Bayshore Elementary School:
Safe Routes to School Workshop Summary

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Recommendations Supporting Safer Routes to School & Healthy Community Design

On March 22, 2019 Bayshore Elementary School, along with the San Mateo County Departments of Education and Health, hosted a walk audit and healthy design workshop, facilitated by Mark Fenton. The intent was to develop recommendations to increase the safety of walking and bicycling to the school and reducing traffic hazards, with the goal of increasing the number of students actually walking and cycling while reducing the amount of vehicle traffic at school arrival and dismissal times.

Before the walk audit the group discussed the key elements that are known to increase walking and bicycling in a community. Mark summarized an overview of the research into what creates a more livable community generally, and settings that specifically encourage walking, bicycling, and transit use. This included the growing evidence that these factors not only support public health through increased physical activity, but also economic vibrancy, environmental sustainability, and quality of life. Four key characteristics of such thriving communities are as follows:

A. Mixed land use patterns: Compact development with different land uses and activities intermingled and close together, allowing for varied types of destinations within walking, cycling, and transit distance, while preserving open land and agricultural space. Neighborhood schools are thus integral to healthy and sustainable community design.

B. Active transportation facilities: A comprehensive and connected network of pedestrian, bicycle, and transit facilities, such as sidewalks, bicycle lanes, and non-motorized pathways, as well as frequent, affordable, quality transit service appropriate to the community scale, from dial-a-ride to scheduled buses.

C. Functional site designs: Destinations and routes are designed to reward, not punish, those who arrive on foot, by bike and transit, such as buildings at the sidewalk, with parking on-street or behind, and elements such as street trees and landscaping; street furnishings such as benches, shade structures, planters, and awnings; human scale lighting and way-finding signs; safe and appealing transit stops with cover, benches and schedule information; and quality, plentiful bicycle parking.

D. Safety and access for people of all ages, incomes, physical abilities and disabilities, including quality street crossings (e.g. highly visible markings, countdown timers and auditory pedestrian signals), full ADA-compliant design, and appropriately applied state of the art traffic calming such as curb extensions, chicanes, median islands, roundabouts, and lane narrowing and road diets.

Recommendations and priorities

At the end of this report is a grid summarizing many of the specific recommendations for actions that were generated during our working session. They are broken into the three Ps: programs (e.g. events, outreach, education, and promotional activities), projects (physical changes to infrastructure and the built environment), and policies (e.g. rules, ordinances, guidelines, practices, and procedures). And they are listed as short-term ideas that could be executed on the order of weeks to months, and longer-term initiatives estimated to take months to years. This makes clear that there are certainly some low cost, near term actions that can be pursued quickly to build momentum and begin making it safer for students immediately. There is also a simple schematic map that shows the potential locations of some of these activities.

Following is a list of specific actions that should be high priorities, as they could lead to some fairly quick positive outcomes for walking and bicycling safely to school.

1. Collect data on current conditions and challenges.

Having a very clear picture of the current conditions is important in developing the most effective solutions. Further, if students themselves help with this evaluation, then they and hopefully their parents and caregivers will be more invested in the solutions. Therefore the group felt the following activities would be worthwhile, with students participating as part of active learning projects (for example collecting, analyzing, and graphing data as part of mathematics classes).

- Collect show-of-hands survey data on how children get to and from school. This can be done during morning attendance; students are simply asked, “How did you get home yesterday? Raise your hand if you walked? Rode a bicycle? Rode in a car with just your family? With other students (carpooled)?” etc. Ask again about school arrival in the morning; note that this data is not asking generally about how you get to school, but about specific trips (yesterday afternoon, this morning) to assure accuracy. It is best if collected on different days of the week, at different times of year, in different conditions. And if collected over time, it can help measure changes, and the effectiveness of your interventions.

- Engage the students in measuring vehicle traffic. They can count total vehicles at arrival and dismissal, observe and count pick-up/drop-off locations, count specific behaviors (dropping students away from the curb, double parking, U-turns in the street), and trends over time.

