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Liberty Elementary School, Riverside Summary and Recommendations Report

Community Pedestrian and Bicycle Safety Training



Berkeley SafeTREC

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Acknowledgements

Thank you to the Planning Committee for inviting us into their community and partnering with us to make Liberty Elementary School in Riverside, California a safer place to walk and bike.

Our work took place on the ethnohistoric territory of the Payómkawichum/Luiseño, Cahuilla, and Tongva/Gabrieleno peoples. We recognize that every community member of Liberty Elementary School has, and continues to benefit from, the use and occupation of Payómkawichum/Luiseño, Cahuilla, and Tongva Gabrieleno land.

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We would like to acknowledge the tragic loss of two community members at the Hayes Street / Roosevelt Avenue intersection in March 2022. No loss of life on City roadways is acceptable, when serious and fatal traffic collisions can be prevented.

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This report was prepared in cooperation with the California Office of Traffic Safety (OTS). The opinions, findings, and conclusions expressed in this publication are those of the author(s) and not necessarily those of OTS.

Introduction

The Community Pedestrian and Bicycle Safety Program (CPBST) is a statewide project of UC Berkeley Safe Transportation Research and Education Center (SafeTREC) and California Walks (Cal Walks). The program uses the Safe System Approach to engage residents and safety advocates to develop a community-driven action plan to improve walking and biking safety in their communities and to strengthen collaboration with local officials and agency staff. Cal Walks and SafeTREC (Project Team) worked with the Planning Committee to develop workshop goals and tailor the curriculum to address the community's safety needs and priorities.

The City of Riverside requested a CPBST for Liberty Elementary School to:

1. Develop a pedestrian and bicycle safety circulation plan specific to Liberty Elementary School that addresses the concerns of parents and students; and
2. Develop momentum and support for Safe Routes to School programming at Liberty Elementary School, including the development of a Safe Routes to School Action Plan and Study.

The Liberty Elementary School CPBST workshop convened the larger local community on August 17, 2023 at the school campus. Forty-three community members participated in the workshop, including Liberty Elementary School staff and families, the City of Riverside, City Council Ward 5, Riverside Unified School District, and the Bourns Family Youth Innovation Center.

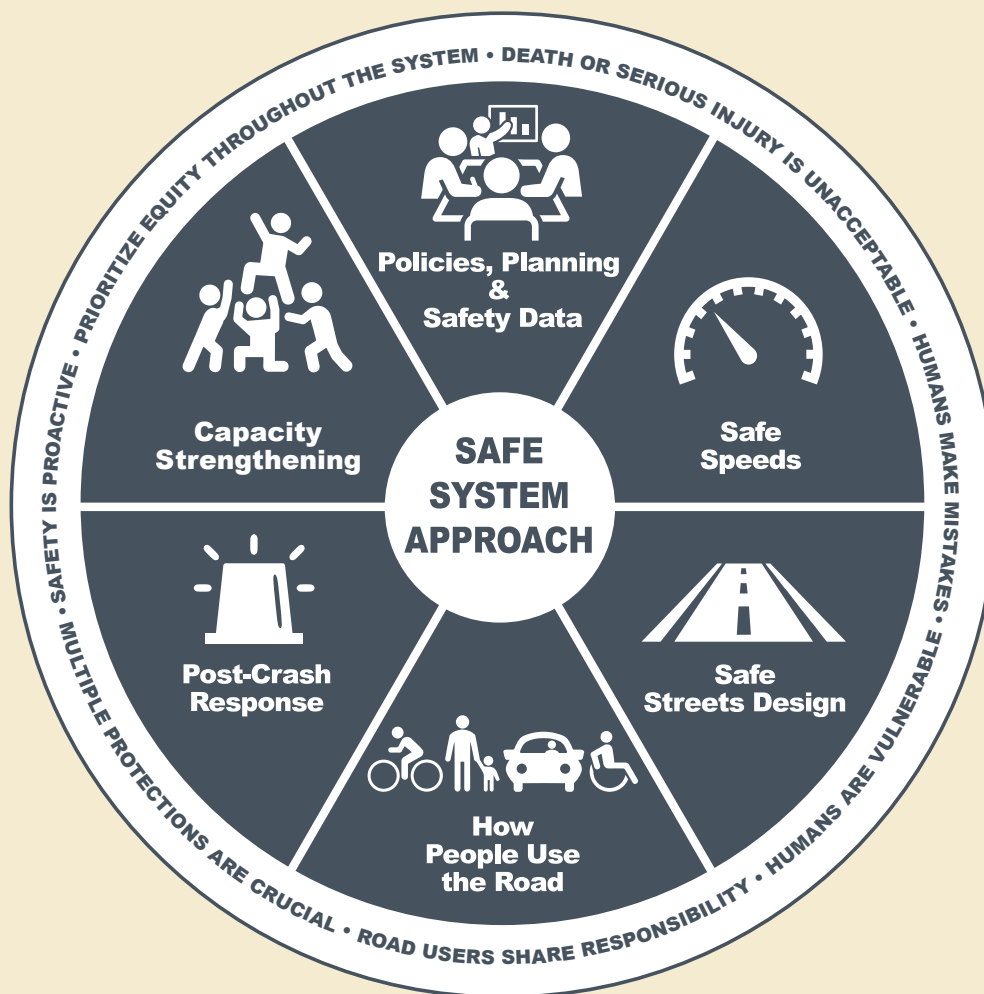
Prior to the workshop, the Planning Committee attended three meetings, conducted in-depth community outreach, and publicized the program's efforts in the community.

The following report summarizes the outcomes of the workshop and provides community and Project Team recommendations for continued guidance in project and program implementation.

Safe System Approach

The Project Team adapted the Federal Highway Administration's Safe System framework to make them more impactful for grassroots community engagement. The Safe System approach aims to eliminate all fatal and serious injuries. We emphasize equity as a central component and acknowledge the critical need to strengthen partnerships between transportation professionals and the communities they serve in order to create safe streets for everyone.

For more information about the Safe System Approach, please review our [policy brief](#). To learn more about Safe System strategies, please review our [toolkit](#).



Background

Liberty Elementary School is located in the City of Riverside in Riverside County. There are 679 students enrolled at Liberty Elementary School. All parking lots are closed during morning dropoff and afternoon pickup and parents use the newly designated loading zones for dropoff and pickup. The school currently provides one bike rack that has 28 spaces for bike storage during the school day. There are approximately four buses (one general education bus and three special education buses) that use the bus dropoff and pickup on Garfield Street to bring children to campus.

Per the [California Office of Traffic Safety's Crash Rankings](#), in 2020, Riverside ranked 7th out of 15 cities of similar population size for people killed or injured in a traffic crash (with a ranking of "one" indicating the worst crash rate). Most notably, the City ranked 2nd out of 15 cities for bicycle crashes involving a person under the age of 15, and 3rd out of 15 cities for speed related crashes.

Per 2023 Esri Community Analyst data, the City of Riverside has a large number of households with one or more persons with a disability (26 percent). Riverside also has a significant number of households with seniors (12 percent), households without a vehicle (11 percent), and households living below the poverty level (12 percent).

The largest commute pattern outside of single occupancy vehicles to work for those in Riverside is carpooling, with 11 percent of residents carpooling to work as their primary form of transportation. Three percent of the City's population walk to work, two percent take public transportation, and one percent bike to work. The full demographic report from 2023 Esri Community Analyst data can be found in the appendix.



Bicycle and pedestrian crashes within a 1/4-mile radius of Liberty Elementary School.

Local Policies and Plans

The 2021 [City of Riverside PACT](#) consists of: a Pedestrian Target Safeguarding Plan (PTS), an Active Transportation Plan (AT Plan), a Complete Streets Ordinance (CSO), and a Trails Master Plan (TMP). The PACT project team conducted Walk Shops, documenting existing conditions, travel behavior, and potential active transportation challenges. Surveys administered as part of the community engagement strategy in and around Magnolia Ave and Van Buren Blvd (Ward 5) highlighted Van Buren Blvd as a corridor that should be improved for walkability and named bicycle safety from vehicles as a concern.

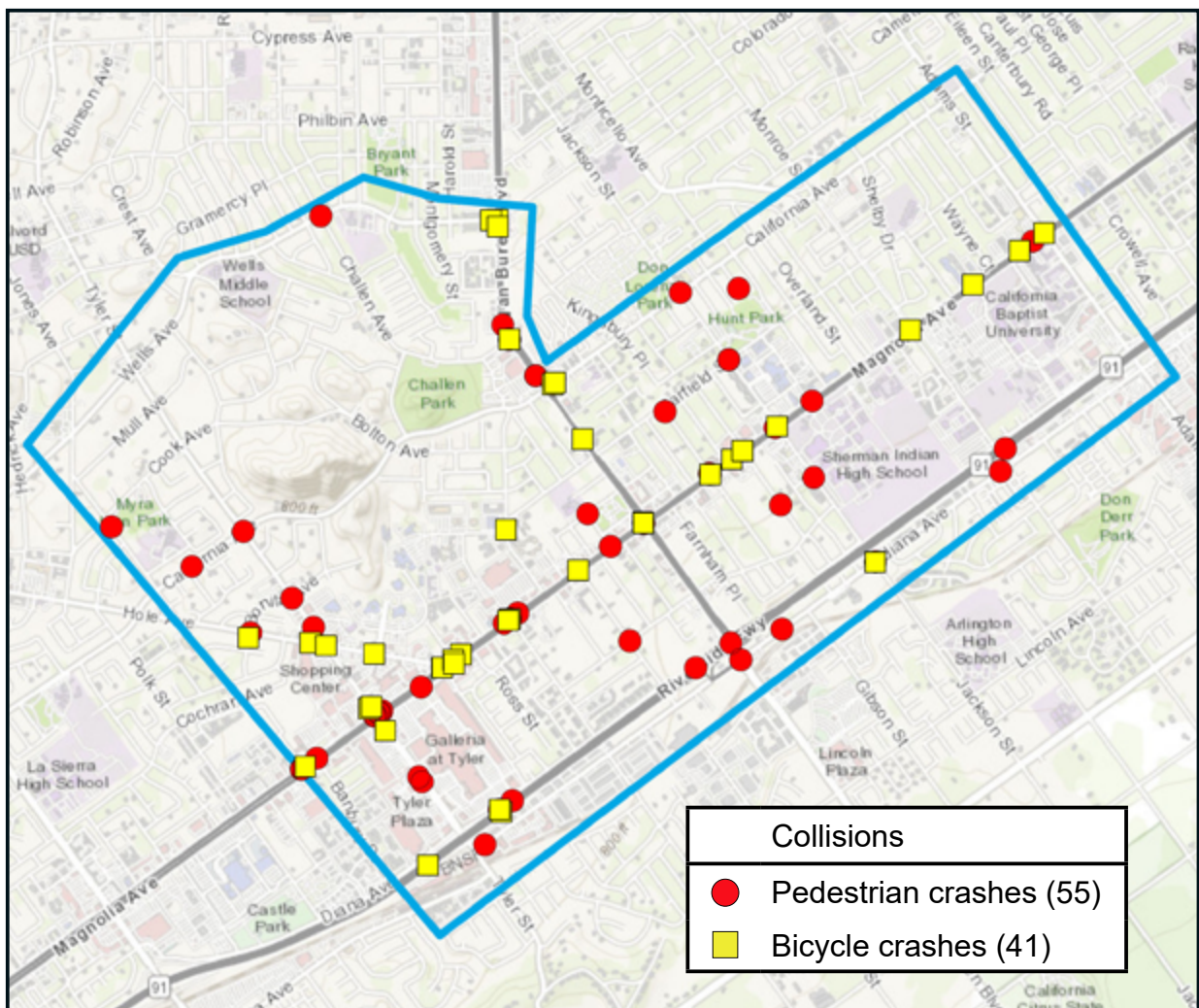
Table 4-11 in the Active Transportation Plan outlines recommendations for specific corridors in Ward 5, including signalized intersection improvements at Magnolia Avenue and Van Buren Boulevard.

The [2022 City of Riverside Local Roadway Safety Plan](#) (LRSP) completed a citywide safety assessment and recommends improvements for non-motorized road users such as high visibility crosswalks, audible pedestrian push buttons, LED stop signs, rectangular rapid flashing beacons, and speed feedback signs.

Pedestrian and Bicycle Crash History

The following data is based on police-reported pedestrian and bicycle crashes resulting in injuries to pedestrians¹ and bicyclists within the community workshop boundaries for Liberty Elementary School. Data reported in this section are from the Statewide Integrated Traffic Records Systems (SWITRS) for the years 2013 to 2022. Data from 2021 and 2022 are provisional as of July 2023. A full discussion of the pedestrian and bicycle crash data can be found in the appendix.

The map shows all of the crashes within the workshop boundaries in which a person was injured and that involved a pedestrian or bicyclist from 2018 to 2022.



Crash Map for Liberty Elementary School.

Data Source SWITRS 2018-2022. 2021 and 2022 data is provisional as of July 2023.

¹ A pedestrian is defined as any person who is afoot or using a non-motorized personal conveyance other than a bicycle. This includes skateboards, strollers, wheelchairs, and any electric assistive mobility device

Community Workshop Boundaries

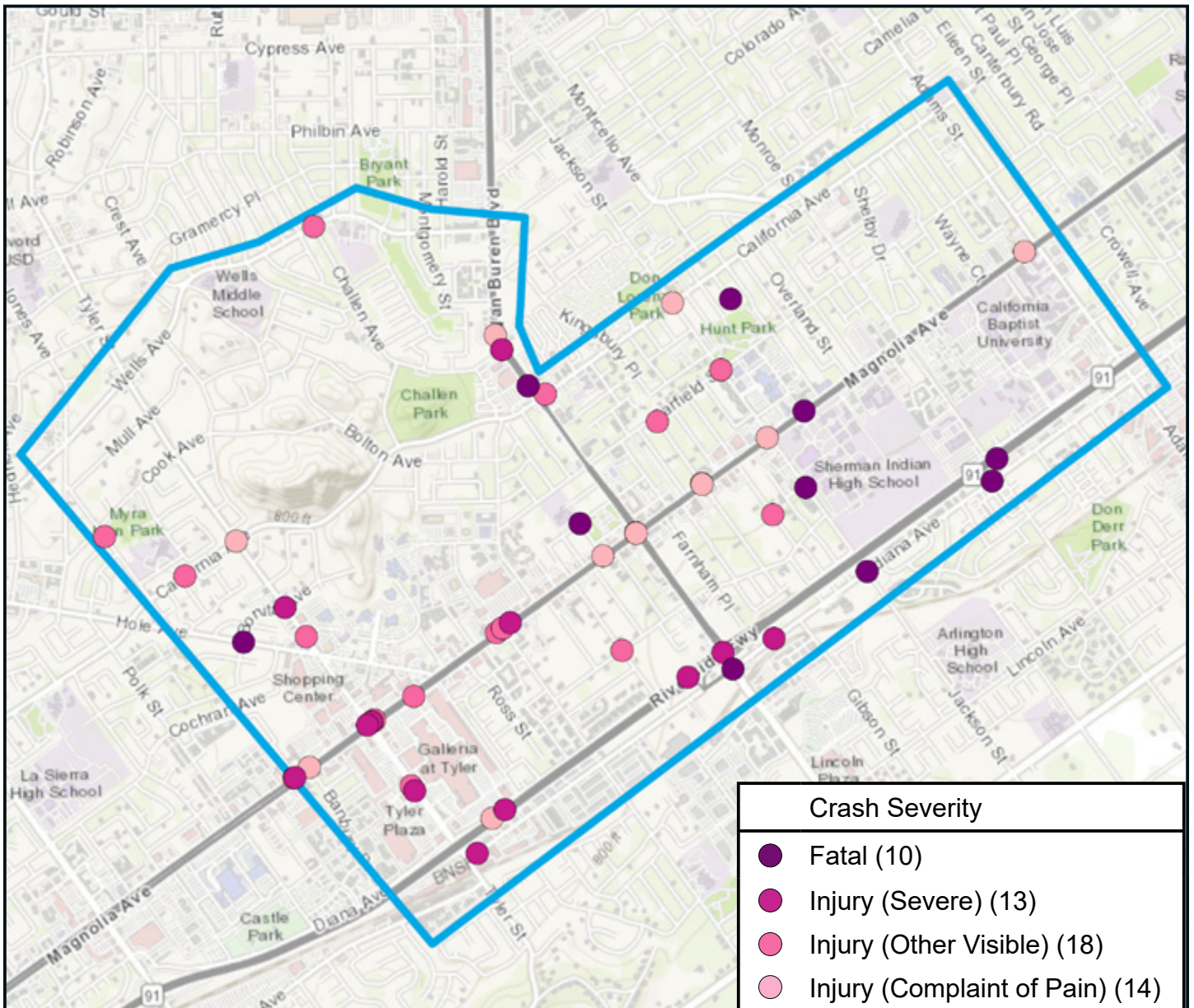
The boundaries for this workshop were: Wells Avenue and California Avenue on the north, Indiana Avenue on the south, Adams Street on the east, and Banbury Drive and Tyler Street on the west. The Planning Committee chose these boundaries to include key community destinations, including the Liberty Elementary School campus, Arlington Park and Library, Tyler Plaza, the Galleria at Tyler, and California Baptist University. When we examine our workshop focus area, we find that it sees more fatal or serious injury pedestrian crashes (22.1 percent) and multiple motor vehicle crashes (51.9 percent) than both the state of California (17.5 and 43.2 percent respectively) and Riverside County (13.5 and 48.6 percent respectively).

