

# APPENDIX C. SAFETY FINDINGS

## METHODOLOGY AND ANALYSIS DETAIL

This appendix contains additional safety findings details such as the incidence of bike and pedestrian collisions near schools, Champion and school administrator perceptions of activity effectiveness at improving safety, and available technical assistance.

### Incidence of Collisions

A direct comparison of the number of crashes involving people walking and biking near schools over time is only partially useful. First, families tend to avoid streets that they deem unsafe to walk along or across, resulting in fewer crashes due to few people walking in particular locations. Second, the low number of crashes near schools yields insufficient data for a statistically-valid analysis. Finally, crash data are typically not available for several years, and this delay in reporting presents challenges for timely analysis that can guide implementation.

Nevertheless, comparing the frequency of collisions near schools, as well as the proximity of schools to the High-Injury Network yields useful information about safety concerns for schools, which the Alameda County SR2S Program can address through infrastructure funding and program activities that support safety.

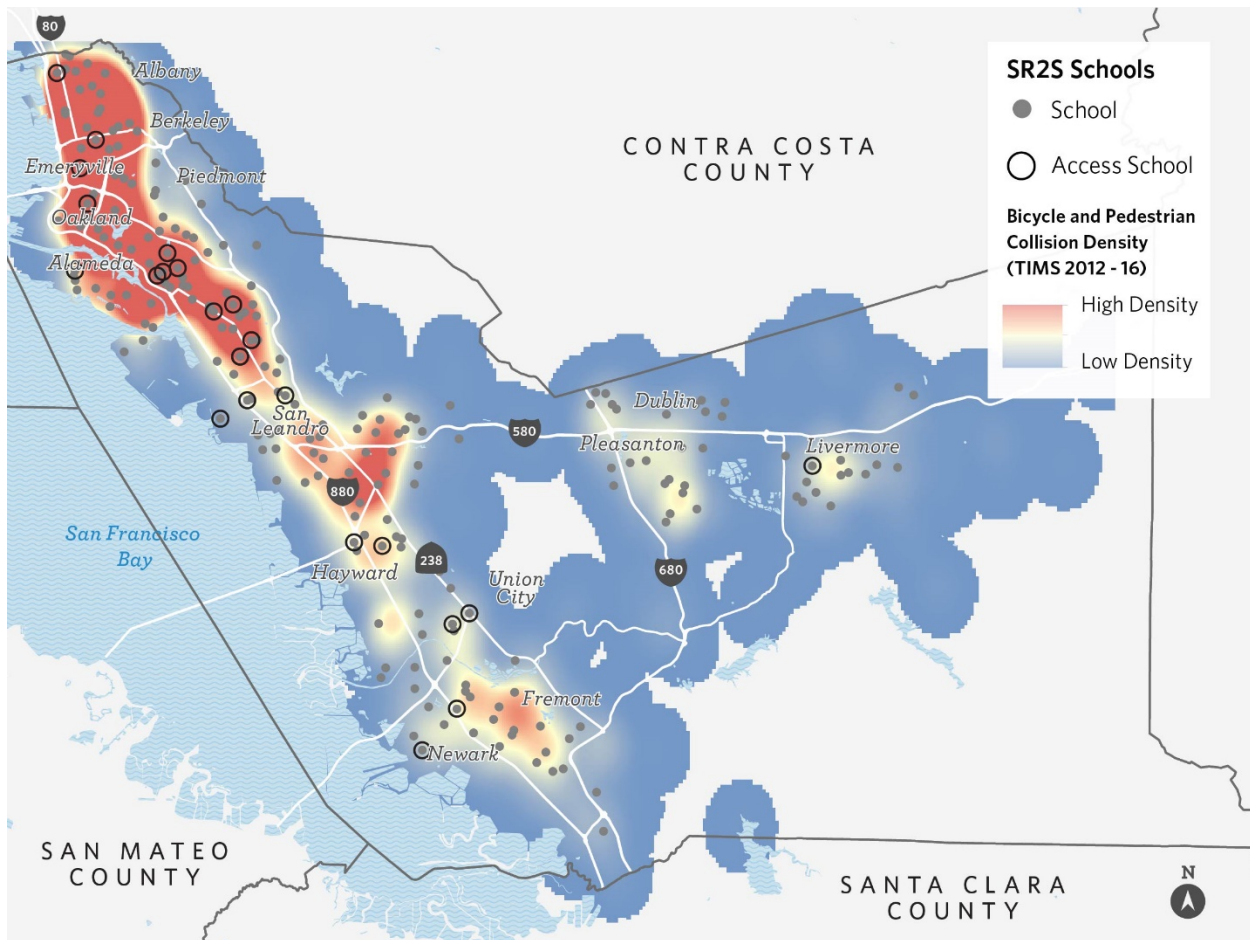
#### *Collisions Near Schools*

Table 1 shows the frequency of collisions near schools enrolled in the SR2S Program using Statewide Integrated Traffic Records System (SWITRS) data from 2012-2016. On average, 10.66 collisions and 0.20 fatalities occurred near enrolled schools. The frequency of collisions near Access schools is slightly higher than that of non-Access schools, but the variation in the data makes this finding not statistically significant.

**TABLE 1. COMPARISON OF BICYCLE AND PEDESTRIAN INVOLVED COLLISIONS NEAR ALL SR2S SCHOOLS AND ACCESS SCHOOLS, SWITRS COLLISION DATA, 2012-2016**

	Collisions	Fatalities
All SR2S Schools	10.66	0.20
Access	12.17	0.13
Non-Access	10.48	0.21

**MAP A. PEDESTRIAN AND BICYCLE CRASH DENSITY AND LOCATIONS OF SR2S SCHOOLS**



Source: Transportation Injury Mapping System Data, 2012-16

The participating SR2S schools with the highest number of collisions within a quarter-mile include: Berkeley High School (105 collisions), Conservatory of Vocal/Instrumental Arts (99 collisions), and Lincoln Elementary in Oakland (92 collisions). The Access Schools that had the most collisions within a quarter-mile include Malcom X (50 collisions) and Achieve Academy (41 collisions).

### **Alameda County High-Injury Network**

The Commission has designated a High-injury Network (HIN), which indicates the streets with the highest incidence of collisions countywide. The HIN considers collisions from the Transportation Injury Mapping System (TIMS) and SWITRS from 2012-2016.<sup>1</sup> Map B and Map D show the proximity of schools enrolled in the Alameda County SR2S Program to the Pedestrian and Bicycle HINs, respectively. These maps provide a visual illustration of each community's schools that are within a ¼ mile of the HIN network.

