3 Intersections and Safety

3.1 Existing Conditions

A safe and efficient transportation system is critical to the livelihood of a community. The transportation network facilitates the internal day-to-day functioning of the community and provides access to and from the outside world whereby goods and services are exported and imported. Safety concerns are a major issue on roads in rural areas. Low traffic volumes encourage speeding along some routes and narrow, two-lane roads without paved shoulders can leave little room for error. Furthermore, many rural roads are simply paved dirt roads, and the resulting intersections are often angled in ways that are dangerous due to limited visibility of oncoming traffic.

The need for safety and intersection improvements in rural areas is so widespread, that it is not practical to attempt to address all shortcomings at once. Careful review and prioritization of projects is needed to ensure that resources are used most effectively. An important part of prioritizing improvement projects is identifying opportunities when road widening occurs in a rural area. The new design can often be adjusted to upgrade the safety of the road and its intersections at the same time. However, many rural roads have safety issues but do not need to be or cannot be widened. Fortunately there are a number of options for addressing safety concerns on rural roads. These include:

- *Widening and paving shoulders*. Many rural roads are narrow and have very narrow or no paved shoulders, and frequently grassed shoulders slope steeply down into drainage ditches. This means that drivers veering even slightly out of a lane may lose control. Stabilizing and paving shoulders can provide a needed buffer for travelers on the road. As an added benefit, these can be designed into bike/ pedestrian facilities. Rural accidents involving nonmotorists have extremely high fatality rates due to increased speeds and limited visibility. Providing them facilities outside of the travel lanes can be very beneficial in preventing these accidents.

- *Realigning intersections and curves*. Rural roads are frequently winding and feature dangerous intersections. This can lead to drivers losing control of their vehicle, or failing to yield to oncoming traffic. Redesigning and straightening curves, as well as realigning intersections, can address problem locations.

- *Traffic calming*. Traffic calming can be defined as a combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users. The SCDOT outlines a range of options for traffic calming in their "Traffic Calming Guidelines" publication, including but not limited to speed humps, raised crosswalks and landscaped medians, traffic circles, physically reducing lane widths, and road closures. These guidelines are generally applied to low volume streets with a low amount of through traffic.

- *Other intersection improvements*. Review of the situation at key intersections can result in other suggested improvements, based on the problems that exist there. This can frequently overlap

with other types of improvements, as described in the other chapters about signalization and maintenance.

- *Lowering speed limits*. This low-cost measure can help reduce speeding, and therefore reduce the number of severe accidents on the road. However, enforcement is key in ensuring speed limits are obeyed.

- *Median barriers*. Most prominently, this can be seen in the SCDOT's interstate cable barriers initiative. In general, the purpose of this is to prevent head-on collisions resulting from vehicles crossing over a median.

- *Lane and road restrictions*. This is also primarily used on interstates. Truck lane restrictions can result in fewer fatal accidents involving heavy trucks. A similar concept is designating certain roads as truck routes, while limiting truck access to others.

- *Traffic law enforcement*. Since driver error is a substantial contributing factor to rural accidents, law enforcement can be an important partner in addressing safety concerns in certain target areas. Additionally, law enforcement personnel can be very effective in identifying trouble spots that need to be addressed in some manner.

3.2 Identified Needs

The SCDOT, through their safety program, already evaluates and prioritizes safety projects statewide. **Table 11** is a current list of SCDOT-funded safety projects in the region.

Table 11. ACOG Region Safety Projects, 2014-2019 STIP

COUNTY	PROJECT
Anderson	SC 8 (PELZER HWY) WITH S-485 (ST. PAUL RD)
Anderson	SC 153
Anderson	S-49 (FLAT ROCK RD) MP 0.00 TO MP 9.26
Cherokee	S-34 (TWIN BRIDGE RD)
Cherokee	S-146 (OCONEE ST)
Cherokee	S-146 (E/W OCONEE ST) MP 0.00 TO MP 1.00
Cherokee	S-70 (OLD RACE TRACK RD) MP 0.00 TO MP 2.17
Oconee	SC 24 @ SC 59
Oconee	S-87 @ S-488
Spartanburg	SC 9 @ FOSTER RD
Spartanburg	SC 418 @ FOUNTAIN INN RD