



Illinois DOT
TSMO & ITS Projects

Kevin Price, ITS Operations Engineer



Presentation Overview

TSMO projects

- » Program Plan
- » INDOT I-80/94

ITS projects

- » TPIMS
- » Traveler Information System update
- » Regional Arterial TMC
- » ...



TSMO Program Plan

- Consultant lead study in started 2020
- Capability Maturity Model (CMM) Assessment
 - » Organize a TSMO Council
 - » TSMO considerations within project development and selection
 - » Integration with design process
 - » Promoting TSMO focused solutions
- Executive approval 2022



Illinois TSMO Council

IDOT

- Corridor and freeway management strategies.
- Develop processes and institutional arrangements that optimize TSMO throughout the state.
- At the district level, collaborate with local agencies to plan and optimize traffic management strategies.

MPOs

- Facilitate coordination and collaboration among various agencies (state and local), in the areas of planning, funding and traffic management.
- Long-range planning to guide the identification, prioritization, and selection of investments, programs, and strategies for the region.

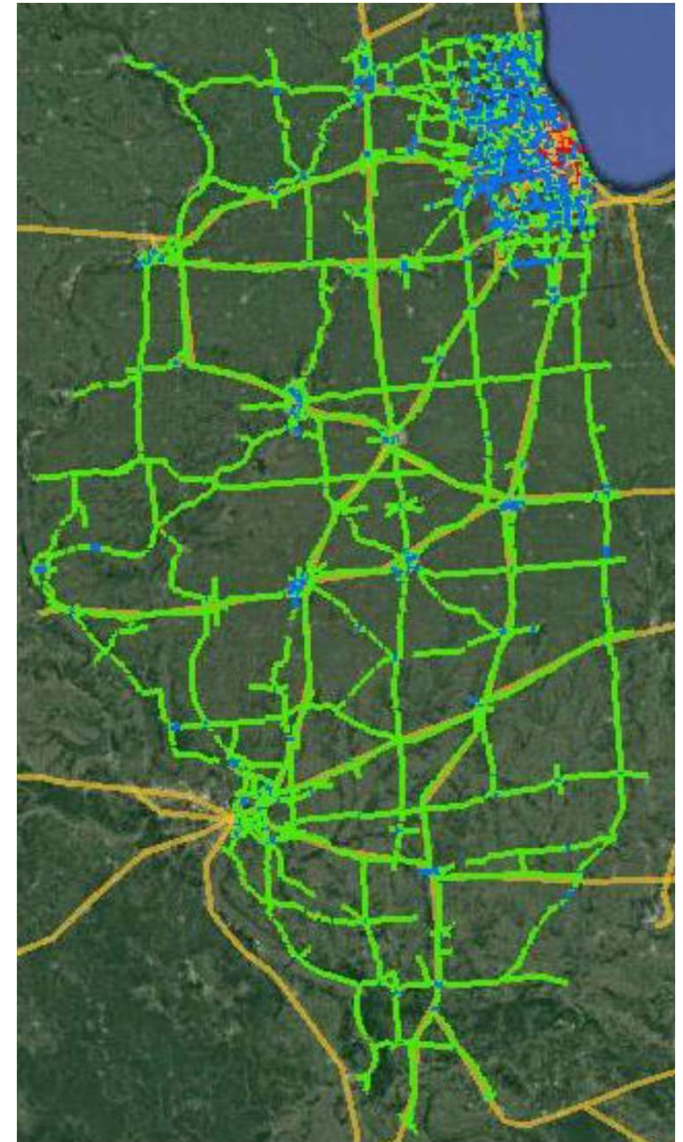
Local Agencies / Roadway Authorities

- Corridor and arterial management strategies.
- Transit service coordination with corridor management strategies.
- Provide input to traffic management and operations priorities for region.
- Police, fire, and emergency medical services (EMS) coordination with traffic management strategies.



Statewide Travel Time Reliability Analysis

- HERE Data (2017-2019)
- 16B records
- Most IDOT and ISTHA roadways plus some local roads (15,118 miles)
- Linked with HPMS speed limits to determine free flow travel time





IL TSMO Dashboard

Pages << File Export Share Chat in Teams Get insights Subscribe ...

