



# Variable Speed Limits



**13 to 60 percent reduction in extreme speeding** through work zones.

Source: [Transportation Research Board \(2018\)](#)

**7:1 to 14:1 safety impact benefit-to-cost ratios.**

Source: [Texas A&M Transportation Institute \(2015\)](#)

**Over 50 percent reduction in collisions** in low visibility conditions.

Source: [Virginia DOT \(2018\)](#)

Variable speed limits (VSL) are signs that can dynamically display different speed limits depending on different factors like traffic, time of day, or weather conditions. They are primarily used for three purposes: reducing congestion, reducing speeds during inclement weather, and managing speeds during traffic events. ([FHWA-OPS](#))

## VSL Use Cases

With VSL, agencies can address a variety of conditions such as traffic volume, operating speeds, weather information, sight distance, and roadway surface conditions when posting speed limits. They can improve safety by decreasing risks associated with traffic moving at speeds higher than appropriate for challenging driving conditions. ([FHWA-OPS](#))

## VSL Outcomes

VSL can dynamically manage speeds during planned (rush hour congestion) and unplanned (incidents) circumstances. They can help eliminate or delay bottlenecks and mitigate the possibility of rear-end, sideswipe, and other collisions generally associated with slowed traffic on high-speed roadways. ([FHWA-OPS](#))



Source: USDOT

## Highlighted ITS Benefits

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