

SAN MATEO COUNTY SAFE ROUTES TO SCHOOLS SAN MATEO FOSTER CITY SCHOOL DISTRICT



GEORGE HALL ELEMENTARY SCHOOL WALK AND BIKE AUDIT FINAL REPORT 06.24.13



San Mateo County
SAFE ROUTES TO SCHOOL
Healthy Kids • Green Communities • Safe Journeys



Prepared by



Kimley-Horn
and Associates, Inc.

Survey Results

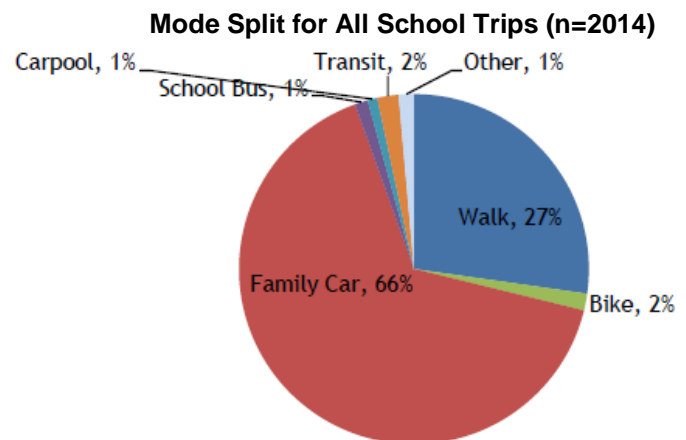
In Fall 2012, a student parent survey was conducted for George Hall Elementary School. A total of 135 responses were collected, which represented 205 students. The number of responses varied per survey question.

	Count	Percent
Male	104	52%
Female	96	48%
Total	200	100%

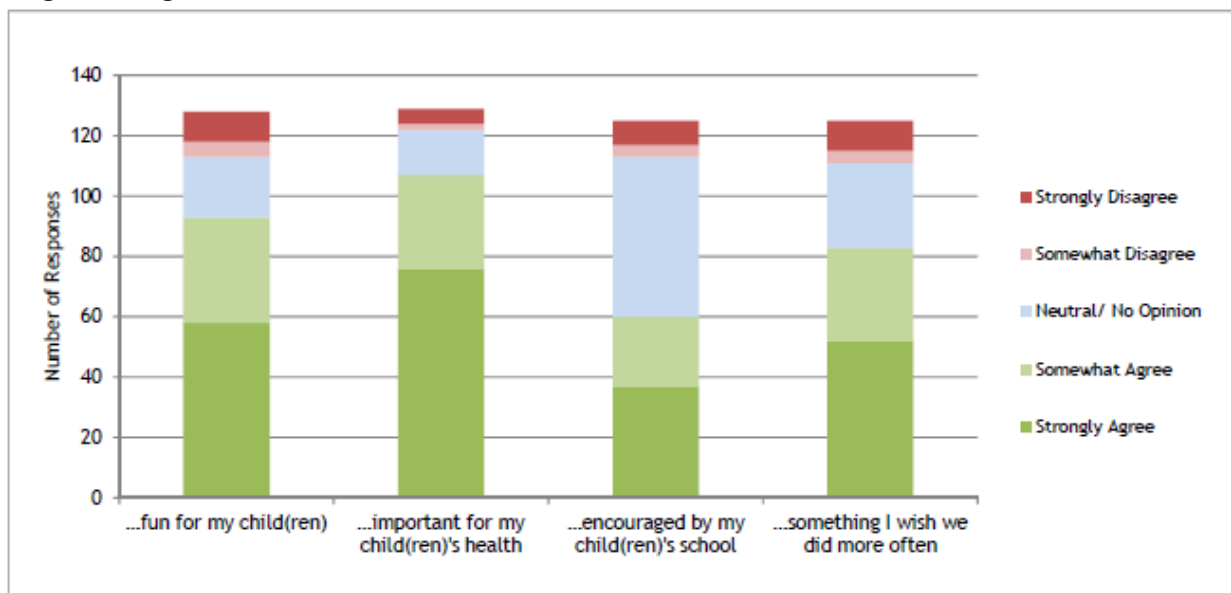
	Number	Percent
¼ mile or less	76	40%
¼ - ½ mile	20	10%
½ - 1 mile	37	19%
1 – 2 miles	49	26%
More than 2 miles	9	5%
Total	191	100%

❖ Many students live within walking distance with 40 and 50 percent of students living within a quarter mile or half mile of the school respectively. Thirty-one percent of students live more than a mile away.

