

HiSafe features:

- Methods for conducting a roadway safety management program
- A predictive method to estimate crash frequency and severity under alternative designs or for future periods
- A catalog of crash modification factors for a variety of geometric & operational features



HiSafe software is the companion software to **Part C** of the **AASHTO Highway Safety Manual, Predictive Method**. HiSafe conducts the calculations for estimating the expected average number of crashes per year at a particular location on a roadway or at an intersection as a function of traffic volume and geometric characteristics of the facility. The outcome of the predictive method is a quantitative measure of expected average crash frequency.

The facilities included in the HiSafe software are:

- Rural Two-Lane Roads
- Rural Multilane Highways
- Urban and Suburban Arterial Highways

With the predictive method, the designer can **test the safety tradeoffs** of design decisions such as narrower lanes and a wider median, or narrower median and wider shoulders; and thus safety can become part of the practical design process and/or least cost planning analyses. It **allows for safety to be quantitatively assessed** and meaningfully used as a project performance measure in conjunction with other project considerations such as community needs, roadway capacity, delay, cost, right-of-way, and environmental considerations.

The screenshot displays the HiSafe software interface. On the left, a sidebar lists various analysis components like 'Segment', 'Intersection', and 'Analysis Summary'. The main window is divided into several sections: 'Input Data' where parameters like segment name, length, and lane width are entered; 'Summary Results' which provides a high-level overview of predicted and observed crash frequencies; 'Crash Severity Distribution' showing the breakdown of crashes by severity (fatal, injury, property damage only); and 'Crash Modification Factors' which lists various factors and their corresponding CMFs. The interface is designed for both data entry and analysis review.

What is the Highway Safety Manual?

The Highway Safety Manual is the first publication of its kind designed to give highway planners the tools the need to better predict safety implications of decisions in all phases of project development. The manual is the culmination of 10 years of research and development by the American Association of State Highway and Transportation Officials, in partnership with the Federal Highway Administration and the Transportation Research Board.