



Introduction

As part of the Safe Routes to School non-infrastructure grant program administered by the Connecticut Department of Transportation, staff from Fitzgerald & Halliday, Inc. (FHI) conducted a site audit of the school on March 11, 2010. Robertson School is an elementary school with about 440 students. School begins at 8:10 AM and dismissal occurs at 3:10 PM. The school principal, Mr. David Petrone, suggested that the FHI team observe dismissal as this is when there is the most congestion around the school.

The observation of school dismissal was focused on areas of concern for walkers and bikers. FHI explored potential improvements for those areas during the audit. This memorandum presents recommendations for engineering and operational improvements that will promote safe walking and biking to school. Some or all of these recommendations can be included in the school's Safe Routes to School Plan as it is developed.

Observations and Issues

On and off campus activity was observed by the FHI team. On campus activity primarily involved issues related to pick-up/drop-off, while off campus activity was notable due to speeding on Cross Street and the use of a crosswalk on Cross Street directly in front of the school.



On Campus Activity

The largest percentage of students (over 80%) is transported to Robertson School by bus. These students come from various locations in Coventry and given the rural nature of the town, any student who requests busing will usually be accommodated. About 20 buses transport students in three distinctive waves. At dismissal, the principal calls the buses in each wave as they arrive. Students board those buses and all buses subsequently leave together. Buses are the only vehicles allowed to use the school's front driveway and circle at drop-off and pick-up time (see Figure 1). This reduces conflicts with other vehicles and allows buses to load and unload safely and efficiently.

In addition to students travelling by bus, the front doors of the school are used by students who walk or bike to and from school. There were approximately 12 students that walked home from school during the observed dismissal. A concrete sidewalk leads from the school's front doors to the roadway at Cross Street.

A bicycle rack is located in front of the school adjacent to this sidewalk. Both sidewalk and bicycle rack appeared adequate to support the number of users that exist.

No conflict or safety issues were observed between walkers and bikers leaving the front doors of the school and the bus loading operation which also occurs in front of the school. As stated earlier, students riding buses wait in a common area and are summoned when their bus arrives. Walkers and bikers are permitted to leave school immediately after school is dismissed.

In addition to busing, there is a high level of student drop-off and pick-up activity. Principal Petrone estimates that 50 students are transported to and from school by car each day. During drop-off and pick-up, parents are not allowed to enter the circle area in the front of the school where the buses pick



Bus loading at front of school.



Bicycle rack is located in front of school. While no bikes were on the rack, a cyclist is present.



Parent drop-off/pick-up area at back of school.

up and drop off. They are instead directed to use the back parking lot and access the school through the doors by the gymnasium. Parents must enter school and sign their children out at dismissal time. Parents are not required to sign in children at the morning drop-off.

During arrival and dismissal, the school custodian places traffic cones in the parent pick-up/drop-off area. These cones are intended to prevent parents from parking in the area directly in front of the school's doors. This procedure has the inadvertent effect of blocking cars in and thus increases congestion, especially in the afternoon when parents must sign children out of school. To avoid this congestion, the school directs parents to a larger adjacent lot. During observation, a number of parents disregarded the traffic cones and double parked their vehicles directly outside the school doors. The cones were also observed to be run over and damaged by parents.

Off Campus Activity

Robertson School is located on Cross Street, which has one lane travelling in each direction. This street provides east/west travel between Main Street (Route 31) and South Street. It is used to access community facilities, the town center, and Wangumbaug Lake. Given its cut-through nature, high travel speeds have been reported on Cross Street. The speed limit on this road is 25 miles per hour.

Signs in each direction of Cross Street notify motorists of the approaching school crosswalk. This is the only school signage present. One of these signs (for westbound traffic) is a retro-reflective green school crossing sign. There is also a plastic kid alert safety sign chained to a street sign warning drivers that children may be present. In addition, there are pavement markings that say "SCHOOL" in both directions, though they were faded and hardly noticeable.



Students walk and ride from school, down sidewalk, towards crosswalk.



Crossing guard on Cross Street.

There is a marked crosswalk on Cross Street at the end of the school's sidewalk. The crosswalk lacks signage directly at its location. The crosswalk is also located in a shaded area thereby decreasing its afternoon visibility. A crossing guard stops traffic at this location for students arriving at and leaving school. While the speed limit on Cross Street is 25 miles per hour, actual speeds were observed to be higher. Speeding motorists were observed failing to stop for the crossing guard. The principal cited complaints from the crossing guard about cars almost hitting him.

All walkers who walked home from school during FHI's observation crossed Cross Street with the assistance of the crossing guard. Most traveled to a sidewalk on the opposite side of the road and continued to a dirt road which leads to a housing development not far from Robertson School.

Summary of Recommendations

Based on field observations of issues and discussions with the Robertson School principal and staff, the following recommendations are offered to improve walk conditions and safety both on campus and on Cross Street. Figure 2 (on next page) illustrates the suggested location for some of these recommendations.



View of crosswalk on Cross Street. Crosswalk is hardly visible given lack of signage.



Figure 2: Proposed improvements include new crosswalk signage, new school zone signage and markings, and a potential raised crosswalk.

Recommendations

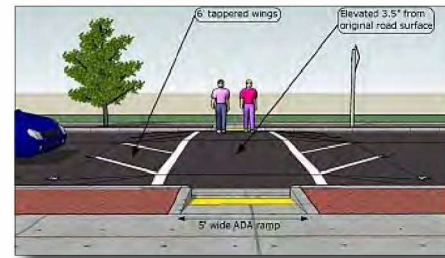
1. Improve/install additional school zone speed limit and crossing signage on Cross Street near the entrances and exits of the school driveway and school crosswalk. These signs should be large, bright (retro-reflective) school zone signs with speed limits of 20 miles per hour. In addition, "School" pavement marking should be repainted. These markings should be maintained and repainted regularly. Additional information can be found in the Manual on Uniform Traffic Control Devices (MUTCD, 2009 edition, http://mutcd.fhwa.dot.gov/pdfs/2009/pdf_index.htm). Part 7 of the manual provides guidance on a variety of traffic control signs for transition areas into schools.
2. The Town of Coventry should consider adopting a uniform signage system, similar to that suggested above. This system should be implemented at all school areas in town



School zone speed limit and crosswalk signage such as the above would improve the visibility of crosswalks and increase driver awareness.

so as to improve recognition by motorists.

3. Investigate the installation of traffic calming features on Cross Street. Relatively low-cost techniques such as a raised crosswalk should be considered. It is recommended that the Town of Coventry consider conducting a full traffic calming study for this roadway. This study should involve the community in decision making related to the most appropriate and acceptable traffic calming measures. Resources for information on traffic calming can be found at the following websites: www.fhwa.dot.gov and www.ite.org.
4. Develop an ongoing program to educate parents on the accepted drop-off and pick-up procedures detailing the safety issues created by violating these practices. This program could be promoted through various measures such as on-line announcements, emails, flyers, social media, and periodic campaigns such as posting personnel at school entrances for periodic enforcement/education.
5. To pursue the implementation of these recommendations, a Safe Routes Committee should be formed at Robertson School with the goal of coordinating with Town Staff and Public Safety to further investigate the feasibility of these recommendations. If feasible, the Committee should work with the Town to pursue funding for the design, construction and maintenance of improvements.



Sketch of a raised crosswalk. This device slows traffic and increases visibility of pedestrians on crosswalk.