





Transportation Conference
 Sept. 19-20, 2023
 




Traffic Operations Bureau
 Tim Simodynes, PE

| | |
|--|---|
| <p>Traffic Operations Bureau</p> <p>Who we are and what we do</p>  | <p>Consultants & Contractors</p> <p>Traffic Operations Bureau</p>  |
| <p>TSMO</p> <p>Transportation Systems Management & Operations</p> | <p>New & Exciting!</p> <p>...in Traffic Operations</p>  |

Traffic Operations Bureau

Who we are and what we do



4 **Traffic Operations Bureau** 

Staffing (12 Full-time)

Systems Operations Division, Dave Lorenzen

- Bureau Director – **Andy Lewis**
- Admin. Assistant – **Danielle Madden**
- TSMO/Traffic Operations – **Tim Simodynes**
- Traffic Management Center & Highway Helper – **Ashley Hochberger & Dawn Williams**
- 511ia.org & TMC software – **Sinclair Stolle**
- Intelligent Transp. Systems – **Mark Van Dyke & Jason Dale**
- Traffic Incident Management – **Ted Shipley**
- Emergency Operations – **Brian Pribyl & Scott McLain**
- Budget Analyst – **Brenda Kramer**

5 **Traffic Operations | Traffic & Safety** 

Andy Lewis, Director

- Traffic Management Center
- Highway Helper
- 511ia.org
- Intelligent Transp. Systems
- Traffic Incident Management
- Emergency Operations
- Cooperative Automated Transportation



Steve Gent, Director

- Traffic Engineering: signs, pavement markings, speed limits, traffic signals, lighting
- Safety: analysis, research, programs
- Access Management
- Advertising Management
- Sign Shop



Tim Willy


Consultants & Contractors

Traffic Operations Bureau



7 **Traffic Operations Staffing** 
 (12 staff + Consultants + Contractors)
 = ±50 people

- Traffic Operations (TSMO) – Consultants
- Traffic Management Center
 - Consultant & Contractor
- Highway Helper - Contractor
- 511ia.org & TMC software – Contractors
- Intelligent Transp. Systems
 - Consultants & Contractor
- Traffic Incident Management - Consultant
- Emergency Operations

8 **Traffic Operations On-Call Consultants** 

Two categories in 2023

- ITS & Fiber Optic Design and Inspection
- Traffic Operations, General
 - TSMO Service Layer Plans & ongoing support
 - Procurements, RFPs, and specification writing

- Selected and awarded in June 2023
- 3-Year Selections

9 **Traffic Operations Contracted Services** 

Procured through DOT Purchasing Section

- TMC Staffing
- Traveler Information System (511ia.org)
- TMC Software ("ATMS")
- Highway Helper
- ITS Field Device Integration & Maintenance
- Intelligent Work Zone services

6-Year Maximum

TSMO

Transportation Systems Management & Operations



Understanding TSMO | Ancient Indian Parable

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Understanding TSMO

- Analytics
- Automation
- Modes
- Traffic Incident Management
- Quick Clearance
- Work Zone Management
- Intelligent Transportation Systems
- Traffic Management Center Operations
- Traveler Information
- (Much more!)

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Iowa DOT TSMO on web

<https://iowadot.gov/tsmo/>

HOME

TSMO PLAN UPDATE - 2022

TSMO STRATEGIC PLAN

TSMO PROGRAM PLAN


TSMO LAUNCH PRESENTATION

TSMO IN IOWA PRESENTATION

SERVICE LAYER PLANS

CONTACT US

ABOUT TSMO



Our roads are busier than ever before and with more drivers on the road, the potential for crashes and increased congestion is greater than ever.

WHAT IS TSMO??

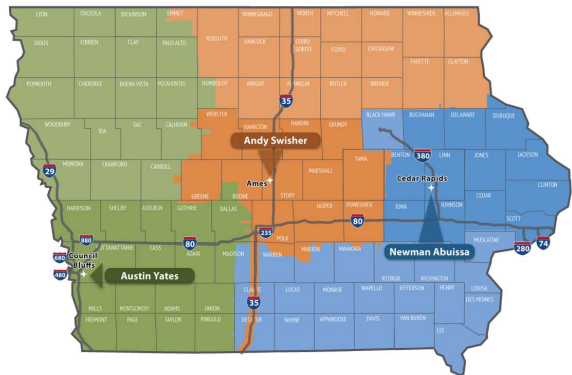
The strategic approach to improving the state's transportation system to help you reach your destination, safely, efficiently, and conveniently.

WHY DEVELOP A TSMO PLAN??

