October 2017

# San Mateo County Safe Routes to School Five-Year Evaluation (2010-2011 – 2014-2015 School Years)

City/County Association of Governments of San Mateo County



# Table of Contents

Table of Contents	2
Introduction	3
Program Overview	4
Program Evolution	9
Education and Encouragement	
Enforcement	
Engineering	
Funding	
Next Steps	
References	
Appendices	

# Introduction

In 2010, the City/County Association of Governments of San Mateo County (C/CAG) partnered with the San Mateo County Office of Education (SMCOE) to develop and implement the San Mateo County Safe Routes to School program (program) to the 25 school districts in San Mateo County. The goal of the program is to improve the health, well-being, and safety of children by encouraging and enabling them to walk and bike to school. The program also aims to reduce traffic congestion and greenhouse gas emissions from vehicular-based school travel.

The program completed its fifth year at the end of the 2015-2016 school year, marking an ideal time to evaluate progress made toward achieving the program's goals. This evaluation represents the first multiyear countywide program evaluation. This document evaluates at the evolution of the program, identifies program elements, and identifies next steps to improve the long-term sustainability and success of the program.



# **Program Overview**

This section summarizes the key parties involved in administering the program and methodologies used to evaluate the program's long-term sustainability and success.

# C/CAG and SMCOE Partnership

As the Congestion Management Agency (CMA) for San Mateo County, C/CAG is the designated fiscal agent that receives and distributes federal funds programmed for regional safe routes to school programs. C/CAG oversees the development, implementation, and monitors the success of the program every five (5) years. C/CAG contracts with SMCOE to provide day-to-day administration of the program.

SMCOE serves as the lead educational agency that implements the program. A dedicated countywide Safe Routes to School Program Coordinator is assigned to the program and responsible for program oversight and collaboration with C/CAG on program administration. SMCOE administers the program to the 25 school districts in San Mateo County. SMCOE collaborates with schools and other community-based organizations to identify ways to improve student's ability to travel safely to and from school.

C/CAG and SMCOE work together to identify program needs, secure funding, and develop the program's work plan. Both agencies are accountable for developing actions items to implement program goals.

The Safe Routes to School Task Force was established in 2010 to guide the development of the program and monitor implementation. The Task Force was comprised of elected officials, public members, and city/county staff. The Task Force monitored the success of the program's education, encouragement, and enforcement strategies to gauge success at each school in the county. A Best Practices review was completed by Alta Planning + Design in 2011 to inform Task Force members of similar safe routes to school

programs in the Bay Area. The Task Force identified opportunities for improvement to increase the likelihood to walking and biking to school.

# Program Coordinators

Each participating school district has an assigned safe routes to school coordinator. District coordinators act as a liaison between individual school coordinators and the SMCOE coordinator. Coordinators are tasked with the design and implementation of safe routes to school



goals their respective schools. There were 16 school district SRTS coordinators in the 2015-2016 school year. SMCOE

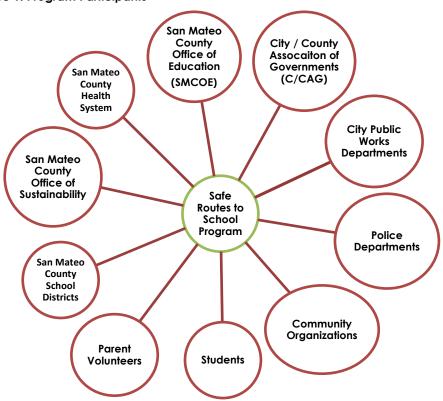
Coordinators at Quarterly Meeting in May 2015

hosts quarterly meetings for district coordinators to learn about countywide opportunities and priorities for

the program, and program priorities. Coordinators also discuss successful strategies deployed at each district and strategize on ways to increase participation within their programs.

# **Community Engagement**

The program relies on the partnership between local government, school administrators, teachers, program coordinators, parent volunteers and students, as shown in Figure 1. Other key participants include principals, local businesses, city planners, crossing guards, community groups focused on older adults, and public health professionals.



#### Figure 1: Program Participants

Interviews with coordinators revealed successful strategies used to promote the program and engage the community. Coordinators regularly look for ways to recruit parent volunteers to participate and lead education and encouragement programs at their schools. In addition to parent volunteers, other key individuals, including city and county professionals, community organizations, and students are key to implementing the program.

# **Evaluation Methodology**

The program is based on the National Center for Safe Routes to School planning framework. The framework, known as the "Five E's", represents the five elements necessary for the development and operation of a successful safe routes to school program. These elements are listed below:

- Education Classroom lessons teach children the skills necessary to navigate through busy streets and persuade them to be active participants in the program. The curriculum is designed to include lessons on pedestrian and bicycle safety, health, and the environment.
- **Encouragement** Events, contests and promotional materials to encourage children and parents to walk and bike to school.
- Enforcement Law enforcement participation encourages safe travel near schools. The program supports school safety patrols and kiddle valets to improve traffic safety around schools.
- **Engineering** Engineering programs create physical improvements to the infrastructure near the school, reducing speeds and establishing safer crosswalks and pathways.
- **Evaluation** Program participation is regularly monitored to determine the growth in student and parent participation through travel surveys.

This evaluation assesses the incorporation of the Five E's into the program. This report used the following criteria to determine areas for improvement:

- Scope (i.e., number of schools participating and enrollment);
- Success incorporating education and encouragement programs;
- Integration of community engagement and law enforcement;
- Program funding and sustainability.

In the fall of 2011, Alta Planning + Design developed the San Mateo County Safe Routes to School Program Guide to summarize the Five E's concept programs and activities. The Guide is a local resource to San Mateo County agencies, schools, parents, teachers, school administrators, public health professionals, and city staff in developing or expanding safe routes to school projects within the county.

In its first year, the program focused on education, encouragement, and engineering activities (i.e., walking and biking audits). The program also provided opportunities for participating schools to implement small scale infrastructure projects that promoted pedestrian and bicycle safety.

Annual reports are published at the end of each school year and summarize educational and encouragement activities, events, and evaluation data, including student travel tallies and parent surveys. Below is a summary of the program's 2014-2015 school year accomplishments.

# 2014-2015 School Year Highlights

In 2014-2015, the program conducted four walking and biking audits, held over a thousand assemblies, bike rodeos, and educational events. The program also awarded schools \$655,201 in funding. 133 schools and/or organizations participated in the program including:

- Belmont-Redwood Shores (7 schools);
- Brisbane (3 schools);
- Burlingame (6 schools);
- Cabrillo (6 schools);
- Hillsborough (4 schools);
- Jefferson Elementary (15 schools);
- La Honda-Pescadero (3 schools);
- Menlo Park City (4 schools);
- Millbrae (5 schools);
- Portola Valley (2 schools);
- Ravenswood (8 schools);
- Redwood City (17 schools);
- San Bruno Park (7 schools);
- San Carlos (7 schools);
- San Mateo Foster-City (20 schools);
- Sequoia High (5 schools);
- Sacred Heart (1 school);
- Afterschool Programs (6 schools).

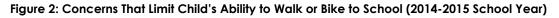
The San Mateo Foster-City School District had the highest number of participating schools during the 2014-2015 school year, followed by Jefferson Elementary School District and Redwood City School District. Six (6) schools hold afterschool programs that teach students on bicycle and pedestrian safety and bike maintenance.

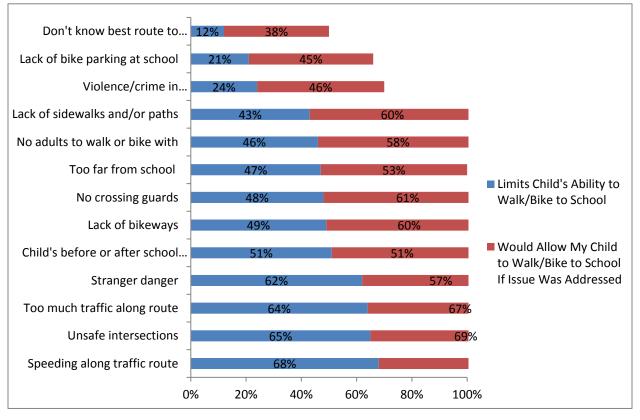
The parent survey identified benefits of participation, participation rates, and key parental concerns. Increased exercise, socialization, and attentiveness in class were the top benefits of student's participation in the program. The report also illustrated San Mateo County walk to and from school rates were higher than the national average. The San Mateo County average for walking from school was approximately 26% and the national average was approximately 16%. Similarly, the San Mateo County average for walking to school was approximately 24% and the national average was approximately 19%. Appendix A

provides an example student travel tally. Parents identified the following as key concerns in the 2014-2015 school year:

- Speeding traffic along route;
- Unsafe intersections;
- Too much traffic along route;
- Stranger danger;
- Distance to school; and
- Lack of adults to walk with.

Figure 2 below summarizes parent concerns that limit allowing their child to walk or bike to school during the 2014-2015 school year. 69% of parents would allow their children to walk or bike to school if speeding and safety improvements at intersections were addressed. The program aims to find solutions to the barriers identified above through walking and biking audits, educational events, and interaction with city, county, and law enforcement professionals.





# **Program Evolution**

This section summarizes program awareness, school participation, mode shift, and the challenges in getting to and from school.

#### **Program Awareness**

Program awareness has been achieved through extensive outreach efforts conducted by C/CAG and SMCOE at local schools and at the district-level. During the program's development year (FY 2010-2011) and implementation year (FY 2011-2012), staff focused on marketing, outreach, and informational sessions that introduced the purpose and benefits of the program to schools across the county. Staff also provided assistance completing enrollment applications to interested schools, walking and bicycle audits, and



resources for parent outreach events. The program aimed to have 25 target schools enrolled at the end of the 2011-2012 school year, which was exceeded with 59 enrolled schools.

Program activities create awareness and excitement about the program. During the 2012-2013 school year, the parent survey asked responders if they were aware of the

Brainstorming at Coordinator Meeting

program and 58 percent of responded, "I don't know" and 37 percent answered, "Yes". When asked the same question during the

2014-2015 school year, 52 percent answered, "I don't know" and 43 percent of parents answered, "Yes". Through improved outreach events and more frequent program activities, knowledge and participation of the program will increase over time.

#### **School Participation**

There were 59 schools that were the first to enroll in the program during the 2011-2012 school year. Figure 3 shows each elementary school district and their boundaries in the county. As seen in Figure , further marketing and outreach efforts resulted in an initial enrollment of 59 schools during the 2011-2012 school year, with strong interest expressed by an additional 33 schools which later enrolled in the program. An additional ten (10) schools joined the program between 2012-2013 and 2014-2015. Enrollment in the program steadily increased each school year with a peak enrollment of 131 schools during the 2014-2015 school year.



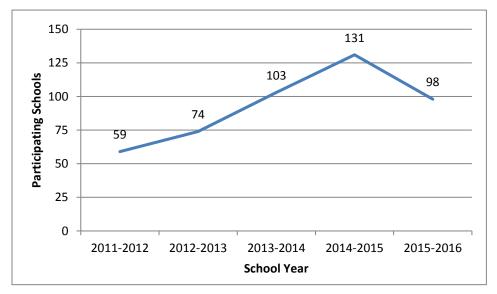
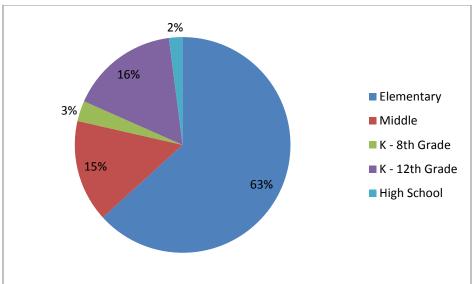


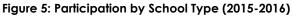
Figure 4: Program Participation by School Year



Students Participating in After School Bike Program

Figure illustrates participation in the program by grade level during the 2015-2016 school year. The largest representation was in elementary schools at 63% followed by K-12th grade at 16%<sup>1</sup>.





# Student Travel Surveys and Mode Shift

As explained in the previous section, student travel surveys are conducted in the fall and spring semesters at participating schools by Safe Routes to School coordinators and teachers. Figure 6 shows the average student travel modes for the 2012-2013 and the 2014-2015 school years. Appendix B contains student travel reports by school district.

On average, nearly 60% of students travel to and from school in a single-occupancy family vehicle. 25% of students reported walking and 4% reported biking to and from school.

<sup>&</sup>lt;sup>1</sup> Data does not add up to 100% as students could select multiple programs

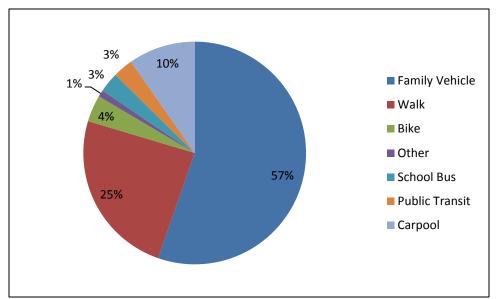


Figure 6: Average School Trips by Mode (2012-2013 and 2014-2015 School Years)

Figure 7 provides a comparison between 2012-2013 and 2014-2015 school year of the average school trips by mode. Single-vehicle family trips decreased and walk, bike, and carpool trips increased observed when comparing the two school years. During the 2014-2015 school year, almost 50% of students traveled to and from school by using alternate modes. Table 1 summarizes student trips by mode for each school district between 2012-2013 and 2014-2015.

