

STATE DOT CASE STUDIES ON SAFETY ADVANCEMENTS

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GEORGIA

SAFE SYSTEM APPROACH APPLIED TO GDOT POLICY

Cost: Minimal in-house resources **Completion Date:** March 2024

The Issue: Vulnerable road users are defined as non-motorists and include pedestrians, bicyclists, and persons on personal conveyance devices. Vulnerable road user (VRU) crashes represent a significant and increasing proportion of fatal crashes in Georgia. Aligning with the safe system principal that death and serious injury are unacceptable, safe speeds play a critical role in creating another layer of safety for the most vulnerable road users. As speed increases, the risk of a pedestrian fatality or serious injury increases, but managing the kinetic energy of a crash has potential to manage the severity of the crash by keeping forces tolerable on the human body. The most significant factor in determining the kinetic energy of a crash is velocity, which includes the speed and direction of the road user. Prior to the incorporated revisions, GDOT Policy 6780-4: *Establishment of Speed Zones* included that a typical Engineering Traffic Investigation (ETI) examines 85th percentile speed and pace speed, roadway geometrics, roadside developments, presence of parking pedestrians and trucks, and crash history. GDOT identified the need to revise Policy 6780-4 to align with the safe system approach.

The Solution: A revision to the GDOT Policy 6780-4: *Establishment of Speed Zones* was to include an analysis of VRU safety as part of the ETI needed to set speed zones. With the revised policy, the ETI should also include an evaluation of VRU usage and safety performance. The VRU Evaluation could include the following elements to support the recommended change: existing and future land use context with a focus on VRU origins and destinations—including uses such as residences, grocery stores, parks, schools, etc., existing VRU accommodations—including pedestrian and bicycle facilities, locations of transit stops if present and availability of pedestrian crossings for transit users, Crash Data Map and/or Chart showing all VRU Crash History for at least a five year period, and the Social Vulnerability Index (SVI) for the corridor.

This critical policy revision has provided GDOT with tool to promote the safe system approach by considering safe speeds for the most vulnerable road users.