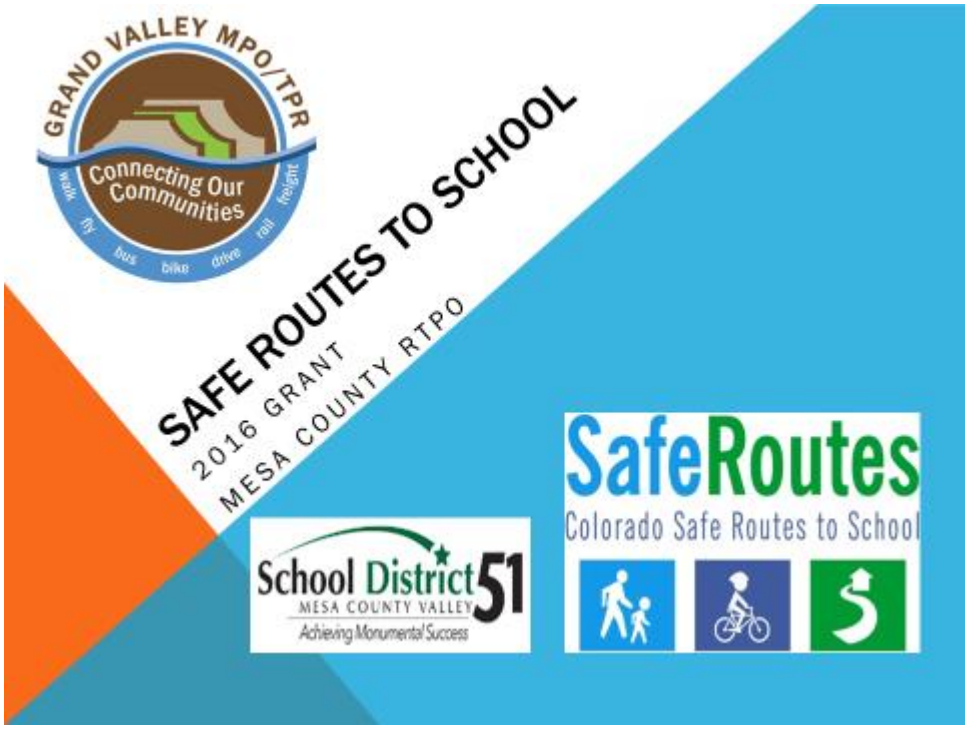
Summary Report – School Walking & Bicycling Audits



Mesa County Regional Transportation Planning Office

This page left blank intentionally

Executive Summary

Background:

Safe Routes to Schools was established by the Federal Highway Administration in 2005 to address issues perceived as barriers to making walking and bicycling to school a reality for more children in the United States. According to a study by the Center for Disease Control, the decline in walking and bicycling has had an adverse effect on traffic congestion and air quality around schools, as well as pedestrian and bicycle safety. In addition, a growing body of evidence has shown that children who lead sedentary lifestyles are at risk for a variety of health problems such as obesity, diabetes, and cardiovascular disease. Safety issues are a big concern for parents, who consistently cite traffic danger as a reason why their children are unable to safely bicycle or walk to school.

Competitive grant funding is provided to state departments of transportation, including the Colorado Department of Transportation (CDOT). The Mesa County Regional Transportation Planning Office applied for and received a non-infrastructure grant from CDOT to introduce 16 elementary schools and 8 middle schools in School District 51 to the Safe Routes to Schools program. A previous grant was awarded to Grand Valley Bikes, a local non-profit, for their work with six elementary schools in the district from 2013-2015.

Purpose:

From September, 2016 through November, 2016 on-site assessments were conducted by a multi-disciplinary team at 12 elementary schools and 8 middle schools. Each assessment included walking and bicycling audits, meetings with school administrators and subsequent assessments of bus loading zones, pick-up and drop-off areas, bicycle parking, sidewalks and bike routes, and intersection and street traffic controls.

Results:

The audit team identified areas for improvement, concerns, and best practices in use. These include: Crossing guard training – standardize, utilize SRO, GJ City, D51 Safety Coordinator as training team; Crossing guard equipment – use of approved safety vests, signs, cones at schools; School traffic safety – set regular agenda item at school team meetings; Infrastructure improvements – prioritize on-site for schools, off-site for local governments; Walking & wheeling champion – one at each school to promote benefits of walking and cycling to school, utilize web applications to walk maps on each school website.

