05 2019

In Reply Refer To: 640/180D

Ms. Nuria Fernandez
VTA General Manager
Santa Clara Valley Transportation Authority
3331 North First Street
San Jose, CA 95134

Dear Ms. Fernandez and the Valley Transit Authority (VTA) Board Office,

I am pleased to provide my full endorsement from VA Palo Alto Health Care System (VAPAHCS) for a new Valley Transit Authority bus route serving our new Community Based Outpatient Clinic (CBOC) on Silver Creek Valley Road in San Jose.

Our San Jose CBOC provides outpatient medical, mental health and some specialty care services including housing and employment support to Veterans in Santa Clara county. Adding public transportation to the location will increase access to care for the brave men and women who served our country in uniform.

It is well understood that individuals in the lower socioeconomic strata are the higher utilizers of public transportation. At VAPAHCS we have made important strides in ending Veteran homelessness and yet we continue to see a high number of homeless Veterans in the Santa Clara county area. At the last published count by Housing and Urban Development (HUD) in January 2018, there were 658 homeless Veterans residing in Santa Clara county, many of who are supported for their health care and housing by our San Jose CBOC. Unfortunately, since our new clinic opened, we have seen an increase in the rate of homeless Veterans not arriving to their scheduled appointments (no-show). Our baseline data for the period leading up to the relocation of this clinic shows that our homeless Veteran population had a no-show rate of 17%. Since the opening of our new San Jose CBOC in November 2018, the no-show rate for our homeless Veterans has more than tripled to 59%.

I thank VTA and applaud your planning efforts to consider this important addition to your existing exemplary public transportation routes.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas J. Fitzgerald III". The signature is stylized and includes a large circular flourish at the end.

Thomas J. Fitzgerald III
Director

Cambrian Community Council

Your Avenue To A Better Community

cambriancommunitycouncil@yahoo.com

www.cambriancommunitycouncil.com

SCUTA RECEIVED
'19MAR8PM2:55
BOARD SECRETARY

District 1
Garnetta Annable
garnetta_annable@hotmail.com
408.839.5343

March 4, 2019
Board of Directors of Santa Clara Valley Transportation Authority
3331 North First Street, Building B
San Jose, CA 95134-1906

District 2
Ed Chirco
edwardchirco@att.net
408.377.3066

Re: Bus Route 65 - Draft 2019 New Transit Service Plan Changes
Cambrian Community Impact Concerns and Request to Retain Route 65

Dear: Teresa O'Neill, Chairperson and Board of Directors

District 3
Vacant

The Cambrian Community Council (CCC) was established in 1983 with support from local city and county elected officials to preserve and enhance the quality of life in the Cambrian Area where the 'Four Corners' of San Jose, Los Gatos, Campbell and a County pocket come connect. Development and redevelopment within the Cambrian Area impacts residents, businesses, municipalities and agencies located in all four jurisdictions.

District 4
Cole Cameron
acolecam.com@gmail.com
408.499.9096

In February, VTA staff members Jay Tyree, Senior Transportation Planner, and Brandi Childress, Media and Public Affairs, presented the Draft 2019 New Transit Service Plan along with the Preliminary Transit Service Productivity Matrix. We were informed Bus Route 65 is proposed to be terminated because of low ridership. While Bus Route 65 is not currently a high ridership route, it is an important route for the Cambrian and Willow Glen communities. Also, proposed redevelopment plans for the Cambrian are in progress, once these various projects are approved, ridership will increase.

District 5
Mike Smithwick
mws2003-ccc@yahoo.com
408.206.0087

We appreciated the opportunity to hear from staff and discuss alternatives to the planned 90/10 shift in bus allocation. However, rather than terminate Route 65, we ask you to consider retaining the route with limited service in the mornings and evenings. Partial reduction of service to other routes could produce a win-win solution for communities and address the Authority's fixed budget issues.


District 6
George Stuckert
gstuckert1@juno.com
408.377.3066

Retaining Route 65 with reduced service will serve the existing community now. As redevelopment is completed service can be increased in your future annual reviews.

Member-At-Large
Bob Burres
bob_burres@hotmail.com
408.832.0706

We are available for further discussions.

Respectfully submitted,



Cole Cameron, Chairman Cambrian Council,
District 4

Mailing Address:
Cambrian Community Council
C/O Cole Cameron, Chairman
15074 Herring Drive
San Jose, CA 95124

CC: Sam Liccardo, Mayor, City of San Jose, VTA Board Member
Susan Ellenberg, Supervisor District 4, County of Santa Clara, VTA Alternate Board Member
Brandi Childress, VTA Media & Public Affairs
Jay Tyree, VTA Senior Transportation Planner



Sergio Jimenez
COUNCILMEMBER
DISTRICT 2

March 21, 2019

Valley Transportation Authority
2240 S 7th St.
San Jose, CA 95112

Honorable Chair O'Neill and Members of the Board,

The Santa Clara Valley Transportation Authority (VTA) provides valuable services to Santa Clara County, which are essential to the communities we represent. That said, the VTA needs significant budget revisions, likely creating reductions and consolidations in services that are needed by people who are most dependent on public transit. Indeed, any cut made to VTA operations will greatly affect our constituents, leading to more cars on the road and less access to social services and basic necessities. In short, there are no good outcomes when reducing public transit.

Understanding the inevitability of this action, however, we are left with only one priority: to ensure all factors are considered carefully when deciding which VTA lines are reduced or eliminated. We are concerned, as representatives of South San Jose and South Santa Clara County, that our constituents will be given the short end of the stick as it relates to transportation alternatives. That the electrification of Caltrain to Gilroy is in doubt given the uncertainty surrounding High-Speed Rail is bad enough - it would be much more devastating for important bus routes to be eliminated. The reduction of Route 121 from 9 to 6 daily trips will adversely impact constituents who work or otherwise depend on services located along Highway 101 from Mountain View, through San Jose and to Morgan Hill and Gilroy. Along the same vein, we are concerned about plans to eliminate Route 122, which provides service along Capitol Expressway and the Seven Trees area to important connections with light rail at Snell and Santa Teresa Stations and to important destinations such as the South San Jose Kaiser Medical Center. It may be a sensible alternative to significantly shorten Route 122 to save resources and time while still connecting an area already suffering from insufficient public transportation options.

Although Route 22 does not touch either of our Districts, it is important that we voice concerns regarding the elimination of the overnight buses given their importance to working individuals looking to get across the county late at night or early in the morning. It is also worth mentioning the impacts this service reduction would have on homeless individuals who have come to depend on these buses on days where the elements pose a significant danger to life and property. Lastly, we are happy to see VTA has determined Route 68 along the Monterey Corridor should be improved and we hope more transportation resources are dedicated to Monterey Road in the future.

Sincerely,

Sergio Jimenez
Councilmember, District 2
City of San José

Mike Wasserman
Supervisor, District 1
Santa Clara County



1 North San Antonio Road
Los Altos, California 94022-3087

February 26, 2019

Nuria Fernandez
General Manager
Valley Transportation Authority
3331 North First Street
San Jose, CA 95134

Re: Homestead Road "School Tripper" Addition – Proposed Route 51
Valley Transportation Authority (VTA) Proposed Transit System Modifications

Dear Ms. Fernandez,

The Los Altos City Council received an update on the Proposed VTA Transit System Modifications at its February 12, 2019 meeting by VTA staff. The presentation and subsequent Council discussion focused on requested route changes to the existing Bus Route 81 (New Bus Route 51).

The City requests that the VTA explore additional modifications to this route that include a time-of-day "school tripper" addition with a route along Homestead Road through the City of Los Altos.

Currently, Route 81 bypasses Homestead Road through the City of Los Altos by traversing onto Foothill Expressway (southbound) to reach De Anza College in the City of Cupertino via Stevens Creek Boulevard. The bus route then diverts back to Homestead Road via North Sterling Road. This existing route bypasses Cupertino Middle School and Homestead High School, both of which service residents living in the southern portion of the City of Los Altos.

The City of Los Altos requests for a "school tripper" alternative can be accomplished by modifying the route during the morning and mid-afternoon school commuter periods that includes the bus route continuing onto Homestead Road from Grant Road within the City limits and then turning right onto North Sterling Road to reach De Anza College. The alternative would allow the bus to get back onto its normal route again via Homestead Road and service our community twice as part of the minor route change.

SCVTA RECEIVED

GENERAL MANAGER

'19MAR4PM2:49

SCVTA RECEIVED

'19MAR5PM3:23

BOARD SECRETARY

Nuria Fernandez, VTA
Homestead Road "School Tripper" Addition – Proposed Bus Route 51
February 26, 2019
Page 2 of 3

The City of Los Altos currently only has five (5) VTA bus routes with focused service in North Los Altos (Routes 22, 35, 40, 52, and 522) leaving South Los Altos disproportionately serviced by the VTA (Route 81). While we understand that bus routes are not designed to specifically service only schools, the existing and proposed VTA routes are focused along high ridership routes that service public schools. Within the City of Palo Alto for example, VTA bus routes service both high schools and all three middle schools. In the City of Cupertino, VTA Route 53 services Homestead High School but provides no connection for Los Altos residents serviced by the same school.

The requested Homestead Road "school tripper" addition to the proposed Bus Route 51 will improve connections to Homestead High and Cupertino Middle Schools for both the City of Los Altos and City of Cupertino and provide a new connection to parts of the community which currently have little to no transit service. This change meets the spirit of the VTA's 90/10 "Ridership/Coverage" change presented by the VTA staff.

Thank you for your consideration. If you have any questions, please feel free to contact City Manager Christopher Jordan at (650) 947-2740.

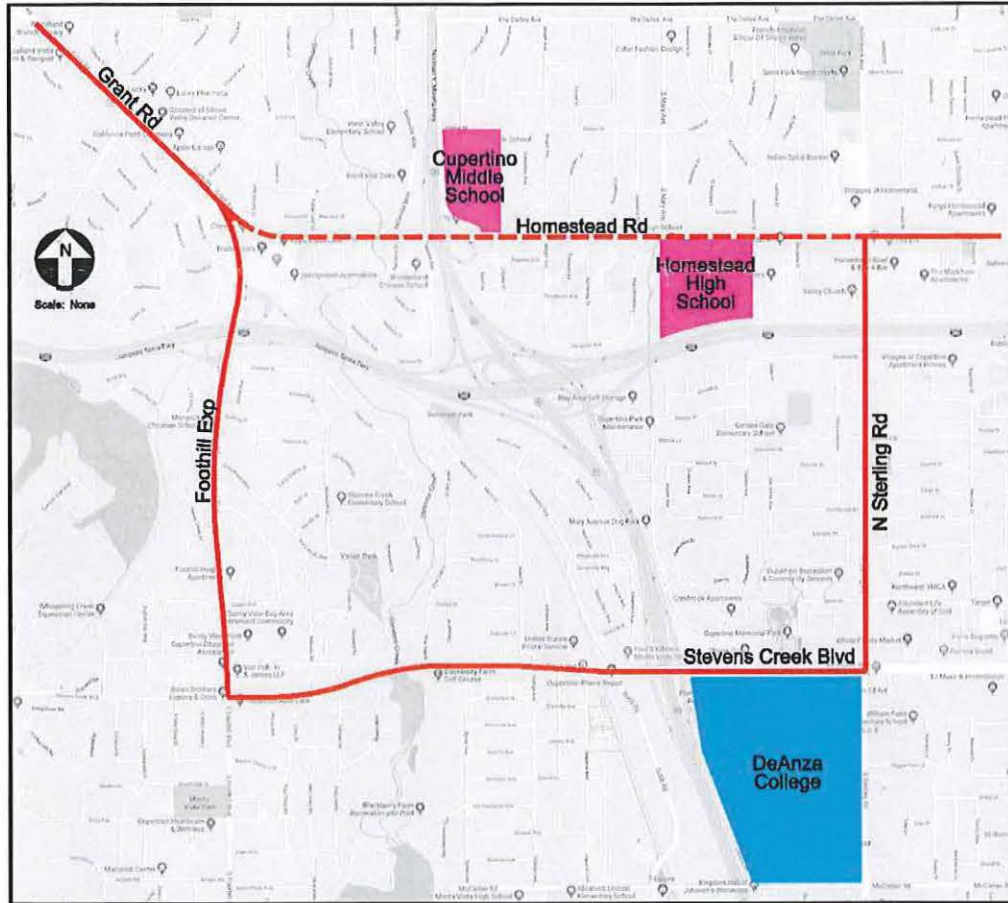
Sincerely,



Lynette Lee Eng
Mayor

c: Los Altos City Council
Kermit Cuff
Chris Augenstein

**PROPOSED HOMESTEAD ROAD "SCHOOL TRIPPER" ROUTE
AM AND MID-AFTERNOON SCHOOL COMMUTE PERIODS**



Map Legend:

- Existing Route 81 Route
- - - Proposed Route 51 "school tripper" route

Superintendent Craig Baker
Board of Education Lorien Cunningham
 Sylvia Leong
 Jerry Liu
 Satheesh Madhathil
 Phyllis Vogel



Cupertino Union School District

Office Address: 1309 S. Mary Avenue, Suite 150, Sunnyvale, CA 94087-3050
 Mailing Address: 10301 Vista Drive, Cupertino, CA 95014-2040

Telephone: (408) 252-3000

February 27, 2019

Dear Honorable VTA Board of Directors,

Thank you for the work the VTA is currently doing to develop a new transit service plan. Our board concurs with the Los Altos City Council and would ask that you consider a route that would provide service for students traveling from Los Altos to our Cupertino Middle School. We also encourage you to consider that such a bus route might also benefit students traveling beyond our middle school to FUHSD's Homestead High School. This could involve rerouting bus route 81/51 to travel past Cupertino Middle School for select trips during school hours, or the creation of scheduled school service.

We have received many parent requests over the last two years, including the receipt of a letter signed by 135 families requesting a for-fee bus service from our attendance area in Los Altos to Cupertino Middle School. Parents of 112 Cupertino Middle School students who took the VTA potential ridership survey in Oct 2018 indicated that their child(ren) would use the bus from Los Altos to school. 73% of those responding indicated interest in using public transportation for the morning commute. 74% indicated interest in using public transportation for the afternoon commute.

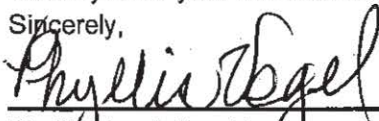
We feel it is important to share that the Cupertino Union School District is in the bottom 2% of funding for school districts statewide. As the largest K-8 District in Northern California, we are also one of the very lowest funded, receiving thousands less per student/per year than any district that surrounds us. We do not have the funds or fleet capacity to provide the requested route with a school bus.

VTA service aligned to our school bell schedule would be very welcomed by our School Board and our student/parent community. It would provide a safe, sustainable, all-weather transportation solution for our students, and will reduce the traffic congestion for all commuters on Homestead Road and around Cupertino Middle School. It is in line with the work of the County funded Homestead Corridor SRTS study currently underway. As you develop the new transit service plan, we formally request your assistance to provide bus service to students who reside in Los Altos and attend Cupertino Middle School. Cupertino Middle School's bell schedule has all students beginning and ending school at the same time each school day.

Morning: M/Tu/Th/Fri 8:10am, Wed 9:35am
Afternoon: M/Tu/Wed/Th/Fri 2:54pm


SCVTA RECEIVED
 19MAR7 PM 3:04
 BOARD SECRETARY

Thank you for your consideration.
 Sincerely,


 Phyllis Vogel, President


 Lori Cunningham, Board Vice President


 Jerry Liu, Board Secretary


 Satheesh Madathil, Board Member


 Sylvia Leong, Board Member



FREMONT UNION HIGH SCHOOL DISTRICT

Cupertino High School | Fremont High School | Homestead High School | Lynbrook High School | Monta Vista High School | Adult School

March 6, 2019

Dear Honorable VTA Board of Directors,

Thank you for the work the VTA is currently doing to develop a new transit service plan. The Fremont Union High School District (FUHSD) Board of Trustees concurs with the Los Altos City Council and would ask that you consider a route that would provide service for students traveling from Los Altos to Homestead High School. We also encourage you to consider that such a bus route might also benefit students traveling to Cupertino Middle School in Cupertino Union School District (CUSD). This could involve rerouting bus route 81/51 to travel past Homestead High School for select trips during school hours, or the creation of a scheduled school service.

VTA service aligned to our school bell schedule would be welcomed by our school district board, staff and our student/parent community. It would provide a safe, sustainable, all-weather transportation solution for our students, and will reduce the traffic congestion for all commuters on Homestead Road and around both Homestead High School and Cupertino Middle School. It is also in line with the work of the County-funded Homestead Corridor SRTS study currently underway. As you develop the new transit service plan, we formally request your assistance to provide bus service to students who reside in Los Altos and Homestead High School.

We appreciate your consideration of this request. Please do not hesitate to contact us should you have any questions.

Best regards,

Roy Rocklin
President, Board of Trustees

Polly M. Bove
Superintendent of Schools

sd/

cc: Maya Bronicki



17575 Peak Avenue
Morgan Hill, CA 95037-4128
TEL: (408) 779-7271
FAX: (408) 779-3117
www.morganhill.ca.gov

February 28, 2019

Nuria I. Fernandez
General Manager/CEO
Santa Clara Valley Transportation Authority
3331 North First Street
San Jose, CA 95134

RE: PUBLIC COMMENT ON 2019 NEW TRANSIT SERVICE PLAN

Dear Nuria:

We would like to thank your staff for presenting VTA's 2019 New Transit Service Plan to the Morgan Hill City Council on February 20, 2019. We appreciate VTA taking the time to educate and engage with the Morgan Hill community. The City of Morgan Hill is committed to enhancing transportation connectivity in the South County region and will continue to advocate more convenient public transportation options for our community.

After VTA's presentation on February 20, 2019, there was an opportunity for the public to comment on non-agendized items and there were a few community members who commented on the new service plan. VTA representatives had already left the meeting, therefore I would like to formally share the following comments:

- Gary Apte – rides busses 185 and 121. He questions why VTA was willing to start and continue express busses knowing it was not going to be full. Why is the Bart delay causing drastic reduction in express bus routes? How is \$15M loss of revenue from Bart delay going to be made up on increasing non-express bus routes? Why has VTA not offered any alternatives other than just saying they are going to cancel service (e.g. vanpools)?
- Kiran Vittal – rides bus 185 to Mountain View from Morgan Hill every day to work. If canceled, he will have to drive one and half hours each way. Propose maintaining at least one bus in the morning and one in the evening.
- Scott Gregg – original rider of the 185 route to Mountain View from Morgan Hill. He has watched ridership of this bus route increase from 1 to 15 in a matter of months. VTA should do more advertising in the areas the bus goes to and from and canvas the businesses along the route to promote service and generate enough ridership to fill the buses each way.
- Magesh Sundararaman – rides 185 bus to Mountain View from Morgan Hill daily. Impact of eliminating bus line will put more cars on the highway. He encourages VTA to continue service as he has witnessed an increase in ridership recently.

Subsequent to the meeting, a community member suggested that the Highway 101 carpool lane be extended to include Morgan Hill through Gilroy and then eventually add more express busses in the future.

Thank you very much for engaging our community and listening to the feedback. Please let me know if you would like to discuss these comments.

Sincerely,

A handwritten signature in blue ink, appearing to read 'CT', with a long horizontal stroke extending to the right.

Christina Turner

cc: Morgan Hill City Council

City of Palo Alto
Office of the Mayor and City Council

February 27, 2019

Nuria Fernandez
General Manager
Santa Clara Valley Transportation Authority
3331 North First Street
San Jose, CA 95134-1906

Re: VTA's 2019 New Transit Plan

Dear General Manager Fernandez,

Thank you for the opportunity to comment on the VTA's Draft 2019 New Transit Plan and the continuing challenges in the VTA's Transit Operating Fund.

We appreciated your Staff's thorough presentation here last night, which clearly explained the nature of the constraints ahead, and we thank you for it. We share the VTA's concern over the recurring \$50 million annual shortfall to the transit operating fund, and the prospect of cyclical decline in ridership. Nevertheless, the Draft 2019 New Transit Plan reduces North County bus service even compared to the Next Network service changes approved by the VTA Board of Directors in 2017, less than two years ago.

Of particular immediate concern to the City of Palo Alto are:

- Elimination of all-night, 24-hour service on line 22. We urge you to reconsider this. As the only all-night service in Santa Clara County, line 22 provides a critical "lifeline" transit service of regional significance, connecting Downtown Palo Alto, the El Camino Real corridor, and San Jose. Line 22's 1-4am service, which routinely exceeds its minimum-ridership thresholds, supports primarily low-income employees who rely on it to reach late-night shift employment. Eliminating this service will strand some of the region's most vulnerable workers.
- Elimination of express bus line 101 and reduced service on lines 102 and 103. The Next Network deferred express bus line changes pending an express bus network plan; as you said last night, the Next Network plan, including this study, has not been initiated. Express bus lines are critical to reducing long-distance automobile travel to the Stanford Research Park, a major regional employment center. VTA should complete the express bus study before considering service modifications which affect the Research Park.

P.O. Box 10250
Palo Alto, CA 94303
650.329.2477
650.328.3631 fax

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GENERAL MANAGER

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SCVTA RECEIVED

19MAR5PM3:22

BOARD SECRETARY

Beyond longer-range commuters, Palo Alto has a sizable local population who depend on public transit. Our longstanding unease remains, regarding the apparent mismatch between Palo Alto and other North County residents' share of the VTA's sales-tax base, and the proportion of services delivered to this area. We're concerned that continued service reductions in the North County will further imbalance this.

A fast, frequent, and financially sustainable bus network is an essential County need. Long-range capital projects and planning, per a comprehensive business plan, should be aligned to support this. Long-standing transit and highway capital projects should be evaluated for consistency with current and future transit budget stability as suggested by the Ad-Hoc Financial Stability Committee. Declining bus transit speeds affect operating costs, and as part of the City of Palo Alto's Comprehensive Plan 2030 policies, the City is committed to planning for transit-priority enhancements on major corridors with queue jump lanes, signal priority, and other features. However, efficiencies are only realized on a regional scale. We ask that VTA undertake a long-range business plan, as recommended in the VTA Strategic Plan, to envision the role of transit services in the County.

We look forward to continued participation in the Draft New Transit Plan planning process.

Sincerely,



Eric Filseth
Mayor

Cc: Palo Alto City Council
Ed Shikada



SARATOGA
California



February 7, 2019

Nuria Fernandez
Santa Clara Valley Transportation Authority
3331 North First Street
San Jose, CA 95134

Re: Proposed Transit Route Changes

Dear Ms. Fernandez:

Thank you for this opportunity to comment on the proposed changes to the adopted Valley Transportation Authority (VTA) Next Network Transit Plan. The City of Saratoga and West Valley College appreciate the ongoing partnership with VTA and its willingness to listen to our concerns.

In the spirit of partnership and collaboration, we would like to call your attention to the decrease in service on Bus Route 37 proposed as part of the Next Network Transit Plan changes. As you know this line mainly serves West Valley College students residing in an underserved area. We fear that **reducing the stop frequency from every 30 minutes to every 60 minutes will further erode ridership on this route.** Reducing service will make this route a less viable option for riders and will result in negative impacts to the students who rely on this critical connection. We appreciate anything that can be done to eliminate service reductions for students attending West Valley College.

In addition to our interests in Bus Route 37, we would like to use this opportunity to voice our interest in serving as a host location for a pilot program to test the feasibility of enabling corporate shuttles to use Transit Centers. This program will increase safety and provide a centralized stop for technology workers. Saratoga hosts the only Transit Center in the West Valley and is home to many of the individuals who work for large regional companies that host these shuttle service, making Saratoga and West Valley College a natural choice for the pilot.

Sincerely,

A handwritten signature in black ink, appearing to read "Manny Cappello".

Manny Cappello
Mayor, City of Saratoga

A handwritten signature in black ink, appearing to read "Brad Davis".

Brad Davis
President, West Valley College

Exhibit 12A: Board Adoption of the 2017 Next Network Final Plan
(PDF Inserted Below)



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Date: April 27, 2017
 Current Meeting: May 4, 2017
 Board Meeting: May 4, 2017

BOARD MEMORANDUM

TO: Santa Clara Valley Transportation Authority
Board of Directors

THROUGH: General Manager, Nuria I. Fernandez

FROM: Interim Director - Planning & Program Development, Carolyn M. Gonot

SUBJECT: Next Network Final Plan

APPROVED ACCEPTED ADOPTED AMENDED DEFERRED REVIEWED
 Santa Clara Valley Transportation Authority
 Board of Directors
 Elaine F. Ballao, Board Secretary
 BY: Memorandum
 DATE: 05/04/17

Policy-Related Action: No

Government Code Section 84308 Applies: No

ACTION ITEM

RECOMMENDATION:

Adopt the Final VTA Transit Service Plan.

BACKGROUND:

VTA updates its transit service plan every two years, typically making small adjustments based on rider input and performance data. For the FY18-19 transit service plan, VTA is completely redesigning its transit network in order to connect to BART at Milpitas and Berryessa Stations, increase overall ridership and improve cost-effectiveness. Due to the enormity of the redesign, VTA initiated a community-based planning process, known as Next Network, in early 2016.

Overview of Next Network Process

The Next Network process framed the redesign to balance the competing goals of ridership and coverage that transit agencies are asked to achieve. A five-month long community engagement process in the summer of 2016 yielded over 5,000 points of input and a general desire by the public for VTA to place more emphasis on the ridership goal and less emphasis on the coverage goal for the FY18-19 transit service plan.

In November 2016, the Board of Directors affirmed the community's input and directed staff to develop a service plan that increased the portion of operating funds spent on ridership-purposed services from 70 to 85 percent and decreased coverage-purposed spending from 30 to 15 percent. At the January 2017 Board Meeting, the Board approved the release of an 85/15 Draft Transit Service Plan. VTA staff then undertook a new round of extensive community engagement in January and February of 2017 to receive input from the community and stakeholders.

*See page 16x of 16x for motion approved by the Board of Directors at the 05/04/17 meeting.

After reviewing over 3,000 public comments on the Draft Transit Service Plan, staff developed a Final Transit Service Plan that made 34 changes to the Draft Transit Service Plan, including retaining service to some areas where discontinuances had been proposed such as Almaden Valley, Palo Alto, Cupertino, Saratoga and Campbell, among others. The Final Transit Service Plan employs an 83/17 ridership/coverage balance. What follows is a more in-depth discussion of the process staff engaged in to arrive at the 83/17 recommendation.

Next Network Foundation

To assist with the Next Network process, VTA hired Jarrett Walker and Associates (JWA), an internationally-respected transit network design firm, to lead a community conversation about how to improve Santa Clara County's transit system. In February of 2016, JWA produced an independent assessment of VTA's transit service called the *Transit Choices Report* (which can be found at nextnetwork.vta.org). The *Transit Choices Report* recommended changes to VTA's network design philosophy, service classes, branding and fare structure. The *Transit Choices Report* outlined a strategy for increasing ridership: operating frequent, all-day transit service in areas that follow patterns of density, walkability, linearity and proximity. The *Transit Choices Report* also noted that increasing transit ridership requires multi-agency collaboration as the two largest drivers of ridership-land use and the design of the street network-are within the authority of municipal governments.

In June 2016, JWA produced a *Transit Alternatives Report* (which can be found at nextnetwork.vta.org) that framed the design of VTA's transit network in terms of the two goals that transit agencies are asked to achieve: ridership and coverage. The ridership goal compels transit agencies to think like a business and invest service hours in places that have high transit demand and transit-supportive characteristics like density and walkability. Ridership-oriented networks tend to have fewer routes, but many that are frequent while coverage-oriented networks have many routes, but few that are frequent. The coverage goal compels transit agencies to think like a government service and locate transit routes in as many places as possible to maximize access to public transit. While increasing ridership and coverage are both important goals, they compete for the same funding. Doing more of one means doing less of the other and transit agencies must decide how much of their funding should be spent toward each.

VTA currently spends 70 percent of its transit operating funding on ridership-purposed routes and 30 percent on coverage-purposed routes (as shown in **Attachment A**). Given the goal of increasing ridership, the *Transit Alternatives Report* asked if VTA should change its ridership/coverage balance and, if so, by how much? To assist with this community conversation, the *Transit Alternatives Report* featured three network concepts that employed different ridership/coverage balances, 70/30, 80/20 and 90/10. Each showed the tradeoff between increased frequency and decreased access. All three concepts were designed in a budget-neutral context, where each would cost the same for VTA to operate.

Phase I Outreach and Board Direction

In the summer of 2016, VTA undertook a community engagement effort consisting of 12 community meetings, four four-hour community leader workshops, surveys and online outreach. This effort asked the public to weigh in on the three network concepts and cast a vote for their preferred ridership/coverage balance along a spectrum that ranged from 70/30 to 90/10. Over

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2,000 votes were cast yielding an 80/20 average. At the community leader workshops, the average result of the ridership/coverage balance survey was 85/15.

VTA also asked if the public would welcome a more-ridership oriented network if it meant walking farther to access faster or more frequent transit and if making transfers between more frequent buses and/or trains in order to arrive at one's destination sooner would be preferred over making one-seat trips. Though some members of the public preferred shorter walks and one-seat trips, the majority favored walking farther and making transfers.

The community leader workshop attendees included elected officials, neighborhood and civic leaders, and representatives of community groups whose constituents rely on transit to get around. Due to these leaders' closeness to the topic of public transit, additional consideration was given to their input, resulting in a staff recommendation for an 85/15 ridership/coverage balance for the Draft Transit Service Plan.

At their November 18, 2016 Board Workshop, VTA's Board of Directors endorsed the staff recommendation. A Draft Transit Service Plan that employed an 85/15 ridership/coverage balance was released for public review at the January 5, 2017 Board of Directors Meeting.

DISCUSSION:

Draft Transit Service Plan

The Draft Transit Service Plan proposed several fundamental changes to the design of VTA's transit network, including the following:

- *Reallocating transit service from low-ridership areas to high-ridership areas*
- *Increasing frequency*
- *Increasing Light Rail Service*
- *More Rapid Routes*
- *Increasing midday and weekend service levels and expanding hours of service*
- *Transitioning toward a grid network*
- *Stronger connections to regional transportation*
- *Expanding potential rider base, improving service for current riders*

The December 22, 2016 memorandum presented to the Board of Directors on January 5, 2017 includes a detailed discussion of these features and the Draft Transit Service Plan that was released for public review. A copy of this memorandum can be found at nextnetwork.vta.org.

Phase II Outreach Campaign and Feedback

Following the release of the Draft Transit Service Plan, VTA staff undertook a public engagement effort to collect input on how VTA could improve the Draft Transit Service Plan. This effort included:

- 86 staff presentations including community meetings, guest presentations, committee and Board agenda items, and city staff and council presentations
- An information campaign including brochures, take-one cards, advertisements and an aggressive social media campaign in multiple languages
- A print and broadcast media campaign that recorded 27 instances of local coverage
- An online video campaign that achieved 111 live viewers, over 4,300 total views and 26,000 minutes of watch-time including webinars, two live-streamed public meetings and eight videos focused on transit changes around colleges
- A multi-lingual project microsite (nextnetwork.vta.org) that recorded 355,000 unique visits and 1.4 million page views
- A multi-lingual street team that engaged with riders at 14 different transit centers totaling 3,287 interactions with transit riders

A full documentation of community outreach can be found in **Attachment B**.

The outreach effort for the Draft Transit Service Plan yielded over 3,000 comments about the components of the Draft Transit Service Plan. These comments were often specific and detailed and focused on several themes:

- Consensus that VTA's ridership and farebox metrics were compelling reasons to make changes in the design of the transit network.
- Endorsement of the idea that increasing access of residents and jobs to frequent (15-minute or better, all-day) service would make transit a more viable travel option for more Santa Clara County travelers.
- Endorsement of more Rapid routes, particularly Rapid 523 in Sunnyvale and Cupertino.
- Support for the Core Connectivity Project, which seeks to identify new ways of providing mobility in areas that are a poor fit for a fixed-route transit service such as contributing funds to city-operated shuttle programs or subsidizing on-demand trips in areas without fixed-route service.
- Concern for those who lose access to any transit service, particularly in Almaden Valley, South San Jose, East San Jose Hills, Saratoga, Cupertino, Los Gatos and Fremont. Routes 37, 45, 53, 65, 82, 88, 89, 120, and 181, which were proposed to be discontinued or have decreased levels of service were the subject of many comments.

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- Concern about the impact to paratransit users whose homes or destinations would fall outside of the paratransit service area or into the premium fare zone if fixed-route services along the periphery of the transit network are discontinued.
- Interest in how VTA can better meet the needs of senior citizens.

A compendium of all comments on the Draft Transit Service Plan can be downloaded at nextnetwork.vta.org.

Final Transit Service Plan

In developing the Final Transit Service Plan, VTA staff sought to balance the direction to pursue a more ridership-oriented network with community requests to retain coverage-purposed routes that had been proposed to be discontinued. Ultimately, staff developed a compromise plan that retained some coverage-purposed routes, resulting in an 83/17 ridership/coverage balance. The Final Transit Service Plan (as shown in **Attachment C**) maintains all of the frequency increases proposed in the Draft Transit Service Plan and retains transit service in some corridors where discontinuances had been proposed. **Attachment D** includes by-route and by-city listings of all Final Transit Service Plan changes compared to the current transit service plan and Draft Transit Service Plan.

Changes from Draft Transit Service Plan to Final Transit Service Plan

Every transit service decision bears an opportunity cost as service hours that could benefit some travelers are shifted to benefit others. In making these decisions, VTA staff attempts to achieve the greatest good, balancing Board direction, ridership data, and community input while giving special consideration to the transportation needs of vulnerable populations such as students, seniors, the disabled, and low-income. The development of the Final Transit Service Plan attempts to achieve the best balance of all these factors within VTA's allotted budget for transit operations. In this process, staff benefitted greatly from the extensive and detailed input received from Santa Clara County travelers during Phase II Outreach.

The following bullets briefly discuss elements of the Draft Transit Service Plan that received a high level of community input and the resulting staff recommendations for the Final Transit Service Plan. A detailed discussion of each service decision can be found in **Attachment E**.

- *Cupertino/Saratoga - De Anza Boulevard/Saratoga-Sunnyvale Road (Current Route 53)*
Recommendation: Continue service in this corridor by extending Route 51 south of De Anza College.
- *San Jose - Leigh Avenue (Route 65)*
Recommendation: Retain service on Route 65 and decrease frequency from 30-minute service level to 60-minute service level.
- *Los Gatos/Campbell (Current Routes 48 and 49)*
Recommendation: Operate Route 27 on Main Street in Downtown Los Gatos as well as Hacienda Avenue and Knowles Drive to service Los Gatos El Camino Hospital and Los Gatos High School.

- *San Jose - Downtown (Current DASH)/Rapid 500*
 Recommendation: Retain the Draft Transit Service Plan's recommendation to upgrade the DASH to the Rapid 500 and add a Rapid 500 stop at Almaden Avenue.
- *Fremont/Sunnyvale (Route 120)*
 Recommendation: Given the extension of BART to Santa Clara County and compelling needs for transit service inside Santa Clara County, staff does not recommend retaining Route 120 in the Final Transit Service Plan.
- *Fremont/San Jose (Route 181)*
 Recommendation: Given the extension of BART to Santa Clara County, alternate ways of making the trip by transit, and compelling needs for transit service inside Santa Clara County, staff does not recommend retaining Route 181.
- *Palo Alto - Gunn High School (Current Route 88)*
 Recommendation: Provide a new Route 288 service during school bell times, with an additional after school trip to accommodate students involved in extracurricular activities. Discontinue Route 88.
- *Palo Alto - Veterans Hospital (Route 89)*
 Recommendation: Retain Route 89 as it exists today to provide hospital access for veterans.
- *San Jose - East Hills (Current Route 45)*
 Recommendation: Retain the Draft Service Plan's recommendation to discontinue Route 45. VTA will offer to provide a van for use by the patrons of the Homeless Veterans Emergency Housing Facility.
- *San Jose - Mineta San Jose Airport (Current Route 10)*
 Recommendation: Due to the inability to enforce whether riders who board at non-airport stops are traveling to the airport, only provide free boardings at airport terminals. Non-airport terminal boardings require a standard fare.
- *Campbell/San Jose - Hamilton/Pine (Current Route 82)*
 Recommendation: Discontinue Route 82 and retain transit service along Hamilton Avenue/Pine Avenue corridor by rerouting Route 56.
- *Gilroy (Current Routes 14, 17 and 19)*
 Recommendation: Discontinue routes 14, 17 and 19 and replace them with a loop route, which will be named Route 85.
- *Campbell/San Jose/Saratoga (Current Route 37)*
 Recommendation: Retain Route 37 at a 60-minute frequency service level rather than a 30-minute service level. The portion of Route 37 that exhibits the greatest demand (from West Valley College to the Light Rail Line between Mountain View and Winchester) will be supplemented by Route 26, which offers 30-minute service.

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- *Cupertino/Los Altos - Foothill and De Anza Colleges*
Recommendation: Due to insufficient demand, the Final Plan does not propose adding service between these two colleges.
- *San Jose - Forest Avenue (Current Route 23, new Route 59)*
Recommendation: Retain the Draft Transit Service Plan's recommendation to keep Route 23 on Stevens Creek, and extend Route 59 from its terminus at the Santa Clara Caltrain Station to serve Forest Avenue via Lafayette.
- *Sunnyvale - Civic Center (Current Route 54)*
Recommendations: Discontinue service on Route 54 along Olive Avenue.
- *Sunnyvale - Fair Oaks Avenue (Route 55)*
Recommendation: Retain the Draft Transit Service Plan's recommendation of removing the Route 55 deviation that serves the Fair Oaks/Remington area. The volume and proximity of other transit services in the area (routes 22, 55, 522 and 523) provide adequate connectivity in all travel directions.
- *San Jose - Almaden Valley (Current Routes 13, 63, 64, 328 and 330)*
Recommendation: Extend Route 64, which currently terminates at Almaden Light Rail Station, to Camden Avenue and retain Route 13 (renamed to Route 83) with modifications to better serve the Almaden Community Center and shopping plazas at the intersection of Blossom Hill Road and Almaden Expressway. Additionally, VTA will explore an on-demand pilot service in Almaden Valley.

Retaining Access for Current Riders and Paratransit Clients

Of particular community concern were the proposals to discontinue routes in areas along the periphery of the transit network. Such changes would leave about one percent of current transit riders without any nearby transit service and would push some trips made by paratransit clients outside of the paratransit service area. The paratransit service area mirrors the shape of the fixed-route transit network. VTA is required by the Americans with Disabilities Act to operate paratransit service in areas within $\frac{3}{4}$ of a mile of a fixed route while that route is in operation. VTA's own paratransit policy extends the service area by an additional mile, at a higher fare. By retaining routes that were proposed to be discontinued in the Draft Transit Service Plan, the impact to current riders and paratransit riders is lessened considerably.

For example, while the Draft Transit Service Plan would result in about one percent of current weekday boardings being more than half a mile from a transit stop. The Final Transit Service Plan would reduce that to about half a percent. Similarly, the Draft Transit Service Plan would result in the homes of 47 current paratransit clients falling outside the paratransit service area. The Final Transit Service Plan reduces this number to two. A detailed analysis of paratransit impacts can be found in **Attachment F**.

Title VI Analysis

Title VI of the 1964 Civil Rights Act states that agencies that receive federal funding may not discriminate on the basis of race, color or national origin.

Federal guidance encourages transit agencies to uphold Title VI in two ways: a metric-based analysis that evaluates the impact to minority and low income communities compared to the overall population of Santa Clara County, and by involving Title VI communities in the planning process so that their input may inform decisions as early as possible.

The metric-based evaluation of Title VI impacts for the Final Transit Service Plan was undertaken by an independent contractor and can be found in **Attachment G**. This analysis evaluates the impacts in two ways: 1) Disproportionate Impact, which measures the impact to minority residents and 2) Disproportionate Burden, which measures the impact to low-income residents. VTA's Board-adopted threshold for determining Title VI impacts is 10 percent, meaning that a service change that decreases the provision of transit for minority or low-income residents at a rate 10 percent greater than a decrease for overall residents is presumed to be non-compliant with the mandates of Title VI.

The independent Title VI analysis found that compared to the overall population, access to transit for low-income and minority residents of Santa Clara County increased slightly. As such, the metric based analysis finds that no disparate impacts or disproportionate burdens would result from the proposed transit service changes.

VTA sought to involve Title VI communities in the Next Network planning process by working with VTA's Title VI Office and following the VTA's Public Participation Plan. This included outreach to organizations that represent minority, low-income, and immigrant communities, hosting community meetings and workshops throughout the county, and partnering with Working Partnerships USA to gain input from transit riders and minority and low-income residents. Additionally, a multi-lingual advertising campaign spread awareness of the proposed service changes and a multi-lingual website encouraged residents to provide feedback in their preferred languages. A full list of outreach to Title VI groups can be found in **Attachment B**.

Ridership Projections

Ridership projections for the Final Transit Service Plan must be viewed in the context of current ridership trends. In Santa Clara County, ridership in FY2016 was two percent lower than FY2015. To date, FY2017 ridership (through January 2017) is down 11.6 percent compared to FY2016. These are significant decreases for an agency that has had relatively flat ridership for the previous ten years. These trends are not isolated to Santa Clara County. CityLab reports that transit ridership has been declining nationally with seven of the 30 largest metropolitan areas losing riders over the past calendar year. Only two metropolitan areas, Seattle, WA (4.1 percent) and Houston, TX (2.3 percent), showed increases in ridership over this time and both agencies have recently completed transit network redesigns that allocated a greater share of operations funding to ridership-purposed routes.

Many potential reasons for the national ridership decline have been identified including low gas prices, rising automobile ownership, higher income levels, on-demand services, corporate shuttles, unprecedented weather events, continued suburbanization, the suburbanization of poverty and changing demographics. Nationwide research into these influences is emerging and VTA is following these reports and is evaluating its own data to assess impacts at the local level.

Given the recent seismic shift in transit ridership, uncertainty about the cause, and inability to

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predict whether these trends will continue, it would be impractical to project ridership totals as a specific number. Rather, projections for the Final Transit Service Plan are presented in comparison to a scenario where VTA retains the current transit service plan. These projections are developed using VTA's countywide transportation demand model and do not account for potential changes to demand that may result from changes to VTA's fare policy, which may include free VTA-to-VTA transfers for Clipper Card users, changes in pricing to the base fare, youth fares, community bus fares and EcoPass.

Our analysis projects that the Final Transit Service Plan could potentially result in an increase in transit boardings as follows:

- **A 15 to 20 percent increase in light rail ridership.** This is driven by the addition of the Orange Light Rail Line which connects Downtown Mountain View with the Milpitas BART Station and Alum Rock Transit Center at 15-minute all day service.
- **An 8 to 10 percent increase in bus ridership.** This is due to the increase in frequent, all-day services, the restructuring of VTA's network to an interconnected grid and the new connection to BART service.

Changes in ridership typically take up to two years to stabilize, though early trends can give an indication as to whether ridership increases are materializing on a system-wide and individual route basis, as shown in the table below. Depending on how ridership changes in the first 6 months, VTA will have a sense for what the eventual ridership changes may be and whether adjustments are necessary. Decreases in ridership immediately after big network changes are common as transit riders adapt to the new service. These decreases can be minimized by information and marketing campaigns.

6 Months	70% of ridership change realized
12 Months	80% of ridership change realized
18 Months	90% of ridership change realized
24 Months	100% of ridership change realized

These projections are based on BART providing two lines of service into Santa Clara County. BART's initial operating plan calls for one of the two lines that currently serve the Fremont BART Station to be extended to the Berryessa BART Station. The second line is expected to be extended in 2018 or 2019. As a result, the impact that new BART service will have on ridership growth may be reduced in the initial 12 to 24 months after BART service begins.

Related Efforts and Issues

Core Connectivity

Fixed route transit service is not always the best mobility solution for every community. As discussed in the Transit Choices Report, some communities will have features that are not supportive of fixed route transit, such as lower land use densities, first/last-mile gaps, an

environment not designed for pedestrians, or a street grid not conducive to transit access. Such areas of our county have always struggled with poor transit access and low productivity under the one-size-fits-all model of fixed route service. As the industry evolves to acknowledge that fixed route transit is not always the best solution, more flexible models of transit service are emerging as potential solutions to provide better mobility for the residents of these communities. VTA's Core Connectivity will explore and develop solutions for these areas where fixed route transit may not be the best approach.

The 2016 Measure B includes a funding category for "innovative first/last mile solutions." While a program has yet to be determined by the VTA Board, this funding category could potentially include an on-demand transit service solution. For example, under Core Connectivity, VTA is exploring a pilot, on-demand transportation approach in Almaden Valley. Such a pilot could leverage VTA's paratransit contractor's ability to utilize on-demand software and excess capacity on Paratransit vehicles (and potentially a multi-provider service, where VTA software would interface with multiple transportation providers such as paratransit, taxis and on-demand service providers to meet trip demand with the most cost-effective option) to deliver service within this area. The pilot could further serve as a model for on-demand service that could be replicated for other areas in the county to replace unproductive fixed route service.

VTA staff is also exploring additional options which may include a senior/municipal shuttle operating subsidy. The Core Connectivity process will engage the VTA Board and committees in exploring the development of a countywide program. The scale of this program would depend on the level of city partnership and how much funding VTA's Board of Directors allocates for first/last-mile solutions.

Fare Policy Review

Staff is reviewing VTA's fare policy within the context of the service redesign objectives of increasing transit ridership and improving farebox recovery. A specific focus is aligning VTA's fare policy with the design of a transit network that encourages making transfers between routes. VTA's present policy of charging cash-paying customers each time they board a vehicle discourages transfers. Additionally, staff is evaluating lowering the cost of youth fares, continuing the Transit Assistance Program (TAP) for low income riders, restructuring the Eco pass program, and adjusting the base fare-which VTA has not done since 2009.

VTA sought input on the fare policy as part of the Draft Transit Service Plan outreach. Finance staff engaged with the public at all nine VTA-hosted community meetings and sought input on VTA's fare policy through an online survey which was promoted on the nextnetwork.vta.org microsite, at community meetings, staff presentations and on social media. Staff will present a preliminary fare change proposal at the April 21, 2017 Board Workshop that includes a preliminary Title VI Fare Equity Analysis and summary of revenue impacts from proposed fare changes. Additional community outreach is planned in May and a recommended fare proposal is scheduled for Board adoption in June of 2017.

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Next Steps

Implementation

Upon adoption of the Final Transit Service Plan, VTA Operations staff will begin the large task of turning a high-level service plan into a finely-tuned schedule that coordinates connections with regional transit services. Drivers will undergo training on the Final Transit Service Plan to ensure familiarity with new or changed routes. Operations staff will also develop vehicle circulation plans for the new transit centers at Milpitas and Berryessa BART Stations.

The timing of service changes will largely be dependent upon the start of service to the Milpitas and Berryessa BART Stations which itself is dependent upon construction and systems testing being completed on time. Changes to special school bell-timed service would be timed for summer or winter breaks to minimize disruption in student travel patterns.

Information and Marketing Campaign

In order to maximize awareness of the service changes, VTA will undertake a robust, multi-lingual information and marketing campaign to promote the new service plan. This campaign will begin in the second half of 2017 with intense promotion in the three months prior to service change implementation. This effort will target Santa Clara County travelers as well as East Bay BART travelers and will consist of print, radio, broadcast TV, cable TV, billboard, and social media advertising. Additionally, VTA will use its own resources to promote the service including: vehicle wraps, shelter posters, car cards, in-vehicle printed collateral, and promotion through the WiFi splash page. A multi-lingual microsite will allow riders to explore the new service plan and compare their trips in the current and future networks. VTA's operators and customer service representatives will receive training and VTA staff will serve as in-person ambassadors at transit centers providing information in the opening days of service.

New Transit System Map and Route Timeguides

Following the adoption of the Final Transit Service Plan, VTA will redesign its transit system map and route timeguides to make them easier to use and more useful. The redesigned system map will focus on frequency rather than service classes, as the current map does. The redesigned timeguides will feature more useful maps that can serve as a resource during trip planning, travel and after disembarking the bus or train. These changes follow national design trends as well as a recommendation from JWA regarding how to reduce information barriers to transit ridership.

Express Bus Study

Following adoption of the Final Transit Service Plan, VTA staff will undertake a study of Express Bus routes, which are peak-period routes that are designed to take commuters long distances at high speeds. With the exception of Express Routes 120, 140, 180 and 181 which currently serve the Fremont BART Station, VTA has excluded changes to express routes from the Final Transit Service Plan. The Express Bus Study will evaluate whether changes should be made to those routes, or new ones added given the new transit network and changes in travel

demand since the last Express Bus Plan was developed in 2011.

FISCAL IMPACT:

At the November 18, 2016 Board Workshop, VTA's Board of Directors endorsed the staff recommendation to return with a Draft Transit Service Plan that employed an 85/15 ridership/coverage plan that was service hour neutral, meaning it would reflect the same number of hours of service being provided.

Bus Service

Although 1,595,000 bus service hours were budgeted in FY17, the actual service hours for FY17 are projected to be 1,499,000 due to a number of planned service changes that were put on hold pending the finalization of the Next Network process. The budgeted service hours for FY18 and FY19 include the 102,000 service hours that were deferred in FY17, resulting in an increase in cost of approximately \$12 million per year.

Light Rail Service

For light rail service, a combination of the proposed Orange Line service (Alum Rock to Mountain View) and the increase in mid-day frequency on the Green Line (Winchester to Old Ironsides) is expected to increase service hours by 38,000 and operating expenses by approximately \$11 million per year.

Approaches to accommodating these increases in costs could include revenue from projected increases in ridership generated by the proposed service revisions, changes to fare structure, potential increased ridership as a result of Transit Oriented Development, and use of the 2016 Measure B Transit Operations program.

The budgetary impacts of these proposed changes will be reflected in the Proposed FY18 and FY19 Transit Fund Operating Budget.

ADVISORY COMMITTEE DISCUSSION/RECOMMENDATION:

The Technical Advisory Committee considered this item on April 12 and many committee members expressed appreciation to VTA staff for their robust outreach efforts and discussions with city staff. A majority of committee members expressed a strong desire to partner with VTA to use 2016 Measure B Transit Operations Innovative First/Last-Mile Service Models program funds to implement new mobility solutions in their communities; however nearly all expressed concern about the timeline and requested VTA accelerate the program's development so that the services could be in place in time for implementation of the new fixed route network when BART opens. Committee members had the following additional comments and questions: 1) clarification that school-oriented service will continue; 2) asked for clarification on proposed service near the Sunnyvale Civic Center; 3) asked for clarification on the request to provide new service between Foothill and De Anza colleges; 4) expressed concern for the cost of the paratransit premium-zone service; 5) expressed concern about the loss of Route 88 in Palo Alto; 6) asked if service information will be published to 511.org; 7) requested BART ridership information at stations; 8) announced that Gilroy and Morgan Hill are discussing a partnership and will make a formal request to partner with VTA to provide some kind of senior mobility service under the 2016 Measure B Transit Operations Innovative First/Last-Mile Service Models program. Staff answered 1) yes, school service will continue; 6) yes, schedule will be published

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to 511.org. The committee voted 14-to-1 to recommend approval of the final transit service plan and to recommend that VTA lead the development of a 2016 Measure B countywide program to identify gaps in the transit market and offer solutions which could be implemented prior to implementation of the new transit network.

The Citizens Advisory Committee considered this item on April 12 and commended staff for excellent depth of analysis and explanatory materials. Committee members had the following questions or comments: 1) asked about construction-related impacts on the Rapid 500 on Santa Clara Street when BART Phase 2 work occurs; 2) expressed concern for SJSU riders having to walk a block to Rapid 500; 3) expressed appreciation that paratransit users were considered and impacts minimized; 4) asked for clarification on the 2016 Measure B Transit Operations Innovative First/Last-Mile Service Models program; 5) asked why VTA ridership has been declining; 6) expressed concern for loss of Express 120 service for Fremont residents; 7) liked the strategy to simplify the classes of transit service; 8) asked for clarification regarding proposed Morgan Hill service; 9) expressed appreciation for staff's detailed work and the Board packet attachments; 10) asked if Route 65 could be improved to 30-minute frequency; 11) liked the move to an all-day transit network; 12) relayed that a member of the community has a number of concerns about the plan, expressed in an email to the committee member; 13) asked about service for the airport and Levi's/Avaya stadium events; 14) expressed eager anticipation for the forthcoming Express Bus study; 15) understood the need to discontinue some Gilroy service because of low ridership, explained very well in the supporting materials; 16) expressed appreciation for staff's consideration of the paratransit impacts, which have been greatly minimized in the final plan; 17) asked staff to make sure routes coordinate with SJSU class schedules; 18) appreciate staff meeting with DASH stakeholders. Staff answered 1) BART Phase 2 construction will have impacts that will be dealt with at the appropriate time; 2) staff met with SJSU and the walk distance is not the primary concern for SJSU riders; 5) a new group of VTA senior staff has been convened to examine the research into why transit usage is falling across the country; 10) Route 65 was proposed for elimination in the draft plan and the final plan proposes a restoration at a lower service level to better match the demand for service; 13) the Orange light rail line will provide a BART connection to Levi's stadium for events, and Route 60 will provide more connections to Avaya stadium, though VTA will continue to provide special event service where necessary; 17) schedules will be coordinated to SJSU class times where appropriate and possible. The committee unanimously voted to recommend approval of the final transit service plan.

The Bicycle and Pedestrian Advisory Committee considered this item on April 12 and expressed great appreciation to staff for their extensive outreach and the high quality and breadth of the memo and the supporting materials. Committee members had the following comments or questions: 1) like the increased service level on Route 57 and 60; 2) like the extension of the Route 60 from Winchester to the airport and then Milpitas BART; 3) look forward the discussion of adding additional service to the plan's transit network using forthcoming 2016 Measure B Transit Operations Core Bus Network funds. The committee unanimously voted to recommend approval of the final transit service plan.

