



# Safe Routes to School 2009 Policy Report

*Moving to the Future: Building on Early Achievements*



Changing the Habits of  
an Entire Generation

March 2009

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The Safe Routes to School National Partnership is a fast-growing network of more than 400 organizations and professional groups working to set goals, share best practices, secure funding and inform agencies that implement Safe Routes to School programs. The Safe Routes to School National Partnership's mission is to serve a diverse national community of organizations that advocates for and promotes the practice of safe bicycling and walking to and from schools throughout the United States. The Partnership is hosted by Bikes Belong Foundation, a 501(c)(3) non-profit which is a sister organization to Bikes Belong Coalition.

For more information visit [www.saferoutespartnership.org](http://www.saferoutespartnership.org).

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# Safe Routes to School: A Federal Program with Broad Benefits

## The Genesis of Concern

Early in the new millennium, a number of important studies were published that ultimately linked the increasingly smaller percentage of children who walk and bicycle to school to larger public health concerns associated with physical inactivity, childhood obesity and poor air quality.

Around the same time, the Federal Highway Administration (FHWA) released the results of its 2001 National Household Travel Survey, which showed a continued dramatic slide in the number of children walking and bicycling to school—down from nearly half of students in 1969<sup>1</sup> to just about 15 percent in 2001<sup>2</sup>—and a related jump in parents driving their children to school. These trends are being felt at the local level, and some communities throughout the United States have documented that parents driving their children to schools can constitute 20 to 30 percent of the morning rush hour traffic.<sup>3</sup>

In 2003, the Environmental Protection Agency (EPA) published an influential report called “Travel and Environmental Implications of School Siting,” which revealed that schools designed to facilitate students walking and bicycling to school had measurably better air quality. Researchers have

separately provided strong evidence linking air pollution produced by traffic to public health problems in children like asthma, chronic respiratory illnesses and certain cancers.<sup>4</sup>

And in 2002, researchers documented that the percentage of overweight children more than doubled in just 20 years’ time,<sup>5</sup> putting children at significant risk of developing serious health problems while young like diabetes, high blood pressure, and asthma and with a greater likelihood of further health complications later in life. A related study documented an important contributing factor—just one-third of children were engaging in the U.S. Department of Health and Human Services’ recommended level of 60 minutes of moderate to vigorous physical activity per day.<sup>6</sup> Researchers have also shown that children who walk to school are more physically active throughout the day.<sup>7</sup>

Considered as a whole, the downturn in children walking and bicycling to school could be viewed as a symptom of a growing crisis of physical inactivity—with detrimental effects on the rise of childhood obesity and health problems related to poor air quality.

## The Five “E’s” of a Safe Routes to School Program

The Federal Highway Administration (FHWA) recommends that SRTS efforts in the United States incorporate—directly or indirectly—five components,<sup>8</sup> often referred to as the Five E’s, outlined below:

- 1 Engineering**—Creating operational and physical improvements to the infrastructure surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safer and fully accessible crossings, walkways, trails and bikeways.
- 2 Education**—Teaching children about the broad range of transportation choices, instructing them in important lifelong bicycling and walking safety skills and launching driver safety campaigns in the vicinity of schools.

- 3 Enforcement**—Partnering with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crosswalks and proper walking and bicycling behaviors) and initiating community enforcement such as crossing guard programs.
- 4 Encouragement**—Using events and activities to promote walking and bicycling.
- 5 Evaluation**—Monitoring and documenting outcomes and trends through the collection of data, including the collection of data before and after the intervention(s).

## Congress Steps In

In the midst of all these warnings, grassroots programs were starting to emerge throughout the country, focused on increasing the safety and prevalence of children walking and bicycling to school. Congress took note of these promising community initiatives—in places like the Bronx, N.Y. and Marin County, Calif.—and created the federal Safe Routes to School (SRTS) program in August 2005 through Section 1404 of SAFETEA-LU, the surface transportation bill (see Appendix 2 for the text of the law). Congress authorized a total of \$612 million in funding to states over five years, beginning with \$54 million for fiscal year 2005 and concluding with \$183 million for fiscal year 2009.

Congress envisioned Safe Routes to School as a multi-faceted program with an overall goal of encouraging more children to walk and bicycle to school. To accomplish that goal, several related purposes were identified, including improving safety for child pedestrians and bicyclists, encouraging children to lead healthy and active lifestyles, and facilitating projects that reduced traffic congestion, fuel consumption and air pollution near schools.

The legislation set out parameters for the implementation of the SRTS program, including the following provisions:

- Requires each state Department of Transportation (DOT) appoint a full-time SRTS coordinator to administer the program;
- Provides an annual apportionment of federal funds based on the state's share of the overall population of children in grades K-8;
- Charges states with awarding the funds to local elementary and middle schools and communities;
- Creates a SRTS Clearinghouse to disseminate best practices and provide technical assistance and support to state agencies and local projects; and
- Forms a National Safe Routes to School Task Force to develop recommendations for a strategy to advance the program nationwide.

The majority of each state's funding must be spent on grants to schools and communities to retrofit roads and build sidewalks, bike lanes and pathways to allow children to more safely walk and bicycle to school. A smaller percentage of funding (10% to 30%) supports non-infrastructure activities, including walking and bicycling safety education, driver awareness campaigns, more robust enforcement of speed limits and traffic safety rules, promotional events to encourage more children to walk and bicycle and more. The types of activities supported by Safe Routes to School are often called the "Five E's."

### Fast Facts on Safe Routes to School: Then and Now

#### In 1969:

- Nearly half of all children overall walked or bicycled to school.
- Eighty-five percent of children living within a mile of school walked or bicycled.
- Fifty percent of children living within one to two miles walked or bicycled.

#### In 2001:

- Less than 15% of children—or 5.7 million children—walked or bicycled to school.
- Half of children attending school in the U.S. were dropped off in the family car.
- Fifty percent of children living within a mile of school walked or bicycled.
- Twelve percent of those living within one to two miles walked or bicycled to school.

#### To the Future:

- Safe Routes to School programs can increase walking and bicycling by 20 to 200%.
- Neighborhood schools produce a 13% increase in walking and bicycling.
- Returning to 1969 levels of walking and bicycling would mean an additional 5.9 million children living within two miles of school would walk or bicycle.
- Individuals are 65% more likely to walk in a neighborhood with sidewalks.
- Approximately 65.5 million people living near a school could benefit from Safe Routes to School projects that improve the environment for walking and bicycling.

### Off to a Quick Start

After Congress created the federal SRTS program in August 2005, a number of steps had to be taken by state DOTs before grants could be awarded to local schools and communities. In September 2005, the FHWA took the first step and formally requested that each state DOT move forward with hiring or assigning a full-time SRTS coordinator to manage the program.

At the beginning of 2006, the FHWA issued guidance to the states on how to interpret the federal statute and making recommendations for processes to administer the program. At that point, states could begin to develop their own application guidelines and procedures for implementing the program. The majority of states also engaged a range of stakeholders—including health and education officials, law enforcement, bicycle and pedestrian advocates, parents and others—on State Advisory Committees to craft the application process, promote the program to communities and review grant applications to ensure a responsible and effective use of the federal funds.

Now, just about three years after the law was originally signed, all states have their state SRTS coordinators in place and each state has issued at least one round of application guidelines. Many states have already awarded all of their available money through fiscal year 2009, generally through multiple grant cycles. Across all states, as of December 2008, approximately 90 percent of federal funds from fiscal years 2005 through 2008 have been awarded and more than 4,400 local schools are benefiting from the federal program and are implementing their SRTS programs and initiatives. (Please see Appendix 1 for state-specific information on the implementation.)

### Impacting the Lives of Children

In communities all across the country, federal Safe Routes to School dollars are already at work, helping schools and cities to encourage more children to be safe, healthy and active on their way to and from school, and helping communities find solutions to traffic congestion, safety concerns, poor air quality and high rates of childhood obesity and related diseases. Examples of just a few of these Safe Routes to School programs are included in sidebars throughout this report.

#### **Saving the Lives of Student Pedestrians— Miami, Florida**

Miami-Dade County has long struggled with one of the highest rates of pedestrian injuries and fatalities in Florida. In 2001 leaders at the University of Miami-Miller School of Medicine and Jackson Memorial Hospital's Ryder Trauma Center convened a team of experts to develop WalkSafe™, which seeks to increase traffic safety knowledge among children to reduce the number of injuries and fatalities. The program was mandated as a part of the Miami-Dade County school district curriculum in 2003, and reaches all 232 elementary schools.

Federal Safe Routes to School funds have allowed for implementation of the WalkSafe™ curriculum in high-risk school districts, paired with encouragement activities, to get more children walking and bicycling. Safe Routes to School funds have also supported engineering modifications in dozens of elementary schools to make the sidewalks and streets safer for children. As a result of this district-wide focus on safe walking, there has been a 41% decrease since 2001 in the number of child pedestrians injured in Miami Dade County, and crash rates continue to decline at a faster rate than in neighboring counties.