- Develop “heat” maps of student home locations, to identify logical clusters that might be able to walk together, for example as part of

Stopping in the street

a walking school bus group. Then encourage students and parents/caregivers to connect to create walking school buses - groups of students walking to school together with an adult, or older students leading younger ones, to help allay parental concerns.

- Survey the area around the school to identify intersections where vehicles tend to park in or dangerously close to crosswalks (e.g. photo at right). This appeared to be a common problem and it makes students using these crosswalks very vulnerable, as they are effectively stepping out blindly from behind the parked vehicle.

2. Launch a program to reduce unsafe automobile traffic at school arrival/dismissal.

Workshop participants agreed that the number of vehicles and unsafe behavior by drivers dropping off and picking up students is a significant issue. Double parking on both sides of streets by the school, illegal U-turns, and leaving unoccupied vehicles on the street as they run children in or out are particular problems. So a high priority is a program of outreach and education to parents and caregivers that has two specific goals:

- Encourage as many students as possible to be allowed to walk, and for older children to bicycle, to school. Make clear the myriad benefits, including evidence that more physically active students have been shown to perform better academically and have fewer disciplinary problems.

- Move as much drop-off and pick-up activity to the high quality, designated loop in the school parking lot. This would assure that students are getting in and out of vehicles at the curbside, away from an active street, and they would not have to cross an active travel lane to get into the school.

The following specific elements could assist in assuring this behavior:

- Student arrival (or at least the younger grades) could be through the doors nearest the parking lot drop-off loop. And students identified as car-riders can be released through these doors as well.

- Although there could be a queue of cars at dismissal time, this could extend out onto Ottilia Street, given the relatively low amount of traffic there (except at school times).

- Have student safety patrol open car doors so that drivers never leave their vehicles; they simply pull as far forward as possible on the curb and stop, then safety patrol opens the doors.

Although these steps may appear to slow the motor vehicle process, it will actually make it quite smooth and predictable, and take roughly the same amount of time. But drivers will have to be patient and wait their turn in an ordered way, which may be a disincentive to some drivers. The positive result may be an incentive to consider letting their children walk, which should be easier to do with the proposed safety enhancements and the opportunity to join neighborhood walking groups.

3. Install curb extensions at the critical intersections nearest the school and along walking routes.

On the walk audit cars were frequently seen parked right next to the crosswalks at intersections. Curb extensions, or bump outs, extend the sidewalk at crosswalks to make crossing pedestrians more visible and able to see traffic, preclude cars from parking illegally close to the crosswalk, shorten the crossing distance, and generally slow vehicle speeds. This may be easiest done as a phased approach as follows:

- First install “pop-up” curb extensions, using low cost and removable materials such as paint, cones, planters, rubber curbing material, and vertical delineators (flexible posts) to test their effectiveness in slowing traffic and improving pedestrian safety. (Two examples are pictured below). Specific intersections mentioned include:
  - Ottilia Street at Schwerin, Oriente, and Accacia Streets.
  - Intersections on Schwerin Street south toward Partridge Street, Midway Drive, and Martin Street (especially given anticipated dense residential development in this area).
  - On Martin Street from Schwerin Street west to the Bayshore Community Center.

- A number of intersections were seen to lack curb ramps for ADA access. Temporary wooden curb ramps can be installed at these intersections if they have pop-up curb extensions to protect the ramps from vehicles (photo right).
- Temporary curb extensions and ramps are specifically recommended for the red-curbed areas immediately adjacent to the school block.
- Whenever any of the roadways are repaved around the school, temporary curb extensions and ramps can be made permanent. These can include "green" infrastructure, such as natural plantings or swales that capture and allow some storm water to infiltrate the ground.
- In cases where there is a stop sign, it is usually advantageous to move stop signs out into the curb extension to make them much more visible to traffic.

