



Safe Routes to Laurel Elementary: Community-Driven Change through Citizen Science

September 2021



Laurel
Elementary School



SAN MATEO COUNTY HEALTH
**PUBLIC HEALTH,
POLICY & PLANNING**



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Safe Routes to Laurel Elementary: Community-Driven Change through Citizen Science

Background

In September 2021, San Mateo's Laurel Elementary School community took to the streets. COVID-19 had disrupted the school's autumn reopening, but that didn't stop Principal César Gaytán from wanting to get input from the diverse multilingual school community on how best to increase safe routes for walking and biking to school. In fact, COVID allowed Gaytán to be a pioneer in implementing an innovative remote-facilitation pilot within the San Mateo County Office of Education's Safe Routes to School (SMCOE-SRTS) Program. Led by engineer and walk audit expert Mark Fenton, the project incorporated use of Stanford University's multilingual Discovery Tool mobile app for use in the walk audit process.

The Discovery Tool allows users to record geotagged photos, comments, and ratings about community level factors that support or hinder healthy living. Developed by the [Stanford Our Voice Initiative](#), the app is a gateway to a process of collective solution-building in which community members become "citizen scientists," analyzing their own collective data and using it to drive positive change that builds on strengths and addresses challenges. The Discovery Tool and the *Our Voice* process has been used in dozens of locally-generated projects around the world. For Mark Fenton, who has decades of experience conducting walk audits to inform community redesign, *Our Voice* provided a way to democratize community engagement, even with the restrictions on community gathering during the COVID era.

The 1-week project elicited a rich array of community insights as well as a wide range of actionable steps to promote and facilitate increased walking and biking to school.

Community Setting

- **Safe Routes to School - San Mateo County**

San Mateo's Safe Routes to School (SRTS) program is modeled after the National Safe Routes to School Program and encourages school children to walk and bike to school. By creating safe routes for children, SRTS aims to lower the number of traffic deaths, improve air quality, and reduce childhood obesity.

- **Laurel Elementary School**

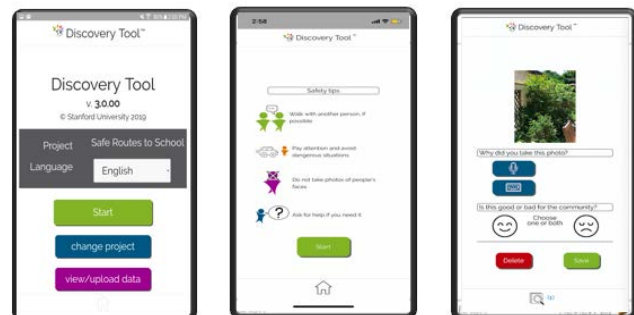
Laurel Elementary School, led by Principal César Gaytán, is part of the San Mateo-Foster City School District. It serves students from Kindergarten to 5th grade.

Our Voice Implementation Steps

- **Planning:** Via direct communication with Principal Gaytán, SMCOE-SRTS identified Laurel Elementary as a priority implementation site for an innovative remotely facilitated SRTS Walk Audit. They then engaged Mr. Fenton and the Stanford *Our Voice* team, together with other community members, to plan an accelerated implementation in September 2021.
- **Recruitment:** Using bilingual (English/Spanish) materials and scripts developed by the OV team, Principal Castillo took the lead in reaching out to his community. He emailed, texted, and robocalled parents, teachers, administrators, and local decision-makers to register and join in the audit process. The San Mateo County Office of Education Safe Routes to School Program and San Mateo County Health Policy and Planning assisted with the outreach by inviting City Manager, City Council and Staff, Supervisor Groom, neighboring churches, childcare centers, medical centers, to participate and provide valuable insights. The team worked to make the process as equitable and inclusive as possible with extensive outreach, and offering: 1) bilingual communication materials 2) virtual sessions with live Spanish interpretation, 3) virtual sessions after school/work hours 4) tablets for use, and 5) on-call assistance where needed.
- **Registration:** Interested community members registered and consented to participate using Stanford's IRB-approved bilingual RedCap interface. At the end of the registration and consent process, they took a brief pre-project survey about their feelings around community safety, social cohesion, and self- and collective efficacy around community change.

A total of 41 people registered to participate in the project in some form

- **Orientation and Training:** Orientation and Training: All those who completed the registration and consent process received an invitation to attend a project orientation and training via webinar, either in English or in Spanish. The webinars provided background and context for the Walk Audits, and trained participants on use of the Discovery Tool mobile app and the process for uploading data to a secure server



The Stanford Discovery Tool mobile app is available in 13 languages and has been used successfully by Citizen Scientists aged 9-90

- **Data Gathering:** Following the online training, consented participants received a project-specific code and password to use the Discovery Tool app. Using their own devices, or borrowed project devices, they were asked to conduct walking assessments over the following 4 days, using the app to identify “*what makes it easy or hard to walk or bike to school.*” Participants who agreed to be contacted by program staff received 2 walk reminders and tips for successful data upload.

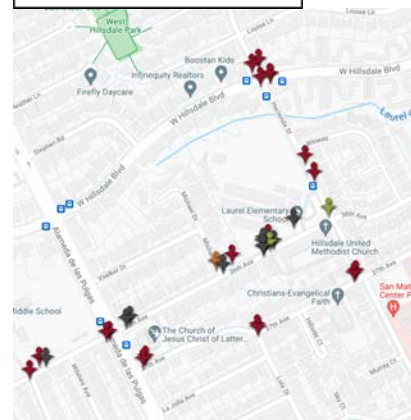
Between September 23 and September 26, participants completed a total of **22 Discovery Tool Walks**, comprising **93 photos** and **88 narratives** (all text-based)

- **Data Tagging and Filtered Reports:** Project facilitators used anonymous participant photos and comments to tag and sort the data according to theme. Any potentially identifiable images were deleted or blurred to maintain anonymity. Many photos were tagged with multiple themes, and photos without comments were placed in an “Uncategorized” group. Data were then processed and filtered according to 10 categories, arranged according to frequency. Project facilitators then prepared filtered reports and “Hot Spot” maps for each theme. These reports were shared with all registered participants via email prior to the Community Meeting, and also made available during the meeting itself.

