



**School Administrator's Guide to
School Walk Routes and
Student Pedestrian Safety**

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Acknowledgments

The *School Administrator's Guide to School Walk Routes* was developed with the support of the Committee on School Walk Routes comprised of representatives from local, county, and state agencies committed to student pedestrian safety. It is their sincere hope that this guidebook will prove a useful tool for school administrators throughout the state.

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Foreword

The Washington Traffic Safety Commission (WTSC), in conjunction with the Washington State Department of Transportation (WSDOT), and the Office of Superintendent of Public Instruction (OSPI), sponsored the development of this Guidebook. It is a revision and update of *A Guidebook for Student Pedestrian Safety, Final Report, August 1996*.

This Guidebook (1) explains the laws and liabilities associated with school walk routes; (2) provides an background on student pedestrian safety education; (3) identifies potential partnerships and responsibilities for improving student pedestrian safety; (4) suggests processes for developing and maintaining school walk routes; (5) presents guidelines for identifying when pedestrian enhancements should be considered; and (6) recommends procedures school administrators can use to work with their local public works agencies to implement needed improvements.

This Guidebook does not address school siting, public transit, or school bus safety considerations. In addition, the procedures and recommendations in this guidebook may not be applicable to bicycle transportation.

This Guidebook is not intended as a comprehensive reference for all aspects of student pedestrian safety, developing school walk routes, or improving school trip safety. While it discusses student pedestrian safety education, it is not a curriculum. It highlights and briefly discusses key steps in the walk route development process and provides guidelines for decision-making wherever possible. However, it cannot replace professional judgement, nor can it fully educate school administrators or other professionals on all aspects of this subject. Therefore, professional traffic engineers should be consulted as appropriate throughout the process.

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Chapter One

Overview

The safety, health, and well being of children are a major concern of parents, schools, public works, public health, and law enforcement agencies. Walking to school is beneficial to the health and well being of our children. Poor health outcomes related to a lack of physical activity, such as walking, are becoming a serious problem in Washington State and across the nation. The number of overweight children is on the rise. The 1999 Washington Youth Risk Behavior Survey found that 7.4% of Washington adolescents in grades nine through 12 were overweight. Today, many of these overweight children are being diagnosed with type II diabetes and high blood pressure—illness previously thought of as “adult diseases.” In addition, physical activity in combination with adequate nutrition has been positively linked with increased academic achievement and a reduction in behavior problems at school. It is the intent of this document, *School Administrator’s Guide to School Walk Routes and Student Pedestrian Safety*, to provide resources to help develop, maintain, and improve school walk routes that will encourage the children of Washington State to be safe, healthy, and productive learners.

What is a School Walk Route Plan?

A school walk route plan recommends a walking route to school based on considerations of traffic patterns and existing traffic controls such as crosswalks, traffic lights, or school safety patrol posts. The chosen route should seek to limit the number of school zone crossings in a way that encourages students to cross streets in groups, allowing only one



This school walk route uses adult safety patrols to cross students at the second crossing. While there are two crosswalks at this intersection, the school walk route map recommends students use only the second crosswalk. This reduces the number of crossing students need to make..

entrance-exit from each block to and from school. A walk route should cover a one-mile radius from the school. In addition, it should seek those routes that provide the greatest physical separation between walking children and traffic, expose children to the lowest speeds and volumes of moving vehicles, and have the fewest number of road or rail crossings.

Once a school walk route plan is developed and distributed to all students and their parents, plans must be routinely updated as conditions change. When safety concerns arise, a walk route plan can help document problems and aid in seeking solutions.

This document addresses each of the functions involved in school walk routes. It is intended to provide background, guidelines, and a systematic approach to this subject. It is written for individuals who are directly responsible for preparing, evaluating, and improving school walk route plans and overseeing student pedestrian safety.

What are the legal requirements for school walk routes?

School districts are required by Washington State regulations to have suggested walk route plans for every elementary school where children walk to school. The plan must cover a one-mile radius from the school and the suggested route to school map must be distributed to all elementary school students and their parents.

In addition, the state also regulates school zone safety issues, crosswalks, and pedestrian actions. The state regulates local government's specific responsibilities to ensure that new development provides adequate facilities for school pedestrian safety, ensuring that new subdivisions and short plats provide safe walking conditions for students who walk to and from school.

[Chapter Two, "Laws and Liability Associated with School Walk Routes,"](#) summarizes Washington State laws and regulations on walk routes and school zone safety, pedestrian and crosswalk rules, and planning and local government's responsibilities. The complete text of the relevant Washington Administrative



School zones can be very busy places during school commute times. By monitoring school walk routes, administrators ensure the best environment for their students who walk.

Code (WAC) and Revised Code of Washington (RCW) references can be found on the Office of the Code Reviser, Statute Law Committee web site at <http://slc.leg.wa.gov/>.

What are the elements of a good student pedestrian safety educational program?

Pedestrian safety education should be a district priority for all elementary students. A program is needed that recognizes childhood developmental limitations and how they affect a child's skill as a pedestrian. [Chapter Three, "Student Pedestrian Safety Educational Programs,"](#) provides an overview of childhood development issues to consider when choosing pedestrian safety educational programs and when designing walk routes. It also presents elements of a good student pedestrian safety program.

Support for student pedestrian safety programs abounds in our communities and our state. [Appendix A, "Ideas and Resources for Student Pedestrian Safety,"](#) lists organizations schools can turn to for help.

Who is responsible for developing school walk routes?

In Washington State, school districts are responsible for developing a walking route for each elementary school in their district where children walk to and from school. Walk routes are often developed as part of a comprehensive student pedestrian safety plan and are best addressed by building community partnerships between school administrators and local public works agencies, local law enforcement agencies, legislative representatives, school-parent organizations, parents, and students. Working collaboratively with community partners ensures that any pedestrian safety concern can be addressed by a variety of solutions.

[Chapter Four, "The Partnership Approach to Student Pedestrian Safety,"](#) is designed to help school districts identify community partners. It outlines responsibilities and suggests ways to work together.

How is a school walk route developed?

Once responsibility for developing walk routes has been assigned, there is a step-by-step process that can guide walk route development. A walk route plan starts with a detailed base map defining a one mile radius of the attendance areas near each school. Next, existing walking conditions and traffic characteristics are inventoried. Then a walking route is designed

keeping in mind guidelines designed to provide the greatest physical separation between walking children and traffic, expose children to the lowest speeds and volumes of moving vehicles, and have the fewest number of road or rail crossings. Since the objective is to minimize roadside and roadway crossing conflicts to the extent practical, this may mean in some cases that a child may need to walk a little farther in order to follow the planned school walk route. Once the best possible route has been determined, a walk route map—one that is easily understood and conveys the essential information of the walk route—is developed and distributed to parents and students. Evaluating the route is an essential final step in the process. Once developed, walk routes need to be updated and distributed each year.

The steps for developing a walk route and the guidelines for choosing the best route are discussed in [Chapter Five, “Ten Steps for Developing and Maintaining School Walk Routes.”](#)

How are potential pedestrian safety concerns identified?

No school walk route is ever completely free from pedestrian safety concerns. However, recognizing and evaluating a concern is the first step in solving it. While no universal definition can be applied to determine if a walk route is “safe,” a variety of factors can be examined to gain an overall picture of the route’s walkability.

[Chapter Six, “Identifying Pedestrian Safety Concerns,”](#) contains a walking condition evaluation form. By rating conditions on a sliding scale, school administrators will have a starting point for working with traffic engineers and other community partners to categorize and prioritize safety concerns along the walk routes. Recognizing and evaluating a concern is the first step in solving it.

What is the process for improving safety on the school walk route?

By using the three Es—education, enforcement, and engineering tools—many walk route safety concerns can be successfully addressed. School administrators can work with community partners to discuss concerns, identify possible solutions, and reach consensus on project priority.

[Chapter Seven, “Implementing Improvements to School Walk Routes,”](#) provides a plan to use a combination of all three Es to improve driving behaviors along the walk route, and gives an example of how the three Es were successfully applied to Bellevue’s School Crosswalk Enhancement Project. It

also describes the five steps school administrators can take to work with their community partners to develop and implement pedestrian improvements.

Isn't it easier just to bus all the students?

In the past, the state has spent millions of education dollars to fund bus transportation for students whose walk routes had “hazardous walking conditions” as identified under specific criteria.

In 1996, the State Legislature change the allocation formula for student transportation funding, basing it on the number of students in kindergarten through fifth grade living within a one-mile radius of the school. These funds allocated to school districts can be used for improvements such as warning signs, sidewalks, overpasses, adult crossing guards, and bus transportation.

Indeed, some schools do elect to bus the entire student population, and sometimes walk route conditions call for this. However, there are many benefits to identifying and funding school walk route safety improvements:

- Over time, such improvements can save tax dollars.
- Improvements provide a safer environment for the public—24 hours a day, not just before and after school.
- Improvements that allow children to walk to school instead of riding a bus or being driven, also provide students some daily exercise that can be beneficial to the overall health of these children.
- By promoting walking to school though the development of a good student pedestrian safety program, you're promoting an activity that is fun, healthy, non-polluting, friendly, educational, and economical—
Thanks for your efforts!



At this school, a staff member oversees a busy parking lot.

Chapter Two

Laws and Liabilities Associated with Student Pedestrian Safety and School Walk Routes

There are many laws and regulations that pertain to student pedestrian safety, in general, and school walk routes, in particular. Laws covering school safety patrols, student transportation funding, pedestrians on the roadway, and the ways that local governments regulate new developments, all can affect school walk routes. This chapter discusses the laws and regulations.

A full text of these laws can be found on the Office of the Code Reviser, Statute Law Committee web site at <http://slc.leg.wa.gov/> using the referenced title, chapter, and section numbers that are cited in the descriptions below.

School Patrols and School Walk Routes

The main code regarding student pedestrian safety is contained in the Revised Code of Washington (RCW) 46.61.385, "School Patrol." This authorizes school districts to set up both student and adult safety patrols. It generally discusses their duties and the duty of drivers to stop for patrols.

Taken with the associated regulations, this law encourages the use of school safety patrols to help students safely cross roadways adjacent to the school and at other crossings as identified in the suggested school walk route plans.

The Washington Administrative Code (WAC) 392-151, Traffic Safety – School Safety Patrols, provides the details of organizing and training safety patrols and requires school districts to develop school walk routes for each elementary school. The specific regulation is found in the Washington Administrative Code (WAC), 392-151-025, "Route Plans," as listed below.



Safety Patrol programs and school walk routes need to be coordinated. Patrol posts at key locations along the route can improve safety for students who walk.

WAC 392-151-025 Route Plans.

Suggested route plans shall be developed for each elementary school that has students who walk to and from school. It shall recommend school routes based on considerations of traffic patterns, existing traffic controls, and other crossing protection aids such as school patrols. These route plans shall limit the number of school crossings so that students move through the crossings in groups, allowing only one entrance-exit from each block to and from school. The route to school plan shall be distributed to all students with instructions that it be taken home and discussed with the parents.

The above regulation mandates the preparation of “suggested route plans” and the distribution of a recommended school route to all elementary school students. Although this regulation may raise questions concerning responsibility for preparing the plans or the potential liability of the school district, the intent of the WAC is to see that students and their parents have the recommended route identified for them, which can provide the following benefits:

- Because a route plan limits the number of road crossings, the plan will encourage students to cross in groups, providing greater safety and limiting the number of crossing guards or traffic signals needed.
- Developing a recommended route to school allows the school to suggest a route that seeks the greatest physical separation between walking children and traffic and exposes the children to the lowest speeds and volumes of traffic—considerations that children may not make if left to choose their own route to school.
- The process of developing and maintaining school walk routes allows a community to identify and address any pedestrian safety concerns in an organized manner.

Responsibilities and Partnerships

The issue of responsibility for developing school walk route plans is not directly addressed by state law, except as it pertains to school safety patrols. WAC 392-151-015, “Administration and Support,” places the superintendent or chief administrative officer of the school district in the role of being ultimately responsible for determining policy and operations for the

school patrol. Since placement of school patrol posts and school walk routes are closely intertwined, it would follow that the superintendent's school patrol policy would include policies regarding school walk routes. The same regulation encourages principals to oversee the individual school's plan and school administrators, local traffic control agencies, teachers, parents, and students to work together. The text of WAC 392-151-015 is below:

WAC 392-151-015 Administration and Support.

The superintendent or chief administrative officer of the school district shall assume the leadership and be ultimately responsible for determining school patrol policy and operations. The principal of each school shall provide leadership in developing good relationships among teachers, student body, and members of the school patrol in matters of selecting, instructing, and giving immediate supervision to school patrol members and carrying out administrative details. Administration of the actual operation of a school patrol may be delegated to a school employee or a safety committee. The approval, understanding, support, and encouragement of school administrators, local traffic control agencies, teachers, parents, and students are essential in providing an effective school safety patrol.

The state regulations recommend forming a Safety Advisory Committee to aid districts in developing school safety patrol policies and walk routes. It suggests that such a committee include various community partners. Working collaboratively to address a comprehensive student pedestrian program is so important that Chapter Three, "Partnerships and Responsibilities for School Walk Routes," is dedicated to this issue. The regulation is listed below:

WAC 392-151-017 Safety Advisory Committee-- Selection.

Selection of a safety advisory committee is important in the development and support of school patrol policy and in the development of safe route to school plans. Members may be selected from the following areas:

- (1) School administration;
- (2) Law enforcement;
- (3) Traffic engineering; and
- (4) School-parent organization.

Reducing Liability

The question of liability is only addressed in state regulations in regard to the safety patrol program in general, with no specific reference to walk routes. WAC 392-151-020, "Liability," lists "suggested procedures [that] may assist schools and employees or agents reduce the potential liability in connection with operations of a school patrol." The regulation addresses liability as a result of negligence or failure to take reasonable precautions to safeguard students in the custody of the school. The procedures suggested to reduce liability in connection with the school patrol also can be applied to reducing liability in connection with walk routes—mainly by establishing policy for walk route development and maintenance and by conducting periodic reviews of the suggested walk routes.

The guidelines presented here, while not having the force of a regulation, provide suggested procedures which, if properly followed, would result in reasonable rules, regulations, and policies governing school walk routes.

Local Governments Responsibilities for School Pedestrian Safety

The Washington State Legislature has given local governments specific responsibilities to ensure that new construction and development provide adequate facilities for student pedestrian's safety. Specifically, RCW 58.17.060, "Short plats and short subdivisions," requires local jurisdictions to adopt regulations that ensure that new subdivisions and short plats are served by adequate facilities that assure safe walking conditions for students who walk to and from school. Specifically, it requires that a proposed subdivision cannot be approved unless "appropriate provisions are made for . . . sidewalks and other planning features that assure safe walking conditions for students who only walk to and from school."

Student Transportation Services

Coordinating walk routes and student bus routes is beneficial in planning efforts. Some school districts elect to bus some students living within a one-mile radius of the school as a way to avoid a hazardous walking condition, such as the need for children to cross multiple lanes of fast moving traffic at an uncontrolled pedestrian crossing. Before 1996, additional student transportation funding could be given to schools who could prove "hazardous walking conditions" existed along their walk routes, allowing for busing of these students. However, in 1996, the State Legislature changed the allocation formula for this additional student transportation funding. Now, all schools

receive a portion of funding based on the number of kindergarten through fifth grade students living within a one-mile radius of the school. This additional funding can be spent by the district for additional buses, for crossing guards, or as matching funds for local and state transportation projects intended to improve pedestrian safety. These transportation allocation rules are contained in RCW 28A.160.150-160, "Student Transportation Allocation."

It is worth noting that when "hazardous" walking conditions occur close to the school, many dollars are spent in busing those students who would normally live close enough to school to walk. Therefore, in the long run, correcting walking conditions close to a school can result in a cost savings, as well as providing a good exercise for children who can then walk.

