ALAMEDA
County Transportation Commission

AFFORDABLE STUDENT TRANSIT PASS PILOT PROGRAM

2016-17 through 2018-19

FINAL EVALUATION REPORT February 2020

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Executive Summary

Introduction

Alameda CTC Affordable Student Transit Pass Pilot Program

The cost of transportation to school is often cited as a barrier to school attendance and participation in after-school activities by middle and high school students. In recognition of this issue, the 2014 Measure BB Alameda County Transportation Expenditure Plan (TEP) included $15 million dedicated to implementation of an Affordable Student Transit Pass Pilot (STPP) for students. Working closely with community stakeholders, the Alameda County Transportation Commission (Alameda CTC) designed a three-year pilot program, which launched in the 2016-17 school year. The pilot program tested and evaluated different program models across different geographies with the aim of identifying successful models for future program implementation.

Affordable Youth Transit Pass Program ($15 million)

"This program is for the purposes of funding one or more models for a student transit pass program. The program would be designed to account for geographic differences within the county. Successful models determined through periodic reviews will have the first call for funding within the innovative grant program, as described below."

— 2014 Alameda County Measure BB Transportation Expenditure Plan

What were the STPP program goals?

The Alameda CTC Commission adopted the following goals for the STPP:

Reduce barriers to transportation access to and from schools

Improve transportation options for Alameda County's middle and high school students

Build support for transit in Alameda County

Develop effective three-year pilot programs

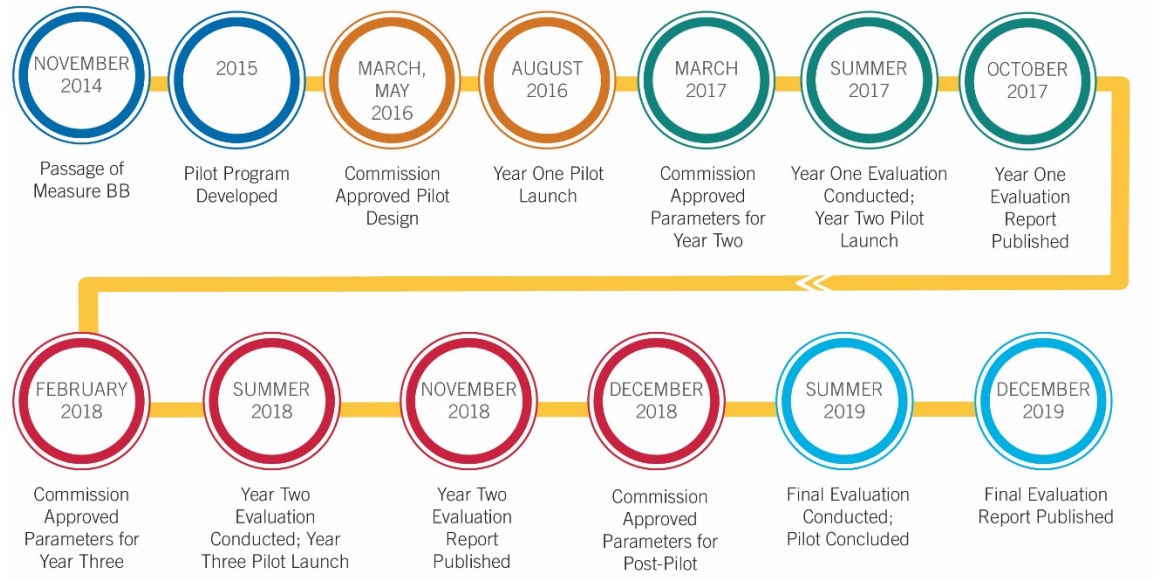
Create a basis for a countywide student transit pass program (funding permitting)

How did the STPP evolve during the pilot?

In 2015, working with the school districts, and a diverse array of community groups and regional stakeholders, Alameda CTC began to design and develop a three-year pilot to test and evaluate various program models. In October 2015, the Commission approved hiring a consultant team to assist with implementation. In March 2016, the Commission accepted a framework to select pilot program schools and program models. In May 2016, the Commission approved the design for Year One of the pilot, including the program models to be tested and the schools and school districts that would participate.

Additionally, in May 2016, the Commission approved a shortlist of 36 schools as the candidate pool for potential expansion in the second and third years of the pilot. Figure 1 provides a summary of key milestones during the three-year pilot.

Figure 1 Timeline for STPP Development, Implementation, and Evaluation [1]



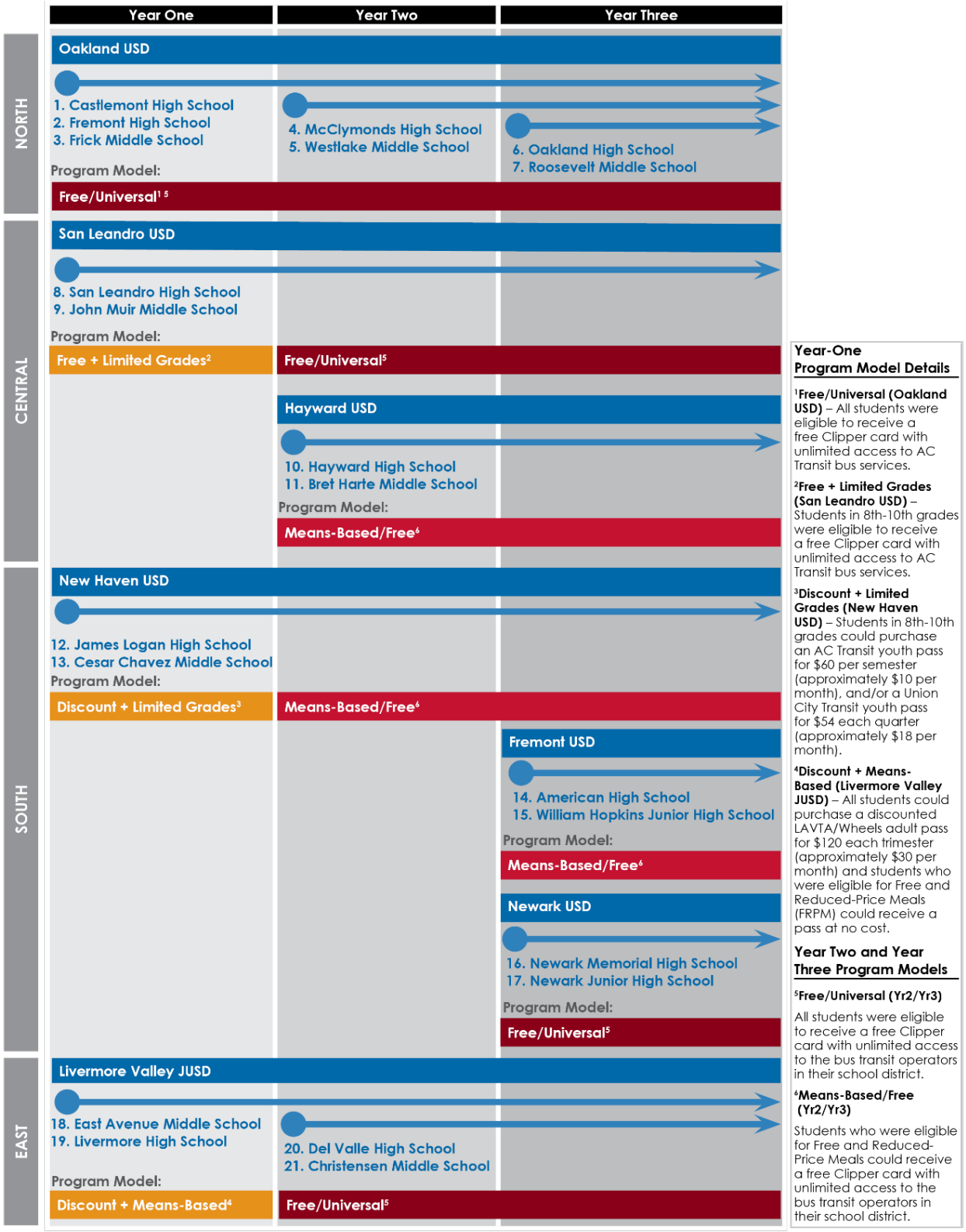
Over three years, the STPP grew from 9 schools in 4 school districts in Year One to include 21 schools across 7 school districts by Year Three. Each year, the pilot built upon the successes and lessons learned from the previous year. For instance, four program models were tested in Year One, which varied in whether they offered free or discounted passes, whether passes were universally available or restricted to low-income students, and whether passes were available to all or limited grades. Starting in Year Two, the number of models was reduced from four to two based on lessons learned from the first year:

[1] This schedule only covers the pilot program; in Spring 2019 the program began transitioning out of the pilot phase. Year One of the permanent program began in the 2019-2020 school year.

- Free/Universal
- Means-Based/Free

Under a Free/Universal program model, all students in the district were eligible to receive a free Clipper card with unlimited access to the bus transit operators in their district; this program model was used in schools with high levels of financial need where 75 percent or more of the student body qualified for free and reduced-price meals. Whereas, a Means-Based/Free model was introduced at schools that did not meet the 75 percent threshold; only those students eligible for free and reduced meals could apply for a free transit pass. Figure 2 provides a summary of the participating schools by year and program type.

Figure 2 Participating Schools and Unified School Districts (USD) by Year



Summary of Key Findings

The STPP is seen as a success because the pilot program met the goals laid out by the Commission and resulted in transit becoming more affordable for students across the Alameda County. The program's success would not have been made possible without the significant commitment and partnership by a broad group of stakeholders, which built and sustained long-term support for program.

In 2010, Alameda CTC began the formal development process for the County's long-range transportation plan and development of a 30-year 2014 Transportation Expenditure Plan (TEP) with the formation of the Community Advisory Working Group (CAWG) and the Technical Advisory Working Group (TAWG). CAWG members represented a broad array of perspectives and stakeholders throughout Alameda County. The TAWG was comprised of staff from Alameda County, cities, transit, and regional agencies. Together, these groups lobbied for the inclusion of the transit pass program in Measure BB that secured funding for the pilot.

Following funding approval, monthly stakeholder meetings were held with Alameda CTC staff to help plan and design the pilot. Input was also collected directly from schools through the distribution of surveys at school sites to understand student demand for the STPP. Staff worked with students at four different focus group meetings during the spring of 2012. This feedback contributed to key program design decisions during development of the pilot program.

From the beginning, this pilot was intended to be an opportunity for learning --to test different models across Alameda County's diverse geographies. Therefore, when the Commission approved the STPP in early 2016, they also adopted a robust evaluation framework to thoroughly understand and measure the effectiveness of the program.

The evaluation framework included 18 quantitative and qualitative metrics to assess the pilot across three key themes: 1) Program Participation and Transit Ridership, 2) Benefits for Students and Families, and 3) Administration, Cost, and Implementation. These themes serve as the organizing framework for this report.

After the pilot, the project team identified takeaways that went beyond the 18 metrics defined at the onset of the pilot. Key takeaways include some findings related to defined evaluation metrics such as program participation and transit use, but they also speak to the underlying drivers of program growth and key success factors in the design and administration of the program. Figure 3 shows

how each of the key findings supports one or more of the program goals and this is followed by a more detailed description of the takeaways themselves.

Figure 3 Did the Pilot's Key Takeaways meet Program Goals?

Key Takeaways	Program Goals				
	Reduce barriers to transportation *access to and from schools*	***Improve transportation options for Alameda*** *County's middle and high school students*	***Build support*** *for transit in Alameda County*	***Develop effective three-year pilot programs***	***Create a basis for a countywide STPP*** *(funding permitting)*
1. Program Growth Impact and popularity of program grows over time	✓	✓			
2. Program Participation Participation rates were highest in schools with free and universal programs, and these were also the schools with the highest level of financial need	✓				
3. Participation of Low-Income Families Students and families with the highest need are more likely to take advantage of the program	✓	✓			
4. Transit Adoption Affordable transit access both sustains and creates transit riders			✓		
5. Transit Agency Ridership Levels The program helps stabilize and helps grow transit ridership			✓		
6. Program Appreciation Schools and families have reported the importance and benefits of the program			✓		✓
7. Financial Benefits to Families Financial support for transportation expenses alleviated stress for families	✓	✓			

Key Takeaways	Program Goals				
	Reduce barriers to transportation *access to and from schools*	***Improve transportation options for Alameda*** *County's middle and high school students*	***Build support*** *for transit in Alameda County*	***Develop effective three-year pilot programs***	***Create a basis for a countywide STPP*** *(funding permitting)*
8. Extracurricular Access Affordable transit expands opportunities for jobs and extra-curricular activities					
9. Enrichment Access The transit pass provided access to additional programs and new learning opportunities					
10. School Attendance The transit pass is cited as an element supporting improved school attendance					
11. Iterative Program Development A pilot model allowed for collaborative teamwork and continuous improvement					
12. Interim Program Evaluation Defining and measuring success made the pilot more effective					
13. Pre-Program Planning There are many details and factors to consider when launching a program and starting early working with transit operators and school districts is critical					
14. Pass Design Development Simple pass design reduced administrative burdens and costs					
15. Card Replacement Protocols Replacing passes is one of the more challenging aspects of the program					

Key Takeaways	Program Goals				
	Reduce barriers to transportation *access to and from schools*	***Improve transportation options for Alameda*** *County's middle and high school students*	***Build support*** *for transit in Alameda County*	***Develop effective three-year pilot programs***	***Create a basis for a countywide STPP*** *(funding permitting)*
16. BART Integration BART does not have any pass products that could be loaded onto Clipper cards					
17. Transit Agency Coordination Transit agency partnerships were integral to program success					
18. Program Management Programs take time to institutionalize and require close coordination with school administrators					
19. Championing the Program Transit agency partnerships were integral to program success					
20. Program Marketing Word of mouth and partnerships are key to program marketing					
21. Privacy Protocols Protocols were required to protect students' and families' information					

Program Participation and Transit Ridership: Benefits scale effectively and efficiently

1. Program Growth

From Year One to Year Two, overall participation in the STPP more than doubled to over 6,600 students, representing nearly half of all eligible students. From Year Two to Year Three, the program doubled again, with more than 11,100 participants and a participation rate of 58 percent. In both Year Two and Year Three, the percentage growth in participants exceeded the percentage growth in the number of eligible students. Most of the schools that were involved in the STPP for two to three years experienced a growth in participation rates, indicating that as program awareness grew, there was more enrollment and support from students, families, and schools.

Takeaway: Impact and popularity of program grows over time.

2. Program Participation

Participation rates were higher at schools where students in all grades had access to the program. Participation rates were also higher in free pass models compared to the discounted models that were trialed in Year One. More rules and constraints on who was eligible to participate disproportionately impacted participation. Schools that had simpler program models throughout the duration of the pilot experienced high participation rates. Moreover, schools that changed from a complex to a simple model during the pilot experienced a dramatic increase in participation rates after the simplification. For example, in Livermore, participation increased at both of the continuing schools from 3 percent to 26 percent in Year Two after the program was simplified.

While the program has experienced heightened participation overall, three of the Year One schools in Oakland USD (Castlemont HS, Fremont HS, and Frick MS) experienced a decline in participation over the course of the three-year pilot. This could be due to several external factors including, but not limited to, changes in schools' marketing efforts, the availability of nearby transit service, and natural variation of a changing student body. And while STPP has been beneficial to many students, it is possible that some students tried transit early on but found that it did not meet their needs.

Takeaway: Participation rates were highest in schools with free and universal programs, and these were also the schools with the highest level of financial need.

3. Participation of Low-Income Families

Income levels were correlated with participation rates and transit ridership. Schools with higher shares of low-income students had higher participation rates. At the Free/Universal programs where all students in the school were eligible to participate, schools with higher shares of low-income students had more transit boardings per participant than schools with lower shares of low-income students.

"Before I had the Clipper card – I used to pay cash – now I have money for emergencies."
—Focus group participant from New Haven USD

"In the Tri-Valley, you don't have to be identified as low socio-economic to be struggling to survive in our community. Just living in the Tri-Valley is expensive, so sometimes that extra $10-20 a week can put a meal on the table for a family. So, it's a big impact on a lot of families."
—School district contact from Livermore Valley JUSD

Takeaway: Students and families with the highest need are more likely to take advantage of the program

4. Transit Adoption

Participating students self-reported that they used transit more often after they received the transit pass. Participants also relied on transit for travel to and from school at higher rates than their peers who did not participate in the program.

"I never took the bus before, once I got the transit pass I do take it. My family encouraged me to take the pass. It has given me a little more independence."
—Focus group participant from San Leandro USD

"I used to take the bus in 8th grade. Now that I have a free Clipper card, I use it three to four times a week. I use it a lot more than before."
—Focus group participant from San Leandro USD

"I think most all of our students have a card—the ones that don't, their friends tell them to get it."
—School site administrator from Oakland USD

"I never used the bus before the pass – now I use it a couple times a month. My parents normally drop me off."
—Focus group participant from San Leandro USD

"We're teaching our students to use transit which is good for everyone in the long run."
—School district contact from Livermore Valley JUSD

Takeaway: Affordable transit access both sustains and creates transit riders

5. Transit Agency Ridership Levels

Transit agencies also assessed ongoing changes to ridership levels that may have resulted from the STPP. Increased ridership generated by the STPP supported growth and stabilization of transit ridership levels in several areas. To date, no major capacity/over-crowding issues have arisen, but it is a concern of operators and will continue to be tracked as part of this program.

Takeaway: The program helps stabilize and helps grow transit ridership

Students and Families: Benefits extend beyond mobility

6. Program Appreciation

Students, families, school administrators, and teachers have all expressed great appreciation for the benefits of this program. Whether helping students access more opportunities, helping families with the costs of transportation and family logistics, or helping teachers provide special programming for students—the STPP assisted many people and built support for transit and for program expansion.

Transit passes also enabled easier household logistics and coordination, reducing the need for working parents to organize school pickup and drop-off.

"Please keep this program running!! I know so many people that it helps, and it allows everyone to access more within the Bay Area."

—Participant from San Leandro USD

"I had a parent cry when we told her the program was going to be expanded next year. She said, 'I don't have to worry about transportation anymore. I know the kids are going to get home safely.'"

—School site administrator from San Leandro USD

"THANK YOU SO MUCH FOR THE BUS PASS!"

—Participant from Oakland USD

Takeaway: Schools and families have reported the importance and benefits of the program

7. Financial Benefits to Families

Affordable transit options provided invaluable support for families. In annual student surveys, more than half of participants reported that the financial benefit of the transit pass was helpful or critical for their families. The housing crisis in Alameda County constrains many families' financial resources, and a free transit pass helped families reallocate income toward housing, meals, or other critical household expenses.

"I will go to school every day now even at the end of the month. When money runs out at end of month, there is no bus fare and there is no food. I can go to school now and always get something to eat so I'm not hungry. There is no reason to stay at home and not go to school."

—Participant from Castlemont High School (Oakland USD)

"The program has helped my family save money. My mom is happy about the program –the money we used to spend on transportation can now be used on food."

—Focus group participant from San Leandro USD

"I think it is awesome I take the bus every day to school. [It's] so helpful because both my parents work."

—Participant from Newark USD

Takeaway: Financial support for transportation expenses alleviated stress for families

8. Extracurricular Access

The availability of an unlimited transit pass encouraged students to use transit more often, enabling them to access jobs and extra-curricular activities, and providing a new sense of freedom. A pass with unlimited rides and no time restrictions allows students to use the pass for more than school transportation and enables them to become more comfortable with using transit in general. Building on this experience, students were more likely to use transit to access jobs and internships, which can be challenging for parents to support due to job hours—allowing students to earn income and build work experience.

"A lot of our juniors and seniors who have the card have been able to use it for work. They can leave school and not have to worry about getting a ride. They know exactly what time they have to leave, and they know they are going to get to work on time, and they have a way to get home, so it's allowed them to work and get that experience."

—School site administrator from Oakland USD

"I take the bus home every day in summer to and from tennis practice. Before the transit pass, I didn't take the bus."

—Participant from San Leandro USD

"[Students] like the fact that it's not just to-and-from school; they can use it on the weekends, or to/from the babysitter's house. They can get places in a timely manner."

—School site administrator from Oakland USD

Takeaway: Affordable transit expands opportunities for jobs and extra-curricular activities

9. Enrichment Access

Though not an intended or anticipated use of the Student Transit Pass at the beginning of the pilot, the STPP provided access to transportation services for off-campus programming for school districts that did not have the resources to buy transit passes or charter buses. Using the bus passes or BART tickets, the STPP allowed participating schools to enrich their classroom experiences with field trips.

"It's not just the money. We have a lot of times where I'm trying to help a teacher plan a field trip, and I call the Transportation Office, and they are already booked for the rest of the school year. And it's an issue for sports, too. Let's say our team gets into finals, but they don't have any buses left. The passes allow them to take transit..."

—School staff from Hayward USD

Takeaway: The transit pass provided access to additional programs and new learning opportunities

10. School Attendance

Although the program's impact on attendance is hard to quantitatively measure given the myriad of influences on student attendance, it appears that the STPP helped some students miss fewer days of school and improved tardiness issues. In each of the three years of the pilot, at least ten percent of participants reported in student surveys that they missed fewer school days since receiving their bus transit pass.

Anecdotally, school staff, families, and students indicated that students with a transit pass were more likely to arrive on-time to school in the morning. In

"Anecdotally yes, the attendance is improving. Especially for the kids with first period tardies."

—School site administrator from Hayward USD

"Hard to connect attendance to one aspect or program… I do believe it has a positive supportive impact on attendance even if you can't prove it with data."

—School district contact from Livermore Valley JUSD

"This serves as a nice resource when we are sitting in on [Student Attendance Review Board] meetings, where we bring in students with truancy issues. There have been a couple of cases where the family has children going to different schools, and they tell us they can't get everyone to school at the right times. We've been able to bring up the bus pass as a resource for those families. A lot of families say they didn't know about it or were new to a school and we were able to offer it to them. It is really helpful. The parents see the school is trying to help their children."

—School district contact from San Leandro USD

"Sometimes you can see a direct correlation with attendance for specific students. They come in for a replacement, and you stop seeing them [at school] until it gets replaced."

—School site administrator from Oakland USD

"Having these passes lessened the burden of asking for rides and missing school, I know it could keep on helping me."

—Participant from Fremont USD

addition, school staff indicated that the pass was particularly helpful with students who have attendance challenges, perhaps due to a difficult home life or a history of changing schools frequently.

"The stories that are the most touching are the ones where the student has had some trauma… where they are trying to escape their home life because their parents aren't able to provide reliable options for them. Those kids take the initiative, and they are making it on their own because of the bus pass. They come and they try hard, and you see their grades improve so much when their attendance improves. They don't take it for granted."

—Parent and family coordinator from San Leandro USD

Takeaway: The transit pass is cited as an element supporting improved school attendance.

Administration, Cost, and Implementation: Simpler programs reduce costs and enhance external and internal partnerships

11. Iterative Program Development

A pilot approach allowed the project team to be nimble and make changes based on lessons learned and create an iterative process towards improvement. To refine the program, the team made early tradeoffs in program design and roll-out to launch the pilot quickly.

Rather than spending resources to create a new transit pass product, the project team used adult Clipper cards for the pilot phase. The use of existing fare products allowed the team to evaluate which types of passes worked well before engaging in costly software development.

Similarly, the production of Clipper cards and replacement process was modified after the first year to create a more efficient and predictable process for transit agency staff and school site administrators. Overall, the flexibility of a pilot—combined with the cooperation of the transit agency and school district partners—was critical to identifying best practices for a long-term transit pass program.

Takeaway: A pilot model allowed for collaborative teamwork and continuous improvement.

12. Interim Program Evaluation

At the end of each year of the pilot, Alameda CTC conducted an interim evaluation using a set of consistent metrics based on data from multiple partners

and sources. The evaluations demonstrated the success of the STPP over time and helped the pilot adapt its approach in each successive year.

Takeaway: Defining and measuring success made the pilot more effective.

13. Pre-Program Planning

Significant one-time staffing effort was required prior to Year One to get a brand-new program up and running. Alameda CTC staff and consultants created processes, protocols, procedures, and templates for all aspects of the program, including student registration forms, pass creation, pass distribution processes, deactivation and replacement procedures, school district and transit agency legal agreements, confidentiality agreements, data storage, management and transfer protocols for valuable fare media and sensitive student data, evaluation data collection prior to program launch, management and analysis approaches, as well as marketing materials and travel training curricula.

This startup effort was so significant that in Year Two, despite expanding to more schools and more than doubling the number of participants, the level of administrative effort declined.

Takeaway: There are many details and factors to consider when launching a program and starting early working with transit operators and school districts is critical.

14. Pass Design Development

Simple pass design reduced the burden on school and transit staff, and decreased implementation overhead costs – such as staff and consultant time. During the pilot program, Alameda CTC tested pass designs of varying complexity. To expedite pilot launch, the pilot used existing pass types that were not specifically designed for a program of this nature, and therefore, introduced some additional complexities to the program. The pilot revealed that a simple pass design should include the following:

- One pass for the full school year
- One fare product and one pass for all transit systems in the program area (e.g. an integrated Clipper card was superior to two different bus flash passes and/or a bus pass and a BART ticket)
- Eligibility open to all grades at participating schools (families often have students in multiple grades and participation in the program is suppressed if one child qualifies while another does not)

- Eligibility determination based on self-reported income by parents/guardians (for means-based passes) and approved by schools
- Financial arrangements at the institutional level, rather than at the individual level (i.e. funds should not be collected from students/families, but all payment should be negotiated between organizations/agencies)
- A clear pass production and distribution schedule to set expectations for school staff and families and balance between administrative burden and student convenience and timely distribution of passes

Takeaway: Simple pass design reduced administrative burdens and costs.

15. Card Replacement Protocols

In the pilot, students lost their cards periodically, as would be expected. Different replacement procedures were used for different transit agencies, but all of them had some challenges. Some of the issues encountered were due to having to utilize existing Clipper card replacement systems. From students' perspectives, obtaining a replacement pass was challenging, both due to the cost ($5 replacement fee), challenging customer service logistics, and the stress of finding alternative transportation arrangements until a replacement pass arrived. The $5 replacement fee was a burden for some students, but it also posed an incentive for students to truly understand the value of the card and keep careful track of them.

The application form is so simple, that it's kind of a shock to them when they go to replace the card, and the process is so much more complicated."

—School site administrator in Oakland USD

Takeaway: Replacing passes is one of the more challenging aspects of the program.

16. BART Integration

Starting in Year Two, BART was introduced to the program. Participating high school students within the BART service area could receive a free $50 BART ticket. Unlike bus agencies which offer unlimited ride pass products, BART does not have a product that could be loaded onto a Clipper card. As a result, the STPP used paper tickets, which have multiple challenges: the tickets cannot be canceled remotely and therefore cannot be replaced if lost; the tickets are already loaded with monetary value, so additional security protocols are required for tracking and storage; and the students had to keep track of both a Clipper card for bus travel and a paper ticket for BART.

The addition of BART tickets to the program revealed demand for BART among some participants, but actual usage of the BART tickets was concentrated amongst few students. In Year Two, only about 40 percent of eligible students opted to request a BART card, and in Year Three, the BART participation rate declined to about 25 percent of all eligible students at the same time as the participation rate for bus passes climbed to nearly 60 percent. In addition, only about 4,600 of the 6,100 BART tickets that were requested (75 percent) have been used for travel. While less than half of the fare value that was on the distributed cards was utilized by the end of the pilot, the tickets to do not expire and students are able to use their tickets, and any remaining value, post pilot.

For the few students who relied on BART for their school or extra-curricular travel, the limited value on the card, $50, did not significantly change travel behavior or reduce a student's transit costs.

Takeaway: BART's fare structure posed challenges to integrating the option into the pilot program due to lack of a student Clipper product.

17. Transit Agency Coordination

Close coordination with transit operators prior to and throughout the pilot was critical to a successful program. Alameda CTC could not have launched and managed this program without close partnership with the transit agencies that run the service that students utilize.

Takeaway: Transit agency partnerships were integral to program success.

18. Program Management

School staff expertise in the administration and management of the program grew gradually over time. Up-front meetings with school district representatives and principals, onboarding meetings with site administrators, and active communication between program administrators and schools were all critical in deepening organizational capacity for and fluency with the program.

"I think because it's my first year, it was hard, it was difficult. I had all these different questions and concerns, but once I got them answered, I got the support I needed. It's a great program. Seeing a kid come in with a smile on their face when they get their card is really good. And they don't have to bother their parents for pocket money. It made me feel like, 'I gotta do this.' The kids come in and say, 'Thank you, because I have to leave here to go to work to support my family. Now, I don't have to leave school early and miss class just to make it to my job on time.'"

—School site administrator from Oakland USD

Takeaway: Programs take time to institutionalize and require close coordination with school administrators.

19. Championing the Program

The program was effective at schools with a consistent, dedicated staff person, as well as an engaged Principal or district-level advocate who provided resources and coordination. The pass required continuous administrative support. Consistency in staff across the pilot years built institutional knowledge and reduced the need to train new staff each year.

Moreover, a dedicated staff person meant there was a trusted person the students already knew and were comfortable with in their day-to-day routine who was consistently available to answer their questions about the program. Students and their families did not have to learn to navigate a separate public agency process in order to obtain the transit pass, which reduced access barriers to the program, particularly for newcomer families who are still learning about how to access needed public services.

Takeaway: School district and school site champions drive success.

20. Program Marketing

As the STPP evolved, the most effective marketing came from site administrators, teachers, and school districts who saw the benefits of the program and understood the value it provided for their students. In-person marketing during school registration/orientation also increased the visibility of the program with parents and facilitated a streamlined registration process.

Over the three years of the pilot, an increasing share of participants reported in student surveys that they sought out information about the program from school-based staff. Schools are already a familiar resource in the community and leveraging the established communication channels between schools and local families is the most efficient way to disseminate information about the program. Student surveys also showed that over time, more and more students have asked their friends and peers about the program, suggesting that awareness and knowledge of the program is disseminated among the student body.

During the pilot, Alameda CTC launched a travel training program to help middle school students become more comfortable riding transit. Materials from the travel trainings are now integrated with Alameda CTC's existing Safe Routes to Schools program to teach students how to ride the bus and spread the word about the STPP in a scalable way. Partnering with a local non-profit that focuses on youth mobility programs made the travel training more effective.

Takeaway: Word of mouth and partnerships are key to program marketing.

21. Privacy Protocols

The information collected from students during registration is sensitive and legally protected Personally Identifiable Information (PII). To protect students' and families' private information, the STPP set up an administrative process that allowed site administrators to see student information only for students enrolled in their school district through secure, password protected online systems. Other protocols to protect students' data—such as the use of an File Transfer Protocol (FTP) site for sharing sensitive information, rather than transmitting it via email, storing all paper applications in secure, locked locations, and having all staff sign a confidentiality form—were developed for the pilot and adhered to by all staff.

Takeaway: Protocols were required to protect students' and families' information.

Success in Meeting Pilot Program Goals

At the launch of the pilot, five goals were identified to guide the overall success of the program. Now, after the three-year effort, the program can be reviewed comprehensively to consider whether the STPP promoted transit in the county and benefitted students and families as initially intended.

Goal #1: Reduce barriers to transportation access to and from schools

From Year One to Year Three, the program expanded from 9 to 21 schools and participation rose to more than 11,100 participants. Most of the schools involved in the program for multiple years experienced steady growth in participation rates, indicating that as program awareness grew, there was more buy-in from students, families, and schools.

In each of the three years of the pilot, at least 10 percent of participants reported in student surveys that they missed fewer school days since receiving their bus transit pass. Moreover, school staff indicated that the pass was particularly helpful with students who had attendance challenges.

A steady increase in participation, as well as anecdotes provided by school staff, suggest that the program reduced students' transportation barriers and improved overall access to and from school.

Goal #2: Improve transportation options for Alameda County's middle and high school students

Feedback provided by students and school staff illuminated the ways in which the pilot improved transportation for the County's middle and high school students. The pass encouraged students to use transit more often, enabling them to access jobs and extra-curricular activities. The pass provided students with a new sense of freedom, which eased household logistics and coordination, reducing the need for working parents to organize school pickup and drop-off. As an unforeseen benefit, the STPP allowed participating schools to enrich their classroom experiences with field trips and afterschool programming that was cost-prohibitive prior to the STPP.

Goal #3: Build support for transit in Alameda County

A free transit pass has helped families reallocate income toward housing, meals, or other critical household expenses. Increased ridership generated by the STPP supported growth and stabilization of transit ridership levels in several areas across the county. Analysis conducted by AC Transit during Year Two showed that ridership increases did not cause any new problems with crowding or vehicle capacity.

The program built support for transit in Alameda County by alleviating the financial burden that transportation has on many families and encouraging young people to become transit riders.

Goal #4: Develop effective three-year pilot program

The structure of the three-year pilot allowed the project team to make iterative changes to improve and refine the program design in each year of the pilot. Alameda CTC staff and consultants created protocols and procedures for all aspects of the program. The effort was effective: despite expanding to more schools and more participants every year, the share of annual costs devoted to administrative effort declined.

The pilot approach, paired with a consistent project team, made for a smooth transition to the expanded, longer-term program.

Goal #5: Create a basis for a countywide student transit pass program (funding permitting)

The level of interest and support that arose from the pilot and the pilot's success in meeting the program goals created a basis for a countywide student transit pass program. The success of a long-term program is dependent on the continued coordination with school districts and transit operators and funding. Up-front meetings with school district representatives and principals, onboarding meetings with site administrators, and active communication between program administrators, transit agencies and schools were, and will continue to be, important for the long-term program success.

Takeaway: There is a strong sentiment that the pilot successfully met the program's five goals. The STPP has been instrumental in encouraging students to use transit across the county, it has improved many families' financial health, and thanks to the pilot's iterative approach, it has set the groundwork for a long-term, countywide program.

Future of Program

As a result of the effective implementation and evaluation of the STPP to date, in December 2018 the Commission approved continuation and phased expansion of the program beyond the pilot period, which ended July 31, 2019. The STPP will be expanded according to the following principles:

- Continue the program in all currently participating schools
- Maintain financial need as a key criterion for expansion
- Focus on students at schools with transit service

- Follow school district-based expansion
- Phase expansion gradually over time

The STPP plans to incorporate all public middle and high schools with transit service in Alameda County within the next five years. At the end of the phased expansion, over 140 schools and approximately 58,000 students will have access to the program.

Figure 4 provides a summary of the criteria that are being used to determine schools for expansion.

Figure 4 Summary of Criteria for Expansion

Criteria	Definition
Income/Need	The percent of students who qualify for Free and Reduced-Priced Meals (FRPM)
Program Model	Free/Universal model in districts with ≥ 75% FRPM Means-Based/Free model in all other districts
Transit Service	Schools must be within ¼ mile of a bus route
Existing Transit Service Capacity	Discussions with transit agencies affected by expansion plan to ensure that STPP does not overburden already at/over-capacity routes
Ease of Inclusion	Continue program at all currently participating schools and expand to full district in participating districts that have very few additional qualifying middle or high schools
Geographic Representation	Districts in every planning area will be included each year

Based on lessons learned from the pilot program, the Commission adopted a largely Means-Based/Free program except for school districts in which a very high percentage of students are eligible for the Free and Reduced-Price Meals program (FRPM), which is determined based on household income.

For initial phases, districts where 75 percent or more of student body are eligible for FRPM will qualify for a Free/Universal program, while all other districts will qualify for a Means-Based/Free program. Exceptions can be made where significant transit service capacity exists, and budgetary impacts can be mitigated in consultation with the transit agency.

Going forward, the STPP is going to transition all students from an adult Clipper card to a youth Clipper card. A youth Clipper card not only has the free bus pass loaded onto it, but it also allows students to access youth discounted fares at

other transit agencies, including a 50 percent discount on all BART fares if they add e-cash to the card.

Alameda CTC will continue to conduct evaluation of the program through the expansion period, using a streamlined and focused set of evaluation criteria (participation rate, frequency of pass usage, transit ridership and capacity, and program costs) based on lessons learned during the pilot period. Evaluation will continue to occur annually for the first three years of the program and will include recommendations for program improvements as appropriate.

The Commission-approved goals for the expanded program are:

- Reduce barriers to transportation access to and from schools
- Improve transportation options for Alameda County's middle and high school students
- Build support for transit in Alameda County
- Implement cost effective program

1 Introduction

The cost of transportation to school is often cited as a barrier to school attendance and participation in after-school activities by middle and high school students. In recognition of this issue, the 2014 Measure BB Alameda County Transportation Expenditure Plan (TEP) included $15 million dedicated to implementation of an affordable transit pass pilot program for students. The purpose of the pilot program was to test and evaluate different approaches to a transit pass program for public middle and high school students in Alameda County over a three-year time period to identify a successful long-term approach.

The goals of the Affordable Student Transit Pass Pilot (STPP) were:

- Reduce barriers to transportation access to and from schools
- Improve transportation options for Alameda County's middle and high school students
- Build support for transit in Alameda County
- Develop effective three-year pilot programs
- Create a basis for a countywide student transit pass program (funding permitting)

The program accounts for the geographic diversity of Alameda County and includes passes that can be used on the various transit providers that serve schools, after-school activities and job locations throughout Alameda County.

Background and Timeline

Early History of the Student Transit Pass Program

The development of the STPP has a long history that began many years before the formal start of the program in 2016 -17. Community members have long been advocating for improved school transportation options in Alameda County. Yellow school bus service is limited to special needs students in most of the county, so many parents and guardians either drive or have their children take public transit to school. Although discounted youth bus passes can reduce

the cost of transit, the cost is a burden for many families. Driving children to school creates congestion and safety issues, impacts air quality, and can be difficult for working parents to accommodate into their own schedules. Many felt that a better solution was needed to help young people access educational opportunities.

In 2010, Alameda CTC began the formal development process for the County's long-range transportation plan and development of a 30-year 2014 Transportation Expenditure Plan (TEP) with the formation of the Community Advisory Working Group (CAWG) and the Technical Advisory Working Group (TAWG). CAWG members represented a broad array of perspectives and stakeholders throughout Alameda County. The TAWG was comprised of staff from Alameda County, cities, transit, and regional agencies. In the development of these two plans, community members in the CAWG advocated to include funding to pay for a countywide Student Transit Pass Program (STPP) through the TEP.

Alameda CTC staff sought input directly from schools on the design of a STPP through the distribution of surveys at school sites in Alameda County to understand student demand for the STPP. Staff worked with students at four different focus group meetings during the spring of 2012. Following each focus group, students completed a two-page survey questionnaire about their ideas for the program. This feedback contributed to key program design decisions during development of the pilot program.

Based on the widespread support that had developed for the program, Alameda CTC included a $15 million funding allocation for the Affordable Student Transit Pass Program as a line item in its 2012 Transportation Expenditure Plan (TEP), which went before voters as Measure B1 in the November 2012 election. The 2012 measure did not secure the necessary two-thirds majority to pass. Two years later, Alameda CTC re-approved the TEP and placed it on the ballot as Measure BB; it was approved by over 71% of voters in November 2014.

