

City of Longmont School Safety Program



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Public Works and Natural Resources
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1.0 Introduction

Safe student access to Longmont's schools is important to everyone in the community. The responsibility of providing safe walking and travel conditions and to develop safe habits and self-reliance among school children is shared by the St. Vrain Valley School District (SVVSD), private school administrators and staff, the City of Longmont, parents, students, and the general public. School and City officials attempt to provide safe travel conditions and help teach safe travel techniques. Parents have a responsibility to teach their children the importance of traveling safely, following recommended routes, and safely coping with traffic along roadways and at crossing locations.

As part of this effort, the City of Longmont, in cooperation with the SVVSD, has been operating a school safety program for many years. The program consists of developing safe walking routes to school, signing and marking of school crossings, establishing reduced school speed zones, installing improvements such as neckdowns (bulbouts) near schools, providing paid adult crossing guards at many school crossings, and providing police support and enforcement.

Uniform application of school safety measures can improve safety benefits by promoting uniform behavior by all roadway users: motorists, pedestrians and bicyclists. Inconsistent, unnecessary, and even inappropriate school traffic controls are more frequently ignored by drivers, often provide a false sense of security to students, and in the end may not create safer conditions for school children. Motorist disrespect of unwarranted or unnecessary traffic control devices can carry over to devices that are truly needed, making the entire school safety program less effective.

It is recognized that older students are more capable of walking to / from school than younger students. School safety programs in many, if not most, other communities are intended for elementary schools only. Longmont's school safety program is primarily targeted at younger students in elementary school, but most program features are also available to middle school students. While this school safety program is not intended for high schools, safe access issues at high schools will be evaluated on a case by case basis.

The purpose of this effort is to describe the school safety program and provide guidelines to help determine when and where various school safety measures should be applied. It is intended that these program guidelines and policies will be consistently applied to all Longmont schools, public or private.

This program has been developed based on similar programs used by other jurisdictions and national school safety best practices. The program will utilize the City of Longmont *Pedestrian Crossing Treatment Guidelines* and will adhere to the *Manual on Uniform Traffic Control Devices* (MUTCD), which has been adopted by the City of Longmont and the State of Colorado as the standard for the placement of all traffic control devices.



2.0 Recommended School Route Maps

A primary goal of our school safety program is identification and promotion of recommended walking routes to school. These routes and route maps serve several purposes:

- 1) Identify recommended routes with sidewalks, safer crossings, and other safety features,
- 2) Help identify where pedestrian treatments may be needed,
- 3) Encourage children to travel safely together and be more visible to drivers,
- 4) Provide safety tips and information to students and parents.

Recommended school routes should allow children to utilize safety measures and traffic control devices, and minimize exposure to high volume streets. Routes should be as direct as possible, recognizing that children tend to follow the shortest route to school. However, children may be required to walk longer distances to avoid hazardous locations or utilize existing safety features.

Policy

Recommended School Route maps for elementary schools in Longmont will be developed by City staff, with assistance from school officials. They will be provided at the beginning of each school year for distribution to the school children and parents. Routes and maps will also be established for middle schools when needed.

Map will identify the school, school speed zones, marked crosswalks, crossing guards, traffic signals, other traffic devices, recommended safe routes, and will include safety tips for students and parents. Deviations from the shortest route may be necessary to avoid hazardous locations and take advantage of existing safety features.

Spanish maps will be developed upon request.



3.0 Safe Access Area

The Safe Access Area is the area immediately adjacent to the school where students arrive and depart by foot, bicycle, and automobile during regular school days. This Safe Access Area typically exists at or near the main school entrance, and would include sidewalks, paths, and the public roadway adjacent to school property.

Policy

The Safe Access Area shall be dedicated to the safe arrival and departure of students by all modes of travel. Within this area, traffic control devices should provide safe and efficient arrival and departure conditions for students.

Parents will not be able to leave their vehicles unattended in the School Access Area within public right of way except in designated parking areas or as otherwise posted. Student drop-off and pick-up in the public right of way that creates unsafe conditions may be restricted.

City staff is willing to work with school officials in order to improve safety and efficiency for students and the general public during school drop-off and pick-up periods.



4.0 School Crossings

A School Crossing is a location where high concentrations of student pedestrians cross a roadway. School crosswalks are intended to warn drivers that children cross at these locations on their way to/from school. They also help direct children to the proper place to cross and congregate children to make them more visible to drivers.