Pedestrian Laws

Before the task of planning a walking route, it is a good idea for planners to review the various pedestrian laws. These include rules regarding how pedestrians should travel along roadways, how pedestrians and vehicles interact at crosswalks, and other situations. Washington State's pedestrian laws are summarized below, each followed by its RCW citation:

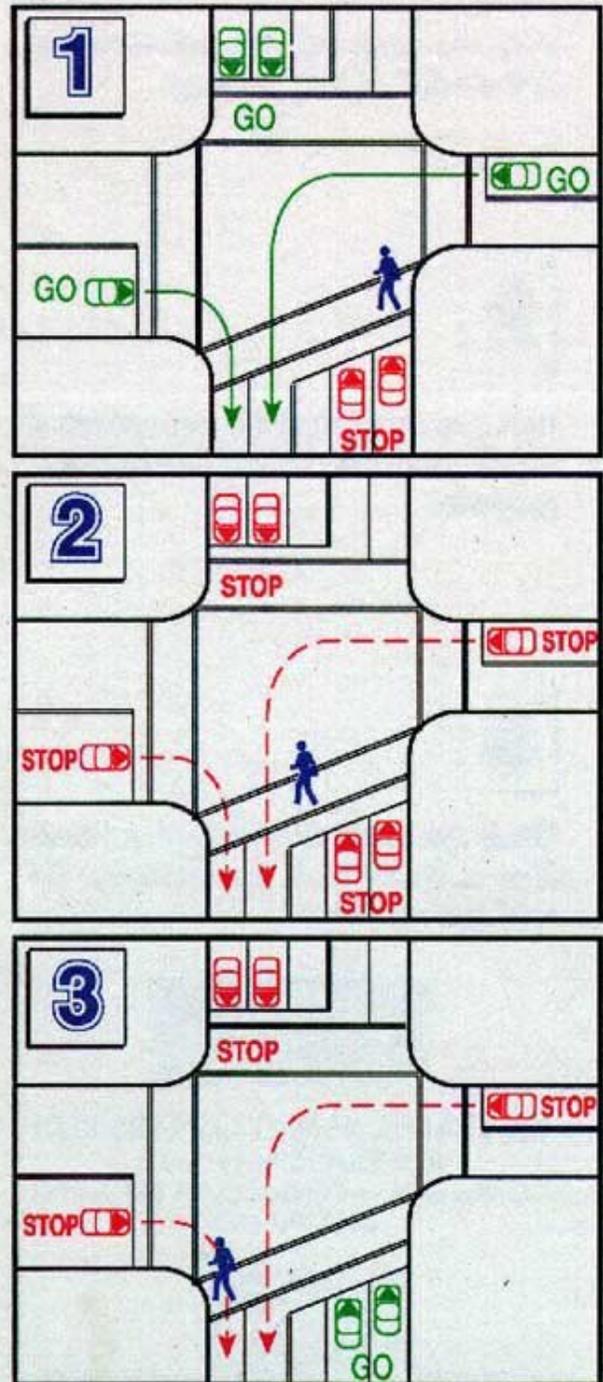
- Pedestrians must obey traffic-control signals and traffic control devices unless otherwise directed by a traffic or police officer (RCW 46.61.050).
- Drivers and bicyclists must yield to pedestrians on sidewalks and in crosswalks (RCW 46.61.261).
- Pedestrians must use sidewalks when they are available. If sidewalks are not available, pedestrians must walk on the left side of the roadway or its shoulder facing traffic (RCW 46.61.250).
- No pedestrian or bicycle shall suddenly leave a curb and move into traffic so that the driver cannot stop (RCW 46.61.235).
- Every driver of a vehicle shall exercise due care to avoid colliding with any pedestrian upon any roadway and shall give warning by sounding the horn when necessary (RCW 46.61.245).

- Every pedestrian crossing a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right of way to all vehicles (RCW 46.61.240).
- Vehicles shall stop at intersections to allow pedestrians and bicycles to cross the road within a marked or unmarked crosswalk (RCW 46.61.235). See Figure 1, Washington's Crosswalk Law, for explanation.

School Zone Speeding Laws

It's a matter of life or death. A child hit by a vehicle has an eighty percent chance of surviving the collision if the vehicle was traveling slower than 20 m.p.h. However, if the vehicle was traveling faster than 20 m.p.h., a child has an eighty percent chance of dying. With this in mind, speeding traffic in the school zone is a major concern. Recognizing this, the Washington State Legislature doubled the fine for speeding in school zones. A school or playground zone is defined as including 300 feet on each side of a properly marked crossing, and Washington laws require drivers to slow down to 20 m.p.h. when passing through a marked school zone. Fifty percent of the money collected from violators is used by the Washington Traffic Safety Commission to fund projects in local communities to improve school zone safety.

Figure 1: Washington State's Crosswalk Law (revised 1993)



1. Vehicle must stop if a pedestrian is in the vehicle's half of the roadway.
2. Vehicles must stop if a pedestrian is within one lane of the vehicle's half of the roadway.
3. Once the pedestrian is beyond one lane of the vehicle's half of the roadway, the vehicles may go.

Chapter Three

Elements of Student Pedestrian Safety Education

For those tasked with developing and maintaining school walk routes, a basic understanding of childhood development as it relates to their pedestrian skills is necessary. A student pedestrian safety educational program that recognizes childhood limitations and seeks to teach young students safe and responsible pedestrian behaviors will go a long way towards improving safety along a school walk route. This chapter provides an overview of childhood developmental limitations and a description of the elements that would constitute a good pedestrian safety educational program. For more information, please see [Appendix A, “Ideas and Resources for Student Pedestrian Safety.”](#)

Understanding Childhood Pedestrian Behaviors

Young children see and hear differently than adults. At five or six years old, children do not have the developmental skill to safely and consistently cope with traffic. This puts children at increased risk for pedestrian injuries. The following facts illustrate what school walk route planners should consider about childhood behaviors:

- A six-year-old's eye level is about 36 inches above the ground. Their smaller size makes them difficult for drivers to see, especially if they are standing between parked cars on the side of the road.

Did You Know?

- In Washington State from 1984 to 2002, the child traffic death rate, including pedestrians killed in traffic collisions, has decreased from 5.5 deaths per 100,000 to 2.5 deaths per 100,000 children ages 0-14. Source: Washington Traffic Safety Commission.
- Nationwide in 1999-2000, while unintentional injuries was the leading cause of injury for children ages 5-9, pedestrian incidents accounted for only a small percentage (2.9 percent) of those injuries; well behind motor vehicle collisions (52 percent), drowning (13 percent), fire/burns (12 percent), and suffocation (3.5 percent). Source: National Center for Injury Prevention and Control
- According to the Center for Disease Control's Injury Fact Book 2001-2002, in the United States in 1999, nearly 5,000 pedestrians died from traffic-related injuries and another 85,000 sustained nonfatal injuries. Children 15 and younger accounted for 12 percent of all pedestrian fatalities and 32 percent of all nonfatal pedestrian injuries.

- Young children have two-thirds of the peripheral vision that adults have and they have difficulty determining the source of a sound.
- Children are still learning to judge distances and speeds. When a car is coming towards them, they cannot judge accurately how fast it is traveling or how long it will take to cover the distance. They can easily misjudge whether it is safe to cross a street.
- Children focus on one thing at a time. If they are playing with friends or riding bikes it is unlikely that they are aware of traffic.

- Children are spontaneous and have trouble stopping an action once started. Children younger than third grade often cannot focus on more than one thing at a time. They have short attention spans and are impulsive and inherently curious.



Busy talking, these students are having fun walking home. They are probably not thinking about the line of cars next to them.

- Parents can over-estimate their children's ability to cross the street. Many elementary school-aged children don't understand traffic signals and don't know how to anticipate drivers' actions. Children under six rarely understand the true nature of a dangerous situation.
- Children also tend to overestimate their abilities, thinking that they can run across a street before the flashing light changes or a car approaches. Their thinking is a combination of reality and fantasy, knowledge and miscomprehension.
- Drivers and child pedestrians each assume (incorrectly) that the other will yield the right-of-way.

Elements of a Good Student Pedestrian Safety Education Program

Pedestrian safety education should be a district priority for all elementary students with a strong curriculum for children in kindergarten through third grades and as review program for children in fourth through sixth grades. In schools that allow fifth and sixth grade students to serve as safety patrol members, the training provides a good review of pedestrian safety rules.

Strong, well-designed student pedestrian safety education programs should equip youngsters for independence by helping them create a “safety consciousness” that effectively guides their behaviors throughout many real life traffic situations. Programs should teach children to:

- identify hazardous situations,
- assess problems accurately,
- calculate the risks involved, and
- respond in an efficient and safe manner.

Children should learn and practice good habits. They should also be prepared to respond to a dynamic situation, such as what to do if a car comes down the street after they’ve already started to cross or if the signal changes while they are in the crosswalk.

Ten Pedestrian Rules to Teach Children: According to the National Safe Kids Campaign, children should know and practice the following ten pedestrian safety rules:

- Do not cross the street alone if you’re younger than 10 years old.
- Stop at the curb before crossing the street.
- Walk, don’t run, across the street.
- Cross at corners, using traffic signals and crosswalks whenever possible.
- Look left, right, and left again before crossing.
- Walk facing traffic.
- Make sure drivers see you before crossing in front of them.
- Do not play in driveways, streets, parking lots, or unfenced yards by the street.
- Wear white clothing or reflectors when walking at night.
- Cross at least 10 feet in front of a school bus.

Cover In-Depth Issues: In addition to the basic safety rules, a good pedestrian safety educational program will teach children to handle an array of possible situations and provide in-depth study of proper pedestrian behaviors, such as:

- Always walk on sidewalks, when possible. If there are no sidewalks, walk facing oncoming traffic and stay as far to the left as possible.

- Watch for vehicles turning into or backing out of parking spaces or driveways.

- When stopped at the curb, if a vehicle or other object is blocking the view of on-coming traffic, children should stop at the outside edge of that object before crossing at a crosswalk.



Teach children to watch for cars backing out of driveways.

- Never enter the crosswalk from between parked cars or from behind bushes, or dart out into the street. (“Darting out” accounts for more than half of all childhood pedestrian injuries.)
- Make sure that all vehicles have stopped before crossing the street.
- Attempt to make eye contact with drivers of stopped or turning vehicles, but do not assume that the drivers can see them.
- Teach children the meaning of all traffic signs and markers such as pedestrian crossing signals and crosswalks.
- Teach children how to cross at corners when crosswalks are not marked.
- Teach children to cross directly, never diagonally.

- Teach children never to enter the crosswalk when the “don’t walk” signal is flashing.
- Tell children to be extra careful in rain or snow. Allow extra time and distance for vehicles to stop.

The most effective programs progress from supervision of the child by others to the development of individual responsibility for their safety. Adults, both parents and teachers, must initially furnish a safe environment for young walkers, while simultaneously providing varied, real-life experiences until the young pedestrian can assume responsibility for themselves in a mature and safe manner. At the school level, a continuing program of education on pedestrian safety can establish good walking behaviors that can last a lifetime.

In many districts, pedestrian safety occurs as part of the injury prevention component of the adopted health curriculum. Skills taught for safe walking can be a separate unit or may be included with bus safety or covered during personal safety units.

Support for Student Pedestrian Safety Programs

Extensive resources are available from the community to assist educators and parents establish pedestrian safety programs in their school districts or in their schools, if none currently exists.

Local support for a program can come from parent-teacher organizations, school district health programs, local law enforcement agencies, city public works departments, county traffic departments, emergency medical services, local hospitals, public health officers, and other local, non-profit organizations with a focus on prevention.

State and regional resources are also available. The Washington State Department of Transportation, Bicycle and Pedestrian Safety Program; Washington Traffic Safety Commission; Department of Health, Office of Emergency Medical and Trauma Prevention are just some examples of state agencies with a wealth of information, support, workbooks, and incentive rewards such as reflective bands or pencils that are available at little to no cost.

[Appendix A, “Ideas and Resources for Student Pedestrian Safety,”](#) contains a complete listing of state, regional and national resources, as well as suggestions on where to find help in your local community.

Chapter Four

The Partnership Approach to Student Pedestrian Safety

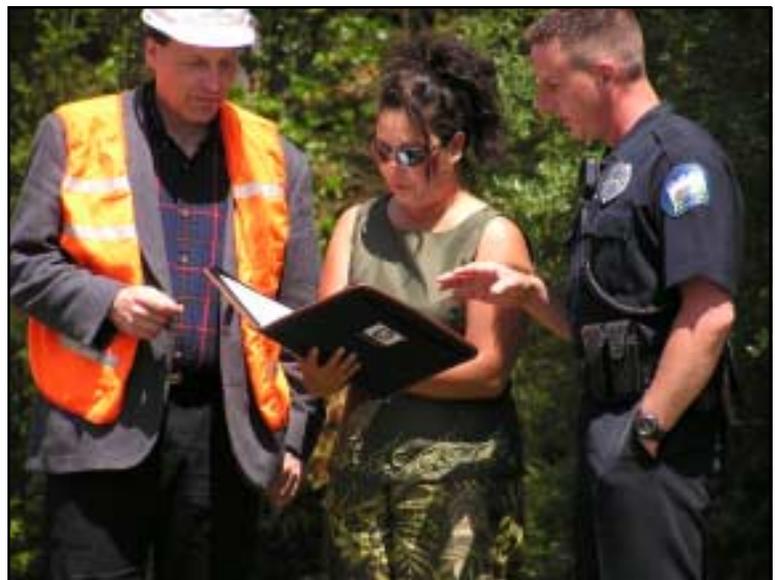
Developing and maintaining school walk route maps is only one part of the whole student pedestrian safety process. Walk routes should be part of the whole pedestrian safety plan and are most effective when coordinated with school safety patrols, student pedestrian safety education, parents who practice safe driving habits, law enforcement efforts, best engineering practices, and support of the public and elected officials.

While the following chapters will specifically address school walk routes, this chapter provides an overview to the partnership approach to student pedestrian safety. It discusses the roles and the responsibilities for student pedestrian safety and suggests possible ways to work together.

Partners and Responsibilities

Pedestrian safety improvements for school walk routes will benefit the entire community, not just school children. The same routes that children take to school are used evenings and weekends by other neighborhood children and by adults to get to school play fields, auditoriums, and community facilities. Improving these walk routes with added sidewalks, widened shoulders, or other improvements creates a safer environment for all pedestrians—24 hours a day.

Another benefit to building community partnerships is that by doing so, school districts invite varied perspectives to solving student pedestrian safety concerns. For example, when developing a walk route, designers will choose a particular crossing for students to use based on sight distances, existing crossing controls, traffic speeds, and the like.



Building community partnerships is the best way to develop and improve student pedestrian safety programs. Traffic Engineer Dave Sorensen and Traffic Officer Don Arnold review concerns along the school walk route with Principal Tanya Jessie.

However, in many school zones, problems arise when cars consistently park along the side of a road too close to a crosswalk. A car parked this way blocks children's view of on coming traffic and presents a concern. A good student pedestrian safety education program may teach children to lean forward and peek out before walking all the way into the crosswalk, but this is hardly a long term solution! A parent group may determine that parents who drop off or pick up children from school are the most likely to park their cars this way and they may launch a parent education campaign reminding parents to park further away from the crosswalk, or they could develop flyers to place on the windshields of the offending car asking them to park in a different location. The school principal could develop drop off and pick up areas or times to alleviate the congestion that often encourages such driver behaviors. A traffic engineer may suggest creating a no parking zone with signs or paint. If those measures are already in place, a law enforcement officer could ticket drivers parking in "no parking" zones. Engineering improvements, such as a curb extension could provide a physical barrier giving students the space they need around a crosswalk, but finding the budget for physical engineering improvements will require working with city, county, or state traffic engineers, as well as the elected officials who oversee the budgets.

A comprehensive student pedestrian safety plan is best addressed by building community partnerships between school administrators and local public works agencies, local law enforcement agencies, legislative representatives, school-parent organizations, parents, and students. Working collaboratively with community partners ensures that any pedestrian safety concern can be addressed by a variety of solutions.

This section identifies community partners and discusses their role in student pedestrian safety. Community partners include:

- school districts,
- schools,
- local governmental jurisdictions,
- local law enforcement agencies,
- parents/guardians,
- drivers,
- students, and
- other governmental agencies and non-profit organizations.

School Districts

School Districts are responsible for:

- siting and developing school facilities that foster good walking conditions,
- establishing student pedestrian safety policies, and
- fostering community partnerships that pool knowledge and resources to provide a comprehensive approach to student pedestrian safety.