Once the TEP passed in 2014, Alameda CTC worked with stakeholders to create a public process around the development and implementation of a Student Transit Pass Program Pilot (STPP) as defined in the TEP.

Implementation Timeline

With the formal approval of a funding source, the real work of implementing the transit pass pilot could begin. In 2015, Alameda CTC collaborated with community groups and regional stakeholders as it began the design and development of the three-year pilot to test and evaluate various program models. Alameda CTC staff held nine workshops over eighteen months to gather

input and solicit ideas for how to make the program successful. Stakeholders invited to the workshops were from school districts, advocacy groups, the Alameda County Technical Advisory Committee, and more. The workshop participants also provided early feedback on concepts for program design, potential evaluation metrics, and pilot site selection criteria.

Alameda CTC engaged numerous stakeholders and interested parties in the initial planning process in several additional ways:

- The transit pass program was presented to members of the Safe Routes To School's Monthly Youth Task Force at two meetings in 2016 in order to solicit feedback on communications strategies and logistics of card distribution at schools.
- Alameda CTC staff coordinated with local and regional partner agencies, including transit operators in Alameda County, MTC, and the Alameda County Office of Education (ACOE) to help refine program needs, constraints, and opportunities.
- Staff and leadership at Alameda CTC conducted direct outreach to school district staff to gauge interest in and capacity for implementing the program in different schools across the county.
- Alameda CTC staff sought out advice from national best practices, as well as three peer agencies in the Bay Area that had also implemented student transit pass programs in recent years: the San Francisco Municipal Transportation Agency (SFMTA), the Transportation Authority of Marin (TAM), and the West Contra Costa Transportation Advisory Committee (WCCTAC).

In March 2016, the Commission approved a framework for selecting schools and program models, as well as an overall evaluation framework for the pilot. Two months later, the Commission approved a short-list of schools that would be candidates for deployment of the STPP during the three-year pilot as well as the final program design for the first year of the STPP. In Year One (2016-2017 academic year), Alameda CTC implemented four program models at nine middle and high schools in four school districts.

Following the successful implementation of Year One, the Commission approved the design for Year Two (2017-2018 academic year), which expanded the program to fifteen schools in five school districts, implementing the two successful program models from Year One across these schools. In Year Three (2018-2019 academic year), the final year of the pilot, the STPP was expanded to twenty-one schools across seven school districts, continuing implementation of the two models from Year Two. See Figure 5 for an overview of the STPP timeline.

Figure 5 Timeline for STPP Development, Implementation, and Evaluation[2]

Site Selection and Evaluation Framework

In March 2016, the Commission approved two frameworks as part of the development of the STPP:

1. **Site Selection Framework**: To select pilot program sites in the four planning areas of Alameda County.
2. **Evaluation Framework**: To evaluate the effectiveness of several pilot program models.

School Site Selection

The site selection framework was a two-stage process that (1) produced a short list of 36 schools eligible to participate in the three-year pilot and (2) identified a sub-set of schools for Year One of the pilot. The first stage assessed the following factors: financial need, proximity to transit service, student population size, school day structure, school readiness, school feeder relationship, as well as other characteristics. After this screening analysis, the program team reached out to a sub-set of candidate schools to evaluate schools' interest in being active partners in the STPP and their ability to implement a pilot program. Figure 6 presents the characteristics used in the site selection process; the short list of 36 schools is contained in Appendix A.

[2] This schedule only covers the pilot program; in spring 2019 the program began transitioning out of the pilot phase. Year One of the permanent program began in the 2019-2020 school year.

Schools participating in each year of the pilot were selected based on student need; an analysis of budget resources available; feedback from schools, students, and families; and lessons learned each year from the implementation and administration of the pilot itself.[3] Program design for each pilot year is described in the following section.

Figure 6 STPP School Site Selection Characteristics for Assessment[4]

Category	Characteristic(s)
School Type	▪ Middle, high, mixed ▪ Charter/non-charter traditional
School Need	▪ Income level as indicated through free and reduced-price meal (FRPM) eligibility
Transit Presence	▪ Bus stop within ¼ mile of the school ▪ Number of routes serving schools
Geographic Location	▪ North, Central, South, East County planning areas ▪ Paired schools (e.g., schools located near one another, middle schools that feed a particular high school, a high school that draws from select middle schools, etc.)
Existing Programs	▪ Presence of Safe Routes to Schools programs and other unique attributes of potential school sites
Other Characteristics	▪ Percent minority of student population ▪ Ethnic diversity of student population ▪ School interest ▪ School readiness ▪ Availability of crossing guards ▪ Potential student and community participation

Evaluation Framework

When the Commission first approved the STPP, they also adopted an evaluation framework to measure performance of the program. The evaluation framework includes 18 quantitative and qualitative metrics, some of which have been refined since initial program approval to better reflect available data and a

[3] Additional detail regarding the site selection process can be found in the March 2016 Commission memo: https://www.alamedactc.org/events/alameda-ctc-commission-meeting-3-24-2016/. Background on Year Two and Three expansion can be found in subsequent Commission memos, March 2017: https://www.alamedactc.org/events/alameda-ctc-commission-meeting-3-23-2017/; and February 2018: https://www.alamedactc.org/events/alameda-ctc-commission-meeting-2-1-2018/.

[4] The location of BART station was considered when the distribution of BART tickets was introduced to the pilot

reasonable level of effort for school site and transit operator staff.[5] Figure 7 and Figure 8 identify how the selected metrics align with the adopted program goals.[6] For additional information, refer to Appendix B, which contains a more detailed rationale and the data requirements used for each metric. The figures also indicate the relevant pages where each metric is discussed within this Final Evaluation Report.

Figure 7 Alignment of Program Goals and Performance Measures – Quantitative Results

Goals/Indicators	Goal 1: Reduce access barriers to school	Goal 2: Improve transportation options for MS/HS students	Goal 3: Build support for transit	Goal 4: Develop effective pilot programs	Report Location
Quantitative Metrics					
Transportation costs to families (participant cost)	■	■		■	p. 94
Participant or student attendance	■				p. 73
Pass availability and use	■				p. 39, 42, 57, 66, 67
After-school activity participation		■			p. 76
Student ridership (including non-passholders)		■	■		p. 42, 57, 63, 67
Diverse participant reach				■	App. C
Program cost per participant				■	p. 115
Administrative costs as a proportion of total program costs				■	p. 115

[5] After Commission approval, the metric "Inclusion of students, parents, community members, administrators" was moved from quantitative to qualitative due to an initial mis-categorization. The table presented here shows the current metrics after this change.

[6] Note that the STPP's fifth goal – to create a basis for a countywide program – does not have associated performance metrics. Rather, the results of this evaluation process help identify the value of and refine Alameda CTC's approach to a potential future countywide program.

Figure 8 Alignment of Program Goals and Performance Measures – Qualitative Results

Goals/Indicators	Goal 1: Reduce access barriers to school	Goal 2: Improve transportation options for MS/HS students	Goal 3: Build support for transit	Goal 4: Develop effective pilot programs	Report Location
Qualitative Metrics					
Student perception of transit options and barriers	■	■	■		p. 88
Inclusion of students, parents, community members, administrators			■	■	p. 25
Effectiveness of marketing and outreach	■		■	■	p. 99
Linkages with existing fare payment option(s)		■	■		p. 116
Leverage with other school-based transportation programs	■	■			p. 117
Leverage with other funding and administration programs		■			p. 117
Transit operator response(s)	■	■	■	■	p. 51, 111
Ease of participation	■	■		■	p. 82, 104, 106, 108
Ease of administration (countywide, site-level, operator-level)	■	■		■	p. 104, 106, 108, 111
Cost performance against expectations				■	p. 115

Program Design

In order to explore different options for meeting the Commission's goals for the STPP, the design of the program was refined in several ways over the course of the three-year pilot. This section describes the most distinctive features of the program design for each year and identifies the lessons learned that shaped subsequent decisions about how to extend and expand the program over time. Additional details about the program parameters for each year are provided in Appendix C.

Year One Program Design

For Year One, the program team developed four pilot program models, one in each of the four planning areas per Commission direction. In order to explore the effectiveness of different pass features, Year One program models varied in pass format, student eligibility and pass price. Nine schools from four school districts participated in Year One. An information-only program was developed for two schools in a fifth school district, but this program was discontinued before the end of Year One due to lack of interest.

The pilot parameters applied in each program model generally reflected the school's financial need and transit service availability as determined in the site selection process. For instance, schools with the greatest level of financial need participated in pilots with free transit passes. At the time of implementation, Union City Transit and LAVTA/Wheels did not have an appropriate transit pass product available on Clipper; therefore, schools served by these systems received transit passes in the format of a flash pass, i.e., stickers affixed to student ID cards that students show upon boarding the bus.

The program team designed the Year One program with financial limitations in mind, recognizing the need to run the STPP for three years and to avoid spending the allotted funding too quickly. As such, the Year One pilot program models were designed to test different ways of limiting budget impacts. For example, several program models provided transit passes at a discount or limited student eligibility to certain grades to contain costs as the program was developed. For those programs where STPP transit passes were sold at a discount, students could purchase them on a quarterly and trimester basis for Union City Transit and LAVTA/Wheels, respectively, to break up the cost of the pass throughout the year.

Year Two Program Design

A substantial takeaway from Year One was that the STPP made a positive impact on students and their families and generated support for transit. The program team gained valuable insight for implementing additional phases of the STPP and identified opportunities for streamlining program design and administrative processes. Specific lessons learned from Year One include:

- Limiting student eligibility to certain grades reduced interest in the program due to families who have students in multiple grades.
- In discounted programs, the high up-front cost for a transit pass limited students' ability to participate in the program.

- Programs that require collecting funds from students entail significant administrative cost and burden on school and program staff.
- Programs with multiple pass formats within a school site have higher administrative complexity and higher program administrative costs.
- It was difficult to draw conclusions from Year One participation rates about student transit need and behavior in different parts of the county since different program models were tested in each area.

Based on these lessons, the program team narrowed the number of program models to test only two models in Year Two:

- Free/Universal
- Means-Based/Free

Under a Free/Universal program model, all students in the district were eligible to receive a free Clipper card with unlimited access to the bus transit operators in their district; this program was used in schools with high levels of financial need where 75 percent or more of the student body qualified for free and reduced-price meals. Whereas, a Means-Based/free model was introduced at schools that didn't meet the 75 percent threshold; only students eligible for free and reduced meals could apply for a free transit pass.

Cash handling was eliminated at all schools and programs were opened to all grades at each of the participating school. Based on budget availability, six new schools and one new school district joined the program in Year Two, bringing the total to fifteen participating schools across five school districts. For the continuing schools, three program model changes were made between Years One and Two:

1. The model at New Haven USD (South County) changed from a discounted and grade-limited program to a free and means-based program.
2. The model at San Leandro USD (Central County) changed from a free and grade-limited program to a free and universal program.
3. The model at Livermore Valley JUSD changed from a two-tiered discounted/means-based program to a free and universal program using an eco-pass payment model where Alameda CTC will pay the transit agency a lump sum for enrollment of all students at the schools.

During Year One, appropriate Clipper card pass products became available for both LAVTA/Wheels and Union City Transit. To further facilitate integration with existing payment systems, enable better management of passes, and improve

data availability, all STPP transit passes were provided on Clipper cards for Year Two.

BART passes were added to the STPP pass offering in Year Two.[7] BART uses a distance-based fare structure. It does not offer a monthly pass product like those used by the program's other transit agencies. Therefore, instead of loading a pass onto the students' Clipper cards, all eligible high school students in the BART service area could request one free BART Orange Ticket with $50 of stored fare value each school year. These tickets are not restricted by time or day but, unlike Clipper cards, they are and non-replaceable and cannot be canceled remotely.

Year Three Program Design

Year Three continued to test the same two program models, allowing for year-over-year comparisons at all continuing schools.

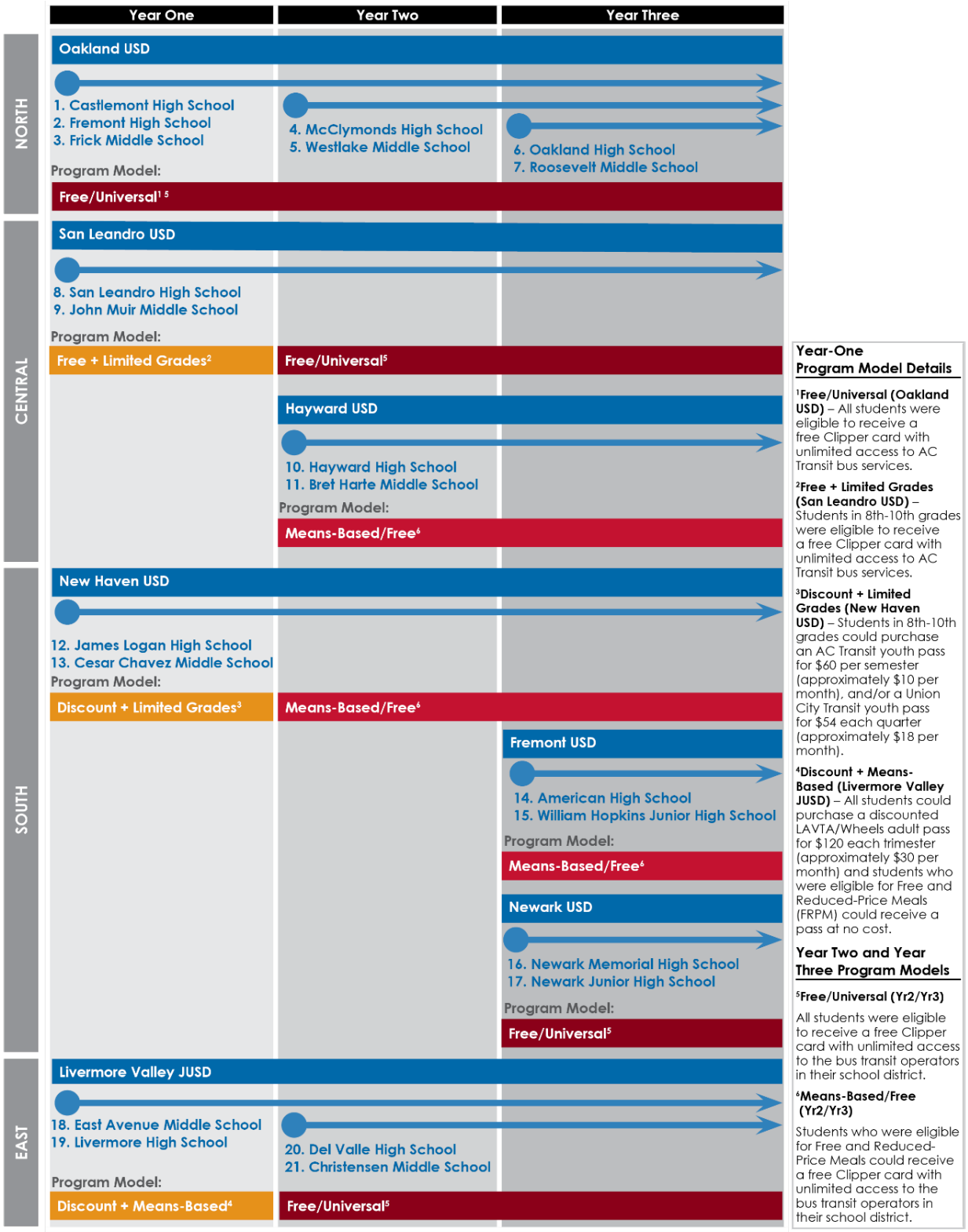
As in Year Two, all bus passes were loaded onto a single Clipper card for each participant. Paper BART tickets continued to be available, with each high school participant in the BART service area eligible to receive one ticket pre-loaded with $50 of fare value.

In Year Three, six new schools and two new school districts joined the program, bringing the total to twenty-one schools in seven school districts. Thirteen schools in four school districts tested the Free/Universal model and eight schools in three school districts tested the Means-Based/Free model.

A table of the participating schools and program models in each year of the pilot is presented in Figure 9.

[7] BART youth ticket options are distinct from all other pass types used in the STPP because they have a fixed monetary value rather than a period of validity with unlimited usage. Given the different nature of the passes and budget limitations, Alameda CTC determined that BART passes would be rolled out in Year Two of the Pilot (2017-18 academic year) to give the program team time to determine the best strategy for providing BART tickets to students.

Figure 9 Participating Schools and Unified School Districts (USD) by Year



Evaluation Data Sources and Limitations of Analysis

This STPP Final Evaluation Report utilizes data from multiple sources, including the following:

- Program participation rates and pass quantities from Alameda CTC and transit agency tracking databases
- Transit ridership data from Clipper transactions and BART fare gates from transit agencies
- Systemwide transit ridership data and capacity analyses provided by transit agency partners
- Student responses to school-wide surveys conducted in fall 2016, spring 2017, spring 2018, and spring 2019
- Student responses to survey questions included on enrollment forms for BART tickets during the 2017-18 and 2018-19 school years
- School-wide data on enrollment, attendance, and chronic absenteeism from school districts
- Debrief sessions with school site administrators, school district staff, and transit agency staff conducted by Alameda CTC
- Focus groups conducted by STPP program staff and community groups
- Testimonials collected by school staff and comments by parents and students noted during on-site registration sessions and travel training activities
- Cost data from program invoices and Alameda CTC accounting systems
- The data and analysis from the interim Evaluation Reports for each of the three program years

These data sources have various constraints and limitations that should be kept in mind while reviewing this report. Participation rates vary throughout the county, and the share of students who responded to the survey varied by school. As a result, overall averages, summary statistics, or survey results for the program will tend to be dominated by the experiences and behavior of the highest participation areas and the highest responding schools and may not be representative or generally applicable to all parts of Alameda County. Additional details about the limitations of the analysis presented in this report are provided in Appendix D.

As a general policy, the STPP allows students to enroll (and un-enroll) throughout the school year, and cards are activated upon student enrollment and deactivated if a student leaves a participating school. As such, student participation can fluctuate from month to month. This report will distinguish

between participants (students who had an activated pass assigned to them at any point during the year) and non-participants (students who did not receive a pass).

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2 Program Participation and Transit Ridership

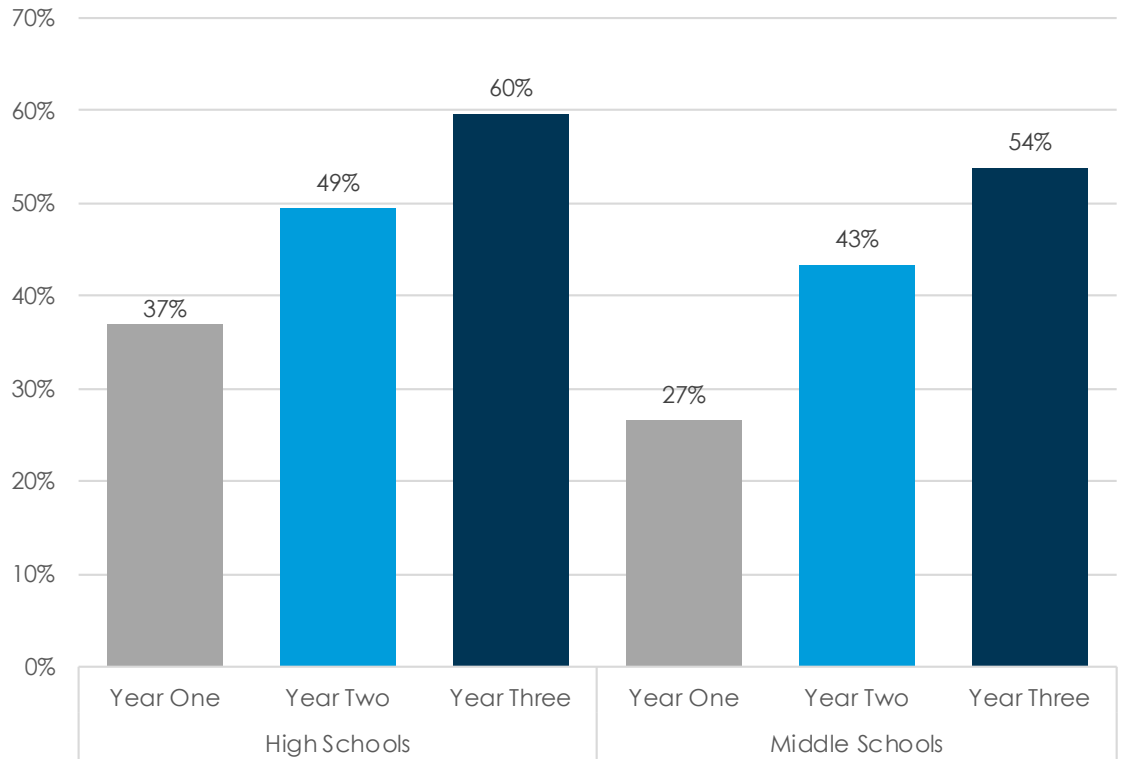
Over the course of the three-year pilot, the STPP has enrolled about half of all students who were eligible to participate – supporting nearly 2.7 million bus trips and about 39,000 trips on BART.

Program Participation

Overall, participation rates increased every year of the pilot, rising from 36 percent in Year One, to 48 percent in Year Two, and finally to 58 percent in Year Three. Participation improved across both high schools and middle schools, and within each of the two program models.[8]

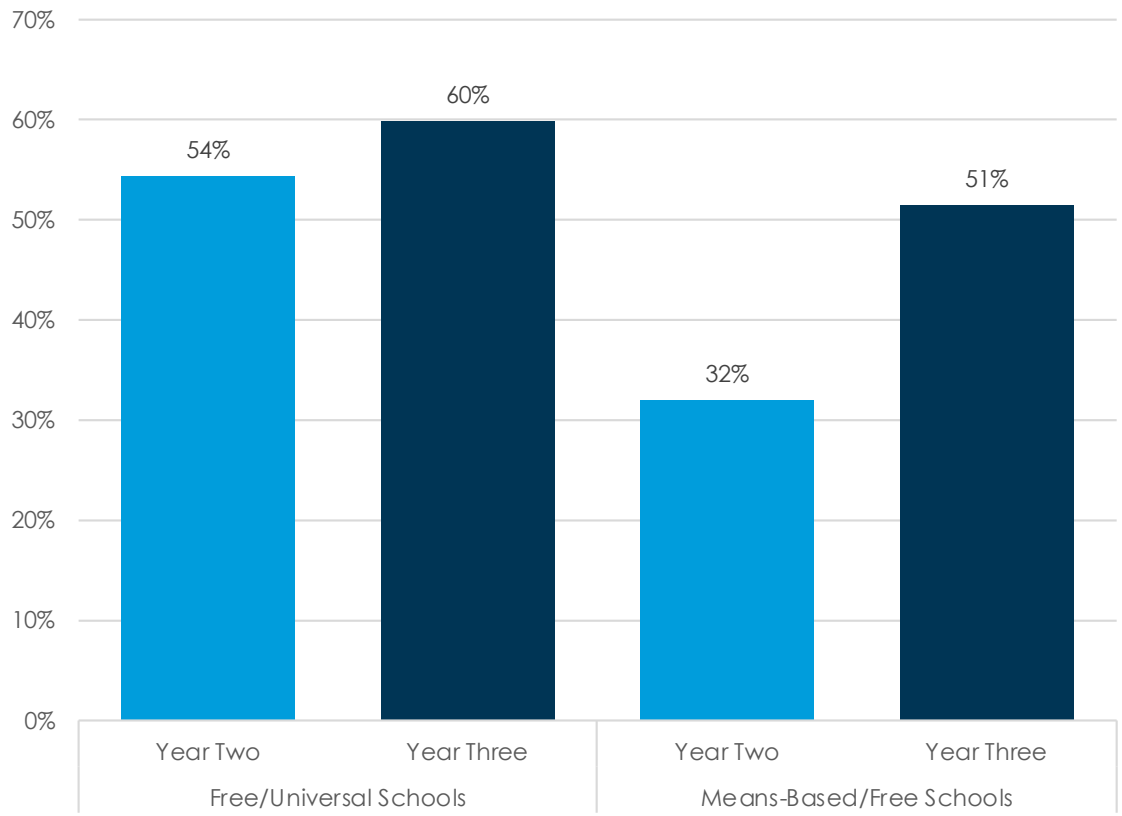
These results are presented in Figure 10 and Figure 11.

Figure 10 Change in Countywide Participation Rate by School Level, all schools



[8] Participation is defined as signing up to receive a pass

Figure 11 Change in Countywide Participation Rates Over Time (all schools, grouped by program model)

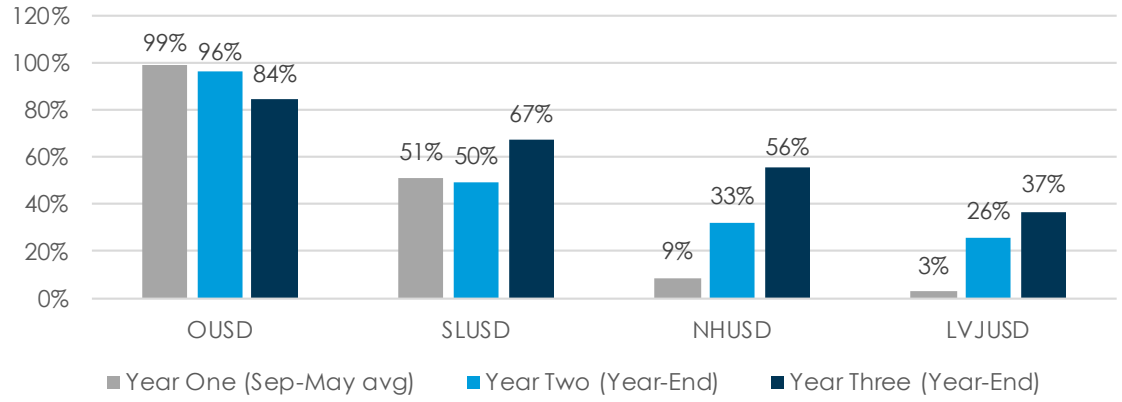


While program participation increased overall, the three Year One schools in Oakland USD (Castlemont HS, Fremont HS, and Frick MS) collectively saw a decline in participation rate over the course of the pilot. As shown in Figure 12, the participation rates at these three schools started quite high, at 99% and 96% in Year One and Year Two of the pilot, respectively. The further decline in Year Three puts the participation rate closer to that of other continuing schools, suggesting that as the program matures, a natural participation rate emerges in continuing schools. The exact reasons for the decline in Oakland USD are unknown. It is possible that some students who initially signed-up in Year One and Year Two may have chosen not to participate in subsequent years because the transit pass did not

Continuing Schools Since Year One:
Castlemont HS [OUSD]
Fremont HS [OUSD]
Frick MS [OUSD]
San Leandro HS [SLUSD]
John Muir MS [SLUSD]
James Logan HS [NHUSD]
Cesar Chavez MS [NHUSD]
Livermore HS [LVJUSD]

meet their needs. Another possibility is that the high initial participation rates led to a lack of focus on marketing at these schools, so that fewer students were prompted to sign up than when the program was brand new.

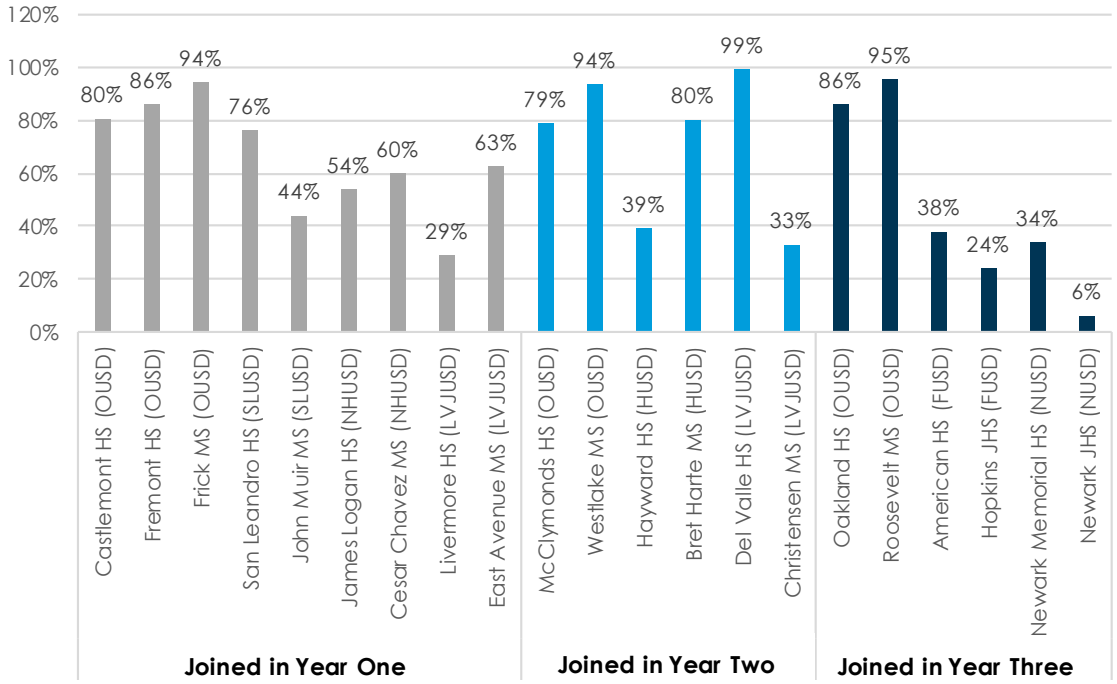
Figure 12 Change in Participation Rate Over Time (continuing schools only, grouped by school district)



Each new year of the pilot brought a mix of high and low participation rates, which suggests that participation was not driven by familiarity with the program over time. New schools tended to have higher participation rates than the continuing schools, which could have been due to heightened marketing and engagement efforts. The more familiar schools were with the program, the less marketing activity there tended to be.

As shown in Figure 13, the highest Year Three participation rate is at a school that joined in Year Two (Del Valle High School) while a Year One school from the same district, Livermore High School, has one of the lowest participation rates this year. Variation across school districts is due to multiple factors including differences in transit service coverage and quality, demographics, land use and urban form throughout the county. This topic is discussed in more detail later in this chapter.

Figure 13 Year Three Participation Rates by Longevity in STPP (Participants as Share of Eligible Students, 2018-19 Year-End)



Bus Usage and Ridership

Total Bus Boardings

Over the three years of the pilot, STPP participants have taken about 2.7 million trips on the bus. Most of the bus boardings were on AC Transit (over 2.4 million or about 91 percent) due to the size of the system and number of students enrolled in the AC Transit service area. Over 155,000 boardings (almost 6 percent) were on LAVTA/Wheels, while approximately 90,000 of all pilot boardings (just over 3 percent) were on Union City Transit. Total boardings by transit operator and by school district for the three years of the pilot are summarized in Figure 14. More detailed ridership information for each of the program years is available in the interim Evaluation Reports in Appendix E.[9]

[9] It should be noted that LAVTA/Wheels offers a two-week promotion every August called "Try Transit to School" where students are invited to ride school-serving bus routes without paying a fare in order to build transit ridership across their system. As a result, existing STPP participants would not have to tag their Clipper card to board a bus for about half the month of August, and their trips would not be recorded. Thus, the actual number of LAVTA boardings by participants in Year Two and Year Three is slightly higher than the value available within the Clipper reporting system.

Figure 14 Summary of STPP Bus Ridership During STPP Pilot

School District	Bus Transit Operator	Year One (Aug-2016 to Jul-2017)	Year Two (Aug-2017 to Jul-2018)	Year Three (Aug-2018 to Jul-2019)	TOTAL, all years combined
OUSD	AC Transit	430,765	542,088	822,813	**1,795,666**
SLUSD	AC Transit	73,037	145,450	150,186	**368,673**
HUSD	AC Transit		37,276	43,572	**80,848**
NHUSD	AC Transit	18,034	48,396	61,532	**127,962**
	Union City Transit	18,045	31,140	41,148	**90,333**
	NHUSD Total	*36,079*	*79,536*	*102,680*	*218,215*
FUSD	AC Transit			11,870	**11,870**
NUSD	AC Transit			30,544	**30,544**
LVJUSD	LAVTA	24,254	54,768	76,313	**155,335**
AC Transit Total		***521,836***	***773,210***	***1,120,517***	***2,415,563***
Union City Transit Total		***18,045***	***31,140***	***41,148***	***90,333***
LAVTA Total		***24,254***	***54,768***	***76,313***	***155,335***
Countywide, all operators		**564,135**	**859,118**	**1,237,878**	**2,661,131**

Boardings Per Participant

Year-over-Year Countywide Results

While the total number of boardings has increased each year due to the addition of more schools, the average number of monthly boardings per participant has declined from 18 boardings in Year One to 12 boardings in Year Two, and 10 boardings in Year Three. As the program matured, more students decided to participate, and this likely included some students that were only occasional transit users. STPP participants who infrequently used their Clipper cards lowered the average number of monthly boardings. Figure 15 provides data on participation and average monthly boardings by school district and countywide; district-level results are discussed in more detail in the next section.

Figure 15 Summary of Average Monthly Boardings Per Participant During STPP Pilot

		Number of Participants			Average Monthly Boardings Per Participant					
					School Year (Sep-May)			Overall (Aug-Jul)		
School District	Bus Transit Operator	Year One[10]	Year Two	Year Three	Year One	Year Two	Year Three	Year One	Year Two	Year Three
OUSD	AC Transit	1,823	2,543	4,502	22	19	17	16	18	15
SLUSD	AC Transit	821	1,787	2,456	9	8	6	8	7	5
HUSD	AC Transit		497	776		9	6		8	5
NHUSD	AC Transit	125	841	1,351	15	7	5	14	6	4
	Union City Transit	77	841	1,351	23	4	4	21	4	3
	NHUSD Total[11]	*202*	*841*	*1,351*	*18*	*11*	9	*16*	*10*	*7*
FUSD	AC Transit			174			8			7
NUSD	AC Transit			628			6			5
LVJUSD	LAVTA	82	960	1,252	28	7	6	28	6	5
Countywide (all operators)		**2,928**	**6,628**	**11,139**	**18**	**12**	**10**	**16**	**17**	**9**

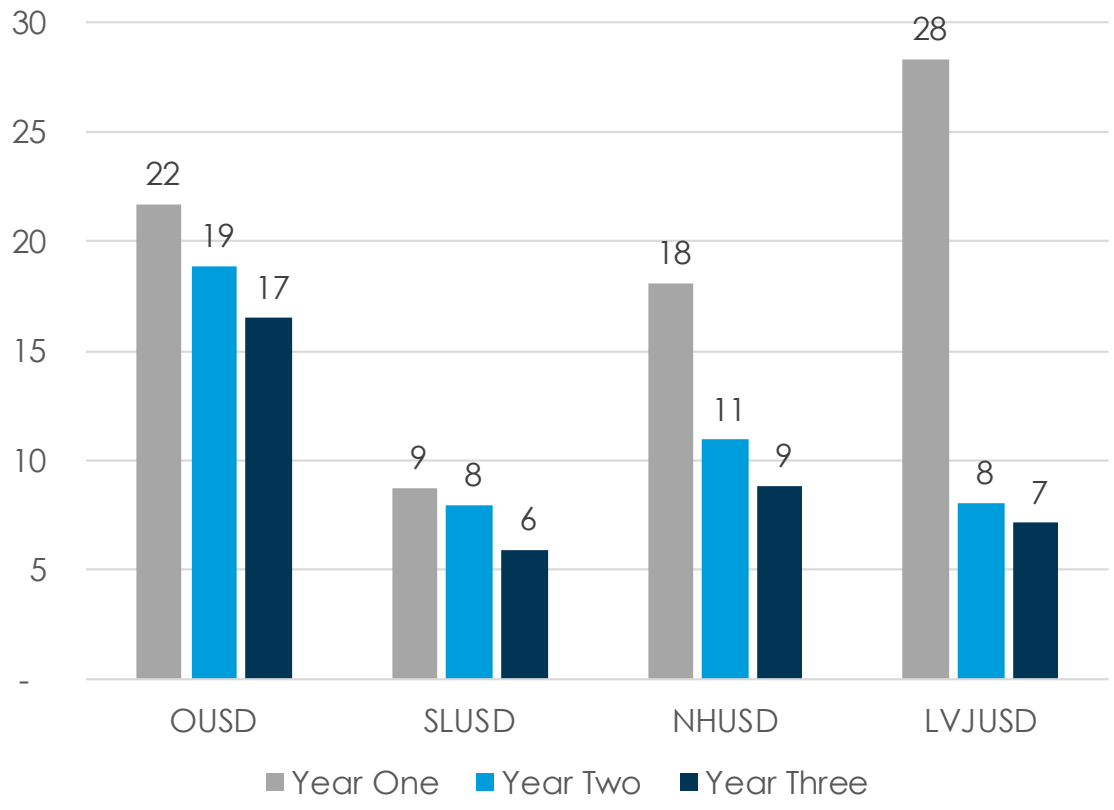
[10] In Districts with free passes (OUSD, SLUSD), the total number of passes is shown. In districts with discounted passes (NHUSD, LVJUSD), the average number of passes over the course of the school year is shown, because the program model was set up in "periods" and students could opt in/out for each period.

[11] During Year One, students in New Haven USD could choose whether to purchase an AC Transit pass, a Union City Transit pass, or both. As a result, boardings per participant is measured separately for each transit operator and the values are not additive. In later years, all participants in New Haven USD received a free Clipper card with both an AC Transit pass and a Union city pass loaded on it. Moreover, the drop in monthly boardings per participant at participating NHUSD schools is largely attributable to the program changes that occurred between Year One and Year Two. The drops in NHUSD and LVJUSD are largely attributable to the program changes between Year One and Year Two. When students had to pay for a pass, only dedicated transit users signed up. Once the passes became free, the number of participants grew, even if they used the pass less often.

Year-over-Year District Results

At the district level, Oakland USD had the most transit usage, with at least 15 monthly boardings per participant. Participant boardings at other school districts generally ranged between 5 and 11 per month, except that results were considerably higher for Year One schools in New Haven USD (18 boardings per month) and Livermore Valley JUSD (28 boardings per month). In Year One, participants in these two school districts had to pay a fee for their transit passes. As such, students tended not to acquire a pass unless they were heavy users of transit. However, once the passes became free in Year Two, average monthly boardings per participant dropped to a level similar to the other participating districts. The overall values by school district are portrayed above in Figure 15. Figure 16 shows a chart of the average monthly boardings per participant in each school district for each year of the pilot, but for only the schools that continued from Year One.

