



ST. LOUIS DISTRICT MOBILITY

MAY/JUNE 2017

GUIDEPOST

- OVERALL FREEWAY MOBILITY HAS IMPROVED IN BOTH THE AM AND PM FROM MAY TO JUNE
- AVERAGE INCIDENT LANE CLEARANCE CONTINUED TO IMPROVE FROM MAY TO JUNE WITH A RECORD NUMBER OF INCIDENTS RECORDED IN MAY
- RECORD HIGH MAJOR AND MODERATE WORK ZONE IMPACTS EXPERIENCED IN JUNE ON EB POPLAR STREET BRIDGE, I-55 NB/SB AT ROUTE A AND THE I-44 AT ROUTE 109 TO ROUTE 141 PROJECTS.
- THE 2016 COMMERCIAL MOTOR VEHICLES FATAL CRASH DATA REPORT IS HIGHLIGHTED ON PAGE 11
- MAY 2017 WEATHER WASHED OVER THE DISTRICT CAUSING PROBLEMS ON MANY ROUTES ACROSS THE DISTRICT



HISTORIC FLOODING THE FIRST WEEK OF THE MONTH IN MAY FLOODED MANY ROADWAYS LIKE THE INTERCHANGE AT I-44 AND ROUTE 141 PICTURED ABOVE, NEGATIVELY IMPACTING THE REGION'S MOBILITY.

MOBILITY SNAPSHOT



FREEWAY MOBILITY

MAY TO JUNE COMPARISON:

AM IMPROVEMENT / PM IMPROVED MOBILITY



MAJOR INCIDENTS

MAY 2017: 6 → JUNE 2017: 8



AVERAGE INCIDENT DURATION MAY → JUNE

LANE CLEARANCE: 24:24 → 22:18

INCIDENT CLEARANCE: 28:55 → 25:43
(MIN: SEC)



MAJOR IMPACT WORK ZONES

MAY → 2 JUNE → 39

MODERATE IMPACT WORK ZONES

MAY → 7 JUNE → 60

ZONING IN

TMS WORK ZONES

- MAY 2017: 301
- JUNE 2017: 349

WORK ZONE BREAKDOWN:

- MAJOR: 41 - 9.4%
- MODERATE: 67 - 15.5%
- MINOR: 324 - 75.1%

WORK ZONE CRASHES: 16



GATEWAY GUIDE
TRANSPORTATION MANAGEMENT CENTER



WORK ZONES

TMC Observed Work Zones May - June 2017			
May		June	
Level of Travel Time Impact	Number of Work Zones	Level of Travel Time Impact	Number of Work Zones
Major Impact	2	Major Impact	39
Moderate Impact	7	Moderate Impact	60
Minor Impact	182	Minor Impact	142
Total	191	Total	241

*Impact Levels described in Data Key

SL Mobility Rating:

- ◆ May 2017: 94%
- ◆ Jun 2017: 98%
- ◆ Goal: 91%

SL Visibility levels:

- ◆ May 2017: 99%
- ◆ June 2017: 96%
- ◆ Goal: 91%

Additional Travel Time Impacts through Work Zones

Major Impact (15 Minutes or Above)

Moderate Impact (10-14 Minutes)

5/29 – 6/30 (Monday – Friday) Eastbound I-64 – Poplar Street Bridge 3 right lanes (29 Major 42 Moderate)

- Closed leaving one lane of traffic open eastbound before Poplar Street Bridge daily
- All mitigation efforts were in use
- RITIS data recorded additional travel times up to 25 minutes during non-peak hours

4/8 – 4/09, 5/13 – 5/14, 6/4, 6/23 – 6/24 (Weekend) Southbound/Northbound I-55 — Jefferson County right lane (5 Major 11 Moderate)

- Traffic reduced to one lane all weekend for bridge work.
- All mitigation efforts were in use
- RITIS data recorded additional travel times up to 33 minutes during non-peak hours

6/19 (Monday) Eastbound/Westbound I-70 – Route Z right lanes (2 Major 4 Moderate)

- Traffic reduced to one lane during daytime hours for coring
- Hours not determined by traffic data
- RITIS data recorded additional travel times up to 33 minutes

6/19-6/23 (Nightly) Eastbound/Westbound I-44 – 109 to 141 right lanes (5 Major 10 Moderate)

- Traffic reduced to one lane during overnight hours for coring
- Hours on westbound were adjusted to a 10:00 pm start time while MoDOT is limited on the start and end times on eastbound
- RITIS data recorded additional travel times up to 60 minutes of travel time

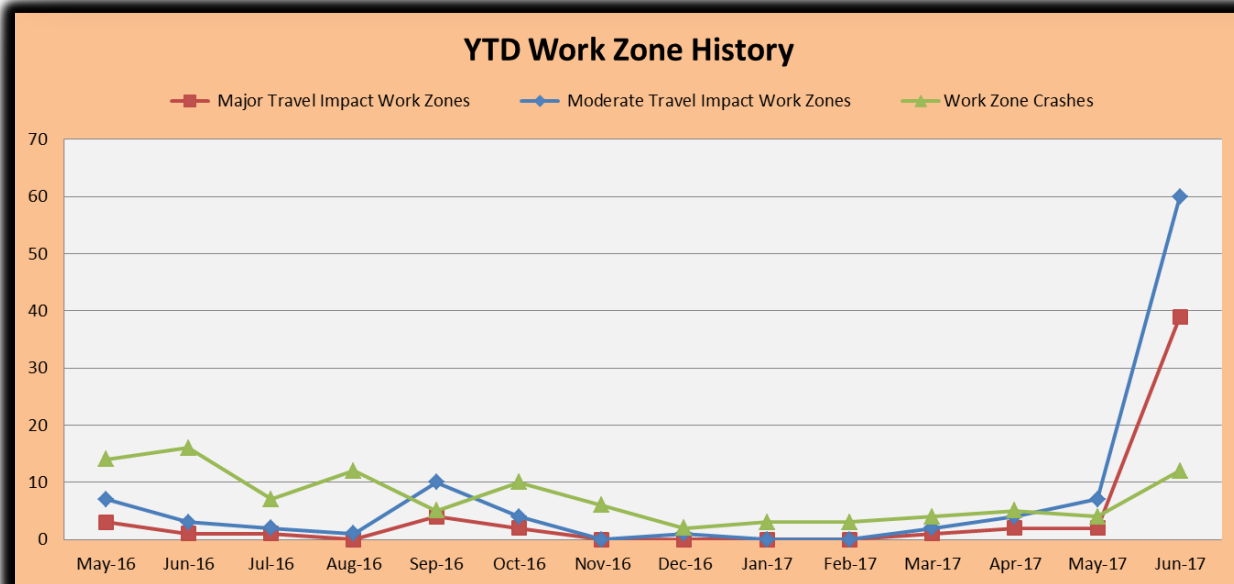
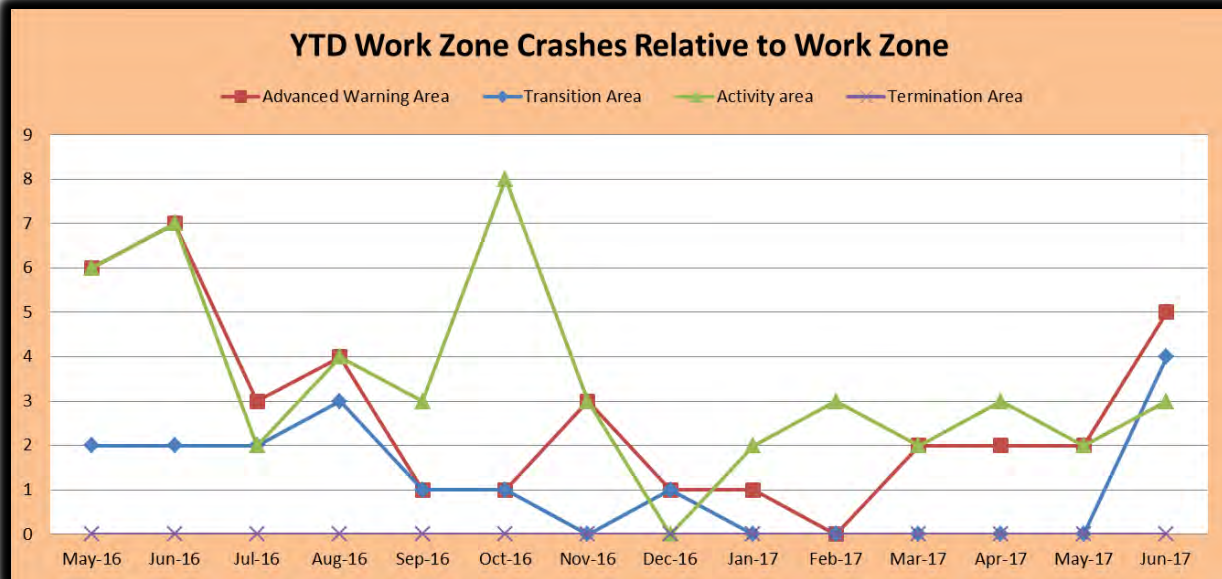