MORNING ANALYSIS

MID-DAY ANALYSIS

PM ANALYSIS

WEEKEND ANALYSIS

ILLINOIS TRAVEL TIME PM METRICS

DISTRICT:
COUNTY:
ROADWAY:
DIRECTION OF TRAVEL:

BI
LOTR
PI
TI

2.09
\$7,406,814

AVG. DIST. OF SEG. MEASURED (MI)
ANNUAL USER DELAY COST (PM)

| ROAD | TRAVEL DIRECTION | INTERSECTION | COUNTY | SEGMENT DISTANCE | PM METRICS | USER DELAY COST | RANK |
|------|------------------|---------------------------------|----------|------------------|------------|-----------------|------|
| I-55 | NORTHBOUND | BROWN ST/DIVERNON RD/EXIT 80 | SANGAMON | 2.91 | 0.10 | \$0.00 | 9 |
| I-55 | NORTHBOUND | CR-2/EXIT 109 | SANGAMON | 3.50 | 0.08 | \$0.00 | 11 |
| I-55 | NORTHBOUND | I-55-BL | SANGAMON | 1.21 | 0.13 | \$0.00 | 6 |
| I-55 | NORTHBOUND | I-55-BL/S SHERMAN BLVD/EXIT 105 | SANGAMON | 2.69 | 0.09 | \$0.00 | 11 |
| I-55 | NORTHBOUND | I-72/US-36/EXIT 92A/92B | SANGAMON | 1.97 | 0.11 | \$0.00 | 7 |
| I-55 | NORTHBOUND | I-72/US-36/EXIT 98 | SANGAMON | 0.20 | 0.10 | \$0.00 | 9 |
| I-55 | NORTHBOUND | IL-104/EXIT 82 | SANGAMON | 1.59 | 0.14 | \$0.00 | 6 |
| I-55 | NORTHBOUND | IL-54/SANGAMON AVE/EXIT 100 | SANGAMON | 2.10 | 0.08 | \$0.00 | 12 |
| I-55 | NORTHBOUND | LAKE SPRINGFIELD BRIDGE | SANGAMON | 0.66 | 0.10 | \$0.00 | 8 |
| I-55 | NORTHBOUND | LAKESHORE DR/PALM RD/EXIT 88 | SANGAMON | 4.87 | 0.08 | \$0.00 | 12 |
| I-55 | NORTHBOUND | OLD ROUTE 66/EXIT 83 | SANGAMON | 1.73 | 0.10 | \$0.00 | 8 |
| I-55 | NORTHBOUND | RAIL SPLITTER REST AREA | SANGAMON | 2.23 | 0.09 | \$0.00 | 11 |

SEGMENT LENGTH (MILES)