Free SafeTREC Data Resources

The Transportation Injury Mapping System (TIMS) is a web-based tool that allows users to analyze and map California crash data from the Statewide Integrated Traffic Records System (SWITRS). TIMS provides quick, easy, and free access to geocoded crash data. Visit: <https://tims.berkeley.edu>

Street Story is a web-based community engagement tool that allows residents and community organizations to gather information that is important to transportation safety, including crashes, near-misses, general hazards and safe locations to travel. To promote access to the tool, SafeTREC offers technical assistance to communities and organizations interested in using Street Story. The platform and the information collected is free to use and publically available in English and Spanish. Visit: <https://streetstory.berkeley.edu>

Pedestrian Crashes



Pedestrian crash severity. Data Source SWITRS 2018-2022. 2021 and 2022 data is provisional as of July 2023.

Pedestrian Crashes

Pedestrian crashes appear to jump in 2019, which is opposite of what we have mostly seen due to the shelter-in-place orders during the COVID-19 shelter-in-place orders.² In the most recent five years of data available, 2018 to 2022, there were 55 pedestrian crashes, which includes eleven pedestrian fatalities, including two at the Hayes Street/Roosevelt Avenue intersection in front of Liberty Elementary and one at the Jackson Street/Hendry Avenue intersection in front of Sherman Indian High School. The pedestrians hit and killed in front of Liberty Elementary School were a 53-year-old woman and a 2-year-old boy during school dismissal time. Pedestrian crashes were concentrated on Magnolia Avenue, Van Buren Boulevard, Tyler Street, and streets adjacent to State Route 91 (SR-91), which participants agreed are unsafe corridors for those walking and biking. Of the pedestrian crashes, 80 percent (44 crashes) occurred between noon and midnight, with 9 p.m. to midnight seeing the highest individual number of crashes (13 crashes). Mondays and Fridays saw the most crashes, with 21 of the 55 crashes (38.1 percent) total occurring on these weekdays. A driver not yielding the right-of-way to a pedestrian at a marked or unmarked crosswalk was the primary cause of crashes for 29 percent of all crashes. Thirty-one percent of crashes were due to a pedestrian failing to yield to vehicles when crossing outside of a marked or unmarked crosswalk.

Of the 57 pedestrians injured in the 55 pedestrian crashes, 42.1 percent (24 victims) of all victims were either killed or seriously injured in a crash, a shockingly high percentage. Victims aged 18 or younger and young adults (aged 25-34) each comprised 23.6 percent of all pedestrian crash victims, making up almost half (48.2 percent) of all victims. Ten bicycle or pedestrian crashes occurred within a 1/4-mile radius of Liberty Elementary School, with half of all the crashes occurring at the Magnolia Avenue/Van Buren Boulevard intersection. Five of these crashes involved pedestrians.

² However, this decline is not lasting. Nationally, preliminary 2022 data shows an increase in traffic fatalities and of pedestrian fatalities from 2020 figures but a marginal decrease from 2021 (DOT HS 813 298 and DOT HS 813 448). Nationally, bicycle fatalities show an increase of 10.6 percent between 2021 and 2022 (DOT HS 813 448). <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813298> <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813448>



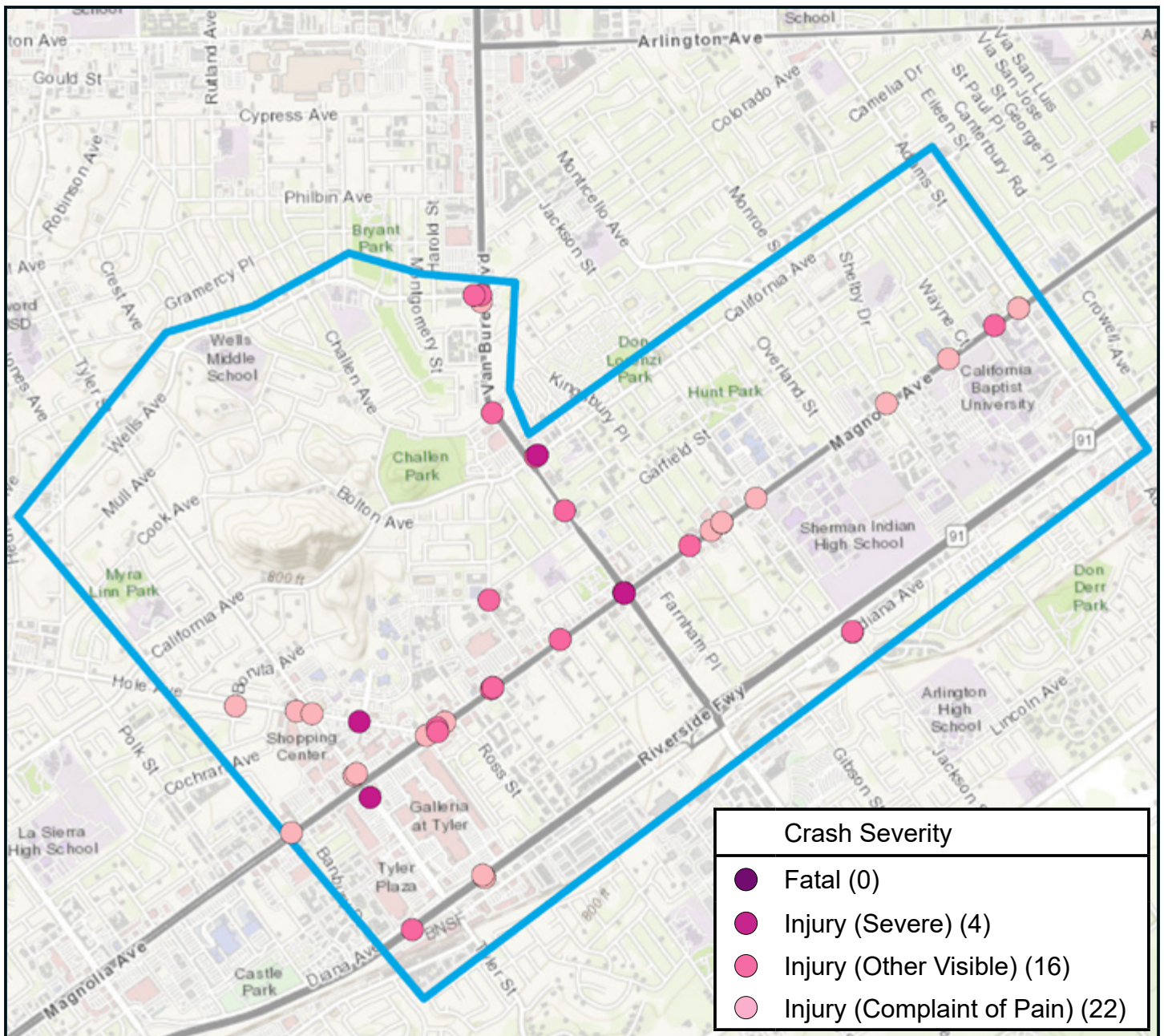
Bicycle Crashes

Over the 10-year period between 2013 and 2022, bicycle crashes appeared to trend downward starting in 2016, with a significant drop in 2017 and again during COVID-19 shelter-in-place orders. In the most recent five years of data available, 2018 to 2022, 42 bicycle crashes occurred in the workshop focus area. Similar to pedestrian crashes, bicycle crashes were also concentrated on Van Buren Boulevard and Tyler Street, while also seeing crashes concentrated on Arlington Avenue and Hole Avenue. Of the 41 crashes, 26.2 percent (11 crashes) of crashes happened between the evening commute hours, bicycle crashes were also concentrated on Van Buren Boulevard and Tyler Street, while also seeing crashes concentrated on Arlington Avenue and Hole Avenue. Of the 41 crashes, 26.2 percent (11 crashes) of crashes happened between the evening commute hours, 6 pm to 9 pm. Eight crashes each occurred on Monday, Wednesday, and Friday. The most common primary crash factor for most of these bicycle crashes was due to a bicyclist riding in the opposite direction on the roadway as motor vehicles, which was associated with 16 crashes.

Among the 40 victims of the 42 bicyclist crashes, there were no fatalities and four serious injuries which all occurred on either Arlington Avenue, Van Buren Boulevard, Tyler Street, or Hole Avenue. For two of the crashes, while a bicyclist was involved in a reported crash, they were not injured. Most bicycle crash victims suffered minor injuries, comprising 36 of the 40 injured victims. Five victims were school-aged children, aged 18 years old or younger. A majority of crashes were adults between the ages of 25 and 64 (77.5 percent). Of the 10 pedestrian or bicycle crashes that occurred within a 1/4-mile radius of Liberty Elementary School, five of the crashes were bicyclists hit by a motor vehicle.



Bicycle Crashes



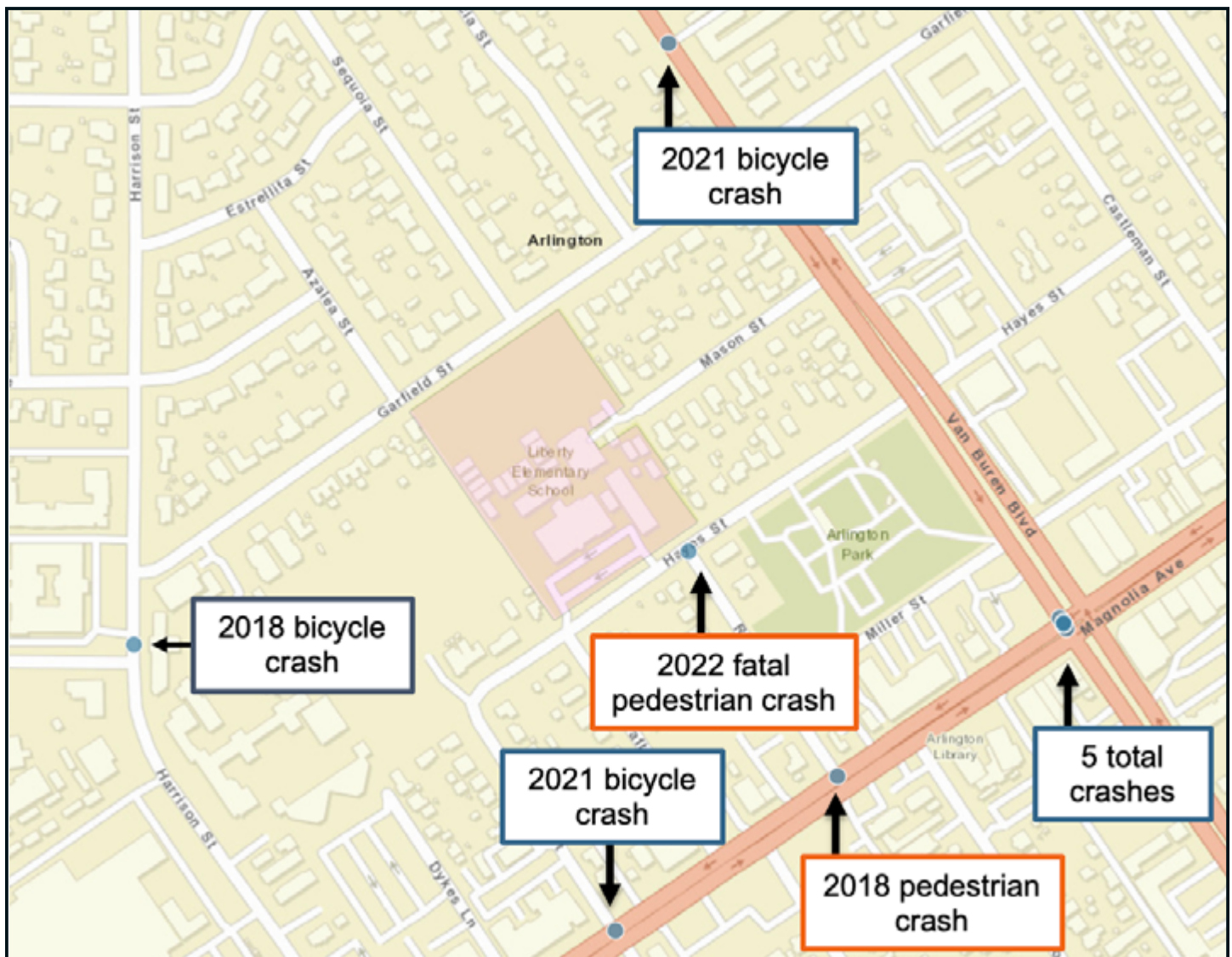
Bicycle crash severity. Data Source SWITRS 2018-2022. 2021 and 2022 data is provisional as of July 2023.

Walking and Biking Assessments

During the workshop, the Project Team and participants participated in walking and biking safety assessments along two routes frequently traveled by community residents. Participants were asked to identify community assets, assess infrastructure conditions, and share how road users engage with the built environment. The following is a summary of the walking and biking assessment.

Route 1: Liberty Elementary School Perimeter

Students and parents of Liberty Elementary School walk and travel along Garfield Street, Van Buren Boulevard, and Hayes Street to access the school from the surrounding neighborhood. Students and families use these streets along with Taft Street and Roosevelt Street to walk and bike to and from community assets like Arlington Park, Arlington Library, and Bourns Family Youth Innovation Center.



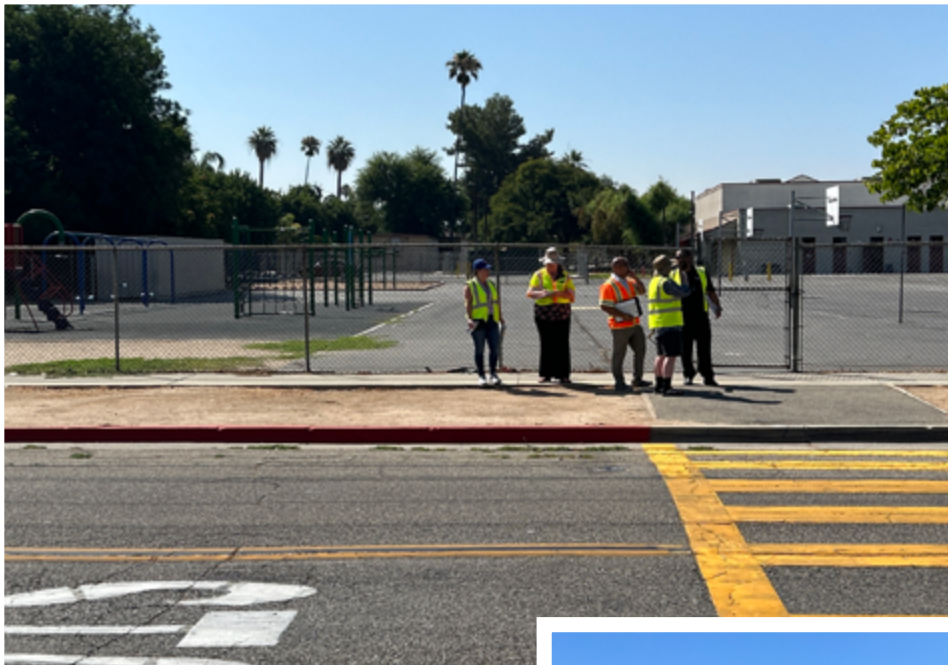
Walking Assessment, Route One

Strengths:

1. Two school crossing guards help students and their families cross at the Hayes Street/ Roosevelt Street intersection in front of Liberty Elementary School and at the Magnolia Avenue/Van Buren intersection. Participants noted the work they do is indispensable in order to keep those walking and biking to school safe from dangerous behaviors by drivers.
2. Wide sidewalks on Roosevelt Street and Hayes Street provide ample space for parents, students, and other community members to walk. For example, the sidewalk on Roosevelt Street near the Bourns Family Youth Innovation Center is newer than other streets in the neighborhood and features landscaping which provides beautification and tree shade, as well as serves as a buffer between those walking and driving.
3. The Liberty Elementary School administration closed the gated entrance to the school parking lot located at Hayes Street and Roosevelt Street this school year. Drivers must now park against the sidewalk on Hayes Street and walk their students to the front entrance, which instantly provided much-needed safety benefits for school children who previously had to navigate vehicles rushing to get in and out of the parking lot to drop-off students. Participants agreed the change was positive and they've seen major improvements since the change.
4. The Liberty Elementary School administration opened an alternate pedestrian entrance to campus on Garfield Street. This has reduced traffic congestion and overcrowding at the main entrance on Hayes Street and provided a closer entrance for those that walk and live in the neighborhood on the northside of campus.
5. There is a large culture of walking to and from Liberty Elementary School because many families live near campus.
6. The City of Riverside has and continues to be responsive to safety concerns the school administration and community members identify. After the CPBST site visit, work orders were submitted to clear debris, trim overgrown trees and repair sidewalks, including a hole in the sidewalk on the south side of Garfield Street just west of Van Buren that the school administration identified as a significant safety concern.



RIGHT: The sidewalk on Roosevelt Street near the Bourns Family Youth Innovation Center.



LEFT: Participants stand on Garfield Street at the gate where the school administration opened up a second entrance to the school.



RIGHT: City of Riverside Dawna Fuller and Araceli Ruiz take photos and place work orders for sidewalk repairs near the Garfield Street/Van Buren Boulevard intersection.

Concerns:

7. Drivers appear to drive above the 25 miles per hour posted speed limit on Hayes Street and Garfield Street, as well as the 40 miles per hour posted speed limit on Van Buren Boulevard. Speeding drivers pose a serious risk to those walking and biking, because higher vehicle speeds increase the likelihood of serious or fatal injuries, especially for vulnerable populations like schoolchildren.
8. Van Buren Boulevard experiences heavy vehicle traffic, including through traffic from semi-trucks, which makes guardians and children hesitant to walk to school and cross the street. There are no pedestrian safety infrastructure elements along Van Buren Boulevard like pedestrian refuge islands to provide safe areas to rest when crossing the six-lane road. At some intersections, like the Van Buren Boulevard/Garfield Street intersection, the median even blocks a portion of the crosswalk which impedes the path of travel for pedestrians and cuts into the already limited space they're provided.
9. There is no protection for those biking on any of the surrounding streets around the Liberty Elementary School campus. This makes many hesitant to bike to school, especially on roads like Van Buren Boulevard where cyclists would be forced to bike next to high-speed vehicle traffic with only painted bike lanes provided.
10. There is no school crossguard at the back entrance of Liberty Elementary School on Garfield Street, which makes crossing the street precarious. On top of that, participants and school administration noted that many drivers go above the 25 miles per hour speed limit and do not fully stop at the stop signs at Sequoia Street and Azalea Street.
11. The crosswalk at the Hayes Street/Roosevelt Street intersection floods when it rains and families cannot cross safely.
12. Many participants shared that the high number of vehicles cause traffic congestion around the main entrance of campus during dismissal time.



