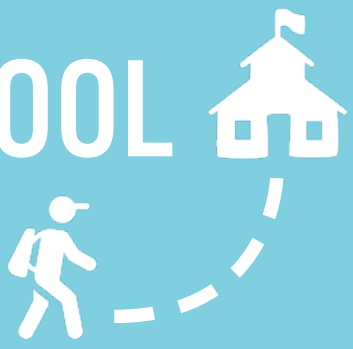
CITY OF OAK CREEK

SAFE ROUTES TO SCHOOL ACTION PLAN



SPRING 2018

APPENDIX

Oak Creek-Franklin Joint School District
BUILDING SUCCESSFUL FUTURES TOGETHER

OAKCREEK
WISCONSIN

APPENDIX

A. How to Get involved

USING YOUR SCHOOL'S ACTION PLAN

At the heart of every successful Safe Routes to School plan is a coordinated and comprehensive effort by parent volunteers, school administration and staff, municipal agency staff, law enforcement, public health officials, community advocates and the larger community.

This Action Plan provides recommendations to increase walking and biking to school and improve student safety, health, academic achievement and quality of life.

The recommendations in this plan are intended to guide infrastructure and programs improvements over the next five years.

Recommendations include both long- and short-term infrastructure improvements, and continuing (year-after-year) programs.

Not all projects and programs need to be implemented right away to improve the environment for walking and bicycling to school.

The recommended projects and programs listed in this plan should be reviewed every year as part of the overall and ongoing Safe Routes to School strategy for each school, and for the district overall.

Some projects will require more time, support, and funding than others. It is important to achieve shorter-term successes while laying the groundwork for progress toward some of the larger and more complex projects.

WAYS TO GET INVOLVED

It takes many partners to achieve success - and each partner has a key role to play. These are some of the unique contributions of key partners in Safe Routes to School.

Parents

Parents can use this report to understand conditions at their children's school and to become familiar with the ways an SRTS program can work to make walking and bicycling to school safer and more useful for their family. Parents can encourage and support their children's walking and biking behaviors. Parent groups, both formal and informal, can help implement many of the educational and encouragement programs suggested in this plan. Parent groups can also be key to ongoing success by helping to fundraise for smaller projects and programs.

Community Members

Community residents, even if they don't currently have children enrolled in school, can play an important role in supporting implementation of the plan. They can use this report to better understand where there may be opportunities to participate in programming initiatives and infrastructure improvements. Community members, including seniors or retirees who may have more flexible schedules than parents with school-aged children, may volunteer in established programs or work with school staff or community partners to start new programs recommended in this plan.

School District

The School District and its staff are key to the success of SRTS. District staff can support the establishment of essential programming and evaluation initiatives - like yearly travel tallies, walk to school events, and to also support and coordinate the establishment of organized travel options like walking school buses and bike trains. District staff can use this report to prioritize infrastructure improvements on District property, and to develop programs that educate and encourage students and parents to seek alternatives for their travel to school.

District officials are perhaps the most year-to-year stable of all stakeholders for a Safe Routes to School program and are in the best position to keep the program active over time. District staff can work with multiple schools, sharing information and bringing learning and efficiencies to SRTS programs at each school.

School Administrators

School administrators have an important role in implementing the recommendations contained within this SRTS plan. For a plan to succeed, the impetus for change and improvement must be supported by the leadership of the school. School administrators can help with making policy and procedural changes to support projects within school grounds and by distributing informational materials to parents within school publications.

For useful information and messages that can be customized for sending to parents and other partners please see Appendices B and C.

Police Department

Police personnel are often already very familiar with safety enforcement issues near schools, and are able to deploy resources to support the work of SRTS plans. Police staff can use this report to further explore issues related to walking and biking to school and to prioritize enforcement activities that may make it easier and safer for students to walk and bike to school. Police staff will be instrumental to the success of the enforcement programs and policies recommended in this plan. Police staff can also play a key role in working with school administrations and providing officers and assistance for some of the proposed education and encouragement programs.

Public Health Officials

Public health staff can use this report to identify specific opportunities to collaborate with schools and local governments to support safety improvements and encourage healthy behaviors in school children and their families.

City / County Public Works and Planning Staff

City and County staff can use this report to identify citywide issues and opportunities related to walking and biking and to prioritize infrastructure improvements. City staff can also use this report to apply for Safe Routes to School implementation grants and other funding and support opportunities such as:

» Federal Safe Routes to School (SRTS) grants

» State funding opportunities

Infrastructure recommendations may require additional analysis to evaluate project feasibility.

For recommendations within the public right-of-way, the responsible agency may determine how (and if) to incorporate suggestions into local improvement plans and prioritize funding to best meet the needs of each school community.

B. SRTS Resources

WISCONSIN DOT DOCUMENTS AND RESOURCES

These resources were compiled by the Wisconsin Department of Transportation. Links to individual resources can be found through the Wisconsin DOT's SRTS website at wisconsindot.gov/Pages/doing-bus/local-gov/astnce-pgms/aid/tap.aspx

Presentations

» 2014 SRTS Non-Infrastructure Training
» Introduction to Safe Routes to School Walk to School Day

Kids Traffic Safety

» Safe Routes to School Brochure
» Madison Middle School Bike Club Curriculum

Wisconsin SRTS Programs

» Fire up your Feet! Wisconsin
» City of Appleton
» East Central Regional SRTS Program
» Villages of Howard-Suamico
» City of Marshfield
» Southwest Wisconsin SRTS Program
» City of Superior
» Green Lake School District
» Madison Metropolitan School District
» Template SRTS Supporting Resolution

Walking School Bus Resources

» Walking School Bus Online Training (National Center for SRTS)
» Walking School Bus brochure (East Central WI RPC)
» Walking School Bus volunteer application template (East Central WI RPC)
» Walking School Bus student registration template (East Central WI RPC)

National SRTS Resources

» Everyone Is A Pedestrian (National Highway Traffic Safety Administration)
» Safe Routes to School (Federal Highway Administration)
» Safe Routes to School (National Highway Traffic Safety Administration)
» National Center for Safe Routes to School
» International Walk to School Day
» Safe Routes to School National Partnership Using Safe Routes to School to Combat the Threat of Violence
» Walkability Checklist

Resources for Officials and Professionals

» Strategies to Increase Physical Activity Among Youth (U.S. Department of Health and Human Services)
» Institute of Transportation Engineers - Safe Routes to School briefing sheets
» Counting Bicyclists and Pedestrians to Inform Transportation Planning
» Steps to a Walkable Community
» INVEST: Infrastructure Voluntary Evaluation Sustainability Tool (Federal Highway Administration)
» Creating Safe Walking & Bicycling Communities: A New Toolkit Orientation

Community Health / Public Health

» Voices for Healthy Kids
» Our Built and Natural Environments (Environmental Protection Agency)
» Moving Healthy: Linking FHWA Programs and Health (Federal Highway Administration)
» Hub for Active School Travel - "Active Travel and Emissions Calculator"
» EPA Healthy School Environments
» School Siting Documents (National Policy & Legal Analysis Network to Prevent Childhood Obesity)
» Safe Routes to School and Minimizing Liability Resources (National Policy & Legal Analysis Network to Prevent Childhood Obesity)
» Wisconsin Green and Healthy Schools program
» Physical Education and Physical Activity page (Wisconsin Department of Public Instruction)
» Physical Activity and Obesity Prevention Program (Wisconsin Department of Health Services)
» Community Walking and Biking Audit Tool (Wisconsin Department of Health Services)
» Driver & Pedestrian Guide to Sharing the Road Safety Pocket Guide

For more information, email srts@dot.wi.gov.

C. SRTS Facts

SRTS FACTS FOR SCHOOL COMMUNICATIONS AND NEWSLETTERS

The following facts and statistics, collected from national sources, can help communicate the goals and benefits of SRTS programs.

These facts and messages can be used for social media messages, school newsletters, emails or other communication with parents and the broader school community. Except where noted, they are based on research summarized by the National Center for Safe Routes to School. More information, including primary sources, can be found at http://guide.saferoutesinfo.org.

Traffic Costs, Congestion, and Safety

» In 1969, half of all US schoolchildren walked or biked to school; by 2009, that number had dropped to just 13 percent.

» In the United States, about one third (31%) of children in grades K–8 live within one mile of school; of these children, about one third (38%) walk or bike to school.

» A child can travel one mile in about 20 minutes by walking or 6 minutes by bicycle.

» In 2009, school travel by private family vehicle for students in grades K through 12 accounted for 10 to 14 percent of all automobile trips made during the morning peak travel and two to three percent of the total annual trips made by family vehicle in the United States.

» Among parents who drove their children to school, approximately 40 percent returned home immediately after dropping their children at school. If more children walked or bicycled to school, it would reduce the number of cars near the school at pick-up and drop-off times, making it safer for walkers and bicyclists through reduced traffic congestion and improved air quality.

» Over the past few decades, many school districts have moved away from smaller, centrally located schools and have instead built schools on the edge of communities where land costs are lower. As a result, the percentage of students in grades K through 8 who live less than one mile from school has declined from 41 percent in 1969 to 31 percent in 2009.

» Personal vehicles taking students to school accounted for 10 to 14 percent of all personal vehicle trips made during the morning peak commute times. Walking, biking, and carpooling to school reduces the numbers of cars dropping students off, reducing traffic safety conflicts with other students and creates a positive cycle—as the community sees more people walking and biking, more people feel comfortable walking and biking.

» Conservatively assuming that 5% of today's school busing costs are for hazard busing, making it safe for those children to walk or bike instead could save approximately $1 billion per year in busing costs in the US.

» In 2009, American families drove 30 billion miles and made 6.5 billion vehicle trips to take their children to and from schools - about 10-14 percent of traffic on the road during the morning commute.

» Reducing the miles parents drive to school by just 1% would reduce 300 million miles of vehicle travel and save an estimated $50 million in fuel costs each year.

» Did you know that as more people bike and walk, biking and walking crash rates decrease? This is also known as the 'safety in numbers' principle. As more families walk and bike to school, streets and school zones become safer for everyone.

Health, Physical Activity and Obesity

» The U.S. Department of Health and Human Services recommends that children complete one hour or more of physical activity each day. Walking just one mile each way to and from school would meet two-thirds of this goal.

» Studies have found that children who get regular physical activity benefit from healthy hearts, lungs, bones and muscles, reduced risk of developing obesity and chronic diseases, and reduced feelings of depression and anxiety. Teachers also report (and research confirms) that students who walk or bike to school arrive at school alert and "ready to learn."

» Researchers have found that people who include walking and biking as part of everyday life (such as the school commute trip) are more successful at sticking with their increased physical activity in the long term than people who join a gym.

» One recent study showed that children who joined a "walking school bus" ended up getting more physical activity than their peers. 65% of obese students who participated in a walking program were no longer obese at the end of the school year.

- Childhood obesity has increased among children ages 6 to 11 from 4% in 1969 to 20% in 2007. Now 23 million children and teens, nearly one-third of all young people in the U.S. are overweight or obese.
- The 2010 Shape of the Nation report from the National Association for Sport and Physical Education found that, nationwide, less than one-third of all children ages 6 to 17 participate in vigorous physical activity for at least 20 minutes a day.
- Children aren't exercising enough AND 78% of children aren't getting the 30 to 60 minutes a day of regular exercise plus 20 minutes of more vigorous exercise that doctors recommend.
- Children are increasingly overweight. 20% of children and 33% of teens are overweight or at risk of becoming overweight. This is a significant increase from 10 years ago.
- According to a study of 1,700 children between the ages of 13 and 18, cognitive performance of adolescent girls who walk to school is better than that of girls who travel by bus or car. Moreover, cognitive performance is also better in girls who walk more than 15 minutes than in those who live closer and have a shorter walk to school.
- One hundred calories can power a cyclist for three miles, but it would only power a car 280 feet. If you have a bowl of oatmeal with bananas and milk for breakfast, you could bike more than nine miles. How far is the trip to school from your house?
- A 2004 study in the American Journal of Preventive Medicine found that, for every hour people spend in their cars, they are 6% more likely to be obese.
- Childhood obesity rates have more than tripled in the past 30 years, while the number of children walking and biking to school has declined.
- According to the 2009 National Household Travel Survey, 13% of students between the ages of 5 and 14 walked or biked to or from school, compared to 48% in 1969.

Environment, Air Quality, Climate and Resources

- Did you know? When you walk, bike, or carpool, you're reducing auto emissions near schools. Students and adults with asthma are particularly sensitive to low air quality. Approximately 5 million students in the U.S. suffer from asthma, and nearly 13 million school days per year are lost due to asthma-related illnesses.
- Idling near schools exposes children and vehicle occupants to air pollution (including particulates and noxious emissions), wastes fuel and money, and increases unnecessary wear and tear on car engines. If you are waiting in your car for your child, please turn off your engine – you'll be doing your part to keep young lungs healthy!
- Families that walk two miles a day instead of driving will, in one year, prevent 730 pounds of carbon dioxide from entering the atmosphere.
- The United States moved into the 21st century with less than 30% of its original oil supply remaining.
- Americans drive more than 2 trillion vehicle miles per year.
- Short motor-vehicle trips contribute significant amounts of air pollution because they typically occur while an engine's pollution control system is cold and ineffective. Thus, shifting 1% of short automobile trips to walking or biking decreases emissions by 2 to 4%.
- There is more pollution inside a stationary car on a congested road than outside on the pavement.
- The transportation sector is the second largest source of CO2 emissions in the U.S. Automobiles and light-duty trucks account for almost two-thirds of emissions from the transportation sector. Emissions have steadily grown since 1990.
- In a year, one single, typical North American car will add close to five tons of CO2 into the atmosphere. Cars account for an estimated 15% to 25% of U.S. CO2 emissions.
- Transportation is the largest single source of air pollution in the United States. In 2006 it created over half of the carbon monoxide, over a third of the nitrogen oxides, and almost a quarter of the hydrocarbons in our atmosphere.
- Disposal of used motor oil sends more oil into the water each year than even the largest tanker spill.
- Going by bus instead of car cuts nitrogen oxide pollution by 25%, carbon monoxide by 80% and hydrocarbons by 90% per passenger mile.
- Eight bicycles can be parked in the space required for just one car.

D. Summary of Planning Process

HOW WERE THE OAK CREEK SAFE ROUTES TO SCHOOL ACTION PLANS DEVELOPED?

Planning for the SRTS Action Plans began in the fall of 2016, after the City of Oak Creek successfully applied for and was awarded a planning grant from the Wisconsin Department of Transportation.

The City of Oak Creek held a competitive Request for Proposals process and selected Community Design Group, a company specializing in Safe Routes to School Planning and pedestrian and bicycle planning, to develop the city's Safe Routes to School Action Plans.

On September 19, 2016, the consultant team met with city staff and Oak Creek school principals and assistant principals to provide an introduction and overview of the project, an introduction to the principles of SRTS, and an overview of the next steps for the plan.

In early November 2016, a brief SRTS site audit training was held with Oak Creek staff and volunteers to perform local data collection for the team.

The site audits for all nine schools were conducted by Oak Creek staff and volunteers over the next couple of weeks, for both arrival (morning) and departure (afternoon) conditions.

The information was compiled and analyzed by the consultant team and was used to develop an initial set of recommendations for each of the schools.

The recommendations were made available to the Oak Creek community using the project's website (www.oakcreeksrts.com) and reviewed by city staff, school administrators, and the general public. An online survey allowed residents and staff to offer comments and guidance for the next draft of the plan.

In Summer 2017, the consultant team met with city staff to perform a second site and context audit of all nine schools to verify the recommendations included in the plans and to ensure their feasibility.

The Action Plans were finalized and delivered to the Oak Creek-Franklin School District and the City of Oak Creek in January of 2018. In February 2018 the consultant team met with principals and administrators of the Oak Creek - Franklin Joint School District to provide an overview of the plans and introduce its recommendations to the wider school community.

E. Infrastructure Reference Guide

INTRODUCTION

The physical environment can make walking or biking to school easier and safer, or more difficult and intimidating. Without well-designed facilities between a child's home and their school, parents may have reservations about allowing their children to participate in SRTS.

This guide describes sixteen commonly-used and effective types of facilities that can be used along a school route to improve safety for children walking and biking.

Each of the facilities described serve a different role, and may be used alone or in combination with other treatments.

A range of costs for a typical implementation of each treatment is included to aid in estimating potential costs for implementation.

As concepts move into preliminary or final design, review by a professional engineer will be required to ensure that the treatments are correctly configured for their application and have the desired effect.

CROSSING GUARDS AND FACILITATED CROSSINGS

Crossing infrastructure is most effective when trained staff can assist students in completing safe crossing movements.

Facilitated crossings are marked crossing locations along student routes where adult Crossing Guards or trained student patrols are stationed to assist students with safely crossing the street. Facilitated crossings may be located on or off campus. Determining whether a location is more appropriate for an adult Crossing Guard or student patrol may be based on location; including distance from school, visibility, and traffic characteristics.

Adult Crossing Guards and student patrols receive special training, and are equipped with high-visibility traffic vests and flags when on duty.

Cost: $14 per hour (typical labor cost for adult crossing guard)

ADVANCED STOP BAR

An Advanced Stop Bar is a solid white line painted ahead of crosswalks on multi-lane approaches to alert drivers where to stop to let pedestrians cross.

Advanced Stop Bars should be placed twenty to fifty feet before a crosswalk. This encourages drivers to stop back far enough for a pedestrian to see if a second motor vehicle is approaching, reducing the risk of a hidden-threat collision.

Advanced Stop Bars can also be used in combination with smaller corner radii to accommodate infrequent (but large) turning vehicles by creating a larger effective turning radius.

Cost: $8.50 per linear foot

Resources

- Reducing Conflicts Between Motor Vehicles and Pedestrians: The Separate and Combined Effects of Pavement Markings and a Sign Prompt
- FHWA Signalized Intersections: Informational Guide – Pages: 192-193
- NACTO Urban Street Design Guide – Pages: 109-116, 144

CROSSING GUARDS AND FACILITATED CROSSINGS

High-Visibility Crosswalks help create a continuous route network for people walking and biking, and alert motorists to the potential presence of pedestrians at crossings and intersections.

High-Visibility Crosswalks should be used at fully controlled intersections where sidewalks or shared-use paths exist.

Cost: $19 per square foot

Resources

» NACTO Urban Street Design Guide – Pages: 109-116

High-Visibility Crosswalks improve pedestrian visibility and crossing safety. Image courtesy of Dan Burden at bikepedimages.org

RAISED CROSSWALKS

Raised Crosswalks are wide and gradual speed humps placed at pedestrian and bicyclist crossings. They are typically as high as the curb on either side of the street, eliminating grade changes for people crossing the street.

Raised Crosswalks help to calm approaching traffic and improve visibility of people crossing.

Cost: $8,000 to $10,000 each

Resources

- FHWA Effects of Traffic Calming Measures on Pedestrian and Motorist Behavior – Pages: 12-15
- NACTO Urban Street Design Guide – Page: 54

Raised Crosswalks facilitate pedestrian visibility and offer traffic calming benefits.

CURB EXTENSIONS / BULB OUTS

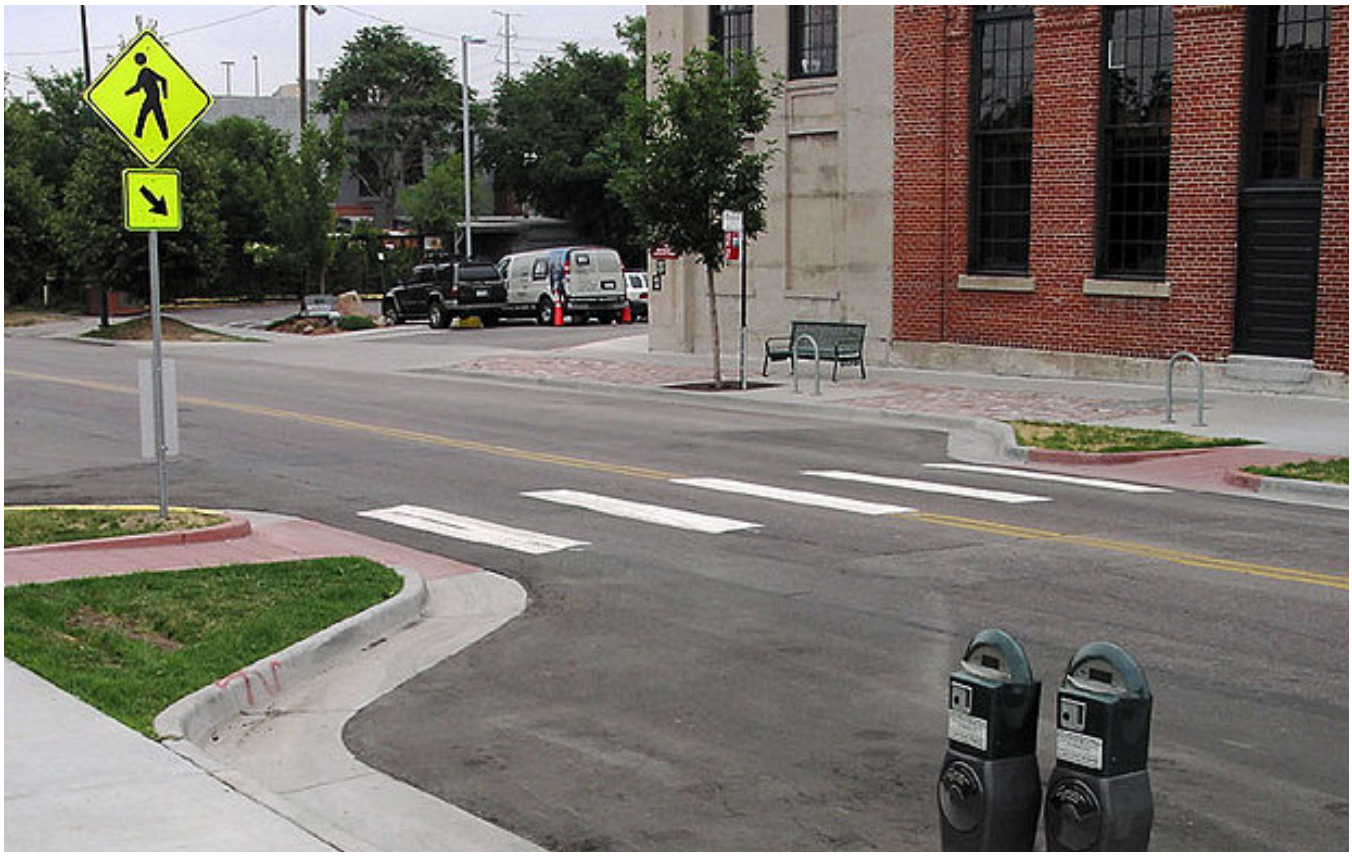
Curb Extensions extend the sidewalk and curb into the motor-vehicle parking lanes at intersection locations.

Also called bump-outs, these facilities improve safety and convenience for people crossing the street by reducing the crossing distance and by increasing the visibility of people walking or biking to motor-vehicle drivers.

Cost: $25,000 per intersection leg

Resources

- FHWA Effects of Traffic Calming Measures on Pedestrian and Motorist Behavior – Pages: 6-11
- FHWA Signalized Intersections: Informational Guide – Pages: 190-192
- NACTO Urban Street Design Guide – Pages: 45-59



A Curb Extension / Bulb Out reduces the crossing distance. Image courtesy of emersongarfield.org

CURB RADIUS REDUCTION

Curb radii have a large impact on the speed at which vehicles make turns at corners. In general, vehicles are able to take turns more quickly around corners with larger curb radii.

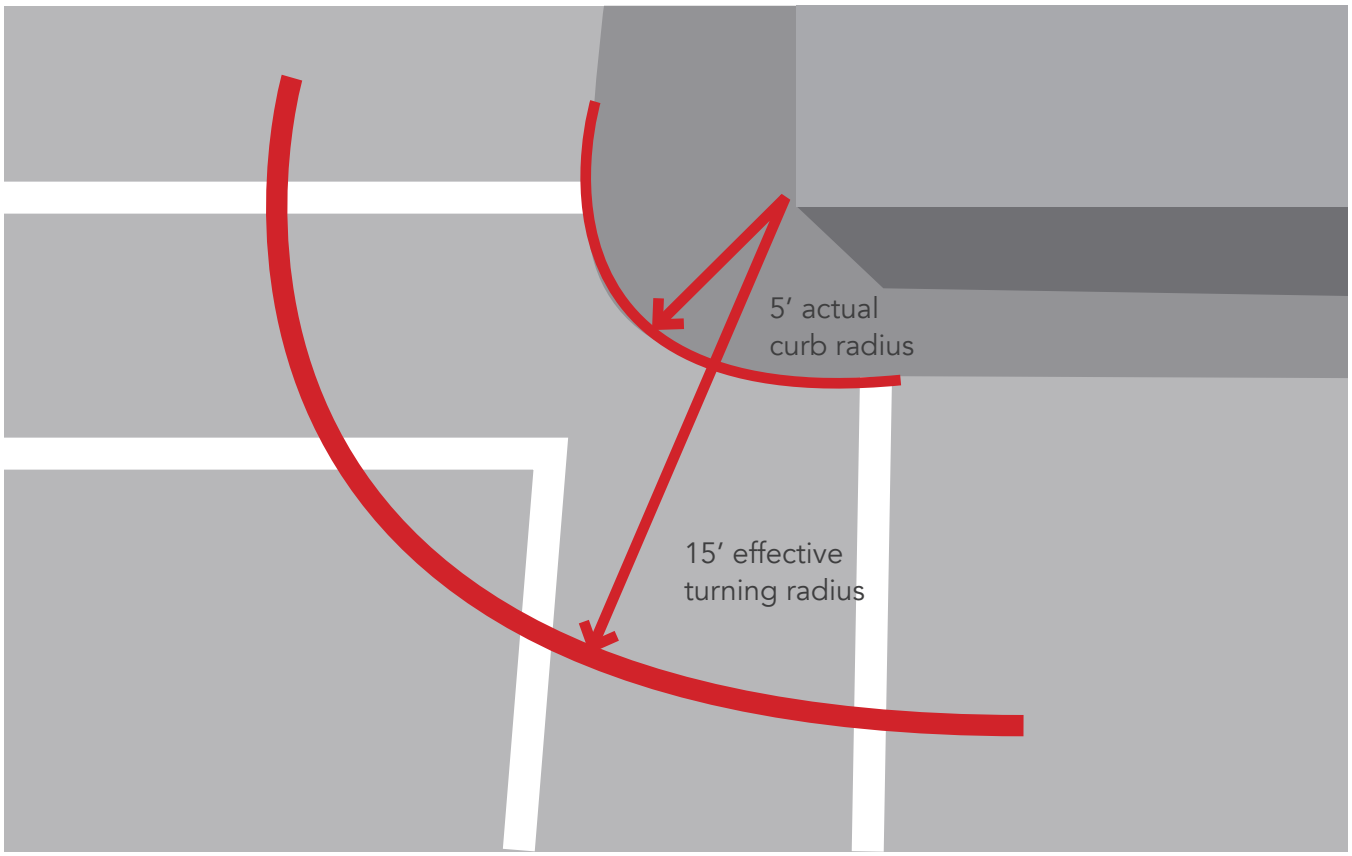
Reducing curb radii forces drivers to take turns at slower speeds, making it easier and safer for people walking or biking to cross the street. An actual curb radius of five to ten feet should be used wherever possible, which provides an appropriate effective turning radii range of 15 to 30 feet, depending on the roadway and land use context.

Cost: $2,000-$40,000 each

Resources

FHWA Signalized Intersections: Informational Guide – Pages: 187-189

NACTO Urban Street Design Guide – Pages: 117-120, 144-146



Actual and effective Curb Radii for turning motor vehicles.

CURB RAMPS

Curb Ramps provide access between roadways and sidewalks for people using wheelchairs, strollers, walkers, crutches, bicycles as well as for those who have mobility restrictions that make it difficult to step up or down from curbs.

Curb Ramps must be installed at intersections and mid-block crossings where pedestrian crossings are located, as mandated by federal law. Separate Curb Ramps should be provided for each direction of travel across the street.

Cost: $800-$1,500 each

Resources

- FHWA Signalized Intersections: Informational Guide – Pages: 47-50
- United States Access Board Proposed Accessibility Guidelines for Pedestrian Facilities in Public Right-of-Way – Pages: 66-67, 78-83

Pedestrian Curb Ramps facilitate access between sidewalk and crosswalk.

LEADING PEDESTRIAN INTERVAL

A Leading Pedestrian Interval (LPI) provides pedestrians with a three to seven second head start when entering an intersection before providing a corresponding green signal in the same direction of travel.

LPIs enhance the visibility of pedestrians in the crosswalk, and reinforce their right-of-way over turning vehicles. LPIs are most useful in areas where pedestrian travel and turning vehicle volumes are both high.

Cost: $0 (in most cases only a reprogramming of signal timing settings is needed)

Resources

» NACTO Urban Street Design Guide – Page: 128

With the help of a Leading Pedestrian Interval, pedestrians are able to step out into the crosswalk before vehicular traffic, increasing their visibility to drivers and improving safety.

PEDESTRIAN HYBRID BEACON / HAWK SIGNAL

The High-Intensity Activated Crosswalk Beacon (HAWK), also known as a Pedestrian Hybrid Beacon System, remains dark until activated by pressing the crossing button. Once activated, the signal responds immediately with a flashing yellow pattern which transitions to a solid red light, providing unequivocal 'stop' guidance to motorists. HAWK signals elicit high rates of motorist compliance.

Cost: $120,000 per intersection

Resources

- FHWA Safety Effectiveness of the HAWK Pedestrian Crossing Treatment
- FHWA Evaluation of Pedestrian and Bicycle Engineering Countermeasures: Rectangular Rapid-Flashing Beacons, HAWKs, Sharrows, Crosswalk Markings, and the Development of an Evaluation Methods Report – Pages: 19-28

A HAWK Signal alerts motorists to the presence of pedestrians in the crosswalk.

RECTANGULAR RAPID FLASH BEACON (RRFB)

An RRFB uses an irregular stutter flash pattern with bright amber lights (similar to those on emergency vehicles) to alert drivers to yield to people waiting to cross. The RRFB offers a higher level of driver compliance than other flashing yellow beacons, but lower than the HAWK signal.

Cost: $25,000 per crossing

Resources

FHWA Effects of Yellow Rectangular Rapid-Flashing Beacon on Yielding at Multi-lane Uncontrolled Crosswalks

FHWA Evaluation of Pedestrian and Bicycle Engineering Countermeasures: Rectangular Rapid-Flashing Beacons, HAWKs, Sharrows, Crosswalk Markings, and the Development of an Evaluation Methods Report – Pages: 13-18

A Rectangular Rapid Flash Beacon announces the presence of bicycle riders using a roadway crossing.

ROAD DIET

A 'Road Diet' converts an existing four-lane roadway to a three-lane cross-section consisting of two through lanes and a center two-way left turn lane. Road Diets improve safety by including a protected left-turn lane, calming traffic, reducing conflict points, and reducing crossing distance for pedestrians.

In addition, road diets provide an opportunity to improve conditions for users of all modes by reallocating excess roadway space for uses such as bike facilities, parking, transit lanes, and pedestrian or landscaping improvements.

Cost: $35,000 per mile

Resources

- FHWA Road Diet Desk Reference
- FHWA Road Diet Informational Guide
- NACTO Urban Street Design Guide – Page: 14

A Road Diet reallocates roadway space and improves safety for all users.

TRAFFIC CIRCLES

Traffic Circles are small, raised circular islands constructed in the center of residential intersections. They may take the place of a signal or four-way stop sign, and calm vehicle traffic speeds by forcing motorists to navigate around them without requiring a complete stop. Signage should be installed with Traffic Circles directing motorists to proceed around the right side of the circle before passing through or making a left turn.

Cost: $35,000 each

Resources

- FHWA Technical Summary: Mini-Roundabouts
- FHWA Technical Summary: Roundabouts – Page: 7 (mention of school area siting)
- NACTO Urban Street Design Guide – Page: 99

Traffic Circle calm neighborhood traffic. Image source: Dan Burden, pedbikeimages.org

MEDIAN REFUGE ISLAND

Median Refuge Islands (also known as Median Crossing Islands) make crossings safer and easier by dividing the crossing movement into two stages so that pedestrians and bicyclists only have to cross one direction of traffic at a time.

Median refuges can be especially beneficial for slower walkers including children or the elderly.

Crossing medians also provide traffic calming benefits by visually and physically narrowing the roadway.

Cost: $20,000 each

Resources

- FHWA Effects of Traffic Calming Measures on Pedestrian and Motorist Behavior – Pages: 17-20
- FHWA Proven Safety Countermeasures: Medians and Pedestrian Crossing Islands in Urban and Suburban Areas
- NACTO Urban Street Design Guide – Page: 116

Staggering the crosswalks allows pedestrians to view the oncoming lane before continuing across. Image courtesy of Dan Burden at bikepedimages.org

SCHOOL SPEED ZONE

School Speed Zones reduce speed limits near schools, and alert motorists that they are driving near a school. School Speed Zones include the section of road adjacent to school grounds, or where an established school crossing with advance school signs is present. Each road authority may establish School Speed Zone limits on roads under their jurisdiction.

In general, school speed limits should not be more than 30 mph below the established speed limit, and not lower than 15 mph. Speed violations within school speed zones are typically subject to a double fine.

Cost: $600 (for signs and markings)

School Speed Zone signs alert motorists to reduce their speed near a school.

SHARED USE PATH

Shared-Use Paths provide off-road connections for people walking and biking. Paths are often located along parks, waterways, abandoned or active railroad corridors, limited access highways, or other open spaces. Shared-Use Paths may also be located along high-speed, high-volume roads as an alternative to sidewalks and on-street bikeways.

Shared-Use Paths are generally very comfortable for users of all ages and abilities.

Cost: $92 per linear foot of a 10' trail with 2' clear zone each side and associated signage

Resources

» AASHTO Guide for the Development of Bicycle Facilities – Chapter 5

Shared Use Paths facilitate pedestrian and bicycle travel.

SIDEWALKS

A well-connected sidewalk network is the foundation of pedestrian mobility and accessibility. Sidewalks provide people walking with space to travel within the public right-of-way that is separated from roadway vehicles. Sidewalks are associated with significant reductions in motor vehicle / pedestrian collisions.

Cost: $84 per linear foot of 6' sidewalk with aggregate base

Resources

- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- NACTO Urban Street Design Guide – Pages: 37-44
- United States Access Board Proposed Guidelines for Pedestrian Facilities in Public Right-of-Way

Typical residential sidewalk to facilitate pedestrian travel and offer separation from the roadway.

RESOURCES

American Association of State Highway and Transportation Officials (AASHTO), 2012. Guide for the Development of Bicycle Facilities. 4th Edition.

Web: https://bookstore.transportation.org/collection_detail.aspx?ID=116

American Association of State Highway and Transportation Officials (AASHTO), 2004. Guide for the Planning, Design, and Operation of Pedestrian Facilities. 1st Edition.

Web: https://bookstore.transportation.org/item_details.aspx?id=119

Huybers, Sherry et al. "Reducing Conflicts Between Motor Vehicles and Pedestrians: The Separate and Combined Effects of Pavement Markings and a Sign Prompt." Journal of Applied Behavior Analysis. 37.4 (2004): 445-456.

Web: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1284522/

National Association of City Transportation Officials (NACTO), 2013. Urban Street Design Guide. Island Press.

Web: http://nacto.org/publication/urban-street-design-guide/

United States Access Board, 2011. Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way.

Web: https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines

U.S. Department of Transportation Federal Highway Administration (FHWA), 2010. Effects of Yellow Rectangular Rapid-Flashing Beacons on Yielding at Multi-lane Uncontrolled Crosswalks. Report FHWA-HRT-10-043.

Web: https://www.fhwa.dot.gov/publications/research/safety/pedbike/10043/10043.pdf

U.S. Department of Transportation Federal Highway Administration (FHWA), 2001. The Effects of Traffic Calming Measures on Pedestrian and Motorist Behavior. Report FHWA-RD-00-104.

Web: http://www.pedbikeinfo.org/collateral/PSAP Training/gettraining_references_EffectsofTrafficCalming.pdf

U.S. Department of Transportation Federal Highway Administration (FHWA), 2015. Road Diet Desk Reference. Report FHWA-SA-15-046.

Web: https://safety.fhwa.dot.gov/road_diets/desk_ref/

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F. Bike Parking

BIKE PARKING GUIDE

Bike parking is an end of trip facility that makes it more convenient and inviting for people to arrive by bicycle to a destination.

Provision of adequate bicycle parking cannot be overlooked. If bicycle parking spots are inadequate or if finding them is enough of an inconvenience, bicycle riders will next time choose a different mode for arriving or may choose another destination altogether, even if the provided bicycle routes are perfectly safe and convenient.

SUMMARY: KEY COMPONENTS OF BIKE PARKING

Bike Rack Design

Choose a style that allows secure locking of the bike (frame and front wheel) to the rack without need of lifting the bike. The “Inverted U” and “Post and Loop” style bike racks are preferred.

Avoid rack designs that do not provide support at two places on the bike. These types include: “Wave”, “Comb”, Spiral”, and “Wheel Well’.

Bike Parking Location

Locate bicycle parking with consideration for the rack’s proximity to the building entrance it serves, its placement along the natural path used by cyclists to approach the building, and its visibility from both the interior and exterior of the building.

Bike Parking Area Design

Bike parking should be easily accessed and constructed on a paved surface with ease of access for regular use and for maintenance operations in mind. Pavements should extend 1-3 feet beyond the parking spaces to allow for perimeter circulation. Circulation areas should be provided within the bike parking area to efficiently facilitate groups of students moving into and out of the area quickly with bikes.

Quantity of Parking

The amount of bike parking needed will depend on the capacity of your school, the ages of students, and the number of staff. But remember: be aspirational! Provide parking for the number of students and staff you’d like to see biking!


DYNAMIC

THE BIKE RACK

The rack should support the bicycle upright by its frame in two places, enabling the frame and one or both wheels to be secured while preventing the bicycle from tipping over. Additionally, the rack should not require a cyclist to lift their bike to be able to lock it securely. A useful rack design should allow a bicyclist to roll-in or back-in their bicycle to lock it.

Recommended Bike Racks

- Inverted U
- Post & Ring

Not Recommended

- Wave
- Comb
- Spiral
- Wheel Well Secure

LOCATION OF THE RACK AREA

One of the most important considerations in providing useful and functional bicycle parking is the location of the rack area in relation to the building it serves. Some guidelines for locating the rack area include:

- The recommended location for a bicycle parking area is immediately adjacent to the entrance it serves, preferably within 50 feet. It should be located as close as possible without blocking the entrance or hindering pedestrian movement to or from the building.
- The rack area should be clearly visible from the entrance it serves and from the building's approach line.
- Bike rack areas should be as close as or closer than the nearest car parking space.
- Buildings with multiple active entrances should include bike rack areas at each entrance.
- Racks that are hard to find, are far from principal entrances, or perceived to be unsafe will not be used by cyclists.

TWO OF THE PREFERRED BICYCLE RACKS:

Inverted U Rack

Post and Loop Rack

THE RACK AREA

The rack area is the “bike parking lot” defined by the racks and the space needed to access the racks. To be functional and useful, certain minimum clearances and access rules should be observed:

- Individual racks should be located no closer than 30 inches to each other in order to allow sufficient space for easy entry and removal of bicycles on either side.
- No rack element should be closer than 24 inches to a wall or other obstruction in order to allow full usability and easy access to perimeter racks.
- Large rack areas, or rack areas with high turnover, should provide more than one entrance to ease circulation of cyclists and pedestrians.
- Rack areas should preferably offer protection from rain and snow in order to ease loading and unloading of bikes and to keep bike saddles dry.
- When multiple rows of bike racks are provided, the circulation space provided from the wheel of a bike on one row to the closest wheel of a bike on the next row should be a minimum of 48 inches.

Arrangement of a bike parking area with a central aisle for circulation.

MINIMUM PARKING GUIDELINES

The following provides guidance regarding the number of bicycle parking spaces that should be provided under particular circumstances:

TABLE F.1 - URBAN AREAS, DENSE SUBURBS, OR WITHIN 1/4 MILE OF TRANSIT FACILITIES

TYPE	SHORT TERM	LONG TERM
Office	1 space for each 5,000 sf; minimum 2 spaces	1 space for each 10,000 sf; minimum 2 spaces
Retail	1 space for each 2,000 sf; minimum 2 spaces	
Multifamily residential	0.1 space for each bedroom; minimum 2 spaces	0.5 spaces for each bedroom
Institutional / public uses (libraries, hospitals, parks, religious uses, etc)	1 per 2,000 sf; minimum 6 spaces	1 per 10,000 sf or 1 space per 20 employees; minimum 2 spaces
Manufacturing, industrial none required	Consider minimum 2 spaces at public building entrance	1 space for each 10,000 sf; minimum 2 spaces
Transit facilities	Space for 1.5% of daily a.m. boardings; as space allows at walk-up facilities	Space for 4% of daily a.m. boardings; as space allows at walk-up facilities

TABLE F.2 - LOW DENSITY SUBURBAN, EXURBAN, OR RURAL USES

TYPE	SHORT TERM	LONG TERM
Office	1 space for each 20,000 sf; minimum 2 spaces	1 space for each 12,000 sf; minimum 2 spaces
Retail	1 space for each 5,000 sf; minimum 2 spaces	
Multifamily residential	0.05 spaces for each bedroom; minimum 2 spaces	0.5 spaces for each bedroom
Institutional / public uses (libraries, hospitals, parks, religious uses, etc)	1 per 5,000 sf; minimum 6 spaces	1 per 30 employees; minimum 2 spaces
Manufacturing, industrial none required;	Consider minimum 2 spaces at public building entrance	1 space for each 15,000 sf; minimum 2 spaces

Source: Hennepin County 2040 Bicycle Transportation Plan.

G. Maintenance

MAINTENANCE AND SEASONAL PLANNING

Annual Maintenance

School routes and crosswalks should be prioritized for maintenance. To ensure high-visibility crosswalks maintain their effectiveness, review all crosswalks within one block of the school each year. If there is notable deterioration, crosswalks should be repainted annually. In addition, crosswalks beyond one block on key school walk routes should be evaluated annually and repainted every other year or more often as needed.

Seasonal Planning and Maintenance

Walking and cycling generally diminish during the cold winter months as inadequately-maintained infrastructure and unpleasant weather conditions create barriers for pedestrians and bicyclists. However, the inverse is also true: maintaining infrastructure and planning inviting winterscapes for students can facilitate the convenience of walking and biking as well as provide new opportunities to encourage students to be outside more.

Snow removal and maintenance of school routes should be prioritized. Snow removal is a critical component of pedestrian and bicycle safety. The presence of snow or ice on sidewalks, curb ramps, or bikeways will deter pedestrian and cyclist use of those facilities to a much higher degree than cold temperature alone. Seniors, and families with children will avoid walking in locations where ice or snow accumulation creates slippery conditions that may cause a fall. Curb ramps that are blocked by ice and snow sever access to pedestrian facilities. Additionally, inadequately maintained facilities may force pedestrians and bicyclists into the roadway. Identified routes to school should be given priority for snow removal and ongoing maintenance.

While it is important to prioritize maintenance, additional planning and design measures shold be considered to encourage students to be outside more. According to the City of Edmonton's Winter Design Guidelines, the five main design principles for designing cities that are inviting and functional for outdoor public life year-round include blocking wind, capturing sunshine, using color, lighting, and providing infrastructure that supports desired winter activities.

Strategies to block wind in the winter include grading land that blocks cold winds from the north and northwest. Other strategies include planting trees and/or piling snow along the north and west sides of streets, properties, parks, and trails to provide shielding from the wind. Buildings along streets can also use canopies, colonnades, and setbacks to block wind and create more inviting street-level walking conditions.

Another way to create an inviting pedestrian and bicycle environment is to employ strategies that maximize limited winter sunshine. Deciduous trees that drop their leaves in winter allow sunshine to filter down to streets and sidewalks. Building setbacks can also allow more sunshine to reach pedestrian areas in the form of wider sidewalks. Creative public art can also capture and reflect sunlight while providing fun and engaging elements on walks and bicycle trips for students to enjoy.

Using warm colors and warm building materials can also contribute to a sense of warmth for the winter pedestrian or bicyclist. When people feel warmer, their attitude improves and they have a greater resilience for being outside in temperatures that they may not normally consider as comfortable. For students with creative imaginations or who need extra stimuli to engage their interest in biking or walking, colorful building facades, public art elements, and wayfinding may encourage them to walk or bike not only in the winter, but year-round.

Lighting is also an element that is important year-round, but becomes increasingly important in the winter for creating more inviting winterscapes for pedestrians and bicyclists. Lighting can contribute to inducing a sense of warmth and

safety, as well as be used for wayfinding and as passive public art displays.

Providing infrastructure that supports desired winter activities can also encourage more active transportation. In addition to providing spaces for winter activities (for example, by developing ice skating rinks) the city of Edmonton, Canada has used other strategies - like harnessing plowed snow piles and stored snow to create new play opportunities for students. These snow piles can be strategically placed in parks along walking routes and mounded into winter slides. Other practices have included regularly tilling snow to make it malleable enough for students to construct their own snow house structures, with maintenance crews tilling the snow every few days to prevent it from forming into denser ice.

Resources

Winter Design Guidelines: Transforming Edmonton into a Great Winter City

https://www.edmonton.ca/city_government/documents/PDF/WinterCityDesignGuidelines_draft.pdf

H. Equity in SRTS Planning

MOVING TOWARDS EQUITY

Safe Routes to School programs and infrastructure provide great benefits to students and families. When planning and implementing your SRTS programming, it is important to design events and activities that are inclusive of students and families of all backgrounds and abilities.

This appendix identifies practical approaches to expand participation and grow SRTS excitement in your school community.

To Grow Participation Meet People Where They Are

The most effective way of increasing parent and family participation in your SRTS initiatives - for low-income or immigrant populations and for the general population around your school - is to make it easier, more comfortable and more inviting for more of them to learn about your initiatives.

A good place to start is by meeting parents where they are:

Some families may not feel comfortable attending larger school events or participating in formal PTA and organizations.

- Attend established meetings to reach groups who may not participate in school PTAs or other formal meetings.
- English Learner Advisory Committees (ELACs) are good partners.
- Conduct outreach or table at school events (such as: Movie nights, family dance nights, Back to School nights, etc).

Residents are often aware of traffic and personal safety issues in their neighborhoods, but may not know how to address them.

- Provide a comfortable and inviting place for parents to voice concerns and start the conversation about making improvements.
- Listen to their concerns, help parents prioritize, and connect them with the responsible agency to address the concerns.
- Encourage staff or parent volunteers to host house meetings, in which a small group gathers at the home of someone they know to voice concerns and brainstorm solutions.
- Seek common goals for community improvement that can be addressed through collaborative efforts with all parent groups.
- Consider inviting law enforcement or public works staff to build a better relationship between officers and residents so they feel comfortable voicing future concerns. Note that some groups such as undocumented

communities may have complex relationships with or mistrust of police. Asking for police representatives who are members of those communities works best.

- When looking for volunteers, start by looking to friends and neighbors to build your base group.
- Be creative; consider going to community events like Farmer's Markets and neighborhood gathering spots to recruit.
- Look for small victories: adding a crossing guard, signage and paint gives parents confidence that their issues can be addressed.

Host Parent Workshops

All parents want their children to be successful. Workshops are a good opportunity to articulate how services and programs can reduce barriers to students' success and help them be successful.

- Create simple ways for parents to get involved and help put on events and activities with their children, who can often help navigate the situation.
- Hold a "Parent University," or workshops where parents can voice their concerns.
- Listen to and act on parents' suggestions to build trust in the community and address concerns.
- Include an icebreaker activity to introduce yourself and to make the participants more comfortable sharing their thoughts and opinions.

Establish Flexible Programs

Often working parents have limited time to volunteer with their children's schools. The hours and benefits associated with many jobs can make it challenging for parents to be available for school activities and take paid time off.

- Host meetings and events at varying times to accommodate differing work schedules.
- Make specific requests and delegate so no single person has to do the majority of the work.

Communicate Health Benefits

Families who are less well-connected to the school community may not be as aware of the benefits of SRTS programming.

- Publicize to parents that walking and biking to school is exercise and to children that it is fun, like an additional recess.
- Health fairs can highlight biking and walking to create an association between those commute options and their benefits. Encouragement competitions such as the Golden Sneaker Award and Pollution Punch Card can show the benefits of walking and biking to school.

Addressing Language and/or Cultural Barriers

To encourage families that do not speak English, are learning English, or have recently immigrated to participate in Safe Routes to School programs, it is important to communicate how the program can benefit families and address parental concerns. Hiring a bilingual staff person is the best way to communicate and form relationships with a community.

Provide Materials in Multiple Languages

Some concepts can lose their meaning and be confusing when translated literally. Also, words may have different meanings depending on the regional dialect.

- Ask families with native speakers to help communicate the message to others.
- Use images to supplement words so that handouts are easy to read and understand.

