



1111 Broadway, Suite 800, Oakland, CA 94607 AlamedaCountySR2S.org info@alamedacountysr2s.org

December 17, 2020

Principal Kristie Starkovich Lawrence Elementary School 2451 Portola Avenue Livermore, CA 94551

RE: School Safety Assessment at Lawrence Elementary

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Dear Principal Starkovich,

Thank you for participating in a school safety assessment (SSA) with the Alameda County Safe Routes to Schools Program. This packet contains an Existing Conditions Memo and Improvement Plan Map. The memo summarizes the existing conditions and what the SR2S team heard from stakeholders during the observation period and discussion. The document also contains educational and encouragement programmatic recommendations that the schools can pursue with the SR2S Program. The Improvement Plan Map contains infrastructure recommendations that the City of Livermore and the Livermore Valley Joint Unified School District can implement.

If you have questions, comments, or wish to follow-up with the Program on the SSA or recommended programmatic recommendations, please contact your school site coordinator:

Jennifer Holmes-Ledet
916.710.0418
iledet@alamedacountysr2s.org

To follow-up with City of Livermore staff about implementing improvements within their jurisdiction, please contact the City's SR2S contact or local City Council representative:

Julie Chiu

Associate Civil Engineer, Engineering Division/Community Development

925.960.4537

jchiu@cityoflivermore.net

Livermore City Council livermorecitycouncil@cityoflivermore.net

Sincerely,

Denise Turner

Denise Turner | Alameda County SR2S Program Manager

Alameda County Safe Routes to Schools

1111 Broadway, Suite 800 | Oakland, CA 94607 510.208.7461



School Safety Assessment Technical Memorandum

Lawrence Elementary School

2451 Portola Ave, Livermore, CA, 94551

Livermore Valley Joint Unified School District

November 2019



Lawrence Elementary School

A school safety assessment was conducted at Lawrence Elementary School in Livermore during the morning arrival on Thursday, November 21, 2019. The assessment was attended by representatives from the City of Livermore, Alameda County Safe Routes to Schools staff, and Lawrence Elementary School staff and parents.

Participants included:

- Julie Chiu, Engineer, City of Livermore
- Juan Tenorio, Engineer, City of Livermore
- Kristie Starkovich, Principal, Lawrence Elementary School
- Andre Huff, Engineer, Alameda County SR2S team
- Jennifer Ledet, School Site Coordinator, Alameda County SR2S team
- Otto Melara, Planner, Alameda County SR2S team
- Libby Nachman, Planner, Alameda County SR2S team
- 7 Lawrence Elementary School parents

School Information

Location & Enrollment



Address:	2451 Portola Avenue		
	Livermore, CA 94511		
Morning Bell(s):	8:30 AM		
Afternoon Bell(s):	1:30 PM (TK & K every day, 1-5 on Wed)		
	2:50 PM (1-5 Mon, Tu, Th, Fri)		
Grade Levels:	TK - 5		
Enrollment:	357		
School Type (neighborhood/ magnet/charter):	Public opt-in school		

Student Travel Data

Students' Proximity to School (school estimate):	Less than ¼ mile (5-min. walk): 0%		
	Between $\frac{1}{4}$ and $\frac{1}{2}$ mile (5-10-min. walk): 5%		
	Between $\frac{1}{2}$ and 1 mile (10 to 20-min. walk): 5%		
	Greater than 1 mile (more than 20-min. walk): 90%		

Student Travel Mode Info: Walking: 1% Biking: 1% School bus: 0% Transit: 0% Carpool: 8% Family Vehicle: 90% Other: 0%

Bikes, Buses, and Drop-off/Pick-up

Does the school have bike racks? What is the capacity? Is it secure bike parking?

On a typical day, what percentage of racks are used?



The school has one bicycle rack inside the school gates. It has capacity for 8-10 bicycles and scooters.

On a typical day, about 90% of the bicycle rack is occupied by bicycles and scooters.

Does the school have special pick-up/drop-off policies/procedures?



The school has multiple pickup and drop-off procedures.

There is 15-minute parking/loading on the frontage facing Portola Avenue.

There is a drop-off loop in the parking lot.

There is an option to park and walk from a nearby church.

There was an option to park and walk from the adjacent Sierra School parking lot, but it was restricted as of January 2020.