- ❖ A majority of trips, 66 percent, to and from school were traveled by family car. The second common transportation mode is by walking at 27 percent.
- ❖ Parents most strongly agreed that walking or biking was important for their children’s health and is fun for their children. Another common statement includes that walking or biking is something parents wished they did more often.



Walking or biking to school is...



Field Walking Audit

The field audit at George Hall Elementary School focused on the following main areas of concern by the group:

- San Miguel Way (between Curtiss Street and Orinda Drive): The front of the George Hall Elementary School including school offices and staff parking is located along San Miguel Way. The east end of the block between Curtiss Street and Orinda Drive is used for a controlled drop-off and pickup monitored by school staff. Otherwise the remaining curb space along San Miguel Way is utilized for drop-off and pick-up by parents pulling up to the curb and letting students out of the car. Double-parking was observed during drop-off and pickup activities on San Miguel Way. Many parents use the north side of the street to park and walk their students into campus, while most parents utilizing the south curb face simply pull to the side and their student exits the vehicle due to the red curb along this section. The short cul-de-sac at Meadow Court is heavily used by parents to park and walk students onto campus and the crosswalk along the east leg of this intersection is also heavily used. In general, traffic travels slower than the signed 25mph during school drop-off and pickup operations due to the congested related to school traffic; however, traffic before and after the concentrated 15 minute peak of school traffic was observed to travel at greater speeds. Most students that walk to/from campus were observed to walk along San Miguel Way and either continue east or turn north at the Orinda Drive intersection.
- Curtiss Street: Curtiss Street is used as the secondary drop-off and pickup location for parents of students. Much of the curb face is currently painted white for this intended activity and in general there is less congestion than on San Miguel Way. There are two side gates that students and parents use to access the campus from Curtiss Street that make parking and walking students onto campus convenient from this location. The intersection of Curtiss Street with San Miguel Way is a stop-controlled traffic circle. In general, vehicles observe right-of-way rules at this intersection and during school operations tend to travel through the intersection more cautiously due to the level of congestion. However, visibility at the intersection is obscured between certain turning movements and pedestrian traffic and some near conflicts occur due to this reduced sight distance. City staff reviewed collision data and found that no historic trend of collisions exists.
- Orinda Drive: Orinda Drive is utilized near the intersection with San Miguel Way from some drop-off and pickup activities, but less so than on San Miguel Way or Curtiss Street. Orinda Drive was observed to be a pedestrian route for many students traveling to origins/destination east of the school. During field observations no speeding traffic was observed on Orinda Way; however, two existing speeds humps exist on Orinda Drive in the school vicinity which leads to the conclusion that speeding was a previous issue.

Additional observations about walking and biking activities near the school campus:

- Observations as well as experience from the site council noted that many students walk to/from campus daily and this is the most highly used alternative transportation mode besides parents using personal vehicles.
- Biking to/from school was used by a much smaller percentage of students. Bike racks are located on the north side of the school next to the office, interior to campus in a safe and secure location. On a daily basis, bike racks are moderately utilized but no additional bike racks are required. No alternate location for the bike racks was determined that may increase the incentive for biking or safe storage of bicycles.

The **Existing SR2S Elements** figure illustrates the existing pedestrian and bicycle safety devices already in place in the study area.