AADT RANGE

Filters

Search

Filters on this page

Length(mi)_Fshapef... is greater than or equal to 0,10

BI METRICS

USER DELAY COST BY COUNTY

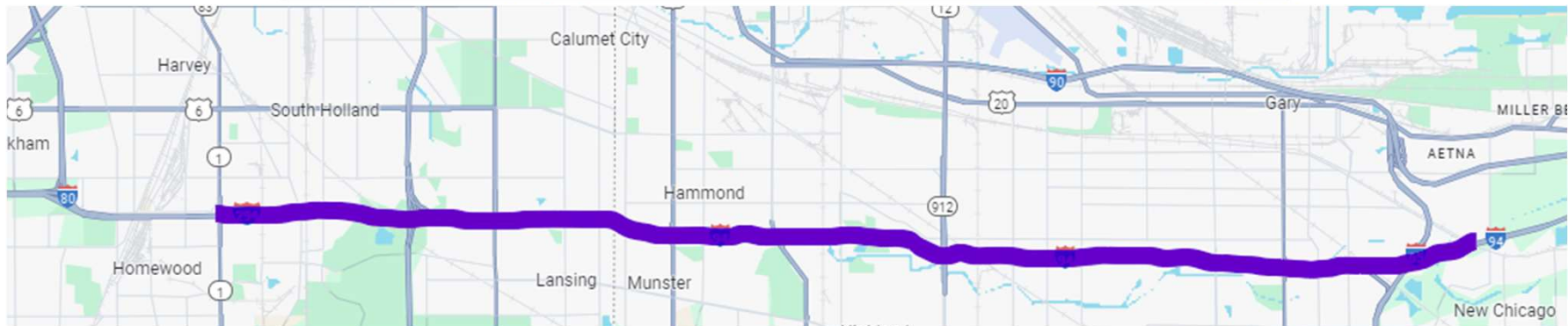
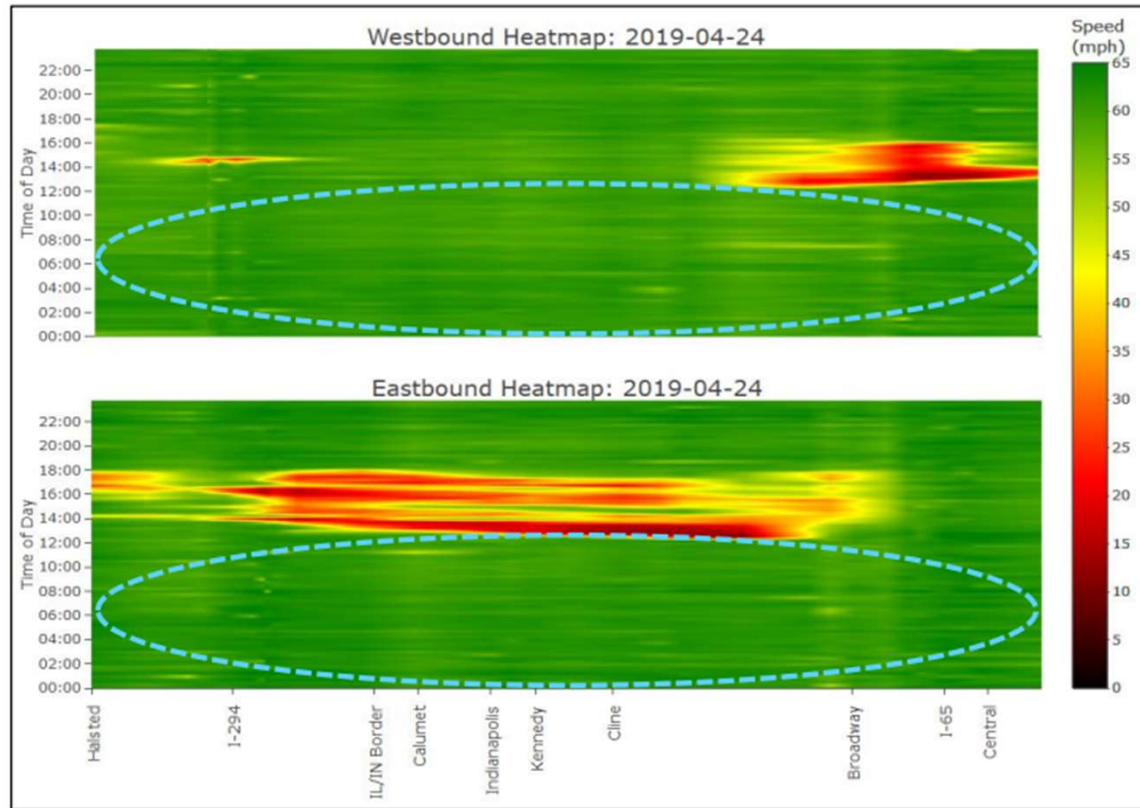


Indiana led study of I-80/94

- Over 14 miles, including 3.5 in Illinois
- Multiple strategies/solutions reviewed
- Part-time shoulder use and one interchange ramp improvement
- Advance contract in 2025. Main contract(s) in 2026.
- <https://indianaflexroad.com/>



INDOT TSMO I-80/94





INDOT TSMO I-80/94

- Design criteria differences
- Operations differences
 - » VSL: IN = enforceable, IL = advisory only
- Funding
 - » IN awarded USDOT MEGA grant (\$127.5M)



Illinois DOT TSMO & ITS Projects



- Pilot at Spoon River Rest Area
 - Tested over-height sensors and pucks
 - Video was originally for correction

| Sensor | Accuracy (R ²) | N (minutes) |
|--------------------------|----------------------------|-------------|
| Camera | 96% | 12,923 |
| w/ heavy rain | 75% | 85 |
| w/ heavy fog | 89% | 417 |
| In-pavement | 88% | 5,760 |
| Over-height | 42% | 1,440 |
| w/o maintenance vehicles | 97% | 1,440 |