Note: Lawrence Elementary School is not served by school buses or transit.

Street Profiles

Street Name	Width	Lanes	Posted Speed Limit	Traffic Volumes	Notes
Portola Avenue	78 feet	4 travel lanes, 2 parking lanes	35 mph (25 mph school zone)	12,061	Class II bicycle lane
Enos Way	56 feet	2 lanes	25 mph	No Data	Class II bicycle lane
N Livermore Avenue	78 feet	4 travel lanes, varied turn lanes	35 mph	18,833	Class II bicycle lane

Pedestrian- and Bicycle-Involved Collision Summary 2014-2018

The collision summary table shows all bicycle- and pedestrian-involved collisions within one-half mile of the school. These collisions may or may not be school-related travel.

Alameda County Safe Routes to Schools Program

Radius from School	Total Collisions	Fatal Collisions	Severe Injury Collisions	Visible Injury Collisions	Complaint of Pain Collisions	Pedestrian Collisions	Bicycle Collisions
< 1⁄4 mi	4	0	0	3	1	3	1
½ mi - ½ mi	16	0	3	8	5	8	8
Total	20	0	3	11	6	11	9

Source: UC Berkeley – Transportation Injury Mapping System, Safe Transportation Research and Education Center, University of California, Berkeley, 2019

Existing Conditions

Overview

Lawrence Elementary School is located on Portola Avenue between N Livermore Avenue and Enos Way. The school can be accessed through the front entrance on Portola Avenue and a side entrance from the eastern parking lot. There is one driveway entrance and one driveway exit on the frontage facing Portola Avenue.

In the morning, most students are dropped off either on Portola Avenue, or in a drop-off loop in the school parking lot. Smaller numbers of students walk from surrounding neighborhoods, either crossing Portola Avenue at Enos Way, or Enos Way at Kelly Street.

Due to its location near the intersection of two arterial roads, vehicle speeds on N Livermore Avenue and especially on Portola Avenue are cause for concern among school safety assessment participants.

Observations

The following existing conditions were observed or reported by participants during the school safety assessment (SSA). Numbers and letters in parenthesis (e.g. 1a; 1b; 1c; etc.) refer to recommendations on the Improvement Plan map and are included to facilitate easy comparison between observations in this Technical Memorandum and recommended improvements in the Improvement Plan.

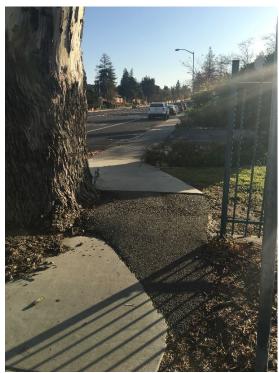
- 1. School Frontage at Portola Avenue
- Portola Avenue is an arterial road with two travel lanes in each direction and a center lane that is variably a two-way turn lane, a left turn only pocket, and a painted median. Portola has sidewalks on both sides of the street, a parking/loading zone on the school side of the street, and a Class II bicycle lane on both sides of the street. (1b; 1c)
- Conditions for people loading/unloading from vehicles, walking, and gathering at the front of the school were observed to be insufficient for the demand.
 - The sidewalk in front of the school is five (5) feet wide right beside the road.
 - People were observed using the sidewalks for multiple uses such as: parents pushing strollers, students unloading from vehicles, students riding bicycles and scooters, and parents walking.
 - West of the school entrance the sidewalk width was observed to be insufficient to accommodate the number of people walking.
 Additionally, car doors that open to drop-off students encroach onto the sidewalk right-of-way. (6a)
 - East of the school there is a section of sidewalk less than five feet wide that is routed around a large tree and damaged by tree roots. (1a)
 - Parents were observed gathering at the plaza area surrounding the flagpole in front of the school. There was insufficient paved surface for

parents to gather while students and parents were walking from Portola Avenue to the school entrance. (6b)