RIGHT: The crosswalk at the Van Buren Boulevard/Garfield Street intersection is partially blocked by the median.



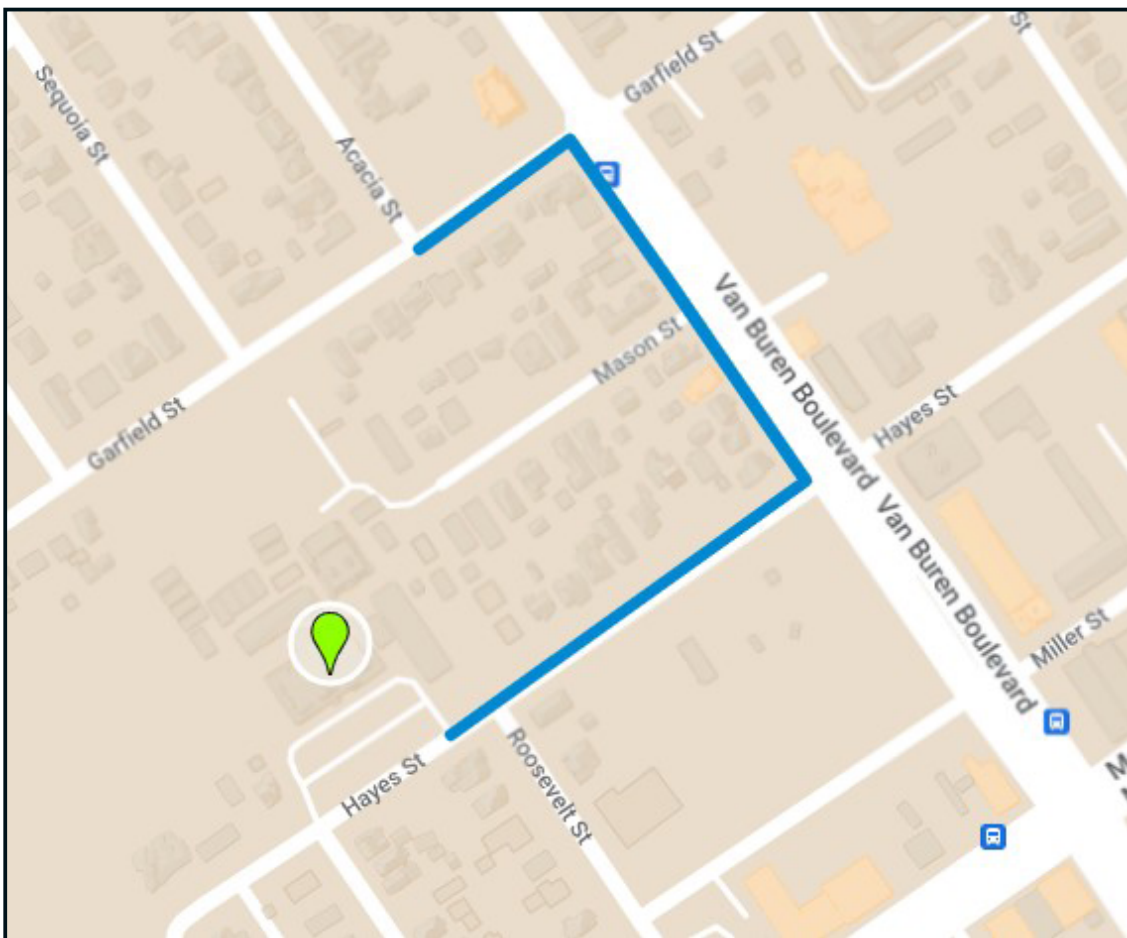
LEFT: A large truck blocks a portion of the bike lane on Van Buren Boulevard.



RIGHT: The high-visibility ladder crosswalk at the Garfield Street/ Sequoia Street intersection which is oftentimes disregarded by those driving down the street.

Route 2: Arlington Park

Students from Liberty Elementary School exit the north side of the school and walk on Garfield Street, while those leaving through the main entrance follow Hayes Street, traversing Arlington Park to reach Van Buren Boulevard, which is a main thoroughfare from the Riverside Freeway (State Route 91). Community members actively walk, bike, and participate in programming at Arlington Park. Students and families use Van Buren Boulevard and Magnolia Avenue to connect to Miller Street, Roosevelt Street, and Hayes Street to access Arlington Park.



Walking Assessment, Route Two

Strengths:

1. The Bourns Family Youth Innovation Center is located within Arlington Park at Roosevelt Street and Miller Street, offering community engagement opportunities for youth, seniors and their family members. The Center is a community hub that provides a space to organize events, such as bike safety fairs or walk-a-thons, to promote pedestrian and bicycle safety awareness.
2. Arlington Park provides recreational activities like swimming and other sports. It also acts as a gathering place for community members to walk and bike to and from.
3. Large trees that line Hayes Street and are planted throughout Arlington Park provide much needed protection from the sun and cool down the surrounding area's temperature.
4. The City of Riverside submitted a Community Development and Block Grant (CDBG) in January of 2023, which includes plans to resurface the road pavement along Garfield Street between Van Buren Boulevard and Harrison Street and includes the installation of new curb ramps at Sequoia Street (backside access).



LEFT: View of the parking lot entrance for the Bourns Family Youth Innovation Center



ABOVE: View of path leading into Arlington Park from Van Buren Boulevard with large trees and shade structures in view.

Concerns:

1. Near Arlington Park, specifically along Miller Street, participants expressed concerns regarding personal safety. These included the presence of trash obstructing sidewalks, as well as drivers double-parking, all of which heightened the potential for injuries for those walking and biking in and around the park. While Arlington Park benefits from sufficient lighting, the nearby streets lack pedestrian-scale lighting.
2. Multiple business drive-through entrances and exits are on Miller Street and Roosevelt Street, which increases the potential points of conflicts between drivers and pedestrians and bicyclists.
3. During the workshop, participants discussed concerns related to driver behavior on Hayes Street, which included excessive speeding, failure to come to a complete stop at stop signs, and failure to obey traffic signals.
4. Unsafe driving caused by congestion is a recurring issue on Magnolia Street, possibly due to its proximity to the Riverside Freeway (State Route 91) which it runs parallel to. Participants highlighted concerns regarding excessive speeding and unlawful U-turns in the area as well. Additionally, while there are crosswalks provided to aid in crossing at the Magnolia Avenue/Van Buren Boulevard intersection, many pedestrians and bicyclists choose to instead cross mid-block to avoid unsafe drivers that fail to yield at the crosswalks. The principal of Liberty Elementary School pointed out that another area with high mid-block crossings is the 7-Eleven on the southside of Magnolia Street, which is a frequent destination for students and community members.



ABOVE: Debris along the sidewalk on Roosevelt Street leading to Magnolia Avenue.



RIGHT: 7-Eleven located on the southside of Magnolia Street where people cross mid-block near Roosevelt Street.

Recommendations

The recommendations in this report are based on observed pedestrian and bicycle safety concerns, Safe System strategies, and workshop participants' priorities. The suggested timelines and resources needed for implementation are estimated based on general pedestrian and bicycle safety best practices and may need to be further tailored by the community.

Community Recommendations

CPBST workshop participants offered the following programmatic and infrastructure recommendations to create a safer environment for walking and biking. General priorities included:

- **Addressing Pedestrian and Bicycle Safety**

- Hire crossing guards during major events at campus or other local venues to prioritize the safety of those walking to and from the events.
- Hire an additional crossing guard in the morning on Hayes Street to aid those walking and biking to campus.
- Install pedestrian-scale lighting around Liberty Elementary School and Arlington Park for those walking at night in the neighborhood.
- Install LED Stop Signs at the Hayes/Roosevelt Street intersection, the Taft Street/Hayes Street intersection, and the Garfield Street/Sequoia Street intersection behind Liberty Elementary School to enhance pedestrian safety and visibility near Arlington Park and the school campus.
- Install protected bike lanes on major biking routes that provide dedicated space away from fast-moving vehicles, especially on Van Buren Boulevard.
- Address high traffic volumes on Van Buren Boulevard and Magnolia Avenue to improve pedestrian and cyclist safety. Implement traffic calming measures and designate safe crossing areas.
- Improve bike infrastructure on Van Buren Boulevard and Magnolia Avenue for a designated bike route, including marked lanes and bike boxes. Coordinate with Riverside Transit Agency for better bicyclist access to local businesses and activities on Magnolia Avenue.

- Improve pedestrian student walking facilities by installing new sidewalk and curb ramps along the following roadway segments:
 - a) Sequoia Street from Garfield Street to California Avenue (cul-de-sac).
 - b) Estrellita Street from Sequoia Street to Harrison Street.
 - c) Bolton Avenue from Sequoia Street to Harrison Street.
 - d) Harrison Street from California Avenue to Garfield Street.

- **Addressing Speed and School Safety**

- Provide more frequent bush and tree trimmings around sidewalks near campus to provide a clear, accessible path to school.
- Address excessively high driver speeds through:
 - e) Speed humps in front of the school to lower driver speeds on Hayes Street;
 - f) A neighborhood-wide speed reduction campaign, like [20's Plenty for Us](#);
 - g) High-visibility speed limit signs and road striping;
 - h) Median road stripings on streets currently missing the center line;
 - i) Speed radar trailers at key intersections; and
 - j) A community safety messaging campaign to bring awareness to the dangers of speeding.
- Install more loading zones and parking spaces near entrances to campus so those driving can safely drop-off their children to school.
- Develop strategies to redirect traffic away from residential areas, such as Harrison Road and Garfield Streets, which are used as shortcuts by speeding drivers.
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- Develop strategies to redirect traffic away from residential areas, such as Harrison Road and Garfield Streets, which are used as shortcuts by speeding drivers.
- Establish an official parent group dedicated to promoting student safety and wellness.
- Collaborate with the Bourns Family Youth Innovation Center and the City of Riverside Arlington Park to develop Safe Routes to School programming that teaches students proper helmet and bike use for safe commuting.
 - a) Community Bike Ride Group: Organize regular community bike rides, inviting residents of all ages to participate. This promotes safe cycling practices and builds a sense of community.
 - b) Student Earn-a-Bike Initiative: Launch a program where students can earn their own bicycles through community service or educational achievements, emphasizing the responsibility and safety aspects of owning and using a bike.
 - c) Safe Routes to School Programs: Implement Safe Routes to School programs to enhance safety for students who walk or bike to school. It's important to note that the City of Riverside was recently awarded a Citywide Safe Routes to School Grant to develop action plans for each school, which will help with the creation of a program at Liberty Elementary School.
 - d) Bike Safety Training: Organize bike safety training sessions for students, teaching them essential skills and rules for safe biking.
 - e) Monthly Family Bike Events: Host monthly family-friendly biking events to encourage parents and students to ride together, reinforcing safety practices and creating a fun atmosphere for learning.

- Raise awareness about campus travel safety by using various communication channels:
 - a) Liberty Elementary School Parent Emails: Send regular emails to parents, sharing tips and resources related to bicycle and pedestrian safety, and highlighting upcoming safety events.
 - b) Robocalls: Utilize automated phone messages to remind parents and community members about safety initiatives, workshops, and events.
 - c) Posters near arrival and dismissal zones: Place informative posters near school arrival and dismissal zones, emphasizing safe travel habits and the importance of cautious driving in those areas.

Workshop participants offered the following recommendations for their community and were able to start the planning process for a select projects below.

Liberty Elementary School Safe Routes to School (SRTS) Safety Project

Project Goals:

1. Formalize a community group that will engage parents and families near Liberty Elementary School to identify community safety needs and priorities
2. Create a safe, comfortable environment for schoolchildren and their families to walk and bike to and from school.
3. Provide opportunities for parents to get involved in creating a safer school environment.
4. Develop parent champions for traffic safety at and near campus.
5. Provide opportunities for the school community to advocate for infrastructure and programmatic changes at and around campus.

The planning committee will gather community members and identify leads to engage Liberty Elementary School, the neighboring community, and the City of Riverside community to develop a SRTS Action and Safety Project to improve walking and biking to and from schools, with a special focus on improving safety along Van Buren Boulevard, Magnolia Avenue, and adjacent streets. These areas present challenges due to high driver speeds, lack of pedestrian safety infrastructure like pedestrian refuge islands, and lack of bike lanes. The project could include the development of a map of Safe Routes to and from school that inventories crosswalks, sidewalk gaps, bike lanes, and other infrastructure elements that aid in creating the most comfortable route for a parent and their children. The project can also help identify infrastructure enhancements and programming.

The project will focus on the Liberty Elementary School campus and portions of the project, like education materials, can be dispersed throughout the 2023-2024 school year. Longer term infrastructure projects may take two-plus years to complete. Liberty Elementary School administration, Riverside Unified School District staff, the City of Riverside, the Bourns Family Youth Innovation Center, schoolchildren, parents, and neighbors should be included in the planning process.

Continued on the next page

Liberty Elementary School Safe Routes to School (SRTS) Safety Project Project, continued

Action Steps:

1. Parents, school administration, and the City of Riverside create and launch a SRTS program at Liberty Elementary School, starting with identifying a SRTS coordinator.
2. Parents and school administration research and create plastic A-frame signs that provide instructions on how students and parents can safely arrive and leave campus.
3. School administration, city planners, and parents work with local bicycle advocacy organizations like the [Inland Empire Biking Alliance](#) to plan and hold a traffic safety class, including a bike rodeo with a helmet/light giveaway to educate students and parents on how to drive and bike safely to and from school.

Resources:

[How To Create Pop-Up Safe Routes to School Projects](#)

[Defining Roles and Partnerships for Safe Routes to School](#)

[School Streets Toolkit](#)

[Go Safely CA](#)

Safe System Strategies:

Bike Train, Daylighting, Designated Safe Routes, High-Visibility Road Markings and Signage, Neighborhood Speed Awareness Program, Quick-Build Projects, Raised Crosswalks, Reduced Speed Limit Zones, Safe Passages Program, Safe Routes to School (SRTS) Community Program, Speed Hump, Temporary Demonstration Project, Walking School Bus

Liberty Elementary School Traffic Safety Project

Project Goals:

1. Reduce driver speeds by installing traffic calming infrastructure and lowering speed limits.
2. Create a culture of community accountability where neighbors work together to educate themselves and others about how to safely drive, walk, or bike around the neighborhood.

This project seeks to create a community culture of safe driving and respect for those walking and biking through speed reduction strategies and traffic calming. In doing so, residents aim to decrease the number of crashes related to speeding, risky driver behaviors, and failure to yield the right-of-way to pedestrians and bicyclists.

The project will focus on the Liberty Elementary School campus and portions of the project, like paint and posts, can be installed within six months. Longer term infrastructure projects may take two-plus years to complete. Liberty Elementary School administration, parents, students, the City of Riverside, and the larger Liberty Elementary School neighborhood should be included in the planning process.

Continued on the next page

Liberty Elementary School Traffic Safety Project, continued

Action Steps:

1. Parents and students identify key infrastructure changes near campus, including high-visibility signage, bulbouts, and crosswalks. One key infrastructure change already named by parents and students are protected bike lanes on Magnolia Avenue.
2. City planners work with Liberty Elementary School administration to apply for funding to install the identified traffic calming infrastructure, especially at key intersections and corridors where speeding is an issue.
3. Install radar speed trailers around the school campus at key intersections where speeding is especially prevalent to deter those driving from speeding and create accountability to follow the posted speed limits.
4. City planners research a potential temporary speed hump program, where the City can install speed humps around the neighborhood for a designated amount of time, rotating the location as needed.
5. School administration, parent volunteers, and neighbors research potential opportunities to build traffic safety advocates who can champion safety projects at City Hall.

Resources:

[SCAG Kit of Parts](#)

[Quick-Build Guide](#)

[Safe Systems Strategies for](#)

[Bicyclists and Pedestrians Toolkit](#)

Safe System Strategies:

Audible Pedestrian Push Button Systems, Curb Extension (Bulbout), Daylighting, Designated Safe Routes, High-Visibility Road Markings and Signage, Hybrid Beacon (HAWK), Neighborhood Speed Awareness Program, Quick-Build Project, Raised Crosswalk, Reduced Speed Limit Zone, Speed Hump, Temporary Demonstration Project

Liberty Elementary School Safety Messaging Campaign

Project Goals:

1. Develop a safety messaging campaign aimed at the Liberty Elementary School neighborhood.
2. Provide opportunities for schoolchildren to take part in the project, including designing safety messaging and artistic crosswalks or street murals

This project seeks to create a community culture of safe driving and respect for those walking and biking through safety messaging and placemaking. In doing so, residents can decrease the number of crashes related to speeding, unsafe driver behaviors, and failure to yield the right-of-way to pedestrians and bicyclists.

The project will focus on a half-mile radius from the Liberty Elementary School campus and portions of the project, like education materials, can be dispersed during the 2023-2024 school year. Liberty Elementary School administration, parents, students, the City of Riverside, and the larger Liberty Elementary School neighborhood should be included in the planning process.

Action Steps:

1. School administration, with support from City planners, create a mass email highlighting the importance of traffic safety to send to all parents at Liberty Elementary School and other nearby elementary, middle, and high schools.
2. School administration and City planners work with parent volunteers to create an educational program on how parents can safely drive to and from school, how to safely pick up and drop off their children, and how to prioritize vulnerable populations like children and seniors walking around the neighborhood.