Figure 16 Change in Average Monthly Boardings Per Participant (Continuing Schools Only, Year One - Year Three)

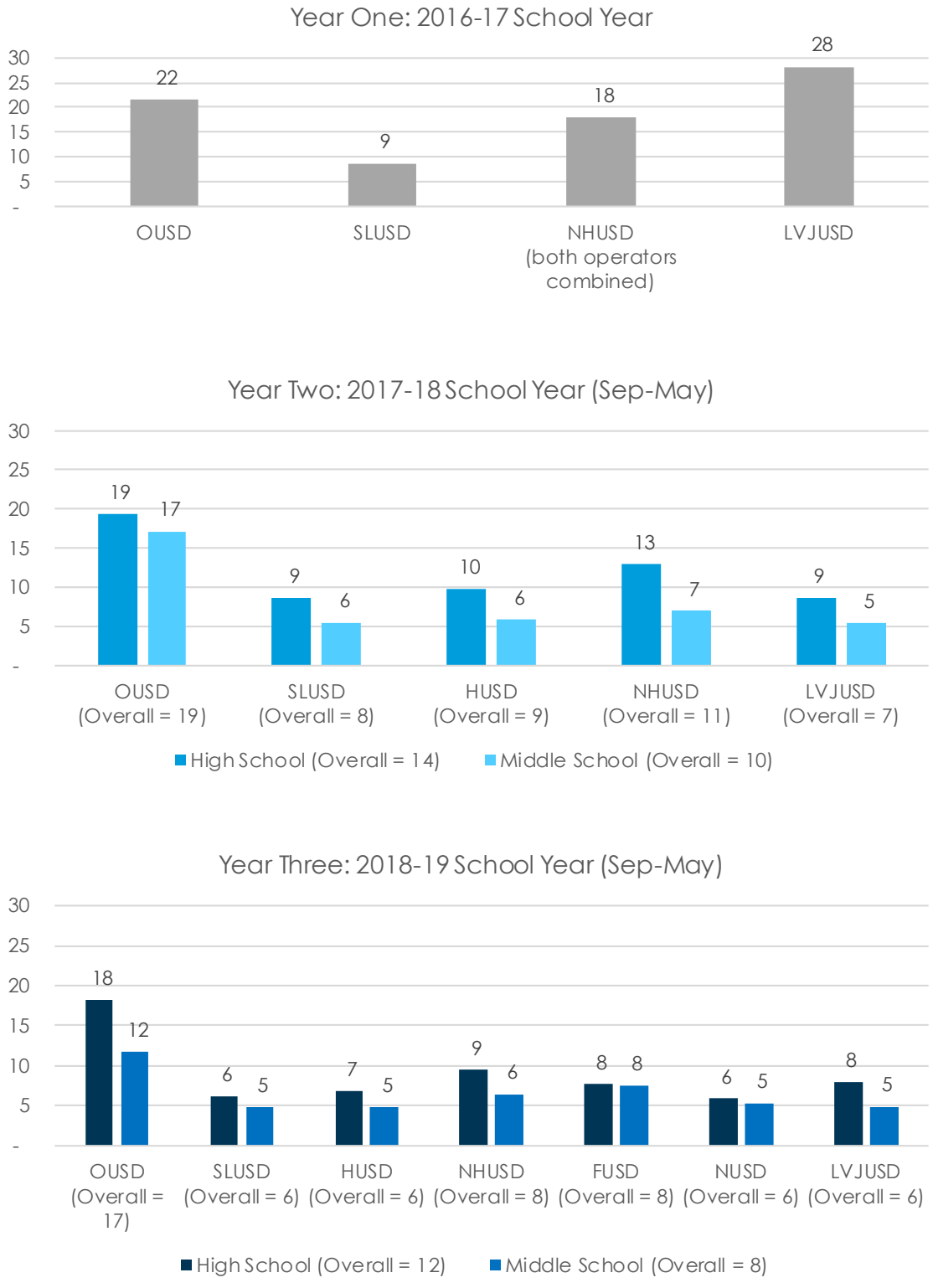


Across all districts, high school students rode the bus more often than middle school students in both Year Two and Year Three. Middle school students self-

reported less transit usage and debriefs with school staff noted that parents of middle school students tended to be more protective and allow for less independence than high school students. Figure 17 shows average monthly boardings per participant for each year of the pilot, including separate values for middle schools and high schools in each district for Year Two and Year Three.

As mentioned above, some of the variation by school district is attributable to external factors such as schools' marketing approaches, the quality of local transit service, land use patterns, student body variation, and underlying demographic characteristics in each part of the county. This can be seen by comparing Year Three's average monthly boardings per participant for schools that have joined at different points in the pilot, as shown in Figure 18 in the next section.

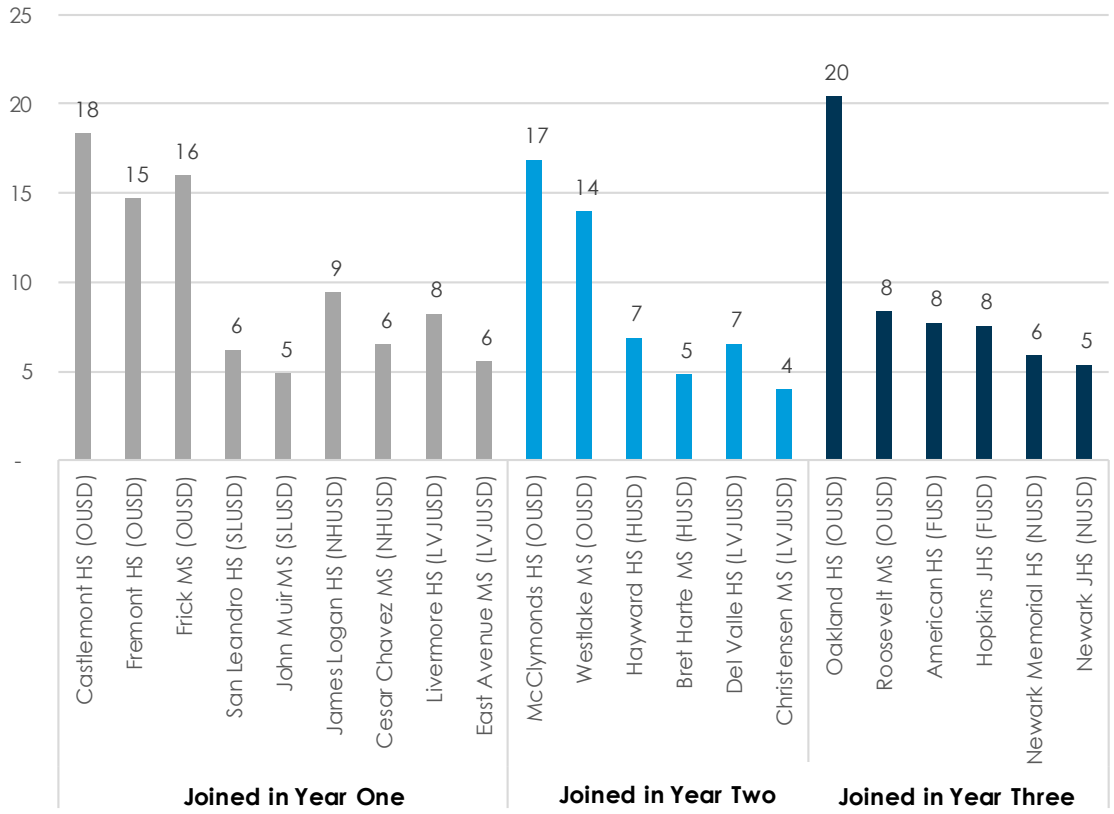
Figure 17 Average Monthly Boardings Per Participant, by School District and Year



School-level Results

Throughout the pilot, schools in the north planning area consistently had the highest average monthly boardings per participant, likely due to a denser transit network in that part of Alameda County and a more urban land use pattern that makes transit a more attractive mode choice. The highest average monthly boarding rate per participant in Year Three was at Oakland High School, which was one of the new schools that year.

Figure 18 Average Monthly Boardings Per Participant, by School, 2018-19 School Year (Sep-May)



Frequency of Bus Transit Use

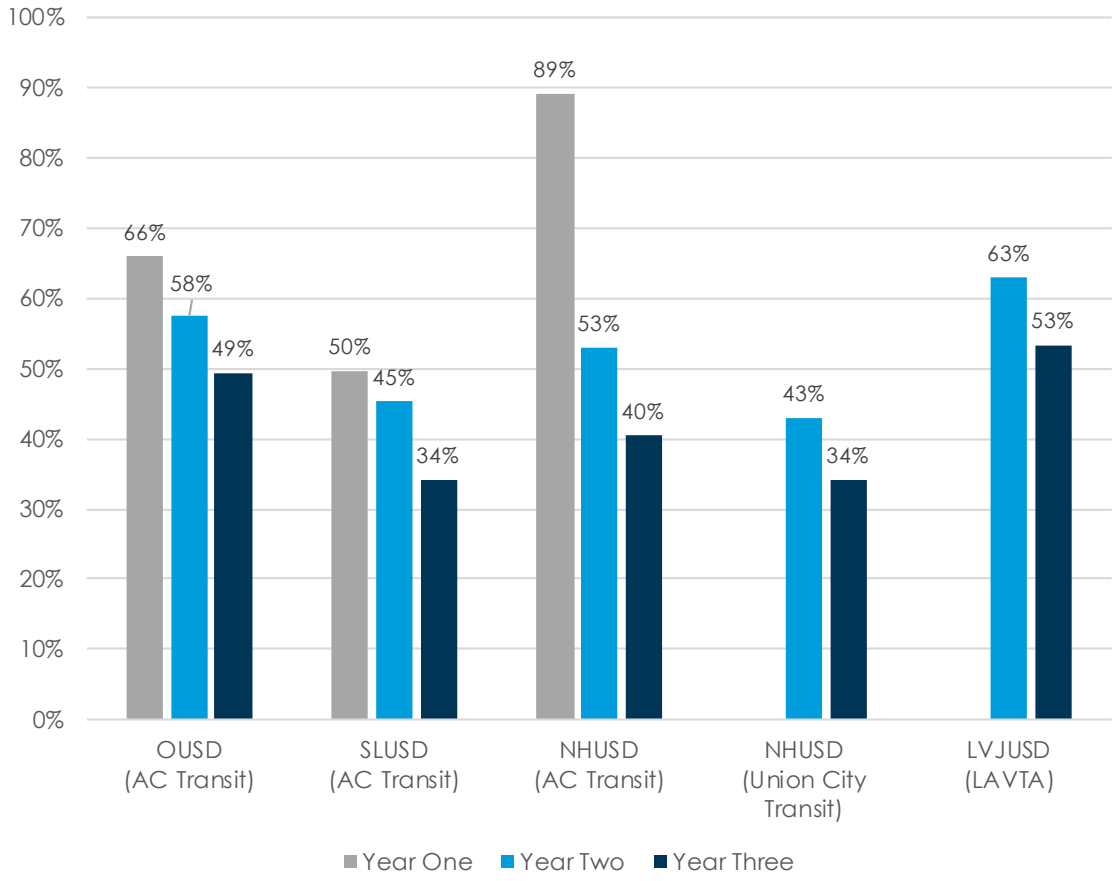
The data on average monthly boardings described in the previous section blends together the travel behavior of all program participants, including those who use their passes infrequently. Trends in bus boardings by regular users were masked due to the increase in the number of students who signed up for the pass but rarely took the bus.

Standard Clipper data provided a way to distinguish between these factors. Each month, Clipper reports showed the number of unique users by school. Across all three program years, the average number of unique monthly users was

typically below the number of participants. In other words, in any given month, between one third and two thirds of all participants do not use their pass at all.[12]

Moreover, the share of participants who use their passes has been falling since Year One. The annual average share of participants who used their pass in each school district is shown in Figure 19.[13]

Figure 19 Share of Participants Who Used Their Pass Each Month, Clipper-based Passes at Continuing Schools Only, Sep-May Average



[12] The average share of passes used per month is calculated separately by school district and transit operator for each month of the year, and then the monthly results for Sep-May are averaged together to determine the annual average value. Data is only available for transit passes on Clipper cards, so Year One figures are not available for Union City Transit or LAVTA.

[13] In the first year of the pilot, NHUSD students had to purchase a flash pass to participate in the program. (Students in 8th – 10th grade could purchase an AC Transit youth pass for $60 per semester or a Union City Transit youth pass for $52 each quarter). The pass was purchased by students who relied on transit, rather than students who would use occasionally take transit. Therefore, the rate of participation was particularly high in Year One (89%) when there were fewer STPP participants, all of whom relied more heavily on taking transit regularly to and from school and their other activities.

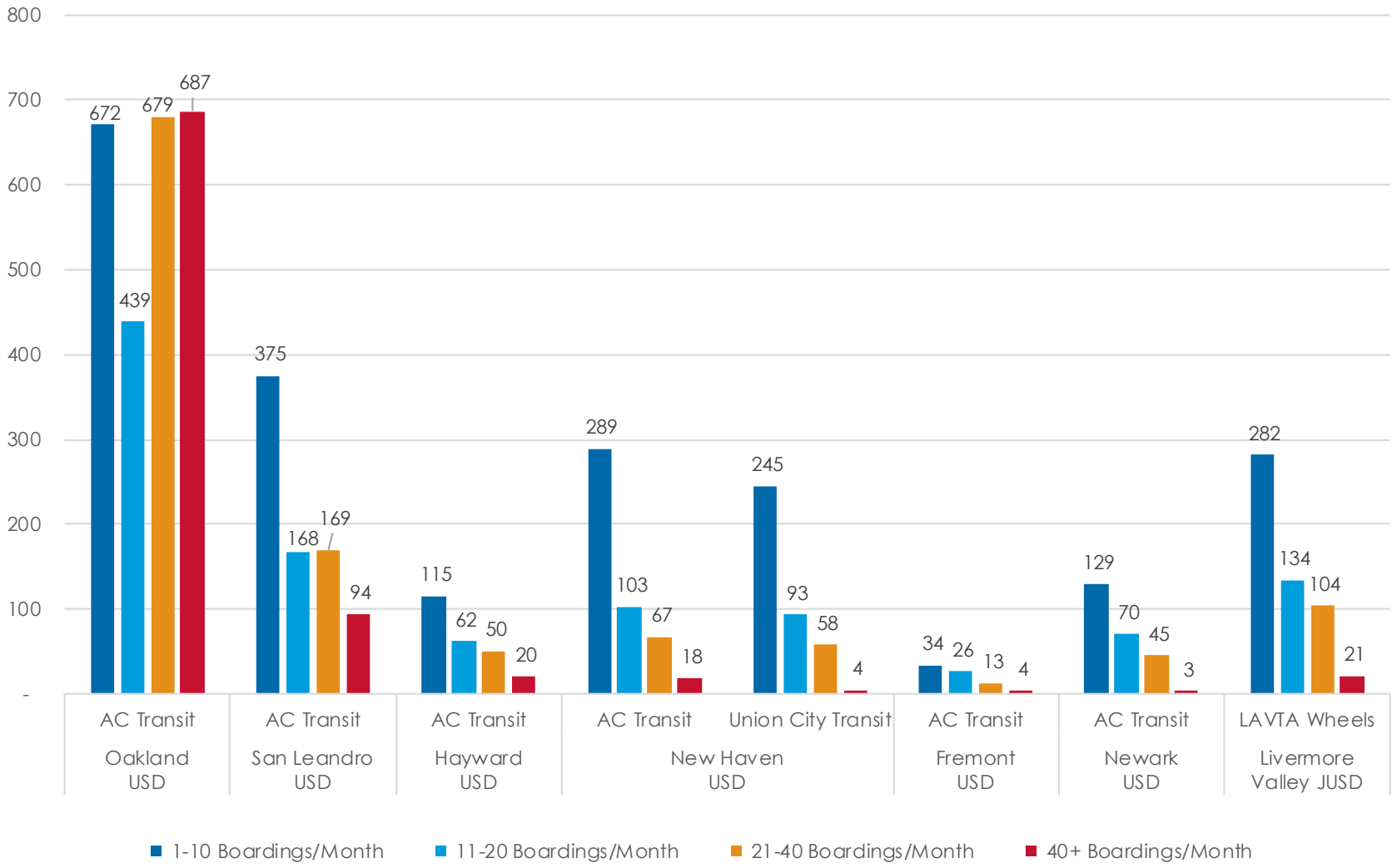
The downward trend observable in Figure 19 supports the premise that the decline in boardings per month is primarily due to an increase in the number of participants who do not ride the bus, rather than a decline in the amount of transit usage by those participants who do ride the bus. Otherwise stated, those that are dependent on the pass, are using it often.

Among the set of participants that do use their passes, there can be wide variation between frequent users and those who rarely use the transit systems. To help illustrate this, monthly Clipper reports group the unique users into one of four categories: users who made 1-10 boardings in the month, 11-20 boardings per month, 21-40 boardings per month, or more than 40 boardings per month.

For example, as seen in Figure 20, Oakland USD has a very high proportion of frequent transit riders -- over half the participants who used their passes rode the bus 20 or more times each month, and more than a quarter of all participants rode at least 40 times each month in Year Three. By comparison, that the majority of participants in other school districts used their passes for 1-10 boardings per month.

These differences are influenced by the availability of transit service in each community; the existence of higher quality bus routes can make transit a convenient option for more types of travel than just trips to and from school. It may also be related to transferring behavior, which is more common in a dense network of transit routes as is seen in the northern part of Alameda County. These differences in the distribution of users should be kept in mind when comparing data on overall monthly averages.

Figure 20 Average Number of Unique Users, Grouped by Boardings Per Month (2018-19, Sep-May Average)



Systemwide Ridership Changes

In each of the three years of the pilot, the program team coordinated with the three bus transit operators to monitor trends in youth ridership, operational changes, and capacity issues that could have some relationship to and impact on the transit pass program.

As the pilot continued to expand, more and more students in Alameda County traveled on the bus using an STPP-provided pass. Some pilot participants were new to transit, so their boardings represented incremental ridership gains for the transit operators. Other participants may have been riding transit prior to joining the program, and they were simply changing from one fare payment type to another.

Over the three years of the pilot, STPP boardings represented a relatively small portion of each transit operator's overall ridership, so it was difficult to discern patterns that were specifically attributable to the pilot at the system-wide level. To try to isolate the effects of the pilot, trends in youth ridership as well as overall boardings on the specific bus routes that serve STPP schools were analyzed to explore potential changes that might be associated with the pilot. The data required to make these comparisons is not uniformly available from all three bus transit operators, so the analytical approach varied for each operator, as described below. The analysis conducted to date suggests that the STPP pilot may have helped to support recent ridership growth in some instances and stemmed recent declines in ridership in others.

AC Transit

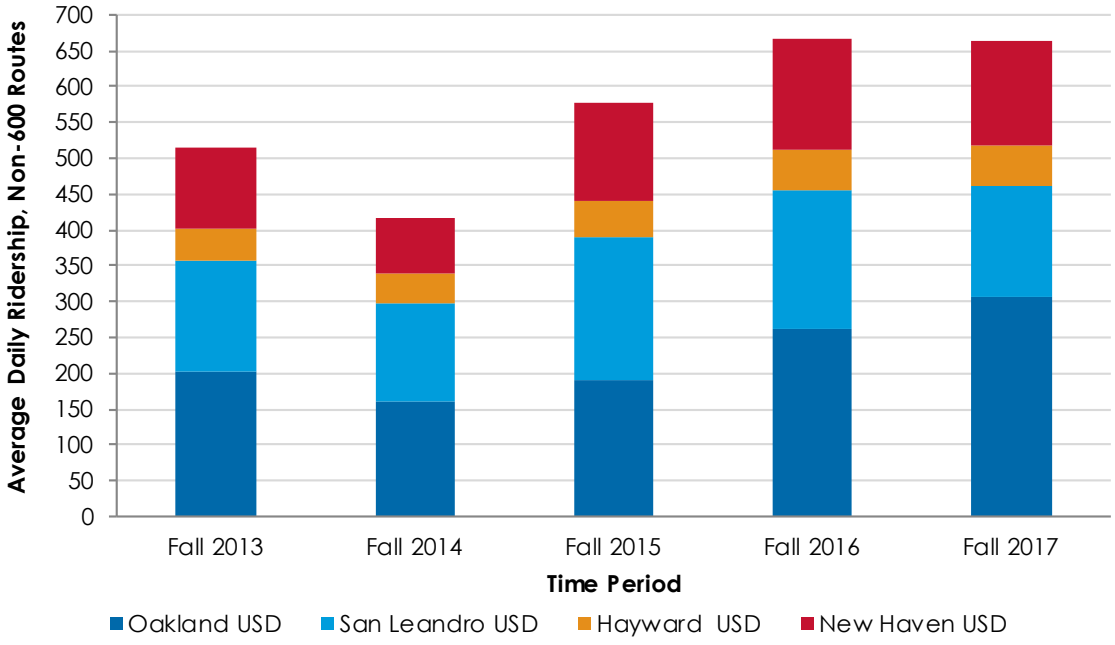
STPP participants made 521,836 boardings on AC Transit routes in Year One and 773,210 boardings on AC Transit routes in Year Two, a year-over-year increase of 48 percent. In Year Three, STPP participants made 1,120,417 AC Transit boardings, a year-over-year increase of 45 percent.

The youth ridership data that is available from AC Transit at this time does not provide a complete picture of systemwide travel activity, so conclusions cannot be drawn about the impact of STPP-related boardings on overall trends. However, several operational analyses conducted by AC Transit staff during Year Two shed light on how the travel activity of STPP participants affects specific bus routes in the AC Transit network that served Year Two participating schools: a route-based analysis of total ridership and a capacity analysis on routes. These analyses are discussed in the Year Two Evaluation report and summarized here.

Route-Based Ridership Analysis

AC Transit conducted a trend analysis of ridership on school-serving routes over the five years from 2013-14 through 2017-18. The analysis focused on boardings and alightings at bus stops located near Year Two STPP pilot schools in the AC Transit service area and the specific bus departures that occurred around school bell times. The ridership data was summed by school district, as shown in Figure 21.

Figure 21 AC Transit Analysis of School-Related Ridership at Year Two Schools, by School District



Changes in ridership at bus stops near participating schools do not appear to be solely correlated to the launch or expansion of the STPP, but the STPP may have boosted ridership to help maintain overall growth trends. Total ridership on the routes and stops that serve the pilot schools was rising before the STPP began, ridership rose again in fall 2016 when the STPP launched, and this increase was sustained through fall 2017. These overall results do blend varying trends at different schools and districts; routes serving some Year Two schools had strong ridership growth associated with the start of the STPP, other routes had a steady growth pattern since before the STPP began, and a few routes had mixed results from year to year.

As a control, these trends were compared to ridership on the 600-series – the supplementary services that serve several schools in districts that were not a part of the STPP during Year Two (Newark USD and Fremont USD) as well as supplementary service to non-participating Oakland USD schools. While ridership

along the 600-series routes followed the same trend as the STPP routes from Fall 2013 through Fall 2015, ridership fell in 2016 in contrast to the trend for the routes serving participating schools and these declines continued in Fall 2017. Although the degree of causation is not entirely clear, it appears the STPP may have contributed to sustaining the increased levels of school-related AC Transit boardings near participating Year Two schools.

Capacity Analysis

AC Transit staff also conducted a capacity analysis of routes serving the participating schools during Year Two. Of the eighteen routes analyzed, six have been either very near or over capacity since before the STPP began, including routes serving four of the five Oakland USD schools plus San Leandro High School and James Logan High School (Union City). To the extent that the available buses are already crowded or full, it could prevent students who want to ride from being able to board; this may be a somewhat circular reason for the lack of more obvious ridership changes on the school-serving routes in the ridership analysis above.

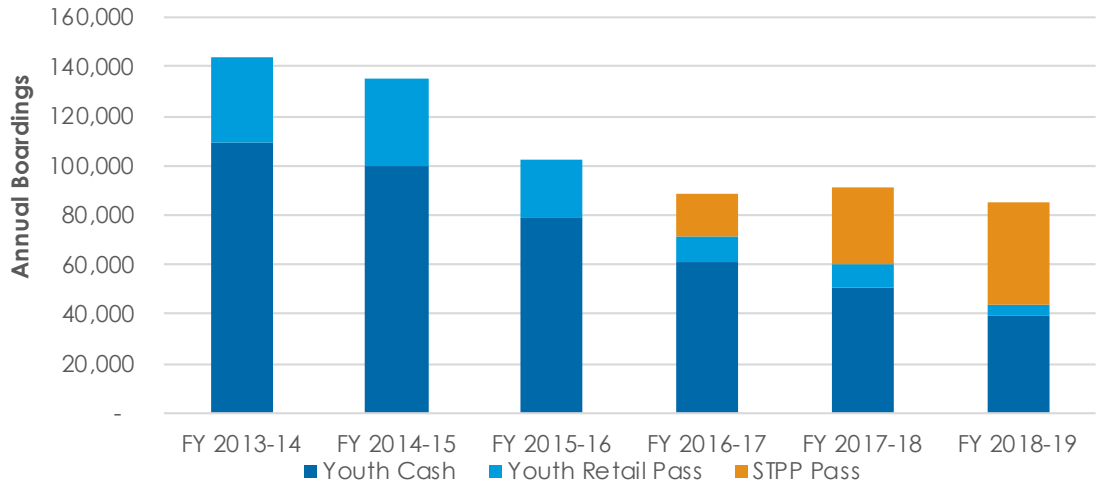
As of this writing, no new capacity issues have been documented due to the STPP and no complaints have been recorded as a result of this program. Alameda CTC will continue to work with transit operators to identify STPP impacts on systemwide ridership trends.

Union City Transit

Over the three years of the pilot, bus ridership on Union City Transit by STPP participants increased from 18,045 boardings during Year One to 31,140 boardings during Year Two and 41,148 boardings during Year Three. Systemwide data on youth ridership trends is currently only available on a fiscal year basis rather than the August through July academic year used for analysis elsewhere in this report. When adjusted to the July 1 – June 30 timeframe, STPP participants took a total of 17,634 trips in 2016-17, a total of 30,194 trips in 2017-18 and a total of 41,611 trips in 2018-19.

Annualized data provided by staff at Union City Transit show that, except for a brief plateau in 2017-18, overall systemwide ridership has declined since 2013-14. Youth ridership across all fare products (cash fares, retail passes, and STPP passes) has followed a similar pattern with a steady decline between 2013-14 and 2016-17, a very modest gain in 2017-18 and another decline in 2018-19. The year-over-year increases in STPP boardings potentially stem the youth ridership decline experienced elsewhere in the system. Youth boardings by fare product are portrayed in Figure 22.

Figure 22 Youth Ridership on Union City Transit by Fare Product



LAVTA/Wheels

Over the three years of the pilot, bus ridership on LAVTA wheels routes by STPP participants increased significantly. Ridership grew 126 percent between Year One and Year Two (from 24,254 to 54,768) and another 39 percent from Year Two to Year Three (to 76,313 boardings). Much of the initial ridership growth in the LAVTA service area can be attributed to the change in program model in Livermore Valley JUSD after Year One and the corresponding surge in program participation that followed in Year Two; ridership growth from Year Two to Year Three is more indicative of the program's maturation toward a steady state.[14]

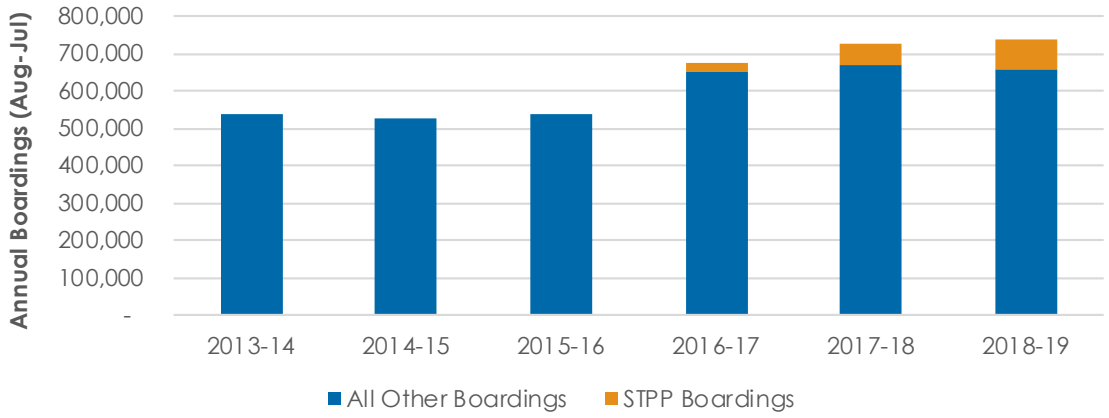
LAVTA systemwide boardings had been declining in each of the past five years until an increase in 2017-18 that continued into 2018-19. Measured on an academic calendar basis (August through July), there were about twenty thousand more boardings in 2018-19 compared to 2017-18, an increase of about one percent. At the same time, the STPP produced a net increase of 21,545 boardings, so the STPP may be helping to mitigate ridership declines elsewhere in the LAVTA system.[15]

LAVTA does not have a separate youth pass product that would allow for comparison of ridership changes at a fare-product level. However, analyzing trends in the bus routes that specifically serve schools can provide some insights as to overall trends. The bus routes that served Year Three schools in Livermore Valley JUSD include routes 14, 15 and 30R. As shown in Figure 23, these three routes averaged about 534,000 boardings per year for the three-year period immediately preceding the STPP. The notable increase in 2016-17 is likely attributable to a systemwide route restructuring, though it coincides with the launch of the STPP. Thereafter, the system achieved modest increases in boardings on school-serving routes in both 2017-18 and 2018-19, but with STPP boardings representing an increasing share of the total on these routes.

[14] Data on STPP boardings was not available in August 2017 due to the change in fare medium from paper passes to Clipper, so the net change from year to year includes the effect of comparing 11 months of Year Two to 12 full months in Year Three.

[15] The annual statistics quoted in this section are expressed based on August to July ridership totals, in order to align with the reporting year used for the STPP. As such, the values will vary from LAVTA publications based on fiscal year reporting.

Figure 23 Ridership on LAVTA Routes Serving LVJUSD Schools



Analysis of Variations in Participation and Usage

During Year Two and Year Three, the program team investigated whether variations in program participation and transit usage could be attributed to underlying differences between schools, school districts and their communities. The team evaluated three potential factors: availability of transit service, level of financial need, and other qualitative attributes.

Availability of Transit Service

To examine how the amount of transit service available might affect students' propensity to sign up for the STPP and to use transit with program benefits, the program team quantified how often the bus serves each school that participated in Year Three.

More specifically, the team calculated how many separate bus arrivals ("stop events") happened within a quarter-mile radius of each school from 7-8 AM on an average weekday. If a bus on particular route stopped twice within the quarter-mile radius in the selected time window, it would be counted as two stop events. For schools in New Haven USD, the stop events of AC Transit and Union City Transit were summed together. The stop event data was then plotted against the participation rates and transit usage rates at each participating school. Linear regressions help illustrate the relationship between stop events and participation and ridership. Separate regressions for the sets of schools served by AC Transit and by LAVTA help illustrate any differences that might exist in these different operating environments. The results are presented in Figure 24 and Figure 25.

When STPP participation rates and average transit usage are compared to the number of stop events at each school, there is a reasonable correlation

suggesting that the amount of transit service available does influence both program participation and subsequent transit usage, but the strength of the correlations varies between the two transit providers' service areas. As shown in Figure 24, the number of stop events is a much stronger predictor of participation rates in AC Transit-served schools as compared to those schools served by LAVTA. In contrast, Figure 25 shows that the number of stop events predicts actual transit usage by participants much more strongly at LAVTA-served schools compared to the schools served by AC Transit.

The differences in the strength of the regressions may be due to localized variation that is not captured by this simple analysis. For example, a stronger correlation might be found if precise school bell times were considered in the selection of the morning arrival time window at each school. Similarly, the quarter-mile radius that was used to select the relevant bus stops may be masking some locally-specific details of how students travel between the bus stop and the school; where the street grid is less prominent, this can mean much farther walking distances to access transit. In addition, both transit-related and non-transit factors may play a role that cannot be captured from stop events alone; these factors could include the density of the transit network in residential neighborhoods where students live, land uses and walkability near each school, and household auto availability.

Figure 24 Comparison of Transit Availability and Participation Rates (2018-19 School Year)

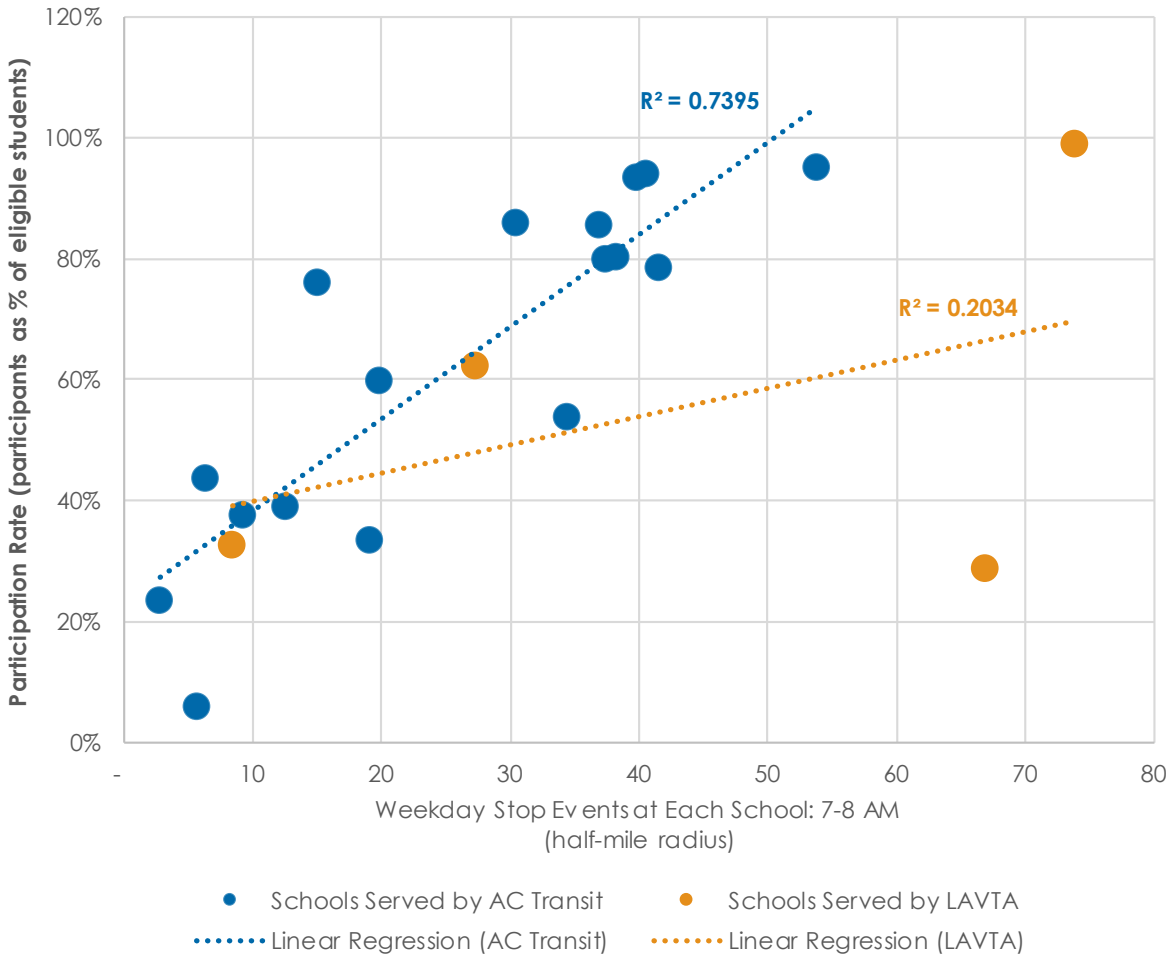
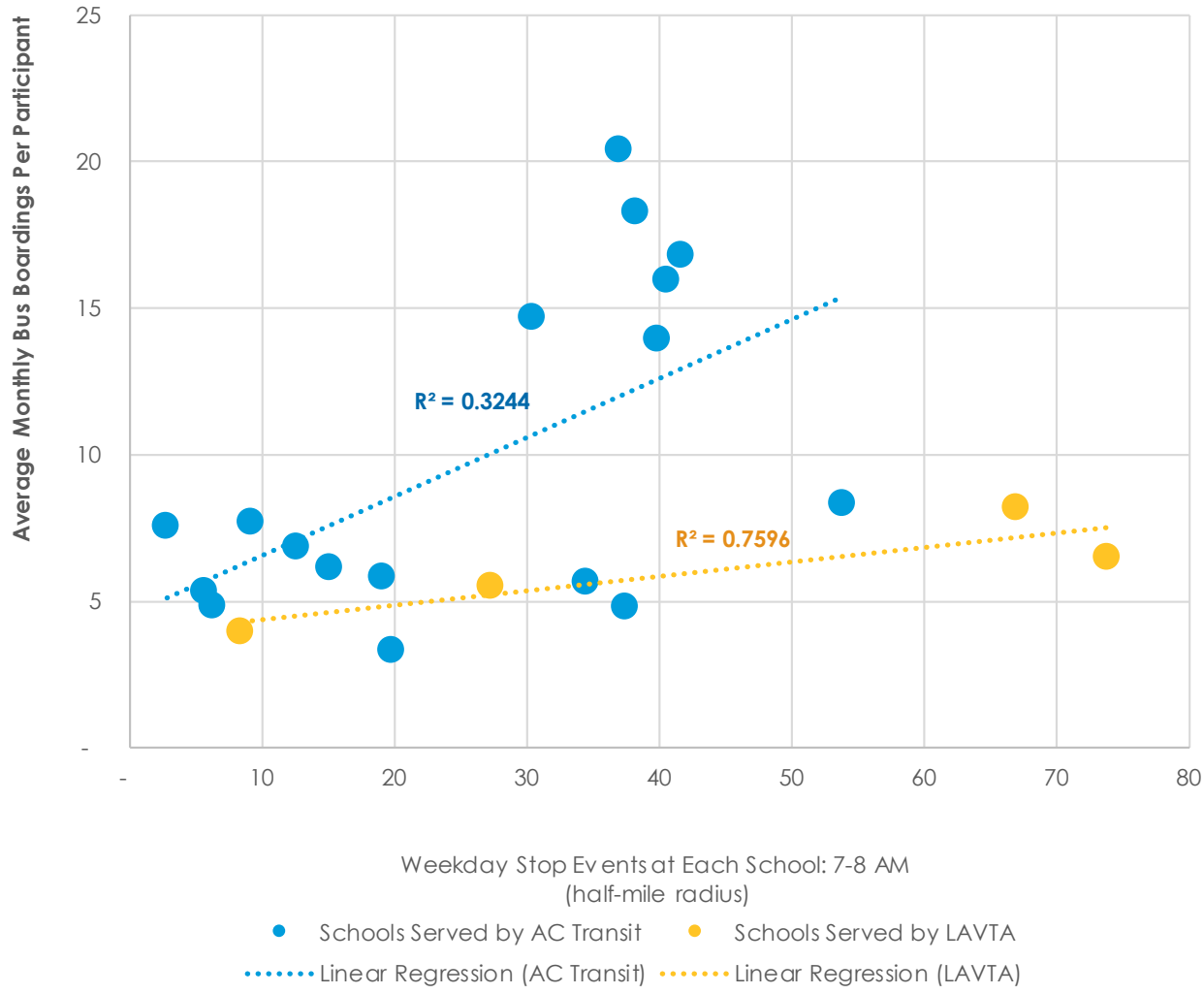


Figure 25 Comparison of Transit Availability and Transit Usage (2018-19 School Year, Sep-May Average)



Level of Financial Need

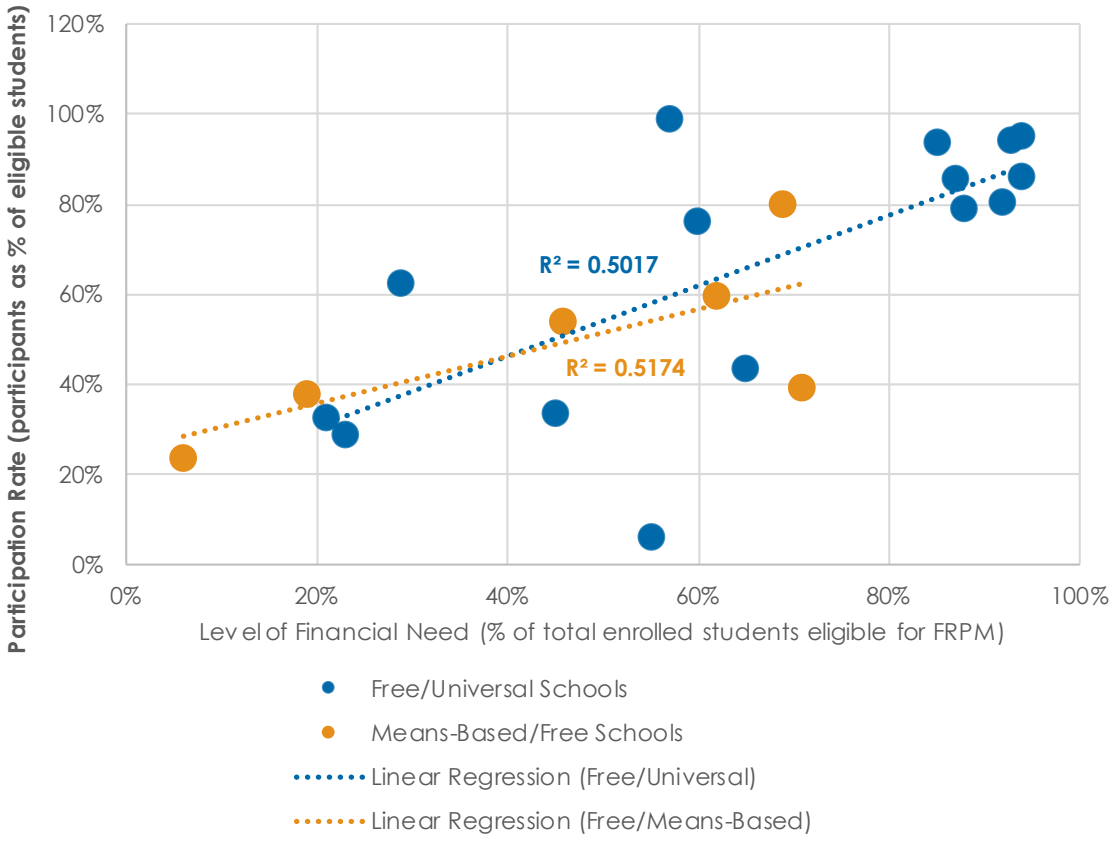
In both Year Two and Year Three, a likely correlation was found between the level of financial need at each school (as measured by the percentage of enrolled students who qualify for Free and Reduced-Price Meals (FRPM)) and the associated participation rates and average monthly bus boardings per participant. The two figures below show graphs of Year Three participation rates

(Figure 26) and bus transit usage rates (Figure 27) plotted against this financial need metric, together with a linear regression for each data set.[16]

In the Year Two Evaluation Report, it was acknowledged that the differences in the independent variables (participation and transit usage) could also be driven by differences in the quality of transit service in different parts of the county as much as, if not more than, the level of financial need alone. For example, the denser and more frequent transit network in the northern part of the county makes a transit pass easier to use for more trips.

