Paving the Way for Safe Routes to School

Sierra Elementary

Walkability and Active Design Audit

April 2015

WALKSACRAMENTO

www.walksacramento.org

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ACKNOWLEDGMENTS

With a special thank you to the participants who contributed to this report and their continued support in promoting safe routes to Sierra Elementary.

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Alyson Fox	Sierra Elementary School	John Dao	Health Education Council
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Allison Crump	Fehr & Peers	Jerry Barton	El Dorado County Transportation Commission
Lindell Price	Local advocate		

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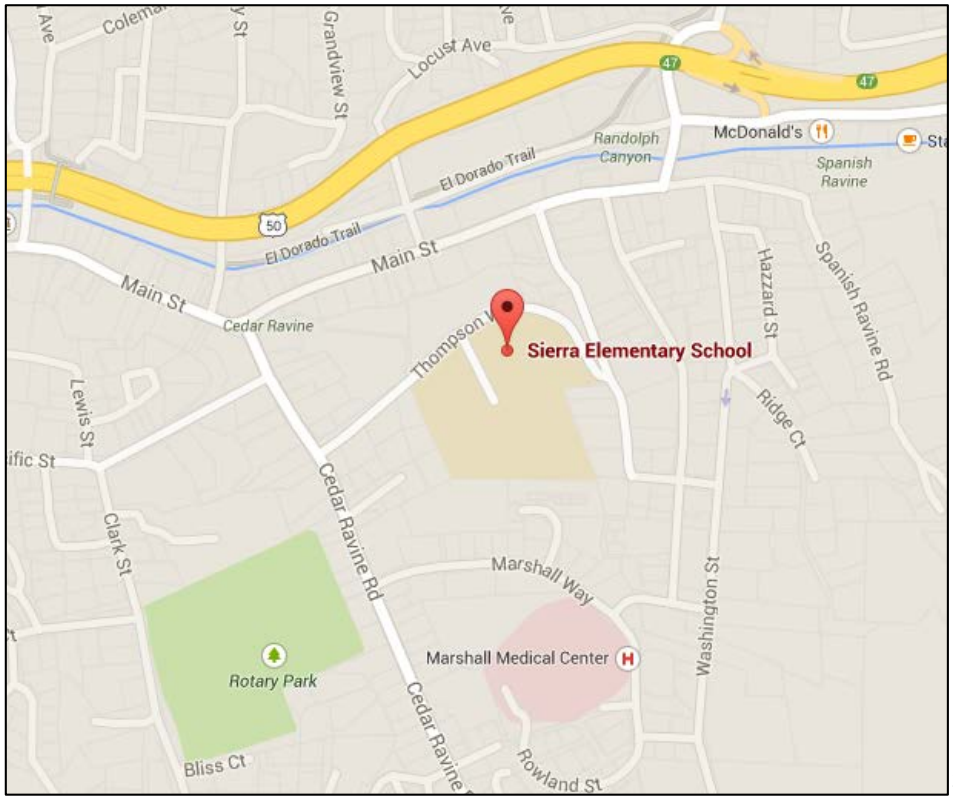
SCHOOL INFORMATION

Sierra Elementary School is located at 1100 Thompson Way, in Placerville, CA. Sierra Elementary is part of the Placerville Union School District. For the 2013-2014 school year, 454 students were enrolled, of which 44.1% were eligible for free or reduced price meals.[1]



[2]

[1] California Department of Education, Free/Reduced Meals Program and CalWORKS Data Files, 2013. Available from http://www.cde.ca.gov/ds/sd/sd/filessp.asp. Accessed on December 12, 2014.

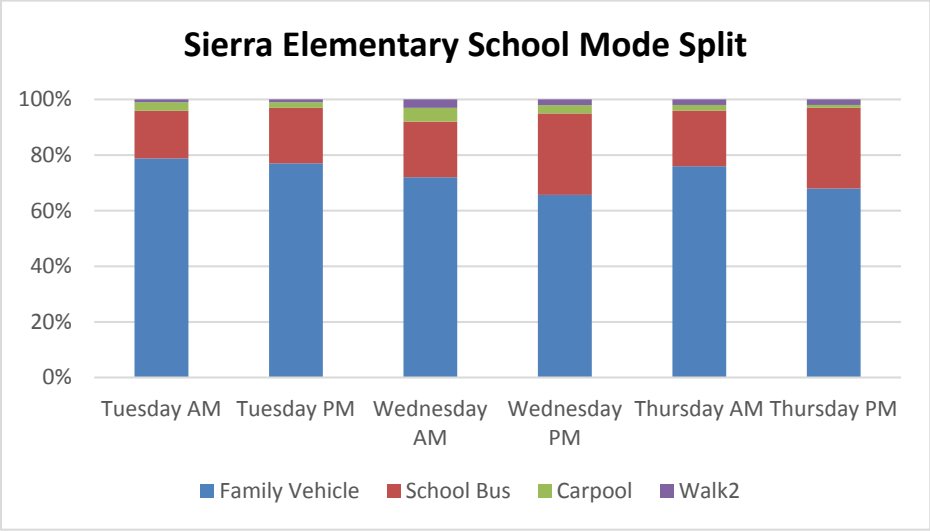
[2] Sierra Elementary, Google Maps, 2015