- The school entrance and exit driveways create challenges for people walking, resulting in the sidewalk not crossing the driveway on a level slope. This may be challenging for people in wheelchairs or using mobility devices, parents with strollers, or students bicycling. (1d)
 - The heavy flow of traffic entering and exiting the driveway made it difficult for people on foot to cross the driveways. The school principal reported that this walking route is undesirable to school staff.
- Traffic flow into and past the entrance driveway often results in conflict between different users.
 - Eastbound vehicles were observed driving to the 15-minute loading zone along Portola to the west of the school entrance to drop-off students. Vehicles then pulled back into eastbound traffic on Portola Avenue, conflicting with drivers waiting to turn into the entrance. (1f)
 - O Drivers were observed driving eastbound on Portola in the rightmost travel lane and turning right into the school entrance to drop students off within the parking lot circle. These drivers were directly conflicting with drivers who dropped students off along the 15-minute loading zone and were attempting to merge back into eastbound traffic.
 - Non-school related thru-traffic was observed eastbound on Portola in the leftmost lane.
 - The queue for westbound vehicles attempting to turn left into the school entrance was longer than could be accommodated with the leftturn pocket as vehicles waited for an opportunity to turn left into the school. This was due to congestion in the parking lot.
- Traffic flow out of and past the exit driveway often results in conflict between different users.
 - Drivers were observed driving to the 15-minute loading zone along Portola to the west of the school exit to drop-off students. They then pulled back into eastbound traffic on Portola Avenue.
 - Drivers were observed driving out of the school drop-off loop in both the eastbound (right turn) and westbound (left turn) direction.
 Westbound drivers were often delayed in exiting due to being blocked by the long queue of vehicles in the center turn lane waiting to turn left into the school entrance. (1e)
- Signage and striping observations include: (1g; 1h; 2i)
 - Red-painted curbs before and after the driveway entrance and exit is appropriate and serves to adequately "daylight" these access points.
 - The sloped pavement across the driveway entrance and exit is painted yellow. It is not clear if this is intended to be a crosswalk or to highlight the slope for people driving. This is not MUTCD-compliant.
 - There are no school pavement markings (CA-MUTCD 3B.20) on Portola Avenue in either direction.

- There is one speed limit sign and speed radar feedback sign in the eastbound direction on Portola Avenue. These signs are located next to the school entrance driveway.
- There are no speed limit signs or speed radar feedback signs in the westbound direction on Portola Avenue.
- A school Assembly D sign is located ahead of the school exit in the eastbound direction and obscured by tree branches.





Left: The narrow sidewalk to the west of the school on Portola Avenue forces pedestrians to walk on the grass to get to school.

Right: Damaged sidewalk to the east of the school on Portola Avenue inhibits safe walking and rolling for pedestrians.

2. N Livermore Avenue/Portola Avenue

- The intersection of N Livermore Avenue/Portola Avenue is a four-way signalized intersection. There are yellow transverse crosswalks across all approaches with crossing distances over 100 feet, including large turning radii at the corners. There are Class II bicycle lanes leading up to and from the intersection. There are pedestrian actuation buttons in the median without a pedestrian refuge island around the button. (2a; 2b; 2d; 2e; 2f; 2g; 2h)
- Not all pedestrian signal heads have countdown heads to indicate the remaining walking time to cross the street. (2c)

3. Enos Way/Portola Avenue

- The intersection of Enos Way/Portola Avenue is a three-way intersection, with stop control from Enos Way onto Portola Avenue.
- There is a high-visibility yellow crosswalk across the western approach that measures 74 feet. This uncontrolled crosswalk has School Crossing Assembly B signage, but no advance yield lines.
- A crossing guard is stationed at this location for one hour each in the morning and afternoon.
- The following issues were observed at the crosswalk across Portola Avenue. (3a; 3b; 3c; 3d)
 - Vehicles were observed driving at fast speeds through the crosswalk.
 Vehicles were also observed failing to yield to the crossing guard on multiple occasions.
 - There is poor visibility between drivers and pedestrians waiting to cross from the southwestern corner due to a parking lane and existing roadway geometry.
- There is a yellow transverse crosswalk across Enos Way. There is a striped median on Enos way that diverts vehicles turning left and right onto Portola Avenue. (3d; 3e)
 - A large turning radius from Portola Avenue onto Enos Way encourages fast right turns that conflict with pedestrians waiting to cross Portola Avenue from the southwestern corner.
 - The crosswalk across Enos Way is 136 feet long including a 60-foot striped median.



Above: The school crossing guard works one hour in the morning and one hour in the afternoon. In between stopping traffic, she waits on a corner with low visibility. Pedestrians gathered on that corner also cannot be seen by oncoming traffic.

