

School Safety Assessment Technical Memorandum

OAKLAND CHARTER HIGH SCHOOL

2365 Coolidge Avenue, Oakland, CA 94601

Oakland Unified School District

May 2023



Oakland Charter High School

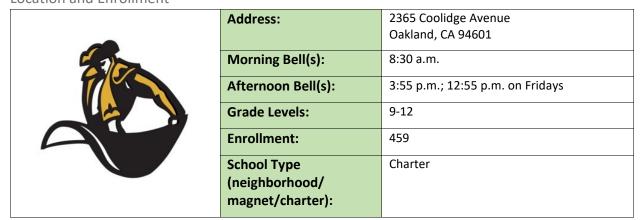
A school safety assessment was conducted at Oakland Charter High School in Oakland, CA, during the afternoon dismissal on May 2, 2023. The assessment was attended by representatives from the City of Oakland, Alameda County Safe Routes to Schools (SR2S) staff, and Oakland Charter High School staff.

Participants included:

- Lucas Woodward, engineer, Oakland Department of Transportation
- Malcolm McArthur, principal, Oakland Charter High School
- Marceli Rocha, assistant principal, Oakland Charter High School
- Sarah Cardenas, dean of instruction, Oakland Charter High School
- Nathan Sharafian, engineer, Alameda County SR2S team
- Ben Frazier, planner, Alameda County SR2S team
- Charlie Simpson, planner, Alameda County SR2S team
- George Foster, planner, Alameda County SR2S team
- Cairo Moore, Alameda County SR2S team

School Information

Location and Enrollment



Bikes, Buses, and Drop-Off/Pick-Up

| Does the school have bike | The school has a small, covered bike rack on campus, outside the |
|-----------------------------|---|
| racks? What is the | cafeteria by the staff parking lot. The rack is also accessible through |
| capacity? Is it secure bike | campus from Coolidge Avenue. |
| parking? | |

| Do local transit agencies serve the school? Are there stops within ¼ mile? | The school is served by the following AC Transit bus routes: 14, 20, 21, 39, 40, and 54. Fruitvale BART Station is 0.9 miles to the south. |
|--|---|
| Does the school have special pick-up/drop-off policies/ procedures? | As stated on their website, Oakland Charter High is committed to reducing car travel and traffic, as well as improving student health and safety. It is stated that there is a Safe Routes Policy to promote the safe and efficient transportation of students to and from school, although supporting materials are not provided. The school has established a parent carpool list, consisting of clustered zones based on student locations. These policies are all to help the school meet its stated goal: to have 60% of students carpool, walk or take public transportation to school. |

Note: Oakland Charter High School is not served by school buses.

Street Profiles

| Street Name | Width | Lanes | Posted Speed Limit | Traffic Volumes | Notes |
|---------------|---------|---------|-----------------------|--------------------|------------------|
| Coolidge Ave | 36 feet | 2 lanes | 25 mph | | |
| Logan St | 28 feet | 2 lanes | 25 mph | | |
| Hyde St | 28 feet | 2 lanes | 25 mph | | |
| E 23rd St | 36 feet | 2 lanes | 25 mph | | |
| Foothill Blvd | 50 feet | 3 lanes | 25 mph | | |
| | | | | | Class II bikeway |
| Fruitvale Ave | 44 feet | 2 lanes | 25 mph | | northbound |
| 34th Ave | 32 feet | 2 lanes | 25 mph | | |
| 35th Ave | 40 feet | 2 lanes | 30 mph | | |

Pedestrian- and Bicycle-Involved Collision Summary 2018-2022

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.