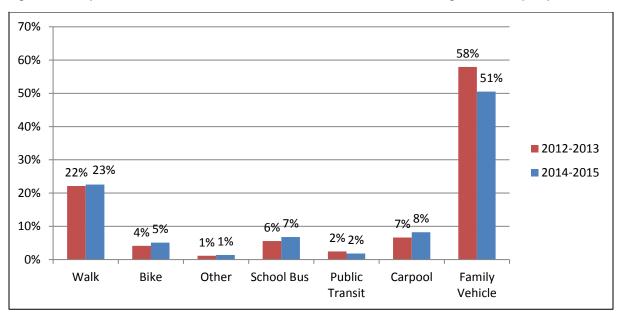


Figure 7: Comparison Between 2012-2013 and 2014-2015 School Year Average School Trips by Mode

School enrollment in the program has increased exponentially, from an initial target number of 25 schools, to 59 schools enrolled during the first year, and 98 schools during the 2015-2016 school year. The current involvement represents about 58% of San Mateo County's public schools. Outreach activities, such as walking audits, focused on addressing school-specific safe routes to school related concerns, have proven to be successful in encouraging new schools to join the program.

Like other Safe Routes to School programs in the area, the San Mateo County program is focused on elementary school participation. Elementary school graduates with an instilled culture centered on walking and bicycling as a means of travel to and from school, are more likely to continue to do so in their future schools. It is also possible that the lack of an established Safe Routes to School Program that supports walking and biking activities at the middle school and high school level could result in a travel mode shift back to single occupancy vehicle travel.

While majority of students still travel to school in single occupancy family vehicles, when comparing 2012-2013 and 2014-2015 school year data, more students have shifted to walking, biking, taking the school bus, and carpooling to and from school.

# Table 1: San Mateo County Average Student Travel by Mode (2014-2015)

Student Trips by Mode	School Year (Average)	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
Belmont-Redwood	2014-2015	24%	7%	1%	2%	7%	7%	52%
Shores Elementary	2012-2013	29%	8%	2%	2%	7%	6%	46%
School District	Percent Change	-17%	-13%	-50%	0%	0%	17%	13%
	2014-2015	23%	1%	0%	2%	8%	3%	62%
Brisbane School	2012-2013	26%	1%	2%	2%	5%	3%	61%
District	Percent Change	-12%	0%	-100%	0%	60%	0%	2%
Burlingame	2014-2015	30%	2%	1%	1%	0%	5%	60%
Elementary School	2012-2013	39%	3%	1%	0%	0%	4%	52%
District	Percent Change	-23%	-33%	0%	100%	0%	25%	15%
	2014-2015	14%	3%	1%	17%	0%	7%	58%
Cabrillo-Unified School	2012-2013	21%	2%	2%	17%	0%	9%	49%
District	Percent Change	-33%	50%	-50%	0%	0%	-22%	18%
	2014-2015	-	-	-	-	-	-	-
Jefferson Elementary	2012-2013	29%	1%	0%	2%	4%	2%	63%
School District	Percent Change	-	-	-	-	-	-	-
	2014-2015	23%	3%	1%	33%	0%	4%	37%
Las Lomitas Elementary School	2012-2013	-	-	-	-	-	-	-
District	Percent Change	-	-	-	-	-	_	-
Menlo Park City	2014-2015	12%	21%	2%	6%	5%	9%	45%
Elementary School	2012-2013	10%	19%	2%	6%	6%	11%	46%
District	Percent Change	20%	11%	0%	0%	-17%	-18%	-2%
	2014-2015	22%	1%	1%	1%	0%	8%	68%
Millbrae Elementary	2012-2013	22%	1%	0%	1%	0%	6%	69%
School District	Percent Change	0%	0%	100%	0%	0%	33%	-1%
	2014-2015	-	-	-	-	-	-	-
	2012-2013	11%	2%	1%	1%	5%	11%	70%
Pacifica School District	Percent Change	-	-	-	-	-	-	-

# Table 1: Continued

Student Trips by Mode	School Year (Average)	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
Portola Valley School	2014-2015	24%	13%	3%	7%	0%	9%	45%
	2012-2013	21%	10%	1%	7%	2%	7%	53%
District	Percent Change	14%	30%	200%	0%	-100%	29%	-15%
Ravenswood	2014-2015	-	-	-	-	-	-	-
Elementary School	2012-2013	22%	3%	0%	17%	1%	2%	56%
District	Percent Change	-	-	-	-	-	-	-
	2014-2015	36%	0%	1%	0%	0%	4%	59%
Redwood City School	2012-2013	28%	2%	1%	3%	2%	6%	58%
District	Percent Change	29%	-100%	0%	-100%	-100%	-33%	2%
	2014-2015	38%	6%	4%	0%	0%	9%	43%
San Carlos School	2012-2013	25%	3%	3%	3%	0%	11%	54%
District	Percent Change	52%	100%	33%	-100%	0%	-18%	-20%
	2014-2015	17%	2%	1%	9%	2%	8%	62%
San Mateo-Foster City	2012-2013	18%	2%	1%	11%	2%	7%	59%
School District	Percent Change	-6%	0%	0%	-18%	0%	14%	5%
	2014-2015	26%	4%	0%	0%	0%	10%	10%
South San Francisco	2012-2013	-	-	-	-	-	-	-
School District	Percent Change	-	-	-	-	-	-	-
Sequoia Union High School District	2014-2015	4%	3%	2%	10%	2%	24%	56%
	2012-2013	9%	1%	0%	6%	0%	8%	75%
	Percent Change	-56%	200%	200%	67%	200%	200%	-25%
	2014-2015	23%	5%	1%	7%	2%	8%	51%
	2012-2013	22%	4%	1%	6%	2%	7%	58%
Average	Percent Change	-3%	22%	0%	-5%	0%	21%	-1%

#### Access to School

Many students in San Mateo County are unable to walk or bike to school. Some schools pull their student population from outside the neighborhood boundaries, making the distance between home and school longer than feasible for young students. For example, residents of Half Moon Bay travel nearly 36 miles each day to attend Pescadero Elementary School. Family schedules, safety concerns, high traffic volumes along school routes, are other barriers that discourage parents from allowing their children to walk or bike to school.

On the other hand, many schools in San Mateo County exceed the countywide walk trips of 23%.



Bikes parked at San Carlos Central Middle School

For example, Hoover Elementary School in Redwood City has the highest average share of walk trips at 52%. Martin Elementary in South San Francisco also reported a high share of students who walk to school at 48%. Martin Elementary is tied with Menlo Park City Elementary for the highest share of students to travel to school by bike at 35%, almost nine times higher than the County average of 4%. 41% of students at Redwood Shores Elementary travel to school using alternate modes with 18% walking and 22% biking.

Schools that have implemented school bus services have been successful at encouraging students to take transit to and from school. La Entrada Middle School in Menlo Park reported 22% of students travel to school by school bus, 38% walk, and 5% bike. Only 31% of students travel by family vehicle at La Entrada Middle



School. Ralston Intermediate School in Belmont has the highest share of students who travel by public transit at 48%. Three bus routes (Routes 60, 67, and 68), operated by the San Mateo County Transit District (SamTrans), have stops directly in front of the school.

Parents have been successful in organizing carpools for students that live nearby to travel to school together. Monte Verde Elementary School in South San Francisco has

Walk to School Train

the highest share of carpool trips at 37%, more

than four times higher than the county average of 9%.

The role of the program is to create awareness about alternate modes of travel to and from school and support parents and students to travel to and from school safely.

# **Education and Encouragement**

This section summarizes student and parent education and encouragement events hosted by the program.

Education and encouragement activities are key components of the program. Educational activities are designed to provide students and adults with a common understanding of the importance of adopting safe behaviors that support healthy, active lifestyles, reduce traffic and improve air quality.

Encouragement programs build upon safe routes to school educational strategies by providing students with opportunities to practice the walking and biking behaviors they have learned through educational



Students participating in pedestrian safety workshop

events. These programs also build community support and sustain momentum by integrating the program into the school culture.

Figure 7 shows a comparison between spring 2013 and spring 2014 of participation in education and encouragement programs. The data is from parent survey responses. The more engaged students are in these activities, the more likely they are to discuss them with their parents at the end of the day.

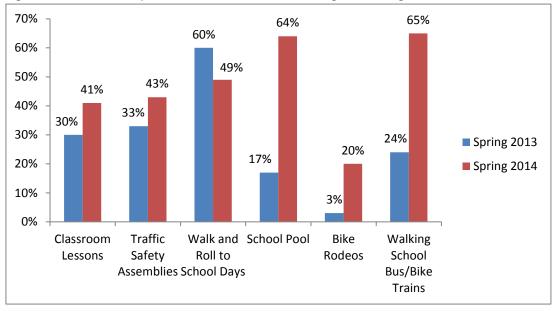
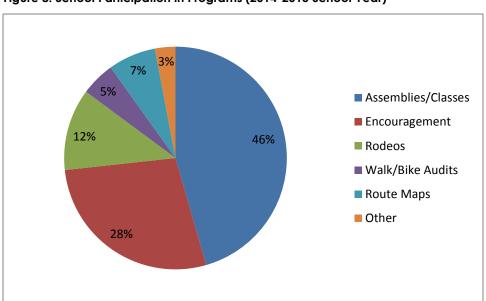


Figure 7: Student Participation in Education and Encouragement Programs

The program views parental awareness as an indicator of the success of the program. Student participation in nearly all education and encouragement programs, shown in Figure 7, have increased when comparing 2013 and 2014 data. Nearly 60% of students participated in walking school bus/bike trains in 2014, compared to 24% in 2013. School carpool participation nearly doubled from 2013 to 2014. Additionally, participation in bike rodeos increased from 3% in 2013 to 20% in 2014.

# **Student Education and Encouragement Activities**

Student education programs are group activities that invite students to learn best practices for safe walking, biking, carpooling, and using public transit to and from school. These activities include assemblies/classes, rodeos, walk/bike audits, route maps, and others. Since the 2011-2012 school year, over 500 assemblies and classes have been held at participating schools. Over 200 of the 500 programs occurred during the 2014-2015 school, as shown in Figure 8<sup>2</sup>



#### Figure 8: School Participation in Programs (2014-2015 School Year)

<sup>&</sup>lt;sup>2</sup> Data does not add up to 100% as students could select multiple programs

Encouragement includes Golden Sneaker, Walking Wednesday, Walking School Bus, and Walk to School Day events.

#### Schoolwide Assemblies

Assemblies engage large numbers of students and build excitement and support for the program. Educational messages regarding safe routes to school are relayed to students through creative skits, songs, chants, photographic or artistic presentations, videos, guest speakers, etc. For example, the program organized Rock the Block: A Walk and Roll Musical by the Bay Children's Theatre at interested elementary schools. Assemblies also provide a forum inform to encourage students to participate in after school programs such as bike clubs, which are designed to complement the in-class instruction on pedestrian and bicycle safety.

#### Student Workshops

Workshops are smaller-scale educational activities to engage students in interactive activities provided by various vendors contracted to work with the program. Presentations include in-person demonstrations of various pedestrian and bicycle safety best practices. Student workshops are curated to be grade-appropriate.



Students Participating in Bike Workshop

#### After School Programs

After school programs involve upper elementary, middle school, and high school students in safe routes to school activities. Bike clubs teach students practical riding skills and bike maintenance. For example, Burlingame Intermediate School hosts an after school program for students to ride bikes around the



After School Bike Program Activities

courtyard. There is also a bike shed on-site where students learn how to repair broken bikes.

#### Parent Education and Encouragement Activities

Parent education events, including workshops, inform parents about safe walking and biking practices to pass onto their children, identify parent volunteers for the program, and promote safe driving habits. Workshops also give parents the opportunity to engage with program staff, which promotes confidence and trust in the program.

#### **Education Programs for Families**

Family education programs include family-friendly events that engage people of all ages in safe routes to school education. These programs range from walking and biking route maps, bike rodeos, family bike nights, and International Walk to School Day.

#### Walking and Biking Route Maps

Walking and biking route maps show parents and students optimal pedestrian and bicycle-friendly roads near schools. These maps are marked with preferred routes, crosswalks, and intersections. The maps are updated when new infrastructure projects around schools are constructed. Appendix C contains the Suggested Walking and Bicycling Routes to School Map for Bowditch Middle School in Foster City.

#### **Bike Rodeos**

Bike rodeos are educational events with bicycle safety checks, helmet fittings, instructions bicycle safety, and skills courses. Rodeos help children become better cyclists and increase awareness of potential safety hazards. The rodeos are family friendly and suitable for all ages.

#### Family Fun Bike Nights

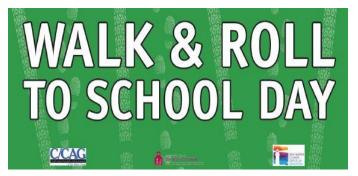
Family bike nights are after school events to teach people of all ages cycling skills, and safety checks. The

events are held in the evenings to increase the likelihood to parents attending.

