Walk Audit Report

SafeRoutes
Napa County

AMERICAN CANYON
MIDDLE SCHOOL

AMERICAN CANYON MIDDLE SCHOOL

300 BENTON WAY
AMERICAN CANYON, CA

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

NAPA COUNTY SAFE ROUTES TO SCHOOL PROGRAM

Napa County Bicycle Coalition
Madeline Oliver, Program Coordinator
Carlotta Sainato, Program Coordinator
Patrick Band, Executive Director
Kara Vernor, Executive Director

Napa County Office of Education
Grant Dinsdale, Community Programs Site Coordinator, Safe Routes to School
Willow Williams, Community Programs Outreach Coordinator
Christine Wedding, Community Programs Manager
Sara Sitch, Community Programs Director

Napa Valley Transportation Authority
Diana Meehan, Senior Planner

WALK AUDIT PARTICIPANTS
Janelle Sellick, Parent
Erica Winterburn, Parent

SCHOOL OFFICIALS
Napa Valley Unified School District
Dr. Rosanna Muccetti, Superintendent
Daniel Scudero, Principal
Carliza Bataller, Assistant Principal/Principal
Karina Servente, Community Parent Liaison

CITY STAFF
City of American Canyon Community Development Department
City of American Canyon Public Works Department
City of American Canyon Fire Protection District
City of American Canyon Police Department

REPORT DESIGN
Ana Rizzo, Graphic Design
Amber Manfree, GIS Mapping

EXECUTIVE **SUMMARY**

THE NAPA COUNTY SAFE ROUTES TO SCHOOL PROGRAM

The Napa County Safe Routes to School (SRTS) Program is a partnership between the Napa County Office of Education (NCOE), Napa County Bicycle Coalition (NCBC) and Napa Valley Transportation Authority (NVTA). Since 2008, the Program has provided high-quality bicycle and pedestrian safety education and encouragement programs and has worked closely with the public agency and school stakeholders to make walking and bicycling safer and more accessible for children throughout Napa County.

According to 2015 California Office of Traffic Safety (OTS) data, the data available when the SRTS program was applying for grant funding, Napa County ranked 1st in per capita number of collisions of bicyclists under the age 15, 2nd in total fatal and injury-causing collisions, and 3rd in overall pedestrian collisions. According to the most recent OTS data (2018), Napa County ranked 8th for bicyclist collisions statewide (58 counties), 7th for speed-related collisions, and 6th for total fatal and injury-causing collisions. A decades-long decline in the number of students walking and biking to school, as well as increased awareness of the significant traffic congestion, air pollution, and related issues associated with students being driven to school galvanized local agency partners to expand the existing program.

> The goal of the Walk Audit Report is to **identify, evaluate, prioritize, and offer solutions** to infrastructure and non-infrastructure barriers to students safely walking and biking to school in Napa County.

In 2017, the Napa County SRTS program secured funding through the Caltrans Active Transportation Program (ATP) and One Bay Area Grant (OBAG) Cycle II programs to expand education programs and initiate a series of evaluations at each public school countywide. NCOE has been leading education and engagement programs under the current program, while NCBC has led evaluations of active transportation barriers at all 36 school sites.

WHY SAFE ROUTES TO SCHOOL?

Safe Routes to School is national initiative committed to increasing the number of students who walk or bike to school, and making it safe, convenient, and fun for kids to do so. In doing so, SRTS aims to improve kids' safety and increase health and physical activity. Concerned by the declining number of students walking and biking to school over recent decades and the related long-term health and traffic consequences, Congress made federal funding available for SRTS programs nationwide in 2005. Since then, SRTS programs have been implemented at more than 14,000 schools in all 50 states.

Studies have linked SRTS programs to increased walking and biking to school[ab] and reduced pedestrian-motorist collisions[cd]. This can lead to safer, healthier, and more focused students, while also benefitting local and school communities.

Regularly walking or biking increases children's daily levels of physical fitness and improves their cardiovascular health[e].

Student health has been linked to improved academic performance[fg]. When students walk or bike to school, the fresh air and exercise allow them to arrive refreshed, energized and ready to focus. Children have a greater sense of spatial awareness and knowledge when they are actively engaged in their transportation, allowing them to better recognize and navigate their neighborhoods independently[h]. Families are also provided with a low-cost transportation option that can significantly reduce their annual expenses[i].

When a greater share of students walk or bike to school, local and school communities benefit too. Fewer cars being driven to school can improve the air quality of surrounding neighborhoods by decreasing air pollutant emissions and increase street safety through reduced traffic congestion and noise pollution. This can also improve campus safety and reduce circulation hazards around the school site. Walking or biking is a reliable form of transportation, which can reduce student absence and tardiness. By reducing the number of short-distance school bus trips, increased student walking and biking can also help school districts save funds by decreasing costly bus service.

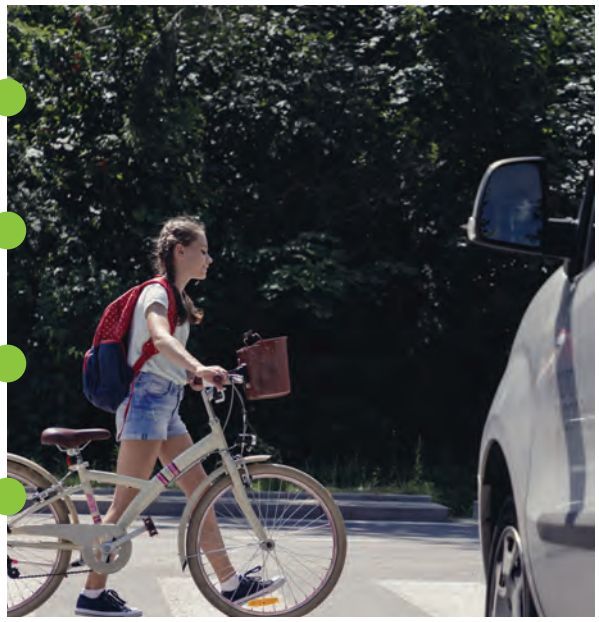
Schools and the community benefit immensely when students choose to walk or bike.

Student health has been linked to improved academic performance.

Walking or biking can provide a reliable form of transportation, leading to reduced student absence and tardiness.

Children arrive ready to learn and are less likely to experience discipline issues.

Fewer cars dropping off and picking up students improves campus safety and reduces circulation hazards.



THE SIX E'S

Safe Routes to School programs originally followed a comprehensive approach that addressed the "Five E's" – education, encouragement, enforcement, evaluation, and engineering. In 2017, when the Napa County SRTS program obtained funding to perform Walk Audit evaluations, the "Five E's" had recently been altered to add a sixth "E" – equity. In June 2020, after a significant portion of the Walk Audit evaluation work had been completed, the "Six E's" framework was again altered, dropping enforcement and adding engagement. These changes were led by the Safe Routes to School National Partnership.

The current "Six E's" framework is described below. Although enforcement is no longer one of the "Six E's", a brief definition of enforcement is included, as it was part of the approach used by the Napa County SRTS program during the majority of the Walk Audit evaluation process.

Engagement
Listen to community members and work with existing community organizations.

Equity
Recognize the unique barriers that different people face in living healthy, fulfilled lives, and craft policies, programs, and overall approaches with those various challenges and needs in mind.

Engineering
Design streets and schools for walkers and bikers to use safely and conveniently.

Encouragement
Promote walking and biking in the school community through events, programs and incentives.

Education
Ensure that everyone learns how to travel safely and why biking and walking are important.

Evaluation
Track progress toward our shared safety goals, develop programs accordingly.

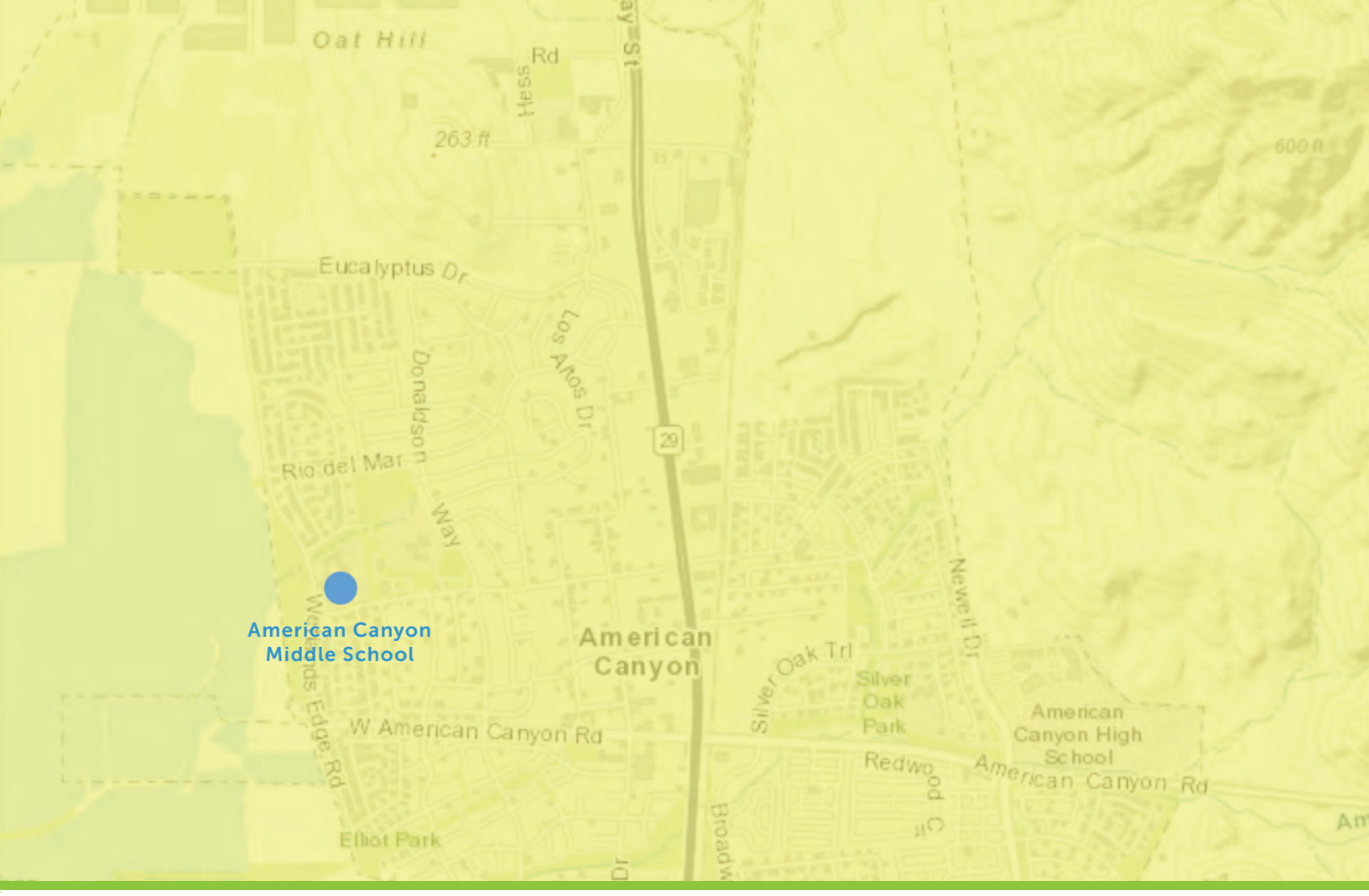
Enforcement (no longer an "E'):
Enforce traffic safety laws and school policies and target risky behaviors. No longer recommended as foundational to the start, maintenance, or growth of Safe Routes to School programs.

REPORT PROCESS

The SRTS team conducted a comprehensive evaluation of the barriers to students walking and biking to and from American Canyon Middle School over the course of 2 years, starting in the summer of 2018. Information on physical and behavioral challenges was collected in two phases. In August 2018, the SRTS team completed an initial infrastructure audit of the school site and the surrounding neighborhood within a half-mile of the school. SRTS team members walked and rode bicycles throughout the school neighborhood, taking photographs of barriers and logging them into Fulcrum, a GPS-enabled data collection smartphone app.

In August 2019, a Community Walk Audit brought parents together to discuss school conditions and behaviors during pick-up and drop-off times, identify safety and convenience barriers for students walking and biking to school, prioritize issues, and brainstorm solutions. These two tasks resulted in an inventory of infrastructural barriers at and around the school site as well as a list of stakeholder-identified challenges.

A report draft was shared with the Napa Valley Transportation Authority, the Napa County Office of Education, public works and planning representatives from the City of American Canyon, the local school district, law enforcement, and school stakeholders, and their feedback was incorporated into the final version. As part of the larger countywide project, the SRTS team engaged EMC Research, a national public opinion research firm to conduct a comprehensive survey of parents' perceptions around walking and biking to school (see Appendix A). The Walk Audit report outlines the information gathered during this multi-year process and provides recommendations for improvements.



Map 1: Enrollment Boundary of American Canyon Middle School

While NVUSD has an open enrollment policy, American Canyon Middle School's default enrollment area covers the entire area of Napa County south of Jameson Canyon Road, which includes the City of American Canyon.

Through the open enrollment policy, families may apply to NVUSD for their student to attend a school other than their school of residence. Out-of-district students may also apply through the open enrollment process. This often results in students living farther away from school, making them more likely to rely on driving for transportation. At schools where open enrollment students constitute a high proportion of their enrollment, this can cause higher vehicular traffic volumes around the school during pick-up and drop-off.

According to the most recent data (2020-21 school year), 6.4% of students attending ACMS reside outside of the school's enrollment boundary.

AMERICAN CANYON MIDDLE SCHOOL (ACMS) **SCHOOL SUMMARY**

Principal	Daniel Scudero (at time of Walk Audit) Carliza Bataller (current)
First Bell	8:20 AM
Last Bell	2:53 PM (M, F) 3:20 PM (T, TH) 1:21 PM (W)

District	Napa Valley Unified
Grades	6-8
Enrollment	1,025
Street	300 Benton Way
City	American Canyon, CA 94503

Overall Facility Rating[j]**: Good**

DATA

No school-specific data is currently available regarding the number of students who walk and bike to school regularly. Additional work is needed to establish a baseline of active transportation use for this school.

According to the results of the countywide EMC Research survey conducted in Spring 2021, 16% of respondents report that their K-8th grade children primarily walk to and/or from school and ~4% primarily bike. While nearly half (43%) say that their child has walked or biked to/from school at some point, 73% report using a single-family vehicle as the primary transportation method to and from school.

Total Enrollment by Group (2019-20)

ETHNICITY	AMERICAN CANYON MIDDLE SCHOOL	DISTRICT
Black or African American	7.5%	1.9%
American Indian or Alaska Native	0.1%	0.2%
Asian	7.1%	2.2%
Filipino	26.6%	6.1%
Hispanic or Latino	38.1%	56.7%
White	11.8%	28.7%
Native Hawaiian or Pacific Islander	0.5%	0.2%
Two or More Races	8.2%	3.6%
Not Reported	0.1%	0.3%
EXPERIENCE		
Socioeconomically Disadvantaged	42.2%	50.5%
English Learners	12.8%	21%
Students with Disabilities	7.4%	12.3%
Foster Youth	0.3%	0.4%

Figure 1: Enrollment Data by Group

Countywide K-8 Primary Transportation to/from School (EMC Research)

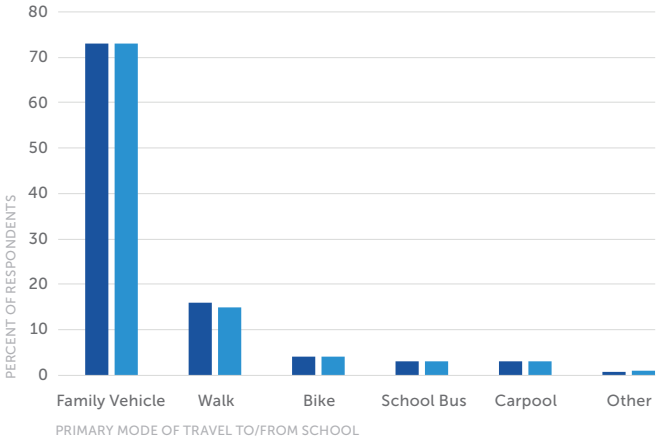


Figure 1: EMC Research Polling Results

Note: *Data from EMC Research survey represents countywide behaviors, and school or city-level breakdowns are not available. See Appendix A for details on survey methods and respondent profiles.*

Student Enrollment by Grade Level (2019-2020)

	NUMBER OF STUDENTS
Grade 6	344
Grade 7	332
Grade 8	349
Total	**1,025**

Figure 2: Enrollment Data by Grade

NEIGHBORHOOD CONTEXT

ACMS shares a block with Donaldson Way Elementary School, Community Parks 1 and 2, the American Canyon Boys and Girls Club, and the American Canyon Community Services Center, which includes a community gym and Philip West Aquatic Center. This block is located on the west edge of American Canyon, and is bordered by Wetlands Edge Road, Spikerush Circle, Rio Del Mar, Donaldson Way, and Benton Way. The lot is surrounded by suburban residential neighborhoods on the north, east, and south side, and wetlands on the west side. ACMS itself is directly bordered by residences to the north and south, wetlands to the west, Community Park 1 to the northeast, and Donaldson Way Elementary School, the Boys and Girls Club, Community Park 2, and the Community Services Center to the east.

Map 2: Satellite Site Context

The neighborhoods around the school are low-density, single-family residential areas. The neighborhoods to the north and south of the school have fragmented and warped parallel street patterns, with northern neighborhoods featuring several lollipops and southern neighborhoods possessing some lollipops and cul-de-sacs. Neighborhoods to the east of the school contain warped parallel street patterns with loops, lollipops, and cul-de-sacs. Though the lollipops and cul-de-sacs reduce vehicle speeds and volumes, they also reduce pedestrian route choice and interconnectivity. Fragmented and warped parallel street patterns also reduce pedestrian interconnectivity and can concentrate traffic onto main collector and arterial roads.

The main roads surrounding the school, Benton Way, Wetlands Edge Road, Rio Del Mar, and Donaldson Way, are all significant collectors that connect west American Canyon neighborhoods to important destinations, such as Highway 29 and the commercial downtown area. Wetlands Edge Road and Donaldson Way, which becomes Elliott Drive south of Benton Way, provide direct north-south connections in American Canyon. These roads are often used to avoid traffic on Highway 29, especially Donaldson Way/ Elliott Drive, which provides the most continuous north-south connection on the west side of American Canyon. About a quarter-mile south of the school, both Donaldson Way/Elliott Drive and Wetlands Edge Road intersect with American Canyon Road, an arterial road that provides the main east-west connection in American Canyon. In addition to American Canyon Road, Benton Way, which turns into Donaldson Way West east of Elliott Drive, is one of the only two roads that provide direct east-west connection in the city.

Map 3: Site Community Context

Benton Way (left), Donaldson Way (middle) and Wetlands Edge Road (right).

EXISTING **CONDITIONS**

The Safe Routes to School Team conducted an initial evaluation of the school site and the surrounding area prior to conducting the Community Walk Audit. The Fulcrum App software was used to map and record significant point and segment issues within a half-mile range of the school. The team also collected information on local and school transportation policies and programs from conversations with the school's staff and administrators, as well as documents from the school and City websites. Prior to circulation of the draft report among partners, the team conducted an additional site visit to confirm conditions.

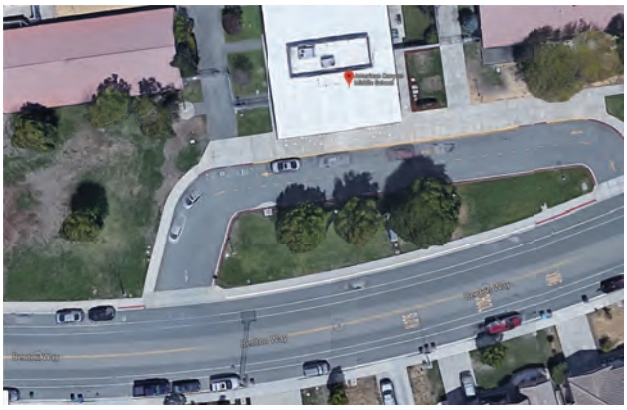
SITE CIRCULATION

ACMS is fenced around its perimeter and has four gated entrances. Two entry points are located on the east side of the school, near the school's parking lot, and the other two entry points are located on either side of the school's main office on Benton Way. A sign on one of the gates indicates that the they are to be closed and locked from 6:30 AM to 3:30 PM. The gates are opened in the morning to allow students in, closed during school hours, and are reopened in the afternoon for student release. This way, visitors must first enter the office and sign in before entering campus.