Concerns based on observations during the audits include low helmet use by students on bikes, scooters; need for consistent and regular crossing guard training; use of teachers as crossing guards; and the need for a District Safe Routes to Schools coordinator-liaison between Principals, PE teachers, Safety Director.

This page left blank intentionally

Contents

This page left blank intentionally

What is Safe Routes to School?

The mission of Safe Routes to School (SRTS) is to increase the number of students walking, bicycling and actively getting to school. SRTS is a federal, state and local effort to improve the health and well-being of children by:

- enabling and encouraging children, including those with disabilities, to walk and bicycle to school;
- making bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age;
- working with community members to plan, develop and implement projects and activities to improve safety and reduce traffic, fuel consumption and air pollution in the vicinity of schools.

A successful Safe Routes to School program benefits children in several ways. When streets, sidewalks and pathways provide a comfortable and efficient way to travel to and from school, walking or biking to and from school is an easy way to get the regular physical activity children need for good health. Studies have shown that physically active students have improved mood and concentration, a stronger self-image and more self-confidence. Physically active kids also have fewer chronic health problems and report lower levels of smoking and alcohol consumption.

Research shows walking and bicycling provides an opportunity for students to be independent, think responsibly, and make decisions for themselves. Some children feel less anxiety about being at school when they know how to get home; it is much more difficult to learn that route from the perspective of a car.

Safe Routes to School initiatives help the environment by easing traffic congestion and reducing air pollution. Research has shown that approximately 25 percent of morning peak hour traffic is parents driving their students to school. Fewer car trips also mean lower gasoline bills.

The main barriers to walking and bicycling to school are community design, safety, time and convenience. Parent surveys consistently indicate that distance to school, perception of lack of safe facilities and convenience to parents are reasons that parents choose to drive their children to school. Safe Routes to School addresses these concerns by promoting safe walk and bike to school programs, such as walking school buses, or identifying locations where parents can bring children so they can walk or bicycle as a group to school.

Safe Routes to School Grant Overview

Mesa County's Regional Transportation Planning Office received a Safe Routes to School grant from the Colorado Department of Transportation with the funds awarded in July, 2016. The grant was intended to follow up on a previous Safe Routes to School grant awarded to Grand Valley Bikes, a local non-profit organization, which focused on six elementary schools in the valley. The 2016 grant was intended to encompass the remaining 16 elementary schools and to include eight middle schools in the District. The grant seeks to make walking and bicycling the easy choice for District 51 students in kindergarten through eighth grade through a variety of approaches.

Audits were conducted at the following schools, as listed in the grant:

Elementary Schools:

Broadway Elementary

Dos Rios Elementary

Chipeta Elementary

Mesa View Elementary

Pear Park Elementary

Rim Rock Elementary

Rocky Mountain Elementary

Clifton Elementary

Lincoln Orchard Mesa Elementary

Nisley Elementary

Scenic Elementary

Taylor Elementary

Chatfield Elementary*

Appleton Elementary*

Loma Elementary*

Wingate Elementary*

Middle Schools:

West Middle School

East Middle School

Fruita Middle School

Mount Garfield Middle School

Bookcliff Middle School

Grand Mesa Middle School

Redlands Middle School

Orchard Mesa Middle School

*Three declined the audit for their schools, as the principals felt no need for an audit. One did not respond to phone calls or emails.

Specific Areas Covered by the Grant

Figure 1 shows the how the grant funds are distributed by area of accomplishment. Audits, mapping and engagement is the largest focus, followed by promotions which included the distribution of Grand Valley Transit passes to the middle schools for use by students to encourage use of the transit system.

Equipment Purchase

The grant provided funds to purchase bicycles for the middle school physical education (PE) teachers for training and the purchase of adaptive cycles and a trailer for use in special education classes. The bicycles purchased include four 26" bicycles, helmets a bike stand and minor repair supplies for the use by middle schools. The equipment for the adaptive program includes six bicycles of various sizes, training wheels, three tricycle bikes, a tandem, and one hand-pedaled tricycle. All bicycles, equipment and the trailer are currently housed at the adaptive PE office near Tope Elementary school.