School crosswalks are essentially the same as standard crosswalks, except that they indicate a significant level of school children can be present and are marked and signed differently. The City of Longmont will utilize our Pedestrian Crossing Treatment Guidelines for installing school crosswalks and standard crosswalks, which consider levels of vehicular traffic traveling along the street, pedestrian traffic crossing the street, and other roadway factors. When measuring pedestrian traffic crossing the street, these guidelines assume that each elementary and middle school age child counts as two pedestrians, while high school students are counted as one pedestrian.

The use of adult crossing guards and school speed zones at some school crossings recognizes that children and adult pedestrians have different abilities and needs. Similarly, some standard crossing treatments may not be appropriate at school crossings. City staff will evaluate and determine appropriate use of these types of standard crossing treatments at school crossings.

Policy

School Crossings shall be located near schools along designated safe school routes, in order to direct students to specific crossing locations. Placement should accommodate preferred paths of students and recognize that students will not travel far out of their desired route. Installation and removal of marked school crossings will be determined by City staff based on the City of Longmont Pedestrian Crossing Treatment Guidelines. High Visibility markings and signing is typically used at school crossings.

City staff will also evaluate installation and removal of other treatments at school crossings, such as bulbouts (or neckdowns), center median refuges, variable speed radar signs, and additional signing, based on our Pedestrian Crossing Treatment Guidelines. Installation of additional treatments will occur as funds are available. When adequate funds are not available for multiple locations that meet guidelines for additional treatments, City staff may prioritize these locations based on criteria such as Crossing Guard Threshold Criteria described below.

All school crossing treatments will adhere to the current Manual on Uniform Traffic Control Devices (MUTCD). City staff will evaluate pedestrian crossing treatments not included in MUTCD's Chapter 7, Traffic Controls for School Areas, to ensure their appropriateness for students using the crosswalks.



5.0 School Speed Zones

A School Speed Zone is a section of roadway where the speed limit is reduced to 20 mph during specific times of regular school days to assist students as they arrive at and depart from school.

School Speed Zones are intended to reduce vehicular speed in order to provide more time for drivers to recognize and react to school children and Adult Crossing Guards within and along the public roadway. They also allow school children, especially young children, to anticipate vehicular movements and safely cross the road. Finally, reduced speeds help students arrive and depart safely in the Safe Access Area when there can be high levels of walking, bicycling and motor vehicle activity for short periods before and after school.

There is much research about the effectiveness of School Speed Zones, and most studies have concluded that vehicular speeds are measurably reduced within the zone. School Speed Zones are an important tool in Longmont's School Safety Program, and are present at school crosswalks with Adult Crossing Guards and some unprotected crosswalks (no stop sign or signal).

Inappropriate use of School Speed Zones at unnecessary locations imposes excessive driver delay and frustration, leading to disrespect and non-compliance of traffic control devices at these and other locations. This in turn provides a false sense of security for students. It is important that School Speed Zones be installed in a consistent and appropriate manner. These guidelines also identify locations where existing school speed zones should be removed if conditions change and they are no longer necessary, such as when an Adult Crossing Guard or crosswalk is removed, or a crosswalk becomes protected by a stop sign or traffic signal.

Policy

School Speed Zones can be established at elementary and middle schools where:

- **An approved Adult Crossing Guard is present, or**
- **An unprotected School Crossing meeting Installation Criteria exists in or within 500 feet of the Safe Access Area, or**
- **An unprotected School Crossing meeting Installation Criteria exists along a School Safe Route on a public road with 35 mph or higher speeds.**

City staff will evaluate and determine the need for School Speed Zones, and will install them based on priority and available funding. If conditions change and City staff determines that a School Speed Zone is no longer needed, it may be removed by the City after discussions with School officials.

School Speed Zone length should be designed to maximize driver compliance and provide safe student access to school. City staff will determine the length and traffic devices utilized based on current MUTCD standards and guidelines. School Speed Zones should only be in effect on normal school days for about 30 minutes immediately before and after school. The exact schedule will be determined by City staff in cooperation with School officials.



6.0 City Adult Crossing Guards

City Adult Crossing Guards are hired by the City of Longmont to help school children safely and correctly cross streets by directing students across when there are gaps in traffic and indicating to drivers that children are crossing the street. The City of Longmont administers an extensive Adult Crossing Guard program for elementary and middle schools. City Adult Crossing Guards are hired, managed, trained, and paid as part time temporary employees by City staff. The St. Vrain Valley School District currently reimburses the City for half of this program cost under an intergovernmental agreement.