The Committee for Transportation Mobility and Accessibility considered this item on April 13 and thanked staff for "hitting the mark" on the plan, particularly the process of listening to concerns and revising the draft plan accordingly. Committee members had the following

comments or questions: 1) appreciated the plan's webinars; 2) asked staff to clarify the 2-year ridership maturation projection; 3) expressed concern about the loss of service along Route 54; 4) expressed difficulty in keeping up with transit schedule changes every 3 months; 5) asked about the timing of renumbering Route 81 to 51; 6) asked for clarification of the final plan's proposal for Almaden Valley; 7) asked if VTA could use smaller buses in areas of lower ridership; 8) asked staff to clarify the proposal for Route 200 and 62; and 9) relayed recent student and rider concerns about safety on light rail. Staff will investigate safety concerns and follow up with the committee member. The committee unanimously voted to recommend approval of the final transit service plan.

The Policy Advisory Committee considered this item on April 13 and expressed unanimous appreciation to staff for the "phenomenal" and broad outreach effort. Committee members had the following comments or questions: 1) when will we see results of the forthcoming Express Bus Study? 2) asked for clarification of the paratransit impacts in Alameda County; 3) asked if staff can accelerate the 2016 Measure B Transit Operations Innovative First/Last-Mile Service Models program; 4) expressed concern regarding the industry's recent ridership declines; 5) clarified that the proposed final plan does not yet include Measure B Transit Operations Core Network Improvements funds; 6) asked if VTA has ever partnered with, or would be willing to in the future, local municipalities to provide a cooperative shuttle/small bus transit service for areas left unserved by VTA's big buses; 7) expressed concern for the high paratransit fare for premium-zone trips, particularly in Morgan Hill; 8) look forward to exploring 2016 Measure B Transit Operations Innovative First/Last-Mile Service Models program to reduce school congestion, perhaps similar to Contra Costa County's Traffix model; 9) appreciate the multilingual outreach and outreach to communities of concern like East San Jose; 10) understood the need to discontinue some very unproductive routes, such as Route 17 in Gilroy, even though the decisions are difficult, and feel like staff did an excellent job listening to the concerns, considering ways to address them, looking at all the data, and writing a detailed explanation of decisions that covered every concern point-by-point. Staff replied 1) the Express Bus study will likely begin later this year and conclude in 2018; 6) VTA will explore potential partnerships for cooperative service under the 2016 Measure B Transit Operations Innovative First/Last-Mile Service Models program. The committee unanimously voted to recommend approval of the final transit service plan.

The Congestion Management Program & Planning Committee considered this item on April 20 and expressed appreciation to staff for the extensive outreach efforts and for revising the plan to incorporate community feedback. Committee members had the following comments or questions: 1) agreed with a public comment that there should be more robust ongoing reporting of ridership once the plan is implemented, including a comparison back to multiple previous years instead of just the single previous year; 2) asked if there is a way to "grandfather in" the 2 impacted paratransit users; 3) asked VTA to expedite the Measure B Transit Operations discussions so that those resources can be used to serve new markets; 4) asked about the paratransit impacts in Alameda County; 5) asked if VTA will provide an online trip planning feature in advance of the new service and when; 6) asked that the new Route 60 continue to prominently advertise the route as service to the airport; 7) asked that Route 60 signage at the airport advertise that riders can board at the airport for free and that it goes to the BART station; 8) asked VTA to provide WiFi onboard Route 60. Staff responded to questions: 2) it may be possible to "grandfather in" the two impacted riders, though this is a departure from our existing

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paratransit policy that the Board would have to consider; 4) VTA currently provides paratransit service in Alameda County due to Express Routes 120, 140, 180, and 181, and in the proposed plan these paratransit users would be covered by East Bay Paratransit; 5) yes, VTA will provide an interactive trip planning feature on its website approximately 60 days prior to the launch of service. The committee unanimously voted to recommend approval of the final transit service plan.

The Administration & Finance Committee considered this item on April 20 and had extended discussion of the need to be "disciplined" in our approach to allocating money for transit service, including an honest discussion of whether we need to reduce the total amount of service provided, given our budget reality, and also as the community and Board considers possible uses of Measure B Transit Operations funds, where the appetite for Measure B money will probably greatly exceed the amount of funds available. In addition to universal appreciation for staff's community engagement efforts and collaboration with city staff, committee members had the following comments or questions: 1) asked what the timeline will be for consideration of Measure B Transit Operations funds; 2) asked if staff know what a service plan with fewer total service hours (a reduction from 1.6 to 1.4 million annual hours, for example) would look like, given VTA's financial situation; 3) appreciate that the plan is forward-thinking and bold, even after extensive engagement with the community; 4) asked why Route 77 exists, since it seems to duplicate BART service between Milpitas and Berryessa stations; 5) expressed a desire to make sure cities are invested in the success of any on-demand pilots we implement; 6) asked staff to carefully consider the price (fare) of any on-demand services that we may provide; 7) asked if staff will do anything new and different to market the new service; 8) asked staff to show the full Board the map of areas where service will go away; 9) asked staff to show a linear chart of ridership history and the expected trend in the future, to set expectations for policy makers; 10) expressed that staff should not be compelled to make any service proposals that we don't think will work in order to avoid difficult decisions; 11) asked for clarification on timing of the final plan versus the budget; 12) asked staff to provide more robust and easier to understand ridership/performance reports on a regular basis. Staff responded to questions: 1) Measure B Transit Operations will be discussed at the April 21 Board Workshop and the June Board meeting; 2) no, staff has not considered or modeled a service plan that includes a reduction of total service hours; 4) Route 77 will provide an important connection between East San Jose residential areas and Milpitas job centers, not necessarily related to the BART service itself; 7) yes, VTA will provide an interactive trip planning feature on its website approximately 60 days prior to the launch of service; 11) the final plan will be considered in early May and the budget considered in June. The committee unanimously voted to recommend approval of the final transit service plan.

The Safety, Security, and Transit Planning and Operations Committee considered this item on April 21 and had the following questions or comments: 1) asked if staff will coordinate schedules with BART and Caltrain; 2) asked how many existing riders would lose access to transit; 3) asked if staff has an alternative strategy to serve areas with routes that cost upwards of \$15 per passenger; 4) asked if staff will do a transit marketing campaign for the Next Network; 5) advocated for an easier-to-use transit map and transit trip planning apps; 6) encourage more real-time information at stops; 7) encouraged by the very few paratransit riders impacted by the plan; 8) expressed that the Core Connectivity project timeline should be aligned with the Next Network plan; 9) asked for more information on the price elasticity of transit demand; 10)

expressed a concern about the use of Measure B Transit Operations resources; 11) asked that capital expenditures focus on maintaining VTA's capital assets; 12) asked staff to investigate moving forward the fare increase by 6 months in order to isolate the impacts from the Next Network impacts. Staff responded to questions: 1) yes, staff coordinate schedules with Caltrain and BART where possible and will continue to do so; 2) less than 0.5% of today's riders would lose access to transit; 3) VTA's Core Connectivity program is exploring alternative mobility options for difficult-to-serve areas; 4) yes, VTA will conduct a major marketing effort for the rollout of the Next Network plan. The committee unanimously voted to recommend approval of the final transit service plan.

Prepared by: Adam Burger
Memo No. 5897

ATTACHMENTS:

- Attachment A - Current Transit Service Plan (PDF)
- Attachment B - Phase II Outreach Summary (PDF)
- Attachment C - Final Transit Service Plan Maps - Frequency Table - Light Rail System Map - Service Profile (PDF)
- Attachment D - Route by Route List of Changes (PDF)
- Attachment E - Changes from Draft Plan to Final Plan (PDF)
- Attachment F - Paratransit Service Impacts (PDF)
- Attachment G - Board VTA Service Equity Analysis Full Report (PDF)

I certify that the foregoing instrument is a true and exact copy of the original on file in the Secretary of the Board of Directors office.

Monique M. Carter

Date 05/12/17

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Agenda Item #7.3. Adopt the Final VTA Transit Service Plan

M/S/C (Chavez/Hendricks) to adopt the Final VTA Transit Service Plan with the following:
1) framework for working with cities; 2) evaluate route for Rapid 500 and consider using San Fernando Street; 3) bring the plan back to the Board during/after the budget for further refinements; 4) include Route 45; and 5) develop framework for evaluation and methods for course-correction.

Transit Service Equity Analysis

For VTA's Next Network Transit Service Plan

Prepared for



Santa Clara Valley Transportation Authority

By



April 2017
Revised

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Overview

In 2016, Santa Clara Valley Transportation (VTA) undertook ways to redesign their transit network to make public transit faster, more frequent and more useful for Santa Clara County travelers. Called the “Next Network,” this transit service redesign is aimed at accomplishing three main goals:

1. Increase overall system ridership
2. Improve VTA’s farebox recovery rate
3. Better connect VTA’s transit network with future BART stations at Milpitas and Berryessa

Throughout the summer of 2016, VTA sought community input on three network design concepts, along with transit network design priorities. After analyzing community input on the three plans, a draft network was released in January 2017 for public review which is based on the service plan recommended by the Board of Directors at their November 18, 2016 meeting. During an extensive six-week public outreach period, VTA held nine public meetings, five webinars and made public presentations to over 50 community based organizations and government agencies. Additionally, a website was developed specifically to aid riders in understanding the planning process and potential outcomes.

Over 3,000 comments on the draft plan were also gathered by e-mail, social media and phone calls. Using this input, a final plan will be presented to VTA’s Board of Directors in May 2017. The changes are scheduled to take place when the two Santa Clara County BART stations open in late 2017.

Key to the adoption and implementation of the Next Network is a Title VI Service Equity Analysis that is aimed at assessing whether the service restructuring plan will result in negative impacts to minority and/or low-income communities. Using VTA Title VI policies, the Service Equity Analysis is the subject of this memo.

As set forth in this report, the proposed adoption of the Next Network service plan will not disproportionately burden low-income communities nor have a disparate impact on minority communities. Rather, the analysis shows that both populations will bear less than their proportional share of the service losses associated with the Next Network proposed final plan.

Title VI Requirements

Title VI of the Civil Rights Act of 1964, Section 601 states:

“No persons in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”

It is VTA's objective to avoid, minimize or mitigate disproportionately high and adverse impacts on minority and low-income populations. As a recipient of financial assistance from the Federal Transit Administration (FTA), VTA is required to comply with Title VI of the Civil Rights Act of 1964 by evaluating service and fare changes at the planning and programming stages to determine whether those changes have discriminatory impacts, including Disparate Impacts on minority populations and/or Disproportionate Burdens on low-income populations.

According to the Federal Department of Transportation, equity in the provision of transit service is described as "providing equal levels of service to minority and non-minority residents of the urbanized area. Levels of service, in turn, are defined in terms of capital allocation and accessibility."¹ The metrics of discrimination that could be monitored for disparate treatment include service design that could consistently cause minority-group riders to experience less service than the overall riding public. Despite being an FTA requirement, a Title VI Equity Analysis should not replace good program planning, which should be an on-going process that considers equity among other factors when designing fare changes, service changes, or discretionary policies and programs.

VTA Title VI Policies

In 2012, FTA issued guidance under FTA Circular 4702.1B (Title VI Requirements and Guidelines for Federal Transit Administration Recipients), and Circular 4703.1 (Environmental Justice Policy Guidance for Federal Transit Administration Recipients) that requires large transit agencies to develop policies for when they are contemplating either service or fare changes.

In order to comply with the guidance, on November 7, 2013, the VTA Board adopted the VTA Major Service Change, Disparate Impact, and Disproportionate Burden policies for the evaluation of service and fare changes. The Policies established a definition of what would constitute a "major" service change to require an equity analysis, in addition to establishing a statistical threshold to determine whether minority and low-income riders are disproportionately impacted by the service changes. Prior to adoption, these Policies were the subject of extensive public outreach and engagement. **The VTA policies are included as Appendix A**, including a description of the public outreach efforts related to the establishment of the policies.

These policies define what constitutes a "major" service change and therefore requires a service equity analysis: establishing of new routes, elimination of routes, a change that impacts 25% or more of a route's miles or hours, a series of changes over time that would cumulatively become major changes, controversial changes, or a systemwide change that impacts 5% or more of the total system hours. The

¹ Transit Cooperative Research Program, Legal Research Digest: "The Impact of Civil Rights Litigation Under Title VI and Related Laws on Transit Decision Making", TCRP Project J-5, Washington, D.C. June 1997

policy states that for service and fare equity analyses, a disparate impact (and disproportionate burden) threshold of 10 percent shall be used to determine if minority and/or low income riders are more negatively affected by the proposed change, when compared to VTA riders as a whole. The 10 percent threshold applies to the difference in the aggregate impacts of the proposed change on minority and low income riders compared to the aggregate impacts on the overall VTA ridership. While the policies state that the analyses shall be based on VTA passenger data, the analyses can also be based on census data if survey data is inadequate or unavailable for the analysis.

Prior to adopting a service change, VTA must conduct a service equity analysis and analyze specific elements of the proposed plan to determine whether the changes would result in impacts that exceed the threshold established by the policies. The analysis contained within this report uses the VTA adopted thresholds for determining Disproportionate Burden and Disparate Impacts.

Should the service equity analysis show that the proposed service change results in a disparate impact or disproportionate burden, alternatives should be considered to avoid, minimize, and mitigate the discriminatory results of the service change. However, if the mitigations do not minimize adverse effects, the equity analysis must demonstrate a substantial legitimate justification and it must be demonstrated that there were no comparably effective alternatives that would result in fewer adverse impacts.

Service Equity Analysis Methodology Overview

Using the guidance provided in VTA's Title VI Policies to quantitatively assess the impacts associated with the proposed service restructuring on minority and low-income populations, it is necessary to use data that would capture the systemwide change that the Next Network presents. This allows an analysis that can better isolate minority and low income rider populations that may be affected by the transition and compare them to the overall affected population. The methodology to perform this service equity analysis was designed per the checklist provided as Appendix K of the FTA's October 2012 4702.1B Circular (Title VI Requirements and Guidelines for Federal Transit Administration Recipients).

Typically, VTA uses passenger survey data to assess the impacts of service changes. However, because the network redesign envisions a large number of service changes (route alignments, frequency changes, route additions and deletions), using passenger data for the analysis would not accurately quantify the impacts. As a result, this Service Equity Analysis is based on Census block group demographic data from a service planning tool called Remix to help assess impacts associated with proposed changes on a systemwide basis. Remix is a proprietary geospatial data analysis tool that uses Geographic Information System (GIS) mapping software that is customized specifically for VTA.

Both the existing network and the proposed network were imported into Remix (including service frequencies, spans of service, and days of the week) along with census block group demographic data depicting minority and low income populations as a way of calculating the population's access to transit under the existing network and the proposed network. This spatial data analysis tool produces "people trips" (total population served by a route X annual scheduled trips on that route) that present a surrogate for how individuals can benefit from a route.

"People trips" are a measurement of the number of residents that are served by transit and the amount of service that is available to them. For each route, People Trips are calculated by multiplying the number of residents who live within ¼-mile of a stop by the total number of annual vehicle trips provided on that route based on its frequency and span of service. A route that runs frequently through densely populated areas would show a high number of People Trips. A route that runs infrequently through low density areas would reflect a much lower number of People Trips. Minority and low income People Trips may also be calculated by using minority or low income population figures in place of total population.

Using the Remix outputs, the Service Equity Analysis compares the change in Total People Trips to the change in Minority People Trips and to Low Income People Trips. This way, the aggregate impacts on the total population can be compared to the impacts experienced by both minority and low income populations to determine if a Disparate Impact or Disproportionate Burden exists.

If the percentage change between All People Trips and Minority People Trips is greater than 10%, that would suggest that the service change would result in Disparate Impacts on minority populations. Further, if the percentage change between All People Trips and Low Income People Trips is greater than 10%, that would suggest that the service change would result in a Disproportionate Burden to low income populations. A change of less than 0% (any negative percentage) would indicate that the service change would have a *greater benefit* low income and/or minority populations as compared to overall ridership.

Data Used

Remix is based on Census data provided by the US American Community Survey, 2009-2013. The Service Area consists of a set of Census block groups (and its underlying data) determined by the route design provided by VTA staff.

The following data definitions were used:

- Minority status of the block groups is determined by subtracting the white, non-Hispanic population from the total population.

- Low income status is set at 200% the US poverty level, based on VTA’s definition of “low income” as referenced in the adopted VTA Title VI program.

Service Area Demographics Overview

The following provides an overview of the VTA Service Area population based on the 2009-2013 American Community Survey 5-Year Sample, which corresponds to the data set used for the Remix analysis.

These demographic statistics were considered early and often in the development of the service recommendations in order to minimize or avoid the potential for changes to result in a Disproportionate Burden on low-income populations or Disparate Impacts on minority populations.

Minority and Income Status

Minority and Income Status are the primary considerations within the Service Equity Analysis. To determine the Service Area population’s minority and income profile, data from the American Community Survey was used for the block groups used in the Remix equity Analysis. The following Figures 1 and 2 provide a service area overview on minority and income status.

Figure 1: Service Area Income Status

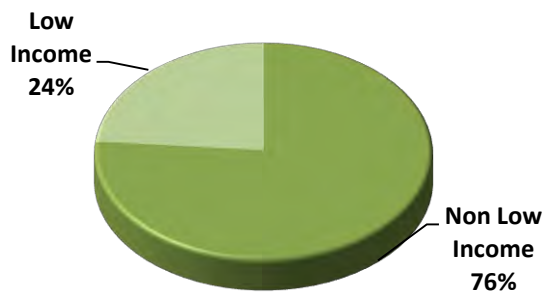
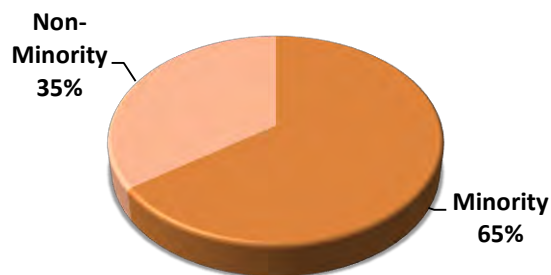


Figure 3: Service Area Minority Status



Source: 2009-2013 American Community Survey 5-year Sample

Next Network Overview

The Transit Ridership Improvement Program is a two-year study of Santa Clara Valley Transportation Authority (VTA) services designed to identify ways to improve ridership. A key output of this study, the 2017 Next Network Plan, has reviewed the structure of the VTA transit network and proposed improvements for implementation in 2017. The planned changes will occur in time for the opening of Bay Area Rapid Transit (BART) to Berryessa, including those changes required to integrate BART into the VTA network. The need for this study arose from two converging factors—falling ridership and population growth—that pose important new questions for transportation in Santa Clara County.

Identifying the appropriate service allocation between services geared toward increasing ridership and those geared toward ensuring geographic coverage was the essential first step in the design of the new transit network. Currently, 70 percent of VTA's operating budget is spent on ridership-purposed routes; that is, those that travel through dense, walkable, transit-supportive places. 30 percent is spent on coverage-purposed routes that provide transit access to parts of the county with little regard for ridership demand.

Three scenarios were studied during the last year:

- 70/30—70% of the service would be allocated to areas that would generate ridership, while 30% would be allocated for the purpose of geographic coverage.
- 80/20—80% of the service allocated to ridership-purposed service and 20% allocated to coverage purposed service
- 90/10—90% of the service allocated to ridership-purposed service and 10% allocated to coverage purposed service.

Throughout the last year, VTA staff and consultants have sought input on concepts and plans studied under the Next Network in order to develop a service plan that addresses the concerns of the Authority and meets the needs of the riders.

On November 18th, 2016 the VTA Board directed staff to design a draft transit network employing an 85/15 balance between ridership purposed and coverage-purposed services. Following a second outreach phase collecting input on this "85/15" draft service plan, staff made changes to produce a final plan. This final plan is the subject of this Service Equity Analysis.

Next Network Characteristics

The Next Network has proposed both service eliminations as well as service and frequency increases on the VTA proposed network. Due to the comprehensive nature of the changes that are included the proposed 85/15 Next Network, a large number of existing VTA riders may be impacted in both positive and negative ways. Some of the systemwide benefits and adverse effects that may result are included below.

Potential Benefits

- Shorter Travel Times—Riders with access to the high frequency network may see reductions in their travel times due to increased service frequency, shorter wait times, and more direct routes.
- Increased Service Reliability—As a result of the frequency improvements on VTA's more productive transit corridors, buses will be more frequent, which means that recovery time will be easier to schedule. If a passenger misses a bus, they know that another one will be arriving shortly.

- Better Connections—As a result of the frequency improvements on VTA’s more productive transit corridors, buses will be coming more often, which means that transfers will be much easier to complete and riders will have more freedom to move throughout the network.
- Increased Off-Peak Service—In order to increase overall ridership, the network recognizes the importance of improving service during mid-day, evening and weekend periods. By adding off-peak service, riders will have more options for trips during these periods than what is available with the existing network.
- Better Regional Mobility—The extension of BART to Milpitas and Berryessa will greatly strengthen the regional transportation network and provide additional mobility alternatives for individuals travelling between Santa Clara County and the rest of the San Francisco Bay Area. The overall increase in mobility will allow passengers to access employment, education, and commercial opportunities that were not previously available.

Potential Adverse Effects

- Reduced Access to Transit Service in Low-Density Areas—Some of the outlying, low-density areas that are currently served by low frequency routes would no longer have access to transit service. As additional resources are invested in the more productive core routes that make up the high frequency network, many of the less productive routes would be reduced or eliminated and the individuals in those areas would no longer have access to transit service.
- Longer Walk Times—As a result of eliminating some routes, some existing riders may need to travel further distances to get to the nearest bus route. In some cases, the bus route that is further away will be running with more frequent service so the overall travel time may be comparable.

Per VTA’s Major Service Change policy, a service equity analysis is required for both the draft (85/15) and final Next Network service plans, as both plans involve a complete redesign of the transit network and would impact more than 5 percent of the system’s service hours (the threshold established by the policy). **Appendix B shows a comprehensive list of the final service plan’s proposed changes by route.** Conducting a Service Equity Analysis is a necessary and useful component of this implementation, as it identifies equity concerns early in the planning process so that potential negative impacts can be mitigated.

Specific Route Considerations

While the Next Network proposes significant service increases on some routes, there are also service eliminations and consolidations that have been included in the network for areas with low population density and/or absent a tendency to use public transit. In some cases, productive portions of routes have been assigned to other routes to render useful service.

VTA's twelve Express routes were not studied as part of this project, except for the routes that currently service Fremont BART. As the only VTA routes that provide service outside of Santa Clara County, the four Express routes that currently serve Fremont BART will be discontinued with the BART Phase 1 (Milpitas and Berryessa) extension.

Next Network Public Outreach Phase 1

Due to the potential scale of changes to the transit network that could be considered as part of the Next Network Plan, VTA started the process of reimagining the transit network by seeking public input on how transit could be improved. A five month long community engagement process was conducted from May 2016 through September 2016 designed to collect feedback on how VTA could make its transit service better. VTA held 12 Community Meetings (VTA staff-led) and four intensive Community Leader Workshops (led by Jarrett Walker and Associates) for during the first phase of outreach. Additionally, VTA staff made 15 presentations to community and neighborhood groups. For online outreach, 104,000 unique visits were recorded to the project website. VTA collected 2,236 votes in online surveys, 1,139 social media interactions and 860 email list subscribers. Staff posted 12 blog posts that each generated dozens of public comments and staff responses. 150 Next Network-related comments were received through VTA's customer service line. In all, over 5,000 points of public input were received during the first outreach phase-more than halfway to staff's goal of receiving 10,000 points of input throughout the entire project. Extensive communication to Limited English Proficient populations was also undertaken, which corresponded to VTA's Language Assistance Plan.

The comments received followed many common themes:

- Concerns over personal impacts of service changes on mobility—How will those who might see their transit service decreased or discontinued get around?
- Desires for more frequent and reliable transit service—With many routes operating at 30-minute frequencies or less, transit is not a viable option for many who live within the core service area.
- Desires to lower the average rider subsidy by decreasing or discontinuing transit service to low-ridership areas.
- Desires to see public transit as a traffic congestion solution
- Desires to improve connections with regional services like Caltrain and future BART service
- A sense that transit did not go where riders wanted to go or that making one's trip would be indirect or require lengthy transfers
- Recognition of the challenge of operating transit in low-density, suburban areas
- Concerns for the mobility of an aging population

Next Network Public Outreach Phase 2

Public outreach has continued following the Board's recommendation to study the Next Network 85/15 plan. The following is a summary of the second outreach phase on the Next Network, conducted during January and February 2017.

External Engagement

- 2,500+ incoming public comments collected via phone, e-mail and specialized microsite <https://nextnetwork.vta.org>, with information on the site mirrored in English, Spanish, Chinese and Vietnamese.
- Nine public meetings held thus far resulted in:
 - Average attendance = 46;
 - Total attendance = 421
- 16 videos (2 live streamed meetings, 5 geographically-focused webinars, 8 college-focused videos) – key metrics include:
 - 4,300 views
 - 111 live viewers
 - 25,700 hours of watch time
 - 250 comments
 - 45 thumbs-up and 75 shares
- Countywide Title VI mailing to 150 organizations
- Targeted South County Title VI mailing to 80 organizations
- Community presentations include: Saratoga Senior Center, SJ District 1 Leadership Council, SPUR, Transform, Gunn High School PTA, Cupertino Chamber of Commerce, Hope Services, Centennial Recreation Senior Center (Morgan Hill), Traffic Safe Communities Network among others
- Outreach to Community Based Organizations, offering presentations/literature for distribution
- Educational Institution Transit Fairs: San Jose State, De Anza, SCU, City College
- Multilingual Street Team ambassadors deployed in the field at major transit hubs for 10 days; reach was over 3,300 individuals.

Marketing Collateral

- Car cards translated in 5 languages on all vehicles
- Proposed discontinued route flyers distributed on affected bus lines
- Bus Stop signage at proposed deleted stations
- Light Rail Station and Bus Shelter Posters
- Passenger Information Message Signs on light rail platforms
- Bus Bench Ads
- Special Take Ones (passenger newsletter translated in 5 languages with a proposed service map) on board buses and at major literature distribution points

- Two rounds of print newspaper ads in 24 publications targeting community and minority publications including: San Jose Mercury News, Silicon Valley Community Newspapers, Metro Newspapers, Gilroy Dispatch/Morgan Hill Times, El Observador, Sing Tao, Philippine News, Korea Daily, Thoi Bao/Vietnam Daily News, Palo Alto Daily Newspaper, Santa Clara Weekly, Evergreen/Almaden Times
- Aggressive social media (Twitter, Facebook, Gov Delivery, Next Door) campaign promoting meetings and webinars

The outreach effort for the Draft Transit Service Plan yielded over 3,000 comments about the components of the Draft Transit Service Plan. These comments were often specific and detailed and focused on several themes:

- Consensus that VTA's ridership and farebox metrics were compelling reasons to make changes in the design of the transit network.
- Endorsement of the idea that increasing access of residents and jobs to frequent (15-minute or better, all-day) service would make transit a more viable travel option for more Santa Clara County travelers.
- Endorsement of more Rapid routes, particularly Rapid 523 in Sunnyvale and Cupertino.
- Support for the Core Connectivity Project, which seeks to identify new ways of providing mobility in areas that are a poor fit for a fixed-route transit service such as contributing funds to city-operated shuttle programs or subsidizing on-demand trips in areas without fixed-route service.
- Concern for those who lose access to any transit service, particularly in Almaden Valley, South San Jose, East San Jose Hills Saratoga, Cupertino, Los Gatos and Fremont. Routes 37, 45, 53, 65, 82, 88, 89, 120, and 181, which were proposed to be discontinued or have decreased levels of service were the subject of many comments.
- Concern about the impact to paratransit users whose homes or destinations would fall outside of the paratransit service area or into the premium fare zone if fixed-route services along the periphery of the transit network are discontinued.
- Interest in how VTA can better meet the needs of senior citizens.

A compendium of all comments on the Draft Transit Service Plan can be downloaded at nextnetwork.vta.org.

Incorporation of Feedback into Final Transit Service Plan

After reviewing all of the input received during the outreach phases, staff developed a Final Transit Service Plan that made 34 changes to the Draft Transit Service Plan, including retaining service to some areas where discontinuances had been proposed such as Almaden Valley, Palo Alto, Cupertino, Saratoga and Campbell, among others. In response to public feedback, the Final Transit Service Plan employs an 83/17 ridership/coverage balance, compared to the draft plan's 85/15 balance.

The following bullets briefly discuss elements of the Draft Transit Service Plan that received a high level of community input and the resulting staff recommendations for the Final Transit Service Plan.

- *Cupertino/Saratoga - De Anza Boulevard/Saratoga-Sunnyvale Road (Current Route 53)*
Recommendation: Continue service in this corridor by extending Route 51 south of De Anza College.
- *San Jose - Leigh Avenue (Route 65)*
Recommendation: Retain service on Route 65 and decrease frequency from 30-minute service level to 60-minute service level.
- *Los Gatos/Campbell (Current Routes 48 and 49)*
Recommendation: Operate Route 27 on Main Street in Downtown Los Gatos as well as Hacienda Avenue and Knowles Drive to service Los Gatos El Camino Hospital and Lost Gatos High School.
- *San Jose - Downtown (Current DASH)/Rapid 500*
Recommendation: Retain the Draft Transit Service Plan's recommendation to upgrade the DASH to the Rapid 500 and add a Rapid 500 stop at Almaden Avenue.
- *Fremont/Sunnyvale (Route 120)*
Recommendation: Given the extension of BART to Santa Clara County and compelling needs for transit service inside Santa Clara County, staff does not recommend retaining Route 120 in the Final Transit Service Plan.
- *Fremont/San Jose (Route 181)*
Recommendation: Given the extension of BART to Santa Clara County, alternate ways of making the trip by transit, and compelling needs for transit service inside Santa Clara County, staff does not recommend retaining Route 181.
- *Palo Alto - Gunn High School (Current Route 88)*
Recommendation: Provide a new Route 288 service during school bell times, with an additional after school trip to accommodate students involved in extracurricular activities. Discontinue Route 88.
- *Palo Alto - Veterans Hospital (Route 89)*
Recommendation: Retain Route 89 as it exists today to provide hospital access for veterans.
- *San Jose - East Hills (Current Route 45)*
Recommendation: Retain the Draft Service Plan's recommendation to discontinue Route 45. VTA will offer to provide a van for use by the patrons of the Homeless Veterans Emergency Housing Facility.
- *San Jose - Mineta San Jose Airport (Current Route 10)*
Recommendation: Due to the inability to enforce whether riders who board at non-airport stops are traveling to the airport, only provide free boardings at airport terminals. Non-airport terminal boardings require a standard fare.
- *Campbell/San Jose - Hamilton/Pine (Current Route 82)*
Recommendation: Discontinue Route 82 and retain transit service along Hamilton Avenue/Pine Avenue corridor by rerouting Route 56.

- *Gilroy (Current Routes 14, 17 and 19)*
Recommendation: Discontinue routes 14, 17 and 19 and replace them with a loop route, which will be named Route 85.
- *Campbell/San Jose/Saratoga (Current Route 37)*
Recommendation: Retain Route 37 at a 60-minute frequency service level rather than a 30-minute service level. The portion of Route 37 that exhibits the greatest demand (from West Valley College to the Light Rail Line between Mountain View and Winchester) will be supplemented by Route 26, which offers 30-minute service.
- *Cupertino/Los Altos - Foothill and De Anza Colleges*
Recommendation: Due to insufficient demand, discontinue this service.
- *San Jose - Forest Avenue (Current Route 23, new Route 59)*
Recommendation: Retain the Draft Transit Service Plan’s recommendation to keep Route 23 on Stevens Creek, and extend Route 59 from its terminus at the Santa Clara Caltrain Station to serve Forest Avenue via Lafayette.
- *Sunnyvale - Civic Center (Current Route 54)*
Recommendations: Discontinue service on Route 54 along Olive Avenue.
- *Sunnyvale - Fair Oaks Avenue (Route 55)*
Recommendation: Retain the Draft Transit Service Plan’s recommendation of removing the Route 55 deviation that serves the Fair Oaks/Remington area. The volume and proximity of other transit services in the area (routes 22, 55, 522 and 523) provide adequate connectivity in all travel directions.
- *San Jose - Almaden Valley (Current Routes 13, 63, 64, 328 and 330)*
Recommendation: Extend Route 64, which currently terminates at Almaden Light Rail Station, to Camden Avenue and retain Route 13 (renamed to Route 83) with modifications to better serve the Almaden Community Center and shopping plazas at the intersection of Blossom Hill Road and Almaden Expressway. Additionally, VTA will explore an on-demand pilot service in Almaden Valley.

In summary, the extensive feedback received helped staff to create a better final transit service plan that minimizes adverse impacts and maximizes benefits. **(Appendix B shows revisions made to the draft plan.)**

Service Equity Analysis Findings

The planning process to develop the draft and final plans thoughtfully considered Title VI and Environmental Justice impacts on protected communities. Understanding the impact that plans, programs or projects have on minority and low-income communities has been part of the early planning and development process for the Next Network. Equity “check-in” analyses also occurred at various stages in the process. While a Service Equity Analysis may uncover impacts to protected populations, if the needs of the agency have been matched with the needs of the low income and minority

communities, an Equity Analysis can also demonstrate that the agency has listened to the community and addressed their major concerns.

Summary Findings

Using the impact thresholds established under the VTA Title VI and Environmental Justice policies and based on a Service Equity Analysis performed on the proposed final Next Network service plan, the network changes would not impose a disparate impact on minority populations or a disproportionate burden on low income populations.

Analysis Results

Based on the Remix data, the final Next Network service plan will result in a reduction of approximately 519 million People Trips annually. This represents a little less than a 2% reduction (-1.70%). It should be noted that this magnitude of change falls well below the margin of error. Additionally, though the BART extension will increase access to jobs and residents, the analysis methodology shows a decrease in people trips because of two factors:

- 1) the increase in service to the areas surrounding the two BART stations means few new people trips because the station areas were sparsely-populated per the 2009-2013 Census data, and
- 2) the service provided by the BART extension itself, including connections throughout the entire BART system, are not reflected because the extension will not be operated directly by VTA.

Minority populations will fare slightly better under the service plan than the overall population, and experience only 1.44% reduction in People Trips. The Difference between Minority Impacts to All Impacts is negligible at 0.26%. This does not represent a Disparate Impact using the 10% threshold established in the VTA policies. Table 1 presents the impacts experienced by the total population and the minority population expressed in People Trips.

Table 1: Disparate Impact Analysis

	People Trips (Total)			People Trips (Minority)			Difference of Minority Impacts to Total Impacts	Exceed 10% DI Threshold
	People Trips	Net change to Existing	% Change	People Trips	Net change to Existing	% Change		
Existing Network	31,126,194,325			22,335,385,235				
Proposed Network	30,606,506,800	-519,687,525	-1.70%	22,019,054,671	-316,330,564	-1.44%	0.26%	NO

Additionally, low income populations will also experience fewer impacts when compared to the overall population under the final Next Network service plan, with a net reduction to Low Income People Trips of 0.67%. This also does not represent a Disproportionate Burden using the 10% threshold established by the VTA policies. Table 2, below, presents the impacts experienced by the total population and the low income population expressed in People Trips.

Table 2: Disproportionate Burden Analysis

	People Trips (Total)			People Trip (Low Income)			Difference of Low Income Impacts to Total Impacts	Exceed 10% DB Threshold
	People Trips	Net change to Existing	% Change	People Trips	Net change to Existing	% Change		
Existing Network	31,126,194,325			9,597,124,302				
Proposed Network	30,606,506,800	-519,687,525	-1.70%	9,533,081,271	-64,043,031	-0.67%	1.03%	NO

Appendix C presents a matrix showing route-by-route and overall impacts of the proposed Next Network service plan:

- The green columns reflect current service levels, including the total population living within ¼-mile of each route, the percent of that population reported as low income in the applicable block groups, the percent of that population reported as minority in the applicable block groups, and the amount of service provided by the route measured as annual bus trips.
- The blue columns set forth the same demographic and service level details under the proposed final Next Network service plan.
- The light grey columns show the gain or loss of service by calculating the population within ¼-mile of each route times the number of trips deleted from or added to the service schedule.
- The first dark grey or red columns show what percent of the added or lost trips is borne by low-income populations. The cell is dark grey when the percentage is equal to or less than 23.5%, the system-wide low-income population; the cell is red when the percentage is higher than 23.5%.
- The second dark grey or red columns show what percent of the lost or added trips is borne by minority populations. The cell is dark grey when the percentage is equal to or less than 65.3%, the system-wide minority population; the cell is red when the percentage is higher than 65.3%.
- The last line of the appendix shows systemwide information, reflecting the cumulative impacts across all routes.

The table at the bottom of the matrix shows that the low-income population is expected to bear 12.3% of the total service loss, which is 11.2% *less* than the percentage of low-income people in the service area, meaning that the service losses will be borne *less* than proportionally by the low-income population. The minority population is expected to bear 60.9% of the total service loss, which is 4.5% *less* than the percentage of minority people in the service area, meaning that the service losses will be borne *less* than proportionally by the minority population. Taken together, these results indicate that *low income and minority populations would actually receive a greater than proportional share of the benefits* of the proposed final Next Network service plan. **Maps showing the changes by low income and minority populations are Appendix D.**

As an additional support to this analysis, we also viewed the difference between the impacts borne by minority and low income populations compared to the overall percentage of minority and low income

populations within the service area. While this does not take into consideration the difference between the *aggregate change* between the total population impacts and the minority or low income population impacts that is required for the Service Equity Analysis, it does provide a touchstone to determine how well the impacts borne by the two populations compare to the overall minority and low income populations in the Service Area. As a result of this analysis, it appears that both low income and minority populations that experience the impacts are less than the overall population within the service area. For the low income populations, the impacts are a little more than half of the low income population in the area. Table 3 provides this analysis.

Table 3: Impacts “Borne” by Low Income and Minority Populations

	Low Income	Minority
Impact Borne By:	12.3%	60.9%
Service Area Average:	23.5%	65.3%
Difference:	-11.2%	-4.5%

As previously stated, Title VI and Environmental Justice impacts on protected communities were considered as part of the planning process to develop the draft and final plans. Because the impacts to minority and low-income communities were considered early in the planning and development process for the Next Network, VTA was able to bridge the needs of the agency with the needs of the low income and minority populations, and develop a service plan that has minimal system-wide impacts to both populations.

Appendix A: VTA Title VI and Environmental Justice Policies

Public Outreach for Title VI and Environmental Justice Policies

In the development of the Major Service Change, Disparate Impact, and Disproportionate Burden policies, VTA solicited input from the community, including low-income, minority, and limited English proficient populations which are traditionally underrepresented in the transit decision-making process. A community outreach plan was implemented to provide the public with multiple opportunities to learn about the proposed policies and provide feedback.

The proposed policies below were emailed to more than 30 community-based organizations, transit advocates, and other grassroots organizations to obtain feedback. Additionally, VTA presented the policies at the Refugee and Immigrant Forum and held a meeting at its River Oaks administrative office. Comments could be made by calling or sending emails to VTA Customer Service. VTA also informed the public of free language assistance available to persons who are limited English proficient.

Resolution for Board Adoption of Major Service Change, Disparate Impact, and Disporportionate Burden Policies

VTA Title VI Program
'P qxgo dgt'4238

From: [Baltao, Elaine](#)
To: [Board.Secretary;](#)
Subject: November 7, 2013 Board of Directors Meeting
Date: Friday, November 08, 2013 1:06:27 PM

The VTA Board of Directors met last night and took the following actions:

Removed from agenda: Item #3.4 – TAEA labor contract

Approved all remaining items on the Consent and Regular Agenda.

The Board of Directors adjourned the meeting in memory of VTA Employee, Anita Jacobson.

Office of the Board Secretary
Santa Clara Valley Transportation Authority
3331 N. First Street
San Jose, CA 95134
408.321.5680
board.secretary@vta.org



BOARD OF DIRECTORS MEETING

Thursday, November 7, 2013

5:30 PM

Board of Supervisors' Chambers
County Government Center
70 West Hedding Street
San Jose, CA 95110

****REVISED AGENDA****

To help you better understand, follow, and participate in the meeting, the following information is provided:

- Persons wishing to address the Board of Directors on any item on the agenda or not on the agenda should complete a blue card located at the public information table and hand it to the Board Secretary staff prior to the meeting or **before the item is heard**.
- Speakers will be called to address the Board when their agenda item(s) arise during the meeting and are asked to limit their comments to 2 minutes. The amount of time allocated to speakers may vary at the Chairperson's discretion depending on the number of speakers and length of the agenda. **If presenting handout materials, please provide 25 copies to the Board Secretary for distribution to the Board of Directors.**
- The Consent Agenda items may be voted on in one motion at the beginning of the meeting under Orders of the Day. If you wish to discuss any of these items, please request the item be removed from the Consent Agenda by completing a blue card at the public information table and handing it to the Board Secretary staff prior to Orders of the Day, Agenda Item #1.2.

***Changes from previous version:*


- *Agenda Item #7.7- 2014 STIP Program Adoption requires 2/3 vote*
- *Agenda language updated for Agenda Item #8.2 –Santa Clara Alum Rock Bus Rapid Transit Project- Civil and Station Improvements Contract, to reflect the recommended contractor and contract amount.*

- Disclosure of Campaign Contributions to Board Members (Government Code Section 84308)

In accordance with Government Code Section 84308, no VTA Board Member shall accept, solicit, or direct a contribution of more than \$250 from any party, or his or her agent, or from any participant, or his or her agent, while a proceeding involving a license, permit, or other entitlement for use is pending before the agency. Any Board Member who has received a contribution within the preceding 12 months in an amount of more than \$250 from a party or from any agent or participant shall disclose that fact on the record of the proceeding and shall not make, participate in making, or in any way attempt to use his or her official position to influence the decision.

A party to a proceeding before VTA shall disclose on the record of the proceeding any contribution in an amount of more than \$250 made within the preceding 12 months by the party, or his or her agent, to any Board Member. No party, or his or her agent, shall make a contribution of more than \$250 to any Board Member during the proceeding and for three months following the date a final decision is rendered by the agency in the proceeding. The foregoing statements are limited in their entirety by the provisions of Section 84308 and parties are urged to consult with their own legal counsel regarding the requirements of the law.

- All reports for items on the open meeting agenda are available for review in the Board Secretary's Office, 3331 North First Street, San Jose, California, (408) 321-5680, the Monday, Tuesday, and Wednesday prior to the meeting. This information is available on our website, www.vta.org, and also at the meeting. Any document distributed less than 72-hours prior to the meeting will also be made available to the public at the time of distribution. Copies of items provided by members of the public at the meeting will be made available following the meeting upon request.

In accordance with the Americans with Disabilities Act (ADA) and Title VI of the Civil Rights Act of 1964, VTA will make reasonable arrangements to ensure meaningful access to its meetings for persons who have disabilities and for persons with limited English proficiency who need translation and interpretation services. Individuals requiring ADA accommodations should notify the Board Secretary's Office at least 48-hours prior to the meeting. Individuals requiring language assistance should notify the Board Secretary's Office at least 72-hours prior to the meeting. The Board Secretary may be contacted at ☎(408) 321-5680 or ✉: board.secretary@vta.org or ☎ (408) 321-2330 (TTY only). VTA's home page is on the web at: www.vta.org or visit us on  Facebook at: www.facebook.com/scvta. ☎(408) 321-2300: 中文 / Español / 日本語 / 한국어 / tiếng Việt / Tagalog.

**NOTE: THE BOARD OF DIRECTORS MAY ACCEPT, REJECT OR MODIFY
ANY ACTION RECOMMENDED ON THIS AGENDA.**

[70 West Hedding St.](#), San Jose, California is served by bus lines *61, 62, 66, 181, and Light Rail. (*61 Southbound last trip is at 8:55 pm for this location.)

For trip planning information, contact our Customer Service Department at (408) 321-2300 between the hours of 6:00 a.m. to 7:00 p.m. Monday through Friday and 7:30 a.m. to 4:00 p.m. on Saturday. Schedule information is also available on our website, www.vta.org.

1. CALL TO ORDER AND ROLL CALL

- 1.1. ROLL CALL
- 1.2. Orders of the Day - approve Consent Agenda (Item #7)

2. AWARDS AND COMMENDATION

- 2.1. INFORMATION ITEM -Recognize Maria Luisa Sanchez-Ku, Human Resources Analyst, River Oaks Administration; Ronald Langston, Coach Operator, Chaboya Division; and Jose Hernandez, Senior Track Worker, Guadalupe Division, as Employees of the Month for November 2013.

3. CLOSED SESSION

- 3.1. Recess to Closed Session
 - A. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)
 - B. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Truck Rail Handling, Inc., et al. v. Santa Clara Valley Transportation Authority, et al.
(Alameda County Superior Court Case No.: RG12628077)
 - C. Anticipated Litigation - Conference with Legal Counsel
Initiation of litigation pursuant to Government Code Section 54956.9(c).

Number of potential cases: 1
Name of potential opposing party: Union Pacific
 - D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1
 - E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives
Bill Lopez, Chief Administrative Officer
Robert L. Escobar, Deputy Director, Administrative Services
Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

- 3.2. Reconvene to Open Session
- 3.3. Closed Session Report
- 3.4. ACTION ITEM - Approve and authorize the General Manager to execute the amended successor labor agreement negotiated between the Santa Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA), IFPTE, Local 21.

4. PUBLIC COMMENT

This portion of the meeting is reserved for persons desiring to address the Board of Directors on any item within the Board's jurisdiction. Speakers are **limited to 2 minutes**. The law does not permit Board action or extended discussion of any item not on the agenda except under special circumstances. If Board action is requested, the matter can be placed on a subsequent agenda. All statements that require a response will be referred to staff for reply in writing.

5. PUBLIC HEARINGS

There are no public hearings.

6. REPORTS

- 6.1. Citizens Advisory Committee (CAC) Chairperson's Report. (Verbal Report) (Brownley)
- 6.2. Policy Advisory Committee (PAC) Chairperson's Report. (Verbal Report) (Price)
- 6.3. General Manager Report. (Verbal Report)
 - 6.3.A. INFORMATION ITEM -Receive Silicon Valley Rapid Transit (SVRT) Program Update.
 - 6.3.B. Receive updates regarding Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) activities.
- 6.4. Chairperson's Report. (Verbal Report)

7. CONSENT AGENDA

- 7.1. Approve the Board of Directors Workshop Meeting Minutes of September 27, 2013.

- 7.2. Approve the Board of Directors Regular Meeting Minutes of October 3, 2013.
- 7.3. ACTION ITEM -Review and accept the Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the period ending June 30, 2013.
- 7.4. ACTION ITEM -Revise the VTA Permit Policy to authorize the General Manager to waive fees for parties making transit improvements for VTA and adopt a resolution amending the VTA Permit Fee Schedule, adjusting fees to be collected for Construction Access Permits and Restricted Access Permits to be consistent with the revision of VTA allocated rates.
- 7.5. ACTION ITEM -Adopt the 2013 VTA Congestion Management Program (CMP).
- 7.6. ACTION ITEM -Approve the allocation of \$5,460,000 of Local Program Reserve (LPR) to:
- | | |
|--|---------------|
| SR 680 Corridor Study | \$250,000 |
| I-280 Corridor Study | \$250,000 |
| I-280/Winchester Blvd Off-Ramp | \$250,000 |
| US 101 Auxiliary Lanes Project | \$260,000 and |
| SR 237, SR 85 and US 101 Express Lanes | \$4,450,000 |
- 7.7. ACTION ITEM -Adopt a resolution to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds.
- Note: Motion must be approved by at least 2/3 of the Board (8 members).**
- 7.8. ACTION ITEM -Authorize the General Manager to execute a contract with GECMS Inc. dba Gyeron Construction, the second lowest responsible bidder, in the amount of \$337,400 for the construction of Pedestrian Swing Gates Replacement, and relieve the low bidder of its obligation to perform the contract.
- 7.9. ACTION ITEM -Review and receive the Auditor General's internal audit report on Investment Program Controls.
- 7.10. ACTION ITEM -Approve the following Internal Audit Work Plans developed and recommended by the VTA Auditor General:
1. Fiscal Year (FY) 2014 for a maximum amount of \$358,800. This item replaces the Interim FY 2014 Internal Audit Work Plan approved by the Board on June 6, 2013 for a maximum amount of \$290,500.
 2. FY 2015 for a maximum amount of \$364,500.
- 7.11. ACTION ITEM -Review and receive the Auditor General's report on the Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment.

- 7.12. ACTION ITEM -Review and receive the Auditor General's report on the Sheriff's Office Contract Compliance Internal Audit.
- 7.13. INFORMATION ITEM -Review the Monthly Legislative History Matrix.
- 7.14. INFORMATION ITEM -Review VTA's adopted Sound Barrier Program.
- 7.15. INFORMATION ITEM -Receive a status update on implementation of the VTA Integrity Helpline.

8. REGULAR AGENDA

- 8.1. ACTION ITEM -Adopt the proposed Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies as mandated by Federal Transit Administration (FTA) Title VI guidelines.
- 8.2. ACTION ITEM -Authorize the General Manager to execute a contract with Goodfellow Top Grade, the lowest responsible bidder, in the amount of \$54,163,685 for the construction of the Santa Clara Alum Rock Bus Rapid Transit Project - Civil and Station Improvements.

9. OTHER ITEMS

- 9.1. ITEMS OF CONCERN AND REFERRAL TO ADMINISTRATION
- 9.2. Reports from VTA Committees, Joint Powers Boards (JPB), and Regional Commissions
 - 9.2.A. VTA Standing Committees
 - 9.2.B. VTA Advisory Committees
 - 9.2.C. VTA Policy Advisory Boards (PAB)
 - 9.2.D. Joint Powers Boards and Regional Commissions
- 9.3. Announcements

- 10. **ADJOURN** in memory of Anita Jacobson, former VTA Employee.
-

BOARD OF DIRECTORS MEETING

Thursday, November 7, 2013

MINUTES

1. CALL TO ORDER AND ROLL CALL

The Regular Meeting of the Santa Clara Valley Transportation Authority's (VTA) Board of Directors was called to order by Chairperson Pirzynski at 5:41 p.m. in the Board of Supervisors' Chambers, County Government Center, 70 West Hedding Street, San José, California.

1.1. ROLL CALL

Attendee Name	Title	Status
Margaret Abe-Koga	Board Member	Present
Xavier Campos	Board Member	Absent
Larry Carr	Alternate Board Member	Absent
Cindy Chavez	Board Member	Present
Jose Esteves	Board Member	Present
Rose Herrera	Board Member	Absent
Ash Kalra	Vice Chairperson	Present
Johnny Khamis	Alternate Board Member	Absent
Sam Liccardo	Board Member	Present
Jamie Matthews	Board Member	Absent
Chuck Page	Alternate Board Member	Absent
Joe Pirzynski	Chairperson	Present
Gail A. Price	Alternate Board Member	Absent
Donald Rocha	Board Member	Present
David Whittum	Alternate Board Member	Present
Perry Woodward	Board Member	Present
Ken Yeager	Board Member	Absent

* Alternates do not serve unless participating as a Member.

A quorum was not present and a Committee of the Whole was declared.

1.2. Orders of the Day

Chairperson Pirzynski, noted that the Agenda was revised to reflect the following: **Agenda Item #7.7:** 2014 Stated Transportation Improvement Program Adoption needs 2/3 vote; **Agenda Item #8.2:** Authorize the General Manager to execute a contract with the lowest responsible bidder for the Santa Clara Alum Rock Bus Rapid Transit Project- Civil and Station Improvements; and added **Addendum #3.1.E.X:** Conference with Real Property Negotiators.

Chairperson Pirzynski, noted that staff requested the following items be removed from Agenda: **Agenda Item #3.1.B:** Existing Litigation-Conference with Legal Counsel; **Agenda Item #3.1.C:** Anticipated Litigation-Conference with Legal Counsel; and **Agenda Item 3.4:** Labor Agreement negotiation between the Santa

Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA).

Chairperson Pirzynski, noted that the Board Meeting will adjourn in memory of Anita Jacobson.

Board Member Liccardo and Board Member Rocha arrived and took their seats at 5:44 p.m. and a quorum was established.

Public Comment

The following public citizens expressed support for Sound Wall barriers in the Capitol/680/Alum Rock area for noise reduction, safety of the community and safety of homes located close to the freeway.

- Alofa Talivaa
- Ulitafa Mariner

Board Member Kalra expressed support for soundwalls.

Board Member Esteves expressed his support for soundwalls but expressed concern that soundwalls along I-680 in the City of Milpitas should be completed first. Board Member Esteves noted he will oppose Agenda Items #7.6 and #7.7.

M/S/C (Woodward/Chavez) on a vote of 7 ayes, 1 no and 0 abstention to accept the Orders of the Day and approve the Consent Agenda. Board Member Esteves opposed Agenda Items #7.6 and #7.7. Motion for Agenda Item 7.7 failed.

M/S/C (Liccardo/Chavez) to reconsider Agenda Item #7.7.

Vice Chairperson Kalra recommended removing Agenda Item #7.7 from Consent Agenda and place it on the Regular Agenda.

On order of Chairperson Pirzynski and there being no objection, the Board of Directors removed Agenda Item 7.7 from the Consent Agenda and placed it on the Regular Agenda.

2. AWARDS AND COMMENDATION

2.1 Employees of the Month for October 2013

Chairperson Pirzynski recognized Maria Luisa Sanchez-Ku, Human Resources Analyst, River Oaks Administration; Ronald Langston, Coach Operator, Chaboya Division; Jose Hernandez, Senior Track Worker, Guadalupe Division.

NOTE: M/S/C MEANS MOTION SECONDED AND CARRIED AND, UNLESS OTHERWISE INDICATED, THE MOTION PASSED UNANIMOUSLY.