George Hall Elementary Safe Route to School Walk and Bike Audit



Legend:

-  School Crossing Sign
-  School Zone Sign
-  Pedestrian Countdown Signals
-  Speed Limit Sign
-  Speed Bump Warning Sign
-  Speed Bump
-  Existing Curb Ramp
-  No Curb Ramp
-  School Crosswalk
-  Ladder School Crosswalk
-  White Crosswalk
-  SLOW SCHOOL XING Pavement Marking
-  Red Curb - No Parking
-  White Curb - Loading Zone

Proposed Safe Route to School Elements

The **Proposed SR2S Elements** and **Proposed SR2S Elements (Near School)** figures illustrate the SR2S Plan on a conceptual basis. A brief discussion is provided below for each of the improvements proposed:

Curtiss Street (North to South):



1. **Install School Speed Limit Sign:** The speed limit along Curtiss Street is 25 mph. It is proposed that a speed limit sign be installed between Poinsettia Avenue and Otay Avenue to inform southbound drivers of the 25 mph speed zone when children are present and for greater potential enforcement by the Police Department.



2. **Install Median:** It is recommended that a 50-foot median be installed on the north and south legs of Curtiss Street and San Miguel Way. The medians will provide a protected zone for pedestrians crossing Curtiss Street, to shorten the unprotected distance of each crossing.



3. **Install White Curb:** To designate drop-off and pick-up area for parents, the SR2S plans proposes that white curb marking be installed on the east side of Curtiss Street south of San Miguel Way.



4. **Install Red Curb:** It is recommended that red curb be installed on the west side of intersection of Curtiss Street and 38th Avenue to provide better visibility for pedestrians utilizing the crosswalks at this intersection.

Orinda Drive (North to South):



5. **Install School Speed Limit Sign:** The speed limit along Orinda Drive is 25 mph. It is proposed that a speed limit sign be installed north of San Miguel Way to inform southbound drivers of the 25 mph speed zone when children are present and for greater potential enforcement by the Police Department.



6. **Install Red Curb:** The SR2S plan suggests that red curb marking be installed on all corners at San Miguel Way and at 39th Avenue to provide better visibility for pedestrians utilizing the crosswalks at this intersection.

Pasadena (North to South):



7. **Install Pedestrian Crossings:** It is suggested that a pedestrian crossing be added to the west side of Pasadena at Almaden Way and San Miguel Way as a pedestrian gap closure.

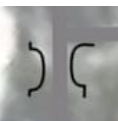
San Miguel Way (East to West):



8. **Install School Speed Limit Sign:** The speed limit along San Miguel Way is 25 mph. It is proposed that a speed limit sign be installed east of Orinda Drive to inform westbound drivers of the 25 mph speed zone when children are present and for greater potential enforcement by the Police Department.



9. **Install Pedestrian Ramps:** Currently there are pedestrian ramps at the intersection of San Miguel Way and Meadow Court. However the SR2S plan proposes that new pedestrian ramps be installed on the east corners.



10. **Install Curb Extension:** Curb extensions can improve safety for pedestrians at an intersection by reducing the crossing distance and exposure for pedestrian and by reducing the speed of turning vehicles. The SR2S plan proposes that curb extensions be installed on the east leg of San Miguel Way and Meadow Court. The curb extension will extend 8 feet.



11. **Install Enhanced Crossing:** It is recommended that an enhanced crossing be installed on the east leg of San Miguel Way and Meadow Court. The enhanced crossing would be lighted to help improve visibility of crossing pedestrians. This installation is recommended as a Rectangular Rapid Flashing Beacon for improved visibility of motorists. In addition, curb extensions are recommended to shorten the crossing distance at the east leg crosswalk and the curbs adjacent to the intersection will be red curbed to disallow parking for better visualization of pedestrians crossing.



12. **Install Red Curb:** To keep the intersection clear, it is proposed that red curb be installed on the south side of intersection of San Miguel Way and Meadow Court.



13. **Install Keep Clear Pavement Marking:** To keep the intersection clear, it is recommended that "Keep Clear" pavement marking be added to the intersection of San Miguel Way and Meadow Court.