The school has a two-lane, one-way, U-shaped drop-off zone in front of the main office on Benton Way. Cars enter from the east side on Benton Way, use the right-hand lane for loading students and the left-hand lane for exiting, and exit from the west side back onto Benton Way. Circulation is indicated by yellow painted arrows and signage marking the driveways as "enter only" and "exit only." There is also a sign at the exit point prohibiting left turns onto Benton Way during school hours. A white curb loading zone that parallels the drop-off zone is located on Benton Way, with signage designating the curb for passenger loading while school is in session. A crossing guard hired through the school regulates traffic and assists students crossing at Benton Way and Hummingbird Way before and after school.

ACMS does not have a formal circulation policy that they distribute to parents or provide on their website.

ACMS has four gated entrances to the campus (marked by yellow boxes).



The U-shaped drop-off zone in front of the ACMS main office on Benton Way.

Traffic-directing signage in the U-shaped drop-off zone on Benton Way.

Limited bus service through NVUSD is available for American Canyon Middle School students and makes eight stops that are mostly on the east side of American Canyon. Students who live beyond 3 miles walking distance from school and attend their school of residence may apply for transportation through NVUSD. A "buses only" drop-off zone exists in the northeast corner of the school's parking lot.

American Canyon is served by four routes of The Vine transit, operated by the Napa Valley Transportation Authority. Three of the routes, the 11: Napa-Vallejo Connector, 11X Napa-Vallejo Express, and 29: Napa-BART Express, are fixed-route only. The fourth route, American Canyon Transit, is an on-demand, door-to-door transit service within specific areas of the city and also operates a limited fixed-route service on weekdays. Both American Canyon Transit and the 11 line have stops at the corner of Benton Way and Donaldson Way, though American Canyon Transit does not stop at that intersection during its fixed afternoon route. The nearest 11X and 29 stops to ACMS are both at the American Canyon Post Office, about 0.8 miles walking distance.

The Vine transit bus stop at Benton Way and Donaldson Way.

SCHOOL PARKING LOT AND GROUNDS

ACMS PARKING LOT

The parking lot for ACMS is on Benton Way, on the east side of the school property and adjacent to two Benton Way intersections with residential streets (Hummingbird Way and Huntington Way). The lot has 50 parking spaces, including three stalls compliant with the Americans with Disabilities Act (ADA). Cars enter from Benton Way on the east side of the lot and exit on the west side back onto Benton Way. The northeast half of the parking lot has a yellow curb dedicated to bus pick-up and drop-off. There are sidewalks on all four sides of the parking lot, providing students who take the bus a separated pedestrian route between the school and the pick-up area.

The ACMS parking lot. Note the yellow curb in the northeast corner designating the space for bus drop-off and pick-up.

The Class I facility along Wetlands Edge Road (top) and the Class I facility between Spikerush Circle and Benton Way (bottom).

BICYCLE AND PEDESTRIAN INFRASTRUCTURE

ACMS is located across the street from a Class I shared-use path, which is a section of the San Francisco Bay Trail. This facility runs north-south along Wetlands Edge Road from Eucalyptus Drive to Kensington Way. There is also a Class I path connecting Spikerush Circle to Benton Way, running along the east edge of the school's campus. Class II bike lanes exist on Benton Way from Wetlands Edge Road, through the intersection where Benton Way turns into Donaldson Way West, and along Donaldson Way West until Andrew Road, where sharrows replace the bike lanes. Elliott Drive also has Class II bike lanes. All other roads around ACMS do not have bicycle facilities.

The area within a half-mile radius of ACMS has a complete and connected network of sidewalks. However, many of these sidewalks feel narrow, accommodating only two pedestrians at a time. This can cause conflicts between pedestrians travelling in opposite directions, especially when groups of students are walking together, as well as between pedestrians and bicyclists, as many students bike on sidewalks.

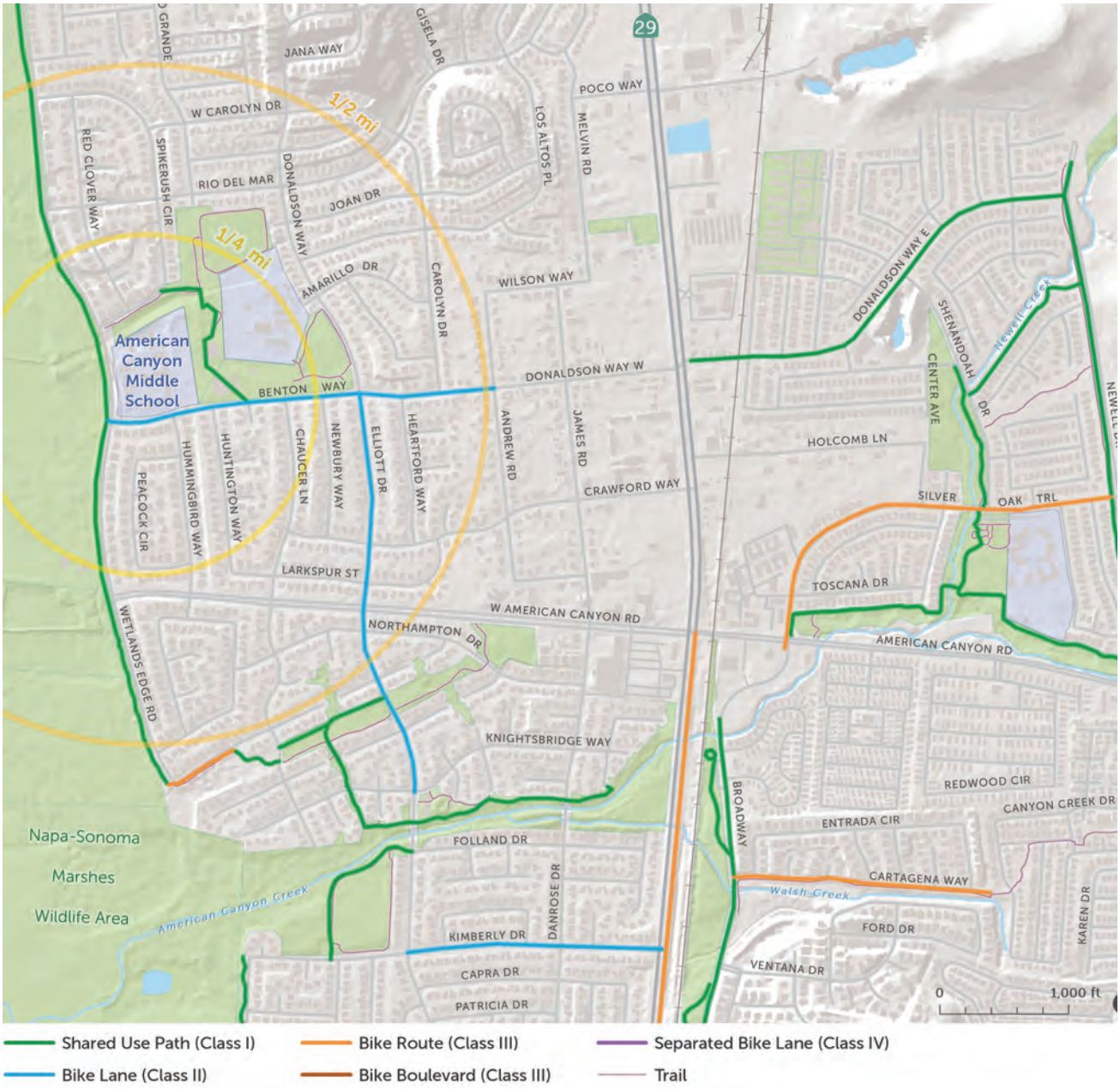
Benton Way in front of ACMS has narrow sidewalks.

ACMS has two long bike racks located near the entrances on the east side of the campus. The racks are bolted down and positioned so that both sides are accessible. Though they are not inside the gated area of the school where the bikes would be protected from the street, a sign on the fence next to the racks indicates that the area is under video surveillance.

Benton Way in front of ACMS has narrow sidewalks.

The school provides bike parking near the east entrances.

MAP OF EXISTING BICYCLE FACILITIES



Map 3: Existing Bicycle Facilities
(Map source: Napa Valley Transportation Authority Napa Countywide Bicycle Plan (2019)).

MAP OF EXISTING PEDESTRIAN FACILITIES

Map 4: Existing Pedestrian Facilities
(Map source: Napa Valley Transportation Authority Napa Countywide Pedestrian Plan (2016)).

POLICIES AND PROGRAMS

Encouragement and Education:

In recent years, ACMS has participated annually in the countywide encouragement event Bike to School Day. Bike to School Day is an annual encouragement event facilitated by Napa County Safe Routes to School that celebrates students making the healthy choice to bike to school. However, the school's encouragement program is limited to this event. The school does not provide regular on-campus bicycle or pedestrian safety education to students.

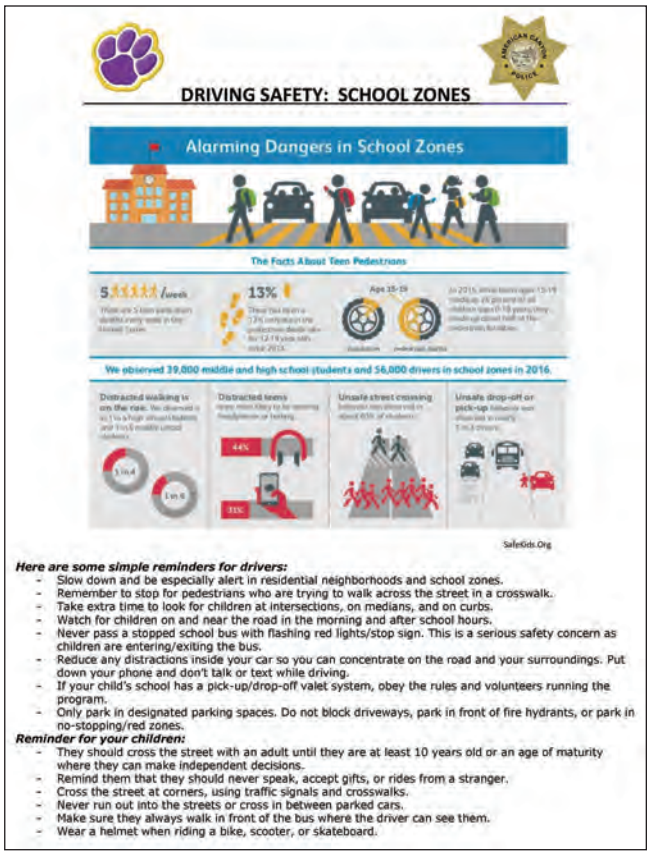
Bike to School Day 2019 at American Canyon Middle School.

YEAR	EVENT	STUDENT PARTICIPANTS
2017	Bike to School Day	69
2018	Bike to School Day	14
2019	Bike to School Day	19

Figure 4: Encouragement and Education Data

Enforcement:

In mid-September 2019, ACMS posted a Driving Safety: School Zones document that was created by the American Canyon Police Department on the school website and shared it to parents via ParentSquare. The school also provided driver reminders for parents and pedestrian safety reminders for students.



DRIVING SAFETY: SCHOOL ZONES

Alarming Dangers in School Zones

The Facts About Teen Pedestrians

5 teens

13%

Ages 15-19

We observed 39,000 middle and high school students and 56,000 drivers in school zones in 2016.

Distracted walking is on the rise.

Distracted teens

Unsafe street crossing

Unsafe drop-off or pick-up

1 in 4

1 in 6

44%

31%

SafeKids.Org

Here are some simple reminders for drivers:

- Slow down and be especially alert in residential neighborhoods and school zones.
- Remember to stop for pedestrians who are trying to walk across the street in a crosswalk.
- Take extra time to look for children at intersections, on medians, and on curbs.
- Watch for children on and near the road in the morning and after school hours.
- Never pass a stopped school bus with flashing red lights/stop sign. This is a serious safety concern as children are entering/exiting the bus.
- Reduce any distractions inside your car so you can concentrate on the road and your surroundings. Put down your phone and don't talk or text while driving.
- If your child's school has a pick-up/drop-off valet system, obey the rules and volunteers running the program.
- Only park in designated parking spaces. Do not block driveways, park in front of fire hydrants, or park in no-stopping/red zones.

Reminder for your children:

- They should cross the street with an adult until they are at least 10 years old or an age of maturity where they can make independent decisions.
- Remind them that they should never speak, accept gifts, or rides from a stranger.
- Cross the street at corners, using traffic signals and crosswalks.
- Never run out into the streets or cross in between parked cars.
- Make sure they always walk in front of the bus where the driver can see them.
- Wear a helmet when riding a bike, scooter, or skateboard.

Figure 5: Driving Safety: School Zones

American Canyon Middle School

INSPIRING AND EMPOWERING STUDENTS TODAY TO SHAPE A BETTER TOMORROW

ACMS Traffic Safety

Julian Rivera • 25 days ago • Monday, Sep 16 at 5:00 PM • American Canyon Middle School

Good Afternoon,

Below are some guidelines regarding Traffic Safety, there is also a *link here for more information*

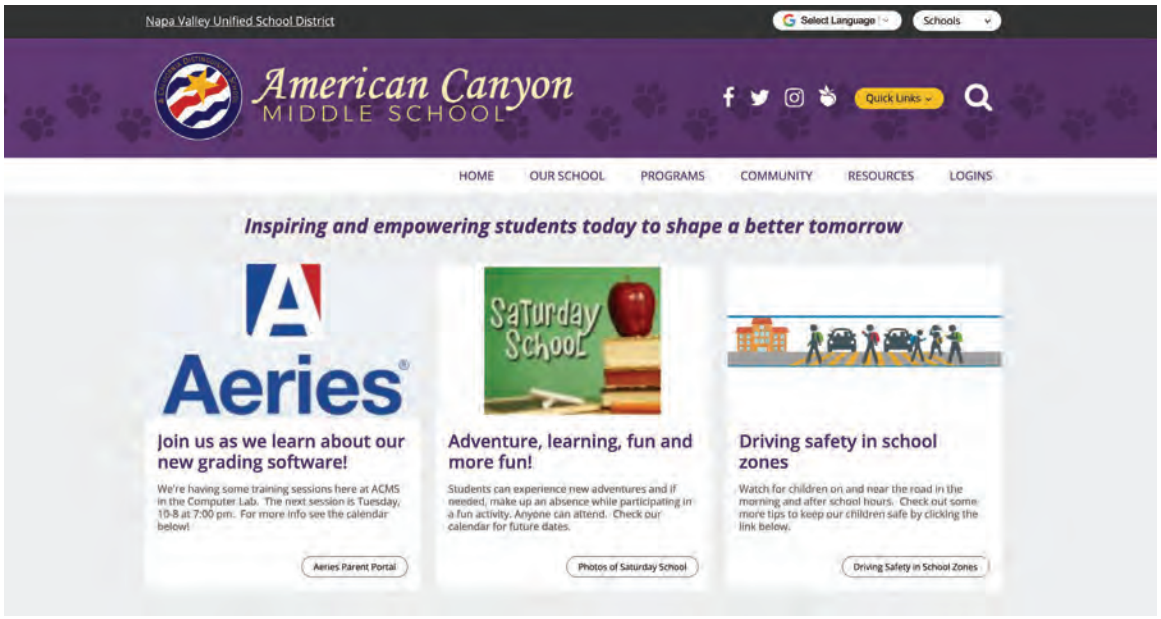
Here are some simple reminders for drivers:

- Slow down and be especially alert in residential neighborhoods and school zones.
- Remember to stop for pedestrians who are trying to walk across the street in a crosswalk.
- Take extra time to look for children at intersections, on medians, and on curbs.
- Watch for children on and near the road in the morning and after school hours.
- Never pass a stopped school bus with flashing red lights/stop sign. This is a serious safety concern as children are entering/exiting the bus.
- Reduce any distractions inside your car so you can concentrate on the road and your surroundings. Put down your phone and don't talk or text while driving.
- If your child's school has a pick-up/drop-off valet system, obey the rules and volunteers running the program.
- Only park in designated parking spaces. Do not block driveways, park in front of fire hydrants, or park in *no-stopping/red zones.*

Reminder for your children:

- They should cross the street with an adult until they are at least 10 years old or an age of maturity where they can make independent decisions.
- Remind them that they should never speak, accept gifts, or rides from a stranger.
- Cross the street at corners, using traffic signals and crosswalks.
- Never run out into the streets or cross in between parked cars.
- Make sure they always walk in front of the bus where the driver can see them.
- Wear a helmet when riding a bike, scooter, or skateboard.

Figure 6: ACMS ParentSquare Message



Napa Valley Unified School District

Select Language | Schools

American Canyon MIDDLE SCHOOL

Quick Links

HOME | OUR SCHOOL | PROGRAMS | COMMUNITY | RESOURCES | LOGINS

Inspiring and empowering students today to shape a better tomorrow

Aeries®

Join us as we learn about our new grading software!

We're having some training sessions here at ACMS in the Computer Lab. The next session is Tuesday, 10-8 at 7:00 pm. For more info see the calendar below!

Aeries Parent Portal

Adventure, learning, fun and more fun!

Students can experience new adventures and if needed, make up an absence while participating in a fun activity. Anyone can attend. Check our calendar for future dates.

Photos of Saturday School

Driving safety in school zones

Watch for children on and near the road in the morning and after school hours. Check out some more tips to keep our children safe by clicking the link below.

Driving Safety in School Zones

Figure 7: ACMS Website Home Page

American Canyon Police Department provided enforcement data for 2014 to 2019 in areas around the school zone on violations for passing a school bus, speeding, failing to stop at stop signs, and failing to yield to pedestrians. Data on traffic stops where citations were not issued were not used, as the Police Department does not collect this data. For American Canyon Middle School, this included Benton Way, Donaldson Way, Donaldson Way West, Elliott Drive, and Wetlands Edge Road. Citations for passing a school bus represented 46% of all tickets issued, and were distributed fairly consistently throughout the years, with a notable peak in 2018. Stop sign violations and failure to yield to pedestrians represented just 3% of citations.

Of the roads around American Canyon Middle School, only Benton Way and Elliott Drive had any history of stop sign violation citations in the last five years: both roads had three citations each over the last five years. For failure to yield to pedestrians between 2014 and 2019, Benton Way had two citations, Donaldson Way and Donaldson Way West had one citation each, Elliott Drive had four citations, and Wetlands Edge Road had no citations.

Speeding data stood out significantly from the provided enforcement data. Benton Way had no citations for speeding and Donaldson Way had only one from 2015. Both Donaldson Way West and Elliott Drive had relatively high numbers of speeding citations in 2014 and 2015, which dropped in subsequent years to low or no citations. Staff from the Police Department mentioned that decreases in speeding could be due to changes in driver behavior when law enforcement is present, though this is difficult to substantiate without traffic survey data. Wetlands Edge Road had citations for speeding during all years except 2016 and 2017. It is notable that Benton Way had no citations for speeding, as speeding was identified as one of the top safety barriers along this corridor by Walk Audit participants. Speeding was also a concern along side streets such as Elliott Drive, despite the recent drop in citations.