Citizen Scientist data were tagged and sorted according to the following themes below. Some photos tagged with multiple themes.

- Condition of Sidewalks and Pathways - 18 photos
- Crossings and Crosswalks - 21 photos
- Vehicle Speed - 10 photos
- Traffic Signs, Lights and Controls - 13 photos
- Bike Accommodations and Facilities - 6 photos
- General Safety and Security - 13 photos
- Connectivity of Sidewalks and Pathways - 4 photos
- Vehicle Behavior - 39 photos
- Other - 0 photos
- Uncategorized; no comments - 15 photos

Sample Hot Spot Map:
Vehicle Behavior



Sample Data from Bilingual Reports to All Participants

*Note: all data are anonymous



Why did you take this picture?

[text] :When cars are parked on the sidewalks, where do pedestrians walk? There was a mom with a stroller ahead of me that had to squeeze in between.

Quando los autos están estacionados en las aceras, ¿por dónde caminan los peatones? Había una mamá con un cochecito delante de mí que tenía que meterse en el medio.

Tags:

Vehicle Behavior CONDITION OF Sidewalks & Pathways



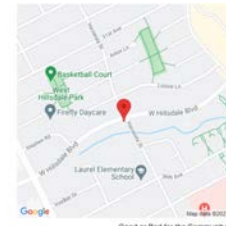
Why did you take this picture?

[text] :Super busy intersection, really needs a crossing guard to help with foot traffic.

Intersección muy transitada, realmente necesita un guardia de cruce para ayudar con el tráfico peatonal.

Tags:

Crossings & Crosswalks



- Community Meeting:** On September 28, 2021, 41 community members joined a Zoom meeting to review and discuss collective findings. After a brief presentation on general improvement strategies, the participants moved into facilitated small groups, where they used their own findings to generate strategies and solutions for environmental change to support biking and walking to school. Each group focused on 2 themes, generating shorter-term and longer-term strategies for projects, programs and policies that could build on assets and address identified challenges

Meeting participants generated a total of **23 specific strategies and solutions** for increasing walking and biking to school, comprising both shorter-term and longer-term recommendations and Programs, Physical Projects, and Policy approaches.

Community-Generated, Data-Driven Strategies and Solutions for Increasing Walking and Biking to Laurel Elementary School (detailed report in Appendix 1)

*Action items voted as top priorities in the post-meeting survey are shown in *red*.

	Shorter term, lower cost	Longer term, more costly
Programs	<ul style="list-style-type: none"> ○ Host walk-to-school day and bike-to-school day events to build knowledge and interest, and to have adults and students report on walk-to-school routes and needed improvements. 	<ul style="list-style-type: none"> ○ Launch Walking Wednesdays as an on-going promotional activity. ○ Launch walking school buses - groups of students walked to school by an adult on a designated route and schedule, picking up kids along the way.

	Shorter term, lower cost	Longer term, more costly
Programs	<ul style="list-style-type: none"> o Launch a clear and comprehensive educational campaign to discourage double parking and other dangerous drop-off and pick-up behaviors, make clear the risks, and emphasize proper arrival & dismissal procedures. Include student developed education and outreach, signs, videos, and possible social media activities. o Create student-led walking audits of the area around school to teach proper safety behaviors, identify best walking routes, and catalogue challenge areas that need improvement. o Launch a helmet promotional and educational campaign for all users of bikes, scooters, and skateboards. 	<ul style="list-style-type: none"> o Launch similar bicycle trains - groups of students bicycling to school with adult supervision. o Daily place and remove plastic delineators, cones, and pedestrian crossing signs in areas around the school to direct proper vehicle behaviors.
Physical Projects	<ul style="list-style-type: none"> o Place signs, student-designed art, posters, other indicators in the rolled curb areas, to emphasize that cars must not park on the sidewalk. (across from Abbott Middle School) o Create temporary curb extensions (paint, cones, light planters) to keep cars from parking in red zones too close to intersections, as well as to calm traffic, and shorten pedestrian crossings. 	<ul style="list-style-type: none"> o Replace flexible delineators at the school's south exit with more permanent structures to assure cars cannot turn left into the school from eastbound 36th Avenue. o Create permanent curb extensions (paint, heavy planters, flexible delineators) to keep cars from parking in red zones too close to intersections, as well as to calm traffic, and shorten pedestrian crossings.

	Shorter term, lower cost	Longer term, more costly
Physical Projects	<ul style="list-style-type: none"> o Consider redesigns for Hacienda to make it safer for pedestrians and motor vehicles. For example, one test could be to make it a one-lane road for vehicles and create a protected bicycle lane as a temporary pop-up treatment. o Place high visibility flags in canisters (quivers) at key crossings, so that kids can hold them when crossing streets. Could even invite students to make flags and placards for these crossings, so there is a sense of ownership. 	<ul style="list-style-type: none"> o Place signs, paint, flexible delineators, planters or other barriers in the rolled curb areas (e.g. across from Abbott Middle School), to emphasize that cars must not park on the sidewalk. o Create permanent flexible delineators, paint, and curbing to define the line-up area on Hillsdale for drop-off and pick-up lane along Hacienda o Place a rectangular rapid flashing beacon (RRFB, yellow light) at the crosswalk of 36th Avenue at Michael Drive. o Place a signal light at the intersection of 36th Avenue and Alameda. Even better, study this intersection for a mini-circle (small roundabout). o Pursue funds for support materials such as crossing guard and safety patrol kits.
Policies	<ul style="list-style-type: none"> o Create a transportation safety committee with school administrators, faculty and staff, parents, city officials (engineering and public works) to study these issues and recommend actions to develop support and participation of the full school community. 	<ul style="list-style-type: none"> o Create and enforce no-parking along the white curbs on roads adjoining the school where vehicles line-up for drop-off and pick-up (cars on Hacienda, and buses on 36th). o Consider moving bus drop-off and pick-up to Hacienda, and spreading vehicle drop off to other areas.