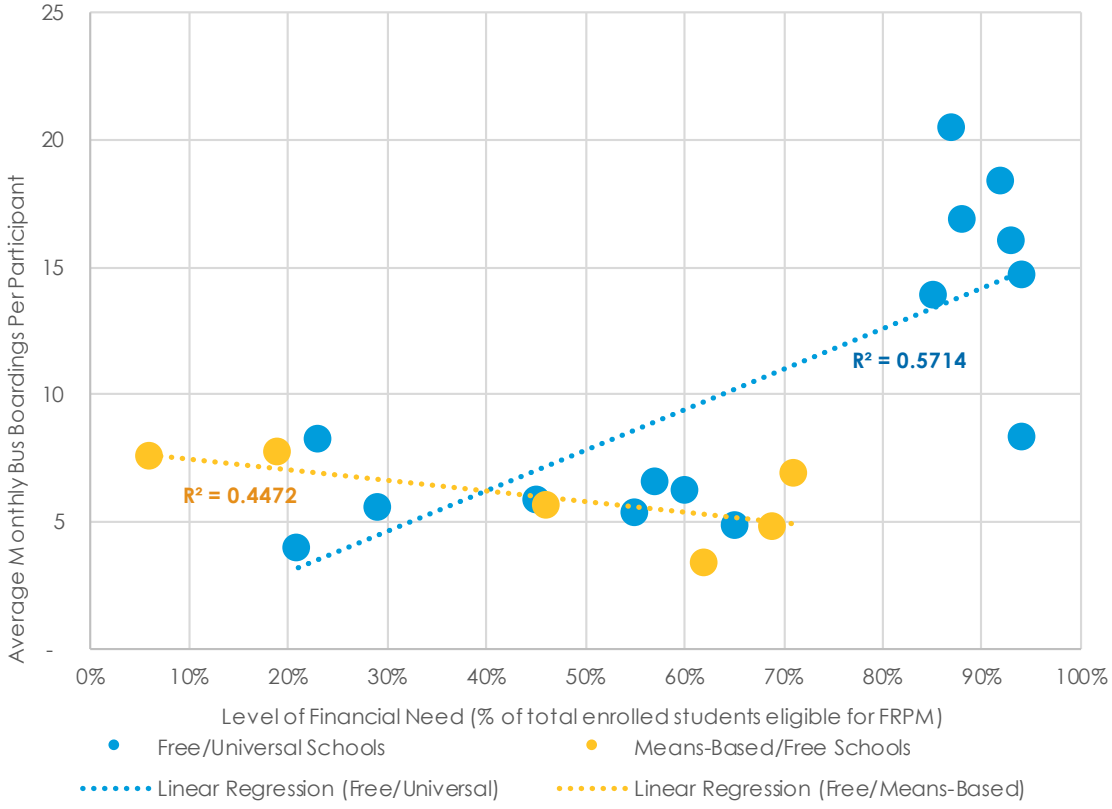
However, because portions of the county with a higher quality transit network also happen to have high levels of financial need, it is difficult to untangle these two factors.

Figure 26 Comparison of Financial Need and Participation Rate (2018-19 School Year)



[16] The data has been segmented by program model (Free/Universal and Free/Means-Based) prior to conducting the regressions, because the values on the two axes do not use the same denominator for both groups. Specifically, the FRPM statistic (X-axis) is always calculated as a share of total enrollment at the school. In the Free/Means-Based programs, students who do not qualify for FRPM are not eligible for the STPP, so they are not included in the denominator when calculating participation rate.

Figure 27 Comparison of Financial Need and Transit Usage (2018-19 School Year, Sep-May Average)



Qualitative Attributes

Several other factors influence program participation and transit use besides those that have been quantified above, including: the street design and land use context where students live and attend school, as well as students' and families' perceptions of transit. These topics are both discussed in more detail in the Year Two Evaluation report in Appendix E. In addition, Chapter 3 includes a summary of survey data about student perceptions of transit.

Arrival and Departure Mode

In each of the three years of the pilot, the annual survey asked students about their typical travel mode to and from school to understand trends in transit usage over time. Several findings consistently held true across all three years[17]:

- Participants used transit for travel to and from school more than non-participants. In Year Three:
  - 25 percent of participants used transit to travel to school compared to only 4 percent of non-participants.
  - 39 percent of participants used transit to leave school compared to only 7 percent of non-participants.
- For both participants and non-participants, students used transit more for afternoon departures than for morning arrivals. The lower share using transit for morning arrivals was primarily offset by a higher share for drop-offs by car.
- High school participants used transit more than middle school participants. In Year Three:
  - Arrival transit share was 35 percent for high school participants compared to 14 percent for middle participants
  - Departure transit share was 50 percent for high school participants and 26 percent for middle school participants.
- These countywide patterns typically held across all school districts in the county, i.e., transit was used more by participants (vs. non-participants), by high school students (vs. middle school students), and for afternoon departures (vs. morning arrivals).

There are also several new findings that emerged from the most recent survey:

- During Year Three, all seven school districts had morning arrivals that were dominated by car. Previously, Oakland USD participants had used transit for morning arrivals more than auto-related modes.
- In Year Three, transit mode shares for afternoon departures in some school districts exceeded 60 percent, which had not occurred in any school district since the elimination of the discount program models in Year One. Surprisingly, this happened in the two newest school districts to join the

[17] While survey findings provided useful insights on the consistency of students' transit use over time,, the survey samples are dominated by responses from the larger participating schools, such as San Leandro High School (San Leandro USD) and James Logan High School (New Haven USD). As a result, the data are not statistically representative of the full participant population in Alameda County.

program: Fremont USD (78 percent transit share) and Newark USD (67 percent transit share).

"I don't really have to wait and wonder who is driving me home. There are other people there that also get on the bus and ride with me so it's fun."

—Participant from John Muir Middle School (San Leandro USD)

"Overall, I like the system and I think [it's] very beneficial to a lot of students to take bus every day."

—Participant from James Logan High School (New Haven USD)

Trends Over Time

With three years of survey data, it is possible to examine potential trends in transit use for the program. The share of respondents in each program year who reported they use transit for morning arrivals and afternoon departures are portrayed in Figure 28 and Figure 29, respectively. The charts are segmented into participant and non-participant sub-groups for both high school and middle school students.

The charts in Figure 28 and Figure 29 show that non-participants at the high school level also decreased their transit use between Year One and Year Two, suggesting that other factors may also be at play in student use of transit in this time period.

Between Year Two and Year Three—where the program models in each school district were held constant—minor changes in transit mode share can be observed, but there are no clear explanatory factors; for both arrivals and departures, high school transit share increased for both participants and non-participants, but middle school transit mode share decreased for participants at the same time as it increased for non-participants. These fluctuations are likely within natural variation from year to year rather than indicators of underlying long-term change.

Figure 28 Share of Respondents Who Report They Arrive at School by Public Transit, by Program Year

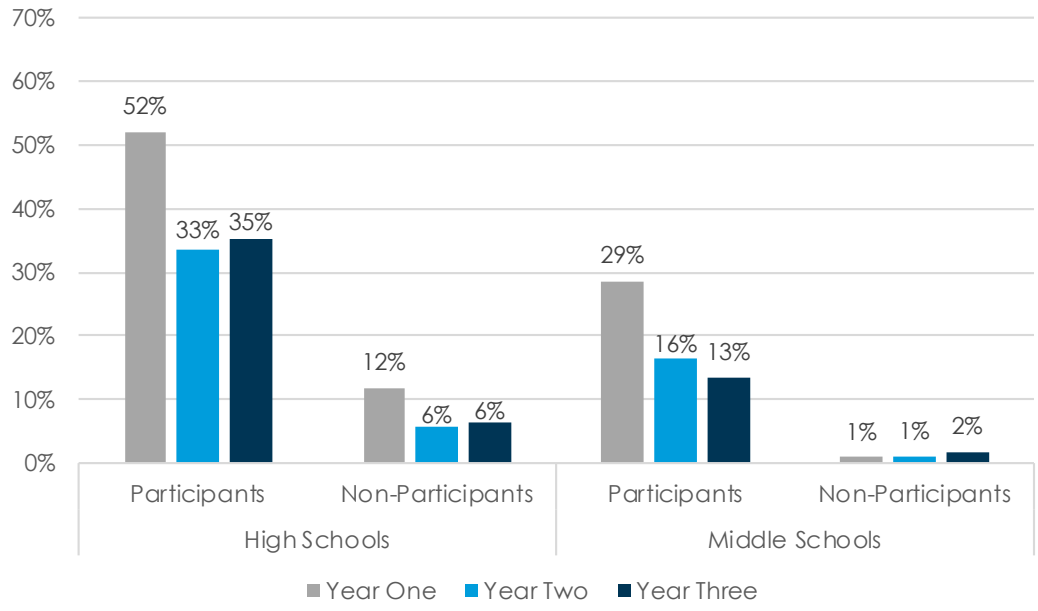
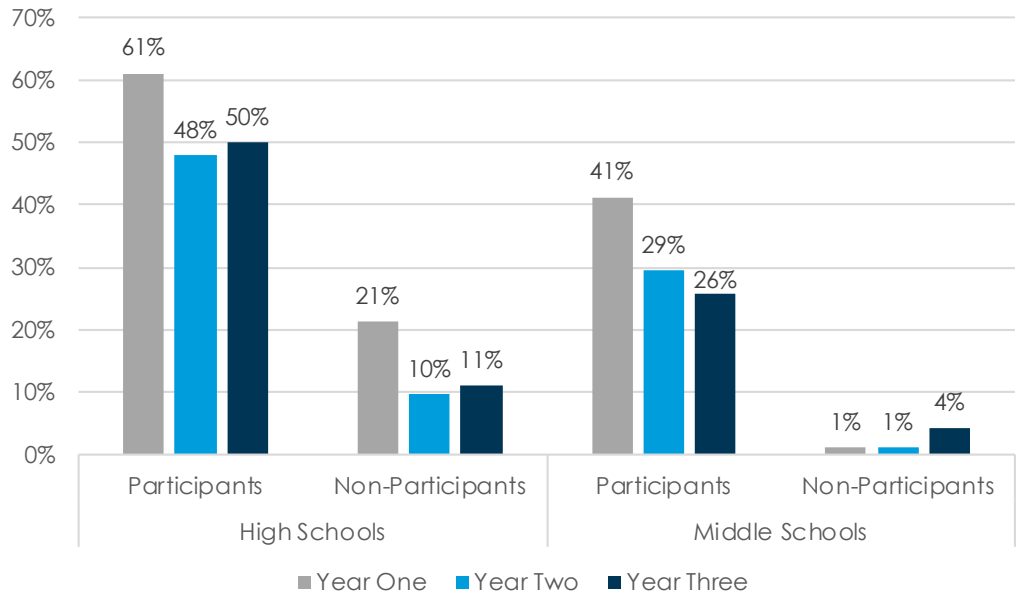


Figure 29 Share of Respondents Who Report They Depart from School by Public Transit, by Program Year



Experience with Multiple Transit Operators

One of the aspects tested during the pilot phase of the STPP is the degree to which students use multiple transit operators. This topic is particularly salient in New Haven USD, which is the only area where there are two bus operators – AC Transit and Union City Transit. As mentioned, during Year One, students had to choose to buy one or the other system's pass (students could buy both, but few did). In Year Two, students at the two New Haven USD schools had access to one Clipper card that provided unlimited access to both AC Transit pass and Union City Transit, so students had the freedom to use whichever operator suited their needs.

Takeaway: Almost 70 percent of students in New Haven used both available transit operators

Analysis of Clipper boarding data between September 2017 and March 2018 for participating students at James Logan High School and Cesar Chavez Middle School yielded the following trends:

- 69 percent of all New Haven USD Clipper cards were used on both transit agencies; a higher share of high school cards were used on both agencies as compared to middle school cards:
  - Of the 167 cards used by Cesar Chavez Middle School participants, 66 percent were used on both transit agencies.
  - Of the 466 cards used by James Logan High School participants, 77 percent were used on both transit agencies.
- 60 percent of all boardings were on AC Transit and 40 percent were on Union City Transit; the 60-40 split is essentially consistent at both the middle school and high school level:
  - Cesar Chavez Middle School participants had 62 percent of boardings on AC Transit and 38 percent of boardings on Union City Transit.
  - James Logan High School participants had 59 percent of boardings on AC Transit and 41 percent of boardings on Union City Transit.
- Those students who used their card on both agencies tended to ride transit more often than those who used only one agency.

This data suggests that, when given the opportunity, students will use both bus operators. Comments from the focus group at James Logan High School reinforce these statistics.

"I use UC Transit to get home and AC Transit to go to the mall."

—Focus group participant from New Haven USD

On a related note, students in both of the Year Two focus groups (at James Logan High School and San Leandro High School) and in the spring 2018 survey all expressed an interest in having other transit operators and transportation services added to their Clipper cards:

> ***"It would improve the program if we could have the pass include Muni or rides to SF."***
>
> *—Focus group participant from New Haven USD*

> ***"Let the clipper card be used for FORD bikes"***
>
> *—Survey respondent from Oakland USD*

BART Participation and Usage

BART tickets were offered in Year Two and Year Three at high schools within the BART service area. Due to limitations of the Clipper system, BART passes cannot be loaded onto STPP Clipper cards, so BART agreed to allow Alameda CTC to use youth Orange Tickets. Each participating high school student was able to receive one BART Orange Ticket loaded with $50 of fare value.

BART Orange Tickets cannot be deactivated remotely; they are non-replaceable if lost or stolen. Unlike bus agencies which offer unlimited ride pass products, BART has no pass products. As such, for the STPP BART tickets were not intended to provide unlimited travel. They enabled students to use BART for essential trips and provided baseline information to understand demand for BART and inform the extent to which BART should be included in a Student Transit Pass Program after the pilot. [18]

BART Ticket Participation

Six high schools were eligible to receive BART tickets in Year Two, and 3,240 students requested a ticket; this represents 39 percent of all eligible students at these schools. In Year Three, BART tickets were available at a total of eight high schools, and 2,878 BART tickets were requested by Year Three participants; this represents about 25 percent of the eligible students at these schools. Figure 30 portrays the number of eligible students, STPP participants and BART tickets distributed in Year Two and Year Three. [19]

[18] The $50 monetary value aimed to balance the value on one BART ticket that is subject to loss by a student with the budgetary implications and administrative burden on school staff required for ticket distribution.

[19] Coordination with Year Two site administrators during Year Three revealed that some additional BART tickets had been distributed during Year Two that were not recorded correctly at the time of the preparation of the Year Two Evaluation Report. All Year Two values presented in this document reflect the updated information available as of the end of the pilot.

Figure 30 Number of Bus and BART Participants in Year Two and Year Three

School District	Participating High Schools in BART Service Area	Year Two (2017-18)			Year Three (2018-19)		
		Students Eligible	STPP Participants	BART Tickets Distributed	Students Eligible	STPP Participants	BART Tickets Distributed
OUSD	Castlemont High	891	871	800	1,012	814	200
	Fremont High	803	745	250	835	718	350
	McClymonds High	400	331	290	430	339	210
	Oakland High				1,705	1,464	564
	Oakland USD Total	***2,094***	***1,947***	***1,340***	***3,982***	***3,335***	***1,324***
SLUSD	San Leandro High	2,612	1,450	1,200	2,652	2,017	923
HUSD	Hayward High	1,175	364	200	1,162	454	200
NHUSD	James Logan High	1,891	587	500	1,672	902	100
FUSD	American High				418	158	131
NUSD	Newark Memorial High				1,703	574	200
	Countywide	**7,772**	**4,348**	**3,240**	**11,589**	**7,440**	**2,878**

In both years, the rate of BART tickets being requested was consistently lower than the share of eligible students who requested a bus transit pass at each of the BART-area high schools. The gap between the bus and BART participation rates widened considerably between Year Two and Year Three.

The distance between a school and the nearest BART station does not seem to be a driver of the differences in BART participation rates. There are multiple cases where schools that are close to BART have some of the lowest BART participation rates and high BART participation rates are seen at schools further away; also, schools that are the same distance from BART have widely varying participation rates. These results are portrayed in Figure 31.

Figure 31 Comparison of Bus and BART Participation Rates in Year Two and Year Three

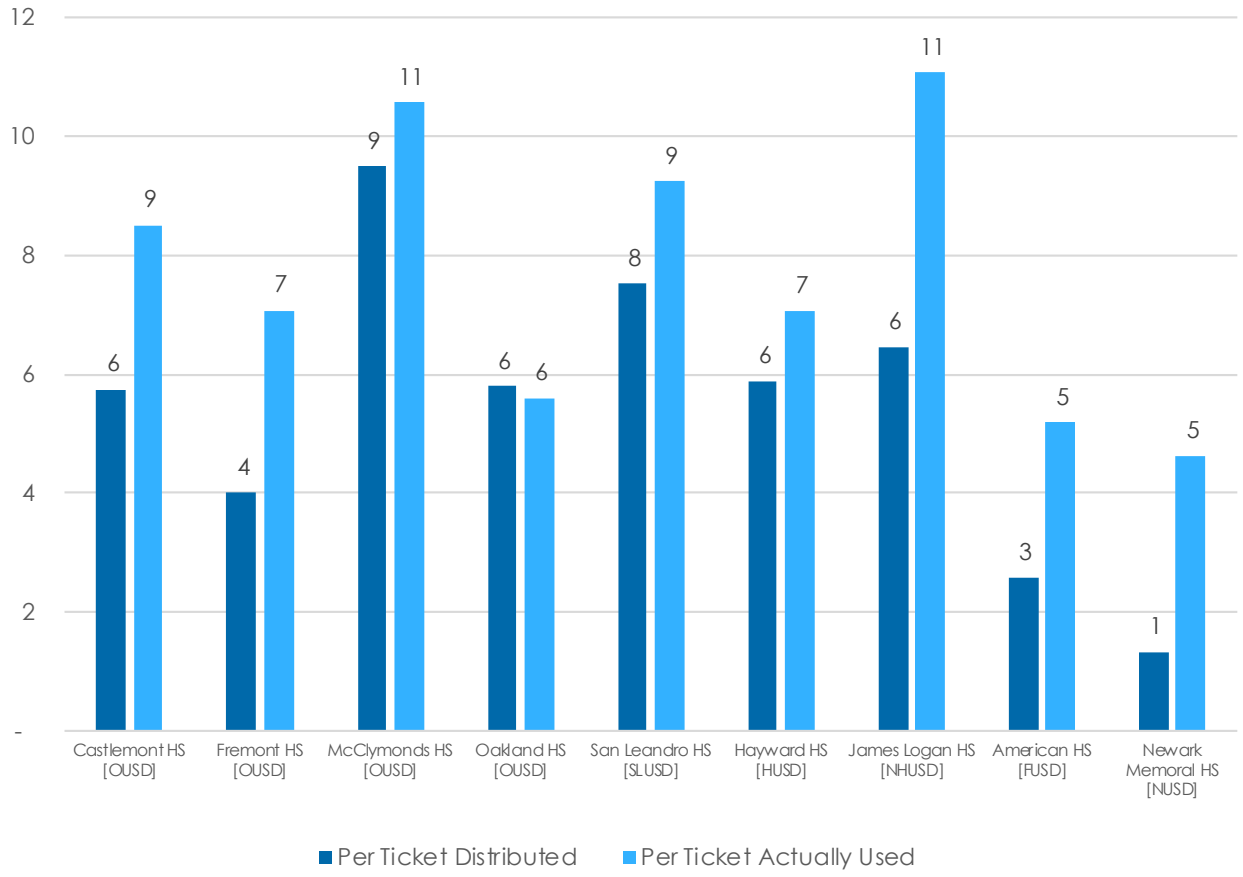
School District	Participating High Schools in BART Service Area	Year Two Participation Rates		Year Three Participation Rates		Distance to Nearest BART Station (miles)
		Bus Passes	BART Tickets	Bus Passes	BART Tickets	
OUSD	Castlemont High	98%	90%	80%	20%	2.5
	Fremont High	93%	31%	86%	42%	1.0
	McClymonds High	83%	73%	79%	49%	1.3
	Oakland High			86%	33%	1.8
	Oakland USD Total	***93%***	***64%***	***84%***	***33%***	
SLUSD	San Leandro High	56%	46%	76%	35%	1.4
HUSD	Hayward High	31%	17%	39%	17%	1.3
NHUSD	James Logan High	31%	26%	54%	6%	1.2
FUSD	American High			38%	31%	2.7
NUSD	Newark Memorial High			34%	35%	3.5
Countywide		**56%**	**42%**	**64%**	**25%**	

BART Ticket Usage

STPP participants took approximately 19,400 one-way BART trips during Year Two and 19,500 one-way trips during Year Three using BART tickets distributed through the program, for a total of 39,000 trips. Through the end of July, 2018, a total of 2,126 of the 3,240 BART tickets that were distributed in Year Two (66 percent) had been used for some travel. By the end of the pilot, a total of 4,579 tickets had been used, representing 75 percent of the 6,118 total that were distributed in Year Two and Year Three combined.

On average, students took nine one-way trips with each BART ticket that was used on the system during the pilot. Because BART fares are partly distance-based, students deplete their $50 at different rates depending on where and how often they travel. For example, students in Newark USD averaged about five trips per ticket while students in New Haven USD averaged about 11 trips per ticket. Average values for each participating high school are shown in Figure 32.

Figure 32 Average BART Trips Per Ticket, by School (Year Two + Year Three combined)



Geographic travel patterns for both Year Two and Year Three were relatively consistent. Overall, about two-thirds of all travel on BART was within Alameda County and more than a quarter of all trips were between Alameda County and San Francisco. Less than six percent of trips were between Alameda County and Contra Costa County, and the remaining four percent were distributed elsewhere in the BART system.

Across all BART trips taken in Year Two and Year Three, the average fare per trip was $3.69. Tickets distributed at schools further south in Alameda County tended to have higher average fares than those in the northern part of the county, likely because of the distance-based fares on the BART system.

Transaction records for Year Two and Year Three combined indicate that the total value of all travel taken on STPP-issued BART tickets is approximately 46 percent of the total fare value that was distributed to STPP participants. BART

paper tickets do not have a formal expiration date, so unused BART tickets could support future travel beyond the formal end of the pilot.[20]

BART offered Alameda CTC a 50 percent discount on the Orange Tickets that were purchased for the STPP. Unfortunately, less than half of the distributed fare value has been used. Alameda CTC did receive a reimbursement of funds from BART for all Orange Tickets that were not distributed to students during the three-year pilot program.

[20] [20] BART is accepting paper (Orange) tickets at all of its faregates; however, you cannot purchase a new ticket or reload existing paper tickets Clipper-only pilot stations (i.e. Antioch, 19th Street Oakland and Powell)

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3 Benefits for Students and Families

Attendance

One of the goals of the STPP is to improve transportation to and from school to help eliminate barriers to accessing education and support student attendance in school and related activities. From the data that was available over the course of the pilot, there is no clear trend that would suggest the STPP has affected school-wide attendance patterns at participating schools for several reasons described below.

However, the anecdotal information and staff feedback collected during the past three years suggests that the transit pass has been a valuable tool to support attendance, particularly for students with challenging family situations. This section summarizes different methods for measuring the effects of the STPP on attendance including student survey results, data analysis, and direct feedback from school staff, as well as representative quotes that illustrate some of the benefits on individual student lives.

Participant Experience

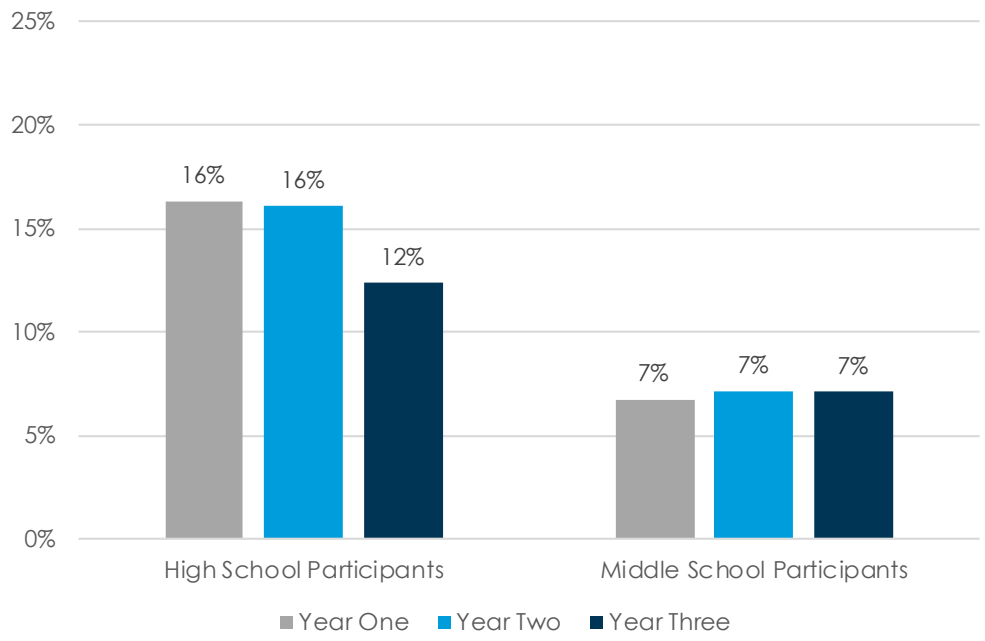
In the annual student surveys, STPP participants were asked about whether the transit pass had affected their lives in different ways, including whether their attendance at school had changed since receiving the pass. Responses to this question vary from school to school and year to year, but can be summarized as follows:

- A small but meaningful share of participants reported that the pass positively impacted their school attendance. However, over each successive year of the pilot, a smaller share of participants agreed with the statement that they miss fewer school days since receiving the transit pass. Overall, the countywide value for this statistic declined from 14 percent in Year One, to 13 percent in Year Two, and then to 10 percent in Year Three. It is possible that, as participation rates have climbed, there are more students signing up for the pass who are less likely to use transit as often, in which case the availability of the pass may have less effect on their attendance behavior than in earlier years of the pilot.
- Across all program years, a larger share of high school participants reported they miss fewer school days since they received the transit pass than their middle school counterparts. This could be because middle school students generally have less independence than high school students to begin with, so their behavior may not be as changeable as

that of older students. The countywide results for all high schools and all middle schools in each program year are portrayed in Figure 33.

- There is no conclusive trend as to which school districts have the highest or lowest share of participants who reported missing fewer school days since they received the transit pass. Results over time are highly variable within and across school districts, and do not clearly relate to the underlying program model.

Figure 33 Change in Share of Participants Who Reported They Miss Fewer School Days Since Receiving a Transit Pass, by School Level



School-wide Data

Each participating school district was asked to provide some statistical data on their enrollment, average daily attendance and rates of chronic absenteeism for the pilot period, as well as three school years prior to joining the program. Unfortunately, this data was not uniformly available for all schools. Analysis conducted at the end of Year Two showed that attendance rates fluctuate each year, the changes are relatively small, and the changes observed since the STPP began are within the range of variation prior to the start of the STPP.

This data did not reveal a clear trend that would suggest the STPP has affected school-wide attendance patterns at participating schools. This is not surprising for several key reasons. First, a third of all participating schools have participation rates near or below 50 percent. It would be difficult for STPP participants at these schools to change their attendance behavior enough to outweigh the behavior

of the rest of the school population in school-wide statistics. Second, participation in the Means-Based/Free programs are restricted to a sub-set of overall students. Due to privacy issues, the behavior of eligible students cannot be separated from the ineligible students, so the school totals reflect a combined result that includes numerous students who are ineligible for the STPP. Finally, changes in program model over time influenced who was eligible for and interested in obtaining the transit pass during the three years of the pilot, which makes it more difficult to establish a causal link based on the final program model.

School Staff Feedback

Many factors influence student attendance besides the availability of transportation options, including health issues (such as a particularly bad flu season), housing insecurity during a region-wide housing crisis, scheduling conflicts (such as families where students attend different schools with similar bell times), and a variety of other challenges in student and family lives. It can be difficult to identify a causal relationship between any one program and school-wide statistics and, similarly, it is difficult to tie any change in attendance and truancy to any one change in programmatic support offered by the school.

However, students, their families, and school staff have provided numerous examples of the ways this program has benefitted student attendance and reduced barriers on an individual basis -- even if the effects are not apparent in school-wide data. Debriefs with school staff and other qualitative evaluation conducted during the pilot identified several recurring themes about how the availability of the transit pass supports improved attendance:

- The STPP pass is a helpful tool for school staff when they are meeting one-on-one with families to address attendance and truancy issues.
- The STPP pass helps students travel more independently.
- The STPP pass is especially helpful for students who have trouble arriving on time for the beginning of the school day.
- School staff have observed that the STPP pass can be both a carrot and a stick for influencing individual attendance.

More detailed explanation of the attendance issues analyzed during the pilot can be found in the Year Two Evaluation Report in Appendix F.

> ***"We had truant families who, now that they have the pass, it has improved attendance. One student in our school was perpetually truant; his family had a lot of issues where they just couldn't get the kids to school on time. He took it upon himself to get the pass, got a parent signature somehow, and now he has straight As."***
>
> *—School site administrator from John Muir Middle School (San Leandro USD)*

Trip Purpose and After-School Activity Participation

The STPP aims to improve school transportation options and to build support for transit more generally. This section presents findings on the various ways in which participants used their bus transit pass and BART tickets during the pilot.

Participant Use of Bus Transit Pass

Student survey data from each of the three years of the pilot shows consistent rates of self-reported use of the transit pass for different trip purposes (school, activities, jobs) from year to year, though there are a few exceptions, as discussed below.

Not surprisingly, travel to and from school was the most commonly cited trip purpose across all school districts and for both middle school participants and high school participants. Other commonly cited trip purposes were afterschool activities, spending time with friends and family, and other errands such as shopping or trips to the doctor.

In all three years, across all trip purposes, high school participants reported higher rates of bus pass usage for each of the queried trip purposes than middle school participants.

> ***"I ride the bus after school and on weekends exploring different places I've never seen before."***
>
> *—Participant from Castlemont High School (Oakland USD)*

Year over year responses for high school participants are shown in Figure 34 and the same data for middle school participants are shown in Figure 35.