4. Royal Road/Portola Avenue

- The intersection of Royal Road/Portola Avenue is a three-way intersection, with stop control from Royal Road onto Portola Avenue.
- An uncontrolled high-visibility yellow crosswalk across the eastern approach measures 81 feet. This crosswalk has School Crossing Assembly B signage but no advance yield markings. (4a; 4b)
 - Vehicles were observed driving at fast speeds through the crosswalk.
 - School safety assessment participants reported that vehicles rarely yielded to pedestrians crossing at this intersection.
 - There is poor visibility between drivers and pedestrians waiting to cross from the northeastern corner due to corner geometry.
- There is no crosswalk across the northern approach. (4c)

5. Enos Way/Kelly Street

- The intersection of Enos Way/Kelly Street is a three-way intersection, with stop control from Kelly Street onto Enos Way.
- There is a yellow high visibility crosswalk across Enos Way on the northern approach, and a yellow transverse crosswalk across Kelly Street. The corners have a large radius. There are no advanced yield markings. (5a; 5b; 5c)
- School staff reported that vehicles will park in the neighborhood to the east of Enos Way, accessed via Kelly Street, on evenings with events such as Back to School Night. They will then walk to the school campus through the church parking lot.

6. School Parking Lot

- The Lawrence Elementary School parking lot can be divided into the front (north) lot and the side (south) lot.
 - o The front lot contains the drop-off loop and the entrance and exit driveways, in addition to a small parking area for 15 staff on the north side of the drop-off loop. There is a crosswalk connecting a sidewalk on the eastern edge of the parking lot to the school entrance.
 - The side lot contains additional parking for staff and parents. Additionally, there is an agreement between the school and neighboring St. Bartholomew's Episcopal Church to allow the school to use the church parking lot during school pick-up and drop-off (the church can use the school lot on Sundays). As a result, school staff have set up an informal crosswalk using cones from the church parking lot onto school property in the southern portion of the lot. The informal crosswalk connects the church parking lot to the school playground through gates that are opened during arrival and dismissal. (6g)
- Sidewalk facilities along the perimeter of the parking lot are inadequate. (6d)
 - o The sidewalk on the eastern edge of the front lot connecting Portola Avenue to the mid-parking-lot crosswalk is narrow. This sidewalk does not extend past the parking lot crosswalk. A dirt path connects to the gate separating the school parking lot from the church parking lot.
- The existing crossing from the church is informal.
 - A gate in a chain link fence is opened in the morning and afternoon to allow access between the school and the church parking lot.
 - School staff set up cones during pick-up and drop-off to delineate the crossing through the school parking lot. Four parking spots, including one designated as R99 Disabled Parking Only, are inaccessible due to the cones during pick-up and drop-off. (6c; 6e)
- Vehicles were observed parking in the side parking lot and walking students inside, or dropping students off in this lot. This results in additional traffic movements within the parking lot that affects traffic flow into and out of the parking lot. (6f)





Left: A chain link fence and gate connect the church parking lot to the school parking lot. A dirt path is between the paved school parking lot and the paved path in the church parking lot. Right: At drop-off and pick-up, the gate to the school is open for students to enter the campus. Orange cones are used by school staff to mark the crossing.

7. Sierra School Parking Lot

- Note: As of January 2020, there is a fence preventing movement between the Sierra School campus and the Lawrence Elementary School campus. Items listed below represent observations as of November 2019 that may no longer be relevant in future study.
- The Sierra School at Lawrence is a private school located to the west of Lawrence Elementary School that serves special needs students from the Livermore Valley Joint Unified School District. It uses a small parking lot with four staff parking spaces and a circle drive for drop-off.
- Lawrence Elementary School parents were observed parking in the lot and walking to Lawrence. Vehicles were also observed double-parking, or parking in areas not designated as parking spots, such as in a striped center median.
- School safety assessment participants reported that the school buses serving special needs students often cannot enter or navigate the parking lot due to vehicle congestion from Lawrence Elementary School.

Participant Comments

School staff and parents from Lawrence Elementary were enthusiastic about the School Safety Assessment and the opportunities for making the roads around the school safer for students. Comments overall centered on the fast speeds of vehicles driving along Portola Avenue, and the fact that commuters use Portola Avenue to bypass I-580. The lack of stop lights between N Livermore Avenue and First Street (a distance of over one mile) may contribute to this speed and usage.