Mode Split

Using the National Center for Safe Routes to School Student Travel Tally1F[3], in-class tallies of student travel mode were conducted over a period of three days in February 2014. On average, 2% of students either walked or biked to/from school, while the vast majority of students traveled in a family vehicle or school bus. The tally results are shown below.

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	92	1%	0%	17%	78%	3%	0%	0%
Tuesday PM	102	1%	0%	20%	77%	2%	0%	0%
Wednesday AM	230	3%	0%	20%	72%	5%	0%	0%
Wednesday PM	233	2%	0%	29%	65%	3%	0%	0%
Thursday AM	235	2%	0%	20%	76%	2%	0%	0%
Thursday PM	220	2%	0%	29%	68%	1%	0%	0%

Percentages may not total 100% due to rounding.



[3] National Center for Safe Routes to School, Evaluation: Student In-Class Travel Tally, 2013, available http://saferoutesinfo.org/program-tools/evaluation-student-class-travel-tally. Accessed December 12, 2014.

Existing Conditions

Sierra Elementary School is located in the rural suburban City of Placerville, California. The elevation increases as students and parents travel from Main Street to reach the school. The topography contributes to the amount of traffic congestion, as drivers navigate the elevation changes, as well as a perceived concern of safety biking to the school. There are bike lanes leading up to the school, along Thompson Way. Streets adjacent to the school are narrow and lack sidewalks or shoulders. Street paving is cracked and directional paint is faded in many places. The neighborhood is well-shaded with an overarching mountain tree canopy.

Parent Concerns

National Center for Safe Routes to School Parent Survey

Parents' attitudes toward walking and biking were surveyed using the National Center for Safe Routes to School Parent Survey in December 2013.[4] Out of 458 surveys, 135 were returned (29%)

Key Results

- The issues most frequently reported to affect the decision to **not** allow a student to walk or bike to/from school is the length of the distance, amount and speed of traffic along route, safety of intersections and crossings, and lack of sidewalks or pathways.
- The majority of parents (54%) estimated the distance between home and school was more than 2 miles.
- The majority of parents reported the family vehicle as the typical mode of arrival and departure from school regardless of the distance a student lives from school

Survey responses of parents' decisions to let their students walk or bike to school make clear the need for both infrastructure improvements and programmatic efforts to encourage walking programs for students who live a far distance from Sierra Elementary.

[4] National Center for Safe Routes to School, Evaluation: Parent Survey, 2009, available http://saferoutesinfo.org/program-tools/evaluation-parent-survey; Internet: accessed May 2012.

Parent Comments

The following comments were submitted as part of the parent survey:

- My biggest concerns are related to infrastructure. Bike lanes and pathways are sporadic, roads are narrow, and traffic too fast. We would even walk halfway if the sidewalks by the school were safer for strollers and bikes.
- If we lived within walking distance to school we would walk currently, we live in Swansboro, and so it's impossible.
- Even though there have been great improvements, the pick-up / drop off scenario at Sierra is extremely unsafe for pedestrians. Walking up narrow path, starting crosswalks at extreme angles and not allowing room for two cars is unsafe period.
- We would even walk part of the way to school if sidewalks to the school could accommodate strollers and bikes safely. Right now the improved sidewalk only leads to the stairs not the ramp.
- Living on Hwy 49 and then having to cross Hwy 50 is not a safe route for our children to walk or bike to sierra.
- We have started a mini-walk one day a week with another family. We drive to the commuter lot on Mosquito Rd and walk the kids to school from there. Fun and safe!

IDENTIFYING BARRIERS TO WALKING AND BIKING

Infrastructure and non-infrastructure barriers to walking and biking to school were identified through a walk audit, field observations, and discussions with school staff, law enforcement, parents, and community members.

Walk Audit

A walkability and active design audit was conducted on Tuesday, March 3, 2015. Participants included California Department of Public Health, Health Education Council, Fehr & Peers, WALKSacramento staff and local advocates. The main barrier to safe pedestrian travel identified by the walk audit is the lack of pedestrian infrastructure, namely sidewalks and adequate crossings.

Walk audit participants meet on March 3, 2015.

