

# West Michigan TMC

April 2009

Serving the Grand Rapids Area Freeways



Suzette Peplinski, PE  
Michigan Department of Transportation  
1420 Front Avenue NW  
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## Control Room Coverage

### Control Room Hours of Operation

Time Period	Days	Hours
October - April	Monday - Friday	6 am - 8 pm
	Saturday - Sunday	As needed
May - September	Monday - Thursday	6 am - 8 pm
	Friday	6 am - 9 pm
	Saturday	12 pm - 6 pm
	Sunday	4 pm - 8 pm
Special Events	All	As needed
Holidays and Holiday Weekends	New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas	As needed

The following report is limited to data collected during the hours of operation for the control room and within the ITS device coverage area.

### ITS Device Locations and Coverage Area



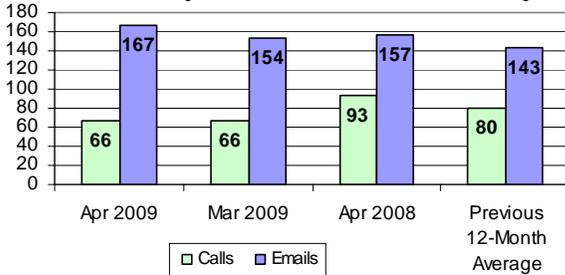
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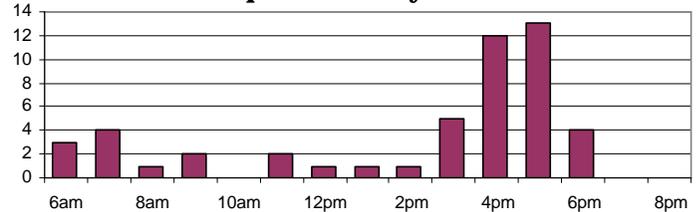
April 2009

## Control Room Support Activity

**Monthly Communication History**



**Month Total of Unplanned Incidents per Weekday Hour**



**Calls and Emails by Type**

Agency	Calls			Emails		
	In	Out	Total	In	Out	Total
City of Grand Rapids	0	0	0	17	0	17
City of Wyoming	0	2	2	0	0	0
Grand Rapids Police Department	2	31	33	0	0	0
Kent County Road Commission	0	0	0	0	0	0
MDOT, Construction	3	7	10	46	0	46
MDOT, Traffic/ITS	1	0	1	7	0	7
MDOT, Maintenance	0	0	0	15	0	15
MDOT, Other	0	0	0	60	1	61
Media	0	0	0	0	3	3
Michigan State Police	0	17	17	0	0	0
Sheriff, Kent Co.	0	0	0	0	0	0
ITS System Maintenance	0	1	1	6	0	6
Weather	0	0	0	12	0	12
Other	1	1	2	0	0	0
<b>Month Total</b>	<b>7</b>	<b>59</b>	<b>66</b>	<b>163</b>	<b>4</b>	<b>167</b>

**Monthly High Impact Unplanned Incident Activity**

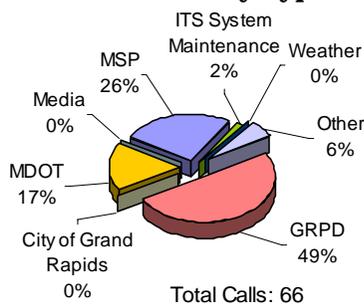
Incident	Apr 2009	Mar 2009	Apr 2008	Previous 12-Month Avg.
Lane Closures	17	11	10	17
Ramp Closures	-	1	-	0
Freeway Closures	-	1	1	1

**Total Monthly Unplanned Incidents by Roadway**

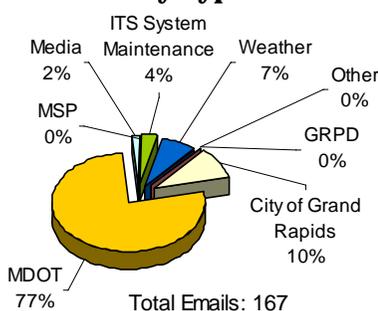
Freeway	Apr 2009		Mar 2009		Apr 2008		Previous 12-Month Avg.	
	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.
I-96 (4.5 mi.)*	10	2.2	8	1.8	2	0.4	6	1.4
I-196 (8.5 mi.)*	13	1.5	14	1.6	15	1.8	16	1.9
US-131 (11 mi.)*	28	2.5	30	2.7	16	1.5	37	3.3
<b>Total</b>	<b>51</b>	<b>2.1</b>	<b>52</b>	<b>2.2</b>	<b>33</b>	<b>1.4</b>	<b>59</b>	<b>2.5</b>

\*Mileages reflect the portion of the roadway within the coverage area.

**Calls by Type**



**Emails by Type**



## Traffic Management Center News

Wayne Burke and Roy Sparks (MITSC) traveled to the Indianapolis TMC in April to observe the operations there. The two supervisors were able to attend a monthly status meeting and the trip was very successful.

Road construction projects are currently affecting I-96, I-196, and US-131 in the Grand Rapids area. The WMTMC continued to work with Grand Rapids TSC engineers to display messages for construction activities.

The WMTMC control room was staffed for select weekend hours in April to support construction activities. Extended summer hours will go into effect in May.

Though the number of incidents in April was similar to March, the area of US-131 and 28<sup>th</sup> Street saw a greater percentage of incidents, with 6 crashes and 5 disabled vehicles.

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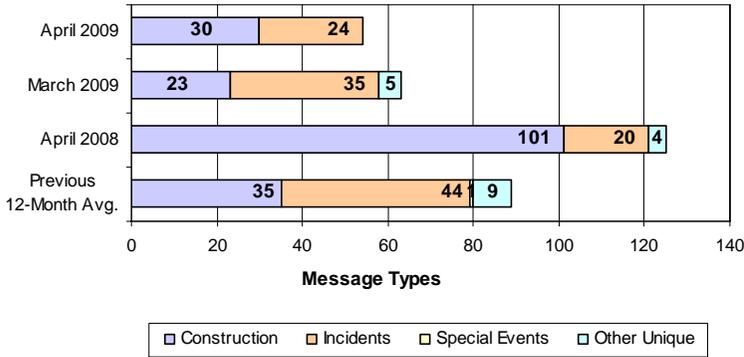
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## Traveler Information Activity

- The MDOT ITS Control Room provides traffic information to freeway users via 10 dynamic message signs (DMS) positioned in key locations along the freeway system in the greater Grand Rapids area.

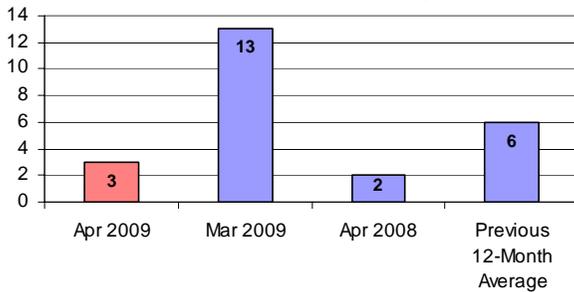
### DMS Messages by Type



### Top Three Utilized DMS

- Southbound US-131 at Ann Street
- Westbound I-96 at Fulton/M-21
- Southbound US-131 at Pearl Street

### Monthly Incident Notification History



### Monthly Incident Notification Communication Accuracy

	Apr 2009	Mar 2009	Apr 2008	Previous 12-Month Avg.
Format Correct	100.0%	92.3%	100.0%	95.7%
Content Correct	66.7%	84.6%	100.0%	94.3%

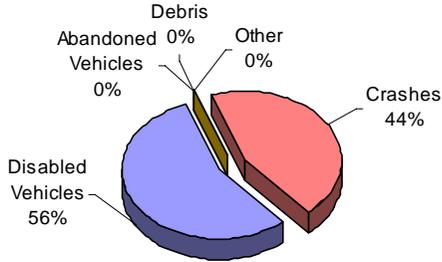
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April 2009

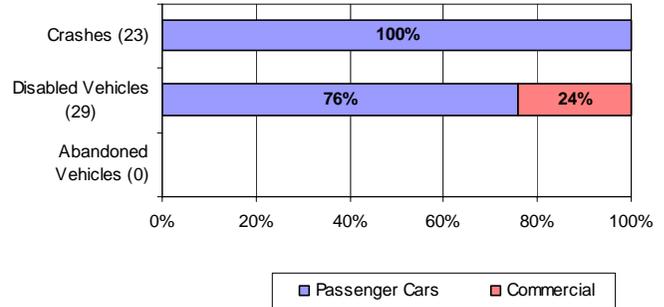
## Incident Management Information

### Incidents Managed by Type

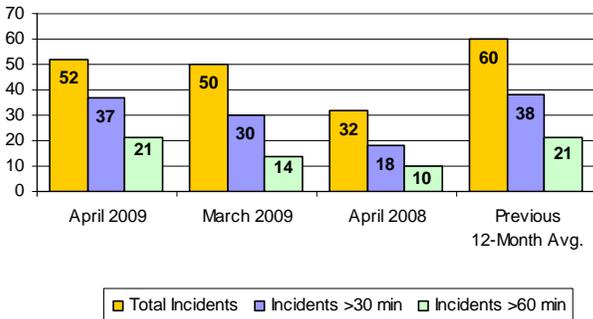


Total Incidents: 52

### Vehicle Composition of Incidents

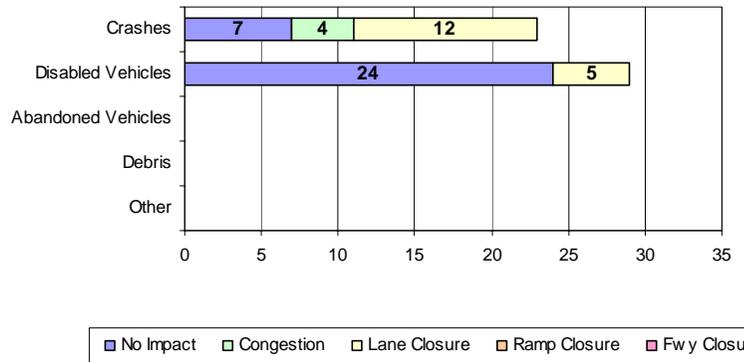


### Incident Duration History\*

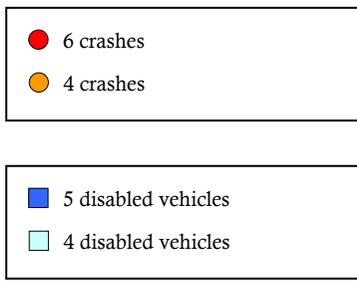


\*Incident Duration History does not include abandoned vehicles.

### Traffic Impacts by Incident Type

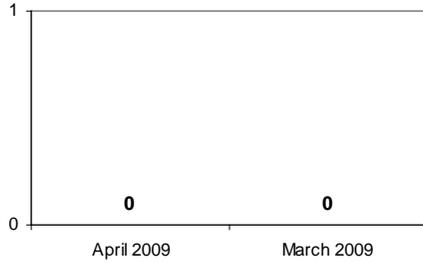


### Incident Hot Spots

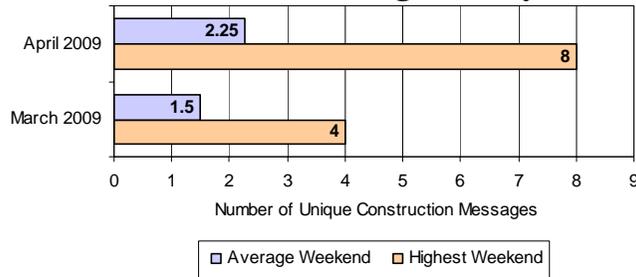


## Construction Management Information

### Incidents Occurring in Construction Zones



### Weekend\* Construction DMS Message Activity



\*Friday, Saturday and Sunday.