Use a Variety of Methods

In schools where families speak different languages, it can be a good idea to present information in multiple ways.

- Use a variety of approaches to communicate the benefits of walking and bicycling to parents.
- Have students perform to their parents, such as through a school play.
- Encourage youth-produced PSAs to educate parents on why walking and biking are fun and healthy activities.
- Provide emails, print materials, etc., in multiple languages.
- Use a phone tree, PTA, or events to reach parents.
- Engage staff or assistants who speak other languages to reach out to parents at events.
- Employ staff from similar ethnic backgrounds to parents at the school.
- Parents increasingly use texting more than emails. Find out how parents communicate with each other and use their methods.

Addressing Barriers to Participation for Students With Disabilities

Some students may not be able to walk or bike to school because of physical or cognitive disabilities, but they can still be included in SRTS programs.

- Invite children with physical disabilities to participate in school infrastructure audits to learn how to improve school access for all.
- Students with cognitive disabilities may have differing capacities for retaining personal and traffic safety information, but programs like neighborhood cleanups and after-school programs can be fun ways to socialize and participate with other students.
- Involve special education instructors and parents of disabled students in the planning and implementation of these programs to better determine the needs of children with disabilities.
- Create SRTS materials that recognize students with disabilities. Include pictures of students with disabilities in program messaging to highlight that SRTS programs are suitable for all students.

Addressing Concerns About Crime and Personal Safety

In some communities, personal safety concerns associated with crime activity is a significant barrier to walking and bicycling. These can include issues of violence, aggressive dogs, drug use, and other deterrents that can take precedence over SRTS activities in communities. These neighborhoods may also lack sidewalks or other facilities that offer safe access to school, and major roads may act as barriers.

Neighborhood Watch Programs

- Establishing neighborhood crime watches, parent patrols, and safety zones can involve the community in addressing personal safety concerns as supervision reduces the risk of bullying, crime, and other unsafe behavior.
- Set up parent patrols to roam areas of concern. Safe Passages or Corner Captain programs station parent or community volunteers on designated key street corners to increase adult presence to watch over children as they walk and bicycle to school.
- Issue special hats, vests, or jackets to give the volunteers legitimacy and identify them as patrol leaders.
- Walkie-talkies allow parents to radio for help if they are confronting a situation they have not been able to resolve.
- Work to identify "safe places" like a home along the route where children can go to in the event of an emergency, or create a formal program with mapped safe places all children can go to if a situation feels dangerous

Setup a Walking School Bus or Other Pooled Travel to School Group

SchoolPool, or commuting to school with other families and trusted adults, can address personal safety concerns about traveling alone.

- Form Walking School Buses, Bike Trains, or carpools. For information about how to set up a SchoolPool at your school, see the Spare the Air Youth SchoolPool guidebook at http://www.sparetheairyouth.org/schoolpoolguidebook
- SchoolPools are a great way of building community. See resources online at www.sparetheairyouth.org/walkingschool-buses-bike-trains for more information.

Offer Education Programs for Parents and Families

Teach students and their families about appropriate safety issues. Parents may not want students to walk or bike if they are not confident in their child's abilities to safely travel to school:

- Use time at school, such as during recess, PE, or no-cost after school programs, to teach children how to bike and walk safely.
- Utilize either existing curricula or bring in volunteer instructors from local advocacy groups and non-profit organizations.
- Teach children what to do in the event of an emergency and where to report suspicious activity or bullying.
- Providing helmets and bikes during the trainings will allow all students to participate regardless of whether or not they have access to these items.
- Open Streets events such as San Francisco's Sunday Streets, Oakland's Oaklavia, and others are also a great way of creating safe zones to teach new skills in the street.

Provide Safety Information for Parents

- Provide information about how to get around safely.
- Develop and distribute suggested routes to school maps that highlight streets with amenities like sidewalks, lighting, low speeds, and less traffic.
- Identify informal shortcuts and cut-throughs that students may take to reduce travel time. Consider whether these routes may put students at risk (for example, by cutting through a fence, across a field, or near railroad tracks) and work with your city planners to improve the route.
- Provide flyers for parents about how to find other families to commute with or what to do in the event of an emergency to educate themselves and their children.
- Offer pedestrian safety training walks. Make these fun and interactive and address parents' safety concerns as well as provide tips for them to teach their children to be safe while walking.

Sponsor Neighborhood Beautification Projects

Clean neighborhoods free of trash and graffiti can create a sense of safety and help reduce crime rates.

Host neighborhood beautification projects around schools, such as clean-up days, graffiti removal, and tree planting to help make families feel more comfortable and increase safety for walking or biking to school.

Host a community dialogue about positive and negative uses of public space.

Addressing Barriers Related To School Distance

Some students simply live too far from school to reasonably walk or bike. However, there are programs that may be implemented to include these students in healthy physical activities, such as walking or biking.

Remote Drop-Off

- Suggest remote drop-offs for parents to drop their children off a couple blocks from the school so they can walk the rest of the way. Volunteers wait at the drop-off and walk with students at a designated time to ensure they arrive to school safely and on time.
- Remote drop-off sites can be underutilized parking lots at churches or grocery stores that give permission for their property to be used this way.
- Identify potential park and walk areas on route maps.

Walk to School Bus Stops

- Incorporate physical activity into students' morning schedule by encouraging them to walk to bus stops.
- Utilize walking school bus programming to organize nearby students to walk in groups to a more centrally located bus stop, which may translate into fewer bus stops because more students will be boarding at each stop.

Frequent Walker Programs

- Students who still arrive to school by bus and parent vehicle do not have to miss out on the physical benefits provided by walking and biking. Programs can be implemented that identify walking opportunities on campus, which can be defined in terms of routes or by the amount of time spent walking.

Additional Resources

- SRTS National Partnership's Implementing Safe Routes to School in Low-Income Schools and Communities http://www.saferoutespartnership.org/sites/default/files/pdf/LowIncomeGuide.pdf
- National Center for SRTS's Involving Students with Disabilities http://saferoutesinfo.org/sites/default/files/resources/Involving_students_with_disabilities.pdf
- SRTS National Partnership's: Students with Disabilities http://www.saferoutespartnership.org/sites/default/files/pdf/Serving_Students_with_Disabilities_SRTSNP_11_4_09_FINAL.pdf
- Rural Communities: Making Safe Routes Work http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SR2S_Rural_making%20SR%20work_20150331.pdf
- Rural Communities: Best Practices and Promising Approaches for Safe Routes http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SR2S_Rural_best%20practices_2015033.pdf
- Rural Communities: A Two Pronged Approach for Improving Walking and Bicycling http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SR2S_Rural_2pronged%20approach_20150331.pdf

I. Stakeholders Matrix

STAKEHOLDERS

For the School District

STAKEHOLDER	WHAT THEY BRING TO SRTS	WHAT THEY GET FROM SRTS
SUPERINTENDENT	• Encourages district-wide support for SRTS programming • Understands how to integrate SRTS with long-range goals for district • Knowledge about infrastructure projects and transportation systems	• Increased safety and health for students • Well-rounded transportation program • Positive leadership image for the district • SRTS policy that can bring positive change to an entire school district
DISTRICT TRANSPORTATION PLANNER	• Understands the transportation program at a district level	• Potential to save money by reducing pressure on bus service
SCHOOL SITING DECISION-MAKER	• Encourages new school development projects to consider walkability and bikeability	• Deeper understanding of intended and unintended school siting consequences • Improved communication with the community

For The Local School Team

STAKEHOLDER	WHAT THEY BRING TO SRTS	WHAT THEY GET FROM SRTS
SCHOOL PRINCIPAL	• Understand the big picture with school policies, engineering and infrastructure projects • Integrate SRTS program into overall school goals and curriculum	• Increased safety, health and academic performance for students • Well-rounded transportation program • Positive image of the school
PARENTS	• Assist in identifying barriers to walking and bicycling along school routes • Provide insight on parent concerns • Provide peer-to-peer communication to other parents	• Healthier, more attentive students • Improved safety for walking and biking to school, and in the community • Increased community involvement
COMMUNITY VOLUNTEERS	• Provide support for the program • Serve as liaisons to community partners	• Safer streets and healthy, informed children • Opportunity to provide assistance to the community
TEACHERS	• Integrate SRTS lessons into curriculum • Encourage other faculty to participate	• Improved attention and academic performance from students
PARENT TEACHER ORGANIZATION	• Engaged community of parents and teachers • Provide peer-to-peer communication with other parents	• Low barrier to entry as an existing PTO • Safer environments for students, parents, and teachers • Increased community involvement
STUDENTS	• Identify everyday barriers to walking and biking • Act as role models to encourage others to participate	• Improved physical fitness • Independent mobility and autonomy • Improved academic performance • Community involvement
CROSSING GUARDS	• First-hand experience with transportation issues near school crossings	• Support for role as crossing guards • Opportunity to improve comfort and safety of crossings through infrastructure improvements and driver education