	Shorter term, lower cost	Longer term, more costly
Policies	<ul style="list-style-type: none"> o Partner with the Police Department, to create a positive school traffic/safety officer program. Focus on safety education, not enforcement activities. o Launch a student safety patrol (e.g. 5th graders), to help guide student walking groups to/at key intersections, open curb-side vehicle doors at drop-off and pick-up, and guide vehicles (from the sidewalk). o Identify a location for satellite drop-off and pick-up several blocks or more from school and lead a walking school bus between this location and the school. o Reach out to church across the street to rebuild the relationship, and explore a possible opportunity to allow for a modest amount of defined drop-off and pick-up at through this location. o Put in place a 5-10 minute safety delay on vehicle pick-up at the school. First release pedestrians and bicyclists; the delay gives them time to clear the closest intersections to the school before allowing the cars to begin moving. o Create designated parking or standing areas for drop-off/pick-up, such as by grade level. For example grades K,1 in front of the school; grade 2 at the church; grades 3, 4 on a particular curb; etc. to spread out traffic. 	<ul style="list-style-type: none"> o Reward parents who participate in volunteer traffic direction and monitoring programs, or who lead walking school buses and bicycle trains. o Work with City Council, Public Works, and law enforcement to lower speed limits in immediate school areas to 15 mph.

- **Post-Meeting Survey:** Within two weeks of the community meeting, all participants were encouraged (via bilingual email communication) to complete a follow-up survey about their experiences using the Discovery Tool app and participating in the community meeting. They were also provided with a complete list of the solutions and strategies generated by the small-group breakout sessions, and asked to help prioritize action steps. Finally, they were invited to sign up, based on interest and availability, for Action Teams to help advance the proposed strategies and solutions.

The post-meeting survey elicited 12 responses from diverse participants.

- Among those who used the Discovery Tool, 100% were either extremely or somewhat satisfied with the experience of using the app to record information about their community. Many found it easy and intuitive to use, and appreciated the geotagging feature. Some reported challenges with data upload and suggested adding a capability to import images from camera roll to the Discovery Tool app.
- Among those who had attended the September 28th community meeting (55% of respondents), 100% expressed satisfaction with the experience. Several attendees enjoyed hearing so many different ideas and perspectives. The school district's superintendent attended the meeting and participants expressed their gratitude for her joining.
- Survey respondents voted on their top three priority strategies/solutions for both shorter-term and longer-term action.
- Three individuals signed up to participate in Action Teams to further the strategies and solutions identified throughout the Our Voice – SRTS process.
- The survey gave participants the opportunities to share additional SRTS solutions. and strategies. These are listed in Appendix 2 on Page 11.

Post-Survey Additional comments

- We talked about a rapid flashing beacon at 36th Ave & Alameda. We did not talk about a signal light and I do not think that's the best idea for the neighborhood - A flashing beacon is a REALLY good option!!
- More flashing yellow lights!
- We need all three local schools working together on this issue: Hillsdale High, Abbott Middle and Laurel.
- Having a police officer to issue warnings/citations would be a good deterrent. Parents know when they are double parking, blocking driveways, etc.--they just don't care.
- Can we ask police to start ticketing people? If they have a regular presence, perhaps drivers will start to change behavior. Can we hire a private parking enforcement?
- Can you open a portion of the blacktop during pickup hour and create a drive thru option for drivers to get their kids?

Highlights

This innovative virtual approach offers an equitable, inclusive, and scalable method for SRTS policy, system, and environmental changes. Some of the key highlights of this effort include:

- 1) Beauty and strengths of the partnerships and collective effort - Walk audit team members, schools and community members
- 2) Great platform to engage community and city staff
- 3) Addressing health equity through an inclusive process and prioritizing high-need schools
- 4) Offering multiple solutions from short-term to long-term solutions generated collectively by the group.

Conclusions and Recommendations

For SRTS projects or initiatives to have the greatest chance of success, it's recommended that an "Action Team" of interested stakeholders be identified for each goal. This can be a mixed group of parents, students, and residents, school and city officials, and other partners.

Recommended Next Steps:

- o Identify leadership, e.g. an individual or group to coordinate and keep this moving
- o Identify additional allies, stakeholders, and partners
- o Create a timeline with specific benchmark outcomes and target dates
- o Identify and engage needed resources including human, financial, and technical support

Acknowledgments

Many people contributed to this project. Special thanks to Laurel Principal César Gaytán, Laurel Elementary staff members, and all the community members who participated in this effort.

Laurel Elementary School: Safe Routes to School Workshop Summary

Prepared for: The Laurel Elementary School Community

Prepared by: Mark Fenton, public health, planning, and transportation consultant; Dec. 2021



Recommendations Supporting Safe Routes to School & Healthy Community Design

During September of 2021 members of the Laurel Elementary School community of San Mateo, along with the San Mateo County Departments of Education and Health, hosted a virtual walk audit and healthy design workshop, facilitated by Ann Banchoff and partners from Stanford University's *Our Voice* initiative and Mark Fenton, a public health, planning, and transportation consultant. The intent was to develop programmatic, infrastructure project, and policy 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.

School faculty and staff, parents, advocates, other area residents, and city staff were invited to take part in a three step process. First were two introductory webinars presented Sep. 22 by the facilitation team outlining simple elements of street and community design that enhance walking and bicycling safety and desirability. They are summarized here:

A. Mixed land use patterns: Compact development with different land uses and activities close together provides varied types of destinations within walking, cycling, and transit distance. Neighborhood schools are an essential piece of such “walkable” development.

B. Active transportation facilities: A comprehensive and connected network of pedestrian, bicycle, and transit facilities, such as sufficiently wide sidewalks, bicycle lanes, and non-motorized pathways, as well as frequent, affordable transit service are key to encouraging non-automotive travel.