4. Develop "satellite" parking to ease the parking limitations near the school.

Although our workshop was on a Thursday, everyone indicated that traffic problems are worst on Tuesdays and Wednesdays when street cleaning restrictions further reduce already limited parking on streets adjoining the school. One of the teachers indicated she occasionally parks in the free parking behind the Cow Palace, across the street from the Bayshore Community Center on Martin Street. This suggested the idea of reaching out to the owners of this parking and determining if it could formally become satellite parking for the school. The following could then occur:

- Teachers could be encouraged to park and walk to school. This could be daily, or on a rotating basis (certain days of the week, or varied throughout the school year). Incentives could be offered to teachers participating in the "park and walk" program, such as recognition, meals, even an earned personal day.
- Those walking from the satellite parking could also effectively become a walking school bus, being joined by students in the neighborhood on the walk to and from school. Needless to say this physical activity is beneficial to the health and well-being of adults as well as students!

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• Eventually parents/caregivers might be encouraged to drop their children at the satellite location so that they might join the walking school bus there. This would allow the students to get healthy, safe daily physical activity and help ease vehicle congestion at the school.

5. Encourage interested older students to bike to school.

Bicycling to school is reasonable for older students coming from neighborhoods with safe routes for riding; some schools suggest students be in grade three or above, and have students pass a bicycling skills and safety course before being allowed to ride. The following ideas were suggested or have been used by similar schools:

- Provide bicycle skills and safety training class. This could be provided by a vetted, trained volunteer, or by PE instructors as a segment of PE class.
- Launch a recycle-a-bicycle program. Utilize experienced volunteer bike mechanics, using donated or found bikes to teach students bicycle maintenance, giving the bikes to those kids who complete the program.
- Provide free bike helmets, from the CA Office of Traffic Safety, and teach students how to wear them properly.
- Create an iconic bicycle rack to help generate student interest. The "shark" bike rack (shown in the photo) triggered the idea of Bayshore developing a dolphin bike rack for students, ideally placed under cover to protect those bikes from sun and rain.


Shark rack Scituate MA

5. Improve the Geneva Avenue pedestrian crossings.

A number of students cross Geneva Avenue, and more might walk from that direction if it were made to feel more safe. It is a fairly long crossing, with a signal light at Schwerin Street, but only a pedestrian activated flashing beacon at Oriente Street. In both cases pedestrians feel and are fully exposed to traffic for the full crossing. This can be particularly dangerous for pedestrians halfway across the crosswalk if, for example, a vehicle making a left turn from Schwerin onto Geneva is inattentive and cuts the turn too closely. An extension on the median island can help provide additional protection.

- Curb extensions can be placed at the crosswalks adjacent to on-street parallel parking, as already exists on the northeast corner of the intersection of Oriente and Geneva (as shown at right). These shorten the crossing distance and help to make pedestrians more visible to vehicles before entering the crosswalk, and provide pedestrians a better view of approaching vehicles. Again, low cost, reversible materials can be tried first to measure their effectiveness.


Curb extension, Geneva Ave.

- The median islands in Geneva can be extended somewhat beyond the crosswalk (with the crosswalk cutting through island) so that the extended portion creates a protected refuge for pedestrians halfway across the street (see the photo below). In particular this protects pedestrians from left turning vehicles cutting the angle too sharply (both entering or turning off of Geneva Avenue).

The focus of these steps is three-fold. First, make the area immediately around the school safer and more accessible (especially with curb extensions and curb ramps) for walking and bicycling. Second, organize the vehicle drop-off and pick-up to make it safer and more predictable, though not necessarily faster as that would simply be an incentive for more children to be driven. Third, generally promote walking (and for mature enough students, bicycling) as healthier for students and the environment, and as the preferred and recommended mode of travel for those who can do it safely.