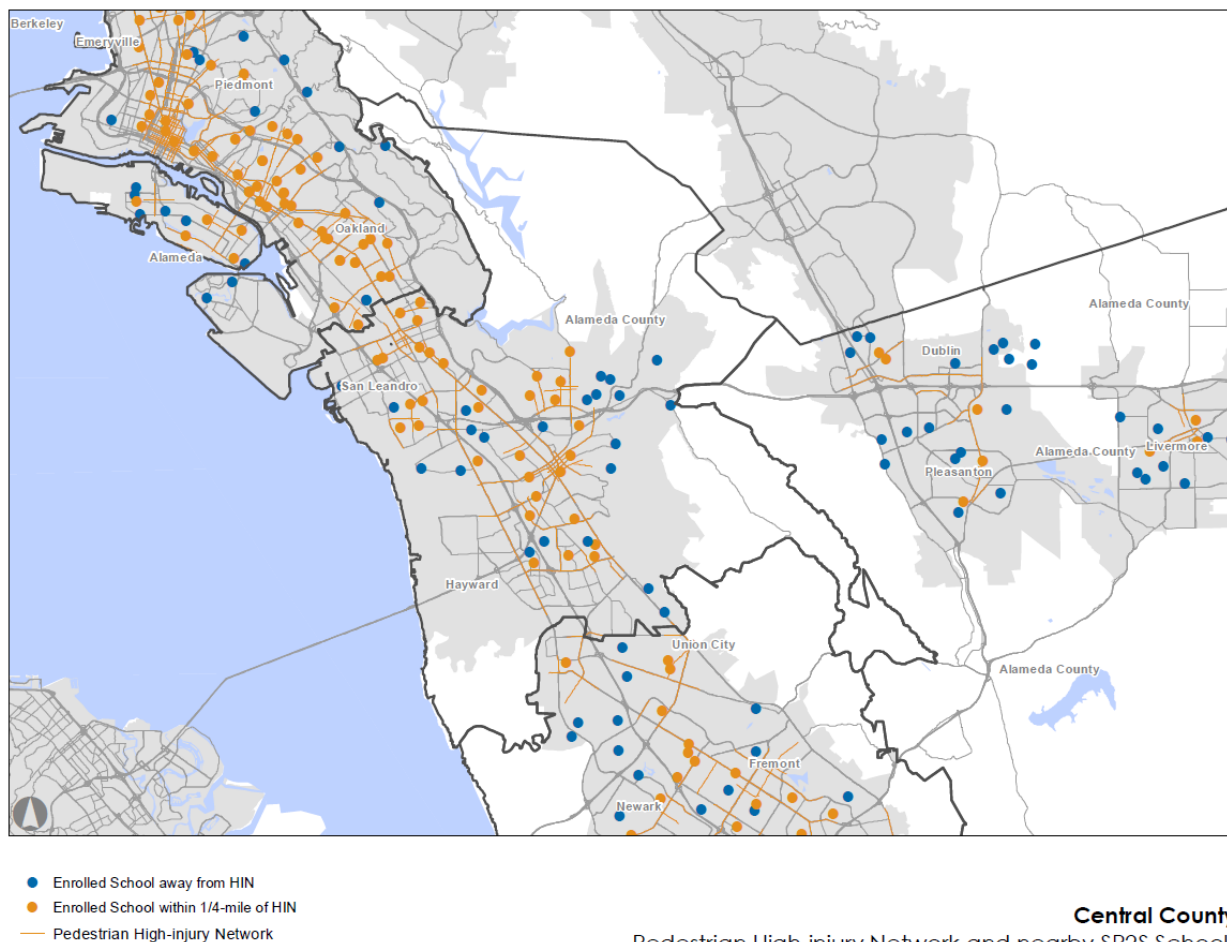
<sup>1</sup> More information about the HIN is available online at: [https://www.alamedactc.org/wp-content/uploads/2019/06/Countywide\\_HighInjuryNetwork\\_Alameda-CTC\\_PPT\\_20190509.pdf?x33781](https://www.alamedactc.org/wp-content/uploads/2019/06/Countywide_HighInjuryNetwork_Alameda-CTC_PPT_20190509.pdf?x33781)

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*65 percent of pedestrian collisions and 59 percent of bike collisions  
occur on just 4 percent of roads.<sup>2</sup>*

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**MAP B. PROXIMITY OF SR2S SCHOOLS TO THE ALAMEDA COUNTY PEDESTRIAN HIGH INJURY NETWORK: CENTRAL COUNTY**