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3. CLOSED SESSION

Public Comment

The following VTA Employees and members of Transportation Authority Engineers and Architects Association (TAEA) addressed the Board of Directors and stressed the importance of realigning wages of TAEA members to attract and retain qualified employees. Members of TAEA commented that VTA Engineers make 12.5% under the average in salary compensation when compared to other counterparts at other local agencies and cities in the county.

- Harry Yip
- Franceen Weisert Anderson
- John Duesterhaus
- Bob Magliocco
- Manjit Singh Khalsa
- Kris Sabherwal
- Raj Sehdev
- Rachel Martinez

Board Member Abe Koga arrived and took her seat at 6:02 p.m.

3.1. **Recess to Closed Session at 6:11 p.m.**

A. Existing Litigation - Conference with Legal Counsel [Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

B. **(Removed from the Agenda)**

Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Truck Rail Handling, Inc., et al. v. Santa Clara Valley Transportation Authority, et al.
(Alameda County Superior Court Case No.: RG12628077)

C. **(Removed from the Agenda)**

Anticipated Litigation - Conference with Legal Counsel
Initiation of litigation pursuant to Government Code Section 54956.9(c).

Number of potential cases: 1
Name of potential opposing party: Union Pacific

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- D. Anticipated Litigation - Conference with Legal Counsel**
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

- E. Conference with Labor Negotiators**
[Government Code Section 54957.6]

VTA Designated Representatives

Bill Lopez, Chief Administrative Officer

Robert L. Escobar, Deputy Director, Administrative Services

Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

- 3.1.E.X Conference with Real Property Negotiators**
[Government Code Section 54956.8]

Property: Partial fee interest, permanent utility easements and a temporary construction easement on the property located at 3501 Tasman Drive in Santa Clara, California (APN: 104-49-029)

Agency Negotiator: Bijal Patel, Deputy Director, Property Development & Management

Negotiating Party: Michael Pelletier, Lake Marriott, LLC c/o Divco West

Under Negotiation: Price and terms of payment

- 3.2. Reconvened to Open Session at 7:40 p.m.**

- 3.3. Closed Session Report**

- A. Existing Litigation - Conference with Legal Counsel**
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

Robert Fabela, General Counsel, reported that no reportable action was taken during Closed Session.

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- D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

Mr. Fabela reported that no reportable action was taken during Closed Session.

- E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives

Bill Lopez, Chief Administrative Officer

Robert L. Escobar, Deputy Director, Administrative Services

Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

Mr. Fabela reported that no reportable action was taken during Closed Session.

- 3.1.E.X Conference with Real Property Negotiators
[Government Code Section 54956.8]

Property: Partial fee interest, permanent utility easements and a temporary construction easement on the property located at 3501 Tasman Drive in Santa Clara, California (APN: 104-49-029)

Agency Negotiator: Bijal Patel, Deputy Director, Property Development & Management

Negotiating Party: Michael Pelletier, Lake Marriott, LLC c/o Divco West

Under Negotiation: Price and terms of payment

Robert Fabela reported that no reportable action was taken during Closed Session.

3.4 (Removed from the Agenda)

ACTION ITEM - Approve and authorize the General Manager to execute the amended successor labor agreement negotiated between the Santa Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA), IFPTE, Local 21.

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4. PUBLIC COMMENT

Ron Roberts, VTA employee and member of Service Employees International Union (SEIU) provided a brief overview of the handout that was distributed to all Board members.

Bill Hawthorne, Interested Citizen, expressed concern about VTA liability due to projects related to BART.

Marc DeLong, VTA Employee and TAEA member addressed the Board of Directors and stressed the importance of realigning wages of TAEA members to attract and retain qualified employees.

5. PUBLIC HEARINGS

There are no public hearings.

6. REPORTS

6.1. Citizens Advisory Committee (CAC) Chairperson's Report

Clinton Brownley provided a verbal report that highlighted the October 9, 2013 Citizens Advisory Committee meeting: 1) Caltrain Budget and Ridership Update; 2) Local Program Reserve Programming Actions; and 3) Adoption of VTA Title VI Policies and Standards.

6.2. Policy Advisory Committee (PAC) Chairperson's Report

A written report was provided and distributed to the Board Members.

6.3. General Manager's Report

Michael Burns, General Manager, provided a report highlighting the following: 1) Average weekday Ridership; and 2) VTA Hispanic Heritage Celebration on October 31, 2103.

6.3.A Silicon Valley Rapid Transit (SVRT) Program Update

Carolyn Gonot, Chief SVRT Program Officer, distributed a presentation entitled, "Bart Silicon Valley Update," highlighting: 1) Current Project Activities Fremont; 2) Current Project Activities Milpitas; 3) Current Project Activities San Jose; 4) Design-Build Parking Structures Contract & Parking Technology Procurement; and 5) Residential Noise Insulation Program (RNIP) Update and Next Steps.

6.3.B. Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) updates.

There were no reports from the Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) Activities.

On order of Chairperson Pirzynski and there being no objection to receive the General Manager's Report

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6.4. Chairperson's Report

Chairperson Pirzynski noted Michael Hursh, Chief Operating Officer, will provide a brief presentation on VTA Rail Safety.

Mr. Hursh provided a presentation entitled, "VTA Roadway Worker Protection," highlighting: 1) Track Access – Program Elements; 2) Light Rail Operator Training; 3) Work Zones; 4) Accessing the right of way; 5) VTA Compliance; 6) On Board Cameras; 7) Pocket Guides; and 8) Summary. Mr. Hursh noted advanced warning signs are going to be installed when trains are going at high speeds. Mr. Hursh added that the Board meeting will also adjourn in memoriam of the BART employees who passed away last month.

Chairperson Pirzynski noted the 2014 Chair & Vice Chair Election will be held during the December 2013 meeting. Chair Pirzynski noted that Board Member Kalra submitted a letter showing interest as the Chairperson for 2014 while Board Member Woodward and Alternate Board Member Price submitted letters showing interest as the Vice Chair for 2014. These letters are available on the dais.

Chairperson Pirzynski noted that the 2014 Board of Directors Meeting schedule is provide and advised all members to review.

7. CONSENT AGENDA

7.1. Board of Directors Workshop Meeting Minutes of September 27, 2013

M/S/C (Woodward/Chavez) to approve the Board of Directors Workshop Meeting Minutes of September 27, 2013.

7.2. Board of Directors Workshop Regular Minutes of October 3, 2013

M/S/C (Woodward/Chavez) to approve the Board of Directors Regular Meeting Minutes of October 3, 2013.

7.3. Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the Period Ending June 30, 2013

M/S/C (Woodward/Chavez) to review and accept the Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the period ending June 30, 2013.

7.4. VTA Permit Fee Schedule Revisions

M/S/C (Woodward/Chavez) to revise the VTA Permit Policy to authorize the General Manager to waive fees for parties making transit improvements for VTA and adopt **Resolution No. 2013.11.24** amending the VTA Permit Fee Schedule, adjusting fees to be collected for Construction Access Permits and Restricted Access Permits to be consistent with the revision of VTA allocated rates.

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7.5. Adopt the 2013 VTA Congestion Management Program (CMP)

M/S/C (Woodward/Chavez) to adopt the 2013 VTA Congestion Management Program (CMP).

7.6. Local Program Reserve Programming Actions

M/S/C (Woodward/Chavez) to approve the allocation of \$5,460,000 of Local Program Reserve (LPR) to:

SR 680 Corridor Study	\$250,000
I-280 Corridor Study	\$250,000
I-280/Winchester Blvd Off-Ramp	\$250,000
US 101 Auxiliary Lanes Project	\$260,000
SR 237, SR 85 and US 101 Express Lanes	\$4,450,000

7.7. (Removed from the Consent Agenda and placed on the Regular Agenda)

Adopt a resolution to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds.

7.8. Pedestrian Swing Gates Replacement

M/S/C (Woodward/Chavez) to authorize the General Manager to execute a contract with GECMS Inc. dba Gyeron Construction, the second lowest responsible bidder, in the amount of \$337,400 for the construction of Pedestrian Swing Gates Replacement, and relieve the low bidder of its obligation to perform the contract.

7.9. Investment Program Controls Internal Audit

M/S/C (Woodward/Chavez) to review and receive the Auditor General's internal audit report on Investment Program Controls.

7.10. Auditor General Recommended FY 2014 & FY 2015 Internal Audit Work Plans

M/S/C (Woodward/Chavez) to approve the following Internal Audit Work Plans developed and recommended by the VTA Auditor General:

1. Fiscal Year (FY) 2014 for a maximum amount of \$358,800. This item replaces the Interim FY 2014 Internal Audit Work Plan approved by the Board on June 6, 2013 for a maximum amount of \$290,500.
2. FY 2015 for a maximum amount of \$364,500.

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7.11. Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment

M/S/C (Woodward/Chavez) to review and receive the Auditor General's report on the Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment.

7.12. Sheriff's Office Contract Compliance Internal Audit

M/S/C (Woodward/Chavez) to review and receive the Auditor General's report on the Sheriff's Office Contract Compliance Internal Audit.

7.13. Monthly Legislative History Matrix

M/S/C (Woodward/Chavez) to review the Monthly Legislative History Matrix.

7.14. VTA Noise Barrier Program

M/S/C (Woodward/Chavez) to review VTA's adopted Sound Barrier Program.

7.15. VTA Integrity Helpline Program Status Update

M/S/C (Woodward/Chavez) to receive a status update on implementation of the VTA Integrity Helpline.

8. REGULAR AGENDA

8.1. Adoption of VTA Title VI Policies and Standards

Michael Burns, General Manager, noted that the Title VI policies are a continuation of comprehensive discussions that began at the Board of Directors Workshop and continued throughout VTA's various committee meetings. Mr. Burns noted the Title VI policies are required and mandated by Federal Transit Administration (FTA). Mr. Burns stated Sylvester Fadal, Human Resources Manager, will review the following: Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies.

Mr. Fadal reviewed the Title VI presentation included in the agenda packet. He referenced Slide 5 – Public Engagement, and noted that staff conducted extensive outreach including community meetings and presentations to the organizations and stakeholders within the area where VTA service is provided. The feedback gathered through this outreach process was considered in the policies being presented for approval.

Mr. Fadal stated the Disparate Impact Policy is designed to address the effects that fare or major service changes have on minority populations, which VTA has always done. The proposed Disparate Impact Policy documents the processes and the application of a threshold that is used when analyzing proposed fare or major service changes.

The Disproportionate Burden Policy is similar to the Disparate Impact Policy but focuses on the effects that fare and major services changes have on low-income populations. The same 10 percent threshold is applied to determine if the low-income riders are more negatively affected or less positively affected by the proposed change than VTA riders as a whole.

Mr. Fadal referred to slide 14 - Service Equity Analysis example, which presents a graphic layout of how VTA conducts equity analysis for proposed major services changes to determine if disparate impacts to minority riders exist. An equity analysis is conducted for proposed major services changes whether the changes are a reduction or an improvement of service. When analyzing changes for disparate impacts, VTA evaluates the impact of those changes to minority riders compared to the overall ridership. If the impacts are significant and higher than the set threshold, VTA will make every effort to mitigate those impacts and address the needs of the community.

The System-Wide Service Standards & Policies are used to track, monitor, and evaluate VTA's service performance to prohibit discrimination on the basis of race, color, or national origin. Critical areas that are evaluated include: peak load factors, headways, on-time performance, service availability, and ridership productivity. Mr. Fadal noted that this policy ensures that VTA services and resources are distributed equitably.

Board Member Chavez recommended that in future reports regarding service related changes, staff should indicate Title VI policies compliance and the benchmarks used.

Mr. Burns noted that in general, transit agencies note that but it is not as prominent. If the policies discussed are adopted by the Board, the future reports would prominently outline the analysis and the compliance to the policies and regulations.

Upon inquiry of Board Member Chavez, Mr. Burns responded that when VTA conducted the Comprehensive Operations Analysis, staff studied and evaluated each route in the system and made appropriate changes. When the services were rebalanced, the analysis showed that VTA provided more services to transit dependent and lower-income neighborhoods.

Alternate Board Member Whittum, inquired about the specific bus change in January 2008 in the City of Sunnyvale. Staff noted the inquiry and stated a response will be prepared.

M/S/C (Chavez/Woodward) to adopt the proposed Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies as mandated by Federal Transit Administration (FTA) Title VI guidelines.

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7.7. 2014 STIP Program Adoption

John Ristow, Chief CMA Officer presented a brief overview of the staff report.

Public Comment

Art Calderon, Interested Citizen, expressed support for Sound Wall barriers in the Capitol/680/Alum Rock area for safety of the community and safety of homes located close to the area.

Board Member Esteves expressed his opposition to Agenda Item #7.7.

M/S/C (**Liccardo/Kalra**) on a vote of 8 ayes, 1 no and 0 abstention to adopt **Resolution No. 2013.11.25** to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds. Board Member Esteves opposed.

Board Member Kalra left his seat at 8: 27 pm.

8.2. Santa Clara Alum Rock Bus Rapid Transit Project – Civil and Station Improvements Contract

Mark Robinson, Chief Engineering & Construction Officer, presented a brief overview of the staff report.

Public Comment

Paul Cianciarulo, Graniterock Company, expressed opposition to awarding the Santa Clara – Alum Rock Bus Rapid Transit Bid Project to Goodfellow Top Grade Construction.

Brian Gates, Goodfellow Top Grade Construction, expressed his thanks and appreciation to VTA Staff and the Board of Directors. Mr. Gates commended VTA Staff for the professionalism that was carried out through the process.

M/S/C (**Chavez/ Woodward**) to authorize the General Manager to execute a contract with Goodfellow Top Grade, the lowest responsible bidder, in the amount of \$54,163,685 for the construction of the Santa Clara Alum Rock Bus Rapid Transit Project - Civil and Station Improvements.

9. OTHER ITEMS

9.1. ITEMS OF CONCERN AND REFERRAL TO ADMINISTRATION

There were no Items of Concern and Referral to Administration.

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9.2. Reports from VTA Committees, Joint Powers Boards (JPB), and Regional Commissions.

9.2.A. VTA Standing Committees

- Committee of the Whole (COW) – October 17, 2013, Minutes as contained in the Agenda Packet.
- Administration and Finance Committee (A&F) – There was no report.
- Congestion Management Program and Planning Committee (CMPP) – There was no report.
- Transit Planning and Operations Committee (TP&O) – There was no report.
- Audit Committee – There was no report.
- Silicon Valley Rapid Transit Program Working Committee – There was no report.

9.2.B. VTA Advisory Committees

- Committee for Transit Accessibility (CTA) – October 9, 2013, Minutes as contained in the Agenda Packet.
- Citizens Advisory Committee (CAC) and 2000 Measure A Citizens Watchdog Committee (CWC) – October 9, 2013, Minutes as contained in the Agenda Packet.
- Bicycle & Pedestrian Advisory Committee (BPAC) – There was no report.
- Technical Advisory Committee (TAC) – There was no report.
- Policy Advisory Committee (PAC) – October 10, 2013, Minutes as contained in the Agenda Packet.

9.2.C. VTA Policy Advisory Boards (PAB)

- Diridon Station Joint Policy Advisory Board - There was no report.
- Downtown East Valley PAB - There was no report.
- El Camino Real Rapid Transit PAB - There was no report.
- Silicon Valley Rapid Transit Corridor and BART Warm Springs Extension PAB - There was no report.

9.2.D. Joint Powers Boards and Regional Commissions

- Peninsula Corridor JPB – November 7, 2013, Summary Notes were accepted as contained on the dais.
- Capitol Corridor JPB – There was no report.
- Dumbarton Rail Corridor Policy Committee - There was no report.
- Metropolitan Transportation Commission (MTC) – October 23, 2013, Summary Notes were accepted as contained on the dais.
- Sunol Smart Carpool Lane Joint Powers Authority - There was no report.
- SR 152 Mobility Partnership - There was no report.

9.3. ANNOUNCEMENTS

Board Member Rocha expressed his thanks to Michael Burns, General Manager and Jim Lawson, Executive Policy Advisor for addressing a referral submitted in a timely manner.

10. ADJOURNMENT


On order of Chairperson Pirzynski and there being no objection, the meeting was adjourned in memory of Anita Jacobson, Laurence Daniels, and David Sheppard at 8:35 p.m.

Respectfully submitted,



Theadora Travers, Board Assistant
VTA Office of the Board Secretary

I certify that the foregoing instrument
is a true and exact copy of the original
on file in the Secretary of the Board of
Director's office.


Date 12/17/13

Appendix B - Matrix of Changes by Route

Route	Proposed Change (current service vs. final plan)	Alignment Change	Frequency Change	Span Change	Class	Weekday			Saturday		Sunday		Change from Draft Plan to Final Plan
						Span	Peak Frequency	Midday Frequency	Span	Frequency	Span	Frequency	
10	Metro/Airport LRT Station - Santa Clara Transit Center	Combine with new Route 60, which would connect Mineta San Jose Airport to Milpitas BART Station, Santa Clara Caltrain Station, Valley Fair, Santana Row and Downtown Campbell; improve weekend frequency.											See Route 60
12	Eastridge Transit Center - San Jose Civic Center	Discontinue; current riders may use revised Route 61 or Route 77.											
13	Ohlone/Chynoweth LRT Station - Almaden/McKean	Replace with new Route 83.											See Route 83
14	Gilroy Transit Center - St. Louise Hospital	Replace with new Route 85, which would serve Route 14 destinations and other areas of Gilroy; reduce weekday frequency.											See Route 85
16	Morgan Hill Civic Center - Burnett Avenue	Re-number to Route 87; service retained on an interim basis until a more effective flexible transit service can be implemented.											See Route 87
17	Gilroy Transit Center - St. Louise Hospital	Discontinue due to low ridership; some riders may use Route 85.											
18	Gavilan College - Gilroy Transit Center	Re-number to Route 86; increase frequency on weekdays.											See Route 86
19	Gilroy Transit Center - Wren and Mantelli	Replace with new Route 85, which would serve Route 19 destinations and other areas of Gilroy; decrease weekday frequency.											See Route 96
20	Sunnyvale - North San Jose - Milpitas		New		Local	5:30a - 10:00p	15 min	30 min	—	—	—	—	The draft plan proposed the route end at Mountain View, but in the final plan the route would end in Sunnyvale.
21	Middlefield		New		Local	5:30a - 10:00p	30 min	30 min	8:00a - 8:00p	45 min	9:00a - 8:00p	60 min	Minor alignment changes to serve San Antonio Circle in Mountain View and Lytton/Hamilton in Palo Alto (pending street improvements).
22	El Camino - Santa Clara - Alum Rock		✓		Frequent	24 hours	15 min	15 min	24 hours	15 min	24 hours	15 min	
23	Stevens Creek - Alum Rock	✓	✓		Frequent	5:00a - 1:00a	15 min	15 min	6:00a - 1:00a	15 min	6:00a - 1:00a	15 min	Final plan would maintain Route 23's current alignment in east San Jose; Sunday frequency would increase to every 15 minutes.
25	Story - Willow - Williams	✓	✓		Frequent	5:30a - 12:00a	12-24 min	12-24 min	6:00a - 12:00a	15-30 min	6:00a - 12:00a	15-60 min	Final plan would maintain service to White Road in east San Jose; minor alignment changes through Valley Medical Center.
26	Tully - Curtner - Campbell	✓	✓	✓	Frequent	5:30a - 12:00a	15-30 min	15-30 min	6:30a - 12:00a	20-40 min	7:30a - 11:00p	20-40 min	
27	Blossom Hill - Los Gatos	✓	✓	✓	Local	5:30a - 10:00p	30 min	30 min	7:00a - 9:00p	30 min	8:00a - 8:00p	60 min	Final plan would maintain service to Knowles/Hacienda area and downtown Los Gatos; Saturday service would end at 9:00p.
31	Evergreen Valley College	✓			Local	6:30a - 10:00p	30 min	30 min	7:30a - 6:30p	60 min	9:00a - 6:00p	60 min	Route was proposed for elimination in draft plan (parts were covered by Route 76).
32	San Antonio Shopping Center - Santa Clara Transit Center	Replace with new Route 21.											See Route 21
34	San Antonio Shopping Center - Downtown Mountain View	Discontinue due to low ridership; some current riders can use Routes 21 or 40.											
35	Stanford Shopping Center - Downtown Mountain View	Replace with new Route 21.											See Route 21
37	West Valley College - Capitol Light Rail Station		✓		Local	6:30a - 6:30p	60 min	60 min	—	—	—	—	Route was proposed for elimination in draft plan.
39	Quimby - San Felipe		✓		Local	6:30a - 6:30p	60 min	60 min	9:00a - 6:00p	60 min	9:00a - 6:00p	60 min	Route was proposed to be renumbered to Route 93, but final plan maintains current number.
40	Foothill College - North Bayshore	✓	✓		Local	6:30a - 10:00p	30 min	30 min	7:00a - 7:00p	45 min	9:00a - 6:00p	45 min	
42	Kaiser San Jose - Evergreen Valley College	✓	✓	✓	Local	6:30a - 6:30p	60 min	60 min	—	—	—	—	Route was proposed for elimination in draft plan.
45	Alum Rock Transit Center - Penitencia Creek Transit Center	Discontinue due to low ridership.											

Appendix B - Matrix of Changes by Route

Route	Proposed Change (current service vs. final plan)	Alignment Change	Frequency Change	Span Change	Class	Weekday			Saturday		Sunday		Change from Draft Plan to Final Plan	
						Span	Peak Frequency	Midday Frequency	Span	Frequency	Span	Frequency		
46	Great Mall Transit Center - Milpitas High School	Scale back to school-oriented service (to be called Route 246) between Milpitas High School and Landess/Yellowstone.												
47	Calaveras	✓	✓	✓	Local	5:30a - 10:00p	30 min	30 min	7:00a - 9:00p	30 min	8:00a - 8:00p	30 min	Modify alignment to serve McCandless Drive.	
48	Downtown Los Gatos - Winchester LRT Station	Replace with revised Route 27; increase frequency on Route 27.												
49	Downtown Los Gatos - Winchester LRT Station	Replace some segments with revised Route 27; increase frequency on Route 27.												
51	Grant - Moffett - Saratoga	✓	✓	✓	Local	6:30a - 6:30p	30 min	60 min	—	—	—	—	Extend 60-min segment of route to West Valley College, via Saratoga-Sunnyvale and Saratoga town center.	
52	Foothill College - Downtown Mountain View	No changes proposed.												
53	Homestead - Sunnyvale	✓	✓		Local	5:30a - 8:00p	30 min	30 min	9:00a - 6:00p	60 min	—	—	Modify alignment to serve Scott and Benton in Santa Clara.	
54	Lockheed Martin Transit Center - De Anza College	Discontinue due to low ridership; add new Rapid 523 service on Mathilda Avenue/De Anza Boulevard corridor.												
55	Sunnyvale - De Anza College	✓	✓		Local	5:30a - 10:00p	30 min	30 min	7:30a - 9:00p	30 min	8:00a - 8:00p	30 min		
56	Wolfe - Hamilton				New	Local	5:30a - 10:00p	30 min	30 min	6:30a - 10:00p	30 min	7:30a - 9:00p	30 min	Extend route to Tamien station via Hamilton.
57	Great America - Bowers - Saratoga			✓	✓	Frequent	5:30a - 12:00a	15 min	15 min	6:30a - 11:00p	20 min	7:30a - 10:00p	30 min	Extend weekday service to midnight.
58	West Valley College - Alviso	Discontinue; some current riders may use Routes 57, 59, 20 and 26.												
59	Monroe - Great America - Alviso				New	Local	5:30a - 10:00p	30 min	30 min	7:00a - 10:00p	30 min	7:30a - 6:30p	60 min	Extend weekday service to Valley Fair and O'Connor Hospital.
60	Winchester - Airport - BART	✓	✓	✓	Frequent	5:00a - 11:00p	15 min	15min	5:00a - 11:00p	20 min	5:00a - 11:30p	20 min		
61	Taylor - Bascom - Berryessa	✓	✓	✓	Frequent	5:30a - 12:00a	15-30 min	15-30 min	6:30a - 11:00p	20-40 min	7:30a - 10:00p	20-40 min		
62	Good Samaritan Hospital - Sierra/Piedmont	Replace with Route 61.												
63	Meridian	✓	✓		Local	6:00a - 10:00p	30 min	30 min	8:00a - 7:00p	60 min	9:00a - 6:00p	60 min		
64	McKee - Lincoln - Almaden	✓		✓	Frequent	5:30a - 12:00a	15-30 min	15-30 min	6:30a - 12:00a	30 min	7:00a - 11:00p	30 min	Extend route to Camden in Almaden Valley.	
65	Kooser/Blossom Hill - Downtown San Jose	✓	✓		Local	6:00a - 6:30p	60 min	60 min	—	—	—	—	The draft plan proposed to discontinue Route 65.	
66	Milpitas - Oakland - Monterey - Snell	✓	✓		Frequent	5:00a - 12:00a	15 min	15-30 min	6:00a - 12:00a	20 min	6:00a - 12:00a	20 min		
68	Monterey - South County			✓	Frequent	4:30a - 12:00a	15 min	15-30 min	5:00a - 12:00a	20 min	5:00a - 12:00a	20 min		
70	Jackson - Flickinger - Morrill	✓	✓	✓	Frequent	5:30a - 12:00a	15-30 min	15-30 min	6:30a - 12:00a	20-40 min	6:30a - 10:00p	20-40 min		
71	Piedmont - White	✓	✓		Local	5:30a - 10:00p	30 min	30 min	6:30a - 10:00p	30 min	7:30a - 9:00p	30 min	The final plan moves its southern end from Eastridge to Capitol light rail station.	
72	McLaughlin			✓	✓	Frequent	5:30a - 12:00a	15 min	15 min	6:30a - 12:00a	20 min	7:30a - 11:00p	30 min	Reduce Sunday daytime frequency from every 20 minutes to every 30 minutes; change southern end from Capitol light rail station to Monterey & Branham.

Appendix B - Matrix of Changes by Route

Route	Proposed Change (current service vs. final plan)	Alignment Change	Frequency Change	Span Change	Class	Weekday			Saturday		Sunday		Change from Draft Plan to Final Plan
						Span	Peak Frequency	Midday Frequency	Span	Frequency	Span	Frequency	
73 Senter	Change southern end from Capitol Expressway/Snell to Monterey Road/Branham Road; increase weekday midday and weekend frequency; add extended evening hours 7 days/week.	✓	✓	✓	Frequent	5:30a - 12:00a	15 min	15 min	6:30a - 12:00a	20 min	7:30a - 11:00p	30 min	Reduce Sunday daytime frequency from every 20 minutes to every 30 minutes.
77 King - Lundy	Change northern end from Great Mall to Milpitas BART Station; change southern end of route to Eastridge Transit Center via Tully Road rather than Rigoletto Drive; serve Berryessa BART station; increase weekday midday and weekend frequencies; add extended evening hours 7 days/week.	✓	✓	✓	Frequent	5:30a - 12:00a	15 min	15 min	6:30a - 12:00a	20 min	6:30a - 11:00p	30 min	Reduce Sunday daytime frequency from every 20 minutes to every 30 minutes.
81 Moffett Field - Downtown San Jose	Replace Moffett Field to De Anza College segment with new Route 51; replace De Anza College to Santa Clara Caltrain Station segment with revised Route 53.	See Routes 51 and 53											
82 Westgate - Downtown San Jose	Discontinue; some segments of route replaced with Routes 56, 66, and 68.	See Route 56											
83 Almaden	New route based on current Route 13, provided on an interim basis prior to implementation of on-demand service for Almaden Valley; revised alignment would serve Blossom Hill (Oakridge Mall), McAbee, and Camden.	✓			Local	6:30a - 6:30p	60 min	60 min	—	—	—	—	The draft plan proposed to discontinue Route 13.
85 Gilroy	New two-way loop route in Gilroy; replaces Routes 14, 17, and 19.		New		Local	6:30a - 6:30p	60 min	60 min	9:00a - 6:00p	60 min	9:00a - 6:00p	60 min	Was called Route 96 in draft plan; also minor alignment changes to facilitate connections with Route 68.
86 Gavilan College	Replaces Route 18; increase frequency.		✓		Local	7:00a - 10:00p	30 min	30 min	—	—	—	—	Was called Route 97 in draft plan.
87 Morgan Hill	Re-number Route 16 to Route 87, provided on an interim basis until a more effective flexible transit solution can be implemented; no other changes proposed.				Local	peak only	60 min	—	—	—	—	—	Draft plan proposed a reduction in service to school-oriented trips only. Final plan would maintain current service until flexible solution can be implemented.
88 Palo Alto VA Hospital - Middlefield/Colorado	Scale back to school trips (to be called Route 288) for Gunn High School.	See Route 288											
89 California Avenue Caltrain - Palo Alto VA Hospital	No changes proposed.				Local	6:30a - 6:30p	30 min	60 min	—	—	—	—	The draft plan proposed to discontinue Route 89.
101 Camden/Highway 85 - Palo Alto	No changes proposed.				Express	2 trips each peak period		—	—	—	—		
102 South San Jose - Palo Alto	No changes proposed.				Express	7 trips each peak period		—	—	—	—		
103 Eastridge Transit Center - Palo Alto	No changes proposed.				Express	4 trips each peak period		—	—	—	—		
104 Penitencia Creek Transit Center - Palo Alto	Change alignment to serve Milpitas BART Station rather than Great Mall Transit Center.	✓			Express	2 trips each peak period		—	—	—	—		
120 Fremont BART - Lockheed Martin Transit Center/Shoreline	Discontinue due to extension of BART to Santa Clara County; explore options for inter-county partnership service with AC Transit.												
121 Gilroy Transit Center - Lockheed Martin Transit Center	No changes proposed.				Express	9 trips each peak period		—	—	—	—		
122 South San Jose - Lockheed Martin Transit Center	No changes proposed.				Express	1 trip each peak period		—	—	—	—		
140 Fremont BART Station - Mission College/Montague	Discontinue due to extension of BART to Santa Clara County.												
168 Gilroy Transit Center - San Jose Diridon Station	No changes proposed.				Express	7 trips each peak period		—	—	—	—		
180 Fremont BART Station - Great Mall - Eastridge	Discontinue due to extension of BART to Santa Clara County.												
181 Fremont BART - San Jose Diridon Station	Discontinue due to extension of BART to Santa Clara County.												
182 Palo Alto - Bailey Road/IBM	No changes proposed.				Express	1 trip each peak period		—	—	—	—		
185 Gilroy Caltrain Station - Shoreline - San Antonio	No changes proposed.				Express	3 trips each peak period		—	—	—	—		
201 DASH Shuttle: Diridon Station - Downtown San Jose - San Jose State University	Replace with Rapid 500; change alignment to Santa Clara Street.	See Route 500											

Appendix B - Matrix of Changes by Route

Route	Proposed Change (current service vs. final plan)	Alignment Change	Frequency Change	Span Change	Class	Weekday			Saturday		Sunday		Change from Draft Plan to Final Plan	
						Span	Peak Frequency	Midday Frequency	Span	Frequency	Span	Frequency		
246	Milpitas High School - Yellowstone/Landess				Special	1 trip before and 1 trip after school			—	—	—	—		
247	Milpitas High School - Park Victoria				Special	1 trip before and 1 trip after school			—	—	—	—		
251	St. Francis High School - Downtown Mountain View				Special	1 trip after school			—	—	—	—		
255	Fremont High School - Lakewood Village				Special	# of trips varies by school schedule			—	—	—	—		
256	Willow Glen High School - Tamien Station - Monterey/Alma				Special	# of trips varies by school schedule			—	—	—	—	Was called Route 282 in draft plan.	
266	Santa Teresa High School - Bernal Road				Special	1 trip after school			—	—	—	—		
287	Live Oak High School - Monterey & San Martin				Special	1 trip after school			—	—	—	—		
288	Gunn High School - North Palo Alto				Special	3 trips before and 4 trips after school			—	—	—	—	Add one additional trip an hour or two after the afternoon bell time to accommodate afterschool activities; modify alignment to follow existing route.	
304	South San Jose - Sunnyvale Transit Center	Discontinue due to low ridership; some current riders may use Routes 66, 68 or 20.												
321	Great Mall Transit Center - Lockheed Martin Transit Center	Discontinue due to low ridership; some current riders may use Routes 20, 59, or Orange line.												
323	De Anza College - Downtown San Jose	Upgrade to Rapid 523 and extend western end to Lockheed Martin Transit Center and eastern end to Berryessa BART Station; increase Sunday frequency.								See Route 523				
328	Almaden/Via Valiente - Lockheed Martin Transit Center	Discontinue due to low ridership.												
330	Almaden/Via Valiente - Tasman Drive	Discontinue due to low ridership.												
500	Diridon - Berryessa BART Rapid				New	Rapid	4:00a - 1:30a	10 min	15 min	6:00a - 1:30a	20 min	8:00a - 1:30a	20 min	Add additional stop at Almaden Boulevard.
522	Palo Alto Transit Center - Eastridge Transit Center		✓	✓		Rapid	5:00a - 11:00p	12 min	12 min	6:00a - 11:00p	15 min	6:00a - 10:00p	15 min	Reduce frequency of some weekend early morning and evening service from every 15 minutes to every 20 minutes; extend Sunday service to 10 pm.
523	Lockheed Martin Transit Center - Berryessa BART Station				New	Rapid	5:00a - 10:30p	15 min	15 min	6:00a - 10:30p	15 min	7:00a - 10:00p	15 min	Extend Sunday service to 10 pm.
Green	Old Ironsides Station - Winchester Station	✓	✓			Light Rail	5:00a - 12:00a	15 min	15 min	6:30a - 12:00a	30 min	6:30a - 12:00a	30 min	
Blue	Alum Rock Transit Center - Santa Teresa Station					Light Rail	4:30a - 1:00a	15 min	15 min	5:00a - 1:00a	15 min	5:00a - 12:00a	15 min	
Purple	Almaden Station - Ohlone/Chynoweth Station					Light Rail	5:30a - 10:30p	15 min	15 min	8:00a - 10:00p	15 min	8:00a - 10:00p	15 min	
Orange	Mountain View Transit Center - Alum Rock Transit Center				New	Light Rail	5:00a - 11:30p	15 min	15 min	6:30a - 11:30p	30 min	7:00a - 11:30p	30 min	
Yellow	Downtown San Jose - Santa Teresa Station Express Service	✓		✓		Light Rail	5 trips each peak period			—	—	—	—	

Appendix B - Matrix of Changes by Route

	Routes Currently Serving City	Routes to Serve City in Proposed Plan
Campbell	26, 27, 37, 48, 49, 60, 61, 62, 65, 82, 101, 328, 330, Green	26, 27, 37, 56, 60, 61, 65, 101, Green
Cupertino	23, 25, 26, 53, 54, 55, 81, 101, 182, 323	23, 25, 26, 51, 53, 55, 56, 101, 182, 523
Gilroy	14, 17, 18, 19, 68, 121, 168, 185	68, 85, 86, 121, 168, 185
Los Altos	22, 40, 52, 81, 522	22, 40, 51, 52, 522
Los Altos Hills	40, 52	40, 52
Los Gatos	27, 48, 49	27
Milpitas	46, 47, 66, 70, 71, 77, 104, 140, 180, 181, 321, 330, Blue	20, 47, 60, 66, 70, 71, 77, 104, 246, 247, Blue, Orange
Monte Sereno	48	27
Morgan Hill	16, 68, 121, 168, 185	68, 87, 121, 168, 185
Mountain View	22, 32, 34, 35, 40, 52, 81, 120, 185, 522, Green	20, 21, 22, 40, 51, 52, 185, 251, 522, Orange
Palo Alto	22, 35, 88, 89, 102, 103, 104, 182, 522	21, 22, 89, 102, 103, 104, 182, 288, 522
San Jose	10, 12, 13, 22, 23, 25, 26, 27, 31, 37, 39, 42, 45, 49, 57, 58, 60, 61, 62, 63, 64, 65, 66, 68, 70, 71, 72, 73, 77, 81, 82, 101, 102, 103, 104, 122, 140, 168, 180, 181, 182, 185, 201 DASH, 304, 321, 323, 328, 330, 522, Blue, Green, Purple, Yellow	20, 22, 23, 25, 26, 27, 31, 37, 39, 42, 56, 57, 59, 60, 61, 63, 64, 65, 66, 68, 70, 71, 72, 73, 77, 83, 101, 102, 103, 104, 122, 168, 182, 185, 201 DASH, 266, 282, 500, 522, 523, Blue, Green, Orange, Purple, Yellow
Santa Clara	10, 22, 23, 32, 55, 57, 58, 60, 81, 121, 140, 304, 321, 323, 328, 330, 522, Green	20, 21, 22, 23, 53, 55, 57, 59, 60, 121, 522, 523, Green, Orange
Saratoga	26, 37, 53, 57, 58	26, 37, 51, 53, 56, 57
Sunnyvale	22, 26, 32, 53, 54, 55, 120, 121, 122, 304, 321, 328, 522, Green	20, 21, 22, 26, 53, 55, 56, 255, 522, 523, Green, Orange

Appendix C - Matrix of Impacts by Route

Route	Current Service (FY16-17)				Proposed Final Plan (FY18-19)				Change from Current Service to Proposed Final Plan				
	demographics of population served (within 1/4-mile)			amount of service	demographics of population served (within 1/4-mile)			amount of service	people-trips (population x trips)			change borne by Title VI communities (highlighted cells greater than area avg)	
	Population	% Low Income	% Minority	Bus Trips (Annual)	Population	% Low Income	% Minority	Bus Trips (Annual)	All People-Trips	Low Inc People-Trips	Minority People-Trips	Low Income	Minorities
10 Santa Clara Transit- Metro Airport	3,808	35.2%	63.0%	20,280					-77,226,240	-27,165,231	-48,631,440	35.2%	63.0%
12 San Jose Civic Center - Eastridge	42,899	42.4%	90.4%	2,090					-89,658,910	-38,008,044	-81,048,110	42.4%	90.4%
13 Almaden & Mckean- Ohlone / Chynwrth	17,515	13.9%	49.3%	3,060					-53,595,900	-7,455,702	-26,413,920	13.9%	49.3%
14 Gilroy Trans Ctr - St. Louise Hosp	4,231	64.2%	86.0%	4,560					-19,293,360	-12,389,317	-16,593,840	64.2%	86.0%
16 M. H. Civic Ctr - Burnett Ave	7,536	25.1%	55.9%	1,785					-13,451,760	-3,370,145	-7,521,990	25.1%	55.9%
17 Gilroy Trns Ctr - Mntry & Ls Animas	6,096	65.1%	86.4%	4,450					-27,127,200	-17,655,099	-23,433,700	65.1%	86.4%
18 Gilroy Trans Ctr - Gavilan College	5,011	50.6%	79.4%	4,590					-23,000,490	-11,627,179	-18,263,610	50.6%	79.4%
19 Gilroy Trans Ctr - Wren & Mantelli	12,767	33.1%	68.1%	5,890					-75,197,630	-24,921,899	-51,231,220	33.1%	68.1%
20 Sunnyvale - Milpitas					19,301	22.3%	76.6%	10,710	206,713,710	46,104,338	158,347,350	22.3%	76.6%
21 Middlefield					81,365	21.9%	58.0%	9,120	742,048,800	162,484,871	430,628,160	21.9%	58.0%
22 Palo Alto - Eastridge	118,549	29.7%	68.0%	31,820	118,463	29.7%	68.0%	26,413	-643,265,961	-190,347,897	-438,411,574	29.6%	68.2%
23 De Anza Col - Alum Rock Trans Ctr	65,510	35.2%	75.0%	27,785	76,784	37.2%	78.1%	22,445	-96,778,470	396,127	-19,581,570	-0.4%	20.2%
25 De Anza Col - Alum Rock Trans Ctr	85,910	37.9%	76.8%	27,485	48,990	45.2%	79.0%	24,885	-1,142,120,200	-344,642,704	-850,490,285	30.2%	74.5%
25L Williams					30,778	21.3%	67.4%	11,344	349,145,632	74,504,260	235,456,064	21.3%	67.4%
26 Sunnyvale / Lockheed - Eastridge	83,909	22.6%	64.7%	11,950	16,167	42.3%	90.7%	20,748	-667,279,634	-84,465,046	-344,359,642	12.7%	51.6%
26L Curtner - Campbell					32,135	15.8%	42.4%	11,049	355,059,615	56,101,796	150,421,086	15.8%	42.4%
26L Curtner - Campbell Weekend					28,276	16.9%	41.1%	11,049	312,421,524	52,863,127	128,533,017	16.9%	41.1%
27 Good Sam Hosp - Kaiser San Jose	41,488	19.3%	52.2%	7,530	61,923	17.5%	44.4%	9,542	278,464,626	42,865,735	99,144,420	15.4%	35.6%
31 Evergreen Valley Col - Eastridge	19,248	30.3%	90.1%	9,060	14,897	24.5%	87.5%	8,234	-51,724,982	-22,865,105	-49,853,402	44.2%	96.4%
32 Sn Antonio Shop Ctr - Sta Clara Tc	56,096	21.7%	63.0%	7,945					-445,682,720	-96,784,480	-280,800,135	21.7%	63.0%
34 Sn Antonio Shop Ctr - Downtown Mv	26,881	28.3%	59.8%	1,530					-41,127,930	-11,644,544	-24,594,750	28.3%	59.8%
35 Dntn Mtn View - Stanford Shop Ctr	37,998	20.6%	49.4%	9,500					-360,981,000	-74,358,485	-178,315,000	20.6%	49.4%
37 West Valley College - Capitol Lrt	31,856	19.0%	46.7%	7,140	31,856	19.0%	46.7%	3,060	-129,972,480	-24,667,718	-60,653,280	19.0%	46.7%
39 The Villages - Eastridge	18,656	18.0%	85.7%	6,455	19,232	18.5%	85.8%	4,050	-42,534,880	-7,332,200	-36,399,435	17.2%	85.6%
40 Foothill Col - La Avenida & Shor	20,748	24.1%	52.9%	9,480	26,714	22.8%	53.0%	7,972	16,272,968	1,057,366	8,823,500	6.5%	54.2%
40 Foothill Col - La Avenida & Shor Weekend					25,534	23.7%	54.6%	696	17,771,664	4,218,846	9,711,288	23.7%	54.6%
42 Kaiser Sj - Evergreen Valley Col	43,585	31.9%	82.9%	5,140	40,753	32.2%	83.4%	3,060	-99,322,720	-31,374,483	-81,801,720	31.6%	82.4%
45 Alum Rock Tc - Penitencia Ck Tc	25,196	34.0%	83.3%	3,315					-83,524,740	-28,381,386	-69,578,535	34.0%	83.3%
46 Great Mall - Milpitas High School	25,879	20.3%	83.8%	5,850					-151,392,150	-30,806,097	-126,886,500	20.3%	83.8%
47 Great Mall - Mccarthy Ranch	15,508	21.0%	87.1%	9,795	20,735	21.1%	85.1%	10,168	58,932,620	12,551,949	46,963,013	21.3%	79.7%
48 Los Gatos - Winchester LRT	15,556	15.7%	32.1%	5,235					-81,435,660	-12,785,983	-26,143,590	15.7%	32.1%
49 Los Gatos - Winchester LRT	16,122	16.3%	30.7%	5,125					-82,625,250	-13,437,125	-25,363,625	16.3%	30.7%
51 Grant - Moffett					27,751	9.5%	49.2%	5,100	141,530,100	13,415,516	69,615,000	9.5%	49.2%
51L Saratoga - West Valley College					21,034	14.7%	71.9%	3,060	64,364,040	9,493,068	46,258,020	14.7%	71.9%
52 Foothill College - Dwn town Mtn View	13,001	13.2%	44.1%	6,375	13,143	13.2%	44.0%	6,630	4,256,715	510,835	1,813,305	12.0%	42.6%
53 Wv College- Sunnyvale Trans Ctr	43,300	13.5%	66.6%	3,060	55,437	16.9%	61.4%	6,630	235,049,310	44,340,521	137,366,970	18.9%	58.4%
53 Stevens Crk - Santa Clara Caltrain					21,573	19.1%	57.1%	468	10,096,164	1,929,938	5,762,952	19.1%	57.1%
54 De Anza College - Lockheed	24,409	20.4%	67.1%	8,990					-219,436,910	-44,743,677	-147,229,230	20.4%	67.1%
55 De Anza College - Great America	50,024	19.9%	69.9%	12,600	48,412	20.1%	68.9%	10,220	-135,531,760	-25,681,291	-99,536,080	18.9%	73.4%
56 Wolfe - Hamilton					72,719	20.9%	61.3%	10,556	767,621,764	160,312,902	470,575,924	20.9%	61.3%
57 West Valley Coll - Great America	34,485	19.6%	62.6%	10,580	35,278	19.7%	62.7%	19,775	332,771,150	65,588,680	209,415,190	19.7%	62.9%
58 West Valley College - Alviso	45,289	19.9%	66.4%	5,865					-265,619,985	-52,907,009	-176,460,255	19.9%	66.4%
59 Monroe - Grt America - Alviso					27,466	31.0%	64.7%	9,692	266,200,472	82,397,606	172,323,760	31.0%	64.7%
60 Winchester Tc - Gt America	37,049	32.2%	59.0%	14,955	38,137	28.0%	62.0%	21,780	276,556,065	54,474,996	188,086,755	19.7%	68.0%
61 Good Sam Hosp - Sierra & Piedmont	56,501	29.5%	67.6%	9,500	34,867	32.5%	63.8%	19,815	154,130,105	66,290,951	77,949,825	43.0%	50.6%
61L Berryessa					14,732	22.1%	86.2%	9,931	146,303,492	32,367,764	126,103,838	22.1%	86.2%
61T Bascom/Union Turnaround					14,637	17.1%	37.0%	9,542	139,666,254	23,896,900	51,708,098	17.1%	37.0%
62 Good Sam Hosp - Sierra & Piedmont	52,180	26.5%	64.2%	10,250					-534,845,000	-141,614,105	-343,118,750	26.5%	64.2%

Appendix C - Matrix of Impacts by Route

Route	Current Service (FY16-17)				Proposed Final Plan (FY18-19)				Change from Current Service to Proposed Final Plan				
	demographics of population served (within 1/4-mile)			amount of service	demographics of population served (within 1/4-mile)			amount of service	people-trips (population x trips)			change borne by Title VI communities (highlighted cells greater than area avg)	
	Population	% Low Income	% Minority	Bus Trips (Annual)	Population	% Low Income	% Minority	Bus Trips (Annual)	All People-Trips	Low Inc People-Trips	Minority People-Trips	Low Income	Minorities
63 Almaden Expy - San Jose State	43,043	23.4%	50.7%	7,530	35,787	26.4%	52.6%	8,489	-20,317,947	4,312,880	-4,764,785	-21.2%	23.5%
64 Almaden Lrt - Mckee & White	54,316	35.7%	68.5%	16,705	33,757	47.0%	83.9%	18,901	-269,307,723	-24,622,334	-86,738,747	9.1%	32.2%
64L Lincoln - Almaden					31,143	17.4%	48.7%	11,964	372,594,852	64,831,408	181,577,628	17.4%	48.7%
65 Kooser & Blossom Hill- Dntn S. J.	57,982	31.3%	61.2%	4,845	38,211	32.9%	61.3%	3,060	-163,997,130	-49,377,843	-100,292,520	30.1%	61.2%
66 Kaiser San Jose - Milpitas / Dixon	80,193	30.6%	76.5%	18,935	69,401	34.2%	76.4%	21,658	-15,367,597	50,207,269	-14,280,686	-326.7%	92.9%
66L Main - Abel					16,927	21.5%	84.6%	18,598	314,808,346	67,761,261	266,174,576	21.5%	84.6%
68 Monterey Hwy - San Jose Diridon	67,516	37.1%	74.9%	20,995	46,059	37.4%	77.4%	21,768	-414,886,108	-151,095,053	-285,218,330	36.4%	68.7%
68L South County					22,978	35.7%	69.2%	18,708	429,872,424	153,324,507	297,457,200	35.7%	69.2%
70 Jackson	88,364	32.8%	90.2%	20,010	29,568	43.1%	94.4%	20,835	-1,152,114,360	-313,632,224	-1,013,434,695	27.2%	88.0%
70L Flickinger - Morrill					24,196	21.0%	85.8%	10,209	247,016,964	51,766,208	212,061,348	21.0%	85.8%
71 Eastridge- Great Mall / Main	48,934	30.9%	87.7%	13,840	86,827	32.2%	87.8%	10,649	247,374,163	88,273,055	217,561,404	35.7%	87.9%
72 Senter / Monterey - Downtown San Jose	65,507	41.5%	84.7%	16,665	66,002	41.4%	84.6%	19,936	224,141,717	91,297,930	189,463,804	40.7%	84.5%
73 Snell & Capitol - Downtwn San Jose	50,681	43.2%	79.8%	14,805	47,271	45.2%	79.9%	19,936	192,062,451	102,224,268	154,498,666	53.2%	80.4%
77 Eastridge - Great Mall / Main	41,928	40.0%	92.5%	15,245	40,866	39.3%	92.4%	19,844	171,752,544	62,831,674	158,007,672	36.6%	92.0%
81 Moffett / Ames Ctr - San Jose State	79,673	19.7%	57.5%	7,890					-628,619,970	-123,642,680	-361,606,590	19.7%	57.5%
82 Westgate - Downtown San Jose	46,444	33.2%	58.8%	8,935					-414,977,140	-137,816,017	-243,818,280	33.2%	58.8%
83 Almaden & Mckean- Ohlone / Chynwrth					17,716	13.9%	49.2%	3,315	58,728,540	8,143,744	28,916,745	13.9%	49.2%
85 Gilroy					19,561	41.8%	73.9%	4,050	79,222,050	33,115,763	58,538,700	41.8%	73.9%
86 Gavilan College					5,778	50.3%	78.6%	6,630	38,308,140	19,287,548	30,113,460	50.3%	78.6%
87 Morgan Hill					7,536	25.1%	55.9%	1,785	13,451,760	3,370,145	7,521,990	25.1%	55.9%
88 Vets Hosp - Middlefield & Colorado	16,317	8.1%	46.9%	5,100					-83,216,700	-6,722,468	-39,066,000	8.1%	46.9%
89 California Ave Ctrn-Vets Hospital	4,587	12.5%	37.7%	5,865					-26,902,755	-3,358,425	-10,140,585	12.5%	37.7%
89 Cal Ave - VA Hospital					3,988	12.8%	37.3%	1,530	6,101,640	780,174	2,276,640	12.8%	37.3%
89 Cal Ave - VA Hospital Peak					4,465	12.5%	37.3%	3,060	13,662,900	1,709,400	5,101,020	12.5%	37.3%
101 Camden & Hwy 85 - Palo Alto	19,822	20.3%	53.1%	1,530	19,822	20.3%	53.1%	1,530	0	0	0	0.0%	0.0%
102 South San Jose - Palo Alto	10,287	15.9%	55.0%	4,335	10,287	15.9%	55.0%	4,335	0	0	0	0.0%	0.0%
103 Eastridge - Palo Alto	10,026	42.9%	77.5%	2,295	10,026	42.9%	77.5%	2,295	0	0	0	0.0%	0.0%
104 Penitencia Trans Ctr - Palo Alto	21,034	17.2%	74.8%	1,020	21,034	17.2%	74.8%	1,020	0	0	0	0.0%	0.0%
120 Fremont Bart - Lockheed Martin	754	21.8%	59.2%	3,315					-2,499,510	-544,382	-1,478,490	21.8%	59.2%
121 Gilroy Trans Ctr - Lockheed Martin	7,348	33.8%	64.2%	5,355	7,348	33.8%	64.2%	5,355	0	0	0	0.0%	0.0%
122 South San Jose - Lockheed Martin	23,962	24.3%	71.6%	1,020	23,962	24.3%	71.6%	1,020	0	0	0	0.0%	0.0%
140 Fremont Bart - M. College & Montague	9,585	21.8%	77.0%	1,785					-17,109,225	-3,729,948	-13,167,945	21.8%	77.0%
168 Gilroy Trans Ctr - San Jose Diridon	9,511	38.3%	65.0%	4,080	9,511	38.3%	65.0%	4,080	0	0	0	0.0%	0.0%
180 Great Mall / Main - Fremont Bart	10,932	36.3%	92.1%	8,160					-89,205,120	-32,351,284	-82,187,520	36.3%	92.1%
181 San Jose Diridon - Fremont Bart	6,866	34.0%	66.2%	22,000					-151,052,000	-51,307,726	-100,034,000	34.0%	66.2%
182 Palo Alto - Ibm / Bailey Ave	5,852	10.7%	67.5%	765	5,852	10.7%	67.5%	765	0	0	0	0.0%	0.0%
185 South County North Bayshore	26,651	29.1%	61.1%	2,295	26,651	29.1%	61.1%	2,295	0	0	0	0.0%	0.0%
200 Baypointe Lrt - Mountain View Lrt	11,745	19.4%	63.2%	730	17,092	20.8%	67.8%	730	3,903,310	938,898	3,040,450	24.1%	77.9%
201 Downtown Area Shuttle (Dash)	6,886	40.0%	63.9%	17,850					-122,915,100	-49,188,081	-78,522,150	40.0%	63.9%
246 Milpitas school trips					19,186	21.7%	83.2%	1,440	27,627,840	6,002,602	22,988,160	21.7%	83.2%
282 Willow Glen school trips					16,256	33.2%	61.2%	720	11,704,320	3,886,068	7,158,240	33.2%	61.2%
288 Palo Alto school trips					16,320	8.1%	46.9%	540	8,812,800	711,747	4,137,480	8.1%	46.9%
288L Palo Alto school trips L pattern					14,168	10.1%	49.8%	360	5,100,480	515,811	2,539,080	10.1%	49.8%
288M Palo Alto school trips M pattern					12,243	13.1%	49.9%	360	4,407,480	578,131	2,201,040	13.1%	49.9%
304 S. San Jose - Sunnyvale Trans Ctr	43,062	33.2%	74.1%	2,805					-120,788,910	-40,132,608	-89,496,330	33.2%	74.1%
321 Great Mall / Main - Lockheed Martin	11,199	23.4%	72.9%	765					-8,567,235	-2,000,736	-6,243,930	23.4%	72.9%
323 De Anza Col - Downtown San Jose	26,292	29.0%	68.2%	19,280					-506,909,760	-146,869,486	-345,478,320	29.0%	68.2%
328 Almaden Valley - Lockheed Martin	40,766	17.3%	51.8%	1,275					-51,976,650	-8,979,649	-26,919,075	17.3%	51.8%