#### International Walk and Bike to School Day

International Walk to School Day (IWTSD), also known as Walk and Roll to School Day, is an annual event held by schools across the world in early October to encourage students,

parents, and the school community to walk, bike, or use another non-motorized way to get to school. The day is widely publicized and a greeting table with a mode chart is set up at each participating school's main entrance where students receive an incentive for indicating how they got to school. In 2012, 91 schools in the county participated in the event, which





International Walk to School Day Promotional Material

increased to 95 schools in 2013.

Coordinators are provided a toolkit by the San Mateo County Safe Routes to School Coordinator with instructions how to host a successful IWTSD at their school. The toolkit includes an event description, materials they will receive, event timeline, and additional resources. Flyers are available in English and Spanish.

# Walking School Buses and Bike Trains

Walking school buses and bike trains are adult-supervised "trains" that held students get safely to and from school. The adult picks up students along the route to school. Many schools have incorporated walking school buses and bike trains into their school culture by promoting "Walking Wednesdays", where students are encouraged to participate in the walking school bus or bike trains to and from school.

#### **Promotional Incentives**

Incentives, such as stickers, keychains, and prizes, raise awareness of the program Most of the items are given to students who participate in encouragement activities, such as Walking Wednesdays and International Walk to School Day. The Golden Sneaker Contest is another incentive for students to keep track of who walked, biked, or used transit to school. The classroom with the highest participation rate is awarded a painted golden sneaker. Over the past five years approximately 11,000 stickers,



12,000 erasers, and 25,000 pencils have been distributed to students in San Mateo County.

Golden Sneaker Prize

Table 1 summarizes safe routes to school activities by district during the 2014-2015 school year. Of the 18 participating school districts, there were 25 schools that participated in the program. Belmont-Redwood Shores School District and San Mateo-Foster City School District reported the highest numbers of safe routes to school activities during the 2014-2015 school year.

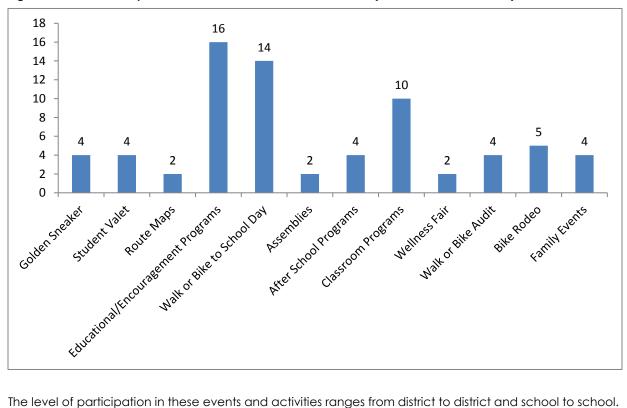
Table 2: Safe Routes to School Activities b	v District (	(2014-2015 School Year)
	/	

District	Schools Served	Safe Routes to School Activities
Belmont-Redwood Shores	Sandpiper, Redwood Shores, Nesbit, Central, Cipriani, Fox, Ralston	Weekly, monthly and quarterly encouragement activities at several school sites, 6 golden sneaker events, 2 secret bike squad events, student valet at 5 schools, route maps, safety lessons, bike to school day, walk to school day
Brisbane	Brisbane Elementary, Panorama, Lipman	School Assembly at Lipman, after school bike program, mountain club/outdoor classroom program, bike to school day, walk to school day, wellness fair,
Burlingame	BIS, Franklin, Lincoln, Roosevelt, Washington, McKinley	1 audit, walk to school day, bike warrior challenge, bike rodeo, health fair, after school bike club,
Cabrillo	HMB High School, Cunha, Hatch, El Granada, Farallone View, Kings Mountain	Cool the Earth Day, Be Seen Keepin' it Clean Day, Family Biking Workshop, Dolphin Club after school program, Youth Summit Rodeo,
Hillsborough	N. Hillsborough, S. Hillsborough, W. Hillsborough, Crocker	Walk to school day at 4 schools, golden sneaker, bike to school day 4 schools,
Jefferson Elementary	Marjorie Tobias, Westlake	2 audits
La Honda-Pescadero	La Honda Elem, Pescadero Elem, Pescadero Middle, Pescadero High School	Weekly encouragement activities, 2 bike rodeos
Menlo Park	Encinal, Hillview, Laurel, Oak Knoll	School assemblies, walk to school day, bike to school day,
Millbrae	Spring Valley, Lomita Park, Green Hills, Meadows, Taylor	Student valet program, walk to school day, Family Bike Festival, PE bike program, bike blender cooking show
Pacifica	Sunset Ridge, Ocean Shore, IBL, Ortega, Vallemar, Cabrillo	29 in-class physical education events, 6 lower your carbon footprint event, walk to school, bike to school, golden sneaker,

# Table 2: Continued

District	Schools Served	Safe Routes to School Activities
Portola Valley	Ormondale, Corte Madera	8 walk/bike to school day, student valet, golden sneaker,
Ravenswood	Belle Haven, Brentwood, Cesar Chavez, Costano, EPA Charter, Green Oaks, Los Robles, Ronald McNair, Willow Oaks	36 Classroom presentations on bike skills trainings, 21 walk and bike to school events, community-wide unity ride,
Redwood City 20/20	Adelante, Clifford, Fair Oaks, Garfield, Hawes, Henry Ford, Hoover, John Gill, Kennedy, Orion, McKinley, North Star, Roosevelt, Roy Cloud, Selby Lane, Taft	4 walking school bus routes, student valet, bicycle and pedestrian education programs, bike rodeo, walk and bike to school days
Sacred Heart	Sacred Heart	Monthly walk and bike to school days, bike safety workshop in PE classes,
San Carlos	Arundel, Brittan Acres, Central, Charter Learning, Heather, Tierra Linda, White Oaks	Walk to school day, bike to school day, walk audit, pedestrian flag program,
San Mateo-Foster City	Abbott, Audubon, Baywood, Beresford, Borel, Bowditch, Brewer Island, College Park, Fiesta Gardens, Foster City, George Hall, Highlands, Horrall, Laurel, Meadow Heights, North Shoreview, Parkside, San Mateo Park, Sunnybrae	Ybike after school program, Tour de SMFC Schools, Wellness Summit, route maps, bike education programs, walk to school days, bike to school days, walking school bus
South San Francisco	Buri Buri, Los Cerritos, Martin, Monte Verde, Ponderosa, Spruce	Walk to school day, walk audit, wheel day, full court fitness hour, family fitness day, bike rodeos, bike safety curriculum
Sequoia	Woodside High School, Redwood High School	Bike shed class, Earth Day fair, safe riding training in PE classes, triathlon, group rides

As seen in Table 2, safe routes to school activities range from golden sneaker events, to after school programs, to family events. Figure 9 summarizes participation in safe routes activities by district during the 2014-2015 school year. Educational and encouragement programs, which include programs such as bike warrior challenges, secret bike squad, Cool the Earth Day, etc., had the highest representation at 16 participating school districts. Walk or Bike to School Day had the second highest participation at 14 school districts, followed by classroom programs, at 10 school districts.





The level of participation in these events and activities ranges from district to district and school to school. During the five-year evaluation period, Assemblies/Classes and Encouragement activities were conducted at all participating school districts at least once. Some districts such as Pacifica School District participated in multiple activities during each school year. Other districts had multiple events within the same activity type. For example, during the 2012-2013 school year, Bayshore Elementary School district conducted eight assemblies/classes at the two participating schools in the district.

#### Case Study: San Carlos School District Crosswalk Flag Program

One of the many challenges with walking to school is the visibility at crosswalks. The San Carlos School District sought a low-cost and easy solution to the crossing guard issue known as the crosswalk flag program. 30 bright orange flags held in polyvinyl chloride (PVC) pipes were attached to stop signs on each corner of study intersections. Students grab the flags, hold high in the air, make eye contact with drivers, and wait for traffic to stop before crossing the street, holding the flags in the air. Students place flags in the receptacle on the opposite side of the intersection. The first crosswalk flags were at the Cedar Street and White Oak Way intersection near White Oaks Elementary School. The program has since expanded to three additional intersections.

Sarah Schwartz, the San Carlos School District Safe Routes to School and Sustainability Coordinator, partnered with the Climate Corps Bay Area Fellowship Program to pilot the program. Positive comments about the program have been received from students and drivers. "Drivers are much better at stopping", Schwartz said. "The bright orange flags attract a driver's attention even before they would see a small child."

Schwartz offered the following advice for schools and districts interested in implementing a similar program:

- Ensure that each side of the intersection has an object such as a light pole or telephone pole to which a flag receptacle can be affixed;
- Work with local municipalities to identify and address liability concerns prior to program implementation which may arise. In San Carlos, the municipality was provided with abundant information about how the program works, and locations at which it would be implemented;
- Build as much excitement as you can by working with the local Safe Routes task force prior to implementing the program at a school; and
- Expect to lose some flags during the first few weeks of the program, but the flags are easily replaceable.

Other schools have since implemented similar programs to the crosswalk flag program to install low-cost solutions that improve safety near schools.

San Mateo County Safe Routes to School Program Five-Year Evaluation Enforcement

# Enforcement

This section summarizes enforcement activities hosted by the program, including parties involved, and the kiddle valet program.

Enforcing the program requires deterring unsafe behaviors of drivers, pedestrians, and bicyclists and encouraging all users of the road to obey traffic laws and safely share the road. These strategies compliment education and encouragement programs, by providing additional support through engagement with law enforcement agencies, volunteers, teachers, and coordinators, and other involved parties. Parents also play a key role in enforcing safe routes by taking responsibility for their travel patterns and encouraging their children to travel safely to and from school.

#### Local Police Departments

School officials, including coordinators, collaborate with local police departments to enforce safe routes. Police officers are stationed close to school sites during morning drop-off and afternoon pick-up to ensure people are safely sharing the road. The presence of resource officers around schools helps parents feel more at ease with letting their children walk or bicycle to and from school. Coordinators are responsible for

communicating upcoming safe routes activities with police departments.

#### **Kiddie Valet Program**

The Kiddie Valet program reinforces traffic safety lessons by pairing students with adults during peak travel periods. Students, with supervision from school staff, are stationed at school loading zones to facilitate pick-up and drop-off. Students open car doors and help younger children dismount from vehicles. The kiddie valet program serves as a reminder to parents to monitor their speed, and practice safe driving behavior.



Parkside Elementary School (Top); North Shoreview Magnet Academy (Bottom)



San Mateo County Safe Routes to School Program Five-Year Evaluation Engineering

# Engineering

The program has dedicated the majority of its funding to education and encouragement programs to raise awareness of the program, correct poor travel patterns, and encourage walking, biking, carpooling, and transit as viable modes of transportation. However, engineering projects have been constructed to support the messages conveyed in educational and encouragement events.

Engineering projects range from capital outlay projects, including parking lot improvements, widening roads on school property, and installing traffic signs, to smaller infrastructure projects, including, paint for parking lots to direct traffic flow, and designating pick-up and drop-off zones. Many schools, such as Laurel Elementary School, have partnered with other agencies to construct safety improvements near schools.

# Laurel Elementary School

C/CAG, SMCOE, San Mateo-Foster City School District, and the City of San Mateo partnered to construct the Laurel Elementary School Sustainable Stormwater and Safe Routes Demonstration Project in May 2015. Improvements included the following:

- Large rain gardens with trees and other vegetation to capture stormwater runoff from building rooftops and parking lot surfaces;
- Stormwater plants to capture overflow stormwater runoff from the parking lot;
- Stormwater curb extensions along 36<sup>th</sup> Avenue and Hacienda Street to capture stormwater runoff from the street and driveway surfaces;
- Marked crosswalks and curb extensions to allow for a shorter crossing distance and better visibility;
- One-way drop-off and pick-up area delineated by bollards to create a safe walking/waiting area and limit intersection between pedestrians and vehicles;
- Pedestrian walkway to create a dedicated pathway to school separated by bollards and a landscape strip;
- Large seating area for students to safely wait for pickup;
- Expanded and secure bike rack area; and
- A combined curb extension and stormwater treatment area to shorten the crossing at Winway Circle. The flashing





Students in Pick-Up Area (Top); Rectangular Rapid Flashing Beacons (Bottom)

crosswalk sign enhances the safety of pedestrians and the visibility of the crossing for drivers.

San Mateo County Safe Routes to School Program Five-Year Evaluation Engineering

The Laurel Elementary School project is an example of collaboration between multiple agencies working together to create safe routes for students.

# Walking and Biking Audits

Audits are a valuable tool to assess the walking and biking environments near schools. Audits are a formal evaluation of environmental conditions that affect student's ability to walk and bike to school. These studies provide school district and local and regional governments with the information necessary to identify and prioritize infrastructure improvements necessary to make their communities safer. Audits also position schools and cities to quality for grant funding by identifying the need for proposed improvements near schools.