Figure 34 Use of Bus Transit Pass for Different Trip Purposes Each Year, High School Students

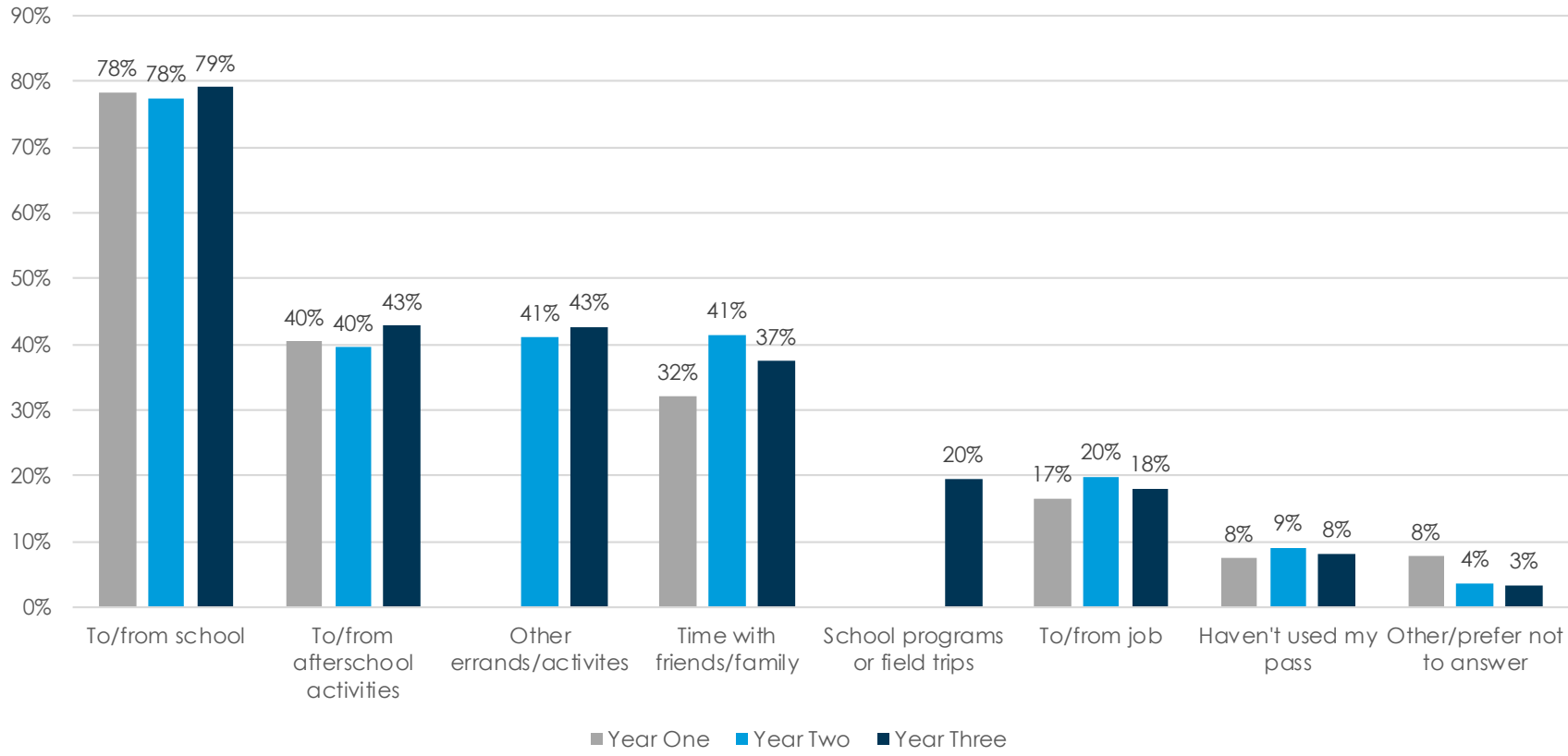
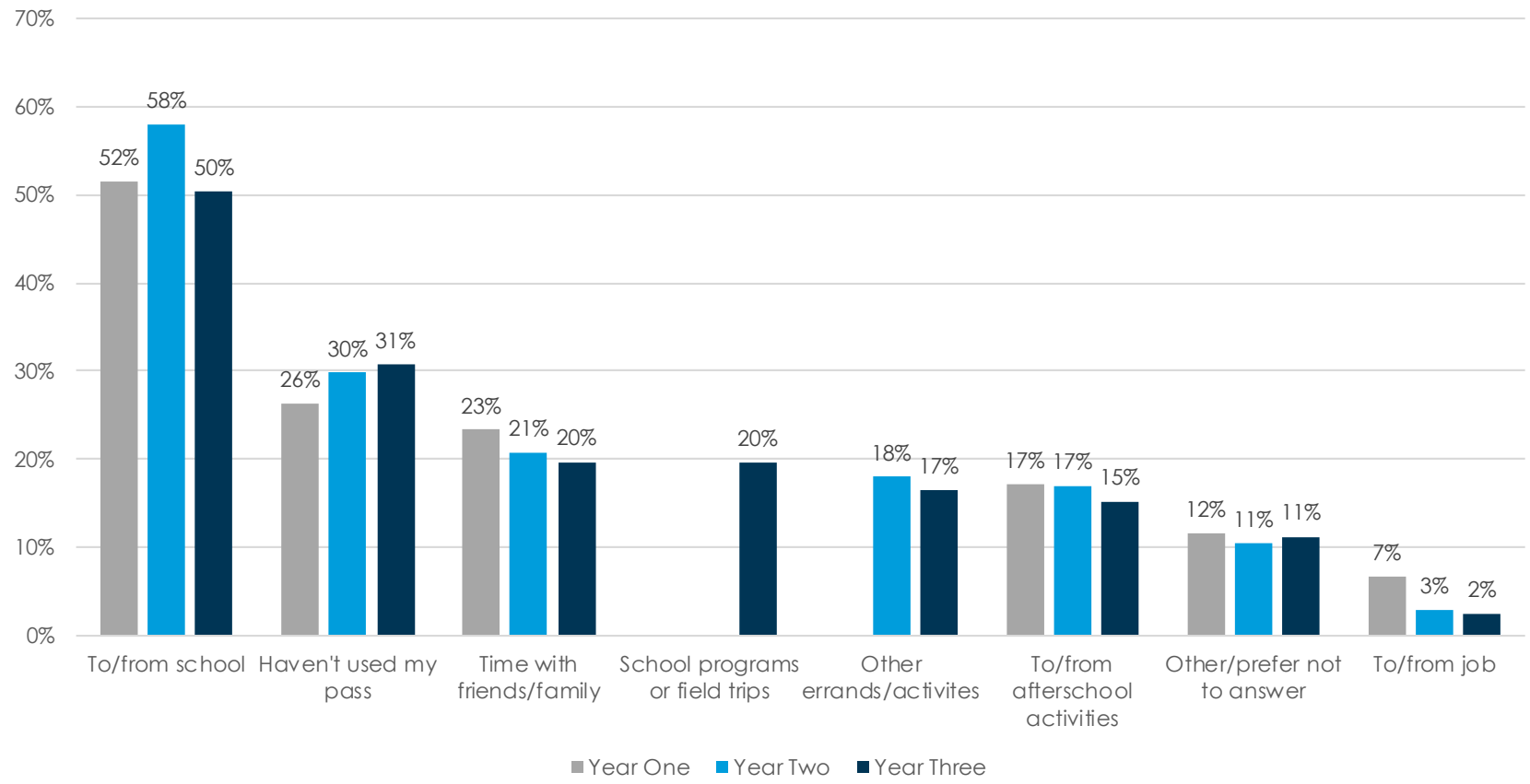


Figure 35 Use of Bus Transit Pass for Different Trip Purposes Each Year, Middle School Students

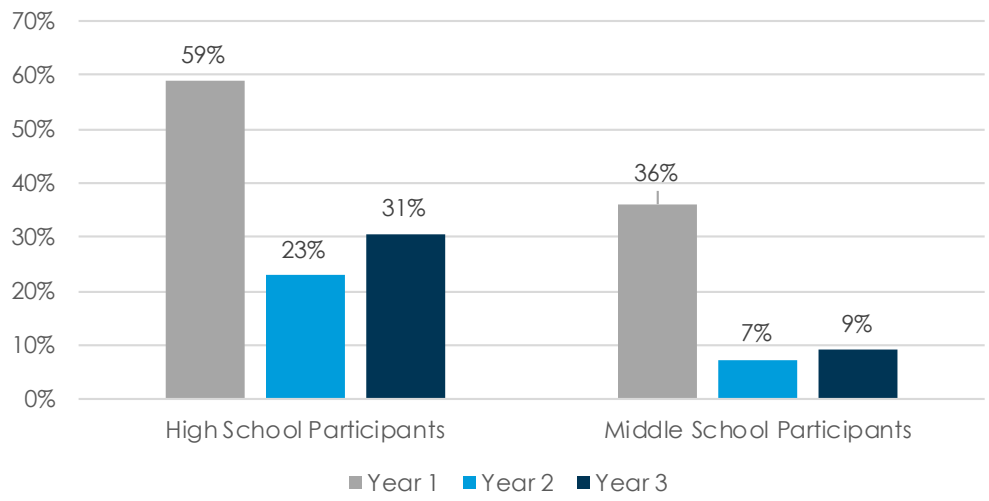


One factor that could be driving these results is the relative distribution of participants (and, correspondingly, of survey respondents) across Alameda County. During the pilot, the largest numbers of participant survey responses came consistently from the four school districts that joined the program in Year One: Oakland USD, San Leandro USD, New Haven USD, and Livermore Valley JUSD. In fact, the two school districts that joined in Year Three only accounted for five percent of all survey responses that year. As a result, the stability of outcomes over time seen in the trip purpose data should be attributed more to behavioral consistency within these four school districts rather than universal truths about student travel behavior across all geographies in Alameda County as the program expands.

One other aspect that should be considered in relation to the use of the transit pass relates to whether the students have an underlying need to travel for these purposes at all. For example, participants who do not have a job would not be expected to use the pass for job-related travel. A separate survey question asked students to indicate whether they have jobs or participate in extra-curricular activities. A cross-tabulation of the two survey questions reveals somewhat higher rates of pass-usage for each of the two trip purposes within the group of participants who acknowledge a need for the associated trip-making to begin with.

Figure 36 presents countywide results for the share of participants who report having extra-curricular activities and jobs who also report using the transit pass for each of those activities (respectively) in each program year. The steep drop-off from Year One values is likely attributable to the change in program models between those two years; many participants in Year One had to pay for their transit pass, so only the most dedicated transit users signed up for the program. However, between Year Two and Year Three, when program models did not change at any participating schools, there is an observable increase in the number of participants who reported using their pass for their non-school trip-making needs, which suggests that students may become more comfortable using transit over time.

Figure 36 Use of Bus Transit Pass Each Year by Students Who Have Jobs and After-School Activities



In addition to the quantitative survey data on how many students have used the pass for different purposes, comments from school debriefs and focus groups indicate that students really value the flexibility offered by the bus transit pass.[21]

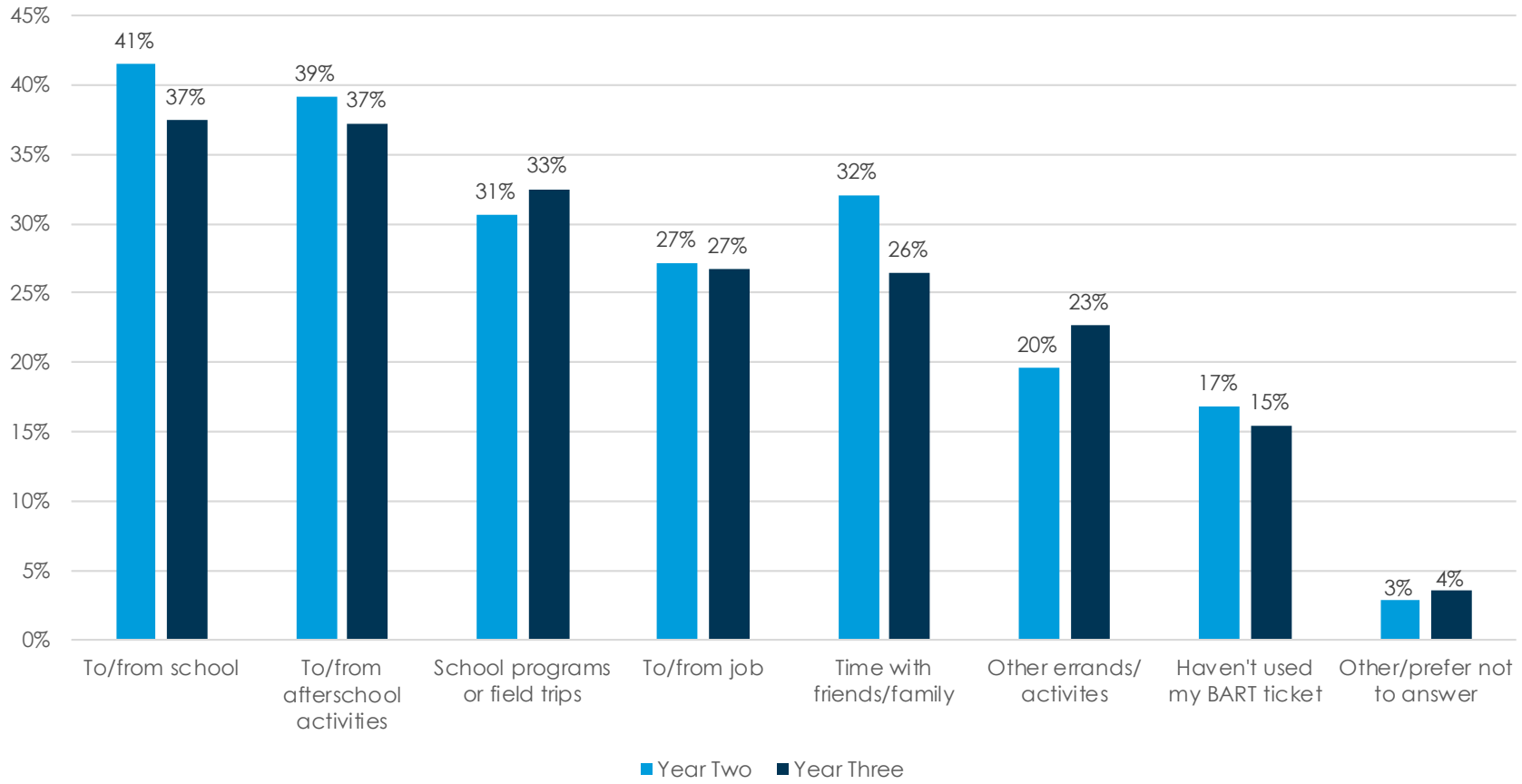
> ***"A lot of our juniors and seniors who have the card have been able to use it for work. They can leave school and not have to worry about getting a ride. They know exactly what time they have to leave, and they know they are going to get to work on time, and they have a way to get home, so it's allowed them to work and get that experience."***
>
> *—School site administrator from Oakland USD*

Participant Use of BART Tickets

Students were asked about their use of BART tickets. In general, a smaller share of participants who received BART tickets reported using the transit pass for travel to and from school than the share who reported using the bus pass for that purpose. This result is not surprising given that the BART ticket did not provide for unlimited travel. The most popular trip purposes cited by BART ticket holders were visiting friends and family and other errands and activities. These results were relatively consistent between Year Two and Year Three, as portrayed in Figure 37.

[21] A separate survey question asked participants if the transit pass has benefitted their lives in different ways, including whether or not the transit pass has given them better access to jobs and activities. This survey question is discussed more thoroughly in the next section, "Student Perceptions of Program Benefits."

Figure 37 Use of BART Ticket for Different Trip Purposes Each Year



Field Trips and Enrichment

One use of the transit pass which came up in multiple discussions with school site administrators was students' use of the passes for enrichment opportunities, such as field trips. At the most basic level, the pass provides a financial benefit to the school, because they do not have to independently raise funds to support transportation to school-related activities. The pass also relieves a scheduling burden for teachers and administrators because they know that students will be able to ride without any additional paperwork, cost, or coordination with a transit operator or charter service.

In fact, some school staff reported that teachers specifically choose destinations for enrichment activities that are transit-accessible, so that students will be able to use their passes.

Takeaway: The transit pass provides a significant benefit to schools who use the pass for enrichment opportunities

As with the bus transit pass, BART tickets were helpful for students and schools in providing access to enrichment opportunities off-campus. At the countywide level, more than 25 percent of participants used their ticket for this purpose each year; within each of the BART-eligible school districts, the share of participants who acknowledged this use of their BART ticket ranged from 15 percent to 40 percent.

Takeaway: BART tickets were used for field trips and off-campus enrichment

Student Perceptions of Program Benefits

Each of the annual student surveys asked program participants whether the student pass had benefitted them in specific ways, such as whether students feel they are more independent now that they have a transit pass.

Across all program years, high school participants reported higher levels of benefit than middle school participants for each of the positive benefit statements that was suggested. Middle school participants were more likely than high school participants to agree with statements that they had not yet used their pass, or the pass had no impact on their life. These differences could partially be explained by the fact that families typically allow more independence for older students as compared to younger students, so the availability of the transit pass may not be as strong an influence on the lives of middle school students.

> ***'The Clipper card is so helpful! It helps me get to places easier and it really helps me be able to go downtown and explore places more. I've benefited from free public transit. I recognize more places and stops in San Leandro because of the frequent trips I take. Now I don't have to walk home. My house is 7 miles away walking distance, it would take forever."***
>
> *—Participant from John Muir Middle School (San Leandro USD)*

Riding Transit More Often

One of the five goals of the STPP is to build support for transit in Alameda County, and the availability of a free and unlimited bus pass should allow for students to ride transit more often than before the program started.

A sizeable share of participants agreed with this statement each year, including more than half of all high school participants and more than thirty percent of all middle school students. The share of high school participants who reported they ride transit more often dropped after Year One but has since held steady. The share of middle school participants who reported that they are riding transit more often continued to decline in Year Three. These results are shown in Figure 38.

These countywide results blend together outcomes in different school districts, which do vary somewhat across the county. The districts with the highest share of participants who reported they ride transit more often were New Haven USD, Fremont USD, and Newark USD. Survey results in both Oakland USD and San Leandro USD showed a smaller share of students reporting that they ride transit more often in each successive year of the pilot and Hayward USD also declined from Year Two to Year Three. These results are portrayed in Figure 39.

Figure 38 Share of Participants Who Report They Ride the Bus More Since Receiving Their Pass, by School Level and Program Year

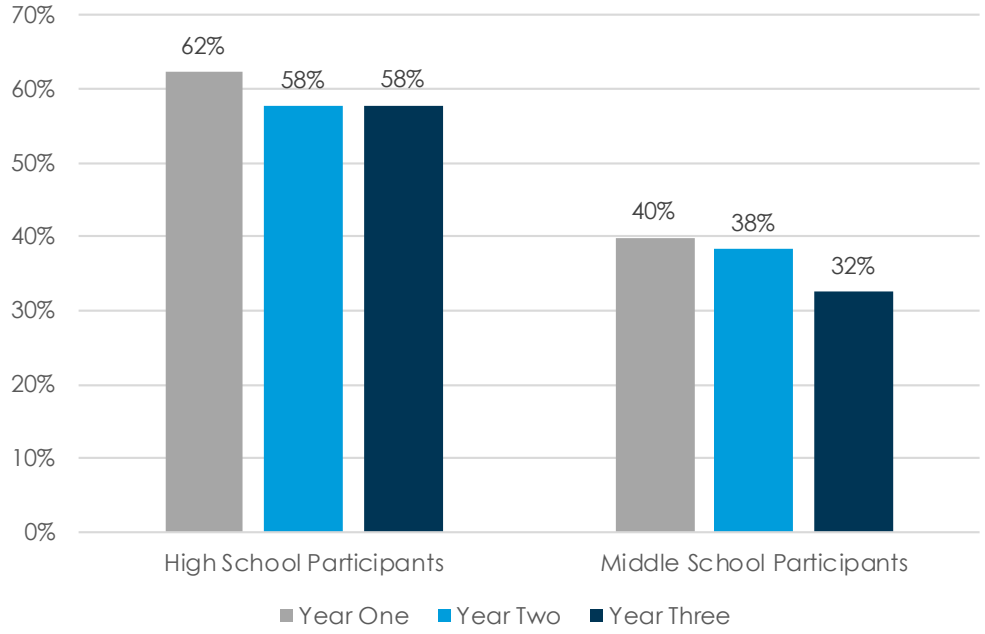
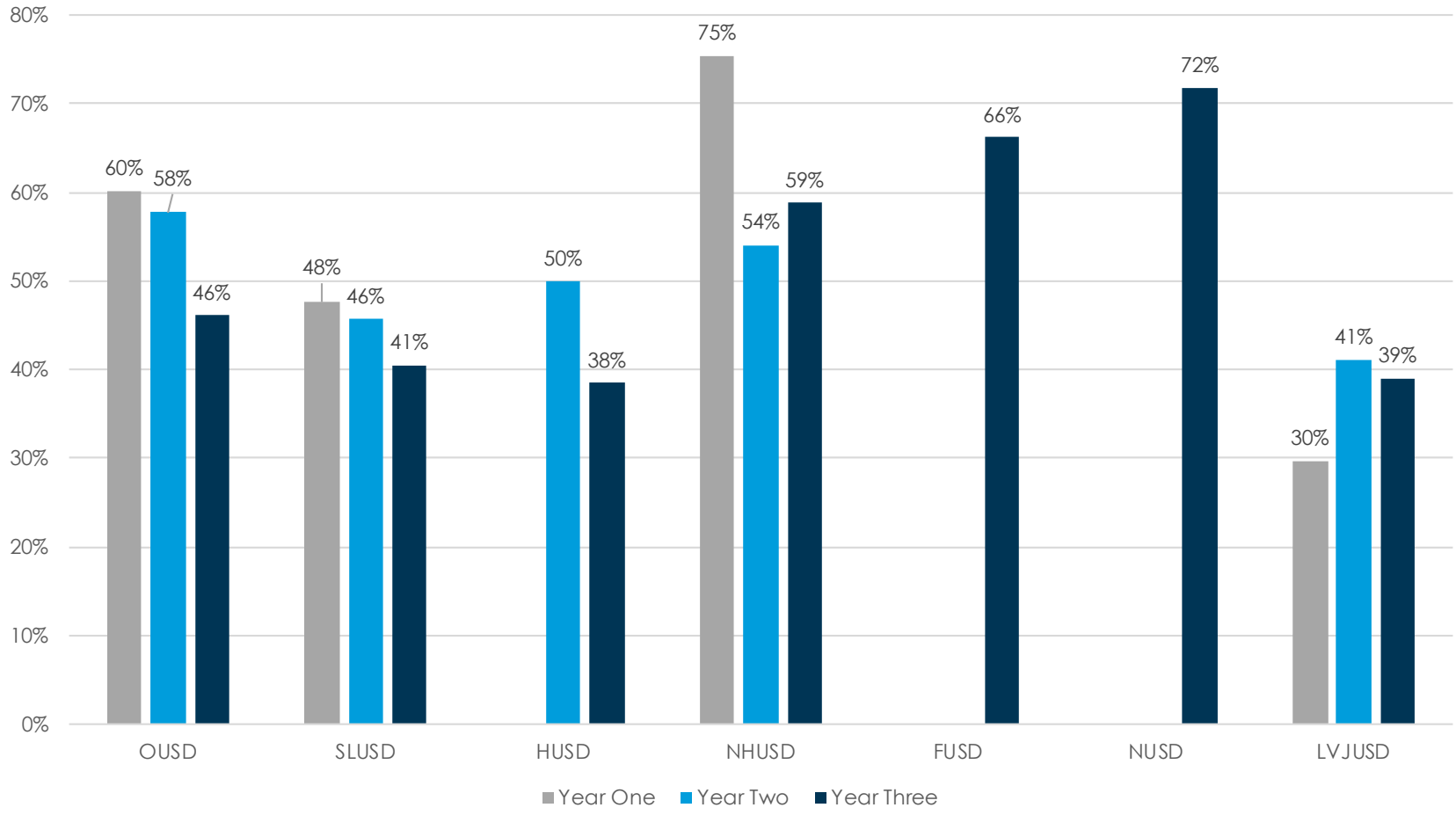


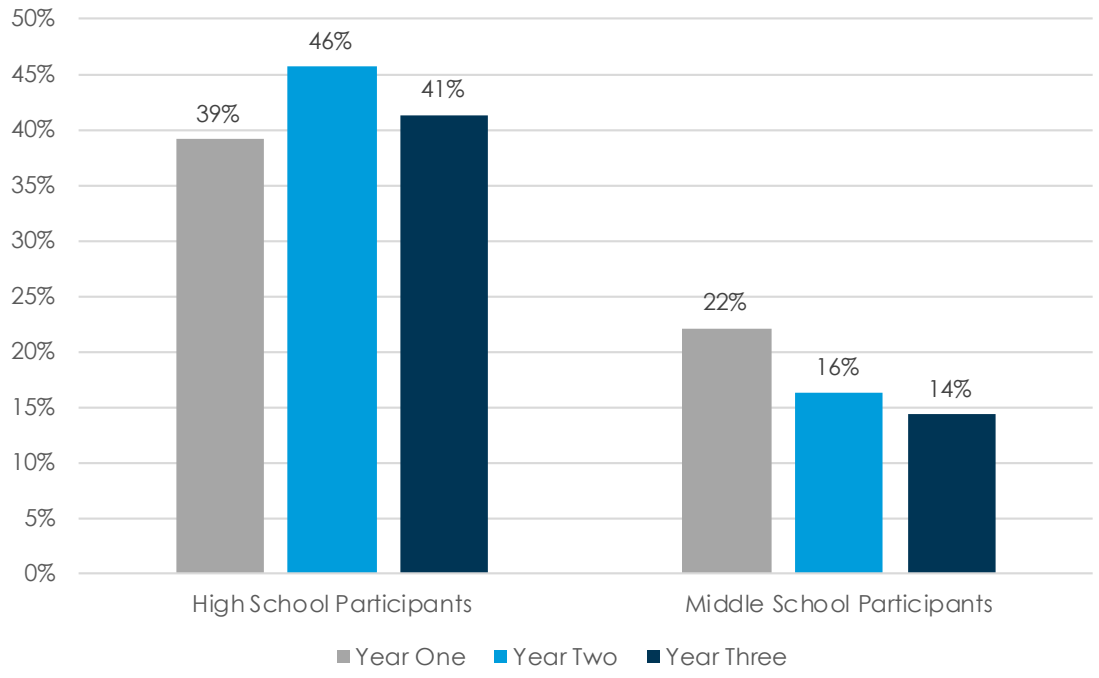
Figure 39 Share of Participants Who Report They Ride the Bus More Since Receiving Their Pass, by School District and Program Year



Better Access to Jobs and Activities

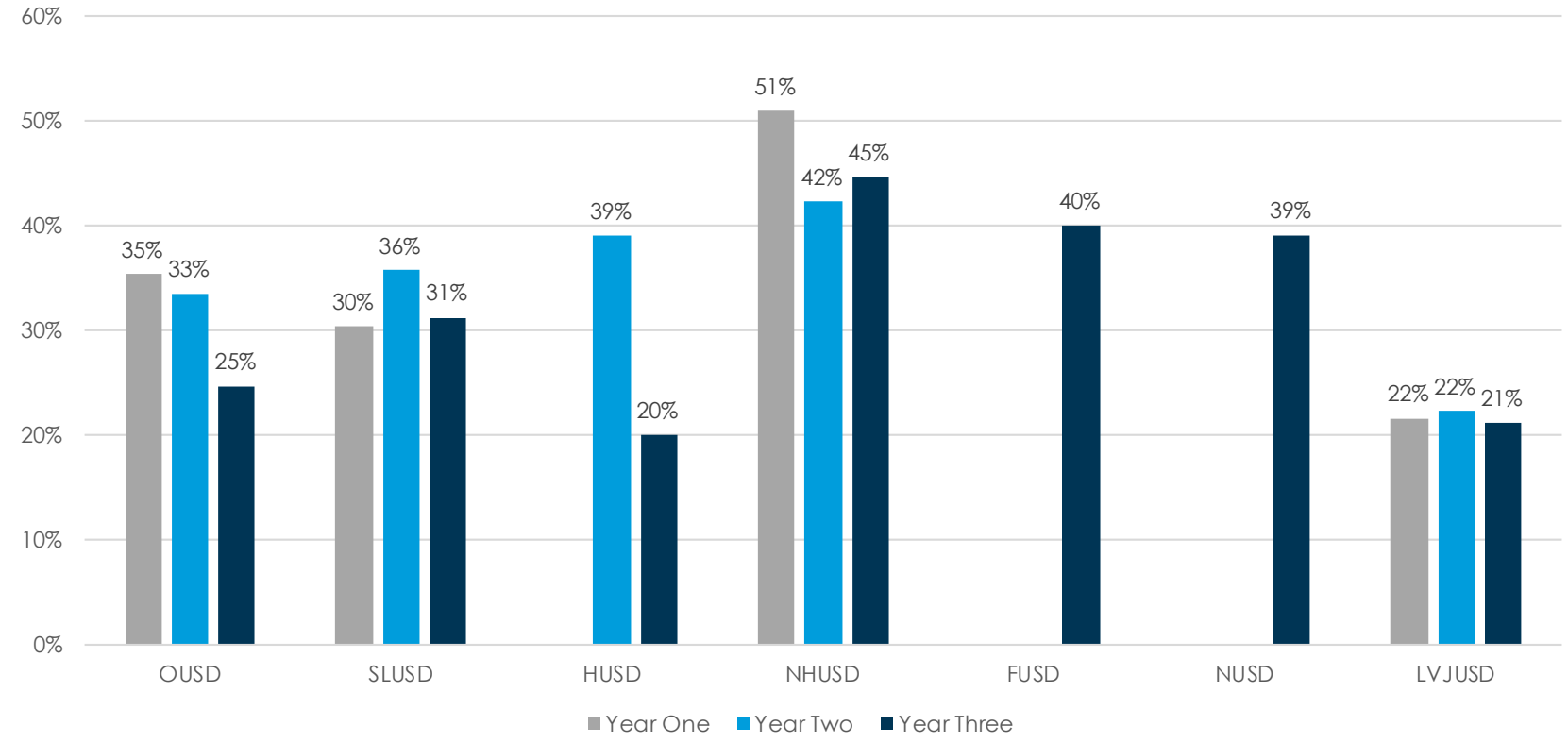
As noted above in the discussion of how students are using their bus pass, many students have been able to use their pass for travel to and from jobs and afterschool activities. About 40 percent of high school participants agree the transit pass has provided them with improved access. These results are shown in Figure 40.

Figure 40 Share of Participants Who Report They Have Better Access to Jobs and Activities with Their Pass, by School Level and Program Year



New Haven USD had the highest share of participants reporting that the transit pass improved access to jobs and activities, whereas Livermore Valley JUSD had the lowest share. These responses suggest that participants sense of access may be partially influenced by the quality of the transit network in their community, because students in New Haven USD gain access to two separate bus networks, and land use patterns in East County make it harder for transit to meet all of the activity-based needs of students in Livermore Valley JUSD. These results are portrayed in Figure 41.

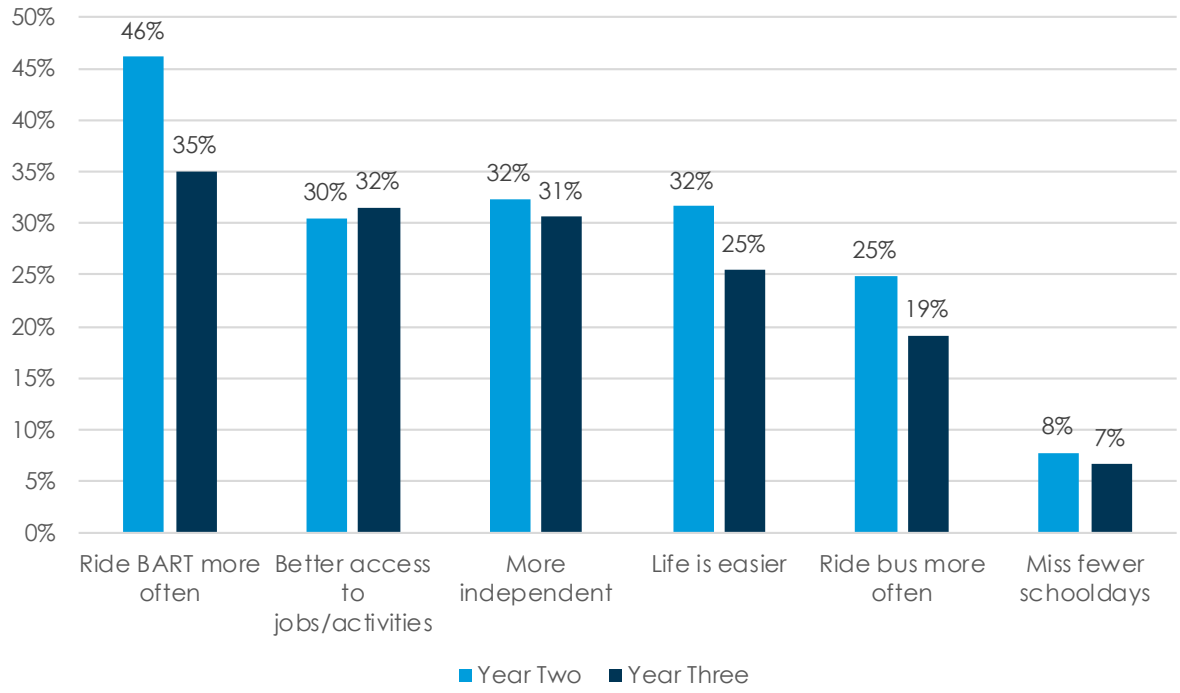
Figure 41 Share of Participants Who Report They Have Better Access to Jobs and Activities with Their Pass, by School District and Program Year



Benefits of BART Ticket

In the Year Two and Year Three student surveys, participants were asked whether the BART ticket had positive benefits on their lives. As a group, the participants who received a BART ticket generally reported high agreement with statements that the BART ticket allowed them to ride BART more often and travel farther. Fewer than ten percent of participants who received a BART ticket reported that they missed fewer school days since receiving the ticket. This is not a surprising result given that the value of the BART ticket was limited to only $50 in fare value. These results are portrayed in Figure 42.

Figure 42 Participant Perceptions of Benefits of BART Ticket, by Program Year



Student Perceptions of Transit

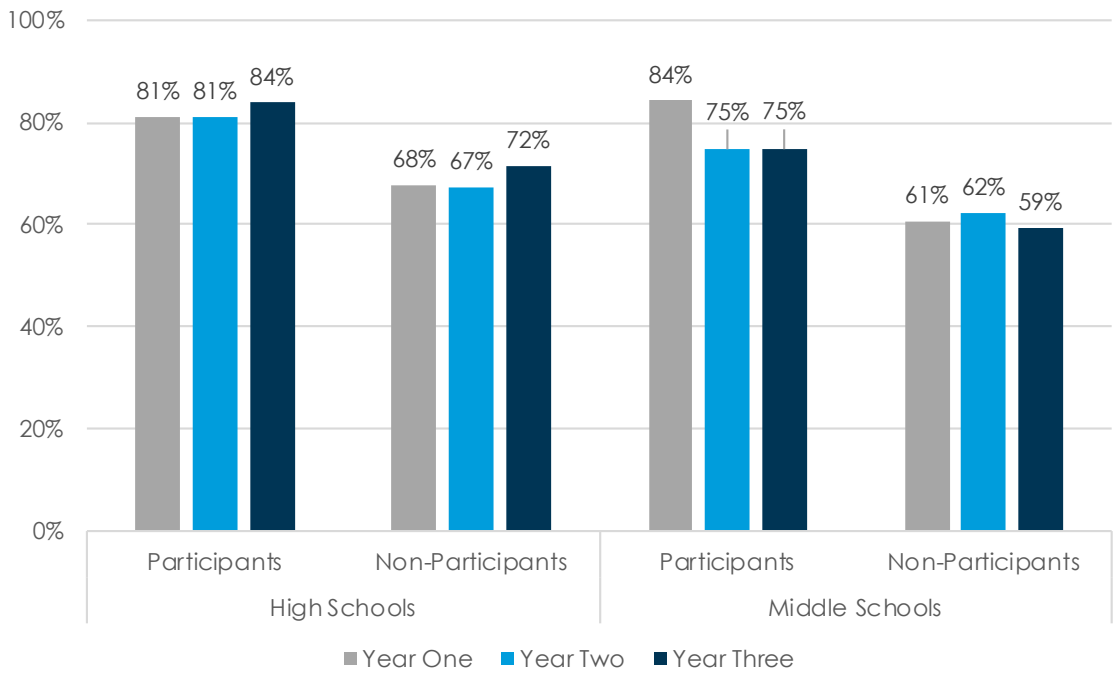
Building support for transit is one of the overall goals for the STPP. The annual student surveys asked all students—participants and non-participants—about their general perceptions of transit as a travel mode. A larger share of students agreed with positive statements about transit than the share that agreed with negative statements for both participants and non-participants, but participants reported more positive associations with transit than non-participants and there was some variation depending on the specific question posed.

Students Feel Safe on The Bus

As a group, at least two thirds of survey respondents reported that they feel safe when riding the bus in all program years. This was true for most sub-groups of respondents, although middle school non-participants only agreed with this statement about 60 percent of the time. More than 80 percent of high school participants reported they feel safe on the bus. These results are portrayed in Figure 43.

As shown in Figure 44, this finding was also confirmed at the school district level, and aside from some adjustments after Year One, the values appear to be relatively stable within each district over time. When the school district results were further segmented into participants and non-participants, at least half of non-participants in each district reported they feel safe on the bus, while three quarters or more of all participants in each district reported they feel safe on the bus.

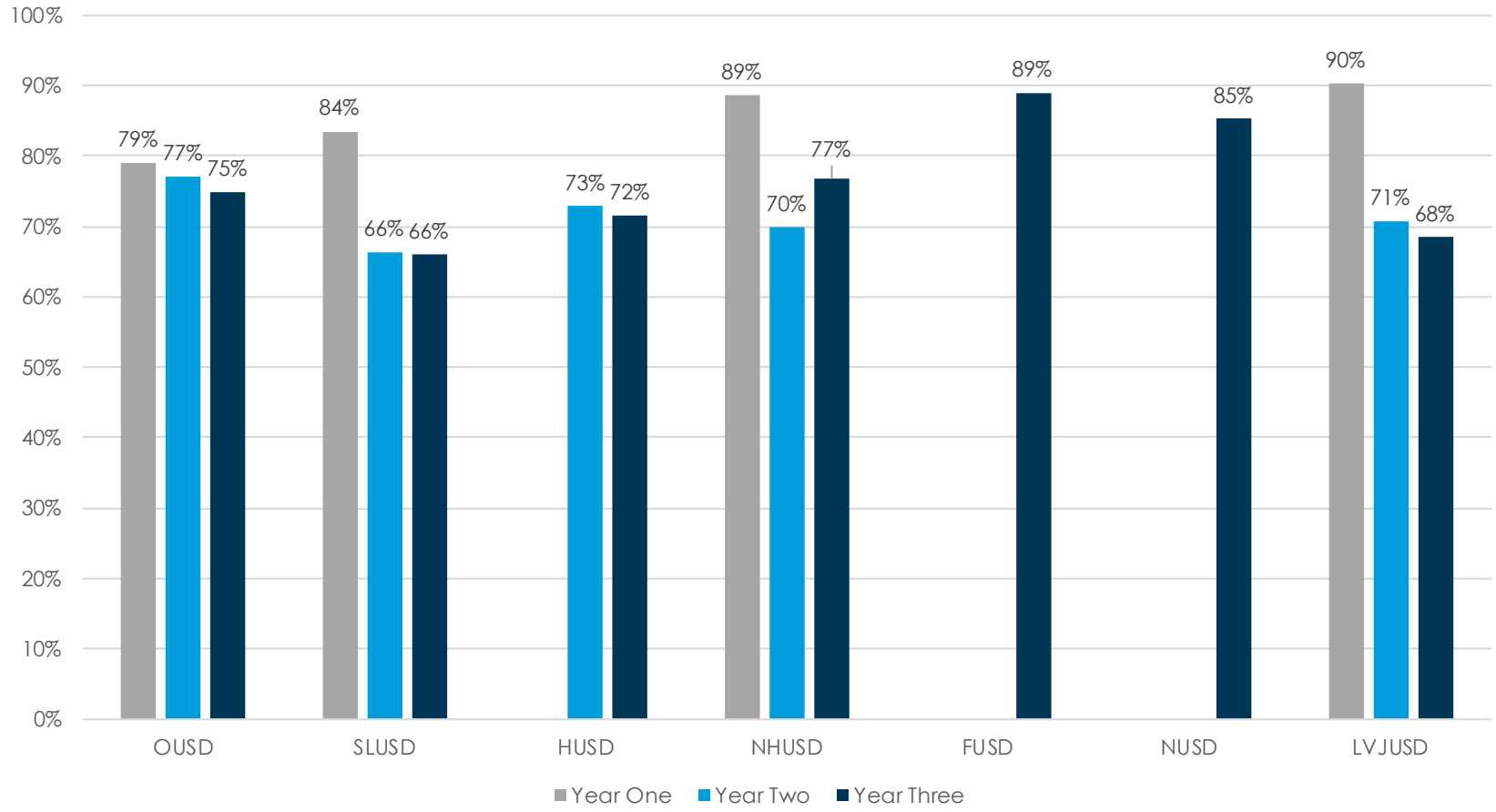
Figure 43 Share of Respondents Who Report They Feel Safe Riding the Bus, Participant vs. Non-Participant Comparison, by Program Year



"It makes me feel safe, and in case my parents have to work real late, I can just ride the bus home."

—Participant from Bret Harte Middle School (Hayward USD)

Figure 44 Share of Respondents Who Report They Feel Safe Riding the Bus, by School District and Program Year



Transit Meets the Needs of Students

In all three years of student surveys, participants were more likely than non-participants to report that transit meets their needs, and similarly, high school students were more likely than middle school students to report that transit meets their needs. The variation among the sub-groups is notable. For example, after the first program year, fewer than half of middle school non-participants agreed with the statement "Transit meets my needs" while more than 75 percent of all high school participants felt this way. These results are portrayed in Figure 45.

Although countywide results for this question appear relatively stable over time, some localized trends become evident when the responses are segmented at the school district level. In particular, the share of all respondents who agreed that transit meets their needs decreased each year in San Leandro USD and Livermore Valley JUSD and increased each year in New Haven USD. These results are shown in Figure 46.