## Leaders in the Safe Routes to School Movement

### Federal Highway Administration

The federal agency, part of the U.S. Department of Transportation, that oversees the federal Safe Routes to School program and other federally-funded road, bicycle and pedestrian projects. [www.fhwa.dot.gov](http://www.fhwa.dot.gov)

### State Departments of Transportation

Each state administers its portion of Safe Routes to School dollars, and selects local communities and schools for grants or projects. Each state must have a full-time Safe Routes to School coordinator associated with the Department of Transportation to administer the program. [www.transportation.org](http://www.transportation.org)

### National Safe Routes to School Task Force

Created by Congress and now sunsetted, the Task Force included leaders in health, transportation and education as well as representatives from state government, local agencies and non-profit organizations including the Safe Routes to School National Partnership. It was charged with making recommendations for strategies to advance the program, which were captured in a report to Congress published in July 2008. [www.saferoutesinfo.org/task\\_force](http://www.saferoutesinfo.org/task_force)

### National Center for Safe Routes to School

The National Center serves as a national clearinghouse and is the training and technical assistance resource for local Safe Routes to School programs and state coordinators. Funded by the Federal Highway Administration, it is operated by the University of North Carolina Highway Safety Research Center in partnership with the American Association of State Highway and Transportation Officials, America Walks, the Governors Highway Safety Association, the Institute of Transportation Engineers and Toole Design Group. [www.saferoutesinfo.org](http://www.saferoutesinfo.org)

### Safe Routes to School National Partnership (SRTSNP)

The Partnership is a network of more than 400 non-profit organizations, government agencies, schools and professionals working together to advance Safe Routes to School nationwide. As an independent non-profit organization, the Partnership provides advocacy, research, information, best practices and leadership on federal, state and local policies and practices affecting Safe Routes to School initiatives. A key program is the Safe Routes to School State Network Project, which brings together state leaders to affect policy changes and to leverage resources that improve the safety and ability for children to walk and bicycle to and from schools. [www.saferoutespartnership.org](http://www.saferoutespartnership.org)



# Observations on Program Implementation: Challenges and Opportunities

While the federal SRTS program is still early in its existence, enough grant cycles and projects have been initiated to allow for an analysis of the program’s initial implementation challenges and opportunities.

This section focuses on five key policy issues that are slowing successful implementation of initiatives to encourage more children to safely walk and bicycle to school. These observations are based on consultations and input from current and prospective local SRTS grant recipients, state SRTS coordinators and other stakeholders at national, state and local levels. Their experiences in implementing the federal SRTS program and accessing and utilizing the funds are an essential barometer of what is working well and what could work better.

If these implementation challenges can be addressed, it will exponentially expand the benefits that Safe Routes to School provides for public health, safety, reducing traffic and decreasing pollution. Addressing these issues will also increase the opportunity for the program to become fully integrated at schools throughout the country, providing improved safety and opportunities for children to engage in healthy and active lifestyles.

## Demand Exceeds Available Funds: More Funding Needed to Address Childhood Obesity and Traffic Safety

While \$612 million for Safe Routes to School over five years may seem, on its surface, to be a significant investment, those funds are divided among 50 states and the District of Columbia over five years. To put that figure in perspective, it represents just 0.2 percent of the overall

federal investment in transportation, and just 1 percent of what our country spends on school bus transportation.<sup>9</sup>

Across the country, state after state is finding that the federal SRTS program is oversubscribed. As of December 2008 state DOTs reported they had received a total of 5,890 requests for funding, and were only able to award funds to 2,363 projects<sup>10</sup>—meaning there are 2.5 applicants for every grant awarded. And, grantees are often funded for less than they had requested. In many states, the ratio of applicants to awards or amount requested to amount awarded is much greater, as the chart below demonstrates.

Some states have adjusted their implementation to react to the demand from local schools and communities. The Ohio DOT received such an overwhelming response from applicants seeking infrastructure funds that they had to rework the engineering parameters to restrict the amount of funds each school could receive, allowing funds to be distributed to a greater percentage of applicants. In Massachusetts, the Executive Office of Transportation wanted to avoid turning down many times more applicants than they could fund, so they chose a process to allow more schools to participate in the SRTS program at some level. Approximately 150 schools around the state have signed as partners, allowing them to receive services and resources from a statewide contractor to help them implement educational and encouragement programs. Schools must participate for at least a year and demonstrate community interest to qualify for infrastructure assistance. Massachusetts anticipates being able

## Need for Funding Outweighs Availability: State Examples

STATE	NUMBER OF APPLICATIONS RECEIVED	AMOUNT REQUESTED BY APPLICANTS	NUMBER OF APPLICATIONS FUNDED	AMOUNT AWARDED
Wisconsin	162	\$17.8 million	44	\$3.9 million
Illinois	1,042	\$77.7 million	112	\$8.3 million
Maine	N/A	\$11.4 million	N/A	\$1.8 million
North Dakota	108	N/A	22	N/A



to provide infrastructure support to approximately 40 schools with their full five years of funding—a fraction of the 1,504 elementary and middle schools in Massachusetts.

While all states face challenges meeting the demand, small states have a particularly difficult time in stretching their dollars to fund improvements at more than a few schools. As the apportionment is based on the population of school-age children, low-population states receive a minimum allotment of \$1 million each per year. For fiscal year 2009, 14 states fall into that category. The million dollars has to support the state's SRTS coordinator, administration expenses, and the local grant awards. Even when small states limit grantees to \$50,000 or \$100,000 per award, just a handful of schools can be supported each year in these states. As infrastructure projects can be costly—it takes on average \$100,000 to construct one mile of sidewalks<sup>11</sup>—these maximum grant sizes will likely only allow for a small part of a school's needed improvements.

There are also signs that the demand in the future could continue to grow beyond the already-high levels of requests for funding. Several states—including Oklahoma as one example—have noted an increase in calls from school personnel looking to SRTS funding for help as they are forced to cut back bus routes to help balance school budgets in times of high fuel prices and a difficult economy. Other states have seen the demand grow from the first grant cycle to the second as word spreads about Safe Routes to School and more schools and communities consider adding initiatives to make walking and bicycling safer for children. Some states, notably Michigan and New Jersey, have concerns that schools in low-income urban areas have not applied for funding even when it's badly needed due to limited staff time and because the schools and communities cannot absorb the costs while they wait for reimbursement by the state. These two states have implemented special

procedures and pilots to facilitate participation from underserved urban communities. If these initiatives are successful, requests for funding and support could grow even further from these types of schools.

In addition to the demonstrated demand from the state application processes, there are other indicators that the need is not being met through the available funding. Across all states, the average grant size as of December 2008 is approximately \$154,000. As there are approximately 100,000 elementary and middle schools across the country, it would take more than \$15 billion in additional SRTS funds to ensure that the most basic safety upgrades and educational and encouragement curriculums are provided at all K-8 schools. Given the previously cited figure of an average cost of \$100,000 to construct one mile of sidewalks, it is likely that the \$154,000 average grant will only allow for some of the needed safety improvements around each school.

A similar conclusion was reached by the National Safe Routes to School Task Force, which was created by Congress to develop recommendations to advance Safe Routes to School. In its report, *Safe Routes to School: A Transportation Legacy*, the Task Force noted that, based on the amount of funding awarded as of summer 2008 and the number of schools that have benefited, the \$612 million will likely only benefit 7.5 percent of schools around the country<sup>12</sup> over the course of the five-year authorization, and that those fortunate schools would likely only receive a portion of what is needed to make all needed infrastructure improvements and non-infrastructure activities.

While communities and schools wait for the availability of SRTS funding and support, they continue to struggle with neighborhoods that are not safe for walking and bicycling and the resulting negative health impacts in terms of pedestrian and cyclist safety, physical inactivity and obesity, and diseases associated with air pollution. Nationally, Americans spend \$76 billion a year on health care costs related to physical

inactivity,<sup>13</sup> \$164 billion a year on health care costs associated with traffic injuries and deaths,<sup>14</sup> and between \$40 billion and \$64 billion a year on health care costs associated with asthma and other health conditions related to high rates of air pollution.<sup>15</sup>

At the current rate of funding, it would take several decades before every school in the United States could receive a SRTS grant. By significantly increasing the funding level for the SRTS program, many more schools will be able to create school transportation options for children that are safe, healthy and less polluting. Making neighborhoods safer and more accessible for bicyclists and pedestrians of all ages will help make progress on rates of obesity and physical activity.

### **Local SRTS Program Managers Are Key:** *Allowing Their Use is an Important Factor in Local Success*

Local SRTS managers are often employed by individual schools and communities to oversee and coordinate implementation of a school or school district's SRTS efforts. These local SRTS managers organize parents and community volunteers to carry out encouragement events and activities such as walking school buses, where groups of neighborhood students walk to school supervised by parents. Developing and carrying out an effective SRTS plan and program also necessitates involvement from a wide range of community stakeholders, including law enforcement, school transportation officials, city engineers, health advocates, elected officials, area businesses and community advocates. The staff time and commitment of local SRTS managers keeps the wide range of participants moving forward towards a common goal.

Also of considerable importance, the local SRTS manager provides consistency and longevity to the program that may not be provided by a parent volunteer, who is likely to leave the position once their child gets older and moves on to another school. Local SRTS managers can also be employed by a school district or the city and

### **Fast Facts on Safe Routes to School: Funding Levels**

- The \$612 million available to Safe Routes to School over five years is just 0.2% of the overall federal investment in transportation.
- Americans spend 100 times as much on school bus transportation each year as they do on Safe Routes to School.
- States have awarded approximately 90% of available federal funds, with an average grant size of \$154,000.
- More than 4,400 schools are benefiting from Safe Routes to School funding.
- It would take an additional \$15 billion in funding to provide just one grant to every K-8 school in the country.

charged with coordinating numerous SRTS efforts at a variety of individual schools throughout the entire community, increasing cost-effectiveness and amplifying coordination efforts.

Section 1404(f) of the legislation creating Safe Routes to School allows grant funds to be used to support local SRTS program managers. At the same time, the legislation also restricts the use of SRTS funds for "reoccurring costs," such as crossing guard salaries, unless explicitly authorized in the legislation. While local SRTS managers are an allowed expense in the federal law, a few states—including Illinois—have ruled that their salaries are reoccurring expenses and cannot therefore be reimbursed with federal SRTS funds.