Traffic Observations

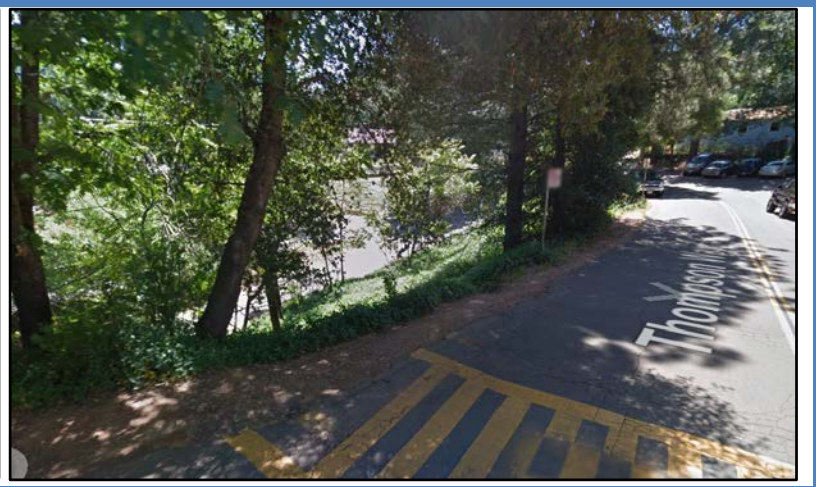
Traffic observations were conducted on January 10, 2014 during the main drop-off. Observations were taken at both entrances to the school.

El Dorado County Safe Routes to School Coalition Meetings

The El Dorado Safe Routes to School Coalition includes members and staff from local law enforcement agencies, public health agencies, schools, transportation planning and engineering departments and other stakeholder groups and departments. Coalition meetings have been vital in developing an understanding of the built and social environments around Sierra Elementary School and organizing encouragement programs for students.

INFRASTRUCTURE RECOMMENDATIONS

ID	Location	Recommendation	Justification
1	In front of the school on the eastern side of Thompson Way	Install a sidewalk along the eastern side of Thompson way between the bend and Sheridan Street	Reckless drivers have been observed taking the bend on Thompson way at high speeds. A sidewalk would decrease the drivable width of the street, forcing drivers to slow around the bend. Additionally, this stretch of Thompson way is often used as a drop-off and pick-up location. Rather than walking on the narrow, sometimes muddy shoulder to reach the crosswalk, students have been observed crossing Thompson way at several different locations. A sidewalk and curb cut could also discourage parents from parking on top of the crosswalk, blocking accessibility. A sidewalk at this location would connect the crosswalk in front of the school with the crosswalk across Sheridan Street. Currently, students often walk down the steep hill to access different parts of the neighborhood rather than continue along often busy Thompson way to the second marked crossing at Sheridan Street.
Visual			

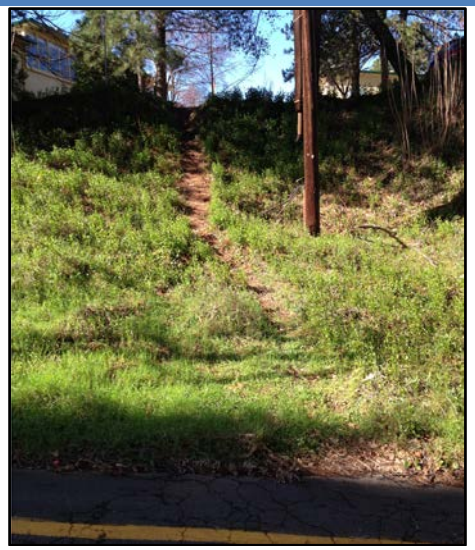


ID	Location	Recommendation	Justification
2	Intersection of Thompson Way and Sheridan Street	Install a curb bulbout	A curb bulbout at this location would increase deflection around the blind corner, slowing traffic. The paved bulbout would also provide students with an area to stand in while waiting to cross into the neighborhood.
Visual			

ID	Location	Recommendation	Justification
3	Thompson Way on the school side of the road at the end of the sidewalk.	Continue the sidewalk and install an adequate curb ramp in the direction of travel OR repave the transition area between the sidewalk and the roadway so that the sidewalk is at grade with the drainage grate. Indicate with signage the presence of the drain.	The grade of the sidewalk where it ends hides the drainage grate from view of cyclists and pedestrians. The uneven and sunken nature of the drain can cause a pedestrian to sprain an ankle or a cyclist to come to an abrupt stop and fall. Poorly maintained infrastructure, especially around schools, significantly degrades the walking and biking environment, and thus likelihood that a student will be active in his or her commute to school.
Visual			

ID	Location	Recommendation	Justification
4	Along Thompson Way in front of the school. Along Sheridan Way traveling southbound	Install blind corner mirrors and more school zone signage	There are several blind corners along prominent routes to school. Blind corners, especially coupled with the lack of sidewalks, can severely decrease safety for students walking or biking to school. Blind corner mirrors will improve visibility for drivers, pedestrians, and cyclists around the school, improving safety, and the likelihood that a parent feels comfortable allowing their student to walk or bike to school. Additional school zone signage will encourage more drivers to slow around corners and look out for students.