CITATIONS IN SCHOOL AREA BY TYPE

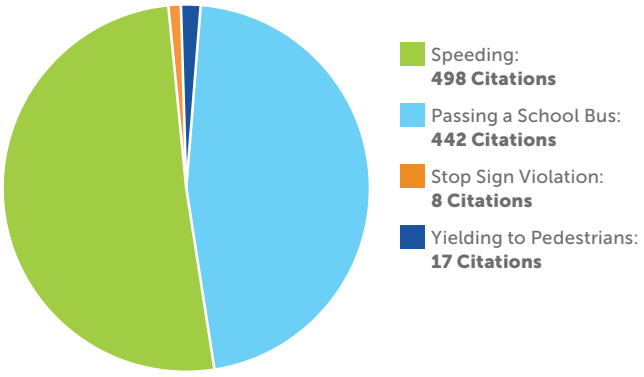


Figure 8: Citations by Type

SPEEDING CITATIONS

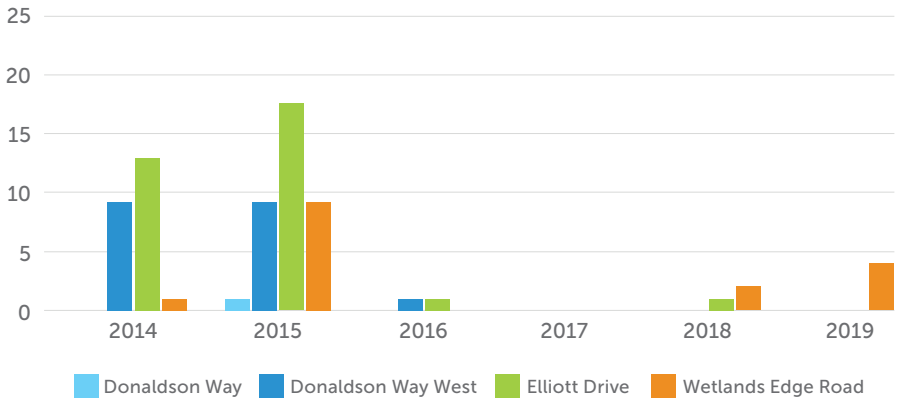
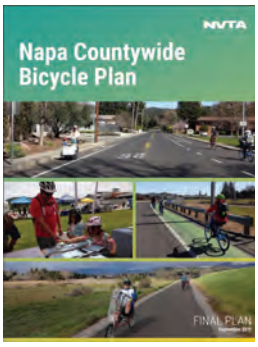


Figure 9: Speeding Citations

EXISTING PLANS



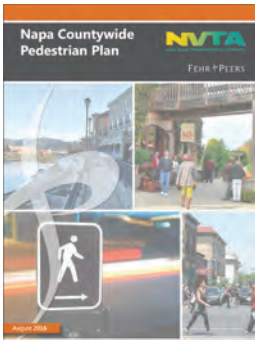
NVTA Napa Countywide Bicycle Plan (2019):

The Napa Countywide Bicycle Plan recommends improving bicycle facilities around the school site. The Bicycle Plan suggests installing a Class I shared-use path along Eucalyptus Drive from Wetlands Edge Road to SR 29, Class II bike lanes on Rio Del Mar from Wetlands Edge Road to SR 29, and Class II bike lanes on Donaldson Way, from Benton Way to Eucalyptus Drive. It also recommends expanding the Bay Trail Class I path north to Hess Drive and south to Maria Drive, as well as completing the Class II bike lanes along Donaldson Way West to SR 29.

NVUSD Facilities Master Plan (2016):

NVUSD's Facilities Master Plan lists several projects for ACMS. These projects include installation/upgrade of fencing around the school perimeter, site ADA improvements at the circulation loop, building a second gym and relocating the city skate park, and adding resource rooms next to the front office. School perimeter fencing is planned to provide a single point of entry during school hours, though there may be more than one entry point during pick-up and drop-off. As ACMS already has fencing that limits entry points during school hours, school circulation may not be greatly impacted by the fencing upgrade. The other projects could impact future circulation around the school site.

MEASURE H
BUILDING ON OUR VISION
NVUSD



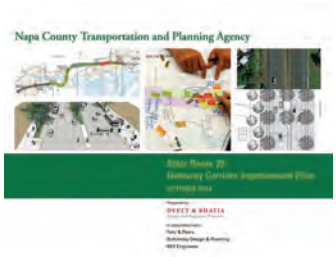
NVTA Napa Countywide Pedestrian Plan (2016):

The Napa Countywide Pedestrian Plan lists several improvements around ACMS. Along Benton Way, the plan recommends crosswalk enhancements at Benton Way and Chaucer Lane, and crossing treatments and traffic-calming at Benton Way and Elliott Drive through the installation of a roundabout. Along Elliott Drive, a variety of traffic-calming projects, crossing treatments, and sign and striping installments are planned, including a traffic circle and raised median. Donaldson Way West improvements include completing sidewalks, installing marked crosswalks, and tree trimming. Along West American Canyon Road, the plan suggests crosswalk enhancements at Elliot Drive and a feasibility study for a linear park along the corridor west of Elliot Drive.

Caltrans District 4 (2018):

The Caltrans District 4 Bike Plan lists two projects for American Canyon. The first is to provide Class I paths along both sides of SR 29 through American Canyon, from American Canyon Road to Jameson Canyon Road. The second is to implement Class II bike lanes on SR 29 near Rio Del Mar and implement signal/intersection improvements to support bicyclist left turns.

Caltrans



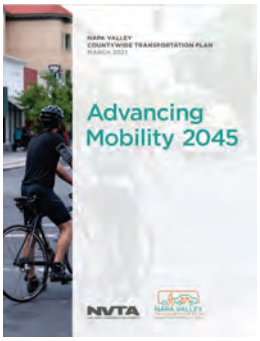
NVTA SR 29 Corridor Improvement Plan (2014):

The NVTA SR 29 Corridor Improvement Plan aims to improve corridor safety, aesthetics, and mobility, along SR 29 between the cities of Vallejo and Napa, including through the City of American Canyon. This plan will take into account all modes of transportation, including bicycling and walking, to improve the corridor. In American Canyon, this plan seeks to provide greater multi-modal access through this corridor for residents and visitors, as SR 29 is the city's main thoroughfare.

Between the south county line and American Canyon Road, the plan recommends four travel lanes with medians and a Class I shared-use path, though it also provides a second option for four lanes, a northbound-only frontage road with a Class II bicycle lane, and a southbound-only Class I shared-use path. Between American Canyon Road and Napa Junction Road, the plan recommends six lanes with a median and a Class I shared-use path and provides a second option for four lanes with a median plus frontage roads with Class II bicycle lanes. At the SR 29 and American Canyon Road intersection, the only improvements proposed are lane widening and potential signal synchronization.

NVTA Napa Valley Countywide Transportation Plan: Advancing Mobility 2045 (2021):

The NVTA Countywide Transportation Plan is a long-range plan of countywide transportation priorities that provides a direction for the four- to five-year plan while considering a 25-year planning horizon. This plan is part of the regional planning process for the Regional Transportation Plan by the Metropolitan Transportation Commission. There are 12 projects by the City of American Canyon listed in the Plan – most focus on extending or widening roads, though there are also plans to construct three pedestrian crossings over SR 29. NVTA projects that impact the City of American Canyon include widening SR 29 to six lanes and installing multimodal improvements, such as Class I shared-use paths on both sides. None of the projects directly impact the area within a half-mile of the school.



City of American Canyon Broadway Specific Plan (2019):

The American Canyon Broadway Specific Plan seeks to move the SR 29 Broadway District away from its existing auto-centric conditions toward a more accessible, multi-modal setting. The circulation section of this plan aims to achieve this goal through various proposals, such as several intersection improvements, including Donaldson Way and American Canyon Road, creating separate pedestrian connections/ paseo routes, and reducing the posted speed limit from 55 mph to 35 mph. Pedestrian improvements include increasing and improving visibility of crosswalks, and bicycle network improvements include several Class I facilities in addition to some Class II and III facilities.

American Canyon General Plan (2040):

The City of American Canyon began updating their 1992 General Plan in early 2020; however, the COVID-19 pandemic halted Committee work and in-person community outreach, delaying the update. According to the City's General Plan update web page, the update will "ensure that the City's General Plan reflects current community needs and priorities" and will address new issues (e.g., community health and climate change), changes in State law (e.g., greenhouse gas emission reductions) and new trends (e.g., shared mobility).

CITY OF AMERICAN CANYON

Watson Ranch Specific Plan (2018):

The Watson Ranch Specific Plan explains the details of the Watson Ranch project development. The Watson Ranch project will construct a new 309-acre town center that includes a 200,000 square foot commercial-use space, a 200-room hotel, a community plaza, parks and open space, a new elementary school, and over 1,200 units of medium-high density residences. This project will also include connections to regional trail systems, including the Napa Valley Vine Trail and the River to Ridge Trail. Newell Drive is planned to be extended from Donaldson Way East to the northern boundary of the project, and Rio Del Mar is planned to be extended from SR 29 to Newell Drive.

WALK **AUDIT**

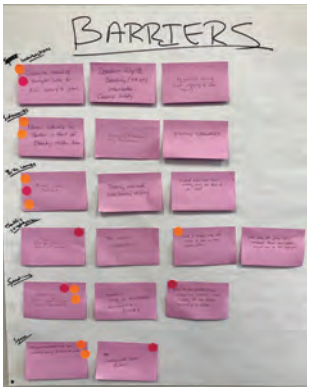
Date: 8/29/2019
Day of the Week: Thursday

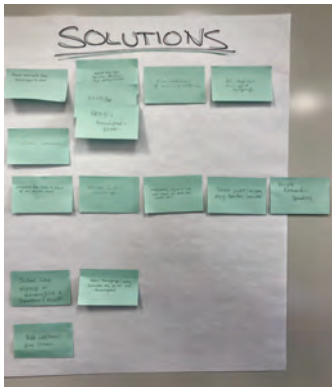
Meeting Time: 7:50 AM
Weather: Cloudy

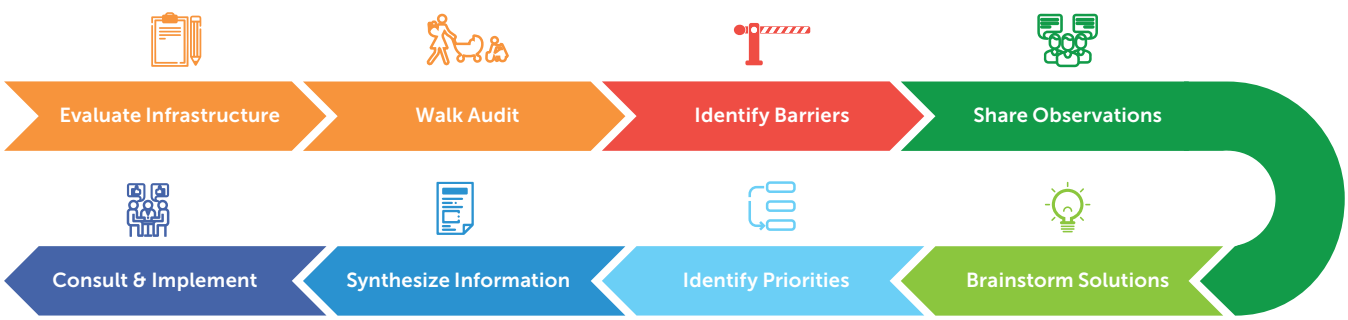
METHODOLOGY

The Community Walk Audit brought school stakeholders together to observe existing conditions during drop-off time, identify barriers to safe walking or biking, and brainstorm solutions. The Walk Audit team consisted of two ACMS parents. The group met 30 minutes prior to the school bell for a brief presentation on the SRTS program and the process and purpose of Walk Audits. The team then walked to the front of the school to observe the drop-off period and along Benton Way from the Chaucer Lane intersection to the Wetlands Edge Road intersection. During this walk, participants observed and discussed the physical infrastructure around the school as well as the behavior of motorists, pedestrians, and bicyclists in the area. They also shared their own experiences traveling to and from school on foot, bike, and by car. Fifteen minutes after the bell, the team returned to the classroom to discuss their observations, map issue areas, and record and prioritize the major barriers identified during the exercise.

During the prioritization exercise, participants wrote down several barriers that were of high priority to them on sticky notes, placed them on a poster on the wall, and organized them into sections based on similar topics. Then, participants were given eight round stickers to place on issues that they felt were most important and needed to be solved most urgently. Participants could spread their stickers out or put multiple stickers on one issue. The group then reviewed the major barriers and brainstormed potential solutions to each issue.







WALK AUDIT FINDINGS

This section of the report lists the barriers and solutions identified by Walk Audit participants during the Walk Audit activity. The barriers and treatments listed in the following tables are the results of the Walk Audit prioritization activities – the content and language used reflect what Walk Audit participants wrote on their sticky notes.

The barrier identification and prioritization exercise resulted in a list of location-specific and geographically general barriers and solutions. Barriers are organized by Vote Score in the table below. Vote Score was determined during the prioritization exercise by the number of stickers and sticky notes addressing a particular issue, with a higher number correlating to a higher Vote Score, indicating a higher importance to Walk Audit participants. Vote Scores were not determined for the list of solutions due to insufficient time to complete the prioritization exercise.

Stakeholder-Identified Barriers:

DESCRIPTION	LOCATION	VOTE SCORE
Speeding	Side streets (Hummingbird Way, Elliott Dr)	6
Traffic congestion	Benton Way and school drop-off area	6
Faded bike lanes	Benton Way	6
Narrow sidewalks	Benton Way	5
Speeding	Benton/Donaldson corridor	4
No crosswalk	Huntington Way	3
Overgrown foliage and low visibility	Class I path on east side of school	3
Inadequate bike lockers	Class I path on east side of school	3
Unsafe intersection (visibility)	Side streets turning onto Elliott Dr	2
Unsafe intersection	Donaldson Way @ Broadway St (SR 29)	1
Aggressive driving (not stopping at stop signs)	Along Benton Way	1

Figure 10: Walk Audit Ratings - Dot Exercise (Barriers)

Stakeholder-Identified Treatments:

DESCRIPTION	BARRIER ADDRESSED	LOCATION	PRIORITY
Raised crosswalk	Motorist failure to yield to pedestrians, speeding, high-volume intersection during school times	Hummingbird Way/Benton Way intersection	9
Rectangular Rapid Flashing Beacons	Low pedestrian visibility, poor motorist yielding behavior	Hummingbird Way, Elliott Dr, drop off area & parking lot exit	7
Curb extensions	Motorist failure to yield to pedestrians, speeding, low pedestrian visibility	Hummingbird Way/Benton Way intersection	6
Median island (small/temporary)	Speeding	Hummingbird Way	6
Widen sidewalks	Narrow sidewalks	Benton Way	5
Separated bike lane	Potential bicycle/vehicle conflicts	In front of ACMS (Benton Way)	3
Painted conflict markings	Potential bicycle/vehicle conflicts	Benton Way	3
Wayfinding signs for best bike paths	Community unaware of existing bicycle facilities	General area	3
Re-paint/re-stripe	Faded bike lanes	Benton corridor	3
Bicycle boulevard	No bicycle facilities	General area	3
School zone signage	Speeding	Hummingbird Way, Donaldson Way, Elliott Drive	2
Additional bike lockers	Not enough bike parking, no long-term bike parking	Around school site	2
Additional drop-off location	Traffic congestion on Benton Way	Wetlands Edge Road	1

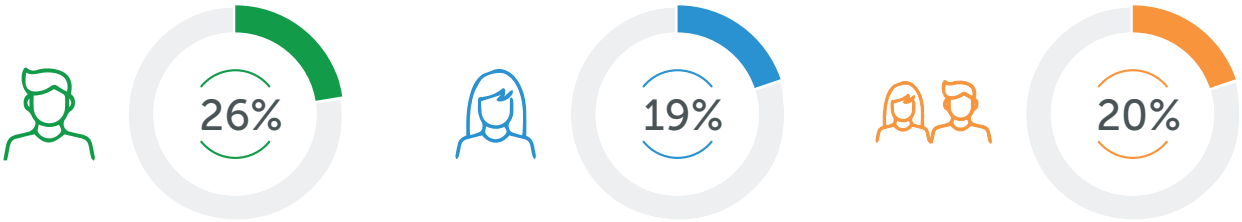
Figure 11: Walk Audit Ratings - Dot Exercise (Solutions)

CONTEXT FOR **RECOMMENDATIONS**

IMPACT OF BARRIERS/HAZARDS ON COMMUNITY

Barriers to safe walking and bicycling, both infrastructure and non-infrastructure, can greatly discourage communities from engaging in active transportation. The quality, accessibility, and connectivity of bicyclist and pedestrian travel networks strongly influence the rates of walking and bicycling as a mode of daily transport[1]. Public policies and attitudes, such as traffic-calming measure enforcement and parking limitations, also contribute to the efficacy of pedestrian/bicycle networks. Thus, barriers to accessibility and connectivity must be addressed in order to encourage increased and safe walking and cycling.

Barriers that discourage walking and bicycling prevent communities from gaining the health benefits offered by active transportation. For children, physical activity can improve cognitive function, bone health, cardiorespiratory and muscular fitness, and mental wellness[2]. Adults benefit from lower risk of cardiovascular disease, hypertension, dementia, anxiety, and falls for older adults, as well as improved quality of life, physical function, bone health, and sleep.

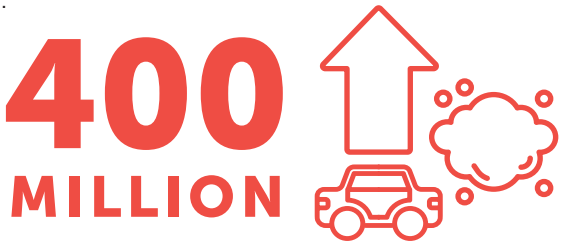


However, only about **26% of men**, **19% of women**, and **20% of adolescents** are meeting the aerobic and muscle-strengthening guidelines developed by the Department of Health. Increased walking and biking to school can help boost that percentage by incorporating physical activity into one's daily routine and encouraging further active transportation choices.

Lack of safe bicycle/pedestrian facilities can also negatively impact the environment, as more people will choose to drive rather than bike or walk. Passenger cars and light-duty trucks produced **over half of the transportation sector emissions in 2017**[3].

The transportation sector produced the most greenhouse gas emission of any economic sector, releasing **up to 29% of total US greenhouse gas emissions** for the year.

Furthermore, **transportation emissions have increased around 400 million metric tons** since 1990 due to increased vehicle demand. Thus, decreasing vehicle use by creating bicycle/pedestrian networks that are safe from potential hazards and barriers can help mitigate these environmental effects.



In addition to the consequences already discussed, barriers to safe walking and bicycling can lead to increased collisions and conflicts between motorists, pedestrians, and bicyclists. Safety barriers can lead to more people choosing to drive, even if the destination is within walking or biking distance, increasing traffic congestion. Children have fewer opportunities to develop their sense of independence through walking and biking to school, and the community is hindered from enjoying the social and economic benefits of bicycling and walking. Safety barriers and hazards that discourage increased walking and bicycling can considerably impact many different parts of a community, which is why it is so crucial to address and resolve them.

[1] Kuzmyak, Richard J., Dill, Jennifer. "Walking and Bicycling in the United States: The Who, What, Where, and Why." TR News May-June 2012: 4-15. Web. [2] U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans, 2nd edition. Washington, DC: U.S. Department of Health and Human Services; 2018. [3] Sources of Greenhouse Gas Emissions, United States Environmental Protection Agency. Web.

RECOMMENDATIONS

Recommendations were determined by Napa County Safe Routes to School staff, taking into account the feedback and results from the Walk Audit activity, Fulcrum data, existing plans, and local stakeholder input. Priority levels for recommendations were calculated through consideration of vehicle, pedestrian, and bicyclist traffic volumes; vehicular traffic speed; collision history; presence of existing bicycle/pedestrian facilities; proximity to major identified routes to school; high-level potential cost/complexity of recommendation; and Walk Audit participant input.

This section outlines and explains high and medium priority recommendations specific to the school site. School site-specific recommendations of all priority levels can be found in the "Table of Recommendations" section. Universal recommendations that apply to all school sites are described in Appendix B. Recommendations that are focused on infrastructure treatments are denoted by "AC," and recommendations that suggest programmatic treatments are denoted by "ACP."