City Adult Crossing Guards can be an appropriate and economical solution at School Crossings in a school Safe Access Area or near the school. Crossing Guards should not be used where few children cross or where there are enough natural gaps in traffic allow children to safely cross as benefits are minimal and disadvantages can arise. Crossing guards can incur added risk at unnecessary locations where drivers do not expect them nor perceive a need for them, which in turn may cause hostility and disrespect from drivers. It is also a poor use of limited City and School District resources to assign crossing guards where they are not needed. In 2008, it cost approximately \$4,000 per year for each crossing guard location, plus staff administration time.

City Adult Crossing Guards are primarily needed for elementary schools where younger children are less skilled at safely judging gaps, vehicle speeds, and time needed to cross. City Adult Crossing Guards not only help provide safe crossing, but can also help teach children how to cross streets safely. Most communities with crossing guard programs only provide them for elementary schools. In Longmont, City Adult Crossing Guards are also provided at some unprotected crossings near some middle schools with relatively high traffic volumes or speeds.

Longmont has developed criteria to determine the need for City Adult Crossing Guards that consider the number of students crossing, traffic volumes, vehicular speed, sight distance, crash history, and other related factors. These guidelines will also identify locations where existing crossing guards are no longer needed and should be removed.

Policy

City Adult Crossing Guards are intended for marked School Crossings in School Safe Access Areas, or along Safe School Routes of elementary and middle schools. Guards typically work at School Crossings for about 30 minutes immediately before and after school days. The following section describes our evaluation criteria, with 40+ points needed for Guard assignment, and Guard removal when below 30 points.

The City of Longmont will attempt to maintain a working intergovernmental agreement with the St. Vrain Valley School District that describes responsibilities and cost sharing for this City Adult Crossing Guard program assigned at or near public schools. The City will attempt to develop and maintain a similar agreement with private schools for Guards assigned at or near private schools.



6.1 City Adult Crossing Guard Threshold Criteria

The following factors are considered in evaluating the need for City Adult Crossing Guards:

1. **Number of School Children Crossing** - The number of elementary and/or middle school children crossing during the peak 30 minute period immediately before and after school peak crossing hours shall be used. Adults using the crossing shall not be included. A minimum of 10 student crossings per period is required for assignment of City Adult Crossing Guard.
2. **Vehicle Gap Availability** - The percentage of total time during the peak 30 minutes of the before and after school crossing periods when adequate gaps for safe crossing of unprotected crossings are available. The safe crossing time shall be considered as the time necessary for school children to cross from one refuge point to another (usually from one curb to another) at an assumed walking speed of 3.0 feet per second. The equation for “Proportion of Pedestrians Delayed” in *ITE Transportation and Traffic Engineering Handbook* will be used to estimate the % time that adequate gaps are not available for students to cross. On streets with a protected median adequate for pedestrian refuge, the approaches shall be considered as separate one-way streets and gaps will be measured along the heaviest traveled approach. Stop protected approaches will have assumed
3. **Speed of Motor Vehicles** – Vehicle speed shall be the higher of either the posted speed limit or the 85th percentile speed observed on the major approaches. The 85th percentile speed is the speed below which 85 percent of the motorists travel.
4. **Sight Distance Ratio** - This element shall be the ratio of available driver sight distance observing an object in the crosswalk to the “design” stopping distance based on speeds measured above. Sight Distance shall be measured as currently defined by American Association of State Highway and Transportation Officials (AASHTO). In 2004, AASHTO sight distance recommendations were:

Under 25 mph	155 feet	36-40 mph	305 feet
26-30 mph	200 feet	41-45 mph	360 feet
31-35 mph	250 feet	46-50 mph	425 feet
5. **Safety History** - This criteria shall primarily be the number of pedestrian accidents at the study location during the previous five year period, involving elementary and middle school children going to or coming from school during the 30 minute periods immediately before and after regular school days.. For locations with two or more such accidents, the five-year limit shall not apply. In addition, a history of other accident types that could conflict with pedestrian crossing will be considered, especially if there is a history of accidents at times of the day when school children generally need to cross.
6. **Other Factors** - Unique factors may exist at crossing locations which would tend to increase or decrease the hazard to school-age pedestrians. Such factors may include complex intersection and/or traffic control, existence of safer crossings nearby, existence of multiple school crossings at one intersection, increased ability of middle school students, and a street which is used extensively by “foreign” traffic. In addition, the character of the street (i.e., arterial, local, etc.) will be considered and may be a factor in borderline situations. Uniformity of hazard ratings between morning and evening crossing periods may require special consideration.