ID	Location	Recommendation	Justification
5	The hillside between Thompson Way and Sheridan Street	Improve sidewalk infrastructure along Thompson Way and Sheridan Street Improve the intersection at Thompson Way and Sheridan Street with signage, sidewalks, and blind corner mirrors Install fencing along the eastern side of Thompson Way to discourage use of this shortcut	Students walking to and from school have created their own path that allows them to avoid the intersection at Thompson Way and Sheridan Street. The path leads from the end of the crosswalk on Thompson Way down the steep embankment onto a 1-foot striped shoulder on Sheridan Street. This shortcut is dangerous for students walking down the path who may slip or fall into oncoming traffic. The path may also pose a threat for students walking toward the school who may not be seen by motorists attempting to park on Thompson Way. The shortcut highlights several deficiencies around the school. Primarily, the striped crosswalk across Thompson Way ends abruptly into a sloped hillside rather than a sidewalk or other comfortable walking area. Second, the path may indicate that students are not comfortable continuing on Sheridan Street, navigating the blind corner at the intersection, then continuing up Thompson Way (or vice-versa). The lack of sidewalks along these common routes to school creates a significant barrier to active transportation.
Visual			



ID	Location	Recommendation	Justification
6	Between Sierra Elementary School parking lot and the church parking lot on Thompson Way	Install a crosswalk between church parking lot and the sidewalk along Thompson way.	Students are often dropped off in the church parking lot to get to school. The lack of a striped crossing, the steep grade of Thompson Way, and the lack of visibility around Thompson way make this an ideal location to install a crosswalk. To further improve the safety of crossings at this location, school zone and crosswalk signage should be installed as well.
Visual			

ID	Location	Recommendation	Justification
7	Intersection of Sheridan Street and Main Street	Install an advanced stop bar at the intersection	Due to the steep grade of Sheridan Street, motorists sometimes stop after the marked stop bar within the pedestrian right of way. An advanced stop bar can help improve safety for students walking to or from school along Main Street by requiring motorists to stop well in advance of the pedestrian right of way.

Visual

ID	Location	Recommendation	Justification
8	Main Street	Underground utility poles and relocate signage poles.	There are several utility and signage poles in the middle of or encroaching upon the pedestrian right of way on sidewalks along Main Street. These utility poles not only can discourage walking by detracting from the aesthetic quality of the streetscape, but can pose a safety threat for pedestrians. Often, where a utility pole takes up a portion of the sidewalk, pedestrians, especially those walking in groups or with strollers and other larger mobility devices, are forced into the street for a brief amount of time. Parents who may already be hesitant about allowing their student to walk to school may be further discouraged by the thought of their children stepping off of a sidewalk onto Main Street.
Visual			

Community-wide Infrastructure Recommendations

Lighting

There are few lighting fixtures throughout the neighborhood around the school. A lack of lighting makes walking and biking less inviting, especially in winter months when there is less natural lighting in the mornings and evenings. We recommend installing additional lighting, especially around common pick-up and drop-off locations.

Bike lanes

There are no striped bike lanes or shoulders around the school. Although the environment around the school is relatively hilly, bike lanes will provide additional visual separation for those who do choose to bike to and from school.