Appendix C - Matrix of Impacts by Route









Route	Current Service (FY16-17)				Proposed Final Plan (FY18-19)				Change from Current Service to Proposed Final Plan				
	demographics of population served (within 1/4-mile)			amount of service	demographics of population served (within 1/4-mile)			amount of service	people-trips (population x trips)			change borne by Title VI communities (highlighted cells greater than area avg)	
	Population	% Low Income	% Minority	Bus Trips (Annual)	Population	% Low Income	% Minority	Bus Trips (Annual)	All People-Trips	Low Inc People-Trips	Minority People-Trips	Low Income	Minorities
330 Almaden Valley - Tasman Drive	46,264	19.1%	56.0%	2,805					-129,770,520	-24,781,547	-72,674,745	19.1%	56.0%
500 Rapid 500					9,777	39.4%	72.9%	31,897	311,856,969	123,009,357	227,489,404	39.4%	72.9%
522 Rapid Palo Alto - Eastridge	66,510	33.6%	73.7%	22,365	56,996	31.3%	72.8%	26,982	50,369,922	-17,144,647	23,227,209	-34.0%	46.1%
523 Rapid Sunnyvale - St Crk - BART					55,724	31.9%	73.2%	23,070	1,285,552,680	409,819,483	940,425,480	31.9%	73.2%
900 Ohlone / Chynoweth - Almaden	3,954	26.9%	50.1%	22,990	3,954	26.9%	50.1%	22,990	0	0	0	0.0%	0.0%
901 Alum Rock-Santa Teresa Via Baypoint	51,801	29.3%	75.1%	26,040	51,801	29.3%	75.1%	26,040	0	0	0	0.0%	0.0%
902 Mountain View - Winchester	41,609	28.0%	62.0%	19,880					-827,186,920	-231,671,849	-512,943,760	28.0%	62.0%
902 Old Ironsides - Winchester					31,931	29.8%	65.4%	22,175	708,069,925	210,709,121	463,080,525	29.8%	65.4%
903 Alum Rock Mtn View					32,910	26.0%	76.1%	19,747	649,873,770	168,781,366	494,326,651	26.0%	76.1%
904 Santa Teresa Peak	11,704	28.9%	61.9%	3,060	11,704	28.9%	61.9%	3,060	0	0	0	0.0%	0.0%
All Changes	1,171,506	26.1%	68.0%	696,185	1,115,260	26.0%	68.3%	775,475	-519,687,525	-64,043,031	-316,330,564	12.3%	60.9%

	Low Income	Minority
Change Borne By	12.3%	60.9%
Area Average	23.5%	65.3%
Delta	-11.2% ✓	-4.5% ✓


Current Plan

Transit Service and Title VI Communities


VTA Weekday Route Frequencies

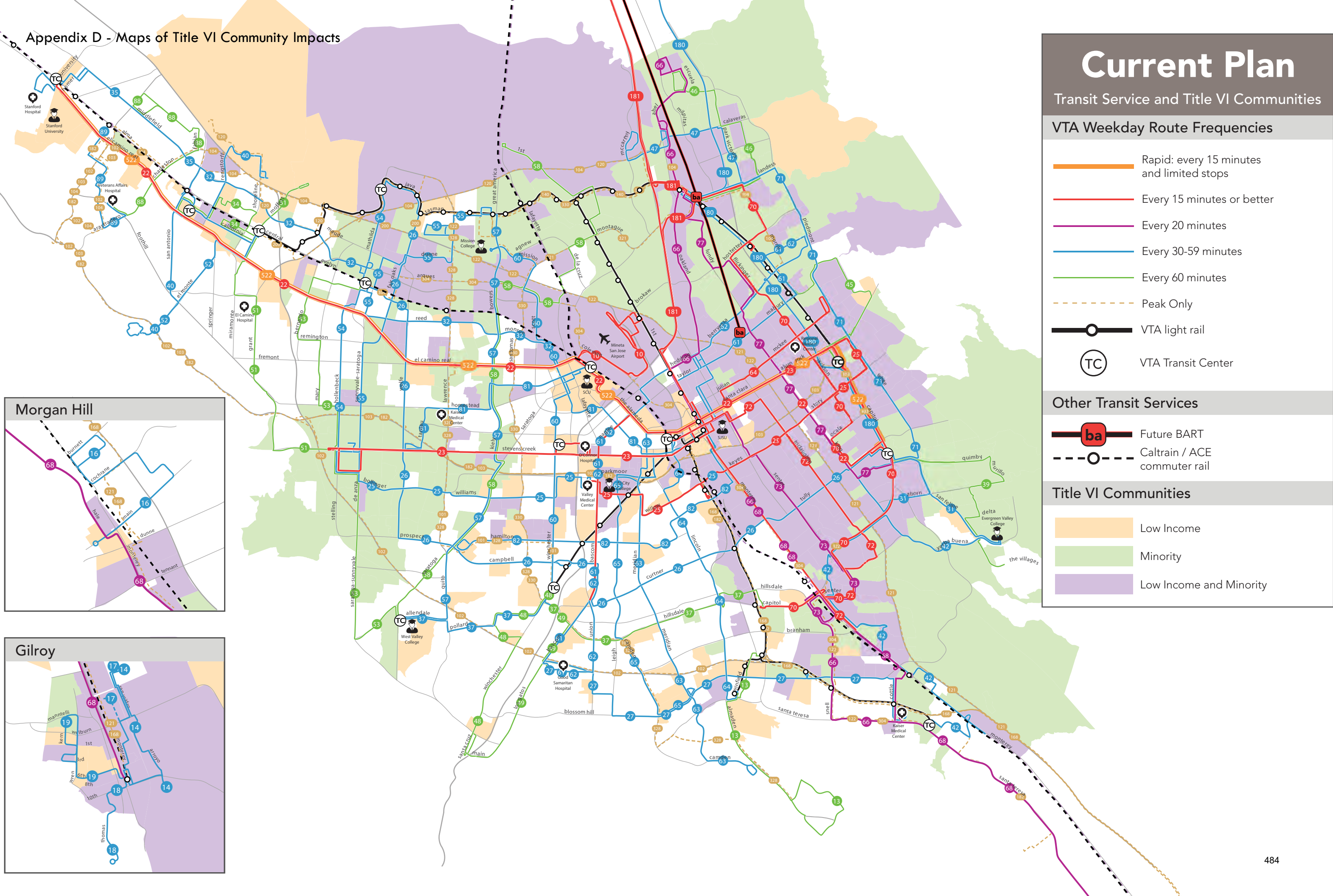
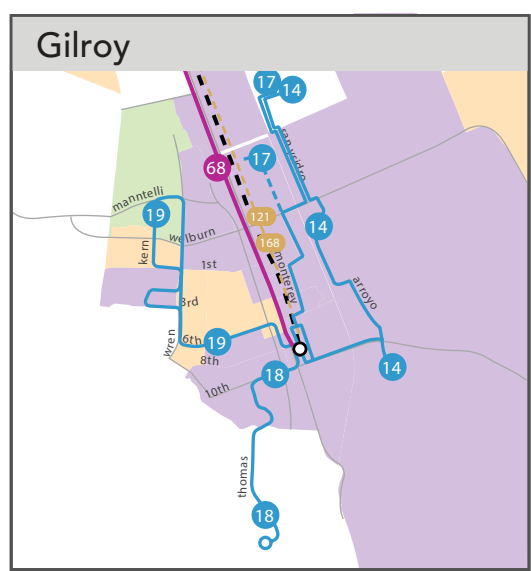
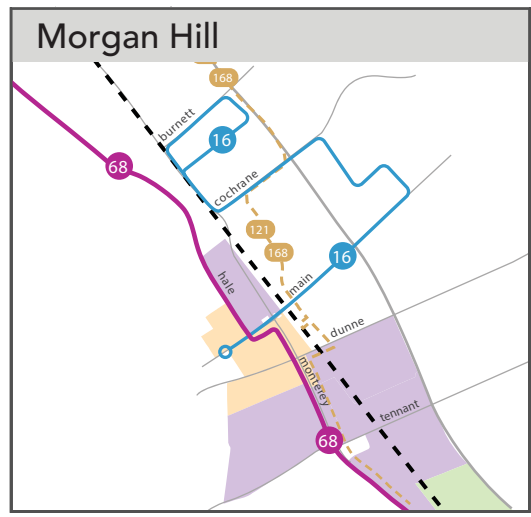
-  Rapid: every 15 minutes and limited stops
-  Every 15 minutes or better
-  Every 20 minutes
-  Every 30-59 minutes
-  Every 60 minutes
-  Peak Only
-  VTA light rail
-  VTA Transit Center

Other Transit Services

-  Future BART
-  Caltrain / ACE commuter rail

Title VI Communities













-  Low Income
-  Minority
-  Low Income and Minority





FINAL PLAN

Transit Service and Title VI Communities



VTA Weekday Route Frequencies

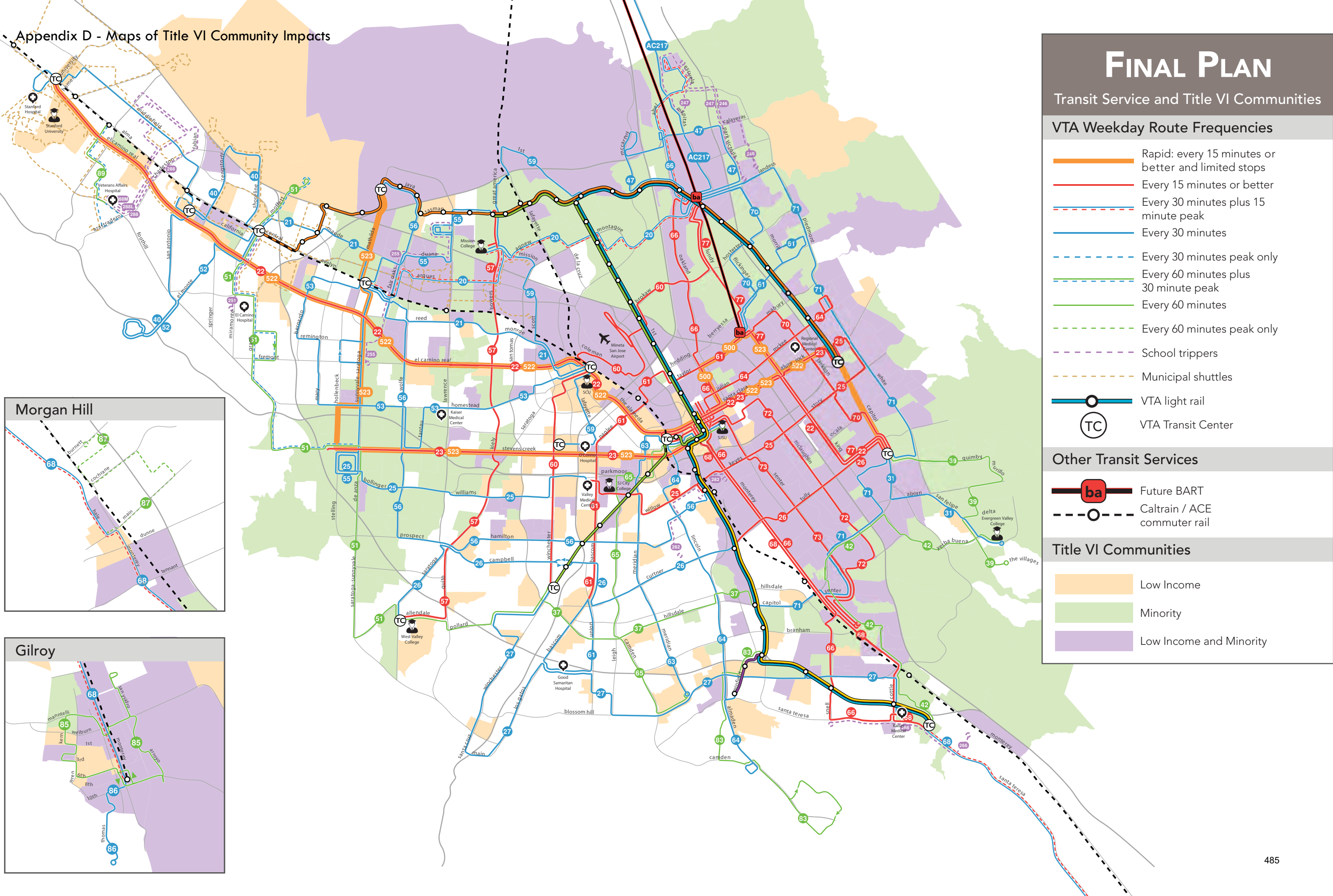
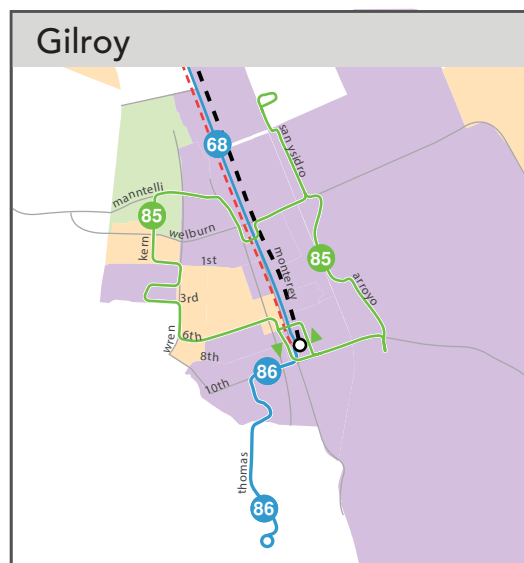
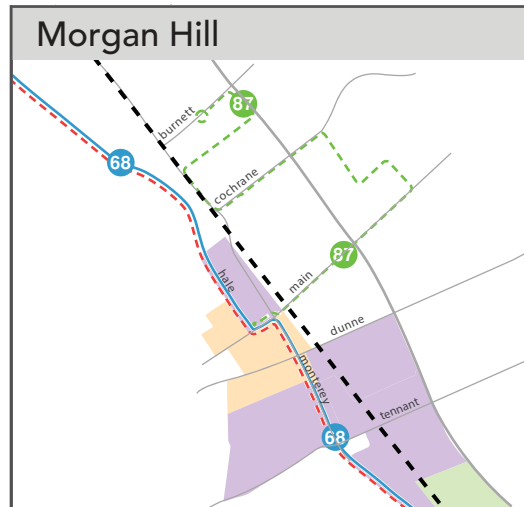
-  Rapid: every 15 minutes or better and limited stops
-  Every 15 minutes or better
-  Every 30 minutes plus 15 minute peak
-  Every 30 minutes
-  Every 30 minutes peak only
-  Every 60 minutes plus 30 minute peak
-  Every 60 minutes
-  Every 60 minutes peak only
-  School trippers
-  Municipal shuttles
-  VTA light rail
-  VTA Transit Center

Other Transit Services

-  Future BART
-  Caltrain / ACE commuter rail

Title VI Communities

-  Low Income
-  Minority
-  Low Income and Minority



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Exhibit 13: Board Adoption of 2018 Discontinuation of Express Light Rail Service
(PDF Inserted Below)



Date: July 24, 2018
Current Meeting: August 2, 2018
Board Meeting: August 2, 2018

BOARD MEMORANDUM

TO: Santa Clara Valley Transportation Authority Board of Directors
THROUGH: General Manager, Nuria I. Fernandez
FROM: Director - Planning & Programming, Chris Augenstein
SUBJECT: Discontinue Express Light Rail Service

APPROVED ACCEPTED ADOPTED AMENDED DEFERRED REVIEWED
Santa Clara Valley Transportation Authority
Board of Directors
Elaine F. Gallo, Board Secretary
BY:
DATE: 8/2/18

Policy-Related Action: No Government Code Section 84308 Applies: No

ACTION ITEM

RECOMMENDATION:

Discontinue express light rail trips.

BACKGROUND:

Since 2010, the Santa Clara Valley Transportation Authority (VTA) has operated supplementary weekday peak-hour express trips on the Light Rail System's Blue Line (Santa Teresa -- Alum Rock). The express trips were added to offer riders the option of a slightly faster trip into downtown San Jose and North First Street. Three trips provide northbound service during the AM peak period and three trips provide southbound service during the PM peak period. These trips are supplementary trips, slotted in between regularly-scheduled trips that depart every 15-minutes. The express trips travel between Santa Teresa Station and Baypointe Station but skip the following stations along the SR-87 segment in order to reduce travel time as shown by the yellow line in **Attachment A:**

- Children's Discovery Museum Station
- Virginia Station
- Tamien Station
- Curtner Station
- Capitol Station
- Branham Station

Light rail express service provides a faster transit option for commuters who live in south San Jose and work in downtown or north San Jose. As compared to regular trips, the express trips save four (4) minutes by skipping stops along SR-87 (between Santa Teresa and the Children's

Discovery Museum stations). These light rail express trips could be discontinued in order to help address ongoing VTA Transit operating cost issues.

DISCUSSION:

In order to reduce ongoing VTA transit operating costs, staff propose to make the following service changes, effective October 8, 2018:

1. Discontinue all six express light rail trips
2. Add light rail cars to trains on adjacent trips where necessary to meet added demand

Express Service

The service change would eliminate all six one-way express trips each weekday:

- Northbound trips departing Santa Teresa Station at 7:19 a.m., 7:49 a.m., 8:19 a.m.
- Southbound trips departing Baypointe Station at 4:11 p.m., 4:41 p.m., 5:12 p.m.

The express trips are slotted into the regularly-scheduled service with trains departing every 15 minutes. No changes are proposed for the regularly-scheduled service.

Express Performance

The light rail express trips are generally well-utilized. Each express train typically carries between 90 and 150 riders, with a daily total ridership of 538 riders across all express trips. Ridership varies by season, particularly with the San Jose State University academic calendar.

Ridership activity is concentrated at a small number of stations. In the northbound (a.m.) direction, boarding activity is high at Ohlone-Chynoweth Station, Santa Teresa Station, and Cottle Station; alighting activity is high in downtown San Jose and at Civic Center Station. Excluding Civic Center Station, ridership is low at stations along North First Street. Activity in the southbound (p.m.) direction generally mirrors northbound activity.

Impacts

Discontinuing light rail express trips will have adverse effects for passengers that currently use these light rail express trips; these passengers will no longer have the option of express trips and will have to ride non-express trips. Most of these passengers will likely take the trip immediately following the eliminated express trip that departs just two minutes later. These passengers would have to adjust their travel plans to depart their origin station two minutes later and arrive at their destination station six minutes later than their current express trip.

VTA will add cars to trains on adjacent trips to accommodate increased ridership demand as express passengers shift to adjacent non-express trips. Currently, most light rail trains during the peak periods are two-car trains; they will be expanded to three-car trains as necessary to accommodate demand. Discontinuing these light rail express trips will result in an annual savings of between \$720,000 - \$820,000, depending on the number of extra cars needed on existing service to handle the shift in passenger loads.

Title VI Service Equity Analysis

VTA conducted a Title VI Service Equity Analysis to determine if the proposed service change would disproportionately impact low income or minority passengers. The analysis found that this service change does not impose a disparate impact on minority passengers or a disproportionate burden on low income passengers. The complete Title VI analysis is included as **Attachment B**.

Outreach

VTA will conduct outreach to riders of the express trips in July 2018. Rider feedback will be reported to the Board of Directors as this proposal is presented for consideration.

ALTERNATIVES:

The Board of Directors could elect to not make the proposed service change and continue operating the express light rail trips.

FISCAL IMPACT:

This action is projected to reduce annual operating expenses by \$720,000 to \$820,000 per year, depending on the number of additional train cars deployed to accommodate increased demand.

Prepared by: Jay Tyree
Memo No. 6608

ATTACHMENTS:

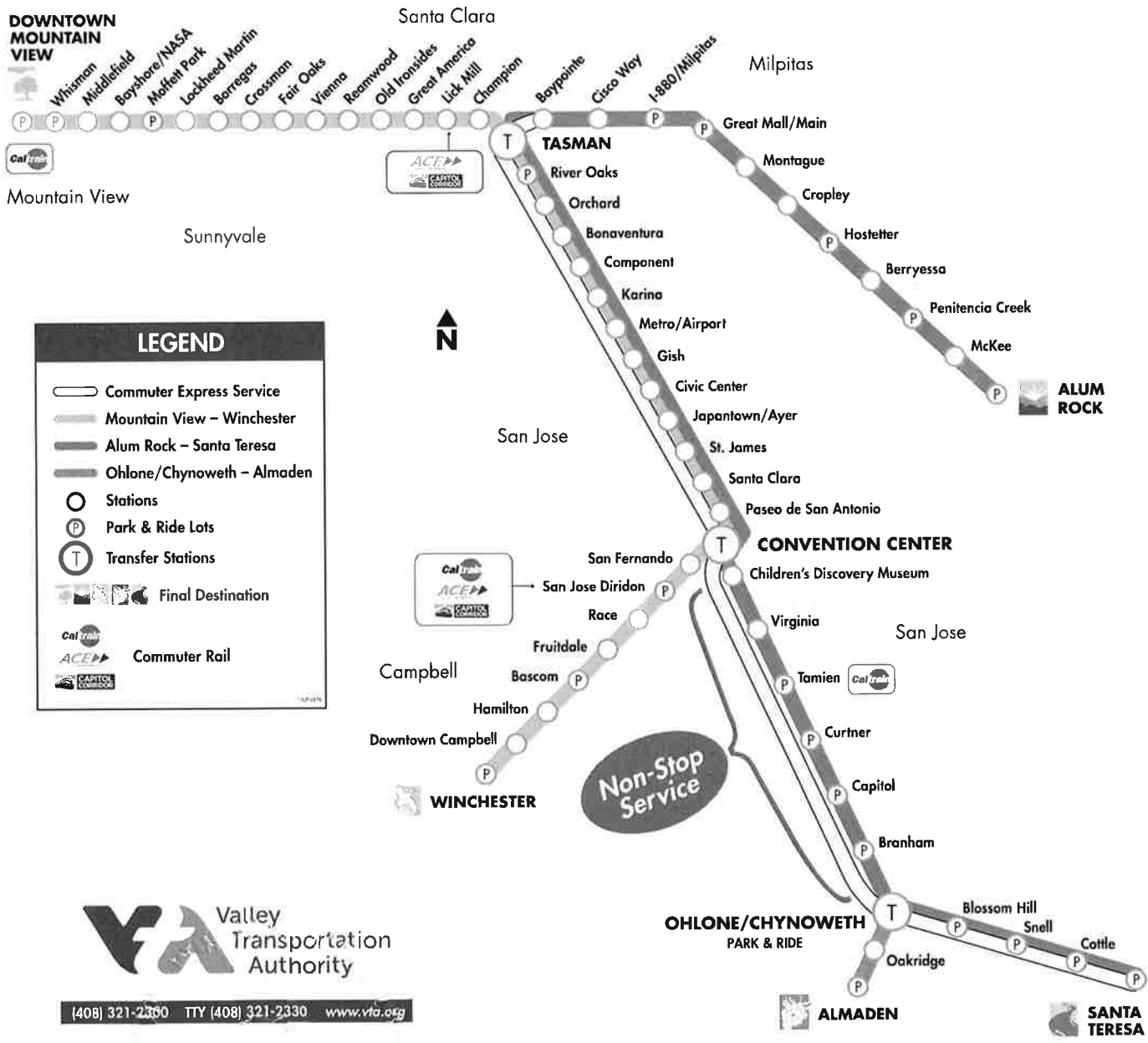
- Attachment A - Rail Map (PDF)
- Attachment B - Guadalupe Express Title VI Analysis (PDF)

I certify that the foregoing instrument is a true and exact copy of the original on file in the Secretary of the Board of Directors office.

Marcia Crisostomo

Date 01-15-2020

CERTIFIED COPY



(408) 321-2380 TTY (408) 321-2330 www.vta.org

Title VI Service Equity Analysis

Discontinuation of Light Rail Express Trains

Transit Service Planning
July 2018



Solutions that move you

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1 INTRODUCTION

Title VI (codified at 42 U.S.C. §2000 et seq.) was enacted as part of the landmark Civil Rights Act of 1964. It prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

In order to comply with Federal Transit Administration's (FTA) Title VI Circular 4702.1B and Environmental Justice Circular 4703.1 requirements, VTA is required to perform a Service Equity Analysis to evaluate the impacts of all major service changes on minority and low income passengers. The Service Equity Analysis must be conducted in accordance with the VTA Major Service Change, Disparate Impact, and Disproportionate Burden policies, which were adopted by the VTA Board of Directors on November 7, 2013 (see Appendix A).

After completing a Service Equity Analysis for the proposed discontinuation of light rail express service, VTA staff concludes that this major service change does not impose a disparate impact on minority passengers or a disproportionate burden on low income passengers.

2 BACKGROUND

Since 2010, VTA has operated supplementary weekday peak-hour express trips on light rail Route 901. Three trips provide northbound service during the AM peak period and three trips provide southbound service during the PM peak period. These trips are supplementary trips, slotted in between regularly-scheduled trips. The express trips travel between Santa Teresa Station and Baypointe Station but skip the following stations along the SR-87 segment as shown by the yellow line in Figure 1:

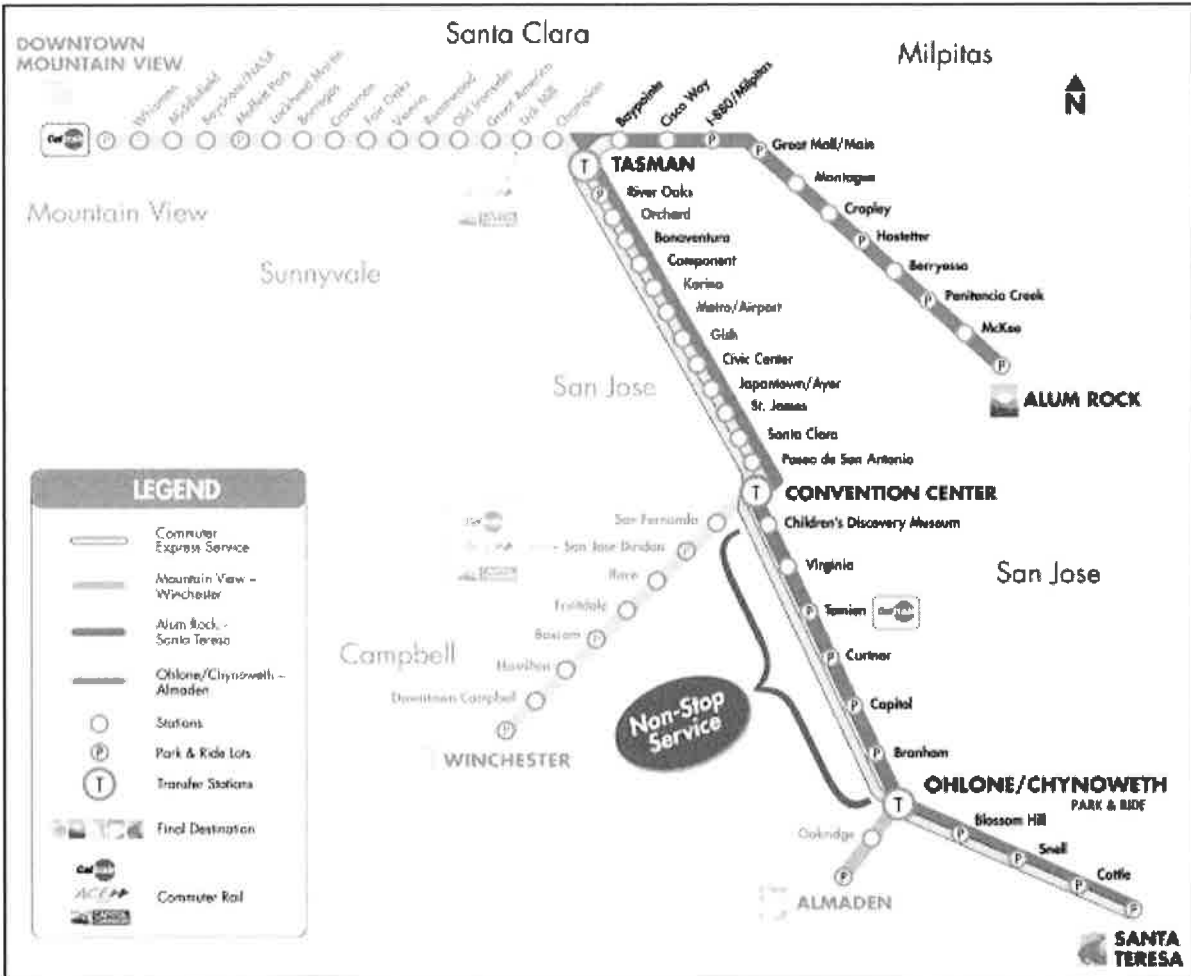
- Children's Discovery Museum Station
- Virginia Station
- Tamien Station
- Curtner Station
- Capitol Station
- Branham station

Light rail express service provides a faster option for commuters who live in south San Jose and work in downtown or north San Jose. By skipping stops along SR-87, the trips are 4 minutes faster than regular trips. As currently scheduled, the three northbound express trips depart Santa Teresa Station at 7:19 a.m., 7:49 a.m., and 8:19 a.m.; the three southbound trips depart Baypointe Station at 4:11 p.m., 4:41 p.m., and 5:12 p.m.. Each express trip is immediately followed by a regular trip that departs 2 minutes later.

The light rail express trips could be discontinued in order to reduce VTA Transit operating costs. Staff conducted this Service Equity Analysis to determine if the elimination of the service would disproportionately impact low income or minority groups.

Title VI Service Equity Analysis of Light Rail Express Service Discontinuation

FIGURE 1 – MAP OF LIGHT RAIL EXPRESS SERVICE



3 SERVICE PROPOSAL

This proposal was developed for the purpose of reducing overall VTA transit operating costs. These express trips were identified for discontinuation because the trips are discrete trips that are supplementary to, and not critical parts of, VTA's core light rail service. The proposal consists of the elimination of all six one-way express trips each weekday:

- Northbound express trip departing Santa Teresa Station at 7:19 a.m.
- Northbound express trip departing Santa Teresa Station at 7:49 a.m.
- Northbound express trip departing Santa Teresa Station at 8:19 a.m.
- Southbound express trip departing Baypointe Station at 4:11 p.m.
- Southbound express trip departing Baypointe Station at 4:41 p.m.
- Southbound express trip departing Baypointe Station at 5:12 p.m.

The express trips are slotted into the regularly-scheduled service with trains departing every 15 minutes. No changes are proposed for the regularly-scheduled service.

4 TITLE VI POLICIES

DISPARATE IMPACT POLICY

The Disparate Impact Policy establishes a threshold for determining if a given service or fare change would result in a fair distribution of positive and negative effects on minority passengers. VTA's Disparate Impact Policy states:

For Service or Fare Equity Analyses conducted by VTA, a disparate impact threshold of 10 percent shall be used to determine if minority riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference between the aggregate impacts of the proposed change(s) on minority passengers and the aggregate impacts of the proposed change(s) on overall VTA ridership. Analysis shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

DISPROPORTIONATE BURDEN POLICY

The Disproportionate Burden Policy establishes a threshold for determining if a given service or fare change would result in a fair distribution of positive and negative effects on low-income passengers. VTA's Disproportionate Burden Policy states:

For Service or Fare Equity Analyses conducted by VTA, a disproportionate burden threshold of 10 percent shall be used to determine if low-income riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference between the aggregate impacts of the proposed change(s) on low-income passengers and the aggregate impacts of the proposed change(s) on overall VTA ridership. Analysis shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

MAJOR SERVICE CHANGE POLICY

All major service changes – both improvements and reductions – are subject to a Title VI Service Equity Analysis. As approved by the VTA Board of Directors on November 7, 2013, VTA defines the following modifications as "major" service changes:

- The establishment of a new transit line or service;
- The elimination of a transit line or service;
- A route change that impacts 25 percent or more of a line's route miles;
- Span of service or frequency changes affecting 25 percent or more of a line's revenue vehicle hours;
- A series of changes on a single route which are included in the two-year Transit Service Plan and cumulatively meet any of the above criteria;
- Proposed changes that are anticipated to be controversial with a particular community or interested parties based on public feedback; and
- A systemwide change concurrently affecting 5 percent or more of the total system revenue hours.

Title VI Service Equity Analysis of Light Rail Express Service Discontinuation

Based on the “elimination of a transit line or service” and “potentially controversial changes” criteria, this proposal is considered a major service change.

5 ADVERSE EFFECTS

The elimination of light rail express trips will have adverse effects for passengers that currently ride these light rail express trips; these passengers will no longer have the option of express trips and will have to ride non-express trips. Most of these passengers will likely take the trip immediately following the eliminated express trip that departs just two minutes later. These passengers would have to adjust their travel plans to depart their origin station two minutes later and arrive at their destination station 6 minutes later than their current express trip.

Staff will adjust the light rail train car consists on adjacent trips to accommodate increased ridership demand as express passengers shift to adjacent non-express trips. Currently, most light rail train consists during the peak-hour periods are two-car train consists; they will be expanded to three-car train consists as necessary to accommodate these new passengers.

6 DATA

The Service Equity Analysis of the proposed service discontinuation was based upon demographic data from VTA’s most recent rider survey, which was conducted by an on-board survey of all light rail and bus routes in late 2017. To ensure compliance with LEP requirements and promote minority representation, the surveys were conducted in four different languages. The survey data was selected over Census data because the survey data provided more precise demographic profiles of the actual passengers on each route. However, U.S. Census American Community Survey demographic data was used to conduct a geographic review of where minority and low-income residents live to re-affirm the survey data’s conclusions.

Survey data for light rail Route 901 was used to determine the demographic profile of passengers that would be impacted by the service change, as the express trips proposed for elimination are Route 901 trips. Survey data for all VTA routes was used to determine the demographic profile of systemwide passengers. From the survey, staff determined the percentage of minority and low income Route 901 passengers (based on 200% of the federal poverty threshold) for comparison to the number of minority and low income passengers systemwide. Census data was used to corroborate the demographic profile of Route 901 passengers.

7 DISPARATE IMPACT ANALYSIS (MINORITY PASSENGERS)

A disparate impact analysis was conducted to determine if **minority** passengers would be more negatively impacted by the service discontinuation than VTA riders as a whole. While the analysis followed VTA’s Disparate Impact Policy as a guide, the policy’s methodology is not appropriate to accurately assess the disparate impact and disproportionate burden of isolated

Title VI Service Equity Analysis of Light Rail Express Service Discontinuation

changes to individual routes such as this proposal. Therefore, the methodology was tailored to focus on the impacts related to the route individually, in order to more accurately assess the impact of this proposal while continuing to use the policy's standard of 10 percent as a guide. A contextual map depicting the minority (non-white) populations in the areas along the express service route is shown as Figure 2.

As shown in Table 1, minority (non-white) groups comprise 55% of passengers on Route 901 and 59% of passengers systemwide. Therefore, the percentage of minority passengers that would be impacted by the service change is lower than the VTA systemwide average. Therefore, the discontinuation of light rail express service would not meet VTA's 10 percent disparate impact threshold.

TABLE 1 - SERVICE EQUITY ANALYSIS OF PROPOSED DISCONTINUATION OF LIGHT RAIL EXPRESS SERVICE

Route	Description of Change	Net Change in Daily Service Hours	Impacted Daily Boardings	Minority Percent of Impacted Passengers	Low Income Percent of Impacted Passengers
901	Discontinue express trips	-12.5	-530	55%	37%
Current Systemwide Average				59%	49%
Difference From Systemwide Average				-4%	-12%
Disparate Impact (>10%)?				NO	
Disproportionate Burden (>10%)?				NO	

Notes: (1) Ethnicity and low income data based on VTA 2017 on-board survey; (2) VTA defines "low income" as passengers with annual household incomes of less than twice the Federal Poverty Threshold.

As shown in Table 2, the proposed 4% reduction in hours compares favorably to the 3% reduction in ridership, illustrating the proposal's focus on maintaining transit efficiency.

TABLE 2 – COMPARISON OF HOURS AND BOARDINGS

		Annual Service Hours	Annual Boardings
901	Existing	82,459	4,579,844
901	Proposed	79,268	4,444,694
Net Change		-4%	-3%

8 DISPROPORTIONATE BURDEN ANALYSIS (LOW INCOME PASSENGERS)

A disparate impact analysis was conducted to determine if **low income** passengers would be more negatively impacted by the service discontinuation than VTA riders as a whole. For the same reasons as the Disparate Impact Analysis, VTA's policy methodology was tailored to

Title VI Service Equity Analysis of Light Rail Express Service Discontinuation

focus on the impacts related to the route individually, in order to more accurately assess the impact of this proposal while continuing to use the policy's standard of 10 percent as a guide. To adjust for the relatively high cost of living in Santa Clara County, low income passengers are defined as those living in households that earn less than twice the federal poverty threshold. A contextual map depicting the low income populations in the areas along the express service route is shown as Figure 3.

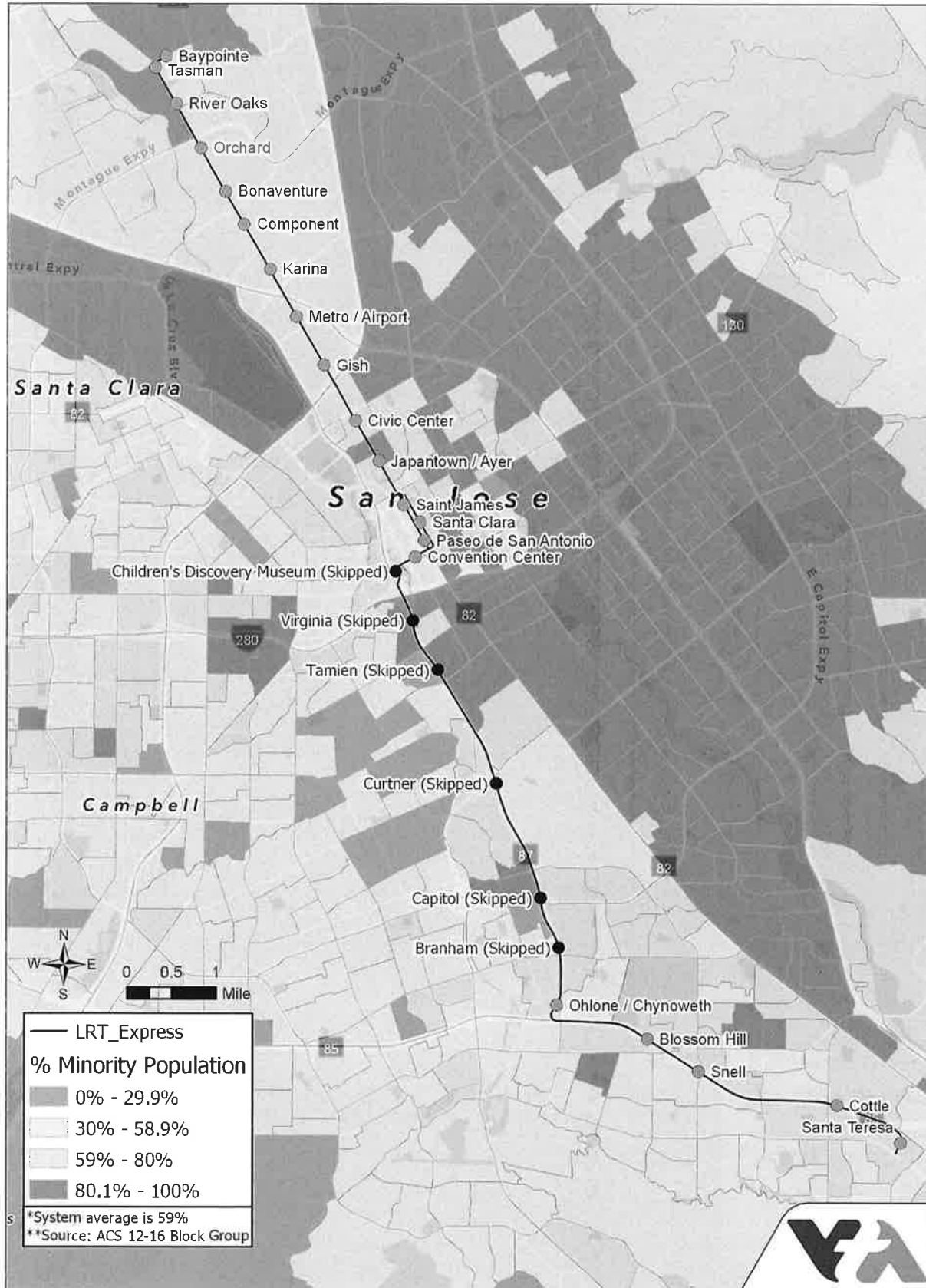
As shown in Table 1, low income passengers comprise 37% of all passengers on Route 901 and 49% of passengers systemwide. Therefore, the percentage of low income passengers that would be impacted by the service change is lower than the VTA systemwide average. Therefore, the discontinuation of light rail express service would not meet VTA's 10 percent disproportionate burden threshold.

9 RESTORATION OF SERVICE

Presently, VTA has no plan to restore light rail express service. However, express service of a similar nature could be considered if additional funds become available in the future.

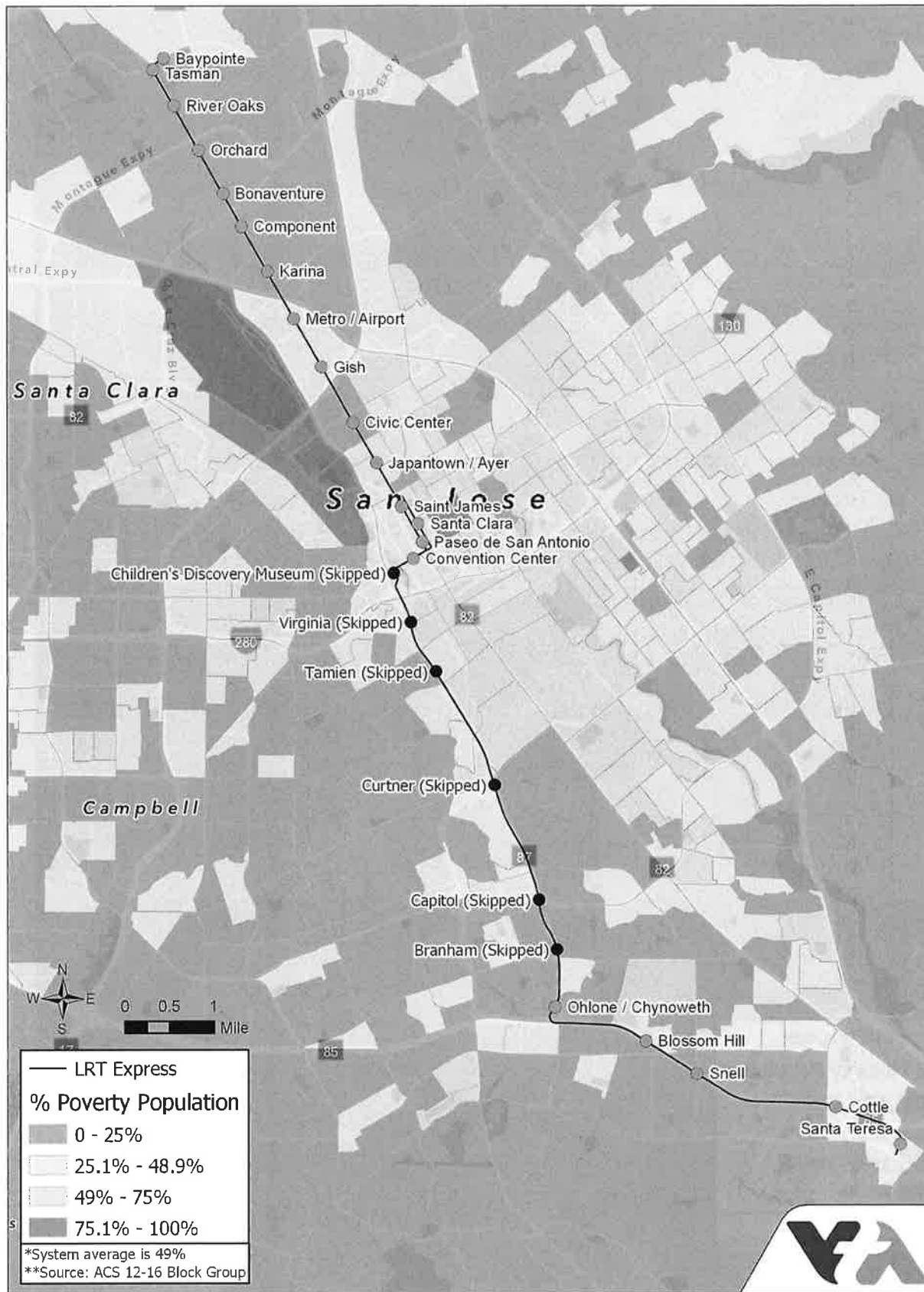
Title VI Service Equity Analysis of Light Rail Express Service Discontinuation

FIGURE 2 – MAP OF MINORITY RESIDENTS ALONG EXPRESS SERVICE



Title VI Service Equity Analysis of Light Rail Express Service Discontinuation

FIGURE 3 – MAP OF LOW INCOME RESIDENTS ALONG EXPRESS SERVICE



Resolution for Board Adoption of Major Service Change, Disparate Impact, and Disporportionate Burden Policies

VTA Title VI Program
November 2016



Part of every trip you take SM

From: Baltao, Elaine
To: Board.Secretary;
Subject: November 7, 2013 Board of Directors Meeting
Date: Friday, November 08, 2013 1:06:27 PM

The VTA Board of Directors met last night and took the following actions:

Removed from agenda: Item #3.4 – TAEA labor contract

Approved all remaining items on the Consent and Regular Agenda.

The Board of Directors adjourned the meeting in memory of VTA Employee, Anita Jacobson.

Office of the Board Secretary
Santa Clara Valley Transportation Authority
3331 N. First Street
San Jose, CA 95134
408.321.5680
board.secretary@vta.org



BOARD OF DIRECTORS MEETING

Thursday, November 7, 2013

5:30 PM

Board of Supervisors' Chambers
 County Government Center
 70 West Hedding Street
 San Jose, CA 95110

****REVISED AGENDA****

To help you better understand, follow, and participate in the meeting, the following information is provided:

- Persons wishing to address the Board of Directors on any item on the agenda or not on the agenda should complete a blue card located at the public information table and hand it to the Board Secretary staff prior to the meeting or **before the item is heard**.
- Speakers will be called to address the Board when their agenda item(s) arise during the meeting and are asked to limit their comments to 2 minutes. The amount of time allocated to speakers may vary at the Chairperson's discretion depending on the number of speakers and length of the agenda. **If presenting handout materials, please provide 25 copies to the Board Secretary for distribution to the Board of Directors.**
- The Consent Agenda items may be voted on in one motion at the beginning of the meeting under Orders of the Day. If you wish to discuss any of these items, please request the item be removed from the Consent Agenda by completing a blue card at the public information table and handing it to the Board Secretary staff prior to Orders of the Day, Agenda Item #1.2.

***Changes from previous version:*

- *Agenda Item #7.7- 2014 STIP Program Adoption requires 2/3 vote*
- *Agenda language updated for Agenda Item #8.2 –Santa Clara Alum Rock Bus Rapid Transit Project- Civil and Station Improvements Contract, to reflect the recommended contractor and contract amount.*

- Disclosure of Campaign Contributions to Board Members (Government Code Section 84308)

In accordance with Government Code Section 84308, no VTA Board Member shall accept, solicit, or direct a contribution of more than \$250 from any party, or his or her agent, or from any participant, or his or her agent, while a proceeding involving a license, permit, or other entitlement for use is pending before the agency. Any Board Member who has received a contribution within the preceding 12 months in an amount of more than \$250 from a party or from any agent or participant shall disclose that fact on the record of the proceeding and shall not make, participate in making, or in any way attempt to use his or her official position to influence the decision.

A party to a proceeding before VTA shall disclose on the record of the proceeding any contribution in an amount of more than \$250 made within the preceding 12 months by the party, or his or her agent, to any Board Member. No party, or his or her agent, shall make a contribution of more than \$250 to any Board Member during the proceeding and for three months following the date a final decision is rendered by the agency in the proceeding. The foregoing statements are limited in their entirety by the provisions of Section 84308 and parties are urged to consult with their own legal counsel regarding the requirements of the law.

- All reports for items on the open meeting agenda are available for review in the Board Secretary's Office, 3331 North First Street, San Jose, California, (408) 321-5680, the Monday, Tuesday, and Wednesday prior to the meeting. This information is available on our website, www.vta.org, and also at the meeting. Any document distributed less than 72-hours prior to the meeting will also be made available to the public at the time of distribution. Copies of items provided by members of the public at the meeting will be made available following the meeting upon request.

In accordance with the Americans with Disabilities Act (ADA) and Title VI of the Civil Rights Act of 1964, VTA will make reasonable arrangements to ensure meaningful access to its meetings for persons who have disabilities and for persons with limited English proficiency who need translation and interpretation services. Individuals requiring ADA accommodations should notify the Board Secretary's Office at least 48-hours prior to the meeting. Individuals requiring language assistance should notify the Board Secretary's Office at least 72-hours prior to the meeting. The Board Secretary may be contacted at ☎(408) 321-5680 or ✉: board.secretary@vta.org or ☎ (408) 321-2330 (TTY only). VTA's home page is on the web at: www.vta.org or visit us on Facebook at: www.facebook.com/scvta. ☎(408) 321-2300: 中文 / Español / 日本語 / 한국어 / tiếng Việt / Tagalog.

NOTE: THE BOARD OF DIRECTORS MAY ACCEPT, REJECT OR MODIFY ANY ACTION RECOMMENDED ON THIS AGENDA.

70 West Hedding St., San Jose, California is served by bus lines *61, 62, 66, 181, and Light Rail. (*61 Southbound last trip is at 8:55 pm for this location.)

For trip planning information, contact our Customer Service Department at (408) 321-2300 between the hours of 6:00 a.m. to 7:00 p.m. Monday through Friday and 7:30 a.m. to 4:00 p.m. on Saturday. Schedule information is also available on our website, www.vta.org.

1. CALL TO ORDER AND ROLL CALL

- 1.1. ROLL CALL
- 1.2. Orders of the Day - approve Consent Agenda (Item #7)

2. AWARDS AND COMMENDATION

- 2.1. INFORMATION ITEM -Recognize Maria Luisa Sanchez-Ku, Human Resources Analyst, River Oaks Administration; Ronald Langston, Coach Operator, Chaboya Division; and Jose Hernandez, Senior Track Worker, Guadalupe Division, as Employees of the Month for November 2013.

3. CLOSED SESSION

- 3.1. Recess to Closed Session
 - A. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)
 - B. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Truck Rail Handling, Inc., et al. v. Santa Clara Valley Transportation Authority, et al.
(Alameda County Superior Court Case No.: RG12628077)
 - C. Anticipated Litigation - Conference with Legal Counsel
Initiation of litigation pursuant to Government Code Section 54956.9(c).

Number of potential cases: 1
Name of potential opposing party: Union Pacific
 - D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1
 - E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives
Bill Lopez, Chief Administrative Officer
Robert L. Escobar, Deputy Director, Administrative Services
Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

- 3.2. Reconvene to Open Session
- 3.3. Closed Session Report
- 3.4. ACTION ITEM - Approve and authorize the General Manager to execute the amended successor labor agreement negotiated between the Santa Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA), IFPTE, Local 21.

4. PUBLIC COMMENT

This portion of the meeting is reserved for persons desiring to address the Board of Directors on any item within the Board's jurisdiction. Speakers are **limited to 2 minutes**. The law does not permit Board action or extended discussion of any item not on the agenda except under special circumstances. If Board action is requested, the matter can be placed on a subsequent agenda. All statements that require a response will be referred to staff for reply in writing.

5. PUBLIC HEARINGS

There are no public hearings.

6. REPORTS

- 6.1. Citizens Advisory Committee (CAC) Chairperson's Report. (Verbal Report) (Brownley)
- 6.2. Policy Advisory Committee (PAC) Chairperson's Report. (Verbal Report) (Price)
- 6.3. General Manager Report. (Verbal Report)
 - 6.3.A. INFORMATION ITEM -Receive Silicon Valley Rapid Transit (SVRT) Program Update.
 - 6.3.B. Receive updates regarding Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) activities.
- 6.4. Chairperson's Report. (Verbal Report)

7. CONSENT AGENDA

- 7.1. Approve the Board of Directors Workshop Meeting Minutes of September 27, 2013.

- 7.2. Approve the Board of Directors Regular Meeting Minutes of October 3, 2013.
- 7.3. ACTION ITEM -Review and accept the Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the period ending June 30, 2013.
- 7.4. ACTION ITEM -Revise the VTA Permit Policy to authorize the General Manager to waive fees for parties making transit improvements for VTA and adopt a resolution amending the VTA Permit Fee Schedule, adjusting fees to be collected for Construction Access Permits and Restricted Access Permits to be consistent with the revision of VTA allocated rates.
- 7.5. ACTION ITEM -Adopt the 2013 VTA Congestion Management Program (CMP).
- 7.6. ACTION ITEM -Approve the allocation of \$5,460,000 of Local Program Reserve (LPR) to:
- | | |
|--|---------------|
| SR 680 Corridor Study | \$250,000 |
| I-280 Corridor Study | \$250,000 |
| I-280/Winchester Blvd Off-Ramp | \$250,000 |
| US 101 Auxiliary Lanes Project | \$260,000 and |
| SR 237, SR 85 and US 101 Express Lanes | \$4,450,000 |
- 7.7. ACTION ITEM -Adopt a resolution to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds.
- Note: Motion must be approved by at least 2/3 of the Board (8 members).**
- 7.8. ACTION ITEM -Authorize the General Manager to execute a contract with GECMS Inc. dba Gyeron Construction, the second lowest responsible bidder, in the amount of \$337,400 for the construction of Pedestrian Swing Gates Replacement, and relieve the low bidder of its obligation to perform the contract.
- 7.9. ACTION ITEM -Review and receive the Auditor General's internal audit report on Investment Program Controls.
- 7.10. ACTION ITEM -Approve the following Internal Audit Work Plans developed and recommended by the VTA Auditor General:
1. Fiscal Year (FY) 2014 for a maximum amount of \$358,800. This item replaces the Interim FY 2014 Internal Audit Work Plan approved by the Board on June 6, 2013 for a maximum amount of \$290,500.
 2. FY 2015 for a maximum amount of \$364,500.
- 7.11. ACTION ITEM -Review and receive the Auditor General's report on the Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment.