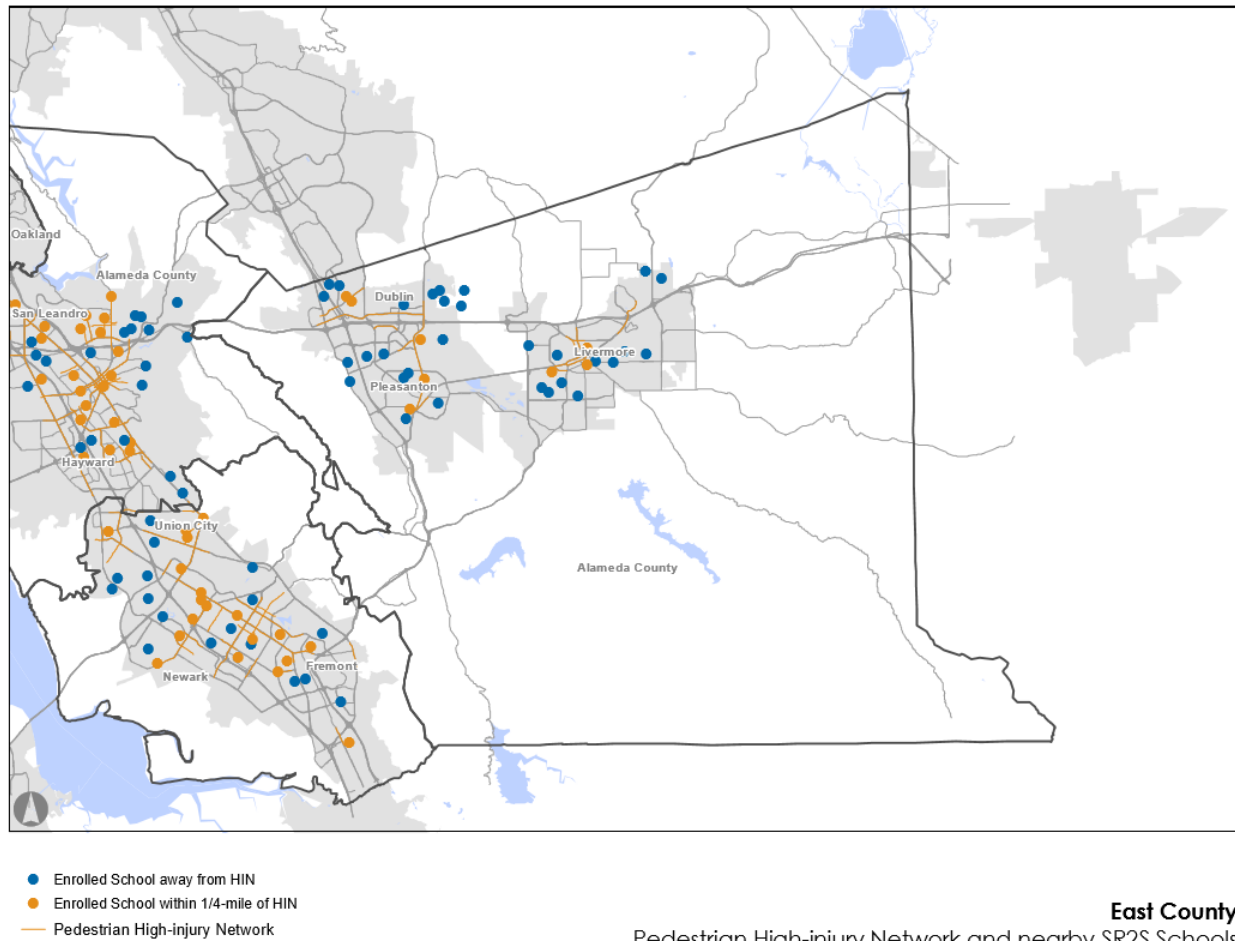


Source: Alameda County Pedestrian High Injury Network, 2019

<sup>2</sup> More information about the HIN is available online at: [https://www.alamedactc.org/wp-content/uploads/2019/06/Countywide\\_HighInjuryNetwork\\_Alameda-CTC\\_PPT\\_20190509.pdf?x33781](https://www.alamedactc.org/wp-content/uploads/2019/06/Countywide_HighInjuryNetwork_Alameda-CTC_PPT_20190509.pdf?x33781)

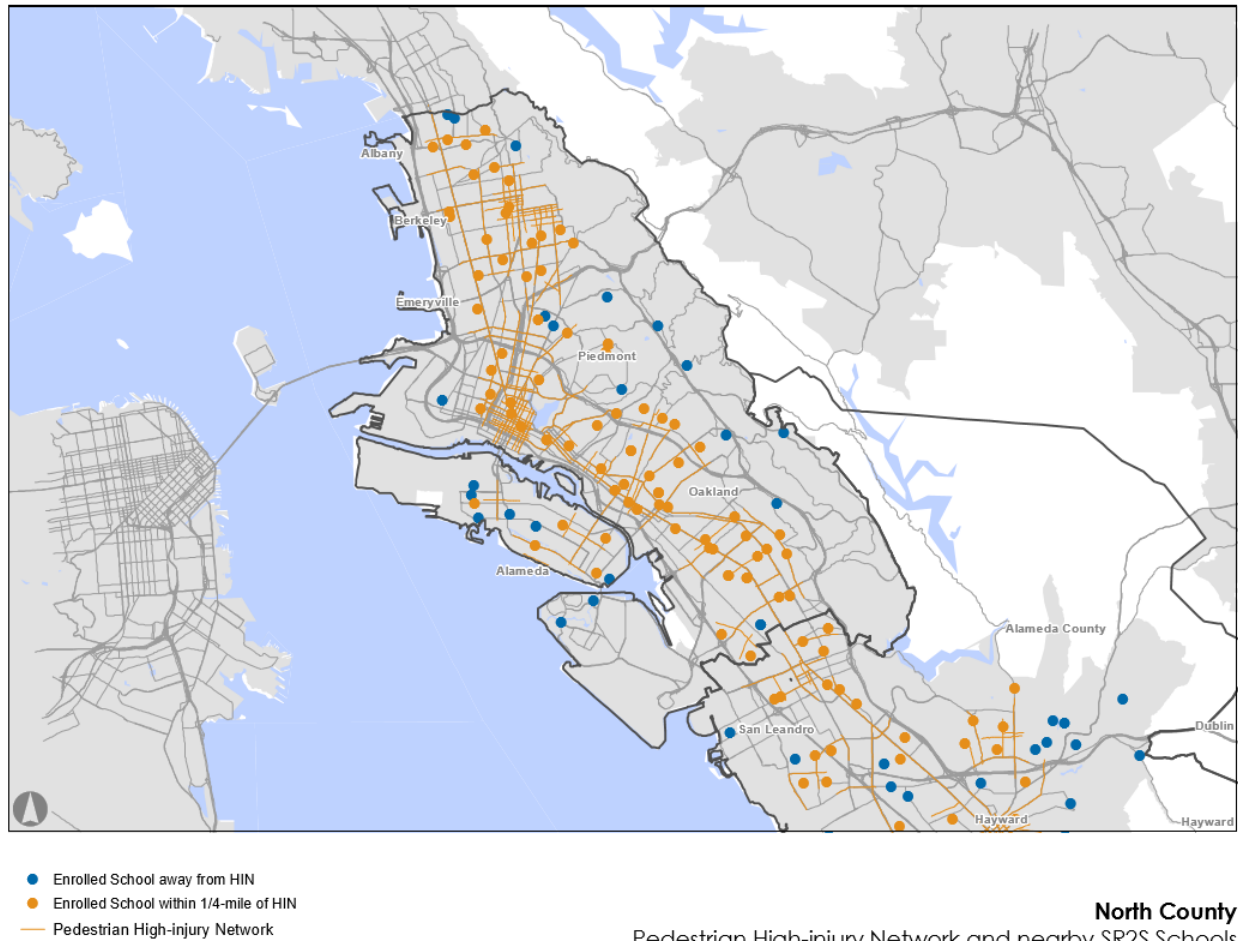
## ALAMEDA COUNTY SAFE ROUTES TO SCHOOLS PROGRAM

