



MEMORANDUM

To: Traffic Study Files

From: Eric Bollich, P.E., PTOE
South Austin Area Engineer
Austin Transportation Department

Date: April 8, 2013

Subject: Reduced Speed School Zone Investigation

Location: East St. Elmo Road and Woodward Street



Date(s) of Previous Investigation: None

A traffic engineering investigation has been conducted to determine if reduced speed school zones are appropriate on East St. Elmo Road and Woodward Street near the Harmony School of Excellence (the "school") for its students. The following information was collected and analyzed for this determination.

Proximity of the School Crossing to the School

The school is located on the northeast corner of East St. Elmo Road and Woodward Street; a traffic signal controls this intersection. The proposed school zones are along these two streets adjacent to the school.

Pedestrian Count

Pedestrians were counted during the afternoon dismissal period on April 1, 2013. The school recently assigned walkers to stage near its front entrance on the northeast corner of East St. Elmo Road and Woodward Street, which has increased crossings near this intersection.

Location	Elementary Child	Middle School Child	Adult	TOTAL
Crossing St Elmo at Woodward	5	1	5	11
Crossing Woodward at St Elmo	10	15	10	35
Crossing Woodward midblock	2	1	3	6
TOTAL	17	17	18	52

Existing Roadway Conditions

Location	Number of Lanes	ADT: Two-Way	Posted Speed Limit	Street Width
E St. Elmo Road	4	9,329	40 MPH	51 feet
Woodward Street	4	10,470	35 MPH	60 feet

Presence of Adult Crossing Guard or Student Safety Patrol

No guard or patrol currently works the signalized intersection. Pedestrians are expected to use the signalized intersection to cross East St. Elmo Road and Woodward Street. The City's Child Safety Program scheduled a visit at the school on March 28, 2013 to educate students on safe crossing practices.

Crash History

Austin Police Department's crash database was reviewed for crashes occurring between March 2010 and March 2013 within the proposed school zones. Five crashes were documented during this period.

East St. Elmo Drive

Date / Time	Direction		Weather	Light	Road	Injury	Comments
	At Fault	Other					
11/15/12 7:45 AM	SB	WB	Clear	Day	Dry	None	Driver failed to yield right-of-way exiting while Harmony School driveway.
1/31/13 8:35 AM			Clear	Day	Dry	None	Pedestrian entered crosswalk on flashing indication and was struck after eastbound driver started from stop. Sun impaired driver's view.
3/6/13 3:40 PM	EB	WB	Clear	Day	Dry	Minor	Driver turned eastbound to northbound, striking westbound pedestrian in crosswalk.

Woodward Street

Date / Time	Direction		Weather	Light	Road	Injury	Comments
	At Fault	Other					
2/2/11 7:50 AM	EB	SB	Clear	Day	Dry	None	Driver failed to yield right-of-way while exiting private driveway.
10/16/11 2:00 PM	NB	NB	Clear	Day	Dry	None	Driver rear-ended vehicle upstream due to lack of attention.

Sight Distance

Sight distance exceeds the lengths of the proposed school zones on East St. Elmo Road and Woodward Street.

Sidewalks and Ramps

Sidewalks are located along both sides of both streets within the proposed school zones. Sidewalks along a segment of the north side of East St. Elmo Road and the entirety of the east side of Woodward Street are decomposed granite. Ramps are located on all corners of the intersection of East St. Elmo Road and Woodward Street.

Recommendation

Based on the analysis of this information, reduced speed school zones of 20 miles per hour (mph) should be installed on East St. Elmo Road from 350 feet east of Freidrich Lane to 350 feet west of South Industrial Drive and Woodward Street from East St. Elmo Road to 630 feet north of East St. Elmo Road. The school is anticipating increasing its enrollment for the 2013-2014 school year and expanding into the adjacent building; these extents account for the proposed annex.

Recommended engineering practice for changes in speed limits is not to exceed 15 mph differentials. Therefore, to accommodate the 20 mph reduced speed school zone on East St. Elmo Road, the posted speed limit should be reduced to 35 mph in advance of the school zone. The 35 mph zone should extend from the east curb of Freidrich Lane to 350 feet east of Freidrich Lane and from the west curb of South Industrial Drive to 350 feet west of South Industrial Drive.

Figure 1 presents the study area and limits of proposed speed zones.



Existing 35 MPH

Existing 40 MPH

Proposed 35 MPH (during non-peak times)

Proposed 20 MPH School Zone (during peak school times)

Figure 1: Study Area