AGENDAVTA Board of Directors
Thursday, November 7, 2013

-
- 7.12. ACTION ITEM -Review and receive the Auditor General's report on the Sheriff's Office Contract Compliance Internal Audit.
 - 7.13. INFORMATION ITEM -Review the Monthly Legislative History Matrix.
 - 7.14. INFORMATION ITEM -Review VTA's adopted Sound Barrier Program.
 - 7.15. INFORMATION ITEM -Receive a status update on implementation of the VTA Integrity Helpline.

8. REGULAR AGENDA

- 8.1. ACTION ITEM -Adopt the proposed Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies as mandated by Federal Transit Administration (FTA) Title VI guidelines.
- 8.2. ACTION ITEM -Authorize the General Manager to execute a contract with Goodfellow Top Grade, the lowest responsible bidder, in the amount of \$54,163,685 for the construction of the Santa Clara Alum Rock Bus Rapid Transit Project - Civil and Station Improvements.

9. OTHER ITEMS

- 9.1. ITEMS OF CONCERN AND REFERRAL TO ADMINISTRATION
- 9.2. Reports from VTA Committees, Joint Powers Boards (JPB), and Regional Commissions
 - 9.2.A. VTA Standing Committees
 - 9.2.B. VTA Advisory Committees
 - 9.2.C. VTA Policy Advisory Boards (PAB)
 - 9.2.D. Joint Powers Boards and Regional Commissions
- 9.3. Announcements

- 10. **ADJOURN** in memory of Anita Jacobson, former VTA Employee.
-



BOARD OF DIRECTORS MEETING

Thursday, November 7, 2013

MINUTES

1. CALL TO ORDER AND ROLL CALL

The Regular Meeting of the Santa Clara Valley Transportation Authority's (VTA) Board of Directors was called to order by Chairperson Pirzynski at 5:41 p.m. in the Board of Supervisors' Chambers, County Government Center, 70 West Hedding Street, San José, California.

1.1. ROLL CALL

Attendee Name	Title	Status
Margaret Abe-Koga	Board Member	Present
Xavier Campos	Board Member	Absent
Larry Carr	Alternate Board Member	Absent
Cindy Chavez	Board Member	Present
Jose Esteves	Board Member	Present
Rose Herrera	Board Member	Absent
Ash Kalra	Vice Chairperson	Present
Johnny Khamis	Alternate Board Member	Absent
Sam Liccardo	Board Member	Present
Jamie Matthews	Board Member	Absent
Chuck Page	Alternate Board Member	Absent
Joe Pirzynski	Chairperson	Present
Gail A. Price	Alternate Board Member	Absent
Donald Rocha	Board Member	Present
David Whittum	Alternate Board Member	Present
Perry Woodward	Board Member	Present
Ken Yeager	Board Member	Absent

* Alternates do not serve unless participating as a Member.

A quorum was not present and a Committee of the Whole was declared.

1.2. Orders of the Day

Chairperson Pirzynski, noted that the Agenda was revised to reflect the following: **Agenda Item #7.7:** 2014 Stated Transportation Improvement Program Adoption needs 2/3 vote; **Agenda Item #8.2:** Authorize the General Manager to execute a contract with the lowest responsible bidder for the Santa Clara Alum Rock Bus Rapid Transit Project- Civil and Station Improvements; and added **Addendum #3.1.E.X:** Conference with Real Property Negotiators.

Chairperson Pirzynski, noted that staff requested the following items be removed from Agenda: **Agenda Item #3.1.B:** Existing Litigation-Conference with Legal Counsel; **Agenda Item #3.1.C:** Anticipated Litigation-Conference with Legal Counsel; and **Agenda Item 3.4:** Labor Agreement negotiation between the Santa

Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA).

Chairperson Pirzynski, noted that the Board Meeting will adjourn in memory of Anita Jacobson.

Board Member Liccardo and Board Member Rocha arrived and took their seats at 5:44 p.m. and a quorum was established.

Public Comment

The following public citizens expressed support for Sound Wall barriers in the Capitol/680/Alum Rock area for noise reduction, safety of the community and safety of homes located close to the freeway.

- Alofa Talivaa
- Ulitafa Mariner

Board Member Kalra expressed support for soundwalls.

Board Member Esteves expressed his support for soundwalls but expressed concern that soundwalls along I-680 in the City of Milpitas should be completed first. Board Member Esteves noted he will oppose Agenda Items #7.6 and #7.7.

M/S/C (Woodward/Chavez) on a vote of 7 ayes, 1 no and 0 abstention to accept the Orders of the Day and approve the Consent Agenda. Board Member Esteves opposed Agenda Items #7.6 and #7.7. Motion for Agenda Item 7.7 failed.

M/S/C (Liccardo/Chavez) to reconsider Agenda Item #7.7.

Vice Chairperson Kalra recommended removing Agenda Item #7.7 from Consent Agenda and place it on the Regular Agenda.

On order of Chairperson Pirzynski and there being no objection, the Board of Directors removed Agenda Item 7.7 from the Consent Agenda and placed it on the Regular Agenda.

2. AWARDS AND COMMENDATION

2.1 Employees of the Month for October 2013

Chairperson Pirzynski recognized Maria Luisa Sanchez-Ku, Human Resources Analyst, River Oaks Administration; Ronald Langston, Coach Operator, Chaboya Division; Jose Hernandez, Senior Track Worker, Guadalupe Division.

NOTE: M/S/C MEANS MOTION SECONDED AND CARRIED AND, UNLESS OTHERWISE INDICATED, THE MOTION PASSED UNANIMOUSLY.

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7.1b

3. CLOSED SESSION**Public Comment**

The following VTA Employees and members of Transportation Authority Engineers and Architects Association (TAEA) addressed the Board of Directors and stressed the importance of realigning wages of TAEA members to attract and retain qualified employees. Members of TAEA commented that VTA Engineers make 12.5% under the average in salary compensation when compared to other counterparts at other local agencies and cities in the county.

- Harry Yip
- Franceen Weisert Anderson
- John Duesterhaus
- Bob Magliocco
- Manjit Singh Khalsa
- Kris Sabherwal
- Raj Sehdev
- Rachel Martinez

Board Member Abe Koga arrived and took her seat at 6:02 p.m.

3.1. Recess to Closed Session at 6:11 p.m.**A. Existing Litigation - Conference with Legal Counsel**
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

B. (Removed from the Agenda)

Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Truck Rail Handling, Inc., et al. v. Santa Clara Valley Transportation Authority, et al.
(Alameda County Superior Court Case No.: RG12628077)

C. (Removed from the Agenda)

Anticipated Litigation - Conference with Legal Counsel
Initiation of litigation pursuant to Government Code Section 54956.9(c).

Number of potential cases: 1

Name of potential opposing party: Union Pacific

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7.1.b

- D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

- E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives

Bill Lopez, Chief Administrative Officer
Robert L. Escobar, Deputy Director, Administrative Services
Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

- 3.1.E.X Conference with Real Property Negotiators
[Government Code Section 54956.8]

Property: Partial fee interest, permanent utility easements and a temporary construction easement on the property located at 3501 Tasman Drive in Santa Clara, California (APN: 104-49-029)

Agency Negotiator: Bijal Patel, Deputy Director, Property Development & Management

Negotiating Party: Michael Pelletier, Lake Marriott, LLC c/o Divco West

Under Negotiation: Price and terms of payment

3.2. Reconvened to Open Session at 7:40 p.m.

3.3. Closed Session Report

- A. Existing Litigation - Conference with Legal Counsel
[Government Code Section 54956.9(a)]

Name of Case: Santa Clara Valley Transportation Authority v. Eastridge Shopping Center (Eminent Domain)
(Santa Clara Superior Court Case No.: 1-11-CV-209524)

Robert Fabela, General Counsel, reported that no reportable action was taken during Closed Session.

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- D. Anticipated Litigation - Conference with Legal Counsel
Significant exposure to litigation pursuant to Government Code Section 54956.9(b).

Number of potential cases: 1

Mr. Fabela reported that no reportable action was taken during Closed Session.

- E. Conference with Labor Negotiators
[Government Code Section 54957.6]

VTA Designated Representatives

Bill Lopez, Chief Administrative Officer
Robert L. Escobar, Deputy Director, Administrative Services
Joseph Smith, Chief Financial Officer

Employee Organizations

Transportation Authority Engineers and Architects Association (TAEA),
IFPTE, Local 21

Mr. Fabela reported that no reportable action was taken during Closed Session.

- 3.1.E.X Conference with Real Property Negotiators
[Government Code Section 54956.8]

Property: Partial fee interest, permanent utility easements and a temporary construction easement on the property located at 3501 Tasman Drive in Santa Clara, California (APN: 104-49-029)

Agency Negotiator: Bijal Patel, Deputy Director, Property Development & Management

Negotiating Party: Michael Pelletier, Lake Marriott, LLC c/o Divco West

Under Negotiation: Price and terms of payment

Robert Fabela reported that no reportable action was taken during Closed Session.

3.4 (Removed from the Agenda)

ACTION ITEM - Approve and authorize the General Manager to execute the amended successor labor agreement negotiated between the Santa Clara Valley Transportation Authority (VTA) and Transportation Authority Engineers and Architects Association (TAEA), IFPTE, Local 21.

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4. PUBLIC COMMENT

Ron Roberts, VTA employee and member of Service Employees International Union (SEIU) provided a brief overview of the handout that was distributed to all Board members.

Bill Hawthorne, Interested Citizen, expressed concern about VTA liability due to projects related to BART.

Marc DeLong, VTA Employee and TAEA member addressed the Board of Directors and stressed the importance of realigning wages of TAEA members to attract and retain qualified employees.

5. PUBLIC HEARINGS

There are no public hearings.

6. REPORTS

6.1. Citizens Advisory Committee (CAC) Chairperson's Report

Clinton Brownley provided a verbal report that highlighted the October 9, 2013 Citizens Advisory Committee meeting: 1) Caltrain Budget and Ridership Update; 2) Local Program Reserve Programming Actions; and 3) Adoption of VTA Title VI Policies and Standards.

6.2. Policy Advisory Committee (PAC) Chairperson's Report

A written report was provided and distributed to the Board Members.

6.3. General Manager's Report

Michael Burns, General Manager, provided a report highlighting the following: 1) Average weekday Ridership; and 2) VTA Hispanic Heritage Celebration on October 31, 2103.

6.3.A Silicon Valley Rapid Transit (SVRT) Program Update

Carolyn Gonot, Chief SVRT Program Officer, distributed a presentation entitled, "Bart Silicon Valley Update," highlighting: 1) Current Project Activities Fremont; 2) Current Project Activities Milpitas; 3) Current Project Activities San Jose; 4) Design-Build Parking Structures Contract & Parking Technology Procurement; and 5) Residential Noise Insulation Program (RNIP) Update and Next Steps.

6.3.B. Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) updates.

There were no reports from the Metropolitan Transportation Commission (MTC) and California Transportation Commission (CTC) Activities.

On order of Chairperson Pirzynski and there being no objection to receive the General Manager's Report

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6.4. Chairperson's Report

Chairperson Pirzynski noted Michael Hursh, Chief Operating Officer, will provide a brief presentation on VTA Rail Safety.

Mr. Hursh provided a presentation entitled, "VTA Roadway Worker Protection," highlighting: 1) Track Access – Program Elements; 2) Light Rail Operator Training; 3) Work Zones; 4) Accessing the right of way; 5) VTA Compliance; 6) On Board Cameras; 7) Pocket Guides; and 8) Summary. Mr. Hursh noted advanced warning signs are going to be installed when trains are going at high speeds. Mr. Hursh added that the Board meeting will also adjourn in memoriam of the BART employees who passed away last month.

Chairperson Pirzynski noted the 2014 Chair & Vice Chair Election will be held during the December 2013 meeting. Chair Pirzynski noted that Board Member Kalra submitted a letter showing interest as the Chairperson for 2014 while Board Member Woodward and Alternate Board Member Price submitted letters showing interest as the Vice Chair for 2014. These letters are available on the dais.

Chairperson Pirzynski noted that the 2014 Board of Directors Meeting schedule is provide and advised all members to review.

7. CONSENT AGENDA**7.1. Board of Directors Workshop Meeting Minutes of September 27, 2013**

M/S/C (Woodward/Chavez) to approve the Board of Directors Workshop Meeting Minutes of September 27, 2013.

7.2. Board of Directors Workshop Regular Minutes of October 3, 2013

M/S/C (Woodward/Chavez) to approve the Board of Directors Regular Meeting Minutes of October 3, 2013.

7.3. Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the Period Ending June 30, 2013

M/S/C (Woodward/Chavez) to review and accept the Fiscal Year 2013 Quarterly Statement of Revenues and Expenses for the period ending June 30, 2013.

7.4. VTA Permit Fee Schedule Revisions

M/S/C (Woodward/Chavez) to revise the VTA Permit Policy to authorize the General Manager to waive fees for parties making transit improvements for VTA and adopt **Resolution No. 2013.11.24** amending the VTA Permit Fee Schedule, adjusting fees to be collected for Construction Access Permits and Restricted Access Permits to be consistent with the revision of VTA allocated rates.

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7.5. Adopt the 2013 VTA Congestion Management Program (CMP)

M/S/C (Woodward/Chavez) to adopt the 2013 VTA Congestion Management Program (CMP).

7.6. Local Program Reserve Programming Actions

M/S/C (Woodward/Chavez) to approve the allocation of \$5,460,000 of Local Program Reserve (LPR) to:

SR 680 Corridor Study	\$250,000
I-280 Corridor Study	\$250,000
I-280/Winchester Blvd Off-Ramp	\$250,000
US 101 Auxiliary Lanes Project	\$260,000
SR 237, SR 85 and US 101 Express Lanes	\$4,450,000

7.7. (Removed from the Consent Agenda and placed on the Regular Agenda)

Adopt a resolution to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds.

7.8. Pedestrian Swing Gates Replacement

M/S/C (Woodward/Chavez) to authorize the General Manager to execute a contract with GECMS Inc. dba Gyeron Construction, the second lowest responsible bidder, in the amount of \$337,400 for the construction of Pedestrian Swing Gates Replacement, and relieve the low bidder of its obligation to perform the contract.

7.9. Investment Program Controls Internal Audit

M/S/C (Woodward/Chavez) to review and receive the Auditor General's internal audit report on Investment Program Controls.

7.10. Auditor General Recommended FY 2014 & FY 2015 Internal Audit Work Plans

M/S/C (Woodward/Chavez) to approve the following Internal Audit Work Plans developed and recommended by the VTA Auditor General:

1. Fiscal Year (FY) 2014 for a maximum amount of \$358,800. This item replaces the Interim FY 2014 Internal Audit Work Plan approved by the Board on June 6, 2013 for a maximum amount of \$290,500.
2. FY 2015 for a maximum amount of \$364,500.

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7.11. Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment

M/S/C (Woodward/Chavez) to review and receive the Auditor General's report on the Silicon Valley Rapid Transit Program Project Delivery Method and Project Execution Assessment.

7.12. Sheriff's Office Contract Compliance Internal Audit

M/S/C (Woodward/Chavez) to review and receive the Auditor General's report on the Sheriff's Office Contract Compliance Internal Audit.

7.13. Monthly Legislative History Matrix

M/S/C (Woodward/Chavez) to review the Monthly Legislative History Matrix.

7.14. VTA Noise Barrier Program

M/S/C (Woodward/Chavez) to review VTA's adopted Sound Barrier Program.

7.15. VTA Integrity Helpline Program Status Update

M/S/C (Woodward/Chavez) to receive a status update on implementation of the VTA Integrity Helpline.

8. REGULAR AGENDA**8.1. Adoption of VTA Title VI Policies and Standards**

Michael Burns, General Manager, noted that the Title VI policies are a continuation of comprehensive discussions that began at the Board of Directors Workshop and continued throughout VTA's various committee meetings. Mr. Burns noted the Title VI policies are required and mandated by Federal Transit Administration (FTA). Mr. Burns stated Sylvester Fadal, Human Resources Manager, will review the following: Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies.

Mr. Fadal reviewed the Title VI presentation included in the agenda packet. He referenced Slide 5 – Public Engagement, and noted that staff conducted extensive outreach including community meetings and presentations to the organizations and stakeholders within the area where VTA service is provided. The feedback gathered through this outreach process was considered in the policies being presented for approval.

Mr. Fadal stated the Disparate Impact Policy is designed to address the effects that fare or major service changes have on minority populations, which VTA has always done. The proposed Disparate Impact Policy documents the processes and the application of a threshold that is used when analyzing proposed fare or major service changes.

The Disproportionate Burden Policy is similar to the Disparate Impact Policy but focuses on the effects that fare and major services changes have on low-income populations. The same 10 percent threshold is applied to determine if the low-income riders are more negatively affected or less positively affected by the proposed change than VTA riders as a whole.

Mr. Fadal referred to slide 14 - Service Equity Analysis example, which presents a graphic layout of how VTA conducts equity analysis for proposed major services changes to determine if disparate impacts to minority riders exist. An equity analysis is conducted for proposed major services changes whether the changes are a reduction or an improvement of service. When analyzing changes for disparate impacts, VTA evaluates the impact of those changes to minority riders compared to the overall ridership. If the impacts are significant and higher than the set threshold, VTA will make every effort to mitigate those impacts and address the needs of the community.

The System-Wide Service Standards & Policies are used to track, monitor, and evaluate VTA's service performance to prohibit discrimination on the basis of race, color, or national origin. Critical areas that are evaluated include: peak load factors, headways, on-time performance, service availability, and ridership productivity. Mr. Fadal noted that this policy ensures that VTA services and resources are distributed equitably.

Board Member Chavez recommended that in future reports regarding service related changes, staff should indicate Title VI policies compliance and the benchmarks used.

Mr. Burns noted that in general, transit agencies note that but it is not as prominent. If the policies discussed are adopted by the Board, the future reports would prominently outline the analysis and the compliance to the policies and regulations.

Upon inquiry of Board Member Chavez, Mr. Burns responded that when VTA conducted the Comprehensive Operations Analysis, staff studied and evaluated each route in the system and made appropriate changes. When the services were rebalanced, the analysis showed that VTA provided more services to transit dependent and lower-income neighborhoods.

Alternate Board Member Whittum, inquired about the specific bus change in January 2008 in the City of Sunnyvale. Staff noted the inquiry and stated a response will be prepared.

M/S/C (Chavez/Woodward) to adopt the proposed Major Service Change, Disparate Impact and Disproportionate Burden Policies and the System-wide Service Standards & Policies as mandated by Federal Transit Administration (FTA) Title VI guidelines.

CERTIFIED COPY

7.7. 2014 STIP Program Adoption

John Ristow, Chief CMA Officer presented a brief overview of the staff report.

Public Comment

Art Calderon, Interested Citizen, expressed support for Sound Wall barriers in the Capitol/680/Alum Rock area for safety of the community and safety of homes located close to the area.

Board Member Esteves expressed his opposition to Agenda Item #7.7.

M/S/C (Liccardo/Kalra) on a vote of 8 ayes, 1 no and 0 abstention to adopt **Resolution No. 2013.11.25** to program 2014 State Transportation Improvement Program (STIP) capacity to projects; approve a funding exchange of \$14.5 million in STIP funds for \$14.5 million in Measure A funds; increase the 2000 Measure A Transit Improvement Program Fund Capital Budget by \$14.5 million; and authorize the General Manager to execute appropriate funding agreements to receive STIP funds. Board Member Esteves opposed.

Board Member Kalra left his seat at 8: 27 pm.

8.2. Santa Clara Alum Rock Bus Rapid Transit Project – Civil and Station Improvements Contract

Mark Robinson, Chief Engineering & Construction Officer, presented a brief overview of the staff report.

Public Comment

Paul Cianciarulo, Graniterock Company, expressed opposition to awarding the Santa Clara – Alum Rock Bus Rapid Transit Bid Project to Goodfellow Top Grade Construction.

Brian Gates, Goodfellow Top Grade Construction, expressed his thanks and appreciation to VTA Staff and the Board of Directors. Mr. Gates commended VTA Staff for the professionalism that was carried out through the process.

M/S/C (Chavez/ Woodward) to authorize the General Manager to execute a contract with Goodfellow Top Grade, the lowest responsible bidder, in the amount of \$54,163,685 for the construction of the Santa Clara Alum Rock Bus Rapid Transit Project - Civil and Station Improvements.

9. OTHER ITEMS**9.1. ITEMS OF CONCERN AND REFERRAL TO ADMINISTRATION**

There were no Items of Concern and Referral to Administration.

9.2. Reports from VTA Committees, Joint Powers Boards (JPB), and Regional Commissions.

9.2.A. VTA Standing Committees

- Committee of the Whole (COW) – October 17, 2013, Minutes as contained in the Agenda Packet.
- Administration and Finance Committee (A&F) – There was no report.
- Congestion Management Program and Planning Committee (CMPP) – There was no report.
- Transit Planning and Operations Committee (TP&O) – There was no report.
- Audit Committee – There was no report.
- Silicon Valley Rapid Transit Program Working Committee – There was no report.

9.2.B. VTA Advisory Committees

- Committee for Transit Accessibility (CTA) – October 9, 2013, Minutes as contained in the Agenda Packet.
- Citizens Advisory Committee (CAC) and 2000 Measure A Citizens Watchdog Committee (CWC) – October 9, 2013, Minutes as contained in the Agenda Packet.
- Bicycle & Pedestrian Advisory Committee (BPAC) – There was no report.
- Technical Advisory Committee (TAC) – There was no report.
- Policy Advisory Committee (PAC) – October 10, 2013, Minutes as contained in the Agenda Packet.

9.2.C. VTA Policy Advisory Boards (PAB)

- Diridon Station Joint Policy Advisory Board - There was no report.
- Downtown East Valley PAB - There was no report.
- El Camino Real Rapid Transit PAB - There was no report.
- Silicon Valley Rapid Transit Corridor and BART Warm Springs Extension PAB - There was no report.

9.2.D. Joint Powers Boards and Regional Commissions

- Peninsula Corridor JPB – November 7, 2013, Summary Notes were accepted as contained on the dais.
- Capitol Corridor JPB – There was no report.
- Dumbarton Rail Corridor Policy Committee - There was no report.
- Metropolitan Transportation Commission (MTC) – October 23, 2013, Summary Notes were accepted as contained on the dais.
- Sunol Smart Carpool Lane Joint Powers Authority - There was no report.
- SR 152 Mobility Partnership - There was no report.

9.3. ANNOUNCEMENTS

Board Member Rocha expressed his thanks to Michael Burns, General Manager and Jim Lawson, Executive Policy Advisor for addressing a referral submitted in a timely manner.

10. ADJOURNMENT

On order of Chairperson Pirzynski and there being no objection, the meeting was adjourned in memory of Anita Jacobson, Laurence Daniels, and David Sheppard at 8:35 p.m.

Respectfully submitted,



Theadora Travers, Board Assistant
VTA Office of the Board Secretary

I certify that the foregoing instrument is a true and exact copy of the original on file in the Secretary of the Board of Director's office.


Date 12/7/13

1.0 Purpose:

Title VI (codified at 42 U.S.C. §2000 et seq.) was enacted as part of the landmark Civil Rights Act of 1964. It prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

In order to comply with Federal Transit Administration’s (FTA) Title VI Circular 4702.1B and Environmental Justice Circular 4703.1 requirements, VTA is required to create and adopt Major Service Change, Disparate Impact, and Disproportionate Burden Policies. These policies are used during the planning process to evaluate the impact of major service and fare changes on minority and low income passengers.

In the development of these policies, VTA was also required to seek input from the community, including low-income, minority, and limited English proficient populations, which are traditionally under-represented in the transit decision-making process.

2.0 Scope:

These policies apply to all “major” service changes, and to all fare changes, regardless of magnitude, except as specifically defined herein.

3.0 Responsibilities:

All VTA employees are required to comply with federal and state Title VI and environmental justice laws, regulations, and administrative directives with regard to policies, projects, programs, services, and activities. The Title VI and Environmental Justice Procedures describe divisional and departmental responsibilities.

4.0 Policy:

In accordance with FTA Title VI requirements, VTA shall perform a Service or Fare Equity Analysis to evaluate the positive and negative impacts of all major service and fare changes on minority and low income passengers. The Major Service Change policy determines which proposed service changes require an Equity Analysis. The Disparate Impact and Disproportionate Burden policies contained provide guidance to staff in their analysis of the effects of the proposed changes. As previously noted, all fare changes proposals are subject to a Fare Equity Analysis.

VTA’s Board of Directors must approve the Major Service Change, Disparate Impact, and Disproportionate Burden policies before they can be incorporated into the Title VI Program and submitted to the FTA. Any future amendments to the policies are also subject to Board review.



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TITLE VI AND ENVIRONMENTAL JUSTICE POLICIES	POLICY		7.1.b
	Appendix: Title VI Policy and Approval		
	Document Number:	AS-HR-PL-2582	
	Version Number:	01	

4.1 Major Service Change Policy

VTA implements service changes on a quarterly basis in January, April, July and October. Proposed “major” service changes must be submitted to the VTA Board of Directors for review and approval. For Title VI purposes, all “major” service changes will require a Service Equity Analysis.

The following modifications shall be considered “major” service changes:

- The establishment of a new transit line or service;
- The elimination of a transit line or service;
- A route change that impacts 25 percent or more of a line’s route miles;
- Span of service or frequency changes affecting 25 percent or more of a line’s revenue vehicle hours;
- A series of changes on a single route which are included in the two-year Transit Service Plan and cumulatively meet any of the above criteria;
- Proposed changes that are anticipated to be controversial with a particular community or interested parties based on public feedback; and
- A system-wide change concurrently affecting 5 percent or more of the total system revenue hours.

The following types of modifications are not classified as “major” service changes and shall not require Service Equity Analyses:

- Special event service;
- Routing changes due to construction or other road closures; and
- Special service operated during emergencies;

Service change proposals that do not meet the criteria for “major” service changes are still subject to an appropriate level of public review and comment.

4.2 Disparate Impact Policy

The Disparate Impact Policy establishes a threshold for determining if a given service or fare change would result in a fair distribution of positive and negative effects on minority passengers.

As defined by FTA Title VI Circular 4702.1B:

Disparate impact refers to a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists



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one or more alternatives that would service the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.

The policy shall establish a threshold for determining when adverse effects of fare/service changes are borne disproportionately by minority populations. The disparate impact threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by minority populations compared to impacts borne by non-minority populations. The disparate impact threshold must be applied uniformly... and cannot be altered until the next Title VI Program submission.

For Service or Fare Equity Analyses conducted by VTA, a disparate impact threshold of 10 percent shall be used to determine if minority riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference between the aggregate impacts of the proposed change(s) on minority passengers and the aggregate impacts of the proposed change(s) on overall VTA ridership. Analyses shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

If VTA finds that a disparate impact exists, it shall analyze alternatives to determine if another alternative could serve the same legitimate objective with less of a disparate impact. If a less discriminatory alternative does not exist and VTA has substantial legitimate justification that cannot otherwise be accomplished, VTA shall mitigate the impact of the change on affected minority riders.

4.3 Disproportionate Burden Policy

The Disproportionate Burden Policy establishes a threshold for determining if a given service or fare change would result a fair distribution of positive and negative effects on low-income riders.

As defined by FTA Title VI Circular 4702.1B:

Disproportionate burden refers to a neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate where practicable.

The policy shall establish a threshold for determining when



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adverse effects of service or fare changes are borne disproportionately by low-income populations. The disproportionate burden threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by low-income populations as compared to impacts born by non-low-income populations. The disproportionate burden threshold must be applied uniformly... and cannot be altered until the next Title VI Program submission.

For Service or Fare Equity Analyses conducted by VTA, a disproportionate burden threshold of 10 percent shall be used to determine if low-income riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference in the aggregate impacts of the proposed change(s) on low-income passengers compared to the aggregate impacts of the proposed change(s) on overall VTA ridership. Analyses shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

If VTA finds that low-income populations will incur a disproportionate burden from a proposed service or fare change, VTA shall identify alternatives available to affected low-income riders and take steps to avoid, minimize, or mitigate impacts where practicable.

5.0 Definitions:

5.1 Environmental Justice

The overarching objective of environmental justice is a fair distribution of the benefits or burdens associated with Federal programs, policies, and activities.

5.2 Fare Change

An increase or decrease in a transit provider’s fare. All fare changes, except the following, are subject to a fare equity analysis:

- “Spare the air days” or other instances when a local municipality or transit agency has declared that all passengers ride free.
- Temporary fare reductions that are mitigating measures for other actions.
- Promotional fare reductions. If promotional or temporary fare reductions last longer than six months, then FTA considers the fare reduction permanent and the transit provider must conduct a fare equity analysis.

5.3 Limited English Proficient (LEP) persons

Refers to persons for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English. It includes people who



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reported to the U.S. Census that they speak English less than very well, not well, or not at all.

5.4 Low-income Population

Refers to any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FTA program, policy, or activity.

5.5 Minority Population

Means a readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

5.6 National Origin

Means the particular nation in which a person was born, or where the person's parents or ancestors were born.

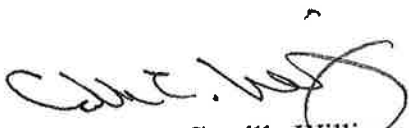
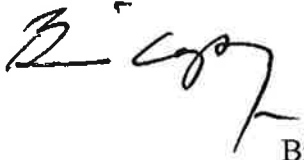

5.7 Title VI

Title VI of the Civil Rights Act of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participated in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

6.0 Summary of Changes:

Initial release of this policy. This policy was approved by the Board of Directors on November 7, 2013.

7.0 Approval Information:

<i>Prepared by</i>	<i>Reviewed by</i>	<i>Approved by</i>
 Camille Williams Title VI/LEP Project Manager	 Bill Lopez Chief Administrative Officer	 Michael T. Burns General Manager

11/19/13
Date Signed



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Exhibit 14: Board Adoption of 2017 Fare Changes
(PDF Inserted Below)

To help you better understand, follow, and participate in the meeting, the following information is provided:


- Persons wishing to address the Board of Directors on any item on the agenda or not on the agenda are requested to complete a blue card located at the public information table and hand it to the Board Secretary staff prior to the meeting or **before the item is heard**.
- Speakers will be called to address the Board when their agenda item(s) arise during the meeting and are asked to limit their comments to 2 minutes. The amount of time allocated to speakers may vary at the Chairperson's discretion depending on the number of speakers and length of the agenda. **If presenting handout materials, please provide 25 copies to the Board Secretary for distribution to the Board of Directors.**
- The Consent Agenda items may be voted on in one motion at the beginning of the meeting. The Board may also move regular agenda items on the consent agenda during Orders of the Day. If you wish to discuss any of these items, please request the item be removed from the Consent Agenda by notifying the Board Secretary staff or completing a blue card at the public information table prior to the meeting or prior to the Consent Agenda being heard.

- Disclosure of Campaign Contributions to Board Members (Government Code Section 84308)

In accordance with Government Code Section 84308, no VTA Board Member shall accept, solicit, or direct a contribution of more than \$250 from any party, or his or her agent, or from any participant, or his or her agent, while a proceeding involving a license, permit, or other entitlement for use is pending before the agency. Any Board Member who has received a contribution within the preceding 12 months in an amount of more than \$250 from a party or from any agent or participant shall disclose that fact on the record of the proceeding and shall not make, participate in making, or in any way attempt to use his or her official position to influence the decision.

A party to a proceeding before VTA shall disclose on the record of the proceeding any contribution in an amount of more than \$250 made within the preceding 12 months by the party, or his or her agent, to any Board Member. No party, or his or her agent, shall make a contribution of more than \$250 to any Board Member during the proceeding and for three months following the date a final decision is rendered by the agency in the proceeding. The foregoing statements are limited in their entirety by the provisions of Section 84308 and parties are urged to consult with their own legal counsel regarding the requirements of the law.

- All reports for items on the open meeting agenda are available for review in the Board Secretary's Office, 3331 North First Street, San Jose, California, (408) 321-5680, the Monday, Tuesday, and Wednesday prior to the meeting. This information is available on our website, www.vta.org, and also at the meeting. Any document distributed less than 72-hours prior to the meeting will also be made available to the public at the time of distribution. Copies of items provided by members of the public at the meeting will be made available following the meeting upon request.

In accordance with the Americans with Disabilities Act (ADA) and Title VI of the Civil Rights Act of 1964, VTA will make reasonable arrangements to ensure meaningful access to its meetings for persons who have disabilities and for persons with limited English proficiency who need translation and interpretation services. Individuals requiring ADA accommodations should notify the Board Secretary's Office at least 48-hours prior to the meeting. Individuals requiring language assistance should notify the Board Secretary's Office at least 72-hours prior to the meeting. The Board Secretary may be contacted at (408) 321-5680 or *e-mail: board.secretary@vta.org or (408) 321-2330 (TTY only). VTA's home page is on the web at: www.vta.org or visit us on  Facebook at: www.facebook.com/scvta. (408) 321-2300: 中文 / Español / 日本語 / 한국어 / tiếng Việt / Tagalog.

**NOTE: THE BOARD OF DIRECTORS MAY ACCEPT, REJECT OR MODIFY
ANY ACTION RECOMMENDED ON THIS AGENDA.**

70 West Hedding St., San Jose, California is served by bus lines *61, 62, 66, 181, and Light Rail. (*61 Southbound last trip is at 8:55 pm for this location.)

For trip planning information, contact our Customer Service Department at (408) 321-2300 between the hours of 6:00 a.m. to 7:00 p.m. Monday through Friday and 7:30 a.m. to 4:00 p.m. on Saturday. Schedule information is also available on our website, www.vta.org.



Date: May 26, 2017
Current Meeting: June 1, 2017
Board Meeting: June 1, 2017

BOARD MEMORANDUM

TO: Santa Clara Valley Transportation Authority
Board of Directors
THROUGH: General Manager, Nuria I. Fernandez
FROM: Chief Financial Officer, Raj Srinath
SUBJECT: Fare Policy Review

APPROVED ACCEPTED ADOPTED AMENDED DEFERRED REVIEWED (*)
Santa Clara Valley Transportation Authority
Board of Directors
Elaine F. Baltao, Board Secretary
BY: [Signature]
DATE: 6/1/2017

Policy-Related Action: Yes Government Code Section 84308 Applies: No

**Resolution
ACTION ITEM**

RECOMMENDATION:

- 1. Adopt a finding that a fare increase is necessary to meet operating expenses, including employee wages and fringe benefits and purchasing or leasing supplies, equipment, or materials.
- 2. Invoke a Statutory Exemption under CEQA, P. R.C. §21080(b)(8) and CEQA Guidelines Section 15273(a) (Rates, Tolls, Fares and Charges) for the purpose of modifying and increasing fares.
- 3. Consider and approve VTA’s Title VI Fare Equity Analysis.
- 4. Adopt a resolution establishing rates and fares for VTA bus, light rail, and paratransit services effective January 1, 2018.
- 5. Adopt a resolution establishing rates and fares for VTA bus, light rail, and paratransit services effective January 1, 2019.

BACKGROUND:

VTA is designing a more useful transit network that will meet the goals of increasing ridership, cost-effectiveness and regional connections. The last significant change to VTA fares took effect in 2009, when VTA increased the base fare from \$1.75 to \$2.00 and also raised Eco Pass fares by approximately 20%. Since then, VTA’s cost of providing service has increased whereas

VTA’s share of operating expenses recovered from fares (Fare Box Recovery Ratio) has declined. **Attachment A** provides a summary of VTA fares over the past decade. At the January Board meeting, staff outlined the need for the review of VTA’s fare policy as well as the six major areas in the fare policy for review, specifically an increase in the base fares, Youth fares, free VTA-VTA transfers, fares for Low Income riders, Community Bus fares, and Eco Pass fares.

* See Page 10X of 10X for motion approved by the Board of Directors at the June 1, 2017 meeting.

DISCUSSION:

Since the January 2017 Board meeting, VTA staff have attended nine community meetings across the county in coordination with the outreach efforts conducted for the service changes resulting from the redesign of VTA's bus network. In addition to the community meetings, VTA conducted an online survey to receive public input on four of the major areas in the fare policy review, including an increase in the base fares, free VTA-VTA transfers, Community Bus fares, and Youth fares. VTA received 2,457 completed surveys. VTA staff initiated meetings with Eco Pass participants in a separate series of meetings commencing the week of April 17th. Feedback from the general public has been generally positive, with the majority agreeing with or not objecting to raising the base fare to provide free transfers and reduced fares for youth. We have received a few concerns about the impact of increased fares on seniors with fixed incomes, and the availability of Clipper cards. Staff has analyzed the impact of the proposed changes and refined the proposals as discussed below. VTA staff presented this information to the Board at the April Board Workshop and will hold an additional five community meetings in May 2017 to present and discuss proposed fare policy changes.

Base Fare Adjustment

VTA has experienced increased costs in providing service but has not had a fare increase since 2009. Staff projects a fiscal deficit for FY 2017 in the range of \$20-25 million. Many of the Bay Area agencies have either already approved fare increases or are in the process of doing so. VTA staff reviewed two scenarios to increase the base fare by approximately 12.5% to 25% (i.e. the adult single ride would increase from \$2.00 to \$2.25 or \$2.50) along with increases in the associated fares such as the Day Pass and the Monthly Pass. Given the magnitude of the financial challenges faced by the organization, coupled with increased community requests for lower youth fares and free transfers, staff proposes moving forward with a 25% increase phased over two years starting January 1, 2018. The adult single ride fare will increase from \$2.00 to \$2.25 on January 1, 2018 and to \$2.50 on January 1, 2019. All associated fares would increase proportionately with the exception of paratransit fares which would remain unchanged.

A table of proposed fares is included below:

VTA Fares	Current Fare	January 1, 2018	January 1, 2019
ADULT			
Single Ride Cash	\$2.00	\$2.25	\$2.50
Community Bus	\$1.25	n/a	n/a
Light Rail Excursion Pass	\$4.00	\$4.50	\$5.00
Day Pass	\$6.00	\$7.00	\$7.50
Day Pass Token (bag of 5)	\$15.00	\$17.50	\$18.75
Express Cash	\$4.00	\$4.50	\$5.00
Express Day Pass	\$12.00	\$13.50	\$15.00
Monthly Pass	\$70.00	\$80.00	\$90.00
Annual Pass	\$770.00	\$880.00	\$990.00
Express Monthly Pass	\$140.00	\$160.00	\$180.00
Express Annual Pass	\$1,540.00	\$1,760.00	\$1,980.00
YOUTH			
Single Ride Cash	\$1.75	\$1.00	\$1.25
Community Bus	\$0.75	n/a	n/a
Light Rail Excursion Pass	\$3.50	\$2.00	\$2.50
Day Pass	\$5.00	\$3.00	\$3.75
Day Pass Token (bag of 5)	\$12.50	\$7.50	\$9.50
Monthly Pass	\$45.00	\$30.00	\$35.00
Summer Blast Pass	\$75.00	\$60.00	\$70.00
Annual Pass	\$495.00	\$330.00	\$385.00
SENIOR/DISABLED			
Single Ride Cash	\$1.00	\$1.00	\$1.25
Community Bus	\$0.50	n/a	n/a
Light Rail Excursion Pass	\$2.00	\$2.00	\$2.50
Day Pass	\$2.50	\$3.00	\$3.75
Monthly Pass	\$25.00	\$30.00	\$35.00
Annual Pass	\$275.00	\$330.00	\$385.00

The base fare increases are expected to result in additional fare revenues of \$1.8 million in FY 2018 (for 6 months), \$6.1 million in FY 2019, and \$8.6 million in FY 2020.

Youth Fares

VTA currently provides discounts on youth fares of 13-40% from the adult base fare, depending on the fare product, as compared to 50-60% discounts for seniors and persons with disabilities. Families with multiple children find it difficult to purchase fares for all of their school going children, and staff has heard multiple requests to provide discounted or free fares for youth on VTA. San Francisco Municipal Transportation Agency recently introduced a “Free Muni for Youth” program that provides registered low and moderate income San Francisco youth ages 5 to 18 free access to Muni services when using a Clipper card. VTA collects \$4.2 million annually

from Youth fares. Given the financial challenges faced by VTA and the lack of alternative funding sources to provide free fares for youth, staff proposes to increase the youth discount and make youth fares consistent with fares for seniors/persons with disabilities. This change will result in a revenue loss of \$ 1.1million in FY 2018, \$2.2 million in FY 2019, and \$2.3 million in FY 2020, which could be funded in part by 2016 Measure B funds up to \$ 1.5 million per year.

Intra-Operator Transfers (VTA-to-VTA)

Currently, a single ride fare is not valid for a free transfer from bus to another bus, whereas a single ride fare on rail is valid for 2 hours of travel in any direction from the time of purchase.

Currently, 98% of trips are completed within 90 minutes of the initial boarding. In order to optimize the service redesign and increase ridership, staff proposes moving forward a proposal to make single ride fares on Clipper valid for up to 90 minutes system wide. This change will reduce fare revenues by up to \$0.9 million in FY 2018, \$2.8 million in FY 2019, and \$3.9 million in FY 2020.

Currently, VTA's ticket vending machines (TVMs) issue a paper ticket for a single ride fare, which acts as the proof of purchase for Fare Inspectors performing fare enforcement on light rail. However, on buses, Operators currently do not issue proof of payment for single rides and it is not desirable to burden Bus Operators with fare enforcement responsibilities when their primary responsibility is to operate the bus safely and on schedule. VTA's fare boxes are equipped to issue limited use smart cards, which cost \$0.25-\$0.30 each, making it financially impractical to issue them as a proof of payment. For these reasons, staff proposes to offer free VTA-to-VTA transfers with single ride fares on Clipper only. This approach is consistent with the regional goal of maximizing the use of Clipper as the fare collection system in the Bay Area. Staff will prepare mitigation strategies to assist riders who do not have a Clipper card similar to the strategies adopted to ease the transition of VTA's Day Pass product to Clipper in early 2016 such as: (a) distribution of Clipper cards at no cost for a limited period of time, (b) additional marketing to public of Clipper resources, and (c) additional public outreaches at major transit centers across the county during implementation.

Fares for Low Income riders

In August 2013, at the request of the group People Acting in Community Together (PACT), the VTA Board approved the Transit Assistance Program (TAP) pilot project. VTA received a \$1.3 million grant from MTC to increase ridership by providing a discounted fare for low income adults not receiving other forms of transportation support. These grants will most likely not be available in the future. The TAP provides a very important lifeline to adults with low incomes by enabling them to use transit for work, health care, and other basic needs. Staff proposes continuing this program using 2016 Measure B funds up to \$1 million per year.

Community Bus fares

VTA had established a lower fare for community bus routes at inception for two basic reasons;

1. The routes were serviced by cut away vehicles which were significantly cheaper to acquire and operate
2. Bus Operators assigned to community bus routes were paid less than Bus Operators assigned to regular routes.

These cost differentials, which were the basis of the reduced community bus fares, no longer exist as VTA operates diesel hybrid transit buses on community bus routes and Bus Operators are paid the same wages regardless of the route they operate. With the service redesign, community bus is no longer included as a service category and therefore, staff proposes that the associated fare category be removed from the fare resolution. This change will have minimal impact on fare revenues of up to \$0.2 million per year.

Eco Pass fares

VTA's Eco Pass is a calendar year pass for unlimited trips on VTA's fixed route service. Fares were established with twin goals of increasing ridership by providing more access and generating revenues equal to the average adult fare per boarding. The program has been well utilized and the average fare per Eco Pass boarding has consistently lagged the average adult fare per boarding. The average Adult Fare per boarding for CY16 was \$1.50, and the average Eco Pass fare per boarding for CY16 was \$0.61. The Eco Pass pricing structure is tiered and complex and has not been reviewed since inception. As a result, the program has provided very low cost transit access to employers, non-profits and universities/colleges. This raises questions of equity where individuals with low or moderate incomes who do not qualify for the Transit Assistance Program (TAP) pay a full fare, whereas corporations who can afford to pay more are charged a significantly lower fare per boarding.

Staff proposes to consolidate the existing four tiers to two tiers, split the program into three logical categories, limit the program to regular VTA service by including the express bus service as an add on option, adjust the pricing structure to more adequately reflect usage by the program participants and to rename the Eco Pass Program to the VTA SmartPass Program.

The existing four tiers per service area would be simplified and consolidated into two tiers. Pricing shall be the higher fare of the consolidated headcount tiers resulting in a price increase for participants in the lower priced tiers.

Existing Headcount Tiers	Proposed Headcount Tiers
1-99	1-2,999
100-2,999	
3,000-15,000	3,000+
15,000+	

Staff proposes to split the program into three institutional categories based on the types of participants. Also, the pass would no longer be a valid fare on VTA's express bus service and will require the purchase of the Express Pass add-on option. The minimum contract value will increase from \$1,794 to \$2,500 to reflect the new pricing structure.

Collegiate Pass

A Collegiate Pass is proposed to be established for universities and community colleges with a price structure not to exceed San Jose State University (SJSU) per capita rate. The current downtown San Jose service level price for SJSU is \$36 per enrolled student/faculty per year. A 5% increase, rounded up to the nearest dollar, shall be applied on January 2018 and on January 2019 increasing SJSU's per enrolled student/faculty rate to \$38 in January 2018 and \$40 in January 2019. Pricing for community colleges in all other service levels which are currently lower shall increase by \$5 per year, but not to exceed the SJSU per capita rate. The Collegiate Pass will not be valid on VTA's express bus service. A table showing the existing rates as well as proposed rates is included below for reference.

	2017 Headcount	Current Fare	January 1, 2018	January 1, 2019
Downtown San Jose				
15,000+ Students/Employees (San Jose State University)	32,795	\$ 36.00	\$ 38.00	\$ 40.00
Area Served by Bus Only				
3,000 - 14,999 Students/Employees (Mission College)	7,932	\$ 18.00	\$ 23.00	\$ 28.00
15,000+ Students/Employees (Foothill-De Anza, San Jose City and Evergreen College)	42,320	\$ 9.00	\$ 14.00	\$ 19.00

Not-For-Profit Pass

A Not-For-Profit Pass is proposed to be established for public agencies such as the county, cities, nonprofit agencies, and low income housing. Staff proposes a fare increase of 15% rounded to the nearest quarter effective January 1, 2019. The Not-For-Profit Pass will not be valid on VTA's express bus service. A table showing the existing rates as well as proposed rates is included below for reference.

	2017 Headcount	Current Fare	January 1, 2018	January 1, 2019
Downtown San Jose				
1 -99 Employees/Residents	-	\$ 144.00	\$ 144.00	\$ 165.50
100 - 2,999 Employees/Residents	321	\$ 108.00		
3,000 - 14,999 Employees/Residents	1,810	\$ 72.00	\$ 72.00	\$ 82.75
15,000+ Employees/Residents	652	\$ 36.00		
Areas Served by Bus & Light Rail				
1 -99 Employees/Residents	-	\$ 108.00	\$ 108.00	\$ 124.25
100 - 2,999 Employees/Residents	1,457	\$ 72.00		
3,000 - 14,999 Employees/Residents	1,347	\$ 36.00	\$ 36.00	\$ 41.50
15,000+ Employees/Residents	5,926	\$ 18.00		
Area Served by Bus Only				
1 -99 Employees/Residents	136	\$ 72.00	\$ 72.00	\$ 82.75
100 - 2,999 Employees/Residents	3,744	\$ 36.00		
3,000 - 14,999 Employees/Residents	3,987	\$ 18.00	\$ 18.00	\$ 20.75
15,000+ Employees/Residents	35,178	\$ 9.00		

Corporate Pass

A Corporate Pass is proposed to be established for businesses and residential units. Staff proposes a fare increase of 25% rounded to the nearest quarter effective January 1, 2019. The Corporate Pass will not be valid on VTA's express bus service. A table showing the existing rates as well as proposed rates is included below for reference.

	2017 Headcount	Current Fare	January 1, 2018	January 1, 2019
Downtown San Jose				
1 -99 Employees/Residents	185	\$ 144.00	\$ 144.00	\$ 180.00
100 - 2,999 Employees/Residents	571	\$ 108.00		
3,000 - 14,999 Employees/Residents	-	\$ 72.00	\$ 72.00	\$ 90.00
15,000+ Employees/Residents	-	\$ 36.00		
Areas Served by Bus & Light Rail				
1 -99 Employees/Residents	170	\$ 108.00	\$ 108.00	\$ 135.00
100 - 2,999 Employees/Residents	3,815	\$ 72.00		
3,000 - 14,999 Employees/Residents	11,778	\$ 36.00	\$ 36.00	\$ 45.00
15,000+ Employees/Residents	19,881	\$ 18.00		
Area Served by Bus Only				
1 -99 Employees/Residents	237	\$ 72.00	\$ 72.00	\$ 90.00
100 - 2,999 Employees/Residents	4,476	\$ 36.00		
3,000 - 14,999 Employees/Residents	12,281	\$ 18.00	\$ 18.00	\$ 22.50
15,000+ Employees/Residents	-	\$ 9.00		

Additional Service "Express Pass" Option

The Collegiate Pass, Not-For-Profit Pass and Corporate Pass will no longer be valid on VTA's express bus service. Participating institutions will have the option to add the Express Pass option to their respective pass. This Express Pass option will also include access to the Dumbarton

Bridge Express, Highway 17 Express and Monterey-Salinas Transit Express operators.

Pricing for the Express Pass option will be based on the three institutional categories as shown below:

	2017 Headcount	Current Fare	January 1, 2018	January 1, 2019
Collegiate Pass				
1 -99 Students/Employees	-	\$ 21.60	\$ 9.00	\$ 9.00
100 - 2,999 Students/Employees	-	\$ 18.00		
3-000 - 14,999 Students/Employees	-	\$ 14.40		
15,000+ Students/Employees	-	\$ 9.00		
Not-For-Profit Pass				
1 -99 Employees/Residents	-	\$ 21.60	\$ 21.60	\$ 24.75
100 - 2,999 Employees/Residents	-	\$ 18.00		
3-000 - 14,999 Employees/Residents	-	\$ 14.40		
15,000+ Employees/Residents	35,178	\$ 9.00		
Corporate Pass				
1 -99 Employees/Residents	15	\$ 21.60	\$ 21.60	\$ 27.00
100 - 2,999 Employees/Residents	247	\$ 18.00		
3-000 - 14,999 Employees/Residents	333	\$ 14.40		
15,000+ Employees/Residents	15,000	\$ 9.00		

Eco Pass Revenue per Boarding by Institution Type

	FY 2017		FY 2018		FY 2019		FY 2020	
	Revenue	Projected Rev/Bdg	Projected Revenue	Projected Rev/Bdg	Projected Revenue	Projected Rev/Bdg	Projected Revenue	Projected Rev/Bdg
Collegiate Pass	\$1.6m	\$0.51	\$1.8m	\$0.56	\$2.1m	\$0.66	\$2.3m	\$0.71
Not-For-Profit Pass	\$1.4m	\$0.55	\$1.9m	\$0.79	\$2.6m	\$1.07	\$2.8m	\$1.15
Corporate Pass	\$1.7m	\$0.96	\$2.3m	\$1.28	\$3.1m	\$1.72	\$3.4m	\$1.91
Grand Total	\$4.8m	\$0.63	\$6.1m	\$0.81	\$7.9m	\$1.05	\$8.6m	\$1.14

Summary of Changes

The table below summarizes the impact of the proposed changes on fare revenues (\$ millions):

	FY 2018	FY 2019	FY 2020
Fare Adjustments	\$1.8	\$6.1	\$8.6
Free Transfers	(\$0.9)	(\$2.8)	(\$3.9)
Increased Discount for Youth	(\$1.1)	(\$2.2)	(\$2.3)
Subsidy from 2016 Measure B - Youth Discounts	\$1.1	\$1.5	\$1.5
Subsidy from 2016 Measure B - TAP	\$1.0	\$1.0	\$1.0
Elimination of Community Bus fares	\$0.2	\$0.2	\$0.2
Eco Pass restructuring	\$1.3	\$3.1	\$3.8
Total*	\$3.4	\$6.9	\$8.9

*Totals may not foot due to independent rounding

Title VI

In order to assess whether the fare change would result in Disparate Impacts on minority populations or a Disproportionate Burden on low income populations, a preliminary Fare Equity Analysis was performed on the proposed fare change. Using the VTA Title VI Policy, a disparate impact threshold 10 percent was used to determine if minority riders are more negatively - or less positively affected- by the proposed change when compared to VTA riders as a whole. The threshold applies to the difference between the aggregate impacts of the proposed fare change on minority and low income riders compared to the aggregate impacts of the change on the overall VTA ridership.

VTA commissioned NWC Partners, a firm specializing in Federal Title VI equity analysis to prepare a Fare Equity Analysis, using model outputs from the Fare Model that was calibrated to data from the VTA 2013 Onboard Survey for ethnicity and income by fare type. Based on their analysis, the proposed fare changes would not result in a Disparate Impact on minority populations or a Disproportionate Burden on low income populations. A copy of the Fare Equity Analysis is attached for reference (Attachment C)

ALTERNATIVES:

The Board could choose to not implement the proposed fare changes. This will result in reduced fare revenues as well as continuing inequities in the existing Eco Pass program. VTA's fare policy will continue to be at cross purposes with it's ridership objectives without free VTA to VTA transfers on Clipper, and fares for Youth will be maintained at current levels.