The experiences of SRTS programs around the country demonstrate the important role that a SRTS program manager plays in a successful SRTS program. In Las Cruces, N.M., for example, the regional transportation planning authority, Las Cruces Metropolitan Planning Organization (MPO), embarked upon a SRTS pilot at one local elementary school for the 2006–2007 school year. An employee of the planning authority was permitted to dedicate a portion of his time to coordinate the Safe Routes to School effort.

The pilot was successful, and the school board and the MPO are now working together to expand the project to two additional schools, and ultimately all schools in the district. However, the effort cannot proceed without additional staff time and resources, so the Las Cruces MPO is currently in negotiations with the New Mexico DOT to secure funding for a full-time SRTS manager to coordinate programs for the 31 elementary and middle schools in the district.

The SRTS program in Windsor, Vt. makes the case for a SRTS manager from the opposite perspective. State Street School received a small planning grant from the Vermont Agency of Transportation—equivalent to approximately \$1,000 per year for two years plus assistance from a statewide planning consultant—to help them plan and carry out a SRTS program. Through Walking Wednesdays and other encouragement activities, impressive shifts were documented in just one school year—an increase of 14 percentage points in children walking and bicycling and a decrease of 10 percentage points in drop-offs by the family car. The initial grant also helped the school apply for and obtain a \$204,000 infrastructure grant. However, now that funding for the non-infrastructure activities has ended, the school's physical education teacher has to volunteer her personal time after school—instead of a block of time during the school day as in previous years—to coordinate the Safe Routes to School program, making it very challenging to maintain the school's previous level of success and placing the future of the program in the hands of a volunteer.

Given the impact a local SRTS manager can have on the longevity and ultimate success of a Safe Routes to School program, it would be extremely beneficial to clarify that this expense is allowable, and to require states to permit reimbursement of these expenses as part of SRTS grants.

### **Regulatory Burden Slows Implementation: Simplification Necessary to Ensure Improvements Are Made Quickly**

In creating Safe Routes to School, Congress subjected the funds to the same rules and regulations as large-scale, complex, federally-funded highway projects. In effect, this means that SRTS grantees must go through several layers of approval and processes with the state DOT and the FHWA before a project is authorized to begin. And, although it is a federal statute, state implementation and interpretations of what the regulations require varies widely.

After going through the application process and being selected by the state for funding, grantees must first sign project agreements or contracts with the state DOT, which can take several months and in some cases more than a year. After receiving a signed contract, the school or city can embark upon fulfilling the regulatory and federal paperwork requirements. One of the numerous regulatory processes that projects must comply with is the National Environmental Policy Act (NEPA). The environmental review process includes an assessment of whether the project will have a positive, negative or no impact on parks or recreational property, historic sites or features, threatened and endangered species, and water resources like wetlands, floodplains or bodies of water. While simpler bicycle and pedestrian projects qualify for a categorical exclusion from the environmental review process, states still often require these projects to submit a 17-page form with sign-offs from various agencies to document they qualify for the exclusion.

Federal regulations also require the use of free and open competitive bidding for any consultants, and limit the use of city or county employees to carry out projects except in specific circumstances. So while many municipalities may already have employees on staff charged with constructing sidewalks, for example, they would usually have to go through a competitive bid process to hire a firm to construct the SRTS project.

Regulations also require that all SRTS projects are funded on a reimbursement basis, which creates financial challenges for many schools and communities that must absorb the costs of carrying out a SRTS project and then wait for the state to pay them back.

These regulations were originally created to safeguard important environmental and labor protections for multi-million dollar highway projects with a significant potential impact on property and the environment. In the SRTS program, these regulations are being applied to small-scale local infrastructure projects with minimal impacts on property and the environment. And, many states require that non-infrastructure projects—which do not include any construction at all—go through the same layers of paperwork and processes.

The impact of these regulations is wide-ranging. Regulatory compliance adds greatly to the expense of a project due to the staff time needed to complete the paperwork and to seek the various levels of required approvals and sign-offs; this makes the projects much more expensive and dilutes the impact and efficiency of the much-needed federal dollars. These regulations also affect which communities can benefit from Safe Routes to School, as a high level of expertise is needed to manage the federal process. In Maryland, two grantees returned their SRTS awards once they fully understood the time and effort it would take to comply with the regulations. In Oregon, many communities have opted to not even apply for SRTS funding, preferring to find funds locally, which will allow them to complete the project for less money and with less staff burden. And while the SRTS grant awards fund 100 percent of project costs, the federal regulatory processes serve as deterrents to low-income, underserved communities, which often do not have engineering staff available to wade through these requirements.

The regulatory process is also causing significant delays in projects. Few infrastructure projects have broken ground around the country due to the length

of time it takes to get the approval to proceed with bidding and construction. For example, New Hampshire awarded infrastructure grants in December 2007. Nine months later, the first of their grantees received the notice to proceed with the bidding process, which adds another few months before the project can break ground. Oklahoma estimates it will take two years from when an infrastructure grant is awarded to when it will be completed. In Michigan, it has taken nine months to get the first three of their infrastructure grantees ready to bid out their project; the rest are still working through the compliance process. Even non-infrastructure projects are affected—Minnesota estimates it takes five to seven months from the time a non-infrastructure project is announced before the grantee will be given the authorization to proceed.

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While the federal legislation permits funding to be awarded to a wide range of grantees including schools and non-profit organizations, the regulatory compliance issues effectively limit most applicants to cities and counties. Due to the intense requirements and high level of expertise needed to comply, many states now require schools and non-profits to have a sponsoring agency from the city or county government to apply, as they are more familiar with federal regulatory compliance.

The impact of these regulatory delays and burdens can also affect the ultimate success of a SRTS project. These projects are often driven by local advocates and parent volunteers, and it is difficult to maintain their enthusiasm throughout the long process, which can last years from the time a project is first submitted for funding. But, most importantly, while these infrastructure projects wait to be implemented, many children—especially those in low-income urban areas—continue to walk and bicycle to school in unsafe conditions. Other children who live within a short distance of their school may be prohibited from walking or bicycling due to traffic and safety concerns, increasing school bus transportation costs for the school district. And, while non-infrastructure projects are delayed, children continue their habits of physical inactivity, potentially putting them on a path towards overweight and obesity.

Solving this complex problem would require Congress, the FHWA, and state DOTs to work together to develop a simplified and expedited regulatory process that is more appropriate for smaller-scale projects like Safe Routes to School. Another potential option would be to have state DOTs provide staff or consultants to “non-traditional” grantees like schools or non-profit organizations to help them understand and get through the regulatory and approval processes.

**Existing Research and Evaluation Are Insufficient:** Stronger Data Collection Needed to Measure Success and Identify Challenges

The Safe Routes to School legislative language does not require any data collection or evaluation of the program’s implementation and effectiveness. The FHWA requests—but does not require—that states evaluate the safety benefits and behavioral changes that SRTS programs generate. No standardized methods are required for states to collect and report this information, creating difficulties in comparing results from state to state and in drawing overall conclusions about the national impact of the federal SRTS program.

**Eliminating Hazards for Walking and Bicycling—Buffalo, New York**

Hamlin Park School #74 is located in a low-income community in the Hamlin Park Historic District in Buffalo, N.Y. The Buffalo Public School District and the City of Buffalo are partnering together to improve the quality of life for students by revitalizing communities. The initiative includes restoring schools, strengthening neighborhoods and implementing SRTS programs.

With a \$550,000 federal SRTS grant awarded by the New York State Department of Transportation, the Hamlin Park Taxpayers Association has created a committee to develop the program and priorities. Infrastructure funds will allow for the complete reconstruction of three key intersections, identified due to their high risk of crashes along the main route to Hamlin Park School. Two are intersections on arterial roads leading to the school that need major upgrades and the third is an intersection considered a safety hazard by the neighborhood. These three intersections will receive new curb ramps, marked crosswalks with enhanced treatments, pedestrian-scale lighting, curb extensions, new signage and pedestrian countdown timers. These improvements tie in perfectly with an already-planned rehabilitation of a pedestrian bridge over the Kensington Expressway that connects to the Hamlin Park School.

Once complete, these projects will significantly increase the safety for children who want to walk and bicycle to Hamlin Park School. There are also nearly 1,000 children that live within a half-mile of Hamlin Park School that attend one of the seven other elementary schools in the area that will benefit from the infrastructure upgrades and safety improvements.

The National Center for Safe Routes to School, which is under contract to the FHWA to support SRTS programs and state coordinators, has developed standardized parent surveys and student tallies for use by local grant recipients. If grant recipients use these forms before their project begins and again at the conclusion of their project, they can demonstrate changes in school transportation habits and parental attitudes about walking and bicycling to school. The National Center collects the data and processes it for local grantees, and is compiling a database of the responses. Even so, some states do not require their grantees to use these tallies and surveys, resulting in a lack of comprehensive data from the thousands of schools utilizing federal dollars for SRTS programs. And, since the data collection forms were developed and tested in the fall of 2007 and rolled out nationwide in January 2008, most programs will not be able to submit datasets from both the beginning of a school year and the end of a school year until spring 2009.

In addition to measuring increases in walking and bicycling to school, the purposes of the program outlined in the SRTS legislation include efforts to increase physical activity and the health of children and to reduce traffic congestion and air pollution near schools. At this point, there is no comprehensive evaluation plan or process in place that would allow for the assessment of these outcomes. The FHWA guidance for the implementation of Safe Routes to School says that states “may choose to evaluate their programs” for these additional outcomes, but the currently available parent surveys and students tallies are not tailored to collect information that allows for the evaluation of health and environmental benefits.

While it does take time to put effective and thoroughly tested data collection measures and evaluation plans in place, evaluation is critical to new initiatives. Data collection and evaluation allows a local program to assess its own success and, if necessary, redirect efforts from less successful activities to those that have a stronger

impact on addressing local concerns. Evaluation at the state and national level, across the range of grantees, is also absolutely essential for understanding the ultimate impact of federal dollars, for evaluating specific outcomes, and for determining whether, how, and in what circumstances funds are most effectively used under varying conditions. For example, a more robust and comprehensive evaluation would allow for an examination of which types of non-infrastructure projects have the most significant impacts on increasing levels of physical activity.

These concerns are echoed by the federal government's own investigative and audit authority. In a report on Safe Routes to School issued in July 2008, the U.S. Government Accountability Office (GAO) recommended that the Federal Highway Administration “develop a comprehensive plan to monitor and evaluate the Safe Routes to School program, and formalize its efforts to work jointly with the clearinghouse, CDC and EPA to explore the feasibility of developing health and environmental outcome measures.”

It would be in the best interests of the future of the SRTS program to require the FHWA to develop and carry out a comprehensive evaluation plan that is able to measure all of the various potential outcomes, including safety, health and environment. Requiring such evaluation would also ensure that data is collected from the states and individual grantees in similar ways, allowing for comparisons of grantee and state performance. Providing dedicated funding for research and evaluation will allow for more robust and scholarly analysis of the data and identification of promising trends and best practices.

### **High-School Students Currently Left Out:** Expanding to Grades 9-12 Important to Address Adolescent Physical Inactivity

The 2005 Safe Routes to School legislation is limited to serving elementary and middle schools, covering K-8 grades—preventing high schools from participating. It is understandable that the limited initial outlay in funds provided by Congress would be focused to create a higher impact on a smaller segment of the student population, but logistically, there are fewer issues with high-school age children walking and bicycling. Parents generally have fewer concerns about high schoolers walking or bicycling independently, and older children are more physically capable of walking or bicycling longer distances. Plus, as SRTS programs become more prevalent in elementary and middle schools, children will increasingly develop new habits of active and healthy behaviors. If high schools are not able to participate in SRTS programs, older children and adolescents may shift back into their old habits of passively getting rides or driving to school.

New research confirms that a backslide in physical activity already takes place during the transition from childhood to adolescence. In July 2008, the National Institutes of Health released a new study<sup>16</sup>—one of the largest and most comprehensive of its kind—to assess changes in levels of physical activity as children grow. The activity levels of more than 1,000 children were tracked from ages 9 to 15, and the study showed that activity levels dropped sharply as children age—from an average of three hours of activity per day at age 9 to an average of just 49 minutes per weekday and 35 minutes per weekend day at age 15.

The U.S. Department of Health and Human Services recommends that children and adolescents get a minimum of 60 minutes per day of moderate to vigorous physical activity. But, by age 15, just 31 percent of the study participants were meeting the recommended level of physical activity on weekdays, and even fewer—17 percent—were

meeting the recommended level on weekends. The study authors wrote, “There is a need for program and policy action as early as possible at the family, community, school, health care and governmental levels to address the problem of decreasing physical activity with increasing age.” The lead author, Philip R. Nader, M.D., professor emeritus, Department of Pediatrics, University of California San Diego School of Medicine, encouraged local governments to provide safe walking and bicycling routes around schools.

Following the advice of Dr. Nader and providing high schools with eligibility to compete for federal Safe Routes to School funds would add a financial burden on an already oversubscribed program. There are approximately 24,000 high schools across the country. Assuming the current average Safe Routes to School grant of \$147,000 per school, it would require approximately an additional \$3.5 billion to make some initial infrastructure improvements and to carry out educational and encouragement activities at high schools nationwide.

However, given the serious risks and costs of adolescent obesity and physical inactivity, the health risks and potential health care costs outweigh the financial implications of expanding the program to high schools. Adding high schools as eligible recipients of Safe Routes to School funding will help ensure that walking and bicycling habits continue into adolescence. This expansion would also require at least a 25 percent increase in funding levels to allow high schools to compete for grants without decreasing the rate of funding for elementary and middle schools.

# Building a Supportive Environment for Safe Routes to School

Federally-funded Safe Routes to School programs do not operate in a vacuum. Because so many elements are required to make walking and bicycling to school safe and more prevalent, it takes a concerted, ongoing and committed effort from leaders in local government, the school, law enforcement and the community. Safe Routes to School efforts are more likely to be successful when they take place in a supportive community environment, and this is often determined by state and local policies.

There are a number of “big-picture” policies and practices that affect—positively or negatively—the ability of children to walk and bicycle to school or that can help institutionalize SRTS programs in a larger context. Proactive communities can utilize these tools to create a stable, long-term funding stream for their SRTS programs and ensure the program is viewed as an essential part of the solution to community concerns about traffic congestion, childhood obesity, safety and pollution.

## Siting Schools in Neighborhoods:

### Community-Centered Schools Are More Walkable and Bikeable

Children will only be able to walk and bicycle to a school if it is located within a reasonable distance from their homes. Unfortunately, the trend over the last few decades has been towards larger schools serving wider swaths of a community, and away from walkable, neighborhood schools. The National Household Travel Survey documents that the number of elementary school students living within two miles of their school decreased from 50 percent in 1969 to approximately 33 percent in 2001.

Decisions about where to locate a school and the enrollment size it will serve are affected by a range of state and local policies and practices. One such policy is “minimum acreage standards,” instituted by many states, requiring that to receive state funding, schools must be built on plot of land that is of a certain size. In effect, this often pushes new schools to the outskirts of communities due to lack of available land of a sufficient size

## Fast Facts on Safe Routes to School: Air Quality and Greenhouse Gases

- Air pollution produced by traffic is linked to children’s health issues like asthma, chronic respiratory illnesses and certain cancers.
- One-third of schools are in “air pollution danger zones” due to proximity to high-traffic areas.
- Nearly one in 10 children suffer from asthma, missing 14-million school days per year.
- It is estimated that air pollution costs Americans between \$40 billion and \$64 billion a year on health care costs for asthma and related conditions.
- The transportation sector produces nearly one-third of all U.S. greenhouse gas emissions.
- Schools designed so children can walk and bicycle to school have measurably better air quality.
- A 5% increase in a neighborhood’s “walkability” reduces vehicle miles traveled by 6%.
- Returning to 1969 levels of walking and bicycling to school would save 3.2 billion vehicle miles, 1.5 million tons of carbon dioxide and 89,000 tons of other pollutants—equivalent to keeping 250,000 cars off the road for a year.

within the community that the school is intended to serve. At the request of the Environmental Protection Agency, the Council of Educational Facility Planners International (CEFPI) examined this issue and ultimately revised its facilities guide<sup>17</sup> in 2004 to remove these minimum acreage standards and encourage communities to select sites appropriate to their community and educational goals. While some states have changed their policies in recent years, over half the states—27 in all—still have state policies setting minimum acreage standards for new schools.

Another challenge is that some states have funding formulas and policies in place that encourage communities to build new schools rather than renovate and maintain older school buildings which are often located in neighborhoods. Generally, these formulas limit state funding for renovation



and modernization of old schools to a certain percentage of the cost of building a new school (a common ratio is two-thirds). In effect, a community can receive greater state support for a more expensive new school than they could to maintain and expand an older school, even if the renovation project is less costly. Another problem with these calculations is that the cost of building the new school often does not factor in expenses such as constructing roads, installing utilities to access the school and the costs of busing or driving children to the school. As older schools are more likely to be located in neighborhoods and new schools are more likely to be located on the outskirts of communities, these formula-based policies often result in a decrease in the number of children who can walk and bicycle to school.

The National Trust for Historic Preservation has drawn an increasing amount of attention to the impact that school siting has on walkability, neighborhood sprawl and preservation of historic school buildings.<sup>18</sup> The Trust recently awarded grants to organizations in six states—California, Illinois, New Hampshire, Oregon, Pennsylvania and South Carolina—to allow them to research existing state policies on school siting and make policy recommendations that encourage community-centered schools within the state. Hopefully, the

experiences of these six states will identify new strategies for tackling the complex—and often competing—goals surrounding school siting policies and practices.

### **Building Complete Streets:**

#### **Addressing Bicycle and Pedestrian Safety Up Front Saves Future Retrofitting**

Cities and counties build many miles of new streets and roads each year, and reconfigure existing road networks—at a cost of billions of dollars. When jurisdictions are building new roads or reconstructing existing roads, it presents an opportune time to ensure that the roads are safe and accessible for bicyclists and pedestrians, as well as automobiles. It is much more costly to go back and retrofit a road with sidewalks, pedestrian crossings and bicycle lanes than it is to build the roads with these features the first time.

According to the National Complete Streets Coalition, six states and several dozen local jurisdictions around the country have adopted “complete streets” policies, which require that the planning, design, construction and maintenance of road and transit facilities address the needs of all transportation users, including pedestrians, bicyclists, the disabled, transit users and motorists. When these policies are in place, people have more choices about how to get to work, school

### **Walking and Rolling to Cleaner Air and a Greener Planet— Boulder and Longmont, Colorado**

The Freiker (Frequent Biker) program uses innovative technology to inspire more children to walk and bicycle to school. Children are outfitted with radio-frequency ID tags, and walk or ride underneath a “Freikomometer” when they arrive each day, which logs their participation for the day. Children earn prizes based on how frequently they walk and bicycle to school, building excitement and enthusiasm among students. At the same time, school officials have access to real-time data tracking participation levels and estimates of mileage, minutes of physical activity and reductions of carbon dioxide emissions. The Freiker program is currently implemented in eight schools throughout Longmont and Boulder, using a portion of five federal SRTS grants totaling over \$270,000 awarded by the Colorado Department of Transportation.

Since the beginning of the 2008–2009 school year, the three participating schools in Longmont collectively are averaging a total of 414 children walking or bicycling to and from school each day—one-third of the student population—generating 22,430 “people-powered” trips to school in just six weeks time. Over the course of the year, assuming a similar level of participation, this will save parents approximately 149,040 miles of driving. This equates to a savings of 68 tons of carbon dioxide and four tons of other pollutants including carbon monoxide, hydrocarbons and nitrogen dioxide.

and shopping—and walking and bicycling becomes more prevalent and safer. Research studies have shown that individuals are 65 percent more likely to walk in a neighborhood with sidewalks,<sup>19</sup> and that as the number of people walking and bicycling increases, deaths and injuries actually decline.<sup>20</sup>

Complete streets policies can ensure that new roads and road improvements are built right the first time, with attention to the needs of pedestrians and bicyclists. As these policies become more widespread, it will allow limited SRTS funding to focus on retrofitting existing roads and paths, rather than having to fix roads that have not yet even been built.

### **Addressing School Bus Route Cuts: Additional Safe Routes to School Funds Could Help Schools with Budget Challenges**

As fuel costs spiked during the summer of 2008, school districts all across the country struggled with how to absorb significant increases in school transportation costs. Even with fuel costs easing in the fall, transportation costs have still risen significantly over the past several years. Many school districts were forced to eliminate or consolidate bus routes or restrict busing to children only outside a certain distance from the school. A July 2008 survey conducted by the American Association of School Administrators<sup>21</sup> found that a third of those surveyed had already moved to consolidate bus routes for the 2008–2009 school year, and that another third were considering eliminating bus routes or bus stops close to school sites for the 2008–2009 school year.

In many of these communities experiencing bus cuts, parents responded with concern for the safety of their children walking or bicycling to school, or anger over their own increased gas usage if they planned to drive their children. Parents losing access to school bus service need reassurance that it is safe for their children to walk and bicycle. Otherwise, they will likely choose to drive children in the family car—worsening traffic congestion and

air quality around schools, and creating more safety hazards for those children who do walk and bicycle. Children from low-income families without the means to drive will likely face increased traffic and unsafe conditions on their walk to school.

As school bus routes are consolidated, children that no longer have the option of riding the bus could instead be getting a much-needed dose of physical activity each morning and afternoon. This situation creates an opportunity for parents, school administrators and school transportation personnel to work together in a collaborative manner to identify safety concerns and develop short-term and long-term solutions that make it safer for children to walk and bicycle to school.

It is worth noting, however, that with schools consolidating or eliminating bus routes, pressure on the federal SRTS program for grants and support will likely increase. As a point of comparison, for

### **Making Healthy Habits the Norm— Flagstaff, Arizona**

The Coconino County Health Department is a strong advocate for fit and healthy lifestyles. In partnership with two elementary schools in Flagstaff, the Department was awarded a \$39,000 federal SRTS grant to roll out its *Walk. Bike. Get Fit.* program. The program combines pedestrian and bicycle safety education, monthly punch-card incentive programs and personal fitness goals to encourage more children to walk and bicycle to school. It even includes a classroom curriculum for kids in grades 3 to 6 that integrates concepts related to the benefits of walking and bicycling into health, science, math and geography lessons. To allow children that lived too far from the school to walk or bicycle to get active, the school implemented a walking program on school grounds.

Through these varied approaches to Safe Routes to School, the *Walk. Bike. Get Fit.* program has generated important progress. At the start of the program, just 45 children at one elementary school walked or bicycled to school. At the end of the 2007–2008 school year, that number had jumped to 110 children—a 144% increase. Coconino County Health Department staff monitor student progress throughout the school year, and have recorded an exponential increase in physical activity before and after school, helping children develop healthy habits.

the 2004–2005 school year, public expenditures on school busing totaled \$18.6 billion<sup>22</sup>—and at that time, gas averaged less than two dollars per gallon—while funding for Safe Routes to School is approximately, 1 percent of that, at less than \$200 million annually. Regardless, it is important that any school bus route cuts be accompanied by a deliberate effort to improve safety for children walking and bicycling in order to avoid increased drop-offs by family vehicles and achieve greater rates of children walking and bicycling to school.

### **Connecting to School Health and Wellness Initiatives: Safe Routes to School Should be Integral to School Health Efforts**

In June 2004, Congress passed the Child Nutrition and Women, Infants, and Children (WIC) Reauthorization Act. A new requirement embedded in the law required all local school districts participating in the Federal School Meal Program to create a wellness policy no later than July 2006. Given that children spend a significant portion of their day at school, schools have an important role to play in safeguarding the health and wellness of their students. Schools are required to work with communities to develop the wellness policies, which must include a focus both on nutrition and physical activity.

In response, the National Alliance for Nutrition and Activity developed Model School Wellness Policies to help guide schools and school districts. Their model policy recommends the inclusion of Safe Routes to School as a strategy to increase physical activity levels among students. As schools develop and update their wellness policies, it provides an opportunity to create a supportive environment for Safe Routes to School programs and to link the initiative to pressing community concerns about childhood inactivity and obesity.

Many schools and school districts have created wellness teams or councils to promote healthy eating and physical activity and engage local stakeholders. These wellness councils can be an ideal body for institutionalizing Safe Routes to

### **Fast Facts on Safe Routes to School: Health**

- The percentage of overweight children has doubled in 20 years' time; nearly one-third of children today are either overweight, obese or at risk of becoming so.
- Overweight adolescents have a 70% chance of becoming an overweight or obese adult.
- Overweight children are at significant risk for diabetes, high blood pressure and asthma.
- Just one-third of children get the recommended level of 60 minutes of physical activity per day, and approximately one-quarter of children get no physical activity a day at all.
- Each extra hour a day spent riding in a car increases obesity risk by 6%.
- Health care costs related to physical inactivity cost Americans \$76 billion a year, and obesity-related health care costs total \$117 billion a year.
- Walking one mile to and from school each day generates two-thirds of the recommended level of physical activity per day.
- Children who walk to school are more physically active throughout the day.

School as an ongoing part of a school's initiatives. Wellness councils can also be a source of active and engaged leadership to help drive the SRTS program and ensure that needed safety upgrades are made and that as many children as possible are walking and bicycling to school.

### **Using Safety Funds to Protect Children: Traffic Safety Funding Should Address Child Pedestrian and Cyclist Safety**

As discussed elsewhere in this report, states have experienced a great deal of demand for the limited federal Safe Routes to School dollars, which represented only 0.2 percent of the entire \$286.5-billion federal transportation bill. Schools and communities may need to look to other funding sources to start and sustain their Safe Routes to School initiatives—and safety funds are a good place to start. These initiatives, however, require state and local policies that are supportive of directing safety dollars to SRTS programs.

At the local level, traffic fines are one option. Communities all across the country have implemented increased fines for drivers that speed or commit moving violations in school zones, as they are endangering vulnerable children. In some states—notably Arizona and Washington—state legislation doubled the fines for school zone violations, and a portion of the proceeds is used to support SRTS programs throughout the state. Portland, Ore. implemented a similar measure, which has generated \$1.2 million in two years to support comprehensive SRTS programs at 25 elementary schools. These policies ensure that traffic violators are helping underwrite safety solutions that protect children.

Federal safety funds that are managed at the state level are another option for funding. Each state is required to have a Strategic Highway Safety Plan (SHSP) to guide its investments in projects that reduce traffic crashes fatalities and injuries. Each state receives millions of dollars in federal safety funding each year to carry out its plan; on average the amounts are more than 10 times the available SRTS funds. The state's Strategic Highway Safety Plan is required to be updated periodically, and must be a collaborative process with multiple opportunities for public input. It establishes statewide goals and objectives and selects key areas for emphasis in how funds will be allocated. This process provides an opportunity to direct state-managed federal safety funds to supplement federal SRTS dollars.

### **Fast Facts on Safe Routes to School: Safety**

- Approximately 23,000 children age 14 and under were injured and 429 children killed while walking and bicycling in 2006.
- Half of children struck by cars near schools are hit by parents driving other children to school.
- Nationally, Americans spend \$164 billion a year on health care costs associated with traffic injuries and fatalities.
- Studies of existing SRTS programs show approximately a 50% decrease in child cyclist and pedestrian accidents.
- As the number of people walking and bicycling increases, deaths and injuries actually decline.



## Conclusion: A Choice Between Two Futures

Right now, America's children are on the path to an unhealthy future. Nearly one-third of all children are either overweight or obese or at risk of becoming so.<sup>23</sup> Approximately one-quarter of children get no physical activity a day at all.<sup>24</sup> Nearly one in 10 children suffer from asthma, causing them to miss 14-million school days a year,<sup>25</sup> and one in three schools is located in an "air pollution danger zone."<sup>26</sup>

These unhealthy habits and situations are likely to negatively affect these children well into adulthood. Overweight adolescents have a 70 percent chance of becoming an overweight or obese adult.<sup>27</sup> Obesity has a range of health consequences, including type 2 diabetes, heart disease, stroke, cancer and arthritis. And, there is strong evidence showing that children living in high-traffic areas are more likely to have asthma and reductions in lung function, which is a risk factor for respiratory and cardiovascular diseases later in life.<sup>28</sup>

The costs of these choices are already exponential. It is worth repeating how expensive these choices are: the federal Centers for Disease Control and Prevention estimated that obesity cost America \$117 billion in the year 2000,<sup>29</sup> and another study showed that physical inactivity results in \$76 billion in direct medical costs annually in the United States.<sup>30</sup> The public health costs of pollution—including asthma and respiratory diseases—from cars and trucks have been estimated at between \$40 billion and \$64 billion per year.<sup>31</sup> As obesity rates and traffic congestion continue to rise, these figures will certainly continue to increase in years to come.

But, we do have a choice for a different future. Children who walk to school have higher levels of physical activity throughout the day.<sup>32</sup> The U.S. Environmental Protection Agency documented that neighborhood schools reduce traffic, produce a 13 percent increase in walking and bicycling, and a 15 percent reduction in emissions that contribute to poor air quality.<sup>33</sup> The same infrastructure improvements that make walking and bicycling safer for children are making communities more walkable and bikeable—which will compound the health, community and environmental benefits for adults

as well. Researchers have found that a 5 percent increase in a neighborhood's walkability leads to a 6 percent reduction in vehicle miles traveled.<sup>34</sup>

If the policy observations identified in this report were put into place, SRTS programs would be positioned to impact more children and communities throughout the nation. Approximately 9.9 million children (25%) currently live within one mile of their school, and only half of them currently walk or bicycle. Another 6.3 million children (16%) live within one to two miles of school, and just 12 percent of them currently walk or bicycle to school.<sup>35</sup> If SRTS programs could reverse our trends over the past 40 years and return to the 1969 levels of walking and bicycling to school, in which 85 percent of children living within one mile and 50 percent of those living within one to two miles of schools walked or bicycled,<sup>36</sup> the health and environmental benefits would be dramatic. It would mean an additional 5.9 million children—who are now currently being bused or driven—would walk or bicycle to and from school, getting at least two-thirds of the daily recommended level of physical activity. On the environmental side, those children—plus the 5.7 million children who already walk or bicycle today—would represent a savings of 3.2 billion miles of car travel per school year, 1.5-million tons of carbon dioxide and 89,000 tons of other smog-forming pollutants each year.

The simple act of getting more children to walk and bicycle to and from school provides an important tool in the efforts to address the very large problems of physical inactivity, obesity and poor air quality. Safe Routes to School initiatives are popular in communities of all shapes and sizes across the country and it is a proven strategy. Safe Routes to School is no longer just a good idea—it is a transformative program that is changing the habits of a generation of children to make healthier choices that are better for themselves and the environment.

***Safe Routes to School is a big step in the right direction. And, it's our choice as to which future we prefer.***



# Appendix 1:

## January 2009 State of the States

The following chart details each state's progress on implementing the federal Safe Routes to School program. All dollar figures cited are as of December 31, 2008.

- The first column indicates whether the required state SRTS coordinator is in place or is an interim official. State coordinators are responsible for administering the program and provide important leadership in how the program is implemented.
- The second column indicates whether the state uses a State Advisory Committee. Committees often help craft the application process, promote the program to communities and review grant applications to ensure a responsible and effective use of the federal funds.
- The third column shows how much funding it is anticipated the state will receive once FY2009 funds are allocated by Congress, and the fourth column represents the funding made available to date by the Federal Highway Administration for each state to spend.
- The total awarded column measures the amount of funding that the state has announced for local grants and statewide spending—not including administrative expenses. These are the funds that will ultimately help local communities create safer routes to school.
- The total obligated column reflects the amount that the state has expended or contracted to spend on Safe Routes to School, including local grants, statewide spending and administrative expenses. Obligation is important as it demonstrates what level of funding has been spent or will soon be spent to date to build infrastructure projects, support non-infrastructure activities and implement the program.

STATE	SRTS	ADVISORY COMMITTEE	PROJECTED FUNDING AVAILABLE (FY05-09) <sup>1</sup>	FUNDING FY05-08 <sup>1</sup>	TOTAL AWARDED <sup>2</sup>	PERCENT AWARDED (FY05-08)	TOTAL OBLIGATED <sup>3</sup>	PERCENT OBLIGATED (FY05-08)
ALABAMA	Yes	Yes	\$9,032,048	\$6,280,751	\$5,302,771	84%	\$600,000	10%
ALASKA	Yes	No	\$4,990,000	\$3,990,000	\$715,851	18%	\$3,990,000	100%
ARIZONA	Yes	Yes	\$11,306,270	\$7,683,062	\$1,500,000	20%	\$1,649,221	21%
ARKANSAS	Interim	Yes	\$5,937,015	\$4,314,540	\$4,099,340	95%	\$1,763,610	41%
CALIFORNIA	Yes	Yes	\$67,533,954	\$44,937,736	\$90,939,750	202%	\$12,868,020	29%
COLORADO	Yes	Yes	\$8,705,010	\$6,053,668	\$6,084,492	101%	\$2,275,137	38%
CONNECTICUT	Yes	Yes	\$6,971,079	\$4,948,217	\$2,619,000	53%	\$2,000,457	40%
DELAWARE	Yes	Yes	\$4,990,000	\$3,990,000	\$947,659	24%	\$3,757,806	94%
DISTRICT OF COLUMBIA	Yes	Yes	\$4,990,000	\$3,990,000	\$2,814,745	71%	\$2,992,500	75%
FLORIDA	Yes	No	\$29,100,655	\$19,391,033	\$43,706,136	225%	\$11,706,205	60%
GEORGIA	Yes	Yes	\$17,177,280	\$11,565,102	\$4,000	0%	\$1,823,467	16%
HAWAII	Interim	No	\$4,990,000	\$3,990,000	\$549,133	14%	\$818,246	21%
IDAHO	Yes	Yes	\$4,990,000	\$3,990,000	\$3,643,813	91%	\$1,534,823	38%
ILLINOIS	Yes	Yes	\$23,279,528	\$15,713,548	\$8,422,721	54%	\$2,084,069	13%
INDIANA	Yes	Yes	\$11,946,460	\$8,201,412	\$6,609,619	81%	\$704,347	9%



STATE	SRTS	ADVISORY COMMITTEE	PROJECTED FUNDING AVAILABLE (FY05-09) <sup>1</sup>	FUNDING FY05-08 <sup>1</sup>	TOTAL AWARDED <sup>2</sup>	PERCENT AWARDED (FY05-08)	TOTAL OBLIGATED <sup>3</sup>	PERCENT OBLIGATED (FY05-08)
IOWA	Yes	Yes	\$6,090,671	\$4,414,726	\$3,649,085	83%	\$2,706,742	61%
KANSAS	Yes	Yes	\$6,010,464	\$4,367,877	\$4,562,719	104%	\$1,610,555	37%
KENTUCKY	Yes	Yes	\$7,882,559	\$5,524,533	\$4,167,401	75%	\$3,383,426	61%
LOUISIANA	Yes	Yes	\$9,009,591	\$6,375,363	\$3,839,033	60%	\$4,298,428	67%
MAINE	Interim	Yes	\$4,990,000	\$3,990,000	\$2,560,000	64%	\$901,251	23%
MARYLAND	Yes	Yes	\$10,328,425	\$7,183,654	\$8,811,920	123%	\$7,549,100	105%
MASSACHUSETTS	Yes	Yes	\$11,284,446	\$7,818,001	\$0	0%	\$2,775,980	36%
MICHIGAN	Yes	Yes	\$19,090,527	\$12,826,750	\$13,990,389	109%	\$4,760,492	37%
MINNESOTA	Yes	Yes	\$9,569,263	\$6,662,389	\$5,467,000	82%	\$3,090,825	46%
MISSISSIPPI	Yes	Yes	\$6,506,087	\$4,658,367	\$3,114,290	67%	\$724,999	16%
MISSOURI	Yes	Yes	\$10,723,923	\$7,413,914	\$8,994,221	121%	\$1,821,959	25%
MONTANA	Yes	Yes	\$4,990,000	\$3,990,000	\$1,270,090	32%	\$2,257,302	57%
NEBRASKA	Yes	Yes	\$5,007,718	\$3,990,000	\$3,185,736	80%	\$1,600,446	40%
NEVADA	Yes	Yes	\$5,583,989	\$4,142,500	\$1,594,971	39%	\$1,033,203	25%
NEW HAMPSHIRE	Yes	Yes	\$4,990,000	\$3,990,000	\$1,523,706	38%	\$513,848	13%
NEW JERSEY	Yes	Yes	\$15,930,009	\$10,817,211	\$8,932,740	83%	\$3,090,308	29%
NEW MEXICO	Yes	Yes	\$5,124,000	\$3,990,000	\$534,700	13%	\$537,460	13%
NEW YORK	Yes	No	\$31,641,547	\$21,319,535	\$27,499,133	129%	\$822,760	4%
NORTH CAROLINA	Interim	No	\$15,593,698	\$10,559,324	\$1,897,000	18%	\$1,539,360	15%
NORTH DAKOTA	Yes	Yes	\$4,990,000	\$3,990,000	\$1,756,592	44%	\$1,206,436	30%
OHIO	Yes	Yes	\$20,563,040	\$13,934,199	\$4,018,466	29%	\$1,960,855	14%
OKLAHOMA	Yes	Yes	\$7,089,250	\$5,007,633	\$3,349,658	67%	\$363,000	7%
OREGON	Yes	Yes	\$6,706,773	\$4,776,089	\$2,593,375	54%	\$523,530	11%
PENNSYLVANIA	Yes	Yes	\$21,011,088	\$14,211,825	\$3,298,969	23%	\$1,544,370	11%
RHODE ISLAND	Yes	Yes	\$4,990,000	\$3,990,000	\$1,900,000	48%	\$350,000	9%
SOUTH CAROLINA	Yes	Yes	\$8,155,711	\$5,719,095	\$5,152,000	90%	\$2,073,750	36%
SOUTH DAKOTA	Yes	Yes	\$4,990,000	\$3,990,000	\$702,258	18%	\$92,000	2%
TENNESSEE	Yes	Yes	\$10,833,176	\$7,455,120	\$6,184,897	83%	\$707,067	9%
TEXAS	Interim	Yes	\$44,684,980	\$29,532,152	\$24,678,953	84%	\$5,530,440	19%
UTAH	Yes	Yes	\$6,128,204	\$4,419,685	\$3,349,305	76%	\$3,048,928	69%
VERMONT	Yes	Yes	\$4,990,000	\$3,990,000	\$2,487,000	62%	\$2,179,117	55%
VIRGINIA	Yes	Yes	\$13,329,111	\$9,113,073	\$3,595,432	39%	\$8,132,166	89%
WASHINGTON	Yes	Yes	\$11,289,653	\$7,775,325	\$10,517,000	135%	\$4,223,678	54%
WEST VIRGINIA	Yes	Yes	\$4,990,000	\$3,990,000	\$2,879,170	72%	\$1,456,166	36%
WISCONSIN	Yes	Yes	\$10,229,018	\$7,102,591	\$6,930,779	98%	\$3,846,048	54%
WYOMING	Yes	Yes	\$4,990,000	\$3,990,000	\$3,664,000	92%	\$3,123,000	78%
<b>TOTAL</b>			<b>\$596,030,000</b>	<b>\$416,060,000</b>	<b>\$370,611,018</b>	<b>89%</b>	<b>\$135,946,903</b>	<b>33%</b>

1 From the Federal Highway Administration. Available at <http://safety.fhwa.dot.gov/saferoutes/fy08table.pdf>.

2 From the National Center for Safe Routes to Schools Winter 2008 Program Tracking Brief. Available at [www.saferoutesinfo.org/resources/collateral/status\\_report/TrackBriefOct-Dec08Revised.pdf](http://www.saferoutesinfo.org/resources/collateral/status_report/TrackBriefOct-Dec08Revised.pdf)

3 Provided by the Federal Highway Administration.

# Appendix 2:

## Safe Routes to School Authorizing Legislation

P.L. 109-59—The Safe, Accountable, Flexible, Efficient Transportation Equity Act:  
A Legacy for Users (SAFETEA-LU)  
Excerpts pertaining to Safe Routes to School

### Sec. 1101. Authorization of Appropriations.

#### (a) IN GENERAL

The following sums are authorized to be appropriated out of the Highway Trust Fund (other than the Mass Transit Account):

- (17) Safe Routes to School Program—For the safe routes to school program under section 1404 of this Act:
  - (A) \$54,000,000 for fiscal year 2005;
  - (B) \$100,000,000 for fiscal year 2006;
  - (C) \$125,000,000 for fiscal year 2007;
  - (D) \$150,000,000 for fiscal year 2008; and
  - (E) \$183,000,000 for fiscal year 2009.

### Sec. 1404. Safe Routes to School Program.

#### (a) ESTABLISHMENT

Subject to the requirements of this section, the Secretary shall establish and carry out a safe routes to school program for the benefit of children in primary and middle schools.

#### (b) PURPOSES

The purposes of the program shall be:

- (1) to enable and encourage children, including those with disabilities, to walk and bicycle to school;
- (2) to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
- (3) to facilitate the planning, development and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption and air pollution in the vicinity of schools.

#### (c) APPORTIONMENT OF FUNDS

- (1) **In General**—Subject to paragraphs (2), (3) and (4), amounts made available to carry out this section for a fiscal year shall be apportioned among the States in the ratio that:
  - (A) the total student enrollment in primary and middle schools in each State; bears to
  - (B) the total student enrollment in primary and middle schools in all States.
- (2) **Minimum Apportionment**—No State shall receive an apportionment under this section for a fiscal year of less than \$1,000,000.
- (3) **Set-Aside For Administrative Expenses**—Before apportioning under this subsection amounts made available to carry out this section for a fiscal year, the Secretary shall set aside not more than \$3,000,000 of such amounts for the administrative expenses of the Secretary in carrying out this subsection.
- (4) **Determination Of Student Enrollments**—Determinations under this subsection concerning student enrollments shall be made by the Secretary.

#### (d) ADMINISTRATION OF AMOUNTS

Amounts apportioned to a State under this section shall be administered by the State's department of transportation.

#### (e) ELIGIBLE RECIPIENTS

Amounts apportioned to a State under this section shall be used by the State to provide financial assistance to State, local, and regional agencies, including nonprofit organizations, that demonstrate an ability to meet the requirements of this section.

#### (f) ELIGIBLE PROJECTS AND ACTIVITIES

##### (1) Infrastructure-Related Projects

(A) **In General**—Amounts apportioned to a State under this section may be used for the planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school, including sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bicycle parking facilities, and traffic diversion improvements in the vicinity of schools.

(B) **Location of Projects**—Infrastructure-related projects under subparagraph (A) may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools.

##### (2) Non-infrastructure-Related Activities

(A) **In General**—In addition to projects described in paragraph (1), amounts apportioned to a State under this section may be used for non-infrastructure-related activities to encourage walking and bicycling to school, including public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health and environment, and funding for training, volunteers and managers of safe routes to school programs.

(B) **Allocation**—Not less than 10% and not more than 30% of the amount apportioned to a State under this section for a fiscal year shall be used for non-infrastructure-related activities under this subparagraph.

(3) **Safe Routes To School Coordinator**—Each State receiving an apportionment under this section for a fiscal year shall use a sufficient amount of the apportionment to fund a full-time position of coordinator of the State's safe routes to school program.

**(g) CLEARINGHOUSE**

- (1) **In General**—The Secretary shall make grants to a national nonprofit organization engaged in promoting safe routes to schools to:
  - (A) operate a national safe routes to school clearinghouse;
  - (B) develop information and educational programs on safe routes to school; and
  - (C) provide technical assistance and disseminate techniques and strategies used for successful safe routes to school programs.
- (2) **Funding**—The Secretary shall carry out this subsection using amounts set aside for administrative expenses under subsection (c)(3).

**(h) TASK FORCE**

- (1) **In General**—The Secretary shall establish a national safe routes to school task force composed of leaders in health, transportation and education, including representatives of appropriate Federal agencies, to study and develop a strategy for advancing safe routes to school programs nationwide.
- (2) **Report**—Not later than March 31, 2006, the Secretary shall submit to Congress a report containing the results of the study conducted, and a description of the strategy developed, under paragraph (1) and information regarding the use of funds for infrastructure-related and non-infrastructure-related activities under paragraphs (1) and (2) of subsection (f).
- (3) **Funding**—The Secretary shall carry out this subsection using amounts set aside for administrative expenses under subsection (c)(3).

**(i) APPLICABILITY OF TITLE 23**

Funds made available to carry out this section shall be available for obligation in the same manner as if such funds were apportioned under chapter 1 of title 23, United States Code; except that such funds shall not be transferable and shall remain available until expended, and the Federal share of the cost of a project or activity under this section shall be 100%.

**(j) TREATMENT OF PROJECTS**

Notwithstanding any other provision of law, projects assisted under this subsection shall be treated as projects on a Federal-aid system under chapter 1 of title 23, United States Code.

**(k) DEFINITIONS**

In this section, the following definitions apply:

- (1) **In The Vicinity Of Schools**—The term 'in the vicinity of schools' means, with respect to a school, the area within bicycling and walking distance of the school (approximately 2 miles).
- (2) **Primary And Middle Schools**—The term 'primary and middle schools' means schools providing education from kindergarten through eighth grade.

## Appendix 3: Safe Routes to School Web Resources

### Active Living Resource Center

[www.activelivingresources.org/saferoutestoschool.php](http://www.activelivingresources.org/saferoutestoschool.php)

The Active Living Resource Center is funded by the Robert Wood Johnson Foundation and includes a City Safe Routes to School program and other resources.

### Bikes Belong Coalition

[www.bikesbelong.org](http://www.bikesbelong.org)

The Coalition's Web site includes a photo library with Safe Routes to School images and other information about the benefits of bicycling.

### U.S. Centers for Disease Control and Prevention

[www.cdc.gov/nccdphp/dnpa/kidswalk](http://www.cdc.gov/nccdphp/dnpa/kidswalk)

CDC's Kids Walk-to-School program aims to increase opportunities for daily physical activity by encouraging children to walk to and from school in groups accompanied by adults.

### Federal Highway Administration

<http://safety.fhwa.dot.gov/saferoutes>

FHWA is responsible for administering federal Safe Routes to School program funds to state DOTs. The FHWA's Safe Routes to School Web site includes program guidance for state DOTs, funding allocation amounts for five federal fiscal years for each state and other resources.

### League of American Bicyclists

[www.bikeleague.org/programs/saferoutes](http://www.bikeleague.org/programs/saferoutes)

The League's Web site includes a four-minute video on Safe Routes to School, as well as bicycling curricula and other resources.

### National Center for Safe Routes to School

[www.saferoutesinfo.org](http://www.saferoutesinfo.org)

Funded by the Federal Highway Administration as the national SRTS Clearinghouse, the National Center for Safe Routes to School Web site includes contacts for state SRTS coordinators, a guide, training opportunities, program tracking and evaluation resources, and information about International Walk to School Day.

### Rails-to-Trails Conservancy (RTC)

[www.railstotrails.org](http://www.railstotrails.org)

RTC's Web site includes resources such as their 2008 report *Active Transportation for America* which quantifies how investment in walking, bicycling and Safe Routes to School saves America billions through improvement health, decreased oil use and reduced carbon emissions.

### Safe Routes to School National Partnership

[www.saferoutespartnership.org](http://www.saferoutespartnership.org)

The Safe Routes to School National Partnership, which authored this report, is a network of more than 400 organizations, government agencies and professional groups that are working to advance the Safe Routes to School national movement. Its Web site includes an interactive U.S. map that allows users to access SRTS-specific information for all 50 states and the District of Columbia, a robust search function, updated national Safe Routes to School news, in-depth policy pages, event listings, resources, links to hundreds of organizations implementing SRTS programs and a submit-a-story form. The site also includes Safe Routes to School case studies, success stories, best practices, reports and research studies.