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April 2009

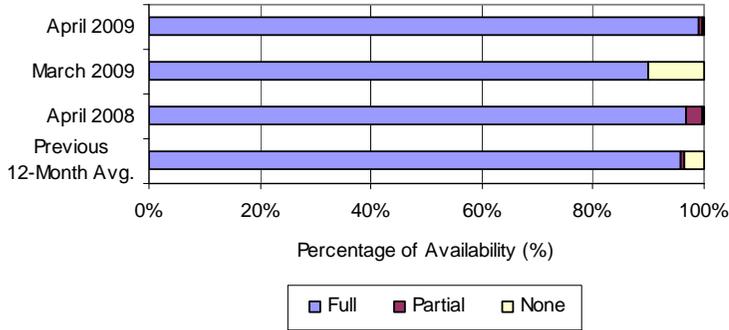
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## ITS Field Infrastructure Reliability

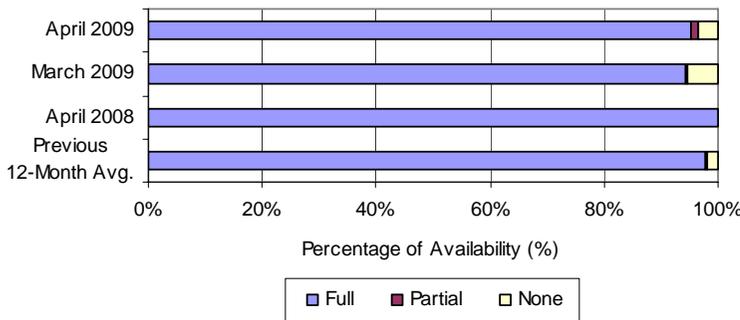
### Overall CCTV Camera System Availability



### Individual CCTV Camera Availability

Camera	Full	Partial	None
1 US-131 @ 28th St	100%	-	-
2 US-131 @ Franklin St	100%	-	-
3 US-131 @ Market Ave	100%	-	-
4 US-131 @ Pearl St	100%	-	-
5 US-131 @ I-196	100%	-	-
6 US-131 @ Leonard St	100%	-	-
7 US-131 @ Ann St	100%	-	-
8 US-131 @ I-96	100%	-	-
9 US-131 @ Hall St	100%	-	-
10 US-131 @ West River Dr	100%	-	-
11 I-196 @ Chicago Dr	94%	-	6%
12 I-196 @ Lake Michigan Dr	94%	6%	-
13 I-196 @ Lane Ave	94%	6%	-
14 I-196 @ College Ave	100%	-	-
15 I-196 @ Fuller Ave	100%	-	-
16 I-96 @ I-196	100%	-	-
17 I-96 @ Fulton St (M-21)	100%	-	-

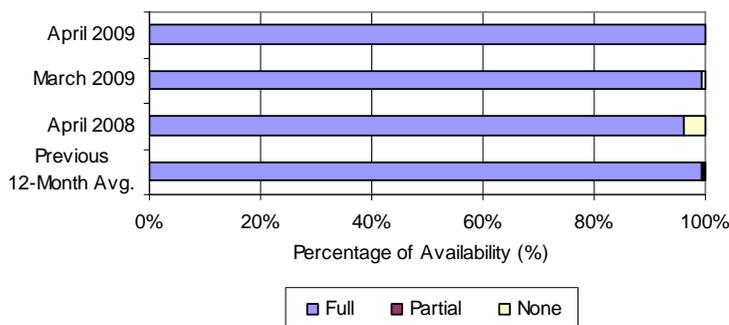
### Overall DMS System Availability



### Individual Dynamic Message Sign Availability

DMS	Full	Partial	None
1 WB I-96 @ Fulton St (M-21)	100%	-	-
2 EB I-196 @ Chicago Dr	100%	-	-
3 WB I-196 @ Plymouth Ave	100%	-	-
4 SB US-131 @ West River Dr	100%	-	-
5 SB US-131 @ Ann St	100%	-	-
6 NB US-131 @ Leonard St	100%	-	-
7 SB US-131 @ Pearl St	100%	-	-
8 SB US-131 @ Hall St	100%	-	-
9 NB US-131 @ 36th St	54%	12%	33%
10 NB US-131 @ 28th St	100%	-	-

### Overall VSS System Availability



### Individual Variable Speed Sign Availability

VSS	Full	Partial	None
1 SB US-131 @ Pearl St	100%	-	-
2 NB US-131 @ Market Ave	100%	-	-
3 SB US-131 @ Market Ave	100%	-	-
4 NB US-131 @ Franklin St	100%	-	-

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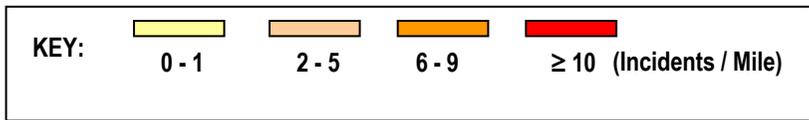
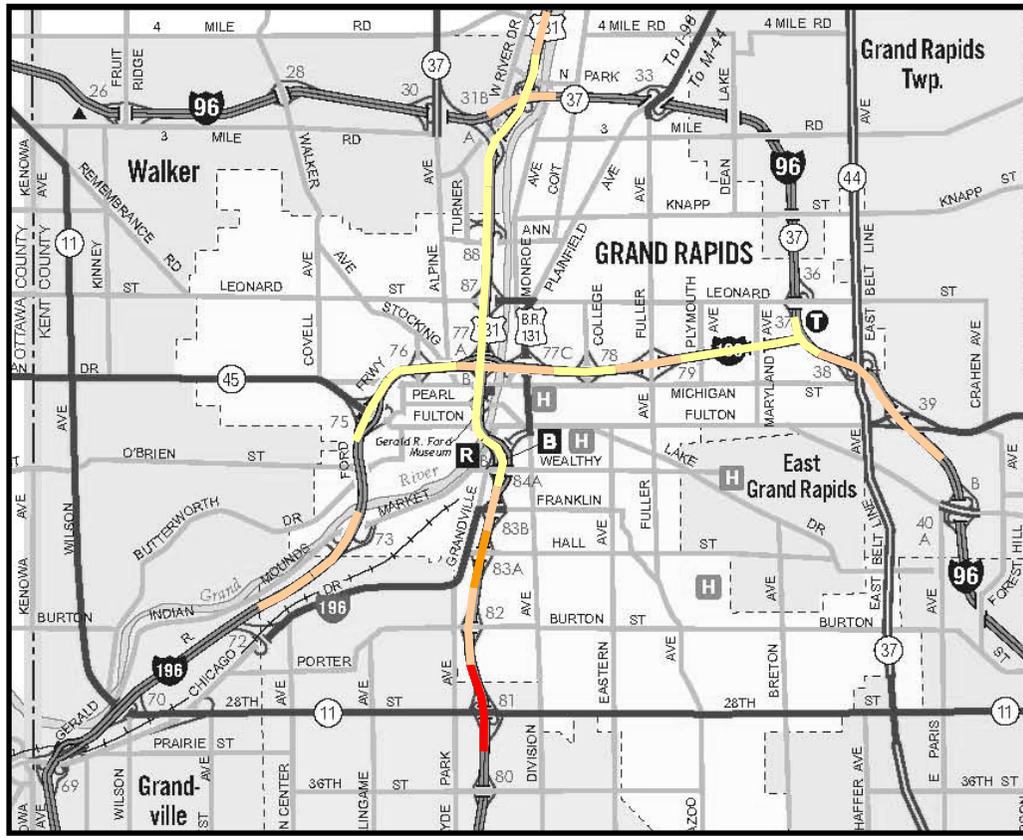


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## Safety Summary

### April 2009 Incident Density by Freeway Segment



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## DATA KEY INFORMATION

Table	Description	Purpose	Data Source
<b>Month Total of Unplanned Incidents per Weekday Hour</b>	Displays the total unplanned incidents for 1-hour increments over a 24-hour period.	Provides a snapshot view of variability of incidents by time of day.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Monthly High Impact Unplanned Incident Activity</b>	Displays the number of major unplanned incidents for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of the major incidents that affect the roadway and freeway interchanges along with historical data.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Total Monthly Unplanned Incidents by Roadway</b>	Displays the total unplanned incidents by freeway and the density of incidents based on freeway coverage.	Provides a snapshot view of the number of incidents per freeway per month.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Monthly Communication History</b>	Displays the number of telephone calls and emails (incoming and outgoing) for the Control Room Operators for the current month, previous month, month last year and a monthly average for the previous 12 months.	Provides a snapshot view of the control room workload in a historical context.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Calls and Emails by Type</b>	Displays the number and types of call and email activity for the Control Room operators, separating incoming and outgoing calls.	Provides a snapshot view of the Control Room call distribution and any apparent trends with the call volume or type.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Calls by Type</b>	Displays the percentage distribution of call activity for the Control Room operators.	Provides a snapshot view of the Control Room call distribution and any apparent trends with the call volume or type.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Emails by Type</b>	Displays the percentage distribution of email activity for the Control Room operators.	Provides a snapshot view of the Control Room email distribution and any apparent trends with the email volume or type.	Manually entered information by the operator.

