



A new safety feature is being added to many stretches of select Michigan highways. The Michigan Department of Transportation (MDOT) has installed cable guardrail along 280 miles of highway medians, in place of steel guardrails and concrete barriers, to stop vehicles from crossing into oncoming traffic – often with devastating consequences. Another 70 miles is planned.

Cross-median crashes are three times more deadly than other freeway crashes. Cable guardrail is expected to reduce cross-median crashes by an estimated 90 percent.

Cable guardrail 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, preventing the vehicle from bouncing back into traffic.

MDOT is installing cable guardrail along some medians with a history of median crossover crashes. Cable guardrail will run along select portions of median as wide as 100 feet.

MDOT expects cable guardrail to save 13 lives and prevent 51 incapacitating injuries a year.

FOR MORE INFORMATION:

www.michigan.gov/cableguardrail

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Michigan Department of Transportation

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CABLE GUARDRAIL in MICHIGAN

Making State Highways Safer

MDOT
Michigan Department of Transportation

COST

MDOT has invested over \$40 million since 2008 in the installation of 280 miles of cable guardrail. Another 70 miles is planned. According to state and federal regulations, the funding cannot be spent on other non-safety transportation projects, and cable barrier is the most cost-effective safety barrier available.

- Cable barrier: \$12-\$15 per foot
- Steel "W-beam" guardrail: \$28-\$33 per foot
- Concrete barrier: \$80 per foot or more

In the state of Washington, the calculated annual societal cost for all median-related accidents was \$13.5 million before the installation of cable guardrail and \$3.3 million after the installation.

According to the Federal Highway Administration, the societal cost per collision is \$3.76 million per fatal crash, compared to \$6,500 per crash resulting in only property damage. The anticipated increase in property damage during the winter months with cable guardrail is dramatically less significant when compared to the economic and emotional toll associated with a fatality.

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PLACEMENT

Cable barrier design is handled on a case-by-case basis. What works best at one location may not work well at another.

It is understandable most people would think cable barrier should be placed in the center of the median. However, water tends to accumulate in the bottom of a ditch. This makes most maintenance difficult, and impossible in some instances.

Unlike concrete barrier and steel guardrail, cable barrier can be placed on sloping shoulders. However, that slope is limited, so some stretches of cable may be closer than others to the edge of the roadway.

In some cases, steep median slopes may prevent the use of a single run of cable guardrail. The cost of leveling the slopes and allowing for the required drainage may offset the benefits of installing a single run of cable barrier. As a result, cable barrier may be needed on both sides of the median in certain areas.

Straight-Line Cable Design



Interwoven Cable Design