There were also concerns about the crosswalk at Enos Way and Portola Avenue. Parent advocacy resulted in hiring the crossing guard but parents are still concerned for the safety of students and the crossing guard while in the crosswalk.

School staff and parents also mentioned issues with egress and ingress to and from the school property. Traffic concerns detailed in the memo above were noted with urgency, particularly in light of future plans to expand the school population and bring more families into the school at drop-off and pick-up times.

Recommendations

Engineering Recommendations

Recommendations to improve infrastructure or operations surrounding Lawrence Elementary School can be seen on the conceptual improvement plan found following this memo.

Policy & Program Recommendations

In addition to engineering improvements, the Alameda County Safe Routes to Schools Program has many encouragement and educational activities that can benefit students and the campus community at Lawrence Elementary School.

The School Site Coordinator for Lawrence Elementary is Jennifer Ledet. The Site Coordinator can help schedule, organize, and promote many of the program offerings of Alameda County SR2S. The contact information for the Site Coordinator is below:

Jennifer Ledet, jledet@alamedacountysr2s.org

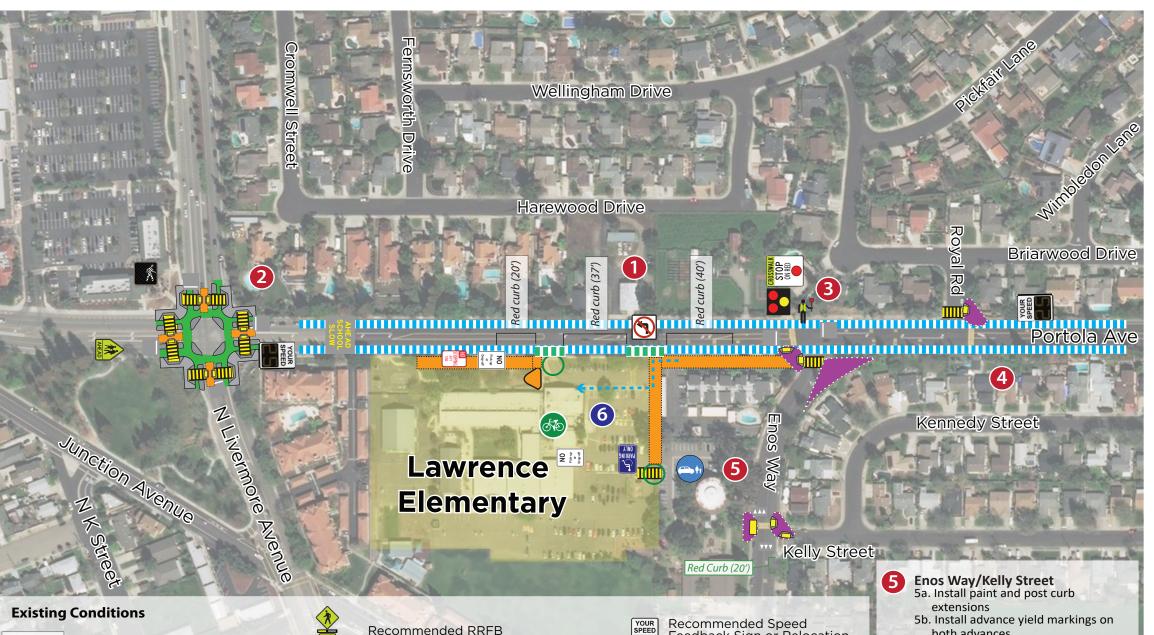
Please do not hesitate to reach out to the Site Coordinator if you have any questions or concerns, or if you wish to move forward with additional programming activities.

Programs

The following improvements are recommendations for policy and program implementation at Lawrence Elementary School to increase safety and active commutes to school.

