

## South Carolina Department of Transportation

### Engineering Directive

**Directive Number:** ED-72 **Effective:** June 14, 2017

**Subject:** Rural Road Safety Project Prioritization Process for Non-Interstate Routes

**References:** Section 57-1-370 of South Carolina Code of Laws, 1976, as amended; S.C. Code of Regulations 63-10, as amended

**Primary Department:** Traffic Engineering

In 2007, the South Carolina General Assembly enacted Act 114. One of the landmark items in Act 114 was the requirement that the South Carolina Department of Transportation (SCDOT) establish a project prioritization process. In 2016, the General Assembly enacted Act 275. Act 275 eliminated some of Act 114's requirements but it retained the requirement for project prioritization. This requirement is codified in Section 57-1-370 of the South Carolina Code of Laws, 1976, as amended. Additional detail on the process is found in S.C. Code of Regulations 63-10, as amended.

This engineering directive details the process for prioritizing and selecting non-interstate projects for the **Rural Road Safety Program** using objective and quantifiable criteria.

Between 2011 and 2015, 60 percent of all fatal crashes in South Carolina occurred on rural roadways. Nearly 50 percent of all rural road crashes resulting in a fatality or serious injury occurred on 10 percent of the total mileage maintained by SCDOT. Road departure was the leading factor in fatal and serious injury crashes. The Rural Road Safety Program focuses on the worst performing non-interstate corridors that had at least five fatal and serious injury road departure related crashes. Based on these criteria, approximately 1,325 miles were selected for the program. The purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on roadways in rural areas through the implementation of infrastructure-related improvements, with a focus on reducing road departure crashes.

The following **relevant** criteria will be used when identifying the Rural Road Safety Program candidate list.

- **Public Safety** – The sole purpose and need of this program is to improve public safety by reducing the number and severity of highway related crashes.
- **Total Crashes** – The total number of crashes resulting in a fatality or serious injury within a selected corridor.
- **Type of Crash** – Road departure crash, which is defined by the vehicle leaving the travel lane.
- **Average Daily Traffic (ADT)** – ADT is the average traffic volume per day.

## **Project Selection**

Corridors along the same routes with the same functional classification (rural arterial) and within the same counties are divided into ten mile independent segments where possible. The maximum segment length is ten miles. Segments will be ranked based on the number of crashes resulting in a fatality or serious injury within each segment. Tie breakers are used for segments with the same number of fatalities and serious injuries crashes. Tie breakers listed in order of priority are: total fatalities, total road departure crashes, and annual daily traffic (ADT).

To ensure the final phase of the program does not consist entirely of small disjointed segments, ranked segments are screened to determine if there is an adjacent segment less than five miles within the identified corridor. The ranked segment and adjacent segment are combined to ensure corridor continuity. Data associated with the adjacent segment is not considered with the ranking process. Segments longer than five miles and segments shorter than five miles, but not adjacent to another segment, are considered independent segments and will be ranked individually.

The following Act 114 criteria were considered but deemed **not relevant** as they relate to this program category priority list, as they do not support the **purpose and need** of the Rural Road Safety Program.

- **Volume-to-Capacity Ratio** – Not relevant as part of the prioritization process since this criteria does not meet the program category “safety” purpose and need.
- **Truck Traffic** – Not relevant as part of the prioritization process since this criteria does not meet the program category “safety” purpose and need.
- **Pavement Condition** – Not relevant as part of the prioritization process since this criteria does not meet the program category “safety” purpose and need.
- **Environmental Impact** – Not relevant as part of the prioritization process since this criteria does not meet the program category “safety” purpose and need.
- **Potential for Economic Development** – Not relevant to the prioritization process since this program category consists of the rehabilitation and reconstruction of existing roads.
- **Alternative Transportation Solutions** – Not relevant as part of the prioritization process since this criteria does not meet the program category “safety” purpose and need.
- **Consistency with Local Land Use Plans** – Not relevant to the prioritization process since this program category consists of the rehabilitation and reconstruction of existing roads.

Upon completion of the analysis, the prioritized list of rural road safety projects will be presented to the SCDOT Commission for approval.

All data used for project prioritization will be kept on file as required by Departmental Directive 51 and SCDOT’s record retention schedules.

Submitted by: Anthony Fallaw, P.E.  
Director of Traffic Engineering

Recommended by: Andrew T. Leaphart, P.E.  
Chief Engineer for Operations

Approved by: Leland Colvin, P.E.  
Deputy Secretary for Engineering

History: Issued on June 14, 2017