

Interactive Highway Safety Design Model (IHSDM)

Problem: There is a need to determine the safety impacts of design decisions.

The social, environmental, and economic context in which today's highways are designed demands trade-off assessments which require more explicit and quantitative consideration of safety issues.

Putting it in Perspective

- Traditionally, designers have relied on compliance with design policy to assure an acceptable level of safety.
- In today's highway development environment, citizens are asking designers for more context-sensitive designs with broader application of the flexibility afforded by design policy without compromising safety.
- Making decisions in this environment calls for more detailed, quantitative estimates of a design alternative's expected safety performance.

Solution: Encourage the use of the Interactive Highway Safety Design Model (IHSDM).

What is IHSDM ?

Interactive Highway Safety Design Model (IHSDM) is a suite of software analysis tools for evaluating safety and operational effects of geometric design decisions on two-lane rural highways. IHSDM is intended for use throughout the highway design process—from preliminary planning and engineering through detailed design to final review. It may be used for projects to improve existing roadways as well as for new roadway construction projects.

The 2003 release of IHSDM for two-lane rural highways has five evaluation modules:

- 1) Policy review
- 2) Crash prediction
- 3) Design consistency
- 4) Intersection review
- 5) Traffic analysis.

Each module provides different measures of the expected safety performance of an existing or proposed highway geometric design.

What are the advantages of IHSDM for highway design?

IHSDM makes it significantly easier and faster to evaluate design decisions. Each module focuses on a specific area of analysis. The policy review module automates the current process of checking a design against applicable, quantitative design guidelines. The crash prediction module provides quantitative safety performance measures, including expected crash frequency and severity. The remaining modules diagnose factors contributing to safety performance of a proposed design.

Additional Resources

To learn more, visit

<http://www.fhrc.gov/safety/ihsdm/libweb.htm>

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