RECOMMENDATION #AC-034: BENTON WAY AND HUMMINGBIRD WAY CURB EXTENSIONS

Narrative – Walk Audit participants identified motorists failing to stop at stop signs along the Benton Way corridor as a significant barrier to students walking and biking to school. This was reported to occur most notably at the intersection of Benton Way and Hummingbird Way, which is in front of the entrance to the school's drop-off zone. Walk Audit participants described that motorists are eager to drop off and pick up students and get out of school zone traffic, and consequently do not fully stop at the stop sign on Benton Way at Hummingbird Way. Furthermore, some motorists use the red zone between the crosswalk and the loading zone entrance as a drop-off/pick-up spot, greatly reducing visibility of students crossing the street. This unsafe driving behavior is especially hazardous given the high volumes of students that cross the street at this location.

The intersection of Benton Way and Hummingbird Way facing east.

IDENTIFIED BARRIERS

- ***Failure to yield –*** Motorists failing to yield to pedestrians at the stop sign on Benton Way at Hummingbird Way was identified by Walk Audit participants as a barrier to students walking and biking to school.
- ***Congestion –*** High levels of congestion during pick-up and drop-off hours contribute towards poor driver behavior (failure to yield, loading in red zones) and make this intersection challenging for students to navigate.

RECOMMENDATIONS

- ***Curb extensions –*** We recommend the installation of curb extensions on the north side and both south corners of this intersection. Curb extensions reduce pedestrian crossing distance, improve pedestrian visibility and motorist yielding, and prevent motorists from using red zones as loading zones. Congestion in the school zone will be addressed through programmatic recommendations (see #ACP-009 and #ACP-010).

Walk Audit participants discussed a few different solutions for this intersection, including the selected recommendation of curb extensions. At this time, we are not recommending the other two participant-suggested improvements: a raised crosswalk and Rectangular Rapid Flashing Beacons. Raised crosswalks both improve visibility of pedestrians by placing them at a slightly higher level than the street and reduce speeding by forcing vehicles to slow down at the crosswalk. However, raised crosswalks are not appropriate for key emergency response routes, such as the Benton Way/Donaldson Way corridor. Rectangular Rapid Flashing Beacons improve pedestrian visibility and motorist yielding behavior through their flashing beacons; however, Rectangular Rapid Flashing Beacons may only be installed at uncontrolled intersections. As the Benton Way and Hummingbird Way intersection is stop-controlled, we cannot recommend the installation of Rectangular Rapid Flashing Beacons at this location.

RECOMMENDATION #AC-036: BENTON WAY AND ELLIOTT DRIVE CURB EXTENSIONS

Narrative – The Benton Way and Elliott Drive intersection is a key nexus along common routes to both American Canyon Middle School and Donaldson Way Elementary School, as it is an intersection between two important collectors. The Donaldson Way/Benton Way corridor provides one of the only two direct east-west connections through American Canyon, and the Elliott Drive/Donaldson Way corridor provides a significant north-south connection for the west side of American Canyon.

Additionally, Elliott Drive intersects with West American Canyon Road a few blocks south, the other direct east-west connection through American Canyon, which can route even more of the east side traffic towards the Benton Way and Elliott Drive intersection. Walk Audit participants reported that motorists park vehicles close to the Benton/Elliott intersection, as there are no red zones, greatly reducing student pedestrian visibility. The intersection further feels unsafe for students due to its long crossing distances, high traffic volume, and poor driver yielding behavior.

IDENTIFIED BARRIERS

- ***No red zones –*** The lack of red curbs around this intersection allows vehicles to park close to the crosswalks, reducing visibility of all pedestrians, especially children.
- ***Long crossing distances –*** The long crossing distances of this intersection increase exposure time of vulnerable road users to vehicles in the roadway.
- ***High traffic volume –*** High traffic volumes make this intersection challenging for students to navigate.
- ***Poor driver yielding –*** Failure of motorists to yield to pedestrians at this intersection increases risk of collisions with pedestrians and makes pedestrians feel unsafe.

The Benton Way and Elliott Drive intersection facing north.

RECOMMENDATIONS

- ***Curb extensions –*** We recommend the installation of curb extensions at all corners of the intersection, which will reduce crossing distance, improve pedestrian visibility, prevent vehicles from parking close to the crosswalks, and improve driver yielding behavior.
- ***High-visibility school zone crosswalks –*** Upgrading the existing crosswalks at this intersection to yellow high-visibility school zone crosswalks can supplement other proposed solutions in increasing driver yielding behavior.
- ***Bicycle facilities –*** Existing and future bike lanes approaching the intersection should be extended all the way to the intersection.

Walk Audit participants suggested that Rectangular Rapid Flashing Beacons be installed at the Benton Way/Elliott Drive intersection. Rectangular Rapid Flashing Beacons improve pedestrian visibility and motorist yielding behavior through their flashing beacons; however, Rectangular Rapid Flashing Beacons may only be installed at uncontrolled intersections. As this intersection is stop-controlled, we cannot recommend the installation of Rectangular Rapid Flashing Beacons at this location. However, we believe that the listed recommendations of curb extensions and high-visibility crosswalks will achieve similar results as Rectangular Rapid Flashing Beacons by increasing pedestrian visibility and improving driver yielding behavior.

RECOMMENDATION #AC-038: DONALDSON WAY BIKE LANES

Narrative – Donaldson Way, a collector, is a key corridor along direct routes to both American Canyon Middle School and Donaldson Way Elementary School. This road is also often used by residents on the west side of American Canyon to bypass SR 29, particularly during morning and afternoon peak traffic hours. Consequently, this road experiences considerable use, especially in the morning when children are travelling to school and adults are going to work. However, despite the wide nature of this corridor, there are no bicycle facilities along Donaldson Way. This gap in the city's bicycle network makes biking along this high-volume collector feel uncomfortable and unwelcome, especially for vulnerable users such as children. As Donaldson Way is a key corridor along routes to the school, filling this network gap and providing a continuous, connected bike network is crucial to ensuring student bicyclist safety and comfort.

IDENTIFIED BARRIERS

- ***No bicycle facilities –*** The lack of bicycle facilities on Donaldson Way creates a gap in the existing bicycle network of the area and makes biking along the corridor feel uncomfortable and unwelcome.

RECOMMENDATIONS

- ***Class II bike lanes –*** We recommend the installation of Class II bike lanes on both sides of Donaldson Way from Eucalyptus Drive to Benton Way as per the 2019 Bike Plan, with prioritization of the segment between West Carolyn Drive and Benton Way due to its school-related traffic.

- ***Traffic-calming –*** We recommend that the City explore and consider traffic-calming measures for southbound Donaldson Way between Amarillo Drive and Benton Way, as the often-empty parking along this portion of the road increases the appearance of lane width, facilitating speeding. This recommendation should be considered in coordination with Donaldson Way Elementary School's circulation recommendations, namely #AC-050.

Donaldson Way, facing south. Adding Class II bike lanes and traffic-calming features would help reduce speeding by narrowing the roadway.

RECOMMENDATION #AC-025: BROADWAY (SR 29) AND DONALDSON WAY INTERSECTION IMPROVEMENTS

Narrative – Students who live on the east side of SR 29 must cross the highway at one of two available locations to reach ACMS. For students living in northern neighborhoods, the most direct route is to cross SR 29 at Donaldson Way. However, this intersection was identified by Walk Audit participants as a safety barrier for students walking and biking to school. Pedestrians crossing SR 29 must cross six lanes of high-speed and high-volume traffic and crossing Donaldson Way requires interacting with traffic trying to enter and exit the highway. In addition to housing, this intersection is along one of the most direct routes from ACMS to Canyon Oaks Elementary School, where students may have siblings with whom they walk or bike home.

IDENTIFIED BARRIERS

- ***Long crossing distances –*** Long crossing distances across SR 29 increase the amount of time bicyclists and pedestrians spend in the roadway exposed to vehicle traffic.
- ***Large curb radii –*** The wide curb radii on all corners of the intersection allow vehicles to make fast right turns, which can be especially hazardous when vehicles are entering or exiting high-speed traffic on the highway.
- ***High traffic volumes/speeds –*** SR 29 carries extremely high volumes of high-speed traffic, which many parents/guardians do not feel comfortable allowing their child to navigate.

The Donaldson Way and Broadway (SR 29) intersection looking north (left) and east (right).

RECOMMENDATIONS

- ***Protected intersection –*** We recommend that the intersection be upgraded to a protected intersection to reduce crossing distances, calm traffic, and make the intersection more accessible to pedestrians and bicyclists, especially in consideration of proposed Class I shared-use paths along SR 29.
- There are many elements that go into the design and construction of a protected intersection, and some of these improvements could be made as short-term safety enhancements, including:
  - ***Refuge islands –*** We recommend that the existing median on the south leg of the intersection be widened and extended to create a pedestrian refuge island to increase pedestrian comfort and sense of safety.
  - ***Reduce curb radii –*** We recommend that the City work with Caltrans to explore options for reduction of curb radii on all corners of the intersection to slow vehicle turning movements.
  - ***Crosswalk addition –*** We recommend that a crosswalk be added across the north leg of the intersection to provide direct, convenient pedestrian routes throughout the corridor when combined with other infrastructure improvements (see #AC-001 and #AC-040).
  - ***Leading Pedestrian Interval –*** We recommend that the traffic signal be upgraded to provide a Leading Pedestrian Interval, which gives pedestrians a protected head-start through the intersection, improving pedestrian comfort and driver awareness of pedestrians.

RECOMMENDATION #AC-011: AMERICAN CANYON ROAD AND BROADWAY (SR 29) INTERSECTION IMPROVEMENTS

Narrative – Students who live on the east side of SR 29 must cross the highway at one of two available locations to reach ACMS. For students living in southern neighborhoods, where all of the city's manufactured home parks are located, the most direct route is to cross SR 29 at American Canyon Road. The American Canyon Road and SR 29 intersection, located in the center of downtown American Canyon, is the largest intersection in the city. Pedestrians and bicyclists must cross up to seven lanes of high-volume, high-speed traffic, and there are only two standard crosswalks in the intersection on the west and south sides. Traffic speeds are high at this intersection: the SR 29 speed limit is 50 mph and the American Canyon Road speed limit is 40 mph eastbound and 45 mph westbound.

IDENTIFIED BARRIERS

- ***Long crossing distances –*** Long crossing distances across SR 29 increase the amount of time bicyclists and pedestrians spend in the roadway exposed to vehicle traffic.
- ***Large curb radii –*** The wide curb radii on all corners of the intersection allow vehicles to make fast right turns, which can be especially hazardous when vehicles are entering or exiting high-speed traffic on the highway.
- ***High traffic volumes/speeds –*** SR 29 carries extremely high volumes of high-speed traffic, which many parents/guardians do not feel comfortable allowing their child to navigate.
- ***Missing crosswalk –*** There are no crosswalks across the north and east legs of the intersection.

The SR 29 and American Canyon Road intersection requires crossing up to seven lanes of high-speed, high-volume traffic.

RECOMMENDATIONS

- ***Protected intersection –*** We recommend that the intersection be upgraded to a protected intersection to reduce crossing distances, calm traffic, and make the intersection more accessible to pedestrians and bicyclists, especially in consideration of proposed Class I shared-use paths along SR 29.
- There are many elements that go into the design and construction of a protected intersection, and some of these improvements could be made as short-term safety enhancements, including:
  - ***Refuge islands –*** We recommend that the existing median on the south leg of the intersection be widened and extended to create a pedestrian refuge island to increase pedestrian comfort and sense of safety.
  - ***Reduce curb radii –*** We recommend that the City work with Caltrans to explore options for reduction of curb radii on all corners of the intersection to calm slow vehicle turning movements.
  - ***Crosswalk addition –*** We recommend that a crosswalk be added across the north leg of the intersection to provide direct, convenient pedestrian routes throughout the corridor when combined with other infrastructure improvements (see #AC-001 and #AC-040).
  - ***Leading Pedestrian Interval –*** We recommend that the traffic signal be upgraded to provide a Leading Pedestrian Interval, which gives pedestrians a protected head-start through the intersection, improving pedestrian comfort and driver awareness of pedestrians.

RECOMMENDATIONS #ACP-009 AND ACP-010: BENTON WAY CONGESTION MANAGEMENT PROGRAMS AND POLICIES

Narrative – Traffic congestion on Benton Way, and especially in the school zone, was tied as the top-ranking barrier identified by Walk Audit participants. Traffic congestion begins in the drop-off zone, backs up through the Hummingbird Way crosswalk across Benton Way, and continues east along Benton Way. Congestion can also back up west along Benton Way when eastbound vehicles try to turn left into the drop-off zone. The school currently does not have any programs to decrease congestion around the school zone.

IDENTIFIED BARRIERS

- ***Congestion in school zone –*** Congestion in the school zone and along Benton Way can prevent students from walking or biking to school by galvanizing impatient driving behavior, blocking pedestrian and bicyclist infrastructure such as crosswalks, and creating a sense of chaos and discomfort for vulnerable active transportation users.

RECOMMENDATIONS

- ***Education and encouragement programs –*** We recommend that the school increase education and encouragement programming to increase mode shift away from motor vehicles and towards active transportation.
  - Active transportation education programs, such as hybrid in-class/on-bike bicycle safety education provided by Napa County Safe Routes to School, should be provided to students annually.
  - Schools should work with parent champions, students, and Napa County Safe Routes to School to implement regular encouragement programs, such as Walk and Roll Wednesdays, Go Green rewards programs, and development of walking school buses or bike trains. Programs should initially occur monthly, with the goal of increasing frequency. Marin County Safe Routes to School successfully runs similar programs through their Safe Routes to School Teen Program and may be a helpful resource.
- ***Circulation plan/policy –*** We also recommend that the school develop and regularly distribute a circulation plan/policy that outlines expectations for all road users and focuses on separation of the different modes. This plan/policy can also include recommended drop-off locations for a Park and Walk program, which may be suitable for students who want to walk, but do not feel comfortable crossing major barriers like SR 29 until improvements are installed.

An example of a bike train group led by parent volunteers at El Roble Elementary School in Gilroy. (Photo by Ihui Lopez, Silicon Valley Bicycle Coalition).

RECOMMENDATIONS #AC-026, AC-029, AND AC-030: BENTON WAY BICYCLE AND PEDESTRIAN INFRASTRUCTURE IMPROVEMENTS

Narrative – Though there are bicycle and pedestrian facilities on Benton Way, infrastructure improvements would help support existing users and promote increased active transportation in the school zone. Benton Way has Class II bike lanes on both sides of the road; however, during the Walk Audit activity, students were observed biking on sidewalks to travel to campus. Students either do not recognize the lanes as designated bike facilities or feel uncomfortable using them on a road with high traffic volumes and speeds. Additionally, cars frequently cut across the bike lanes along Benton Way to pick up or drop off students, increasing potential for conflicts between vehicles and bicyclists and decreasing bicyclist sense of safety and comfort. While there are continuous sidewalks on both sides of Benton Way, the sidewalk on the north side (the side the school is on) is narrow, only accommodating two pedestrians walking side-by-side, which does not support the high volumes of pedestrians in the school area during pick-up and drop-off times.

IDENTIFIED BARRIERS

- ***Unprotected bicycle facilities –*** The existing Class II bike lanes on Benton Way are either not recognized by students as designated bicycle facilities or feel unsafe to use due to high vehicle speeds and volumes and cars frequently cutting across the bike lane to load/unload students.
- ***Narrow sidewalk –*** The sidewalk on the eastbound (north) side is narrow, failing to accommodate high volumes of students during morning and afternoon hours which can discourage students from walking to and from school.

Students may be riding on the sidewalk instead of the Class II bike lanes on Benton Way due to high vehicle speeds and volumes and frequency of cars pulling up to the curb in the school area. Note: bike lane stencils were added to the bike lanes after the ACMS Walk Audit.

RECOMMENDATIONS

- ***AC-026 Class IV protected bike lanes –*** We recommend that the existing Class II bike lanes be upgraded to parking-protected Class IV bike lanes with K-71 bollards and red zones around driveways and intersections to improve sight lines for exiting vehicles. This may include lane narrowing, which would help decrease speeding along the corridor, another barrier identified by Walk Audit participants.
- ***AC-029 Green conflict markings –*** We recommend that green conflict markings be painted in areas that cross parking lot/loading zone driveways, key intersections, and beginning and ends of corridor segments to improve visibility of bicyclists and reduce risk of collisions.
- ***AC-030 Widen sidewalk –*** We recommend that the sidewalk on the eastbound (north) side be widened to a minimum of 6' to accommodate higher volumes of student pedestrians.

Three of the highest barriers identified by Walk Audit participants impact active transportation use on Benton Way: faded bike lanes, narrow sidewalks, and speeding. The recommended solutions (protected bike lanes, conflict markings, and widened sidewalks) for Benton Way were all suggested by Walk Audit participants.

RECOMMENDATIONS #AC-033, AC-035, AND AC-043: RESIDENTIAL STREET CHICANES

Narrative – One of the highest-ranked barriers identified by Walk Audit participants was motorists speeding on residential streets off of Benton Way, such as Hummingbird Way, Chaucer Lane, and Elliott Drive. These three roads connect to West American Canyon Road, providing a route that allows motorists to bypass peak school hour congestion on Benton Way. These residential streets are long, straight, and wide, which are all qualities that facilitate speeding, especially amongst motorists who are in a rush to drop off students on time, potentially at multiple schools, and travel to other morning commitments.

IDENTIFIED BARRIERS

- ***Speeding –*** Motorists speeding on residential streets off of Benton Way (Hummingbird Way, Chaucer Lane, and Elliott Drive) during pick-up and drop-off times increase risk and potential severity of collisions with vulnerable road users, making these streets feel unwelcoming for student pedestrians and bicyclists, especially as only one of them (Elliott Drive) has bicycle facilities (Class II bike lanes).

RECOMMENDATIONS

- ***Chicane –*** We recommend the installation of chicanes on Hummingbird Way (AC-033), Chaucer Lane (AC-043), and Elliott Drive (AC-035) to deter speeding on these residential routes. Chicane installation should include a median island element, which provides an opportunity for tree planting.

Chicanes can help reduce speeding on long, wide, straight roads such as Hummingbird Way (photographed above).

While Walk Audit participants suggested installation of school zone signage on these residential streets, we are recommending chicanes at this time, as physical changes to the roadway will be more effective at reducing speeding than signage.

RECOMMENDATION #AC-037: DONALDSON WAY SIDEWALK WIDENING

Narrative – Donaldson Way, a collector, is a key corridor along the route from ACMS to both housing northeast of the school and Donaldson Way Elementary School, where students may have siblings. As Donaldson Way is also a part of routes to Community Parks 1 and 2, and between Donaldson Way Elementary School and the Boys and Girls Club and housing, this corridor has high potential for pedestrian use. However, the southbound sidewalk, the side more likely to be used by students, is narrow and does not accommodate increased pedestrian use. The sidewalk can only hold two pedestrians walking side by side, causing conflicts between groups of pedestrians passing each other, or pedestrians with strollers or in wheelchairs.

IDENTIFIED BARRIERS

- ***Narrow sidewalk –*** The Donaldson Way southbound sidewalk is too narrow to support pedestrian use between the two nearby schools, which may result in pedestrians stepping into the roadway.

RECOMMENDATIONS

- ***Widen sidewalk –*** We recommend that the existing southbound sidewalk be widened to at least 6' from Amarillo Drive to Benton Way, the segment where there is most likely to be high volumes of school-related pedestrian traffic. Costly curb and gutter work can be avoided by widening sidewalk on the park side.

The narrow southbound sidewalk on Donaldson Way discourages increased pedestrian use of the corridor.