Audits are conducted by engineering professionals, school staff, city staff, and law enforcement. The audit team conducts a site visit to evaluate the quality and availability of pedestrian and/or bicycle facilities that provide access to school, as well as on-site facilities. 61 walking and biking audits have been conducted in San Mateo County over the last five years. Appendix D includes a walking and biking audit performed at Audubon Elementary School in 2013.

San Mateo County Safe Routes to School Program Five-Year Evaluation Funding

# Funding

The program is funded through a combination of local and regional funds. Local funds are allocated by C/CAG on an annual basis. Federal funds are allocated by the Metropolitan Transportation Commission (MTC) on a multi-year basis. C/CAG is responsible for administering grant funds to the SMCOE for program administration purposes as well as to individual school districts. This section summarizes local, regional, and federal funding sources for the program, and how funds are distributed.

# Local Funds

Local funding for the program is provided through voter-approved Measure M. Since 2010, motor vehicles registered in San Mateo County are imposed with a \$10 annual fee used to fund transportation and water pollution mitigation programs. The revenue is estimated at \$6.7 million annually over a 25-year period. 50% of the net proceeds are allocated for countywide transportation programs, such as transit operations, regional traffic congestion management, water pollution prevention, and safe routes to school. Measure M has provided approximately \$2 million dollars in funding for the program since the 2015-2016 school year.

# **Regional Funds**

Regional funding for the program is provided through the MTC One Bay Area Grant (OBAG). OBAG integrates the region's federal transportation program with California's Climate Law. MTC receives federal funding for local programming through the State of California from federal surface transportation legislation. MTC distributes OBAG funds to the county management agencies (CMAs), such as C/CAG, who are responsible for soliciting, evaluating, and selecting eligible projects within their counties.

# Federal Funds

Federal funding for the program is provided through the Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ). During the first Safe Routes to School cycle, \$1,429,000 in STP/CMAQ funds were available during the 2009-2010 through 2011-2012 school years. Under the OBAG 1 cycle, \$2,992,000 in CMAQ funds were available to San Mateo County jurisdictions for 2012-2013 through 2015-2016 school years.

# Funding Distribution

The program initially focused funds on education and outreach activities, with intent to later coordinate with cities and schools in developing capital projects, such as pathways, sidewalks, crosswalks, signals, speed signs, traffic calming, and ramps.

San Mateo County Safe Routes to School Program Five-Year Evaluation Next Steps

# **Next Steps**

This section provides recommendations to improve the effectiveness and sustainability of the program.

# Increase School Participation

The program has been implemented at 73% of public schools in San Mateo County. Over the next five years, the program should increase participation to 80% in public schools and 25% in private schools. This requires extensive outreach at non-participating schools.



Coordinators should be prepared to provide in-depth information on the success of the

Students riding bicycles during an enocuragement event

program and benefits to students, faculty, and families. Coordinators should also consider providing incentives to new school to join the program.

# Increase In Student and Parent Surveys

Data shows that not all student travel surveys are completed by parents on a bi-annual basis. To facilitate program evaluation, and to better monitor the effectiveness of education and encouragement activities, the program should require schools to make survey responses mandatory from parents twice a year.

# Provide Regular Education and Encouragement Programs

The level of participation in education and encouragement activities varies across school district and changes year-to-year. Coordinators would benefit from a countywide inventory of events and activities completed by participating schools, best practices, and discussion on required materials. By providing these materials, coordinators would have the tools necessary to organize more activities.

# Engineering

The program should require walking and biking audits be performed every three years at participating schools to ensure data is current and reflects changes in infrastructure and community needs. Additionally, suggested walking and biking maps should be updated periodically to reflect changes in the built environment and student's walking and biking preferences. Additional funding should be incorporated into the budget to include periodic updates.

San Mateo County Safe Routes to School Program Five-Year Evaluation Next Steps

#### Equity

Successful Safe Routes to School Programs have incorporated a sixth "E", equity. Adding equity demonstrates the program's commitment to providing safe routes to school tools to each demographic in the county, particularly communities of concern and low-income areas. The needs of students in low income areas and students with disabilities would also be incorporated when developing elements of the program and planning events.

#### Funding

Future funding should continue to focus on education and encouragement programs, but should consider funding infrastructure improvements identified as part of walking and biking audits.

District and school administration are most knowledgeable about the infrastructure needs around their schools. It is recommended that feasible, infrastructure funds could be made available to individual school jurisdictions. This would allow school administrators to prioritize improvements to meet student's needs.

San Mateo County Safe Routes to School Program Five-Year Evaluation References

# References

The following resources were used in the development of this evaluation:

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- Pedestrian and Bicycle Information Center. Safe Routes to School Online Guide (2016).
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- San Carlos Crosswalk Flag Program: <u>https://www.youtube.com/watch?v=j\_JELO\_ZBZ8</u>
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- San Mateo County Office of Education. Woodside Elementary School Walking and Bicycling Audit. June 2013.
- San Mateo County Office of Education: <u>http://www.smcoe.org/learning-and-leadership/safe-and-supportive-schools/safe-routes-to-school-(SRTS)/</u>
- San Mateo County Safe Routes to School 2013-2014 Annual Report: <u>http://ccag.ca.gov/wp-content/uploads/2014/05/13\_14\_Annual-Report\_v2\_FINAL.pdf</u>
- San Mateo County Safe Routes to School Website. Online: <u>http://www.smcoe.org/learning-and-leadership/safe-and-supportive-schools/safe-routes-to-school-(SRTS)/grant-information.html</u>
- Transportation Authority of Marin. Marin County Safe Routes to Schools Program Evaluation (November 2011).

San Mateo County Safe Routes to School Program Five-Year Evaluation References

• Transportation Authority of Marin. Measure B Vehicle Registration Fee (VRF) Strategic Plan. (Adopted July 28, 2011)

Appendix A: Student Travel Survey

## Safe Routes to School Students Arrival and Departure Tally Sheet

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Appendix B: Student Travel Surveys by District



#### Belmont-Redwood Shores Elementary School District

			Stuc	lent Trips By M	ode		
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
-			2014	/ 2015 School	Year		
Central Elementary School	28%	0%	5%	0%	0%	11%	56%
Cipriani Elementary School	33%	2%	0%	0%	0%	8%	58%
Fox Elementary School	27%	0%	2%	2%	0%	6%	62%
Nesbit Elementary School	22%	6%	1%	5%	0%	4%	61%
Ralston Intermediate School	16%	1%	1%	0%	48%	10%	26%
Redwood Shores Elementary School	18%	22%	1%	4%	1%	5%	51%
Sandpiper Elementary School	23%	16%	1%	1%	0%	8%	51%
Average	24%	7%	1%	2%	7%	7%	52%
			2012	/ 2013 School	Year		
Central Elementary School	27%	0%	1%	0%	0%	9%	64%
Cipriani Elementary School	29%	0%	0%	0%	0%	7%	65%
Fox Elementary School	16%	0%	2%	0%	1%	5%	76%
Nesbit Elementary School	22%	2%	6%	10%	3%	5%	54%
Ralston Intermediate School	13%	0%	0%	4%	45%	8%	32%
Redwood Shores Elementary School	22%	17%	4%	5%	1%	4%	49%
Sandpiper Elementary School	31%	16%	3%	1%	0%	6%	44%
Average	29%	8%	2%	2%	7%	6%	46%

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:

"Other" represents trips by non-motorized travel modes not categorized as walk or bike.

"N/A" denote years in which student tally data is unavailable.







#### Brisbane Elementary School District

	Student Trips By Mode												
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle						
	2014 / 2015 School Year												
Brisbane Elementary School	27%	2%	1%	1%	3%	3%	63%						
Lipman Middle School	23%	1%	0%	4%	21%	6%	45%						
Panorama Elementary School	19%	0%	0%	0%	0%	1%	79%						
Average	23%	1%	0%	2%	8%	3%	62%						
			2012	/ 2013 School	Year								
Brisbane Elementary School	31%	3%	1%	0%	1%	3%	62%						
Lipman Middle School	31%	1%	4%	6%	14%	3%	42%						
Panorama Elementary School	15%	0%	1%	0%	0%	5%	80%						
Average	26%	1%	2%	2%	5%	3%	61%						

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:

"Other" represents trips by non-motorized travel modes not categorized as walk or bike. "N/A" denote years in which student tally data is unavailable.







#### Burlingame Elementary School District

			Stuc	lent Trips By M	ode		
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
			2014	/ 2015 School	Year		
Franklin Elementary School	22%	0%	1%	1%	0%	9%	68%
Lincoln Elementary School	41%	2%	1%	0%	0%	4%	52%
McKinley Elementary School	28%	2%	2%	1%	0%	6%	61%
Roosevelt Elementary School	32%	3%	2%	2%	0%	5%	57%
Washington Elementary School	30%	2%	2%	2%	0%	2%	63%
Average	30%	2%	1%	1%	0%	5%	60%
			2012	/ 2013 School	Year		
Franklin Elementary School	23%	1%	1%	0%	1%	6%	69%
Lincoln Elementary School	55%	2%	1%	0%	0%	4%	38%
McKinley Elementary School	36%	4%	1%	0%	0%	6%	52%
Roosevelt Elementary School	46%	3%	2%	0%	0%	2%	48%
Washington Elementary School	33%	5%	4%	1%	0%	5%	54%
Average	39%	3%	1%	0%	0%	4%	52%

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:

"Other" represents trips by non-motorized travel modes not categorized as walk or bike.

"N/A" denote years in which student tally data is unavailable.







#### Cabrillo-Unified School District

			Stud	lent Trips By M	lode							
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle					
	2014 / 2015 School Year											
El Granada Elementary School	5%	2%	0%	18%	0%	9%	66%					
Farallone View Elementary School	9%	3%	0%	32%	0%	6%	51%					
Alvin Hatch Elementary School	29%	5%	2%	0%	0%	7%	57%					
Average	14%	3%	1%	17%	0%	7%	58%					
			2012	/ 2013 School	Year							
El Granada Elementary School	6%	4%	7%	15%	0%	8%	62%					
Farallone View Elementary School	18%	2%	0%	37%	0%	6%	39%					
Alvin Hatch Elementary School	40%	1%	1%	0%	0%	13%	46%					
Average	21%	2%	2%	17%	0%	9%	49%					

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:









#### Jefferson Elementary School District

			Stud	lent Trips By M	ode							
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle					
	2014 / 2015 School Year											
Fernando Rivera Intermiediate School	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Westlake Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
			2012	/ 2013 School	Year							
Fernando Rivera Intermiediate School	35%	0%	0%	0%	8%	1%	56%					
Westlake Elementary School	22%	1%	0%	3%	0%	3%	71%					
Average	29%	1%	0%	2%	4%	2%	63%					

Source: San Mateo County Safe Routes to School Student Tallies







Las Lomitas Elementary School District

	Student Trips By Mode											
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle					
	2014 / 2015 School Year											
La Entrada School	38%	5%	1%	22%	0%	3%	31%					
Las Lomitas Elementary School	7%	2%	0%	44%	0%	4%	43%					
Average	23%	3%	1%	33%	0%	4%	37%					
			2012	/ 2013 Schoo	Year							
La Entrada School	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Las Lomitas Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A					

Source: San Mateo County Safe Routes to School Student Tallies

"Other" represents trips by non-motorized travel modes not categorized as walk or bike. "N/A" denote years in which student tally data is unavailable.







#### Menlo Park City Elementary School District

			Stud	lent Trips By M	ode		
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
			2014	/ 2015 School	Year		
Encinal School	9%	17%	3%	8%	7%	12%	46%
Hillview Middle School	16%	35%	1%	4%	14%	8%	24%
Laurel School	12%	6%	4%	9%	0%	7%	64%
Oak Knoll School	13%	26%	0%	4%	0%	12%	46%
Average	12%	21%	2%	6%	5%	9%	45%
			2012	/ 2013 School	Year		
Encinal School	9%	18%	4%	9%	4%	12%	46%
Hillview Middle School	14%	22%	3%	6%	17%	11%	29%
Laurel School	10%	11%	3%	6%	0%	16%	56%
Oak Knoll School	10%	25%	1%	3%	2%	7%	54%
Average	10%	19%	2%	6%	6%	11%	46%

Source: San Mateo County Safe Routes to School Student Tallies Notes:

"Other" represents trips by non-motorized travel modes not categorized as walk or bike.

"N/A" denote years in which student tally data is unavailable.







#### Millbrae Elementary School District

			Stuc	lent Trips By M	ode		
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
			2014	/ 2015 School	Year		
Green Hills School	20%	0%	0%	1%	0%	9%	70%
Lomita Park School	34%	1%	2%	0%	0%	5%	58%
Meadows School	16%	1%	0%	1%	0%	10%	72%
Spring Valley School	12%	1%	0%	1%	0%	10%	77%
Taylor Middle School	27%	0%	0%	0%	1%	7%	65%
Average	22%	1%	1%	1%	0%	8%	68%
			2012	/ 2013 School	Year		
Lomita Park School	41%	1%	1%	0%	1%	5%	51%
Meadows School	15%	0%	0%	1%	0%	8%	76%
Spring Valley School	14%	1%	1%	1%	0%	6%	77%
Average	22%	1%	0%	1%	0%	6%	69%

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:

"Other" represents trips by non-motorized travel modes not categorized as walk or bike.

