

D. Environment

The environment in which motorists operate their vehicles can contribute to the occurrence of traffic crashes. Environment is defined herein as the combination of external or extrinsic physical conditions that affect and influence the operation of a motor vehicle. These include road surface, weather, light conditions, traffic control, road character, road defects, locale and vision obstructions for each driver.

One or more of the environmental factors can be the primary cause of a collision or may be a contributing factor in a given crash. Weather, light, surface conditions and locale are substantially beyond the control of engineering or law enforcement efforts. Changes in traffic controls, road character, road defects and vision obstruction factors can all be effected by traffic engineering efforts.

As reflected in the statistics on the next four pages, most collisions occur under favorable environmental conditions: dry roadway (81.3%); clear weather (75.0%); daylight (72.4%); no traffic control device (64.6%); straight-level road (77.3%); no road defect (97.7%); open country (38.8%) and no vision obstruction (per unit) (98.1%).

For fatal collisions, the percentages of collisions which occurred under the most favorable surface and weather conditions were about the same or even higher for most environmental factors. The largest difference is seen in light conditions where just under 52% of fatal collisions did not occur during daylight hours. The percentage of fatal collisions occurring under the most favorable environmental conditions are as follows: dry roadway (87.4%); clear weather (80.0%); daylight (48.5%); no traffic control (77.6%); straight-level roadway (59.3%); no road defect (97.8%); open country (69.8%) and no vision obstructed (per unit) (97.8%)

Environmental factors were the probable cause in only 5.6% of all collisions in 1999. The environment may have been a contributing factor to collisions where it was not the primary probable cause. Efforts to improve those environmental factors which can be controlled (especially traffic control, road character and road defect) should help to reduce the frequency of traffic crashes in South Carolina.