C. Functional site designs: Destinations and routes are designed to reward those who travel on foot, by bike and transit, such as buildings at the sidewalk, with parking on-street or behind, and elements such as street trees, landscaping, planters, benches, bicycle parking, shade structures, awnings, lighting, way-finding signs, safe and appealing transit stops, and similar “street furnishings.”

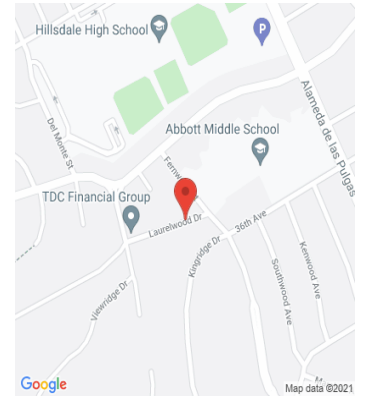
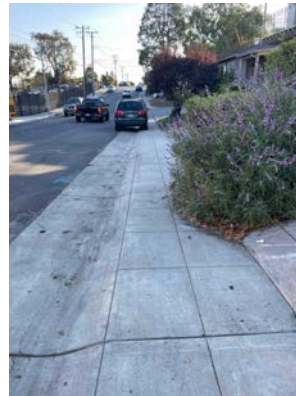
D. Safety and access for people of all ages, backgrounds, incomes, abilities and disabilities, including ADA-compliant design, high visibility crosswalks and signs; and features to help slow traffic such as curb extensions, median islands, small roundabouts, chicanes, and lane reductions and narrowing.



This webinar also introduced the *Our Voice Discovery Tool*. The tool is a cell phone or tablet based application that allows users to take photographs of their environment, and add a comment on whether or how it encourages or discourages walking and bicycling, while automatically recording the location. Over the ensuing week participants were invited to use the application to capture and upload images of locations that they or children they know traverse on their trips to school and nearby in the community. The image at the right is an example of a page of the report generated by the *Our Voice* team, and illustrates the information that is captured: the photo that is taken; the map indicating where it was taken; any comment that was recorded; and whether the photographer felt it was good or bad for the community (in this case both: a good sidewalk, but a bush and parked car impeding the pathway).

Project : LAUREL

September 24, 2021 8:10 am · pg 9/20



Good or Bad for the Community?



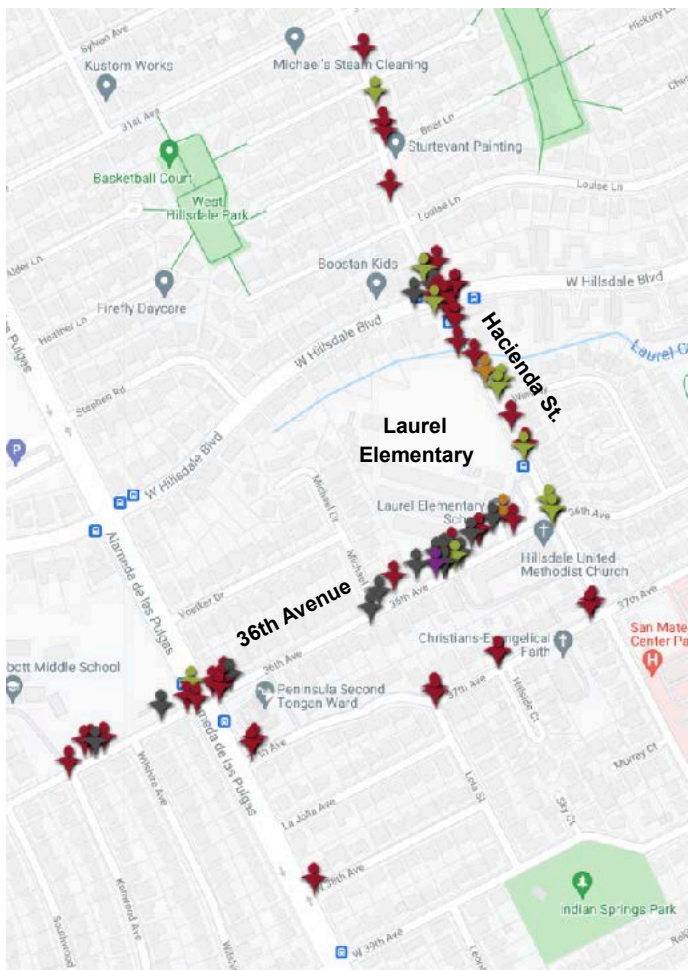
Why did you take this picture?

[text] : 'Rolled curbs always seem to make drivers want to park on the curb, blocking half or more of the sidewalk.'

Los bordillos enrollados siempre parecen hacer que los conductores quieran estacionarse en el bordillo, bloqueando la mitad o más de la acera.'

Tags:

CONDITION of Sidewalks & Pathways



The map at the left shows the area around the Laurel Elementary school, and the locations of all of the photos that were taken. The color of the mark indicates whether the person taking the picture indicated it illustrated something that *encouraged* walking and bicycling (green); *discouraged* it (red); showed some of both (orange); or did not indicate either positive or negative (gray). It is worth noting the clusters of photos taken along the two primary avenues adjoining the school, Hacienda Street (basically north-south) and 36th Avenue (more east-west). Also note the clusters of photos and concerns identified at the intersections of W. Hillsdale Blvd. and Hacienda Street, and at 36th Avenue and Alameda de las Pulgas. The latter intersection is immediately adjacent to the Abbott Middle School.

The images were grouped by eight thematic topics (below) and organized into a PowerPoint presentation for the second step in the process.

1. Sidewalk & pathway conditions.	4. Bicycle accommodation & facilities.	7. Vehicle behaviors
2. Sidewalk & pathway connectivity.	5. Traffic signs, lights, & controls.	8. General security & safety.
3. Crossings & crosswalks.	6. Vehicle speeds.	