## Appendix 4: National Affiliates of the Safe Routes to School National Partnership

More than 400 national, state and local groups have pledged their support for the Safe Routes to School National Partnership by signing our consensus statement and memorandum of understanding. Below is a listing of national non-profit organizations that have joined as partner affiliates as of January 15, 2009. A complete list of our partner affiliates, including state and local groups, is available at [www.saferoutespartnership.org](http://www.saferoutespartnership.org).

AARP	National Association for Health and Fitness
Active Living by Design	National Association for Sport and Physical Education
Active Living Resource Center	National Association of Chronic Disease Directors
Alan M. Voorhees Transportation Center	National Association of Regional Councils
America Bikes	National Center for Bicycling & Walking
American Academy of Pediatrics	National Coalition for Promoting Physical Activity
American Association of School Administrators	National Complete Streets Coalition
American Cancer Society Cancer Action Network	National Park Service—Rivers, Trails and Conservation Assistance
American Diabetes Association	National Recreation and Park Association
American Heart Association	National Wildlife Federation
American Public Health Association	PTA
American Society of Landscape Architects	Rails-to-Trails Conservancy
American Trails	SafeKids Worldwide
America Walks	Smart Growth America
Association of Pedestrian and Bicycle Professionals	Smart Schools, Smart Growth Initiative
Bikes Belong Coalition	Sprockids
Campaign to End Obesity	State and Territorial Injury Prevention Directors Association
Center for Health and Learning	Surface Transportation Policy Partnership
Center for Health Training	Thunderhead Alliance
Child Safety Solutions	Traffic Intersection Awareness Foundation (T.I.A. Foundation)
Cool the Earth	Trailnet
EcoMom Alliance	YMCA of the USA
The Green Zone Foundation	
Institute of Transportation Engineers	
Keep Kids Alive Drive 25	
League of American Bicyclists	
Local Government Commission	
The Mobility Education Foundation	

# Endnotes

- 1 "Transportation Characteristics of School Children, Report no. 4." Washington, DC: Nationwide Personal Transportation Study, Federal Highway Administration, July 1972.
- 2 "Travel and environmental implications of school siting." U.S. Environmental Protection Agency, EPA 231-R-03-004, October 2003. Available at [http://epa.gov/smartgrowth/pdf/school\\_travel.pdf](http://epa.gov/smartgrowth/pdf/school_travel.pdf)
- 3 Data from local communities, example available at the Transportation Authority of Marin at <http://co.marin.ca.us/depts/pw/main/MarinTraffic/facts.htm>.
- 4 McCubbin D and Delucchi M. "Health Effects of Motor Vehicle Air Pollution," Institute of Transportation Studies, University of California-Davis, 1995.
- 5 Ogden C, Flegal K, Carroll M, et al. "Prevalence and Trends in Overweight Among U.S. Children and Adolescents, 1999-2000," *Journal of the American Medical Association*, 288 (14): 1728-1732, October 2002.
- 6 "Trends in the Prevalence of Physical Activity, National YRBS 1991-2007." Centers for Disease Control and Prevention. Available at [http://cdc.gov/HealthyYouth/yrbs/pdf/yrbs07\\_us\\_physical\\_activity\\_trend.pdf](http://cdc.gov/HealthyYouth/yrbs/pdf/yrbs07_us_physical_activity_trend.pdf)
- 7 Cooper A, Page S, Foster L, et al. "Commuting to school: Are children who walk more physically active?" *American Journal of Preventative Medicine*, 25 (4):273-6, November 2003.
- 8 Program Guidance Safe Routes to School. Federal Highway Administration, 2005. Available at <http://safety.fhwa.dot.gov/saferoutes/srtsguidance.htm>.
- 9 "Digest of Education Statistics, 2007." U.S. Department of Education, National Center for Education Statistics, 2008. Available at [http://nces.ed.gov/programs/digest/d07/tables/dt07\\_176.asp?referrer=list](http://nces.ed.gov/programs/digest/d07/tables/dt07_176.asp?referrer=list).
- 10 "Fall 2008 SRTS Program Tracking Brief," National Center for Safe Routes to School, November 2008. Available at [http://saferoutesinfo.org/resources/collateral/status\\_report/TrackingBriefJuly-Sept2008.pdf](http://saferoutesinfo.org/resources/collateral/status_report/TrackingBriefJuly-Sept2008.pdf).
- 11 Gotschi T and Mills K, "Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking," Rails-to-Trails Conservancy, October 2008. Available at [www.railstotrails.org/whatwedo/index.html](http://www.railstotrails.org/whatwedo/index.html).
- 12 "Safe Routes to School: A Transportation Legacy. A National Strategy to Increase Safety and Physical Activity among American Youth." National Safe Routes to School Task Force, July 2008, p. 38.
- 13 Pratt M, Macera C, and Wang G. "Higher Direct Medical Costs Associated with Physical Inactivity." *The Physician and Sportsmedicine*, 28(10):63-70, October 2000.
- 14 "Crashes vs. Congestion: What's the Cost to Society?," American Automobile Association, March 2008. Available at [www.aaanewsroom.net/Assets/Files/20083591910.CrashesVsCongestionFullReport2.28.08.pdf](http://www.aaanewsroom.net/Assets/Files/20083591910.CrashesVsCongestionFullReport2.28.08.pdf).
- 15 Ostro B and Chestnut L. "Assessing the Health Benefits of Reducing Particulate Matter Air Pollution in the United States." *Environmental Research* 76:94-106, 1998; AND McCubbin D and Delucchi M "Health Costs of Motor-Vehicle-Related Air Pollution," *Journal of Transport Economics and Policy*, 33(3): 253-286, September 1999.
- 16 Nader P, Bradley R, Houts R, et al. "Moderate-to-Vigorous Physical Activity From Ages 9 to 15 Years," *Journal of the American Medical Association*, 300 (3): 295-305, July 2008.
- 17 "Creating Connections: CEFFPI Guide for Educational Facility Planning/2004 Edition." Council of Educational Facility Planners International, 2004.
- 18 Beaumont C and Pianca E. "Why Johnny Can't Walk to School: Historic Neighborhood Schools in the Age of Sprawl" National Trust for Historic Preservation, October 2002.
- 19 Giles-Corti B and Donovan R. "The relative influence of individual, social, and physical environment determinants of physical activity." *Social Science & Medicine*, 54(12): 1793-812, June 2002.
- 20 Jacobsen P. "Safety in numbers: More walkers and bicyclists, safer walking and biking." *Injury Prevention* 9: 205-209, 2003.
- 21 "AASA Fuel and Energy Snapshot Survey," American Association of School Administrators, July 2008. Available at [www.aasa.org/newsroom/pressdetail.cfm?ItemNumber=10637](http://www.aasa.org/newsroom/pressdetail.cfm?ItemNumber=10637).
- 22 "Digest of Education Statistics, 2007." U.S. Department of Education, National Center for Education Statistics, 2008.
- 23 Ogden C, Carroll M, Curtin L, et al. "Prevalence of Overweight and Obesity in the United States, 1999-2004." *Journal of the American Medical Association*, 295(13)April 2006. Available at <http://jama.ama-assn.org/cgi/content/full/295/13/1549#JOC60036T2>.
- 24 "Physical activity levels among children aged 9-13 years—United States, 2002." *Morbidity and Mortality Weekly Report* 2003; 52(33): 785-8.
- 25 National Health Interview Survey, National Center for Health Statistics, CDC. Available at <http://cdc.gov/nchs/products/pubs/pubd/hestats/asthma/asthma.htm>.
- 26 Appatova A, Ryan P, LeMasters G, et al. "Proximal exposure of public schools and students to major roadways: a nationwide US survey," *Journal of Environmental Planning and Management*, 51(5): 631-646, September 2008.
- 27 Torgan C. "Childhood Obesity on the Rise," *The NIH Word on Health*, National Institutes of Health, June 2002. Available at <http://nih.gov/news/WordonHealth/jun2002/childhoodobesity.htm>.
- 28 Gauderman W, Avol E, Lurmann F, et al, "Childhood Asthma and Exposure to Traffic and Nitrogen Dioxide," *Epidemiology*, 16(6): 737-743, November 2005. AND Gauderman, Vora H, McConnell R, et.al. "Effect of exposure to traffic on lung development from 10 to 18 years of age: a cohort study," *The Lancet*, 369(9561): 571-7, February 2007.
- 29 "Preventing Chronic Diseases: Investing Wisely in Health. Preventing Obesity and Chronic Diseases Through Good Nutrition and Physical Activity," Centers for Disease Control and Prevention, August 2008. Available at <http://cdc.gov/nccdphp/publications/factsheets/Prevention/pdf/obesity.pdf>.
- 30 Pratt M, Macera C, and Wang, G. "Higher Direct Medical Costs Associated with Physical Inactivity." *The Physician and Sportsmedicine* 200(28): 63-70, October 2000.
- 31 Ostro B and Chestnut L. "Assessing the Health Benefits of Reducing Particulate Matter Air Pollution in the United States." *Environmental Research* 76 (2):94-106, February 1998 AND McCubbin D and Delucchi M. "The Health Costs of Motor-Vehicle-Related Air Pollution." *Journal of Transport Economics and Policy* 33 (3): 253-286, September 1999.
- 32 Cooper et al. (see citation #7)
- 33 "Travel and environmental implications of school siting." U.S. Environmental Protection Agency, EPA 231-R-03-004, October 2003. Available at [http://epa.gov/smartgrowth/pdf/school\\_travel.pdf](http://epa.gov/smartgrowth/pdf/school_travel.pdf)
- 34 Frank L, Sallis J, Conway T, et al. "Many Pathways from Land Use to Health" *Journal of the American Planning Association*, 72(1): 75-87, Winter 2006
- 35 McDonald N. "Active Transportation to School: Trends among U.S. Schoolchildren, 1969-2001," *American Journal of Preventive Medicine*, 32(6): 506-16, June 2007.
- 36 Ibid.



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