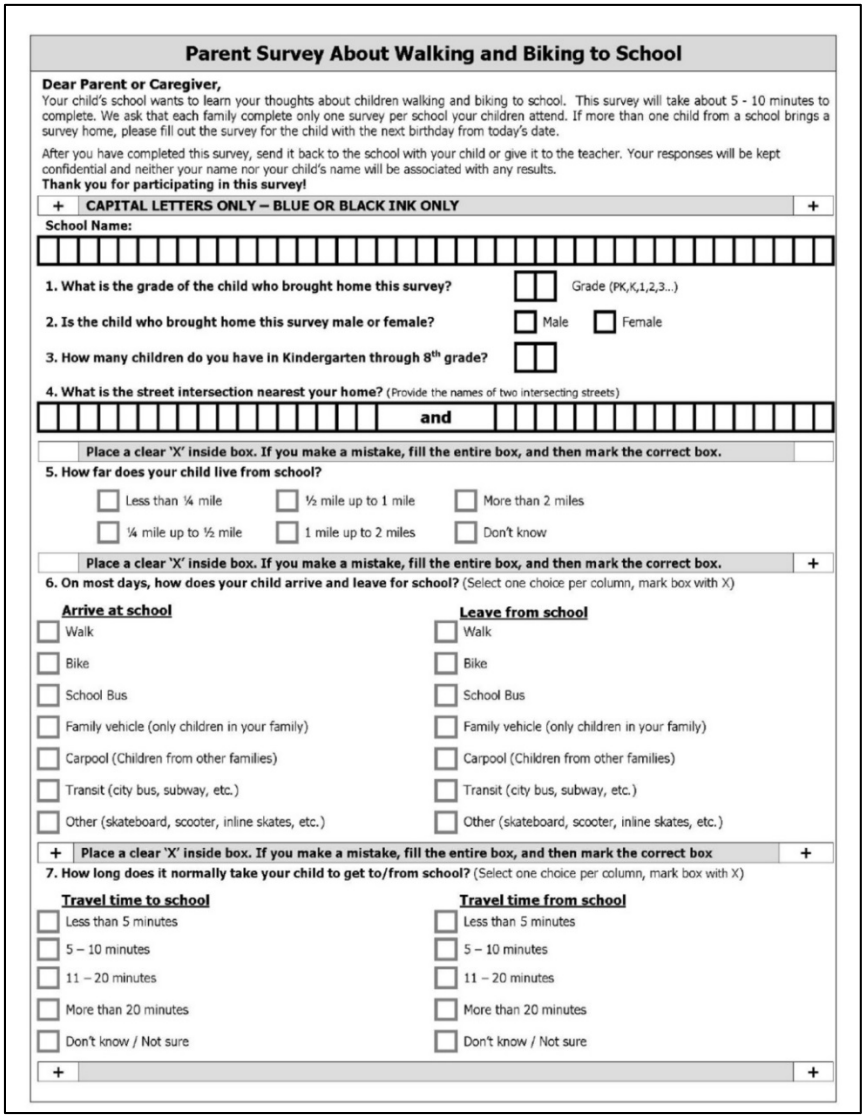
Restriping

There are several locations around the school and in the larger community that are in need of significant restriping. Restriping painted shoulders, lane dividers, arrows, stop lettering, yield lettering, crosswalks, and stop bars can improve overall safety.

Roadway

There are several roads around Sierra elementary School that are in disrepair due to a lack of recent repaving. In order to avoid patches of gravel and potholes, both drivers and pedestrians take unpredictable paths of travel, creating potentially dangerous conflicts. Smoother roads will allow for consistent, comfortable travel to and from Sierra Elementary School.

APPENDIX A: National Center for Safe Routes to School Parent Survey Form



Parent Survey About Walking and Biking to School

Dear Parent or Caregiver,

Your child's school wants to learn your thoughts about children walking and biking to school. This survey will take about 5 - 10 minutes to complete. We ask that each family complete only one survey per school your children attend. If more than one child from a school brings a survey home, please fill out the survey for the child with the next birthday from today's date.

After you have completed this survey, send it back to the school with your child or give it to the teacher. Your responses will be kept confidential and neither your name nor your child's name will be associated with any results.

Thank you for participating in this survey!

CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY

School Name:

1. What is the grade of the child who brought home this survey? ☐☐ Grade (PK,K,1,2,3..)

2. Is the child who brought home this survey male or female? ☐ Male ☐ Female

3. How many children do you have in Kindergarten through 8th grade? ☐☐

4. What is the street intersection nearest your home? (Provide the names of two intersecting streets)

and

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box.

5. How far does your child live from school?

☐ Less than ¼ mile ☐ ½ mile up to 1 mile ☐ More than 2 miles
☐ ¼ mile up to ½ mile ☐ 1 mile up to 2 miles ☐ Don't know

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box.

