



Traffic Study Summary

Date:	July 28, 2023
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Request:	Evaluate the extent of the existing reduced speed school zone on S Walnut Avenue north of County Line Road
Recommendation:	Relocate the northern extent of the reduced school speed limit zone to be 240 feet north of the school crossing at S Walnut Avenue and Northpark Ridge

Background

The Transportation Division received a traffic request to evaluate the extent of the school speed limit zone on S Walnut Avenue north of County Line Road due to concerns of vehicles speeding during the posted school zone hours. S Walnut Avenue is classified as a Principal Arterial on the 2012 Regional Transportation Plan, with a pavement width of 60 feet. It consists of two travel lanes and an on-street bike lane in each direction and has a posted speed limit of 35 mph from Woodall Circle to Klein Road. S Walnut Avenue has a continuous sidewalk network from IH 35 to Klein Road, which includes sidewalks on both sides within the school zone.

There is a speed school zone on S Walnut Avenue and County Line Road for school days during the hours of 6:45 AM to 8:45 AM and 2:50 PM to 4:00 PM. The speed limit is posted at 20 mph for those hours within the school zone. The school zone serves Walnut Springs Elementary School, Memorial Elementary School, and County Line Elementary School. The traffic control indicating the beginning of each end of the school zone includes a standard school speed limit assembly equipped with a flashing beacon. On S Walnut Avenue north of County Line Road, the sign assembly with flashing beacon for southbound traffic entering the school zone is currently located at approximately 1,190 feet north from the nearest school boundary, next to the driveway of First Presbyterian Church of New Braunfels. A site map of the area schools and existing school zone limits is shown in Figure 1.



Figure 1: Site Map

The existing extent of the north end of the school zone has been called into question because the length of the school zone appears to be longer than what is specified in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). If vehicles are directed to operate at a reduced speed for longer than is prudent, drivers tend to disregard the reduced speed limit and accelerate back to typical speeds for the roadway, and the safety benefits of the school zone are diminished. Contributing factors include driver behavior such as inattention and impatience and a lack of consistent enforcement of the reduced speed limit.

Guidance

Section 7B.15 of the TMUTCD provides support and guidance for locating reduced school speed limit zones. It states *“the beginning point of a reduced school speed limit zone should be at least 200 feet in advance of the school grounds, a school crossing, or other related activities”*.

Site Investigation

Engineering staff conducted a site investigation and documented the existing school zone traffic control within the school speed limit zone on S Walnut Avenue north of County Line Road. There is a school crossing across S Walnut Avenue located on the south side of the intersection with Northpark Ridge. The intersection has an all-way stop condition and is located within the school zone, so school crossing signs are not needed for the crosswalk. The crossing is monitored and operated by a crossing guard assigned by the school district. Staff compared the location of the existing school zone boundary to the beginning point recommended in the TMUTCD. Figure 2 shows that comparison.



Figure 2: Existing School Zone Boundary vs TMUTCD Recommended Boundary

Crash History

Traffic crash data for 2020 through July 2023 was found through TxDOT's Crash Records Information System. There were six (6) reported crashes within the school zone on S Walnut Avenue north of County Line Road but none during the active hours of the school speed limit zone.

Recommendation

Based on site observations, existing pedestrian routes, the locations of the schools, and the guidance in the TMUTCD, it is recommended to relocate the northern bounds of the school zone on S Walnut Avenue from the existing location to approximately 240 feet north of the school crossing because 200 feet from the school crossing conflicts with the Dollar General driveway. The existing crosswalk at Northpark Ridge will remain in the school zone boundaries and continue to serve as a school crossing.

A detailed layout of the recommended changes to the school zone sign plan is shown in Appendix A. These adjustments would reduce the length of the school speed zone by approximately 470 feet. School zones are meant to be established in targeted areas in close vicinity to the schools they serve in order to be effective. By shortening the length of the school speed zone, higher compliance of the reduced speed limit is expected, resulting in an improved sense of safety for pedestrian, bike, and vehicular traffic traveling to and from school. Even with the recommended reduction, this school zone is exceptionally large due to serving three different schools. Additional static signs within the school zone are recommended to be installed as periodic reminders to drivers to observe a speed limit of 20 mph during school zone hours.

Due to the time and funding required to relocate the flashing beacon, it may be recommended to proceed with a static sign alone to install the recommended changes in time for the upcoming school year. In the meantime, staff should work towards establishing a timeline and cost for flashing beacon relocation in order to reinstall it in the recommended location as soon as possible.