| Radius from School | Total Collisions | Fatal Collisions | Severe Injury Collisions | Visible Injury Collisions | Complaint of Pain Collisions | Pedestrian Collisions | Bicycle Collisions |
|--------------------------|---------------------|---------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------|-----------------------|
| < ¼ mi | 27 | 1 | 1 | 8 | 17 | 17 | 10 |
| ¼ mi – ½ mi | 50 | 0 | 4 | 15 | 31 | 34 | 16 |

| Radius from School | Total Collisions | Fatal Collisions | Severe Injury Collisions | Visible Injury Collisions | Complaint of Pain Collisions | Pedestrian Collisions | Bicycle Collisions |
|--------------------------|---------------------|---------------------|--------------------------------|---------------------------------|------------------------------------|--------------------------|-----------------------|
| Total | 77 | 1 | 5 | 23 | 48 | 51 | 26 |

Source: UC Berkeley – Transportation Injury Mapping System, Safe Transportation Research and Education Center, University of California, Berkeley, 2021

Community Health and Demographics (Data from the census tract of school site)

| Percent of Students Eligible for Free or Reduced Priced Meals (2020-21 school year) | MTC Equity Priority Community Designation (2018) | Healthy Places Index Score (2021) | CalEnviroScreen 4.0 Percentile (2021) |
|---|--|--------------------------------------|---------------------------------------|
| 79.3% | Highest | 34.5 | 71 |

Sources: California Department of Education, Metropolitan Transportation Commission, Public Health Alliance of Southern California, and California Office of Environmental Health Hazard Assessment

Existing Conditions

Overview

Oakland Charter High School is set in southeast Oakland between Sausal and Peralta Creeks, just north of Foothill Boulevard on Coolidge Avenue. Located on a long stretch of Coolidge Avenue without cross-streets, the school's segment of Coolidge Avenue is bounded by E 23rd Street and Logan Street to the west (both T-intersections), and Foothill Boulevard and Hyde Street (offset intersection) to the east. Coolidge Avenue is straight, downhill, and without stop controls for 1,400 feet in front of the school, which creates potential conflicts between drivers and stopped cars or crossing students. Three speed humps in front of the school attempt to address these potential conflicts.

Classes begin at 8:30 a.m., with the school opening at 8:00 a.m. School ends at 3:55 p.m., except on Fridays when school ends at 12:55 p.m. Various after-school programs run from between 4:00 and 6:00 p.m. daily. If a student is not in an after-school program, such as tutorial or detention, then they are not allowed on campus and must depart by 4:30 p.m. Oakland Charter High School is also unique in that it has an explicit goal to have 60% of students carpool, walk or take public transportation to school. The school has an established parent carpool list, compiled of clusters (zones) based on student locations.

Coolidge Avenue, Fruitvale Avenue, Foothill Boulevard, and 35th Avenue were all identified as part of <u>Oakland's High Injury Network (2018)</u>, and are the corridors where the majority of the city's severe and fatal collisions occur. These corridors, and Roosevelt Middle School, are also located within a Metropolitan Transportation Commission (MTC) Equity Priority Community.

Finally, it should be noted that both Foothill Boulevard and Fruitvale Avenue were identified for implementation of buffered bike lanes in the *2019 Oakland Bike Plan*. Coolidge Avenue is currently planned for repaying in 2026.

Observations

Participants observed or reported the following conditions during the school safety assessment.

- 1. Coolidge Avenue and Hyde Street (Corresponds to #1 on improvement map)
- Coolidge Avenue and Hyde Street form a four-way, offset intersection that is all-way stopcontrolled.
 - o All four legs have one travel lane in each direction and parking on both sides.
 - There are high-visibility crosswalks on the northern and western legs of the intersection, though the condition of the paint is deteriorated.
- Perception of vehicles speeding on Coolidge Avenue by participants.
- People driving vehicles were observed not complying with southbound stop sign on Coolidge Avenue.
 - Those in compliance with stop signs on Coolidge Avenue were also observed failing to alternate the right-of-way with people driving vehicles on non-adjacent leg of Hyde Street.