RECOMMENDATION #AC-040: DONALDSON WAY WEST FROM ELLIOTT DRIVE TO BROADWAY (SR 29)

Narrative – The Donaldson Way corridor is one of just two direct east-west connections through downtown American Canyon that crosses SR 29, the other being American Canyon Road to the south. In addition to providing key access to and from SR 29, the Donaldson Way corridor provides a direct route to ACMS for residences east of the school while also serving American Canyon High School students living on the northwest side of the city. Consequently, this corridor experiences high volumes of traffic. The segment of Donaldson Way West between Elliott Drive and SR 29 can be difficult for pedestrians and bicyclists to navigate, due to these high traffic volumes and challenging bicycle and pedestrian facilities. There are sidewalk gaps on both sides of the road and the eastbound Class II bike lane suddenly transitions to a Class III bike boulevard mid-block between Carolyn Drive and Andrew Road without advance warning to motorists or bicyclists.

IDENTIFIED BARRIERS

- ***High-volume road –*** High traffic volumes along Donaldson Way West can make the corridor feel unsafe and uncomfortable for bicyclists and pedestrians, especially because sidewalk gaps and Class III bicycle boulevards require them to interact with vehicle traffic.
- ***Sidewalk gaps –*** There are three significant sidewalk gaps (two on the eastbound side, one on the westbound side) between Elliott Drive and SR 29, with only one of these gaps having a crosswalk to an existing sidewalk. This forces pedestrians to walk in the road when the sidewalk ends or cross high volumes of Donaldson Way West traffic unnecessarily.
- ***Sudden bike facility transition –*** The change from an eastbound Class II bike lane to a Class III bike boulevard without an advance warning may result in bicyclists and motorists not being prepared to suddenly share the road in a narrowing roadway.

The eastbound Class II bike lane on Donaldson Way West suddenly turns into a Class III bike boulevard when the roadway narrows with no prior warning to motorists or bicyclists.

RECOMMENDATIONS

- ***Curb extensions –*** We recommend the installation of curb extensions at Andrew Road and on the north side of Carolyn Drive to calm vehicle traffic that is sharing the road with bicyclists.
- ***Sidewalks –*** We recommend that all sidewalk gaps be filled to provide a direct, separated route for pedestrians along the corridor.
- ***Bike facility transition –*** We recommend that the transition from an eastbound Class II bike lane to Class III bike boulevard be improved with stencils and pavement markings to provide more time and space for bicyclists and motorists to safely merge.

RECOMMENDATION #AC-045: WEST AMERICAN CANYON ROAD AND HUMMINGBIRD WAY INTERSECTION IMPROVEMENTS

Narrative – West American Canyon Road, one of the city's two 4-lane arterials, is one of just two direct east-west connections through downtown American Canyon that crosses SR 29. In addition to providing access to SR 29, American Canyon Road is a key route to ACMS for residences east of the school, including the city's manufactured home parks, while also serving American Canyon High School students on the west side of SR 29. Consequently, this corridor experiences high volumes of traffic. Hummingbird Way connects West American Canyon Road to Benton Way and provides a direct route between ACMS and neighborhoods south of American Canyon Road. However, this intersection can be challenging for pedestrians and bicyclists to navigate, mainly due to long crossing distances across West American Canyon Road, where traffic is uncontrolled.

IDENTIFIED BARRIERS

- ***Long crossing distances –*** Pedestrians must cross five lanes of traffic at this intersection. Long crossing distances increase the amount of time vulnerable road users spend in the roadway exposed to vehicle traffic. This is especially challenging at Hummingbird Way, where West American Canyon Road traffic is uncontrolled.

RECOMMENDATIONS

- ***Curb extension –*** We recommend that a curb extension be installed at the northeast corner to square up the intersection, improve pedestrian visibility at the northeast corner, and decrease crossing distance across the east leg of the intersection.

- ***Pedestrian refuge islands –*** We recommend that the medians be widened to pedestrian refuge islands to decrease the crossing distance, calm traffic, and allow pedestrians to focus on one direction of traffic at a time.

The The Hummingbird Way and West American Canyon Road intersection has a long crossing distance across uncontrolled American Canyon Road traffic. Donaldson Way East and Newell Drive intersection, looking north.

Note: As Class IV bike lanes are proposed along West American Canyon Road in the Napa Countywide Bicycle Plan, these future facilities should be considered in the construction of any curb extensions along West American Canyon Road.

RECOMMENDATION #AC-046: WEST AMERICAN CANYON ROAD AND CHAUCER LANE INTERSECTION IMPROVEMENTS

Narrative – West American Canyon Road, one of the city's two 4-lane arterials, is one of just two direct east-west connections through downtown American Canyon that crosses SR 29. In addition to providing access to SR 29, American Canyon Road is a key route to ACMS for residences east of the school, including the city's manufactured home parks, while also serving American Canyon High School students on the west side of SR 29. Consequently, this corridor experiences high volumes of traffic. Chaucer Lane connects West American Canyon Road to Benton Way and provides a direct route between ACMS and neighborhoods south of SR 29. However, this intersection can be challenging for pedestrians and bicyclists to navigate, mainly due to long crossing distances across West American Canyon Road.

IDENTIFIED BARRIERS

- ***Long crossing distances –*** Pedestrians must cross five lanes of traffic at this intersection. Long crossing distances increase the amount of time vulnerable road users spend in the roadway exposed to vehicle traffic.
- ***Low-visibility crosswalks –*** The crosswalks at Chaucer Lane are standard parallel lines, which, in conjunction with long crossing distances, may make pedestrians feel less likely to be seen than other high-visibility treatments.
- ***Incomplete bike facilities –*** The westbound bike lane becomes dashed far from the intersection, suggesting that cars can cross and drive in the bike lane, increasing the risk of conflicts.

The Chaucer Lane and West American Canyon Road intersection has long crossing distances across American Canyon Road and low pedestrian visibility.

RECOMMENDATIONS

- ***High-visibility crosswalks –*** Upgrading the existing crosswalks at this intersection to high-visibility crosswalks can supplement other proposed solutions in increasing driver yielding behavior.
- ***Pedestrian refuge islands –*** We recommend that the medians be widened to pedestrian refuge islands to decrease the crossing distance, calm traffic, and allow pedestrians to focus on one direction of traffic at a time.
- ***Solid bike lane –*** We recommend that the westbound bike lane be continued with solid lines to the intersection to reinforce separation of bicyclists from vehicles.

RECOMMENDATION #AC-028: WEST AMERICAN CANYON ROAD AND ELLIOTT DRIVE INTERSECTION IMPROVEMENTS

Narrative – West American Canyon Road, one of the city's two 4-lane arterials, is one of just two direct east-west connections through downtown American Canyon that crosses SR 29. In addition to providing access to SR 29, American Canyon Road is a key route to ACMS for residences east of the school, including the city's manufactured home parks, while also serving American Canyon High School students on the west side of SR 29. Consequently, this corridor experiences high volumes of traffic. Elliott Drive connects West American Canyon Road to Benton Way and provides a direct route between ACMS and neighborhoods south of SR 29. However, this intersection can be challenging for pedestrians and bicyclists to navigate, mainly due to long crossing distances across West American Canyon Road.

IDENTIFIED BARRIERS

- ***Long crossing distances –*** Pedestrians must cross five lanes of traffic at this intersection. Long crossing distances increase the amount of time vulnerable road users spend in the roadway exposed to vehicle traffic.
- ***Low-visibility crosswalks –*** The crosswalks at Elliott Drive are standard parallel lines, which, in conjunction with long crossing distances, may make pedestrians feel less likely to be seen than other high-visibility treatments.
- ***Incomplete bike facilities –*** The westbound and eastbound bike lanes become dashed far from the intersection, suggesting that cars can cross and drive in the bike lanes, increasing the risk of conflicts.

The Elliott Drive and West American Canyon Road intersection has long crossing distances across American Canyon Road and low pedestrian visibility.

RECOMMENDATIONS

- ***High-visibility crosswalks –*** Upgrading the existing crosswalks at this intersection to high-visibility crosswalks can supplement other proposed solutions in increasing driver yielding behavior.
- ***Pedestrian refuge islands –*** We recommend that the medians be widened to pedestrian refuge islands to decrease the crossing distance, calm traffic, and allow pedestrians to focus on one direction of traffic at a time.
- ***Solid bike lane –*** We recommend that the westbound and eastbound bike lanes be continued with solid lines to the intersection to reinforce separation of bicyclists from vehicles.
- ***Curb extensions –*** We recommend the installation of curb extensions on all four corners of the intersection to reduce crossing distances, improve pedestrian visibility, and calm traffic.

Note: As Class IV bike lanes are proposed along West American Canyon Road in the Napa Countywide Bicycle Plan, these future facilities should be considered in the construction of any curb extensions along West American Canyon Road.

RECOMMENDATION #AC-049: BENTON WAY AND CHAUCER LANE CURB EXTENSIONS

Narrative – The Benton Way and Chaucer Lane intersection is a significant intersection along routes to ACMS. Both Benton Way and Chaucer Lane are important collectors, with Benton Way being the primary access road to the school's entrance and Chaucer Lane providing a direct route to Benton Way from West American Canyon Road and the neighborhoods south of West American Canyon Road. Students may elect to cross Benton Way at this location, as the crosswalk at Hummingbird is congested with school traffic and the crosswalks at Elliott Drive are often busier due to Donaldson Way/Elliott Drive traffic. However, this intersection may feel challenging for pedestrians to cross, due to low pedestrian visibility and failure of motorists to stop at stop signs, as was reported by Walk Audit participants.

IDENTIFIED BARRIERS

- ***Low pedestrian visibility –*** The crosswalks at this intersection are standard parallel lines, which may not provide enough pedestrian visibility given the high volumes of traffic on Benton Way, the set-back westbound stop line, and the tendency of motorists to speed, as was reported by Walk Audit participants.

- ***Motorist failure to stop at stop signs –*** Walk Audit participants also identified motorists failing to stop at stop signs along Benton Way as a safety barrier to student bicyclists and pedestrians.

Low pedestrian visibility and vehicles failing to stop at stop signs are the major barriers at the Benton Way and Chaucer Lane intersection.

RECOMMENDATIONS

- ***High-visibility crosswalks –*** Upgrading the existing crosswalks at this intersection to high-visibility crosswalks can supplement other proposed solutions in increasing driver yielding behavior.

- ***Curb extensions –*** We recommend the installation of floating curb extensions on the northwest, southwest, and northeast (east of the parking lot entrance) corners of the intersection to improve pedestrian visibility and motorist yielding while also accommodating recommended Class IV bike facilities (see #AC-026). We also recommend that the westbound stop sign be moved to the northeast curb extension to improve visibility of the sign.

RECOMMENDATION #ACP-007: SAFE DRIVING REMINDERS

Narrative – Walk Audit participants reported unsafe driving behaviors in the school area as a barrier to students walking and biking to school. These behaviors include speeding along key routes to the school (residential side streets such as Hummingbird Way and Benton Way/West Donaldson Way) and motorists failing to stop at stop signs along Benton Way. It is likely that congestion in the school zone during pick-up and drop-off times increases unsafe driving behavior, as motorists are anxious to get out of the congestion and/or may be rushing to get to other commitments on time. While recommended infrastructure improvements outlined in this report will likely reduce these behaviors, it is important that they be addressed in the interim with programmatic efforts.

IDENTIFIED BARRIERS

- ***Unsafe driving behavior –*** Walk Audit participants identified unsafe driving behavior in the school area, particularly speeding and motorists failing to stop at stop signs, as barriers to students walking and biking to school, as these behaviors increase risk of collisions and make the environment feel unwelcoming and unsafe for pedestrians and bicyclists.

RECOMMENDATIONS

- ***Safe driving reminders –*** We recommend that the school send out regular reminders to parents on safe driving practices that address the main unsafe behaviors observed in the school area. Reminders should include instructions to parents to share safety information with other relatives who may be picking up/dropping off students. Reminders should also be sent out in advance of encouragement events that will increase the number of students walking and biking to school, such as Walk and Roll Wednesdays.

ADDITIONAL CONSIDERATIONS

Improvements listed in this section are those within a half-mile radius that are either considered significant to the school area but are not located along routes to the school based on the school's enrollment boundary or were ranked as a higher priority during the Walk Audit for another nearby school. These barriers are listed as high or medium priority due to their impact on routes to nearby schools in the neighboring areas and will be analyzed in more depth in the reports for the affected schools.

RECOMMENDATION #AC-042: AMARILLO DRIVE AND DONALDSON WAY INTERSECTION IMPROVEMENTS

IDENTIFIED BARRIERS

- ***Poor pedestrian visibility***
- ***Traffic congestion***
- ***Impatient driving behavior***

RECOMMENDATIONS

- ***Curb extensions***
- ***High-visibility crosswalks***

Relevant Reports:

- *Donaldson Way Elementary School Walk Audit Report*

RECOMMENDATION #AC-044: JOAN DRIVE AND DONALDSON WAY INTERSECTION IMPROVEMENTS

IDENTIFIED BARRIERS

- ***White crosswalk in school zone***
- ***No signage or traffic control***

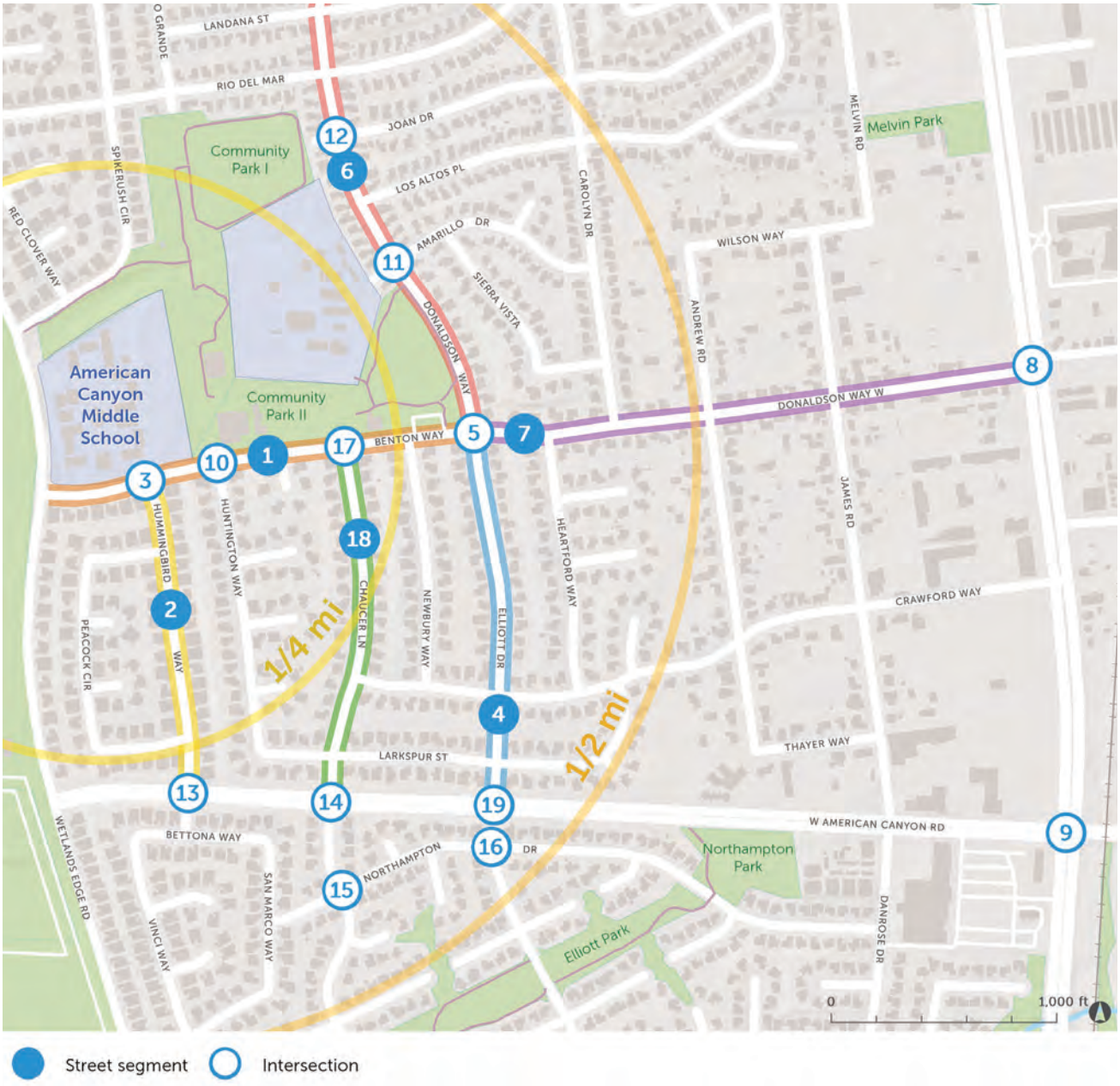
RECOMMENDATIONS –

- ***High-visibility yellow school zone crosswalks***
- ***Pedestrian crossing signage***

Relevant Reports:

- *Donaldson Way Elementary School Walk Audit Report*

MAP OF RECOMMENDATIONS



Map 5: Recommendations

TABLE OF RECOMMENDATIONS

Infrastructure:

	LOCATION	ID #	BARRIER	RECOMMENDATION	COST	PRIORITY
1	Benton Way from Elliott Drive to Wetlands Edge Road	AC-027	Unsafe driving behavior (speeding, not stopping at stop signs)	Install additional school zone signage	$	Low
		AC-026	Unprotected bicycle facilities; students not using existing bicycle facilities	Upgrade existing Class II bike lanes on both sides of the street to parking-protected Class IV bike lanes with K-71 bollards and red zones around driveways and intersections to improve sight lines for exiting vehicles	$$	Medium
		AC-029		Paint green conflict markings, at least in areas that cross parking lot/loading zone driveways, key intersections, and beginning and ends of corridor segments	$	Medium
		AC-030	Narrow sidewalk on north side	Widen sidewalk on north side to 6' minimum	$$	Medium
		AC-031	Missing curb ramps across city parking lot exit lane (lot at Chaucer Lane intersection)	Install curb ramps or raised crosswalk to sidewalks across city parking lot exit lane	$	Low
2	Hummingbird Way from American Canyon Road to Benton Way	AC-033	Speeding	Install a chicane	$$	Medium
3	Benton Way and Hummingbird Way intersection	AC-034	Congestion at intersection, drivers not stopping at stop signs	Install curb extensions on north side and south corners	$$	High
4	Elliott Drive from American Canyon Road to Benton Way	AC-035	Speeding*	Install a chicane	$$	Medium
5	Benton Way and Elliott Drive intersection*	AC-036	Vehicles parking close to crosswalks, long crossing distances, high traffic volumes, poor driver yielding	Install curb extensions at all corners and yellow high visibility school zone crosswalks at all crosswalks. Extend existing and future bike lanes all the way to the intersection.	$$	High
6	Donaldson Way from West Carolyn Drive to Benton Way	AC-037	Narrow sidewalks	Widen existing southbound sidewalk to at least 6' from Amarillo Drive to Benton Way	$$	Medium
		AC-038	No bicycle facilities from West Carolyn Drive to Benton Way	Install Class II bike lanes on both sides of road (consider for entire corridor from Eucalyptus Drive to Benton Way per Bike Plan)*. Consider traffic-calming measures for southbound between Amarillo Drive and Benton Way.	$-$$	High
		AC-039	Poor road quality from Amarillo Drive to Rio Del Mar, sidewalk too narrow for shared use	Repave road	$$$	Low