Figure 45 Share of Respondents Who Report Transit Meets Their Needs, Participant vs. Non-Participant Comparison, by Program Year

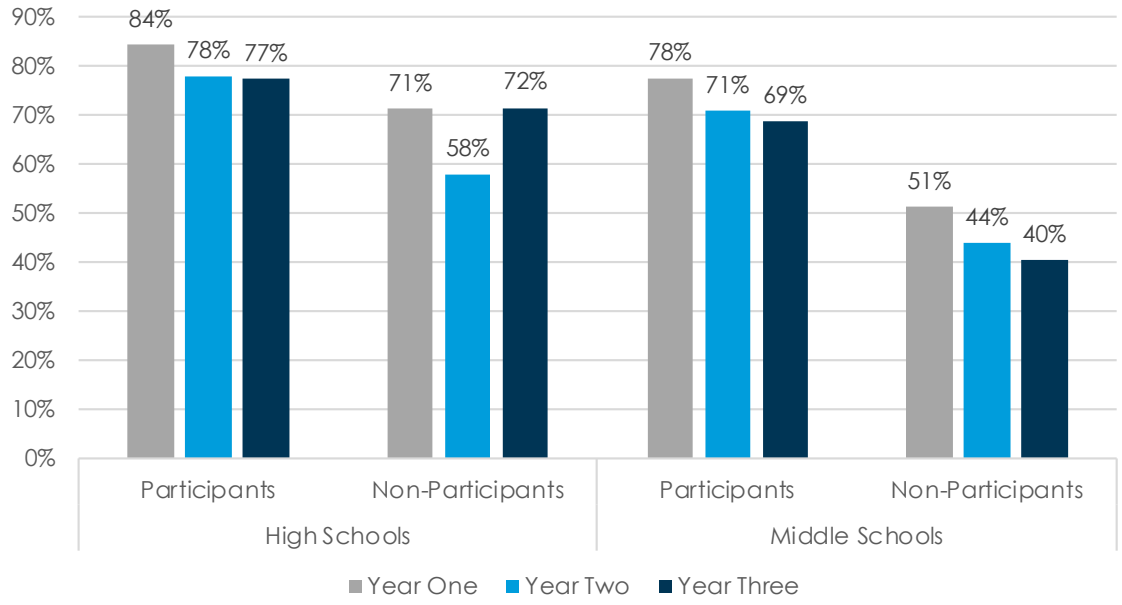
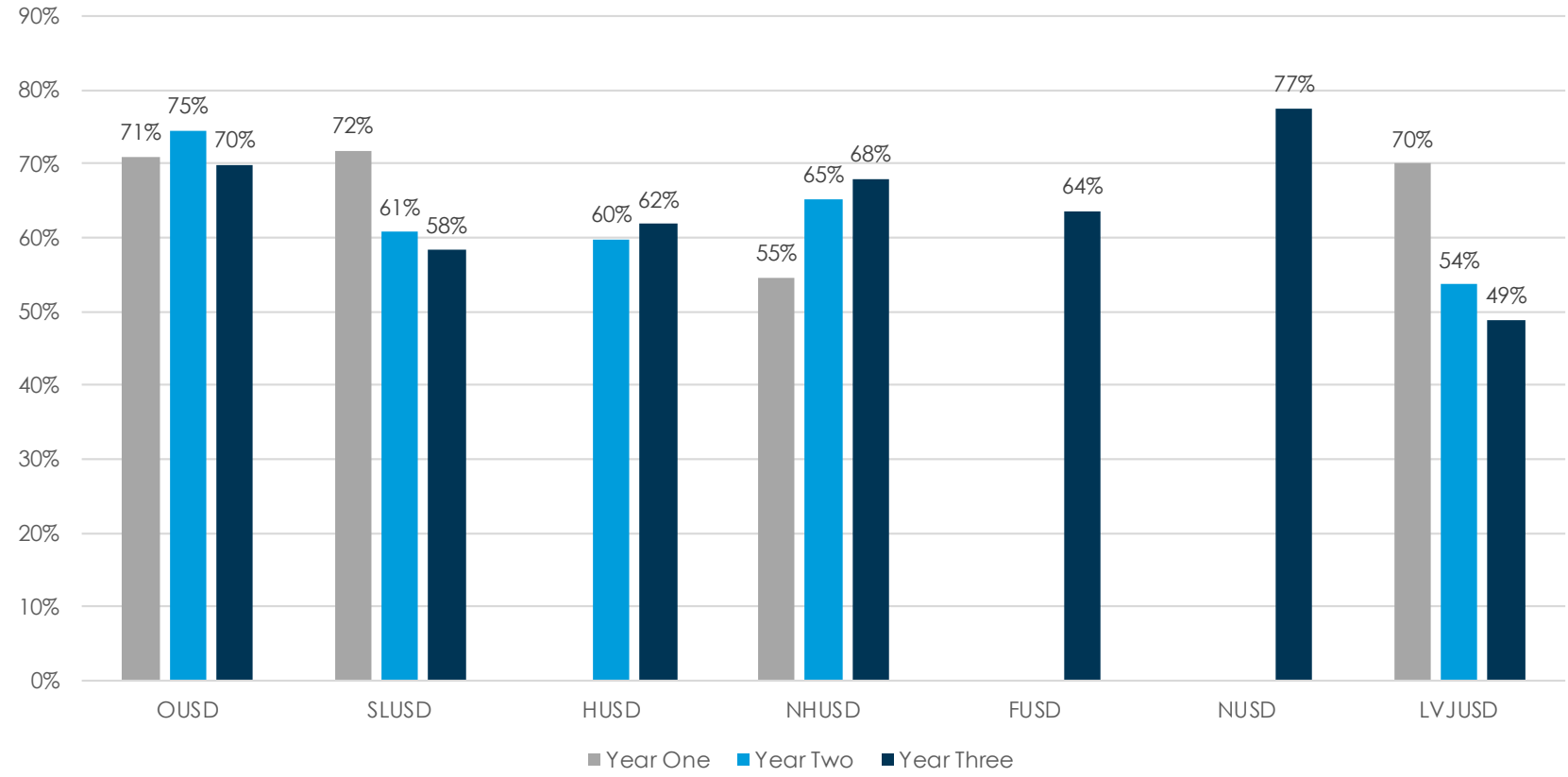


Figure 46 Share of Respondents Who Report Transit Meets Their Needs, by School District and Program Year



Familial Support of Transit Use

In other parts of this report, the importance of parental support is identified as an important component of students being allowed the independence to ride transit by themselves; not every family is comfortable with this travel option. One of the transit perception survey questions asked students to agree or disagree with the statement, "My parent/guardian doesn't want me to ride the bus." Not surprisingly, responses to this question show a strong correlation with participation status and school level, with non-participants and middle school students being more likely to have a family member who discourages transit use. These results are shown in Figure 47 and Figure 48, respectively.

Figure 47 Share of Respondents Who Report Their Family Does Not Want Them to Ride the Bus, Participant vs. Non-Participant Comparison, by Program Year

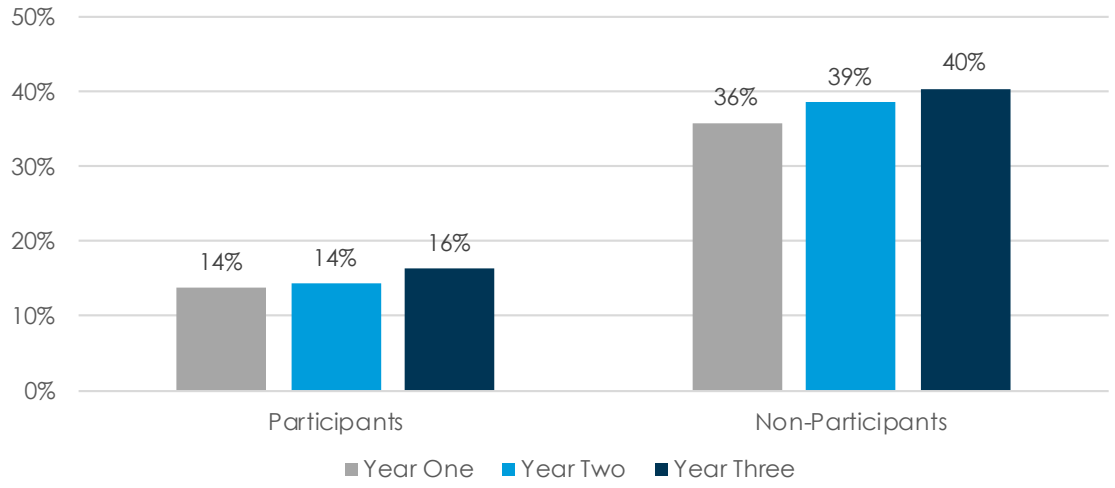
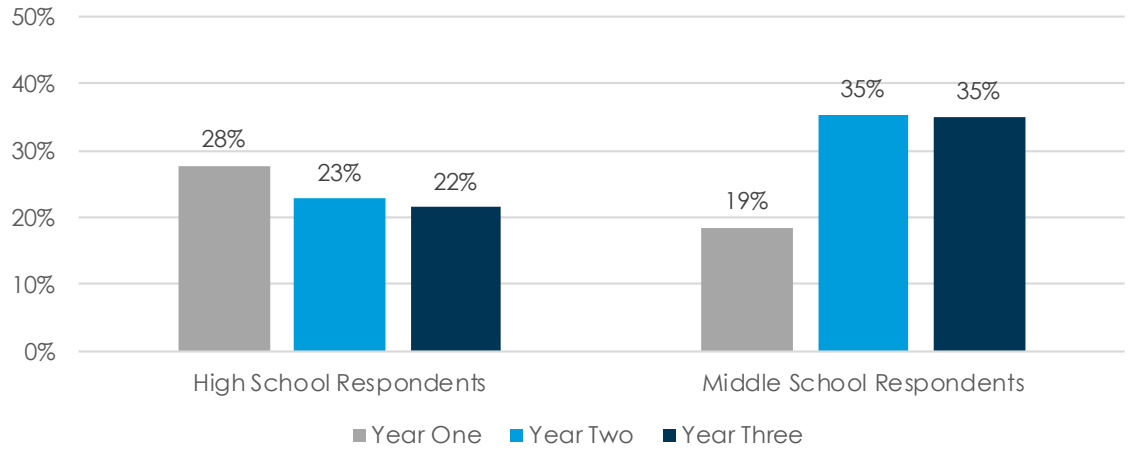


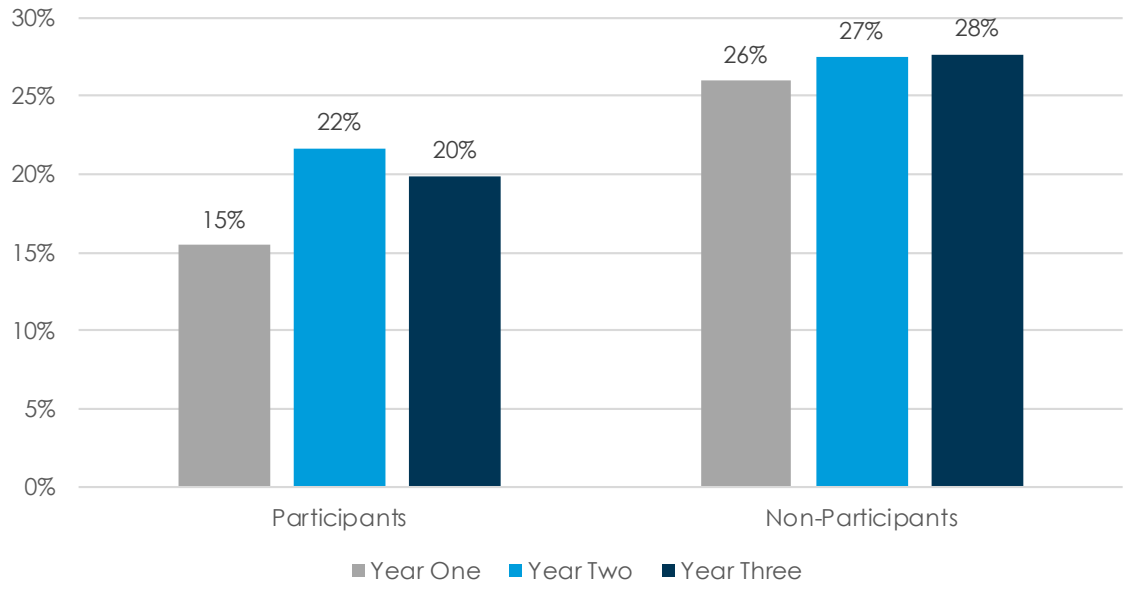
Figure 48 Share of Respondents Who Report Their Family Does Not Want Them to Ride the Bus, by School Level and Program Year



Student Comfort with Riding Transit

In addition to family support of their children riding transit, students themselves need to feel comfortable using the system on their own. One of the transit perception survey questions asked students to agree or disagree with the statement, "It's intimidating to use the bus system." Again, a higher share of non-participants tend to have this negative association than participants, which could indicate some amount of self-selection in who decides to sign up for the transit pass. These results are shown in Figure 49.

Figure 49 Share of Respondents Who Report They Find the Bus Intimidating to Ride, Participant vs. Non-Participant Comparison, by Program Year

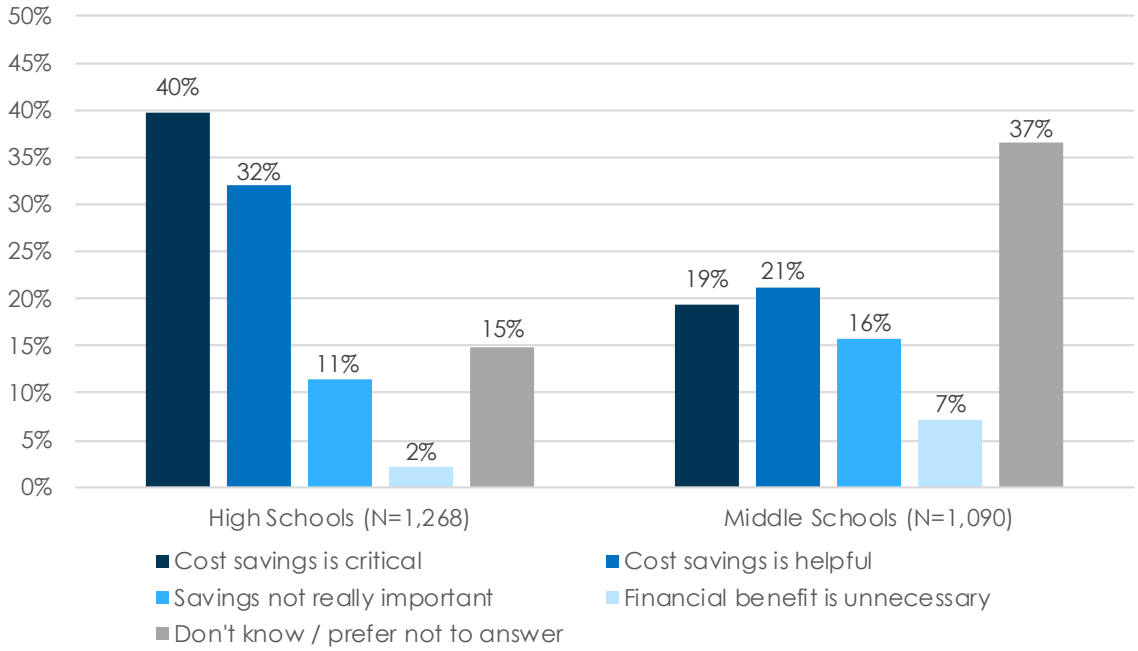


Cost to Families

Student surveys in each year of the pilot asked participants to indicate how important the cost savings of the transit pass was to them. In all three years, more than half of participants responded that the cost savings was either "helpful" or "critical" to their families.

In all three years, high school participants generally reported higher rates of "helpful" or critical" responses than middle school participants, although this is largely driven by the fact that a large proportion of middle school participants chose the response "I don't know/I prefer not to answer." This can be seen in the Year Three survey results for the cost savings question, which are portrayed in Figure 50.

Figure 50 Importance of Bus Pass Cost Savings to Year Three Participant Families

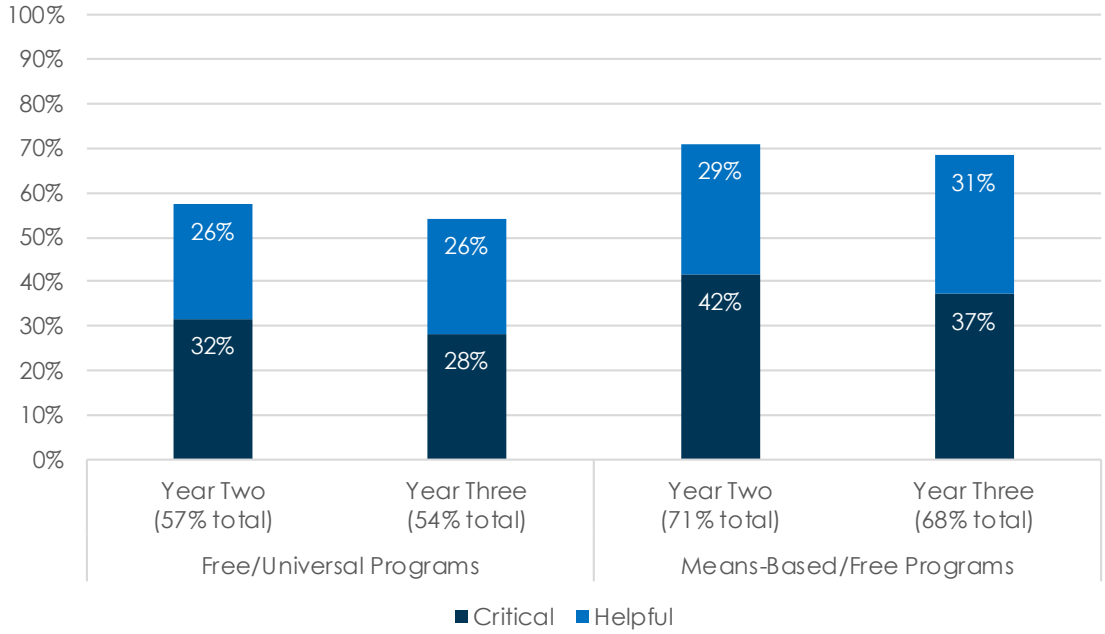


"[The pass] helps me to be able to get to places easier and not worry about the costs."

—Participant from Oakland High School (Oakland USD)

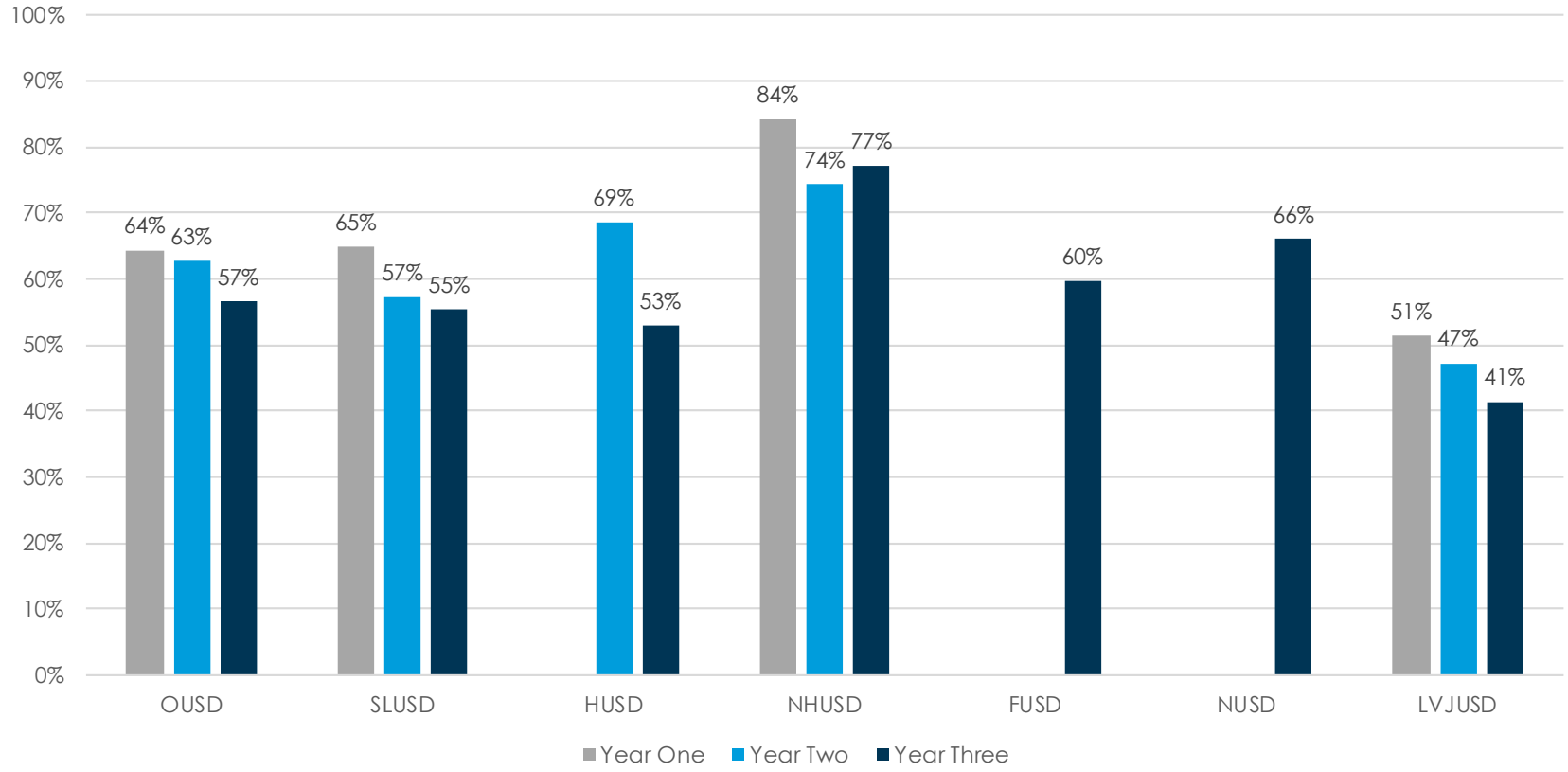
A larger share of survey participants in Means-Based/Free programs reported the cost savings of having a Clipper card as "helpful" or "critical" than their counterparts in Free/Universal programs. This was likely the case because Free/Universal programs included some participants that did not qualify as low-income while in Means-Based/Free programs, only the low-income students were eligible to participate. The survey results for both Year Two and Year Three are portrayed in Figure 51.

Figure 51 Share of Participants Who Report That Cost Savings is Helpful or Critical, by Program Model and Program Year



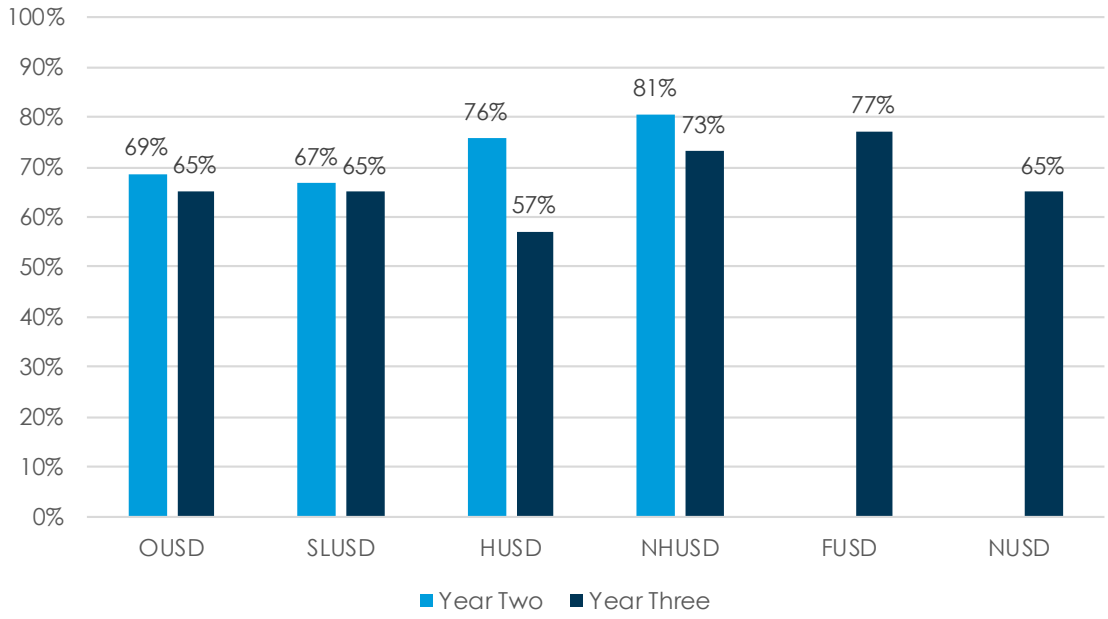
Across all three years of the pilot, the school district with the highest share of participants who responded that the cost savings is "helpful" or "critical" to their family was consistently New Haven USD. The school district with the lowest share of participants who responded that the cost savings is "helpful" or "critical" to their family was consistently Livermore Valley JUSD. These results are portrayed in Figure 52.

Figure 52 Combined Share of Participants Who Reported That Bus Pass Cost Savings is Either Helpful or Critical, by School District and Program Year



The surveys in Year Two and Year Three also asked participants who received a BART ticket about whether the cost savings from receiving the free BART ticket was important to their families. The Year Three survey results for the question on the savings associated with the BART ticket are portrayed in Figure 53.

Figure 53 Combined Share of BART Ticket Holders Who Reported That BART Pass Cost Savings is Either Helpful or Critical, by School District and Program Year



In both years that BART was in the program, a higher share of all participants reported that the cost savings associated with the BART ticket was either "helpful" or "critical" to their families as compared to the share who chose one of the same two responses for the question about the bus pass.

4 Administration, Cost and Implementation

Marketing and Outreach

During planning efforts for the pilot, school site and school district staff shared the observation that students and parents are generally overloaded with the variety and volume of information they receive from schools, so it can be hard to get their attention about new programs. Throughout the course of the STPP, the team used different marketing and outreach methods to reach students and parents to inform them about the existence of the pilot, to explain the sign-up process, and to encourage students to use the pass to ride transit. These efforts were refined over the three successive years of the pilot, ultimately resulting in a set of best practices that are recommended for use at all STPP schools going forward.

> ***"For us, just getting the information out to them is the biggest obstacle in whether or not they decide to get the free pass. We send so many messages to them, they are on overload."***
>
> *—School site administrator for Livermore High School (Livermore Valley JUSD)*

Outreach Best Practices

Debrief sessions revealed that there was no single-best method for communicating program details to students and their families. Participating schools have been encouraged to market the program as they see fit, as site administrators and school staff often have the best insights regarding how to effectively share information with their respective students. During the pilot, the most effective outreach methods recommended for use by school staff included the following:

- Program materials sent directly to families via the school's standard print and electronic communication channels
- Posters, flyers and banners placed around the school
- Regular announcements about the program on campus and in school newsletters
- Information added to the websites of schools and school districts
- Tabling at school orientation sessions and briefings for teachers and school staff
- Working directly with students and parents through family liaisons

Figure 54 details the outreach practices that occurred during the pilot and further serves as a guide for the outreach and communication strategies that will be implemented during the program's expansion.

Figure 54 Calendar of Required and Recommended Communications Activities

Time Points	Required Communications Channel	Recommended Communication Channels
Before the end of the school year leading up to program launch (approx. May/June)	▪ Pilot information on the school website landing page ▪ Student mailer – Letter of introduction – FAQs – Registration/consent form or link to form online	▪ Email listserv ▪ Digital fliers ▪ School social media
Leading up to orientation (approx. August)	▪ Pilot information on the school website landing page ▪ Staffed table during orientation to collect registration/consent forms	▪ Voice robocalls and/or text message campaign ▪ Welcome letter ▪ Email listserv ▪ Digital fliers ▪ School social media
Beginning of winter semester (approx. January)	▪ Pilot information on the school website landing page	▪ Voice announcements at school ▪ School newsletter
Throughout school year	▪ Pilot information on the school website with Registration, Consent, and Release form for download	▪ Physical posters at school

Partner Transit Agency Support

In addition to the recommended approaches described above, the pilot benefitted from the supportive efforts of the partner transit agencies, who provided complementary outreach in their service areas, such as:

- AC Transit distributed mailers introducing students and families to the program
- LAVTA has a two-week "Try Transit Free" period at the beginning of each school year to publicize transit use throughout the system for all customers (not just STPP participants).

- Union City Transit added a blurb about the program on their website encouraging families to investigate whether or not they meet eligibility requirements.
- LAVTA occasionally tabled at area schools to promote the STPP and transit use in general.

Travel Trainings

Travel training sessions were conducted during Year One and Year Two as another avenue for reaching out to students about the program. In recognition of the fact that younger students are typically less familiar or comfortable with riding transit, the sessions were provided at each participating middle school in the first year they joined the program. Each session typically included having a bus come to campus so that students could practice tapping their pass on the card reader plus activities that taught students how to ride the bus system, read a bus schedule, and use a map for trip-planning. Transit agency partners were instrumental in providing buses and marketing staff to highlight their transit services.

> ***"Before, they didn't know how to ride the bus. They are still young, so they need a push"***
>
> *—Parent and family coordinator from John Muir Middle School (San Leandro USD)*

The travel training sessions were deemed relatively successful at communicating key information to students. School site administrators at several of the middle schools reported a burst of sign-ups immediately following the travel training, and students who attended the sessions shared their enthusiasm for not having to be as dependent on parents and guardians for their travel needs.

However, the stand-alone sessions are not especially cost-effective compared to other available marketing channels. In Year Three, the travel training curriculum for the STPP was integrated into the County's Safe Routes To Schools program. Leveraging the existing partnership between Alameda CTC and schools, the Safe Routes to Schools program will be able to provide information about transit options to all students in the County.

> ***"The kids wear the [STPP] lanyard as a point of pride. They love it!***
>
> *—School site administrator from East Avenue Middle School (Livermore Valley JUSD)*

Student Feedback on Outreach Methods

The student surveys and focus groups that were conducted during the pilot asked participants how they obtained information about the program.

In both Year Two and Year Three, more than half of all responses to student surveys said that they asked school staff for assistance, including teachers and office staff, which was a substantial increase from the 27 percent of participants who used this method in Year One. This method also appeared to gain traction within schools over time. In the five school districts that continued from Year Two into Year Three, more than 50 percent of participants reported that they sought information about the program from school staff, and nearly 40 percent at the two new school districts.

Talking to a friend or classmate was another method for learning about the program that became increasingly used over time. It could be the case that, as more students signed up for the transit pass, they were able to provide more information to their peers about the program. School announcements were the most popular method of seeking information in Year One, but the popularity of this approach declined compared to the other methods.

A welcomed development in the Year Three survey was that almost five percent of participants said that they have no questions about the program. It is likely that the need to seek information declined as the program stabilized and became routine at each school. Countywide results for this survey question are presented in Figure 55.

In addition to asking participants how they learned about the program in the past, the annual student surveys also asked which methods would be best for sharing future information about the STPP. School announcements were consistently the most popular method requested by participants, with about half of all participants suggesting this option each year, despite the fact that participants seem less inclined to use the method in practice.

In addition to school announcements, email was an increasingly popular request for future communications, with more than 42 percent of participants suggesting this method in Year Three. Posters at school and text messages have each registered slightly less than a third of all participant responses in each year. Only 20 percent of participants said a social media tool would be an effective form of communication. Countywide results for this survey question are presented in Figure 56.

Figure 55 Methods Used by Participants to Obtain Information About the STPP

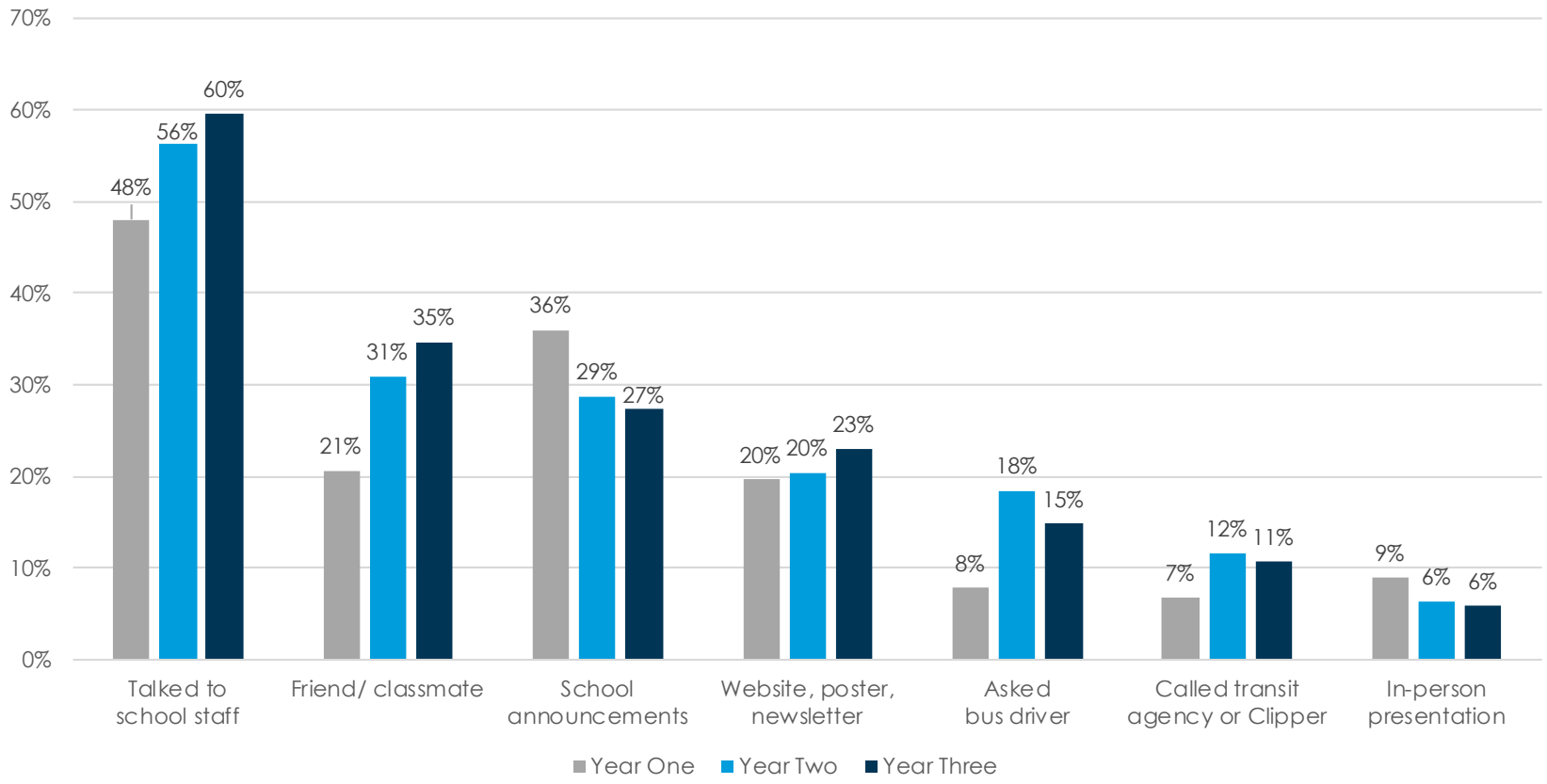
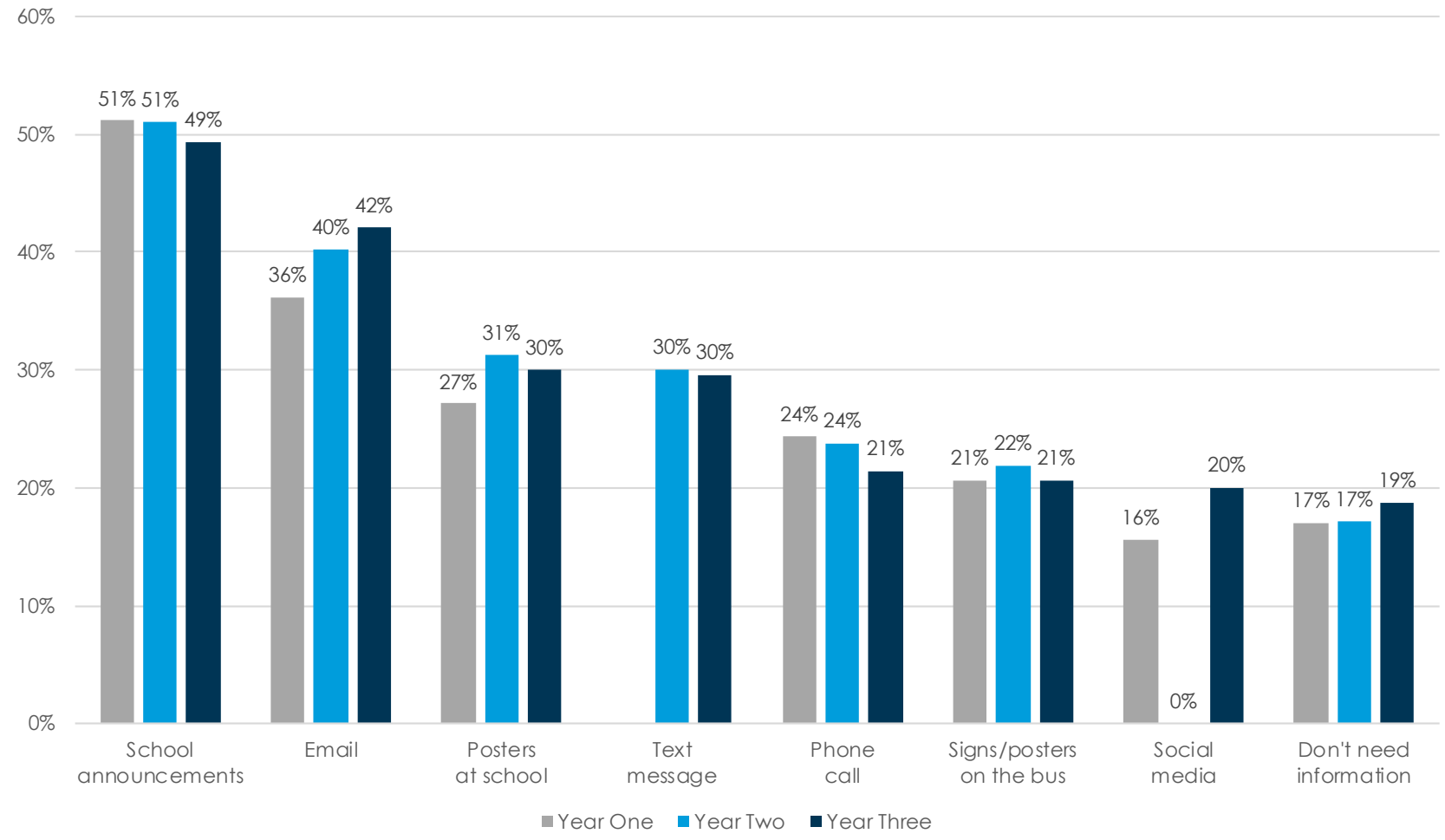


Figure 56 Suggested Options for Future Communications About the STPP



Program Model

The three-year pilot offered the opportunity to test and refine a variety of different program models in an iterative fashion. Four different program models were tested in Year One to explore different options for encouraging broad participation and transit use while ensuring prudent use of financial resources:

- **Free + Universal (Oakland USD)** – All students were eligible to receive a free Clipper card with unlimited access to AC Transit bus services.
- **Free + Limited Grades (San Leandro USD)** – Students in 8th-10th grades were eligible to receive a free Clipper card with unlimited access to AC Transit bus services.
- **Discount + Limited Grades (New Haven USD)** – Students in 8th-10th grades could purchase an AC Transit youth pass for $60 per semester (approximately $10 per month), and/or a Union City Transit youth pass for $54 each quarter (approximately $18 per month).
- **Discount + Means-Based (Livermore Valley JUSD)** – All students could purchase a discounted LAVTA/Wheels adult pass for $120 each trimester (approximately $30 per month) and students who were eligible for Free and Reduced-Price Meals (FRPM) could receive a pass at no cost.