The second step was a virtual workshop session in which representative images were shared and discussed, possible improvements to address challenges were offered, and smalls group discussed what types of solutions they felt would be most effective in improving pedestrian, bicycle, and vehicle safety. This session generated a list of recommendations, with participants encouraged to consider all three of the Ps:

Programs. Events, outreach, education, and promotional activities.

Projects. Physical changes to infrastructure and the built environment.

Policies. Rules, ordinances, guidelines, practices, and procedures.

The groups considered both short-term ideas that could be executed on the order of weeks to months, and longer-term initiatives that might cost more and take months to even years. This was to assure that we identified some low cost, near term actions that can be pursued quickly to build momentum and begin making it safer for students immediately. These ideas are summarized in a table at the end of this memo.

The third step in the process was a survey sent out to all of the participants in the workshop listing the program, project, and policy recommendations that had been generated. Survey respondents were asked to identify what they felt were priority actions in each category, and specifically those they would be interested in working on to see them actually implemented. These recommendations are listed in the table at the end of this document in the order of priority based on the number of votes they received, with higher vote-getters listed first. However, that does not mean that later recommendations do not have merit. Some of the “lower” recommendations may have great potential impact, but relatively few people felt they could help actually execute those recommendations, so they received fewer votes. Therefore it is important to reach out to other partners, such as city government and regional and state planning, transportation, and safety agencies and organizations to identify partners to assist in funding and executing these recommendations. Some of the most essential themes and grouped recommendations for action are summarized below.



The intersection at Hillsdale & Hacienda is identified by many as a priority area for pedestrian safety improvements.

Recommendations and priorities

At the end of this report is a table with the programmatic, project, and policy recommendations. Following is a list of themes, or groupings of actions that were identified as high priorities, as they could lead to some fairly quick positive outcomes for walking to school more safely.

1. Encourage more walking to school with educational, promotional, and safety activities.

Workshop participants recognized that many students from the neighborhood already walk to school, and more could and would do so if enough supports are put in place. It was also recognized that the only way to significantly reduce the motor vehicle traffic at the school is to encourage and support all of those students for whom it is reasonable to walk and not be driven to school. Therefore a series of supports for walking (and for older students, bicycling) to school are strongly recommended.

- Encourage as many students as possible to be allowed to walk (and for older children to bicycle) to school. Promote to students, as well as to parents and caregivers the myriad benefits, particularly evidence that more physically active students have been shown to perform better academically and experience fewer disciplinary challenges.
- Go beyond supporting one-time promotions. Certainly participate in significant national promotional activities, such as October *Walk to School Day* and May *Bike to School Day*. But at every opportunity *continually* reiterate the goal of having the maximum number of students possible walking to school, emphasizing the health, academic performance, and behavioral benefits to students; the potential congestion reduction and air quality benefits in the areas around the school; and the safety benefits to the entire community.
- Institutionalize school support and provide administrators and teachers with ways to recognize students who are frequent walkers – a classroom tally board, modest prizes, recognition at assemblies, etc.
- Generate maps indicating recommended walking routes with the fewest traffic conflicts. Also identify where there are clusters of students in surrounding neighborhoods, and suggest to parents that they create informal walking school buses (one or two adults leading a group of students walking together) with shared responsibilities, so that each adult doesn't have to walk with every student every day.



A "Golden Shoe" can be awarded to the class that accumulates the most days walked to school.



Paw prints mark the way: simple chalk drawings (left); or an artistically painted crosswalk created with the support of the Public Works Department (right).

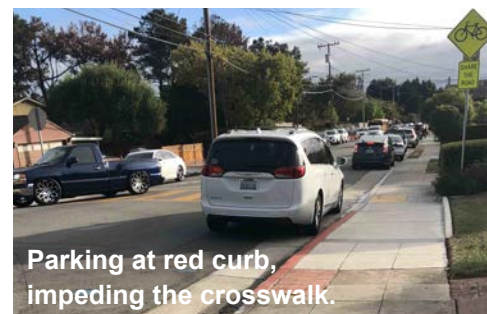
Above: Quivers on both sides of the road can hold high visibility flags for pedestrians to carry while crossing at the crosswalk.

- Identify and very visibly mark typical walking routes to school. In some communities adults and students have put up signs, have used stencils to mark walking routes with footprints or images of the school’s mascot, and have placed signs and flags at intersections and crosswalks; some have partnered with public works departments to paint curb extensions and even crosswalks to make student walking routes very obvious to all.

2. Create infrastructure to encourage safer driving behaviors near the school.

Workshop participants agreed that among the greatest concerns are safety challenges created by motor vehicles in general, and by adults who are dropping off and picking up students by car specifically. Particular concerns include the following:

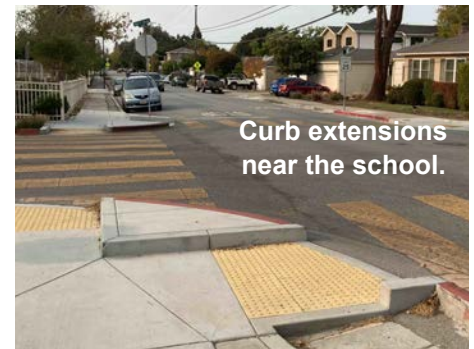
- Dropping off or picking up students on the side of Hacienda and 36th Avenue *opposite* the school, which is dangerous for students who must then cross those roads, particularly if they don’t use a crosswalk.
- Double parking on 36th Avenue and Hacienda to drop-off and pick-up students. When cars stop in the travel lane it is unsafe for the students and significantly impedes traffic and worsens congestion.
- Turning left from eastbound 36th Avenue into the school parking lot, across the flexible posts which are supposed to act as mid-lane barrier.
- Cars parking in the red-curbed no parking areas near the school, often too close too intersections and crosswalks, which puts crossing pedestrians at risk as they are stepping out from behind a parked car.