"N/A" denote years in which student tally data is unavailable.







#### Pacifica School District

			Stud	lent Trips By M	ode		
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
			2014	/ 2015 School	Year		
Cabrillo Elementary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ingrid B. Lacy Middle School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ocean Shore School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sunset Ridge Elementary	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			2012	/ 2013 School	Year		
Cabrillo Elementary	8%	2%	1%	1%	4%	17%	69%
Ingrid B. Lacy Middle School	10%	2%	1%	0%	17%	17%	56%
Ocean Shore School	10%	3%	1%	1%	2%	9%	76%
Vallemar School	13%	1%	0%	0%	5%	9%	72%
Average	11%	2%	1%	1%	5%	11%	70%

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:

"Other" represents trips by non-motorized travel modes not categorized as walk or bike.

"N/A" denote years in which student tally data is unavailable.







Portola Valley School District

		Student Trips By Mode											
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle						
			2014	/ 2015 School	Year								
Corte Madera School	27%	10%	3%	4%	0%	6%	51%						
Ormondale School	21%	16%	2%	11%	0%	13%	38%						
Average	24%	13%	3%	7%	0%	9%	45%						
			2012	/ 2013 School	Year								
Corte Madera School	26%	6%	1%	6%	3%	9%	51%						
Ormondale School	17%	14%	1%	8%	1%	6%	55%						
Average	21%	10%	1%	7%	2%	7%	53%						

Source: San Mateo County Safe Routes to School Student Tallies

"Other" represents trips by non-motorized travel modes not categorized as walk or bike. "N/A" denote years in which student tally data is unavailable.







#### **Ravenswood Elementary School District**

		Student Trips By Mode											
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle						
		2014 / 2015 School Year											
Costaño School	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Ronald McNair Middle School	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
			2012	/ 2013 School	Year								
Costaño School	21%	0%	0%	16%	0%	2%	62%						
Ronald McNair Middle School	24%	6%	0%	18%	1%	2%	50%						
Average	22%	3%	0%	17%	1%	2%	56%						

Source: San Mateo County Safe Routes to School Student Tallies









#### Redwood City School District

	Student Trips By Mode						
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
			2014	/ 2015 School	Year		
Adelante Spanish Immersion School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clifford Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fair Oaks Community School	36%	0%	1%	0%	0%	4%	59%
Garfield Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hawes Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hoover Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
John F. Kennedy Middle School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
John Gill Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roy Cloud Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Taft Community School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	36%	0%	1%	0%	0%	4%	59%
			2012	/ 2013 Schoo	Year	•	
Adelante Spanish Immersion School	1%	0%	1%	0%	0%	14%	84%
Clifford Elementary School	4%	3%	0%	1%	3%	11%	78%
Fair Oaks Community School	54%	2%	1%	4%	0%	4%	37%
Garfield Elementary School	47%	3%	0%	1%	1%	6%	43%
Hawes Elementary School	31%	1%	2%	5%	0%	4%	58%
Hoover Elementary School	52%	1%	1%	0%	0%	2%	45%
John F. Kennedy Middle School	13%	6%	2%	13%		3%	49%
John Gill Elementary School	17%	4%	1%	4%		7%	67%
Roy Cloud Elementary School	25%	1%	0%	0%	0%	7%	68%
Taft Community School	42%	3%	2%	0%	0%	1%	54%
Average	28%	2%	1%	3%	2%	6%	58%

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:

"Other" represents trips by non-motorized travel modes not categorized as walk or bike. "N/A" denote years in which student tally data is unavailable.







#### San Carlos School District

		Student Trips By Mode					
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
			2014	/ 2015 School	Year		
Arundel Elemetnary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Brittan Acres Elementary School	40%	4%	2%	0%	0%	9%	45%
Central Middle School	35%	10%	6%	0%	1%	10%	40%
Heather Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
San Carlos Charter Learning Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tierra Linda Middle School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
White Oaks Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	38%	6%	4%	0%	0%	9%	43%
Average	38%	6%	4%	0%	0%	9%	43%
			2012	/ 2013 School	Year		
Arundel Elemetnary School	18%	2%	1%	0%	0%	7%	74%
Brittan Acres Elementary School	34%	2%	4%	4%	0%	7%	51%
Central Middle School	40%	8%	5%	1%	0%	7%	40%
Heather Elementary School	12%	0%	0%	13%	0%	7%	69%
San Carlos Charter Learning Center	12%	1%	1%	0%	0%	28%	58%
Tierra Linda Middle School	19%	4%	4%	2%	2%	21%	50%
White Oaks Elementary School	44%	6%	6%	4%	0%	4%	38%
Average	25%	3%	3%	3%	0%	11%	54%

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:

"Other" represents trips by non-motorized travel modes not categorized as walk or bike.

"N/A" denote years in which student tally data is unavailable.







#### San Mateo-Foster City School District

			Stuc	lent Trips By M	lode		
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
		•	2014	/ 2015 School	Year		
Abbott Middle School	15%	1%	2%	17%	2%	14%	50%
Audubon Elementary School	17%	2%	1%	1%	1%	11%	68%
Bayside STEM Academy	14%	2%	3%	7%	4%	15%	56%
Baywood Elementary School	24%	0%	1%	10%	0%	5%	60%
Beresford Elementary School	2478	3%	3%	23%	0%	2%	50%
Borel Middle School	20%	1%	2%	3%	13%	9%	52%
		10%	1%	1%	10%	12%	
Bowditch Middle School	18%	2%	1%	3%	10%	4%	50%
Brewer Island Elementary School		_/*	=,*		.,.	.,	
College Park Elementary School	6%	0%	0%	10%	1%	13%	70%
Fiesta Gardens International Elementary	7%	1%	0%	16%	0%	6%	70%
Foster City Elementary School	21%	4%	1%	2%	0%	4%	69%
George Hall Elementary School	21%	1%	2%	4%	2%	6%	66%
Highlands Elementary School	12%	1%	0%	14%	0%	5%	68%
Laurel Elementary School	19%	2%	1%	18%	0%	3%	57%
LEAD Elementary School	14%	1%	0%	22%	0%	8%	55%
Meadow Heights Elementary School	12%	2%	2%	23%	0%	4%	58%
North Shoreview Montessori School	16%	2%	1%	0%	0%	11%	71%
Park Elementary School	17%	1%	1%	2%	0%	8%	72%
Parkside Elementary School	17%	2%	1%	2%	1%	7%	72%
Sunnybrae Elementary School	20%	3%	2%	3%	3%	8%	63%
Max	100%	100%	100%	100%	100%	100%	100%
INIGA	100%	100%	100%	100%	100%	100%	100%
Abbott Middle School	19%	100%	100%	100%	100%	9%	52%
Audubon Elementary School	15%	4%	1%	0%	0%	9%	71%
Bayside STEM Academy	26%	2%	3%	10%	9%	6%	45%
Baywood Elementary School	20%	0%	0%	11%	0%	8%	55%
Beresford Elementary School	24%	0%	0%	29%	0%	2%	45%
Borel Middle School	17%	4%	2%	2%	15%	10%	52%
Bowditch Middle School	17%	9%	1%	2%	6%	15%	50%
Brewer Island Elementary School	27%	1%	2%	1%	0%	5%	66%
College Park Elementary School	12%	1%	1%	2%	0%	15%	70%
Fiesta Gardens International Elementary	1%	0%	0%	42%	0%	5%	53%
Foster City Elementary School	23%	1%	2% 3%	1%	1%	6% 5%	67% 62%
George Hall Elementary School Highlands Elementary School	13%	3%	3%	16%	0%	5%	62%
Laurel Elementary School	24%	2%	1%	24%	0%	3%	46%
LEAD Elementary School	14%	1%	0%	24%	0%	5%	56%
Meadow Heights Elementary School	12%	2%	0%	23%	0%	3%	61%
North Shoreview Montessori School	18%	1%	0%	0%	1%	13%	68%
Park Elementary School	17%	2%	1%	2%	0%	8%	71%
Parkside Elementary School	18%	1%	2%	0%	1%	9%	69%
Sunnybrae Elementary School	25%	3%	3%	3%	1%	4%	63%
	100%	100%	100%	100%	100%	100%	100%
Average	18%	2%	1%	11%	2%	7%	59%

#### Notes:







#### South San Francisco School District

		Student Trips By Mode					
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
			2014	/ 2015 School	Year		
Buri Buri Elementary School	34%	0%	0%	0%	0%	17%	0%
Los Cerritos Elementary School	50%	0%	0%	0%	0%	0%	0%
Martin Elementary School	24%	18%	0%	0%	0%	0%	9%
Monte Verde Elementary School	7%	3%	0%	0%	0%	19%	23%
Ponderosa Elementary School	24%	2%	0%	0%	0%	7%	18%
Spruce Elementary School	19%	3%	0%	0%	0%	16%	13%
Average	26%	4%	0%	0%	0%	10%	10%
			2012	/ 2013 School	Year		
Buri Buri Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Los Cerritos Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Martin Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monte Verde Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ponderosa Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Spruce Elementary School	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:







#### Sequoia Union High School District

	Student Trips By Mode						
School	Walk	Bike	Other	School Bus	Public Transit	Carpool	Family Vehicle
	2014 / 2015 School Year						
Woodside High School	4%	3%	2%	10%	2%	24%	56%
Average	4%	3%	2%	10%	2%	24%	56%
	2012 / 2013 School Year						
Woodside High School	9%	1%	0%	6%	0%	8%	75%
Average	9%	1%	0%	6%	0%	8%	75%

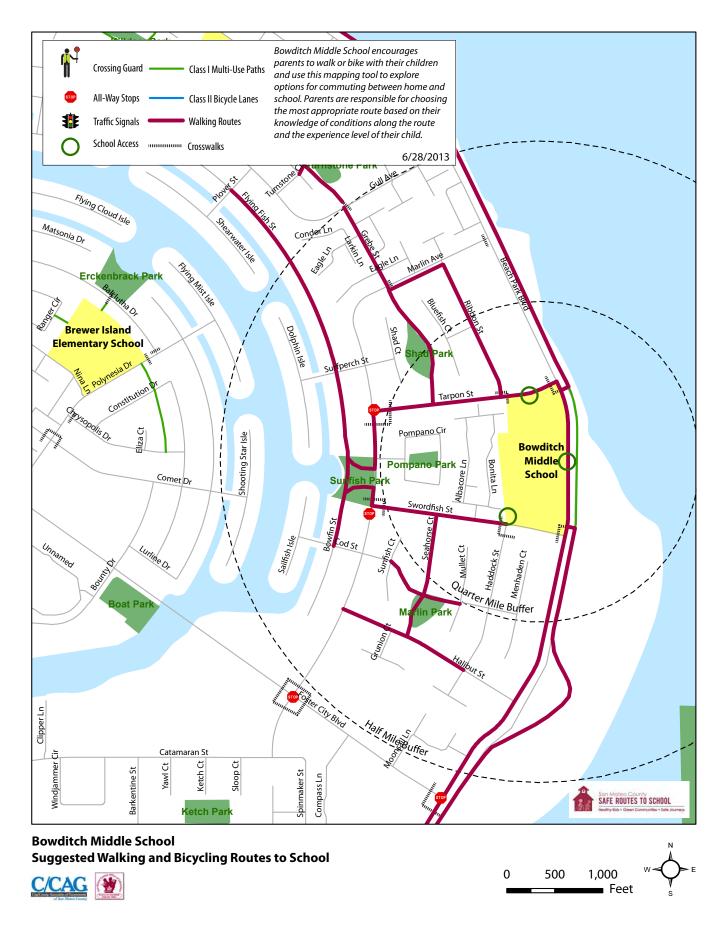
Source: San Mateo County Safe Routes to School Student Tallies

#### Notes:





Appendix C: Walking and Biking Route Map



Appendix D: Walking and Biking Audit Example

# **Walking and Bicycling Audits**

## San Mateo-Foster City School District

**Audubon Elementary School** 

**Bowditch Middle School** 

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**Brewer Island Elementary School** 

**Foster City Elementary School** 





**JUNE 2013** 







## CONTENTS

Audubon Elementary Scho

Bowditch Middle School.....

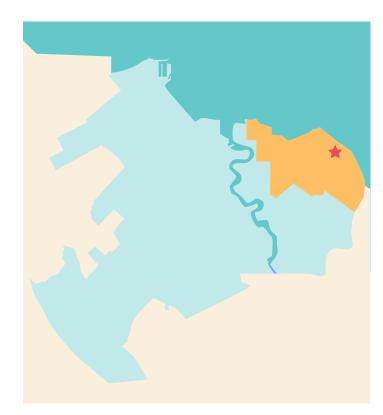
Brewer Island Elementary S

Foster City Elementary Scho

Toolbox of Potential Improv

ol	••	3
•••••	••	7
School	1	1
00	1	5
vements	1	9

## **Audubon Elementary School Walking and Biking Audit**



## **School Information**

Audubon Elementary School is located at 841 Gull Avenue in a residential neighborhood of Foster City. All streets immediately surrounding the school are two-lane roadways with on-street parking.