FISCAL IMPACT:

The proposed fare changes are expected to result in increased fare revenues by \$3.4 million in FY2018, \$6.9 million in FY2019, and \$8.9 million in FY2020. The proposed VTA Transit Fund Operating budget for FY2018 and FY2019 reflects the increased fare revenues.

ADVISORY COMMITTEE DISCUSSION/RECOMMENDATION:

See Attachment B.

STANDING COMMITTEE DISCUSSION/RECOMMENDATION:

The Administration & Finance Committee considered this item at its May 18, 2017 meeting. Member Carr expressed concern about the exclusion of Express Bus service from the proposed Collegiate Pass and the impact on SJSU students. He also expressed concerns about the availability of Clipper cards. Member Bruins recommended that staff conduct outreach to assist passengers who may have difficulty obtaining a Clipper card. Ali Hudda, Deputy Director Finance & Budget responded that staff is considering a project to modify VTA's ticket vending machines (TVMs) to enable them to dispense Clipper cards. This will create approximately 155

additional distribution points in the county. He also indicated that staff plans to do extensive outreach efforts during the implementation phase to ease the transition, similar to the efforts undertaken to implement the transition of the VTA Day Pass fare product to Clipper. The item was approved unanimously.

Prepared by: Ali Hudda
Memo No. 6102

ATTACHMENTS:

- Fare Memo April Workshop Attachment A (PDF)
- Community Advisory Committee Comments Attachment B (PDF)
- VTA Fare Policy Equity Analysis Attachment C-Updated (PDF)
- PROPOSED_Fare_Tariff_01012018 Attachment D (PDF)
- PROPOSED_Fare_Tariff_01012019 Attachment E (PDF)

7.2 **Fare Policy Review**

M/S/C (Yeager/Liccardo) on a vote of 11 ayes and 1 no to:

1. Adopt a finding that a fare increase is necessary to meet operating expenses, including employee wages and fringe benefits and purchasing or leasing supplies, equipment, or materials.
2. Invoke a Statutory Exemption under CEQA, P. R.C. §21080(b)(8) and CEQA Guidelines Section 15273(a) (Rates, Tolls, Fares and Charges) for the purpose of modifying and increasing fares.
3. Consider and approve VTA's Title VI Fare Equity Analysis.
4. Adopt a resolution establishing rates and fares for VTA bus, light rail, and paratransit services effective January 1, 2018.
5. Adopt a resolution establishing rates and fares for VTA bus, light rail, and paratransit services effective January 1, 2019.

Further, to:

1. Approve Senior/Disabled fares for 2018, no recommendation for Senior/Disabled fares for 2019 until it is revisited at a later date;
2. Change the Eco Pass rate for all Community Colleges (Collegiate Pass) to \$20 per student per year for the next four years;
3. Increase transfer period time to two hours; and
4. Approve the Corporate Pass rate increase with the request to assess Eco Pass to determine if there are ways to increase revenues.

Director Chavez opposed.

ATTACHMENT A

VTA Fare Structure History

Fixed Route and ADA Paratransit

January 2005 to Date

Fares (effective date)	1/2005 to 8/2007 (Jan 2005)	9/2007 to 9/2009 (Sep 2007)	10/2009 to date (10/09, 1/15, 1/16)
Fixed Route Service (Bus and Light Rail)			
Adult			
Cash	\$1.75	\$1.75	\$2.00
Community Bus	-	\$1.00	\$1.25
Express	\$3.50	\$3.50	\$4.00
Light Rail Excursion (1)	\$3.50	\$3.50	\$4.00
Day Pass (6)	\$5.25	\$5.00	\$6.00
Day Pass Express (6)	\$10.50	\$10.00	\$12.00
Monthly Pass	\$61.25	\$61.25	\$70.00
Monthly Pass Express	\$122.50	\$122.50	\$140.00
Day Pass Token (Bag of Five) (4)	\$23.60	\$22.50	\$15.00
12 month Pass Subscription	\$674.00	\$674.00	\$770.00
12 month Express Pass Subscription	\$1,348.00	\$1,348.00	-
Youth (2) (7)			
Cash	\$1.50	\$1.50	\$1.75
Community Bus	-	\$0.50	\$0.75
Light Rail Excursion (1)	\$3.00	\$3.00	\$3.50
Day Pass (6)	\$4.50	\$4.00	\$5.00
Monthly Pass	\$49.00	\$40.00	\$45.00
Day Pass Token (Bag of Five) (5)	\$20.25	\$18.00	\$12.50
12 month Pass Subscription	\$539.00	\$440.00	\$495.00
Senior/Disabled (2)			
Cash	\$0.75	\$0.75	\$1.00
Community Bus	-	\$0.50	\$0.50
Light Rail Excursion (1)	\$1.50	\$1.50	\$2.00
Day Pass (6)	\$2.25	\$2.00	\$2.50
Monthly Pass	\$26.00	\$20.00	\$25.00
12 month Pass Subscription	\$286.00	\$220.00	\$275.00
ADA Paratransit (3)			
ADA One-Way Trip	\$3.50	\$3.50	\$4.00

(1) Light Rail Excursion passes implemented on promotional basis in June 2006 and placed in tariff in July 2007.

(2) Youth and Senior/Disabled riders can board Express services for the same fare as Local services.

(3) Effective August 1, 2003, persons with ADA paratransit photo ID cards may ride any VTA fixed-route service for free.

(4) Adult Day Pass Tokens reduced to \$15.00 for bag of five effective January 2015.

(5) Youth Day Pass Tokens reduced to \$12.50 for bag of five effective January 2015.

(6) All Day Passes to be "Clipper Only" (using Accumulator logic) beginning January 2016.

(7) Eligibility for all Youth fares extended to 18-year olds effective July 2015.

Fare Policy Review Public and Advisory Committee Outreach

COMMUNITY MEETING COMMENTS:

Five community meetings to present the Fiscal Years 2018 and 2019 Proposed Biennial Budget and Proposed Fare Policy Changes were held May 1 to May 9 in Morgan Hill, Mountain View, San Jose (two) and Sunnyvale. Fifty-six members of the public attended. The major comments from participants were as follows:

Support:

- No increase in paratransit fares
- Youth fare improvements, get riders at a younger age
- Free 90 minute transfers between VTA bus and light rail
- Eco Pass program, environmental sustainability, low cost for students

Concerns:

- Increase in Sr/Disabled fare
- Exclusion of Express Service from base Eco Pass pricing
- Increase in De Anza Eco Pass pricing
- Low farebox recovery ratio and high operating costs
- Inclusion of for-profit universities in the Corporate category versus the Collegiate category for Eco Pass
- Clipper[®] only transfers
- Shortage of places to purchase or add value to a Clipper[®] Card
- Length of transfer validity
- Potential loss of ridership due to fare increases

Suggestions:

- Discontinue discounted fares
- Provide free fares for all riders
- Implement an excursion pass for bus
- Engage with school boards and PTSA's for potential service improvements to increase ridership

ADVISORY COMMITTEE DISCUSSION/RECOMMENDATION:

On May 10 and May 11, the Proposed fare Policy Review was presented to the Technical Advisory Committee, Citizens' Advisory Committee, Committee for Transportation Mobility and Accessibility, and Policy Advisory Committee. The major comments from committee members were as follows:

Support:

- 90 minute window for free transfers
- No increase in paratransit fares
- Continuation of Light Rail Excursion Pass
- Simplification of Eco Pass program

Concerns:

- Exclusion of Express Service from base Eco Pass pricing
- Length of transfer validity
- Inclusion of residential Eco Pass users in the Corporate category
- Inclusion of private, for-profit universities in the Corporate category versus the Collegiate category for Eco Pass
- Equity of Eco Pass tier consolidation
- Ability of visitors to acquire Clipper® cards
- Inability of university students to opt-out of Eco Pass program

Suggestions:

- Work with convention organizers to distribute Clipper® cards for visitors
- Conduct follow-up outreach to students
- Implement one price for Eco Pass Corporate category that includes Express Service
- Increase transfer window to at least 2 hours

Attachment C

VTA Fare Equity Analysis

For VTA's Fare Restructuring Proposal

Prepared for



Santa Clara Valley Transportation Authority

By

May 2017

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Executive Summary

In 2016, Santa Clara Valley Transportation Authority (VTA) began a review of their fare structure which had not been the subject of a comprehensive review since 2009. Additionally, many of the other local transit agencies have either already approved fare increases or are in the process of doing so. As a result of the review, a number of fare changes were presented to the Board for consideration and for public review.

Prior to considering a fare increase, VTA must complete a Fare Equity Analysis as required by federal Civil Rights guidance C4702.1B in order to determine whether the fare change would create discriminatory impacts to minority and low-income riders. The recommendations presented to the board are the basis of this Fare Equity Analysis.

Based on our analysis, the proposed fare structure would not result in either Disparate Impacts to minority riders or a Disproportionate Burden to low-income riders.

Overview

In 2016, Santa Clara Valley Transportation Authority (VTA) undertook ways to redesign their transit network to make public transit faster, more frequent and more useful for Santa Clara County travelers. Called the “Next Network,” this transit service redesign is aimed at increasing overall system ridership, improving the VTA farebox recovery rate and ensuring good connections with future BART stations in Milpitas and Berryessa. This redesign, to be implemented through a revised transit service plan, will have more frequent service but will also require more transfers by patrons to reach their destinations. Currently VTA does not provide free transfers between buses or between buses and light rail.

Due to the magnitude of potential changes to the transit network, many riders may need to transfer to complete their trips and reach their final destinations, which required VTA to review its intra-operator (VTA-to-VTA) transfer policy. Because the last significant change to VTA fares took effect in 2009, a comprehensive review of other fare structure elements such as Youth fares, fares for low income riders, Community Bus fares and the EcoPass program were due for review. VTA has contracted with Four Nines Technologies to assist in a comprehensive fare policy review. The following sections further describe fare policies under review and which are proposed to be presented to the public for comment in May; however, preliminary fare policy discussions were also included in outreach associated with the Next Network service plan.

To gain public input on the Fare Study, VTA conducted a number of outreach activities both during the development phase of the fare policy review and once a fare proposal was developed. This included a Fare Review Public Input Survey, which was distributed in the top six languages spoken in Santa Clara County that was available at public meetings with bilingual staff in attendance to provide translations upon request. It was also available on-line to the general public. Additionally, staff met with San Jose State University, Stanford Research Park, Silicon Valley Leadership Group, and International Technological University to understand their concerns. Feedback from the general public has been generally positive and staff has analyzed the impact of the proposed changes and refined the proposals as discussed within this report. Using this input, a final plan will be presented to VTA's Board of Directors in June 2017. The changes are scheduled to take place starting January 1, 2018 when the two Santa Clara County BART stations open in Fiscal Year 2018.

Title VI Requirements

Title VI of the Civil Rights Act of 1964, Section 601 states:

“No persons in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”

It is VTA's objective to avoid, minimize or mitigate disproportionately high and adverse impacts on minority and low-income populations. As a recipient of financial assistance from the Federal Transit Administration (FTA), VTA is required to comply with Title VI of the Civil Rights Act of 1964 by evaluating service and fare changes at the planning and programming stages to determine whether those changes have discriminatory impacts, including Disparate Impacts on minority populations and/or Disproportionate Burdens on low-income populations.

According to the Federal Department of Transportation, equity in the provision of transit service is described as "providing equal levels of service to minority and non-minority residents of the urbanized area. Levels of service, in turn, are defined in terms of capital allocation and accessibility."¹ The metrics of discrimination that could be monitored for disparate treatment include service design that could consistently cause minority-group riders to experience less service than the overall riding public. Despite being an FTA requirement, a Title VI Equity Analysis should not replace good program planning,

¹ Transit Cooperative Research Program, Legal Research Digest: "The Impact of Civil Rights Litigation Under Title VI and Related Laws on Transit Decision Making", TCRP Project J-5, Washington, D.C. June 1997

which should be an ongoing process that considers equity among other factors when designing fare changes, service changes, or discretionary policies and programs.

VTA Title VI Policies

In 2012, FTA issued guidance under FTA Circular 4702.1B (Title VI Requirements and Guidelines for Federal Transit Administration Recipients), and Circular 4703.1 (Environmental Justice Policy Guidance for Federal Transit Administration Recipients) requiring large transit agencies to develop policies when they contemplate either service or fare changes.

To comply with the guidance, on November 7, 2013, the VTA Board adopted the VTA Major Service Change Policy, the Disparate Impact Policy, and the Disproportionate Burden Policy for the evaluation of service and fare changes. These three policies established a definition of what would constitute a “major” service change to require an equity analysis, in addition to establishing a statistical threshold to determine whether minority and low-income riders are disproportionately impacted by a service or fare change. Prior to adoption, these policies (hereafter “VTA Policy”) were the subject of extensive public outreach and engagement. The VTA Policy is included as Appendix A, including a description of the public outreach efforts related to the establishment of the policies.

Per the VTA Policy, all fare changes, except the following would be subject to a Fare Equity Analysis:

- “Spare the air days” or other instances when a local municipality or transit agency has declared that all passengers ride free.
- Temporary fare reductions that are mitigating measures for other actions.
- Promotional fare reductions. If promotional or temporary fare reductions last longer than six months, then FTA considers the fare reduction permanent and the transit provider must conduct a fare equity analysis.

VTA Policy states that that for fare equity analyses, a disparate impact (and disproportionate burden) threshold of 10 percent shall be used to determine if minority and/or low-income riders are more negatively affected—or less positively affected—by the proposed fare change, when compared to VTA riders as a whole. The 10 percent threshold applies to the difference in the aggregate impacts of the proposed change on minority and low-income riders compared to the aggregate impacts on the overall VTA ridership.

Prior to adopting any fare change, VTA must conduct a fare equity analysis and analyze specific elements of the proposed fare structure to determine whether the changes would result in adverse impacts that exceed the threshold established by the policies. For fare changes, adverse effects could include an increase in cost or a reduction in accessibility of fare media. The analysis contained within

this report uses the VTA adopted thresholds for determining Disproportionate Burden and Disparate Impacts. Because the fare change directly impacts ridership, the analysis would be based on VTA passenger data, collected via surveys and validated by Automatic Passenger Counter (APC) data.

Should the fare equity analysis show that the proposed fare change results in a disparate impact or disproportionate burden, alternatives should be considered to avoid, minimize, and mitigate the discriminatory results of the fare change. However, if the mitigations do not minimize adverse effects, the equity analysis must demonstrate a substantial legitimate justification and it must be demonstrated that there were no comparably effective alternatives that would result in fewer adverse impacts.

Fare Equity Analysis Methodology Overview

The typical measure of disparate impact or disproportionate burden involves a comparison between the proportion of persons in the protected class (i.e. minority or low-income populations) who are adversely affected by the service or fare change and the proportion of persons not in the protected class (i.e. non-minority or non-low-income) who are adversely affected.²

Based on the Federal Guidance, the transit provider shall—

- (i) Determine the number and percent of users of each fare media being changed;
- (ii) Review fares before the change and after the change;
- (iii) Compare the differences for each particular fare media between minority users and overall users; and
- (iv) Compare the differences for each particular fare media between low-income users and overall users.³

The methodology to perform this fare equity analysis was designed per the checklist provided as Appendix K of the FTA's October 2012 4702.1B Circular (Title VI Requirements and Guidelines for Federal Transit Administration Recipients).

If the percentage change between all riders and minority riders is greater than 10%, that would suggest that the fare change would result in Disparate Impacts on minority populations. Further, if the percentage change between all riders and low-income riders is greater than 10%, that would suggest that the fare change would result in a Disproportionate Burden to low-income populations. A change of less than 0% (any negative percentage) would indicate that the fare change would benefit low-income and/or minority populations more than the average rider.

² Federal Circular: C4702.1B Chap IV-10

³ Federal Circular C4702.1B Chap. IV-19

Average Fare Analysis Methodology

The Fare Equity Analysis uses an Average Fare Analysis as the comparative tool to determine the impact to minority and low-income riders. This Average Fare Analysis uses the Four Nines Fare Model baseline data in order to determine specific ridership and fare payment changes along with the impacts associated with changes in each fare category. The model assesses the ridership and revenue impacts of a fare change based on projected ridership, payment methods, and elasticity rates. It also evaluates the impacts of introducing new fare payment methods. The model also uses ridership and survey data to determine “unit fares” for fare products that are not single use such as monthly or day passes. This way, the unit fares can be compared between each fare category to determine percentage increases that each fare product may experience regardless of the fare type. For example, the “unit fare” for a single cash fare would be the stated fare divided by 1. For monthly passes, the “unit fare” would be the monthly pass price divided by the average times monthly passes are used in a month (which varies by service type and pass type) derived from both farebox and Clipper data. Additionally, transfer data to assess the impacts of a free transfer on clipper was also derived from Clipper data resulting in a usage rate of 1.26. All of these usage rates produce an “Average Fare” on a system-wide level as well as for each fare and service type—both existing and proposed.

Combined with the data contained in the 2013 Onboard Survey, the information generated by the Four Nines Fare Model is also disaggregated by income and minority status within each fare category. This includes fare products and fare structures that are currently in use as well as those being proposed to change with the Fare Study recommendations. The Average Fare Analysis also provides the percentage change between the existing and proposed fare structures by fare type, for ridership income and minority status, to assess whether the proposed fare structure change will fall within the thresholds established by VTA for a Disproportionate Burden and Disparate Impact.

Because the fare change is intended to be phased-in over the next several years, the Fare Equity Analysis is based upon the final fare change anticipated in 2019, so that compounding impacts can be assessed. This way, the greatest level of change will be compared to the existing fare structure, thereby identifying the greatest level of potential impacts. This will certainly overstate the impacts experienced in the first phase, but represents a conservative approach to identifying cumulative impacts.

Because access to Clipper media may result in negative impacts, we also evaluated the proximity of Clipper outlets to minority and low-income communities relative to the access of non-minority and non-low-income riders. For this, a geospatial analysis was conducted of Clipper outlets overlaid minority status and income spatial data from the census.

Additionally, we have reviewed changes associated with the EcoPass and other pass programs. However, because fare change impacts to pass programs are borne by employers or other agencies, and not necessarily individuals, we have conducted a parallel analysis to assess equity. Further, because data about the actual cost to the rider of the EcoPass programs is not available, we must consider other metrics in our analysis.

DATA USE

For purposes of examining the fare payment behavior, two main data sets were used:

- VTA 2013 Onboard Rider Survey—The data includes information regarding customers’ riding behavior including fare usage, ethnicity, income, household size and other relevant information. The survey captured a total of 9,449 completed records, with a statistical accuracy of not less than 95 percent and ± 5 percent margin of error. The 2013 data is the most recent comprehensive data available.
- Ridership Data for 2016—Farebox and APC data was used to determine ridership by service type (i.e., Local, Express, LR, Community Bus) and by fare payment method – fare product (e.g., cash, Clipper, Monthly pass, Day Pass, and other) and rider category (i.e., Adult, Youth and Senior/Disabled). 2016 farebox data was used in the development of the fare restructuring recommendation as it was the most complete data available at time of analysis. Given the recent ridership decline on certain service types (e.g., Local), ridership by service type was scaled based on 2016 ridership data to reflect the new distribution of ridership by service type.

Additional analysis related to Clipper media was also conducted using the following data:

- American Community Survey 2011-2015 Five Year Estimates from the US Census Bureau for ethnicity and income.
- Geolocations for all Clipper Retail outlets.

Additionally, the Four Nines Fare model also used a variety of other data points to supplement the existing data including, Pass Revenue Data for 2016 and Clipper use data. The Four Nines Fare Model, was calibrated by using VTA ridership and revenue data as well as the 2013 On board survey data and was verified by VTA staff.

MINORITY STATUS ASSUMPTIONS

For purposes of the Fare Equity Analysis and the Average Fare Analysis, minority populations are those who have not identified themselves as only “Caucasian/White” on the 2013 Onboard Survey.

Ethnicity/Race categories include:

- (1) American Indian and Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
- (2) Asian, which refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- (3) Black or African American, which refers to people having origins in any of the Black racial groups of Africa.
- (4) Hispanic or Latino, which includes persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
- (5) Native Hawaiian or Other Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

INCOME ASSUMPTIONS:

Based on the VTA Title VI program, a “low-income” categorization is considered for those whose median household income is at or below 200% of the US poverty level in the year that corresponds to the onboard survey year (i.e. 2013). This translates to those who indicate that they make below \$31,000 for a household of two, as reflected below in Table 1. Based on household size, this corresponds to the following income categories in the Onboard Survey, as indicated below in Table 2. It should be noted that current poverty rates have increased since 2013, thereby increasing the low-income rate as defined by VTA. However, in order to accurately match 2013 onboard survey data with income levels, the 2013 Federal Poverty Rate was used for this analysis.

Table 1: Low-income Definition and Federal Poverty Rate 2013

Household Size	Federal Poverty Rate 2013	200% of Federal Poverty Rate
1	\$11,490	\$22,980
2	\$15,510	\$31,020
3	\$19,530	\$39,060
4	\$23,550	\$47,100
5	\$27,570	\$55,140
6	\$31,590	\$71,220
7	\$35,610	\$71,220

**NOTE: For survey responses with household sizes of "six or more persons", a household size of 7 is assumed for the poverty level calculation.*

Table 2: Onboard Survey Income Categories

HH Size	200% of Poverty Level	UNDER \$15K	\$15-25K	\$25-35K	\$35-50K	\$50-100K	\$100-150K	\$150-200K	200K+
		1	2	3	4	5	6	7	8
% of Category that is "low-income"		100.00%	96.75%	76.77%	46.18%	4.41%	0.00%	0.00%	0.00%
Threshold		<\$15K	\$15-25K	\$25-35K	\$35-50K	\$50-100K	\$100-150K	\$150-200K	\$200K+
1	\$22,980	100.00%	79.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	\$31,020	100.00%	100.00%	60.20%	0.00%	0.00%	0.00%	0.00%	0.00%
3	\$39,060	100.00%	100.00%	100.00%	27.07%	0.00%	0.00%	0.00%	0.00%
4	\$47,100	100.00%	100.00%	100.00%	80.67%	0.00%	0.00%	0.00%	0.00%
5	\$55,140	100.00%	100.00%	100.00%	100.00%	10.28%	0.00%	0.00%	0.00%
6	\$71,220	100.00%	100.00%	100.00%	100.00%	42.44%	0.00%	0.00%	0.00%

Ridership Demographics Overview

Consistent with prior surveys, VTA's 2013 On-Board Survey shows that VTA serves a diverse ridership with significant numbers of both minority and low-income riders:

- Almost three-fourths (74%) of riders are minority, while 26% are non-minority.
- The average VTA rider lives in household of 3 to 4 people, with a household income of \$42,802 per year.
- Considering income relative to household size, 66% of VTA riders are low-income, defined as having household incomes below 200% of Federal poverty guidelines.
- When asked how well they speak English, 28% of riders say they speak it less than Very Well. When asked what languages are spoken in the home, these riders most commonly responded Spanish (46%), Chinese (19%), Vietnamese (10%), Tagalog (8%), Hindi (3%), Korean (2%), and Japanese (2%).

To support Fare Equity analysis, we also performed additional cross-tabulations of the survey data to develop a breakdown of fare payment by minority and low-income riders, versus overall riders, as shown in the figures below.

Figure 1 presents the fare payment by minority and low-income ridership compared to the overall ridership. Figure 2 presents the minority and low-income ridership by fare payment.

Figure 1: Fare Payment by Minority and Low-Income Ridership

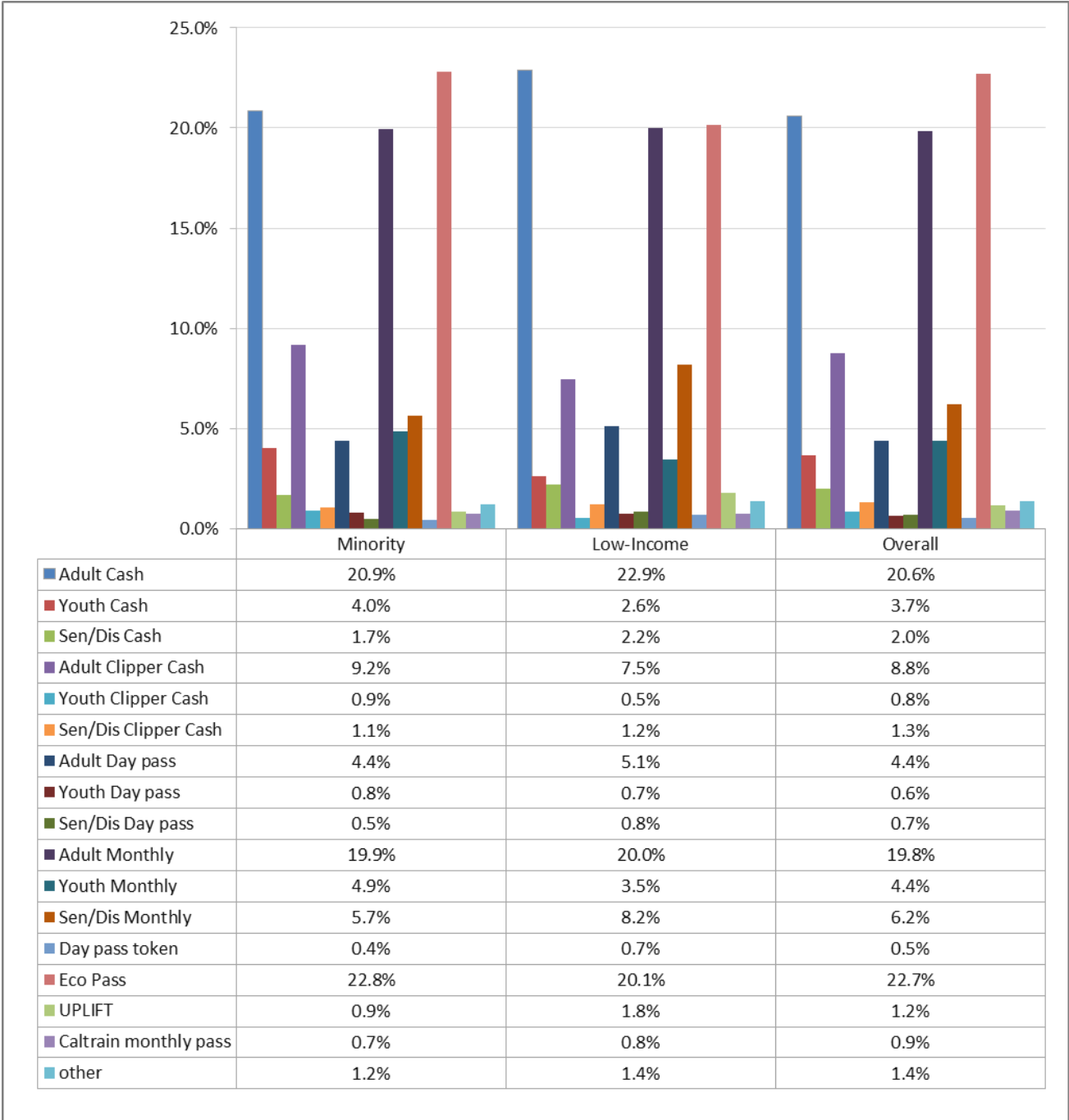
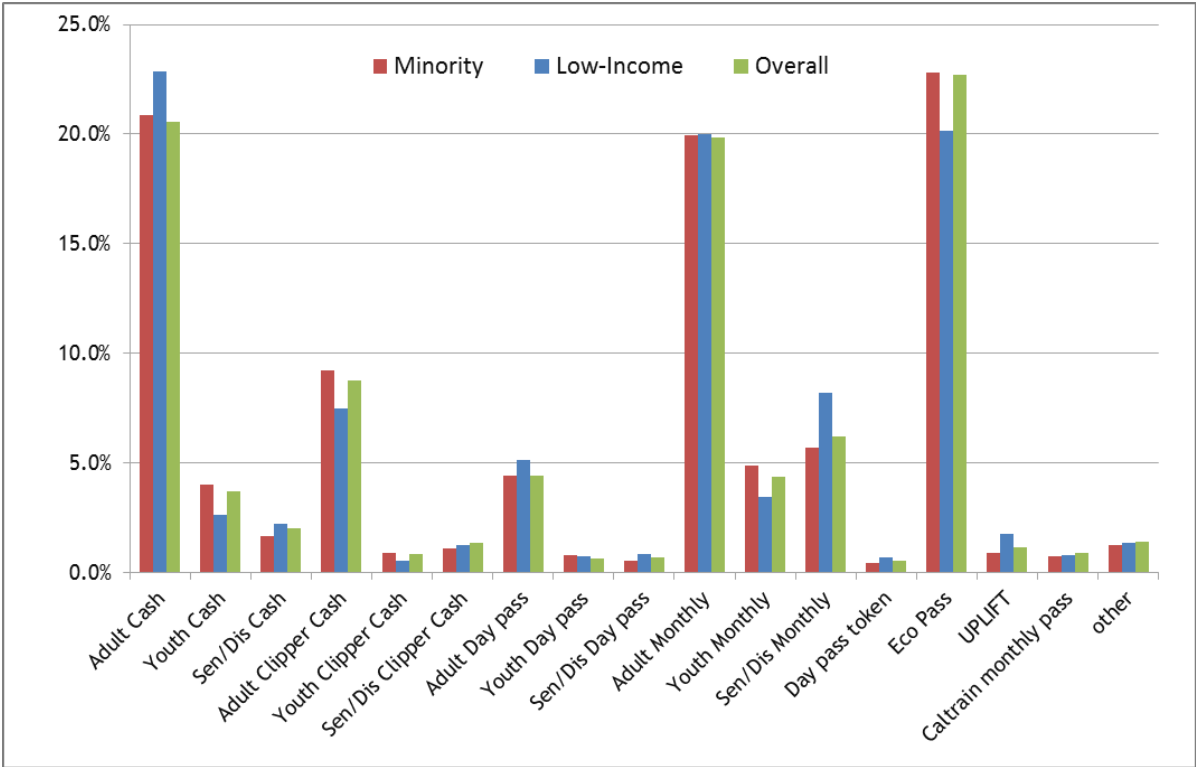


Figure 2: Minority and Low-Income Ridership by Fare Payment



Fare Structure Overview

VTA has experienced increased costs in providing service but has not had a fare increase since 2009. Staff projects a fiscal deficit for FY 2017 in the range of \$20-25 million. Many of the Bay Area agencies have either already approved fare increases or are in the process of doing so. To increase revenue, there are a number of proposed changes that have been included the proposed fare change. They include changes to the base fares, youth fare, intra operator transfers (VTA to VTA), Community Bus fares, and to their specialty pass programs including the introduction of several new pass products and programs.

Cash and Pass Products

The following provides detail about the changes proposed for cash and traditional pass products.

Base Fare Adjustment

Base fares represent the pivot point for a number of other fare products, such as passes or tokens; and also represent the starting point for the discounts provided for youth, seniors and disabled, or for the premiums that are charged for various service types. VTA staff reviewed two scenarios to increase the base fare by approximately 12.5% to 25% (i.e. the adult single ride would increase from \$2.00 to \$2.25 or \$2.50) along with increases in the associated fares such as the Day Pass and the Monthly Pass. Based

on both financial considerations and increased community requests for lower youth fares and free transfers, the VTA staff has proposed a 25% increase phased over two years starting January 1, 2018. The adult single ride fare will increase from \$2.00 to \$2.25 on January 1, 2018 and to \$2.50 on January 1, 2019. All associated fares would increase proportionately with the exception of paratransit fares which would remain unchanged. Table 3 presents the proposed fare increase to the base fares by fare type along with the multiple ride fare products. Other specific changes and explanations follow.

Table 3: Proposed Fare Structure.

VTA Fares	Current Fare	January 1, 2018	January 1, 2019
ADULT			
Single Ride Cash	\$2.00	\$2.25	\$2.50
Community Bus*	\$1.25	N/A	N/A
Light Rail Excursion Pass	\$4.00	\$4.50	\$5.00
Day Pass	\$6.00	\$7.00	\$7.50
Day Pass Token (bag of 5)	\$15.00	\$17.50	\$18.75
Express Cash	\$4.00	\$4.50	\$5.00
Express Day Pass	\$12.00	\$13.50	\$15.00
Monthly Pass	\$70.00	\$80.00	\$90.00
Annual Pass	\$770.00	\$880.00	\$990.00
Express Monthly Pass	\$140.00	\$160.00	\$180.00
Express Annual Pass	\$1,540.00	\$1,760.00	\$1,980.00
YOUTH			
Single Ride Cash	\$1.75	\$1.00	\$1.25
Community Bus*	\$0.75	N/A	N/A
Light Rail Excursion Pass	\$3.50	\$2.00	\$2.50
Day Pass	\$5.00	\$3.00	\$3.75
Day Pass Token (bag of 5)	\$12.50	\$7.50	\$9.50
Monthly Pass	\$45.00	\$30.00	\$35.00
Summer Blast Pass	\$75.00	\$60.00	\$70.00
Annual Pass	\$495.00	\$330.00	\$385.00
SENIOR/DISABLED			
Single Ride Cash	\$1.00	\$1.00	\$1.25
Community Bus*	\$0.50	N/A	N/A
Light Rail Excursion Pass	\$2.00	\$2.00	\$2.50
Day Pass	\$2.50	\$3.00	\$3.75
Monthly Pass	\$25.00	\$30.00	\$35.00
Annual Pass	\$275.00	\$330.00	\$385.00

*See Community Bus Fares, below, for more information

Youth Fares

VTA currently provides discounts on youth fares of 13-40% from the adult base fare, depending on the fare product, compared to 50-60% discounts for seniors and persons with disabilities. Staff has heard that families with multiple children find it difficult to purchase fares for all of their school-going children, and staff has heard multiple requests to provide discounted or free fares for youth on VTA.

San Francisco Municipal Transportation Agency recently introduced a “Free Muni for Youth” program that provides registered low- and moderate-income San Francisco youth ages 5 to 18 with free access to Muni services when using a Clipper card.

While this may be a preferred scenario for consideration, given the financial challenges faced by VTA and the lack of alternative funding sources to provide free fares for youth, staff proposes to increase the youth discount and make youth fares consistent with fares for seniors/persons with disabilities.

Intra-Operator Transfers (VTA-to-VTA)

Currently, a single ride fare is not valid for a free transfer from bus to another bus, whereas a single ride fare on rail is valid for 2 hours of travel in any direction from the time of purchase. Based on survey data, 98% of trips are completed within 90 minutes of the initial boarding.

In order to optimize the service redesign and increase ridership, VTA staff has proposed making single ride fares on Clipper valid for up to 90 minutes system-wide for both light rail and bus.

Currently, VTA’s ticket vending machines (TVMs) issue a paper ticket for a single ride fare, which acts as the proof of purchase for Fare Inspectors performing fare enforcement on light rail. However, on buses, Operators currently do not issue proof of payment for single rides and it is not desirable to burden Bus Operators with fare enforcement responsibilities when their primary responsibility is to operate the bus safely and on schedule. VTA’s fare boxes are equipped to issue limited use smart cards, which cost \$0.25-\$0.30 each, making it financially impractical to issue them as a proof of payment. For these reasons, VTA staff has proposed to offer free VTA-to-VTA transfers with single ride fares on Clipper only. This approach is consistent with the regional goal of maximizing the use of Clipper as the fare collection system in the Bay Area.

To mitigate the transition for those riders who do not have a Clipper card, VTA has proposed to implement similar strategies that were used to ease the transition of VTA’s Day Pass product to Clipper in early 2016 such as: (a) distribution of Clipper cards at no cost for a limited period of time, (b) additional marketing to public of Clipper resources, and (c) additional public outreaches at major transit centers across the county during implementation.

Fares for Low-income riders

In August 2013, at the request of People Acting in Community Together (PACT), the VTA Board approved the Transit Assistance Program (TAP) pilot project. VTA received a \$1.3 million grant from MTC to increase ridership by providing a discounted fare for low-income adults who were not receiving other forms of transportation support. While these grants will most likely not be available in the future, the TAP provides a very important lifeline to adults with low incomes by enabling them to use

transit for work, health care, and other basic needs. As a result, no change is proposed for this program; VTA intends to use 2016 Measure B funds up to \$1 million per year to fund this program.

Community Bus fares

VTA had established a lower fare for community bus routes at inception for two basic reasons;

1. The routes were serviced by cut-away vehicles which were significantly cheaper to acquire and operate
2. Bus Operators assigned to Community Bus Routes were paid less than Bus Operators assigned to regular routes.

These cost differentials, which were the basis of the reduced Community Bus Fares, no longer exist as VTA now operates diesel hybrid transit buses on community bus routes and Operators are paid the same wages regardless of the route they operate. With the service redesign, Community Bus is no longer included as a service category and therefore, staff proposes that the associated fare category be removed from the fare resolution. As a result, Community Bus Fares would be eliminated, and riders would be required to pay a Local Fare.

Specialized Pass Programs

VTA has a variety of specialized pass programs aimed at increasing ridership at schools, businesses and developments throughout the county. Staff proposes to split the EcoPass program into three institutional categories based on the types of participants and add new pass categories. This includes: 1) Corporate (For-Profit) Employers; 2) Non-profit Institutions and Communities and 3) Colleges. Changes to the programs are discussed below.

VTA's EcoPass is a calendar year pass for unlimited trips on VTA's fixed route service. Fares were established with twin goals of increasing ridership by providing more access and generating revenues equal to the average adult fare per boarding. The program has been well used. However, the average fare per EcoPass boarding has consistently lagged behind the average adult fare per boarding. For example, the average Adult Fare per boarding for CY16 was \$1.50, and the average EcoPass fare per boarding for CY16 was \$0.61.

The EcoPass pricing structure is tiered and complex and has not been reviewed since inception. As a result, the program has provided very low cost transit access to employers, non-profits and universities/colleges. This raises questions of equity where individuals with low or moderate incomes who do not qualify for the Transit Assistance Program (TAP) pay a full fare, whereas corporations who can afford to pay more are charged a significantly lower fare per boarding. To create greater parity with the average fare and promote equity of fare programs, VTA staff reviewed the program and proposed significant changes.

VTA staff has proposed consolidating the existing four tiers to two tiers, splitting the program into three logical categories, limiting the program to regular VTA service by including the express bus service as an add-on option, adjusting the pricing structure to more adequately reflect usage by the program participants, and renaming the EcoPass Program to the VTA SmartPass Program.

The existing four tiers per service area would be simplified and consolidated into two tiers. Pricing shall be the higher fare of the consolidated headcount tiers resulting in a price increase for participants in the lower priced tiers. Table 4 presents the comparison of the headcount tiers being considered.

Table 4: EcoPass Headcount Tiers

Existing Headcount Tiers	Proposed Headcount Tiers
1-99	1-2,999
100-2,999	
3,000-15,000	3,000+
15,000+	

Additionally, the pass would no longer be a valid fare on VTA's express bus service and will require the purchase of the Express Pass add-on option. The minimum contract value will increase from \$1,794 to \$2,500 to reflect the new pricing structure.

Corporate Pass

A For-Profit Corporate Pass is proposed for businesses and residential units. Staff proposes a fare increase of 25% rounded to the nearest quarter effective January 1, 2019. The Corporate Pass will not be valid on VTA's express bus service. Table 5 below presents the existing rates and proposed rates.

Table 5: For Profit Corporate Pass Rates

	2017 Headcount	Current Fare	January 1, 2018	January 1, 2019
Downtown San Jose				
1 -99 Employees/Residents	185	\$ 144.00	\$ 144.00	\$ 180.00
100 - 2,999 Employees/Residents	571	\$ 108.00		
3,000 - 14,999 Employees/Residents	-	\$ 72.00	\$ 72.00	\$ 90.00
15,000+ Employees/Residents	-	\$ 36.00		
Areas Served by Bus & Light Rail				
1 -99 Employees/Residents	170	\$ 108.00	\$ 108.00	\$ 135.00
100 - 2,999 Employees/Residents	3,815	\$ 72.00		
3,000 - 14,999 Employees/Residents	11,778	\$ 36.00	\$ 36.00	\$ 45.00
15,000+ Employees/Residents	19,881	\$ 18.00		
Area Served by Bus Only				
1 -99 Employees/Residents	237	\$ 72.00	\$ 72.00	\$ 90.00
100 - 2,999 Employees/Residents	4,476	\$ 36.00		
3,000 - 14,999 Employees/Residents	12,281	\$ 18.00	\$ 18.00	\$ 22.50
15,000+ Employees/Residents	-	\$ 9.00		

Not-For-Profit Pass

A Not-For-Profit Pass is proposed to be established for public agencies such as the county, cities, nonprofit agencies, and low-income housing. Staff proposes a fare increase of 15% rounded to the nearest quarter effective January 1, 2019. The Not-For-Profit Pass will not be valid on VTA's express bus service. Table 6 presents the existing and proposed rates for the Not-For-Profit passes.

Table 6: Not-For-Profit Pass Rates

	2017 Headcount	Current Fare	January 1, 2018	January 1, 2019
Downtown San Jose				
1 -99 Employees/Residents	-	\$ 144.00	\$ 144.00	\$ 165.50
100 - 2,999 Employees/Residents	321	\$ 108.00		
3,000 - 14,999 Employees/Residents	1,810	\$ 72.00	\$ 72.00	\$ 82.75
15,000+ Employees/Residents	652	\$ 36.00		
Areas Served by Bus & Light Rail				
1 -99 Employees/Residents	-	\$ 108.00	\$ 108.00	\$ 124.25
100 - 2,999 Employees/Residents	1,457	\$ 72.00		
3,000 - 14,999 Employees/Residents	1,347	\$ 36.00	\$ 36.00	\$ 41.50
15,000+ Employees/Residents	5,926	\$ 18.00		
Area Served by Bus Only				
1 -99 Employees/Residents	136	\$ 72.00	\$ 72.00	\$ 82.75
100 - 2,999 Employees/Residents	3,744	\$ 36.00		
3,000 - 14,999 Employees/Residents	3,987	\$ 18.00	\$ 18.00	\$ 20.75
15,000+ Employees/Residents	35,178	\$ 9.00		

Collegiate Pass

A Collegiate Pass is proposed to be established for universities and community colleges with a price structure not to exceed San Jose State University (SJSU) per capita rate. The current downtown San Jose service level price for SJSU is \$36 per enrolled student/faculty per year. A 5% increase, rounded up to the nearest dollar, shall be applied increasing SJSU's per enrolled student/faculty rate to \$38 in January 2018 and \$40 in January 2019. Pricing for community colleges in all other service levels that are currently lower shall increase by \$5 per year until they have reached the SJSU rate. The Collegiate Pass will not be valid on VTA's express bus service. Table 7 below presents the existing rates and proposed rates for the Collegiate Pass.

Table 7: Existing and Proposed Collegiate Annual Pass Rates

	2017 Headcount	Current Fare	January 1, 2018	January 1, 2019
Downtown San Jose				
15,000+ Students/Employees (San Jose State University)	32,795	\$ 36.00	\$ 38.00	\$ 40.00
Area Served by Bus Only				
3,000 - 14,999 Students/Employees (Mission College)	7,932	\$ 18.00	\$ 23.00	\$ 28.00
15,000+ Students/Employees (Foothill-De Anza, San Jose City and Evergreen College)	42,320	\$ 9.00	\$ 14.00	\$ 19.00

Additional Changes

The Collegiate Pass, Not-For-Profit Pass and Corporate Pass will no longer be valid on VTA's express bus service. Participating institutions may choose to add the Express Pass option to their respective pass. This Express Pass option will also include access to the Dumbarton Bridge Express, Highway 17 Express and Monterey-Salinas Transit Express operators. Table 8 presents the pricing for the Express Pass option that is based on the three institutional categories as shown below.

Table 8: Express Pass Option Pricing

	2017 Headcount	Current Fare	January 1, 2018	January 1, 2019
Collegiate Pass				
1 -99 Students/Employees	-	\$ 21.60	\$ 9.00	\$ 9.00
100 - 2,999 Students/Employees	-	\$ 18.00		
3-000 - 14,999 Students/Employees	-	\$ 14.40		
15,000+ Students/Employees	-	\$ 9.00		
Not-For-Profit Pass				
1 -99 Employees/Residents	-	\$ 21.60	\$ 21.60	\$ 24.75
100 - 2,999 Employees/Residents	-	\$ 18.00		
3-000 - 14,999 Employees/Residents	-	\$ 14.40		
15,000+ Employees/Residents	35,178	\$ 9.00		
Corporate Pass				
1 -99 Employees/Residents	15	\$ 21.60	\$ 21.60	\$ 27.00
100 - 2,999 Employees/Residents	247	\$ 18.00		
3-000 - 14,999 Employees/Residents	333	\$ 14.40		
15,000+ Employees/Residents	15,000	\$ 9.00		

Potential Adverse Effects

Typically, adverse effects associated with a fare change relate to the cost increase of a transit trip, fare or fare media. However, because this proposed fare structure allows free transfers for those using the Clipper card, adverse effects may also relate to access of the Clipper media, add-value locations or retail networks.

As such adverse effects of this fare change proposal could include:

- Increased costs of per trip transit fares
- Reduction in discounts resulting in higher per trip fares
- Changes to service designation that would require a different and/or increased fare
- Elimination of fare payment methods that would require a higher per trip fare
- Access to Clipper add value and/or retail locations

Fare Survey and Community Outreach

To gain public input on the Fare Study, VTA conducted a Fare Review Public Input Survey in six languages (English, Spanish, Vietnamese, Korean and Tagalog). The paper surveys were distributed at 9 public meetings held in January-February, 2017, at which bilingual staff was available for additional translation assistance. The survey was also made available on-line to the public between November and December 2016. VTA redirected the public trying to access VTA's public Wi-Fi onto the online survey which resulted in the vast majority of these responses. In total, VTA received 2,457 surveys: 73 paper surveys and 2,355 online surveys. Out of the total, 29 surveys were non-English. Over 2,400 surveys were collected.

The survey provided a variety of data points on use of VTA service, type of fare media used, reasons for specific fare media use, and attitudinal questions about general fare policy as well as specific proposals being considered as part of the study.

The following results from this survey have been considered during the Fare Study process.

- 54% of the respondents use VTA three or more times per week, with 63% saying they take two trips per day.
- 36% of the respondents indicate that they use Clipper Cash and/or a Clipper Day pass, with only 7.5% indicating that they use cash to board the bus, and 10% who use cash or a credit/debit card at a ticket vending machine.
- 44% of respondents identify as White/Caucasian, while 32% identify as Asian, 19% Hispanic/Latino and 6% as Black/African American
- 63% of the respondents indicate that they are male, with 34% as female.
- When asked about why cash payers did not use Clipper, 26% indicated that they didn't know how Clipper worked, while 10% didn't have access to a bank account to add value online or over the phone and 21% would rather have cash in their wallet for flexibility.
- If free VTA to VTA transfers were offered on Clipper, only 12% indicate that they would continue to use cash, with 52% indicating they would use Clipper and 35% saying they would use a monthly pass.
- Of the general attitudinal questions related to increasing fares to cover increasing cost, offering free or reduced transfers, or reducing youth fares/youth monthly passes, the average rating was 3 (Not Sure/No Opinion). However, when questioned whether they would agree or disagree with the proposed changes, two thirds of the respondents did not disagree. Results from all of the survey questions are presented in Appendix B.

Public, Community and Advisory Outreach Efforts

Community Meeting Comments:

Eighteen community meetings were held across the county. Nine community meetings were coordinated through the outreach efforts conducted with the Next Network service changes held on January 11 to February 16 in three San Jose locations, Campbell, Cupertino, Gilroy, Milpitas, Mountain View and Palo Alto attended by 421 members of the public. Five community meetings were held in conjunction with the presentation of the Fiscal Years 2018 and 2019 Proposed Biennial Budget in May 2017 at two San Jose locations, Morgan Hill, Mountain View, and Sunnyvale attended by 56 members of the public. Four separate meetings were held with San Jose State University, Stanford Research Park, Silicon Valley Leadership Group, and International Technological University specifically to address their EcoPass concerns and were attended by 48 members of the public. The major fare-related comments from participants were as follows:

Support:

- No increase in paratransit fares
- Youth fare improvements, get riders at a younger age
- Free 90 minute transfers between VTA bus and light rail
- Eco Pass program, environmental sustainability, low cost for students
- EcoPass program as it is an important part of an institution's solution to help their employees, students, and/or residents with their transportation needs

Concerns:

- Increase in Senior/Disabled fare
- Exclusion of VTA Express bus service from base Eco Pass pricing
- Increase in De Anza Eco Pass pricing
- Low farebox recovery ratio and high operating costs
- Inclusion of for-profit universities in the Corporate category versus the Collegiate category for Eco Pass
- Clipper® only transfers
- Shortage of places to purchase or add value to a Clipper® Card
- Length of transfer validity
- Potential loss of ridership due to fare increases
- The timing and increases for the proposed Corporate Pass is unexpected and will be challenging to obtain funding

Suggestions:

- Discontinue discounted fares
- Provide free fares for all riders
- Implement an excursion pass for bus
- Engage with school boards and PTSA's for potential service improvements to increase ridership
- Go back to offering paper Day Passes
- Provide more locations to purchase Clipper Cards
- Provide less drastic Corporate EcoPass price increases
- Redefine Collegiate Pass eligibility to include small non-profit institutions

Advisory Committee Discussions/Recommendations

On May 10 and May 11, the Proposed Fare Policy Review was presented to the Technical Advisory Committee, Citizens' Advisory Committee, Committee for Transportation Mobility and Accessibility, and Policy Advisory Committee. The major comments from participants were as follows:

Support:

- 90 minute window for free transfers
- No increase in paratransit fares
- Continuation of Light Rail Excursion Pass
- Simplification of Eco Pass program

Concerns:

- Exclusion of Express Service from base Eco Pass pricing
- Length of transfer validity
- Inclusion of residential Eco Pass users in the Corporate category
- Inclusion of private, for-profit universities in the Corporate category versus the Collegiate category for Eco Pass
- Equity of Eco Pass tier consolidation
- Ability of visitors to acquire Clipper® cards
- Inability of university students to opt-out of Eco Pass program

Suggestions:

- Work with convention organizers to distribute Clipper® cards for visitors
- Conduct follow-up outreach to students
- Implement one price for Eco Pass Corporate category that includes Express Service
- Increase transfer window to at least 2 hours

The comments received were considered in the Fare Policy Review presented at the May 18, 2017 Administration and Finance Committee and June 1, 2017 VTA Board Workshop.

Fare Equity Analysis Findings

Understanding what the potential Title VI implications may be for minority and low-income communities has been part of the early planning and development process for the VTA Fare restructuring plan. Staff assigned to equity analysis participated in equity “check-ins” at various stages in the process so that disparities could be identified and mitigated. Additionally, while a Fare Equity Analysis may uncover impacts to protected populations, if the agency has listened to the concerns of the community, major impacts can often be considered in the early development stages of the fare structure. However, because the nature of a fare change is to ask riders to pay more at the farebox, some impacts are expected. Determining whether those impacts are disproportionately distributed to minority and low-income populations is the role of the Fare Equity Analysis.

Summary Findings

Using the impact thresholds of 10% established under the VTA Title VI and Environmental policies (Policy AS-HR-PL 2582) and based on a Fare Equity Analysis performed on the proposed fare policy restructuring, the fare change would not impose a disparate impact on minority populations or a disproportionate burden on low-income populations, based on the aggregate change experience by minority and low-income riders when compared to the overall aggregate change.

Based on the average percentage change of 19% for minority riders compared to the average percentage change of 20% for overall riders; the percentage change does not exceed the threshold established by the VTA policies. In fact, the results show that minority riders would experience a smaller percentage increase than the overall ridership. As a result, the proposed change does not result in a Disparate Impact on minority riders. Table 8 presents the system-wide summary findings for minority rider fares.

Table 8: System-wide Summary Disparate Impact

All Riders						Minority Riders					
Number of Riders		Fare Revenue		Average Fare		Number of Riders		Fare Revenue		Average Fare	
31,269,762	31,269,762	\$36,600,735	\$43,818,055	1.17	\$1.40	21,996,885	21,996,885	\$26,816,592	\$31,908,357	\$1.22	\$1.45
% Change in Average Fare Overall						20%					
						% Change in Minority Rider Fare					
						19%					

Additionally, we also compared the overall data for low-income riders and found similar results. While the overall percentage increase was 20%, the percentage change that would be experienced by low-income riders was 18%. As a result, the proposed change would not result in a Disproportionate Burden on low-income riders. Table 9 below presents the system-wide summary findings.

Table 9: System-wide Summary Disproportionate Burden

All Riders						Low Income Riders						
Number of Riders		Fare Revenue		Average Fare		Number of Riders		Fare Revenue		Average Fare		
31,269,762	31,269,762	\$36,600,735	\$43,818,055	1.17	\$1.40	21,508,356	21,508,356	\$ 24,678,496	\$29,125,059	\$1.15	\$1.35	
% Change in Average Fare Overall						20%		Change in Low Income Rider Fare				18%

Further analysis, including a more detailed examination by fare type is presented below.

Analysis Results

Because the Fare Equity analysis used the Four Nines Fare model, we can analyze individual changes associated with the fare restructuring, as well as the aggregate changes needed to determine Disparate Impact and Disproportionate Burden. As previously stated, the model uses ridership and survey data to determine “unit fares” for fare products that are not single use such as monthly or day passes. For example, the “unit fare” for a single cash fare would be the stated fare divided by 1, because cash fares are only good for one ride. For monthly passes, the “unit fare” would be the monthly pass price divided by the average times monthly passes are used in a month (which varies by service type and pass type), that was derived from farebox and Clipper data. This produces an “Average Fare” on a system-wide level as well as for each fare and service type—both existing and proposed. For Clipper usage associated with free transfers, Clipper data was used to assess the number of transfers that were completed within the proposed minute window.

The ridership data also relates to the revenue data which is used to determine the average fare by fare type. It should be noted however, that these revenue estimates are based on existing ridership and may not reflect the revenue anticipated with the fare change should individuals switch between fare media to take advantage of any discount or convenience.