Continued on the next page

Liberty Elementary School Safety Messaging Campaign, continued

3. Create a Safety Messaging Campaign to create an awareness around traffic safety.
 - a) School administration works with Liberty Elementary School to create an art contest where students help design the safety messaging campaign elements, including the message and the artwork.
 - b) School administration and parent volunteers print lawn signs with safety messages and offer signs to neighbors to post in their front yard.
 - c) School administration and parent volunteers print safety messaging posters and attach to the school's fencing.
4. School administration, parent volunteers, and neighbors research potential opportunities for the installation of artistic crosswalks and/or street murals at and near campus to bring awareness to pedestrian infrastructure and create placemaking opportunities.

Resources:

[Pop-up Placemaking ToolKit](#)
[Heads Up Safety Campaign](#) [Safety Tips for Pedestrians](#)
[OTS Go Safely CA](#)

Safe System Strategies:

Bike Rodeo, Bike Train, Community Liaison/Promotores Campaign, Designated Safe Routes, Helmet/Light Distribution, Participatory Campaign, Placemaking, Safe Passages Program, Safety Messaging Campaign, Safe Routes to School (SRTS) Community Program, Walking School Bus

Project Team Recommendations

The Project Team recommends the following for local stakeholder consideration.

Funding for Safe Routes to School Coordinator

Safe Routes to School (SRTS) is a multifaceted strategy that encourages walking and biking to school through infrastructure upgrades, safety education, and incentives for families and students. It enhances community safety, boosts student physical activity, and addresses pick-up and drop-off zone issues. The Project Team recommends Liberty Elementary School explore partnering with [Riverside County Department of Health](#), [Riverside University Health System](#), [Southern California Association of Governments \(SCAG\)](#), the City of Riverside, and/or [Riverside Unified School District](#) to apply for funding for a full-time SRTS Coordinator. Having a dedicated staff member responsible for creating programs and organizing parents to advocate for change will be crucial to maintaining community momentum built during Liberty's CPBST planning and workshop. The following resources can be referenced for additional information about SRTS programming:

- [Safe Routes to School Guide](#)
- [Starting and Running a Safe Routes to School Program, Safe Routes Partnership](#)
- [Safe Routes National Center for Safe Routes to School](#)

Statewide Funding Sources for Pedestrian and Bike Infrastructure Projects

The Project Team recommends the City of Riverside explore funding opportunities to implement pedestrian and bicycle infrastructure and programming recommendations in the Liberty Elementary School neighborhood. Traffic calming infrastructure like speed humps

is an important priority area for funding and would provide the City of Riverside with support installing and maintaining these safety improvements. Potential funding sources include:

- [Caltrans' Active Transportation Program](#) for infrastructure or non-infrastructure projects
- [The Office of Traffic Safety Grants Program](#) for non-infrastructure projects
- [Safe Streets and Roads for All \(SS4A\) Grant Program](#) for infrastructure and non-infrastructure projects

Quick-Build Program

The Project Team recommends that the City work to create a quick-build project list for the Liberty Elementary School community based on the crash history near campus and the surrounding neighborhood. Safety improvements are needed in the short term, a quick-build program brings low-cost and effective safety improvements to the community. City Planners may also use these projects to try new infrastructure or project-specific elements planned for long-term projects. At Liberty Elementary School, a quick-build program may include infrastructure elements, such as bulbouts at school entrances, mid-block and/or raised crosswalks at intersections where cars do not stop at stop signs and drive above the speed limit, and speed humps or tables to reduce high vehicle speeds near campus. The California Bicycle Coalition, alongside Alta Planning, published the [Quick-Build Guide](#) as a resource for communities looking to implement quick-build projects. As more resources become available, the Association of Bay Area Governments adds more resources to the [Quick-Build Resource Library](#).

Potential funding sources may include [Caltrans' Active Transportation Program](#), [PeopleForBikes Community Grant Program](#), [AARP Community Challenge](#), and the [SCAG Kit of Parts](#).

Photo and VideoVoice Projects

Photo and VideoVoice projects provide an opportunity to gather community experiences from unreported bicycle and pedestrian crashes and capture the general experiences of road users in a community. Through meetings with the Planning Committee, the project team discovered many community members have had near-misses and other unsafe experiences walking or biking within the focus area. By implementing a PhotoVoice and/or VideoVoice project, the Planning Committee can create a platform for students and their guardians to share these experiences as both a tool for engagement and advocacy. Furthermore, Photo and VideoVoice projects are widely used as engagement strategies in Safe Routes to School programs nationwide. Notably, [Marin County](#) and [Oregon Metro](#) used VideoVoice projects as part of their Safe Routes to School programming. SafeTREC and California Walks offer one-on-one technical assistance for communities after the CPBST process, including assistance with Photo and VideoVoice Projects.

Appendix

- CPBST Site Visit Data Presentation
- ESRI Demographics
- CPBST Workshop Poster

Liberty Elementary School CPBST Site Visit

Pedestrian and Bicycle Crash History

July 25, 2023

Kristen Leckie, kristenmleckie@berkeley.edu



Berkeley SafeTREC

What is a pedestrian crash?

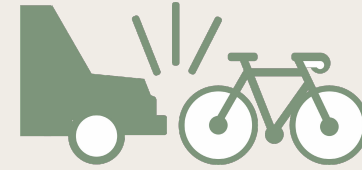


Pedestrian-motor vehicle crash

- Includes a person afoot, on a skateboard, stroller, wheelchair, electric assistive mobility device

One crash may result in multiple pedestrian victims.

What is a bicycle crash?

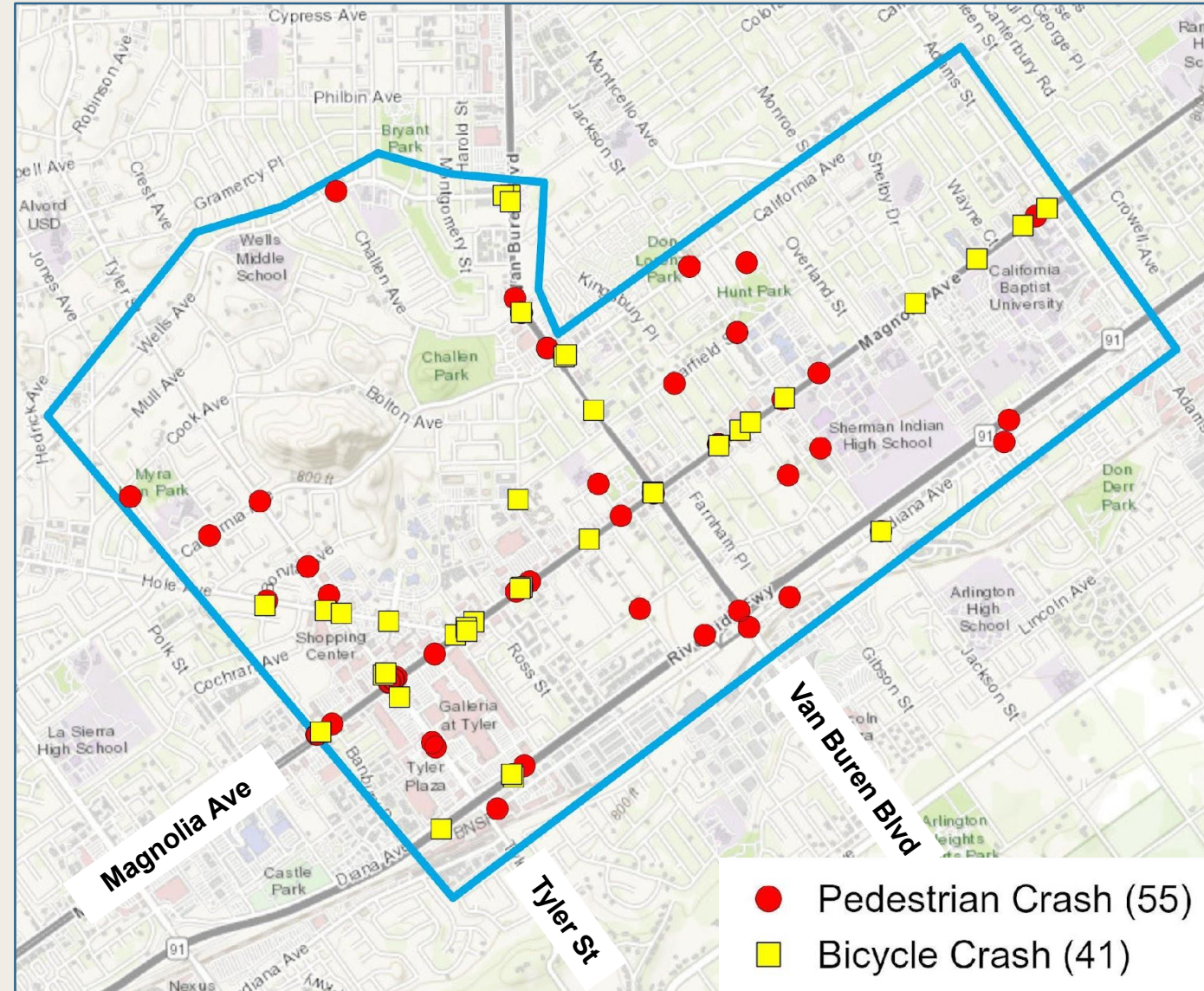


Bicycle-motor vehicle crash

- Bicycles are considered vehicles and therefore violations committed by a “driver” could have been committed by a motor vehicle driver or bicyclist.

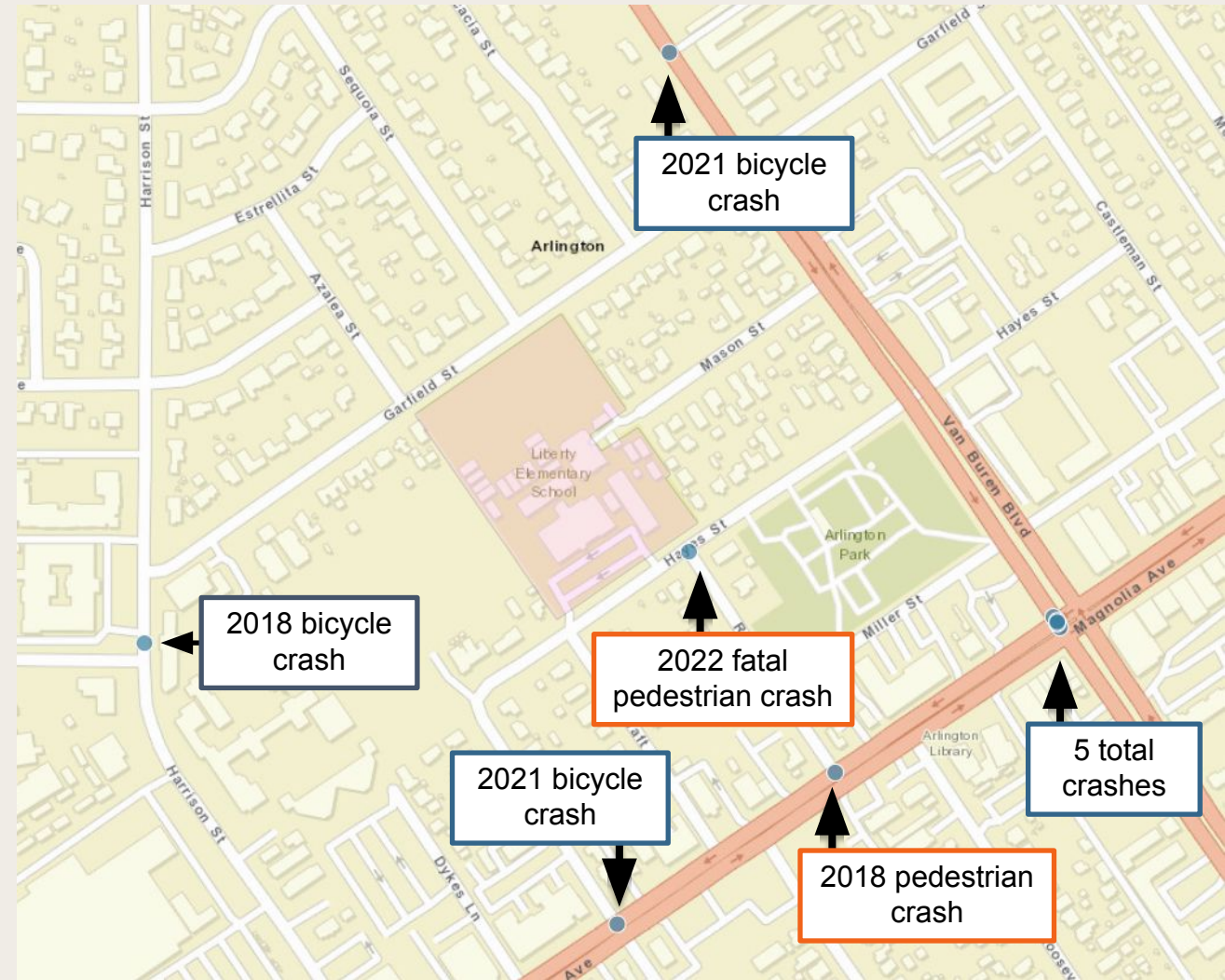
Overview of crashes near Liberty E.S., 2018-2022

- 96 crashes in the workshop focus area, including:
 - 55 pedestrian crashes
 - 41 bicycle crashes
- Crashes concentrated on several main corridors:
 - Magnolia Avenue (33 crashes)
 - Tyler Street (13 crashes)
 - Van Buren Boulevard (12 crashes)



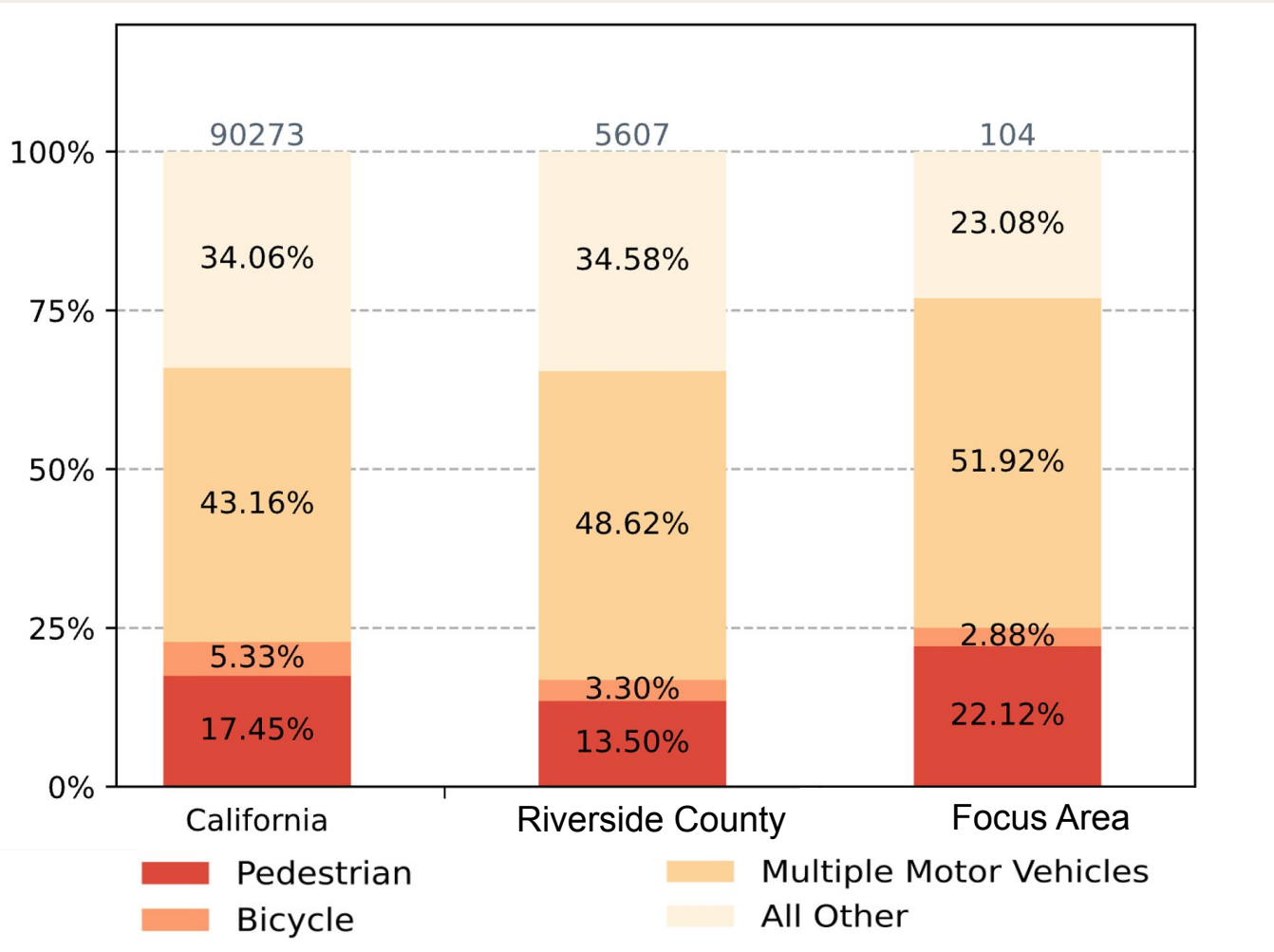
Overview of crashes near campus, 2018-2022

- 10 crashes occurred within a 1/4-mile radius of Liberty Elementary School.
- Half of all crashes (5 of 10) occurred at the Magnolia Avenue / Van Buren Boulevard intersection.
- Crashes occurred on Magnolia Avenue (7 crashes), Hayes Street, Van Buren Boulevard and Harrison Street.