	LOCATION	ID #	BARRIER	RECOMMENDATION	COST	PRIORITY
7	Donaldson Way West from Elliott Drive to Broadway (SR 29)	AC-040	High-volume road, sidewalk gaps, challenging sudden bicycle facility transition	Install curb extensions at Andrew Road and on the north side of Carolyn Drive to act as traffic-calming. Fill sidewalk gaps on both sides of the road. Improve transition from eastbound Class II bike lane to Class III bike boulevard.	$$	**Medium**
8	SR 29 and Donaldson Way intersection	AC-025	Long crossing distances, large curb radii, high traffic volumes and speeds	Upgrade intersection to protected intersection. Add refuge island to the south leg, reduce curb radii for free right turns. Add crosswalk across north leg. Upgrade signal to provide Leading Pedestrian Interval across SR29.	$$$	**High**
9	SR 29 and American Canyon Road intersection	AC-011	Long crossing distances, large curb radii, high traffic volumes and speeds, missing crosswalks	Upgrade intersection to protected intersection. Add refuge islands to north/south legs (east/west if feasible), reduction of curb radii, and addition of north and east crosswalks. Upgrade signal to provide Leading Pedestrian Interval.	$$$	**High**
10	Benton Way and Huntington Way intersection	AC-041	Faded crosswalk across Huntington Way	Repaint crosswalk	$	**Low**
11	Amarillo Drive and Donaldson Way intersection	AC-042	Poor pedestrian visibility (cars parking close to intersection), traffic congestion, impatient driving behavior	Install curb extensions on all corners. Upgrade crosswalks to high-visibility pattern	$$	**High**
12	Joan Drive and Donaldson Way intersection	AC-044	White crosswalk in school zone, no signs or traffic controls	Repaint crosswalks to be yellow high-visibility crosswalks and install pedestrian crossing signage	$	**Medium**
13	Hummingbird Way and West American Canyon Road intersection	AC-045	Long crossing distances, uncontrolled traffic	Install curb extensions on northeast corner to square up intersection and widen medians to be pedestrian refuge islands	$$	**Medium**
14	Chaucer Lane and West American Canyon Road intersection	AC-046	Low-visibility, faded crosswalk across several lanes of traffic. Westbound bike lane becomes dashed far before the intersection.	Repaint crosswalks with high-visibility pattern and widen medians to be pedestrian refuge islands. Continue westbound bike lane to intersection.	$-$$	**Medium**
15	Northampton Drive and Chaucer Lane intersection	AC-047	No crosswalks	Install crosswalks across east, west, and south legs of intersection	$	**Low**
16	Northampton Drive and Elliott Drive intersection	AC-048	No crosswalks	Install crosswalks across Northampton Drive	$	**Low**

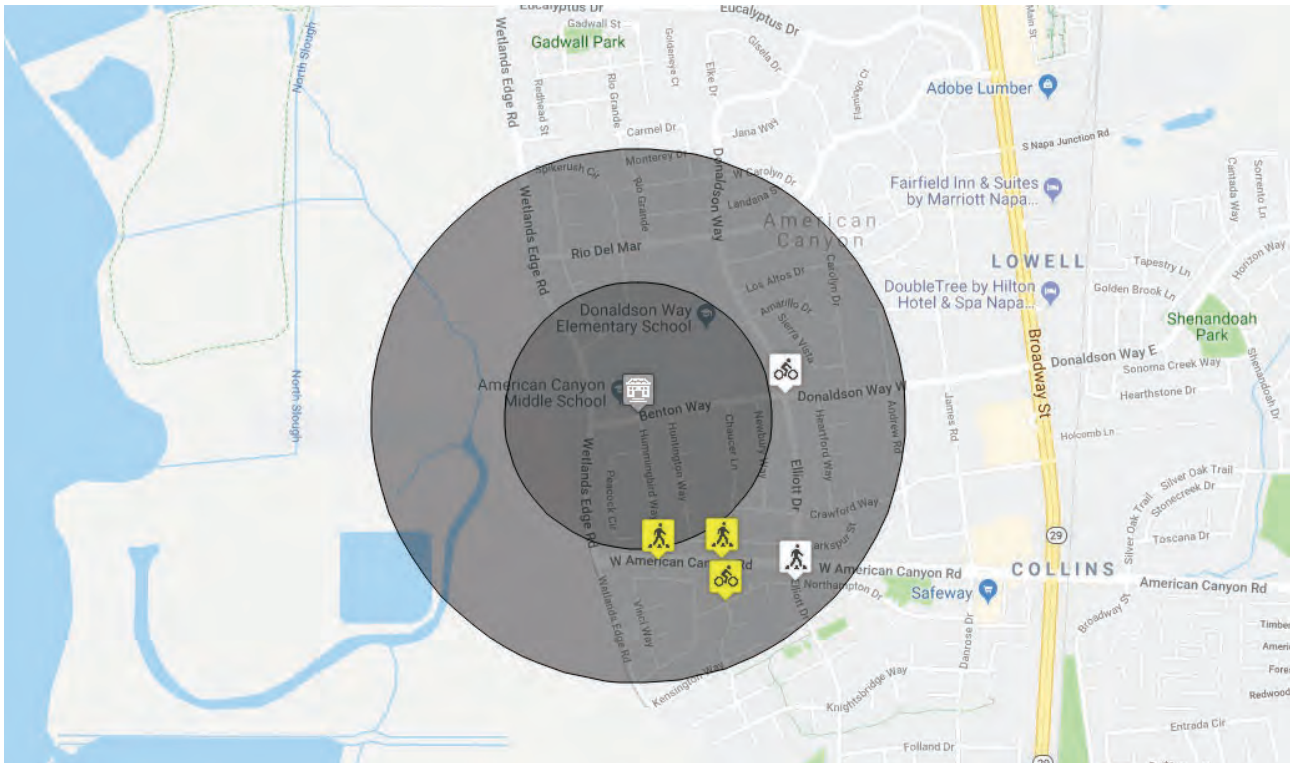
	LOCATION	ID #	BARRIER	RECOMMENDATION	COST	PRIORITY
17	Benton Way and Chaucer Lane intersection*	AC-049	Low pedestrian visibility, motorists failing to stop at stop sign	Upgrade crosswalks to high-visibility pattern. Install floating curb extensions on northwest, southwest, and northeast (east of parking lot entrance) corners to accommodate Class IV. Move westbound stop sign to curb extension to improve visibility.	$$	**Medium**
18	Chaucer Lane from American Canyon Road to Benton Way	AC-043	Speeding	Install a chicane	$$	**Medium**
19	Elliott Drive and West American Canyon Road intersection	AC-028	Long crossing distances; low-visibility crosswalks; bike lanes do not reach crosswalks	Upgrade medians to be pedestrian refuge islands. Continue bike lanes to crosswalks. Install curb extensions on all four corners. Upgrade crosswalks to high-visibility pattern.	$$	**Medium**

Programmatic Improvements:

	ISSUE	ID #	RECOMMENDATION	LOCATION	FREQUENCY	COST	PRIORITY
1	Unsafe driving behavior in school area (speeding, not stopping at stop signs)	ACP-007	Send regular reminders from the school to parents regarding safe driving practices	School zone	Monthly	$	**Medium**
		ACP-008	Increased law enforcement presence during pick-up and drop-off	Benton Way	Monthly	$	**Low**
2	Traffic congestion on Benton Way	ACP-009	Increase education and encouragement programming to encourage more walking and biking; development of walking school buses or bike trains	School zone	Monthly	$	**High**
		ACP-010	Develop and distribute a circulation plan/policy with recommended drop-off locations	School site area	Annually	$	**High**

** = projects included in Napa Countywide Pedestrian Plan (2016) or Napa Countywide Bicycle Plan (2019)*

COLLISION MAP AND DATA



Map 7: Collision Map (2012-2017) (Source: UC Berkeley Transportation Injury Mapping System: SRTS Collision Map Viewer)

Summary Statistics

RADIUS	FATAL	SEVERE INJURY	VISIBLE INJURY	COMPLAINT OF PAIN	PEDESTRIAN	BICYCLE	TOTAL
< .25 mi.	0	0	0	0	0	0	0
.25-.5 mi.	0	0	3	2	3	2	5
Total	0	0	3	2	3	2	5

Collision List

DATE	TIME	PRIMARY	SECONDARY	BIKE/PED
2013-03-22	07:58	Donaldson Wy	Benton Wy	Yes/No
2013-10-04	08:06	Elliot Dr	Northampton Dr	No/Yes
2017-07-29	13:33	Chaucer Ln	Northampton Dr	Yes/No
2017-03-17	05:44	American Canyon Rd	Chaucer Ln	No/Yes
2016-09-26	07:54	W American Canyon Rd	Hummingbird Wy	No/Yes

Figure 12: Collision Data (2012-2017) (Source: UC Berkeley Transportation Injury Mapping System: SRTS Collision Map Viewer)

APPENDICES

FIGURES & MAPS

FOOTNOTES

[a] Noreen McDonald, Ruth Steiner, Chanam Lee, Tori Rhoulac Smith, Xuemei Zhu and Yizhao Yang (2014). "Impact of the Safe Routes to School Program on Walking and Bicycling." Journal of the American Planning Association. Vol 80, Iss 2, p 153-167.

[b] Orion Stewart, Anne Vernez Moudon, and Charlotte Claybrooke (2014) Multistate Evaluation of Safe Routes to School Programs. American Journal of Health Promotion: January/February 2014, Vol. 28, No. sp3, pp. S89-S96.

[c] Peter A Muennig et al., 'The Cost-Effectiveness Of New York City's Safe Routes To School Program', American Journal Of Public Health, iss 0 (2014): 1-6.

[d] David Ragland, S Pande, J Bigham and FJ Cooper. (2014, January). Ten years later: examining the long-term impact of the California Safe Routes to School program. Presented at the Transportation Research Board 93rd Annual Meeting, Washington DC. Available at http://docs.trb.org/prp/14-4226.pdf.

[e] Davison K, Werder J and Lawson, C. "Children's Active Commuting to School: Current Knowledge and Future Directions." Preventing Chronic Disease, 5(3): A100, July 2008.

[f] Hillman CH, Pontifex MB, Raine LB, Castelli DM, Hall EE, Kramer AF. The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. Neuroscience. 2009;159(3):1044-1054. doi:10.1016/j.neuroscience.2009.01.057

[g] Castelli, D.M., Glowacki, E., Barcelona, J.M., Calvert, H.G., & Hwang, J. (2015). Active Education: Growing Evidence on Physical Activity and Academic Performance. [Research brief.] Active Living Research. http://activelivingresearch.org/sites/default/files/ALR_Brief_ActiveEduc....

[h] Appleyard, B. (2017). The meaning of livable streets to schoolchildren: An image mapping study of the effects of traffic on children's cognitive development of spatial knowledge. Journal of Transport & Health, 5.

[i] AAA. Cost of Owning and Operating Vehicle in U.S. Increased 1.9% According to AAA's 2012 Your Driving Costs Study. 2012. http://newsroom.aaa.com/2012/04/costof-owning-and-operating-vehicle-in-u....

[j] Overall Facility Rating determined from 2019-20 School Accountability Report Card

APPENDIX A

EMC Survey Toplines

Safe Routes to School Walk Audit Report and Active Transportation Action Plan

Evaluation: Research & Methodology

- **Purpose: Gain insight into parent practices, perceptions, and attitudes around children walking and riding bicycles to and from school; explore barriers to behavior change**
- **Quantitative survey of 459 parents of K-8 students in Napa County**
  - Conducted online and by telephone, offered in English and Spanish
  - Conducted March 11 – April 12, 2021
  - Participants recruited via communications from school districts and targeted online and telephone contacts
  - *Survey methods were designed to include as many participants as possible; not a random sample*
- **Qualitative follow-up research**
  - One online focus group with 7 participants in English; 4 in-depth telephone interviews in Spanish
  - Conducted May 20 – 28, 2021
  - Targeted parents who lived within two miles of their school site and would like their children to walk or bike to school

Survey of Parents/Guardians of at least one child in K-8th Grade
Napa County, California
Hybrid Email-to-Web/Text-to-Web/Live Telephone Survey
Conducted March 11-April 12, 2021
n=459
EMC Research #21-6420

All numbers in this document represent percentage (%) values, unless otherwise noted.
Please note that due to rounding, percentages may not add up to exactly 100%.

INTRO: Your opinions are important! Thank you for participating in this survey EMC Research is conducting on behalf of the Napa County Safe Routes to School program in partnership with local school districts. You may have been contacted previously to complete this survey via telephone and we ask each individual only complete the survey once.

Your responses will remain completely confidential. Please try to answer every question even if you're not sure. If you need to, you may skip a question.

1. Are you the parent or guardian of any children currently attending kindergarten through eighth grade in one or more of the school districts located in Napa County below? *Please select the District(s) that your K-8th grade student(s) is/are currently enrolled in, check all that apply.* **(MULTIPLE RESPONSES ACCEPTED)**

Calistoga Joint Unified School District	0
Howell Mountain Elementary School District	-
Napa Valley Unified School District	97
Pope Valley Union Elementary School District	0
Saint Helena Unified School District	2
Another District or school in Napa County (please specify)	1
None of the above → **TERMINATE**	-
(No response) → **TERMINATE**	-

2. Please indicate below what grade(s) your child/children are in. *Please select all that apply.* **(MULTIPLE RESPONSES ACCEPTED)**

Kindergarten	22
1st grade	17
2nd grade	15
3rd grade	20
4th grade	15
5th grade	15
6th grade	14
7th grade	12
8th grade	9
9th through 12th grade → **TERMINATE IF ONLY RESPONSE SELECTED**	14
(No response) → **TERMINATE**	-

(IF MORE THAN ONE K-8 STUDENT: "Although you have multiple children in K-8, we ask that you please think about your **oldest K-8** child when answering the next questions."**)**

For these next few questions, please think back to when your **(**child was**/**children were**)** attending school **before** the COVID-19 pandemic.

3. On most days, what was the primary way your **(**K-8 child**/**oldest K-8 child**)** travelled **to** school?

Family vehicle (only children in your family)	73
Carpool (children from other families)	3
School bus	3
Other public transportation	0
Bike	4
Walk	16
Other (scooter, skateboard, inline skates, etc.)	0
(No response)	0

4. And on most days, what was the primary way your **(**K-8 child**/**oldest K-8 child**)** travelled **from** school?

Family vehicle (only children in your family)	73
Carpool (children from other families)	3
School bus	3
Other public transportation	1
Bike	4
Walk	15
Other (scooter, skateboard, inline skates, etc.)	0
(No response)	0

5. How long did it normally take your **(**K-8 child**/**oldest K-8 child**)** to get to/from school?

Less than 5 minutes	18
5-10 minutes	42
11-15 minutes	22
16-20 minutes	8
More than 20 minutes	9
(No response)	0

6. Has your **(**K-8 child**/**oldest K-8 child**)** ever walked or biked to/from school?

Yes	43
No	56
(No response)	0

7. **(ONLY ASKED IF Q6=1, 'Yes, has walked/biked to/from school')** In what grade did your child begin to walk or bike to/from school? **(n=199)**

Pre-school	7
Kindergarten	30
1st grade	9
2nd grade	6
3rd grade	10
4th grade	8
5th grade	9
6th grade	13
7th grade	6
8th grade	1
9th through 12th grade	1
(No response)	2

8. Thinking generally, what grade would you feel comfortable with a child walking or biking to/from school?

Pre-school	1
Kindergarten	5
1st grade	2
2nd grade	2
3rd grade	5
4th grade	14
5th grade	12
6th grade	16
7th grade	10
8th grade	7
9th through 12th grade	13
I would not feel comfortable at any grade	14
(No response)	1

9INT. Continuing to think about times **before** the COVID-19 pandemic, please indicate how comfortable **you** were with your **(**K-8 child**/**oldest K-8 child**)** doing each of the following.

SCALE:	Very Comfortable	Somewhat Comfortable	Not too Comfortable	Not at all Comfortable	(No Response)	Total Comfort.	Total Not Comfort.
(RANDOMIZE)							
9. Taking a bus to school	32	33	17	15	3	**65**	**32**
10. Walking to school without an adult	8	18	19	54	1	**26**	**73**
11. Riding a bike to school without an adult	7	17	22	53	2	**23**	**75**
12. Walking to school with an adult	66	19	6	8	1	**85**	**14**
13. Riding a bike to school with an adult	45	29	11	13	2	**74**	**24**
(END RANDOMIZE)							

14. **(ONLY ASKED IF Q10=3 OR 4, 'not comfortable')** What would you say is the **main** reason you were not comfortable with your **(**K-8 child**/**oldest K-8 child**)** **walking** to school without an adult?
(VERBATIM RESPONSES CODED INTO BELOW CATEGORIES) (n=335)

Worry for child's safety/Crime	28
Not old enough	19
Live too far away	17
Traffic/Busy streets	11
Street crossing/Intersections	6
Not enough sidewalks	5
Crossing Highway 29	3
Other	8
Don't know	1

15. **(ONLY ASKED IF Q11=3 OR 4, 'not comfortable')** What would you say is the **main** reason you were not comfortable with your **(**K-8 child**/**oldest K-8 child**)** **riding a bike** to school without an adult?
(VERBATIM RESPONSES CODED INTO BELOW CATEGORIES) (n=324)

Worry for child's safety/Crime	29
Not old enough	18
Traffic/Busy streets	13
Live too far away	9
Street crossing/Intersections	5
Crossing Highway 29	4
Can't ride a bike	4
Not enough sidewalks	3
No bike lanes	3
Other	10
Don't know	1

For these next few questions, please think back to when your **(**child was**/**children were**)** attending school **before** the COVID-19 pandemic.

16INT. Please indicate whether you agree or disagree with each of the following statements.

SCALE:	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	(No Response)	Total Agree	Total Disagree
(RANDOMIZE)							
16. I would generally like my K-8 **(**child**/**children**)** to be able to walk or bike to/from school.	43	32	12	12	0	**76**	**24**
17. My K-8 **(**child enjoys**/**children enjoy**)** walking and/or biking places.	57	31	8	4	0	**88**	**12**
18. I would never let my K-8 **(**child**/**children**)** walk or bike to/from school.	20	24	27	28	0	**44**	**55**
19. It is safe for children to walk or bike in my area.	13	45	22	20	-	**58**	**42**
20. There are enough bike paths and sidewalks for my K-8 **(**child**/**children**)** to walk or bike to/from school.	13	27	20	39	1	**40**	**60**
21. I am concerned about speeding or distracted drivers if/when my **(**child**/**children**)** walk or bike to/from school.	81	15	2	2	0	**96**	**4**
22. The school is too far away for my K-8 **(**child**/**children**)** to walk or bike there.	37	19	15	29	0	**55**	**45**
23. My K-8 **(**child**/**children**)** cannot bike to and from school because of their before- or after-school commitments.	13	26	25	35	1	**39**	**60**
24. Walking or biking to and from school is a good way for my K-8 **(**child**/**children**)** to get physical exercise.	69	25	3	3	1	**93**	**6**
25. Walking or biking to and from school is a good way for me to spend quality time with my K-8 **(**child**/**children**)**.	55	30	7	6	1	**85**	**14**
26. I would only allow my K-8 **(**child**/**children**)** to walk or bike to and from school if I, or another adult, can accompany them.	54	25	12	8	0	**79**	**21**
(END RANDOMIZE)							

27INT. Next, you will see some things that local schools and other organizations could do that may affect how you feel about your **(**K-8 child**/**oldest K-8 child**)** biking to school once the COVID-19 pandemic has ended. For each, please indicate if the item would make you feel more comfortable about allowing your **(**K-8 child**/**oldest K-8 child**)** to walk or bike to school once the COVID-19 pandemic has ended.