Review & Update Procedures & Notifications

- Open/Close status
- Winter Operations
- Incident notification
- Other Scenarios





ITS Projects - TPIMS

- Four Rest Areas online (incl update of pilot location).
- Website shows:
 - » Parking status
 - » Typical availability
 - » Snapshot of lot

Illinois Department of Transportation Truck Parking System

Map Report Contact Us Admin

Lots

- [Eastbound Spoon River Rest Area \(Zoom\)](#)
- [Westbound Spoon River Rest Area \(Zoom\)](#)
- [Westbound Mackinaw Dells Rest Stop \(Zoom\)](#)
- [Eastbound Mackinaw Dells Rest Stop \(Zoom\)](#)
- [Limestone Rest Stop \(Zoom\)](#)
- [Great Sauk Trail \(Zoom\)](#)

Copyright (c) 2023 University of Illinois at Chicago Department of Computer Science

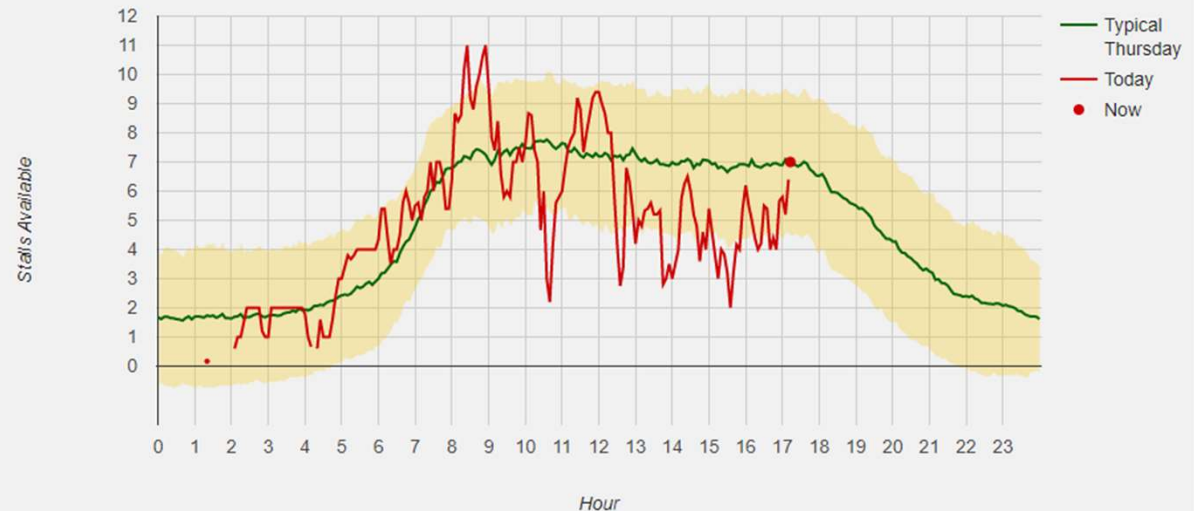


Parking Information Sample

Details

| | |
|------------------|---|
| Name | Westbound Spoon River Rest Area |
| Updated at | 10/12/2023, 5:12:28 PM |
| Stalls available | 7 |
| Trend | Steady |
| Capacity | 12 |
| Status | Open |
| Location | West bound I-74 at mile post 62.0 |
| Ownership | Publicly Owned |

Typical Parking Availability



When is the Lot Typically Full?



- Singh & Assoc. working on PS&E for D1, D2, D3 rest areas (14)
- Remaining IDOT Rest Areas (34) start later this year.



- District 1 (Chicago) Regional Arterial TMC
 - » Program and Strategy plan complete
 - » Starting Centralized Traffic Signal network
- Update Gateway Traveler Information System (GTIS)
 - » Update website and add data sources (multi-modal)
 - » Security review (IT more involved)



ITS Projects

- Mobile App (take 2)
 - » Legislative passed 2023
- Statewide ATMS
 - » Move to single statewide ATMS (consultant study)
 - » RFP developed and pending review for advertisement
- Weigh station upgrades (ALPR, electronic credentialing)
- WZDx – review and update construction data processing
- Traffic Management project – Dubuque, IA
- Fiber backbone – continued expansion and leasing
- National I-80 Corridor Coalition