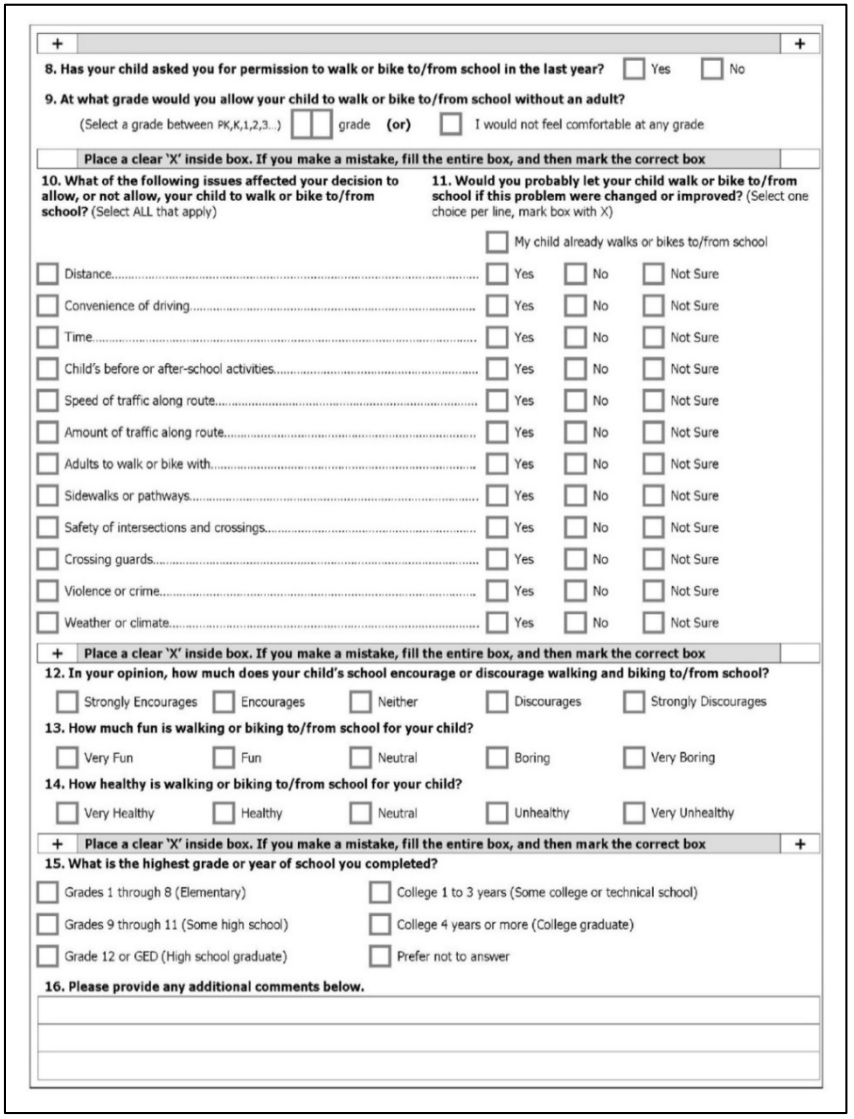
6. On most days, how does your child arrive and leave for school? (Select one choice per column, mark box with X)

Arrive at school	Leave from school
☐ Walk	☐ Walk
☐ Bike	☐ Bike
☐ School Bus	☐ School Bus
☐ Family vehicle (only children in your family)	☐ Family vehicle (only children in your family)
☐ Carpool (Children from other families)	☐ Carpool (Children from other families)
☐ Transit (city bus, subway, etc.)	☐ Transit (city bus, subway, etc.)
☐ Other (skateboard, scooter, inline skates, etc.)	☐ Other (skateboard, scooter, inline skates, etc.)

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box

7. How long does it normally take your child to get to/from school? (Select one choice per column, mark box with X)

Travel time to school	Travel time from school
☐ Less than 5 minutes	☐ Less than 5 minutes
☐ 5 – 10 minutes	☐ 5 – 10 minutes
☐ 11 – 20 minutes	☐ 11 – 20 minutes
☐ More than 20 minutes	☐ More than 20 minutes
☐ Don't know / Not sure	☐ Don't know / Not sure



8. Has your child asked you for permission to walk or bike to/from school in the last year? ☐ Yes ☐ No

9. At what grade would you allow your child to walk or bike to/from school without an adult?

(Select a grade between PK,K,1,2,3..) ☐☐ grade **(or)** ☐ I would not feel comfortable at any grade

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box

10. What of the following issues affected your decision to allow, or not allow, your child to walk or bike to/from school? (Select ALL that apply)

11. Would you probably let your child walk or bike to/from school if this problem were changed or improved? (Select one choice per line, mark box with X)

	My child already walks or bikes to/from school		
☐ Distance	☐ Yes	☐ No	☐ Not Sure
☐ Convenience of driving	☐ Yes	☐ No	☐ Not Sure
☐ Time	☐ Yes	☐ No	☐ Not Sure
☐ Child's before or after-school activities	☐ Yes	☐ No	☐ Not Sure
☐ Speed of traffic along route	☐ Yes	☐ No	☐ Not Sure
☐ Amount of traffic along route	☐ Yes	☐ No	☐ Not Sure
☐ Adults to walk or bike with	☐ Yes	☐ No	☐ Not Sure
☐ Sidewalks or pathways	☐ Yes	☐ No	☐ Not Sure
☐ Safety of intersections and crossings	☐ Yes	☐ No	☐ Not Sure
☐ Crossing guards	☐ Yes	☐ No	☐ Not Sure
☐ Violence or crime	☐ Yes	☐ No	☐ Not Sure
☐ Weather or climate	☐ Yes	☐ No	☐ Not Sure

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box

12. In your opinion, how much does your child's school encourage or discourage walking and biking to/from school?

☐ Strongly Encourages ☐ Encourages ☐ Neither ☐ Discourages ☐ Strongly Discourages