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Construct curb extensions on Coolidge Avenue, north of Hyde Street, to reduce crossing distances for pedestrians and improve stop visibility.
- Refresh paint for crosswalks and stop bars.
- School District: Coordinate with the City and Friends of Peralta Hacienda board to consider designating Peralta Hacienda Historical Park as a Park and Walk location to reduce traffic at the school.
- 2. Coolidge Avenue and Logan Street (Corresponds to #2 on improvement map)
 - Coolidge Avenue and Logan Street form a three-way T-intersection that is all-way stopcontrolled.
 - All three legs have one travel lane in each direction and parking on both sides.
 - o There are transverse crosswalks on the northern and western legs of the intersection.
 - Crosswalk across Coolidge Avenue north of Logan Street ends in a driveway (east side).
 - Roughly one in three people driving vehicles were observed not complying with southbound stop sign on Coolidge Avenue.
 - Perception of vehicles speeding on Coolidge Avenue by participants.

The following infrastructure recommendations are proposed to improve the existing conditions described above:

• Consider relocating crosswalk across Coolidge Avenue from northern to southern leg to establish an ADA compliant landing.

- After relocating crosswalk, construct curb extensions on Coolidge Avenue south of Logan Street, and on Logan Street west of Coolidge Avenue, to reduce crossing distances for pedestrians and improve stop visibility.
- Refresh/add paint for stop bars and update transverse crosswalks to high-visibility crosswalks.

3. Coolidge Avenue at Oakland Charter High (Corresponds to #3 on improvement map)

- The entrance to Oakland Charter High is located mid-block on Coolidge Avenue.
 - There are two high-visibility crosswalks cross Coolidge Avenue outside the school with three speed bumps alternating between them.
 - These crosswalks are also used throughout the school day to access a satellite building for the school's split campus across Coolidge Avenue.
- Perception of vehicles speeding on Coolidge Avenue by participants.
- People driving vehicles were observed encroaching on cones placed by the school to daylight crosswalks.
- People driving vehicles were observed blocking the travel lanes in both directions to wait for students during pick-up. Drivers were observed passing in the opposite lane through crosswalks to bypass.
- Multiple drivers parked their cars on the Coolidge Avenue sidewalks.
- There is no secure bike parking on campus.



Left: Vehicles were observed parked on the Coolidge Avenue sidewalks.

Right: When the cones shown in this image are encroached on by vehicles, students are less visible when crossing, and are more at risk.

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Construct curb extensions for both crosswalks to reduce crossing distances for pedestrians and improve stop visibility. Consider converting the existing crosswalks to raised crossing because of regular use throughout the day by students at this split-campus school. Raised crosswalks may necessitate removal of some speed humps.
- Install advance yield markings for both crosswalks.
- Consider installing white curb on the west side of Coolidge Avenue outside the school.

Conduct residential outreach to remind residents not to park on the sidewalk. Long term, if efforts
to stop sidewalk parking are not successful, consider landscaping options to deter use of
sidewalks by people parking vehicles.

4. Coolidge Avenue and E 23rd Street (Corresponds to #4 on improvement map)

- Coolidge Avenue and E 23rd Street form a three-way T-intersection that is stop-controlled on E 23rd Street.
 - All three legs have one travel lane in each direction and parking on both sides.
 - o There are no marked crosswalks at this intersection.
- People driving vehicles were observed stopped in the intersection, waiting on traffic.
 - People driving vehicles on E 23rd Street were observed waiting to turn beyond the stop bar, rather than waiting for a break in traffic to advance, blocking people walking from crossing E 23rd Street.
- Broken sidewalks due to tree root uplift on western side of Coolidge Avenue north of E 23rd
 Street and on southern side of E 23rd Street west of Coolidge Avenue.
- Vehicles were observed parked on the Coolidge Avenue sidewalks.





Left: Broken sidewalks present hazards for students and community members.

Right: Many students cross E 23rd Street, where there is no crosswalk, to access the buses on Foothill Boulevard.

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Install high-visibility crosswalk across E 23rd Street.
- Refresh stop bar paint.
- Replace broken sidewalk on western side of Coolidge Avenue north of E 23rd Street and on southern side of E 23rd Street.
- Conduct residential outreach to remind residents not to park on the sidewalk. Long term, if efforts
 to stop sidewalk parking are not successful, consider landscaping options to deter use of
 sidewalks by people parking vehicles.
- School District: Consider designating E 23rd Street as a Park and Walk location to reduce traffic at the school.