- Create a Rolling Drop-Off within the School Parking Lot
 - Building off of the existing circle drop-off in the north parking lot, this program would prohibit drop-off on Portola Avenue and require vehicles to pull into the parking lot to drop-off students. A queue of 4-6 cars would pull in, parent and student volunteers would open the car doors for students to exit, and then a new wave of cars would pull in for the next drop-off. This creates a more efficient drop-off structure and would remove the conflict at the entrance driveway.
 - Alameda County SR2S can provide guidance to the school on how to create a rolling drop-off program, as well as handout to provide to parents to educate them on the new procedure. Contact Jennifer Ledet, Site Coordinator, for more information.
- Encourage Parents to Park and Walk from Designated Locations
 - A park and walk location has been identified on the Improvement Plan Map.
 - St. Bartholomew's Episcopal Church parking lot
 - The school should encourage parents to utilize this location to reduce congestion in and near existing drop-off/pick-up locations.
- Encourage and Help Facilitate Carpooling
 - The SR2S Program can assist schools in working with parents to connect them with other families who live nearby to increase the number of students carpooling. This can reduce congestion by reducing the number of vehicles coming to campus.
- Encourage and Help Facilitate Taking the Bus
 - Two bus routes have been identified with stops within ¼-mile of the school
 - 30R (N Livermore Ave and Portola Ave)
 - 15 (Junction Ave and N Livermore Ave)
 - The school should encourage parents to consider taking the bus to reduce congestion in and near existing drop-off/pick-up locations.
- Provide Rail Safety Education
 - Railroad tracks run less than a mile south of the school, crossing both N Livermore Ave and Junction Ave.
 - The SR2S Program can assist with providing rail safety education to the school community.
- Develop Walk and Bicycle Route Maps
 - The SR2S Program can create recommended Walk and Bicycle Route Maps. These maps illustrate preferred routes to school for walking and biking. Maps also provide safety tips to encourage better travel behavior.
 - These maps can also be used as a part of Walking School Buses (WSBs), Bicycle Trains (BTs), or other Walk and Roll to School activities. Park and Walk, WSB, and BT meeting locations are also shown on these maps where appropriate.
- Facilitate Walking School Buses and Bicycle Trains

- Walking School Buses (WSBs) and Bicycle Trains (BTs) are groups of students, led by parent/adult chaperone(s), that meet at designated locations and times to gather and walk and/or bike to school together. WSBs and BTs can be regular events, occurring daily, weekly, or monthly or occur in coordination with other events like International Walk and Roll to School Day or the Golden Sneaker Contest. SR2S staff can assist schools with the planning, coordination, and execution of the WSBs and BTs. Walking and biking in groups with parental supervision can not only increase the visibility of these road users, but can reduce barriers to walking or biking for some families while making it fun and exciting for the students.
- Schedule Pedestrian Rodeos and Bicycle Rodeos
 - These interactive rodeos are great educational opportunities to teach and refresh safe walking and bicycling behavior. These workshops cover a wide range of relevant topics from understanding traffic signals and signs, to bicycle hand signals, to how to safely cross the street. Pedestrian Safety Rodeos and Bicycle Safety Rodeos are geared towards elementary school students.
- Participate in International Walk and Roll to School Day (IRW2SD), the Golden Sneaker Contest (GSC), and Bike to School Day (B2SD)
 - These are the three main countywide encouragement events that occur throughout the academic year. All schools can participate in International Walk and Roll to School Day, held in October every year. The Golden Sneaker Contest, held in spring, is for elementary and middle schools and is a two-week contest both within schools and across the county challenging classrooms to travel to/from school using active and shared modes. All schools can also participate in Bike to School Day, held in tandem with Bike to Work Day, which encourages schools to sponsor Energizer Stations and students and families to bike to school.



Existing Curb Paint



Existing School Access Point



Existing Bike Parking



Existing Crossing Guard Location

Recommendations



Recommended High-Visibility Crosswalk

Recommended Class IV



Recommended Sidewalk



Separated Bikeway Recommended Class II Bike Lane Green Conflict Zone Markings



Recommended Curb Paint



Recommended Paint & Post Curb Extension





Recommended Pedestrian Hybrid Beacon



Recommended Advance Limit Line Pavement Marking



Recommended Advance Yield Markings



Recommended SLOW SCHOOL **AHEAD Pavement Markings**



Recommended Plaza



Recommended Refuge Island



Recommended Protected Intersection



Park & Walk Location

Recommended

Pedestrian Route





Feedback Sign or Relocation of Existing Sign



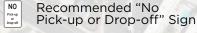
Recommended Relocation of Existing CA-MUTCD School Assembly D