13. How much fun is walking or biking to/from school for your child?

☐ Very Fun ☐ Fun ☐ Neutral ☐ Boring ☐ Very Boring

14. How healthy is walking or biking to/from school for your child?

☐ Very Healthy ☐ Healthy ☐ Neutral ☐ Unhealthy ☐ Very Unhealthy

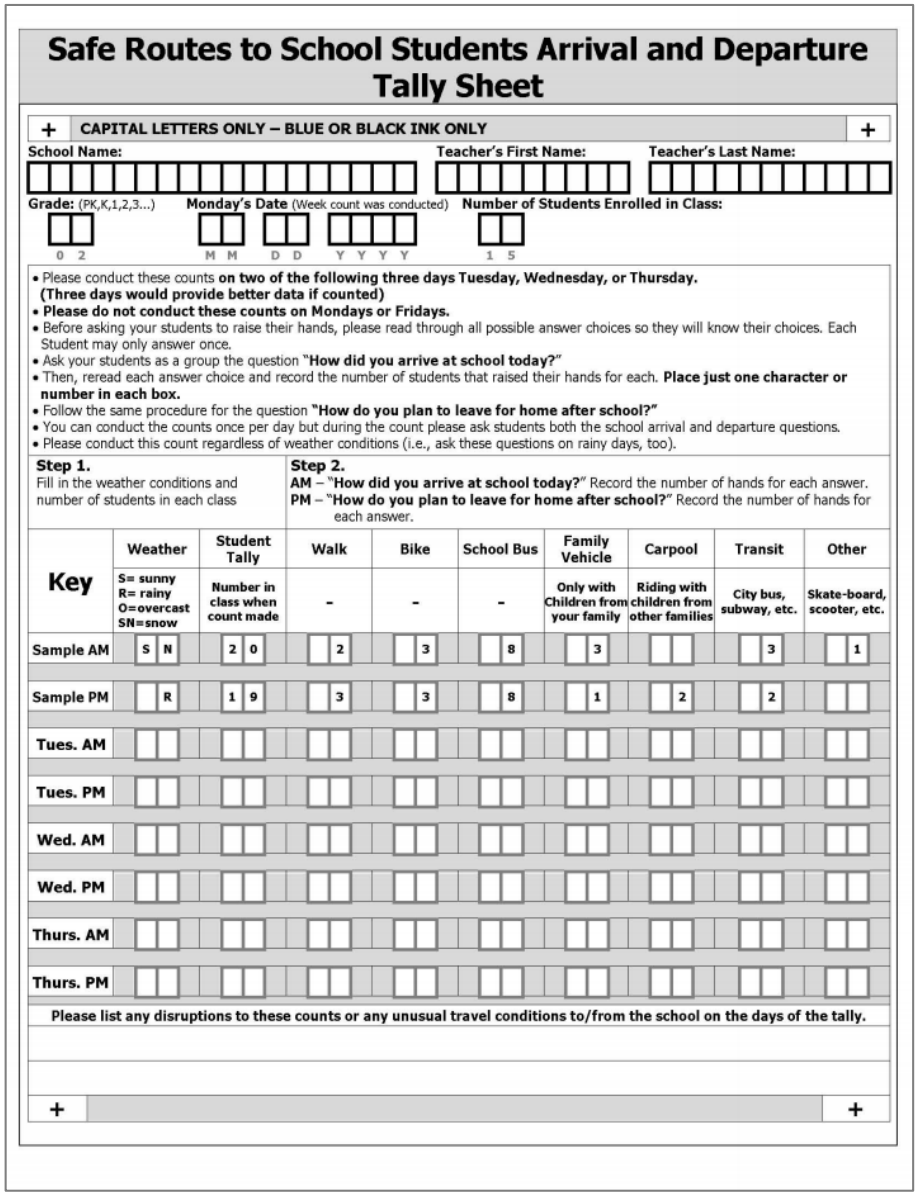
Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box

15. What is the highest grade or year of school you completed?

☐ Grades 1 through 8 (Elementary)
☐ Grades 9 through 11 (Some high school)
☐ Grade 12 or GED (High school graduate)
☐ College 1 to 3 years (Some college or technical school)
☐ College 4 years or more (College graduate)
☐ Prefer not to answer

16. Please provide any additional comments below.

APPENDIX B: National Center for Safe Routes to School Travel Tally Form



Safe Routes to School Students Arrival and Departure Tally Sheet

+ CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY +

School Name: **Teacher's First Name:** **Teacher's Last Name:**

Grade: (PK,K,1,2,3...) (0 2) **Monday's Date** (Week count was conducted) (M M D D Y Y Y Y) **Number of Students Enrolled in Class:** (1 5)

- Please conduct these counts **on two of the following three days Tuesday, Wednesday, or Thursday. (Three days would provide better data if counted)**
- **Please do not conduct these counts on Mondays or Fridays.**
- Before asking your students to raise their hands, please read through all possible answer choices so they will know their choices. Each Student may only answer once.
- Ask your students as a group the question **"How did you arrive at school today?"**
- Then, reread each answer choice and record the number of students that raised their hands for each. **Place just one character or number in each box.**
- Follow the same procedure for the question **"How do you plan to leave for home after school?"**
- You can conduct the counts once per day but during the count please ask students both the school arrival and departure questions.
- Please conduct this count regardless of weather conditions (i.e., ask these questions on rainy days, too).