WORK ZONES

Work Zone Related Crashes with Mobility Impact

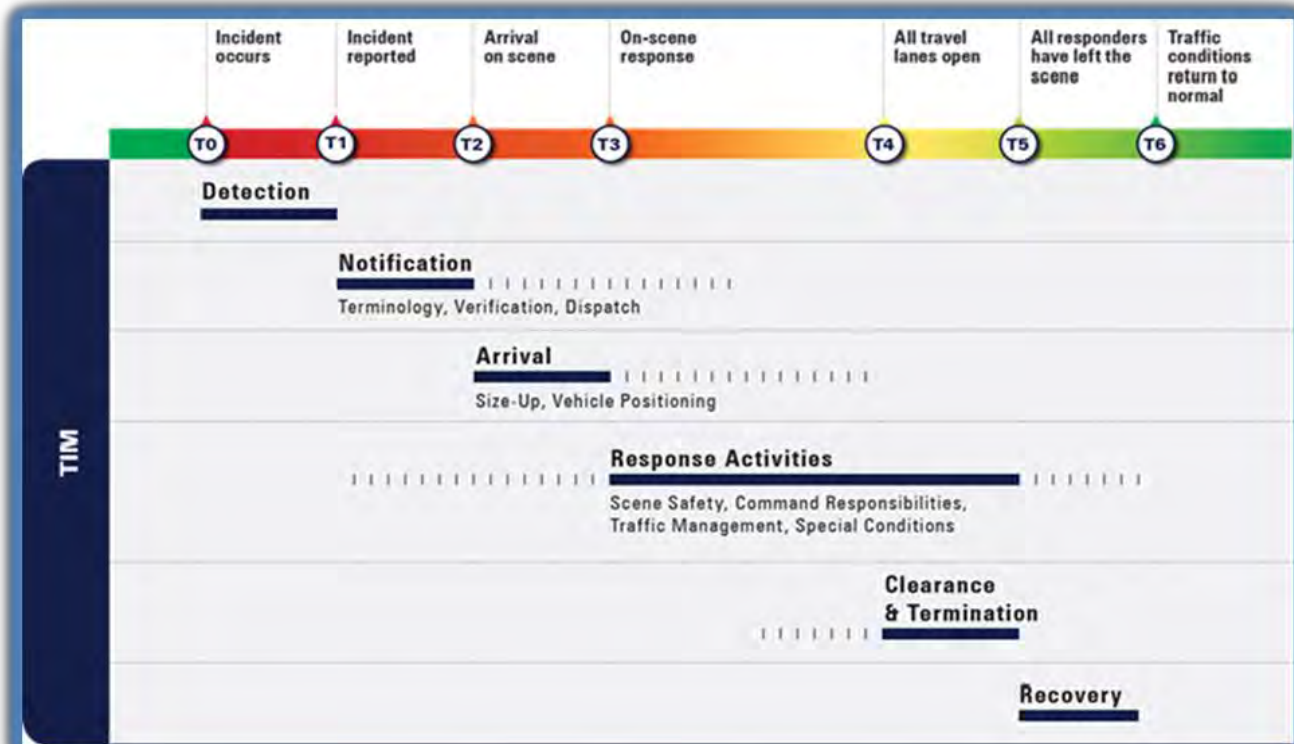
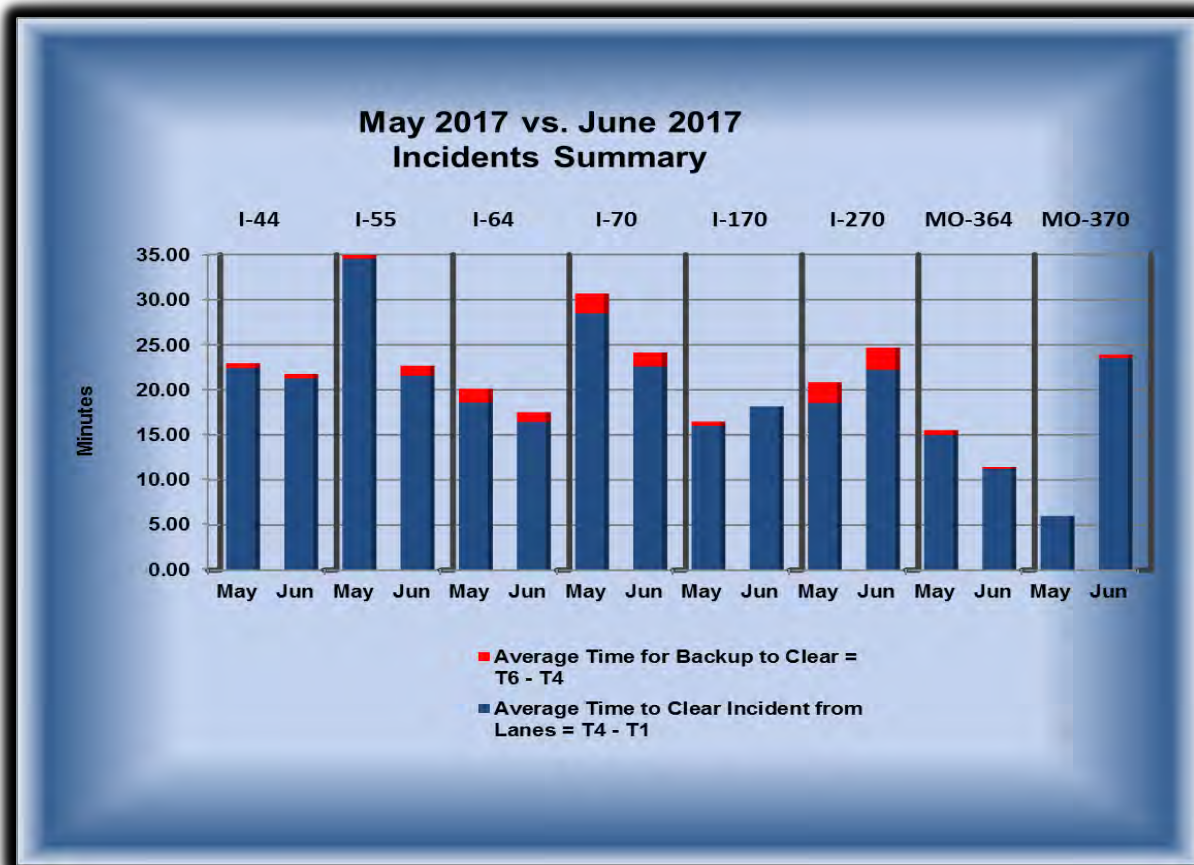
6/23 (Friday) 1:42 pm Northbound I-55 at Route A

- Fatal crash in work zone involving 3 vehicles with 6 injuries
- The incident lasted 3 hours and 44 minutes with a 17 minute queue when it cleared