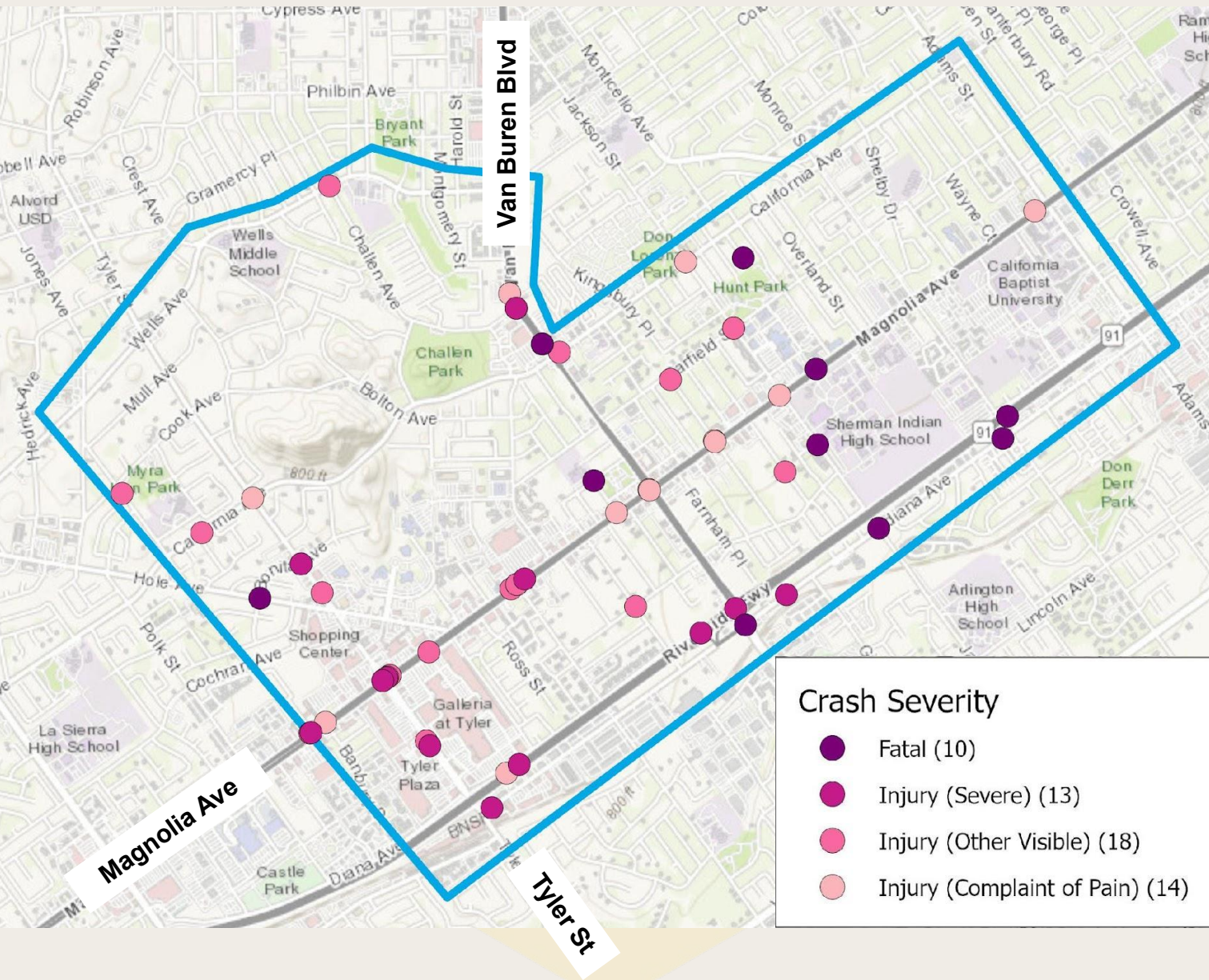
How does Liberty Elementary School compare to other areas?

Fatal and Serious Injury Crashes by Involvement 2018-2022



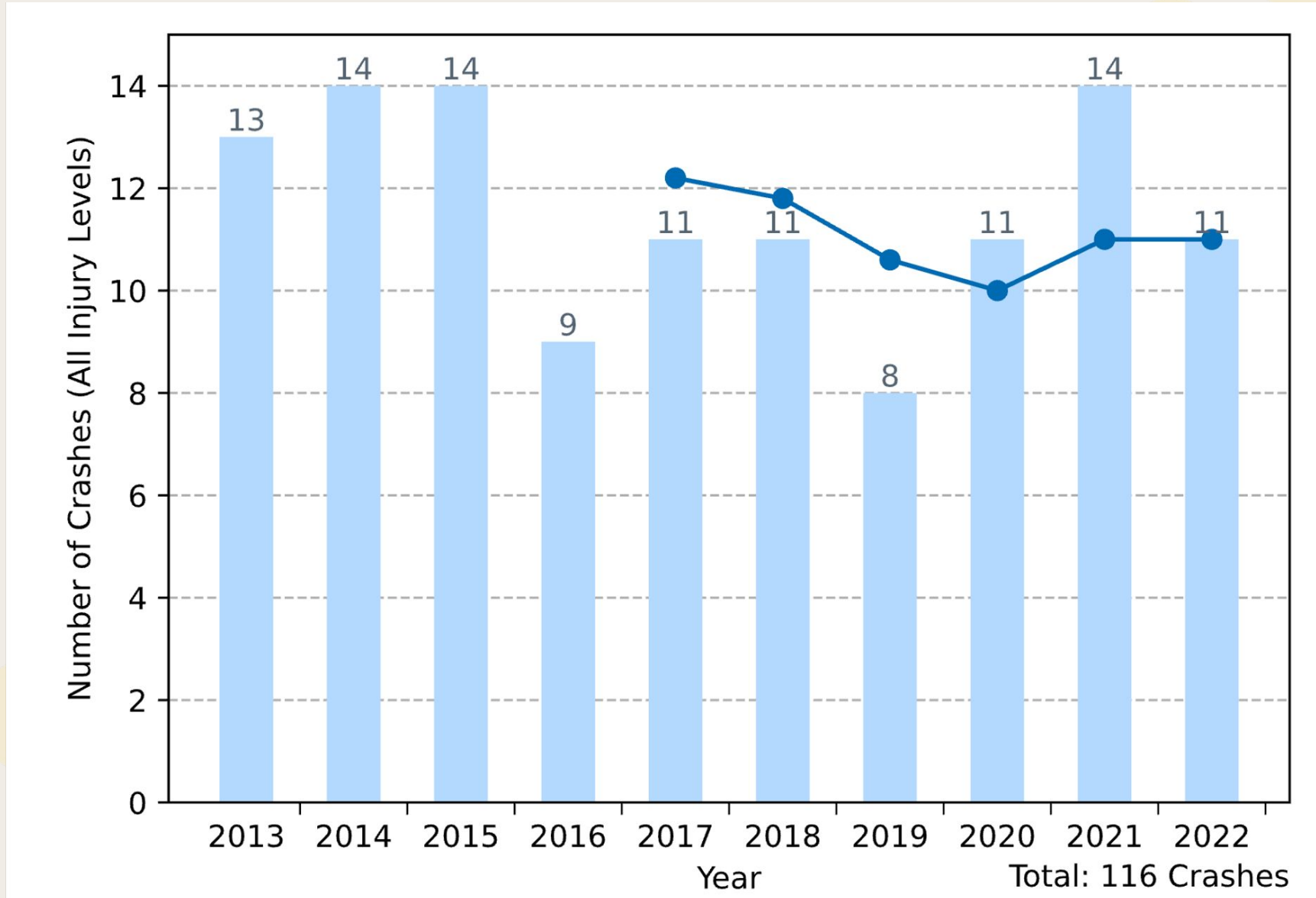
- Our focus area sees more fatal or serious injury pedestrian and multiple motor vehicle crashes than both the state of California and Riverside County.
- Our focus area sees fewer bicycle crashes than both the state of California and Riverside County.

Pedestrian Crashes 2018-2022



- Most pedestrian crashes were concentrated on Magnolia Avenue, Van Buren Boulevard, Tyler Street, and streets adjacent to SR-91.
- There were 10 fatal pedestrian crashes:
 - Hole Avenue and Bonita Avenue
 - Hayes Street and Roosevelt Avenue (in front of Liberty ES)
 - Indiana Avenue and Van Buren Boulevard
 - Van Buren Boulevard and California Avenue
 - Indiana Avenue and Jackson Street
 - Jackson Street and Hendry Avenue (in front of Sherman Indian HS)
 - Magnolia Avenue and Sherman Drive
 - Goodman Street and California Avenue
 - Indiana Avenue and Monroe Street
 - SR-91 eastbound and Monroe Street

Pedestrian Crashes 2013-2022



Data source: Statewide Integrated Traffic Record System (SWITRS) 2018-2022. 2021 and 2022 data are provisional as of July 2023.

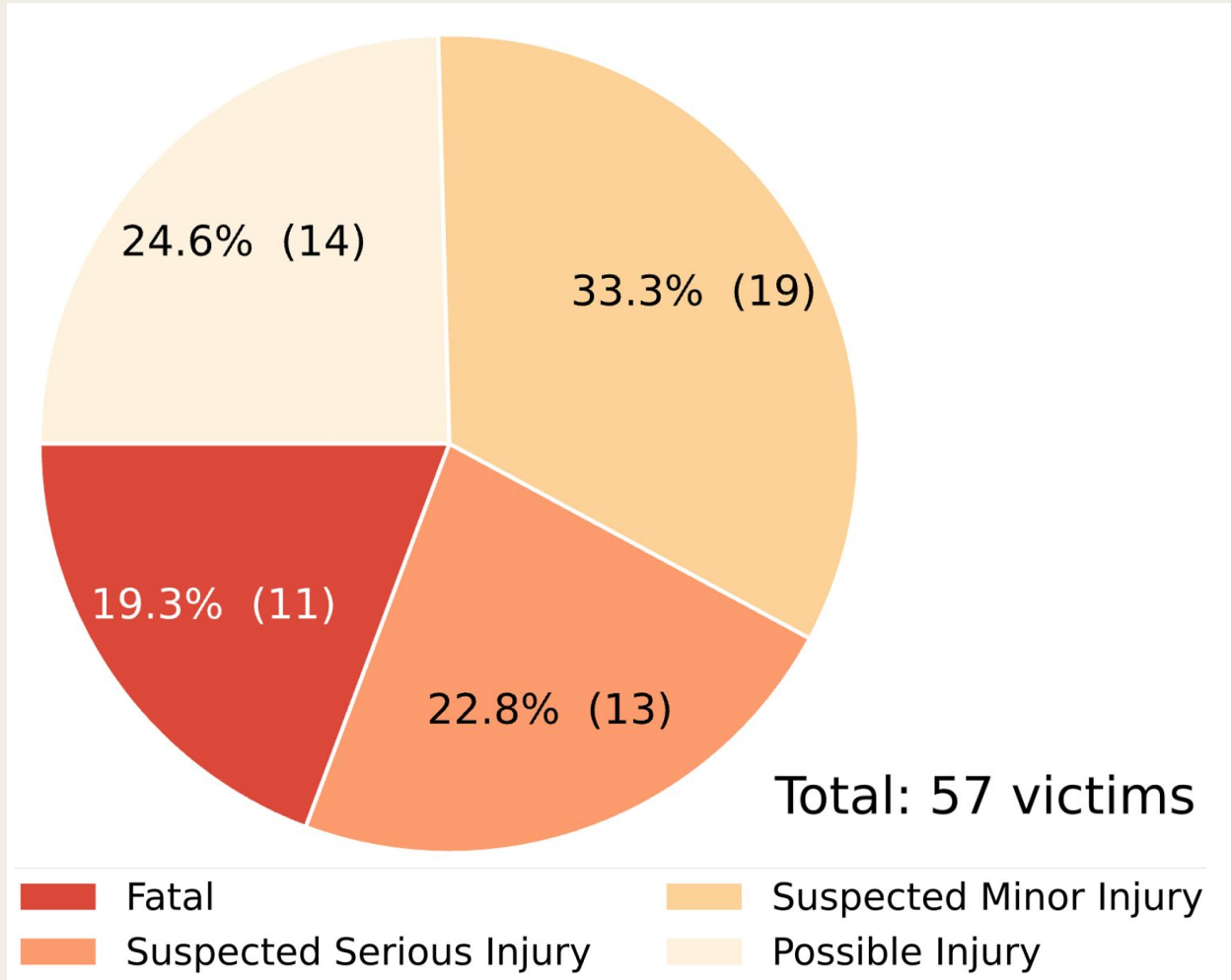
Pedestrian Crashes 2018-2022

By time of day and week

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
09:00PM-11:59PM	2	1	1	3	2	3	1	13
06:00PM-08:59PM	4	2	2	2	0	1	0	11
03:00PM-05:59PM	2	2	0	0	4	0	1	9
Noon-02:59PM	2	3	0	2	1	1	2	11
09:00AM-11:59AM	0	0	0	0	0	1	0	1
06:00AM-08:59AM	1	0	0	1	2	0	0	4
03:00AM-05:59AM	0	0	0	0	0	0	1	1
Midnight-02:59AM	0	1	0	0	1	3	0	5
Total	11	9	3	8	10	9	5	55

Pedestrian Crashes 2018-2022

By injury severity



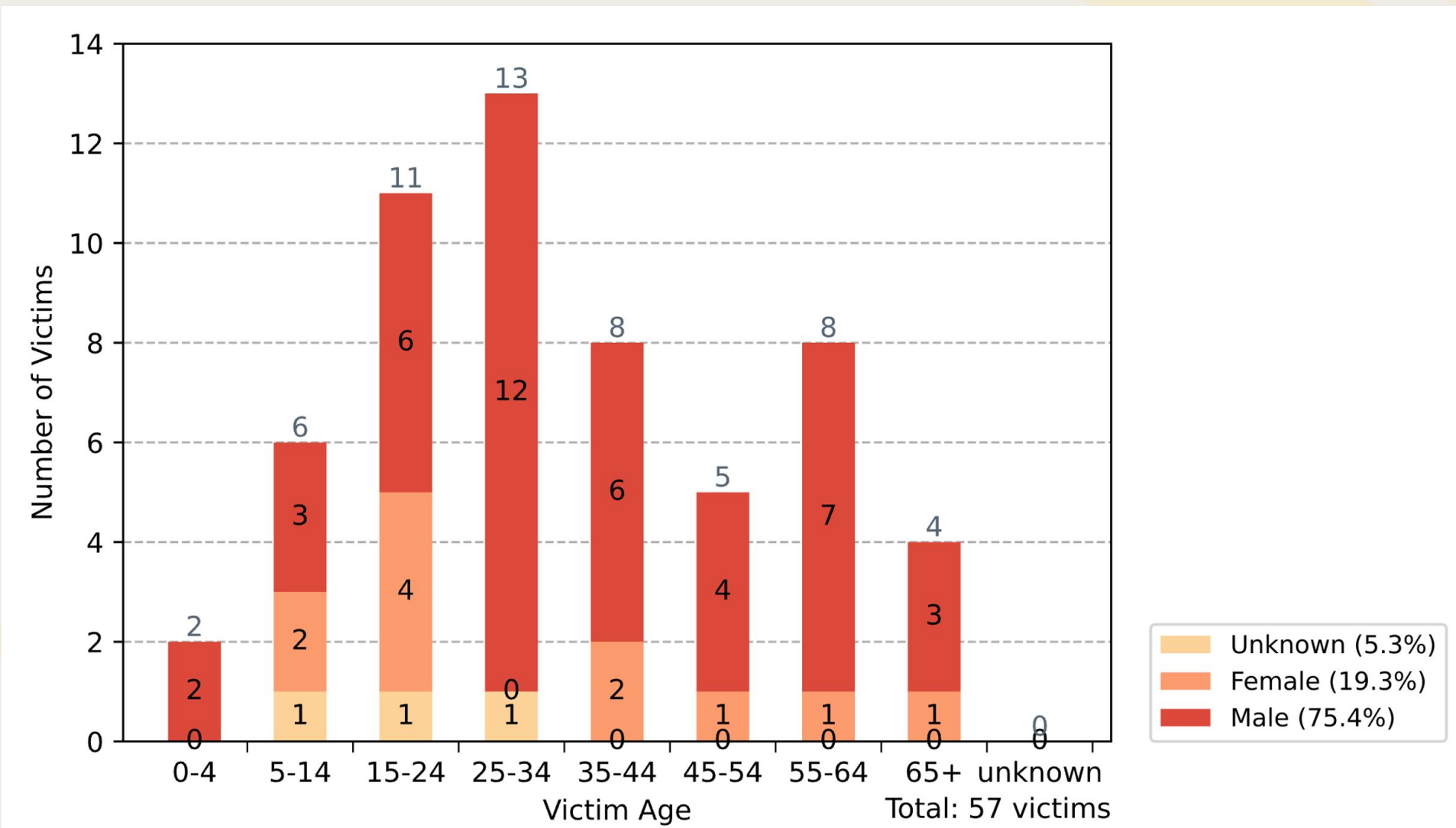
57 victims were injured in 55 pedestrian crashes.

11 of those victims were killed.

42.1% of all victims were either killed or seriously injured in a crash.

