

Getting Results: SRTS Programs That Reduce Traffic

SafeRoutes

National Center for Safe Routes to School



Communities initiate Safe Routes to School (SRTS) programs for a variety of reasons. In an attempt to reduce the barriers for students to walk and bicycle to school, some programs focus on reducing traffic congestion and the number of cars around schools.

This brief looks at the problem of traffic congestion, provides an overview of local programs that successfully measured traffic reductions and outlines steps that programs can take to measure impacts of their activities.

What's the Problem?

Heavy vehicle traffic in places with pedestrians and bicyclists increases the chance of a crash, and this increased risk can affect parent decisions on school travel.

According to a 2010 National Center for Safe Routes to School review of over 100,000 parent surveys collected from schools around the United States, the amount of traffic often impacts whether parents allow their children to walk or bicycle to school. Fifty-five percent of parents who reported not allowing their children to walk or bicycle to school identified the number of cars along the route to school as a significant issue in their decision-making process.¹



Location	Results
Alpine, UT: Alpine Elementary	Reduction of morning traffic by 59 vehicles
Boulder, CO: Bear Creek Elementary	36% reduction in traffic near the school
Atlanta, GA: Oak Grove Elementary	10% reduction in student drop-off traffic at school
Longmont, CO: Eagle Crest Elementary	40% reduction in traffic, 60% reduction in students arriving to school by car
Marin County, CA: Marin County Schools	13% reduction in traffic near schools
Windsor, VT: State Street Elementary	20% reduction in traffic near the school
Pinehurst, NC: Pinehurst Elementary	22% reduction in traffic on Walking School Bus Days

Communities Are Making Improvements

SRTS programs employ a range of activities in an effort to reduce the number of vehicles near schools. Some activities include establishing remote drop-off sites for private vehicles, promoting walking and bicycling and making improvements to the physical environment for walking and bicycling.

Evaluation and measurement play a critical role in helping programs understand the barriers to students walking and bicycling to school and the outcomes associated with their SRTS activities. The programs described on the following pages determined that the amount of traffic around a school was a safety concern for pedestrians, instituted activities to address that traffic volume and subsequently measured a decrease in the amount of traffic.



Success Stories



Alpine, Utah: Alpine Elementary

According to a 2008 survey of parents, the amount of traffic around Alpine Elementary was the primary barrier to walking and bicycling to school for the school's 780 students. While 75 percent of Alpine students lived close enough to walk or bicycle, only 35 percent of students did so. Over two years, the Alpine program successfully encouraged students, parents and the community to walk and bicycle to school.

The program measured initial walk and bicycle rates, surveyed parent perspectives and instituted school-wide encouragement activities, such as Walk to School Wednesdays, Walking School Buses and Bicycle Trains. These activities helped Alpine reduce traffic outside the school each day while increasing the number of average walkers by over 100 students. Funding for these activities came from \$70,000 in federal SRTS funds, \$7,000 from the city of Alpine and a \$1,000 grant from the National Center for Safe Routes to School.

Boulder, Colorado: Bear Creek Elementary

In 2007, two-thirds of Bear Creek Elementary students lived within two miles of the school. Led by a committed team of parent and school leaders, Bear Creek developed a comprehensive SRTS program to encourage more of the students living nearby to walk and bicycle regularly. The Car-Free Commute program combined year-long encouragement activities, like parent-led Walking School Buses, with infrastructure improvements around the school, including sidewalk repair and the installation of a foot bridge.

In just two years of SRTS activities, the school measured a 36 percent reduction in car traffic and an increase from 25 percent to 70 percent of students who walk and bicycle to school daily. Bear Creek Elementary received funding for these activities over several shared SRTS projects from the Colorado Department of Transportation, totaling about \$250,000 in SRTS infrastructure and non-infrastructure funding.