During the 2012–2013 school year, 629 students were enrolled in Kindergarten through 5th grade from all over Foster City.

Passenger pick-up and drop-off occurs in a formal loading loop accessed from Crane Avenue and on the street at Gull Avenue and Avocet Court.

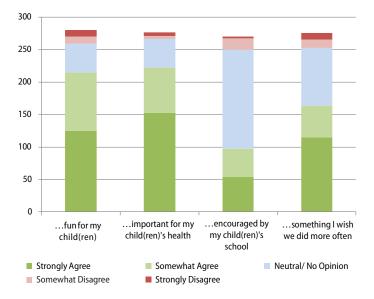
## **Bell Schedule**

Grade	Morning	Afternoon
Kindergarten	8:20	12:20
1 - 3	8:20	2:40 12:41
4 - 5	8:20	3:00 12:45

## Safe Routes to School Survey

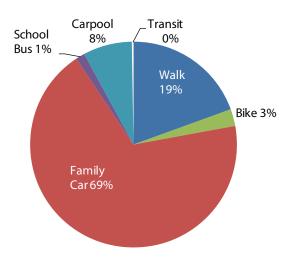
A parent survey was conducted at Audubon Elementary School during the Fall 2012 semester, with 136 responses were collected. Key findings are reported below:

- Riding in family vehicle and walking are the most common modes of travel: Asked about their travel patterns, 19 percent of parents responded that their child walks to and from school. Sixty-nine percent are driven in a family vehicle. Carpooling accounts for approximately eight percent of trips.
- Travel distances are further than for other Foster **City elementary schools:** Although 31 percent of students live within a guarter mile of the school site, 44 percent live at least a mile away. Eight percent of students travel more than two miles to school.
- → There is interest in walking and bicycling to school: Most respondents cited that walking and bicycling is fun for their children and important for their children's health. However, a majority of respondents were neutral when asked whether walking and bicycling was encouraged by their child's school.
- **Traffic considerations are a high priority:** Parents cited "Unsafe Intersections" as a primary barrier preventing them from allowing their children to walk and bike to school more often. Unique to Audubon Elementary, distance from school is another significant challenge.



#### Walking or biking to school is... (n = 280)

Mode split for all school trips (n = 1,355)



#### Would you allow your children to walk/bike more often if this concerned were addressed?

Unsafe intersection Too far from schoo No crossing guards No adults to walk or bike with Too much traffic along route Speeding traffic along route Stranger dange Lack of bikeways Walking/biking take too long Child's before or after school activities Child has too much to carry Lack of sidewalks and/or paths Lack of bike parking at schoo Violence/crime in neighborhood Bad weather Don't know best route to schoo Driving is more convenient

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## Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of March 19, 2013. Staff representing the City of Foster City and the San Mateo - Foster City School District attended the audit, along with the school principal and several parents of school attendees.

Audit participants observed the morning arrival period, including travel behavior by pedestrians, bicyclists, and motorists, and transportation infrastructure issues at the school site and surrounding neighborhood. Photos are shown on the following page.

#### Infrastructure Observations

#### **SCHOOL GROUNDS:**

- School staff reported that approximately 12 bicyclists park daily at a bke rack on the east side of the school parking lot and loading zone:
- The proximity of the loading zone entrance to the intersection of Crane Avenue and Egret Street causes some delay as motorists were observed blocking the intersection and crosswalks.
- An open lane connects the loading zone entrance with the school grounds. No motorists were observed using the lane.
- A fence running the lgnth of the property line prevents pedestrian access at any location other than a narrow gate.
- Yellow curb paint denotes the passenger loading zone; the California Vehicle Code calls for white.

#### **CRANE AVENUE AT EGRET STREET:**

- ➔ All intersection legs are uncontrolled.
- There are no curb ramps for the crosswalks at this intersection.
- One parking space is reserved along the school side, generally used by residents of the nearest home.
- Stencils and signage appropriately indicate the uncontrolled pedestrian crossing.

### **GULL AVENUE:**

- High parking occupancy on Gull Avenue was observed.
- A crossing guard is stationed at the uncontrolled pedestrian crossing of Gull Avenue.

### **CONNECTING PATHWAYS:**

- The gate at Swan Street is permanently opened. It is slated to be replaced with a closing gate.
- Pathways on both sides of the school connect to extended off-street pathway networks.

### **Behavior Observations**

#### PASSENGER LOADING ZONE:

- One school staff member assists at the passenger loading zone.
- Motorists were observed failing to pull forward to drop off their students, especially closer to bell time. In some instances, students disembarked in the driveway before entering the loop.
- Motorists were observed dropping students off on both sides of Crane Avenue
- Left turning vehicles into and out of the loading zone caused delay
- Parents were reported speeding into the passenger loading zone from Crane Avenue.

#### **GULL AVENUE:**

School staff reported that some motorists do not obey the crossing guard on Gull Avenue. Motorists were reported to continue through the intersection before the crossing guard returned to the curb.

## **Improvement Plan**

Recommendations for the school area appear in the following pages.



A motorist observed pausing in a crosswalk to drop off a student.



Many crossing locations for students lack curb ramps



Crane Avenue serves both walking and driving trips.



The presence of school staff managing the loading zone on Crane Avenue is important for the smooth operation of the facility.



Passenger loading zones should be demarcated with white curb paint.



Outdated signage exists at many locations around the school site.



Adjacent vegetation can obstruct visibility of school area signage.



Pathways through parks and at midblock locations provide students with opportunities to shorten their walking distance.



Congestion from the loading zone can present challenges to pedestrians as well as motorists.

## **Observations**



Drivers do not always yield to pedestrians in the crosswalk.



Uncontrolled transverse crosswalks can be difficult for motorists to see without additional crossing treatments.



Congestion on Crane Avenue resulting from school drop-off.

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Sandpiper

Lart Market Market

tile Coure

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(20)

Kildeer Court

Gull Avenue

## **Potential Safe Routes to**

Install high-visibility crosswalk at southeast Install Assembly A signage on Crane northw Install Assembly B and D signage on Crane Evaluate need for installing on Egret Street **Remove Assembly B.** Install curb ramps at both ends of all crossw

Consider curb extensions on north and east

o elication to Install h northy Install A Install A Replace

Add "NO STOPPING" marking at entrance to loading zone

**AUDUBON ELEMENTARY SCHOOL** 

Install assembly A on Gull Avenue westbound (11)

Replace with current CA MUTCD signage (18) on Gull Avenue eastbound at Kildeer

> Install red curb paint on both sides of Gull Avenue at school entrance Replace with current CA MUTCD signage on Gull Avenue near crosswalk (18) Consider curb extensions on both sides of crosswalk

Avocet Cour

School	Improvements

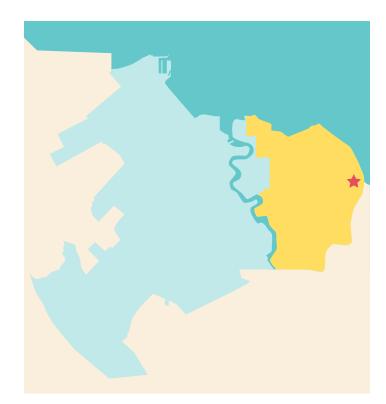
t leg of intersection	2
west of intersction	(11)
from both appropaches	12
t at Crane.	14
valks	19
t corners.	(20)

Frane Avenue

high-visibility school crosswalk at west leg of intersection	2	
Assembly A signage on Crane southeast of intersction	(1)	
Assembly B and D on Crane from both approaches	(12)	
e with current CA MUTCD signage signage on Crane	18	



## **Bowditch Middle School Walking and Biking Audit**



## **School Information**

Bowditch Middle School is located at 1450 Tarpon Street in a residential neighborhood of Foster City.

In 2012–2013, 852 students are enrolled from all over Foster City. The school is situated along the Bay shoreline served by a multi-use path. Beach Park Boulevard, a four-lane road, separates the school from the path.

Passenger pick-up and drop-off occurs in a formal loading loop on Tarpon Street and an on-street passenger loading loop on Beach Park Boulevard.

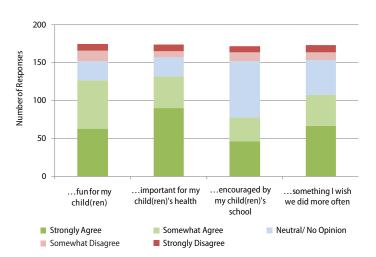
## **Bell Schedule**

Grade	Morning	Afternoon
6–8	8:20	3:00
6–8 Wednesday	8:20	1:40

## **Safe Routes to School Survey**

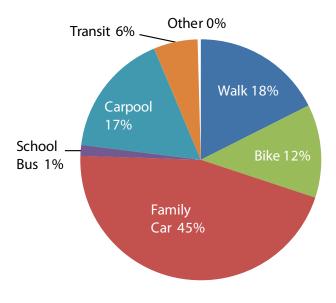
A parent survey was conducted at Bowditch Middle School during the Fall 2012 semester; 285 responses were collected. Key findings are reported below:

- A minority of students are driven to school alone: While 45 percent of students are driven to school in a family vehicle, 17 percent carpool, 18 percent walk, and 12 percent bike. The percentage of students using these modes of transportation is highest for schools in the city.
- A majority of students live at least a mile from school: Only 21 percent of students live within a half mile from school. Fifty-eight percent of students live more than a mile from school. The high use of nonmotorized modes of transportation and carpooling suggests that distance need not prevent walking and bicycling.
- There is interest in walking and bicycling to school: A majority of parents indicated that walking and bicycling to school was something that they did more often, with large majorities citing that walking and bicycling is fun for their children and important for their children's health.
- Middle school students have unique considerations for walking and bicycling: Parents most commonly cited the amount of things their child must carry (73 percent) as a concern that discouraged walking and bicycling. Traffic considerations, including traffic speed and volume, were cited by large majorities.



#### Walking or biking to school is... (n = 175)

Mode split for all school trips (n= 1,355)



Source MTC Safe Routes to Schools Parent Survey, 2012

## Would you allow your children to walk/bike more often if this concerned were addressed?

-	1
Speeding traffic along route	71%
Too much traffic along route	70%
Unsafe intersections	68%
No crossing guards	65%
Strangerdanger	62%
Lack of bikeways	61%
No adults to walk or bike with	60%
Too far from school	59%
Lack of sidewalks and/or paths	57%
Child's before or after school activities	55%
Walking/biking take too long	54%
Bad weather	52%
Violence/crime in neighborhood	51%
Driving is more convenient	50%
Lack of bike parking at school	48%
Don't know best route to school	38%

## Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of January 31, 2013. Staff representing the City of Foster City and the San Mateo - Foster City School District attended the audit, along with the school principal and several parents of school attendees.

Audit participants observed the morning arrival period, including travel behavior by pedestrians, bicyclists, and motorists, and transportation infrastructure issues at the school site and surrounding neighborhood. Photos are shown on the following page.

#### Infrastructure Observations

#### **BEACH PARK BOULEVARD**

- Beach Park Boulevard has two wide travel lanes in each direction.
- Significant unused capacity on the roadway encourages excessive vehicle speeds.
- Speed feedback devices and school area signage are currently used to manage traffic flow.
- Many recreational walkers and bicyclists observed on the multi-use path east of Beach Park Boulevard.

#### **SWORDFISH STREET**

- Curb paint and pavement markings are in excellent condition.
- ➔ Many intersections lack curb ramps.
- ➔ The street does not have lane markings.

#### **TARPON STREET**

- High vehicle volumes were observed on Tarpon Street with motorists entering and exiting the passenger loading area.
- Parking at the uncontrolled intersection of Tarpon Street and Ribbon Street reduces visibility for motorists and pedestrians.

## **Behavioral Observations**

### SCHOOL GROUNDS

 Congestion in the school loading zone presents obstacles to pedestrians.

### **BEACH PARK BOULEVARD**

- Students were observed walking, bicycling, skateboarding, and being dropped off on the sidewalk along Beach Park Boulevard.
- High vehicle speeds were observed along Beach Park Boulevard.

### **TARPON SREET**

- Students were observed crossing Tarpon Street outside the crosswalk, maneuvering amid high volumes of school drop-off traffic.
- ➔ Bicycle riding along the sidewalk was observed.
- Tarpon Street is heavily parked, with parked cars observed close to the crosswalk at Ribbon Street.

### SWORDFISH STREET

Motorists were observed doing U-turns after dropping students off on Swordfish Street.

## **Improvement Plan**

Recommendations for the school area appear in the following pages.

8



A key pedestrian crossing connects an off-street path with the school neighborhood.



Heavy traffic on Tarpon Street.



Bicycle riding along Tarpon Street's sidewalk.



Curb ramps are missing from several pedestrian crossings adjacent to the school site.



Students walking along Tarpon Street and crossing midblock to access the school site.



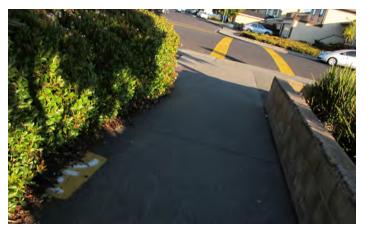
Red striping at key locations may discourage motorists from parking at corners and obstructing crosswalks.



A student navigating through congested vehicles in the school parking lot.



Wide turning radii at intersections can result in higher vehicle speeds.



Pedestrian path provides access to the school from the crosswalk on Tarpon Street.

## **Observations**

9



Vegetation obscuring signage along Swordfish Street.

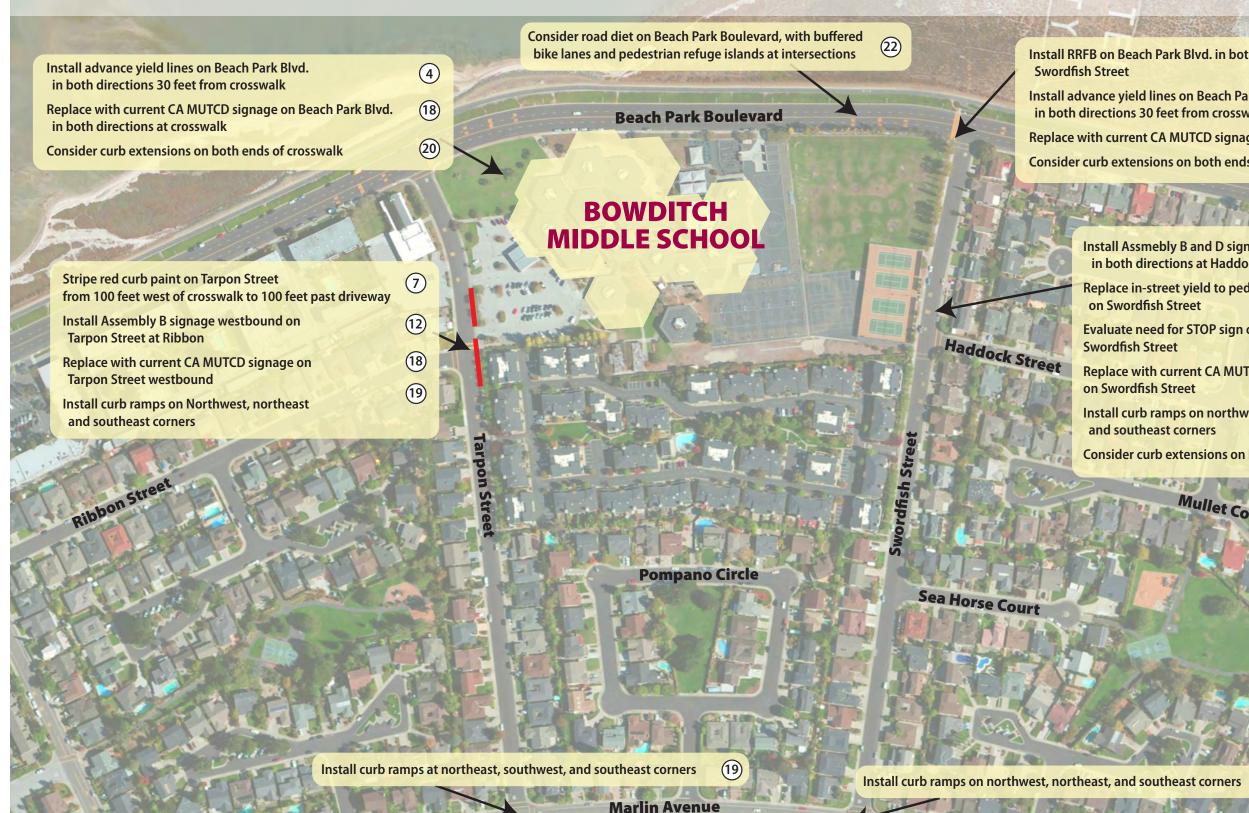


Passenger loading zone along Beach Park Boulevard provides access to the back side of Bowditch Middle School.



Beach Park Boulevard has four wide lanes and significant unused capacity.

(X) For specific recommendations, see Toolbox on page 19.



## **Potential Safe Routes to School Improvements**

	11003026-02
n Beach Park Blvd. in both directions at eet	15
e yield lines on Beach Park Blvd. tions 30 feet from crosswalk	4
current CA MUTCD signage on Beach Park Blvd.	18
extensions on both ends of crosswalk	20

II Assmebly B and D signage on Swordfish Street oth directions at Haddock Street	12
ace in-street yield to pedestrian sign wordfish Street	13
ate need for STOP sign on Haddock Street at dfish Street	14
ace with current CA MUTCD signage vordfish Street	18
ll curb ramps on northwest, southwest, southeast corners	19
ider curb extensions on both ends of crosswalk	20

**Mullet Court** 

(19)

## **Brewer Elementary School Walking and Biking Audit**



## **School Information**

Brewer Island Elementary School is located at 1151 Polynesia Drive in a residential neighborhood of Foster City.

During the 2012–2013 school year, 710 students were enrolled from all over Foster City. The school has numerous access points that shorten walking distance, including pathways connecting to Niantic Drive and Ranger Circle.

Passenger pick-up and drop-off occurs in a formal loading loop on Polynesia Drive and was observed at the two rear gates.

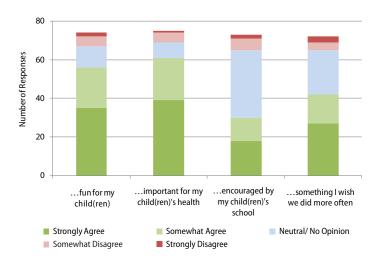
## **Bell Schedule**

Grade	Morning	Afternoon
Kindergarten	8:00 9:05	11:35 12:40
1 - 3	8:00	2:40
4 - 5	8:20	2:40

## Safe Routes to School Survey

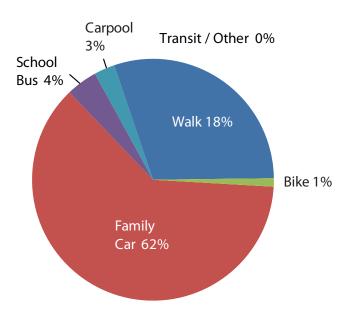
A parent survey was conducted at Brewer Island Elementary School during the Fall 2012 semester; 136 responses were collected. Key findings are reported below:

- Riding in family vehicle and walking are the most common modes of travel: Asked about their travel patterns, 30 percent of parents responded that their child walks to and from school. Sixty-two percent are driven in a family vehicle. School buses are used for about seven percent of afternoon trips, but no morning trips.
- ✤ Most students live within easy walking and bicycling distance from school: Thirty-nine percent of students live within a quarter mile from school, and 52 percent within a half mile. Only six percent of students travel more than two miles to school.
- ➔ There is interest in walking and bicycling to school: A majority of parents indicated that walking and bicycling to school was something that they did more often, with large majorities citing that walking and bicycling is fun for their children and important for their children's health.
- **Traffic considerations are a high priority:** Barriers most frequently cited that prevent parents from allowing their children to walk and bike to school more often included "Unsafe intersections" (59 percent), "No adults to walk or bike with" (58 percent), and "Speeding traffic along route" (58 percent).



#### Walking or biking to school is... (n = 280)

Mode split for all school trips (n=1,355)



Source MTC Safe Routes to Schools Parent Survey, 2012

### Would you allow your children to walk/bike more often if this concerned were addressed?

Unsafe intersect No adults to walk or bike Speeding traffic along ro No crossing gu Too much traffic along ro Stranger da Child's before or after school activ Bad wea Lack of bikev Walking/biking take too Lack of sidewalks and/or p Too far from scl Driving is more conven Violence/crime in neighborh Child has too much to o Lack of bike parking at scl Don't know best route to school

_	-	
tions		59%
with		58%
route		58%
uards		56%
route		56%
anger		55%
vities	51'	%
ather	47%	
ways	46%	
long	46%	
paths	45%	
chool -	44%	
nient	42%	
- hood	40%	
carry	40%	
chool	36%	
chool	28%	

## Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of March 7, 2013. Staff representing the City of Foster City and the San Mateo - Foster City School District attended the audit, along with the school principal and several parents of school attendees.

Audit participants observed the morning arrival period, including travel behavior by pedestrians, bicyclists, and motorists, and transportation infrastructure issues at the school site and surrounding neighborhood. Photos are shown on the following page.

### Infrastructure Observations

### PARKING LOT/ LOADING ZONE

- The passenger loading loop functioned with little observed delay. A police officer was present. The principal monitors the loading zone once a week and assigns staff to monitor once or twice per week.
- Vegetation obstructs visibility for vehicles exiting the west parking lot.

### **POLYNESIA DRIVE**

- ➔ Parents and children were observed jaywalking.
- Curb ramps are missing along Polynesia Drive.
   These include intersections with Foster City Boulevard, Comet Drive, Nina Drive, and Niantic Drive.
- Deteriorating curb paint along Polynesia Drive does not adhere to California Vehicle Code standards. Passenger loading should be indicated with white paint.
- A multi-use path enters Polynesia Drive from the south with no curb ramp or crossing treatment.
   Path users either jaywalk or walk to Niantic Drive.

#### **NIANTIC DRIVE**

A small parking area off Niantic Drive serves Erckenbrack Park. Many parents were observed parking here and using the marked crosswalk to access a back entrance to the school.

### POLYNESIA DRIVE AT FOSTER CITY BOULEVARD

➔ Foster City Boulevard is uncontrolled.

- Lane configuration consistes of two lanes in each direction, a two-way left turn lane, and a median that is too narrow to serve as a pedestrian refuge.
- Visibility for vehicles turning onto Foster City Boulevard is obstructed.
- There are no marked crosswalks or curb ramps at this intersection.

### **BACK ENTRANCES**

- Rear entrance gates are closed 15 minutes after the last arrival bell.
- Students approach the Balclutha gate from an uncontrolled crosswalk with an in-street yield paddle.
- Ranger Circle was heavily parked, ostensibly with school traffic.

## **Behavioral Observations**

### PASSENGER LOADING ZONE

The passenger loading zone appeared to operate smoothly with most adults pulling forward as requested. A police officer was present.

#### **POLYNESIA DRIVE**

- Many motorists were observed parking on the far side from the school and walking across with their children, usually outside of crosswalks.
- School community apprecaites the crossing guard at Niantic Drive.

### POLYNESIA DRIVE AT FOSTER CITY BOULEVARD

- School staff reported that many pedestrians choose to cross at this location instead of signals at Balclutha Drive and Bounty Drive.
- Traffic speeds on Foster City Boulevard make pedestrian crossings challenging.

## **Improvement Plan**

Recommendations for the school area appear in the following pages.



Students and parents were both observed crossing Polynesia Drive outside of crosswalks.



A crossing guard assists students crossing Polynesia Drive at the intersection with Niantic Drive.



A visible police presence during passenger pick-up and drop-off can encourage good driver behavior.



Outdated signage at schools throughout Foster City.



Many crosswalks around Brewer Island Elementary School are missing curb ramps.



The school uses traffic cones to prevent encroachment on the bus stop.



Faded curb paint does does not clearly communicate parking restrictions on the curb.



In-street signage at the uncontrolled crossing on Niantic Drive increases visibility.



Nina Lane is on the walking route for many students. There are currently no marked crosswalk or curb ramps.

## **Observations**



Without additional treatments to increase crosswalk visibility, drivers may not always yield to pedestrians in the crosswalk.



Students attempting to cross Foster City Boulevard at the uncontrolled location on Polynesia Drive.



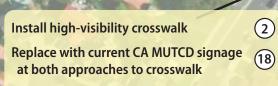
Students crossing the wide plaza in front of the school.

(X) For specific recommendations, see Toolbox on page 19.

## Install red curb on Polynesia from path to intersection Install Assembly B and D signage southbound on Niantic at Polynesia Replace with current CA MUTCD signage southbound on Niantic and eastbound on Polynesia Install curb ramps on northeast and northwest corners

## **Potential Safe Routes to School Improvements**

Stripe white curb on Polynesia between entrances to the loading loop



Consider curb extensions on both sides of crosswalk

Install red curb paint on both sides of walkway (7)

20

(7)(12)

18

(19)

**BREWER ISLAND** 

**ELEMENTARY SCHOOL** 

Balclutha Drive

Install in-street yield to pedestrian sign in (13) crosswalk across Nina at Polynesia Install curb ramps at both ends of crosswalk (19)

(2) (12)

(13)

(18)

(19)

Install curb ramps on both ends of crosswalk (19)

Install high-visibility crosswalk at northeast leg of intersection Install Assembly B and D signage on Polynesia from both approaches Install in-street yield to pedestrian sign in crosswalk across Chrysopolis at Polynesia Replace with current CA MUTCD signage on Polynesia from both approaches Install curb ramps at all four corners of intersection



## **Foster City Elementary School Walking and Biking Audit**



## **School Information**

Foster City Elementary School is located at 461 Beach Park Boulevard in a residential neighborhood of Foster City. Edgewater Boulevard, a four-lane roadway with a wide median, borders the school on the east.

During the 2012-2013 school year, 771 students were enrolled from all over Foster City. The school is located adjacent to a park and its facilities are the newest in Foster City.

Passenger pick-up and drop-off occurs in two formal loading loops on Edgewater Boulevard and Beach Park Boulevard and the school has instituted a student number system to improve efficiency of passenger pick-up.

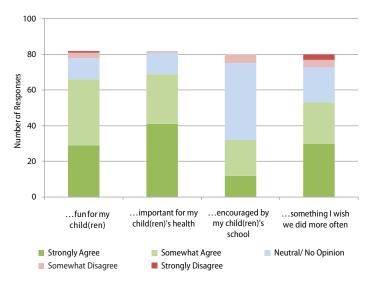
## **Bell Schedule**

Grade	Morning	Afternoon
Kindergarten	8:20	12:30
1 - 3	8:20	2:40
4 - 5	8:05	2:45

## Safe Routes to School Survey

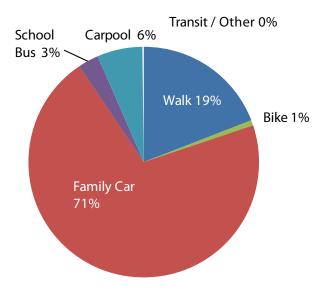
A parent survey was conducted at Foster City Elementary School during the Fall 2012 semester; 161 responses were collected. Key findings are reported below:

- Riding in family vehicle and walking are the most common modes of travel: Asked about their travel patterns, 19 percent of parents responded that their child walks to and from school. Seventy-one percent are driven in a family vehicle. Carpooling accounts for nine percent of trips, especially afternoon trips.
- **Students are spread throughout Foster City, but** most live within easy bicycling distance from school: Forty-four percent of students live within a half mile from school, and 76 percent within a mile. Only two percent of students travel more than two miles to school.
- ➔ There is interest in walking and bicycling to school: A majority of parents indicated that walking and bicycling to school was something that wished they did more often, with large majorities citing that walking and bicycling is fun for their children and important for their children's health.
- Traffic considerations are a high priority: The six barriers most frequently cited preventing parents from allowing their children to walk and bike to school are traffic related, with large majorities indicating they would allow their child to walk or bike more often if speed and volume of traffic were addressed.



Walking or biking to school is... (n = 82)

Mode split for all school trips (n = 1,561)



Source MTC Safe Routes to Schools Parent Survey, 2012

### Would you allow your children to walk/bike more often if this concerned were addressed?

Too much traffic along ro Speeding traffic along ro Lack of bikev Unsafe intersect Lack of sidewalks and/or pa No crossing gua Stranger dar No adults to walk or bike Child's before or after school activi Walking/biking take too Driving is more conver Too far from sch Lack of bike parking at sch Child has too much to c Violence/crime in neighborh Don't know best route to sch Bad wea

_		
route		71%
route		71%
ways		68%
tions		66%
oaths		64%
uards		63%
nger	6	1%
with	6	1%
vities	59	%
long	56%	
nient	56%	
hool	55%	-
hool	54%	
carry	53%	
hood	48%	
hool	42%	
ather	40%	

## Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of February 26, 2013. Staff representing the City of Foster City and the San Mateo - Foster City School District attended the audit, along with the school principal and several parents of school attendees.

Audit participants observed the morning arrival period, including travel behavior by pedestrians, bicyclists, and motorists, and transportation infrastructure issues at the school site and surrounding neighborhood. Photos are shown on the following page.

### Infrastructure Observations

#### PARKING LOT/LOADING ZONE

- There are two passenger loading loops. One is accessed from Edgewater Boulevard and the other from Beach Park Boulevard. Duting afternoon pick-up, parents display a number that matches a particular student to improve the efficiency of passenger loading. Parents are not allowed to enter the loading area without a number.
- ➔ Signage and curb paint is in excellent condition.

#### **EDGEWATER BOULEVARD**

Major congestion was observed at the intersection of Edgewater Boulevard and Beach Park Boulevard.

#### **BACK ENTRANCE**

- An additional loading zone was recently opened on Polaris Avenue (it was not open during the audit).
- A midblock crossing on Polaris Avenue is difficult to see when approaching from the south.
- Intersections for the path approaching the school lack curb ramps.

## **Behavioral Observations**

### **BEACH PARK BOULEVARD**

- Multiple motorists were observed pulling into the opposite lane of traffic to pass cars stopped at the entrance to the passenger loading zone.
- Jaywalking was observed across Beach Park Boulevard.
- Many students do not dismount when crossing Beach Park Boulevard at Catamaran Avenue. These were likely Bowditch Middle School Students.

### **BEACH PARK BOULEVARD AT CASTOR STREET**

- The pedestrian crossing of Beach Park Boulevard is uncontrolled.
- ➔ Turning left into or out of Castor Street is challenging.

### BEACH PARK BLVD. AT EDGEWATER BLVD.

- School staff reported that some motorists ignore the crossing guard stationed at the intersection of Beach Park Boulevard and Edgewater Boulevard.
- Westbound motorists were observed not clearing the intersection during the green cycle and obstructing cross traffic.

### **EDGEWATER BOULEVARD**

School staff reported that students and parents sometimes cross Edgewater Voulevard outside of a marked crossing near the intersection of Ram Lane.

- School staff reported that some students cross
   Edgewater Boulevard at Port Royal Avenue south of the school.
- A large pack of adult bicyclists was observed traveling south on Edgewater Boulevard.

## **Improvement Plan**

Recommendations for the school area appear in the following pages.



Many parents were observed accompanying their children to school.



Frustrated motorists on Beach Park Boulevard move into the oncoming traffic lane to get around stopped traffic.



Congestion along Beach Park Boulevard backs up into the intersection with Edgewater Boulevard.



Edgewater Boulevard is a popular route among bicyclists.



Some parents were observed parking in the church lot across the street to walk their children into school.



Some students were observed crossing Beach Park Boulevard outside the crosswalk amid the traffic shown here.



A family crossing Beach Park Boulevard at the intersection with Castor Street.



Transportation infrastructure at Foster City Elementary School is newer and more up-to-date than at other elementary schools.



Edgewater Boulevard is a wide street that includes four lanes, bike lanes, and a landscaped median.

## **Observations**



A crossing guard monitors the intersection of Edgewater Boulevard and Beach Park Boulevard.



Uncontrolled transverse crosswalks can be difficult for motorists to see without additional crossing treatments.



A dirt path along the median suggests that this location is already being used as a midblock crossing.

(X) For specific recommendations, see Toolbox on page 19.

Install high-visibility crosswalk on Polaris Avenue at pedestrian path Install Assembly B and D signage on Polaris Avenue from both approaches Consider curb extensions for both ends of crosswalk on Polaris

Move SLOW SCHOOL XING stencil closer to crosswalk when repainting (5)

Circle

Replace with current CA MUTCD signage on Polaris Avenue at Castor Street in both directions 18

2

12 20

Provide pedestrian signal on Edgewater Blvd for proposed crosswalk

oulev

**FOSTER CITY** 

**ELEMENTARY** 

**SCHOOL** 

Install enhanced bike lanes on Edgewater Blvd southbound through entrance to school loading loop

and Beach Park Blvd at all approaches

Install curb ramps on southwest and southeast corners of intersection (19)

Beach Park Blvd

Replace with current CA MUTCD signage on Beach Park Blvd in both directions (18) Consider curb extension on northeast corner of intersection



## **Toolbox of Potential Improvements**



*School crosswalks* are appropriate for lower volume crossing locations near school sites.



*High-visibility school crosswalks* make it easier for motorists to see crossing pedestrians.



*Advance stop bars* provide more space for pedestrians and increase visibility.



**SLOW SCHOOL XING pavement stencils** signal that an uncontrolled crosswalk is ahead.



Double yellow centerlines discourage U-turns by motorists.



Red curb paint delineates areas where parking is prohibited.



**Enhanced bike lanes** can be used for conflict zones, where motorist and bicycle paths cross.



*Restriping traffic, bicycle, and parking lanes* that have faded can assist school traffic operations.



Assembly C signage can reduce traffic speeds around schools.



Advance yield lines/sharks teeth instruct motorists where to yield at uncontrolled crosswalks.



*White curb paint* signifies appropriate areas for passenger loading, and not parking.



Assembly B and D signage alert motorists to an uncontrolled crosswalk ahead.

## **Toolbox of Potential Improvements, cont.**



In-street yield to pedestrians signs increase crosswalk visibility.



**STOP signs** may be installed where pedestrian volumes or other safety considerations warrant.



*Rectangular Rapid Flash Beacons* increase yield compliance at uncontrolled crossings.



*Signalized pedestrian crossings* provide opportunities for pedestrians to cross safely.



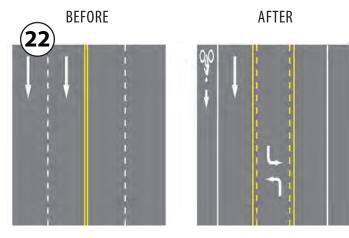
**Replace obsolete or inappropriate school area signs** to keep school traffic control up to date.



*Curb ramps* provide access to disabled pedestrians and parents walking with strollers.



*Increasing the size of the pedestrian waiting area can keep sidewalks accessible.* 



*Road diets* calm traffic provide space for bicyclists, and can provide pedestrian refuges.



**15 or 20 MPH school speed limit ordinances** can further reduce traffic speeds in school areas.



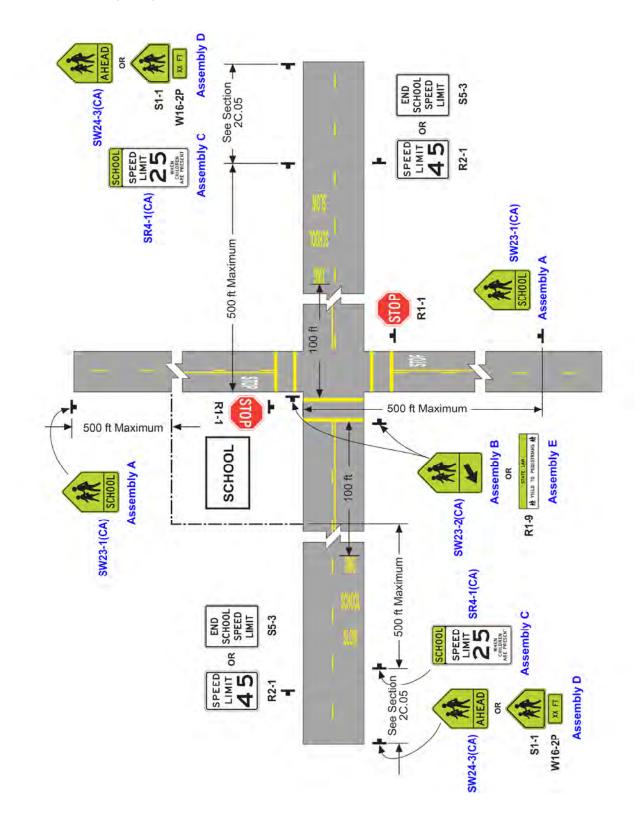
*Leading pedestrian interval phasing* allows pedestrians a head start crossing the street.



*Curb extensions* shorten pedestrian crossing distance and enhance visibility.

## Example of Signing for School Zone with a School Speed Limit and a School Crossing

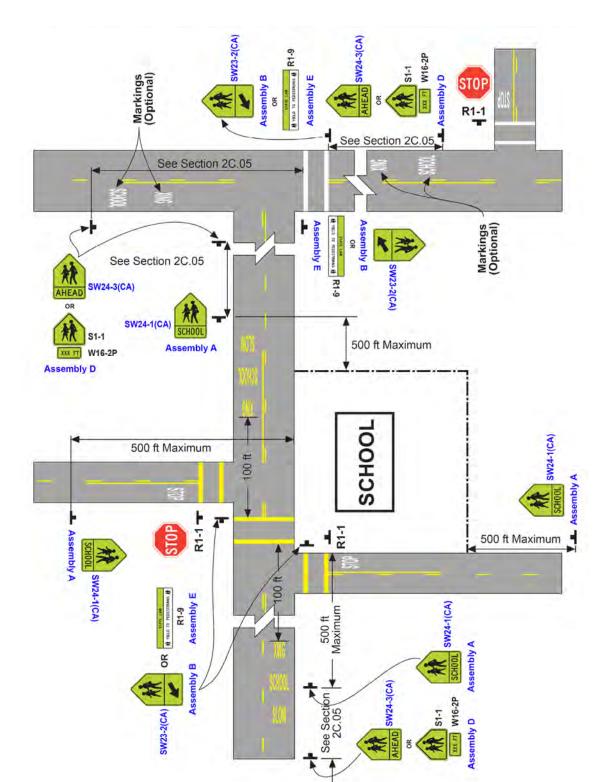
## Example of Signing for School Crosswalk Warning Assembly



California MUTCD 2012 Edition

(FHWA's MUTCD 2009 Edition, as amended for use in California)

Chapter 7B – Signs, page 1274. Figure 7B-5(CA). Part 7 – Traffic Control for School Areas . January 13, 2012



California MUTCD 2012 Edition

(FHWA's MUTCD 2009 Edition, as amended for use in California) Chapter 7B – Signs, page 1279. Figure 7B-104(CA). Part 7 – Traffic Control for School Areas . January 13, 2012