Teacher Training

Training was conducted for three groups of PE teachers as part of the grant – six elementary school teachers who had not had previous training attended; -16 teachers attended the training during the previous grant 2013-2015; middle school PE teacher training conducted by Bicycle Colorado was presented to nine teachers representing all eight middle schools; and training for adaptive PE teachers was conducted jointly by Colorado Discoverability and adaptive PE staff.

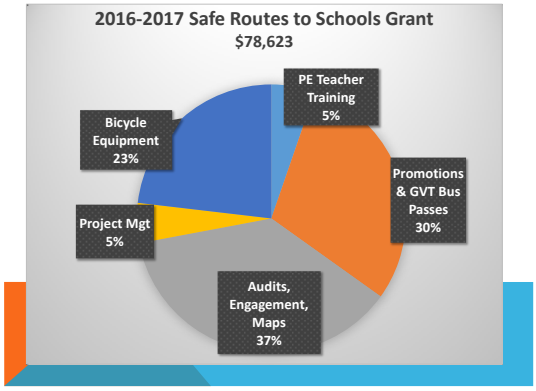


FIGURE 1: BUDGET CATEGORIES FOR 2016 GRANT

Walking and Wheeling Program and Incentives

Each PE teacher at schools listed in the grant will be contacted during the spring of 2017. A packet of materials is being prepared for them to be able to successfully implement walking and bicycling events and training into the curriculum. Student incentives for PE teachers who promote walking and bicycling in their classes are a part of the grant, and will be implemented in the coming months. A spreadsheet of items that may be used for incentives has been provided to the PE teachers along with prices for items such as tire patch kits, reflective spoke materials, reflective bands, bicycle locks, and tire pumps.

Parent Engagement

Parent engagement is another aspect of the grant project which focuses on engaging parents in recognizing the importance of safe walking and biking for their children. Thus

far, limited parent engagement activities have occurred under the auspices of the grant project. However, two events in partnership with Fruita Parks and Recreation have occurred such as the Fruita Truck and Treating Event and a Fruita Bicycle Rodeo conducted just prior to the beginning of the school start date.

Additional activities are being planned in the spring, 2017. The findings from the school audits indicated a low use of helmets by students throughout the district and two events are planned to focus on helmet fitting and the importance of helmet usage. The grant funds will not pay for helmet purchase, so fund-raising outside of the grant is being conducted by Grand Valley Bikes, a local non-profit, to provide funds to purchase helmets to provide to students at the events.

Mapping of School Walk Routes

Another critical component of the grant work is qualitative assessing and mapping of school walk routes. On-the-ground assessments of the presence or lack of sidewalks, sidewalk width, condition and accessibility have been compiled in the Geographic Information Systems (GIS) environment. Analysis of the routes is being conducted to provide information to several audiences – parents, teachers, students, city and county public works officials – to use in deciding on routes for children to walk and to help prioritize needed infrastructure improvements. One of the anticipated outcomes of the mapping and analysis is a simple tool for parents and students to use to map and assess their routes to and from school and other locations such as parks and libraries.

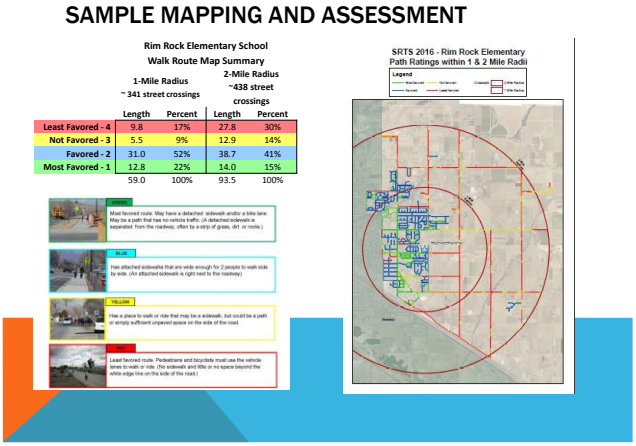


FIGURE 2: WALKING ROUTE MAP DEVELOPED AS PART OF THE GRANT.

Walk Audits

Walk audits were conducted at 12 elementary schools and eight middle schools and provided a consistent review of the school infrastructure including the bus loading areas, parent pick-up and drop-off, bicycle parking on campus, sidewalks, crosswalks and other traffic control around schools. Using a team approach, the goal of the audits was to identify barriers that students have when walking or bicycling to school. The aim was to identify what is currently working well and to suggest improvements both on and off school grounds. Ultimately the goal was to find solutions so that more students feel safe walking and bicycling to school.

Individual school reports have been assembled and provided to the school principals. The findings and the mapping have also been presented to the local government public works officials to be able to address off-site infrastructure issues.

Class Travel Tallies and Parent Surveys

In October, 2016 tally sheets were distributed in classrooms for teachers to record through a show of hands how students arrived and departed from school – by walking, bicycling, family vehicle, school bus or car pool. The data was entered into the national Safe Routes to School Partnership database. Parent surveys were distributed and the results of the surveys were entered into the national database. A total of 1199 surveys were returned, representing 17 schools and grade levels from kindergarten through 8th grade (see Figure 3).

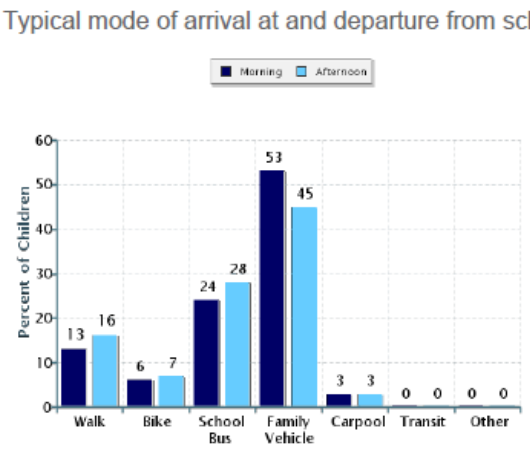


FIGURE 4: STUDENT TRAVEL TYPES.

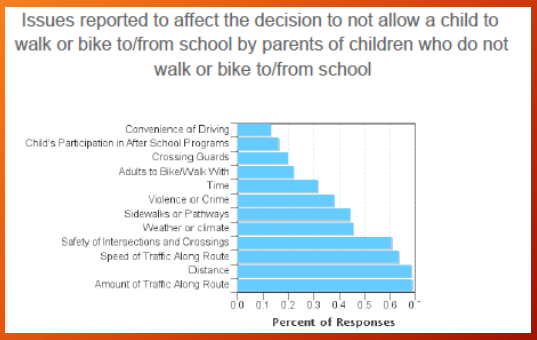


FIGURE 3: DISTRIBUTION OF PARENT CONCERNS.

As shown in the graph in Figure 4, the family vehicle is the most frequent way children travel to and from schools.

Issues that affect a parent's decision to not allow their child to walk or bicycle to school are summarized in the chart in Figure 3. Distance to the school and the amount of traffic weigh heavily in the decision, along with the presence or lack of sidewalks and pathways.

When asked how much the child's school encourages or discourages walking or bicycling to school, the survey indicated 69% of parents thought schools did neither.

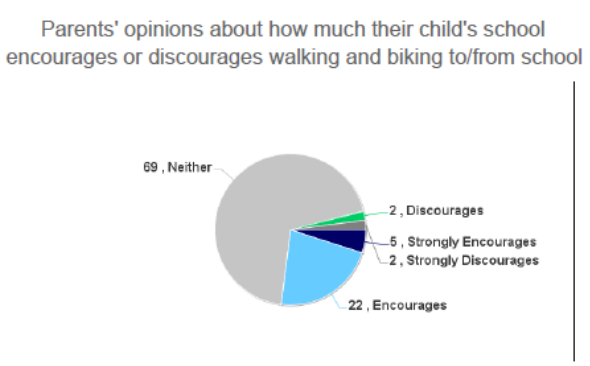


FIGURE 5: PARENTS' VIEW OF ENCOURAGEMENT.

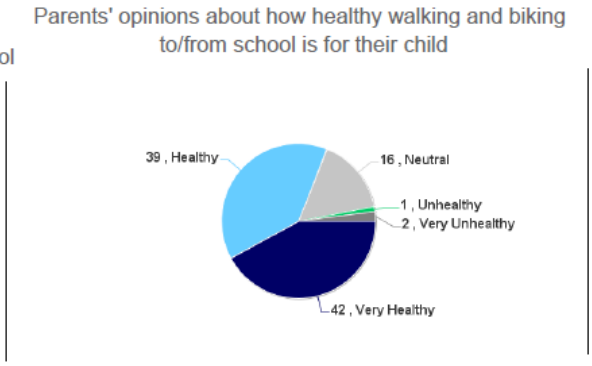


FIGURE 6: PARENTS SEE WALKING AS HEALTHY.