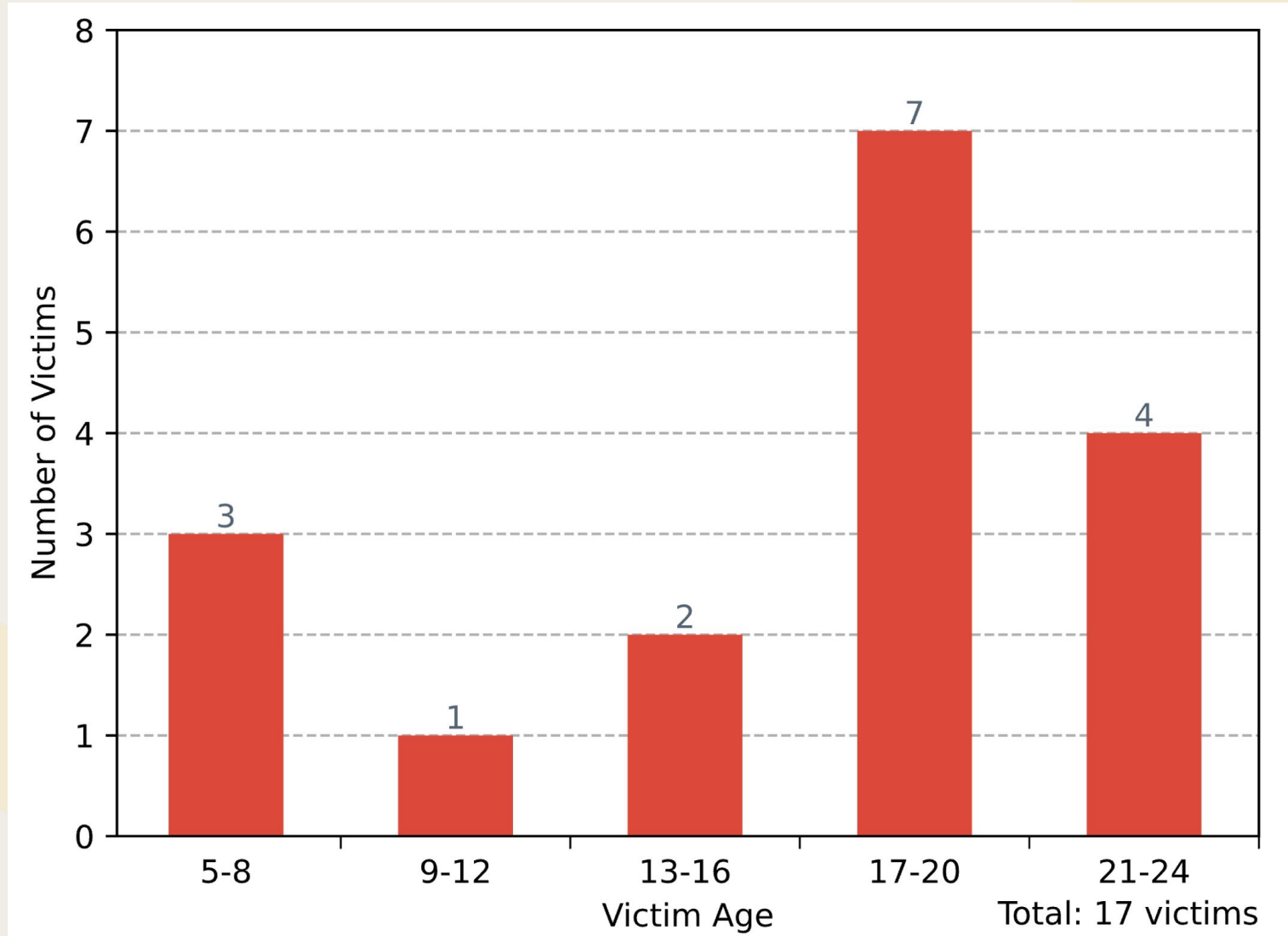
Pedestrian Crashes 2018-2022

By victim age and gender



Pedestrian Crashes 2018-2022

School-aged children



Data source: Statewide Integrated Traffic Record System (SWITRS) 2018-2022. 2021 and 2022 data are provisional as of July 2023.

Pedestrian Crashes 2018-2022

Most frequently cited violations in injury crashes

17
crashes

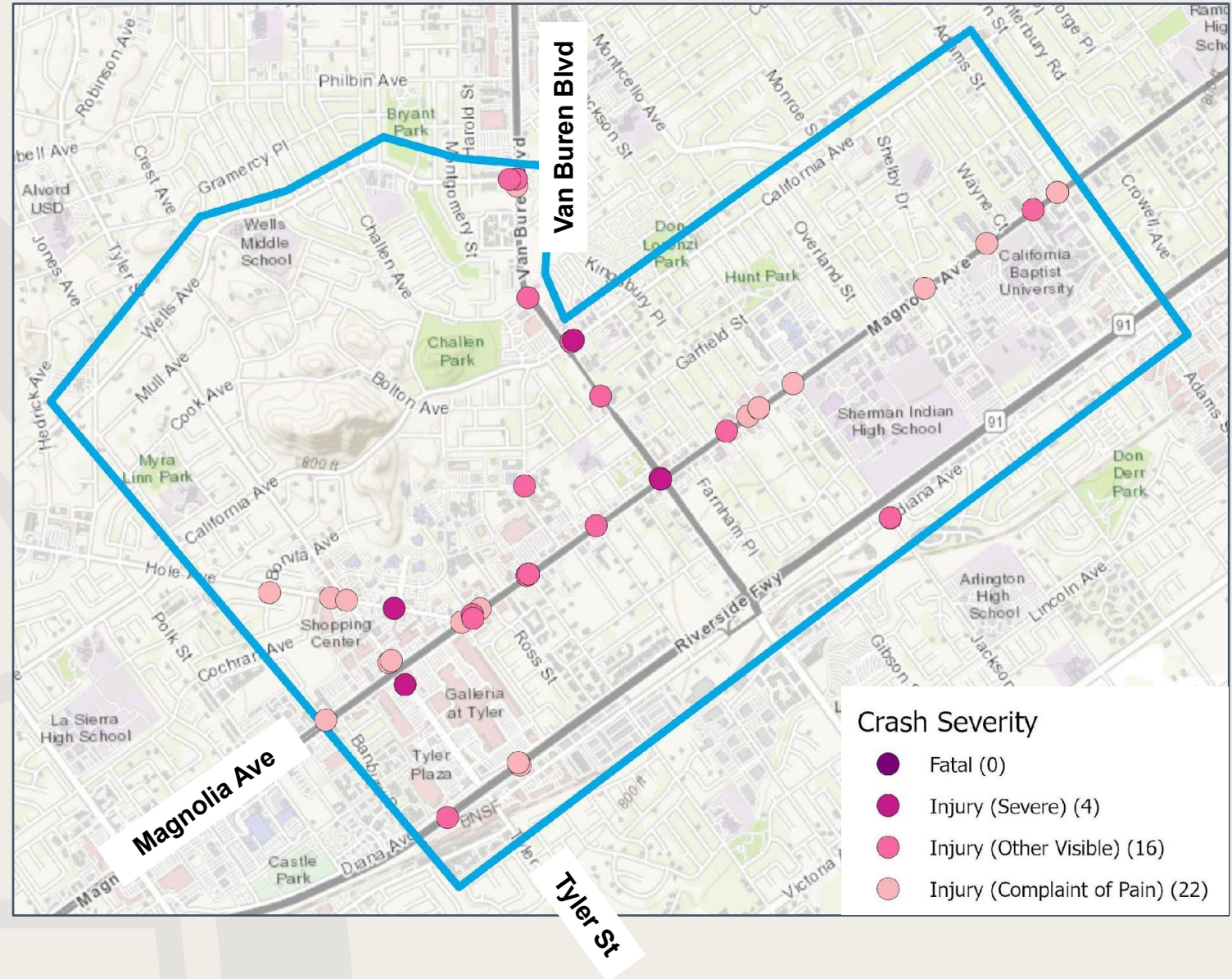
21954. Pedestrian failure to yield to vehicles when crossing outside of a marked or unmarked crosswalk.

16
crashes

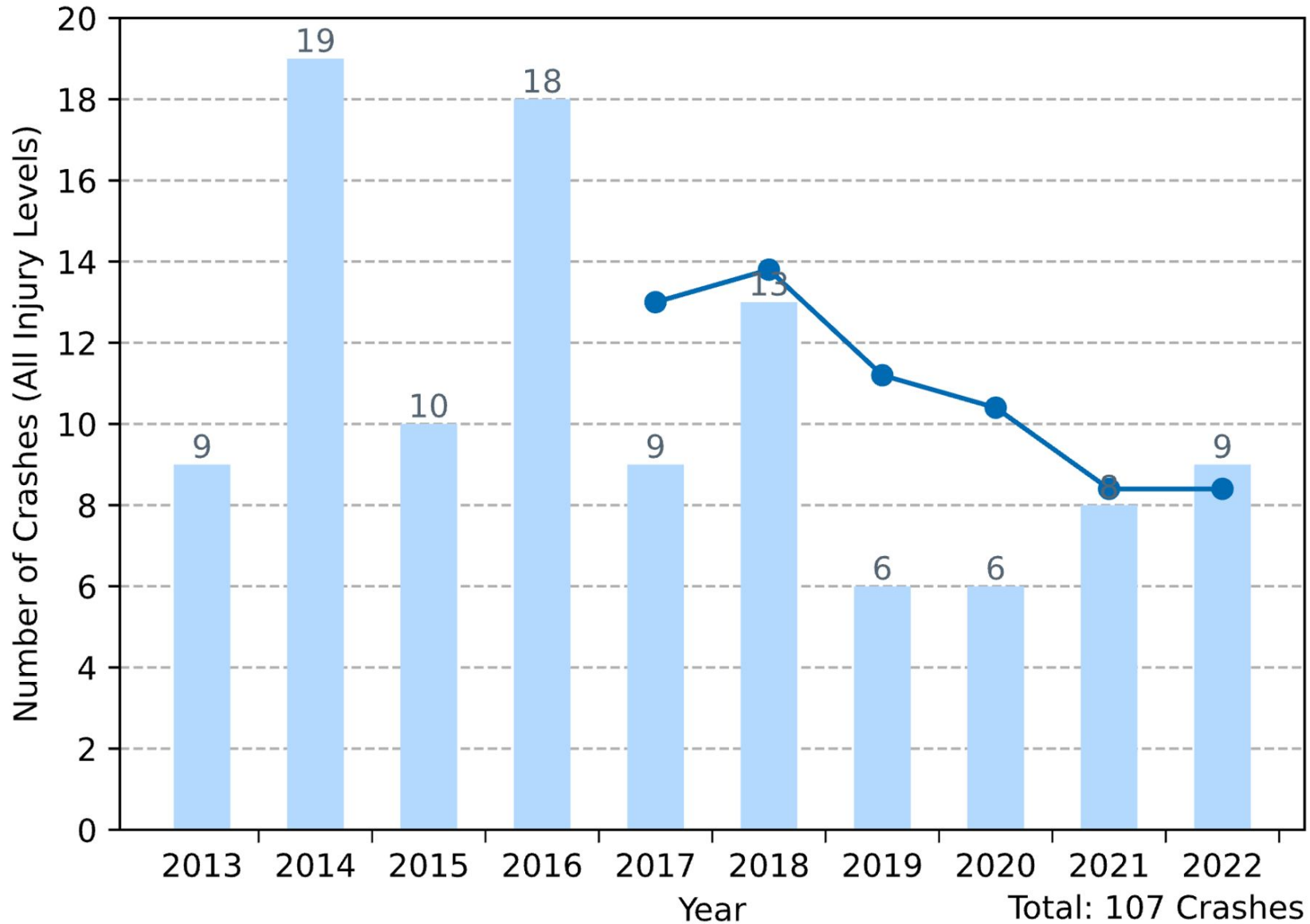
21956. Driver failure to yield right-of-way to pedestrians at a marked or unmarked crosswalk.

Bicycle Crashes 2018-2022

- There were no fatal bicycle crashes.
- Most bicycle crashes were concentrated on Magnolia Avenue, Van Buren Boulevard, Tyler Street, and Hole Avenue.
- There were four serious injury crashes:
 - Hole Avenue and County Circle Drive
 - Tyler Street and Magnolia Avenue
 - Van Buren Boulevard and Magnolia Avenue
 - California Avenue and Van Buren Boulevard



Bicycle Crashes 2013-2022



Data source: Statewide Integrated Traffic Record System (SWITRS) 2018-2022. 2021 and 2022 data are provisional as of July 2023.

Bicycle Crashes 2018-2022

By time of day and week

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
09:00PM-11:59PM	0	0	0	2	0	1	1	4
06:00PM-08:59PM	1	1	1	1	3	0	4	11
03:00PM-05:59PM	1	1	3	1	1	0	0	7
Noon-02:59PM	3	1	2	1	1	0	0	8
09:00AM-11:59AM	1	0	2	0	2	0	1	6
06:00AM-08:59AM	1	1	0	0	1	1	1	5
03:00AM-05:59AM	0	0	0	0	0	0	0	0
Midnight-02:59AM	1	0	0	0	0	0	0	1
Total	8	4	8	5	8	2	7	42

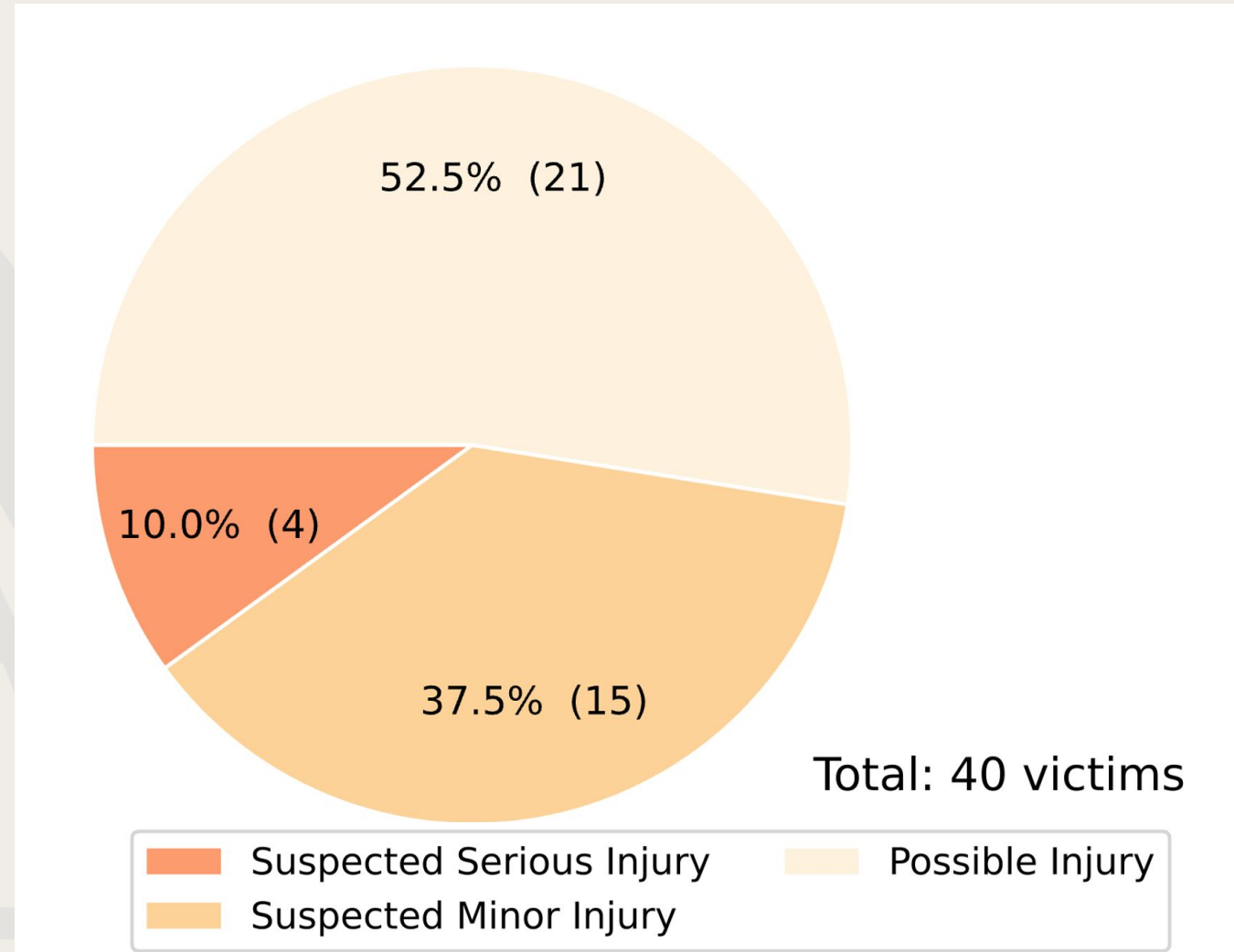
Bicycle Crashes 2018-2022

By injury severity

40 victims were injured in 42 bicycle crashes. We have fewer victims than crashes because two crashes involved a bicyclist hitting a pedestrian.