STAKEHOLDERS

For the City

STAKEHOLDER	WHAT THEY BRING TO SRTS	WHAT THEY GET FROM SRTS
LAW ENFORCEMENT	• Information on traffic safety and statistics in the community • Enforce traffic laws near school campus	• Opportunity for positive interactions with young people in the community • Improved behavior from drivers, pedestrians and bicyclists
TRAFFIC ENGINEER	• Knowledge of the physical infrastructure in a community • Can bring about changes to surrounding transportation system	• A well-rounded transportation system that addresses all modes of travel
LOCAL PLANNER	• Knowledge of land-use issues impacting schools • Involved in developing master plans and school siting decisions	• Support for planning efforts that support walkable and bicycle-friendly communities
PUBLIC WORKS REPRESENTATIVE	• Knowledge of city projects impacting schools • Involved in developing master plans and school siting decisions	• Informed about school and community goals around bicycle and pedestrian infrastructure
CITY COUNCIL MEMBER/ ELECTED OFFICIAL	• Provide political support for SRTS programs	• Active, healthy young people who understand how to safely walk and bike in the community
PEDESTRIAN AND BICYCLE COORDINATOR	• Provide information about bicycle and walking plans and future improvements	• Supporters for bicycle and pedestrian improvements in the future
PUBLIC HEALTH PROFESSIONAL	• Encourage physical activities for students	• Better health outcomes for students • Improved air quality for everyone around the school
PARKS AND RECREATION DEPARTMENT	• Knowledge about how to integrate trails and parks into bicycling and walking routes for students	• Better wayfinding, more users and increased connections to parks and trails

For the Community

STAKEHOLDER	WHAT THEY BRING TO SRTS	WHAT THEY GET FROM SRTS
PEDESTRIAN AND BICYCLE ADVOCATE	• Information on strategies on how to work with the community on bicycle and pedestrian issues	• Students who understand how to safely bicycle and walk in the community • New advocates for walking and biking
NEIGHBORHOOD/ COMMUNITY ASSOCIATION	• Partner in communicating SRTS policies and information with the community	• Safer streets for the community • Better relationships with other community stakeholders
GENERAL COMMUNITY MEMBERS	• Provide support for the program • Serve as liaisons to other community partners	• Safer streets for the community • Opportunity to assist in the community
LOCAL BUSINESS REPRESENTATIVE	• Provide incentives to students and families who participate in the SRTS program	• Positive marketing of business • Safer community for everyone
DISABILITIES REPRESENTATIVE	• Provide insight into physical infrastructure and program needs of all users	• Safer, more connected and up to date facilities for all users

J. Setting Up a Student Safety Patrol

STUDENT SAFETY PATROL

Providing a combination of Adult Crossing Guards and Student Safety Patrols at selected locations around a school will greatly improve safe behaviors - both for students walking or biking to school and for motorists driving in the vicinity of the school.

In fact, facilitating student crossings through these inexpensive and easily implementable programs is one of the most effective ways to improve student safety and address parents' safety concerns.

This section provides an overview of what is needed to setup a crossing program staffed by students - a Student Safety Patrol.

To learn about what is needed to setup a crossing programs staffed by adults - either as volunteers or as paid staff - please visit http://guide.saferoutesinfo.org/enforcement/adult_school_crossing_guard.cfm

Role of Student Safety Patrols

Student Safety Patrols allow student volunteers from upper elementary, middle, and junior high schools to participate directly in improving pedestrian safety around their schools. Patrols assist with pedestrian crossings at selected intersections near school grounds during arrival and dismissal, protecting students, teachers and parents from potential crossing hazards.

Students are nominated for the Safety Patrols by teachers or principals, or volunteer during an open call. Members of the Safety Patrol demonstrate characteristics of leadership, responsibility and maturity, and interest in pedestrian/bicycle safety, or civic engagement. A teacher or other school staff acts as a patrol supervisor and is responsible for coordinating, training, and overseeing the program.

Selecting Patrolled Intersections

The first step to assembling a Student Safety Patrol team is to work with a traffic engineer to evaluate which intersections will be served, and how many Student Safety Patrols are needed at each intersection.

Intersections should be selected based on input from school staff, law enforcement, bus drivers, local businesses, and PTA officials. Locations should be reviewed annually to provide the most effective program. The number and location of Student Safety Patrols should be determined in response to issues at intersections near the school, side of street from which students approach, and traffic direction/density. Patrolled locations should be coordinated with student route maps and Walking School Buses.

Assembling a Safety Patrol Team

Patrol Supervisor

Once the size of the project is understood, a Safety Patrol Supervisor is appointed by the school's principal to oversee the Student Safety Patrol project. Patrol Supervisors are often teachers, but can be any responsible adult.

Appointed Supervisors ideally demonstrate the following characteristics: a belief in the usefulness of the program, knowledge of traffic safety, leadership, organizational skills, people skills, accountability, and the ability to inspire confidence and respect among students and staff. Supervisors are responsible for providing program information, selecting student patrols, training members, monitoring the program, and conducting any necessary meetings.

Student Officers

Appointing older students to Officers may also be beneficial. These students are given additional responsibilities including preparing reports for the Patrol Supervisor, assigning posts, scheduling, monitoring patrols, enforcing rules, filling in for absent student patrols, keeping an inventory of equipment, and proposing agenda items for patrol meetings.

Student Patrol Members

Patrol members, whether they volunteer independently or are recommended by school staff, should be selected based on the following qualities: leadership, maturity, reliability, ability to follow rules, timeliness, interest, good judgement, good attendance, respect to others, and desire to help. Consideration for a student's ability to keep up in class should also be given, as patrol members may be a few minutes later to class, or have to leave early for patrol. Patrols should also be able to tend to crossings before the start of school, and after dismissal. Students who ride the bus may not be available during these times. Parental permission is also required before a student may become a member of the Student Safety Patrol.

Benefits of Implementing a Student Safety Patrol Program

To Students:

- Safety awareness
- Sense of leadership
- Teamwork with fellow Safety Patrol members
- Citizenship and community engagement
- Respect for law enforcement

To the School:

- Traffic safety awareness
- Opportunities for peer education
- Character-building among student patrols
- Positive relationships between students and school staff

To the Community:

- Safer environments for pedestrians and motorists alike
- Spirit of volunteerism
- Positive connection between students, parents, the school, and law enforcement

Training

New patrols are often selected in the spring for participation the following fall. This provides an opportunity to train newly selected patrols for the upcoming year at the end of the prior year, with refresher trainings at the beginning of the school year.

Training may be conducted by the Patrol Supervisor, or even a law enforcement officer. During training, new new members learn the fundamentals of traffic safety, responsibilities of a patroller, how to identify sufficient gaps in traffic, special hazards to watch out for, how to direct pedestrians, and school bus and school ground safety.

Training can be conducted in a number of ways. It may be best to combine several methods to accommodate students with different learning styles. Examples of training techniques include classes, on the job direction, written guidelines, presentations, quizzes, joint sessions with other schools or experienced patrols, training videos, summer training camp, and/or diagramming crossing situations.

Equipment

A patrol uniform allows Student Safety Patrols to be seen easily by motorists, and indicates to pedestrians that they should wait to cross until directed to do so. Uniforms may include bright yellow reflective vests, belts, badges, hats, and/or ponchos, as well as stop signs or flags. Equipment can be stored in a designated area, for example in the office, or in the classroom of the Patrol Supervisor, to help keep inventory of uniforms and other equipment.

Additional Considerations

Ongoing monthly meetings may be used to check in with patrols, review important safety details, review difficult situations, bring attention to any positive or negative issues, and reinforce a team spirit between patrollers.

In addition, setting up a point system to track and reward responsible behavior of patrols encourages positive actions and growth. Certificates, badges, or other awards may be presented to patrols who display positive and responsible qualities.

Oak Creek-Franklin Joint School District
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