

Collectors and Local Streets Speed Reduction Pilot Program

Purpose

As part of NDOT’s Traffic Calming program, NDOT selected streets that are ineligible for vertical measures (e.g. speed cushions, due to high traffic volumes, truck volumes, and speed limits), but still merit safety improvements in the form of speed limit reductions. The intent of speed limit reductions along the selected streets is to create safer conditions for all street users including pedestrians, cyclists & motorcyclists, transit riders, and drivers. Lower speeds on urban streets allow for longer reaction times and lower severity of injuries due to crashes, while only increasing travel times by a few seconds.

Scope

The 10 streets chosen for the pilot program are:

- Anderson Road
- Broadmoor Drive
- Buena Vista Pike
- Cahal Avenue
- Davidson Street
- Paragon Mills Road
- Robertson Avenue
- S 11th Street
- Smith Street
- Thompson Place

Method

The new speed limits, shown in the “Results” table section below, were determined using the procedures laid out by the National Cooperative Highway Research Program (NCHRP) Research Report 966, as is standard for NDOT. Considerations for the speed limit reductions included residential and commercial density, prevalence and severity of crashes, proximity to schools or parks, and comparison to similar streets.

Note: On Buena Vista Pike, NCHRP 966 criteria propose keeping the current speed limit of 40 mph. Due to its status as a collector and its high crash rate, NDOT recommends a speed limit of 35 mph.

Note: On Paragon Mills Road, NCHRP 966 criteria propose keeping the current speed limit of 35 mph. Due to its proximity to local schools and pedestrian uses, NDOT recommends a speed limit of 30 mph.

Results

Street	Speed		
	Current (mph)	NCHRP (mph)	NDOT Recommended (mph)
Anderson Road	35	30	30
Buena Vista Pike	40	40	35
Broadmoor Drive	35	30	30
Cahal Avenue	35	30	30
Davidson Street	35	30	30
Paragon Mills Road	35	35	30
Robertson Avenue	35	30	30
S 11 th Street	35	25	25
Smith Springs Road	35	30	30
Thompson Place	35	30	30

Appendix

Project Resources

Resource	Use
NCHRP Research Report 966	Guidance for SLS-Procedure
Regional Integrated Transportation Information Systems (RITIS)	Determining the 50 th percentile speed over the course of five years assuming a normal distribution.
TDOT's Enhanced Tennessee Roadway Information Management System (ETRIMS)	Online source that provides roadway data needed for analysis.
TDOT Traffic Count Database System (TCDS)	Online source that provides historic traffic data along route(s)

Data Needed for SLSGS Procedure

Data	Applicable Source
Roadway Type	Inspection NCHRP 966 Guidance
50th Percentile Speed	RITIS
85th Percentile Speed	Data Collection
Maximum Speed Limit	Inspection/RITIS/NCHRP
Average Annual Daily Traffic (AADT)	ETRIMS
Presence of Adverse Alignment	Inspection
Presence of Angle Parking	Inspection
Level of Bicyclist Activity	Inspection/Data Collection
Design Speed	ETRIMS/RITIS/NCHRP 966
Roadway Grade	ETRIMS
Sidewalk Presence & Width	ETRIMS ¹
Lane Width	ETRIMS ¹
Number of Lanes	Inspection
Median Type	ETRIMS ¹
Number of Access Points	Inspection
Number of Signalized Intersections	Inspection
Level of On-Street Parking Activity	Inspection/Data Collection
Presence of Parallel Parking	Inspection
Level of Pedestrian Activity	Inspection/Data Collection
Segment Length	Inspection
Presence of Sidewalk Buffer	Inspection
Number of Years of Crash Data	ETRIMS
AADT for the Crash Data Period	TDOT Traffic History
Total Number of Crashes	ETRIMS
Total Number of Severe (Fatal & Serious Injury Crashes)	ETRIMS
Total Crash Rate	Calculation/NCHRP 966
Severe Crash Rate	Calculation/NCHRP 966

¹ Visual verification required