SCALE:	Much More Comfortable	Somewhat More Comfortable	A Little More Comfortable	(No Difference)	(Don't Know)
(RANDOMIZE)					
27. Limit how much children have to carry in their backpacks	36	25	14	24	1
28. Provide children and parents with information and maps on safe routes to and from school	37	24	16	22	1
29. Offer free bicycle safety courses for children to learn how to ride safely on local streets	43	21	21	15	0
30. Provide opportunities for children to practice biking in a car-free environment	42	23	14	20	-
31. Offer free pedestrian safety classes for children	39	20	21	19	1
32. Provide crossing guards at major intersections	62	22	10	6	-
33. Organize groups of students to walk or bike to/from school together	42	26	17	14	1
34. Provide a local parent or adult volunteer to walk or bike with children to/from school	36	27	15	20	1
35. Add designated bike lanes to roads	46	24	15	14	-
36. Improve the condition of existing bike lanes	47	23	14	16	1
37. Add more bike paths that are separated from the road	62	17	11	9	0
38. Add more sidewalks	53	21	13	12	1
39. Fix missing or broken sidewalks	56	19	15	10	1
40. Increase the visibility and safety of crosswalks	61	20	11	8	0
41. Increase the police presence on routes that lead to schools	52	23	13	12	1
42. Reduce the speed of traffic on streets that kids use to walk or bike to school	53	21	15	11	1
(END RANDOMIZE)					

43. Is there something else that could be done that would make you feel more comfortable about allowing your **(**K-8 child**/**oldest K-8 child**)** to walk or bike to school once the COVID-19 pandemic has ended? **(VERBATIM RESPONSES CODED INTO BELOW CATEGORIES)**

Nothing/No additional comments	42
Add or improve bike paths/Sidewalks/Crosswalks	15
Increase crossing guards/Supervision/Police presence	11
School is too far away/Can't use active modes	9
Speeding concerns/Increased road law enforcement	5
Increase safety related to Highway 29	2
Already walks/bikes/etc.	2
Provide bikes/Equipment/Storage	2
Other	10
Don't know/Refused	2

44. About how far does your **(**K-8 child**/**oldest K-8 child**)** live from school? If you're not sure, give your best guess.

Less than ½ mile	14
½ mile up to 1 mile	19
1 mile up to 2 miles	21
2 miles up to 3 miles	14
3 miles up to 5 miles	15
5 miles or more	16
(No response)	1

45. Does your **(**K-8 child**/**oldest K-8 child**)** currently have their own working bicycle?

Yes	79
No	21
(No response)	-

46. Did you ride a bicycle when you were your K-8 **(**child's**/**children's**)** age?

Yes	78
No	21
(No response)	0

These last questions are for statistical purposes only. Your responses will remain completely confidential.

47. Do you identify as…

Male	14
Female	83
Non-binary	-
Another gender identity	-
Prefer not to respond	3

48. What year were you born? **(YEARS CODED INTO CATEGORIES)**

18-29 (2003-1992)	5
30-39 (1982-1991)	36
40-49 (1972-1981)	45
50-64 (1957-1971)	12
65 or older (1956 or earlier)	1
Prefer not to respond	1

49. Do you consider yourself to be…

Hispanic or Latino	38
White or Caucasian	41
African American or Black	1
Asian or Pacific Islander	7
Something else	3
Prefer not to respond	10

50. Do you…

Own or are buying the home or apartment where you live	55
Rent or lease	35
Prefer not to respond	10

THANK YOU!

APPENDIX B

Universal Recommendations

Safe Routes to School Walk Audit Report and Active Transportation Action Plan

Appendix B
Napa County SRTS Walk Audit Report
Universal Recommendations

The Napa County Safe Routes to School (SRTS) Walk Audit Report Universal Recommendations apply to all public schools in Napa County, which reflects the schools served under the SRTS program. Universal recommendations are meant to supplement site-specific recommendations and address common barriers in the bicycle/pedestrian network around schools in a concise and consistent manner.

Universal Recommendation 1: High-Visibility School Zone Crosswalks

Federal Highway Administration data[1] indicates that high-visibility crosswalk striping improves the visibility of crosswalks compared to standard parallel lines and can improve yielding behavior by drivers[2]. Additionally, crosswalk visibility enhancements, which include but are not limited to high-visibility crosswalks, can reduce crashes by 23-48%[1].

- Recommendation: High-visibility (continental or ladder pattern) crosswalks should be implemented at the following locations:
    - Utilizing the California Vehicle Code (CVC) §21368 requirements for designating crosswalks as "school zone" crosswalks (painted yellow), all school zone crosswalks;
    - And, all marked crosswalks at an intersection with a designated collector or arterial roadway within 1320 feet (0.25 miles) of a school (following the same measuring method as CVC §21368)

This recommendation applies to existing and future crosswalks. It does not provide guidance for new crosswalk warrants; it is primarily focused on the improvement of crosswalks within the roughly ¼ mile radius examined through the Walk Audit process.

Universal Recommendation 2: Intersection Daylighting

Daylighting is the practice of removing visual barriers, including parked vehicles, within a certain distance of a crosswalk or intersection to greatly improve visibility for pedestrians, bicyclists, and motorists. The National Association of City Transportation Officials recommends removing parking within 20-25 feet of an intersection. Daylighting can be accomplished through permanent infrastructure, such as concrete curb extensions, or more cost-effective materials, such as paint and bollards.

---

[1] https://safety.fhwa.dot.gov/ped_bike/step/docs/TechSheet_VizEnhancemt_508compliant.pdf

2 Pulugartha, S. S., V. Vasudevan, S. S. Nambisan, and M. R. Dangeti. Evaluating the Effectiveness on Infrastructure-Based Countermeasures on Pedestrian Safety. Presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.

- Recommendation: Daylighting strategies should be implemented at the following intersections:
    - Those that are in the school zone as defined by CVC §21368;
    - Those that are intersections with a designated collector or arterial roadway within 2640 feet (0.5 miles) of a school (following the same measuring method as CVC §21368).

Universal Recommendation 3: Sidewalk Width Adjacent to School Campus

A barrier frequently identified during Walk Audits throughout the county was that sidewalks immediately adjacent to the school were too narrow for the high volumes of pedestrians generated during school arrival and dismissal times. Most of these sidewalks were roughly 4 feet wide, including space for utility and signage poles. While these sidewalks may meet specific municipal standards, they do not accommodate high volumes of school-related pedestrians and can deter or prevent students from walking to school if they travel with their families, in groups, or use a mobility assistance device. This is especially so when sidewalks are obstructed by utility poles, signal boxes, and other objects.

- Recommendation: All sidewalks that lead to a school campus entrance should be a minimum of 6 feet wide within at least 250 feet of the school entrance; if a school has only one entrance, the sidewalk leading to that entrance should be a minimum of 8 feet wide within 250 feet of that entrance.

Universal Recommendation 4: Class III Bike Boulevard Traffic-Calming

Class III bicycle boulevards are on-street bicycle facilities that have traditionally been marked by signage and share-the-road stencils ("sharrows") painted in the vehicle travel lane. Class III facilities do not provide any separation between bicyclists and motorists and instead indicate to road users that bicyclists and motorists must share the road. Such facilities are intended to be installed on low-speed (25 mph or less*) and low-volume (<3,000 vehicles/day*) roadways; however, the current practice of implementing only signage and sharrows for Class III routes frequently does not meet the comfort and safety perception needs of the "Interested but Concerned" user profile of bicyclists, which includes an estimate of 51%-56% of the population and is typically the profile assumed for most school-age children. To create a lower stress bicycle network, the Federal Highway Administration describes improving bicycle boulevards by "slowing motor vehicle speeds and implementing other speed management measures."

- Recommendation: All Class III bicycle boulevards should be marked with sharrows and signage and must be treated with traffic-calming strategies to enforce the desired speed limit and prevent motorist speeding. Class III bicycle boulevards adjacent to school campuses or along roadways that facilitate

motorist speeding (long, straight, and/or minimal traffic control) should be prioritized for traffic-calming treatments.

* Metrics established by the Federal Highway Association in their 2019 Bikeway Selection Guide.

Universal Recommendation 5: Curb Ramps (Americans with Disabilities Act)

Some of the early Walk Audit reports specifically call out intersections or other pedestrian access points where curb ramps compliant with the Americans with Disabilities Act were missing, which creates a significant connectivity barrier for pedestrians who use mobility assistance devices. However, following these reports, the Napa County Safe Routes to School team recognized that many intersections and pedestrian access points were missing these curb ramps and that individually identifying each missing curb ramp would be redundant, particularly given data from the Napa Countywide Pedestrian Plan (2016). Consequently, though some early reports do mention lack of accessible curb ramps, a universal recommendation was created to address this important pedestrian barrier while avoiding redundancy in reports.

- Recommendation: In alignment with the Americans with Disabilities Act, when implementing recommendations made in Napa County Safe Routes to School reports that impact the curb at intersections, pedestrian crossings, or other pedestrian access points, curb ramps that are compliant with the Americans with Disabilities Act should be installed.

APPENDIX C

Quick Build Brochure

Safe Routes to School Walk Audit Report and Active Transportation Action Plan

QUICK-BUILD BIKEWAY NETWORKS FOR SAFER STREETS

Delivering Safer Streets in Weeks or Months, Instead of Years

How to Meet Public Demand for Safe Bikeway Networks—Affordably, Quickly, and Inclusively

Photo credit: Alta Planning + Design

CASE STUDY

Adeline Street in Berkeley got protected bike lanes 20 years ahead of schedule, when Bike East Bay worked closely with the city to incorporate planned lanes into the repaving schedule, saving time and money by simply adding bike infrastructure to an existing project, one funded through a local infrastructure bond measure. The City of Berkeley garnered extensive public input on the Adeline Corridor, making this a great example of quick-build speeding up existing bike infrastructure planning, bringing bike lanes to Berkeley in 2019 instead of 2039.

WHY QUICK-BUILD? WHY NOW?

Biking is up in many communities in California, including those that started with low rates of bicycling, as people seek out healthy and safe transportation and recreation. Californians are discovering they can be healthier and happier simply by getting out on two wheels.

Meanwhile, agency budgets are down. Plans to spend millions on infrastructure may no longer be realistic. More than ever, the public demands that transportation projects are equitable and responsive to the needs of neglected communities.

Quick-build is a method of building bike and pedestrian safety improvements—protected bike lanes, pedestrian crossings, slow streets, parklets, and more—now, within your budget. In challenging times, quick-build projects are crucial to building trust in the government's ability to deliver public benefit. And quick-build infrastructure can engage the public better than ever, and be more inclusive and equitable than traditional infrastructure.

> *"We as transportation experts need to be thinking strategically about whether or not we need to spend three years talking about doing something important, or three weeks to just try something."*
>
> — Warren Logan
>
> *Transportation Policy Director of Mobility and Interagency Relations at Oakland Mayor's Office*

WHAT IS QUICK-BUILD?

The Basics

- Quick-build projects use materials that can be installed quickly and at low cost. Build projects from posts, planters, and stripes of paint, not new pavement or curb alignments.
- **Quick-build projects are installed on a trial basis.** Temporary installations allow for adjusting or removing elements in response to public feedback. Successful projects may become permanent, exactly as installed, or upgraded with more durable materials.
- **Quick-build should incorporate rigorous community engagement.** A project on the ground can serve much more effectively than a PowerPoint or rendering for trying something out and allowing community residents to respond. Gather feedback and input, and change designs accordingly.

Materials

From paint, traffic cones, and A-boards to concrete curb barriers, planters, and temporary raised crosswalks, a wide variety of materials work well for creating quick-build projects. The full Quick-Build Toolkit provides thorough, detailed descriptions of materials that can make for an effective and inexpensive project to meet your community's needs.

Photo credits, top to bottom: Alta Planning + Design; Real Hartford; Alta Planning + Design; Street Plans Collaborative

CASE STUDY

In August of 2020, the City of San Luis Obispo converted one of the three motor vehicle lanes of downtown Higuera Street into a buffered bike lane, as part of Open SLO, the city's pilot program to expand the use of public spaces (with parklets and bike/ped spaces) during the COVID-19 pandemic. The project was installed with paint, took less than a week to install, and cost a mere $15K instead of the more than $150K it would have taken to put in a traditional bike lane by sealing and restriping the whole street as the city would normally do.

Photo credit: Bike SLO County

WHO?

Your Quick-Build Project Team

Team leader. Quick-build projects need a "chief" (usually city staff) tasked with project facilitation, keeping the momentum going, establishing lines of communication, and accepting and evaluating feedback.

Community leaders. Because evaluation and adjustment are essential for successful quick builds, make sure community leaders are on board from the beginning. Look to businesses, residential associations, places of worship, and nearby schools. Bring in bike/ped advocacy organizations and other CBOs, including those based in disadvantaged communities and led by people of color.

Department liaisons. Your project may impact transit, street sweeping, parking enforcement, maintenance, waste management and recycling, and emergency response. Involve other agencies as necessary to ensure you don't forget a critical aspect.

Elected Officials. They have the power to marshal funding for quick-build projects. They will hear from constituents, so communication channels between the project team and electeds must be open for effective project evaluation.

Communications. Ideally, include a dedicated communications person on your team. Because this is a new method, and people are used to years of discussion, publicize quick-build's temporary nature. Talk about the project's intended benefits, and listen to feedback about the actual impacts.

Community Engagement

Community engagement is essential and also very effective, because it's easy to engage people in providing feedback on real-world solutions that they can see and use. Here are the keys:

- Start engaging with the community before you install the project so that residents' opinions are included from the get-go.
- Be inclusive in your outreach, including perspectives from disadvantaged communities and people of color.
- Emphasize the project's temporary nature, and the ability to change the project after it's installed.
- Implement effective feedback mechanisms during the project, making sure to plan and budget for project adjustments in response to input.

CASE STUDY

The El Cajon Boulevard Business Improvement Association ("The Boulevard") got city councilmembers and the mayor on board to fund a pilot bus and bike lane along a 3-mile stretch of San Diego's El Cajon Boulevard. The Boulevard staff brought in diverse stakeholders and built on longstanding relationships to push the city to dedicate a lane for El Cajon Boulevard's new bus rapid transit line, and got bikes included on this Vision Zero corridor. The entire three-mile project, which launched in January 2020, cost $100K, funded by San Diego's general fund.

Photo credit: Holly Raines

WHERE?

Which Projects are Best for Quick-Build?

Some projects are better than others for the quick-build method.

- **Look to existing plans.** Your community's current active transportation plan already identifies key improvements and priorities. Most such plans will take decades to complete with traditional methods and funding. Quick-build can take those plans to reality much sooner.
- **Fill gaps in the bikeway network, especially now when more people are bicycling.** Look to improve intersections that are dangerous to navigate, short sections of crosstown routes that use busy streets, or long sections of streets that could become "slow streets" to connect neighborhoods.
- **Put disadvantaged communities first.** If your plan doesn't already incorporate an equity analysis to set priorities, this is your chance. Look at a model plan like Oakland's "Let's Bike Oakland" bicycle plan which incorporates a framework of equity and a focus on improving well-being for the city's most vulnerable groups.

If a project is funded and on schedule to be built within a year or two, turn your attention to projects that will take years without quick build. Projects that require expensive modifications—new traffic signals, bridges, reconfigured curbs—are not good quick-build candidates.

Photo credit: Alta Planning + Design

Funding for Quick-Build

POTENTIAL FUNDING SOURCES IN CALIFORNIA

Available funding for quick-build projects varies a lot from one municipality to the next. But here are a few ideas.

- Public works departments' essential repaving and repair projects are great opportunities to put in quick-build projects at low cost.
- Local and regional funds such as general fund, sales tax revenue, and Air Quality Management District funds can be used for quick-build projects.
- Tack on costs to another publicly-funded transportation project, or even a private project. For example, a development project that is required to repave and stripe new bike lanes might install a protected bike lane using quick-build materials instead.
- In 2020, the **Active Transportation Program** piloted a special quick-turnaround funding pot for quick-build projects, with an earlier (summer) deadline. Keep an eye on the ATP to see if they continue to offer this funding in future years. CalBike will be pushing them to do so.
- PeopleForBikes has a **small grant program** for infrastructure projects.
- AARP's **Community Challenge grant** could fund a quick-build project.

This resource was prepared in partnership with Alta Planning + Design. For more information see our complete **Quick-Build Guide**.

CALIFORNIA BICYCLE COALITION

APPENDIX D

Bike Parking Guidance

Safe Routes to School Walk Audit Report and Active Transportation Action Plan

ESSENTIALS OF

BIKE PARKING

Selecting and installing bicycle parking that works

apbp

Association of Pedestrian and Bicycle Professionals

Expertise for Active Transportation

Essentials of Bike Parking
Revision 1.0, September 2015

Acknowledgments

Lead author - Nathan Broom

Contributors - Eric Anderson, Vince Caristo, Ryan Dodge, Jennifer Donlon-Wyant, Sarah Figliozzi, Elco Gauw, Dan Jatres, David Loutzenheiser, Heath Maddox, Brian Patterson, Cara Seiderman

Alta Planning + Design donated their expertise in the design and illustration of this guide. Cat Cheng, lead designer, Jillian Portelance, production designer.

Cover image: *Sign D4-3 from Standard Highway Signs, 2004 Edition, http://mutcd.fhwa.dot.gov/ser-shs_millennium_eng.htm*

APBP is an association of professionals who plan, implement and advocate for walkable and bicycle-friendly places.

Association of Pedestrian and Bicycle Professionals

bikeparking@apbp.org
www.apbp.org

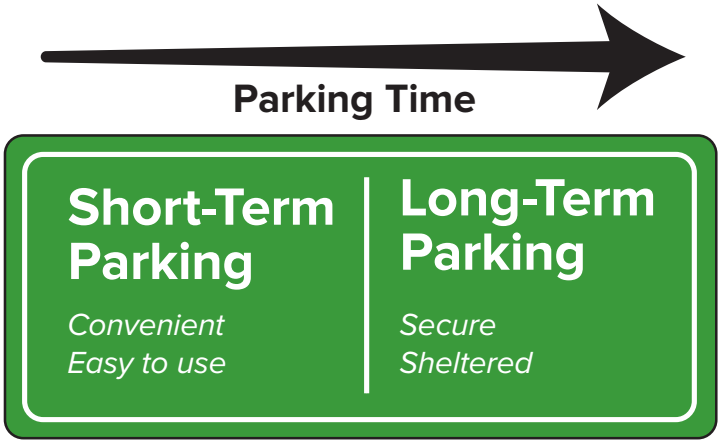
TABLE OF CONTENTS

INTRODUCTION

Among the necessary supports for bicycle transportation, bike parking stands out for being both vital and easy. Still, it requires some attention to get it right. Bike parking may go unused if it's not more appealing to users than the nearest sign post. A minor mistake in installation can make a quality rack unusable. The variety of bicycle sizes, shapes, and attachments continues to increase, and good bike parking should accommodate all types.

The Association of Pedestrian and Bicycle Professionals (APBP) prepared this guide for people planning to purchase or install bike parking fixtures on a limited scale. It is a brief overview of APBP's comprehensive *Bicycle Parking Guidelines* handbook, available at www.apbp.org.

This guide divides bike parking into short-term and long-term installations. These two kinds of parking serve different needs, and the starting point for most bike parking projects is recognizing whether the installation should serve short-term users, long-term users, or both. If users will typically be parking for two hours or longer, they are likely to value security and shelter above the convenience and ease that should characterize short-term parking.



SHORT-TERM PARKING

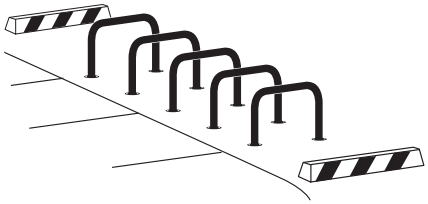
Effective bike parking for short-term users depends on two main factors: 1) proximity to the destination and 2) ease of use.

Short-term parking is designed to meet the needs of people visiting businesses and institutions, and others with similar needs—typically lasting up to two hours. Short-term users may be infrequent visitors to a location, so the parking installation needs to be readily visible and self-explanatory.

INVERTED U

POST & RING

CORRAL



SITE PLANNING

Location

Short-term bike parking should be visible from and close to the entrance it serves—50' or less is a good benchmark. Weather-protected parking makes bicycle transportation more viable for daily and year-round use, and it can reduce the motivation for users to bring wet bicycles into buildings. Area lighting is important for any location likely to see use outside of daylight hours.

Security

All racks must be sturdy and well-anchored, but location determines the security of short-term parking as much as any other factor. Users seek out parking that is visible to the public, and they particularly value racks that can be seen from within the destination. Areas with high incidence of bicycle theft may justify specific security features such as specialty racks, tamper-proof mounting techniques, or active surveillance.

Quantity

Many jurisdictions have ordinances governing bike parking quantity. APBP's full *Bicycle Parking Guidelines* offers complete recommendations for the amount and type of parking required in various contexts. In the absence of requirements, it's okay to start small—but bear in mind that perceived demand may be lower than the demand that develops once quality parking appears.