Step 1. Fill in the weather conditions and number of students in each class

Step 2. **AM** – "**How did you arrive at school today?**" Record the number of hands for each answer. **PM** – "**How do you plan to leave for home after school?**" Record the number of hands for each answer.

Key	Weather	Student Tally	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
	S= sunny R= rainy O=overcast SN=snow	Number in class when count made	-	-	-	Only with Children from your family	Riding with children from other families	City bus, subway, etc.	Skate-board, scooter, etc.
Sample AM	S N	2 0	2	3	8	3		3	1
Sample PM	R	1 9	3	3	8	1	2	2	
Tues. AM									
Tues. PM									
Wed. AM									
Wed. PM									
Thurs. AM									
Thurs. PM									

Please list any disruptions to these counts or any unusual travel conditions to/from the school on the days of the tally.

+ +

APPENDIX C: Traffic Observation Form

OBSERVATIONS OF STUDENT SAFETY BEHAVIORS WHEN CROSSING

School: ____________________ Date: _____/_____/_____ Observer Name: ____________________

Address: ____________________ Begin Time: __________ Notes: ____________________

Location: ____________________ End Time: __________ ____________________

GENERAL QUESTIONS ABOUT INTERSECTION & MOVEMENT SURVEYED:

a) Is there a signal light at the intersection?	☐ Yes ☐ No	d) Were the intersections difficult to negotiate?	☐ Yes ☐ No
b) Is there a crossing signal for the movement surveyed?	☐ Yes ☐ No	e) Are motorists driving safely and obeying the law?	☐ Yes ☐ No
c) Is the intersection assisted by Crossing Guard/Student Safety Patrol?	☐ Yes ☐ No	f) In general, are drivers yielding (closest to intersection)?	☐ Yes ☐ No

OBSERVATIONS OF SAFETY BEHAVIORS: *[Please use one (1) observation line per person]*:

#	MODE	DEMOGRAPHIC (#)					Notes: Example- Arrived at crossing alone, pair, groups. Crossing behind cars.
	☐ Pedestrian ☐ Cyclist, Helmet? ☐ Yes ☐ No ☐ Other (specify):	☐ Preschool (0-5):___ ☐ Child (6-12):______ ☐ Teen (13-18):______ ☐ Adult (19-60):______ ☐ Senior (60+):______	Crossing at designated crossing? ☐ Yes ☐ No	Pushed signal button (individual or group)? ☐ Yes ☐ No	Waited for light/ guard to cross? ☐ Yes ☐ No	Looked L/R/L before crossing? ☐ Yes ☐ No	
	☐ Pedestrian ☐ Cyclist, Helmet? ☐ Yes ☐ No ☐ Other (specify):	☐ Preschool (0-5):___ ☐ Child (6-12):______ ☐ Teen (13-18):______ ☐ Adult (19-60):______ ☐ Senior (60+):______	Crossing at designated crossing? ☐ Yes ☐ No	Pushed signal button (individual or group)? ☐ Yes ☐ No	Waited for light/ guard to cross? ☐ Yes ☐ No	Looked L/R/L before crossing? ☐ Yes ☐ No	
	☐ Pedestrian ☐ Cyclist, Helmet? ☐ Yes ☐ No ☐ Other (specify):	☐ Preschool (0-5):___ ☐ Child (6-12):______ ☐ Teen (13-18):______ ☐ Adult (19-60):______ ☐ Senior (60+):______	Crossing at designated crossing? ☐ Yes ☐ No	Pushed signal button (individual or group)? ☐ Yes ☐ No	Waited for light/ guard to cross? ☐ Yes ☐ No	Looked L/R/L before crossing? ☐ Yes ☐ No	
	☐ Pedestrian ☐ Cyclist, Helmet? ☐ Yes ☐ No ☐ Other (specify):	☐ Preschool (0-5):___ ☐ Child (6-12):______ ☐ Teen (13-18):______ ☐ Adult (19-60):______ ☐ Senior (60+):______	Crossing at designated crossing? ☐ Yes ☐ No	Pushed signal button (individual or group)? ☐ Yes ☐ No	Waited for light/ guard to cross? ☐ Yes ☐ No	Looked L/R/L before crossing? ☐ Yes ☐ No	
#of Motorists:		# of Motorists parked in No Parking zone:	# of Motorists don't yield to pedestrians:		# of Motorists U-turn in street:		Other Motorist behavior: