This Annual Performance Measure Report contains data collected by the WMTOC during Fiscal Year 2014, which is presented in the form of graphs, charts, maps and tables. Please refer to the WMTOC Fiscal Year 2014 Annual Report for a narrative related to the performance measure data and other WMTOC activities. Please contact Suzette Peplinski for further information regarding these performance measures.

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West Michigan TOC Control Room
E-mail: MDOT-GR-TRAFFOPS@michigan.gov
Main: 616-451-8329
WMTOC Control Room

Hours of Operation

<table>
<thead>
<tr>
<th>Days</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday – Thursday</td>
<td>6 a.m. – 8 p.m.</td>
</tr>
<tr>
<td>Friday</td>
<td>6 a.m. – 9 p.m.</td>
</tr>
<tr>
<td>Saturday – Sunday</td>
<td>Noon – 8 p.m.</td>
</tr>
<tr>
<td>Special Events and Holidays</td>
<td>As needed</td>
</tr>
</tbody>
</table>

Control Room Contact Information

E-mail: MDOT-GR-TRAFFOPS@michigan.gov
Main: 616-451-8329
Fax: 616-774-9101

ITS Device Locations and Coverage Area

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DMS on North I-196/US-31 in advance of Blue Star Highway

**DEVICE TYPE**
- TRAFFIC CAMERA
- DYNAMIC MESSAGE SIGN
## Communications Activity

Operators log all incoming and outgoing control room communications, engaging various incident responders and stakeholders.

### Total Communication

- **Calls:** 4,182
- **Emails:** 6,499

## Quality Assurance/Quality Control

Quality assurance and quality control audit of format and content for incident notification communication and media traffic reporting.

### Incident Notification

- **Format Correct:** 92.2%
- **Content Correct:** 97.9%

## Unplanned Incidents

Operators log information about each unplanned incident* including date/time, location, traffic impact, duration, and associated traveler information.

### Total Incidents

1,427

### Incidents Occurring in Construction Zones

18

## Construction Activity

Operators maintain a list of ongoing construction projects and contacts for these projects. This activity also includes maintenance operations.

### System Availability

- **CCTV:** 87%
- **MVDS:** 82%
- **DMS:** 92%

## Daily Shift Report

Operators track maintenance issues for all Intelligent Transportation Systems (ITS) equipment, including Closed-circuit Television (CCTV) cameras, Microwave Vehicle Detector Systems (MVDS), and Dynamic Message Signs (DMS).

*Incidents* include, but are not limited to, vehicle crashes, abandoned or disabled vehicles, and debris in the roadway.

**Note:** Data included in this report is from MDOT FY 2014 (Oct. 1, 2013, through Sept. 30, 2014)
Communications by Agency

<table>
<thead>
<tr>
<th>Agency</th>
<th>Calls</th>
<th>E-mails</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td>MDOT</td>
<td>424</td>
<td>1017</td>
</tr>
<tr>
<td>Other</td>
<td>451</td>
<td>329</td>
</tr>
<tr>
<td>GRPD</td>
<td>164</td>
<td>595</td>
</tr>
<tr>
<td>URS Corporation</td>
<td>304</td>
<td>94</td>
</tr>
<tr>
<td>ITS System Maintenance</td>
<td>175</td>
<td>127</td>
</tr>
<tr>
<td>MSP</td>
<td>21</td>
<td>234</td>
</tr>
<tr>
<td>KCRC</td>
<td>123</td>
<td>124</td>
</tr>
<tr>
<td>Weather</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nixle</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>GovDelivery</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Annual Total</strong></td>
<td><strong>1,662</strong></td>
<td><strong>2,520</strong></td>
</tr>
</tbody>
</table>

Calls by Type

- **MDOT (34.4%)**
- **Media (1.7%)**
- **MSP (6.1%)**
- **GRPD (18.1%)**
- **City of Grand Rapids (9.5%)**
- **URS (5.9%)**
- **Nixle (7.3%)**
- **Other (22.6%)**

Total Calls: 4,182

E-mails by Type

- **MDOT (31.6%)**
- **Media (1.1%)**
- **MSP (0.7%)**
- **Nixle (7.3%)**
- **Other (18.3%)**
- **URS (5.2%)**
- **Weather (5.4%)**
- **City of Grand Rapids (1.9%)**

Total Emails: 6,499

Annual Average Communication History

- **2014 Average Month:** Calls 349, Emails 529
- **2013 Average Month:** Calls 316, Emails 341
- **2012 Average Month:** Calls 274, Emails 256
- **2011 Average Month:** Calls 221, Emails 196
- **2010 Average Month:** Calls 213, Emails 141
- **2009 Average Month:** Calls 68, Emails 142

Incident Notification* History

- **Average Month:** Calls 127, Emails 60.6
- **Highest Month Jan. 2014:** Calls 242, Emails 83
- **Lowest Month Aug. 2014:** Calls 78, Emails 27

DMS and VSS Messages by Type

- **Average Month:** Construction 56, Incident 149, Special Event 255, Congestion 69, Weather 31
- **Highest Month Jan. 2014:** Construction 242, Incident 23, Special Event 162, Congestion 78, Weather 83
- **Lowest Month Aug. 2014:** Construction 78, Incident 12, Special Event 50, Congestion 78, Weather 83

Incident Notification* Communication Accuracy

<table>
<thead>
<tr>
<th></th>
<th>FY 2014 Average</th>
<th>FY 2013 Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format Correct</td>
<td>92.2%</td>
<td>96.8%</td>
</tr>
<tr>
<td>Content Correct</td>
<td>97.9%</td>
<td>94.3%</td>
</tr>
</tbody>
</table>

*Incident Notification e-mails are issued for high-impact incidents with an expected duration of 15 minutes or longer.

Sign up for e-mail from MDOT!

Secondary Crashes

<table>
<thead>
<tr>
<th>Secondary Crashes/ Percentage of Total</th>
<th>Total Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>46 (5%)</td>
<td>904</td>
</tr>
</tbody>
</table>

* Data limited to crashes within the WMTOC camera coverage area.
### Traffic Impacts by Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Incidents</th>
<th>0-29 Minutes</th>
<th>30-59 Minutes</th>
<th>60-119 Minutes</th>
<th>120+ Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crashes (1004)</td>
<td>179</td>
<td>152</td>
<td>526</td>
<td>376</td>
<td>0</td>
</tr>
<tr>
<td>Disabled Vehicles (278)</td>
<td>178</td>
<td>76</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Abandoned Vehicles (121)</td>
<td>113</td>
<td>1</td>
<td>5</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Debris (24)</td>
<td>1</td>
<td>2</td>
<td>18</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Vehicle Composition of Incidents*

<table>
<thead>
<tr>
<th>Type</th>
<th>Incidents</th>
<th>0-29 Minutes</th>
<th>30-59 Minutes</th>
<th>60-119 Minutes</th>
<th>120+ Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crashes (997)</td>
<td>88%</td>
<td>23%</td>
<td>12%</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Disabled Vehicles (277)</td>
<td>77%</td>
<td>23%</td>
<td></td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Abandoned Vehicles (121)</td>
<td>96%</td>
<td>4%</td>
<td></td>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>

*Vehicle Composition of Incidents excludes incidents where vehicle types were not identified.

### Incident Clearance Details*

<table>
<thead>
<tr>
<th>Incident/Roadway Average Clearance Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearance Time</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>60</td>
</tr>
<tr>
<td>70</td>
</tr>
</tbody>
</table>

*Incident Clearance Details excludes abandoned vehicles.

### Total Unplanned Incidents per Weekday Hour

- **6 a.m.** to **8 a.m.**: Number of incidents decreases.
- **10 a.m.** to **12 p.m.**: Number of incidents increases.
- **2 p.m.** to **4 p.m.**: Number of incidents decreases.
- **6 p.m.** to **8 p.m.**: Number of incidents increases.

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* : Previous 5-Year Avg.
Incident Density and Hot Spots Map

High-impact Unplanned Incident Activity*

<table>
<thead>
<tr>
<th>Incident</th>
<th>FY 2014</th>
<th>FY 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Month</td>
<td>Highest Month</td>
</tr>
<tr>
<td>Lane Closure</td>
<td>52.0</td>
<td>104</td>
</tr>
<tr>
<td>Ramp Closure</td>
<td>4.6</td>
<td>14</td>
</tr>
<tr>
<td>Freeway Closure</td>
<td>5.9</td>
<td>12</td>
</tr>
</tbody>
</table>

*High-impact Unplanned Incident Activity includes unplanned incidents resulting in closures.