5. Coolidge Avenue and Foothill Boulevard (Corresponds to #5 on improvement map)

- Coolidge Avenue and Foothill Boulevard form a three-way T-intersection that is signalized.
 - o Coolidge Avenue has one travel lane in each direction and parking on both sides.
 - Foothill Boulevard has one travel lane in each direction, a center turn lane and parking on both sides.
 - Foothill Boulevard westbound at this intersection has a dedicated right turn lane and a center travel lane.
 - There are transverse crosswalks with enclosed artwork on all three legs of the intersection.
 - There are curb extensions on Foothill Boulevard on the northeast corner and along the entire southern edge of the intersection.
- Vehicles backed up past E 23rd Street to the north from signal during afternoon dismissal.
- Perception of vehicles speeding on Foothill Boulevard by participants.
- Students were observed using shortcut across parking lot on northwest corner of a setback facility with underutilized parking.

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Refresh paint of transverse crosswalks and decorative markings.
- Construct new buffered bike lanes on Foothill Boulevard, per 2019 Oakland Bike Plan.

6. 33rd Avenue and Foothill Boulevard (Corresponds to #6 on improvement map)

- 33rd Avenue and Foothill Boulevard form a three-way T-intersection that is stop-controlled on 33rd Avenue.
 - 33rd Avenue has one travel lane in each direction and parking on both sides, though entrance from Foothill Boulevard is prohibited.
 - Foothill Boulevard has one travel lane in each direction, a center turn lane and parking on both sides.
 - There is a transverse crosswalk with enclosed artwork across 33rd Avenue and a highvisibility crosswalk across the western leg of Foothill Boulevard.
 - There are curb extensions on Foothill Boulevard on the southwest corner and the northern terminus of the high-visibility crosswalk.
 - An archway with artwork and the word FRUITVALE spans the western leg of Fruitvale Avenue, partially blocking pedestrian visibility to eastbound vehicles on Fruitvale Avenue.
- People driving were observed not stopping for pedestrians on Foothill Boulevard.
- Perception of vehicles speeding on Foothill Boulevard by participants.



Above: The Fruitvale welcoming archway obscures the visibility of pedestrians at this intersection.

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Consider installing a rectangular rapid flash beacon (RRFB) on Foothill Boulevard for the crosswalk with advance yield markings.
- Construct new buffered bike lanes on Foothill Boulevard, per 2019 Oakland Bike Plan.

7. Fruitvale Avenue and Foothill Boulevard (Corresponds to #7 on improvement map)

- Fruitvale Avenue and Foothill Boulevard form a four-way intersection that is signalized.
 - Foothill Boulevard has one travel lane in each direction, a center turn lane, and parking on both sides.
 - Sharrow markings are painted on the roadway.
 - Fruitvale Avenue has one travel lane in each direction, a left turn lane, and parking on both sides.
 - There is a northbound Class II bike lane north of the intersection, and Class II bike lanes in both directions south of the intersection.
 - For about 80 feet north of the intersection, there is no parking on either side.
 - For about 200 feet south of the intersection, there is no parking on the western side, though many cars were observed illegally parked in the bike lane along red curb
 - There are transverse crosswalks on all four legs of the intersection.
 - There are partial curb extensions on the northwest, southwest, and southeast corners of the intersection.

- Perception of vehicles speeding on Fruitvale Avenue and Foothill Boulevard by participants.
- This intersection is where most students, teachers, and staff access AC Transit buses.
- There is a Bay Wheels bikeshare docking station on the north side of Foothill Boulevard, east of the intersection.
- As noted in the Transportation Injury Mapping System collision data, this intersection has a high number of vehicular collisions involving people riding bicycles.