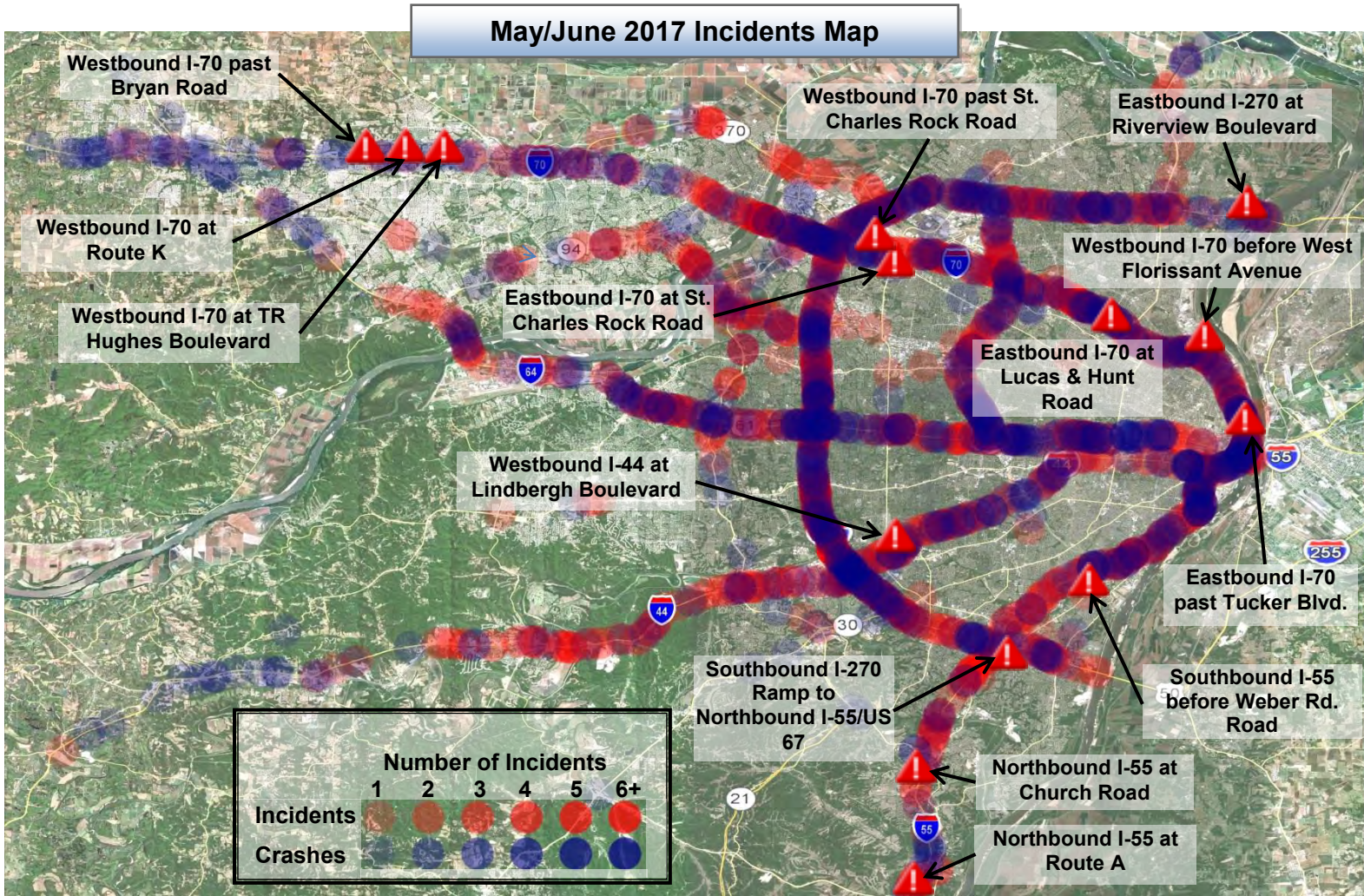


INCIDENT MANAGEMENT



INCIDENT MANAGEMENT

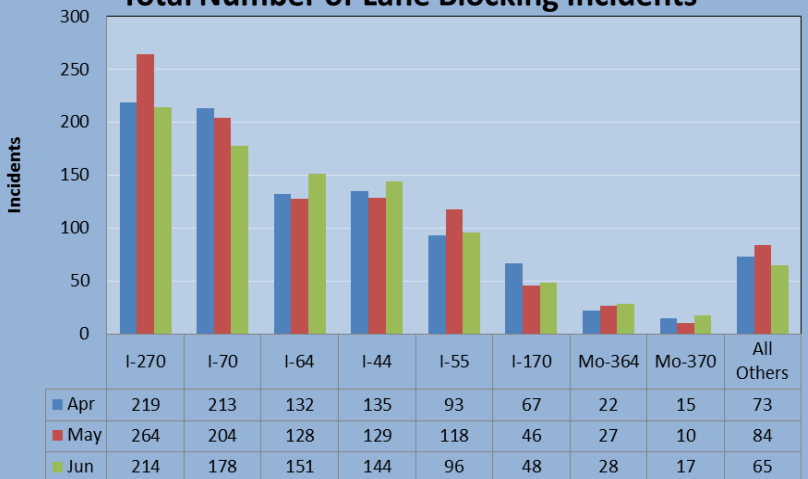
May/June 2017 Incidents Map



Denotes Location of Major Impact Traffic Incidents

Total Number of Incidents: April: 969 / May: 1010 / June: 941

Total Number of Lane Blocking Incidents



Major Impact Incidents

May 2017 vs. June 2017
(10) (4)

Fatal Incidents

May 2017 vs. June 2017
(7) (4)

Tractor Trailer Incidents

May 2017 vs. June 2017
(51) (40)



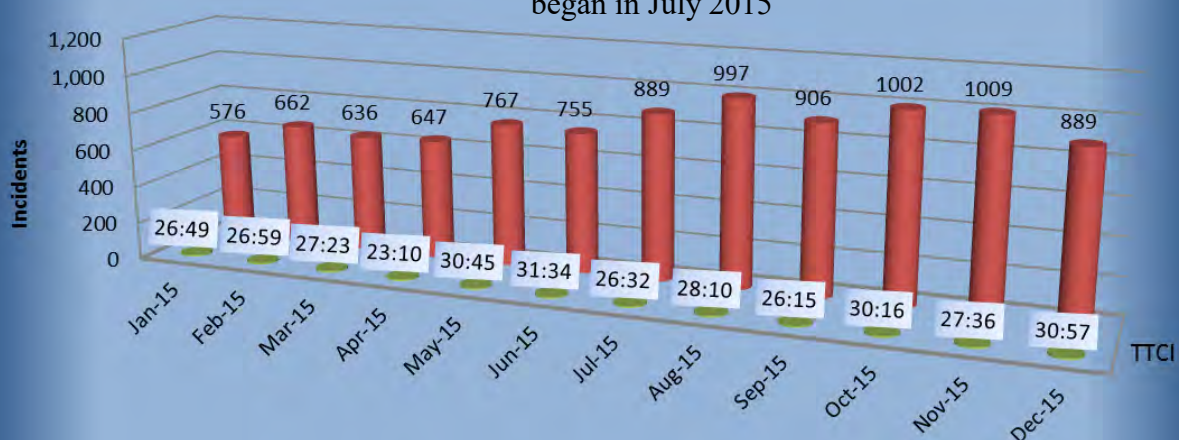
INCIDENT MANAGEMENT

Lane Blocking Incidents by Freeway May and Jun 2017

Interstate	Month	Number of Incidents	Average Time to Clear Incident from Lanes = T4 - T1	Average Time for Backup to Clear = T6 - T4	Freeway Miles	Incidents per Mile
I-44	May	129	22:41	00:53	33	3.91
I-44	Jun	144	21:27	00:49	33	4.36
I-55	May	118	34:53	00:44	23	5.13
I-55	Jun	96	21:56	01:12	23	4.17
I-64	May	128	18:59	01:53	40	3.20
I-64	Jun	151	01:12	01:10	40	3.78
I-70	May	204	28:49	02:19	38	5.37
I-70	Jun	178	22:57	01:58	38	4.68
I-170	May	46	16:00	00:47	11	4.18
I-170	Jun	48	18:16	00:01	11	4.36
I-270	May	264	18:54	02:31	36	7.33
I-270	Jun	214	22:24	02:45	36	5.94
MO-364	May	27	15:00	00:53	11	2.45
MO-364	Jun	28	11:25	00:19	11	2.55
MO-370	May	10	06:00	00:00	13	0.77
MO-370	Jun	17	23:53	00:38	13	1.31
Total	May/Jun	1802	19:03	01:11	410	4.40