Atlanta, Georgia: Oak Grove Elementary

Oak Grove Elementary School is located on a busy road in DeKalb County. With a goal to increase safety for walkers and bicyclists traveling to school, program leaders focused on working with law enforcement and crossing guards to improve safety around their school. Education and encouragement activities, like Walk to School Wednesdays, bicycle and pedestrian safety presentations and organized Walking School Buses, also helped improve safety.

Oak Grove families completed a Walkability and Bikeability Checklist, which resulted in a "heat map" showing issues along the route between student homes and school. This information helped engineers identify upgrades, including crosswalk restriping and pedestrian countdown signals. Over one year, Oak Grove's SRTS program reduced student drop-off traffic by 10 percent and increased the number of walkers from 18 percent to 28 percent. The program received SRTS funding through the Georgia Department of Transportation in 2009 and 2010.

Longmont, Colorado: Eagle Crest Elementary

In 2008, Eagle Crest Elementary School's Step Often and Ride to School (SOAR) program surveyed families in order to understand travel patterns to the school. The survey revealed that nearly 75 percent of students arrived at Eagle Crest by car. As a result, SOAR leaders focused on increasing walking and bicycling rates through education and encouragement. Students learned how to walk and bicycle safely, and student leaders promoted health and environmental benefits using a marketing campaign. SOAR also utilized the Boltage system, a solar-powered device that counts walkers and bicyclists wearing a radio frequency identifier tag on their backpacks or helmets. To encourage participation, students that met walk and bicycle milestones were rewarded with small prizes.

One year after the inception of the SOAR program, Eagle Crest measured a 40 percent reduction in motor vehicle traffic and a 60 percent reduction in the number of students driven to school. Funding for the SOAR program at Eagle Crest came from a shared portion of \$75,000 in SRTS funding through the Colorado Department of Transportation in 2008.



Marin County, California: Marin County Schools

The Marin County Safe Routes to School program provides an example of the power of policy and local support for funding safe walking and bicycling activities. In 2004, Marin County voters approved a half-cent county sales tax for an increase in transportation funding which guaranteed the county's SRTS program almost \$36 million over the next 20 years. Using this funding, Marin County SRTS reached 49 schools with activities such as safety education, school zone traffic enforcement, adult crossing guards, encouragement activities and infrastructure upgrades, such as pedestrian bridges. Overall, Marin County reported a 13 percent decrease in traffic near schools since the implementation of its SRTS programming.



Windsor, Vermont: State Street Elementary School

State Street Elementary is located in the walkable downtown of Windsor, a community of almost 4,000 located along the Connecticut River. A 2006 survey of parent attitudes towards children walking and bicycling to school showed significant concerns with traffic and student safety. The State Street SRTS program used a variety of strategies to reduce the number of cars around their school, including speed enforcement, safety education for students, encouragement activities, Walking School Buses, and infrastructure upgrades to the sidewalks around the school.

One year into the SRTS program, morning traffic on the main street leading to State Street Elementary decreased by 20 percent, and the percentage of students walking to school doubled from 17 percent to 35 percent on Walking School Bus days. Windsor received \$18,000 for non-infrastructure work from the Vermont Agency of Transportation in 2006 and an additional \$200,400 SRTS infrastructure award in 2007.

Pinehurst, North Carolina: Pinehurst Elementary

The Pinehurst Walks! program focused on encouraging Pinehurst Elementary's 650 students to walk and bicycle to school and engaging students as program leaders. The program included a classroom walking competition, and winning classrooms planted a shade tree along the route to school. Pinehurst Walks! also created the Pinehurst Elementary Walking School Bus, which enrolled 250 children in the spring of 2010 and averaged 90 students walking to school each week. These encouragement activities resulted in a 22 percent reduction in traffic volume on Walking School Bus days.

In addition, the Pinehurst student council presented their neighborhood walkability recommendations to Pinehurst's Mayor and Village Council. This presentation led to a \$150,000 allocation for a greenway that will connect the elementary school to the Village of Pinehurst. The National Center for Safe Routes to School awarded Pinehurst Walks! an initial \$1,000 grant to help with these education and encouragement activities in the spring of 2010.