14. **Install White Curb:** To designate drop-off and pick-up area for parents, the SR2S plans proposes that white curb marking be installed on the south side of San Miguel Way from Meadow Court to Curtiss Street.

Overall School Zone Study Area:

15. Some of the current school-related roadway signage is not current based on the most recent version of the 2012 California Manual on Uniform Traffic Control Devices (MUTCD). The current MUTCD includes some updates to sign text and/or images, as well as standards for sign retro-reflectivity. It is recommended that future efforts for funding the elements of this plan also inventory the status of the current school signage and update all signs to the current standard.

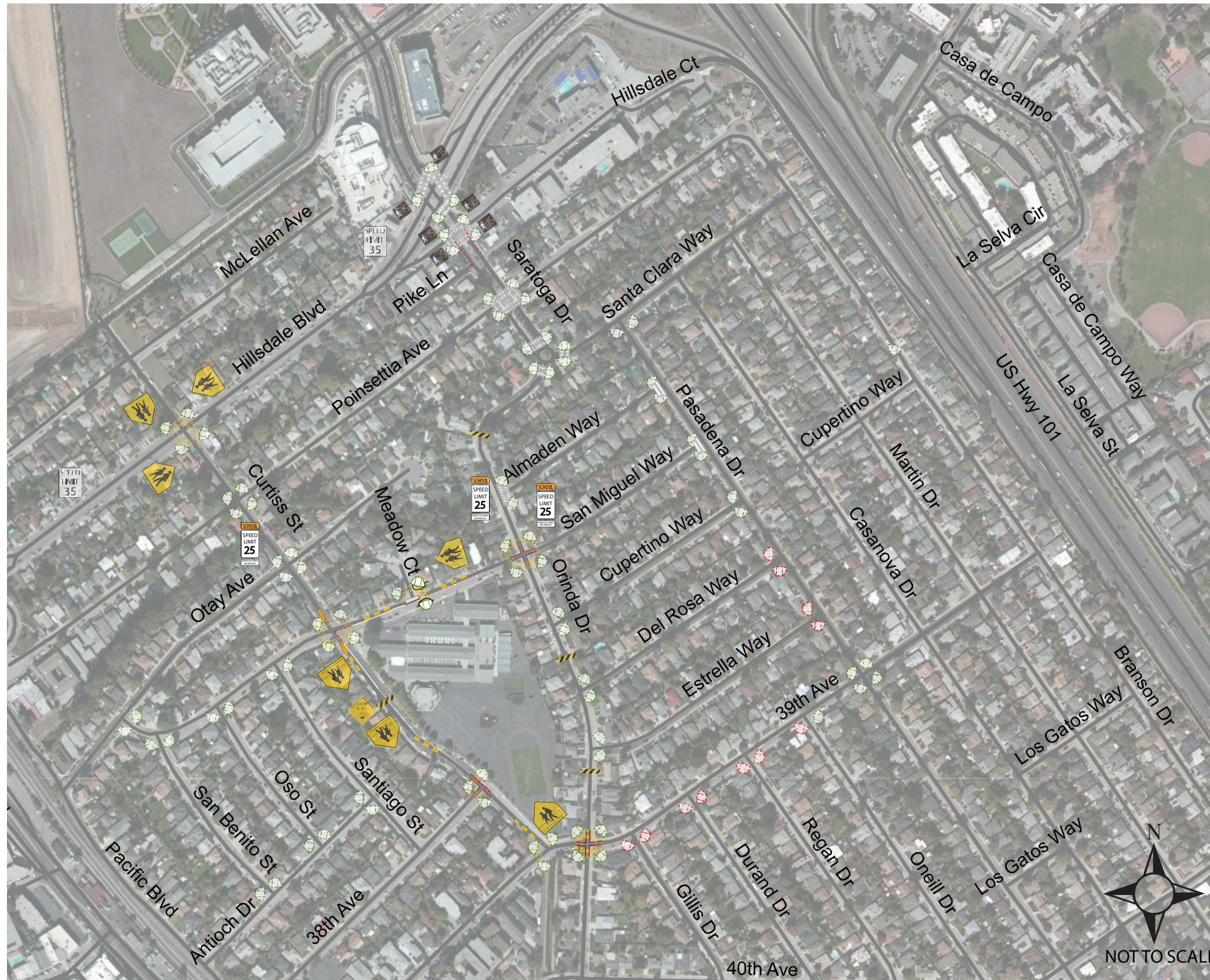
Vehicular Drop-off and Pickup Procedure:

16. Although the primary goal of the Walk and Bike Audit is the encouragement of additional walking and biking through safety improvements of physical roadway features, the general safety of school areas is also observed. George Hall Elementary School would greatly benefit from the establishment and publication of a set vehicular drop-off and pickup policy. Vehicle drop-off and pickup operations at the school are currently organized by school staff based on a limited plan in place. A revised plan developed in concert between school staff and parent representatives, and distributed to parents each semester, would greatly improve the vehicular-related safety around the school campus.

Speed Limit in School Zone:

17. It is recommended that the City of San Mateo review the potential implementation of reduced Speed Limits in School Zones throughout the City. The California Vehicle Code (CVC) and the California Manual of Uniform Traffic Control Devices (MUTCD) allow the reduction of speeds limits in school zones to 20 or 15 miles per hour for up to 500 feet from school grounds. The City, as the local authority, may by ordinance or resolution adopt the lower prima facie limit upon the basis of an engineering and traffic survey. CVC Section 22358.4 and MUTCD Section 7B.15 are the applicable standards setting forth the requirements for the potential decrease of local speed limits near schools.

George Hall Elementary Safe Route to School Walk and Bike Audit

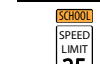










Legend:

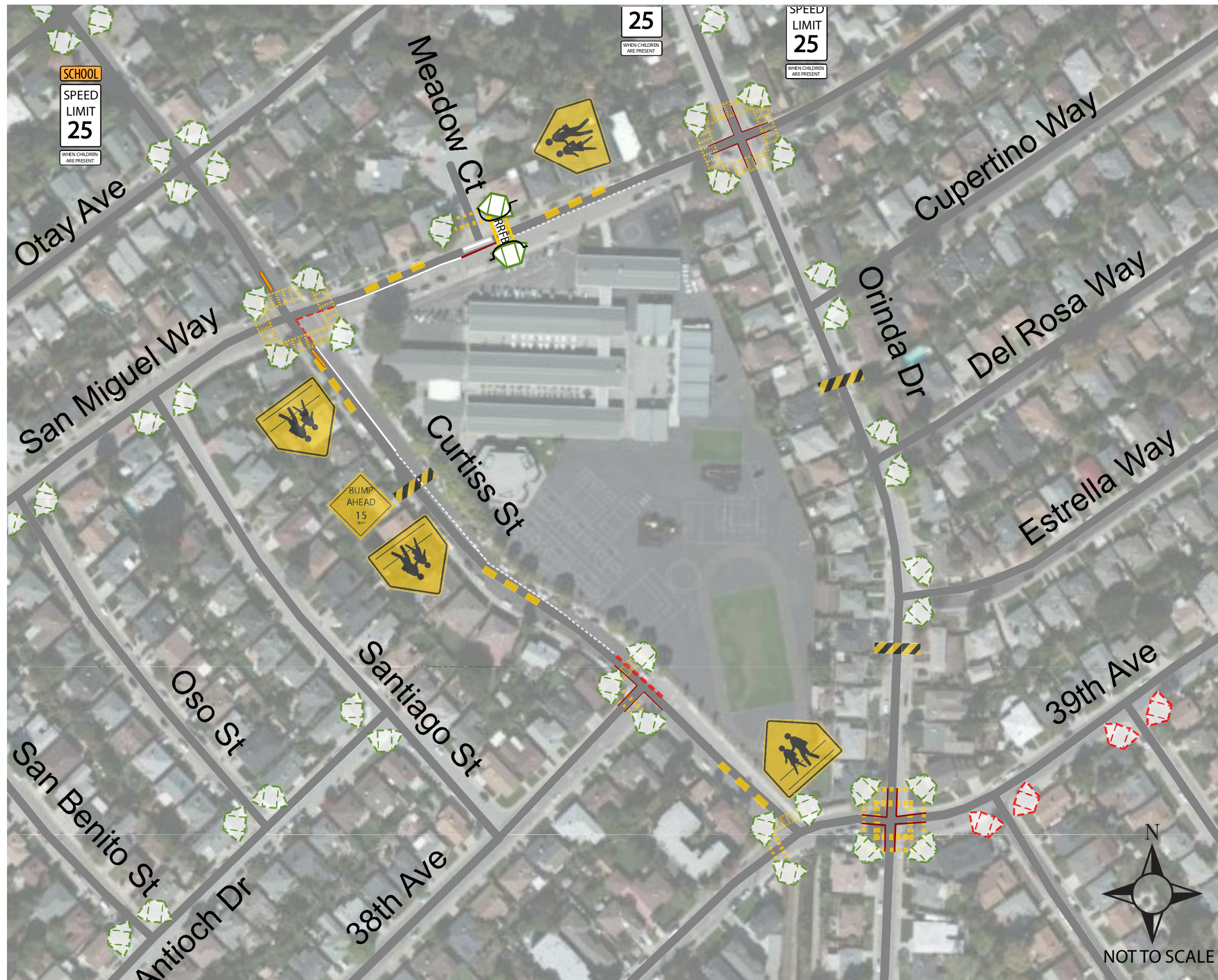
Existing

-  School Crossing Sign
-  School Zone Sign
-  Pedestrian Countdown Signals
-  Speed Limit Sign
-  Speed Bump Warning Sign
-  Speed Bump
-  Curb Ramp
-  No Curb Ramp
-  School Crosswalk
-  Ladder School Crosswalk
-  White Crosswalk
-  SLOW SCHOOL XING Pavement Marking
-  Red Curb Marking
-  White Curb - Loading Zone

Proposed Improvements

-  School Zone Speed Limit Sign
-  Curb Ramp
-  Curb Extension
-  Median
-  Crosswalk
-  Enhanced School Crosswalk (Recommending Rectangular Rapid Flashing Beacon)
-  Red Curb Marking
-  White Curb Marking
-  Keep Clear Pavement Marking

George Hall Elementary Safe Route to School Walk and Bike Audit



Legend:

Existing


















- School Crossing Sign
- School Zone Sign
- Pedestrian Countdown Signals
- Speed Limit Sign
- Speed Bump Warning Sign
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Typical SR2S Element Summary

More details of the recommended elements included herein, as well as other typical SR2S elements are summarized in the table below.

