

Projects

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Prepared by Transportation Planning
Missouri Department of Transportation

DB-904 Safety Selection Tool

Advance warning system		Supplement existing advance warning signs with flashing beacons			Install high-visibility, continental crosswalks			Install Left Turn Flashing Yellow Arrow			
Project Cost	Select	Valid?	Weighted KABC Crash Reduction	Crash Reduction Credits	Project Cost	Select	Valid?	Weighted KABC Crash Reduction	Crash Reduction Credits	Project Cost	Select
Total across selected	\$ - 0		Total across candidates	33 87.9 93	Total across selected	\$ - 0		Total across candidates	50 4.6 7	Total across selected	\$ - 0
								Total across candidates	13 103.2 106	Total across selected	\$ - 1
			X	1.2 1.5			X	0.0 0.0		X	12.9 13.0
			X	5.8 6.0			X	0.2 0.5			
							X	0.0 0.0		X	18.3 18.5
			X	1.4 1.5			X	0.0 0.0		X	17.5 18.0
			X	3.2 3.5							
			X	1.4 1.5							
			X	1.4 1.5							
			X	17.6 18.0			X	0.0 0.0			

Description and Benefit

The Safety Improvements Design-Build project has the goal of maximizing the impact of approximately \$40 million of federal and state safety funds. To accomplish this goal a tool was developed by MoDOT and Jacobs in St. Louis to estimate the impact of different safety improvements at select locations. Traditionally, to estimate the impact of safety improvements, a spreadsheet based on the methodology in the Highway Safety Manual must be meticulously filled out with several inputs, from roadway geometry, to crash history and to improvement crash modification factor (CMF) and more. A new spreadsheet must be filled out for each scenario and each individual location which requires significant time investment from the designer team. The DB-904 Safety Selection Tool simplifies and hastens this process. It houses data for approximately 400 different locations, and over 30 different safety improvements. The combinations of safety improvements at a given location are also automatically checked to ensure it is possible to implement, such as ensuring that signal improvements can't be selected for a rural unsignalized roadway segment. The DB-904 automatically calculates the crash reduction for the selected improvements at each site with the press of a button. Instead of filling out countless HSM spreadsheets to see the impact of improvements across the project area, the DB-904 can be filled out once with fewer user inputs to see the impact of many improvements across several locations.

For More Information Contact

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