How to Measure Traffic Volume

Measuring the impacts of SRTS activities can help a local SRTS program evaluate its progress, pursue additional funding or even market its efforts. For programs that aim to reduce the number of vehicles near the school during arrival and dismissal times, a simple way to gauge progress is to take an initial measurement of traffic volume before any strategies are implemented and then take a second measurement of traffic volume after reduction efforts are underway or complete.

Naturally it is important to consider additional factors that may have contributed to the results, like a city-wide campaign to reduce car use or an increase in gas prices. SRTS programs described on the previous pages used a variety of straightforward methods that condense to three steps:

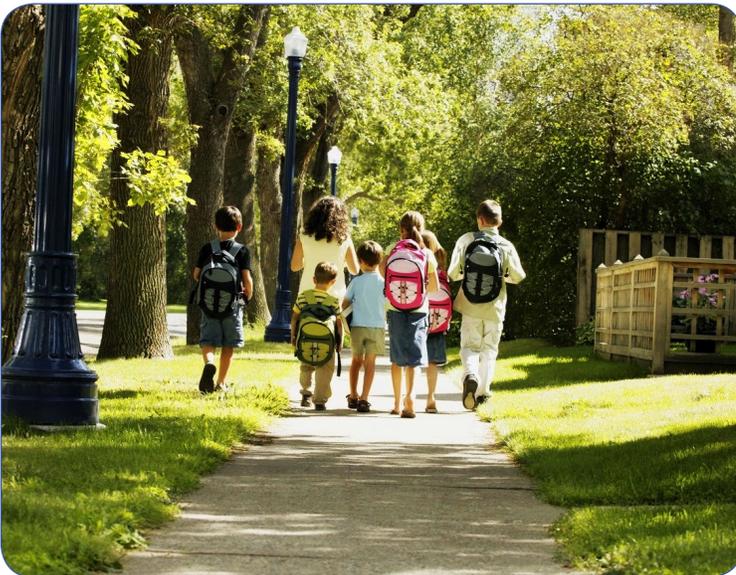
1. Before taking any action to reduce the number of vehicles, measure the traffic volume.

Measurement can be taken by methods such as hand-counting the number of cars in school drop-off zones or parking lot entrances, or by electronically tracking the number of cars traveling on nearby streets using road tube traffic counters. Students could assist with hand-counting and electronic vehicle counts require engaging law enforcement or municipal departments such as transportation, public works or planning.

2. Conduct activities aimed at reducing traffic near the school. The National Center for Safe Routes to School's SRTS Guide contains a broad range of strategies for education, encouragement, enforcement and engineering solutions.

Available at: <http://guide.saferoutesinfo.org>.

3. Repeat the count method used in Step 1 while activities are underway and, if possible, at a logical end-point like the end of a school semester, or after the completion of an infrastructure improvement. Compare the measurements and look for differences.



Conclusion

Heavy vehicle traffic around schools can not only increase safety risks for children walking or bicycling to school, but can also impact parent decisions on school travel. As demonstrated by the examples provided in this brief, SRTS programs and strategies can play a role in reducing vehicle traffic near schools. Measuring traffic volume before implementing SRTS activities allows a program to track progress towards overall program goals.

For more information on program evaluation, see the SRTS Evaluation Guide at:

<http://guide.saferoutesinfo.org/evaluation/index.cfm>.

For additional SRTS program success stories on a variety of topics, visit:

www.saferoutesinfo.org/data-central/success-stories.

¹ The National Center for Safe Routes to School (2010). Safe Routes to School Travel Data: A Look at Baseline Results from Parent Surveys and Student Travel Tallies. Retrieved April 13, 2011 from: http://www.saferoutesinfo.org/resources/travel_data_reports.cfm