School Facilities: School districts have a great opportunity to influence pedestrian safety when they establish a new school. While evaluating potential site for new school, preference should be given to sites which are easily connected to the existing pedestrian system. During construction, districts should include sidewalks, wide paved shoulders, or even separated pedestrian pathways along all streets which bound the school site. By working with local public works agencies during the site design process, districts and traffic engineers can mutually identify major school pedestrian crossing and implement the most ideal crossing treatments, including signing and striping for crosswalks and the use of adult and student crossing guards at key locations.

For more recommendations on new school considerations, please see

[Appendix B, "Practical Tips for Opening a New School."](#)

School districts can influence pedestrian safety at existing school sites, as well. Districts can encourage school administrators to consider innovative approaches to pedestrian safety such as separating bus traffic from parent vehicles or developing parking lot traffic flow patterns. Districts can encourage individual schools to call upon the services of local law enforcement officers or local traffic engineers when pedestrian safety concerns occur. When needs arise, school districts can help evaluate, prioritize, and seek funding for needed engineering improvements along school walk routes.



During construction planning, districts should include sidewalks, within the school site that direct pedestrians to the school facility without needing to cross parking lots or weave around vehicles.

Pedestrian safety policies: The school district should set policies regarding school safety patrols, school walk routes, and pedestrian safety education. These pieces may be part of a larger trip safety program that includes school bus route plans and the policy for providing bus transportation for students living within a one-mile radius of the school. The district should have an efficient and equitable process to address parent requests that bus transportation be provided for their child even though their child lives within a one-mile radius from school.

Establishing and documenting pedestrian safety policies is one way to reduce potential liability for injuries sustained by students or employees. [Washington Administrative Code \(WAC 392-151-020\)](#) discusses issues of liability and suggests that the establishment of specific policies is one way to reduce possible liability.

[Chapter Three, “Student Pedestrian Safety Educational Programs,”](#) describes the elements of a good elementary student pedestrian safety program. [Appendix A, “Ideas and Resources for Student Pedestrian Safety,”](#) lists resources dedicated to improving student pedestrian safety, encouraging walkable communities, and funding school walk route improvements.

Fostering Community Partnerships: School districts should take the lead in developing community relationships for improving student pedestrian safety. District administrators, or even the school board, need to clearly assign responsibilities to some entity—be it a department, person, or committee—that will have the authority to oversee pedestrian safety issues and the development and maintenance of walk routes. The authority needs to ensure that community partners are contacted and consulted with the goal to ensure that a community’s resources and knowledge are pooled to provide a comprehensive approach to pedestrian safety issues. Once identified, such an authority could:

- oversee school walk route development and endorse school route maps;
- prioritize and coordinate multi-agency, district-wide engineering pedestrian safety improvements;
- act as mediator, hearing appeals regarding school walk route assignments; and

- advise the school board or the district superintendent on recommended policies (or changes in policies) on pedestrian safety issues.

Please see, “[Working Together](#),” on page 26 for more information on this topic.

Schools

School administrators are responsible for overseeing the school's walk route and safety patrol programs. They should play an active role in student pedestrian safety education and training of crossing guards. School administrators are the primary contact for educating parents on the school's drop off and pick up procedures or other school specific parking lot controls. They should encourage parents to model good pedestrian safety skills for their children by sharing student pedestrian safety education materials with them. The principal should review the programs yearly and oversee adjustments according to changes in the environment, such as new construction or increases in traffic volume. Schools are responsible for distributing walk route maps to parents and students, annually.



School administrators are responsible for overseeing the school's pedestrian programs. Here, the school principal and the safety patrol advisor meet to review the school's safety patrol program and their walk routes.

Local Governmental Jurisdictions

City, county, or state agencies will need to be involved with school pedestrian safety depending on who maintains the roads near the school. School Administrators should build partnerships with city public works, county planning, or state department of transportation agencies. These agencies are responsible for designing, installing, and maintaining traffic control devices and other pedestrian facilities. A traffic engineer can work with school administrators to address pedestrian safety concerns and provide suggestions on possible fixes.

Local jurisdictions also administer zoning and building permits and in some locales, collect school impact fees from private developers. As mentioned under School District Responsibilities above, school districts and local governments need to keep each other aware of planned developments within the school district's service area, as well as plans for improvements to the roads and pedestrian facilities within the district.

Local Law Enforcement Agencies

Local law enforcement officers may be able to offer school pedestrian safety education or may be available to train school patrols, both adults and students. Many agencies in Washington State practice community policing, assigning the same officer to answer all the calls from one set of schools. School principals can call their local law enforcement agency to see if this is the case and obtain the officer's name. Then the principal can invite the officer to school functions or ask the officer to provide training. If dangerous driver behaviors are plaguing your walking routes, increased presence of a law enforcement officer during school commute times can go a long way towards correcting the problem behaviors.



Drivers carry the responsibility for making a school walk routes and school zones safe for students. Extreme caution is called for when students are present along the roadway.

Parents/Guardians

Parents of school children can make strong allies in promoting student pedestrian safety. Not only will their attitudes towards pedestrian and bicycle safety strongly influence their children, they also are likely to compose the majority of drivers around a school during pick up and drop off times. Parents should review pedestrian safety educational materials that come home with their child and remember to model ideal pedestrian behaviors. When the school walk route comes home, parents need to travel the route with their children and ensure that the child practices and understands safe walking behavior.

Parents also serve in leadership roles with Parent-Teacher organizations or as members of a school site council team. These roles often find parents at the forefront of improving safety for their children.

Drivers

Perhaps the greatest responsibility for school pedestrian safety lies with the individual driver. Pedestrians have the right-of-way in a crosswalk, marked or not, and driver's must stop to allow a pedestrian to cross. Motorists must exercise extreme caution in school zones and along the route to school.

By building community partnership, unsafe driving behaviors can be addressed with a variety of solutions. Please see Chapter Seven, "Improving Safety On School Walk Routes," [Figure 11: Solving Unsafe Driver Behaviors](#) on page 58, for a description of methods to improve driving behaviors along the walk route.

Students

A student's personal responsibility for his own safety as a pedestrian cannot be over-emphasized. The child must understand and follow the instructions given for walking to and from school. Children develop life-saving pedestrian skills and awareness through practice under the supervision of educated adults who model safe pedestrian behaviors.

Metropolitan Planning Organization (MPO)

There are nine regional Metropolitan Planning Organizations in Washington State. These groups provide a forum for cities, counties, ports, transit agencies, tribal nations, school districts, health organizations, and state agencies to work together to develop transportation plans for their region. School district representation on the council is beneficial in obtaining funding for school walk route improvements. These organizations may be a great resource for map-making and traffic characteristics information. [Appendix C, "Metropolitan Planning Organizations,"](#) contains a list of regional MPOs.

Other Governmental Agencies and Non-Profit Organizations

There may be other public agencies who are responsible for sections of the roadway along the walk route such as: parks department, cemetery district, port district, fire district, drainage district, utility division, railroad district, irrigation district, Department of Natural Resources, or Forest Service. Even private owners of easements such as power company, water company, neighborhood associations, or railroads could be affected by pedestrian improvement along school walk routes.

The Washington Traffic Safety Commission, the Washington State Department of Health, and the Kids Walk to School Program are just some of the resources available for improving student pedestrian safety. Please consult Appendix A, “Ideas and Resources for Student Pedestrian Safety,” for a list of resources dedicated to improving student pedestrian safety, encouraging walkable communities, and funding school walk route improvements.

Also, remember to contact elected officials and let them know about any student pedestrian safety concerns that occur in their district. They control the budgets and their support can be critical in funding solutions.

Working Together

As noted in Chapter Two, WAC 392-151-017 recommends that each school district establish a Safety Advisory Committee to aid in the development of school walk route plans and that committee members include school administration, law enforcement, traffic engineering, and school-parent organization.

While each school district may or may not actually have a Safety Advisory Committee comprised of such representation, the role and authority that such a committee would have needs to be clearly assigned by the school district. In districts around the state, this authority may be given to an existing community safety or security committee, assigned to a transportation department, given to the educational service district’s risk manager, charged to the community site councils at individual schools, or doled out to any other individual, department, group, or committee that suits the district’s size and environment.

Tasks for Overseeing Pedestrian Safety and Walk Route Development

Once assigned, such an entity should work with community partners, either through a community-based committee, or through informal meetings to coordinate activities. The following is a list of possible tasks for such an entity:

- Advise the school board or superintendent on recommended policies on student pedestrian safety issues, including school patrol policies and placement at intersections and school walk route development.

- Oversee walk route development and maintenance at each elementary school. Include middle schools, junior highs, and/or high schools, if needed.
- Coordinate the receiving, reviewing, and resolution of suggestions and concerns about student pedestrian safety. Examine available collision and injury data to stay alert to any concerns along the walk route.
- Serve as the contact for local planning agencies (or include local agencies on a committee) to receive notification of planned development, review development plans, and respond to any plans or environmental reviews within the school district's service area.
- Provide input on city/county decisions about street and pedestrian improvement plans.
- Prioritize pedestrian safety concerns throughout the district and work with community partners to suggest solutions. Explore solutions that rely on parent education, enforcement, low cost signage or striping, as well as engineering solutions.
- Recommend actions to be taken and work with the school district and community partners to fund and coordinate improvement.
- Provide input to the decision process for new school location and design.

Although the cooperative process is ideal and necessary to maximize the use of public resources, each agency is legally responsible for measures within its jurisdiction as defined by local ordinance and state law. Any recommendations from a pedestrian safety committee or group should be evaluated for conformance with adopted engineering standards, for availability of funding, and for legal considerations by the implementing agency. The pedestrian safety committee should be sensitive to these issues in making its recommendations to local and state agencies. Active participation by local traffic engineers, public work staff, and the rest of the mentioned community partners should minimize infeasible recommendations.

Chapter Five

Ten Steps for Developing and Maintaining School Walk Routes

This chapter provides guidelines and step-by-step procedures for preparing walk route plans for schools in Washington. The information will provide an explanation of the principles that will guide in the selection of specific walk routes and steps necessary to end up with a map that presents the walk routes in a clear and concise manner and avoids extraneous information.

Ultimately, however, no guidebook can cover all situations, nor can it replace the need for common sense application of safe walking principles as applied to specific situations. Working collaboratively with traffic engineers, law enforcement officers, and other community professionals will provide the best results.

A School Walk Route Map

A school walk route map recommends a walking route to school based on considerations of traffic patterns and existing traffic controls such as cross walks, traffic lights, or school safety patrol posts. The chosen route should seek to limit the number of school zone crossings in a way that encourages students to cross streets in groups, allowing only one entrance-exit from each block to and from school. A walk route should cover a one-mile radius from the school, excluding areas outside the school service area. A walk route does not need to cover neighborhood streets. A walk route should seek those routes that provide the greatest physical separation between walking children and traffic, expose children to the lowest speeds and volumes of moving vehicles, and have the fewest number of road or rail crossings. An example of a school walk route map is shown in [Figure 2](#).

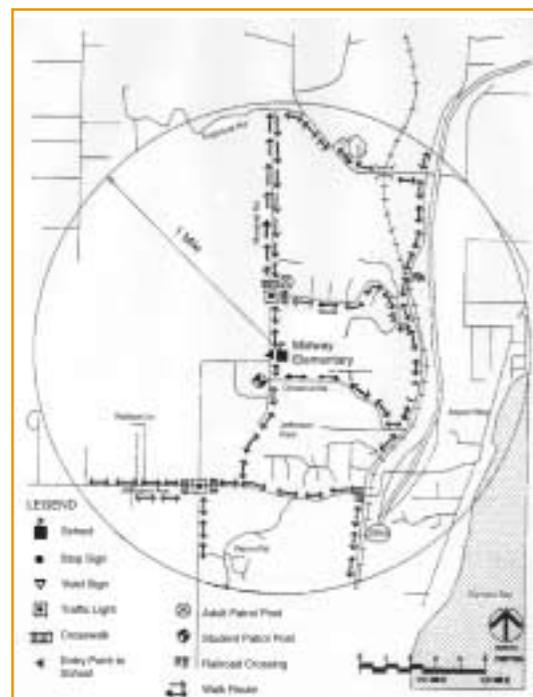


Figure 2: School Walk Route Map
This typical school walk route map is ready for distribution. A larger version of this same map is shown on page 44.

Process Overview

Following the step-by-step procedure for developing, implementing, and maintaining school walk route plans will result in creating clear and concise maps to show parents and children the preferred route to school.

These steps are:

- Step 1: Assign responsibility
- Step 2: Prepare base maps
- Step 3: Inventory existing walking conditions
- Step 4: Inventory traffic characteristics
- Step 5: Design the walk routes
- Step 6: Prepare the draft walk route map
- Step 7: Review the route maps with district and community officials
- Step 8: Distribute and explain the maps
- Step 9: Evaluate the program
- Step 10: Maintain the program

Step One: Assign Responsibility

The first step is for the school board, superintendent, or their designated body to assign responsibility for developing school walk route plans. Some suggestions for this responsibility include the district transportation supervisor, the principal or site management council at each school, the security department, other existing safety committees, or even a person outside the district hired on contract to develop walk routes.

As discussed in [Chapter Four, "The Partnership Approach to Student Pedestrian Safety,"](#) the school district may have assigned the authority to oversee walk route development to a department, community-based committee, or individual. If that is the case, this entity will be overseeing walk route development, although, it may not be responsible for developing individual walk routes.

Whoever is assigned the responsibility for developing walk routes should review the information in the preceding chapters to gain an overview of the laws and liability issues associated with walk routes, an understanding of childhood developmental limitations related to their pedestrian skills, and the importance of utilizing community resources to provide the best possible solutions to walk route design concerns.

Step 2: Prepare Base Maps for Each School

A base map is a street map that covers a one-mile radius of the area around the school. It is a current, clear, and concise map drawn to scale. It will show only the streets, street names, street widths and the school location. The base map becomes the backbone of the school walk route map and so it is important that conveys only the essential information needed to communicate the suggest route to school to students and parents.

It is essential that the final walk route map be easily understood. Therefore, start with a very simple base map. Do not use an existing map that is complex, covers too large an area, or shows more than the streets and the school. Using a detailed map and drawing the designated the walk route over it will cause more confusion and problems than it will solve.

Maps can be obtained from city or county planning or public works agencies. Check with your regional Metropolitan Planning Organization for map making assistance, too. A list of the state's MPOs is contained in [Appendix C](#) on page 73. These agencies may be able to develop tailored maps for each school. If this is the case, ask for one simple map that only contains existing streets, street names, and the school, and a separate map that shows traffic and roadway data which will be useful for Step 4: Inventory Existing Traffic Conditions. The planning agency may be able to produce the final route maps, as well.

[Figure 3, "Base Map,"](#) on page 32, illustrates a clear and simple base map.

Make and keep several copies of the base map to use in the following steps. Walking conditions and traffic characteristics will be marked on the base map to create a map version to assist in route selection. A fresh base map will be used for marking the selected route and creating the final route to school map.