The Limited Grades approach was intended to focus program resources on the students considered most likely to use and need transit. It was assumed that the youngest students (or their families) might not be comfortable with riding transit and that older students may be less interested in transit if they had access to personal vehicles. However, feedback received via school site administrator debriefs indicated that this approach ultimately suppressed program sign-ups in families with more than one student at the same school.

> ***"The only thing is that some students have siblings who are in a grade that isn't eligible; the parents still have to drop off one child, so they don't enroll the other one. If the program could be extended to all grades it would help."***
>
> *—School site administrator from John Muir Middle School (San Leandro USD)*

The requirement to have students and their families share the cost of the transit pass in two of the Year One program models was a cost containment strategy informed by the participating schools' estimated financial need. However, the discount approach was ultimately deemed to be too great a barrier to participation for needy families and it created far too much administrative complexity for school staff.

> ***"The main cost-related concern [we heard] was for students who would not ride every day—the cost of the pass does not make sense if the student only rides a few days a week."***
>
> *—School site administrator from East Avenue Middle School (Livermore Valley JUSD)*

Based on the learnings from Year One, only two program models were offered in Year Two and Year Three: a Free/Universal program open to all students at participating schools and a Means-Based/Free program in which a free transit pass was available only to students from families with incomes at or below the threshold for FRPM.

Both programs have proven successful and are expected to be continued in the expanded program. The main criteria differentiating the two program models is a tradeoff between cost and coverage. Feedback and observations from students and families as well as school staff and administrators indicate that there is demand for a pass for families who do not qualify for FRPM; however, the costs of Free/Universal programs are much higher.

Pass Format

Clipper Cards

Clipper cards loaded with unlimited transit pass products allow for unlimited travel, unconstrained by time of day, school schedule, or day of week. These cards also offer the advantage that they can be canceled remotely and are replaceable. Clipper provides high quality data that is comparable across all programs, although some pre-existing reports have limitations.

During Year One, neither Union City Transit nor LAVTA had an appropriate transit pass product that could be loaded onto Clipper cards, so the team opted to use stickers affixed to student ID cards as a flash pass. Beginning in Year Two, Clipper-based transit pass products were available for all three bus operators, so all transit passes were provided on a single Clipper card. This change led to easier fare payment for students who use both transit operators in New Haven USD and simplified operating procedures for school site administrators in both New Haven USD and Livermore Valley JUSD.

Takeaway: The use of a single Clipper card for all bus pass products beginning in Year Two was easier to manage and yielded more consistent data compared to the flash pass stickers used in Year One.

Throughout the course of the pilot, there was no joint fare product that could accommodate both AC Transit and Union City Transit in a single pass. Therefore,

the development of a back-office procedure was necessary to enable students to have a card that allowed unlimited access to both transit operators.

To avoid Clipper programming costs and time, regular coordination was necessary between Alameda CTC, AC Transit, and Union City Transit to ensure each New Haven USD Clipper card was properly loaded with both passes before being distributed to the students and for every replacement card that needed to be issued. Going forward, development of a joint pass product would simplify day-to-day administration of the program. With the next generation of Clipper (Clipper 2.0) now in the planning process, there may be opportunity to improve on some of the challenges with using Clipper for this program.

Takeaway: Development of processes to enable a single Clipper card to provide access to multiple operators was a challenge in New Haven USD.

To get the pilot program up and running quickly without additional software programming in the Clipper system, the program team opted to use adult Clipper cards for the entire pilot phase. The adult cards did not require age verification, which made the process of issuing the initial card much easier. Yet, replacements were sometimes more complicated, especially if the student had not registered their card online, or if the customer service representative was not alerted that the student was a participant in the STPP.

In addition, the adult card limited the students' ability to load additional youth fare products onto their card; if they added transit passes or stored value to their STPP-issued card, they would pay the adult fare. Due to these features, the expanded program will transition to Youth Clipper cards in the 2019-20 school year and beyond.

Takeaway: Youth Clipper cards loaded with unlimited pass products are optimal for a long-term program.

BART Tickets

BART does not have a pass product that can be added to a Clipper card in the same way as the bus passes, so when BART was added to the pilot at the start of Year Two, BART youth paper tickets were used. This required students to carry two transit payment media. As was discovered during Year One in New Haven USD, it is always challenging to manage multiple pass products and different fare media. Further, the BART tickets could not be canceled or replaced. Due to the opportunities for abuse, distributing BART cards required maintaining a reliable inventory and secure storage by the school administrator.

Takeaway: Using multiple fare products and policies added complexity to the program.

It was also challenging to establish an appropriate value for the BART tickets to meet students' variable travel needs. Although bus passes allow for unlimited travel for a set price, Alameda CTC had to pay for a fixed amount of BART value for each student. To help control program cost during the pilot period, students were limited to one $50 BART card each school year, limiting its utility as a school commute option and supporting only occasional use to after-school activities or other irregular trips. Many school program administrators highlighted the fact that a small sub-set of their students really needed BART for commuting long distances because of complex family situations or work opportunities. Those students would have benefited greatly from a higher value BART ticket but it was not clear how to create an equitable system for allocating tickets to account for these factors.

Takeaway: The limited fare value that was provided on the BART ticket is not a good fit for students' travel needs.

Finally, there was some confusion about the intent of the BART ticket. The program team received comments from site administrators indicating that the tickets were being used for field trips, which was not the original intent. Clearly there were some positives to this approach: enrichment opportunities are a benefit to the participating students, and school site administrators explained that using the STPP-provided tickets is much easier for them than making a special advance order directly from BART. Also, the STPP tickets are provided to the schools free of charge, so they do not have to allocate funds from their own budget to pay for them. However, a single field trip is unlikely to use the full value of the $50 ticket, and the unspent balance may go unused if schools did not distribute the BART tickets out to students for their own personal use.

Takeaway: Students may not use all of the fare value loaded onto their paper tickets, which could result in excess program expenditures.

Card Replacement

Although many elements of program administration have been streamlined and improved during the pilot, the card replacement process continued to be one of the more challenging parts of the program.

AC Transit and Union City Transit

During the pilot, card replacements for participants within the AC Transit service area (including students who use Union City Transit) were intended to be

handled through the standard Clipper customer service channels. Students were able to call the Clipper telephone customer service center for assistance, or, if they knew their card number, they were able to request a replacement through the Clipper website. Once a replacement request was received by Clipper and flagged as an STPP request, the information was forwarded to dedicated staff at AC Transit to produce the replacement card. The new Clipper cards were loaded with the correct student pass(es) and mailed out to the participating schools.[22]

Given the complexities of this system, students and families tended to communicate with their site administrators first before reaching out to Clipper on their own. However, if a student chose to contact Clipper directly, problems sometimes occurred if they did not indicate to the agent that they were a part of the STPP. Without this information, the Clipper representatives sometimes routed the request incorrectly, or they processed the replacement as a stand-alone e-cash card that did not have the STPP transit pass loaded on it. This resulted in the student waiting another week or two for a second replacement card. Besides the impact on the student of not having a card, this created additional work for school staff, who often received extra questions and complaints from students and families who were frustrated with this process.

During Year Two, program staff refined processes for managing transit passes, including developing a more structured approach to Clipper card production and data transfers. Debriefs at the end of Year Two indicated that the improvements helped to some degree, but the level of effort required of school staff was still considered problematic. Going forward, the expanded program will use youth Clipper cards that can be registered to individual students more easily, which should help reduce confusion when contacting Clipper customer service for assistance.

LAVTA/Wheels

The process for students in Livermore Valley JUSD was somewhat different for the pilot. LAVTA handles all card production (including replacements) for participants in their service area. A participant who has lost their card fills out a special form and gives it to their school site administrator, who then forwards the request directly to LAVTA. If school is not in session, students can call

[22] Students attending schools in New Haven USD have access to both AC Transit and Union City Transit. As such, an extra step is required for replacement cards that are distributed to James Logan High School and Cesar Chavez Middle School. Every week, a member of the program team sends replacement card serial numbers to Union City Transit. Union City Transit staff load Union City Transit passes onto the cards via their Clipper backend system, activating and/or deactivating the cards, per request. It takes about three days for the Clipper card to recognize both passes.

LAVTA/Wheels customer service directly; Clipper representatives need not be involved.

Once LAVTA receives the request, agency staff print the replacement card, load it with the pass, and mail it out to the school. In general, the actual replacement process has gone smoothly in Livermore Valley JUSD but has entailed additional work for transit agency staff. Also, ease of replacement may have an unintended effect, in that some students have lost their card multiple times, which creates extra work and cost for LAVTA staff.

Takeaway: For students and families, the card replacement process can be challenging to navigate. (see additional related take away under Staff Level of Effort below.)

In the AC Transit and Union City Transit service area, students and families must pay $5 to Clipper to process a replacement card. This fee itself is a hardship for some families and making the payment can be a challenge in some cases. A credit or debit card is required for Clipper to accept payment, so at a minimum, students must get help from an adult, and students from unbanked families are generally unable to get a replacement through Clipper customer service. Many students can pay with cash instead of a card, so several site administrators generously agreed to accept the money from the students and then they used their personal credit or debit card to make the payment to Clipper. This step created extra delay in getting the request submitted and was an added administrative burden for school staff.

> ***"My biggest issue has been students who can't afford to pay the $5 card replacement fee…and while they wait for the card in the mail, they can't pay bus fare for that 2-4 week turnaround window."***
>
> *—School site administrator from John Muir Middle School (San Leandro USD)*

> ***"…for one kid, we paid the $5 replacement fee. Because it was more important to us to get the kid here every day."***
>
> *—School site administrator in Hayward USD*

LAVTA did not charge students to process a replacement card in order to simplify processing and eliminate barriers. As a result, there is no disincentive to not lose a card, and they have had repeat card losses from the same students, which could become a problem over time.

Takeaway: There are both positive and negative aspects to the card replacement fee charged by Clipper.

Staff Level of Effort

Over the course of the pilot, the team has worked to reduce program complexity and simplify administrative processes to reduce the level of effort needed to manage the STPP. This section discusses the staff level of effort for three different groups who worked on the pilot: school and school district staff, transit agency staff, and Alameda CTC and consultant staff. Additional information on staffing-related expenditures is included in the discussion of program costs later in this chapter.

School and School District Staff

The staff level of effort in Year One was significant for all four program models for several reasons. At schools with high participation rates, the volume of paperwork and data entry consumed significant staff resources at the beginning of the school year, which is already a busy time for most school staff. Schools with means-based and/or discount programs experienced heavy workloads due to the added steps required for making eligibility determinations and processing payments from students. Finally, the use of flash passes in two school districts required additional paperwork and processes to manage and securely store the sticker inventory.

> ***"It's really time-consuming. I mean, I love doing the program. It's not a burden. But it's time consuming."***
>
> *—School site administrator for James Logan High School (New Haven USD)*

Based on feedback from Year One, program models and administrative processes at school sites were simplified, and administration and management of the STPP in Year Two was much more efficient than in Year One for multiple reasons:

- Simply having familiarity with the program made the program easier to manage and staff were better able to handle ad hoc questions that arose.
- All passes were free to students, which eliminated cash handling entirely.
- Determination of financial need changed from being evaluated directly by school staff to the use of a self-reported status on the sign-up form, which eased back-office procedures.
- All three bus operators were able to issue their passes on Clipper cards, which eliminated the use of flash pass stickers and made pass production and data reporting much more streamlined.

- Data transfer protocols shifted to the use of cloud-based systems, which reduced paperwork and time spent on coordinating program status.

Debriefs conducted at the end of Year Two confirmed that these new processes worked well, and the improvements led to significant decreases in staff time commitments relative to the increasing scale of the program. The one exception was cases where there was staff turnover; the related loss of institutional knowledge at some schools made it seem like starting from scratch with a new program. Still, based on this positive feedback, the Year Two processes were continued in Year Three and are largely being replicated for the expanded program.

> ***"From my perspective, one of the reasons I think [the program] is better is because I haven't had to get involved. That means it's going well!"***
>
> *—School principal in New Haven USD*

Although the overall level of effort spent on the program was manageable, staff did highlight that there was significant workload at the beginning of the year to register new participants. To help mitigate the short-term surge in level of effort, in Year Three Alameda CTC used temp workers to assist with data entry of the first batch of sign-up forms received at the very beginning of the school year. This reduced workload and provides an incentive to school administrators to encourage students to sign-up right away. This process improvement was considered successful in Year Three and is being continued as part of the expanded program in the 2019-20 school year.

> ***"I need to say that we really appreciate the people who are taking the time to implement this. They might say that it didn't affect their day to day jobs, but it did increase their workload, and they may not be willing to say so, because everyone understands how important this is to our kids."***
>
> *—School district contact from Livermore Valley JUSD, on behalf of school site staff*

Takeaway: Despite improvements to the program, there is a notable workload for school staff at the beginning of the year to register new students.

School site administrators reported several challenges related to card management and replacement: 1) managing expectations of students and families, especially around replacement cards; 2) the extra effort required to pay card replacement fees for students without credit cards; and 3) challenges with the card replacement process in general.

"The application form is so simple, that it's kind of a shock to them when they go to replace the card, and the process is so much more complicated."

—School site administrator in Oakland USD

Takeaway: The complexity of the card replacement process created challenges for site administrators.

Transit Agency Staff

Staff level of effort varied a great deal between transit agencies, because each agency was responsible for a different set of tasks.

However, most transit agencies reported improvements from Year One to Year Two, due to the transition to Clipper, as well as streamlined administrative processes. For example, in Year One, new Clipper cards were processed by AC Transit on a rolling basis throughout the year, but in Year Two, new card production was limited to one batch per month to reduce staff workload, with card replacements processed once per week.

AC Transit

AC Transit had the largest administrative burden of the three bus operators, because they produced and managed about 90 percent of all Clipper cards in the STPP. Activities included routine card processing (production, replacements, maintaining card stock, shipping), as well as database management and general trouble-shooting.

In all three years of the pilot, the startup period at the beginning of each school year involved significant workload to print, code, and process new Clipper cards. This was partly because of changes in the actual pass products and fare media that occurred during the rapid iteration of the pilot, requiring re-issuance of large numbers of Clipper cards at the start of each year. As the program expands, schools will continue to add participants but once the program roll-out stabilizes, the start-of-year workload will slacken somewhat, because new cards will only need to be issued for first year students at each school.

In addition to the production of new cards, AC Transit staff also produced replacement cards on a weekly schedule throughout the year. The time involved in direct production of replacements was relatively minimal, but follow-up inquiries from site administrators required multiple interactions with Clipper Customer Service, which was time consuming. It is expected that the transition to Youth Clipper cards in the expanded program—together with the requirement for students to register them individually—will reduce the effort that AC Transit staff has to spend coordinating with Clipper Customer Service.

Union City Transit

Staff involvement at Union City Transit was less than the other operators but was still notable given the agency's small staff size. Since there was no joint pass product allowing for unlimited travel on both AC Transit and Union City Transit, an extra step was required for New Haven USD's Clipper cards. After AC Transit produced the cards, the serial numbers were transmitted to staff at Union City Transit who then used their Clipper backend system to load a Union City Transit pass onto those cards. Site staff at James Logan High School and Cesar Chavez Middle School held their students' cards a few extra days to make sure that both passes were properly loaded.

The workload for Union City Transit was minimal, but the time-sensitive nature of Clipper card replacement was difficult for a smaller agency to accommodate along with other responsibilities.

LAVTA

The staff experience at LAVTA was somewhere between that of AC Transit and Union City Transit. LAVTA handled all card production and replacements for participants in East County (Livermore Valley JUSD). The transition to Clipper cards at the beginning of Year Two required a lot more effort than Year One, but by the end of Year Three, procedures and systems stabilized, so the level of effort became more predictable.

Alameda CTC and Consultant Staff

Alameda CTC had overall responsibility for managing the STPP, including overall project management and agency-level coordination with all school district and transit partners. Throughout the pilot, Alameda CTC was supported by a consultant team led by Nelson\Nygaard Consulting Associates who provided additional staffing capacity for the sign-up period at the start of each school year; day to day administration and coordination with school site staff and transit agencies; data management; travel training; and pilot evaluation.

Staff and consultants had to create processes, protocols, procedures and templates for all aspects of the program, including: student registration, pass creation, distribution, deactivation and replacement procedures; school district and transit agency legal agreements and confidentiality agreements; storage, management and transfer protocols for sensitive student data; evaluation data collection, management and analysis approaches; and travel training curricula.

With this initial work largely complete, the Year Two development effort consisted of refining operational processes and documents to accommodate many of the program design changes such as the shift to Clipper cards in all schools. By Year

Three, staff was primarily focused on simplifying and standardizing the on-boarding process for news districts and schools, in preparation for wider expansion of the program after the end of the pilot.

Takeaway: Significant one-time expenditures were necessary in Year One to get this brand-new program up and running.

Although the level of effort required for each school should be relatively modest as processes become more streamlined and familiar, there is a base level of effort required for every new school involved in the program, so the staffing required for day-to-day management will likely increase as the number of schools increases. Additional staff support could take the form of one dedicated, full-time staff person who takes on a larger role or additional staff members that would share day-to-day project responsibilities. In either case, a cohesive team that is closely coordinating on the many nuances of the program is critical to the success of the program.

Takeaway: Additional staff capacity will be required to support continued expansion of the program.

Program Costs

Most of the costs associated with any transit pass program comes from the expenses paid out to local transit agencies in exchange for the transportation services they are providing to students. As a result, costs can grow quickly as the program expands both in participation and usage over time.

To ensure that sufficient funds would be available for all three years of the pilot, the program team took a necessarily cautious approach to rolling out the program. Without knowing in advance how popular the program would be and how much it would actually cost administratively and by transit usage, the program was initially launched at only a handful of schools and school districts. Year One was largely focused on testing a wide variety of program models and payment options as potential strategies for cost containment to meet the goal of finding sustainable model(s) that could be continued after the pilot phase.

Once the best practice program models began to take shape, the expansion of the program in Year Two and Year Three was measured and deliberate. The program required a tremendous amount of staff support and coordination with key partners at schools, school districts, and the transit agencies. It was important that the program not expand too quickly during this time to maintain sufficient staffing capacity to evaluate and re-tool the pilot at intermediate points along the way.

Although much of the process and protocol development for the program has reached a mature stage, bringing on new schools and school districts will continue to add to the overall level of effort required to monitor and manage the program on a day-to-day basis. However, the proportion of costs devoted to administration should stabilize as the program becomes institutionalized in more schools in the county.

Over the three years of the pilot, the total cost was just under $8 million, 83 percent represents the cost of transit service utilized by the students. Approximately 2 percent was spent on direct costs for program materials such as the physical Clipper cards, printing and shipping costs, and translation services for sign-up forms and fact sheets. The 16 percent was spent on administrative labor expenses, including billed time for project management by program staff at Alameda CTC, school liaison and pilot evaluation efforts handled by the Nelson\Nygaard consulting team, and compensation for AC Transit staff time spent on Clipper card processing.

These totals and percentage shares are for the full three-year pilot, and they include significant administrative costs before and during the first year of the program, as systems and protocols were initially being developed. By Year Three, the share of costs devoted to staffing had fallen to less than nine percent of annual costs. Combined with the modest amount of other direct costs in Year Three, only ten percent of total expenses that year were for administrative overhead.

Takeaway: Measured expansion ensured a balance of fiscal responsibility and the overall objective of encouraging students to sign up for and use the transit pass.

Linking the Transit Pass to Other Supportive Programs

Linkages with Existing Fare Products

A recurring theme heard in focus groups and student surveys was that pilot participants were frustrated that their transit passes did not work on other Bay Area transit operators outside of Alameda County, such as Muni in San Francisco and VTA in Santa Clara County.

Due to the use of Adult Clipper cards for the pilot phase of the program, students were not encouraged to add other fare products to their STPP cards, because it would require them to pay full fare to ride instead of being able to take advantage of youth fare discounts. This meant that students who regularly used Clipper to ride another transit system had to carry and keep track of two different Clipper cards for fare payment.

Fortunately, the STPP program is able to transition to Youth Clipper cards beginning in the 2019-20 school year. This will allow students to access discounted fare products on all transit operators, including BART and other transit operators outside their school district.

As noted earlier in this chapter, transit operators in Alameda County currently do not offer any joint pass products that allow for unlimited travel on more than one system. This is a topic that could be explored in the future, potentially as part of the implementation of the next-generation regional farecard, known as Clipper 2.0, that is currently in development.

Leverage with Other School-Based Transportation

The pilot provided the program team insight into several other connections between the transit pass and other school-based transportation needs and services. As noted previously in this report, the transit pass program was utilized by many schools to support enrichment programs such as field trips, inter-scholastic sports, and coding camps. This option was particularly helpful when a school district's resources for off-campus transportation were oversubscribed for the year.

The program team also identified smaller scale benefits of the transit pass in some locations. School staff in Hayward USD noted that some of their students regularly attend vocational training at Chabot College, and that transit could be an option to replace a dedicated bus that currently shuttles students between Hayward High School and Chabot. In New Haven USD, the program could support middle school students who attend an after-school program at the Union City Family Center in the future.

> ***"The Cesar Chavez middle school has an after-school program that serves about 150 kids who are low-income / high-risk. In the past, we had a grant to pay for bus service to take 50-60 kids back and forth from Cesar Chavez into the Decoto neighborhood each evening, but we did not get funded for next year. A lot of the participants would probably qualify under the means-based Year Two program, so it's perfect."***
>
> *—Staff member from KidsZone afterschool program (New Haven USD)*

Leverage with Other Funding and Administration Programs

During the school debrief sessions, several administrators acknowledged that the STPP pass complements the existing McKinney-Vento transportation funding program. McKinney-Vento is a federal program that provides grants to help pay

for services for homeless adults and children. School transportation is an eligible expense for the program, and some districts have historically used McKinney-Vento funds to buy transit passes for qualifying students. Schools have been able to encourage their students to get a transit pass through the STPP, which leaves more McKinney-Vento funds available for less routine transportation needs or other types of services altogether.

> ***"This program has helped. In the past three-plus years that I've been at this school, I have always had a stockpile of [McKinney-Vento] passes at my desk, but I haven't had to request any replenishments this year, so it has definitely gone down. In a normal year, 5-6 families have asked, but this year I can't think of any that have come in."***
>
> *—School site administrator at Livermore High School (Livermore Valley JUSD)*

In addition to existing funding programs, the STPP is likely to be a good fit with potential funding programs that may emerge at the state level. In both the previous and the current legislative sessions, members of the California Assembly have introduced bills to try to jump-start transit pass programs for youth throughout the state. Assembly Bill 17 (AB17) was introduced in December 2016 and passed by the full legislature, but it was vetoed by the governor in October 2017. Assembly Bill 1350 (AB1350) was introduced in February 2019, but was held in committee through 2019. Both bills would establish a policy framework for a pilot statewide grant program for transit pass programs like the STPP, though neither bill appropriated revenues to provide the actual funding source for the grants. AB1350 specifically anticipates that future funds could likely come from the state's Greenhouse Gas Reduction Fund, but the Legislature will need to balance competing demands on this revenue source before making their next round of allocations.

Alameda CTC staff will continue to monitor developments on AB1350 and will continue to seek additional funding that will support the STPP from local, regional, state and federal sources.

5 Future of Program

Key Lessons Learned

The three-year pilot demonstrated that the STPP provides meaningful benefits to students and families in Alameda County. The program team learned several key lessons about what worked best for participants, for transit agency partners, and for school administrators, which have been helpful in designing an expanded program and could be useful to other agencies considering similar programs.

Program Participation and Transit Ridership: *Benefits scale effectively and efficiently*

The growth in program participation exceeded the growth in the number of students who were eligible for the program each year, suggesting that increased familiarity with the program over time contributes to greater uptake by the student body. Simple program models encourage higher participation rates, and program participation is correlated with level of need, with higher participation rates seen at schools with higher shares of students from low income families. Although some participants were already transit riders before they joined the program, the STPP exposes other students to transit for the first time, and encourages all participants to become regular transit riders as this behavior becomes normalized among students' peers. Transit operators recognize the benefits of the increased ridership, and have been able to accommodate the new student riders.

Students and Families: *Benefits extend beyond mobility*

Students and their families were highly supportive of the program. Participants cite improved access to school, jobs, and other after-school activities. Parents appreciate that the program simplifies school transportation logistics. A majority of participants say the financial benefit of a free bus pass is helpful or critical to their family.

Though not part of the original intention of the program, the bus passes help school administrators support off-campus enrichment opportunities for students because the transit pass offers a transportation option that might not otherwise be available. School site administrators report that the bus pass is extremely helpful when working with students who have truancy issues or complex family situations, because it provides them with a supportive tool that removes an obstacle to improving students' attendance patterns.

Administration, Cost, and Implementation: ***Simpler programs reduce costs and enhance external and internal partnerships***

The program team took an iterative approach to implementation of the pilot, starting small and minimizing initial startup costs during the early years. This allowed the team to confirm effective models and parameters before expanding the program. An iterative approach, however, does not translate into reduced up-front effort. Pre-launch planning is necessary to develop all of the protocols and procedures necessary to roll out a program in a setting in which there are multiple school districts and transit operators, all while maintaining appropriate privacy protections for students.

School district staff and site administrators are important partners in this process, who make significant time investments in this program to support their students. The program is most successful when individual school officials champion the program and work to ensure adequate resourcing on the part of their school. Despite their willingness to contribute, it is also important to minimize the administrative burden on site administrators to be able to scale the program over time. After the first year, the program focused on simplifying the rules and requirements of program participation as well as the paperwork and data exchange that occurred behind the scenes.

Even with these simplifications, some aspects of the program remain challenging. In particular, replacement of lost or stolen Clipper cards is a burden, both because it can be difficult to navigate an unfamiliar process and also because students who have come to rely on the transit pass do not always have transportation alternatives while they wait for the replacement. It is also very difficult to seamlessly integrate all local transit providers into the pass program in an area with multiple providers with different fare structures. The administrative complexity of offering multiple fare products makes the program a less cost-effective benefit.

Partnerships Are Fundamental to Success

Early in the planning for this program, a variety of stakeholders and community leaders championed the concept of a student transit pass. Stakeholders' vocal and visible support helps secure necessary funding to resource the program appropriately, and to allow for an experimental approach. The ongoing support and flexibility of participating schools and districts and transit operator partners is essential to allowing the program to adapt over time towards a more sustainable program design. The success of the STPP is largely attributable to the willingness of all of these partners to prioritize the needs of students and their families for the benefit of Alameda County as a whole.

Implementation of Expanded Student Transit Pass Program

As a result of the effective implementation and evaluation of the STPP to date, in December 2018 the Commission approved continuation and phased expansion of the program beyond the pilot period, which ended July 31, 2019. The STPP plans to incorporate all qualifying middle and high schools with transit service in Alameda County within the next five years. At the end of the phased expansion, over 140 schools and approximately 58,000 students will have access to the program.

Based on lessons learned from the pilot program, the Commission approved a Means-based/Free program except for school districts in which a very high percentage of students are eligible for Free and Reduced-Price Meals (FRPM), which is determined based on household income. For initial phases, districts where 75% of more of students overall are eligible for FRPM qualify for a Free/Universal program, while all other districts qualify for a Means-based/Free program. Exceptions can be made where significant transit service capacity exists and budgetary impacts can be mitigated in consultation with the transit agency.

The STPP students will be transitioned for an adult Clipper card to a youth Clipper card. A youth Clipper card not only has the free bus pass loaded onto it, but also allows students to access youth discounted fares on other transit agencies, including a 50 percent discount on all BART fares if they add e-cash to the card.

Alameda CTC will conduct evaluation of the program through the expansion period, using a streamlined and focused set of evaluation criteria (participation rate, frequency of pass usage, transit ridership and capacity, and program costs) based on lessons learned during the pilot period. Evaluation will continue to occur annually for the first three years of the program and will include recommendations for program improvements as appropriate.

APPENDIX A

Shortlisted Schools Approved by the Commission

Appendix A – Shortlisted Schools Approved by the Commission

Selection of schools approved May, 2016. Data for each school last updated January, 2018.

■ Schools Participating in the STPP, as of Year One (*), Year Two (**), and Year Three (***)

Planning Area		School District	School Name	School Type	Charter	School Level	Grades	Enrollment (2016-2017)	SR2S	Traditional/ Continuation School Day	Existing Bus Stop within 1/4 mile of School	Income Opportunity (percent of FRPM eligible students)	# of Bus Routes
North	1	Berkeley Unified	REALM Charter High	Traditional	Charter	High	9 - 12	347	No	Yes	Yes	66%	9
	2	Berkeley Unified	REALM Charter Middle	Traditional	Charter	Middle	6 - 8	249	No	Yes	Yes	70%	9
	3	Oakland Unified	Castlemont High*	Traditional	Non-charter	High	9 - 12	759	No	Yes	Yes	83%	10
	4	Oakland Unified	Fremont High*	Traditional	Non-charter	High	9 - 12	764	No	Yes	Yes	86%	6
	5	Oakland Unified	McClymonds High**	Traditional	Non-charter	High	9 - 12	372	No	Yes	Yes	89%	6
	6	Oakland Unified	Oakland High***	Traditional	Non-charter	High	9 - 12	1,562	No	Yes	Yes	88%	15
	7	Oakland Unified	Roosevelt Middle***	Traditional	Non-charter	Middle	6 - 8	524	No	Yes	Yes	93%	3
	8	Oakland Unified	Westlake Middle**	Traditional	Non-charter	Middle	6 - 8	383	Yes	Yes	Yes	86%	6
	9	Oakland Unified	Bret Harte Middle	Traditional	Non-charter	Middle	6 - 8	500	No	Yes	Yes	81%	10
	10	Oakland Unified	Aspire Berkley Maynard Academy	Traditional	Charter	Middle	K - 8	519	No	Yes	Yes	80%	4
	11	Oakland Unified	Oakland Military Institute	Traditional	Charter	Middle/High	6 - 12	683	No	Yes	Yes	73%	10
	12	Oakland Unified	Alliance Academy	Traditional	Non-charter	Middle	6 - 8	328	No	Yes	Yes	87%	1
	13	Oakland Unified	Elmhurst Community Prep	Traditional	Non-charter	Middle	6 - 8	383	No	Yes	Yes	93%	1
	14	Oakland Unified	Frick Middle*	Traditional	Non-charter	Middle	6 - 8	227	No	Yes	Yes	94%	5
	15	Oakland Unified	Urban Promise Academy	Traditional	Non-charter	Middle	6 - 8	370	No	Yes	Yes	95%	6
Central	16	San Leandro Unified	San Leandro High*	Traditional	Non-charter	High	9 - 12	2,608	Yes	Yes	Yes	58%	5
	17	San Leandro Unified	John Muir Middle*	Traditional	Non-charter	Middle	6 - 8	970	Yes	Yes	Yes	60%	1
	18	Hayward Unified	Cesar Chavez Middle	Traditional	Non-charter	Middle	6 - 8	567	Yes	Yes	Yes	82%	5
	19	Hayward Unified	Bret Harte Middle**	Traditional	Non-charter	Middle	7 - 8	637	Yes	Yes	Yes	59%	8
	20	Hayward Unified	Hayward High**	Traditional	Non-charter	High	9 - 12	1,576	No	Yes	Yes	66%	3
	21	San Lorenzo Unified	Bohannon Middle	Traditional	Non-charter	Middle	6 - 8	854	Yes	Yes	Yes	68%	4
	22	San Lorenzo Unified	San Lorenzo High	Traditional	Non-charter	High	9 - 12	1,394	Yes	Yes	Yes	76%	2

Planning Area		School District	School Name	School Type	Charter	School Level	Grades	Enrollment (2016-2017)	SR2S	Traditional/ Continuation School Day	Existing Bus Stop within 1/4 mile of School	Income Opportunity (percent of FRPM eligible students)	# of Bus Routes
South	23	New Haven Unified	Cesar Chavez Middle*	Traditional	Non-charter	Middle	6 - 8	1,255	Yes	Yes	Yes	62%	1 ACT 4 UCT
	24	New Haven Unified	James Logan High*	Traditional	Non-charter	High	9 - 12	3,750	No	Yes	Yes	45%	9 ACT 6 UCT
	25	Newark Unified	Newark Junior High***	Traditional	Non-charter	Middle	7 - 8	901	No	Yes	Yes	51%	4
	26	Newark Unified	Newark Memorial High***	Traditional	Non-charter	High	9 - 12	1,703	No	Yes	Yes	45%	8
	27	Fremont Unified	William Hopkins Junior High***	Traditional	Non-charter	Middle	7 - 8	1,119	No	Yes	Yes	5%	2
	28	Fremont Unified	American High***	Traditional	Non-charter	High	9 - 12	2,200	Yes	Yes	Yes	17%	5
East	29	Dublin Unified	Wells Middle	Traditional	Non-charter	Middle	6 - 8	920	Yes	Yes	Yes	15%	2
	30	Dublin Unified	Dublin High	Traditional	Non-charter	High	9 - 12	2,499	Yes	Yes	Yes	8%	5
	31	Livermore Valley Joint Unified	Del Valle Continuation High**	Continuation	Non-charter	High	7 - 12	121	No	Yes	Yes	54%	1
	32	Livermore Valley Joint Unified	East Avenue Middle*	Traditional	Non-charter	Middle	6 - 8	618	Yes	Yes	Yes	31%	1
	33	Livermore Valley Joint Unified	Livermore High*	Traditional	Non-charter	High	9 - 12	1,810	No	Yes	Yes	21%	4
	34	Livermore Valley Joint Unified	Andrew N. Christensen Middle**	Traditional	Non-charter	Middle	6 - 8	625	No	Yes	Yes	17%	1
	35	Pleasanton Unified	Thomas S. Hart Middle	Traditional	Non-charter	Middle	6 - 8	1,243	Yes	Yes	Yes	6%	6
	36	*Pleasanton Unified*	*Foothill High*	*Traditional*	*Non-charter*	*High*	*9 - 12*	*2,148*	*Yes*	*Yes*	*Yes*	*6%*	*3*

APPENDIX B
Performance Indicators and Metrics

Appendix B: Performance Indicators and Metrics

Figure B-1 Quantitative Performance Indicators

Indicators*	Rationale	Metric	Data Source
Transportation costs to families (participant cost)	To determine the financial burden of transportation to/from school	Amount that families pay for school transportation and/or the pass	Determined as part of program model parameters Surveys
Participant or student attendance	To discern a relationship between pass program design and attendance	Average daily attendance	Mandated school reporting
Pass availability and use	To determine the level of penetration of the pilot program (i.e., how many students could use the pass vs. actually use the pass)	Number of eligible students Number of passes distributed Number of passes used (depending on choice of fare media)	School sites, transit operators, and Clipper if applicable
After-school activity participation	To discern a relationship between pass program design and after-school activity participation	Attendance of students at key clubs, activities and organizations associated with each site	Waiver forms and student surveys
Student ridership	To determine the impact of the pass program on ridership (i.e., net and gross change in ridership)	Number of passes provided Agency-level student ridership	Transit operators
Diverse participant reach	To determine whether geographic diversity and equity are addressed	Demographic information of program sites	Determined as part of program model parameters
Program cost per participant	To understand the overall cost-benefit ratio of the pass program	Overall program costs per participant, beyond what the pass price is (if applicable)	Program model parameters; financial information provided by schools, county agencies and transit operators
Administrative costs as a proportion of total program costs	To understand the overall cost-benefit ratio of the pass program	Costs borne by the transit operators, schools, etc. Including costs with an on-site administrator	Financial information provided by schools, county agencies and transit operators

* After Commission approval, the metric "Inclusion of students, parents, community members, administrators" was moved from quantitative to qualitative due to an initial mis-categorization and some minor changes were made to data sources and timelines due to limitations in data availability and to align data requests with the realities of demands on the school site administrators' time. The table presented here shows the current metrics after these minor revisions.

Figure B-2 Qualitative Performance Indicators

Indicators	Rationale	Metric	Data Source
Student perception of transit options and barriers	To understand how students understand transportation options and perceive barriers to accessing those options	Number and extent to which students perceive pass options and barriers to accessing those options, including cost	Surveys or focus groups conducted by program team and school sites
Inclusion of students, parents, community members, administrators	To determine if community members are integrated and informed	Engagement & participation in program activities: periodic stakeholder group meetings, school-based outreach/tabling, travel training, surveys	Sign-in sheets, survey response rate, public comment submissions, formal/informal community feedback
Effectiveness of marketing and outreach	To ensure that community members are integrated and informed	Extent to which participants know about the program	Student feedback (via focus groups and/or surveys)
Linkages with existing fare payment option(s)	To discern if linkages with existing options affects pilot outcomes	Key features of fare payment options	Determined as part of program model parameters; Clipper if applicable
Leverage with other school-based transportation programs	To discern if coordination with existing programs affects pilot outcomes	Aspects that benefit related programs (SR2S, crossing guards, etc.)	Determined as part of program model parameters
Leverage with other funding and administration programs	To understand potential for future funding opportunities	Key findings regarding funding eligibility and partnerships	Feedback from school sites, transit operators, other stakeholders
Transit operator response(s)	To understand how the pilot programs are perceived by transit operators	Perceived impacts of program to service delivery	Transit operator feedback
Ease of participation	To discern how students perceive the program model and how to use it	Perceived ease of use of program model	Participant surveys
Ease of administration (program-wide, site-level, operator-level)*	To discern how program administration is perceived by different entities involved at different scales	Perceived ease of administration by school sites, transit operators and countywide coordination	Feedback from school sites, transit operators, other stakeholders
Cost performance against expectations	To understand or anticipate any potential future costs and issues	Degree to which any cost overruns represent "one-time" versus recurring and/or unpredictable issues	Feedback from school sites, transit operators, other stakeholders

* Metrics associated with this indicator may be used to evaluate potential implications for the level of decentralized oversight and potential for replication in other schools.