### MAP C: PROXIMITY OF SR2S SCHOOLS TO THE ALAMEDA COUNTY PEDESTRIAN HIGH INJURY NETWORK: EAST COUNTY



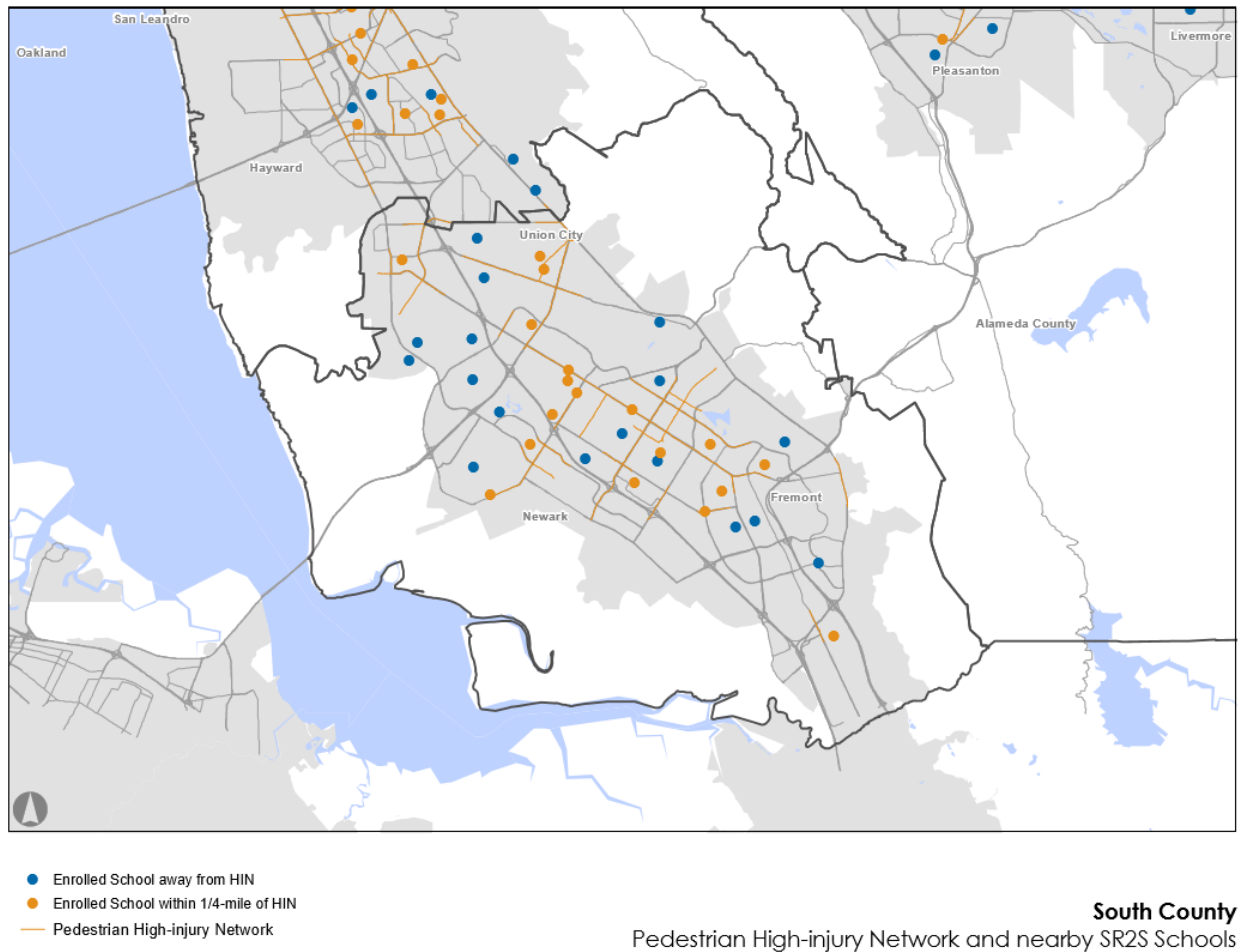
Source: Alameda County Pedestrian High Injury Network, 2019

**MAP D: PROXIMITY OF SR2S SCHOOLS TO THE ALAMEDA COUNTY PEDESTRIAN HIGH INJURY NETWORK: NORTH COUNTY**



Source: Alameda County Pedestrian High Injury Network, 2019

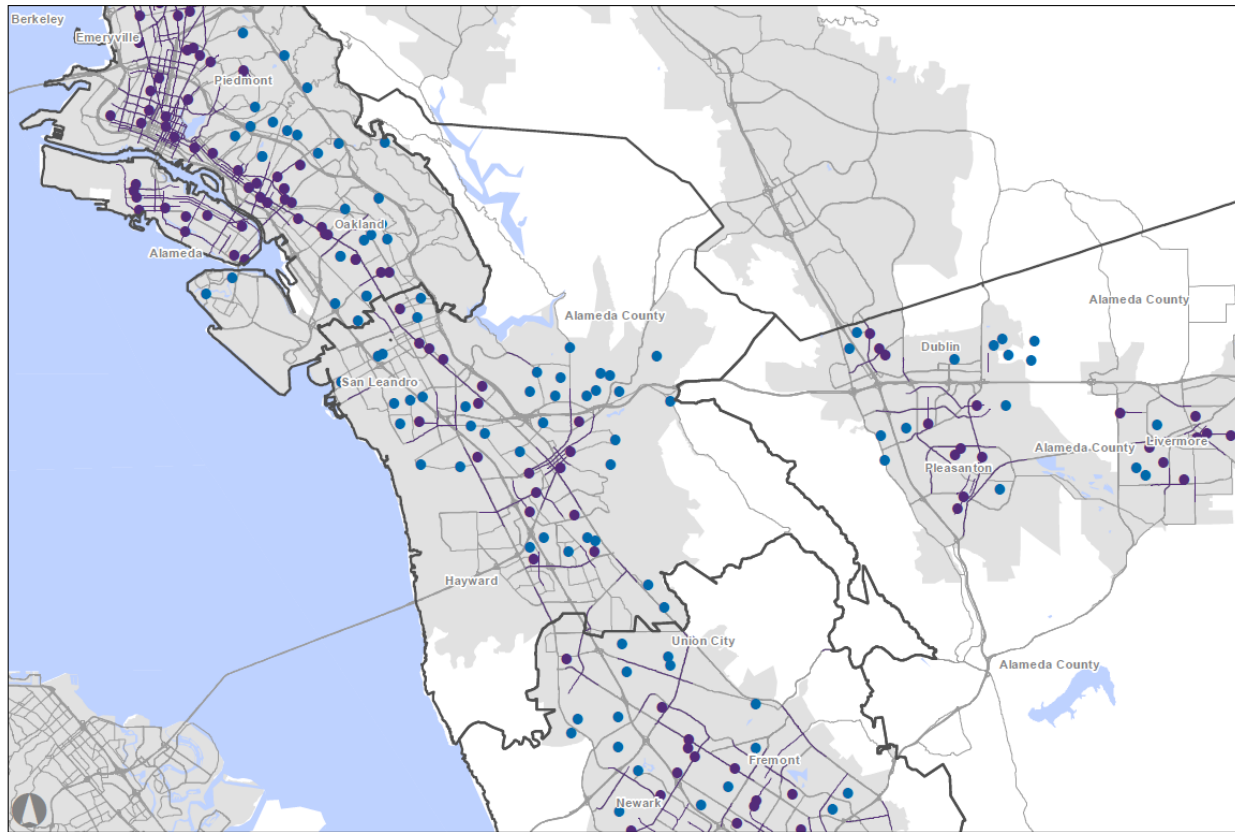
**MAP E: PROXIMITY OF SR2S SCHOOLS TO THE ALAMEDA COUNTY PEDESTRIAN HIGH INJURY NETWORK: SOUTH COUNTY**