Our roads are busier than ever before. With

14 **IOWADOT**

District Traffic Operations Engineers



The map shows Iowa divided into districts with the following assignments:

- Andy Swisher:** Districts 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- Austin Yates:** Districts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34.
- Cedar Rapids:** Districts 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120.
- Newman Abuissa:** Districts 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140.

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Iowa DOT TSMO on web

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Eight TSMO Service Layer Plans


- 2017**
 - Traveler Information
- 2018**
 - ITS and Communications (2023 update)**
 - Traffic Incident Management (2024 update)
 - Work Zone Management (2020 update)
- 2019**
 - Emergency Management
 - Cooperative Automated Transportation (was Connected and Autonomous Vehicles)
- 2020**
 - Traffic Management Center
- 2023: Active Transportation and Demand Management**

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ITS Service Layer Plan Update

Focus on

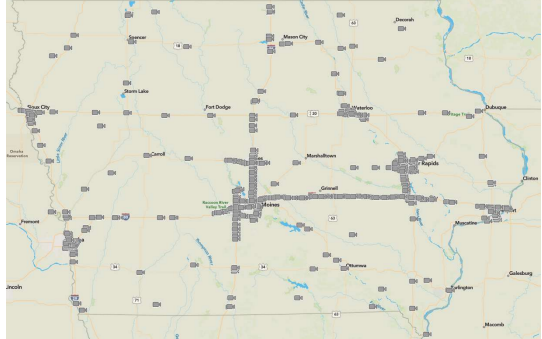
- Dynamic Message Sign needs
- Camera/Fiber Optic corridor needs




18 **IOWADOT**

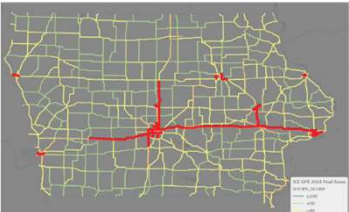
ITS Service Layer Plan Update

Camera/Fiber Optic corridor needs




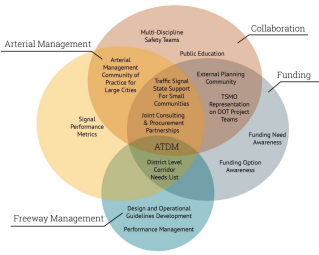
19 Infrastructure Condition Evaluation—Operations, "ICE-Ops" 

Refreshed and Tailored to DMS Needs Evaluation



| Weighted Criteria |
|----------------------------------|
| AADT |
| Bottleneck Duration |
| Incident Density |
| Crash Rate |
| Buffer Time Index |
| Event Center Proximity |
| Flood Event Density |
| Winter Weather Sensitive Mileage |
| Freight Network Mileage |
| ICE Infrastructure Score |

20 Active Transportation and Demand Management (Service Layer) 



- Part-time Shoulder Use
- Variable Speed Limits
- Travel Time Messaging
- Lane Utilization
- Ramp Metering
- Traffic Signal Optimization

New & Exciting!


...in Traffic Operations



22 InTrans Analytics Tools 

<https://iowadot.gov/performance>



23 InTrans Analytics Tools 

Dashboards and Tools for

- TMC Incidents
- Crashes
- Congestion
- Weather
- Work Zones
- Etc.

GENERAL DASHBOARDS

- ✓ Emergency Incident Notification (EIN)
- Real-time dashboard of current and

<https://public-iowadot.opendata.arcgis.com/pages/iowa-state-university-operations-and-safety-dashboards>




TSMO in Project Development/Delivery

- Alternatives Analysis & Planning
- Optimizing Construction Impacts
- Feedback to Designers
- Funding

TSMO Challenge


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Work Zones & Traffic Critical Projects





<https://iowadot.gov/workzonereferencelibrary>


- Maintenance of Traffic on rural 2-lane bridges
- Shoulder design
- Lane Closure Efforts



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Lane Closure System


| | | |
|--|---|----------|
|  | DOT Maintenance | FY '23 |
|  | Construction (Contractor) | FY '24 |
|  | 3 rd Party: Utility, City, Towing & Recovery, etc. | FY '25 |
|  | Emergency | On-Going |

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Work Zones

3 New Task Forces:


- Transverse, Long-term, Temporary Rumble Strips
- Emergency Pull-off Guidance
- Speed Management



28 **Intelligent Work Zone**

How do we encourage drivers to use an optional detour?

Travel Times?
Delay messaging



LEGEND

- 2023 CLOSURES
 - Fall
 - Full Closure of Gateway (Okoboji) by 8:00pm Beginning Sept. 28, 2023
- 2024 CLOSURES
 - Spring
 - Fall
- 2023 U.S. 71 DETOUR
- U.S. 71 Detour



Thank you



Traffic Operations Bureau
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