

INTRODUCTION

School route maps are effective tools for informing parents and students of traffic conditions and bicycle/pedestrian infrastructure around their schools. These maps can indicate the preferred, most convenient, and most accessible walking and bicycling routes to and from school and identify areas to avoid owing to high traffic volumes, lack of walkways, absence of controlled street crossings, and other conditions. These maps can show off-street trails, marked crosswalks, crossing guards, and pedestrian/bicycle facilities that assist students walking or bicycling, as well as challenging intersections, sidewalk gaps, and other barriers.

The 2009 *Manual on Uniform Traffic Control Devices* (MUTCD) recommends the development of a school route plan: “The school route plan, developed in a systematic manner by the school, law enforcement, and traffic officials responsible for school pedestrian safety, should consist of a map showing streets, the school, existing traffic controls, established school walk routes, and established school crossings” (Section 7A.07).

BACKGROUND INFORMATION

School route maps can be developed through a variety of quantitative data, some of which may already exist:

- Aerial photographs—marked crosswalks, traffic-calming measures (speed humps, islands, curb extensions or bulb-outs), posted speed limits, and street width;
- Geographic information system (GIS) data
 - Primary information—roadways, sidewalks, bike lanes, shared-use paths, traffic control (crosswalks, traffic signals, etc.), railroads
 - Secondary information (if available)—presence of curb ramps, average daily traffic, and other more detailed information;
- School or school district—school enrollment, locations of crossing guards, walking attendance boundaries, and attendance boundary maps (if available);¹ and
- Parent surveys—distance most students live from school, identified problem areas, and how often students walk or bike to and from school.



Figure 2. Working with community to develop route plan. Source: David Parisi

In addition to this quantitative data, the school’s Safe Routes to School (SRTS) Task Force (if one exists) and other key personnel should be interviewed to determine generally where students live (if not available from the district), what key routes students take, and what policies the school has on walking and bicycling.

WORKING WITH THE COMMUNITY

Once a preliminary map has been developed, stakeholders should be invited to provide feedback. Stakeholders can include parent volunteers, students, school officials, crossing guards, and other community members. Stakeholders can also provide the following information regarding barriers to walking and bicycling:

¹ Traffic control and crossing guard placement may be changed as a part of the school audit and mapping process. This process may also result in a change to the walking attendance boundary or school attendance boundary.

- Sidewalks—gaps or areas of poor sidewalk conditions (narrow, uneven, etc.);
- Challenging intersections—wide streets, high automobile speeds and volumes, lack of traffic control, insufficient signal crossing time, or extended pedestrian wait time for signals; and
- Areas with personal safety concerns—locations with abandoned buildings, unleashed dogs, no street lighting, overgrown vegetation (which impedes visibility), and known or suspected crime.

Community members and stakeholders should also confirm the routes identified in the quantitative analysis. Keep in mind that students may need to walk along both sides of the street.

There are a variety of methods to engage the community for feedback and additional information for the school route map. A school-area walking and bicycling audit can be held to bring technical experts and community stakeholders together to discuss and identify issues. See the ITE Briefing Sheet—*Walking and Bicycling Audits* for more information. An alternate strategy is to provide a mapping Web site where parents and other stakeholders can note specific locations and comment at their convenience. The National Center for Safe Routes to School offers a Map-a-Route, a Web site where users can indicate whether a route is for walking, bicycling, or both, and can note locations of crosswalks, stop signs, crossing guards, and traffic signals.² Another method is to use a GIS-based quantitative evaluation, which might consider available quantitative data.

MAKING THE MAPS USEFUL

School route maps are developed primarily for use by students and their parents, and they should be readable, attractive, and informative. Streets should be named and consistent graphics used to indicate features such as crosswalks, signals, and crossing guard locations. The legend should be clearly readable and include a scale bar. Color can be used to indicate the type of feature; reds and oranges may indicate caution or challenges, while blues, purples, and greens imply appealing routes. However, be mindful of how the map will read if copied in black and white or to a color-blind person. The map should provide relevant information for users and not be cluttered with extraneous detail. Distance and/or time references for different routes can be included.