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- Refresh paint of transverse crosswalks and decorative markings.
- Construct new buffered bike lanes on Foothill Boulevard and Fruitvale Avenue, per 2019 Oakland Bike Plan. Study this location for intersection design changes to provide a protected intersection for people riding bicycles.

8. Fruitvale Avenue and Logan Street (Corresponds to #8 on improvement map)

- Fruitvale Avenue and Logan Street form a four-way offset intersection that is stop-controlled on Logan Street.
 - All four legs have one travel lane in each direction and parking on both sides. Fruitvale Avenue has a northbound Class II bikeway.
 - There are transverse crosswalks with enclosed artwork across both legs of Logan Street and one high-visibility crosswalk across Fruitvale Avenue, situated between the two offset approaches of Logan Street.
- Perception of vehicles speeding on Fruitvale Avenue by participants.
- This intersection is the second location where students, teachers, and staff access AC Transit buses.
- People driving were observed not stopping for pedestrians on Fruitvale Avenue.

The following infrastructure recommendations are proposed to improve the existing conditions described above:

- With consideration to current and future bicycle facilities, construct curb extensions for the crosswalk across Fruitvale Avenue to slow vehicular turning speeds and reduce crossing distances for pedestrians.
- Consider installing an RRFB for pedestrians crossing Fruitvale Avenue.
- Consider installing two-stage turn queue boxes, placed in the on-street parking lanes on Fruitvale Avenue, so that people riding bicycles on Logan Street can more safely reposition themselves to wait for a crossing opportunity at this offset intersection.
- Construct new buffered bike lanes on Fruitvale Avenue, per 2019 Oakland Bike Plan.

Participant Comments

Generally, most of the comments from attendees focused on the high speeds and high congestion of people driving cars immediately outside the school, the absence of bicycle infrastructure, and the poor condition of sidewalks in the vicinity.

General observations from participants included people driving cars ignoring red curbs and parking on sidewalks, as well as causing congestion on Coolidge Avenue. Participants perceived speeding by people driving vehicles on major avenues and boulevards, including Coolidge Avenue. Other observations

included the absence of bicycle infrastructure and poor sidewalk conditions. Many students walk to school or to nearby transit stops and the pedestrian experience would benefit from improvements.

Recommendations

Engineering Recommendations

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

Policy and Program Recommendations

In addition to engineering improvements, the Alameda County SR2S Program has many encouragement and educational activities that can benefit students and the campus community at Oakland Charter High.

The School Site Coordinator for Oakland Charter High School is Michele Walker. 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:

Michele Walker, <u>mwalker@alamedacountysr2s.org</u>

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

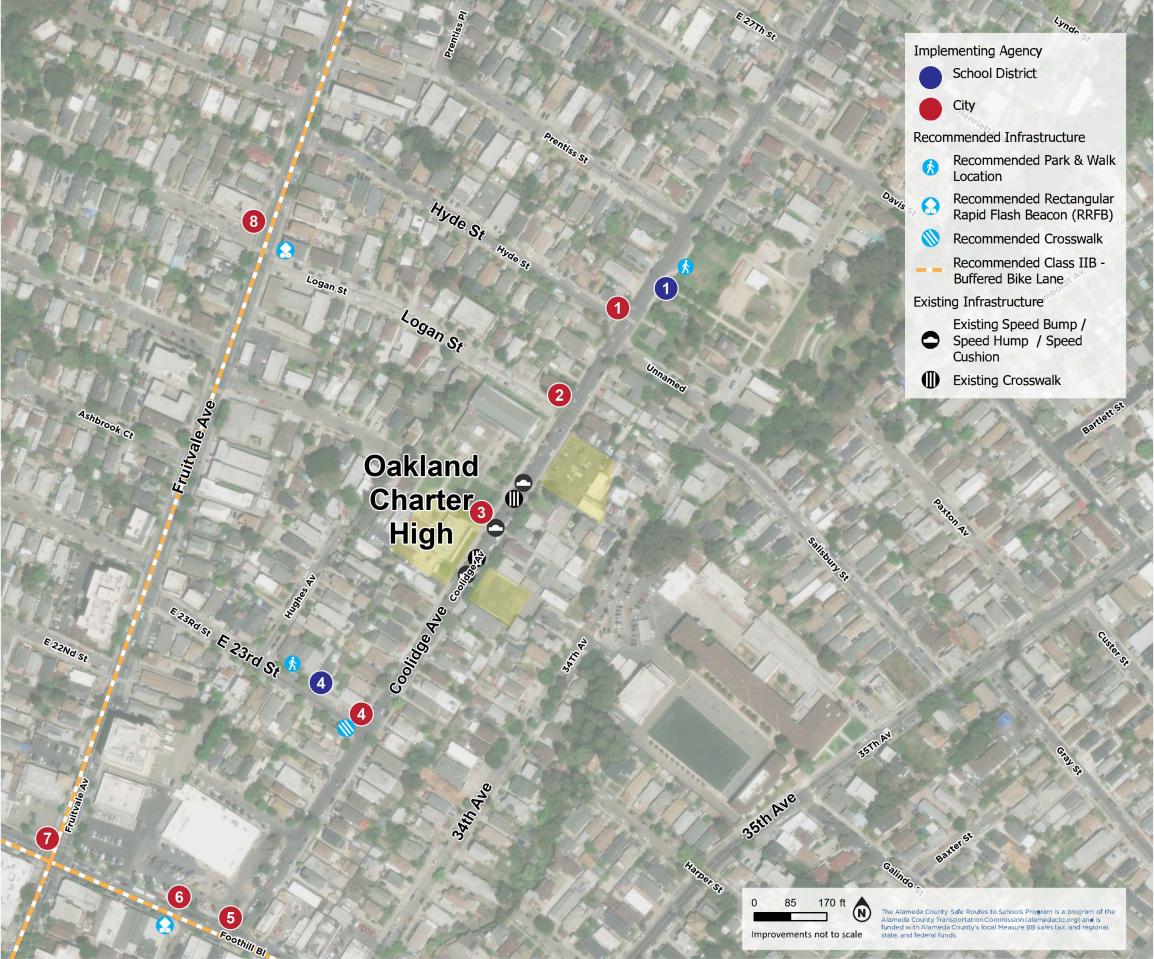
The following policy and program improvements are recommended for implementation at Oakland Charter High School to increase safety and active commutes to school.

- 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, and 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.
- Encourage and facilitate carpooling.
 - The SR2S Program can assist schools in connecting families who live close together to increase the number of students carpooling. This can reduce congestion by reducing the number of vehicles coming to campus.
- Encourage caregivers to park and walk from designated locations.
 - o Potential Park and Walk locations have been identified on the improvement plan map.
 - E 23rd Street between Coolidge Avenue and Fruitvale Avenue
 - Peralta Hacienda Historical Park
 - The school should encourage caregivers to use these locations to reduce congestion in and near existing drop-off/pick-up locations.

- Facilitate WSBs and BTs.
 - WSBs and BTs are groups of students, led by parent or adult chaperones, that meet at designated locations and times to gather, and walk or bike to school together. WSBs and BTs can be regular events, occurring daily, weekly, monthly or in coordination with other events like International Walk and Roll to School Day. 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 increase the visibility of these road users and reduce barriers to walking or biking for some families while making it fun and exciting for the students.
- Schedule Drive Your Bike Workshop.
 - This interactive workshop is a great educational opportunity to teach and refresh safe walking and bicycling behavior. This workshop covers many relevant topics, from understanding traffic signals and signs to bicycle hand signals to how to safely cross the street. The Drive Your Bike workshop has a high school version.
- Participate in International Walk and Roll to School Day, Cocoa for Carpools, and Bike to School Day.
 - 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. Cocoa for Carpools, held in the winter, is a fun event for high schools that rewards carpoolers with free hot chocolate when they arrive at school. 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.