APPENDIX C
Detailed Description of Program Design

Appendix C: Detailed Description of Program Design

Year One Program Design

For Year One of the STPP, four different pilot program models were implemented, one in each Alameda County planning area, based on school characteristics and availability of transit pass options. Each program model was implemented in one school district. The school that participated in Year One are shown below in Figure C-1. Figure C-2 presents the parameters of the different pilot program models and identifies which elements were implemented in each school district.

Figure C-1 Countywide Map of Year One Participating Schools and Transit Operators

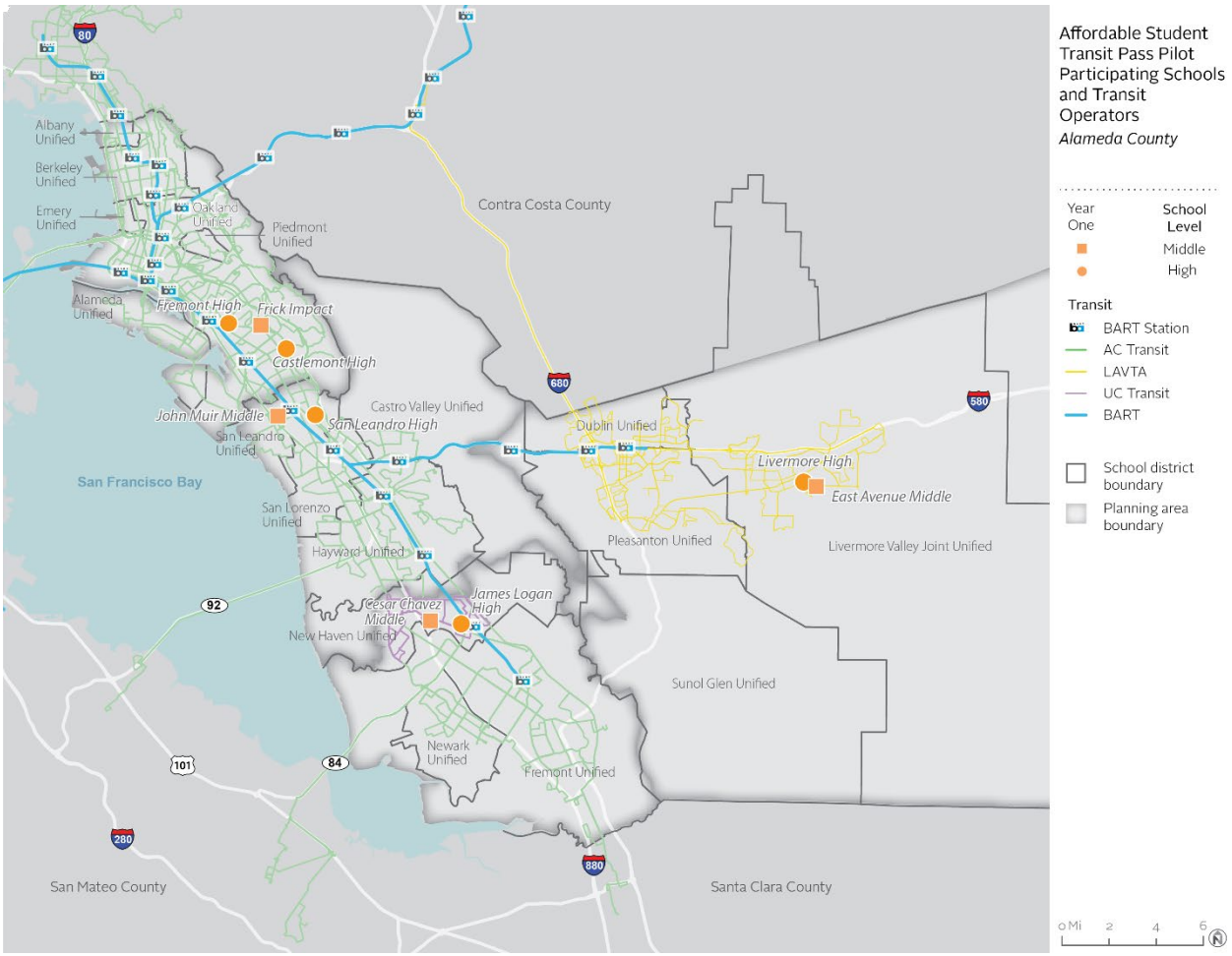


Figure C-2 Year One Pilot Program Parameters

Parameters	Options Tested	Oakland USD, Oakland	Berkeley USD, Berkeley	San Leandro USD, San Leandro	New Haven USD, Union City	Livermore Valley Joint USD, Livermore[1]
Schools	**High Schools**	Castlemont High School* Fremont High School	Realm High School	San Leandro High School*	James Logan High School*	Livermore High School
	Middle Schools	Frick Impact Academy	REALM Middle School	John Muir Middle School*	Cesar Chavez Middle School*	East Avenue Middle School*
Pass Format	**Clipper**	■		■	■	
	Flash pass				■	■
Eligibility	**Universal (all students)**	■				■
	Specific grades			■	■	
Pass Price	**Free to students**	■		■		■
	Discounted				■	■
	Non-discounted; Information only		■			
Financial Need[2]	**High Level of Need**	■		■		
	Moderate Level of Need				■	
	Low Level of Need					■
Transit Service	**AC Transit**	■		■	■	
	BART	■		■	■	■
	Union City Transit				■	
	LAVTA/Wheels					■

* Indicates that the school was enrolled in the Safe Routes to Schools (SRTS) program at the beginning of Year One of the STPP.

[1] Livermore Valley Joint USD will hereafter be referred to as Livermore Valley JUSD.

[2] Financial need as indicated by the percentage of students eligible for Free/Reduced-Priced Meals (FRPM) in the Year One participating schools. Eligibility for FRPM is often used as a proxy for low-income/poverty.

Year One tested program models that varied in pass format, student eligibility, and pass price. The pilot parameter applied in each program model generally reflected the school's financial need and transit service availability as determined in the site selection process. For instance, schools with the greatest level of financial need participated in pilots with free transit passes. At the time of implementation, Union City Transit and LAVTA/Wheels did not have an appropriate transit pass product available on Clipper; therefore, schools served by these systems received transit passes in the format of a "flash pass," i.e. stickers affixed to student ID cards that students show upon boarding the bus.

The program team designed the Year One program with financial limitations in mind, recognizing the need to run the STPP for three years and to avoid spending the allotted funding too quickly. As such, the Year One pilot program models were designed to test different ways of limiting budget impacts. For example, several program models involved providing transit passes at a discount or limiting student eligibility to certain grades to diminish the financial burden on Alameda CTC. For those programs where STPP transit passes were sold at a discount, students could purchase them on a quarterly and trimester basis for Union City Transit and LAVTA/Wheels, respectively, to break up the cost of the pass throughout the year.

The combinations of features in Figure C-2 represent five unique program models, all but one of which were tested in Year One (see Program Changes section below). To facilitate comparisons among the program models, this report uses the following names to highlight the most notable program model characteristics that differentiate them:

- **Oakland USD**: Free + Universal
  - All students were eligible to receive a free Clipper card with unlimited access to AC Transit bus services.
- **Berkeley USD**: Information-Only
- **San Leandro USD**: Free + Limited Grades
  - Students in 8th-10th grades were eligible to receive a free Clipper card with unlimited access to AC Transit bus services.
- **New Haven USD**: Discount + Limited Grades
  - Students in 8th-10th grades could purchase an AC Transit youth pass for $60 per semester (approximately $10 per month), and/or a Union City Transit youth pass for $54 each quarter (approximately $18 per month).
- **Livermore Valley JUSD**: Discount + Means-Tested
  - All students could purchase a discounted LAVTA/Wheels adult pass for $120 each trimester (approximately $30 per month). [3]
  - Students who were eligible for free/reduced-price meals (FRPM) could receive a pass at no cost.

[3] LAVTA/Wheels currently does not provide a youth pass.

All Year One pilot program models included the following characteristics:

- Information and training for students was provided on using transit and the applicable passes.
- All passes were valid year-round, and not limited by day or time.
- A designated on-site administrator was assigned at each school, who received training associated with the applicable program model.

Year One Program Model Changes

As is the nature of a pilot, several program model changes occurred following Commission approval of the program design as part of the Year One implementation.

Alameda CTC, in its development of the STPP, identified BART as a transit operator partner. BART youth ticket options are distinct from all other pass types used in the STPP because they have a fixed monetary value rather than a period of validity with unlimited usage. Given the different nature of the passes and budget limitations, Alameda CTC determined that BART passes would be rolled out in Year Two of the Pilot (2017-18 academic year) to give the program team time to determine the best strategy for providing BART tickets to students. The team did collect information on student usage of BART during the Year One surveys to inform integration of BART into the Pilot in Year Two.

Although five program formats were designed, only four were implemented in Year One. Despite significant outreach to Berkeley's REALM Charter Middle and High Schools, which were selected to participate in an information-only program, the schools were unresponsive and/or indicated a lack of interest in participating in the program. As such, the program team chose not to implement this information-only program model in Year One.

Year Two Program Design

During Year Two the Alameda CTC narrowed the number of models to two based on lessons learned from Year One: a free and universal model and a means-based (income tested) model:

- **Free/Universal:** All enrolled students at participating schools will receive a STPP pass for free.
- **Means-Based/Free:** All students who report that their household income meets the criteria for the FRPM program will receive a STPP pass for free.

Although the Free/Universal program model implemented at all Livermore Valley JUSD participating schools was identical from a student/school perspective to the other Free/Universal programs, it was a slightly different pass product than the AC Transit pass. Considered an eco-pass format, an established price is paid to the transit operator based on the number of eligible students, whereas the institutional agreement with AC Transit is based on the number of transit passes created, which varies with participation.

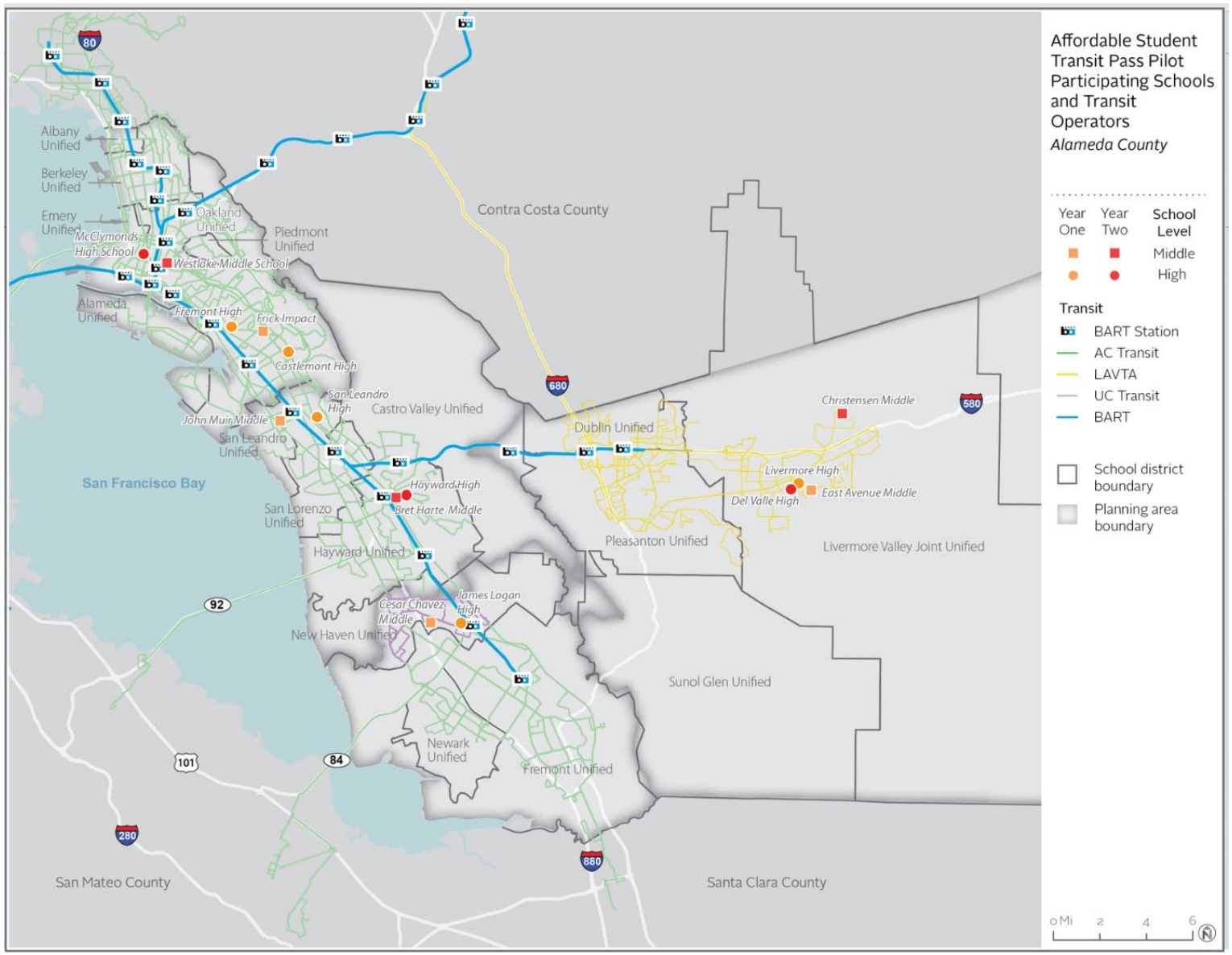
All STPP transit passes were provided on Clipper adult cards to further facilitate integration with existing fare payment systems. As in Year One, passes were not restricted by time of day or day of week. In addition, all eligible high school students at schools within one mile of a BART station were able to request one BART Orange Ticket with a $50 value. The BART Orange Tickets are not restricted by time or day, but they are non-refundable and non-replaceable. The addition of the BART ticket benefit was intended to enable students to use BART for essential trips while providing baseline information to determine the extent of future BART inclusion. Program staff selected the $50 value in an attempt to balance the amount of value on one BART ticket that is subject to loss by student, and the administrative burden and budget implications.

In response to concerns raised regarding the administrative burden and the ease of student participation, Year Two included certain changes to internal processes:

- To support transit operator staff and set clearer expectations for schools and students, student enrollment occurred once per month through an online form.
- Students replacing transit passes had to go through Clipper (except for LAVTA/Wheels), but the program team developed a visual guide to replacing the card online or by phone, with the hope of streamlining that process and the database was updated to include school names for easier communication with students/families and school staff.
- Students were encouraged to register their Clipper cards online to help with the likely need to replace lost or missing STPP passes in the future.
- LAVTA/Wheels processed its own replacements through an online form.

Six new schools and one school district joined the program in Year Two, bringing the total to 15 schools and five school districts. Year Two included two new schools added in Oakland USD (North County), two new schools added in Hayward USD (Central County), and two new schools added in Livermore Valley JUSD (East County). Figure C-3 presents a map of the schools that participated in the STPP during Year Two.

Figure C-3 Countywide Map of Year Two Participating Schools and Transit Operators



Three program model changes were also made between Years One and Two: 1) the model at New Haven USD (South County) changed from a discounted and grade-limited program to a free means-based program; 2) the model at San Leandro USD (Central County) changed from a free grade-limited program to a free and universal program; and 3) the model at Livermore Valley JUSD changed from a two-tiered discounted/means-based program to a free and universal program. The high-level program model parameters for Year Two are portrayed in Figure C-4. A detailed listing of participating schools is presented in Figure C-5.

Figure C-4 Affordable STPP Year Two Pilot Parameters

Parameters	Options Tested	North	Central	South	East
Pass Format	Clipper	■	■	■	■
Pilot Model	Universal (all students)	■	■		■
	Means-Based (income-qualified)		■	■	
Pass Cost	Free	■	■	■	■
Transit Service	AC Transit	■	■	■	
	Union City Transit			■	
	LAVTA				■
	BART	■	■	■	

Figure C-5 Year Two Participating Schools

School District	Participating Schools	Year Two Program Model	Participating Transit Operator(s)
OUSD	McClymonds High* Fremont High Castlemont High Westlake Middle* Frick Middle	Free/ Universal	AC Transit BART
SLUSD	San Leandro High John Muir Middle	Free/ Universal	AC Transit BART
HUSD*	Hayward High* Bret Harte Middle*	Means-Based/ Free	AC Transit BART
NHUSD	James Logan High Cesar Chavez Middle	Means-Based/ Free	AC Transit Union City Transit BART
LVJUSD	Livermore High Del Valle High* East Avenue Middle Christensen Middle*	Free/ Universal	LAVTA/ Wheels

*Asterisks indicate districts and/or schools participating in the STPP for the first time in Year Two.

Year Three Program Design

Year Three continued to test the same two program models as Year Two, allowing for year-over-year comparisons at all continuing schools.

As in Year Two, all bus passes were loaded onto a single Clipper card for each participant. Paper BART tickets continued to be available, with each high school participant in the BART service area eligible to receive one ticket pre-loaded with $50 of fare value.

In Year Three, six new schools and two new school districts joined the program, bringing the total to 21 schools in seven school districts. Thirteen schools in four school districts tested the Free/Universal model and eight schools in three school districts tested the Means-Based/Free model. Figure C-6 portrays the schools that participated in Year Three.

Figure C-6 Year Three Participating Schools

School District	Participating Schools	Year Three Program Model	Participating Transit Operator(s)
OUSD	▪ Castlemont High ▪ Fremont High ▪ McClymonds High ▪ Oakland High* ▪ Frick Middle ▪ Westlake Middle ▪ Roosevelt Middle*	Free/ Universal	AC Transit BART
SLUSD	▪ San Leandro High ▪ John Muir Middle	Free/ Universal	AC Transit BART
HUSD	▪ Hayward High ▪ Bret Harte Middle	Means-Based/ Free	AC Transit BART
NHUSD	▪ James Logan High ▪ Cesar Chavez Middle	Means-Based/ Free	AC Transit Union City Transit BART
FUSD*	▪ American High* ▪ Hopkins Middle*	Means-Based/ Free	AC Transit BART
NUSD*	▪ Newark Memorial High* ▪ Newark Junior High*	Free/ Universal	AC Transit BART
LVJUSD	▪ Livermore High ▪ Del Valle High ▪ East Avenue Middle ▪ Christensen Middle	Free/ Universal	LAVTA/Wheels

*Asterisks indicate districts and/or schools participating in the STPP for the first time in Year Three.

Summary of STPP Participation

Figure C-7 provides data on the number of eligible students and participation levels in each school district for each year of the STPP.

Figure C-7 Summary of STPP Participation

School District	Participating Schools	Students Eligible in Year One	Year One Participation (Sep-May average)		Students Eligible in Year Two	Year Two Participation (as of July 2018)		Students Eligible in Year Three	Year Three Participation (as of July 2019)	
			Number of Participants	Share of Eligible Students		Number of Participants	Share of Eligible Students		Number of Participants	Share of Eligible Students
OUSD	Castlemont High	834	818	98%	891	871	98%	1,012	814	80%
	Fremont High	746	744	100%	803	745	93%	835	718	86%
	McClymonds High	n/a	n/a	n/a	400	331	83%	430	339	79%
	Oakland High	n/a	n/a	n/a	n/a	n/a	n/a	1,705	1,464	86%
	Frick Middle	263	261	99%	240	240	100%	244	230	94%
	Westlake Middle	n/a	n/a	n/a	372	356	96%	371	347	94%
	Roosevelt Middle	n/a	n/a	n/a	n/a	n/a	n/a	619	590	95%
	Oakland USD Total	***1,843***	***1,823***	***99%***	***2,706***	***2,543***	***94%***	***5,216***	***4,502***	***86%***
SLUSD	San Leandro High	1,291	699	54%	2,612	1,450	56%	2,652	2,017	76%
	John Muir Middle	323	122	38%	997	337	34%	1,003	439	44%
	San Leandro USD Total	***1,614***	***821***	***1***	***3,609***	***1,787***	***50%***	***3,655***	***2,456***	***67%***
HUSD	Hayward High	n/a	n/a	n/a	1,175	364	31%	1,162	454	39%
	Bret Harte Middle	n/a	n/a	n/a	422	133	31%	402	322	80%
	Hayward USD Total	***n/a***	***n/a***	***n/a***	***1,597***	***497***	***31%***	***1,564***	***776***	***50%***
NHUSD	James Logan High	1,870	ACT: 120 UCT: 76	10%	1,891	587	31%	1,672	902	54%
	Cesar Chavez Middle	400	ACT: 5 UCT: 1	2%	690	254	37%	750	449	60%
	New Haven USD Total	***2,270***	***ACT: 125 UCT: 77***	***9%***	***2,581***	***841***	***33%***	***2,422***	***1,351***	***56%***
FUSD	American High	n/a	n/a	n/a	n/a	n/a	n/a	418	158	38%
	Hopkins Middle	n/a	n/a	n/a	n/a	n/a	n/a	67	16	24%
	Fremont USD Total	***n/a***	***n/a***	***n/a***	***n/a***	***n/a***	***n/a***	***485***	***174***	***36%***
NUSD	Newark Memorial High	n/a	n/a	n/a	n/a	n/a	n/a	1,703	574	34%
	Newark Middle	n/a	n/a	n/a	n/a	n/a	n/a	901	54	6%
	Newark USD Total	***n/a***	***n/a***	***n/a***	***n/a***	***n/a***	***n/a***	***2,604***	***628***	***24%***
LVJUSD	Livermore High	2,441	82	3%	1,936	426	22%	1,878	542	29%
	Del Valle High	n/a	n/a	n/a	115	82	71%	121	120	99%
	East Avenue Middle	1805	39	2%	648	247	38%	568	355	63%
	Christensen Middle	n/a	n/a	n/a	717	205	29%	715	235	33%
	Livermore Valley JUSD Total	***636***	***43***	***7%***	***3,416***	***960***	***28%***	***3,282***	***1,252***	***38%***
	Countywide	**8,168**	**2,928**	**36%**	**13,909**	**6,628**	**48%**	**19,228**	**11,139**	**58%**

APPENDIX D
Data Sources and Limitations

Appendix D: Data Sources and Limitations

While the key lessons learned from the pilot are certain, the data sources used in this report have various constraints and limitations, as outlined below.

Participation Profile

School sizes and participation rates vary significantly throughout the county. For example, in Year Three, the number of participating students at each school varied from less than 20 students at a school in South County to more than 2,000 students at a school in Central County. The larger schools tend to dominate aggregate countywide results, so overall totals may not necessarily be representative of student transit need and behavior in all parts of the county.

The distribution of students is also uneven between school levels (middle school versus high school) and program models (Free/Universal versus Means-Based/Free). In Year One, about 85 percent of participants were high school students; in Year Two and Year Three, about 73 percent of all participants were high school students. The reason for the strong proportion of older students is because high schools are generally larger than middle schools, and across all three years of the program, about 70 percent of eligible participants were high school students and 30 percent middle school. In terms of program models, about 70 percent of eligible students In Year Two were located in districts with the Free/Universal program model, while the remaining 30 percent were in schools with the Means-Based/Free program model (not directly related to the grade level split). In Year Three, these percentages were 77 percent in Free/Universal districts and 23 percent in Means-Based Free districts. The distribution of participants by program model mirrored these proportions, with about 80 percent of participants in Year Two and Year Three signing up in districts with the Free/Universal program model. Any graphics that present aggregate results across the school level and program model dimensions will necessarily reflect these proportions as well.

Student Survey Data

Much of the data presented in this report came from surveys distributed in the spring of each program year to all students at participating schools. Response rates varied by school and, as a result, the responses received are not a proportional sampling of the student population nor the participant population; results are sometimes dominated by high numbers of responses from certain sub-groups of students. Highlights of these variations are described below and all results presented in the report should be interpreted with this background in mind. Despite these caveats, the surveys do provide valuable qualitative insight into program impacts.

Figure D-1provides a summary of total survey responses by school district each year. The highest number of survey responses collected was in Year Two, when a very

strong effort was made to encourage students to complete the surveys as part of designing specific recommendations for Year Three of the pilot and beyond. The distribution of total responses across districts was also somewhat more balanced between districts in Year Two. In Year Three, the newer school districts had relatively small number of responses, so they tend to be underrepresented in aggregate results.

Figure D-1 Total Survey Responses by Program Year

District	Total Number of Respondents			Share of Total in Each District		
	Year One	Year Two	Year Three	Year One	Year Two	Year Three
OUSD	396	970	1,272	27%	15%	25%
SLUSD	504	1,825	1,230	34%	29%	24%
HUSD	n/a	1,331	406	n/a	21%	8%
NHUSD	238	1,082	1,037	16%	17%	21%
FUSD	n/a	n/a	225	n/a	n/a	4%
NUSD	n/a	n/a	77	n/a	n/a	2%
LVJUSD	353	1,100	777	24%	17%	15%
Total	**1,491**	**6,308**	**5,024**	**100%**	**100%**	**100%**

Each survey response was coded as either "participant" or "non-participant" prior to further analysis. Responses were coded as participant if the student indicated they currently have an STPP pass or they had an STPP pass before but do not have one now. Responses were coded non-participant if the student has never had an STPP pass or did not know about the program. Figure D-2 provides the distribution of participant versus non-participant responses within each district each year.

Figure D-2 Distribution of Participant and Non-Participant Survey Responses by Program Year

District	Year One		Year Two		Year Three	
	Participant Share	Non-Participant Share	Participant Share	Non-Participant Share	Participant Share	Non-Participant Share
OUSD	89%	11%	82%	18%	79%	21%
SLUSD	33%	67%	44%	56%	50%	50%
HUSD	n/a	n/a	24%	76%	35%	65%
NHUSD	24%	76%	26%	74%	31%	69%
FUSD	n/a	n/a	n/a	n/a	36%	64%
NUSD	n/a	n/a	n/a	n/a	73%	27%
LVJUSD	10%	90%	35%	65%	35%	65%
Total	**41%**	**59%**	**41%**	**59%**	**50%**	**50%**

Over time, a larger proportion of the total responses within each district came from non-participants, regardless of program model. Only two districts had a higher share of participant responses than non-participant responses: Oakland USD and Newark USD. This difference is at least partly due to the difference in participation rates between the two districts—for example, about 90 percent of all students in Oakland USD are participants, so it is entirely expected that a majority of responses would be from participants in that district. In Year Three, Newark USD had the lowest district-wide participation rate, so the fact that a clear majority of responses came from participants could be caused by other factors, such as the methods used to promote the survey among the student body. Of the districts where non-participant responses were a larger share, three of the four have a Free/Means-Based program model in which only a sub-set of students are eligible for the program. Non-participants and ineligible students were able to respond to the survey to provide contextual information on a limited set of questions about travel behavior and perceptions of transit.

In addition to the challenges with uneven distribution of responses between participants and non-participants, another consideration is the underlying eligibility of survey respondents. The survey did not screen for whether the respondent was eligible to participate in the STPP, so data collected from schools with Means-Based/Free programs included responses from ineligible non-participants. This problem intensified in Year Three, as the program expanded to schools with lower levels of financial need and higher proportions of ineligible students. These ineligible students did not have access to the program benefit that encouraged a shift to transit among their eligible participant counterparts within the same school. In spite of these challenges, responses on travel mode and perceptions of transit are useful as characterizations of the overall student body, and their survey responses help illuminate differences between school districts.

The majority of survey questions were posed only to program participants. Figure D-3 provides a comparison of the participant responses relative to the actual number of participants in each district and the distribution of participant responses across districts for each year. As the table shows, the survey sampled different proportions of participants in each district and the districts are not equally represented within aggregate results.

Figure D-3 Participant Response Profile by Program Year

District	Participant Responses as % of Participants in Each District			Participant Responses as % of All Participant Responses		
	Year One	Year Two	Year Three	Year One	Year Two	Year Three
OUSD	19%	32%	23%	57%	31%	41%
SLUSD	21%	47%	25%	27%	31%	25%
HUSD	n/a	69%	19%	n/a	12%	6%
NHUSD	35%	36%	24%	9%	11%	13%
FUSD	n/a	n/a	47%	n/a	n/a	3%
NUSD	n/a	n/a	9%	n/a	n/a	2%
LVJUSD	37%	44%	22%	6%	15%	11%
Total	**21%**	**41%**	**23%**	**100%**	**100%**	**100%**

All of the tables above present survey response data at the school district level. Within districts, survey response rates vary from school to school. To illustrate this variation, the following two figures portray the number and distribution of survey responses for each school in each of the years that they participated in the program. Figure D-4 show the distribution of survey responses in each participation category within each school; all schools on the same 100% scale, and the columns are not weighted by variations in the number of responses. Figure D-5 shows the actual number of responses in each category from each school; the height of the column corresponds to the total number of responses received.

Figure D-4 Survey Respondent Profile, Distribution of Responses by School and Program Year (100% Stack, Unweighted by Response Number)

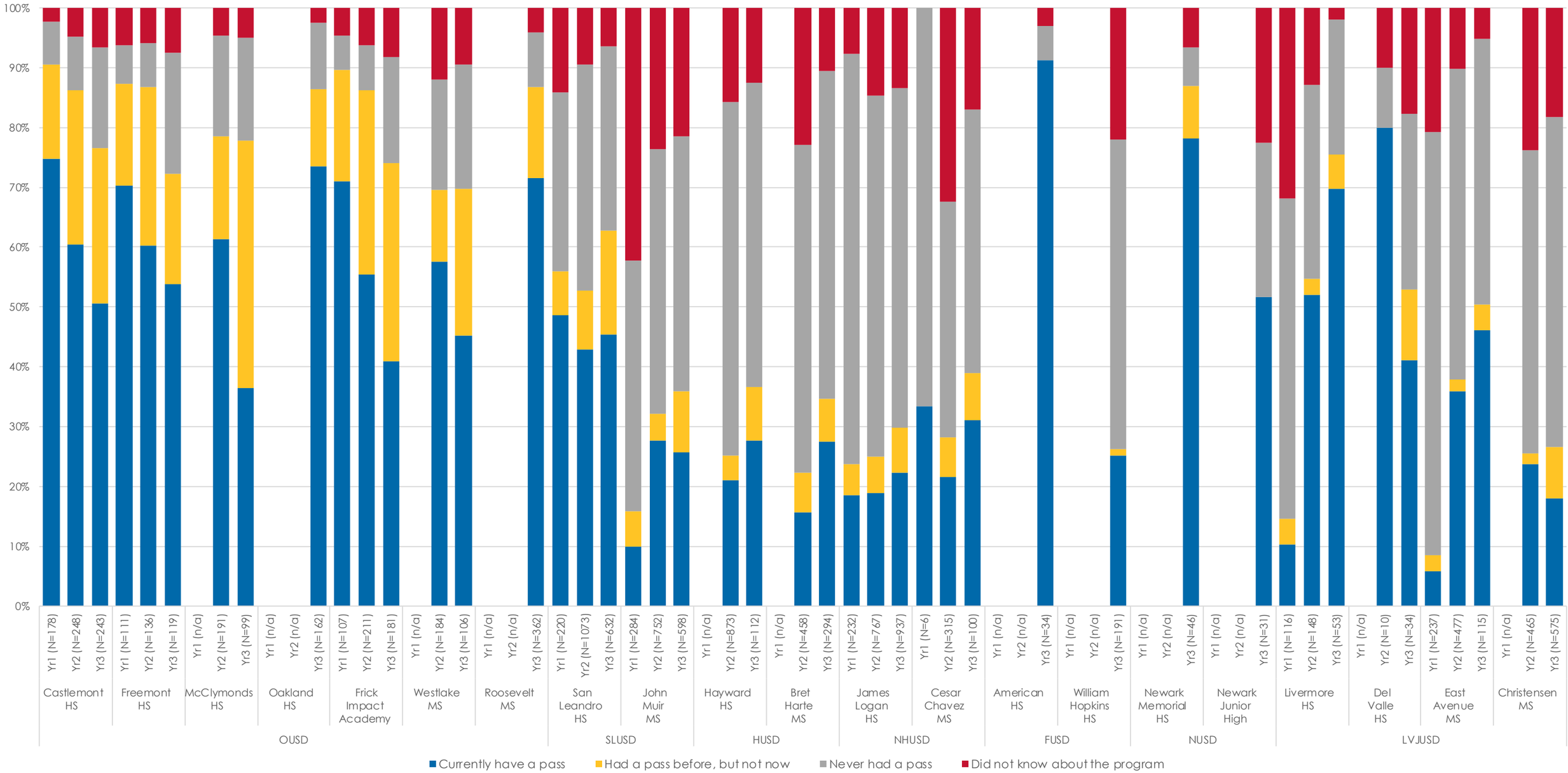
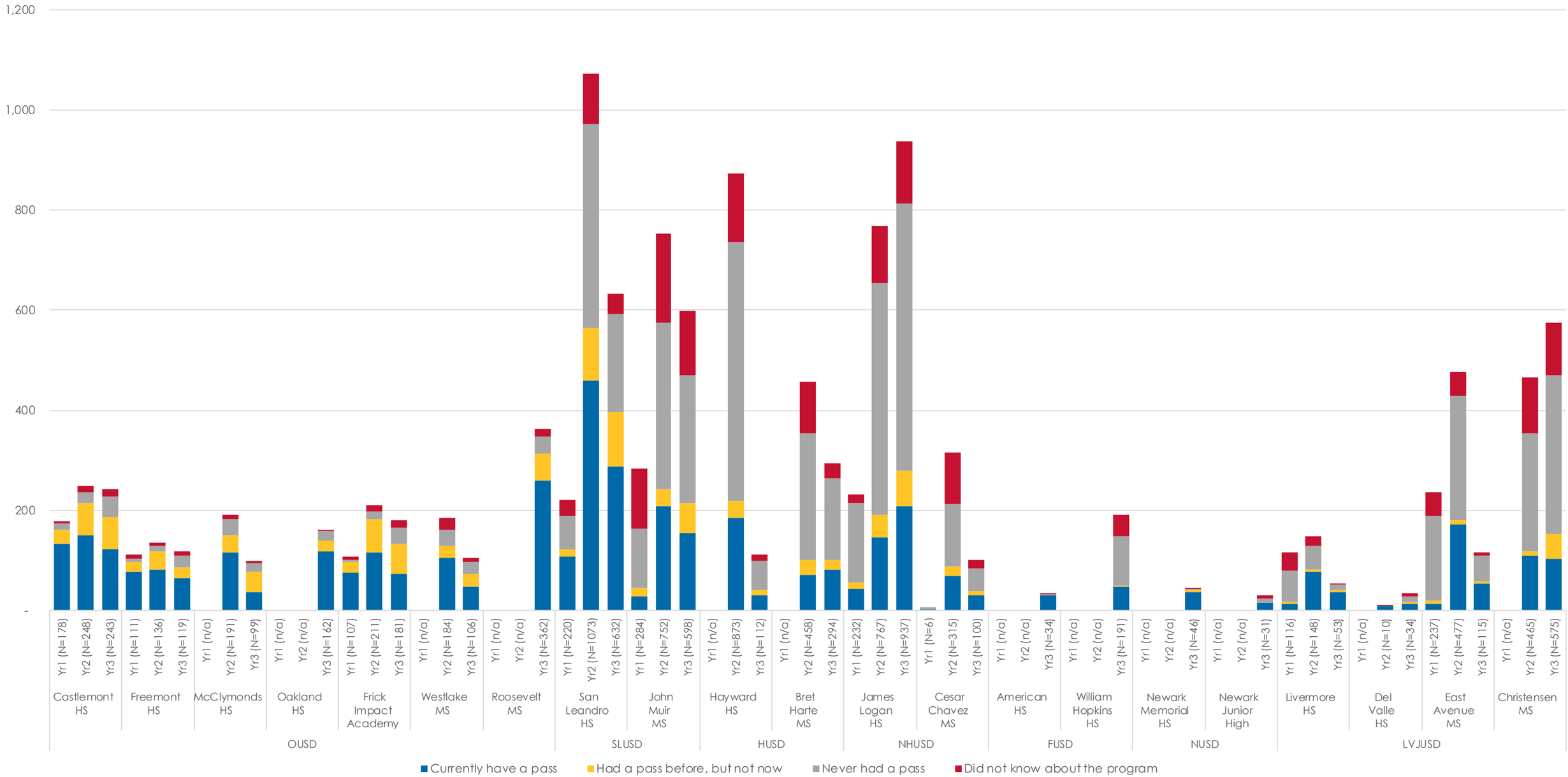


Figure D-5 Survey Respondent Profile, Number of Responses by School and Program Year



Transit Agency Data

Most transit data for the pilot is derived from Clipper reporting systems for AC Transit, Union City Transit, and LAVTA, and from BART's fare gate transaction system. The Clipper backend systems used by each transit operator vary slightly, so some reports are not available across all operators. In particular, Clipper data is available at the trip level for only two of the three bus transit operators: AC Transit and LAVTA.[4] All Clipper trip records include a timestamp record for each STPP boarding on AC Transit and LAVTA, but route numbers only appear for about half of all records, so data quality issues prevent the route information from being reliably used. The program team is currently working with transit agency staff to improve the quality of this data and make it available for evaluation. To protect student privacy, serial numbers are stripped from the Clipper data before transmittal and analysis.

In Year One, Clipper data was only available for AC Transit; the other bus operators relied on manual counts recorded by bus drivers when students presented their flash pass. Also, Clipper data for Year One was grouped by program model/school district – not at the school level. Thus, it was not possible to distinguish travel trends between middle school and high school students, so year-over-year comparisons can only be made at the school district level.

Program Participants Who Change Schools

The Clipper data used to analyze bus transit usage is collected and grouped based on the pass product that is loaded onto each individual card. As students change schools over time, the pass information may not be updated quickly enough to exactly match the timing of the students' change of status, which could mean their travel behavior would be tallied under the wrong category. There are two different potential causes for this kind of mis-categorization:

1. If a student graduates or transfers out of a participating school without re-enrolling in a school that is participating in the STPP, their pass needs to be deactivated. In the spirit of maintaining students' access to transit, and to avoid additional processing delays in case the student was to choose another participating school, cards were not deactivated immediately upon unenrollment. Some travel may have been recorded for a short time after the student formally became ineligible for the program.
2. The Clipper pass products used in Year Two were different than those used in Year One, and a few cards were not updated in time for the beginning of the academic school year, so some travel in the month of August was recorded under the Year One pass categories. All New Haven USD and Livermore

[4] Trip-level data is not available for Union City Transit at this time because their back-office system only provides aggregate reports by agency instead of data on individual boardings.

Valley JUSD students from Year One had to re-register at the beginning of Year Two due to the re-design of the program in those districts, so this issue is observed primarily in the Oakland USD and San Leandro USD schools.

APPENDIX E
Interim Evaluation Reports

Appendix E: Interim Evaluation Reports