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<b>DMS Messages by Type</b>	Displays the total number of DMS messages by type that occurred during the month.	Provides a snapshot view of the level of effort and need related to DMS messages.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Top Three Utilized DMS</b>	Displays the top 3 DMS in terms of the number of unique messages displayed for the month.	Provides a snapshot view of the "most active" DMS for traveler information, which may indicate areas where additional DMS or other forms of traveler information may be necessary.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Monthly Incident Notification History</b>	Displays the number of email incident notifications sent out by Control Room Operators for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of the control room workload in a historical context.	<b><u>QA/QC Log</u></b> Manually entered information by operations supervisor.
<b>Monthly Incident Notification Communication Accuracy</b>	Displays the accuracy of email incident notification messages sent out to stakeholders. Accuracy measures include format and content.	Provides a quantitative method of quality control on operator interactions with stakeholders.	<b><u>QA/QC Log</u></b> Manually entered information by operations supervisor.

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<b>Incidents Managed by Type</b>	Displays the distribution of incident types.	Provides a snapshot view of the composition of incidents.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Vehicle Composition of Incidents</b>	Displays the number of incidents that involved commercial vehicles compared to passenger cars for each incident type.	Provides a snapshot view of the incidents involving commercial vehicles.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Incident Duration History</b>	Displays the total number of incidents compared with the number of incidents with durations exceeding 30 minutes and 60 minutes. (current month, previous month, month last year and the monthly average for the previous 12 months.)	Provides a snapshot view of the duration of incidents managed by the control room.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Traffic Impacts by Incident Type</b>	Displays traffic impact distributions by incident type.	Provides a snapshot view of the typical traffic impacts for each incident type.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Incident Hot Spots</b>	Displays the most frequent locations for accidents and disabled vehicles.	Provides a snapshot view of where operators should concentrate their attention.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.

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<b>Incidents Occurring in Construction Zones</b>	Displays the number of unplanned incidents occurring in construction zones for the current and previous months.	Provides a snapshot view of the number of incidents occurring in construction zones.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.
<b>Weekend Construction DMS Message Activity</b>	Displays the average and maximum number of unique construction messages posted during a full (Friday-Sunday) weekend in the current and previous months.	Provide an snapshot view of the quantity of messaging occurring during the weekend.	<b><u>Control Room Activity Log</u></b> Manually entered information by the operator.

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Table	Description	Purpose	Data Source
<b>Overall Camera System Availability</b>	Displays the percentage of CCTV camera availability for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of system availability in relation to historical data.	<b><u>Daily Shift Report</u></b> Manually entered information by the operator.
<b>Individual CCTV Camera Availability</b>	Displays the percentage of time each individual CCTV camera is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<b><u>Daily Shift Report</u></b> Manually entered information by the operator.
<b>Overall DMS System Availability</b>	Displays the percentage of Dynamic Message Sign availability for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of system availability in relation to historical data.	<b><u>Daily Shift Report</u></b> Manually entered information by the operator.
<b>Individual Dynamic Message Sign Availability</b>	Displays the percentage of time each individual Dynamic Message Sign is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<b><u>Daily Shift Report</u></b> Manually entered information by the operator.
<b>Overall VSS System Availability</b>	Displays the percentage of Variable Speed Sign availability for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of system availability in relation to historical data.	<b><u>Daily Shift Report</u></b> Manually entered information by the operator.
<b>Individual Variable Speed Sign Availability</b>	Displays the percentage of time each individual Variable Speed Sign is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<b><u>Daily Shift Report</u></b> Manually entered information by the operator.
<b>Incidents by Freeway Segment</b>	Displays incident density per segment of roadway within the ITS device coverage. Red indicates a freeway with the highest incident density. Dark orange, light orange and light yellow represent decreasing levels of density, respectively.	Provides a graphic representation of incident density to assist in choosing locations for future ITS devices.	<b><u>Daily Shift Report</u></b> Manually entered information by the operator.