The map should be limited to the radius from which students might walk or bicycle. This extent will depend on conditions around the school, including major barriers such as freeways, railroads, streams, topography, and residential density. It may be appropriate to expand the map to show key connections or intersections beyond the school-defined “walk area.” The school route maps need to serve every residence in the walking attendance boundary, even though certain homes may not house students. Student housing may change as families move into areas or young children grow to school age.

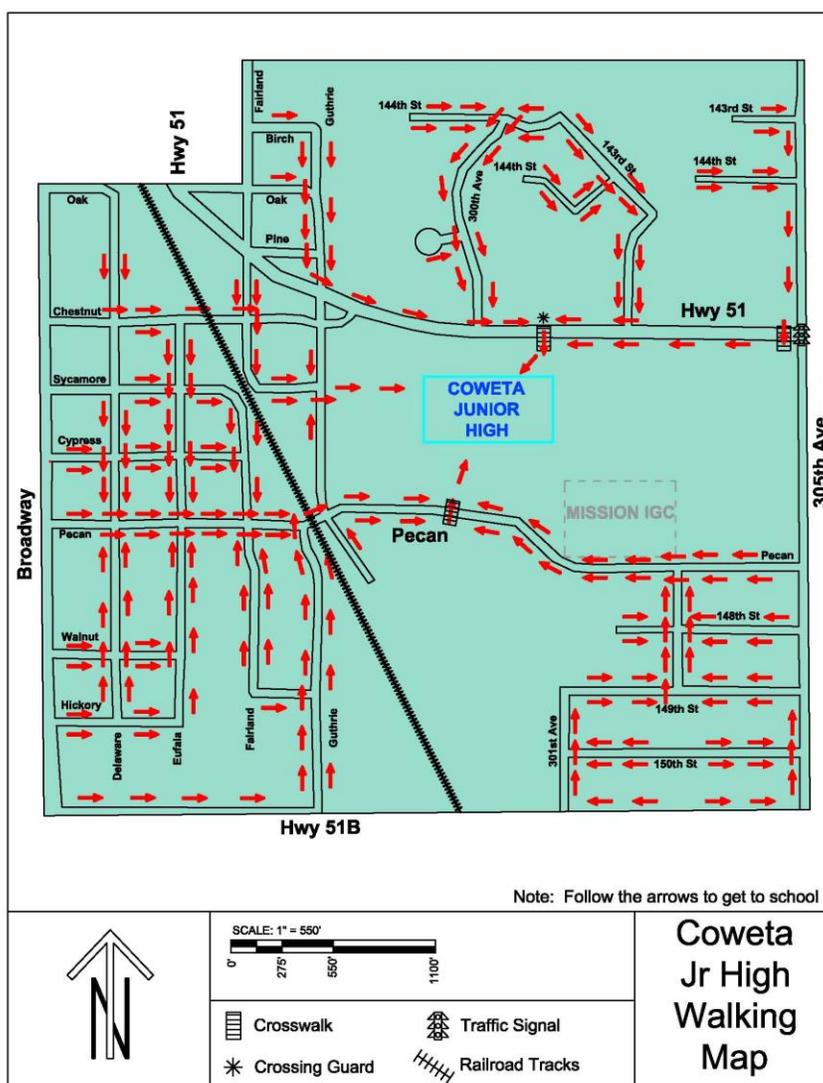


Figure 2. Walking Route Map. Source: City of Coweta, Oklahoma, USA

² <http://maps.walkbiketoschool.org>.

If additional space is available, informational or promotional text and graphics can be included on the back of the map. Examples include contact information or guidance for walking school buses or bike trains, reminders of appropriate walking and bicycling behavior, and key community contact information.

Maps should be translated into languages commonly used in the school. To address concerns about liability, the map should not be titled “Safe Routes to School Map,” which indicates safety; rather, “Walking Routes to School” is recommended. In addition, a disclaimer should be included on the bottom of the map. The disclaimer might read, “This map is intended for information purposes only. The School or City assumes no responsibility for people using these routes.” Where possible, maps should be revisited annually and updated with infrastructure and other changes such as crossing guard locations or school boundaries.

The maps should be made available online as well as in hard copy distributed through the school district. School route maps can be given to parents when they enroll their children in school and at the beginning of the school year. They can be useful in generating walking school buses or bike trains.