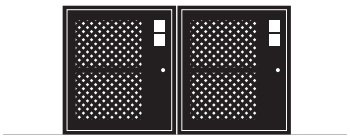
BIKE CORRALS

Some cities with limited sidewalk space and strong bicycle activity place bike parking in on-street "bike corrals" located in the street area adjacent to the curb. Bike corrals can sometimes make use of on-street areas that are unsuitable for auto parking. When replacing a single auto parking space, a corral can generally fit 8 to 12 bicycles. APBP's full *Bicycle Parking Guidelines* provides details about designing and siting bike corrals. **apbp.org**

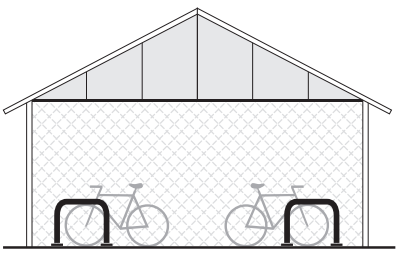
LONG-TERM PARKING

Users of long-term parking generally place high value on security and weather protection. Long-term parking is designed to meet the needs of employees, residents, public transit users, and others with similar needs. These users typically park either at home or at a routine destination such as a workplace. They often leave their bicycles unmonitored for a period of several hours or longer, so they require security and weather protection that let them park without unreasonable concern for loss or damage.

Long-term parking can take a variety of forms, including a room within a residential building or workplace, a secure enclosure within a parking garage, or a cluster of bike lockers at a transit center. Some long-term parking is open to the public—such as a staffed secure enclosure at a transit hub—and some of it is on private property with access limited to employees, residents, or other defined user groups.



BIKE LOCKERS



SHELTERED SECURE ENCLOSURE

SITE PLANNING

Location

Appropriate locations for long-term parking vary with context. Long-term parking users are typically willing to trade a degree of convenience for weather protection and increased security. Long-term installations emphasize physical security above public visibility. Signage may be needed for first-time users.

Security

Security is paramount for quality long-term parking. Access to parked bicycles can be limited individually (as with lockers) or in groups (as with locked bike rooms or other secure enclosures). Options for access control include user-supplied locks, keys, smart cards, and other technologies.

Quantity

Refer to local ordinances or the comprehensive APBP *Bicycle Parking Guidelines* to determine the amount and type of parking required for various contexts.

SPECIAL CONSIDERATIONS FOR LONG-TERM PARKING

In many ways, short-term and long-term parking function similarly and are served by the same guidelines. Some exceptions are noted below.

Density

The competition of uses for high-security and sheltered locations creates particular pressure on long-term parking to fit more bicycles in less space. When parking needs cannot be met with standard racks and spacing recommended in this guide, consider rack systems designed to increase parking density. See the high-density racks table on page 7. Note that increasing density without careful attention to user needs can create parking that excludes people because of age, ability, or bicycle type. This may result in people parking bicycles in other less desirable places or choosing not to bike at all.

Bicycle design variety

Long-term parking facilities should anticipate the presence of a variety of bicycles and accessories, including—depending on context—recumbents, trailers, children's bikes, long-tails, and others. To accommodate trailers and long bikes, a portion of the racks should be on the ground and should have an additional 36" of in-line clearance.

Performance criteria

The bike rack criteria in the next section apply to racks used in any installation, regardless of its purpose. Long-term installations often use lockers and group enclosures not discussed in this guide. Such equipment raises additional considerations that are discussed in detail in APBP's full *Bicycle Parking Guidelines*. **apbp.org**

INSTALLATION

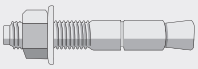
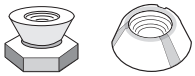
Selecting an appropriate installation surface and technique is key to creating bicycle parking that remains secure and attractive over time.

INSTALLATION SURFACE

A sturdy concrete pad is an ideal surface for installing bicycle parking. Other surfaces often encountered include asphalt, pavers, and soft surfaces such as earth or mulch. These surfaces can accommodate in-ground mounting or freestanding bike racks such as inverted-U racks mounted to rails. See APBP's *Bicycle Parking Guidelines* for details. **apbp.org**

INSTALLATION FASTENERS

When installing racks on existing concrete, consider the location and select appropriate fasteners. Drill any holes at least three inches from concrete edges or joints. Some locations benefit from security fasteners such as concrete spikes or tamper-resistant nuts on wedge anchors. Asphalt is too soft to hold wedge and spike anchors designed for use in concrete. Installing bike parking on asphalt typically requires freestanding racks and anchor techniques specific to asphalt.

FASTENERS		
CONCRETE SPIKE		Installs quickly in concrete with a hammer. Tamper-resistant. Removal may damage concrete and/or rack.
CONCRETE WEDGE ANCHOR		Allows for rack removal as needed. Not tamper-resistant, but can accommodate security nuts (below).
SECURITY NUTS		Use with concrete wedge anchors. Security nuts prevent removal with common hand tools.

INSTALLATION TECHNIQUES

When installing racks on existing concrete, choose those with a surface-mount flange and install with a hammer drill according to the specifications of the mounting hardware selected. When pouring a new concrete pad, consider bike parking fixtures designed to be embedded in the concrete. Because replacing or modifying an embedded rack is complicated and costly, this installation technique requires particular attention to location, spacing, rack quantity, and material.

BICYCLE RACK SELECTION

PERFORMANCE CRITERIA FOR BIKE PARKING RACKS

These criteria apply to any rack for short- or long-term use.

CRITERIA	DETAILS
Supports bike upright without putting stress on wheels	The rack should provide two points of contact with the frame—at least 6" apart horizontally. Or, if a rack cradles a bicycle's wheel, it must also support the frame securely at one point or more. The rack's high point should be at least 32".
Accommodates a variety of bicycles and attachments	The racks recommended on page 6 ("racks for all applications") serve nearly all common bike styles and attachments—if installed with proper clearances (see placement section). Avoid designs and spacing that restrict the length, height, or width of bicycles, attachments, or wheels.
Allows locking of frame and at least one wheel with a U-lock	A closed loop of the rack should allow a single U-lock to capture one wheel and a closed section of the bike frame. Rack tubes with a cross section larger than 2" can complicate the use of smaller U-locks.
Provides security and longevity features appropriate for the intended location	Steel and stainless steel are common and appropriate materials for most general-use racks. Use tamper-resistant mounting hardware in vulnerable locations. Rack finish must be appropriate to the location (see materials and coatings section).
Rack use is intuitive	First-time users should recognize the rack as bicycle parking and should be able to use it as intended without the need for written instructions.

RACK STYLES

The majority of manufactured bike racks fall into one of the categories on pages 6-8. Within a given style, there is wide variation among specific racks, resulting in inconsistent usability and durability. APBP recommends testing a rack before committing broadly to it.

RACKS FOR ALL APPLICATIONS

When properly designed and installed, these rack styles typically meet all performance criteria and are appropriate for use in nearly any application.

INVERTED U
also called staple, loop

Common style appropriate for many uses; two points of ground contact. Can be installed in series on rails to create a free-standing parking area in variable quantities. Available in many variations.

POST & RING

Common style appropriate for many uses; one point of ground contact. Compared to inverted-U racks, these are less prone to unintended perpendicular parking. Products exist for converting unused parking meter posts.

WHEELWELL-SECURE

Includes an element that cradles one wheel. Design and performance vary by manufacturer; typically contains bikes well, which is desirable for long-term parking and in large-scale installations (e.g. campus); accommodates fewer bicycle types and attachments than the two styles above.

This guide analyzes the most common styles of bike racks, but it is not exhaustive. Use the performance criteria on page 5 to evaluate rack styles not mentioned. Custom and artistic racks can contribute to site identity and appearance, but take care that such racks don't emphasize appearance over function or durability.

HIGH-DENSITY RACKS

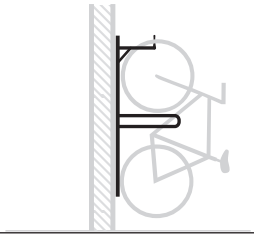
These rack styles do not meet all performance criteria but may be appropriate in certain constrained situations.

High-density rack systems can maximize the use of limited parking space, but they don't work for all users or bicycles. If installing these racks, reserve additional parking that accommodates bicycles with both wheels on the ground for users who are not able to lift a bicycle or operate a two-tier rack, or for bikes that are not compatible with two-tier or vertical racks.

STAGGERED WHEELWELL-SECURE

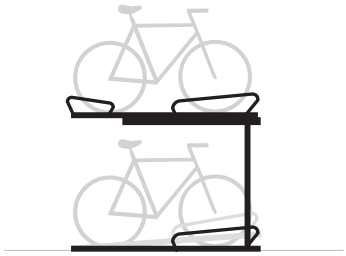
Variation of the wheelwell-secure rack designed to stagger handlebars vertically or horizontally to increase parking density. Reduces usability and limits kinds of bikes accommodated, but contains bikes well and aids in fitting more parking in constrained spaces.

VERTICAL



Typically used for high-density indoor parking. Not accessible to all users or all bikes, but can be used in combination with on-ground parking to increase overall parking density. Creates safety concerns not inherent to on-ground parking.

TWO-TIER



Typically used for high-density indoor parking. Performance varies widely. Models for public use include lift assist for upper-tier parking. Recommend testing before purchasing. Creates safety concerns not inherent to on-ground parking, and requires maintenance for moving parts.

RACKS TO AVOID

Because of performance concerns, APBP recommends selecting other racks instead of these.

WAVE
also called undulating or serpentine

Not intuitive or user-friendly; real-world use of this style often falls short of expectations; supports bike frame at only one location when used as intended.

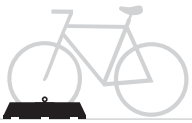
SCHOOLYARD
also called comb, grid

Does not allow locking of frame and can lead to wheel damage. Inappropriate for most public uses, but useful for temporary attended bike storage at events and in locations with no theft concerns. Sometimes preferred by recreational riders, who may travel without locks and tend to monitor their bikes while parked.

COATHANGER

This style has a top bar that limits the types of bikes it can accommodate.

WHEELWELL



Racks that cradle bicycles with only a wheelwell do not provide suitable security, pose a tripping hazard, and can lead to wheel damage.

BOLLARD

This style typically does not appropriately support a bike's frame at two separate locations.

SPIRAL

Despite possible aesthetic appeal, spiral racks have functional downsides related to access, real-world use, and the need to lift a wheel to park.

SWING ARM SECURED

These racks are intended to capture a bike's frame and both wheels with a pivoting arm. In practice, they accommodate only limited bike types and have moving parts that create unneeded complications.

RACK MATERIALS & COATINGS

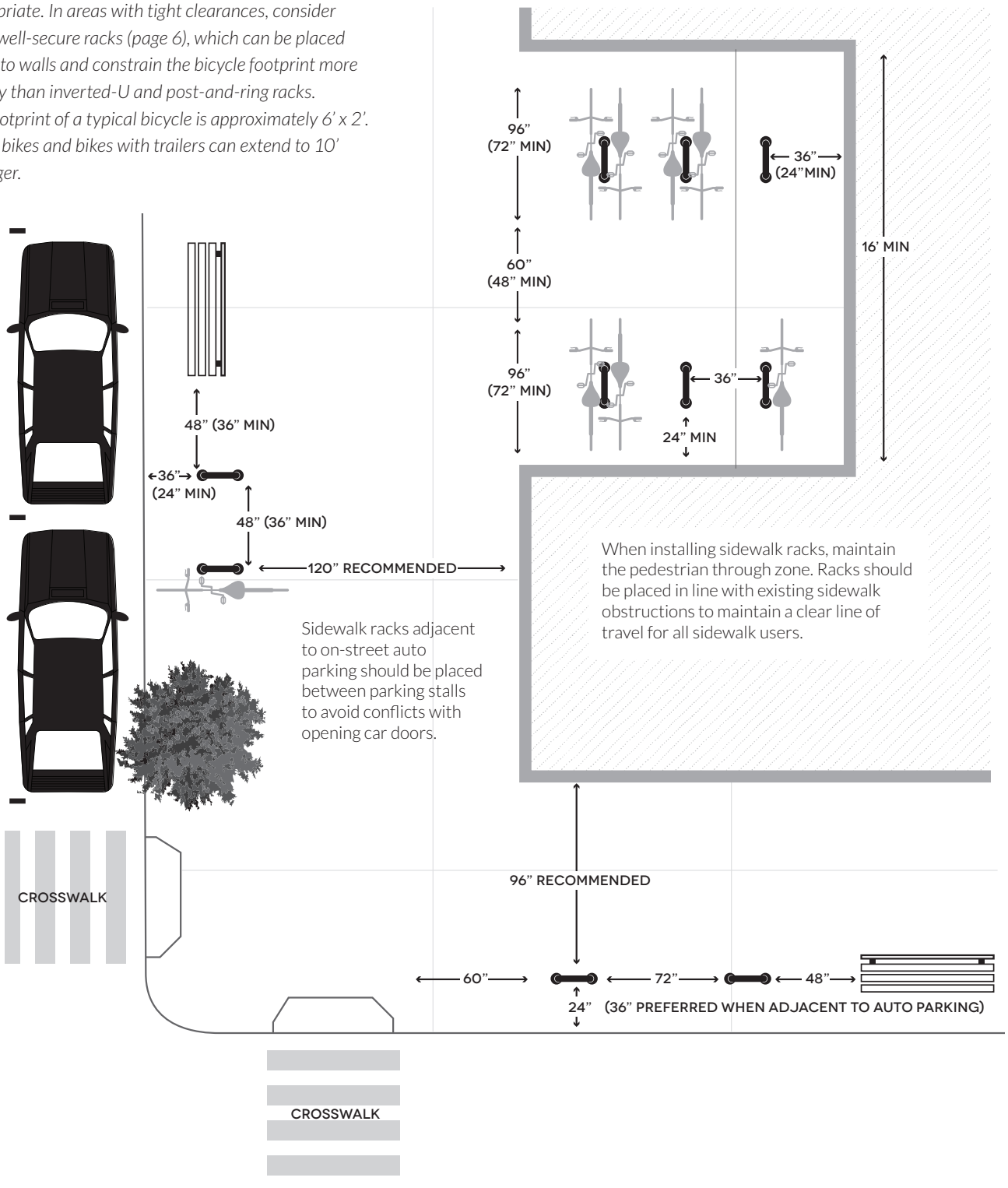
Most bicycle parking racks are made of carbon steel or stainless steel. Carbon steel requires a surface coating to resist rust while appropriate grades of stainless steel need no coating. Not all materials and coatings with the same name perform equally. Square tubing provides a security advantage as round tubing can be cut quietly with a hand-held pipe cutter. Before purchasing racks, talk to suppliers about your particular conditions and choose a material and coating that suit your needs. The following are common choices, depending on local considerations and preferences.

RACK MATERIAL – COATING	RELATIVE PURCHASE COST	DURABILITY	CAUTIONS
Carbon steel - galvanized	Usually lowest	Highly durable and low-maintenance; touch-up, if required, is easy and blends seamlessly	Utilitarian appearance; can be slightly rough to the touch
Carbon steel - powder coat* (TGIC or similar)	Generally marginally higher than galvanized	Poor durability	Requires ongoing maintenance; generally not durable enough for long service exposed to weather; not durable enough for large-scale public installations
Carbon steel - thermoplastic	Intermediate	Good durability	Appearance degrades over time with scratches and wear; not as durable as galvanized or stainless
Stainless steel - no coating needed, but may be machined for appearance	Highest	Low-maintenance and highest durability; most resistant to cutting	Can be a target for theft because of salvage value; maintaining appearance can be difficult in some locations

** When applied to carbon steel, TGIC powder coat should be applied over a zinc-rich primer or galvanization to prevent the spread of rust beneath the surface or at nicks in the finish.*

PLACEMENT

The following minimum spacing requirements apply to some common installations of fixtures like inverted-U or post-and-ring racks that park one bicycle roughly centered on each side of the rack. Recommended clearances are given first, with minimums in parentheses where appropriate. In areas with tight clearances, consider wheelwell-secure racks (page 6), which can be placed closer to walls and constrain the bicycle footprint more reliably than inverted-U and post-and-ring racks. The footprint of a typical bicycle is approximately 6' x 2'. Cargo bikes and bikes with trailers can extend to 10' or longer.



APPENDIX E

Recommendation
Cost Range Estimates

Safe Routes to School Walk Audit Report and Active Transportation Action Plan

Appendix E: Recommendation Cost Range Estimates

Cost estimate was one of many factors considered when prioritizing recommendations for Napa County Safe Routes to School Walk Audit reports. Recommendations in which a high cost estimate would considerably delay implementation of the recommendation may have been given a lower priority level in order to prioritize recommendations that are lower cost and therefore more likely to be installed more quickly. Cost was considered on a high-level scale; real cost ranges of recommendations may differ from cost range estimates included in Walk Audit reports.

Cost range estimates for Safe Routes to School Walk Audit recommendations are as follows:

$	< $25,000
$$	Between $25,000 and $250,000
$$$	$250,000 to $1 million
$$$$	> $1 million

APPENDIX F

Next Steps

Safe Routes to School Walk Audit Report and Active Transportation Action Plan

From Recommendations to Action: Next Steps

Napa County Bicycle Coalition (NCBC) has concluded the final task under the Napa County Safe Routes to School Program in coordination with the Napa County Office of Education, funded under the One Bay Area Grant and the Active Transportation Program.

Evaluation of active transportation barriers at school sites are complete and final reports of recommendations for each school in Napa County will be published in the spring of 2022. The NCBC team is already planning the next phase of Safe Routes to School that will help bring these recommendations into reality. Supported by a "Quick Strike" grant through the Metropolitan Transportation Commission (MTC), NCBC will continue its SRTS work over the course of this next year.

NCBC SRTS Quick Strike Program Elements (2022-2023):

- Engage parents in advocating for implementing the recommendations. Hold safety summits at various school sites that raise awareness of the recommendations and provide a forum for parents to discuss strategies and to plan next steps. Work with schools and other stakeholders to implement recommendations. Build a Safe Routes to School (SRTS) Advisory Committee, including "parent champions" from key school sites, to help guide the SRTS program into the next phase of growth and engagement and to help ensure the long-term viability of the program, providing a structure both for stakeholder feedback and input, as well as for increased local investment in future program activities.
    - Action Steps:
        - Hold up to seven safety summits at various school sites
        - Form SRTS advisory committee
- Provide education and encouragement programming at elementary and middle schools that includes bike rodeos throughout the year, Bike Month (and Bike to School Day) in the spring, and Walk and Roll to School Day in the fall. This programming aims to increase the number of students who walk or bike to school and to ensure that, as barriers are removed and facilities are improved, youth have the skills and confidence to take advantage of improvements.
    - Action Steps:
        - Hold up to 14 Bike Rodeos at elementary and middle schools
        - Provide outreach and support for Walk and Roll to School Day and Bike Month activities at up to seven school sites
        - Support local Agricultural & Hospitality Industry workers with bicycle safety education
- Conduct community-based safety education programming that reaches identified populations of concern. Through bilingual Family Biking Workshops, community rides in partnership with other local organizations, and safety education outreach to agricultural

and hospitality workers, NCBC will tailor our programming to help engage the full spectrum of our community.

    - Action Steps:
        - Conduct up to nine bilingual Family Biking Workshops
        - Conduct up to six community events and rides

- Secure future funding for the Safe Routes to School Partnership (SRTS). We believe that every student should be able to safely walk or ride a bike to school. The SRTS program provides vital safety education, encouragement, and community engagement programs to thousands of students annually while advocating for facilities that make active transportation safe and accessible. SRTS will be a key force in helping to make the Walk Audit recommendations a reality. Napa County is one of the only counties in the region that lacks dedicated, long-term funding for these programs and efforts, and without that support implementing the recommendations will face more barriers.
    - Action Steps:
        - Apply for competitive and discretionary grant funding
        - Seek funding support from jurisdictions
        - Seek funding support from community health
        - Provide annual program reports to stakeholders