Michigan DOT I-94 Corridor

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Larry Doyle, Kalamazoo TSC Manager
Michigan Department of Transportation
Great Lakes Megaregion and GRLTOC
I-94 Corridor Operations Partnership (COP)
Travel Time and User Delay Cost (UDC)
Performance Measures
Technology, Resources, Data
Lessons Learned
Best Practices
I-94 Work Zone Performance Measures
Great Lakes Region Transportation Operations Coalition
I-94 Work Zone Performance Measures
MDOT I-94 Corridor Operation Partnership

I-94 Fast Facts

- Three Regions
- Nine TSC’s
- Nine Counties
- 275 miles
I-94 Corridor Operation Partnership (COP) Mission: “Improve traffic operations and system reliability along the I-94 corridor statewide.”

**I-94 COP Objectives**

- Unification of the I-94 corridor with one focus
- Travel Reliability: 40 min delay max for entire corridor
I-94 Work Zone Performance Measures
Travel Time Delay and User Delay Cost

UDC is a fairly easily defined and comprehendible metric for transportation professionals as well as the public and other partners in highway operations.

<table>
<thead>
<tr>
<th>User Delay Cost</th>
<th>Travel Time Reliability</th>
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<tbody>
<tr>
<td>Tangible, Relatable Unit of Measure</td>
<td>More Complex “Index”</td>
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<td>Real Time, Up to the Minute</td>
<td>Good for Long Term Trends, but Loses Meaning at Hourly Increments</td>
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<td>Accounts Well for Variation in Volume, Location &amp; Time of Day Impacts</td>
<td>Not as Reflective of Volume, Location, and Time of Day Impacts</td>
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<tr>
<td>Actionable: Allows for Proactive &amp; Active Management that Connect to Results</td>
<td>Difficult to Tie Actions to Outcomes</td>
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Recurring Vs. Non-recurring Delay

- Recurring congestion is the baseline.
- Non-recurring are above the baseline; examples, winter, work zones and traffic incidents.

Breakdown is based on three year average provided by RITIS.
I-94 Work Zone Performance Measures
MDOT Southwest Region I-94 Performance Measures

Evolution of work zone performance measures

- 2010 – Time (project level)
- 2011 – Time (corridor level), Speed and MOT
- 2012 – Speed and MOT
- 2013 – Time (predicted versus actual), Cost and Communication

Performance Measurement Elements

- Cost due to delay in work zone
- Time (Project and Corridor level)
- Speed
- Maintenance of Traffic (MOT) Implementation
- Communication
Cost Performance Measure:
Limit the 2013 user delay cost on the I-94 corridor to $108 million.

UDC Weekly Summary
Travel Time Delay: Maintain a maximum of 40 minutes travel time delay for the I-94 corridor
Work Zone Speed Compliance:
Maintain posted (normal) speeds through all work zones, 90% of the time in each TSC.
Work Zone Set-Up Compliance:
Perform two work zone reviews per week at each project set-up and stage change 90% of the time.
Communication Performance Measure:
Perform maintenance of traffic huddles (MOTH) for 90% of weeks with active work zones.

This measure targets:
- Communication between operations and construction
- Incorporate maintenance, permits, construction work zones each week
I-94 Work Zone Performance Measures
MDOT Southwest Region Resources, Technology and Data

Resources, Technology and Data

- Operation focus shift
- ITS infrastructure
- Vehicle speed probe data
- Manual calculation of delay
- Auto calculation of delay

Regional Integrated Transportation Information System (RITIS)
Lessons Learned

- Change in behavior/culture
- Speed has the most influence to the goal
- Project development is key to success
  - Applying experience helped us to refine lane restrictions and work operations
- Testing cultural change to measure communication

**Mission:** Improve traffic operations and system reliability along the I-94 corridor statewide
Best Practices

- Region work zone Gantt Chart
  - Incorporation of maintenance activities
- Project level delay mitigation
  - Towing incentives
  - Off peak work based on delay measures
  - Increase in the use of incentive/disincentive
- Incorporation of new ITS infrastructure
- Customer focus with emphasis on continuous improvement
Questions?

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