



mesa·az Transportation Advisory Board Report

Date: September 15, 2009
To: Transportation Advisory Board
From: Ravi Seera, Transportation Engineer
Subject: Driver Speed Feedback Signs – Pilot Program

Purpose and Recommendation

This report presents information pertaining to driver speed feedback signs as a tool to mitigating traffic speeds.

Staff recommends the installation driver speed feedback signs on four collector street segments this fiscal year as part of a pilot program.

Background

As of February 5, 2009, the City of Mesa has a tool to address speeding on most minor collector streets deemed fire routes, through the installation of speed cushions. Although this program is new, it is apparent that speed cushions are not welcomed in all neighborhoods. This presents an opportunity to explore the application, cost and effectiveness of a less intrusive speed mitigating device that has shown promise in other communities: driver speed feedback signs.

Discussion

Driver speed feedback signs (DSFS) are educational in nature. They display the speeds of approaching vehicles. This dynamic display serves to draw a driver's attention to their travel speed and the posted speed limit.

The City of Bellevue, Washington has been using DSFS for the past eight years. A recent evaluation of the effectiveness of all 31 DSFS showed a reduction of vehicle speeds between 1 and 6 mph, even up to eight years after the signs were installed. All installations are on two-lane streets (ie. no multi-lane streets).

The City of Chandler is studying the effectiveness of DSFS on multi-lane arterial streets. A recent one-year evaluation of the effectiveness of the DSFS installed on Hunt Highway showed a reduction of 4 mph in vehicle speeds.

The City of Phoenix has evaluated the effectiveness of DSFS on a four lane divided collector street with a 35 mph speed limit. Initial studies showed a reduction of 3 mph in vehicle speeds but over time the speeds crept back to the same level that existed before the signs were installed. The DSFS signs were removed by the City.

The City of Glendale has conducted a pilot study to study the effectiveness of DSFS on collector streets. The results of the study showed a reduction of 4 mph in vehicles speeds. The City of Glendale uses DSFS on collector streets which are fire routes with daily traffic volumes greater than 3,000 vehicles per day.

The Town of Gilbert has installed DSFS on Gilbert Road on each end of its downtown area. The town hasn't tracked their effectiveness.

Locations recommended for the pilot program are as follows:

Hermosa Vista Drive between 64th Street and Power Road

This 23-foot wide, half-built collector street was eligible for speed cushions but did not receive Board approval to proceed to installation. The posted speed limit is 25 mph, the 85th percentile speed was measured at 42 mph, and the traffic volume is approximately 800 vehicles per day. Due to the downhill grade for westbound traffic, one DSFS is recommended for installation in the westbound direction.

McLellan Road between Val Vista Drive and 40th Street

This street was eligible for speed cushions but failed to garner sufficient support from the immediately affected property owners. McLellan Road is 48 feet wide, has a posted speed limit of 25 mph and an 85th percentile speed of 41 mph. Traffic volumes are approximately 1,300 vehicles per day. One DSFS is recommended for installation in the westbound direction as speed counts indicate that the westbound traffic in this segment has higher travel speeds.

McLellan Road between 40th Street and Ogden

This street was eligible for speed cushions but failed to garner sufficient support from the immediately affected property owners. McLellan Road is 48 feet wide, has a posted speed limit of 25 mph and an 85th percentile speed of 38 mph. Traffic volumes are approximately 1,100 vehicles per day. One DSFS is recommended for installation in the eastbound direction as speed counts indicate that the eastbound traffic in this segment has higher travel speeds.

Redmont Drive between Recker and Rafriver

This street was eligible for speed cushions but failed to garner sufficient support from the immediately affected property owners. Redmont Drive is 40 feet wide, has a posted speed limit of 30 mph and an 85th percentile speed of 39 mph. Traffic volumes are approximately 1,300 vehicles per day. One DSFS is recommended for installation in the westbound direction as speed counts indicate that the westbound direction has

higher travel speeds.

Alternatives

One alternative is not to approve the installation of driver speed feedback signs. However, it would be one less tool for staff to address speeding on some streets.

Fiscal Impact

City Council approved \$150,000 for the speed hump program in the 2009-2010 fiscal year. However, less than 50% of the funds are projected to be spent. This provides an opportunity to utilize unexpended funds for a pilot program that uses driver speed feedback signs for speed mitigation.

Material costs for four solar-powered DSFS are estimated at \$20,000. Labor costs are estimated at \$6,600 for DSFS installation at four locations.

Ravi Seera, Transportation Engineer