36th Ave. & Alameda de las Pulgas

A handful of photos showed specific intersections that were missing fully painted crosswalks and/or ADA accessible curb ramps, for example on the southwest corner of 36th Avenue and Alameda de las Pulgas (photo at left.) Photos also identified high quality curb extensions at crosswalks as a needed remedy. These are often called bump-



Curb extensions near the school.

outs because the sidewalk “bumps out” the width of the parking lane or shoulder at a corner or crosswalk. This makes crossing pedestrians more visible and able to see and be seen by traffic, precludes cars from parking illegally close to the crosswalk, shortens the crossing distance, and generally slows vehicle speeds by visually narrowing the roadway. A series of low cost approaches can be taken to make intersections and crossings safer until funds are available and the city is able to install permanent, high quality curb extensions and curb ramps (such as in the photo above right, at Hacienda and 36th Avenue).

- **Step 1: Pop-up curb extensions.** Easily placed (and removed) materials such as chalk or washable paint, cones, boxed or potted plants, straw waddle, and small patches of fake turf can be used to create temporary curb extensions (below, left photos). Tar paper can be painted and rolled out to create temporary crosswalk markings as well (below, right photos). These approaches are great for walk to school day demonstrations.



- **Step 2: “Quick-build” curb extensions.** The goal here is to quickly create semi-permanent curb extensions with low cost materials such as paint and flexible vertical delineators or posts (near right photo), and signs and heavy rubber curb stops (far right); often these are available in the public works department.



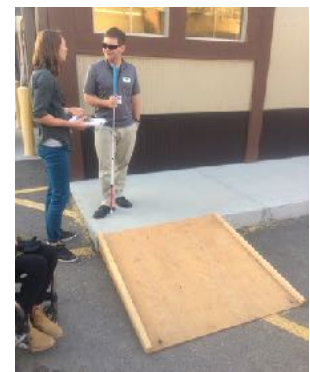


Students in Maui painted a beach and ocean decoration in this curb extension (left), created with low cost flexible posts (delineators, picture at right), to increase its visibility and their sense of ownership on their walk to school route.



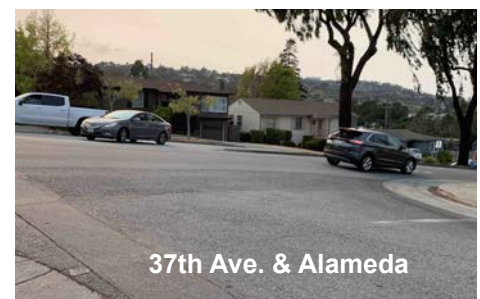
A short term solution for crosswalks lacking a curb ramp for ADA access can be a temporary wooden ramp as shown at right. However this is only a short term solution, and can only be installed at intersections if it is combined with a quick-build curb extension to protect the ramp from vehicles, and to keep parked cars sufficiently far from the ramp and crosswalk.

The southwest corner of 36th Ave. and Alameda might be a location to try this out, as there is a great deal of pedestrian activity there, it is in need of a curb ramp, and the curb extension would help keep parked cars back from the crosswalk. Quick-build curb extensions might be appropriate for a number of the red-curbed areas at intersections throughout the school area given the great amount of pedestrian activity and stated concerns about vehicle speeds and poor yielding at stop signs.



• **Step 3: Construct permanent curb extension and crosswalk improvements.**

This will be completed in partnership with city staff, and entails the construction of high quality curb extensions with ADA compliant curb ramps, and painting high visibility crosswalks with ladder style markings. It is often most efficient do this type of more substantial painting and construction when other work on the roadway is underway. Certainly crosswalks can be upgraded to ladder style marking during other routine paint maintenance (photo below left). More substantial construction such as curb extensions or median islands (as is needed to block left turns from eastbound 36th Avenue into the school exit driveway) are least expensive when included with other work such as on utilities under the road, or routine repaving projects. Based on workshop feedback some priority intersections the city must consider for pedestrian safety improvements include Hillsdale Blvd. and Hacienda St.; 36th Avenue and Hacienda St.; 36th Avenue and Alameda de las Pulgas; 37th Avenue and Alameda; and 37th Avenue and Hacienda Street.



3. Launch a student driven educational campaign on safe driving and drop-off & pick-up.

The goal of this program should make very clear to all drivers and students the expected behavior to maximize the safety of everyone at the school, whether walking, cycling, or driving. This includes adhering to all traffic laws such as no U-turns across the centerline and no parking on sidewalks (photo at right); and following specific drop-off and pick-up locations and procedures, such as pulling up in sequence to the white curb areas, staying in the vehicle, and allowing children in or out of the car only at the curb, never in the street.



Balloons mark the route on walk to school day.

Note that this is an opportunity for students to be creative - they could develop engaging and descriptive signs and placards (such as for active unloading and loading areas), mark walking routes in fun and artistic ways (photo, left), develop newsletter articles and photo montages of what is going well and what is not. They could even present skits or develop videos on the benefits of walking and bicycling, and proper walk, bike, and driving behaviors, such as only crossing at crosswalks and only parking in designated areas.

This program should also provide neighborhood outreach (e.g. through a school newsletter, flyers in mailboxes or on vehicle windshields, or even hosting an open house and picnic for neighbors) to explain traffic patterns, procedures, and parking rules around the school. For example, the red-curbed “no parking” and white-curbed loading and unloading zones on Hacienda and 36th Avenue must be kept clear (and no parking enforced) if they are to remain functional and safe at arrival and dismissal times. The advantage to neighbors is that if school related traffic is moving through curbside pick-up/drop-off lanes as designed, and drivers aren’t double parking to let students in and out, then street traffic should be much less disrupted.

4. Formalize drop-off and pick-up procedures to create a safer environment for all.

Along Hacienda and 36th Avenue the white-curbed areas are designated active loading and unloading zones, which means there should be no parking there during school arrival and dismissal times. Currently the buses drop off along 36th Avenue, and cars line up along Hacienda, then pass through the school parking lot. However, it is not uncommon for cars to stop in these areas, and some drivers leave their cars to retrieve their students. This process would be much safer, and ultimately more efficient, if the following procedures were implemented:

- Initially, the curbside lanes can be coned off before and during arrival and dismissal times, so that cars can not park there. Vehicles must move through in single file, stay in sequence (not just pull in and out anywhere), pull all the way forward before stopping, and drivers must stay with their vehicle. Students should then only exit and enter vehicles along the curb, which is much safer.



- Some schools require parents using such a pick-up lane at afternoon dismissal to have a large card (e.g. sheet of a manilla folder) in the window with the student’s name, so that an adult or student (e.g. safety patrol) on the curb can call out names to the waiting students so they quickly get to their cars.

- In many schools a safety patrol is formed of older students (e.g. in fifth grade) to take on tasks such as placing cones to define the drop-off/pick-up lane, opening car doors so parents do not have to get out to let younger students in or out of the car, and calling out students names at the pick-up lane.

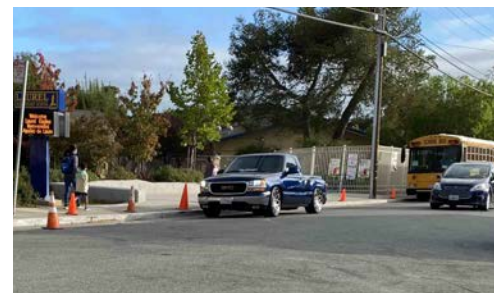


- For even greater clarity at dismissal, it was recommended that the school designate particular areas for pick-up for specific ages or classes. E.g. the very youngest students could be picked up in the circle in front of the school, middle grades along Hacienda, and older students further west along 36th.



- The curbside lanes on Hacienda and 36th Ave. could eventually be defined not by temporary cones (photo at left) but by flexible vertical delineators attached to the ground. These cause no damage if struck by a car, but they do define the drop-off/pick-up lane and discourage cars from cutting in and out, which will also help to keep the roadway travel lanes flowing. Simply put, cones aren’t always enough to encourage proper driver behavior; more permanent infrastructure may be required.

Although these steps may appear to slow the motor vehicle access, it can actually make it more smooth and predictable, and take roughly the same amount of time. But drivers will have to be patient and wait their turn to move through designated lane 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.



5. Implement a satellite drop/pick area, walking school bus, and five-minute safety delay.

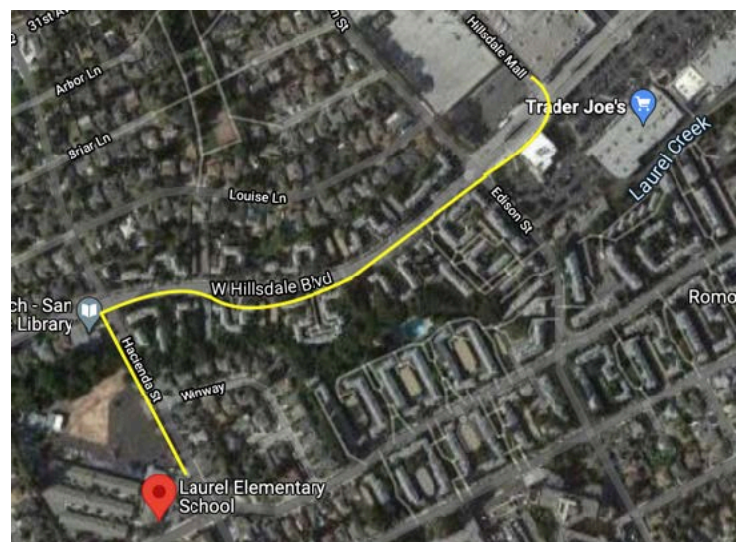
This three-way combination of project, program, and policy implementation may be one of the simplest ways to encourage even students who are being driven to school to get some daily physical activity by walking, while reducing traffic congestion immediately at the school. The three elements are as follows:

- Identify a location within a short-to-moderate walk of the school, on a safe walking route, that provides ample space for private vehicles to drop-off in the morning, and to wait to pick-up students in the afternoon. Very visibly mark that route connecting the school and this “satellite” drop-off/pick-up area in some of the manners discussed and illustrated above. The Hillsdale Shopping Center could be an ideal location.
- Launch a daily walking school bus, with adults walking students from this satellite location to the school in the morning, and a group returning from school to the parking area in the afternoon. (See map below.)
- Institute a five-minute safety delay on the automobile pick-up line at the school in the afternoon. First release all students who are riding the school bus, walking and bicycling, including those walking to the satellite pick-up area. Begin releasing students going to the car line at the school only *after* the walkers have all cleared the school grounds and nearby street crossings. This improves safety by reducing the conflicts between pedestrians and moving vehicles near the school, while creating an incentive for students (and their drivers) to instead meet at the satellite pick-up location.

This could first be introduced as a special event, such as on Walk to School Day. But it could then be institutionalized more routinely, such as on Walking Wednesdays or Footloose Fridays. And if permission of the mall or store ownership is obtained, it could include having the school buses occasionally drop off at the mall to allow all students, even those riding the bus, to have some physical activity on the way to school.

Conclusion

No one of the above ideas above, or additional recommendations listed in the tables below, is going to alone dramatically change the environment or travel behaviors at the school. But a *combination* of these types of activities in other schools have proven to improve safety, build awareness, and over time encourage an increasing number of students (and families) to discover the joys and freedom of walking to school. The great ideas generated by the workshop participants represented here have the potential to do the same for the Laurel Elementary community.



Program, project, & policy recommendations from the workshop.