Source: Alameda County Pedestrian High Injury Network, 2019



**MAP F. PROXIMITY OF SR2S SCHOOLS TO THE ALAMEDA COUNTY BICYCLE HIGH INJURY NETWORK:  
CENTRAL COUNTY**

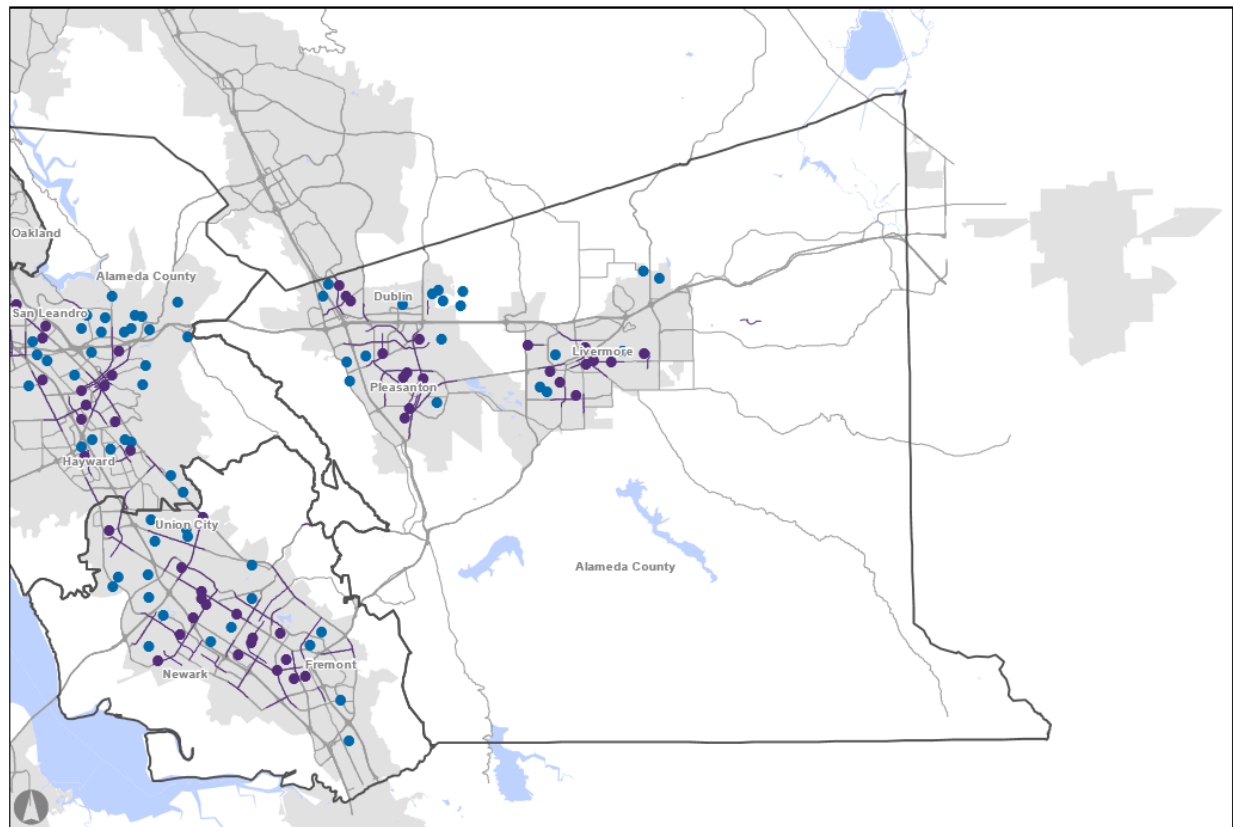


- Enrolled School away from HIN
- Enrolled School within 1/4-mile of HIN
- Bicycle High-injury Network

**Central County**  
High-injury Network and nearby SR2S Schools

Source: Alameda County Bicycle High Injury Network, 2019

**MAP G: PROXIMITY OF SR2S SCHOOLS TO THE ALAMEDA COUNTY BICYCLE HIGH INJURY NETWORK:  
EAST COUNTY**



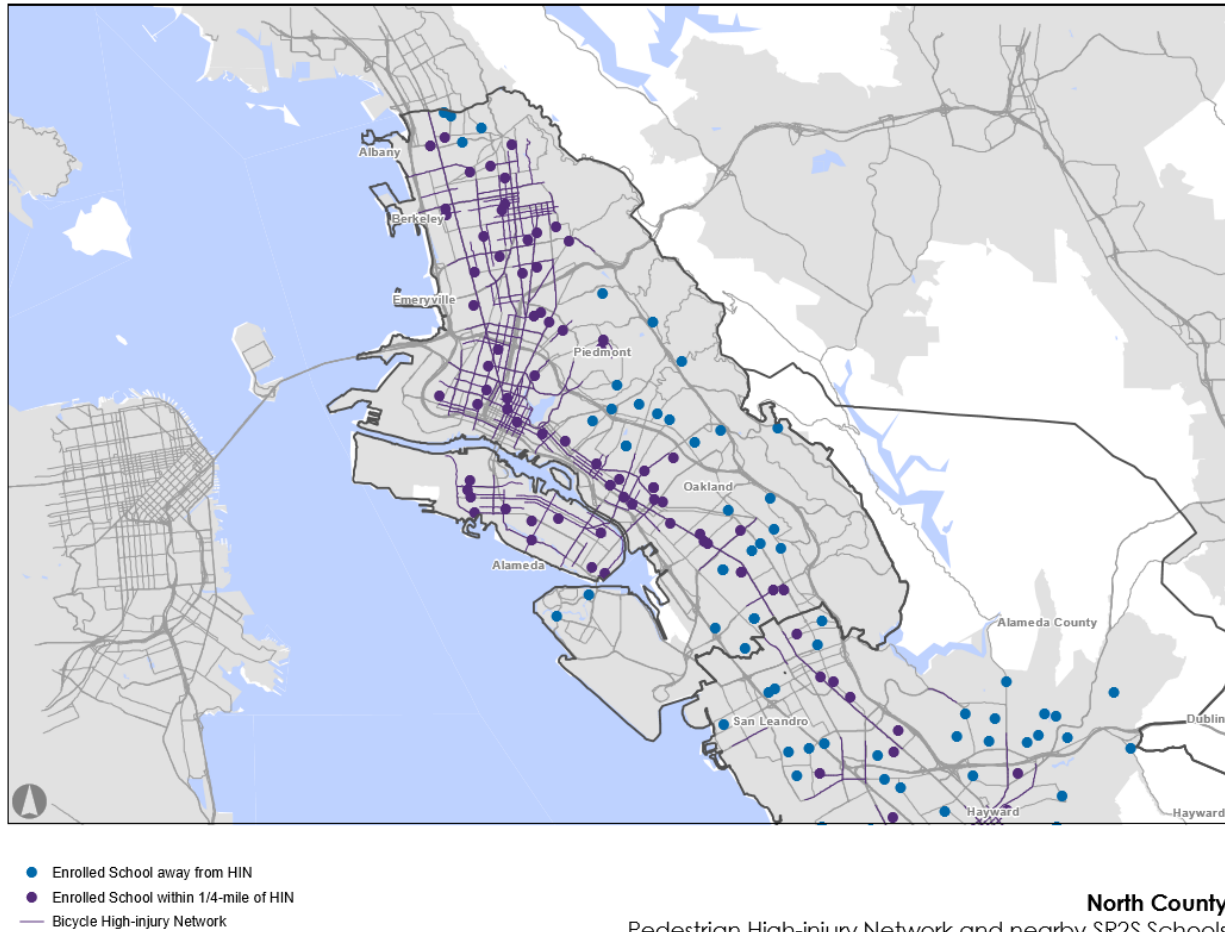
- Enrolled School away from HIN
- Enrolled School within 1/4-mile of HIN
- Bicycle High-injury Network