2015 Number of Incidents and Time to Clear Lanes

*Note changes in Incident reporting data began in July 2015

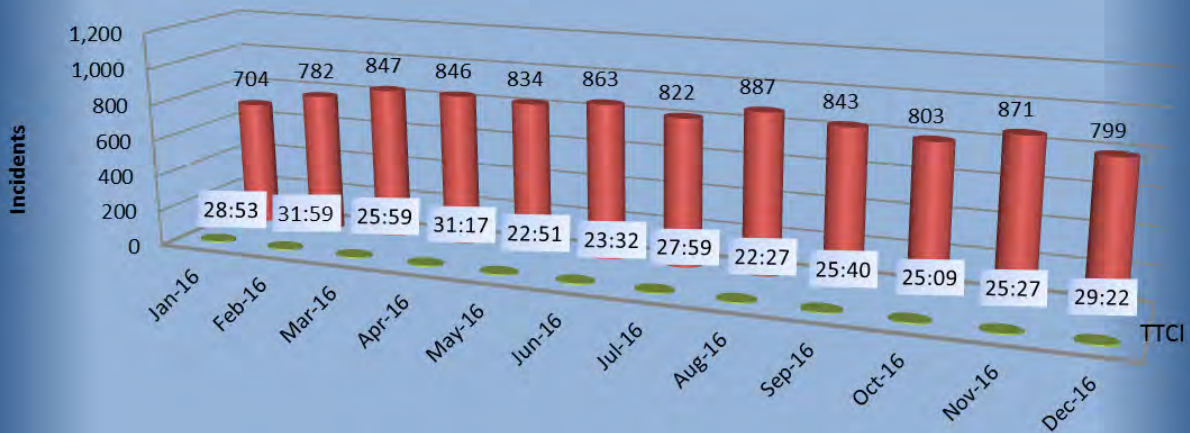


	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
TTCI	26:49	26:59	27:23	23:10	30:45	31:34	26:32	28:10	26:15	30:16	27:36	30:57
Incidents	576	662	636	647	767	755	889	997	906	1002	1009	889



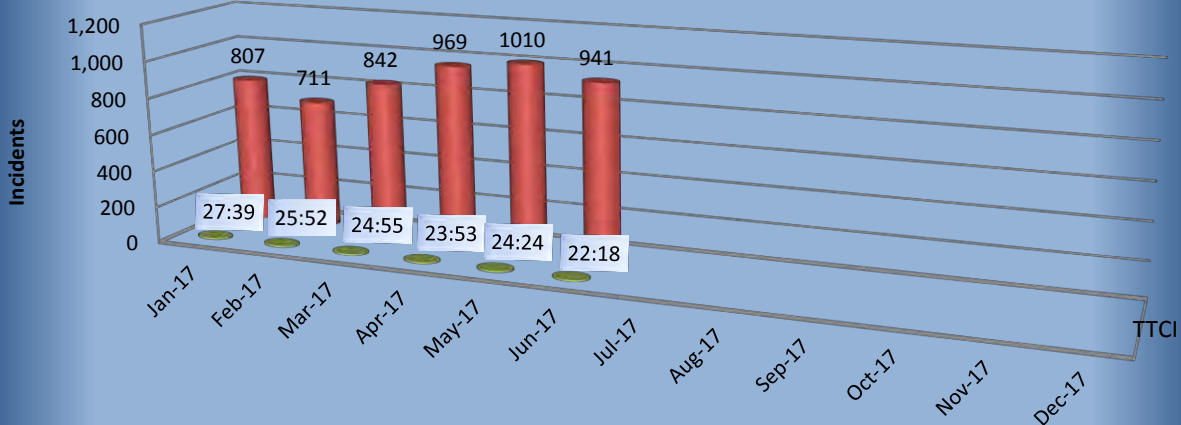
INCIDENT MANAGEMENT

2016 Number of Incidents and Time to Clear Lanes



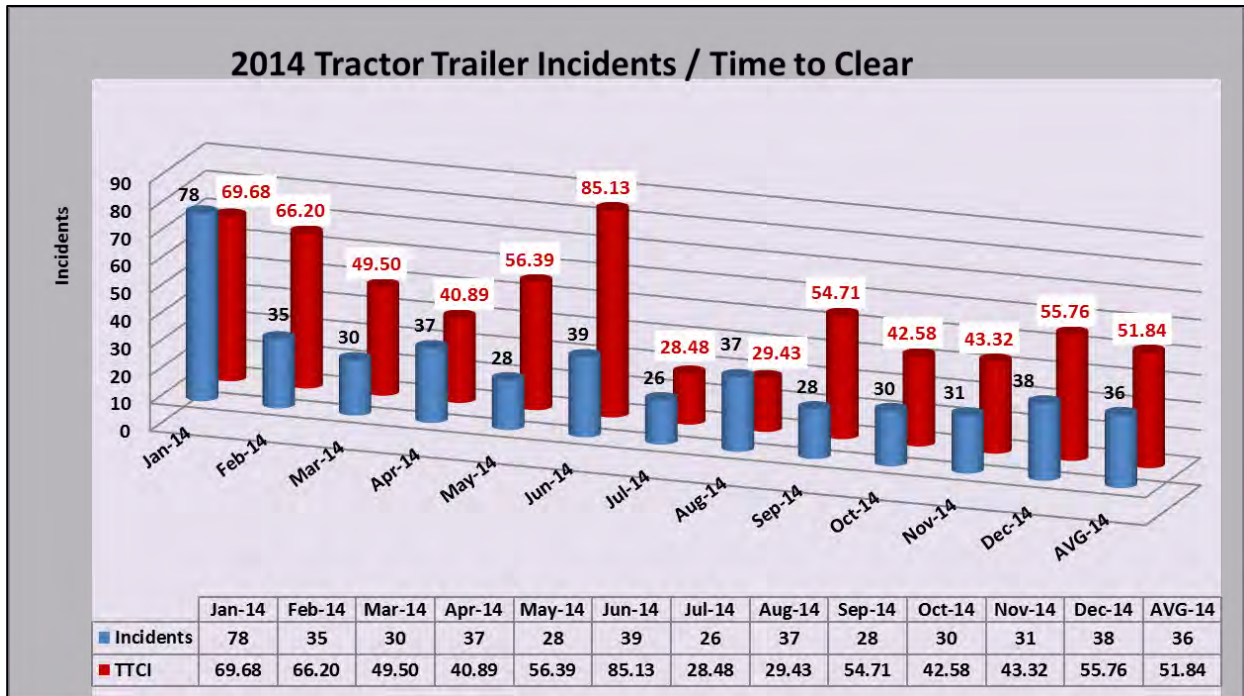
	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
TTCI	28:53	31:59	25:59	31:17	22:51	23:32	27:59	22:27	25:40	25:09	25:27	29:22
Incidents	704	782	847	846	834	863	822	887	843	803	871	799

2017 Number of Incidents and Time to Clear Lanes



	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
TTCI	27:39	25:52	24:55	23:53	24:24	22:18						
Incidents	807	711	842	969	1010	941						

