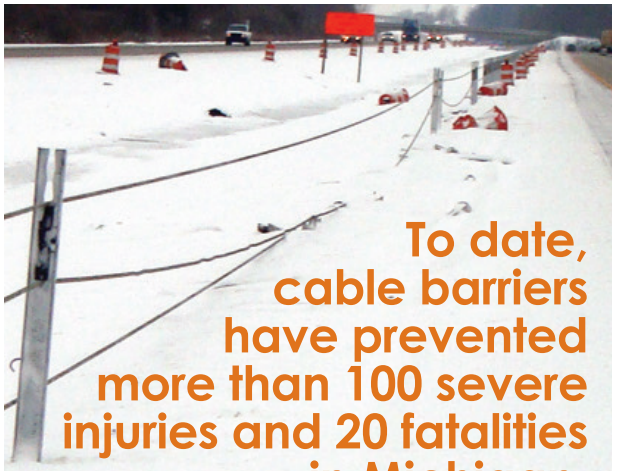

To date, cable barriers have prevented more than 100 severe injuries and 20 fatalities in Michigan.

A new safety feature has been added to many stretches of select Michigan highways. The Michigan Department of Transportation (MDOT) has installed cable barrier along 333 miles of highway medians as of 2014, in place of steel guardrails and concrete barriers, to stop vehicles from crossing into oncoming traffic – often with devastating consequences. Cable barrier has been 97 percent effective in containing out-of-control vehicles.

Cross-median crashes are the most severe of all freeway crashes. The cable barrier installed in Michigan has been shown to reduce the rate of these types of crashes by 87 percent.

Cable barrier reduces the severity of crashes, and is a very cost-effective safety measure when compared to other barriers. Cable barrier is designed to prevent a vehicle from crossing into lanes of oncoming traffic. The cable also absorbs most of the impact, usually preventing the vehicle from bouncing back into traffic.

MDOT has installed cable barrier along some medians with a history of median crossover crashes. Cable barrier runs along select portions of median as wide as 100 feet.

TZD®
Toward Zero Deaths

FOR MORE INFORMATION:

www.michigan.gov/cableguardrail

MDOT
Michigan Department of Transportation

MDOT: Providing the highest quality integrated transportation services for economic benefit and improved quality of life.

RECYCLED PAPER

Prepared by: MDOT Graphics (1/15 CJ)
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CABLE MEDIAN BARRIER

Saving Lives on Michigan Freeways

MDOT
Michigan Department of Transportation

COST

Cable median barrier is a very cost-effective countermeasure for preventing cross-median crashes as compared to traditional steel guardrail or concrete barrier. Transportation funds allocated for safety projects can be stretched furthest with the installation of cable barrier.

A recent study from Washington state compared the costs of three barrier types:

- Cable barrier: $58.40 per foot
- Traditional beam guardrail: $89.94 per foot
- Concrete barrier: $351.11 per foot or more

According to the National Safety Council, the comprehensive cost per fatality in a traffic crash is $4.54 million, compared to $8,900 per crash resulting in only property damage. The anticipated increase in property damage during the winter months with cable barrier is dramatically less significant when compared to the economic and emotional toll associated with a fatality.

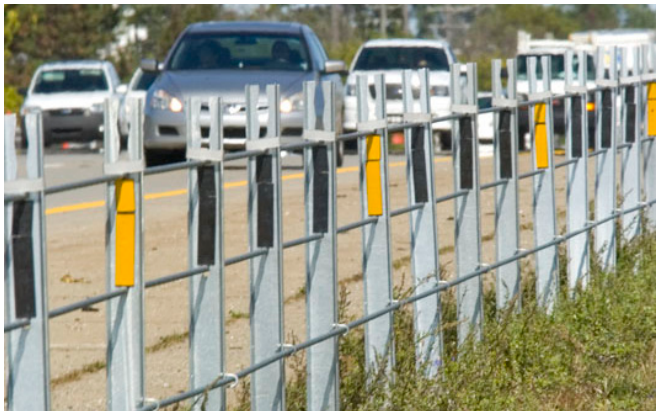
PLACEMENT

It is understandable most people would think cable barrier should be placed in the center of the median. However, specific criteria must be followed in order for cable barrier to be most effective.

Unlike concrete barrier and steel guardrail, cable barrier can be placed on sloping shoulders. However, cable barrier must be placed within specific distances from both the top and the bottom of the slope, depending on the pitch of the slope, to ensure optimal barrier performance. As a result, some stretches of cable barrier may be closer than others to the edge of the roadway.

In many cases, cable barrier is not placed in the center of the median due to abrupt and extreme changes in slope. If cable barrier were placed in such areas, it would significantly reduce or eliminate the cable barrier's ability to capture or redirect impacting vehicles. Additionally, water tends to accumulate in the bottom of a ditch, making most maintenance difficult, sometimes impossible.

Straight-Line Cable Design



Interwoven Cable Design

Cable barrier has reduced cross-median crash rates by 87 percent and contained 97 percent of out-of-control vehicles.