Step 3: Inventory Existing Walking Conditions

The next step is to identify existing walking conditions through a field inventory—by walking or driving through the area and recording the needed data directly on the base map. Begin this step by eliminating the areas within the one-mile radius base map that are:

- Outside the school service area;
- Qualify as neighborhood walkways (neighborhood walkways need not be included in the route to school map);

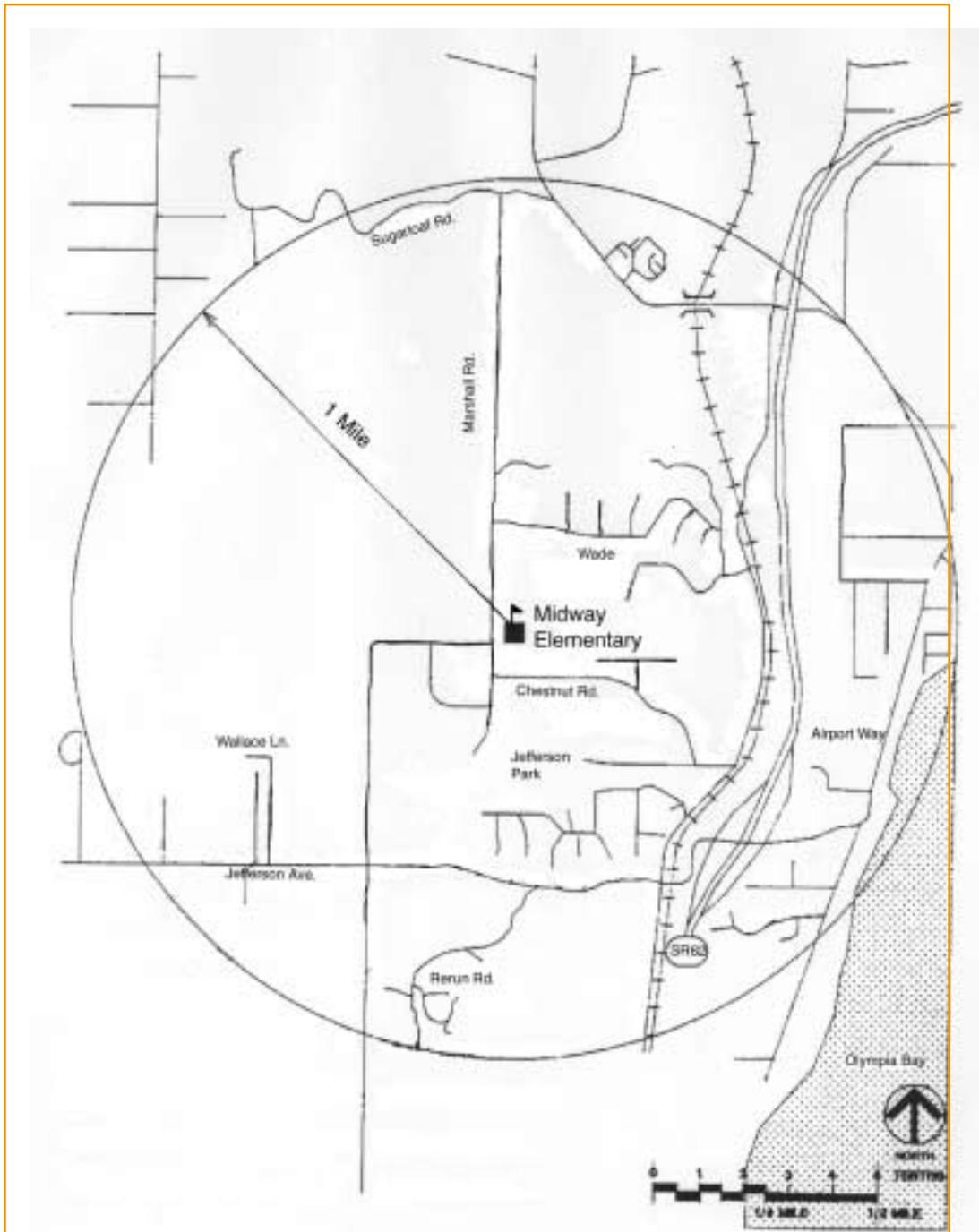


Figure 3: Base Map

This sample base map is clear and simple, showing only the school and major street names. The base map, developed during Step 2, is used as the “bottom layer” of the other maps that will be developed during school walk map development. Make several copies of the base map.

- Areas where students receive bus transportation instead of walking;
- Areas that are excluded for some other reason.

Figure 4, “Walk Route Study Area,” on page 34, shows a base map that has eliminated the areas that do not apply to the walk route. Eliminating these areas before conducting the field survey will save time.

The goal of the field inventory is to assess existing pedestrian facilities that can aid students walking to and from school. (Check with your local public works to see if they have already collected pedestrian information, through photographs or video recording for their traffic engineering records, or if they have equipment that could help log the needed information.) Collect and record (or check existing records for) the following information:

- school location and attendance boundaries
- all stop and yield signs
- traffic signals including presence of marked crosswalks and pedestrian signal indications
- traffic signal timing and phasing for pedestrian crossings
- number of traffic lanes
- parking areas and restrictions
- posted speed limits and warning signs, including the school zone speed limit signs and the type of school zone signage
- crossing guard or school safety patrol locations
- railroad tracks, including number of tracks and type of crossing protection
- location of all crosswalks, including type of crossing protection offered
- medians, pedestrian refuge islands, and other pedestrian safety features
- sidewalks, pedestrian paths, and shoulders, noting
 - condition and width of sidewalks and shoulders
 - shoulder material (paved, gravel, grass, non-existent)
 - distance of walkway from traffic or existence of planting strip or other means of separating pedestrians from moving traffic
 - the location of drainage or irrigation ditches
- high noise areas and other environmental obstructions to safe walking
- major line of sight obstructions as measured from the height of a child
- other relevant pedestrian safety factors observed in the field, such as the existence of potentially dangerous dogs whether loose, fenced, or restrained in other ways; or commercial business that may use environmentally hazardous chemicals
- bicycle lanes or paths

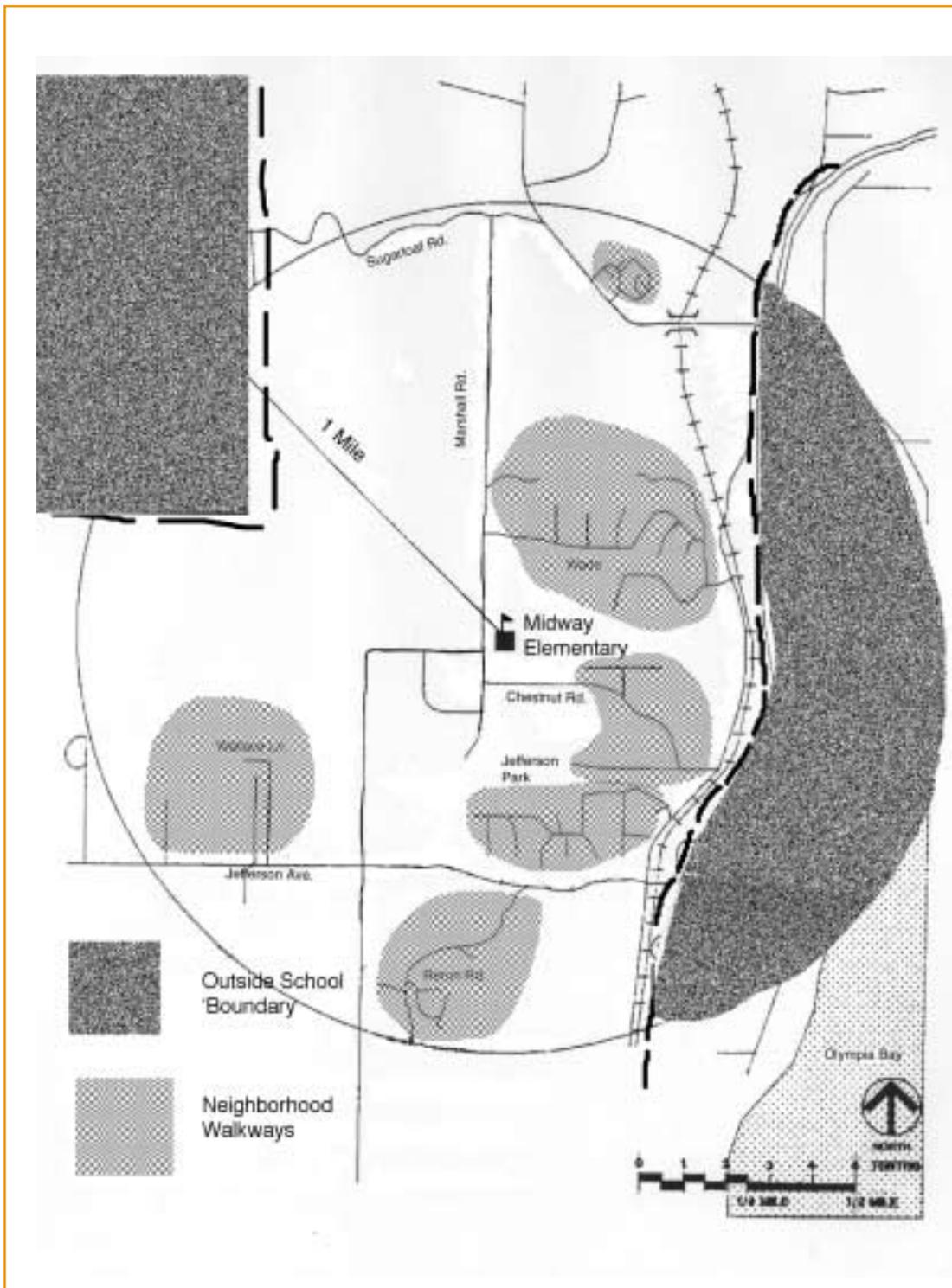


Figure 4: Walk Route Study Area

This map shows areas that have been eliminated from the base map because they are outside of the school attendance boundary or they are considered neighborhood walkways. The remaining streets will be evaluated for use as school walk routes. Eliminate such areas from the base map (beginning of Step 3) before conducting the walking condition field inventory (result of Step 3 shown on next page).

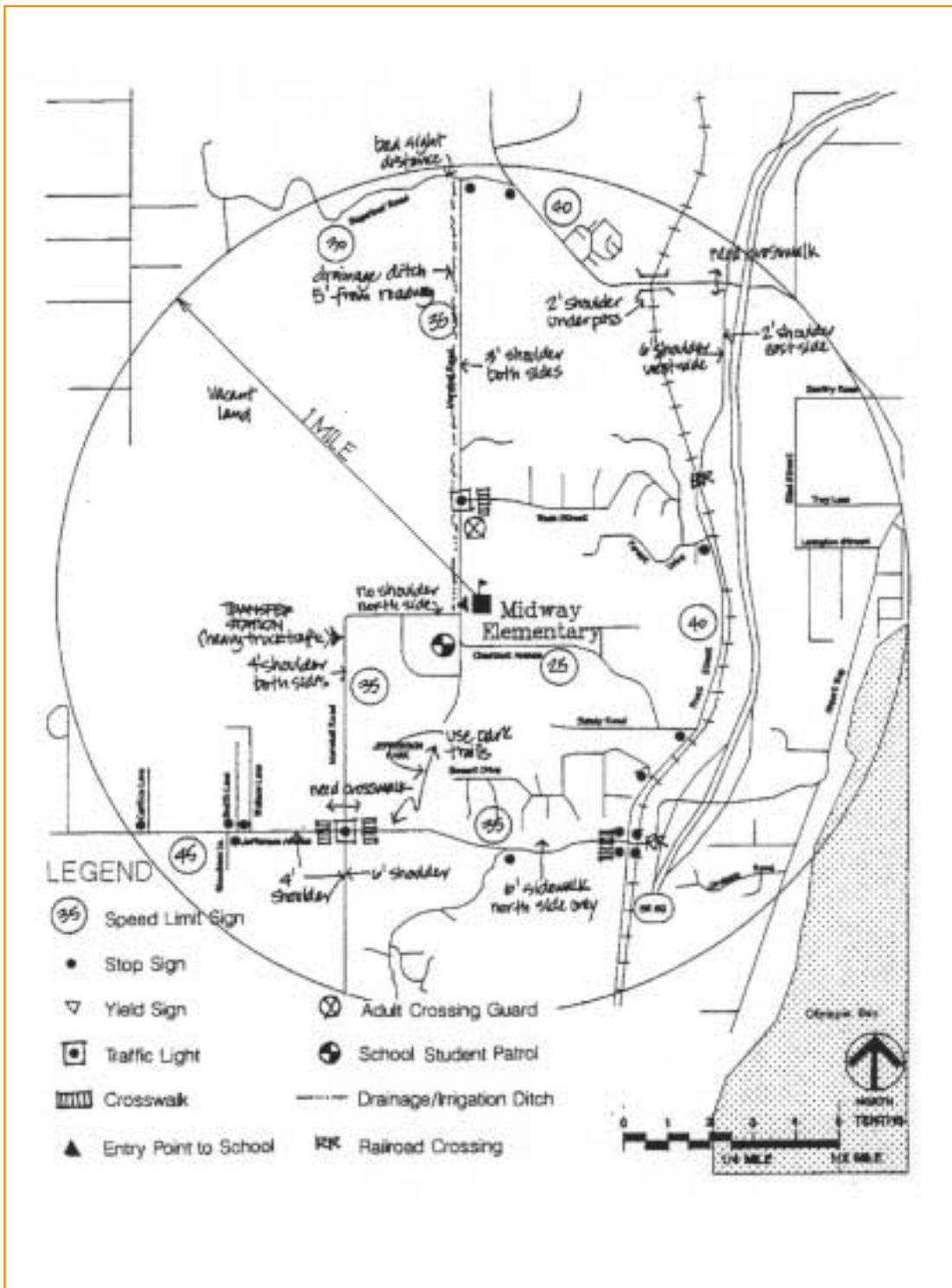


Figure 5: Pedestrian Inventory Map

This map shows the base map with the pedestrian inventory data noted, as the map would look at the end of Step 3. This map notes speed limits, cross walks, sidewalks, shoulder width, and other collected pedestrian information useful in determining the school walk route.

Figure 5, “Pedestrian Inventory Map,” on page 35, shows an example of what the base map will look like after the pedestrian inventory is completed and its features noted.

Step 4: Inventory Traffic Characteristics

The next step is to conduct an inventory of traffic characteristics. As you gather traffic data, simply add this data to the field inventory map that was developed during Step 3. This allows designers to see the “full picture” when they begin the task of designing the walk route. Figure 6, “Traffic Characteristics Map,” on page 37, shows a sample of how the map will look at the end of this step.

To begin, work with your local traffic engineer or public works department to:

- identify high volume streets within the walking area;
- collect data on traffic volumes and speeds on major streets within the school walking area; and
- provide information on planned road improvements, high collision locations, and any known pedestrian safety concerns in the area.

Special attention should be paid to the streets adjacent to the school grounds. Collect data on traffic volumes and speed on the streets close to the school grounds to determine the magnitude of potential conflicts at crossing points. Ideally, this school specific data should be collected during school commute times (before and after school).

Consider the type of traffic that travels the streets within the walking area. Heavy truck traffic along the walk routes poses safety concerns because large trucks require a greater turning radius, restrict sight while parked, and need greater distances and time to stop. Truck drivers may also have a greater difficulty seeing students immediately in front of, along side, or behind their vehicles. Therefore, note streets that carry heavy truck traffic and avoid routing students along or across these streets, when possible.

Also, work with the local law enforcement agency to determine if they have any information on safety concerns near the school walking areas. Concerns could include drug-trafficking activities, areas with a history of illegal or violent activity, identified sex offenders living or working along the routes, or even reports of dangerous dogs along the route. Mark these concerns on the map, as well.

