BUILDING SAFER ROADWAYS BY DESIGN

The Challenge:

Employ design and engineering technology to help reduce traffic fatalities in Hawaii.

BACKGROUND

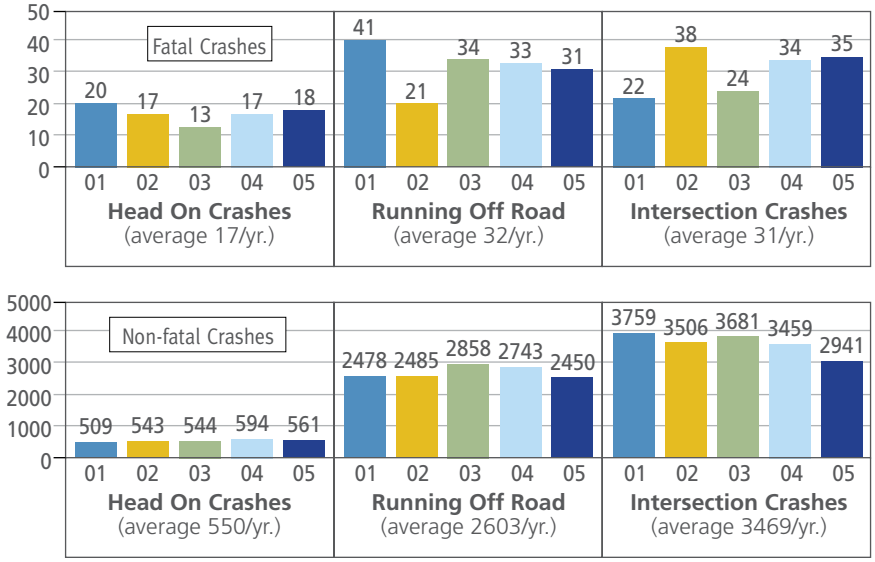
Although Hawaii is blessed with favorable year-round weather conditions and a good roadway system, there is a need to plan and build facilities designed to reduce traffic fatalities and injuries in our State.

Three types of traffic incidents are quantified in State data: head-on collisions, running off the road, and crashes at intersections. Head-on collisions comprised 26 percent of all fatal vehicle crashes in the State (an average of 17 per year), and 12 percent of all non-fatal crashes (550 per year). About two-thirds (65 percent) of the fatal head-on collisions were on rural roads. There were an average 32 fatal crashes from running off the road each year (49 percent of all vehicle crashes), and 2,600 non-fatal crashes (26 percent). Most (66 percent) of the run off the road fatal crashes were on rural roads. There was a decreasing trend in the number of non-fatal crashes from 3,750 in 2001 to 2,941 in 2005. Crashes at intersections comprised about one-quarter (25 percent) of all fatal and one-third (32 percent) of non-fatal crashes in Hawaii (30 and 3,470 crashes per year, respectively). There was a decreasing trend in the number of non-fatal crashes from 3,750 in 2001 to 2,941 in 2005.

Substance use, speeding, and failure to obey traffic signs and signals were all prevalent factors for the fatal vehicle crashes.

FIGURE 9

Annual Number of Fatal and Non-Fatal Crashes in Hawaii, by Type of Crash, 2001-2005.



STRATEGIES

ENGINEERING

- Install milled rumble strips at centerline and roadway shoulders to alert inattentive and drowsy drivers that are straying into opposing traffic lanes or off the road.
- Implement a pavement marking management program that will assure more timely replacement of worn and faded pavement markings.
- Implement a statewide sign management program that will replace weatherworn and damaged signs.
- Install signs with bigger typefaces to make it easier for older drivers to see and respond.
- Improve or install roadway lighting at locations with a history of nighttime crashes.
- Install delineators where the roadway alignment is confusing or unexpected.
- Reduce the possibility of hitting an object or overturning by designing safer slopes and ditches and removing or relocating objects in critical locations; add guardrails where needed.
- Install medians and other physical barriers to reduce head-on or crossover collisions.
- Implement a program for the timely repair of damaged safety fixtures such as damaged guardrails and light poles.
- Develop a streamlined process to accelerate delivery of local road projects.
- Incorporate designs that reduce conflicts such as synchronized traffic signals, traffic calming, round abouts, separate left turn signals and turn pockets.
- Conduct Road Safety Audits or Assessments on roadway projects to identify additional safety improvements.
- Continue to improve work zone safety through public education, good signage, and off-peak construction.

ENFORCEMENT

- Consult with police during project development and design safe locations to enforce traffic laws.

TRANSPORTATION AND LAND USE

- Pursue on a priority basis, projects identified in the Highway Safety Improvement Program for locations with known histories and incidents of crashes.
- Adopt rights-of-way maintenance and management policies that maintain clear zones as designed.
- Develop a coordinated transportation master plan that emphasizes safety, accommodates all users, and ensures adequate rights-of-way to support future growth.
- Develop a process to quickly resolve jurisdictional issues, as safety improvements cannot be undertaken where the road ownership is in limbo.