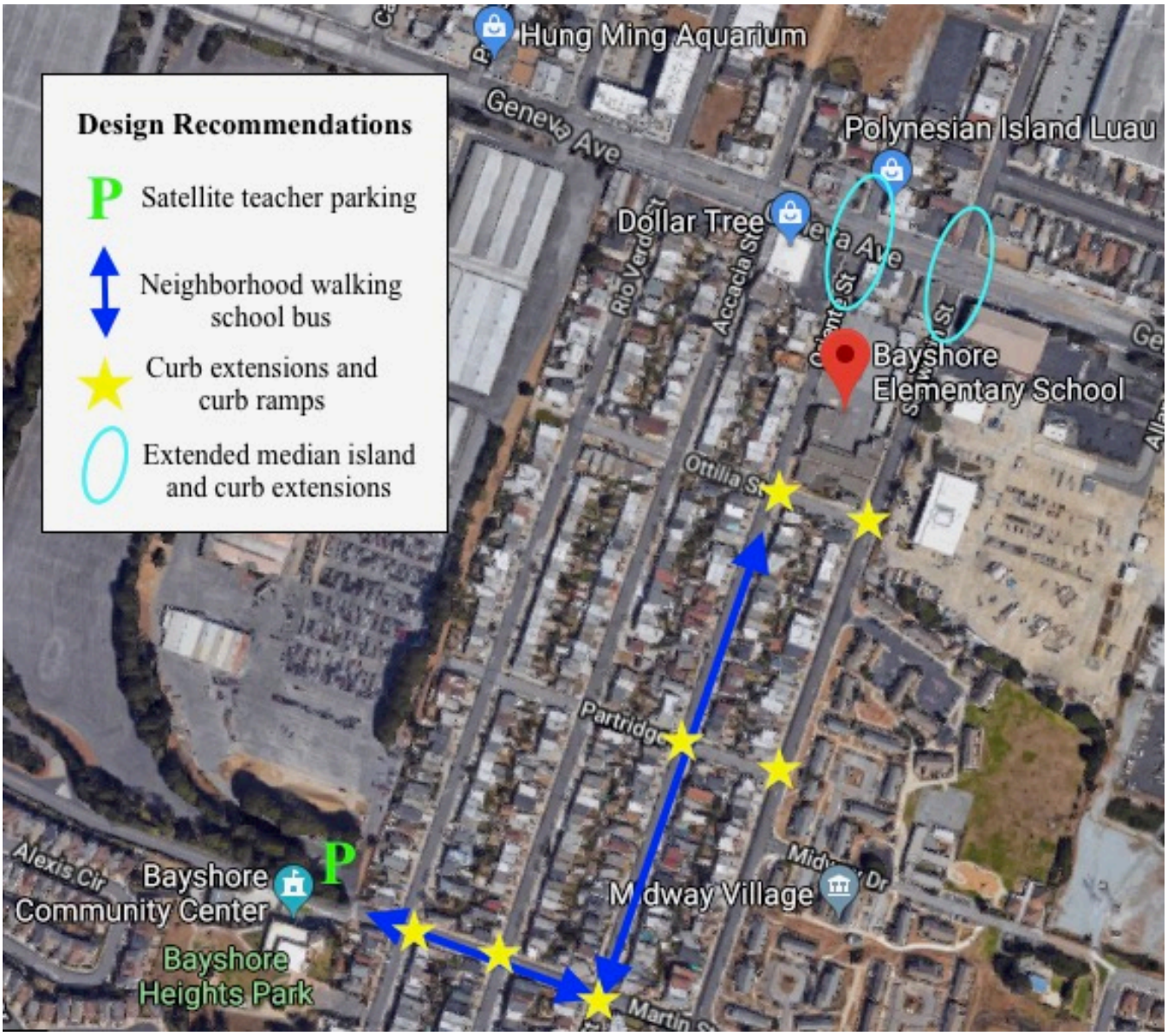
Program, project, & policy recommendations from workshop.