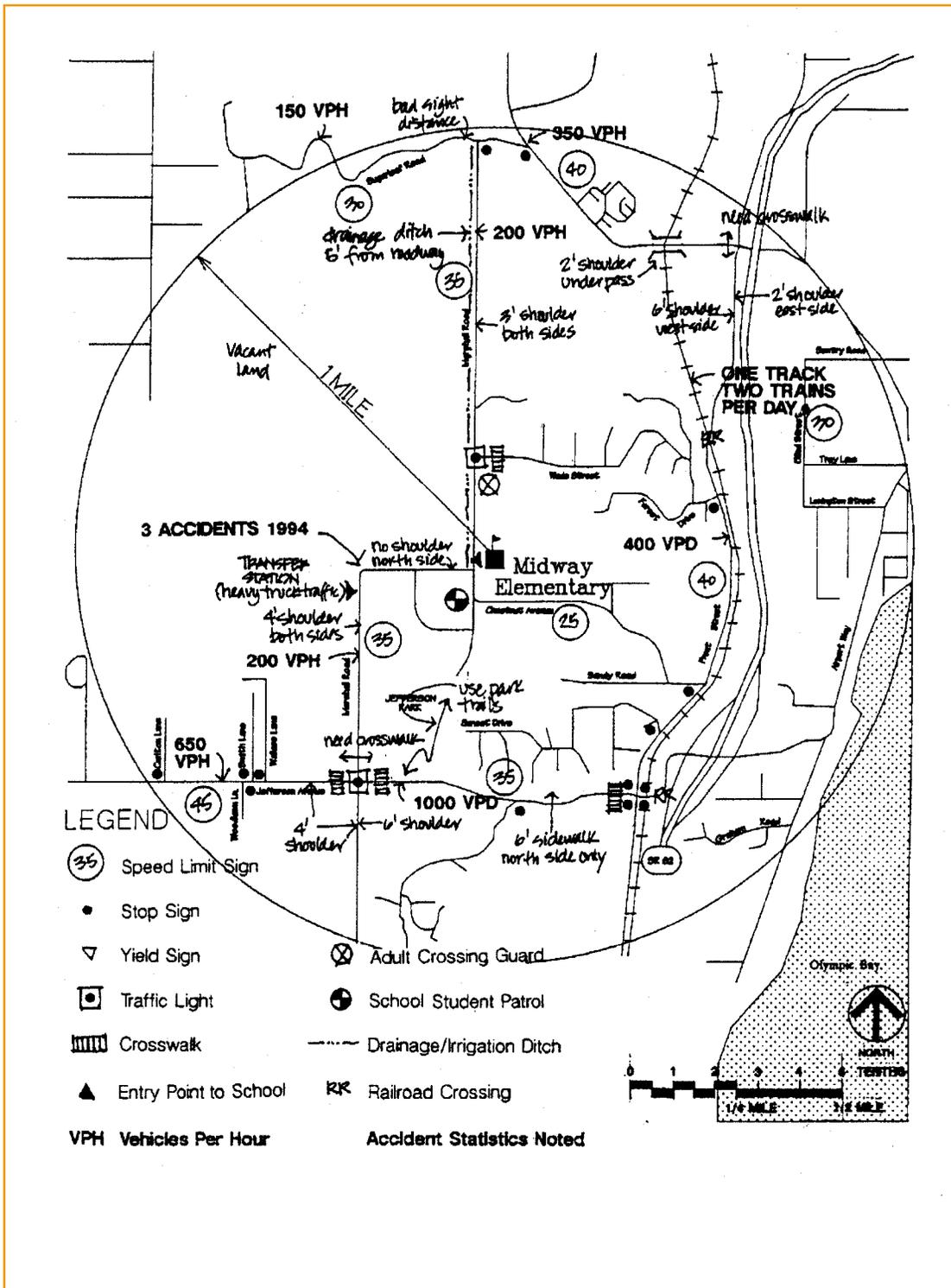


Figure 6: Traffic Inventory Map

In this version of the map, traffic characteristics have been noted, as discussed in Step 4. This map is a base map with the pedestrian inventory and the traffic characteristics both noted on it. Collected traffic data includes traffic volumes, types of vehicles using the roadway, and known accident history.

Step 5: Determine the Walk Routes

Armed with the information gathered and noted on the Traffic Characteristics Map, it is time to begin choosing the actual routes students should be directed to take between their neighborhood and the school.

The objective in selection a school walk route is to minimize roadside and roadway crossing conflicts to the extent possible. When choosing routes, remember that children may have to walk farther in order to follow the best route, but avoid making a child walk more than a block or two out of her way or she will likely ignore the selected route.

Begin by walking the streets and neighborhood near the outer limits of the mile radius from school and work inward to school. Plot drafts of walk routes on fresh copies of the “base maps” (the clear, concise map developed in Step 2), using sequential arrows indicating the direction of walking and the side of the street to be used. Consider that children walk from their neighborhoods to school, and then from school to their neighborhoods, noting different routes for coming and for going, if conditions require.

Use the guidelines to help make decisions about selecting the route. Note, however, that these are only guidelines and do not take the place of professional judgement in choosing the best walking path at a specific site.

Form Children Into Groups: Develop walk routes that form children into groups of larger numbers so that they cross street together. More children at a crossing helps increase driver awareness and increases driver’s compliance with crosswalk laws. If large numbers of children will be gathering at crossings, chose the intersections that provide the best refuge (large shoulders or sidewalk areas) while they are waiting to cross.

Use Sidewalks, Wide Shoulders: Select routes that use sidewalks or paths, where available. Direct students to walk on the left side of the road, facing traffic on streets, whenever feasible. As a rule of thumb, have students walk the shortest possible distance on streets without sidewalks or wide shoulders. Since this is situation can be cause for concern, if no sidewalk or adequate shoulder exists, please see, “Special Considerations,” at the end of this discussion.

Select Safest Roads: Direct the walk route along the roads with the slowest speeds, the lowest traffic volumes, and the least volume of trucks. Use the information gathered from the public works departments to determine this, as well as information gathered from a visual inspection.

Consider Easements and Shortcuts: Use easements with walkways through parks or other available areas only after evaluating safety. Check the

information from the local law enforcement agency to ensure that the area is not known for drug trafficking or other illegal activity. Physically walk the route to ensure no other concerns are present on the route. Do not endorse a “student short cut” through private property.

Select the Safest Crossing Location: Determine the safest place for children to cross by visiting each potential crossing location. Check the information gathered on pedestrian features and traffic characteristics to help determine the best crossing location. Watch traffic during school commuter times to determine if natural gaps in traffic occur more frequently at one location than another. Consider what can actually be observed about visibility, speed, and parking conditions, as well as hard information already gathered when making your choice. Choose the location that offers:

- lowest traffic speeds and volumes,
- least amount of heavy truck traffic, and
- best sight distance.

Avoid using crossings where roadway curves interfere with sight distance. Choose a place free from shrubs, parked cars, or other obstacles that would interfere with the pedestrian’s view of traffic and the driver’s view of the pedestrians.

Maximize the Use of Existing Pedestrian Crossings Protections: Whenever possible, direct students to cross at intersections that have existing stop signs, marked crosswalks, traffic signals, pedestrian signals, or school safety patrol posts. Check that timing and displays are adequate for children’s skills and speed. Recommend the use of the school safety patrol to complement existing crossing controls within the school zone, if necessary.

Limit the Number of Crossings: Limit the number of crossing points within the school zone. Minimizing the number of crossings will help group children together for crossing and provide less exposure to potential conflicts with vehicle traffic. Keeping the number of crossings to a minimum also reduces the resources needed for crossing protections such as stop signs, lights, and safety patrol posts. Driver awareness and compliance is also increased by keeping the number of school zone crossing points to the smallest number possible.

Avoid Mid-block Crossings: Mid-block crossings should be designated only if they are either signalized or supervised by an adult member of the school patrol. Proper pedestrian crossing signs and enforced curb parking restrictions are necessary to assure sufficient visibility in a mid-block crossing area.

Consider Hours of Darkness, Inclement Weather: If children will be walking routes during dark hours of the morning in winter, consider selecting streets that offer lighting. If no lighting exists, consider reminding parents and children about wearing light colored or reflective clothing when walking at dawn or dusk. Remember that rain, hail, sleet, and snow change sight distances and stopping requirements for vehicles.

At the School, Keep Pedestrians Separate From Traffic: Carefully select the location where the walk route terminates at the school. Keep it well separated from car and bus loading and unloading zones. Direct students around parking lots, never through them. Cars backing out of parking spaces pose a threat to small children.

Shoulder/Sidewalk Considerations

A concern raised by many tasked with designing school walk routes is how to route children along streets and roadways which do not have adequate shoulders or sidewalks. In such cases, there is often a choice between directing the children to cross a road to walk facing traffic on a shoulder or sidewalk or to direct them to walk a short distance along the road with their backs to traffic. This decision must be made on a case-by-case basis, taking into consideration the age of the children, the width of the roadway, the volume and speed of traffic, sight distances along the roadway and at crossing points, and the walking distances involved. In general, consider the following:

Sidewalks: On roadways with sidewalks on one or both sides, direct students to walk along the sidewalk facing traffic or to cross the street, if necessary, to reach the sidewalk if it exists on only one side. Students should be directed to cross at the safest crossing.

No Sidewalks, Shoulders Same Width on Both Sides: In general, on roads without sidewalks, students should be directed to walk facing traffic. This allows them to observe on-coming vehicles and move as far to the left away from traffic as they can. However, students may be allowed to walk on the shoulder on the side of traffic for a short distance if it significantly reduces the number of road crossings they must make.

Adequate Shoulder on One Side, No Shoulder On the Other: Another situation exists when, as on some suburban and rural roads, one side of the roadway has an adequate (at least five feet wide) shoulder on one side, but a narrow or no shoulder on the other side. In these situations, the walk route designer must decide whether it is better to have children walking on the shoul-

der with their backs to traffic or to direct them to cross the road and walk on the road or the narrow shoulder facing traffic. For help deciding, consider traffic volumes:

- On roads with moderate or high traffic volumes, walking on a five-foot shoulder in the same direction as traffic flow would probably be better than walking in the traffic lane facing on-coming traffic without a safe refuge to retreat to when meeting a vehicle.
- On low volume roads, it may be better to direct the students to walk facing traffic, even if it means walking on the roadway if drivers are usually able to encroach into the other lane of traffic to avoid a pedestrian because the low traffic volume means that is less likelihood that the driver would meeting an on-coming vehicle and a pedestrian at the same time.

The walk route selected using the considerations listed above will show the suggested path between a student's neighborhood and the school, and while it may not be perfect, it should reflect the best choice given the existing walking conditions and alternates routes available. Despite efforts to make the best choice for the walk route, some routes may still present pedestrian concerns. The process of selecting a school walk route will help identify concerns so that addressing them becomes the next step. [Chapter Six, "Identifying Needed Pedestrian Safety Improvements,"](#) provides a walking condition evaluation form to help walk route developers get an overview of a route's ability to serve a student population. [Chapter Seven, "Implementing Improvements to School Walk Routes,"](#) provides tips on using education programs, enforcement activities, and engineering tools to improve safety on school walk routes.

A Final Check: After completing a draft version of the walk routes on a base map, "field check" the route one more time, walking the selected route keeping in mind a child's viewpoint (36 inches above the ground). Crouch down at intersections to ensure a child's sight lines are unobstructed. Also, consider a driver's vantage point in terms of the walk route and the visibility of students to drivers. Consider "field checking" the route by walking the route with a few children.

Finally, be sure that all signals, signs, and crosswalks are functional and in the proper location. Note if signs need cleaning or if crosswalks need fresh paint and contact the traffic engineering or public works department to notify them if this is the case.

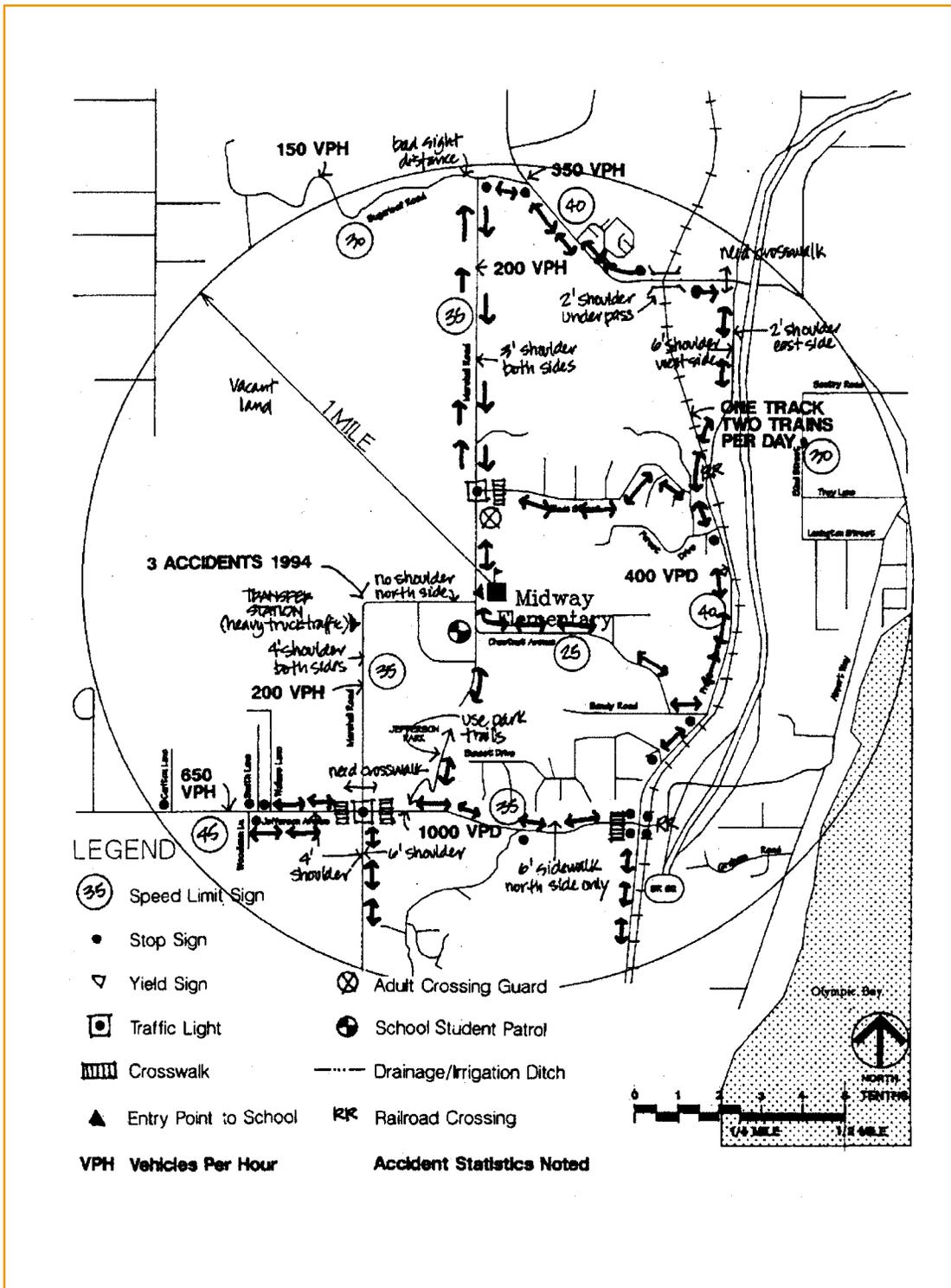


Figure 7: Walk Route Selection Map

This map is a combination of the pedestrian inventory, traffic characteristics, and walk route selection information all noted on a single map. This is a sample of how the map will look at the end of Step 5. However, this map would be too complicated to distribute to students and parents. The next step is to convey walk route directions in a clear and simple form.

When the walk routes have been selected and marked on the base map, then you'll have a map that looks similar to [Figure 7, "Walk Route Selection Map,"](#) on page 42.

Step 6: Prepare the Walk Route Map

Now that the routes to school have been selected, the next step is to create a map that presents the routes to school in a clear and concise manner. Once this map has been approved, this is the map that will be distributed to students and parents. [Figure 9,](#) on page 44, shows a route to school map that is ready to be distributed.

Start with a fresh base map and indicate the selected routes to school. Use arrows, colored lines, different line weights, or other means to illustrate clearly the selected route and the direction of travel along the road. Keep the map simple and uncluttered. Be sure to indicate which side of the road to walk along coming and returning for those roads without sidewalks or adequate shoulders on both sides.

Along with the selected routes, the map will need to illustrate features along the walking route that walkers need to pay attention to, such as:

- The school
- Entry point to school
- Crosswalks
- Traffic control devices (traffic lights, stop signs, yield signs)
- Adult and student safety patrol posts
- Other important features such as railroad tracks and crossings

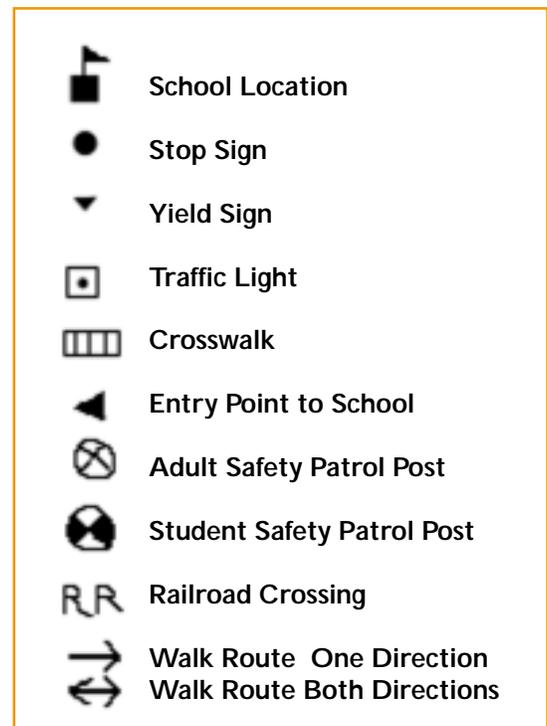


Figure 8: Symbol Key for School Walk

Use symbols to note the features and provide a key to the symbols on a corner of the map. [Figure 8](#) illustrates a key for a school walk route map.