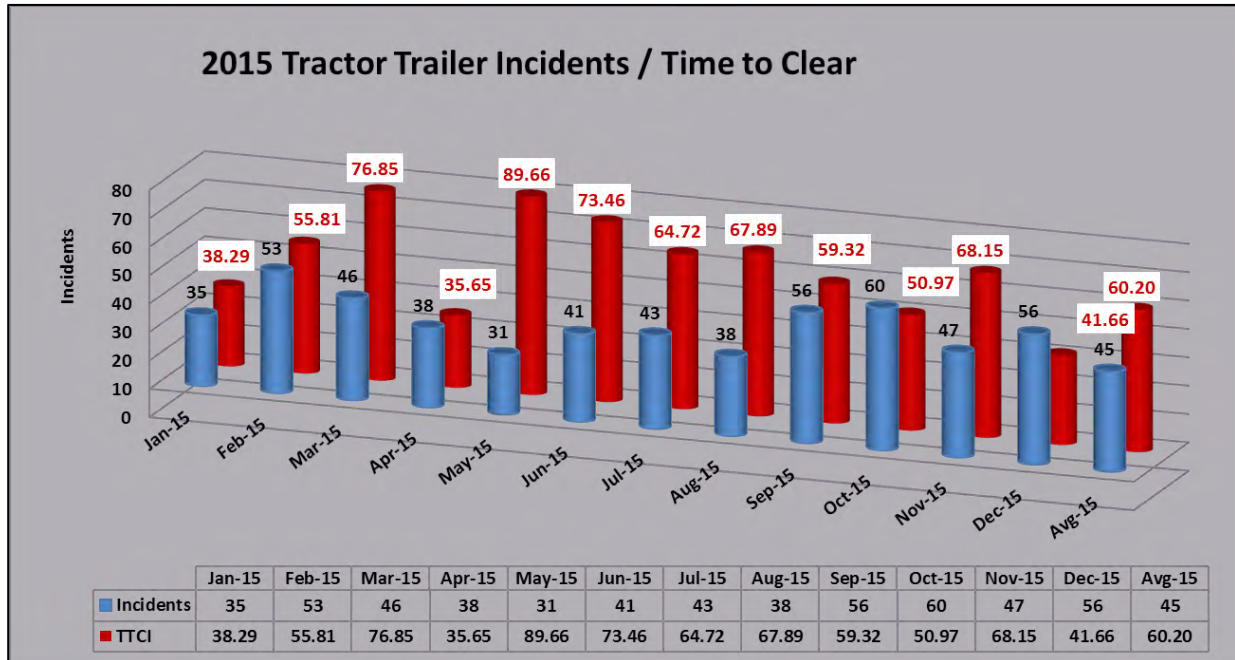
INCIDENT MANAGEMENT



2014	I-44	I-55	I-64	I-70	I-170	I-255 / I-270	Route 364	Route 370	* Other	Total	TTCI
Jan	20	7	9	24	3	11	3	1	0	78	69.68
Feb	5	3	6	13	1	6	0	1	0	35	66.20
Mar	8	7	5	5	0	4	0	1	0	30	49.50
Apr	5	3	12	7	0	10	0	0	0	37	40.89
May	5	8	4	4	1	6	0	0	0	28	56.39
Jun	11	8	5	8	0	7	0	0	0	39	85.13
Jul	4	2	8	4	0	7	0	1	0	26	28.48
Aug	5	4	7	8	2	10	0	1	0	37	29.43
Sep	3	3	4	10	0	7	0	1	0	28	54.71
Oct	5	6	4	4	1	7	0	3	0	30	42.58
Nov	2	4	5	9	1	7	0	3	0	31	43.32
Dec	7	7	2	12	1	8	0	1	0	38	55.76
YR Totals	80	62	71	108	10	90	3	13	0	437	51.84

*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015

INCIDENT MANAGEMENT

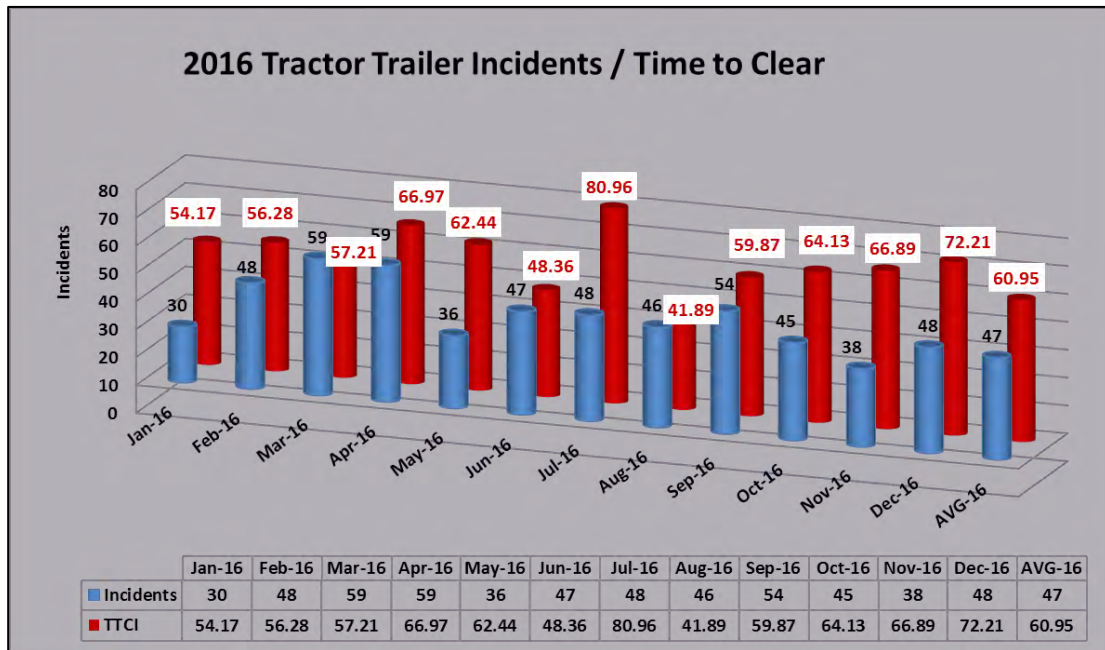


2015	I-44	I-55	I-64	I-70	I-170	I-255 / I-270	Route 364	Route 370	* Other	Total	
Jan	7	4	4	10	0	9	0	1	0	35	38.29
Feb	20	2	6	9	1	14	1	0	0	53	55.81
Mar	9	4	11	14	0	7	0	1	0	46	76.85
Apr	7	3	7	17	1	2	1	0	0	38	35.65
May	5	2	9	10	0	3	1	1	0	31	89.66
Jun	9	3	6	10	0	12	0	1	0	41	73.46
Jul	6	6	8	8	1	11	0	0	3	43	64.72
Aug	10	2	3	11	0	9	0	0	3	38	67.89
Sep	11	9	5	17	2	9	0	1	2	56	59.32
Oct	12	12	8	17	1	8	0	0	2	60	50.97
Nov	8	4	7	14	0	11	0	0	3	47	68.15
Dec	5	9	8	19	2	8	0	0	5	56	41.66
YR Totals	109	60	82	156	8	103	3	5	18	544	60.20

*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015



INCIDENT MANAGEMENT



2016	I-44	I-55	I-64	I-70	I-170	I-255 / I-270	Route 364	Route 370	* Other	Total
Jan	7	3	4	5	1	10	0	0	0	30
Feb	10	3	10	15	2	5	0	1	2	48
Mar	14	6	6	22	2	8	0	0	1	59
Apr	14	7	6	16	1	11	0	2	2	59
May	7	4	5	9	0	7	0	2	2	36
Jun	14	3	8	12	0	7	0	1	2	47
Jul	16	3	5	13	0	6	0	2	3	48
Aug	16	3	4	9	2	11	0	0	1	46
Sep	12	3	5	18	1	13	0	0	2	54
Oct	10	4	5	11	0	10	0	3	2	45
Nov	18	6	1	6	0	4	0	2	1	38
Dec	5	7	7	14	1	11	0	1	2	48
YR Totals	143	52	66	150	10	103	0	14	20	558

*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015



INCIDENT MANAGEMENT

2016 Commercial Motor Vehicle Fatal Crash Data

Carrier Size –

• Large	37 (31%)
• Medium	24 (20%)
• Small	58 (49%)

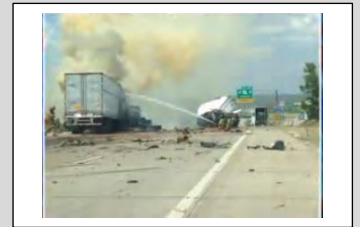
Contributing Circumstance –

• CMV	40 (33.6%)
• Non-CMV	79 (66.4%)



Cause –

• Distracted	17 (14%)
• Driver Fatigue	1
• Failure To Yield	19 (16%)
• Following Too Close	6
• Impaired	6
• Improper Lane Change	33 (28%)
• Improperly Stopped	2
• Other	7
• Overcorrected	4
• Too Fast For Conditions	21 (18%)
• Unknown	1
• Vehicle Defects	2



Roadway Type –

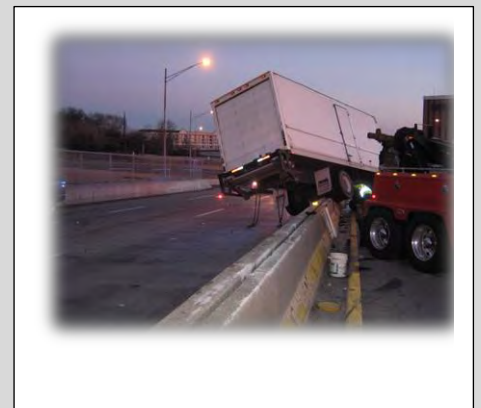
• City	12 (10%)
• County	18 (15%)
• Interstate	62 (52%)
• State	27 (23%)