Unplanned Incidents by Roadway

<table>
<thead>
<tr>
<th>Freeway</th>
<th>FY 2014</th>
<th>FY 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Month</td>
<td>Highest Month</td>
</tr>
<tr>
<td></td>
<td>Total per mi.</td>
<td>Total per mi.</td>
</tr>
<tr>
<td>I-96 (10.6 mi.)</td>
<td>17.0</td>
<td>34</td>
</tr>
<tr>
<td>I-196 (12.1 mi.)</td>
<td>29.0</td>
<td>67</td>
</tr>
<tr>
<td>US-131 (15.2 mi.)</td>
<td>57.0</td>
<td>104</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>103.0</strong></td>
<td><strong>205</strong></td>
</tr>
</tbody>
</table>

* Reflects roadway mileage within the current WMTOC camera coverage area.
Incidents Occurring in Work Zones

Highest Month Work Zone Incident Details:
During the month of July, 11 incidents were identified by operators as being within work zones. All 11 crashes occurred within the southbound US-131 bridge repair work zone from Wealthy Street to I-196.

Monthly Construction DMS Message Activity
Overall CCTV Camera Availability

- **CCTV Cameras Below 95% Availability**
  - **Location**
  - **Full**
  - **Partial**
  - **None**
  - 1. US-31 @ Jackson Ave 19% 67% 14%
  - 2. US-31 @ Van Wagoner St 20% 66% 14%
  - 3. I-196 @ M-11 (28th St.) 28% 8% 64%
  - 4. US-31 @ M-104 46% 45% 9%
  - 5. I-196 @ Jackson St. 71% - 29%
  - 6. I-196 @ Bike Path 72% - 28%
  - 7. I-96 Conn. to US-131 73% - 27%
  - 8. I-196 @ Chicago Dr. Conn. 81% 2% 17%
  - 9. I-96 @ I-196 82% 18% -
  - 10. I-96 EB @ Plainfield Ave. 83% 14% 4%
  - 11. I-96 @ E. Beltline Ave. 83% 12% 5%
  - 12. M-6 @ Kalamazoo Ave. 86% - 14%
  - 13. I-96 EB @ M-37 (Alpine Ave.) 88% 12% -
  - 14. I-196 @ Lane Ave. 90% 10% -
  - 15. I-196 @ Chicago Dr. 93% - 7%
  - 16. I-196 @ College Ave. 95% 5% -

Overall MVDS Availability

- **MVDS Below 75% Availability**
  - **Location**
  - **Full**
  - **Partial**
  - **None**
  - 1. 227 - US-131 NB @ I-96 WB - - 100%
  - 2. 114S - I-196 EB @ Ottawa - - 100%
  - 3. 114N - I-196 WB @ Monroe - - 100%
  - 4. 114 - - - 100%
  - 5. 229 - US-131 @ I-96 13% - 87%
  - 6. 124 - I-196 EB @ I-96 Merge 39% - 61%
  - 7. 220 - I-196 @ US-131 48% - 52%
  - 8. 205 - US-131 NB N of 28th 57% - 43%
  - 9. 125 - I-96 EB @ E. Beltline 68% - 32%

Overall DMS Availability

- **DMS Below 95% Availability**
  - **Location**
  - **Full**
  - **Partial**
  - **None**
  - 1. I-196 WB @ Chicago Dr. Conn. 61% 3% 36%
  - 2. I-96 WB @ M-21 (Fulton St.) 63% - 37%
  - 3. US-131 NB @ 84th St. 65% - 35%
  - 4. M-6 EB @ Ivanrest Ave. 78% 6% 16%
  - 5. US-131 SB @ 12 Mile Rd. 86% - 13%
  - 6. I-96 WB @ Knapp St. 88% - 12%
  - 7. I-96 WB @ Quiggle Ave. 90% 10% -
  - 8. I-96 EB @ Dean Lake Ave. 93% 6% 1%
  - 9. I-96 EB @ Forest Hill Ave. 94% 5% 1%