**East County**  
Pedestrian High-injury Network and nearby SR2S Schools

Source: Alameda County Bicycle High Injury Network, 2019

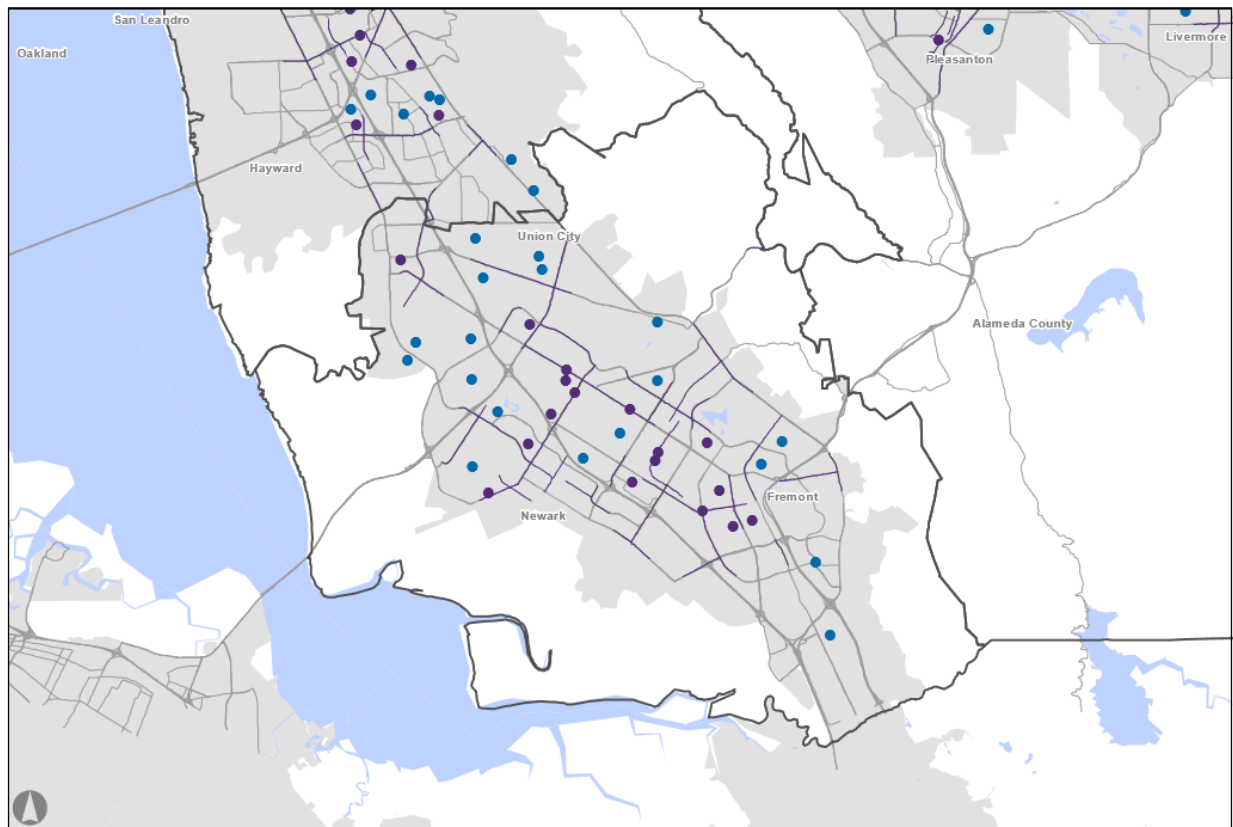


**MAP H: PROXIMITY OF SR2S SCHOOLS TO THE ALAMEDA COUNTY BICYCLE HIGH INJURY NETWORK: NORTH COUNTY**



Source: Alameda County Bicycle High Injury Network, 2019

**MAP I: PROXIMITY OF SR2S SCHOOLS TO THE ALAMEDA COUNTY BICYCLE HIGH INJURY NETWORK:  
SOUTH COUNTY**



- Enrolled School away from HIN
- Enrolled School within 1/4-mile of HIN
- Bicycle High-injury Network

**South County**  
Pedestrian High-injury Network and nearby SR2S Schools

Source: Alameda County Bicycle High Injury Network, 2019

### **Technical Assistance**

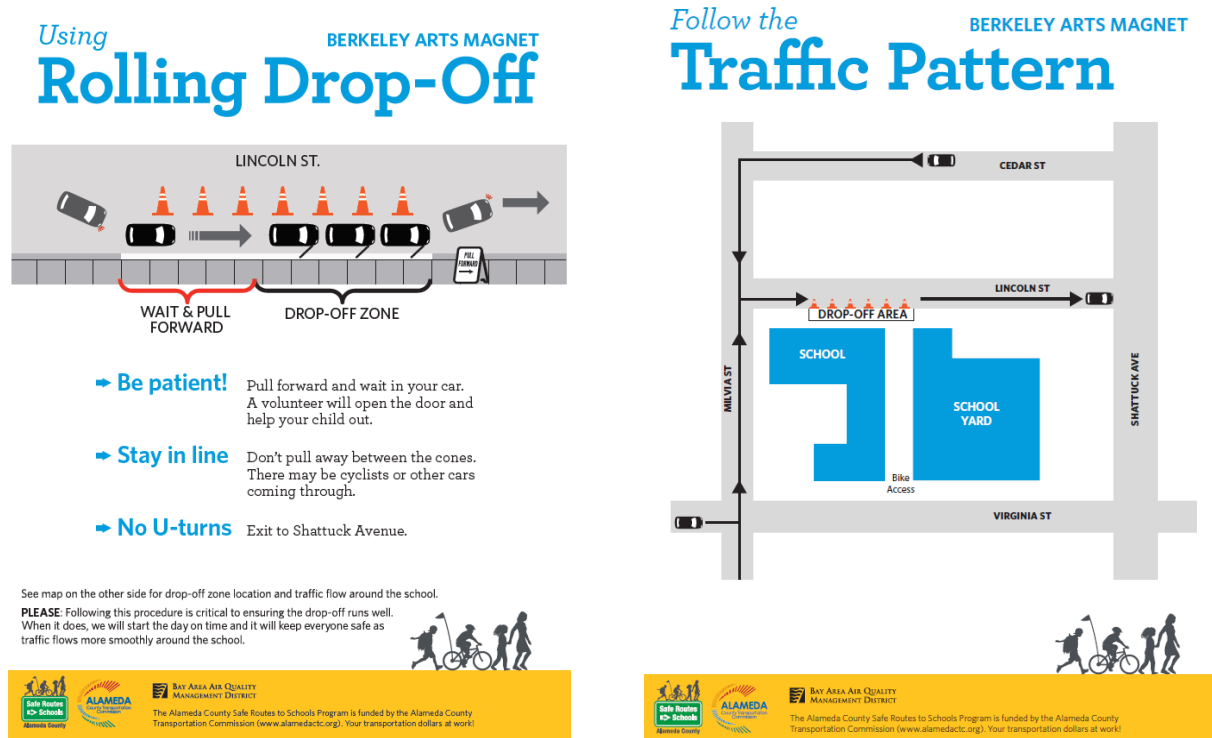
Limited technical assistance is available to schools. Available services include the following:

- » **Suggested Routes to School, Walking School Bus and Bike Train maps** that identify preferred routes to school for walking, bicycling and transit, based on existing infrastructure like sidewalks and bike lanes, or traffic controls/crossing guards for crossing streets. These maps are user maps, intended to be used as a wayfinding, encouragement, and as an outreach tool.
- » **Rolling drop-off** materials can support volunteers and families in implementing a rolling drop off at their schools. A rolling drop-off can reduce morning congestion by designating an area for families to let their kids out of the car (with help from a volunteer) without parking or leaving the car.

- » **School Safety Assessment follow-up technical assistance** will generally include a meeting at the school with school officials, parents, and/or local jurisdiction officials to review the final proposed safety improvement recommendations.

### *Success Story: Rolling Drop-Off at Berkeley Arts Magnet*

Alameda County SR2S developed a circulation plan for Berkeley Arts Magnet to clarify the student loading areas. The school distributed these fliers to parents to communicate changing expectations about drop-off behaviors:



## Student and Parent Confidence

For parents, the perception that active and shared travel are dangerous often deters families from walking or biking to school. Moving forward, program staff will work to increasingly engage parents as the transportation decision-maker via strategic communications campaigns and targeted education to address these concerns.

### *Concerns with Walking and Biking to School*

*The absence of safe walking and biking infrastructure can make it difficult for students to use those modes to get to school.*

Many parents, Champions, and school administrators mentioned recent crashes and injuries that had taken place near schools or questioned why more is not being done to prevent these incidents. Some of the infrastructure needs are freeway and railway crossings, lack of sidewalks

or bike lanes, and narrow, chaotic roadways present specific barriers for students. Challenging topography, such as large hills, are also an issue for families who want to walk or bike that parents identified. Parents also wished for better public transit connections to their schools.

- » “Railroad crossing does not have proper pedestrian crossing and sidewalk.” — parent/caregiver survey response
- » “Make sure we have safe sidewalks and safe bike lanes on the streets we use to bike to school.” — Champion survey response
- » “The biggest hurdle in our district is infrastructure. Sidewalks on Stanton Avenue will have more of an impact on the number of students walking to school than any SR2S Program.” — Champion survey response
- » “Many students, parents and teachers don't bike because our city isn't really bike friendly. Roads are narrow and crowded with park[ed] cars so bikers don't have much space between them and moving cars. Our school is located near major intersections with no cross guards so parents don't let their kids walk from certain neighborhoods. More support and services from the city to encourage walking and biking would go a long way.” — Champion survey response

*Poor driving behavior is a frequently-cited barrier to walking and biking to school.*

Parents and focus group participants cited challenges with drivers blocking crosswalks, aggressive reactions from parents who are asked to behave differently, and the general chaos caused by people driving during drop-off and pick-up. Students at the San Leandro High focus group described feeling unsafe walking on roads near their school because of speeding cars.

- » “Parents do not respect teachers and administrators who try to enforce good behavior or call out bad behavior” — feedback from Focus Group
- » “This is tough, there are great resources to educate kids on safety but parents in general resist allowing their students to ride to school because of their perceived danger on the roads. Some of that danger is exaggerated but I will admit some of that is justified. In Castro Valley the busiest traffic time is school drop off time. Students who ride their bikes are at greatest risk at this time. Drivers in a hurry combined with timid kids on bikes make for a worrisome situation for many parents. Student and parent bike education could help” — Champion survey response
- » “Too many students have to walk between campuses; students walk on streets and feel unsafe because of speeding and jay-walking.” — feedback from Focus Group

*Crime and personal safety concerns are significant barriers for students walking and biking to school.*

One parent/caregiver survey response from Emerson Elementary described severe gun violence in their neighborhood that has reduced her family’s ability to walk and bike to school. Student Focus Group participants mentioned bike theft as a major concern.

- » There are activities going on in the neighborhood that are more “intense” than worrying about wearing a helmet. – feedback from Focus Group

- » “Need to organize the community to address the personal safety issues; this support from the program would be effective.” – feedback from Focus Group

### *Perceptions of Most Effective SR2S Activities at Improving Safety*

As shown in Figure 1 and Figure 2, Champions perceive SR2S activities to be highly effective at improving safety for students and getting students to walk, bike, carpool, or ride the bus. The highest-rated program activities (receiving high efficacy scores from 70 percent of Champion respondents or more) include the following:

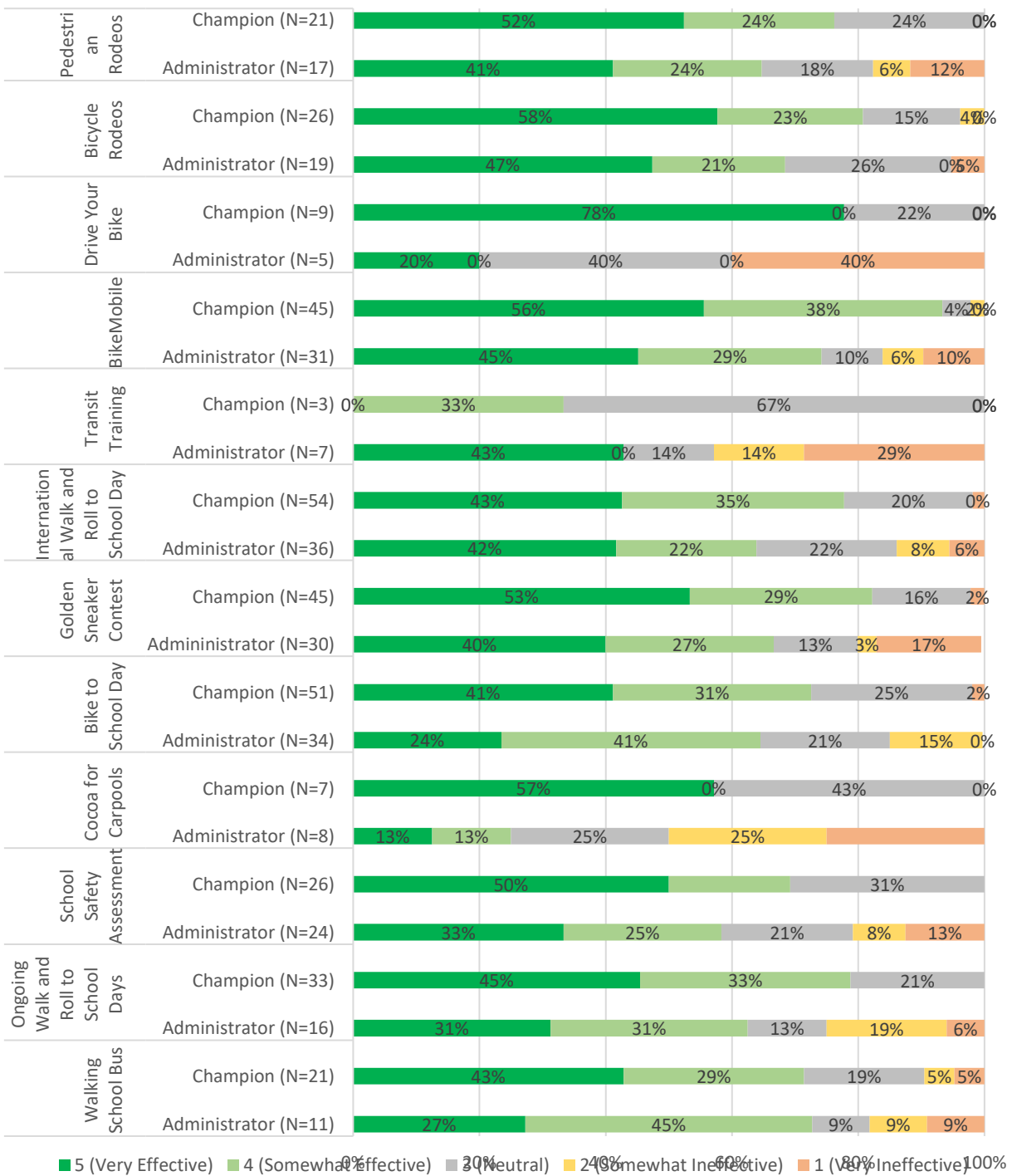
- » International Walk and Roll to School Day
- » Golden Sneaker Contest
- » Bike to School Day
- » Pedestrian rodeos
- » Bicycle rodeos
- » Drive your Bike
- » BikeMobile
- » Ongoing Walk and Roll to School Days

No SR2S activity received poor safety improvement or mode shift ratings from over 10 percent of respondents.

More than 70 percent of surveyed administrators believed that the BikeMobile and Walking School Buses activities improve safety for students using active and shared modes to get to school. However, school administrators are more skeptical than Champions about the effectiveness of SR2S activities in general. More than 25 percent of administrators surveyed disagree with the safety impact/benefits of the following SR2S Program activities:

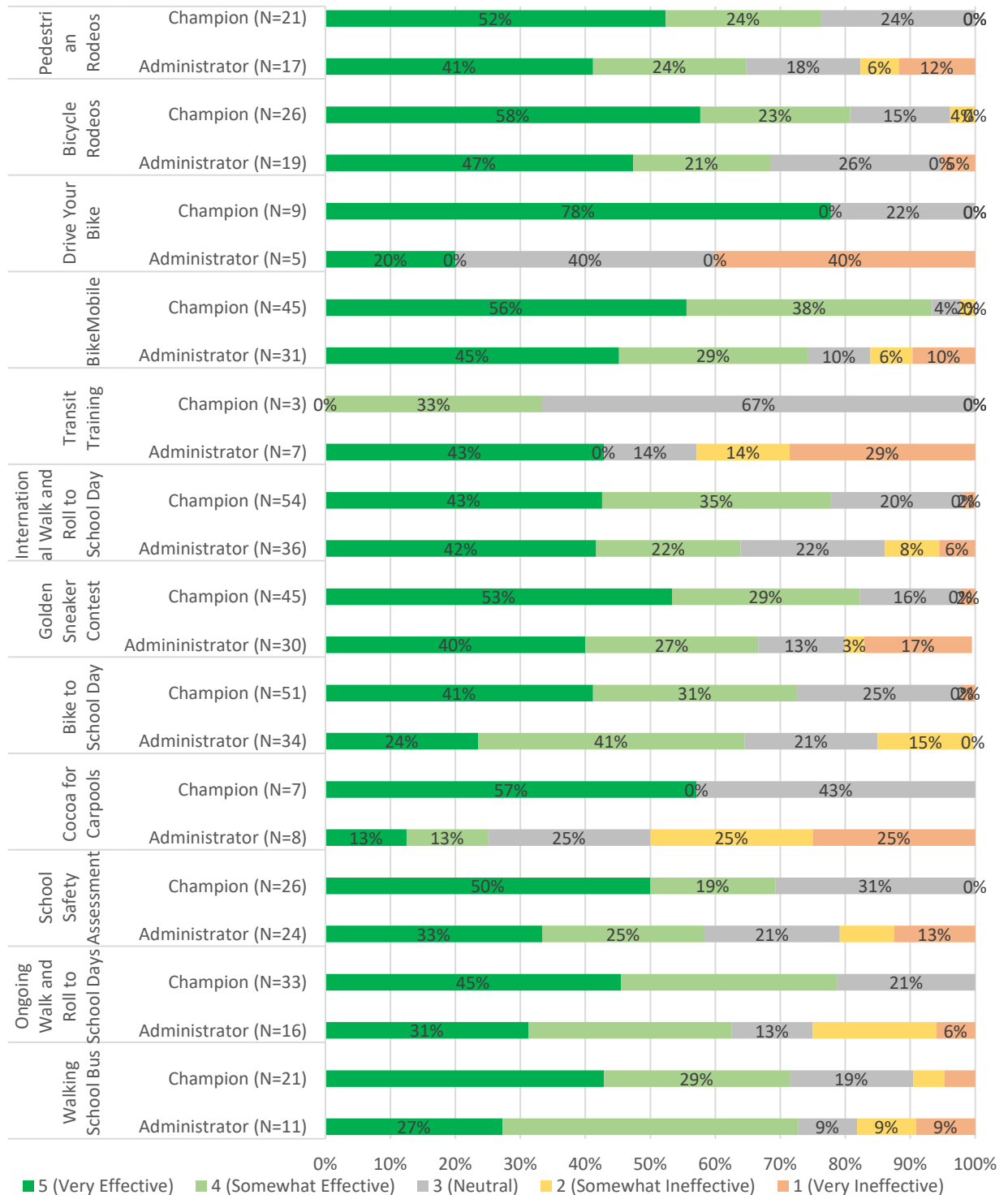
- » Drive Your Bike
- » Travel Training

**FIGURE 1. ENCOURAGEMENT ACTIVITY PERCEPTIONS OF EFFECTIVENESS AT IMPROVING SAFETY**



Source: 2018-19 School Administrator and School Champion Surveys



**FIGURE 2: EDUCATION ACTIVITY PERCEPTIONS OF EFFECTIVENESS AT IMPROVING SAFETY**


Source: 2018-19 School Administrator and School Champion Surveys