

South Carolina Department of Transportation

Engineering Directive

Directive Number: ED-71 **Effective:** September 1, 2026

Subject: Safety - Intersection Safety Project Prioritization Process

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 projects for the Intersection Safety Program using data driven, objective, and quantifiable criteria. SCDOT currently maintains approximately 41,500 miles of roadways. Safety projects are administered through a federally approved and funded Highway Safety Improvement Program (HSIP). The purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on our roadways through the implementation of infrastructure-related improvements.

Crash data is received from South Carolina Department of Public Safety (SCDPS) on a quarterly basis. SCDPS is the official custodian of the state's master crash data file. Volume data is generated from SCDOT Road Data Services.

Locations of crashes are recorded by the investigating officer on the collision report and SCDPS records the crash details. The crash data from SCDPS, which includes all crashes occurring on public roadways, is imported into SCDOT's Safety Management Software (SMS), which provides crash totals and associated crash factors within the above -defined corridors.

The following relevant criteria will be used when identifying the intersection safety 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.
- **Average Daily Traffic (ADT)** – ADT is the average traffic volume per day. The ADT is used to calculate crash rate.

- **Financial Viability** – Financial viability is based on the consideration of project cost in comparison to the six-year Statewide Transportation Improvement Program (STIP) budget. This information is used to determine the number of projects considered in the candidate pool.
- **Crash Rate** – Crash rate is calculated using the number of crashes linked to the intersection divided by the exposure, which is calculated based on the total entering volume for the intersection expressed as crashes per million entering vehicles.
- **Total Fatal Crashes + Total Injury Crashes (F&I)** – Crashes within the SMS database that resulted in a fatality or injury.
- **Total Crashes** – Total number of intersection crashes within the SMS database.

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 intersection 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.
- **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.

Criteria

Two intersection candidate lists will be developed in the SMS, based on signalized intersections and unsignalized intersections that have documented crash history using the latest five (5) years of statewide crash data. The Signalized Intersection List will be populated using SMS

Advanced Query criteria of: "Intersection Related = Yes" & "Intersection Traffic Control = Stop and Go Light". The Unsignalized Intersection List will be populated using SMS Advanced Query criteria of "Intersection Related= Yes" & "Intersection Traffic Control = Stop and Go Light".

The final candidate list(s) will then be prioritized by the highest number of fatal and/or serious injury crashes (F&SI). If a secondary prioritization is needed, total crashes will be used. Crash rate may be used as an additional prioritization if needed beyond F&SI and total crashes. Candidate locations will then be analyzed in ranked order and screened for additional factors to ensure project viability including but not limited to; data accuracy, availability of engineering solutions to reasonably reduce crashes, project overlaps (past, present, and/or future), functional classifications, crash patterns, existing conditions, an evaluation of the effectiveness of all potential countermeasures to ensure safety benefits are obtained for the amount of funds invested.

Additional candidates may also be considered and evaluated based on submittals from either internal or external entities but will be subject to the same safety project selection analysis detailed above. Financial viability and available funding will be used to determine the extent of the candidate lists.

The final candidate lists along with a certification of Act 114 compliance shall be presented by the State Traffic Safety Engineer, reviewed by the Director of Traffic Engineering and Deputy Secretary for Engineering, and submitted to the Secretary of Transportation for approval.

SCOOT does not guarantee any future project, scheduling priority, nor any specific countermeasures as projects proceed. As scoping, designs, and budgets are proposed, projects may be altered, removed, or delayed based on updated design standards, funding, and engineering judgement.

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

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Approved by: Rob Perry, P.E.
Deputy Secretary for Engineering

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