Carrier Operation –

• Interstate	93 (78%)
• Intrastate	26 (22%)

Carrier Type –

• Concrete	1
• Dump	7
• HM Tank Truck	2
• Mobile Home	1
• Passenger	5
• School Bus	1
• General Freight	102 (86%)



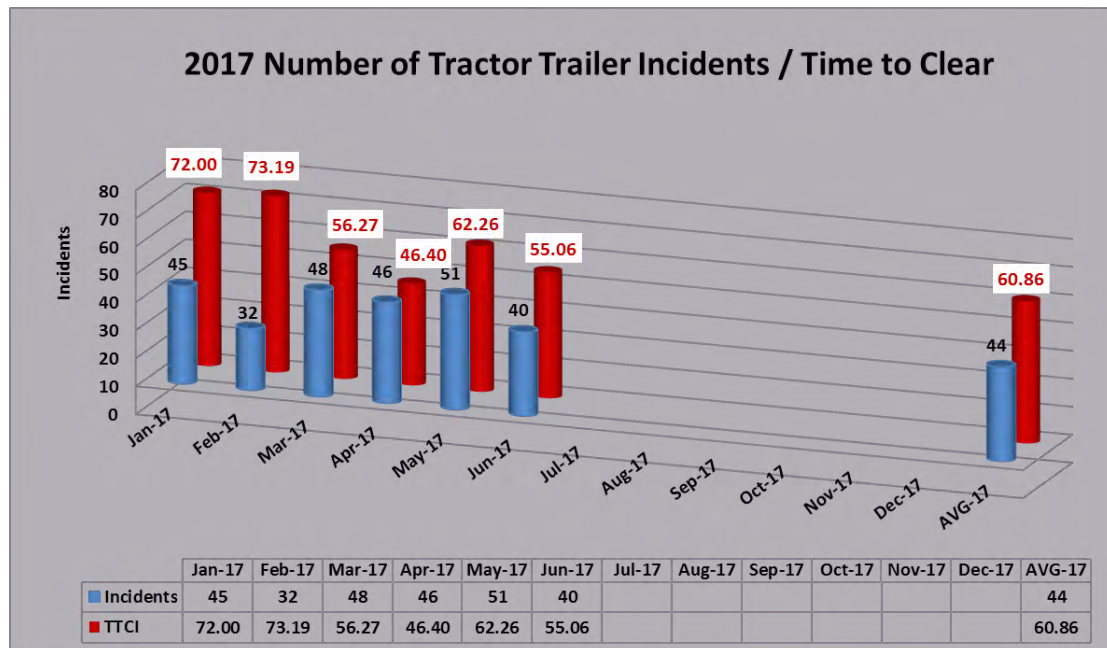
2016 Commercial Motor Vehicle Fatal Crash Data

- 69% involved medium to small carriers (almost 50% were small carriers). Our CMV safety investigations tell us that many times small carriers don't have the resources to properly maintain their equipment, don't have the information and education and or simply aren't inclined to do either.
- 66% of the crashes had Non-CMV (the 4-wheelers) as a major contributor
- The top 4 causes (regardless of whether or not the CMV was the major cause of the crash) were:
 - Improper Lane Change (28%)
 - Too Fast for Conditions (18%)
 - Failure to Yield (16%)
 - Distracted Driving (14%)
- 52% occurred on the interstate
- 23% on state roads
- 78% involved interstate carriers (a lot of non-Missouri based carriers)





INCIDENT MANAGEMENT



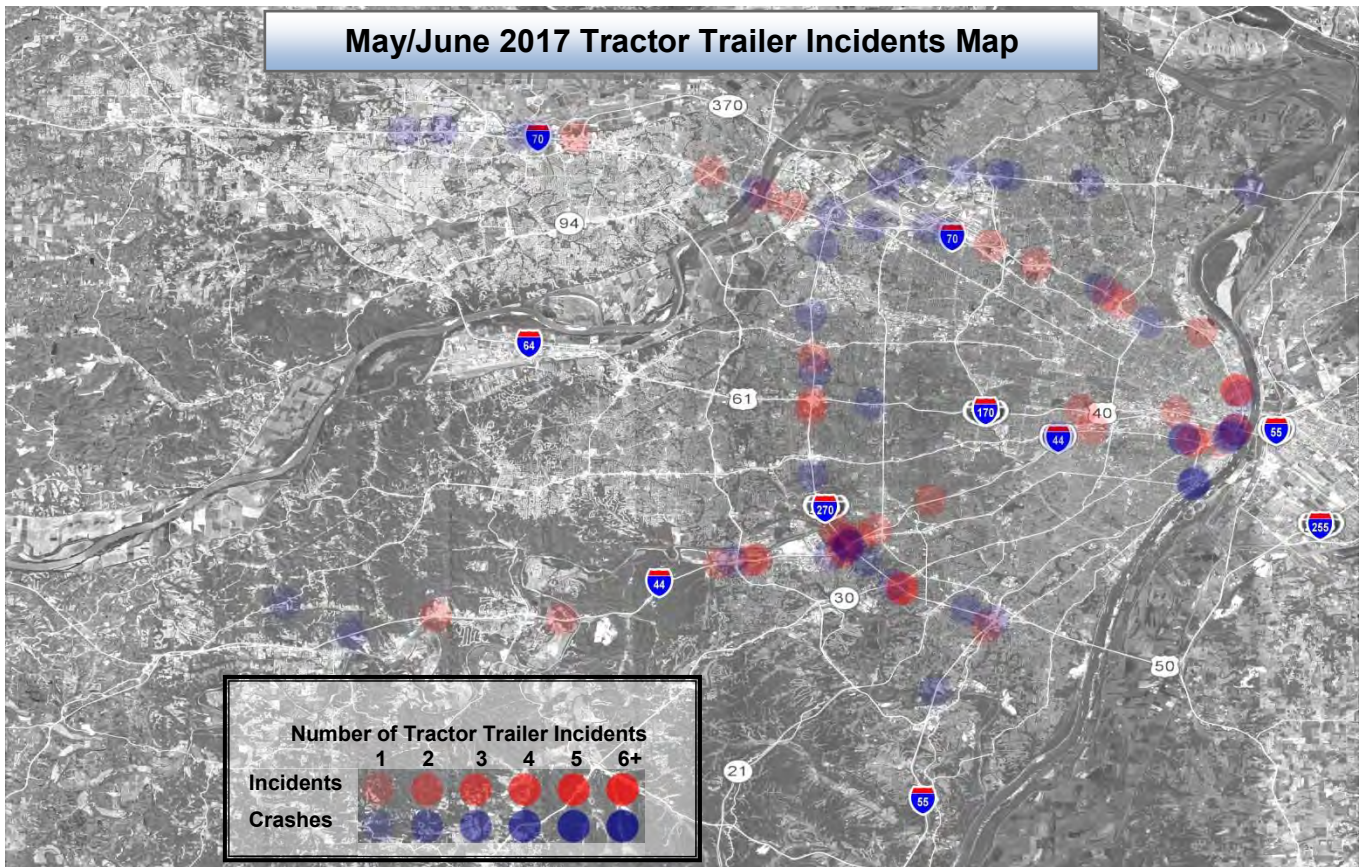
2017	I-44	I-55	I-64	I-70	I-170	I-255 / I-270	Route 364	Route 370	*Other	Total
Jan	11	4	4	11	0	15	0	0	0	45
Feb	10	2	4	6	1	9	0	0	0	32
Mar	12	7	7	12	1	7	0	0	2	48
Apr	16	3	5	10	1	7	0	1	3	46
May	11	8	2	15	0	12	0	0	3	51
Jun	15	3	1	6	1	11	0	1	2	40
Jul										0
Aug										0
Sep										0
Oct										0
Nov										0
Dec										0
YR Totals	75	27	23	60	4	61	0	2	10	262

*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015

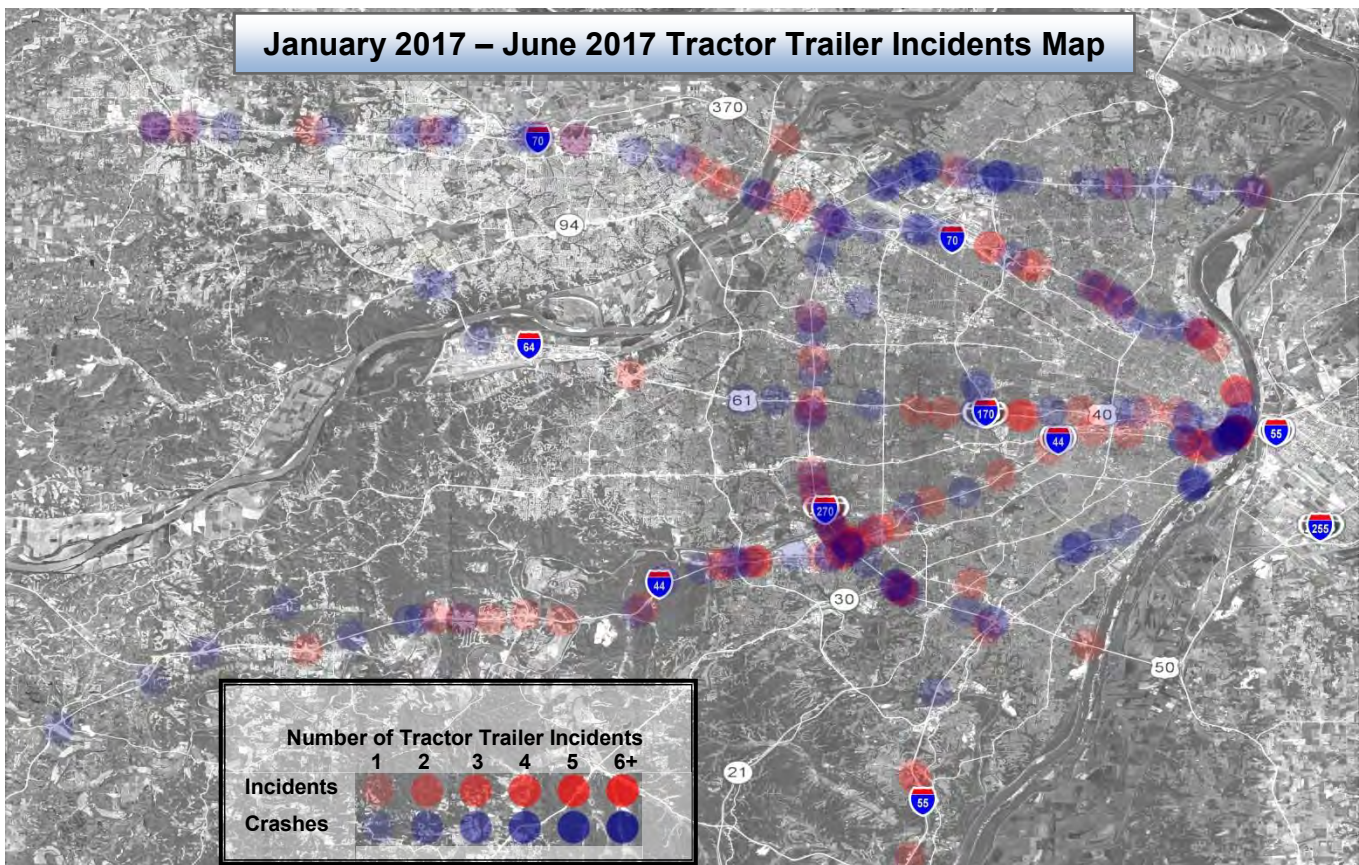


INCIDENT MANAGEMENT

May/June 2017 Tractor Trailer Incidents Map




January 2017 – June 2017 Tractor Trailer Incidents Map

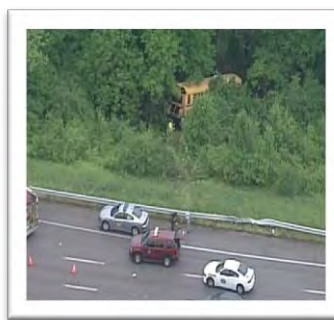


Major Impact Traffic Incidents and Mitigation

5/11/2017 (Thursday)

- **Time:** 7:56 am - 12:06 pm
- **Location:** St. Louis County – Westbound I-44 at Lindbergh Boulevard
- **Event Type:** Two-Vehicle Crash
- **Estimated Initial Impact:** Rush Hour: 2 of 4 travel lanes affected equals (=) 50%
- **Incident Details:** A passenger car attempted to pass another vehicle when it lost control and struck the rear of a school bus. The impact forced the school bus across two lanes of traffic where it struck the center median wall before returning to the roadway. The school bus ran off the right side of the road, struck a metal guardrail and continued down an embankment into a ravine. The driver of the school bus was transported with serious injuries, as were 14 children for minor injuries.
- **Action Taken:** Crestwood Police and MSHP responded and took command of the scene. Due to the number of injured children, multiple agencies responded to assist in transporting them to several area hospitals. The responding departments included, Kirkwood Fire and EMS, Shrewsbury EMS, Fenton EMS, Mehlville Fire and EMS, Abbott EMS, and St. Louis City EMS. The TMC dispatched five MoDOT Emergency Responders to assist with traffic control. Advanced warning signs were placed before Elm and at Big Bend. The TMC messaged for the event to notify the drivers. The District Engineer, Area Engineer, EOC and Communications staffs were all notified. Lanes 1 and 2 were closed for a short time while a tow truck loaded the passenger vehicle. Traffic queued approximately 3 miles, back to Berry Road.
- **Event Duration:** 4 hours 10 minutes

Westbound I-44 at Lindbergh Boulevard	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
						
Closed Hours/Minutes	1:25	0:08	0:02	3:59	4:05	4:10





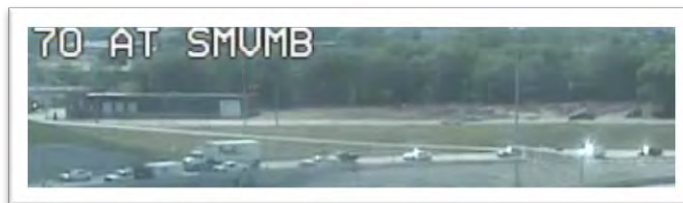
INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

5/12/2017 (Friday)

- **Time:** 11:51 am – 4:41 pm
- **Location:** St. Louis City – Eastbound I-70 past Tucker Boulevard (entrance to Stan Musial Bridge)
- **Event:** Debris in Roadway – Adhesive Spill
- **Estimated Initial Impact:** Non-Rush Hour: 1 of 2 travel lanes affected equals (=) 50%
- **Incident Details:** The TMC received a phone call from the St. Louis City Fire Department who requested assistance with a reported spill on the roadway of a fairly large amount of bonding adhesive
- **Action:** MoDOT Emergency Response arrived on scene to block left lane and shoulder. A crew from Broadway Maintenance responded and attempted to contain the glue by putting down sand. Environmental Restoration, a remediation company, responded. Their attempts at scraping the glue from the roadway were unsuccessful. Emergency Response then added oil dry to the sand that maintenance put on the spill and the glue dried allowing for cleanup and the lane to be reopened. The Communication Staff and management were notified of the spill via SLAdminText. The TMC messaged for the spill along I-70 back to Union/Bircher. Traffic queued less than one mile.
- **Event Duration:** 4 hours 50 minutes


Eastbound I-70 past Tucker Boulevard 	Left Shoulder	Lane 1	Lane 2	Right Shoulder
Closed Hours/Minutes	4:50	4:50		

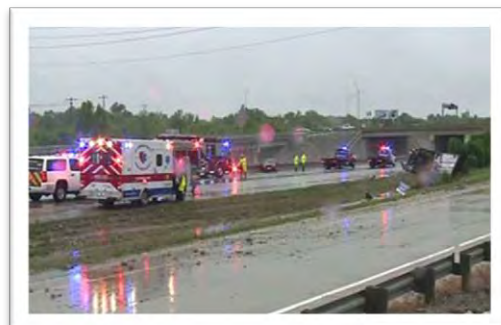


Major Impact Traffic Incidents and Mitigation

5/20/2017 (Saturday)