Each crossing is evaluated during morning and afternoon school peak periods (generally 30 minute periods immediately before and after school). An overall *hazard rating* is calculated based on points assigned for each factor. Higher hazard ratings indicate a more difficult school crossing. Guard assignment can be considered with 40+ points, and Guard removal should be considered if a hazard rating drops below 30 points. Points are assigned as follows:

1. Number of School Children Crossing

<u>Student Volume</u>	<u>Points (fractions round up)</u>
0-9	0
10-105	# students / 3
106 & Over	36

2. Vehicle Gap Availability

<u>% Time with safe gaps</u>	<u>Points</u>
80% or more	0
10% - 79%	(80-%Time w/ Safe Gaps)/2
Less than 10%	36

3. Vehicle Speeds

<u>MPH</u>	<u>Points</u>
0-25	0
26-30	2
31-35	4
36-40	6
41-45	8
Over 45	10

4. Sight Distance / AASHTO Stopping Distance

<u>Ratio</u>	<u>Points</u>
Over 2.0	0
1.5-2.0	1
1.0-1.5	5

5. Safety History

a) Preventable School Crossing Crashes involving students during peak school periods

<u># Crashes</u>	<u>Points</u>
0	0
1	5
Each Additional	20

b) Other Related Crashes 0-5

6. Other Factors

	<u>Points</u>
Foreign traffic route	0 to +5
For each intersection approach above four	+5
For complex crossing	+2 to +10
Safer crossing one block or less away	0 to -10
Middle School Crossing 0 - 29 mph	-10
Middle School Crossing 30 - 34 mph	-5
Multiple crosswalks at intersection	0 to +10



7.0 School Provided Adult Crossing Guards and Other Adult Assistance

School Provided Adult Crossing Guards are trained adults assigned at School Crossing locations that do not meet the above thresholds for City Adult Crossing Guards, but are requested by a school or the School District, and approved by the City of Longmont. School Provided Adult Crossing Guards with the stop sign paddles should only be used at crossings which meet the thresholds described below.

School Provided Adult Crossing Guards must be at least 21 years of age.

If a school or the School District requests assistance at a crossing that does not meet these thresholds for a School Provided Adult Crossing Guard, there are other options available. Adults can help children walk (or bicycle) to school by crossing with the children at specific crossings, but without a stop sign paddle and without stopping or controlling traffic. Adults can also help lead a “walking school bus”, where they walk with the children along a specified route to / from school. These walking school buses can be very successful as they encourage children to enjoy walking to school with their friends, and parents feel better that their children are walking as a group and are accompanied by an adult.

Policy

When City Adult Crossing Guards are not assigned, School Provided Adult Crossing Guards may be used at School Crossings along safe school routes that have at least 10 crossing students during peak school times, and either a) meet 75% of the above hazard rating threshold or b) have unique characteristics that create an unsafe or difficult School Crossing as determined by the City of Longmont staff.

City staff will help train these adults, provide stop sign “paddles” and safety vests, and periodically review to ensure that School Provided Adult Crossing Guards are appropriately performing their duties. The School or School District will be responsible to find and hire School Provided guards, perform background screening checks, administer the program to ensure that an adult is present at their assigned times every school day, and provide Limited Liability Accident Insurance.

School Provided Adult Crossing Guards will be removed from specific School Crossings if guards are not consistently at a crossing, if guards are not properly trained, or if guards are not using safe and proper crossing techniques.

School Provided Adult Crossing Guards (including substitutes) must be at least 21 years of age, be property trained by City staff, and will follow the same working procedures as City Adult Crossing Guards.



8.0 Safe Routes to School Program and Other School Safety Activities

The City of Longmont and the Saint Vrain Valley School District have been awarded federal and state Safe Routes to School program grants in recent years. This program funding can be used at elementary and middle schools to encourage children to walk or ride their bicycles to school, educate children on safe walking and bicycling habits, obtain and install bicycle racks at schools, and construct missing sidewalk or path sections along school routes.

Policy

City staff will work with school officials, parents and school children to provide safe routes to school, encourage children to walk or bicycle to school, and educate children on safety as they travel to / from school. City staff will continue to pursue Safe Routes to School program funding to help promote safe walking and bicycle travel to / from schools.