SR2S Element	Application in accordance with:	Image	Dimensions (W x H)	Typical purpose	Typical Cost Range
SIGNS					
SCHOOL SPEED LIMIT	California MUTCD, Part 7, Section 7B.11 (School Speed Limit Assembly (CA))		(24" x 8") + (18" x 24") + (24" x 10")	To indicated the speed limit where a reduce speed zone for a school area has been established	\$300 - \$500
SPEED LIMIT FEEDBACK	California MUTCD, Part 2, Sections 2B.13 (Vehicle Speed Feedback Sign)		(30" x 30")	To display to approaching drivers the speed at which they are traveling. Enhances driver awareness of their speed, especially when used in condition with speed limit sign (R2-1)	\$12, 500 - \$17, 500
NO PARKING ANYTIME	California MUTCD, Part 2, Section 2B.46 (R26(CA))		(12" x 18")	To prevent parked or waiting vehicles from blocking pedestrians' views , and drivers' view of pedestrians	\$300 - \$500
NO STOPPING ANYTIME	California MUTCD Part 2, Section 2B.46 (R26(S)(CA))		(12" x 18")	To inform motorist of a no stopping zone at a specific location where red curb marking is not used.	\$300 - \$500
SCHOOL PASSENGER LOADING ONLY	California MUTCD, Part 2, Section 2B.46 (R25D(CA))		(12" x 18")	To inform motorist of curb restriction at location for loading or unloading passengers for the time as specified by local ordinance.	\$300 - \$500
PEDESTRIAN ELEMENTS					
SCHOOL CROSSING WARNING SIGN	California MUTCD, Part 7, Section 7B.08 (School Warning Assembly A (CA))		(30" x 30") + (24" x 8")	Installed at marked crosswalk, or as close to it as possible to show the location of the school crossing.	\$300 - \$500
PEDESTRIAN COUNTDOWN SIGNAL	California MUTCD, Part 4, Section 4E.07			To inform pedestrians of the number of seconds remaining in the pedestrian change interval.	\$1,500
RECTANGULAR RAPID FLASHING BEACON (RRFB)	Federal High Administration approval per California MUTCD, Section 1A.10, Approval No. IA-11-83-RRFB-California Statewide		Beacon (4" x 29") + Warning Signs	For use at uncontrolled pedestrian and school crosswalk locations.	\$50,000
IN-ROADWAY LIGHTS	California MUTCD Part 4, Chapter 4L		~10" deep x ~7.5" Diameter	To warn road users that they are approaching a condition on or adjacent to the roadway that might not be readily apparent and might require the road user to slow down and/or come to a stop.	\$50,000
CURB RAMP	Caltrans 2010 Standard Plan A88A and A88B		Varies	To make sidewalks accessible for those who need mobility or visual assistance.	\$500 - \$800
BICYCLE ELEMENTS					
BICYCLE LANE	California MUTCD, Part 9, Section 9C.04		Varies	Pavement marking designated that portion of the roadway for preferential use by bicyclists.	\$100-\$150 per bike and arrow
BICYCLE LANE SIGN	California MUTCD, Part 9, Section 9B.04 (R81(CA))		(12" x 8")	Installed at the beginning of each designated Bike Lane and along each Bike Lane at all major changes to regulated bicycle and motor vehicle traffic.	\$300 - \$500
NO PARKING BIKE LANE SIGN	California MUTCD, Part 9, Section 9B.10 (R7-9)		(12" x 18")	To restrict parking, standing, or stopping in a bicycle lane.	\$300 - \$500
BICYCLE + SHARE THE ROAD	California MUTCD, Part 9, Section 9B.19 (W11-1 + W16-1)		(30" x30") + (18" x 24")	To warn motorist to watch for bicyclists traveling along the highway.	\$300 - \$500
ROADWAY IMPROVEMENTS					
CURB EXTENSIONS	City Jurisdiction		Varies	Improves safety for pedestrians and motorist at intersection. Increases visibility and reduces speed of turning vehicles.	Varies
RAISED PEDESTRIAN CROSSINGS	City Jurisdiction		Varies	Improves safety for pedestrians by increases visibility for drivers and reduces speed of vehicles.	Varies
SLOW SCHOOL XING PAVEMENT MARKINGS	California MUTCD, Part 7, Section 7C. 03 (7C-101 (CA))		N/A	Warning drivers in advance of all yellow school crosswalks.	\$400

School Staff, Faculty, Parents, and Students Participating

Pam Bartfield (Principal)

San Mateo County Office of Education

Daina Lujan

dlujan@smcoe.k12.ca.us

650.802.5306

San Mateo Foster City School District

Karrie Passalacqua

kpassalacqua@smfc.k12.ca.us

650.312.7243

City of San Mateo

Ken Chin

KChin@cityofsanmateo.org

650.522.7313

Kimley-Horn and Associates, Inc.

Mike Mowery, P.E.

mike.mowery@kimley-horn.com

6150 Stoneridge Mall Road

Suite 200

Pleasanton, CA 94588

Phone: 925.398.4840



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