Parents overwhelming indicated, however, they believed walking or bicycling to school is healthy or very healthy.

The class tallies for 13 schools offers an overview of the travel modes for students arriving and departing from school in Figure 7. The combination includes both elementary and middle schools. Each of the eight middle schools has been provided with Grand Valley Transit passes to allow students to utilize the transit system. The graph indicates only 1% of students in the survey used the transit system. Providing passes and information on how to use the system may encourage additional use.

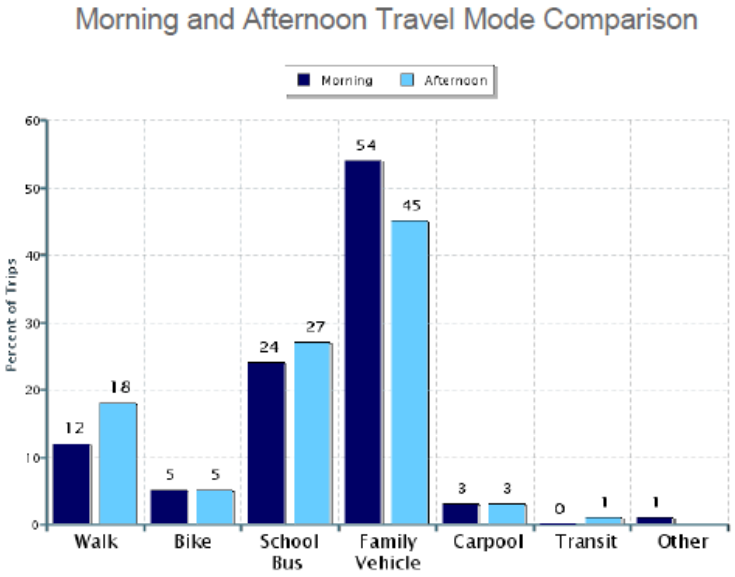


FIGURE 7: COMBINED TOTALS FROM 13 SCHOOLS ON TRAVEL MODES.

What is a Walk Audit

A walk audit is conducted by a team that includes parents, school administrators and public works officials who observe the school property and adjacent streets to evaluate circulation, parking, bicycle parking, bus loading/unloading, parent pick-up/drop-off, and crosswalks and intersections.

Auditors observe what students experience during their walk to school from school at the end of the day and give school officials firsthand evidence of existing safety problems as well as acknowledge best practices. The audits are generally done during school arrival and dismissal times.

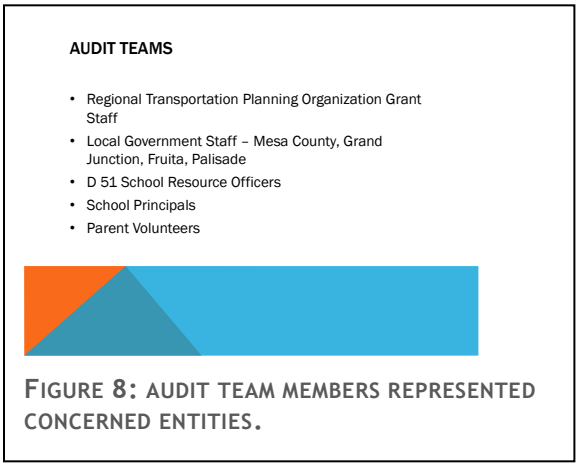


FIGURE 8: AUDIT TEAM MEMBERS REPRESENTED CONCERNED ENTITIES.

A walk/bike audit provides a snapshot of the walking/biking environment and an opportunity to develop improvement strategies where safety issues exist.

The audit team uses a format developed to consistently evaluate specific areas and locations on and surrounding the school. The team meets after the evaluation to discuss problems and possible solutions, and take notes which contribute to the final report. The report is intended as a tool to engage city officials, policy makers, and community members in making the school neighborhood more walkable and bikeable. The report serves to document the progress of the SRTS grant and lay a foundation for further improvements.

The Five "E's"

The SRTS Program is organized around five complementary strategies known as the "5 E's". They are:

Engineering: The design, implementation, operation and maintenance of traffic control devices or physical measures that provide a balanced roadway network. Physical improvements can greatly improve safety around schools, and the proper infrastructure can even encourage more students to bike or walk. Such practices can include maintenance and operational measures as well as construction projects. The goal is to have a collaborative effort between city, county, and school districts to identify infrastructure gaps in safe routes to schools and provide solutions.