If fitting all of the routes on one map makes the map too complicated, an alternative is breaking the map into sections and producing several different maps, one for each neighborhood or direction of travel.

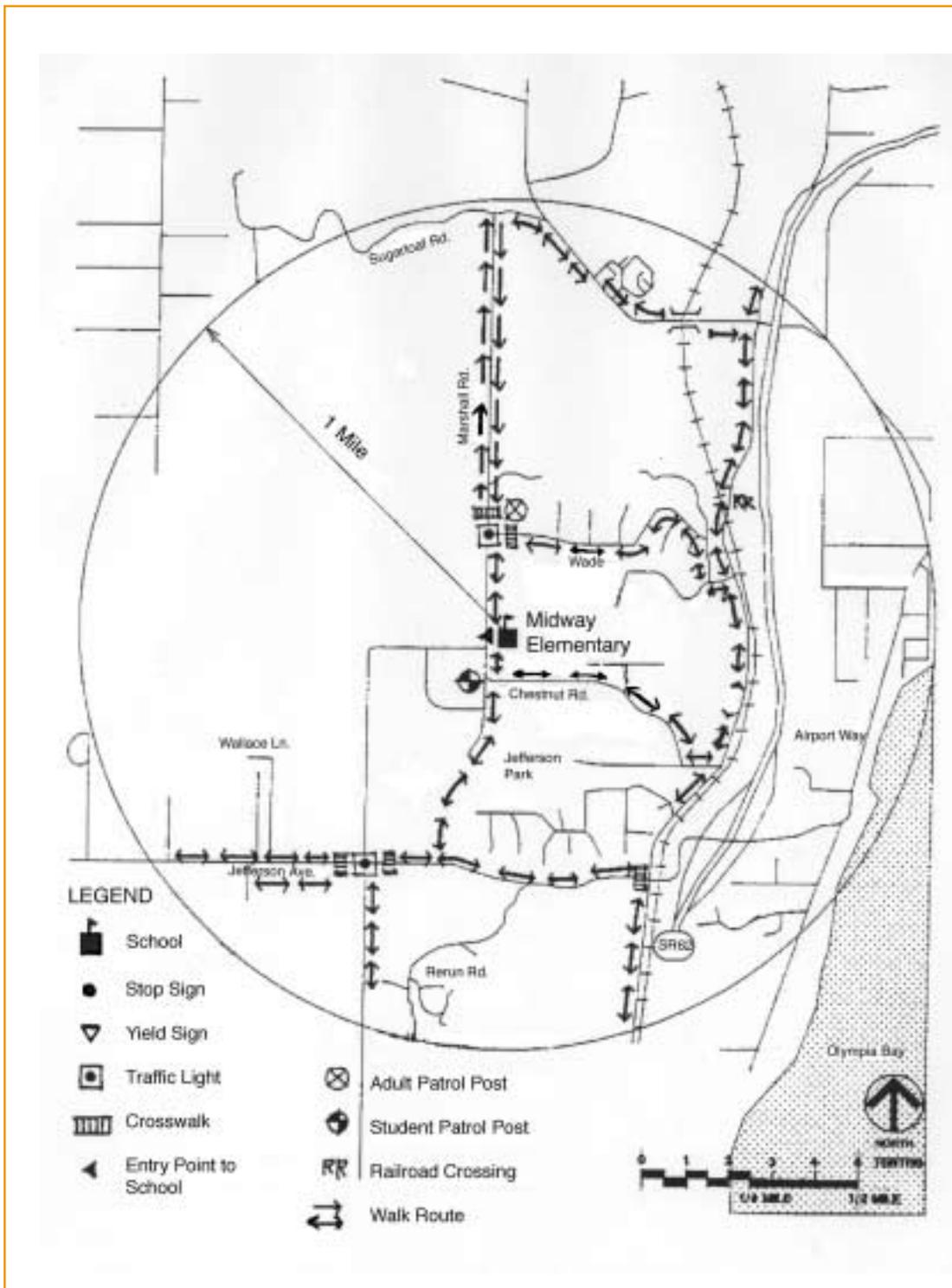


Figure 9: School Walk Route Map

Here's a sample of what the final school walk route map will look like at the end of Step 6. Only the directional route information is left on this map. It's clear, simple, and should be easy for students and parents to understand. Combined with a letter to parents (see page 46 for a sample letter), a map like this is ready to be distributed once it has been approved.

Each map should be sent home with a letter that explains the map and provides instructions on how to use it. Mention any particular features of the walk routes, such as safety patrol posts and the importance of following the patrol's instructions for crossing the street. Ask parents to review the map with their children and walk the route with them at least once, pointing out to children any potential concerns such as business driveways, alleys, railroad tracks, or other features. Include [pedestrian safety rules](#), such as those in Chapter Three on page 15, and ask parents to review the rules with their children. The letter should direct parents to tell their children to use the same route each day. It can include a tear off signature slip for parents to sign and return to school indicating they received the map, discussed it with their children, and walked the route together. A sample letter is shown in [Figure 10](#) on page 46, Sample Walk Route Instructions.

Step 7: Review the Walk Route Maps

Before sending the map and letter home with students, perform a final review process to ensure the map and instructions are clear. If the routes have been developed using the partnership approach to student pedestrian safety, then include appropriate community members in the review process. At the very least, ask the local school principal, the local police department, and local traffic engineering staff to review the information. Consider including the PTA and asking a trial set of parents and students to try out the instructions and follow the route. Depending on how the walk route program is set up in the district, the routes may need to be approved by the superintendent, the school board, or their designated representative.

Incorporate review comments into the final school walk route map and instructions before continuing on to Step 8.

Step 8: Distribute School Walk Routes to Students and Parents

Before distributing the maps and instructions to students and parents, decide exactly what will be expected. If you've asked parents to return a form saying they've received the map, then build a system to ensure that the returned forms are received. If you'll encourage parents to report any concerns they observe along the walk route, be sure to have a person for them to contact who will keep them updated on how the concerns are being resolved.

Distributing maps in the fall may also be a good time to remind parents of expected driving behaviors in the school zone and to tell them about

Figure 10: Sample School Walk Route Instructions

Dear Parents:

Walking to school each day can be part of a good exercise program that keeps your child healthy, fit, and ready to learn. Children who walk to school also help minimize parking lot congestion at our school. We have developed this school walk route to encourage walking and safe pedestrian behaviors.

This school walk route map shows the route for your child to use walking to and from school each day. By following the arrows, you will be able to find the best route between your neighborhood and the school. Mark the route from your neighborhood to the school with a colored pen or crayon.

The walk route plan has been developed based on traffic patterns and traffic controls such as crosswalks, traffic lights, and safety patrol posts. The route limits the number of street crossings children will make and seeks to group children together to increase their visibility and safety. Therefore, the route may not be the shortest way to school, but it is important that children follow the route, even if they have to walk a little farther to do so.

Please help your child become familiar with this route by walking it together. Teach your child to cross the street only at the locations indicated on the map. Practice good pedestrian behaviors with your child when walking the route together by following these safety rules:

- Do not cross the street alone if you're younger than 10 years old.
- Stop at the curb before crossing the street.
- Walk, don't run, across the street.
- Cross at corners, using traffic signals and crosswalks whenever possible.
- Look left, right, and left again before crossing.
- Walk facing traffic.
- Make sure drivers see you before crossing in front of them.
- Watch out for driveways, alleys, or other places where cars may have trouble seeing you.
- Wear white clothing or reflectors when walking at night.
- Cross at least 10 feet in front of a school bus.

Safety patrol members will be posted before and after school at the crosswalks as indicated on the map. Remember to tell your child to follow the patrol member's instructions.

This route will be reviewed yearly and may change as conditions along the route change. Please contact (individual school's contact's name) if you have any concerns regarding the walk route. Together we can work to make your child's walk to school an enjoyable part of his or her day.

Sincerely,

Your Principal and PTA

Return to your child's teacher:

I have received the school walk route map and discussed it with my child.

Parent or guardian signature _____

any school parking lot regulations the school has designed. Explain drop off and pick up locations and times, if necessary.

The *School Zone Safety Curriculum Kit and Resource Guide* produced by the Washington Traffic Safety Commission and distributed to each elementary school in fall of Fall 2001, contains the Parent's School Zone Safety Tips handout (available in seven languages). The start of school may be a good time to use this handout or another tip sheet reminding parents to drive slowly near school and stop for students and other pedestrians crossing the street.

Whether school walk routes and instructions are sent home with students or mailed directly to students' houses, there are many ways school administrators and teachers can help ensure students understand the importance of following the suggested route to school. Here are some ideas to get you started on how best to ensure the directions are followed:

- The principal can hold a special "walk to school" day in the fall where he or she meets with students as they emerge from their neighborhoods and walks with them to school following the map.
- Teachers can help students identify the route on the map that they will take from their home to school and mark the way in a bright color on their map.
- Teachers can have each student create a map of their route to school as a project. (Even students who ride buses can participate in this activity.) Students should show they understand the suggested route to school and can develop their own set of symbols to note landmarks on their maps.
- Teachers can use the maps to launch their student pedestrian safety education unit, highlighting the reasons children must follow the route and cross the streets only at the locations specified.

Step 9: Evaluate the Program

After the maps have been distributed to the students and parents, the program should be evaluated to determine whether parents and students are properly using the maps. This evaluation can be conducted through direct observation, through a phone survey, or through a written feedback form, or some combination of these.

For a direct observation, station evaluators along the routes to school at both school start and end times. Have the evaluators watch the children as they walk and note whether or not the recommended routes are being used and good pedestrian safety skills practiced. Evaluators can observe how the student pedestrians interact with traffic. Record the observations and, if needed, make changes to the walk route or conduct further student and parent education.

Another practice for obtaining feedback is to conduct either a written or a phone survey. It is not necessary to question every parent and student—a sample of 10 to 25 percent should be sufficient. Written surveys could be mailed out with the maps, or sent later to the students' homes. Questions to evaluate the program's effectiveness might include:

- Did you receive and understand the school walk route map?
- Could you read and understand the map? If not, what was confusing?
- Were the instructions provided with the map easy to follow? Why or why not?
- Did parents and children discuss the map together and walk the route together?
- Are children using the designated route each trip to school? If not, why not?
- Do you have any concerns about the designated route? If yes, please describe them.

Be sure that the feedback obtained through your evaluations is recorded and used to create future editions of the school walking route maps.

Step 10: Maintaining the Walk Route Program

Developing and distributing the school walk route maps is not a single event—it is a program that is constantly changing. It changes with the seasons and from year to year. It changes as a sidewalk is constructed and when a new subdivision is built. Despite efforts to make the best choice for the walk route,

some routes may still present pedestrian concerns and further action must be taken to improve conditions on these walk routes.

Feedback on the maps and routes may provide further action steps that need to be taken:

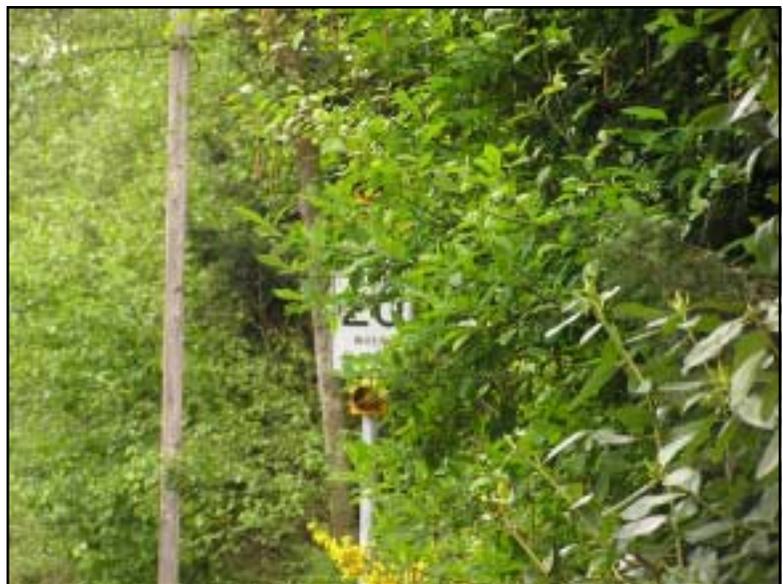
- Unsafe pedestrian behaviors by children may point to the need to conduct further safety education.
- Unsafe drivers along the walking route may point to the need to conduct parent or community outreach, or increase law enforcement activities.
- Lack of wide shoulders or sidewalks, fast traffic speeds, or limited sight concerns may point to the need for engineering improvements.

Please see [Chapter Seven, “Improving Safety on School Walk Route”](#) for information on actions that can be taken to improve walk route safety.

Annual Review: The designated walk routes for each school should be reviewed annually prior to opening school and sending the map home. Routes should also be reviewed whenever changes in the environment warrant it, such as changes in traffic patterns, start of road construction projects, new development, or changes to the school's attendance boundaries.

When reviewing the walk route, be sure to conduct a field survey and note any changes on the route. Make sure crosswalks and curb paint is clean and fresh and signs along the route are not blocked by shrubbery. Be sure weeds are not encroaching on the shoulder of the road creating a challenging walking condition. Contact your city public works department or the county planning department to correct any noted conditions.

Review the status of noted concerns along the walk route. Chapter Seven outlines ways to work with the community to resolve any walk



During the annual review, be sure to check that all road signs are clean and not blocked by shrubbery. Contact your public works department or county planning office if needed.

route concerns. Be sure to communicate with any parents or community members who have expressed concerns and let them know the status of what's being done to address the problems.

Request new traffic engineering data such as traffic counts, traffic controls, sidewalk construction plans, changes to the street network, or plans for new construction in the service area and make sure the walk route reflects any changes noted from these reports.

Once the review has been conducted, be sure that updated route maps are distributed to students and parents each fall as school opens to help establish safe walking patterns and habits that will hopefully carry throughout the school year.

Chapter Six

Identifying Pedestrian Safety Concerns

The process of developing and distributing walk route maps may have uncovered a few concerns about the walk route's ability to adequately serve the student pedestrian population. Ideally, all walk routes would have complete sidewalk systems where walk ways are separated from low volumes of traffic by planting strips, where adult safety patrol members manage all-way stop intersections with clearly marked crosswalks, and where all driver's are cautious, calm, and alert along the roadways. However, in reality, no school walk route is completely free from pedestrian safety concerns. The question is: When does a less-than-perfect environment cross the line between acceptable and unacceptable?

There is no universally accepted definition of what makes one walk route safe and the other hazardous. High speeds of traffic along a walk way does not automatically mean all children need to be bused until traffic calming measures are in place; just as low traffic volume doesn't automatically ensure a walk route will adequately meet student pedestrian needs. Rather, it takes professional judgement examining a variety of factors that should determine when safety measures are needed and how different needs should be prioritized. With this in mind school administrators should:

- examine all concerns that surface, and
- work collaboratively with community partners to evaluate concerns and seek solutions.



This school walk route includes the need for students to cross this four-lane, high-volume roadway. Adult safety patrol posts and traffic and pedestrian controls help mitigate concerns.

Identify Concerns

Develop a system to document and track pedestrian walk route concerns as they arise. Note any concerns discovered during walk route development. Encourage parents to report any concerns to school administrators. Ask local law enforcement agencies to keep school officials up-to-date on changing situations along the walk route, such as increased accident rate or any pedestrian collisions. Work with local city/county planners to identify new developments, road construction project, or pedestrian improvement plans along the walk routes.

In order to track walk route concerns, it would be helpful to establish contacts at individual schools as well as a contact at the school district level. School districts are given money to fund “transportation services” for students living within a one-mile radius of the school. This money can be used to provide bus service, fund crossing guards, or provide matching funds for local or state transportation projects intended to mitigate hazardous walking conditions. By providing district-wide coordination for walk route concerns, the district can prioritize funding improvements along the various schools’ walk routes.