Recommended CA-MUTCD "No Left Turn" Sign



Recommended Relocation of Existing CA-MUTCD R99 Disabled Parking Only Signage



Recommended CA-MUTCD R26S "No Stopping Any Time" Signage

Implementing Agency

City of Livermore



Livermore Valley Joint Unified School District



- both advances
- 5c. Install red curb south of Kelly Street on Enos Way

School Frontage and Parking Lot

- 6a. Widen sidewalk to west of school driveways to create more space for people to walk. Short Term: Create widened path using decomposed granite. Long Term: Widen concrete sidewalk
- 6b. Widen plaza area in front of school 6c. Install high-visibility crosswalk from church parking lot to school playground entrance
- 6d. Widen existing sidewalk on eastern edge of parking lot, and pave sidewalk where it does not exist
- 6e. Relocate R99 Disabled Parking Only sign to northern side of crosswalk and install disabled parking markings
- 6f. Install "No Pick-up or Drop-off" signage on eastern side of school
- 6g. Establish church parking lot as Park & Walk location

Safe Routes to Schools Improvement Plan

Lawrence Elementary School

Livermore

School Safety Assessment held November 2019

School Frontage at Portola Avenue

- 1a. Repair and widen sidewalk to east of school driveways
- 1b. Upgrade the existing Class II Bicycle Lanes on either side of the street to Class IV Separated Bikeway Note: This recommendation would require a road diet on Portola
- Avenue and is not included as a recommendation in Livermore's 2018 Bicycle, Pedestrian, & Trails Active Transportation Plan (ATP) 1c. Reconstruct ADA-compliant sidewalk across driveway entrance and
- exit, and remove existing yellow markings. Consider adding green bicycle zone conflict markings at driveways
- 1d. Restrict left turns out of driveway exit during drop-off and pick-up 1e. Add "No Stopping During School Pick-up and Drop-off" signage and "No Pick-up or Drop-off" signage to school frontage ahead of
- driveway entrance 1f. Evaluate and consider relocating speed limit sign(s) and radar feedback sign location (signs for east bound Portola between N Livermore Avenue and Royal Way) to provide motorist more advance notice of the school zone
- 1g. Install yellow "SLOW SCHOOL AHEAD" pavement markings

N Livermore Avenue/Portola Avenue

- 2a. Immediately remove pedestrian actuation buttons from medians due to lack of pedestrian refuge islands in current intersection configuration
- 2b. Install pedestrian refuge islands and reinstall pedestrian actuation
- 2c. Study feasiblity of signal timing update to include a leading pedestrian interval. If warranted, upgrade existing pedestrian signalheads to include countdowns
- 2d. Install curb extensions at all four corners to shorten turning radius
- 2e. Install or consider installing protected intersection bicycle treatments at all four corners. Note: This recommendation is not consistent with recommendations in Livermore's 2018 ATP
- 2f. Upgrade existing transverse crosswalks to yellow high-visibility crosswalks across all approaches
- 2g. Install advance limit lines across all approaches
- 2h. Install green bicycle zone conflict markings across the intersection at all four approaches
- 2i. Relocate existing School Assembly D sign

Enos Way/Portola Avenue

- 3a. Explore if this location meets warrants for the installation of a pedestrian hybrid beacon. If warranted, install advance stop markings at both approaches
- 3b. If pedestrian hybrid is not warranted, install advance yield markings
- 3c. Restripe and straighten existing high-visibility crosswalk
- 3d. Install curb extension at southwest corner. Build with paint and posts in the short-term and upgrade to concrete when funding becomes available. Ensure design accomodates recommended Class IV Separated Bikeway
- 3e. Reconfigure southeast corner to tighten corner geometry and shorten cross distance. Build with paint and posts in the short-term and upgrade to concrete when funding becomes available

Royal Road/Portola Avenue

- 4a. Remove existing high-visibility crosswalk to encourage families to cross at Enos Way
- 4b. Install curb extension at northeast corner. Build with paint and posts in the short-term and upgrade to concrete when funding becomes available. Ensure design accomodates recommended Class IV Separated Bikeway
- 4c. Install high-visibility crosswalk across northern approach









Improvements not to scale *The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.

**Red curb and/or parking restriction signage should be provided between advance stop/yield markings and the crosswalk. Exact red curb distance should be determined in accordance with the CA-MUTCD and City policies/standards. Red curb not symbolized on map.