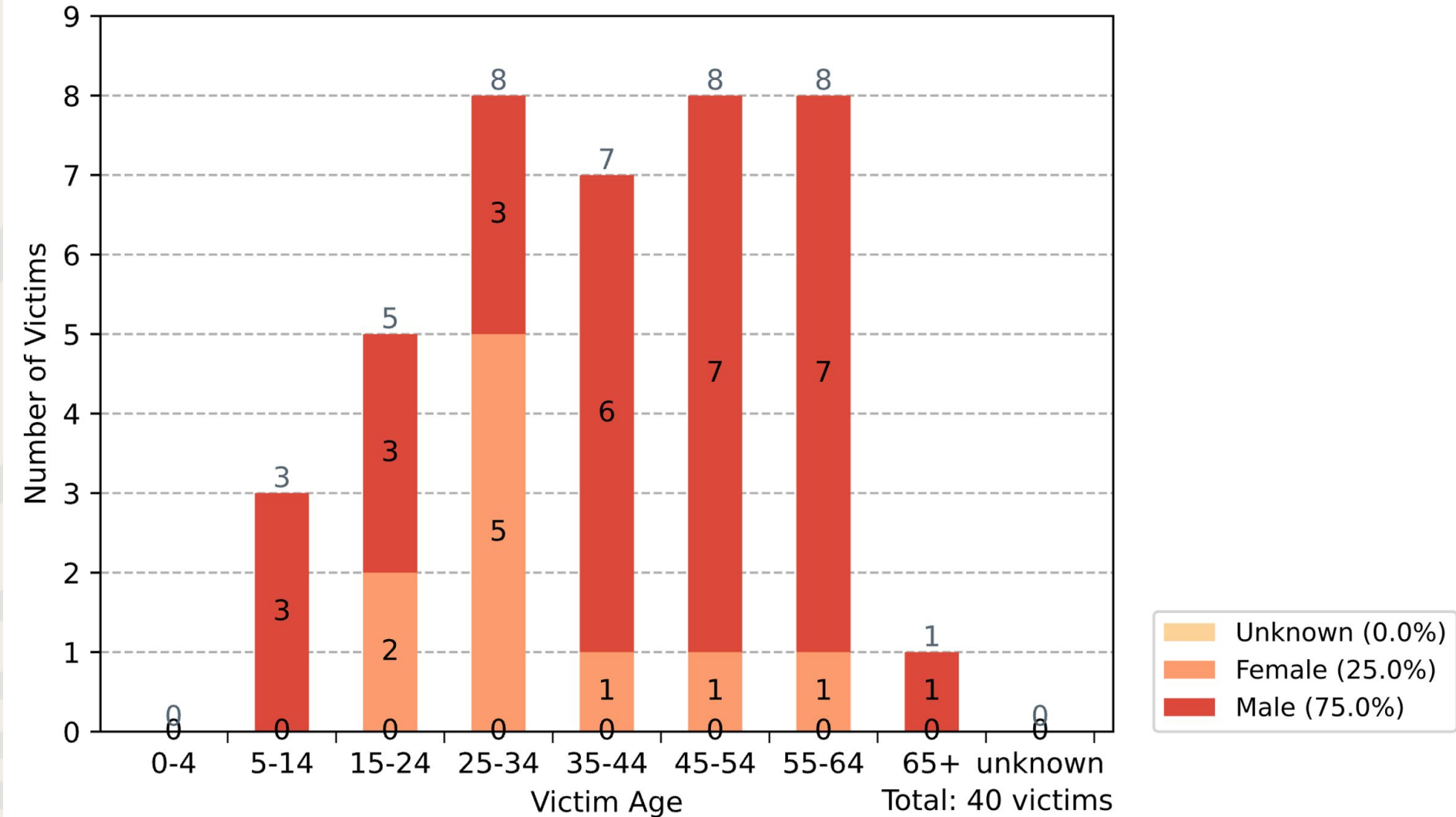
4 of those victims were seriously injured.

90% of all victims were minorly injured.



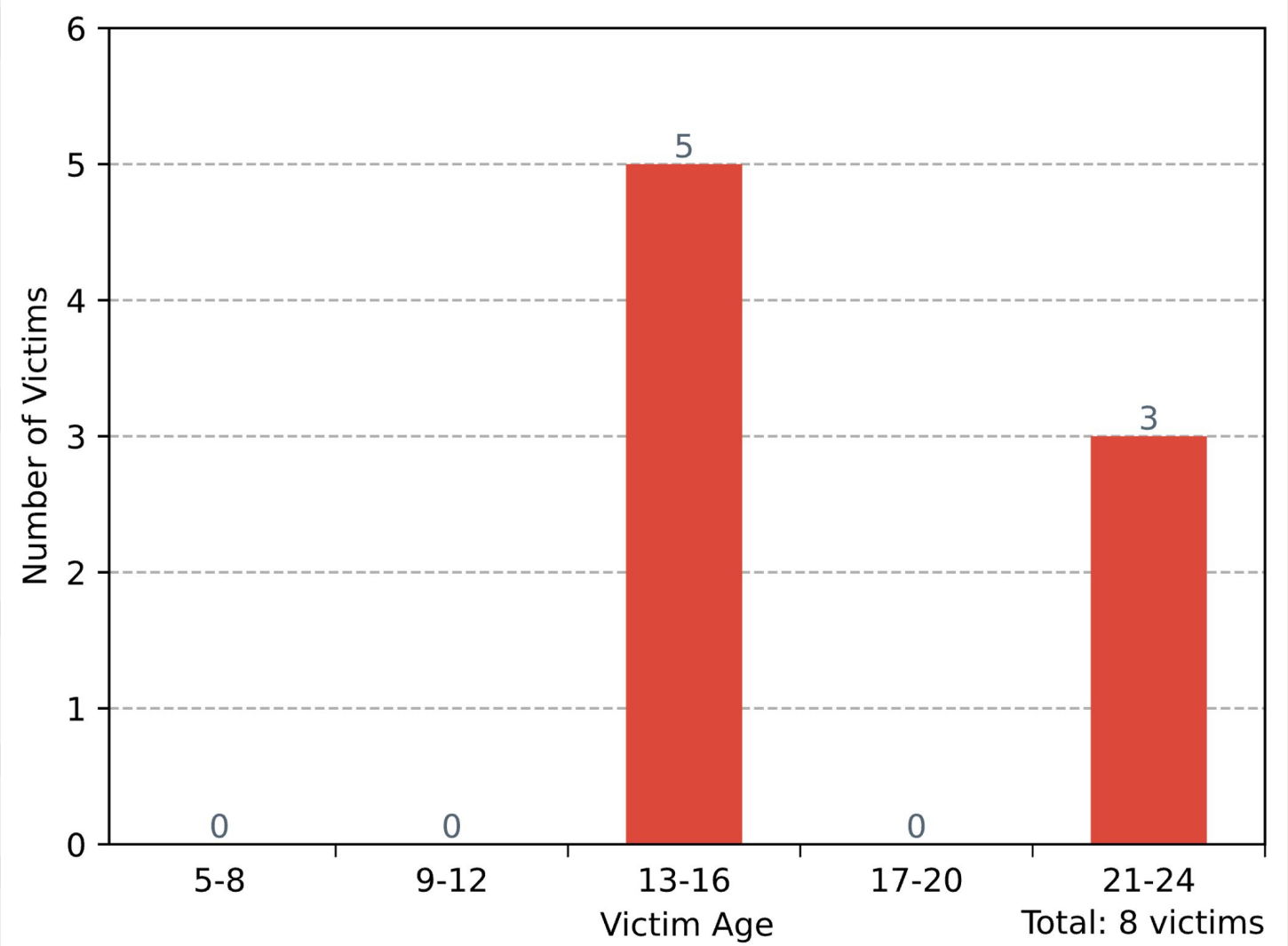
Bicycle Crashes 2018-2022

By victim age and gender



Bicycle Crashes 2018-2022

School-aged children



Data source: Statewide Integrated Traffic Record System (SWITRS) 2018-2022. 2021 and 2022 data are provisional as of July 2023.

Bicycle Crashes 2018-2022

Most frequently cited violations in injury crashes

16

crashes

21650. Bicyclist failure to drive/ride on the right half of the roadway (with some exceptions).

6

crashes

21453. Driver failure to stop at a limit line or crosswalk at red light. Driver failure to yield right-of-way to pedestrian when turning on a red light.

5

crashes

22107. Unsafe turning or moving right or left on a roadway. Turning without signaling.

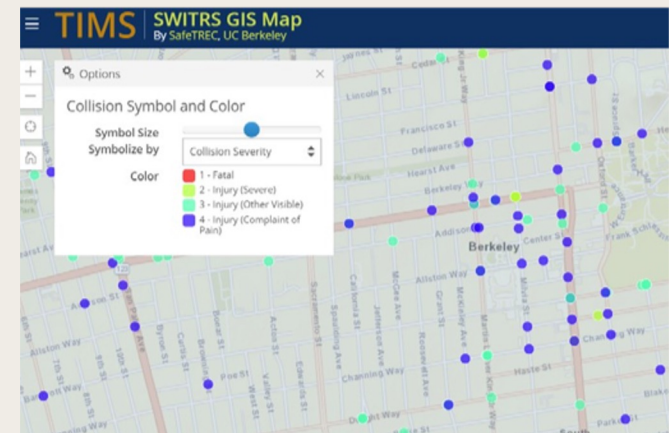
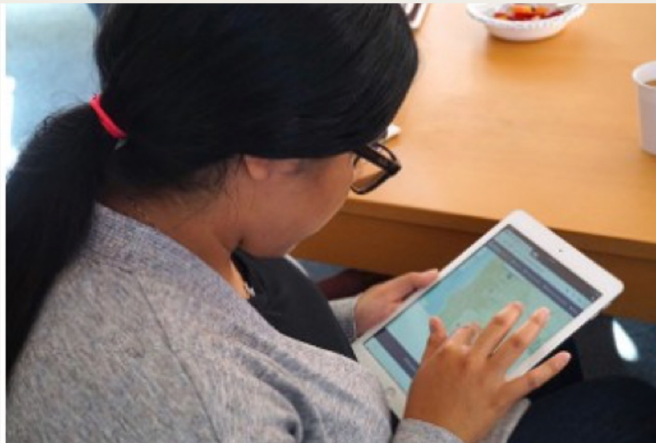
Additional Resources

Street Story

Street Story is a tool for gathering community feedback on transportation safety issues.

Share stories on Street Story of where you've been in a crash or near crash, or where you feel safe or unsafe traveling.

streetstory.berkeley.edu



Transport Injury System (TIMS)

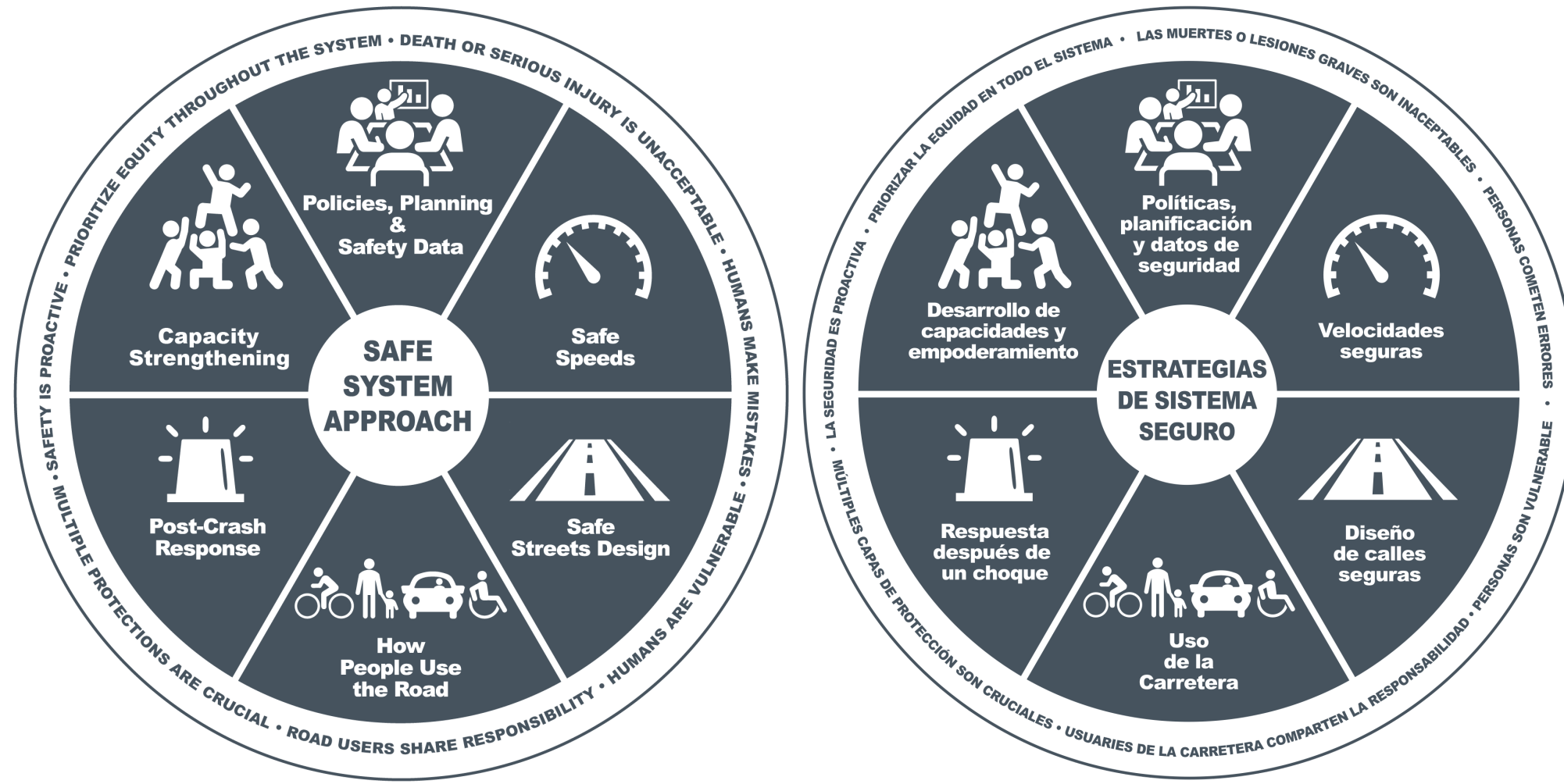
TIMS is a web-based tool that allows users to analyze and map data from the California State Integrated Traffic Log System (SWITRS).

To further explore crash data, sign up for a free account to access tools and resources on TIMS.

tims.berkeley.edu

Safe System Strategies

Estrategias de Sistema seguro



The Safe System approach focuses on saving lives, knowing people can make mistakes and get hurt. It works on designing streets better and teaching communities to use streets safely to reduce serious injuries and deaths.

El enfoque del Sistema Seguro se centra en salvar vidas, con el conocimiento que las personas pueden cometer errores y lastimarse. Trabaja para diseñar mejor las calles y enseñar a las comunidades a usar las calles de manera segura para reducir las lesiones graves y las muertes.



Scan this code to view the full list of strategies!

¡Escanee este código para ver la lista completa de estrategias!

Participatory Campaign
Campaña Participatoria

Neighborhood Speed Awareness Program
Programa de concienciación de velocidad vecinal

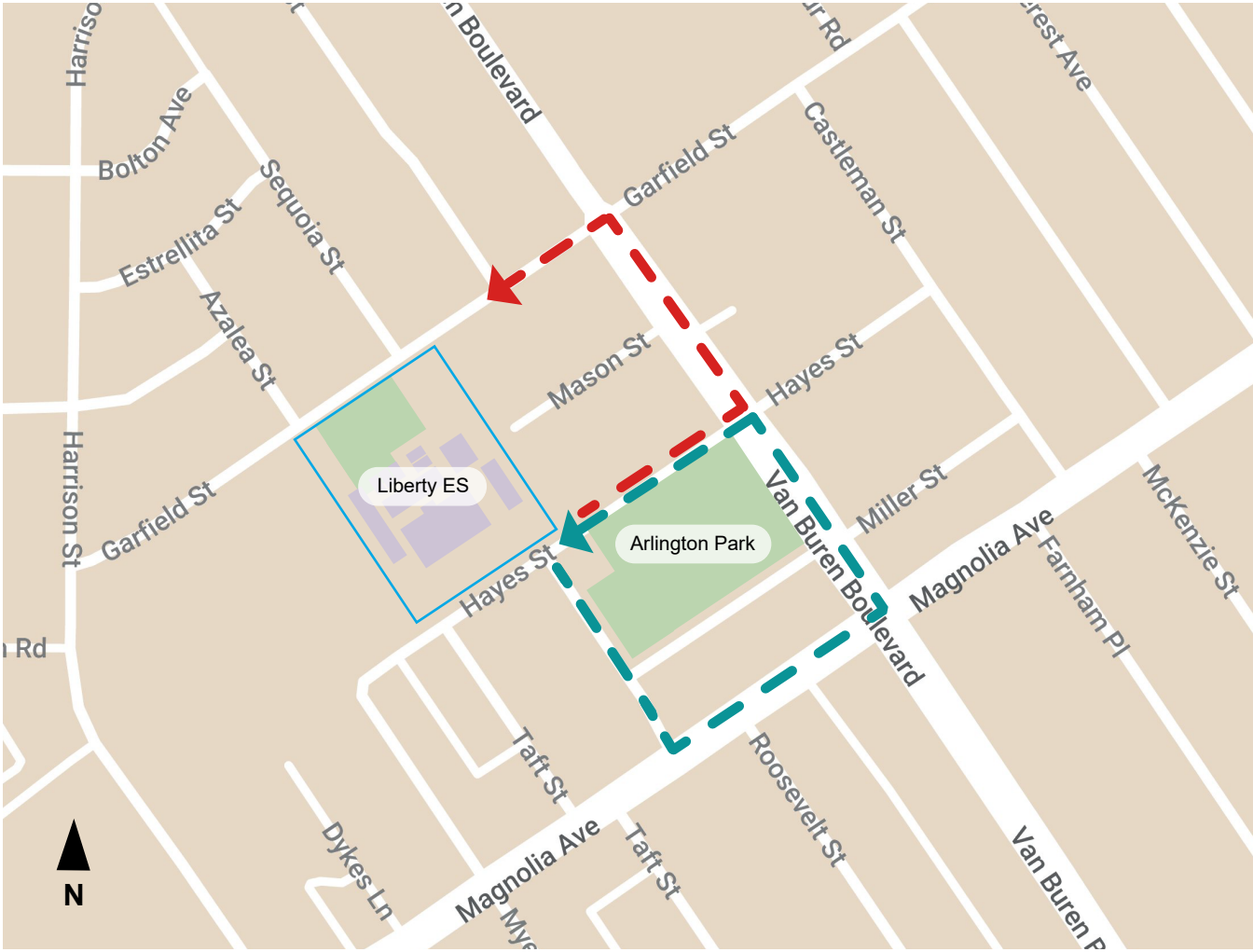
High Visibility Road Markings
Marcas de alta visibilidad