Walking Condition Evaluation

Once concerns have been identified, it may be useful to apply a set of criteria to help evaluate the severity of the concern. Applying a consistent set of criteria may be useful to:

- help identify concerns when asking traffic engineers for assistance,
- discuss the problem with parents and community members,
- discuss funding needs with elected public officials,
- determine if bussing students is needed in the short term until other solutions can be implemented and
- Help prioritize numerous projects along multiple walk routes.

While applying the criteria will result in a way to prioritize pedestrian improvement projects, even lower priority concerns should be addressed. Remember that no set of criteria can cover all possibilities or combinations of conditions. Therefore, remain flexible in establishing criteria, adding and subtracting categories as determined by the individual situation.

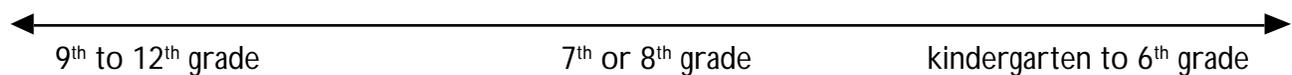
WALKING CONDITION EVALUATION

This form evaluates conditions according to a scale where the points to the left indicating a preferred environment for walking and those point closest to the right indicating a riskier environment. Use this evaluation form to get an overall picture of the walk route's ability to serve the student population and to help define the degree of the problem.

Key:



Age of Pedestrians



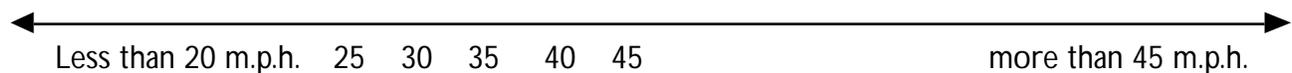
Number of Students Affected



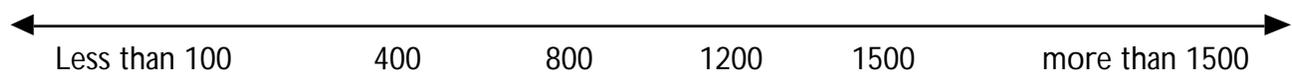
Distance from School



Posted Speed Limit



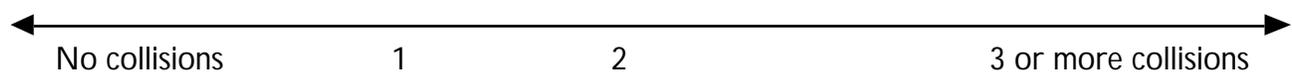
Traffic Volume (in Cars Per Hour)



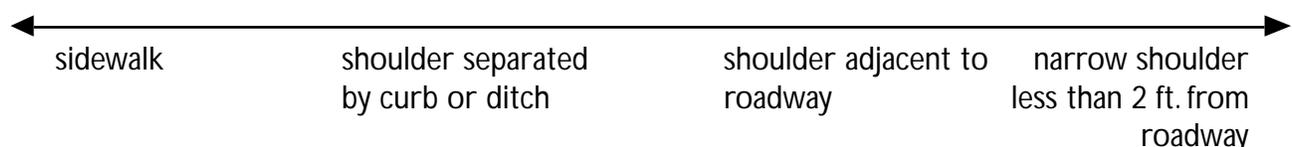
Length of Problematic Section



Collision History In Past Three Years



Type of Walkway

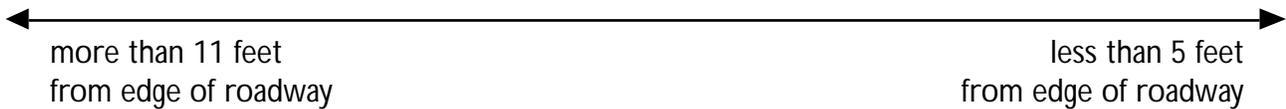


Evaluate Shoulder Considerations

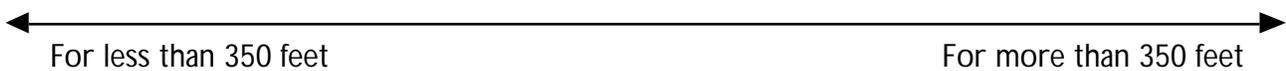
Shoulder Separated from Roadway by Curb or Ditch



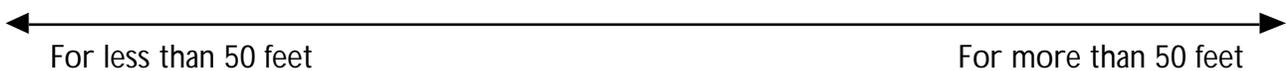
Shoulder Adjacent to Roadway



Narrow Shoulder (less than 2 feet wide) Adjacent to Roadway



Narrow Shoulder (less than 2 feet wide) With Bridge or Underpass

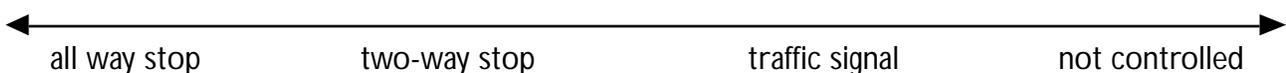


Crossing Considerations

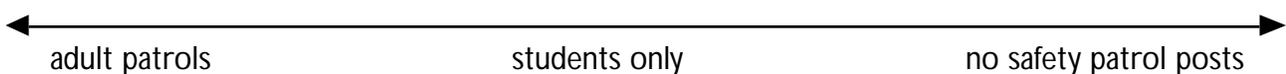
Crossing Width



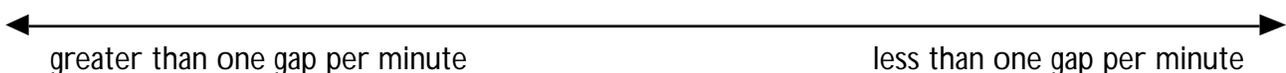
Crossing Controls



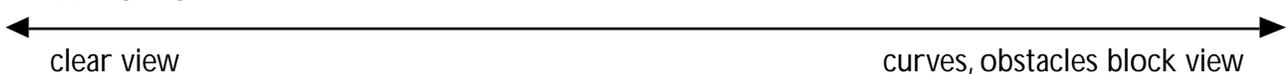
Safety Patrol Posts



Natural Gaps in Traffic



Stopping Sight Distance

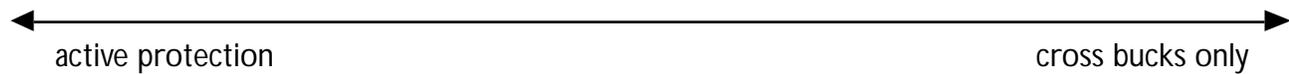


Railroad Crossing Consideration

Number of Tracks



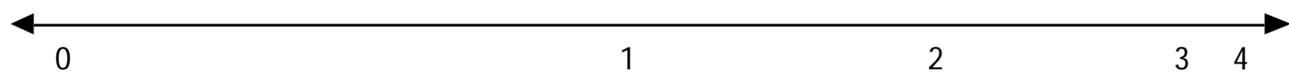
Type of Protection



Speed of Trains



Number of Trains During School Commute Times



Driver Behaviors

It is important to also observe and evaluate driving behaviors along the walk route. In a recent survey of Washington State elementary school principals, unsafe driving behavior tops their list of concerns. Education, enforcement, and engineering solutions can be found to solve many problems along the walk route that involve unsafe drivers. Please note if any of the following driving behaviors are consistently observed along your walk routes:

- Speeding on walk route
- Speeding in school zone
- U-turns (middle of road, turning into private driveways)
- Parking too close to or on crosswalk
- Parking on shoulder when it blocks walking path
- Parking where it blocks sight distant at crossing points
- Failure to stop for pedestrians waiting to cross
- Vehicles encroaching on crosswalks before pedestrians are one and a half lanes away
- Inattentive driving
- School parking lot congestion
- Vehicles parking in the bus pick-up and drop-off zone
- Vehicles lined up in the street at drop-off and pick-up times

After marking each scale that applies to the section of the walk route, look to see if many of the marks fall far to the right, indicating more risk for student using this route to school. Some risks can be balanced by other more ideal conditions, for instance a crosswalk without any crossing controls can be made safer with the addition of a safety patrol post and the existence of adequate gaps in traffic. See [Chapter Seven, "Implementing Improvements to School Walk Routes,"](#) for a discussion on developing solutions to these concerns.

Chapter Seven

Improving Safety on School Walk Routes

Once walk routes have been developed and pedestrian concerns identified and evaluated, it's time to seek appropriate solutions. Some conditions along the walk route can be addressed by low-cost solutions, while some may require long-term, more expensive resolutions.

Solutions to walk route safety concerns fall into three categories: education, enforcement, and engineering, and some of the best solutions employ all three. That is why it is so important to work on finding solutions with a broad-based community partner approach. (Please see [Chapter Four, "The Partnership Approach to Student Pedestrian Safety,"](#) for a full discussion on identifying and working with community partners.)

Education Programs

Teach pedestrian safety to students as part of their classroom curriculum. (Please see [Chapter Three, "Elements of Student Pedestrian Safety Education,"](#) for details.)

Provide information to parents about their responsibilities to model good pedestrian behaviors. If a school has developed drop-off and pick-up areas or other parking lot or school zone procedures, make sure parents are reminded of what's expected of them. If bad driving behaviors plague the walk route, educational outreach to parents often goes a long way towards improving behaviors. [Figure 11, "Solving Unsafe Driving Behaviors,"](#) on page 58, provides an example of a low cost solution to improving safety in the school zone through an education campaign.



Educating parents and students about pedestrian safety and school walk routes can go a long way towards keeping your walk routes safe.

Figure 11

Solving Unsafe Driving Behaviors

“School Zone Safety Curriculum Kit and Resource Guide,” published by the Washington Traffic Safety Commission, recommends the following steps for dealing with unsafe drivers:

1. Size up the situation. Contact local law enforcement officer. Observe typical problem behaviors and ask for advice.
2. If many of the unsafe drivers are parents, conduct a parent education outreach. The “School Zone Safety Curriculum Kit and Resource Guide” contains, “Parents’ School Zone Safety Tips.” This master, which comes in English and six other languages, is designed to be copied and sent home to parents. It reminds them of the laws: 20 m.p.h. in a school zone, stop for pedestrians in crosswalks, stop for school buses. It can be used to launch an educational campaign.
3. Develop a plan for confronting unsafe drivers. An adult staff member could let a driver know when they have broken a rule. The adult should approach the driver (when stopped) and describe the problem: “You stopped in the crosswalk to let your child out of the car,” and the desired behavior: “Next time please let your child out in our designated drop off area. When drivers stop on or near the crosswalk it creates a hazard and makes it hard for me to safely cross the students who walk.” It is important to let drivers know when they didn’t follow the rules, whether they broke a law or just school policy. By confronting the problem driver you let other drivers know what’s not acceptable.
4. Work out an enforcement plan with a law enforcement officer. In many areas, adult patrol members or other staff members fill out a report on unsafe drivers that lists the license plate number, the car description, the day, and the time; and describes the problem behavior. If a car is speeding through the school zone and is not a part of the school community, this method may be the only way to reach the driver. The report is sent to the officer who checks that the license and vehicle description match and then sends a letter to the registered driver regarding the complaint. If the officer receives a second complaint with the same vehicle, then the officer makes personal contact with the vehicle’s owner to issue a warning.
5. Communicate with parents again. Send another letter home to parents describing the ongoing problem and letting them know what measures are being taking to solve the problem. Let them know who has been assigned to talk with unsafe drivers and that the school will be sending reports to law enforcement.
6. If these steps do not improve driver behavior, ask the district law enforcement officer to make his presence known before and after school. Consider an engineering improvement to help with the problem.

Enforcement Activities

Enforcement efforts can go a long way towards improving safety for students along the school walk routes. Visible enforcement efforts remind both drivers and pedestrians to follow the rules. The law enforcement agency should visit the school site frequently and patrol the school routes, giving warnings or tickets to pedestrians and drivers as they are warranted. Enforcement activities which contribute to better student pedestrian safety include:

- Enforcing parking restrictions near schools to prevent traffic jams caused by illegally parking during pick up and drop off times, ensuring that parked vehicles do not block sight lines for pedestrians or other drivers;
- Strictly enforcing speed limits along the streets near schools and in school zones;
- Enforcing Washington's crosswalk law that requires drivers to stop and remain stopped to allow a pedestrian to cross the road in a marked or unmarked crosswalk; and
- Warning pedestrians to cross at crosswalks.



The City of Lacey Police Department practices community policing—sending the same officer to answer questions and provide enforcement at the same schools each time. Here, Traffic Officer Don Arnold provides school safety patrol training to new recruit Andrew Baldwin.

Many law enforcement jurisdictions have established neighborhood “speed watch” programs. These programs are designed to educate, remind, and warn drivers of reduced speed limits in neighborhoods or school zones. The program provides volunteers with a speed limit sign, radar gun, and a speed reader board which shows the approaching vehicle's speed. Although not enforcement per se, these activities can be effective in reducing vehicle speeds through school zones and demonstrate another way to build community partnerships.

Engineering Solutions

A variety of street design techniques can reduce traffic volumes, decrease speed, and improve safety. Some engineering solutions, moreover, don't require large expenditures, such as posting signs, re-timing lights, or re-painting crosswalks and bike lanes. While new engineering techniques for improving pedestrian safety are continually being developed, the following list provides some examples of techniques that can be used.

Traffic Calming: Measures designed to reduce traffic volume and speed through a neighborhood area are generally called traffic calming measures. These steps can include curb extension, roundabouts, curb radius reductions, modified intersections, refuge islands, full medians, narrowing the width of the road, or many other measures. The idea with traffic calming is to take a holistic approach to the entire area, not just to move traffic off one street only to impact a different street.

Speed Humps or Tables: Unlike their predecessor the speed bump, humps and tables are parabolic or trapezoidal in shape, longer, not so noisy, and easier on cars. Speed tables, when used as a raised crosswalk, bring the crossing up to the level of the sidewalk, slowing traffic and increasing pedestrian's visibility.

Barriers: Traffic diverters, medians, islands, and other barriers can discourage or eliminate through traffic on selected streets along a designated school walk route.

Crossing treatments: Curb extensions, high visibility markings, enhanced signing, traffic signals, in-pavement pedestrian activated flashing lights, and angled crossings are examples of crossing treatments that could improve pedestrian safety at some crosswalks.

This partial list of possible engineering improvements is provided only to give an idea of what type of treatments might be available to address a particular concern. A traffic engineer can discuss what treatments would provide the best solution and be the most cost effective.

Listed below are a few guidelines to consider when implementing engineering improvements:

- No physical improvements or operational measures should be initiated without the appropriate level of review, engineering study, and/or justification by the local public works agency.
- Actions taken must meet all applicable laws and standards.
- Selected actions should address specific pedestrian safety concerns in a safe and cost-effective manner.

- School districts must provide support through financial commitments and by providing adult crossing guards where appropriate for safety.

An Example:

City of Bellevue's School Crosswalk Enhancement Project

The City of Bellevue's School Crosswalk Enhancement Project provides an example of how education, enforcement, and engineering solutions can improve safety in a school zone. In a two-year project, the city worked with schools to identify traffic concerns.

The first year of the project focused on changing driver behaviors through education programs, enforcement activity, signing, and pavement marking. In the second year, physical engineering improvements were installed if the problem behaviors had not improved. At Somerset Elementary and Bennett Elementary the city installed raised crosswalks, curb extensions, and bollards. At both schools there was a history of drivers speeding through the school zone and parking on or near the crosswalks. The raised crosswalk acts like a gentle, smooth speed bump to reduce vehicle speeds and to make students more visible as they cross. Curb extensions, or curb bulbs, bring a semicircle of sidewalk out into the crosswalk. This shortens the pedestrians' crossing distance and eliminates parking on or near the crosswalk providing an unobstructed view for the pedestrians. The bollards (three foot posts) are positioned back from the edge of the curb extensions to keep pedestrians a safe distance back from the road. Plaques were installed on the bollards with tips on how to safely cross the street. These improvements reduced average speed through the school zone and eliminated parking near the crosswalks, making a safer pedestrian environment.