	Short Term	Long Term
Programs (e.g. events, outreach, education, promotions)	• Survey kids on their current travel modes (show of hands surveys of students during morning attendance checks). • Generate a heat map of family locations, and possible walking routes to school. • Launch walking school buses with parent volunteers walking with groups. • Have students collect data on any demonstration projects: vehicle speeds, driver yielding behavior.	• Satellite parking program for teachers. Use parking at Community Center; offer incentives to teachers to park there, and walk to school with students from this neighborhood. • Attach walking school bus to staff remote parking. Create an off-site drop-off/pick-up location for students, who • Begin rewarding students for walking, biking: recognition, small prizes, “points.” • Consider a biking event or program to encourage cycling from the neighborhood – safety & skills education. • Have social justice/activism woven into the outreach and education.

Projects (e.g. changes to physical infrastructure & the built environment)	• Increased visibility and clarity of signage around the school – where drop-off/pick-up can occur.
	• Identify most commonly walked routes to school.
	  • Temporary curb extensions at identified preferred walking routes; paint and planters to create protected areas at the curb.
	  • Sidewalk enhancements and repairs.
	  • Paint high visibility crosswalks – ladder style striping
	  • Inlaid markers (e.g. tiles, dolphins) along recommended routes.
		• Make the Rectangular Rapid Flashing Beacon (RRFB) at crosswalk on Geneva visible to pedestrians standing at the crosswalk – children indicated they could not see when it was blinking.
		  • Add a nose or extension to the median islands on Geneva.
		  • Other safety enhancements? Some requested the signal be a pedestrian activated stop light.
		• Possible dolphin bike racks at the school.
		• Accacia and Ottilia intersection needs more red curbing; possible curb extension.
		• Close Oriente from 8:00-8:45; 2:30-3:15 pm, to reduce vehicle chaos.

	Short Term	Long Term
Policies (e.g. rules, ordinances, guidelines, practices, & procedures)	• Smoke free zone 24/7 at school. • Enforce the designated drop-off/ pick-up area in the school parking lot; perhaps create benches and comfortable waiting areas; have kids formally enter through the multi-purpose room so that is the closest drop-off/ pick-up location. • Create incentives to parents/ students for walking and bicycling, and if driving for using the proper areas for arrival/ dismissal (e.g. earn a point or Fintastic ticket).	• Permitted parking only in the school adjacent streets; possible “teacher parking permit” on Schwerin? • Consider altering plan so students enter on Schwerin? Or focus on Oriente, with a designated pick-up/drop-off area (white curb). • Be prepared for lots of housing growth coming in the region. • State Park at Carter & Guadalupe; should seek some of the available funds to increase access to parks (e.g. sidewalks, perhaps designated bike routes, up to the edge of the neighborhood abutting the park)

Schematic of typical recommendation locations



References and Resources

The National Center for Safe Routes to School; lots of practical information and downloadable resources: www.saferoutesinfo.org

The Safe Routes to School National Partnership; coalition of organizations and experts providing great implementation support to schools & communities: www.saferoutespartnership.org

Complete Streets: National coalition working for streets that work for pedestrians, bicyclists, transits riders, and drivers of all ages, incomes, and abilities: http://www.completestreets.org

Slow Your Street: A How-to Guide for Pop-Up Traffic Calming. Available from Trailnet. https://trailnet.org

The Tactical Urbanist's Guide to Materials & Design, by the Streets Plan Collaborative. Downloadable for free. http://tacticalurbanismguide.com

Urban Street Design Guide and the *Urban Bikeway Design Guide* by the National Association of City Transportation Officials (NACTO $50 each). https://nacto.org/publication/urban-street-design-guide/

Small Town and Rural Multi-Modal Networks, FHWA 2017. Lots of relevant images and information. Downloadable for free. https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/

Guidebook for Developing Bicycle and Pedestrian Performance Measures, FHWA 2016; downloadable for free. https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/performance_measures_guidebook/pm_guidebook.pdf

Costs for Pedestrian & Bicycle Infrastructure Improvements, Pedestrian & Bicycle Information Center (PBIC), 2013. http://www.pedbikeinfo.org/cms/downloads/Countermeasure_Costs_Summary_Oct2013.pdf

Better Block: educates, equips, and empowers communities and their leaders to reshape and reactivate built environments to promote the growth of healthy and vibrant neighborhoods: www.betterblock.org