Liberty Elementary School CPBST: Walking and Biking Assessment Routes

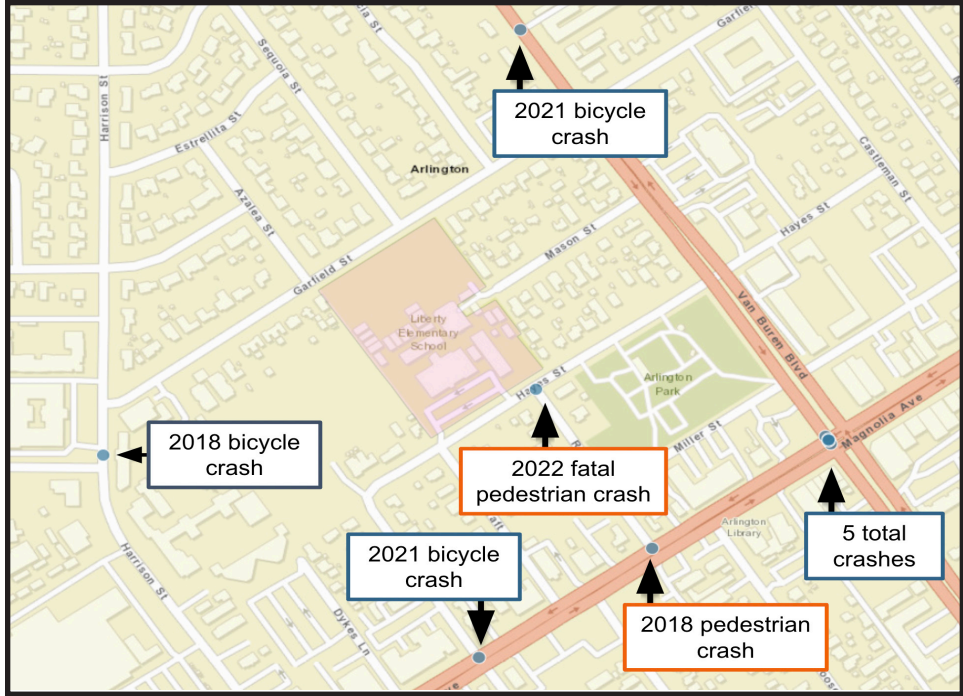
Legend

- Liberty ES Boundary
- Liberty ES Buildings
- Green Space
- Walking Route 1
- Walking Route 2



Pedestrian and Bicycle Crashes

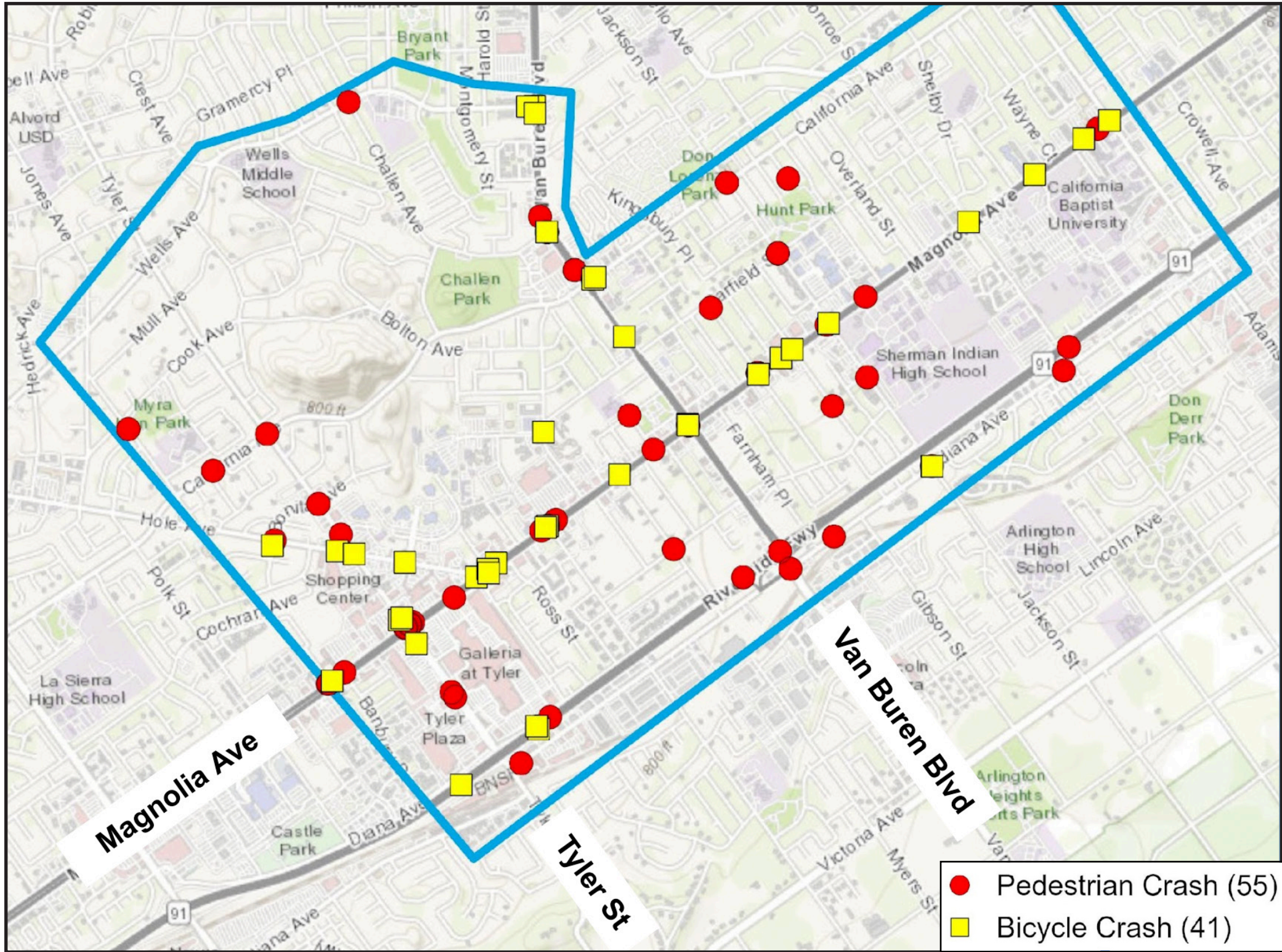
2018-2022



Pedestrian and Bicycle Crashes within 1/4 mile radius of Liberty Elementary School

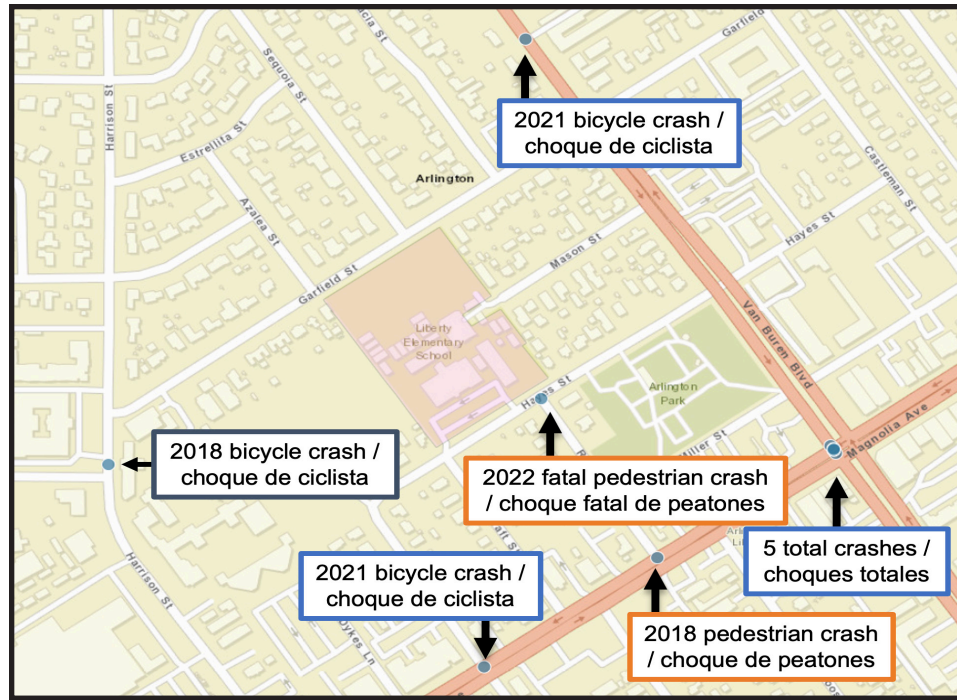
Top crash corridors

- Magnolia Avenue (33 crashes)
- Tyler Street (13 crashes)
- Van Buren Boulevard (12 crashes)



Data source: Statewide Integrated Traffic Record System (SWITRS) 2018-2022. 2021 and 2022 data are provisional as of July 2023.

Choques de peatones y ciclistas 2018-2022

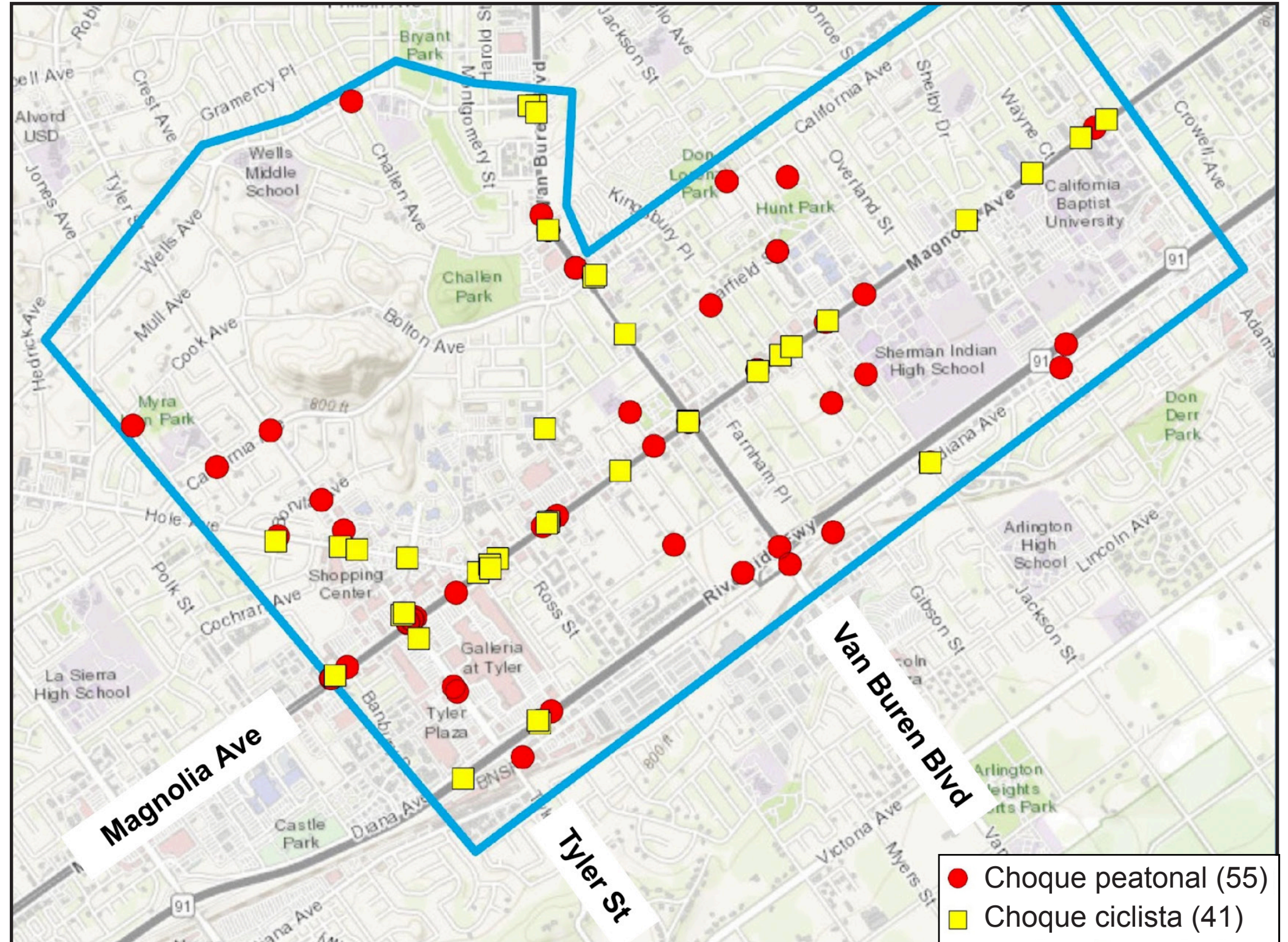


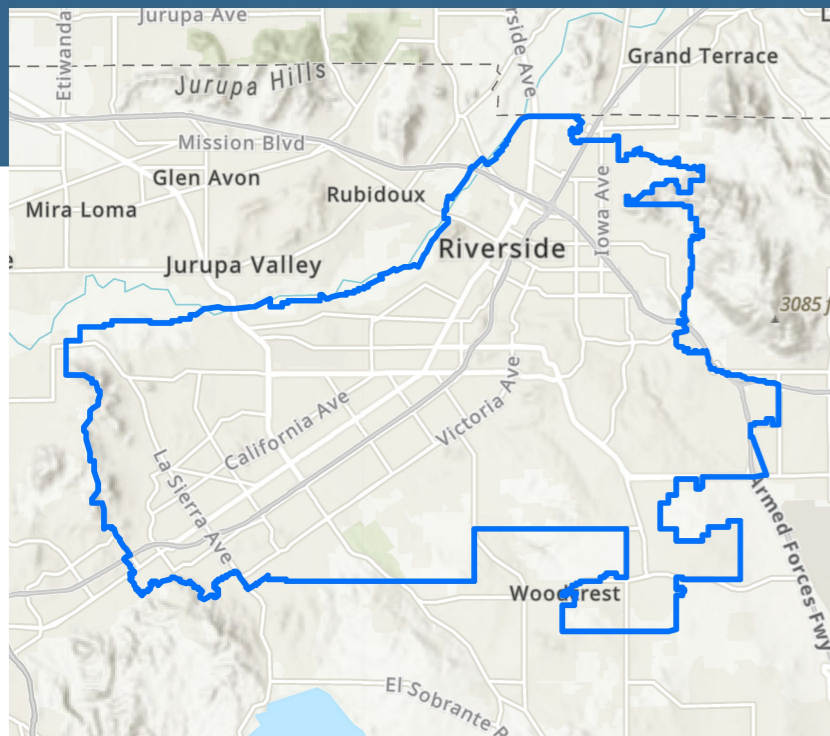
Choques de peatones y ciclistas dentro de un radio de 1/4 de milla de la Escuela Primaria Liberty

Los corredores principales de choques

- Magnolia Avenue (33 choques)
- Tyler Street (13 choques)
- Van Buren Boulevard (12 choques)

Fuente de datos: Registro integrado del tráfico estatal (Statewide Integrated Traffic Records System, SWITRS) del 2018 al 2022. Los datos de 2021 y 2022 son provisionales a julio de 2023.





Riverside

Community Pedestrian and Bicycle Safety Program

Key Facts



26%

Households with 1+ Persons with a Disability

Vulnerable Population



12%

Population 65+



11%

Households without a vehicle



12%

Households Below the Poverty Level

Commute Profile



2%

Took Public Transportation



11%

Carpooled



3%

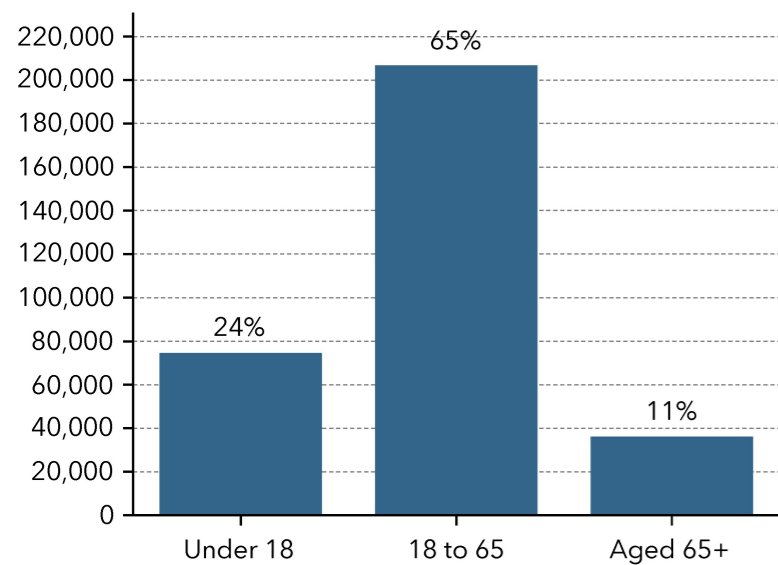
Walked to Work



1%

Bike to Work

Population by Age



2023 Race and Ethnicity (Esri)

The largest group: Hispanic Origin (Any Race) (56.52)

The smallest group: Pacific Islander Alone (0.34)

Indicator ▲	Value	Diff
White Alone	34.91	-4.67
Black Alone	6.33	-0.16
American Indian/Alaska Native Alone	1.97	+0.15
Asian Alone	7.51	+0.15
Pacific Islander Alone	0.34	+0.01
Other Race	31.40	+4.19
Two or More Races	17.54	+0.34
Hispanic Origin (Any Race)	56.52	+5.27

Bars show deviation from 06065 (Riverside County)

Household Income (2021)

Median Household Income	\$81,240	
Household Income less than \$15,000	7,099	7%
Household Income \$15,000-\$24,999	5,165	5%
Household Income \$25,000-\$34,999	6,315	6%
Household Income \$35,000-\$49,999	9,495	10%
Household Income \$50,000-\$74,999	16,371	17%
Household Income \$75,000-\$99,999	13,908	14%
Household Income \$100,000-\$149,999	21,247	22%
Household Income \$150,000-\$199,999	8,918	9%
Household Income \$200,000 or greater	8,966	9%

Thank you for your interest in the Community Pedestrian and Bicycle Safety Training Program.

For more information, please visit:
<https://safetrec.berkeley.edu/programs/cpbst> or
<https://www.calwalks.org/cpbst>

For questions, please email:
safetrec@berkeley.edu or cpbst@calwalks.org

This report was prepared in cooperation with the California Office of Traffic Safety (OTS). The opinions, findings, and conclusions expressed in this publication are those of the author(s) and not necessarily those of OTS.



Berkeley **SafeTREC**