	Short Term	Long Term
<p>Programs (e.g. events, outreach, education, promotions)</p>	<ul style="list-style-type: none"> • Launch a clear and comprehensive educational campaign to discourage double parking and other dangerous drop-off and pick-up behaviors, make clear the risks, and emphasize proper arrival & dismissal procedures. This must include parent-to-parent activities but could also entail a student-driven educational campaign on safer drop-off and pick-up procedures and proper vehicle, pedestrian, and bicycle behavior. Include student developed education and outreach, signs, videos, and possible social media activities. • Host walk-to-school day and bike-to-school day events to build knowledge and interest, and to have adults and students report on walk-to-school routes and needed improvements. • Partner with the Police Department to create a positive school traffic/safety officer program. Focus on safety education, not enforcement activities. This could lead to training volunteers (parents, retirees, faculty and staff) to help guide safe traffic patterns at arrival & dismissal. • Launch a student safety patrol (e.g. 5th graders), perhaps to help guide student walking groups to/at key intersections, open curb-side vehicle doors at drop-off and pick-up, and guide vehicles (from the sidewalk). • Launch a helmet promotional and educational campaign for all users of bikes, scooters, and skateboards. (Adults must model the behavior!) 	<ul style="list-style-type: none"> • Launch bicycle trains - groups of students bicycling to school on a designated route and schedule, with adult supervision. • Launch Walking Wednesdays as an on-going promotional activity. • Launch walking school buses - groups of students walked to school by an adult on a defined route and schedule, picking up kids along the way. • Daily place and remove plastic delineators, cones, and pedestrian crossing signs in area around the school to direct proper vehicle behaviors. • Recognize and reward parents who participate in volunteer traffic direction and monitoring programs or who lead walking school buses and bicycle trains (e.g. school store credits, recognition and preferred parking at special events).

	Short Term	Long Term
<p>Projects (e.g. changes to physical infrastructure & the built environment)</p>	<ul style="list-style-type: none"> • Create temporary curb extensions (paint, cones, light planters) to keep cars from parking in red zones too close to intersections, as well as to calm traffic, and shorten pedestrian crossings. • Place signs, student-designed art, posters, other indicators in the rolled curb areas, to emphasize that cars must not park on the sidewalk (e.g. across from Abbot Middle School). • Place high visibility flags in canisters (quivers) at key crossings, so that kids can hold them when crossing streets. Could invite students to make flags and placards for these crossings, so there is a sense of ownership (and less likelihood of vandalism). • Identify a location for satellite drop-off and pick-up several blocks or more from school (such as the expansive parking at the Hillsdale Shopping Center), and lead a walking school bus between this location and the school. • Create designated parking or standing areas for drop-off/pick-up, such as by grade level. For example grades K,1 in front of the school; grade 2 at the church; grades 3, 4 on a particular curb; etc. to spread out traffic. 	<ul style="list-style-type: none"> • Replace flexible delineators on 36th Avenue at school's south exit with more permanent structures to assure cars cannot turn left into the school from eastbound 36th Avenue. • Place signs, paint, temporary delineators, planters or other <i>barriers</i> in the rolled curb areas (such as across from Abbott Middle School), to emphasize that cars must not park on the sidewalk, and even physically deter them from doing so. • Place a signal light at the intersection of 36th Avenue and Alameda. Even better, study this intersection for a mini-circle (small roundabout), and create a demonstration (or pop-up) circle to test this approach. • Create permanent curb extensions (paint, heavy planters, flexible delineators) to keep cars from parking in red zones too close to intersections, as well as to calm traffic and shorten pedestrian crossings. • Create permanent flexible delineator posts, paint, and curbing to define the line-up area on Hillsdale and Hacienda for the drop-off and pick-up lane so that cars have to move through in sequence, and stay along the curb, to keep travel lanes clear for passing traffic. • Place a rectangular rapid flashing beacon (RRFB, yellow light) at the crosswalk of 36th Avenue at Michael Drive.

	Short Term	Long Term
<p>Policies (e.g. rules, ordinances, guidelines, practices, & procedures)</p>	<ul style="list-style-type: none"> • Create student-led walking audits of the area around school to teach proper safety behaviors, identify best walking routes, and catalogue challenge areas that need improvement. • Consider redesigns for Hacienda to make it safer for pedestrians and motor vehicles. For example, one test could be to make it a one-lane road for vehicles and create a protected bicycle lane as a temporary pop-up treatment. • Create a transportation safety committee with school administrators, faculty and staff, parents (of both walking and bicycling students and those who arrive by car), city officials (engineering and public works) to study these issues and recommend actions to develop support and participation of the full school community. • Put in place a 5-10 minute safety delay on vehicle pick-up at the school. First release pedestrians and bicyclists; the delay gives them time to clear the closest intersections to the school before allowing the cars to begin moving, to avoid pedestrian-vehicle conflicts. • Reach out to church across the street to rebuild the relationship, and explore a possible opportunity to allow for a modest amount of defined drop-off and pick-up at through his location (for example, certain grade levels, students with special needs, etc.) 	<ul style="list-style-type: none"> • Pursue funds for support materials such as crossing guard and safety patrol kits and safety messaging on signal and light cabinets. • Work with City Council, Public Works, and law enforcement to lower speed limits in the immediate school areas to 15 mph. • Consider moving bus drop-off and pick-up to Hacienda, and spreading vehicle drop off to other areas. • Create and enforce no-parking along the white curbs on roads adjoining the school where vehicles line-up for drop-off and pick-up (currently this is cars on Hacienda, and buses on 36th).

References and Resources

The National Center for Safe Routes to School; extensive practical traffic safety and programmatic information 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>

Small Town and Rural Multi-Modal Networks. Outstanding resource for low cost neighborhood-scale traffic calming and safety measures, with lots of relevant images and information. (Federal Highway Administration 2017.) Downloadable for free. <https://www.ruraldesignguide.com>

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

Guidebook for Developing Bicycle and Pedestrian Performance Measures (Federal Highway Administration 2017). Downloadable for free. https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/performance_measures_guidebook/pm_guidebook.pdf

Costs for Pedestrian & Bicycle Infrastructure Improvements, Quick resource for rough estimates of infrastructure costs. Pedestrian & Bicycle Information Center (PBIC), 2013. http://www.pedbikeinfo.org/cms/downloads/Countermeasure_Costs_Summary_Oct2013.pdf

Better Block initiative. Resources to educate, equip, and empower communities and their leaders to reshape and reactivate streetscapes to promote the growth of healthy and vibrant neighborhoods. www.betterblock.org