As required by C4702.1B, Appendix K, we have reviewed the existing cost of individual fare media, the proposed cost associated with the fare change, the percentage change and the overall usage of the fare media by both minority riders and low-income riders in both real numbers and percentages. For purposes of assessing the impacts of the free transfers, we have used the “Average Fare” described in the previous section to include those benefits derived from riding Clipper that may not be afforded cash paying riders. Table 10 presents the fare media change by usage by group in real numbers and Table 11 presents the fare media change by usage in percentages.

Table 10: Fare Media Changes and Population Usage

VTA Fares	Average Fare		Change		Usage by Group		
	Existing	Proposed	Absolute	Percentage	Low Income	Minority	Overall
ADULT							
Single Ride Cash	\$2.00	\$2.50	\$0.50	25%	4,367,159	4,549,124	6,065,499
Light Rail Excursion Pass	\$2.00	\$2.50	\$0.50	25%	2,479	6,197	13,770
Single Ride Clipper	\$1.97	\$1.98	\$0.01	1%	855,070	1,115,939	1,449,271
Community Bus Cash	\$1.25	\$2.50	\$1.25	100%	115,378	105,076	166,885
Community Bus Clipper	\$1.25	\$1.98	\$0.74	59%	38,640	59,923	81,324
Day Pass	\$1.21	\$1.51	\$0.30	25%	460,604	473,399	639,728
Caltrain Joint Day Pass	\$3.00	\$3.75	\$0.75	25%	11,871	14,217	23,018
Adult Mobile Day Pass	\$1.50	\$1.88	\$0.38	25%	936	961	1,299
Day Pass Token (bag of 5)	\$0.62	\$0.77	\$0.15	25%	380,493	314,891	437,348
Express Cash	\$4.00	\$5.00	\$1.00	25%	97,020	131,994	174,573
Express Clipper	\$2.85	\$3.97	\$1.12	39%	69,358	186,294	236,815
Express Day Pass	\$3.00	\$3.75	\$0.75	25%	488	426	583
Monthly Pass	\$1.05	\$1.53	\$0.47	45%	5,122,575	6,114,041	8,262,217
Annual Pass	\$0.79	\$1.02	\$0.23	29%	-	-	94,602
Express Monthly Pass	\$2.61	\$3.36	\$0.75	29%	48,528	127,610	179,733
Average Adult	\$1.52	\$1.97	\$0.46	29%	11,570,599	13,200,091	17,826,665
YOUTH							
Single Ride Cash	\$1.75	\$1.25	-\$0.50	-29%	603,532	661,405	826,756
Light Rail Excursion Pass	\$1.75	\$1.25	-\$0.50	-29%	-	1,379	2,758
Single Ride Clipper	\$1.74	\$0.99	-\$0.74	-43%	82,374	104,602	130,753
Community Bus Cash	\$0.75	\$1.25	\$0.50	67%	69,791	87,312	103,683
Community Bus Clipper	\$0.75	\$0.99	\$0.24	32%	10,761	12,107	16,142
Day Pass	\$1.06	\$0.80	-\$0.27	-25%	12,555	12,903	17,437
Youth Mobile Day Pass	\$1.25	\$0.94	-\$0.31	-25%	156	171	186
Day Pass Token (bag of 5)	\$0.80	\$0.60	-\$0.19	-24%	100,972	40,389	100,972
Monthly Pass	\$2.17	\$0.92	-\$1.26	-58%	470,100	488,415	610,519
Summer Blast Pass	\$3.31	\$2.58	-\$0.74	-22%	432,314	448,326	533,721
Annual Pass	\$3.31	\$2.58	-\$0.74	-22%	2,309	2,395	2,851
Average Youth	\$2.12	\$1.42	-\$0.70	-34%	1,784,864	1,859,404	2,345,778
SENIOR/DISABLED							
Single Ride Cash	\$1.00	\$1.25	\$0.25	25%	880,050	675,182	1,607,575
Light Rail Excursion Pass	\$1.00	\$1.25	\$0.25	25%	770	385	770
Single Ride Clipper	\$0.97	\$0.99	\$0.02	2%	170,742	157,608	262,680
Community Bus	\$0.50	\$1.25	\$0.75	150%	58,131	62,522	89,317
Community Bus Clipper	\$0.50	\$0.99	\$0.49	98%	17,317	9,983	19,966
Day Pass	\$0.48	\$0.72	\$0.24	50%	219,527	219,527	267,716
Senior/Disable Mobile Day Pass	\$0.63	\$0.94	\$0.31	50%	84	65	116
Monthly Pass	\$0.45	\$0.48	\$0.03	7%	4,629,981	3,637,842	5,511,882
Annual Pass	\$1.05	\$1.47	\$0.42	40%	28,861	26,847	33,559
Other	\$0.00	\$0.00	\$0.00	0%	2,147,430	2,147,430	3,303,738
Average Senior/Disabled	\$0.41	\$0.48	\$0.07	26%	8,152,892	6,937,391	11,097,319
TOTAL RIDERS					21,508,356	21,996,885	31,269,762

Table 11: Fare Media Changes by Population Percentages

VTA Fares	Average Fare		Change		Usage by Group (Percentages)		
	Existing	Proposed	Absolute	Percentage	Low Income	Minority	Overall
ADULT							
Single Ride Cash	\$2.00	\$2.50	\$0.50	25%	20.3%	20.7%	19.4%
Light Rail Excursion Pass	\$2.00	\$2.50	\$0.50	25%	0.01%	0.0%	0.0%
Single Ride Clipper	\$1.97	\$1.98	\$0.01	1%	4.0%	5.1%	4.6%
Community Bus Cash	\$1.25	\$2.50	\$1.25	100%	0.5%	0.5%	0.5%
Community Bus Clipper	\$1.25	\$1.98	\$0.74	59%	0.2%	0.3%	0.3%
Day Pass	\$1.21	\$1.51	\$0.30	25%	2.1%	2.2%	2.0%
Caltrain Joint Day Pass	\$3.00	\$3.75	\$0.75	25%	0.1%	0.1%	0.1%
Adult Mobile Day Pass	\$1.50	\$1.88	\$0.38	25%	0.0%	0.0%	0.0%
Day Pass Token (bag of 5)	\$0.62	\$0.77	\$0.15	25%	1.8%	1.4%	1.4%
Express Cash	\$4.00	\$5.00	\$1.00	25%	0.5%	0.6%	0.6%
Express Clipper	\$2.85	\$3.97	\$1.12	39%	0.3%	0.8%	0.8%
Express Day Pass	\$3.00	\$3.75	\$0.75	25%	0.0%	0.0%	0.0%
Monthly Pass	\$1.05	\$1.53	\$0.47	45%	23.8%	27.8%	26.4%
Annual Pass	\$0.79	\$1.02	\$0.23	29%		0.0%	0.3%
Express Monthly Pass	\$2.61	\$3.36	\$0.75	29%	0.2%	0.6%	0.6%
Average Adult	\$1.52	\$1.97	\$0.46	29%	53.8%	60.0%	57.0%
YOUTH							
Single Ride Cash	\$1.75	\$1.25	-\$0.50	-29%	2.8%	3.0%	2.6%
Light Rail Excursion Pass	\$1.75	\$1.25	-\$0.50	-29%	0.0%	0.0%	0.0%
Single Ride Clipper	\$1.74	\$0.99	-\$0.74	-43%	0.4%	0.5%	0.4%
Community Bus Cash	\$0.75	\$1.25	\$0.50	67%	0.3%	0.4%	0.3%
Community Bus Clipper	\$0.75	\$0.99	\$0.24	32%	0.1%	0.1%	0.1%
Day Pass	\$1.06	\$0.80	-\$0.27	-25%	0.1%	0.1%	0.1%
Youth Mobile Day Pass	\$1.25	\$0.94	-\$0.31	-25%	0.0%	0.0%	0.0%
Day Pass Token (bag of 5)	\$0.80	\$0.60	-\$0.19	-24%	0.5%	0.2%	0.3%
Monthly Pass	\$2.17	\$0.92	-\$1.26	-58%	2.2%	2.2%	2.0%
Summer Blast Pass	\$3.31	\$2.58	-\$0.74	-22%	2.0%	2.0%	1.7%
Annual Pass	\$3.31	\$2.58	-\$0.74	-22%	0.0%	0.0%	0.0%
Average Youth	\$2.12	\$1.42	-\$0.70	-34%	8.3%	8.5%	7.5%
SENIOR/DISABLED							
Single Ride Cash	\$1.00	\$1.25	\$0.25	25%	4.1%	3.1%	5.1%
Light Rail Excursion Pass	\$1.00	\$1.25	\$0.25	25%	0.0%	0.0%	0.0%
Single Ride Clipper	\$0.97	\$0.99	\$0.02	2%	0.8%	0.7%	0.8%
Community Bus	\$0.50	\$1.25	\$0.75	150%	0.3%	0.3%	0.3%
Community Bus Clipper	\$0.50	\$0.99	\$0.49	98%	0.1%	0.0%	0.1%
Day Pass	\$0.48	\$0.72	\$0.24	50%	1.0%	1.0%	0.9%
Senior/Disable Mobile Day Pass	\$0.63	\$0.94	\$0.31	50%	0.0%	0.0%	0.0%
Monthly Pass	\$0.45	\$0.48	\$0.03	7%	21.5%	16.5%	17.6%
Annual Pass	\$1.05	\$1.47	\$0.42	40%	0.1%	0.1%	0.1%
Other	\$0.00	\$0.00	\$0.00	0%	10.0%	9.8%	10.6%
Average Senior/Disabled	\$0.41	\$0.48	\$0.07	26%	37.9%	31.5%	35.5%
TOTAL RIDERS					100.0%	100.0%	100.0%

While the data from the tables, above were reviewed in conjunction with this analysis, they do not represent the full analysis used to determine whether the change would result in Disparate Impacts to minority riders or a disproportionate burden for low-income riders. For that analysis, we employed a much more complex model that took into consideration both the average fare that would be experienced under the proposed fare change as well as the proportion of riders in each rider group and fare media. Appendix C provides the full spreadsheet analysis, which includes number and percentage

of riders in each group by fare type and fare media, which was determined through cross tabulations using the VTA 2013 Onboard Survey data.

Table 12 below shows one view of the Average Fare Analysis for Minority Riders that was used to determine whether the fare change would result in a Disparate Impact based on the VTA thresholds. Table 13 provides the same view of the analysis for low-income riders. While each fare media experienced a different percentage change, when viewed in totality, the impacts experienced by minority or low-income riders would be less than the impacts experienced by the overall ridership.

Table 12: Disparate Impact Analysis by Fare Type

	All Riders						Minority Riders					
	Number of Riders		Fare Revenue		Average Fare		Number of Riders		Fare Revenue		Average Fare	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
ADULT												
Single Ride Cash	6,065,499	6,065,499	\$12,130,998	\$15,163,748	\$2.00	\$2.50	4,549,124	4,549,124	\$ 9,098,249	11,372,811	\$2.00	\$2.50
Light Rail Excursion Pass	13,770	13,770	\$ 27,540	\$ 34,425	\$2.00	\$2.50	6,197	6,197	\$ 12,393	15,491	\$2.00	\$2.50
Single Ride Clipper	1,449,271	1,449,271	\$ 2,858,940	\$ 2,875,538	\$1.97	\$1.98	1,115,939	1,115,939	\$ 2,201,384	2,214,164	\$1.97	\$1.98
Community Bus Cash	166,885	166,885	\$ 208,606	\$ 417,213	\$1.25	\$2.50	105,076	105,076	\$ 131,345	262,689	\$1.25	\$2.50
Community Bus Clipper	81,324	81,324	\$ 101,434	\$ 161,357	\$1.25	\$1.98	59,923	59,923	\$ 74,741	118,895	\$1.25	\$1.98
Day Pass	639,728	639,728	\$ 770,931	\$ 963,664	\$1.21	\$1.51	473,399	473,399	\$ 570,489	713,111	\$1.21	\$1.51
Caltrain Joint Day Pass	23,018	23,018	\$ 69,054	\$ 86,318	\$3.00	\$3.75	14,217	14,217	\$ 42,651	53,314	\$3.00	\$3.75
Adult Mobile Day Pass	1,299	1,299	\$ 1,949	\$ 2,436	\$1.50	\$1.88	961	961	\$ 1,442	1,802	\$1.50	\$1.88
Day Pass Token (bag of 5)	437,348	437,348	\$ 270,973	\$ 338,716	\$0.62	\$0.77	314,891	314,891	\$ 195,101	243,876	\$0.62	\$0.77
Express Cash	174,573	174,573	\$ 698,292	\$ 872,865	\$4.00	\$5.00	131,994	131,994	\$ 527,977	659,971	\$4.00	\$5.00
Express Clipper	236,815	236,815	\$ 674,408	\$ 939,742	\$2.85	\$3.97	186,294	186,294	\$ 530,534	739,264	\$2.85	\$3.97
Express Day Pass	583	583	\$ 1,749	\$ 2,186	\$3.00	\$3.75	426	426	\$ 1,277	1,596	\$3.00	\$3.75
Monthly Pass	8,262,217	8,262,217	\$ 8,701,721	\$12,626,003	\$1.05	\$1.53	6,114,041	6,114,041	\$ 6,439,274	9,343,242	\$1.05	\$1.53
Annual Pass	94,602	94,602	\$ 74,760	\$ 96,120	\$0.79	\$1.02	-	-	\$ -	-	-	-
Express Monthly Pass	179,733	179,733	\$ 469,415	\$ 603,534	\$2.61	\$3.36	127,610	127,610	\$ 333,285	428,509	\$2.61	\$3.36
Average Adult	17,826,665	17,826,665	\$27,060,770	\$35,183,863	\$1.52	\$1.97	13,200,091	13,200,091	\$20,160,139	26,168,735	\$1.53	\$1.98
YOUTH												
Single Ride Cash	826,756	826,756	\$ 1,446,823	\$ 1,033,445	\$1.75	\$1.25	661,405	661,405	\$ 1,157,458	826,756	\$1.75	\$1.25
Light Rail Excursion Pass	2,758	2,758	\$ 4,827	\$ 3,448	\$1.75	\$1.25	1,379	1,379	\$ 2,413	1,724	\$1.75	\$1.25
Single Ride Clipper	130,753	130,753	\$ 227,117	\$ 129,715	\$1.74	\$0.99	104,602	104,602	\$ 181,693	103,772	\$1.74	\$0.99
Community Bus Cash	103,683	103,683	\$ 77,762	\$ 129,604	\$0.75	\$1.25	87,312	87,312	\$ 65,484	109,140	\$0.75	\$1.25
Community Bus Clipper	16,142	16,142	\$ 12,106	\$ 16,014	\$0.75	\$0.99	12,107	12,107	\$ 9,079	12,010	\$0.75	\$0.99
Day Pass	17,437	17,437	\$ 18,549	\$ 13,886	\$1.06	\$0.80	12,903	12,903	\$ 13,726	10,276	\$1.06	\$0.80
Youth Mobile Day Pass	186	186	\$ 233	\$ 174	\$1.25	\$0.94	171	171	\$ 214	160	\$1.25	\$0.94
Day Pass Token (bag of 5)	100,972	100,972	\$ 80,328	\$ 61,049	\$0.80	\$0.60	40,389	40,389	\$ 32,131	24,420	\$0.80	\$0.60
Monthly Pass	610,519	610,519	\$ 1,327,297	\$ 558,797	\$2.17	\$0.92	488,415	488,415	\$ 1,061,838	447,038	\$2.17	\$0.92
Summer Blast Pass	533,721	533,721	\$ 1,769,178	\$ 1,376,028	\$3.31	\$2.58	448,326	448,326	\$ 1,486,110	1,155,863	\$3.31	\$2.58
Annual Pass	2,851	2,851	\$ 9,450	\$ 7,350	\$3.31	\$2.58	2,395	2,395	\$ 7,938	6,174	\$3.31	\$2.58
Average Youth	2,345,778	2,345,778	\$ 4,973,670	\$ 3,329,510	\$2.12	\$1.42	1,859,404	1,859,404	\$ 4,018,086	2,697,333	\$2.16	\$1.45
SENIOR/DISABLED												
Single Ride Cash	1,607,575	1,607,575	\$ 1,607,575	\$ 2,009,469	\$1.00	\$1.25	675,182	675,182	\$ 675,182	843,977	\$1.00	\$1.25
Light Rail Excursion Pass	770	770	\$ 770	\$ 963	\$1.00	\$1.25	385	385	\$ 385	481	\$1.00	\$1.25
Single Ride Clipper	262,680	262,680	\$ 254,630	\$ 260,595	\$0.97	\$0.99	157,608	157,608	\$ 152,778	156,357	\$0.97	\$0.99
Community Bus	89,317	89,317	\$ 44,659	\$ 111,646	\$0.50	\$1.25	62,522	62,522	\$ 31,261	78,152	\$0.50	\$1.25
Community Bus Clipper	19,966	19,966	\$ 9,980	\$ 19,808	\$0.50	\$0.99	9,983	9,983	\$ 4,990	9,904	\$0.50	\$0.99
Day Pass	267,716	267,716	\$ 129,403	\$ 194,080	\$0.48	\$0.72	219,527	219,527	\$ 106,111	159,146	\$0.48	\$0.72
Senior/Disable Mobile Day	116	116	\$ 73	\$ 109	\$0.63	\$0.94	65	65	\$ 41	61	\$0.63	\$0.94
Monthly Pass	5,511,882	5,511,882	\$ 2,483,889	\$ 2,658,568	\$0.45	\$0.48	3,637,842	3,637,842	\$ 1,639,366	1,754,655	\$0.45	\$0.48
Annual Pass	33,559	33,559	\$ 35,318	\$ 49,445	\$1.05	\$1.47	26,847	26,847	\$ 28,254	39,556	\$1.05	\$1.47
Other	3,303,738	3,303,738	\$ -	\$ -	\$0.00	\$0.00	2,147,430	2,147,430	\$ 0	0	\$0.00	\$0.00
Average Senior/Disabled	11,097,319	11,097,319	\$ 4,566,295	\$ 5,304,682	\$0.41	\$0.48	6,937,391	6,937,391	\$ 2,638,367	3,042,289	\$0.38	\$0.44
Total Ridership	31,269,762	31,269,762	\$36,600,735	\$43,818,055	1.17	\$1.40	21,996,885	21,996,885	\$26,816,592	\$31,908,357	\$1.22	\$1.45
			% Change in Average Fare Overall			20%			% Change in Minority Rider			19%

Table 13: Disproportionate Burden Analysis by Fare Type

	All Riders						Low Income Riders							
	Number of Riders		Fare Revenue		Average Fare		Number of Riders		Fare Revenue		Average Fare			
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed		
ADULT														
Single Ride Cash	6,065,499	6,065,499	\$12,130,998	\$15,163,748	\$2.00	\$2.50	4,367,159	4,367,159	\$ 8,734,319	\$10,917,898	\$2.00	\$2.50		
Light Rail Excursion Pass	13,770	13,770	\$ 27,540	\$ 34,425	\$2.00	\$2.50	2,479	2,479	\$ 4,957	\$ 6,197	\$2.00	\$2.50		
Single Ride Clipper	1,449,271	1,449,271	\$ 2,858,940	\$ 2,875,538	\$1.97	\$1.98	855,070	855,070	\$ 1,686,775	\$ 1,696,567	\$1.97	\$1.98		
Community Bus Cash	166,885	166,885	\$ 208,606	\$ 417,213	\$1.25	\$2.50	115,378	115,378	\$ 144,223	\$ 288,445	\$1.25	\$2.50		
Community Bus Clipper	81,324	81,324	\$ 101,434	\$ 161,357	\$1.25	\$1.98	38,640	38,640	\$ 48,195	\$ 76,666	\$1.25	\$1.98		
Day Pass	639,728	639,728	\$ 770,931	\$ 963,664	\$1.21	\$1.51	460,604	460,604	\$ 555,070	\$ 693,838	\$1.21	\$1.51		
Caltrain Joint Day Pass	23,018	23,018	\$ 69,054	\$ 86,318	\$3.00	\$3.75	11,871	11,871	\$ 35,613	\$ 44,516	\$3.00	\$3.75		
Adult Mobile Day Pass	1,299	1,299	\$ 1,949	\$ 2,436	\$1.50	\$1.88	936	936	\$ 1,404	\$ 1,755	\$1.50	\$1.88		
Day Pass Token (bag of 5)	437,348	437,348	\$ 270,973	\$ 338,716	\$0.62	\$0.77	380,493	380,493	\$ 235,746	\$ 294,683	\$0.62	\$0.77		
Express Cash	174,573	174,573	\$ 698,292	\$ 872,865	\$4.00	\$5.00	97,020	97,020	\$ 388,082	\$ 485,102	\$4.00	\$5.00		
Express Clipper	236,815	236,815	\$ 674,408	\$ 939,742	\$2.85	\$3.97	69,358	69,358	\$ 197,520	\$ 275,231	\$2.85	\$3.97		
Express Day Pass	583	583	\$ 1,749	\$ 2,186	\$3.00	\$3.75	488	488	\$ 1,465	\$ 1,832	\$3.00	\$3.75		
Monthly Pass	8,262,217	8,262,217	\$ 8,701,721	\$12,626,003	\$1.05	\$1.53	5,122,575	5,122,575	\$ 5,395,067	\$ 7,828,122	\$1.05	\$1.53		
Annual Pass	94,602	94,602	\$ 74,760	\$ 96,120	\$0.79	\$1.02	-	-	\$ -	\$ -				
Express Monthly Pass	179,733	179,733	\$ 469,415	\$ 603,534	\$2.61	\$3.36	48,528	48,528	\$ 126,742	\$ 162,954	\$2.61	\$3.36		
Average Adult	17,826,665	17,826,665	\$27,060,770	\$35,183,863	\$1.52	\$1.97	11,570,599	11,570,599	\$ 17,555,178	\$22,773,807	\$1.52	\$1.97		
YOUTH														
Single Ride Cash	826,756	826,756	\$ 1,446,823	\$ 1,033,445	\$1.75	\$1.25	603,532	603,532	\$ 1,056,181	\$ 754,415	\$1.75	\$1.25		
Light Rail Excursion Pass	2,758	2,758	\$ 4,827	\$ 3,448	\$1.75	\$1.25	-	-	\$ -	\$ -				
Single Ride Clipper	130,753	130,753	\$ 227,117	\$ 129,715	\$1.74	\$0.99	82,374	82,374	\$ 143,084	\$ 81,721	\$1.74	\$0.99		
Community Bus Cash	103,683	103,683	\$ 77,762	\$ 129,604	\$0.75	\$1.25	69,791	69,791	\$ 52,343	\$ 87,238	\$0.75	\$1.25		
Community Bus Clipper	16,142	16,142	\$ 12,106	\$ 16,014	\$0.75	\$0.99	10,761	10,761	\$ 8,071	\$ 10,676	\$0.75	\$0.99		
Day Pass	17,437	17,437	\$ 18,549	\$ 13,886	\$1.06	\$0.80	12,555	12,555	\$ 13,355	\$ 9,998	\$1.06	\$0.80		
Youth Mobile Day Pass	186	186	\$ 233	\$ 174	\$1.25	\$0.94	156	156	\$ 195	\$ 146	\$1.25	\$0.94		
Day Pass Token (bag of 5)	100,972	100,972	\$ 80,328	\$ 61,049	\$0.80	\$0.60	100,972	100,972	\$ 80,328	\$ 61,049	\$0.80	\$0.60		
Monthly Pass	610,519	610,519	\$ 1,327,297	\$ 558,797	\$2.17	\$0.92	470,100	470,100	\$ 1,022,019	\$ 430,274	\$2.17	\$0.92		
Summer Blast Pass	533,721	533,721	\$ 1,769,178	\$ 1,376,028	\$3.31	\$2.58	432,314	432,314	\$ 1,433,034	\$ 1,114,582	\$3.31	\$2.58		
Annual Pass	2,851	2,851	\$ 9,450	\$ 7,350	\$3.31	\$2.58	2,309	2,309	\$ 7,655	\$ 5,954	\$3.31	\$2.58		
Average Youth	2,345,778	2,345,778	\$ 4,973,670	\$ 3,329,510	\$2.12	\$1.42	1,784,864	1,784,864	\$ 3,816,264	\$ 2,556,053	\$2.14	\$1.43		
SENIOR/DISABLED														
Single Ride Cash	1,607,575	1,607,575	\$ 1,607,575	\$ 2,009,469	\$1.00	\$1.25	880,050	880,050	\$ 880,050	\$ 1,100,063	\$1.00	\$1.25		
Light Rail Excursion Pass	770	770	\$ 770	\$ 963	\$1.00	\$1.25	770	770	\$ 770	\$ 963	\$1.00	\$1.25		
Single Ride Clipper	262,680	262,680	\$ 254,630	\$ 260,595	\$0.97	\$0.99	170,742	170,742	\$ 165,510	\$ 169,387	\$0.97	\$0.99		
Community Bus	89,317	89,317	\$ 44,659	\$ 111,646	\$0.50	\$1.25	58,131	58,131	\$ 29,065	\$ 72,664	\$0.50	\$1.25		
Community Bus Clipper	19,966	19,966	\$ 9,980	\$ 19,808	\$0.50	\$0.99	17,317	17,317	\$ 8,656	\$ 17,180	\$0.50	\$0.99		
Day Pass	267,716	267,716	\$ 129,403	\$ 194,080	\$0.48	\$0.72	219,527	219,527	\$ 106,111	\$ 159,146	\$0.48	\$0.72		
Senior/Disable Mobile Day Pass	116	116	\$ 73	\$ 109	\$0.63	\$0.94	84	84	\$ 52	\$ 78	\$0.63	\$0.94		
Monthly Pass	5,511,882	5,511,882	\$ 2,483,889	\$ 2,658,568	\$0.45	\$0.48	4,629,981	4,629,981	\$ 2,086,466	\$ 2,233,197	\$0.45	\$0.48		
Annual Pass	33,559	33,559	\$ 35,318	\$ 49,445	\$1.05	\$1.47	28,861	28,861	\$ 30,374	\$ 42,523	\$1.05	\$1.47		
Other	3,303,738	3,303,738				\$0.00	2,147,430	2,147,430	\$ 0	\$ 0	\$0.00	\$0.00		
Average Senior/Disabled	11,097,319	11,097,319	\$ 4,566,295	\$ 5,304,682	\$0.41	\$0.48	8,152,892	8,152,892	\$ 3,307,053	\$ 3,795,199	\$0.41	\$0.47		
Total Ridership	31,269,762	31,269,762	\$36,600,735	\$43,818,055	1.17	\$1.40	21,508,356	21,508,356	\$ 24,678,496	\$29,125,059	\$1.15	\$1.35		
	% Change in Average Fare Overall						20%	Change in Low Income Rider Fare						18%

Evaluation of Clipper® Distribution Network

In order to determine whether equity issues exist related to the existing Clipper® retail network, a Geographic Information System (GIS) map-based analysis was completed to assess low-income and minority riders' access to Clipper® vendors, which are reflected in maps provided in Appendix D-1 and D-2. To prepare the maps, predominantly low-income and minority block groups were identified along with the current vendor network, including light rail stations, customer service sites, and retail locations. Using mapping software, ½ mile buffers were drawn around the locations to help assess proximity of the vendor network to the protected and overall population.

Per FTA Title VI guidance, census blocks, tracts and block groups are classified as “predominantly minority” or “predominantly low-income” if the percentage of minority or low-income population exceeds the VTA service area average. The US Census Bureau American Community Survey 2010-2015 five year estimates provided data on income and minority status for Santa Clara County at the census tract level.

The GIS system was also used to determine the percentage of low-income, minority and overall population within ½ mile of the Clipper® retail network. The following tables provide comparisons based on income and ethnicity that indicate that the minority and low-income populations have similar access to the Clipper® retail network when compared to the overall population. It should be noted that “total population” may vary between maps as a result of the data set, as ACS data represents a sample with a fairly high margin of error for income designation. Percentages were based on the relative data sets and are appropriate. Table 14 presents the comparison of Clipper outlets for income status, and Table 15 presents the comparison for minority status.

While the proximity to Clipper® retail locations appeared to be distributed equitably in the community, impacts associated with access to Clipper® may be somewhat different between low-income populations and non-low income populations based on auto availability. VTA should continue to strive toward expanding the Clipper® retail network in order to increase access for low-income and minority populations.

Table 14: Proximity of Clipper® Retail Locations to Low-Income Populations

	Total Population	Population within ½ Mile of Clipper Vendor or TVM	% of Population within ½ Mile of Clipper Vendor or TVM
Low Income	417,423	285,279	68%
Non Low Income	1,422,612	910,071	64%
Overall	1,840,035	1,195,350	65%

Table 15: Proximity of Clipper Retail Locations to Minority Populations

	Total Population	Population within ½ Mile of Clipper Vendor or TVM	% of Population within ½ Mile of Clipper Vendor or TVM
Minority	1,153,933	745,700	65%
Non-Minority	714,216	472,548	66%
Overall	1,866,149	1,218,248	65%

Evaluation of the Special Pass Programs

Many of the VTA Special Pass programs do not result in a direct financial impact to the individual rider, as these pass programs typically involve employers or other types of agencies participating in the program in order to provide a free-transit benefit to their constituents. However, because the fare restructuring proposal includes a restructuring of the special pass programs such as the EcoPass and the Collegiate pass, along with the introduction of several new pass products, we have conducted a parallel analysis to ensure that the pass program functions in a non-discriminatory manner.

While the federal guidance does not require it, a full equity analysis is good practice to ensure that the program would not result in discriminatory impacts on minority and low-income populations. Additionally, a full equity analysis provides an opportunity to fill in data gaps for relevant fare categories. In this instance, no specific survey data was available regarding the ethnicity or income category of riders in each of the specialty pass programs, as the onboard survey did not distinguish between the varieties of EcoPass programs that were available at the time of the survey. Using the onboard survey data, we only know that about 23% of minority riders and a little over 20% of low-income riders indicated that they use an EcoPass when paying their fares. However, in evaluating the changes to the EcoPass programs, we can make some assumptions about the nature of the existing participants in the pass programs using proxies in the way that the low-income housing or nonprofit agencies cater to low-income and/or minority populations. We can then assess whether the discounts afforded to those agencies is on par with the discounts afforded private companies.

In light of the lack of specific ethnicity or income data of the EcoPass programs, we have reviewed the specialty pass proposals to understand how each product or program would be structured. We reviewed several metrics as a way to assess whether low-income or minority users may experience greater impacts than the overall rider, including:

- Percentage increase in contract rate from the current year and
- Percentage change in Revenue per Boarding
- Proposed Revenue per Boarding by Individual Institutions

For this analysis, the Express option is included in the rates to capture the greatest level of change. We have also assumed the same horizon year (2019) to determine the greater level of impacts.

While all of the pass programs are proposed to increase, the Collegiate and Not-For-Profit Pass programs have the lowest 2019 rates compared to the Corporate (for profit) pass. Further, the rate for the Corporate Pass program is about 30% higher than the Not-For-Profit Pass program. This suggests that while some Non-Profit Pass programs saw greater percentage increases than some of the Corporate Pass programs, overall rates for non-profit organizations are still lower than for-profit institutions. Table 16 below presents the comparison between rates for 2017 and 2019, along with the projected percentage increases.

Table 16: Comparison of 2017 EcoPass Program Rates

Institution	2017 Rate	2019 Rate	2019 % Increase from 2017
California Community College and University System (Collegiate Pass)	\$ 16.20	\$ 25.00	80%
California Community College System	\$ 11.25	\$ 21.25	97%
California University System	\$ 36.00	\$ 40.00	11%
Nonprofit (Not-For-Profit Pass)	\$ 46.41	\$ 82.27	90%
Nonprofit Employer	\$ 54.00	\$ 89.25	89%
Low-Income Housing	\$ 52.20	\$ 89.00	76%
Government Agency	\$ 37.13	\$ 62.13	80%
Not-for-Profit School	\$ 41.14	\$ 88.68	122%
For-Profit (Corporate Pass)	\$ 67.37	\$ 108.03	77%
Employer	\$ 61.20	\$ 101.17	78%
For-Profit Housing	\$ 48.00	\$ 105.00	129%
For-Profit School	\$ 54.00	\$ 112.50	119%
Hotel Employer	\$ 84.71	\$ 121.76	59%
Grand Total	\$ 57.41	\$ 94.70	81%

We also reviewed the Revenue per Boarding for the institutional group to determine the level of change anticipated with the revised EcoPass program rates. While the Not-For-Profit pass groups experienced the highest rate of increase (108% between 2017 and 2019) their revenue per boarding rates were some of the lowest, especially the Low-Income Housing participants whose rate was the lowest at \$0.50 per boarding. The highest rates were related to the For-Profit Housing, at \$3.72 per boarding, and Non-Profit Employers (such as Stanford University) at \$3.53 per boarding. In all cases, the revenue per boarding for those institutions that cater to low-income populations—such as low-income housing and the Community College programs, Not-For-Profit Schools, For-Profit Hotels, and Government Agencies—have the lowest revenue per boarding rates. While it could be argued that the nonprofit employer has one of the higher rates of revenue per boarding, the bulk of that group is Stanford University, which has a significant base of employees who would not qualify as low-income. In the future, surveys aimed at discovering

To determine how that relatively high Nonprofit Employer rate affected groups, agencies or employers that cater to low-income populations, we reviewed the individual participants to compare them to the

revenue per boarding for profit groups. While the overall Nonprofit Employer has a relatively high rate, individual organizations, such as Goodwill of Santa Clara County and Evergreen Adult Development Center have very low revenue per boarding amounts, which signals that any increase in their rates will not affect their ability to continue to offer this benefit to their constituents.

Table 17 provides the summary of the Revenue per Boarding for the EcoPass programs.

Table 17: Revenue per Boarding for EcoPass Programs

	Projected Boardings for 2017-2020	FY 2017		FY 2019	
		2017 Contract Participants	Projected Revenue per Boarding	Projected Revenue per Boarding	Percentage Change from 2017
California Community College and University System (Collegiate Pass)	3,298,423	83,047	\$ 0.51	\$0.66	30%
California Community College System	1,523,793	50,252	\$ 0.31	\$0.59	90%
California University System	1,774,631	32,795	\$ 0.67	\$0.72	8%
Nonprofit (Not-For-Profit Pass)	2,498,395	80,078	\$ 0.55	\$1.15	108%
Nonprofit Employer	342,980	27,384	\$ 1.43	\$3.53	147%
Low-Income Housing	400,874	4,196	\$ 0.31	\$0.50	61%
Government Agency	1,457,752	46,623	\$ 0.44	\$0.84	92%
Not-for-Profit School	296,789	1,875	\$ 0.42	\$0.83	97%
For-Profit (Corporate Pass)	1,805,952	68,989	\$ 0.96	\$1.79	87%
Employer	1,478,705	65,512	\$ 1.04	\$1.93	85%
For-Profit Housing	25,842	988	\$ 2.20	\$3.72	69%
For-Profit School	56,901	749	\$ 0.76	\$1.46	91%
Hotel Employer	244,504	1,740	\$ 0.44	\$0.82	86%
Grand Total	7,602,770	232,114	\$ 0.63	\$1.09	72%

In general, the EcoPass changes and new pass programs appear to have considered the needs of low-income populations that may be the recipients of these pass programs when determining the 2019 rates and levels of increase.

Appendix A: VTA Title VI and Environmental Justice Policies

Public Outreach and Schedule

In the development of the Major Service Change, Disparate Impact, and Disproportionate Burden policies, VTA solicited input from the community, including low-income, minority, and limited English proficient populations which are traditionally underrepresented in the transit decision-making process. A community outreach plan was implemented to provide the public with multiple opportunities to learn about the proposed policies and provide feedback.

The proposed policies below were emailed to more than 30 community-based organizations, transit advocates, and other grassroots organizations to obtain feedback. Additionally, VTA presented the policies at the Refugee and Immigrant Forum and held a meeting at its River Oaks administrative office. Comments could be made by calling or sending emails to VTA Customer Service. VTA also informed the public of free language assistance available to persons who are limited English proficient.

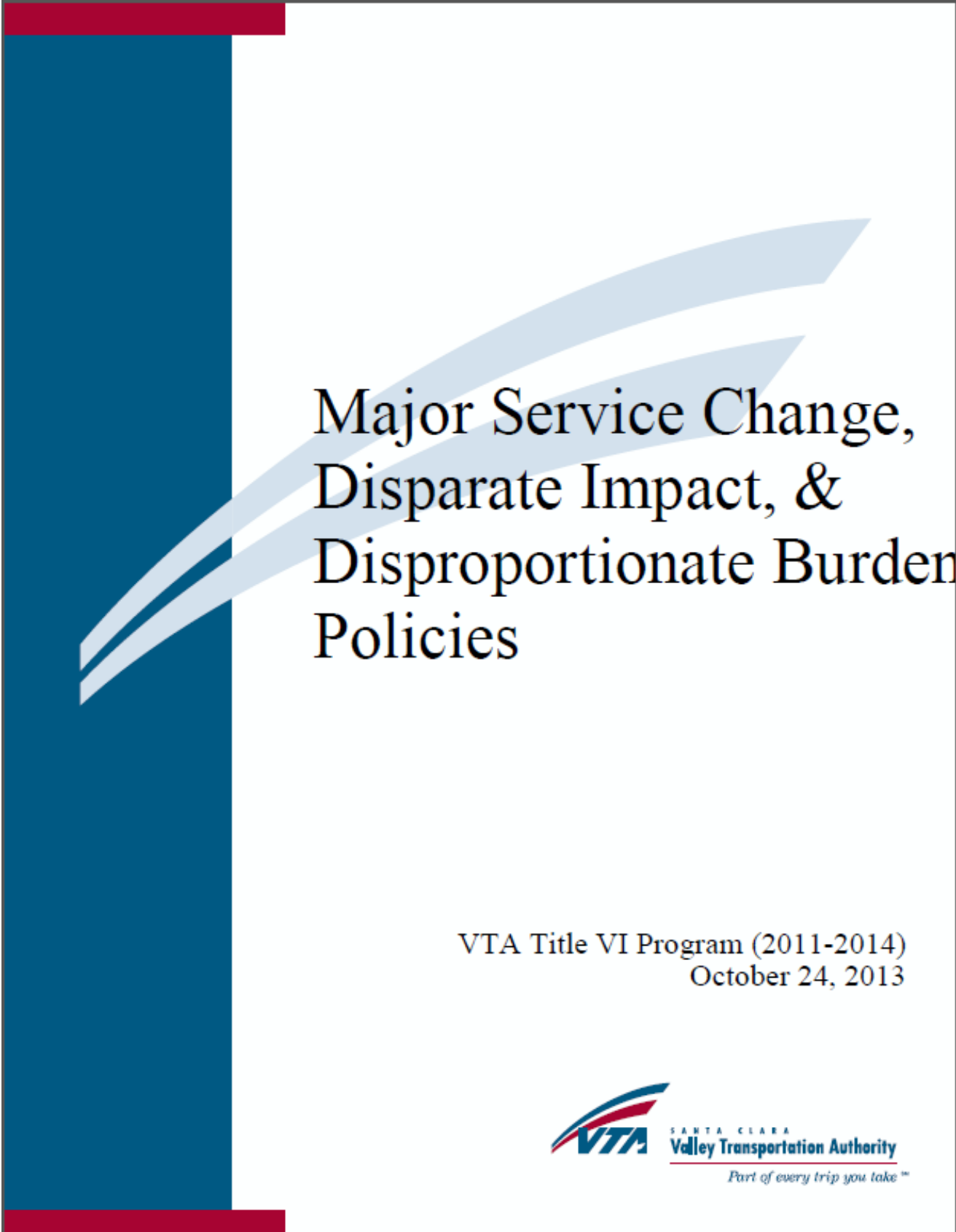
Outreach Schedule:

- September 13 – October 4, 2013: Comment Period
- September 13 – October 28, 2013: Posted draft documents on VTA’s website for public comment
- September 10, 2013: Notified CBOs and advocates of outreach period on policies
- September 13, 2013: Emailed proposed policies to CBOs and Advocates
- September 18, 2013: Presentation to the Refugee and Immigrant Forum
- September 20, 2013: Presentation to CBOs at VTA, River Oaks Administrative Offices
- September 26, 2013: Emailed examples of service and fare equity analyses and PowerPoint presentation of proposed policies in advance of presentation
- October 2, 2013: Teleconference with transit advocates, including Public Advocates, Urban Habitat, TransForm, The City Project

In response to the comments made by the public, VTA made the following changes to the Major Service Change, Disparate Impact and Disproportionate Burden Policies:

1. Changed the definition of a Major Service Change to include:
 - A series of changes on a single route which are included in the two-year Transit Service Plan and cumulatively meet any of the above criteria.
 - A system-wide change concurrently affecting 5 percent or more of the total system revenue hours; and
 - Revised Criteria for “proposed changes that are anticipated to be controversial” to clarify that the decision will be based upon public feedback.
2. Revised Disparate Impact and Disproportionate Burden policies to clarify which data sources are used for equity analyses, as follows: “Analyses shall be based on the most recent VTA passenger survey data, but may also use US Census data if survey data is inadequate or unavailable.”

Board Adoption Date: November 7, 2013



Major Service Change, Disparate Impact, & Disproportionate Burden Policies

VTA Title VI Program (2011-2014)
October 24, 2013



<i>TITLE VI AND ENVIRONMENTAL JUSTICE POLICIES</i>	POLICY	
	Document Number:	AS-HR-PL-2582
	Version Number:	01

1.0 Purpose:

Title VI (codified at 42 U.S.C. §2000 et seq.) was enacted as part of the landmark Civil Rights Act of 1964. It prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

In order to comply with Federal Transit Administration's (FTA) Title VI Circular 4702.1B and Environmental Justice Circular 4703.1 requirements, VTA is required to create and adopt Major Service Change, Disparate Impact, and Disproportionate Burden Policies. These policies are used during the planning process to evaluate the impact of major service and fare changes on minority and low income passengers.

In the development of these policies, VTA was also required to seek input from the community, including low-income, minority, and limited English proficient populations, which are traditionally under-represented in the transit decision-making process.

2.0 Scope:

These policies apply to all "major" service changes, and to all fare changes, regardless of magnitude, except as specifically defined herein.

3.0 Responsibilities:

All VTA employees are required to comply with federal and state Title VI and environmental justice laws, regulations, and administrative directives with regard to policies, projects, programs, services, and activities. The Title VI and Environmental Justice Procedures describe divisional and departmental responsibilities.

4.0 Policy:

In accordance with FTA Title VI requirements, VTA shall perform a Service or Fare Equity Analysis to evaluate the positive and negative impacts of all major service and fare changes on minority and low income passengers. The Major Service Change policy determines which proposed service changes require an Equity Analysis. The Disparate Impact and Disproportionate Burden policies contained provide guidance to staff in their analysis of the effects of the proposed changes. As previously noted, all fare changes proposals are subject to a Fare Equity Analysis.

VTA's Board of Directors must approve the Major Service Change, Disparate Impact, and Disproportionate Burden policies before they can be incorporated into the Title VI Program and submitted to the FTA. Any future amendments to the policies are also subject to Board review.



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4.1 Major Service Change Policy

VTA implements service changes on a quarterly basis in January, April, July and October. Proposed “major” service changes must be submitted to the VTA Board of Directors for review and approval. For Title VI purposes, all “major” service changes will require a Service Equity Analysis.

The following modifications shall be considered “major” service changes:

- The establishment of a new transit line or service;
- The elimination of a transit line or service;
- A route change that impacts 25 percent or more of a line’s route miles;
- Span of service or frequency changes affecting 25 percent or more of a line’s revenue vehicle hours;
- A series of changes on a single route which are included in the two-year Transit Service Plan and cumulatively meet any of the above criteria;
- Proposed changes that are anticipated to be controversial with a particular community or interested parties based on public feedback; and
- A system-wide change concurrently affecting 5 percent or more of the total system revenue hours.

The following types of modifications are not classified as “major” service changes and shall not require Service Equity Analyses:

- Special event service;
- Routing changes due to construction or other road closures; and
- Special service operated during emergencies;

Service change proposals that do not meet the criteria for “major” service changes are still subject to an appropriate level of public review and comment.

4.2 Disparate Impact Policy

The Disparate Impact Policy establishes a threshold for determining if a given service or fare change would result in a fair distribution of positive and negative effects on minority passengers.

As defined by FTA Title VI Circular 4702.1B:

Disparate impact refers to a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists



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one or more alternatives that would service the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.

The policy shall establish a threshold for determining when adverse effects of fare/service changes are borne disproportionately by minority populations. The disparate impact threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by minority populations compared to impacts borne by non-minority populations. The disparate impact threshold must be applied uniformly... and cannot be altered until the next Title VI Program submission.

For Service or Fare Equity Analyses conducted by VTA, a disparate impact threshold of 10 percent shall be used to determine if minority riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference between the aggregate impacts of the proposed change(s) on minority passengers and the aggregate impacts of the proposed change(s) on overall VTA ridership. Analyses shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

If VTA finds that a disparate impact exists, it shall analyze alternatives to determine if another alternative could serve the same legitimate objective with less of a disparate impact. If a less discriminatory alternative does not exist **and** VTA has substantial legitimate justification that cannot otherwise be accomplished, VTA shall mitigate the impact of the change on affected minority riders.

4.3 Disproportionate Burden Policy

The Disproportionate Burden Policy establishes a threshold for determining if a given service or fare change would result a fair distribution of positive and negative effects on low-income riders.

As defined by FTA Title VI Circular 4702.1B:

Disproportionate burden refers to a neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate where practicable.

The policy shall establish a threshold for determining when



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adverse effects of service or fare changes are borne disproportionately by low-income populations. The disproportionate burden threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by low-income populations as compared to impacts born by non-low-income populations. The disproportionate burden threshold must be applied uniformly... and cannot be altered until the next Title VI Program submission.

For Service or Fare Equity Analyses conducted by VTA, a disproportionate burden threshold of 10 percent shall be used to determine if low-income riders are more negatively affected – or less positively affected – by the proposed change(s) than VTA riders as a whole. The 10 percent threshold applies to the difference in the aggregate impacts of the proposed change(s) on low-income passengers compared to the aggregate impacts of the proposed change(s) on overall VTA ridership. Analyses shall be based on the most recent VTA passenger survey data, but may also use census data if survey data is inadequate or unavailable.

If VTA finds that low-income populations will incur a disproportionate burden from a proposed service or fare change, VTA shall identify alternatives available to affected low-income riders and take steps to avoid, minimize, or mitigate impacts where practicable.

5.0 Definitions:

5.1 Environmental Justice

The overarching objective of environmental justice is a fair distribution of the benefits or burdens associated with Federal programs, policies, and activities.

5.2 Fare Change

An increase or decrease in a transit provider’s fare. All fare changes, except the following, are subject to a fare equity analysis:

- “Spare the air days” or other instances when a local municipality or transit agency has declared that all passengers ride free.
- Temporary fare reductions that are mitigating measures for other actions.
- Promotional fare reductions. If promotional or temporary fare reductions last longer than six months, then FTA considers the fare reduction permanent and the transit provider must conduct a fare equity analysis.

5.3 Limited English Proficient (LEP) persons

Refers to persons for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English. It includes people who



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reported to the U.S. Census that they speak English less than very well, not well, or not at all.

5.4 Low-income Population

Refers to any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FTA program, policy, or activity.

5.5 Minority Population

Means a readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

5.6 National Origin

Means the particular nation in which a person was born, or where the person's parents or ancestors were born.

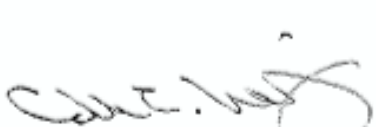
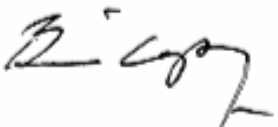
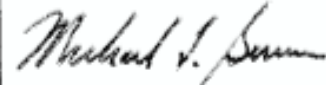
5.7 Title VI

Title VI of the Civil Rights Act of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participated in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

6.0 Summary of Changes:

Initial release of this policy. This policy was approved by the Board of Directors on November 7, 2013.