Raised crosswalks, curb extensions, and bollards were installed in this school zone in Bellevue as part of a two-year project to change driver behaviors. Education and enforcement, as well as less expensive signing and pavement markings were also used.

Five Steps to Develop and Implement Pedestrian Improvements

School administrators can use the following five steps to develop and implement pedestrian safety improvements along school walk routes. Please modify and assign responsibility for overseeing this process as fits your district and situation.

1. Identify safety concerns along the school walk routes.
2. Work with community partners to identify possible solutions and prioritize issues.
3. Divide concerns into categories: long-term project, short-term project, project already in-progress, and “no action” location.
4. Assign responsibilities and timelines.
5. Seek public support for solutions and funding.

Step 1: Identify safety concerns along the school walk routes.

Chapter Six, “Identifying Pedestrian Safety Concerns,” provides methods for identifying and evaluating pedestrian safety concerns along the school walk route. As concerns are gathered, develop a list of the location and type of each one. Use the school walk route maps to indicate each location in question. If there are many locations, it may be helpful to develop a numbering system to identify each location. Document the location, description and extent of the concern, number and grades of children affected, and any special considerations.

Step 2: Work with community partners to identify possible solutions and prioritize issues.

Gather representatives from city public works, county planning, and/or state department of transportation (depending of who maintains the road in question) as well as representatives from local law enforcement agencies, school administrators, and parents (especially any who have expressed concerns about pedestrian safety issues). There may be other public agencies who are responsible for sections of the roadway along the walk route such as: parks department, cemetery district, port district, fire district, drainage district, utility division, Department of Natural Resources, or Forest Service. Even private owners of easements such as power company, water company, neighborhood associations, or railroads could be affected by pedestrian improvements along school walk routes. Be sure to have representation from the entities affected by plans. Hopefully, your community partners have been involved with student pedestrian and trip safety plans from the beginning.

Together go over the concerns. Discuss possible education, enforcement, and engineering solutions. Some solutions may be immediately obvious, such as developing a parking lot flow plan, educating parents about expected

driving behaviors, or providing greater visibility enforcement. Others may require that further studies be conducted.

Seek to implement the easy fixes, such as directing students to take a different route (not likely if walk route was designed recently and updated yearly), adding adult safety patrol posts, or sending information home to parents.

Decided who will study solutions to the more complex problems and set a timeline for these solutions to be presented.

Step 3: Develop a plan

As possible solutions surface, develop a plan that prioritizes and categorizes the solutions. Consider dividing the concerns into categories: long-term project, short-term project, project already in-progress, and “no action” location.

Long-term projects: Engineering solutions to pedestrian safety concerns sometimes involve projects that will take a long time to implement and will require funding sources. Therefore, the concerns that require such long-term solutions need to be clearly prioritized by the school district to reflect their priorities, available funding, and local political considerations.

Short-term projects: Low cost, immediate actions projects can be identified and implemented quickly to improve pedestrian safety. These types of projects can include:

- Developing a system to confront dangerous driving behaviors (See [Figure 11: Solving Unsafe Driver Behaviors](#), on page 58).
- Enforcement emphasis patrols by local law enforcement officers coupled with notes home to parents informing them of increased enforcement efforts.
- Shoulder repair or widening with local maintenance crews.
- Signs, pavement marking, fresh paint.
- Creating safety patrol posts. (Note: any new locations for safety patrol posts should be evaluated for adequate lines of sight and, if uncontrolled by traffic light or stop signs, for adequate traffic gaps.)

Projects already in-progress: Public works representatives can identify locations where planned pedestrian or roadway improvement projects will affect the pedestrian concern being discussed. The jurisdiction's Six-Year

Transportation Improvement Program (TIP) is a good source for such information. If such a case exists, the proposed roadway improvement project can be reviewed to see if a minor modification is needed to remedy the pedestrian safety concern at little to no additional cost.

If it will take several years before the planned project will be implemented, the need for any interim remedial actions should be discussed.

No Action Locations: Some rare pedestrian safety concerns are unavoidable or are not correctable by education, enforcement or traffic engineering solutions. These could include:

- Walking along high speed, high volume roadways.
- Walking along too narrow or non-existent shoulders where building adequate shoulders is infeasible, impractical, or cost-prohibitive.
- Railroad tracks with a high number of trains that effect only a limited number of students.

Sometimes engineering solutions are not financially feasible in the next six years (per the jurisdiction's planning cycle). When many different locations are being addressed, it may be helpful to concentrate on those where solutions are practical and assign these difficult locations to the "no action" category for the time being. As other concerns are addressed, revisit the locations in this category periodically to see if new funding sources have become available or if new engineering solutions have been developed. In the near term, discuss if such situations require that students be bused.

Step 4: Assign responsibilities and timelines

As the plan for improving student pedestrian safety begins to take form, it will probably be obvious who will be responsible for which parts. Be sure to decide how progress will be communicated.

Actions which require a financial commitment by the school district could include:

- funding flashing beacons or other small engineering improvements,
- providing a local matching share for federal or state grants, or
- providing paid adult crossing guards.

Such actions will probably require action and approval by the superintendent or the school board. Make sure they have been kept informed of plans and had a chance to provide input on the prioritized list of improvements and that their priorities are reflected in the list.

Step 5: Publicize and seek support for solutions and funding

Public input on proposed solutions to pedestrian safety concerns is an important step to continue the cooperative effort among the school and local agencies. For grants using federal funds, there are often specific requirements for public involvement during the project development. Community comments would be especially useful for capital improvements such as new sidewalks or pedestrian overpasses—which benefit the entire community, not just school children. In addition, local elected officials usually give preference for funding projects with broad, visible community support. Plan to publicize proposed solutions to the community and seek their input. Be sure to contact elected officials, seek their support for the project, and keep them informed as the project progresses.

Funding school pedestrian safety improvements takes an innovative and concerted effort to seek funds from as many sources as possible. If school walkways and bikeways are a priority for the community, a portion of the local transportation budgets could be allocated for these types of projects. In some jurisdictions, as much as one-third of the transportation budget is funded by property tax revenues. The safety benefits of pedestrian and bicycle facilities can have a real dollar benefit to the community through fewer injuries, lower medical and health care costs, and lower insurance premiums for community members.

Funding considerations involve setting priorities, matching needs with special purpose grant programs, and programming general transportation funds for pedestrian safety improvements in the most cost-effective manner.

Considering the rapidity of change in transportation funding, explore as many options as possible for tapping a variety of sources, such as Washington State Department of Transportation grant programs, Washington Traffic Safety Commission, County Road Administration Board, Transportation Improvement Board, metropolitan planning organizations, and local health and safety organizations. (Please refer to [Appendix A, “Ideas and Resources for Student Pedestrian Safety,”](#) for a list of potential funding resources.)

School districts receive funding from the state based on the number of kindergarten through fifth grade students in the district living within a one-mile radius of their school. These funds can be spent by the district for additional buses, for crossing guards, or as matching funds for local and state transportation projects intended to improve pedestrian safety.

Appendix A

Ideas and Resources for Student Pedestrian Safety

AAA Washington
1745 114th Ave. SE
Bellevue, WA 98004-6930
(206) 462-2222

- Excellent source of materials, teachers guide and curriculum material, brochures, color books, colorful posters and a number of videos relating to child pedestrian safety and traffic. Brochures for parents such as, The Safest Route to School, Parents Can be Serious Traffic Hazards, Preschool Children in Traffic. Supplies crossing guard patrols equipment and recognition.
- Films and videos sold at cost or loaned at no charge. Printed material sold at cost.
- Information also available from local service centers.

Harborview Injury Prevention and Research Center
325 9th Avenue, Box 359960
Seattle, WA 98104-2499
(206) 521-1520
Coordinator, Child Pedestrian Safety Programs
(206) 521-1534

- *Wary Walker Child Pedestrian Safety Curriculum*. Excellent K-4 program with intensive “hands-on” parent/child activity component; a school-based curriculum consisting of five classroom lessons and an outdoor video field day. The safety skills are taught by combining “real life” activities, modeling, and positive reinforcement. Videos, fun activity sheets, pedestrian safety rap song, a Map to Safety, and other interesting props.
- Assistance available to organize and conduct childhood injury prevention projects.
- A catalog of materials developed by HIPRC is available.
- Materials available at no charge or cost of production and distribution. A catalog of materials is available.

Washington Traffic Safety Commission
1000 South Cherry PD-11
Olympia, WA 98504
(360) 664-8426

- Grants available to Washington schools to develop pedestrian safety programs.
- Pedestrian program materials such as brochures, video, fact sheets, and promotional items at <http://www.wa.gov/wtsc>.
- Master copies of materials available; some materials in quantity. No charge for materials.

Children's Resource Center, Children's Hospital and Medical Center
PO Box C5371
4800 Sand Point Way NE
Seattle, WA 98105
(206) 789-2306

- Information, educational materials and programs are available on childhood injury prevention topics via Children's Resource Line, Children's Resource Center, Speakers Bureau, etc.
- Most materials are available for loan or free of charge in limited quantities. Speakers are available on a limited basis.

Washington State Department of Health
Office of Emergency Medical Services and Trauma Systems
1112 SE Quince Street
Mail Stop ET-40
Olympia, WA 98504

- Consultation and technical assistance is provided to eight regional EMS councils to implement injury prevention and public education activities.
- Inquiries about local activities and contact people should be made to this office.

National Highway Traffic Safety Administration
U.S. Department of Transportation
Jackson Federal Building, Room 3140
915 2nd Avenue
Seattle, WA 98174
(206) 220-7640
www.nhtsa.dot.gov

- Films, brochures, flyers, and videos are available on vehicle, bicycle, pedestrian, motorcycle, and traffic safety, including use of air bags, safety belts, and child safety restraints. A program specialist is also available for presentations, training and/or lectures on these subjects.
- Statistical information and facts are available on the above topics.
- Films and videos are available on a loan basis only. Brochures, flyers, and handouts available on a very limited basis.
- Safe Routes to School/Safe Streets Toolkit download available.

Office of Superintendent of Public Instruction
P.O. Box 47200
Olympia, WA 98504-7200
(360) 753-0235
(360) 586-3946 fax

- Materials to assist in presentation of basic rules of school bus ridership. Includes some pedestrian safety.
- MY SCHOOL BUS video, teacher material, take-home pamphlet.

National Bicycle and Pedestrian Clearinghouse

1506 21st Street, NW Suite 200

Washington, DC 20036

(202) 463-8405 PHONE

1-800-760-NBPC

(202) 463-6625 fax

- Designed to be a central point of contact for organizations. Database of information including research, program materials and audiovisual materials Monday-Friday 9am to 5pm.
- <http://www.bikewalk.org>

National Association for the Education of Young Children (NAEYC)

1509 16th Street NW

Washington, DC 20036

(202) 232-8777

1-800-424-2460

- WITS Program, a series of colorful storybooks that provide a complete foundation in traffic safety.
- Storybooks introduced at six month intervals.
- Nine parent guides about a child's developmental level.

Walkable Communities, Inc.

320 South Main Street

High Springs, FL 32643

386-454-3304 or 386-454-3306 FAX

www.walkable.org

- A variety of publications on walking, traffic calming, and crossings available as downloads.

Partnership for a Walkable America, National Safety Council

1121 Spring Lake Drive

Itasca, IL 60143-3201

(630) 285-1121 or (630) 285-1315 FAX

www.nsc.org/walkable.htm

- Walk Our Children to School Day information
- Walkable America Checklist

Puget Sound Regional Pedestrian Safety Coalition

Meets Quarterly at the Washington Traffic Safety Commission

(360) 664-8426, (360) 586-6489 fax

- Groups interested in traffic and pedestrian safety meet quarterly to share resources.

Transportation Research Board

500 Fifth Street, NW

Washington, DC 20001

(202) 334-2934

<http://trb.org/>

- Publishes the Relative Risks of School Travel: A National Perspective and Guidance for Local Community Risk Assessment.

School Bus Information Council

(888) FOR-SBIC or (888) 367-7242

<http://schoolbusinfo.org/>

- School Bus Information Reports
- Key Safety Equipment Requirements
- School Bus Facts

Community Organizations and Agencies: Many other organizations and agencies are involved in childhood injury prevention. Suggested groups to contact for ideas, materials, and assistance in your area include:

- Police department
- Fire department
- School District Health Services
- Health Professionals
- Youth Organizations
- Service Organizations
- Media Representatives
- Hospitals
- Local or County Health Departments and Districts

Appendix B

Practical Tips for Opening a New School

The Beginning

1. Give preference to sites that are easily connected to existing pedestrian systems.
2. Notify appropriate governmental agencies at the very beginning of the school planning process that walkways will need to be developed.
3. Work with school planners to develop building access from yet-to-be-developed walkways and sidewalks, keeping in mind pedestrian safety. Look for ways to separate bus zone locations from other vehicle traffic. Consider pick-up and drop-off zones that won't interfere with traffic flow and will allow children to exit onto a sidewalk or pathway.
4. Meet with your community partners (schools, local government jurisdictions, local law enforcement agencies, parents, and others). Discuss student pedestrian safety needs and concerns. Brainstorm innovative ways to ensure pedestrian and walk route safety. Consider alternative pathways such as from an apartment building to a back entrance at the school. Discuss signing, signals, safety patrol posts, lighting, and sources for funding. Outline needed education, enforcement, and engineering improvements initiatives.
5. Prioritize and set time lines for goals that result from meeting with community partners.
6. Develop school walk routes.

Spring Before School is Opened

1. Meet with new school parent group to discuss the walking plan for the school. Include community partners in meeting.
2. School officials and parents can field test the walk routes, walking from the school to neighborhoods and noting any concerns.
3. Publish and distribute walking route information in letters home, newsletters, or local newspaper. Collect any concerns and work to mitigate them.

4. Discuss school walk routes, safety patrol membership, and other pedestrian safety issues at any “open houses” held prior to school starting.

When School Opens

1. Distribute school walk route maps to students and parents.
2. Continue working with community partners to implement improvements.
3. Review pedestrian safety programs yearly.

Appendix C

Metropolitan Planning Organizations

Each Metropolitan Planning Organization (MPO) in Washington serves a very diverse population and provides a forum for cities, counties, ports, transit agencies, tribal nations, school districts, health organizations and the state to work together on regional issues and develop transportation plans for their regions. There are currently nine MPOs across the state. Most serving several counties and urban areas.

Benton Franklin Council of Governments

1622 Terminal Drive
Richland, WA 99352
Phone: 509-943-9185
www.wa.gov/bfcog/index.html

Thurston Regional Planning Council

2404 Heritage Court SW #B
Olympia, WA 98502
Phone: 360-786-5480
www.trpc.org

Cowlitz-Wahkiakum Council of Governments

207 4th Ave. North
Kelso, WA 98626
Phone: 360-577-3041
www.cwcog.org

Wenatchee Valley Transportation Council

300 S. Columbia Street
Wenatchee, WA 98801
Phone: 509-669-2906

Puget Sound Regional Council

1011 Western Ave., Suite 500
Seattle, WA 98104
Phone: 206-464-7090
www.psrc.org/contact.htm

Whatcom Council of Governments

314 E Champion Street
Bellingham, WA 98225
Phone: 360-676-6974
www.wccog.org

Southwest Washington Regional Transportation Council

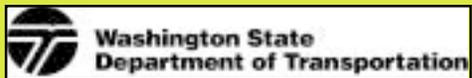
1351 Officers Row
Vancouver, WA 98661
Phone: 360-397-6067
www.rtc.wa.gov

Yakima Valley Conference of Governments

6 South Second St., Suite 605
Yakima, WA 98901
Phone: 509-574-1550
www.yvcog.org

Spokane Regional Transportation Council

221 W. First Avenue, Suite 310
Spokane, WA 99201
Phone: 509-343-6370
www.srtc.org/index.htm



Washington State Department of Transportation
310 Maple Park Avenue SE
P.O. Box 47390
Olympia, WA 98504-7390
(360) 705-7070
www.wsdot.wa.gov

Douglas B. MacDonald, Secretary of Transportation
David Sorensen, Traffic Technology Engineer



Washington Traffic Safety Commission
1000 South Cherry Street
P.O. Box 40944
Olympia, WA 98504-0944
(360) 753-6197
www.wa.gov/wtsc
John Moffat, Director
Lynn Drake, Program Manager