

# October 2021 Public Meeting

## I-80/94 BORMAN EXPRESSWAY

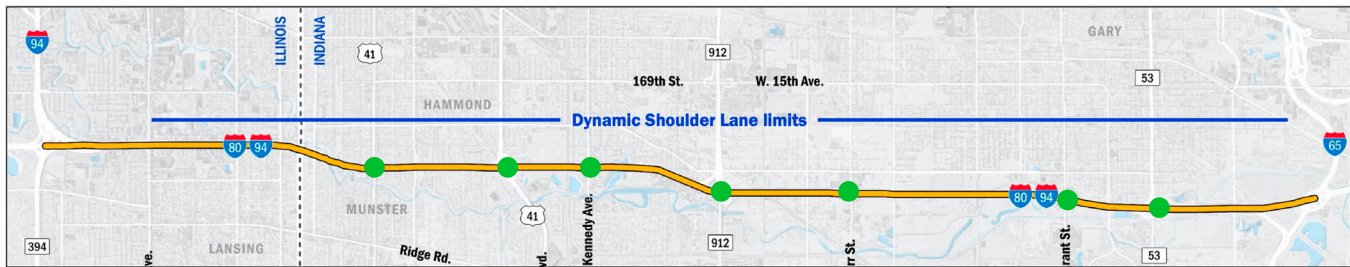
Transportation Systems Management and Operations (TSMO) Study

### Transportation Systems Management and Operations (TSMO)







Transportation Systems Management and Operations (TSMO) are strategies that focus on improving the performance of an existing transportation system and are often used in areas where additional travel lanes are not practical.

TSMO strategies including Dynamic Shoulder Lanes, Variable Speed Limits, and Traffic Event Management Systems are evaluated – both individually and in combination – to develop a comprehensive strategy package.

Variable Speed Limits, Queue Warning, and Lane Control are being considered throughout the corridor. Dynamic Shoulder Lanes and Ramp Metering are being evaluated as shown in the map below.



● Ramp Metering Locations

	 <b>Travel Time</b> minutes saved one-way	 <b>Average Speed</b> mph faster in peak periods	 <b>Travel Time Reliability</b> minutes with/without strategy	 <b>Study Area</b> reduced vehicle hours traveled	 <b>Safety</b> change in crash rates	 <b>Cost</b> in million
<b>Dynamic Shoulder Lanes</b>	<b>7</b>	<b>10</b>	<b>25/31</b>	<b>9%</b>	Reduced congestion-related crashes	<b>\$45-90</b>
<b>Ramp Metering</b>	<b>3</b>	<b>0</b>	<b>28/31</b>	<b>0%</b>	Reduced congestion-related crashes	<b>\$3-5</b>
<b>Variable Speed Limits</b>	<b>&lt;1</b>	<b>3</b>	<b>31/31</b>	<b>5%</b>	Reduced congestion-related crashes	<b>\$30-35</b>
<b>Queue Warning</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>16%</b>	<b>\$1</b>
<b>Lane Control</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4-9%</b>	<b>\$25-30</b>

## Event Management

This group of strategies is designed to reduce the impact that an incident (for example, a crash or maintenance work) has on traffic delays.

- Computer Aided Dispatch (CAD) Integration
- Maintenance/Emergency Response CCTV Access
- CCTV Enhancements
- Center to Center Interfaces
- Towing & Recovery Incentive Program (TRIP)

**Incident Examples: The project team evaluated the benefit of event management under two scenarios:**

### Minor Incident: Fender Bender

Implementing these strategies would clear this crash **5 minutes faster**, reducing user delay by 100 hours per event (**14% reduction**).

### Major Incident: Overturned Truck

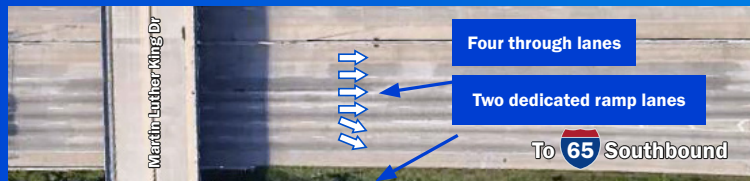
Implementing these strategies would clear this crash **60 minutes faster**, reducing user delay by 1,900 hours per event (**17% reduction**).



### Cost

System Setup \$1M | Annual Operation \$400k

## I-65/Broadway Improvements

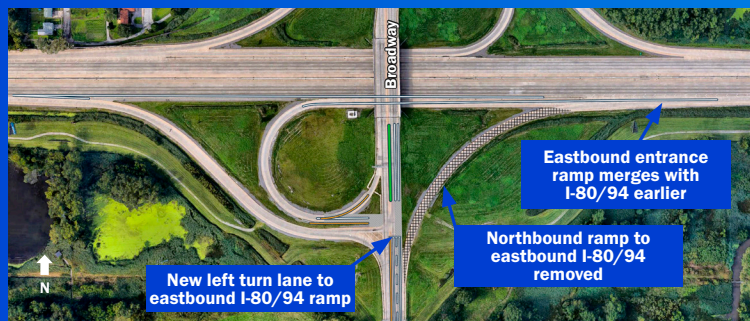


### Existing Geometry

The existing exit to I-65 southbound creates congestion because the right lane is underutilized.

### Proposed Geometry

Creating a 3rd lane and modifying the Broadway interchange would allow drivers to merge into the freeway sooner and would help address congestion in this area.



## What congestion cost area drivers in 2019

The benefits of TSMO strategies extend beyond increasing safety along the Borman Expressway; they also play a role in saving drivers time and money. In 2019, the average commuter in Chicago, IL-NW IN area lost more than 3 full days and an estimated \$1,587 in time and fuel costs<sup>1</sup> due to traffic congestion. TSMO strategies provide long-term environmental, economic, and quality of life dividends by improving air quality, increasing system reliability, and saving drivers time and money year after year.



The average driver lost **74 hours** due to congestion



The average driver lost approximately **\$1,587 in time** and fuel costs



The average driver used an extra **30 gallons of fuel** sitting in traffic

<sup>1</sup> Texas A&M Transportation Institute, "2019 Urban Mobility Report." August 2019.

## Stay Connected to the Study and Get Involved

**We need your input!** Your comments and insights will influence how the Borman Expressway operates in the future. To learn more about study, upcoming meetings, and ways to submit comments, visit: [www.indianaflexroad.com](http://www.indianaflexroad.com)