Transit Recommendations

- Oakland Charter High School is served by transit with several bus stops near the campus and the Fruitvale BART Station less than a mile to the south. AC Transit options readily available to students include bus routes 20, 21, 39, 40 and 54.
- Recommendations include:
 - Install benches with shade awnings at bus stops.
 - o Install pedestrian-scale lighting at bus stops.
 - o Construct bus bulbs, with attention to future protected bikeways.
 - Use AC Transit buses and BART for field trips, as a method of education.



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.

This figure is intended only for reference, conceptual planning, and informational purposes. This figure should not be used to establish boundaries, property lines, location of objects, or to provide any other information typically needed for final design, construction or any other purpose when engineered plans are required.

Safe Routes to Schools Improvement Plan

Oakland Charter High, Oakland

School Safety Assessment held May 2023

Improvement Detail

- 1a Construct curb extensions on Coolidge Ave, north of Hyde St to reduce crossing distances for pedestrians and improve stop visibility.
- 1b Refresh paint for crosswalks and stop bars.
- 1c School District: Coordinate with the City and Friends of Peralta Hacienda board to consider designating Peralta Hacienda Historical Park as a Park and Walk location to reduce traffic at the school.
- 2a Consider relocating crosswalk across Coolidge Avenue from northern to southern leg to establish an ADA compliant landing.
- 2b After relocating crosswalk, construct curb extensions on Coolidge Avenue south of Logan Street, and on Logan Street west of Coolidge Avenue, to reduce crossing distances for pedestrians and improve stop visibility
- 2c Refresh/add paint for stop bars and update transverse crosswalks to highvisibility crosswalks.
- 3a Construct curb extensions for both crosswalks to reduce crossing distances for pedestrians and improve stop visibility. Consider converting the existing crosswalks to raised crossing because of regular use throughout the day by students at this split-campus school. Raised crosswalks may necessitate removal of some speed humps.
- 3b Install advance yield markings for both crosswalks.
- 3c Consider installing white curb on the west side of Coolidge Avenue outside the school
- 3d Conduct residential outreach to remind residents not to park on the sidewalk. Long term, if efforts to stop sidewalk parking are not successful, consider landscaping options to deter use of sidewalks by people parking vehicles.
- 4a Install high-visibility crosswalk across E 23rd St.
- 4b Refresh stop bar paint.
- 4c Replace broken sidewalk on western side of Coolidge Ave north of E 23rd St and on southern side of E 23rd St.
- 4d Conduct residential outreach to remind residents not to park on the sidewalk. Long term, if efforts to stop sidewalk parking are not successful, consider landscaping options to deter use of sidewalks by people parking vehicles.
- 4e School District: Consider designating E 23rd Street as a Park and Walk location to reduce traffic at the school.
- 5a Refresh paint of transverse crosswalks and decorative markings.
- 5b Construct new buffered bike lanes on Foothill Blvd, per 2019 Oakland Bike
- 6a Consider installing an RRFB on Foothill Blvd for the crosswalk with advance vield markings.
- 6b Construct new buffered bike lanes on Foothill Blvd, per 2019 Oakland Bike
- 7a Refresh paint of transverse crosswalks and decorative markings.
- 7b Construct new buffered bike lanes on Foothill Blvd and Fruitvale Ave, per 2019 Oakland Bike Plan. Study this location for intersection design changes to provide a protected intersection for people riding bicycles.
- 8a With consideration to current and future bicycle facilities, construct curb extensions for the crosswalk across Fruitvale Ave to slow vehicular speeds and reduce crossing distances for pedestrians.
- 8b Consider installing an RRFB for pedestrians crossing Fruitvale Ave.
- 8c Consider installing two-stage turn queue boxes, placed in the on-street parking lanes on Fruitvale Ave, so that people riding bicycles on Logan St can more safely reposition themselves to wait for a crossing opportunity for this offset intersection.
- 8d Construct new buffered bike lanes on Fruitvale Ave, per 2019 Oakland Bike Plan.