Encouragement: Encouraging kids to walk and bike to school more often. Encouragement strategies, such as International Walk to School Day and other

programs such as a frequent biker and walker clubs (Walking and Wheeling Wednesday), generate excitement and incentives for children to walk and bike to school. The goal is to create a sustainable culture of walking and bicycling at each school.

Education: Teaching kids and parents safe ways to walk and bike. Educational activities are a great way to teach children about the benefits of walking and biking safely. This is an important opportunity for parents to get involved and be role-models to their children. The goal is to increase the safety skill set of all students at each participating school and extend the SRTS program to all K-8 Schools in SD51.

Evaluation: Checking to see how many kids are walking and biking as a result of the program or how conditions and perceptions have improved. There are several different ways to evaluate the success or failure of a Safe Routes to School project. Practices such as conducting surveys before and after improvements are important ways to gauge the success of pedestrian and bicycle improvements. The goal for the following school year is to increase by 10% the number of students who travel to and from school actively.

Enforcement: Changing driver, walker and bicyclist behavior as they travel together along the road. Enforcement activities can change the behavior of students, parents, and teachers around school zones. Enforcement through neighborhood or local means is an effective way to improve driver awareness. The goal is to have SD51 Safety Resource Officers responsive to encouragement events and walk audit results.

Projects that incorporate all five E's are likely to be more effective and sustainable.

Overview of the Audit Reports

Twelve elementary schools and eight middle schools in District 51 participated in the audits, conducted during the months of September, October and early November, 2016. The information collected using a consistent form and compiled in spreadsheets for analysis.

The audit team for each school was assembled with a base team that included two temporary Mesa County employees who have been SRTS instructors and have worked with mapping safe routes to school. Two Colorado Mesa University students completing internship credits were also a part of the base team. Rounding out the team were City of Grand Junction, City of Fruita, or City of Palisade transportation officials and/or Mesa County transportation officials depending upon the school site within Mesa County.

Potential areas for improvement district-wide:

- Crossing guard training –
    - Standardize

    - Utilize SRO, GJ City, D51 Safety Coordinator as training team
- Crossing guards equipment –
    - approved safety vests, signs, cones as needed
- School traffic safety –
    - regular agenda item at school team meetings
- Infrastructure improvements – prioritize
    - on-site for schools
    - off-site for local governments
- Walking & wheeling champion – One at each school
    - Promote benefits of walking and cycling to school
    - Utilize web applications to walk maps on each school website

Concerns based on observations during the audits:

- Low helmet use by students on bikes, scooters
- Need for consistent and regular crossing guard training
- Use of teachers as crossing guards
- Need for a District Safe Routes to School coordinator-liaison between Principals, PE teachers, Safety Director

Through the process of meeting with school principals, school safety staff and resource officers, a number of schools have practices that work well for the school and could potentially be a tool for improving other schools' circulation and walking and bicycling by students:

Best Practices:

- "Children Breathing - No Idle Zone" = Engines off sign (e.g. West MS photos)
- Pick-up/Drop-off areas by grade (e.g. Bookcliff MS, Pear Park ES). This may create a safer situation for walkers and bikers.
- Crossing guard gathers kids by school for crossing busy street (e.g. Mesa View ES)
- Crossing guards have standard stop signs, and Class A, Level 2 vests.
- Crossing guards are well trained – on site training available (e.g. Chipeta report for more on this). Crossing guards need to be paid to take the training.
- Take the time to teach parents how to go through pick-up/drop-off process correctly. (e.g. Bookcliff MS)

- Teach kids to wear helmets.
- Having staff and faculty outside the building at the beginning and the end of day. (e.g. West MS, Rocky Mountain ES)
- Clear and predictable flow of traffic through parking lots. (e.g. Bookcliff MS)
- The Health Assistant and PE teachers are active in promoting healthy transportation to and from school. (e.g. Mesa View ES)
- Hosting a bike rodeo and teaching the bike safety and skills unit in PE.
- Crossing guards should be dedicated and not staffed from teachers or other staff who can't get to their stations in time. (e.g. Tope ES, where the PTO pays crossing guards, and "specials" teachers also have duty)