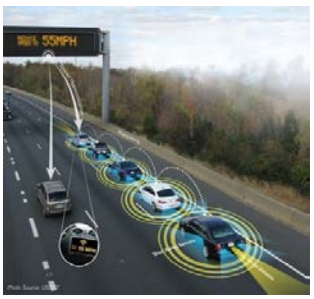
DEPARTMENT OF TRANSPORTATION

Intelligent Transportation System Technology

Change Item for the 2017 Legislative Session



Request

MnDOT is requesting a base increase of $9 million from the Trunk Highway Fund to maintain and strategically expand Minnesota's Intelligent Transportation Systems (ITS) including the emerging area of connected and autonomous vehicles. MnDOT has owned and operated statewide ITS for forty years, which includes:

- Regional Transportation Management Center (RTMC)
- Changeable message signs
- Signals, cameras, ramp meters
- Freeway Incident Response Safety Teams (FIRST)
- 511 Website
- Fiber optic communication lines
- Managed Lane technology
- Roadway Weather Information System (RWIS)
- Electronic gate systems

ITS assets reduce congestion, increase the roadway system efficiency and reduce crashes. Economic growth and increasing travel demands are significantly straining our existing infrastructure. ITS technology advances are required to meet these demands.

In addition, Automated Vehicles (AV) and Connected Vehicles (CV) technology is quickly advancing in the automobile industry. As vehicles and infrastructure begin to communicate, significant advances in state owned infrastructure will be required.

Proposal

The funding will be spent in 3 ways:

Capital Funding:

- Replace assets at their life cycle targets and expand the ITS statewide network.
- Expand infrastructure on four highways (Hwy. 52, Hwy. 169, I94, and I35).
- Connect greater Minnesota ITS devices through a virtual network to the RTMC.
- Enhance the 511 traveler's information website.

Operations and Maintenance:
Funding would provide approximately 28 FTES and resources for:

- 24/7 statewide incident and congestion management support at the RTMC (monitors metro traffic and congestion)
- Freeway Incident Response Safety Teams (FIRST).
- Maintaining and increasing ITS system reliability.
- Maintaining and enhancing systems at the RTMC.
- Researching, developing and deploying ITS technologies to enhance roadway safety and operations.

Advance ITS Technologies: Funds could be used as a match for federal grant opportunities or other work to further the state ITS technology.

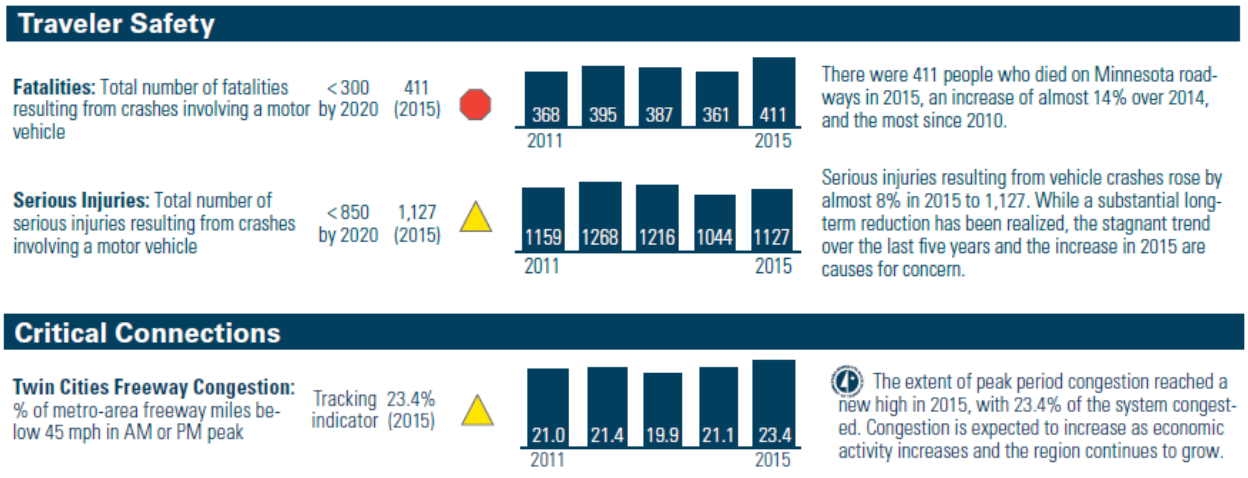
- Advance ITS technology in CV and AV, work zones, and snow and ice operations.

Impact

The ITS investments proposed have the potential to:

- Reduce fatalities and serious injuries: By reducing congestion, advanced work zone and system back up warnings.
- Reduce crashes: AV/CV investment will reduce many types of crashes which typically cause serious injury or death.
- Mitigate congestion: Congestion is projected to increase due to economic activity and regional growth. Investing in strategies to maintain current assets, add staff to increase RTMC operations, and manage ITS from a regional level will have a positive influence on this performance measure.

Performance measures shown below are from MnDOT's 2015 Annual Minnesota Transportation Performance Report.



For More Information

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