7.0 Approval Information:

<i>Prepared by</i>	<i>Reviewed by</i>	<i>Approved by</i>
 Camille Williams Title VI/LEP Project Manager	 Bill Lopez Chief Administrative Officer	 Michael T. Burns General Manager

11/19/13
Date Signed



Original Date:	Revision Date:	Page 5 of 5
11/7/2013	N/A	

Appendix B: Results of Fare Study Public Outreach Survey

Fare Review Public Input Survey Results			
January 1 - February 20, 2017			
Question #1:		Do you ride VTA? If YES, on average, how many days per week do you ride VTA bus and/or light rail?	
Answer Options		Response Percent	Response Count
1		9.2%	224
2		8.2%	201
3		8.6%	211
4		13.9%	342
5		32.0%	786
6		7.9%	196
7		12.8%	317
If NO, please go to question 12 next.		7.4%	180
answered question			2,457
skipped question			-
Question #2:		On an average day that you take VTA, how many trips do you make?	
Answer Options		Response Percent	Response Count
1		9.3%	211
2		62.5%	1,411
3		7.6%	173
4		11.5%	264
5		2.7%	61
6+		6.4%	148
answered question			2,268
skipped question			189
Question #3:		To complete an average trip, how many transfers do you need between VTA buses and/or VTA light rail trains?	
Answer Options		Response Percent	Response Count)
0 - No transfers needed		44.3%	993
1		25.0%	564
2		18.3%	416
3		7.3%	165
4		2.6%	59
5+		2.6%	60
answered question			2,257
skipped question			200

Question #4:	What type of VTA service do you use? Please mark all that apply.	
Answer Options	Response Percent	Response Count
Community Bus	19.6%	443
Local Bus	49.7%	1,131
Light Rail	89.3%	2,018
Express Bus	21.4%	483
	<i>answered question</i>	2,263
	<i>skipped question</i>	194
Question #5:	What type of fare do you pay?	
Answer Options	Response Percent	Response Count
Adult	76.0%	1,729
Youth (5-18 yrs old)	5.0%	111
Senior (65+ yrs old)	4.6%	105
Disabled	4.5%	103
Other (please specify)	9.9%	223
	<i>answered question</i>	2,271
	<i>skipped question</i>	186
Question #6:	How do you usually pay your fare?	
Answer Options	Response Percent	Response Count
Cash on-board bus	7.5%	173
Cash or credit/debit card at a ticket vending	9.6%	216
Clipper®Cash Value and/or Day Pass	36.3%	818
Monthly Pass - Please go to question 8	20.0%	458
Eco Pass - Please go to question 13 next.	21.5%	481
Other (please specify)	5.1%	113
	<i>answered question</i>	2,259
	<i>skipped question</i>	198
Question #7:	Why do you choose to pay with cash instead of Clipper®? Please mark all that apply.	
Answer Options	Response Percent	Response Count
Don't know how Clipper®Card works	26.2%	162
Don't know where to load value onto	10.7%	65
Don't have place to load value	9.0%	55
Loading value onto Clipper®Card is	15.6%	95
Don't have access to a bank account or	10.0%	62
Don't have access to the internet to load	4.4%	28
Rather have cash in my wallet for flexibility	21.1%	133
Privacy concerns with using Clipper®	6.9%	43
Clipper®Card costs \$3	15.4%	97
Other (please specify)	26.6%	163
	<i>answered question</i>	620
	<i>skipped question</i>	1,837
Question #8:	were offered on Clipper®, how would you pay your fare?	
Answer Options	Response Percent	Response Count

Question #9: VTA should consider increasing fares to cover increasing costs and maintain VTA service levels.							
Answer Options	Strongly Agree	Agree	Not Sure/No Opinion	Disagree	Strongly Disagree	Rating Average	Response Count
	238	500	456	319	330	3.00	1,843
						<i>answered question</i>	1,843
						<i>skipped question</i>	614
<i>Percentage Do not disagree</i>	<i>13% 65%</i>	<i>27%</i>	<i>25%</i>	<i>17%</i>	<i>18%</i>		
Question #10: VTA should consider increasing fares in order to offer free or reduced transfers.							
Answer Options	Strongly Agree	Agree	Not Sure/No Opinion	Disagree	Strongly Disagree	Rating Average	Response Count
	234	460	538	329	274	3.03	1,843
						<i>answered question</i>	1,843
						<i>skipped question</i>	614
<i>Percentage Do not disagree</i>	<i>13% 67%</i>	<i>25%</i>	<i>29%</i>	<i>18%</i>	<i>15%</i>		
Question #11: VTA should consider further reducing the price of the youth fare and monthly pass.							
Answer Options	Strongly Agree	Agree	Not Sure/No Opinion	Disagree	Strongly Disagree	Rating Average	Response Count
	345	507	466	324	176	3.29	1,843
						<i>answered question</i>	1,843
						<i>skipped question</i>	614
<i>Percentage Do not disagree</i>	<i>19% 72%</i>	<i>28%</i>	<i>25%</i>	<i>18%</i>	<i>10%</i>		

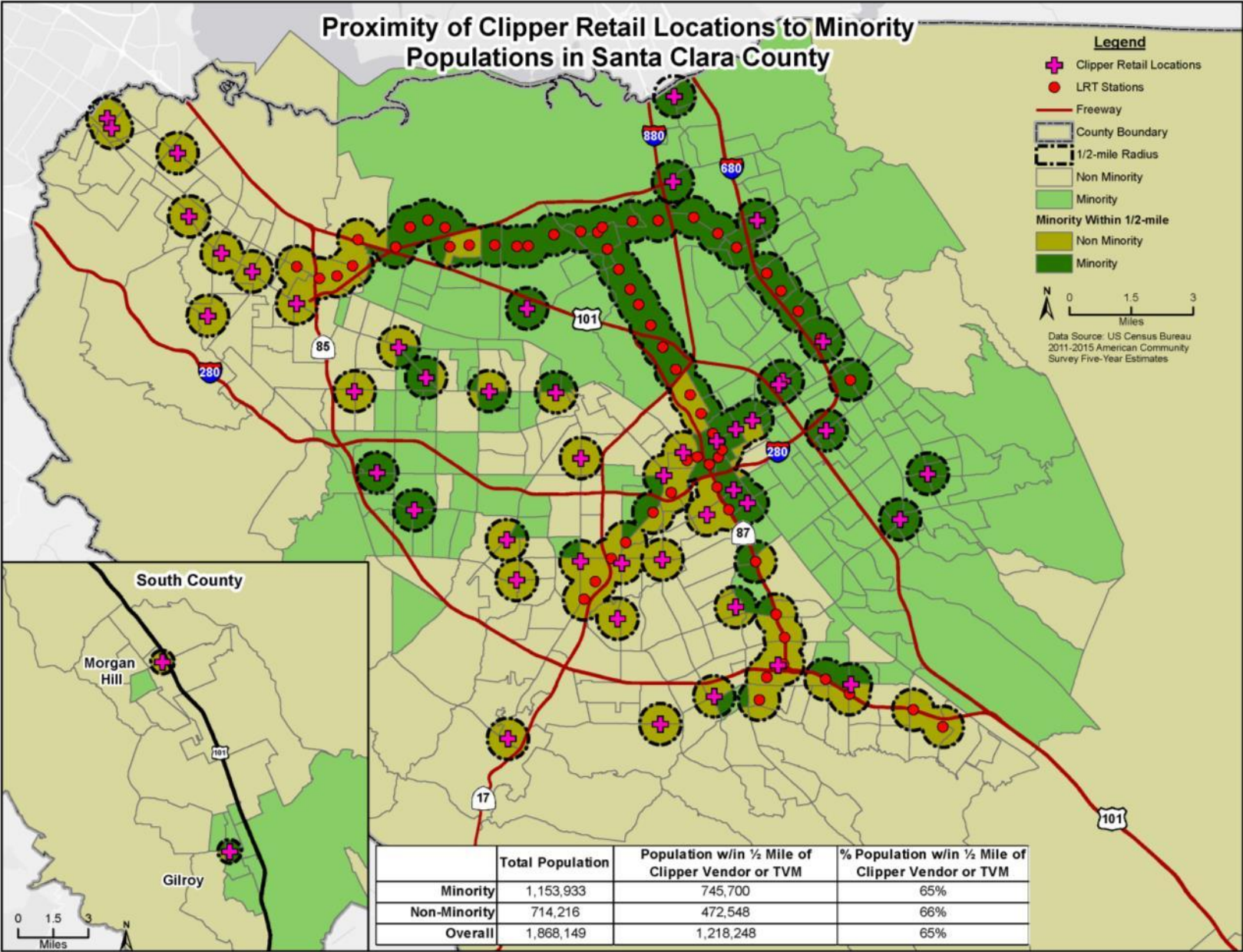
Question #12:	If you currently do not ride VTA, why do not ride VTA? Please mark all that apply.	
Answer Options	Response Percent	Response Count
It's difficult to figure out how to get to my	15.1%	111
VTA doesn't go where I need to go	36.5%	272
Buses/light rail trains don't run often enough	29.7%	222
Buses/light rail trains don't run late/early	22.5%	169
It's difficult to figure out what my fare would	4.5%	34
It's inconvenient to need cash to pay my	10.6%	79
Fares are too expensive	16.8%	126
Other (please specify)	31.7%	231
<i>answered question</i>		744
<i>skipped question</i>		1,713
Question #13:	Including YOU, how many people live in your household?	
Answer Options	Response Percent	Response Count
1	16.9%	384
2	27.8%	641
3	19.2%	440
4	19.3%	444
5	8.9%	209
6+	7.9%	183
<i>answered question</i>		2,301
<i>skipped question</i>		156
Question #14:	Including YOU, how many adults (age 16 and older) that are employed full or part time live in your household?	
Answer Options	Response Percent	Response Count)
1	35.3%	785
2	35.8%	795
3	15.7%	349
4	7.8%	175
5	3.1%	71
6+	2.3%	51
<i>answered question</i>		2,226
<i>skipped question</i>		231

Question #15:	What Race/Ethnicity do you most identify with? (mark all that apply)		
Answer Options		Response Percent	Response Count)
American Indian / Alaska Native		3.7%	82
Native Hawaiian / Pacific Islander		2.6%	57
Black / African American		5.8%	126
White		43.9%	960
Asian		32.4%	722
Hispanic / Latino		19.1%	433
Other (please specify)		5.5%	121
		<i>answered question</i>	2,216
		<i>skipped question</i>	241
Question #16:	What is your gender?		
Answer Options		Response Percent	Response Count
Male		63.4%	1,437
Female		34.5%	783
Other (please specify)		2.1%	47
		<i>answered question</i>	2,267
		<i>skipped question</i>	190
Question #17:	Do you have any comments or concerns related to the proposed fare changes?		
Answer Options		Response Count	
		768	
		<i>answered question</i>	768
		<i>skipped question</i>	1,689
Question #18:	Please provide your email information below if you would like to be informed of other VTA outreach efforts about fares.		
Answer Options		Response Count	
		488	
		<i>answered question</i>	488
		<i>skipped question</i>	1,969

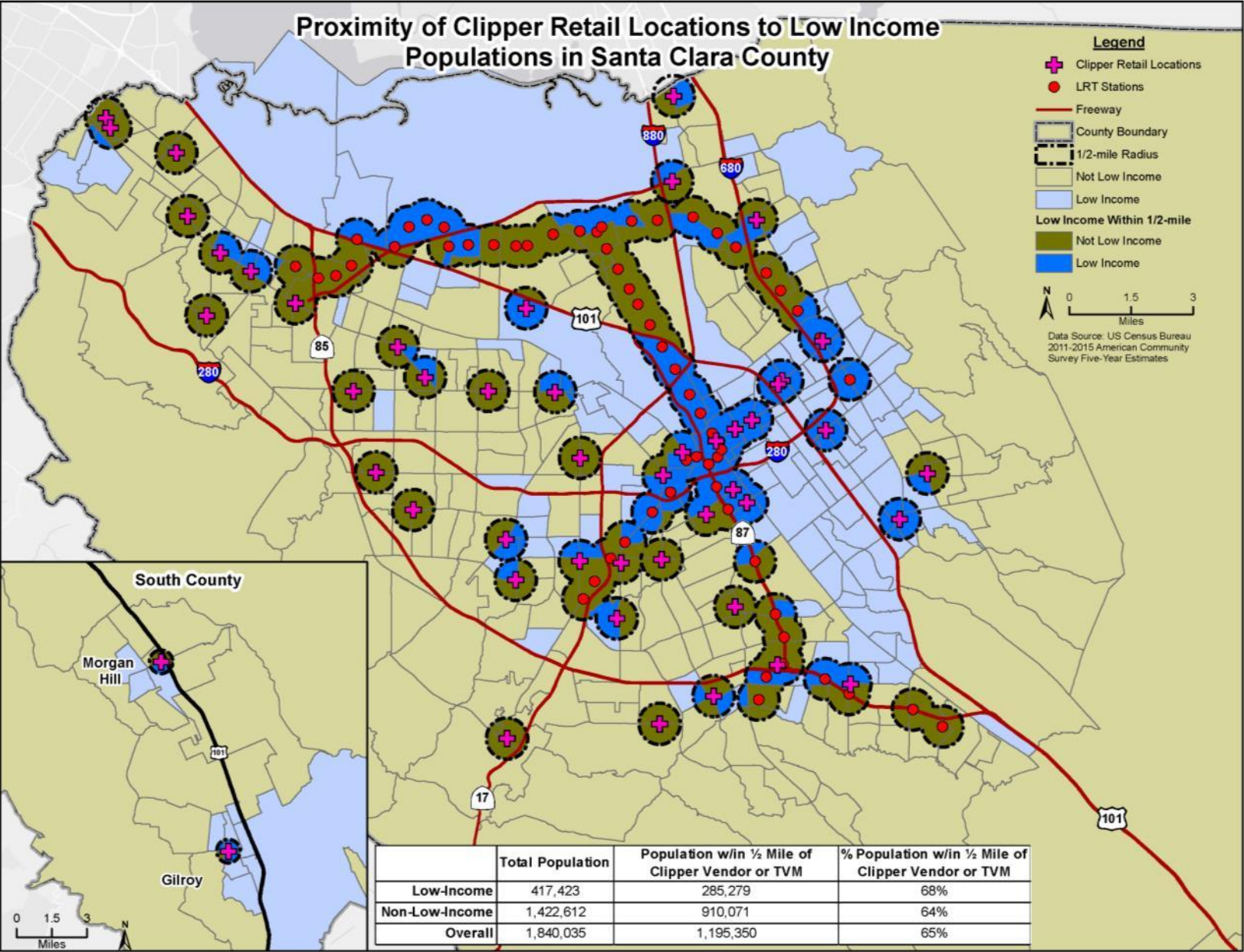
Appendix C: Fare Equity Analysis Spreadsheet

VTA Fares	Existing												Proposed												
	TOTAL-All Riders			Minority Riders				Low Income Riders					Total All Riders				Minority Riders				Low Income Riders				
	Ridership	Avg Fare	Fare Rev	% Minority	# Minority	Avg Fare	Minority Fare Rev	% Low Income	# Low Income	Ave Fare	Low Income Fare Rev	Overall Ridership	Ave Fare	All Riders Fare Rev	% Change	% Minority	# Minority	Ave Fare	Minority Fare Rev	% Change	% Low Income	# Low Income	Ave Fare	Low Income Fare Rev	% Change
ADULT																									
Single Ride Cash	6,065,499	\$ 2.00	\$ 12,130,998	75.0%	4,549,124	\$ 2.00	\$ 9,098,249	72.0%	4,367,159	\$ 2.00	\$ 8,734,319	6,065,499	\$ 2.50	\$ 15,163,748	25%	75.0%	4,549,124	\$ 2.50	11,372,811	25%	72.0%	4,367,159	\$ 2.50	10,917,898	25%
Light Rail Excursion Pass	13,770	\$ 2.00	\$ 27,540	45.0%	6,197	\$ 2.00	\$ 12,393	18.0%	2,479	\$ 2.00	\$ 4,957	13,770	\$ 2.50	\$ 34,425	25%	45.0%	6,197	\$ 2.50	15,491	25%	18.0%	2,479	\$ 2.50	6,197	25%
Single Ride Clipper	1,449,271	\$ 1.97	\$ 2,858,940	77.0%	1,115,939	\$ 1.97	\$ 2,201,384	59.0%	855,070	\$ 1.97	\$ 1,686,775	1,449,271	\$ 1.98	\$ 2,875,538	1%	77.0%	1,115,939	\$ 1.98	2,214,164	1%	59.0%	855,070	\$ 1.98	1,696,567	1%
Community Bus Cash	166,885	\$ 1.25	\$ 208,606	63.0%	105,076	\$ 1.25	\$ 131,345	69.1%	115,378	\$ 1.25	\$ 144,223	166,885	\$ 2.50	\$ 417,213	100%	63.0%	105,076	\$ 2.50	262,689	100%	69.1%	115,378	\$ 2.50	288,445	100%
Community Bus Clipper	81,324	\$ 1.25	\$ 101,644	73.7%	59,923	\$ 1.25	\$ 74,741	47.5%	38,640	\$ 1.25	\$ 48,195	81,324	\$ 1.98	\$ 161,357	59%	73.7%	59,923	\$ 1.98	118,895	59%	47.5%	38,640	\$ 1.98	76,666	59%
Day Pass	639,728	\$ 1.25	\$ 770,931	74.0%	473,399	\$ 1.25	\$ 570,489	72.0%	460,604	\$ 1.25	\$ 555,070	639,728	\$ 1.51	\$ 963,664	25%	74.0%	473,399	\$ 1.51	713,111	25%	72.0%	460,604	\$ 1.51	693,838	25%
Caltrain Joint Day Pass	23,018	\$ 3.00	\$ 69,054	61.8%	14,217	\$ 3.00	\$ 42,651	51.6%	11,871	\$ 3.00	\$ 35,613	23,018	\$ 3.75	\$ 86,318	25%	61.8%	14,217	\$ 3.75	53,314	25%	51.6%	11,871	\$ 3.75	44,516	25%
Adult Mobile Day Pass	1,299	\$ 1.50	\$ 1,949	74.0%	961	\$ 1.50	\$ 1,442	72.1%	936	\$ 1.50	\$ 1,404	1,299	\$ 1.88	\$ 2,436	25%	74.0%	961	\$ 1.88	1,802	25%	72.1%	936	\$ 1.88	1,755	25%
Day Pass Token (bag of 5)	437,348	\$ 0.62	\$ 270,973	72.0%	314,891	\$ 0.62	\$ 195,101	87.0%	380,493	\$ 0.62	\$ 235,746	437,348	\$ 0.77	\$ 338,716	25%	72.0%	314,891	\$ 0.77	243,876	25%	87.0%	380,493	\$ 0.77	294,683	25%
Express Cash	174,573	\$ 4.00	\$ 698,292	75.6%	131,994	\$ 4.00	\$ 527,977	55.6%	97,020	\$ 4.00	\$ 388,082	174,573	\$ 5.00	\$ 872,865	25%	75.6%	131,994	\$ 5.00	659,971	25%	55.6%	97,020	\$ 5.00	485,102	25%
Express Clipper	236,815	\$ 2.85	\$ 674,408	78.7%	186,294	\$ 2.85	\$ 530,534	29.3%	69,358	\$ 2.85	\$ 197,520	236,815	\$ 3.97	\$ 939,742	39%	78.7%	186,294	\$ 3.97	739,264	39%	29.3%	69,358	\$ 3.97	275,231	39%
Express Day Pass	583	\$ 3.00	\$ 1,749	73.0%	426	\$ 3.00	\$ 1,277	83.8%	488	\$ 3.00	\$ 1,465	583	\$ 3.75	\$ 2,186	25%	73.0%	426	\$ 3.75	1,596	25%	83.8%	488	\$ 3.75	1,832	25%
Monthly Pass	8,262,217	\$ 1.05	\$ 8,701,721	74.0%	6,114,041	\$ 1.05	\$ 6,439,274	62.0%	5,122,575	\$ 1.05	\$ 5,395,067	8,262,217	\$ 1.53	\$ 12,626,003	45%	74.0%	6,114,041	\$ 1.53	9,342,242	45%	62.0%	5,122,575	\$ 1.53	7,828,122	45%
Annual Pass	94,602	\$ 0.79	\$ 74,760	0.0%	0	\$ 0.79	\$ 0	0.0%	0	\$ 0.79	\$ 0	94,602	\$ 1.02	\$ 96,120	29%	0.0%	0	\$ 1.02	0	29%	0.0%	0	\$ 1.02	0	29%
Express Monthly Pass	179,733	\$ 2.61	\$ 469,415	71.0%	127,610	\$ 2.61	\$ 333,285	27.0%	48,528	\$ 2.61	\$ 126,742	179,733	\$ 3.36	\$ 603,534	29%	71.0%	127,610	\$ 3.36	428,509	29%	27.0%	48,528	\$ 3.36	162,954	29%
	17,826,665	\$ 1.52	\$ 27,060,770		13,200,091	\$ 1.53	\$ 20,160,139		11,570,599	\$ 1.52	\$ 17,555,178	17,826,665	\$ 1.97	\$ 35,183,863	29%		13,200,091	\$ 1.98	\$ 26,168,735	30%		11,570,599	\$ 1.97	\$ 22,773,807	30%
YOUTH																									
Single Ride Cash	826,756	\$ 1.75	\$ 1,446,823	80%	661,405	\$ 1.75	\$ 1,157,458	73%	603,532	\$ 1.75	\$ 1,056,181	826,756	\$ 1.25	\$ 1,033,445	-29%	80%	661,405	\$ 1.25	826,756	-29%	73%	603,532	\$ 1.25	754,415	-29%
Light Rail Excursion Pass	2,758	\$ 1.75	\$ 4,827	50%	1,379	\$ 1.75	\$ 2,413	0%	2,758	\$ 1.75	\$ 4,827	2,758	\$ 1.25	\$ 3,448	-29%	50%	1,379	\$ 1.25	1,724	-29%	0%	-	\$ 1.25	-	-29%
Single Ride Clipper	130,753	\$ 1.74	\$ 227,117	80%	104,602	\$ 1.74	\$ 181,693	63%	82,374	\$ 1.74	\$ 143,084	130,753	\$ 0.99	\$ 129,715	-43%	80%	104,602	\$ 0.99	103,772	-43%	63%	82,374	\$ 0.99	81,721	-43%
Community Bus Cash	103,683	\$ 0.75	\$ 77,762	84%	87,312	\$ 0.75	\$ 65,484	67%	69,791	\$ 0.75	\$ 52,343	103,683	\$ 1.25	\$ 129,604	67%	84%	87,312	\$ 1.25	109,140	67%	67%	69,791	\$ 1.25	87,238	67%
Community Bus Clipper	16,142	\$ 0.75	\$ 12,106	75%	12,107	\$ 0.75	\$ 9,079	67%	10,761	\$ 0.75	\$ 8,071	16,142	\$ 0.99	\$ 16,014	32%	75%	12,107	\$ 0.99	12,010	32%	67%	10,761	\$ 0.99	10,676	32%
Day Pass	17,437	\$ 1.06	\$ 18,549	74%	12,903	\$ 1.06	\$ 13,726	72%	12,555	\$ 1.06	\$ 13,355	17,437	\$ 0.80	\$ 13,886	-25%	74%	12,903	\$ 0.80	10,276	-25%	72%	12,555	\$ 0.80	9,998	-25%
Youth Mobile Day Pass	186	\$ 1.25	\$ 233	92%	171	\$ 1.25	\$ 214	84%	156	\$ 1.25	\$ 195	186	\$ 0.94	\$ 174	-25%	92%	171	\$ 0.94	160	-25%	84%	156	\$ 0.94	146	-25%
Day Pass Token (bag of 5)	100,972	\$ 0.80	\$ 80,328	40%	40,389	\$ 0.80	\$ 32,313	100%	100,972	\$ 0.80	\$ 80,328	100,972	\$ 0.60	\$ 61,049	-24%	40%	40,389	\$ 0.60	24,420	-24%	100%	100,972	\$ 0.60	61,049	-24%
Monthly Pass	610,519	\$ 2.17	\$ 1,327,297	80%	488,415	\$ 2.17	\$ 1,061,838	77%	470,100	\$ 2.17	\$ 1,022,019	610,519	\$ 0.92	\$ 558,797	-58%	80%	488,415	\$ 0.92	447,038	-58%	77%	470,100	\$ 0.92	430,274	-58%
Summer Blast Pass	533,721	\$ 3.31	\$ 1,769,178	84%	448,326	\$ 3.31	\$ 1,486,110	81%	432,314	\$ 3.31	\$ 1,433,034	533,721	\$ 2.58	\$ 1,376,028	-22%	84%	448,326	\$ 2.58	1,155,863	-22%	81%	432,314	\$ 2.58	1,114,582	-22%
Annual Pass	2,851	\$ 3.31	\$ 9,450	84%	2,395	\$ 3.31	\$ 7,938	81%	2,309	\$ 3.31	\$ 7,655	2,851	\$ 2.58	\$ 7,350	-22%	84%	2,395	\$ 2.58	6,174	-22%	81%	2,309	\$ 2.58	5,954	-22%
	2,345,778	\$ 2.12	\$ 4,973,670		1,859,404	\$ 2.16	\$ 4,018,086		1,784,864	\$ 2.14	\$ 3,816,264	2,345,778	\$ 1.42	\$ 3,329,510	-34%		1,859,404	\$ 1.45	\$ 2,697,333	-33%		1,784,864	\$ 1.43	\$ 2,556,053	-33%
SENIOR/DISABLED																									
Single Ride Cash	1,607,575	\$ 1.00	\$ 1,607,575	42%	675,182	\$ 1.00	\$ 675,182	55%	880,050	\$ 1.00	\$ 880,050	1,607,575	\$ 1.25	\$ 2,009,469	25%	42%	675,182	\$ 1.25	843,977	25%	55%	880,050	\$ 1.25	1,100,063	25%
Light Rail Excursion Pass	770	\$ 1.00	\$ 770	50%	385	\$ 1.00	\$ 385	100%	770	\$ 1.00	\$ 770	770	\$ 1.25	\$ 963	25%	50%	385	\$ 1.25	481	25%	100%	770	\$ 1.25	963	25%
Single Ride Clipper	262,680	\$ 0.97	\$ 254,630	60%	157,608	\$ 0.97	\$ 152,778	65%	170,742	\$ 0.97	\$ 165,510	262,680	\$ 0.99	\$ 260,595	2%	60%	157,608	\$ 0.99	156,357	2%	65%	170,742	\$ 0.99	169,387	2%
Community Bus	89,317	\$ 0.50	\$ 44,659	70%	62,522	\$ 0.50	\$ 31,261	65%	58,131	\$ 0.50	\$ 29,065	89,317	\$ 1.25	\$ 111,646	150%	70%	62,522	\$ 1.25	78,152	150%	65%	58,131	\$ 1.25	72,664	150%
Community Bus Clipper	19,966	\$ 0.50	\$ 9,980	50%	9,983	\$ 0.50	\$ 4,990	87%	17,317	\$ 0.50	\$ 8,656	19,966	\$ 0.99	\$ 19,808	98%	50%	9,983	\$ 0.99	9,904	98%	87%	17,317	\$ 0.99	17,180	98%
Day Pass	267,716	\$ 0.48	\$ 129,403	82%	219,527	\$ 0.48	\$ 106,111	82%	219,527	\$ 0.48	\$ 106,111	267,716	\$ 0.72	\$ 194,080	50%	82%	219,527	\$ 0.72	159,146	50%	82%	219,527	\$ 0.72	159,146	50%
Senior/Disable Mobile Day Pass	116	\$ 0.63	\$ 73	56%	65	\$ 0.63	\$ 41	72%	84	\$ 0.63	\$ 52	116	\$ 0.94	\$ 109	50%	56%	65	\$ 0.94	61	50%	72%	84	\$ 0.94	78	50%
Monthly Pass	5,511,882	\$ 0.45	\$ 2,483,889	66%	3,637,842	\$ 0.45	\$ 1,639,366	84%	4,629,981	\$ 0.45	\$ 2,086,466	5,511,882	\$ 0.48	\$ 2,658,568	7%	66%	3,637,842	\$ 0.48	1,754,655	7%	84%	4,629,981	\$ 0.48	2,233,197	7%
Annual Pass	33,559	\$ 1.05	\$ 35,318	80%	26,847	\$ 1.05	\$ 28,254	86%	28,861	\$ 1.05	\$ 30,374	33,559	\$ 1.47	\$ 49,445	40%	80%	26,847	\$ 1.47	39,556	40%	86%	28,861	\$ 1.47	42,523	40%
Other	3,303,738	\$ 0.00	\$ 0	65%	2,147,430	\$ 0.00	\$ 0	65%	2,147,430	\$ 0.00	\$ 0	3,303,738	\$ 0.00	\$ 0	0%	65%	2,147,430	\$ 0.00	0	0%	65%	2,147,430	\$ 0.00	0	0%
	11,097,319	\$ 0.41	\$ 4,566,295		6,937,391	\$ 0.38	\$ 2,638,367		8,152,892	\$ 0.41	\$ 3,307,053	11,097,319	\$ 0.48	\$ 5,304,682	26%		6,937,391	\$ 0.44	\$ 3,042,289	15%		8,152,892	\$ 0.47	\$ 3,795,199	15%
TOTAL	31,269,762	\$ 36,600,735	Total	21,996,885	\$ 26,816,592	Total	21,508,356	\$ 24,678,496	31,269,762	\$ 43,818,055	Total	21,996,885	\$ 31,908,357	Total	21,508,356	\$ 29,125,059									
Ave Fare All Riders	\$ 1.17	Ave Fare Minority	\$ 1.22	Ave Fare Low Income	\$ 1.15	Average Fare All Riders	\$ 1.40	Average Fare Minority	\$ 1.45	Average Fare Low Income</															

Appendix D1: Map of Minority Access to Clipper Vendor Network



Appendix D-2: Map of Low-income Access to Clipper Vendor Network



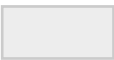
RESOLUTION NO. "42390806"

**RESOLUTION ESTABLISHING RATES & FARES
FOR SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (VTA)**

RESOLVED that the following bus, light rail and paratransit rates and fares are hereby adopted by Santa Clara Valley Transportation Authority effective January 1, 2018, whereupon all previously adopted rates and fares are repealed, except as provided in Section VII.

I. Basic Fare Structure

<u>Fare Category</u>	<u>Fares</u>	<u>Requirements/Restrictions</u>
<u>Adult:</u>		
Single Ride	\$2.25	
Light Rail Excursion Pass	\$4.50	
Day Pass	\$7.00	
Bag of 5 Day Pass Tokens	\$17.50	Tokens sold only to public agencies, social services, schools, and other non-profit organizations
Monthly Pass	\$80.00	
Prepaid 12 Monthly Passes	\$880.00	
<u>Express Bus:</u>		
Express Bus Single Ride	\$4.50	Express fares are only applicable for Adult riders.
Express Day Pass	\$13.50	
Express Monthly Pass	\$160.00	
Prepaid 12 Monthly Passes	\$1,760.00	
<u>Youth:</u>		
Single Ride	\$1.00	<ul style="list-style-type: none"> • Ages 5 - 18 • Proof of age may be required • Ages 4 and under ride free
Light Rail Excursion Pass	\$2.00	
Day Pass	\$3.00	
Bag of 5 Day Pass Tokens	\$7.50	Tokens sold only to public agencies, social services, schools, and other non-profit organizations
Monthly Pass	\$30.00	
Summer Blast Pass	\$60.00	Good for June, July, August
Prepaid 12 Monthly Passes	\$330.00	



<u>Fare Category</u>	<u>Fares</u>	<u>Requirements/Restrictions</u>
<u>Senior/Disabled/Medicare:</u>		
Single Ride	\$1.00	
Light Rail Excursion Pass	\$2.00	
Day Pass	\$3.00	
Monthly Pass	\$30.00	
Prepaid 12 Monthly Passes	\$330.00	

For Senior/Disabled/Medicare fares, the rider must be 65 years of age or older, or a certified disabled person. The following forms of identification shall be accepted as proof of eligibility =>

- Valid Regional Transit Connection (RTC) Discount Card;
- Medicare Card;
- California Driver's License;
- California ID Card;
- DMV Disabled License Plate Registration;
- DMV Placard computer printout;
- Birth certificate;
- Passport (U.S. or foreign);
- Alien Registration Card;
- Valid Senior/Disabled/Medicare ID card from another California transit agency.



II. Application of Fares

A. Bus

1. All fares shall be paid upon boarding and shall be valid for one boarding unless otherwise designated.
2. “Single Ride” fares purchased using Clipper® shall be valid for 120 minutes of travel, whether it be on a single route or a trip with multiple transfers across buses and light rail. When the passenger initially taps their card onto the reader to purchase a Single Ride fare, a 120-minute transfer will be stored onto their card. The passenger must subsequently tap their card each time they board a vehicle. Youth and Senior/Disabled/Medicare Single Ride fares shall be valid on all VTA operated service. Adult Single Ride fares shall be valid on VTA regular bus and VTA light rail services. An Adult passenger transferring to Express Bus service must pay a surcharge that is the difference between the Local and Express Bus fare if applicable. The 120 minute transfer window shall restart upon payment of a surcharge.
3. No change shall be given if fares are not paid in the exact amount of the appropriate fare in cash, pass, token or ticket. Combination of different fare media for a single ride is not allowed except Express Bus service surcharges may be paid in cash by persons holding Adult Day Passes or Adult Monthly Passes or valid passes or transfers from other agencies. Passengers with a valid Single Ride transferring to Express Bus service must pay the applicable surcharge with Clipper®.
4. Valid transfers and passes from AC Transit, Altamont Commuter Express, BART, Caltrain, Capitol Corridor, Dumbarton Bridge Express, Highway 17 Express, Monterey-Salinas Transit, and SamTrans shall be accepted as specified in separate inter-operator fare and transfer agreements or the Clipper® Business Rules, as provided in Section VII.

B. Light Rail and Historic Trolley

1. Proof of fare payment shall be carried at all times while on light rail and historic trolley, and shall be presented to fare inspector upon request.
2. “Single Ride” tickets purchased from ticket vending machines at light rail stations shall be valid for 120 minutes after time of purchase, and shall allow for unlimited travel on light rail or historic trolley in any direction during these 120 minutes, unless otherwise designated.
3. “Single Ride” fares purchased using Clipper® shall be valid for 120 minutes of travel, whether it be on a single route or a trip with multiple transfers across buses and light rail. When the passenger initially taps their card onto the reader to purchase a Single Ride fare, a 120-minute transfer will be stored onto their card. The passenger must subsequently tap their card each time they board a vehicle. Passenger must have a valid

fare for the duration of their entire trip within the light rail system, including time spent within the paid area of stations or waiting at station platforms. Adult, Youth, and Senior/Disabled/Medicare Single Ride fares shall be valid on VTA regular bus and VTA light rail services.

4. "Light Rail Excursion" passes purchased from ticket vending machines at light rail stations are valid for 8 hours from time of purchase, and shall allow for unlimited travel on light rail or historic trolley in any direction during the 8 hours, unless otherwise designated.
5. Valid transfers and passes from AC Transit, Altamont Commuter Express, BART, Capitol Corridor, Caltrain, Dumbarton Bridge Express, Highway 17 Express, Monterey-Salinas Transit, and SamTrans shall be accepted as specified in separate inter-operator fare and transfer agreements or the Clipper® Business Rules, as provided in Section VII.

C. Pass Restrictions

1. Day Passes shall generally be available only on Clipper®. For Clipper® users, day passes shall be implemented as a daily fare maximum or "cap" for each rider fare category. Once the rider has incurred fare equal to the value of the Day Pass, no additional fare shall be charged for the balance of the service day. The Youth Day Pass, Senior/Disabled/Medicare Day Pass, and Express Day Pass shall be valid on all VTA operated service except Special Event Express Bus service. The Adult Day Pass shall be valid on all VTA operated service except Express Bus and Special Event Express Bus service. The Adult Day Pass shall be credited as base fare on Express Bus service but no credit shall be provided on Special Event Express Bus service. Paper day passes shall be available only in exchange for Adult or Youth Day Pass Tokens.
2. Light Rail Excursion Passes are not valid on bus service.
3. Monthly Passes shall be valid for unlimited rides from 12:01 a.m. on the first day of the month for which issued until 3:00 a.m. on the first day of the following month. The Youth Monthly Pass, Senior/Disabled/Medicare Monthly Pass, and Express Monthly Pass shall be valid on all VTA operated service except Special Event Express Bus service. The Adult Monthly Pass shall be valid on all VTA operated service except Express Bus and Special Event Express Bus service. The Adult Monthly Pass shall be credited as base fare on Express Bus service but no credit shall be provided on Special Event Express Bus service.
4. No refunds shall be made for purchased passes. Lost or stolen Day Passes or Monthly Passes shall not be replaced.

III. Special Fares

SmartPass:

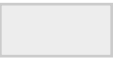
1. Calendar year pass for unlimited trips on all VTA-operated fixed-route service except Express Bus service. The agreement period for Colleges and Universities will be defined based on the agreed upon academic year.
2. Pass Categories:
 - a. Corporate Pass
 - i. For-profit - A business, school, residential housing, development or corporation organized for the purpose of earning profits and enhancing the financial position of the owners.
 - b. Not-For-Profit Pass
 - i. Nonprofit – An organization granted nonprofit status under state and federal tax exemptions. May also include not-for-profit schools.
 - ii. Low-Income Housing – Generally refers to properties required to provide units at below-market rents that are subsidized or discounted based on the tenant’s income, unlike Market Rate Housing where rents are set by the landlord based on how much the unit is worth in the market. Some examples include: Low-Income Housing, Subsidized Housing and Senior Housing.
 - iii. Government Agency – a local, state or federal administrative unit of U.S. government.
 - c. Collegiate Pass
 - i. College & University Systems – Colleges that belong to the California Community College system, San Jose State University, Santa Clara University, and Stanford University.
3. SmartPass Validity on Paratransit Service:
 - a. Corporate and Not-For-Profit Passes for employers includes credit equal to an Adult Single Ride fare toward a paratransit One-Way Trip. No credit shall be provided for any other type of paratransit trip or service charge.
 - b. Collegiate Pass for San Jose State University includes credit equal to Adult Single Ride fare toward a Paratransit One-Way Trip. No credit shall be provided for any other type of paratransit trip or service charge.



- 4. A minimum annual charge of \$2,500 shall apply to all SmartPass contracts.
- 5. A residential community or development shall have a minimum 25 units to join SmartPass.
- 6. Fare Category and Fares:

Service Level based on Location and Size	Pass Category / Annual Rate Per Headcount		
	Not-for-Profit Pass	Corporate Pass	Collegiate Pass*
Downtown San Jose Location			
1 – 2,999 Headcount	\$144.00	\$144.00	\$38.00
3,000+ Headcount	\$72.00	\$72.00	
Location Served by Bus & Light Rail			
1 – 2,999 Headcount	\$108.00	\$108.00	\$38.00
3,000+ Headcount	\$36.00	\$36.00	
Location Served by Bus Only			
1 – 2,999 Headcount	\$72.00	\$72.00	\$38.00
3,000+ Headcount	\$18.00	\$18.00	
Additional Service Option			
The per headcount premium below is added to regular SmartPass Annual Rate for access to VTA Express buses and additional contracted services with Dumbarton Express, Highway 17 Express, and Monterey-Salinas Transit Express operators.			
Per Headcount	\$21.60	\$21.60	\$9.00

*California Community College annual rates shall be \$20.00 per enrolled student.



<u>Fare Category</u>	<u>Fares</u>	<u>Requirements/Restrictions</u>
<u>Convention Day Pass:</u>		Valid for all VTA operated service except Express and Special Event Express Bus service.
Adult Convention Day Pass	75% of Adult Day Pass fare per day	Available only to Conventions/Hotels in quantities of 100 or more.
Youth Convention Day Pass	75% of Youth Day Pass fare per day	Available only to Conventions/Hotels in quantities of 100 or more.
<u>Golden Getaway:</u>	35 times Adult Day Pass price	Available to Senior non-profit organizations

Special Event Express Bus Service

Single Ride Fare	No less than \$10.00	Applicable to Special Event Express Bus routes operated only for special events. No passes accepted on these routes.
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IV. Other Fares

A. Promotional Fares

The Director of Communications may institute a limited period of reduced or free fares for promotional purposes.

B. Class Pass

The Director of Public Affairs and Marketing may offer a free “class pass” for students grades K-12, valid for one field trip per semester per class.

C. Emergency Response and Recovery Plans

The General Manager, or designee, may institute a temporary period of free fares in response to emergency situations and conditions, such as natural disasters, described in VTA’s Emergency Response and Recovery Plans.

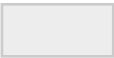


D. UPLIFT Program

Per agreement between VTA and Santa Clara County, VTA may provide up to 2,400 quarterly stickers for an annual fee of \$144,000. Such stickers shall be valid for fare only when affixed to a valid County-issued photo ID card including the title “Santa Clara County Continuum of Care.” County shall issue such cards and stickers only to homeless individuals receiving case management services. County may purchase additional transit stickers above the base quantity of 2,400 at a rate of \$15.00 per quarterly sticker. UPLIFT stickers shall be honored on VTA services equal to a VTA Adult Monthly Pass for the period indicated on the sticker. The UPLIFT Program does not provide any benefit on ADA paratransit service.

V. ADA Paratransit Fares

<u>Fare Category</u>	<u>Fares</u>	<u>Requirements/Restrictions</u>
One-Way Trip	\$4.00	For a disabled individual who is qualified for Paratransit Service.
Companion	Equal to One-Way Trip (\$4.00)	A person other than a personal care attendant accompanying a qualifying disabled individual.
Open Return Trip	4 times One-Way Trip (\$16.00)	A return trip is not dispatched until customer calls and requests it.
Second Vehicle Sent	4 times One-Way Trip (\$16.00)	Charge for a second vehicle dispatched because customer was not ready or at pick-up location at the scheduled time for the first vehicle dispatched.
Same-Day Trip	4 times One-Way Trip (\$16.00)	Trip scheduled within the same day.
Same-Day Trip Companion	4 times One-Way Trip (\$16.00)	A person, other than a personal care attendant, accompanying a qualifying disabled individual on a same-day trip.
Extended Service Area	4 times One-Way Trip (\$16.00)	For service up to one mile beyond the ¾ mile ADA Paratransit Service Area.



VI. Waived Fares

- A. Children under five years of age.
- B. Any peace officer, upon presentation of proper identification (badge or ID card).
- C. VTA employees, their dependents, and VTA retirees upon presentation of currently valid VTA issued identification card.
- D. Persons holding VTA-issued ADA paratransit photo ID cards may ride VTA fixed-route services except Special Event Express Bus service free of charge. If a personal care attendant is necessary for an individual to ride paratransit, then a personal care attendant may also ride free of charge when accompanying a qualifying person on fixed-route service.

VII. Agreements With Other Organizations

VTA may establish separate fare and transfer agreements/arrangements with AC Transit, BART, Monterey-Salinas Transit, SamTrans, Santa Cruz Metropolitan Transit District, the Dumbarton Bridge Express Service Consortium, the Peninsula Corridor Joint Powers Board (Caltrain), the Altamont Commuter Express Joint Powers Authority, the Capitol Corridor Joint Powers Authority, or any other organization providing transportation services within and through Santa Clara County. These agreements, along with the Clipper® Business Rules, shall define reciprocal transfer arrangements with other operators to facilitate the transfer of passengers between systems. Such agreements are not affected by this resolution.

VIII. Acceptance of Peninsula Corridor Joint Powers Board (Caltrain) Passes

VTA shall allow passengers with any Caltrain monthly pass of greater value than the applicable VTA monthly pass (Adult, Youth, and Senior/Disabled) to ride free on all VTA regular bus and VTA light rail services. On VTA Express Bus service, Adult passengers with any Caltrain monthly pass of greater value than the applicable VTA monthly pass shall receive a base fare credit; Youth and Senior/Disabled/Medicare passengers with any Caltrain monthly pass of greater value than the applicable VTA monthly pass shall be allowed to ride free. No fare credit or free rides shall be provided for Caltrain monthly passholders on Special Event Express Bus service.

PASSED AND ADOPTED by the Santa Clara Valley Transportation Authority Board of Directors on June 1, 2017 by the following vote:

AYES: DIRECTORS BRUINS, CARR, DIEP, HENDRICKS, JONES, KHAMIS, LICCARDO, O'NEILL, PERALEZ, RENNIE, YEAGER

NOES: DIRECTORS CHAVEZ

ABSENT: DIRECTORS NONE



Jeannie Bruins, Chairperson
Board of Directors

ATTEST:



ELAINE BALTAO, Secretary
Board of Directors

APPROVED AS TO FORM:



ROBERT FABELA
General Counsel

RESOLUTION NO. 2017.06.24

RESOLUTION NO. 2017.06.23

**RESOLUTION ESTABLISHING RATES & FARES
FOR SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (VTA)**

RESOLVED that the following bus, light rail and paratransit rates and fares are hereby adopted by Santa Clara Valley Transportation Authority effective January 1, 2019, whereupon all previously adopted rates and fares are repealed, except as provided in Section VII.

I. Basic Fare Structure

<u>Fare Category</u>	<u>Fares</u>	<u>Requirements/Restrictions</u>
<u>Adult:</u>		
Single Ride	\$2.50	
Light Rail Excursion Pass	\$5.00	
Day Pass	\$7.50	
Bag of 5 Day Pass Tokens	\$18.75	Tokens sold only to public agencies, social services, schools, and other non-profit organizations
Monthly Pass	\$90.00	
Prepaid 12 Monthly Passes	\$990.00	
<u>Express Bus:</u>		
Express Bus Single Ride	\$5.00	Express fares are only applicable for Adult riders.
Express Day Pass	\$15.00	
Express Monthly Pass	\$180.00	
Prepaid 12 Monthly Passes	\$1,980.00	
<u>Youth:</u>		
Single Ride	\$1.25	• Ages 5 - 18
Light Rail Excursion Pass	\$2.50	• Proof of age may be required
Day Pass	\$3.75	• Ages 4 and under ride free
Bag of 5 Day Pass Tokens	\$9.50	Tokens sold only to public agencies, social services, schools, and other non-profit organizations
Monthly Pass	\$35.00	
Summer Blast Pass	\$70.00	Good for June, July, August
Prepaid 12 Monthly Passes	\$385.00	

<u>Fare Category</u>	<u>Fares</u>	<u>Requirements/Restrictions</u>
<u>Senior/Disabled/Medicare:</u>		
Single Ride	\$1.00	
Light Rail Excursion Pass	\$2.00	
Day Pass	\$3.00	
Monthly Pass	\$30.00	
Prepaid 12 Monthly Passes	\$330.00	

For Senior/Disabled/Medicare fares, the rider must be 65 years of age or older, or a certified disabled person. The following forms of identification shall be accepted as proof of eligibility =>

- Valid Regional Transit Connection (RTC) Discount Card;
- Medicare Card;
- California Driver's License;
- California ID Card;
- DMV Disabled License Plate Registration;
- DMV Placard computer printout;
- Birth certificate;
- Passport (U.S. or foreign);
- Alien Registration Card;
- Valid Senior/Disabled/Medicare ID card from another California transit agency.

II. Application of Fares

A. Bus

1. All fares shall be paid upon boarding and shall be valid for one boarding unless otherwise designated.
2. "Single Ride" fares purchased using Clipper® shall be valid for 120 minutes of travel, whether it be on a single route or a trip with multiple transfers across buses and light rail. When the passenger initially taps their card onto the reader to purchase a Single Ride fare, a 120-minute transfer will be stored onto their card. The passenger must subsequently tap their card each time they board a vehicle. Youth and Senior/Disabled/Medicare Single Ride fares shall be valid on all VTA operated service. Adult Single Ride fares shall be valid on VTA regular bus and VTA light rail services. An Adult passenger transferring to Express Bus service must pay a surcharge that is the difference between the Local and Express Bus fare if applicable. The 120 minute transfer window shall restart upon payment of a surcharge.
3. No change shall be given if fares are not paid in the exact amount of the appropriate fare in cash, pass, token or ticket. Combination of different fare media for a single ride is not allowed except Express Bus service surcharges may be paid in cash by persons holding Adult Day Passes or Adult Monthly Passes or valid passes or transfers from other agencies. Passengers with a valid Single Ride transferring to Express Bus service must pay the applicable surcharge with Clipper®.
4. Valid transfers and passes from AC Transit, Altamont Commuter Express, BART, Caltrain, Capitol Corridor, Dumbarton Bridge Express, Highway 17 Express, Monterey-Salinas Transit, and SamTrans shall be accepted as specified in separate inter-operator fare and transfer agreements or the Clipper® Business Rules, as provided in Section VII.

B. Light Rail and Historic Trolley

1. Proof of fare payment shall be carried at all times while on light rail and historic trolley, and shall be presented to fare inspector upon request.
2. "Single Ride" tickets purchased from ticket vending machines at light rail stations shall be valid for 120 minutes after time of purchase, and shall allow for unlimited travel on light rail or historic trolley in any direction during these 120 minutes, unless otherwise designated.
3. "Single Ride" fares purchased using Clipper® shall be valid for 120 minutes of travel, whether it be on a single route or a trip with multiple transfers across buses and light rail. When the passenger initially taps their card onto the reader to purchase a Single Ride fare, a 120-minute transfer will be stored onto their card. The passenger must subsequently tap their card each time they board a vehicle. Passenger must have a valid

fare for the duration of their entire trip within the light rail system, including time spent within the paid area of stations or waiting at station platforms. Adult, Youth, and Senior/Disabled/Medicare Single Ride fares shall be valid on VTA regular bus and VTA light rail services.

4. "Light Rail Excursion" passes purchased from ticket vending machines at light rail stations are valid for 8 hours from time of purchase, and shall allow for unlimited travel on light rail or historic trolley in any direction during the 8 hours, unless otherwise designated.
5. Valid transfers and passes from AC Transit, Altamont Commuter Express, BART, Capitol Corridor, Caltrain, Dumbarton Bridge Express, Highway 17 Express, Monterey-Salinas Transit, and SamTrans shall be accepted as specified in separate inter-operator fare and transfer agreements or the Clipper® Business Rules, as provided in Section VII.

C. Pass Restrictions

1. Day Passes shall generally be available only on Clipper®. For Clipper® users, day passes shall be implemented as a daily fare maximum or "cap" for each rider fare category. Once the rider has incurred fare equal to the value of the Day Pass, no additional fare shall be charged for the balance of the service day. The Youth Day Pass, Senior/Disabled/Medicare Day Pass, and Express Day Pass shall be valid on all VTA operated service except Special Event Express Bus service. The Adult Day Pass shall be valid on all VTA operated service except Express Bus and Special Event Express Bus service. The Adult Day Pass shall be credited as base fare on Express Bus service but no credit shall be provided on Special Event Express Bus service. Paper day passes shall be available only in exchange for Adult or Youth Day Pass Tokens.
2. Light Rail Excursion Passes are not valid on bus service.
3. Monthly Passes shall be valid for unlimited rides from 12:01 a.m. on the first day of the month for which issued until 3:00 a.m. on the first day of the following month. The Youth Monthly Pass, Senior/Disabled/Medicare Monthly Pass, and Express Monthly Pass shall be valid on all VTA operated service except Special Event Express Bus service. The Adult Monthly Pass shall be valid on all VTA operated service except Express Bus and Special Event Express Bus service. The Adult Monthly Pass shall be credited as base fare on Express Bus service but no credit shall be provided on Special Event Express Bus service.
4. No refunds shall be made for purchased passes. Lost or stolen Day Passes or Monthly Passes shall not be replaced.

III. Special Fares

SmartPass:

1. Calendar year pass for unlimited trips on all VTA-operated fixed-route service except Express Bus service. The agreement period for Colleges and Universities will be defined based on the agreed upon academic year.
2. Pass Categories:
 - a. Corporate Pass
 - i. For-profit - A business, school, residential housing, development or corporation organized for the purpose of earning profits and enhancing the financial position of the owners.
 - b. Not-For-Profit Pass
 - i. Nonprofit – An organization granted nonprofit status under state and federal tax exemptions. May also include not-for-profit schools.
 - ii. Low-Income Housing – Generally refers to properties required to provide units at below-market rents that are subsidized or discounted based on the tenant’s income, unlike Market Rate Housing where rents are set by the landlord based on how much the unit is worth in the market. Some examples include: Low-Income Housing, Subsidized Housing and Senior Housing.
 - iii. Government Agency – a local, state or federal administrative unit of U.S. government.
 - c. Collegiate Pass
 - i. College & University Systems – Colleges that belong to the California Community College system, San Jose State University, Santa Clara University, and Stanford University.
3. SmartPass Validity on Paratransit Service:
 - a. Corporate and Not-For-Profit Passes for employers includes credit equal to an Adult Single Ride fare toward a paratransit One-Way Trip. No credit shall be provided for any other type of paratransit trip or service charge.
 - b. Collegiate Pass for San Jose State University includes credit equal to Adult Single Ride fare toward a Paratransit One-Way Trip. No credit shall be provided for any other type of paratransit trip or service charge.

- 4. A minimum annual charge of \$2,500 shall apply to all SmartPass contracts.
- 5. A residential community or development shall have a minimum 25 units to join SmartPass.
- 6. Fare Category and Fares:

Service Level based on Location and Size	Pass Category / Annual Rate Per Headcount		
	Not-for-Profit Pass	Corporate Pass	Collegiate Pass*
Downtown San Jose Location			
1 – 2,999 Headcount	\$165.50	\$180.00	\$40.00
3,000+ Headcount	\$82.75	\$90.00	
Location Served by Bus & Light Rail			
1 – 2,999 Headcount	\$124.25	\$135.00	\$40.00
3,000+ Headcount	\$41.50	\$45.00	
Location Served by Bus Only			
1 – 2,999 Headcount	\$82.75	\$90.00	\$40.00
3,000+ Headcount	\$20.75	\$22.50	
Additional Service Option			
The per headcount premium below is added to regular SmartPass Annual Rate for access to VTA Express buses and additional contracted services with Dumbarton Express, Highway 17 Express, and Monterey-Salinas Transit Express operators.			
Per Headcount	\$24.75	\$27.00	\$9.00

*California Community College annual rates shall be \$20.00 per enrolled student.

Fare Category Fares Requirements/Restrictions

Convention Day Pass:

Valid for all VTA operated service except Express and Special Event Express Bus service.

Adult Convention Day Pass 75% of Adult Day Pass fare per day Available only to Conventions/Hotels in quantities of 100 or more.

Youth Convention Day Pass 75% of Youth Day Pass fare per day Available only to Conventions/Hotels in quantities of 100 or more.

Golden Getaway:

35 times Adult Day Pass price Available to Senior non-profit organizations

Special Event Express Bus Service

Single Ride Fare No less than \$10.00 Applicable to Special Event Express Bus routes operated only for special events. No passes accepted on these routes.

IV. Other Fares

A. Promotional Fares

The Director of Communications may institute a limited period of reduced or free fares for promotional purposes.

B. Class Pass

The Director of Public Affairs and Marketing may offer a free "class pass" for students grades K-12, valid for one field trip per semester per class.

C. Emergency Response and Recovery Plans

The General Manager, or designee, may institute a temporary period of free fares in response to emergency situations and conditions, such as natural disasters, described in VTA's Emergency Response and Recovery Plans.

D. UPLIFT Program

Per agreement between VTA and Santa Clara County, VTA may provide up to 2,400 quarterly stickers for an annual fee of \$144,000. Such stickers shall be valid for fare only when affixed to a valid County-issued photo ID card including the title "Santa Clara County Continuum of Care." County shall issue such cards and stickers only to homeless individuals receiving case management services. County may purchase additional transit stickers above the base quantity of 2,400 at a rate of \$15.00 per quarterly sticker. UPLIFT stickers shall be honored on VTA services equal to a VTA Adult Monthly Pass for the period indicated on the sticker. The UPLIFT Program does not provide any benefit on ADA paratransit service.

V. ADA Paratransit Fares

<u>Fare Category</u>	<u>Fares</u>	<u>Requirements/Restrictions</u>
One-Way Trip	\$4.00	For a disabled individual who is qualified for Paratransit Service.
Companion	Equal to One-Way Trip (\$4.00)	A person other than a personal care attendant accompanying a qualifying disabled individual.
Open Return Trip	4 times One-Way Trip (\$16.00)	A return trip is not dispatched until customer calls and requests it.
Second Vehicle Sent	4 times One-Way Trip (\$16.00)	Charge for a second vehicle dispatched because customer was not ready or at pick-up location at the scheduled time for the first vehicle dispatched.
Same-Day Trip	4 times One-Way Trip (\$16.00)	Trip scheduled within the same day.
Same-Day Trip Companion	4 times One-Way Trip (\$16.00)	A person, other than a personal care attendant, accompanying a qualifying disabled individual on a same-day trip.
Extended Service Area	4 times One-Way Trip (\$16.00)	For service up to one mile beyond the 3/4 mile ADA Paratransit Service Area.

VI. Waived Fares

- A. Children under five years of age.
- B. Any peace officer, upon presentation of proper identification (badge or ID card).
- C. VTA employees, their dependents, and VTA retirees upon presentation of currently valid VTA issued identification card.
- D. Persons holding VTA-issued ADA paratransit photo ID cards may ride VTA fixed-route services except Special Event Express Bus service free of charge. If a personal care attendant is necessary for an individual to ride paratransit, then a personal care attendant may also ride free of charge when accompanying a qualifying person on fixed-route service.

VII. Agreements With Other Organizations

VTA may establish separate fare and transfer agreements/arrangements with AC Transit, BART, Monterey-Salinas Transit, SamTrans, Santa Cruz Metropolitan Transit District, the Dumbarton Bridge Express Service Consortium, the Peninsula Corridor Joint Powers Board (Caltrain), the Altamont Commuter Express Joint Powers Authority, the Capitol Corridor Joint Powers Authority, or any other organization providing transportation services within and through Santa Clara County. These agreements, along with the Clipper® Business Rules, shall define reciprocal transfer arrangements with other operators to facilitate the transfer of passengers between systems. Such agreements are not affected by this resolution.

VIII. Acceptance of Peninsula Corridor Joint Powers Board (Caltrain) Passes

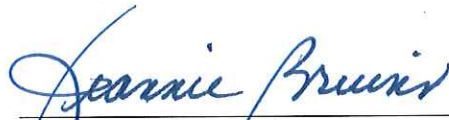
VTA shall allow passengers with any Caltrain monthly pass of greater value than the applicable VTA monthly pass (Adult, Youth, and Senior/Disabled) to ride free on all VTA regular bus and VTA light rail services. On VTA Express Bus service, Adult passengers with any Caltrain monthly pass of greater value than the applicable VTA monthly pass shall receive a base fare credit; Youth and Senior/Disabled/Medicare passengers with any Caltrain monthly pass of greater value than the applicable VTA monthly pass shall be allowed to ride free. No fare credit or free rides shall be provided for Caltrain monthly passholders on Special Event Express Bus service.

PASSED AND ADOPTED by the Santa Clara Valley Transportation Authority Board of Directors on June 1, 2017 by the following vote:

AYES: DIRECTORS BRUINS, CARR, DIEP, HENDRICKS, JONES, KHAMIS, LICCARDO, O'NEILL, PERALEZ, RENNIE, YEAGER

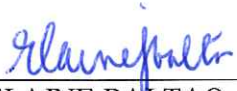
NOES: DIRECTORS CHAVEZ

ABSENT: DIRECTORS NONE



Jeannie Bruins, Chairperson
Board of Directors

ATTEST:



ELAINE BALTAO, Secretary
Board of Directors

APPROVED AS TO FORM:



ROBERT FABELA
General Counsel

RESOLUTION NO. 2017.06.23

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