- **Time:** 6:02 am – 1:25 pm
- **Location:** St. Charles County – Westbound I-70 at TR Hughes Boulevard
- **Event Type:** 2 Vehicle Crash
- **Estimated Initial Impact:** Non-Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- **Incident Details:** A passenger vehicle traveled into the path of a tractor trailer causing the tractor trailer to travel off the right side of the roadway where it overturned. The driver of the tractor trailer was transported with minor injuries.
- **Action Taken:** O'Fallon Police and Fire along with St. Charles County EMS responded and closed all lanes of the interstate. MSHP responded and took command of the scene. At the start of the incident there were no MoDOT Emergency Response units on duty, so the TMC notified MoDOT's Incident Management Coordinator. The Incident Management Coordinator and two other ER units responded to assist with traffic control. During the full closure, Police diverted traffic at Route 79 which kept the queue to less than a mile. The extended duration was due to the tractor trailer hauling 18 pallets of food and it was being loaded onto another trailer. MoDOT's Incident Management Coordinator directed the TMC to contact the health department and condemn the load so that the scene could be cleared faster. The St. Charles County Health Department arrived approximately 2 hours later and condemned the load. DNR was contacted and responded to ensure no fuel entered the drainage system since the overturned tractor trailer spilled 20 gallons of diesel fuel near a storm drain. A MoDOT Maintenance crew from St. Charles County responded with a bobcat to assist with offloading the overturned trailer. The TMC activated the appropriate message boards and the closure was also entered into TMS to alert the public. The queue cleared quickly once the two left lanes were reopened. All lanes were reopened at 1:02 pm while work continued on the shoulder.
- **Event Duration:** 7 hours 22 minutes

Westbound I-70 at TR Hughes Blvd.	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
						
Closed Hours/Minutes	1:16	1:16	1:16	7:00	7:00	7:22






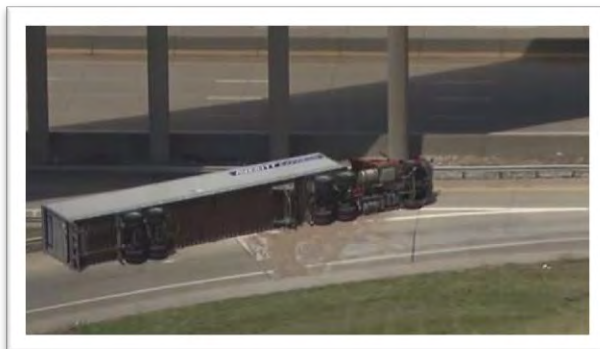
INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

5/25/2017 (Thursday) – 5/26/2017 (Friday)

- **Time:** 10:15 am – 4:00 am
- **Location:** St. Louis County - Southbound I-270 Ramp to Northbound I-55/US 67
- **Event Type:** Hazmat
- **Estimated Initial Impact:** Rush Hour: 3 of 3 ramp lanes affected equals (=) 100%
- **Incident Details:** A tractor trailer hauling 40-thousand pounds of organochlorine in granular form was traveling too fast to safely negotiate the downhill curve, causing the load to shift and the tractor trailer to overturn at the end of the cloverleaf ramp. The tractor trailer came to a rest on its left side blocking the lane from Southbound I-270 to Northbound I-55 as well as the lane from Northbound I-55 to Lindbergh Blvd. (US 67). The pesticide was packaged in bags and some of those bags ruptured releasing the highly toxic substance inside the trailer with some spilling out onto the roadway. The driver of the tractor trailer was transported with serious injuries.
- **Action Taken:** The Mehlville FPD had command of the scene with the support of the St. Louis County Police and the MSHP. Three MoDOT Emergency Response units were dispatched to assist with traffic control. The TMC activated all appropriate DMS boards and entered the closure into TMS to alert the public. MoDOT's Incident Management Coordinator, Communications staff, the EOC, and Motor Carriers were all notified. The Department of Natural Resources responded and set up a Hazmat tent. The duration was extended due to the difficulty of unloading the pesticide safely without further contaminating the environment or personnel.
- **Event Duration:** 17 hours 45 minutes

Southbound I-270 Ramp to Northbound I- 55/US 67	Left Shoulder	LX Lane to I-55	RX Lane to US 67	Right Shoulder
				
Closed Hours/Minutes	6:44	6:44	17:45	17:45





INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

5/28/2017 (Sunday)

- **Time:** 12:57 pm – 3:03 pm
- **Location:** St. Louis City – Southbound I-55 before Weber Road
- **Event Type:** Pedestrian Struck
- **Estimated Initial Impact:** Non-Rush Hour, 4 of 4 travel lanes affected equals (=) 100%
- **Incident Details:** TMC operators monitoring police scanner traffic heard units being dispatched to a pedestrian struck. Reports indicate a male subject was struck by a vehicle while he was attempting to retrieve an illicit narcotic that had been thrown out a car window onto the highway during an argument. The vehicle that struck the male then left the scene. Due to the severity of the pedestrian's injuries, St. Louis City Police closed all southbound lanes of I-55 for further investigation.
- **Action Taken:** MoDOT Emergency Response units were dispatched to provide traffic control. The TMC messaged for the event on the appropriate DMS boards within 2 minutes and then pushed the boards back to the I-44/I-55 split after 10 minutes to keep drivers informed. The incident was also entered into TMS to notify the public. MoDOT EOC, Motor Carriers, Communications, the Emergency Incident Coordinator, and shift supervisor were all notified. Traffic was originally diverted off at Weber Road, but at the request of St. Louis City PD, it was pushed back to Germania with the entrance ramp from Carondelet also being closed. Maximum traffic queue was estimated at 1 mile, which returned to normal shortly after all lanes opened.
- **Event Duration:** 2 hours 5 minutes

Southbound I-55 before Weber Road	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
						
Closed Hours/Minutes	2:05	2:05	2:05	2:05	2:05	2:05






INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

5/31/2017 (Wednesday)

- **Time:** 6:50 pm – 9:45 pm
- **Location:** St. Louis County – Westbound I-70 past St. Charles Rock Road
- **Event:** 3+Vehicle Collision
- **Estimated Initial Impact:** Rush Hour: 2 of 3 travel lanes affected equals (=) 66%
- **Incident Details:** The Bridgeton Police Department called requesting assistance with traffic control for a multi-vehicle accident involving a tractor trailer. Upon looking for incident on camera, operators found PD on scene blocking the two right lanes. After emergency response units arrived, it was determined the tractor trailer hit an abandoned vehicle on the right shoulder and it went off the road. Debris from the initial accident hit two passing vehicles on the interstate.
- **Action:** MoDOT Emergency Responders were dispatched to help with traffic control. The Communication Staff and management were notified via SLAdminText email. The TMC messaged for the event on all available DMS boards along I-70, I-170 and US 67 to alert drivers. Duration of the event was extended due to the heavy tow trucks needing additional time to move the tractor trailer. Traffic queue reached 1.5 mile, but cleared within 3 minutes of all lanes being reopened.
- **Event Duration:** 2 hours 55 minutes

Westbound I-70 past St. Charles Rock Rd 	Left Shoulder	Lane 1	Lane 2	Lane 3	Right Shoulder
Closed Hours/Minutes	0:12	0:03	2:55	2:55	2:55





INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

6/3/2017 (Saturday)

- **Time:** 3:13 am – 5:38 am *** Fatality ***
- **Location:** St. Louis City – Westbound I-70 before West Florissant Avenue
- **Event:** Police Investigation
- **Estimated Initial Impact:** Non-Rush Hour: 4 of 4 travel lanes affected equals (=) 100%
- **Incident Details:** Reports indicate a motorist stopped along the center median wall of the interstate to check on his tires when he was shot by an unknown subject. The motorist was transported to the hospital where he was pronounced deceased. St. Louis City PD closed all westbound lanes of the interstate to investigate the shooting.
- **Action:** St. Louis City Police, Fire and EMS responded. Given the dangerousness of the situation, MoDOT Emergency Responders were not dispatched to assist. The TMC messaged for the event on DMS boards within 1 minute of confirming the highway was closed via CCTV. The incident was entered into TMS to notify the public. Once the fatality was confirmed, the SLAdminText and I70IM were sent out. Duration of the incident was extended due to the amount of time it took the SLMPD Crime Scene Unit to arrive. Traffic was diverted off at Carrie / I-70 North Outer Road. Given the time of day there was no significant impact to traffic noted, and what initial queue there was quickly cleared once the diversion to Carrie was in place.
- **Event Duration:** 2 hours 25 minutes

Westbound I-70 before West Florissant Ave	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
						
Closed Hours/Minutes	2:25	2:25	2:25	2:25	2:25	2:25






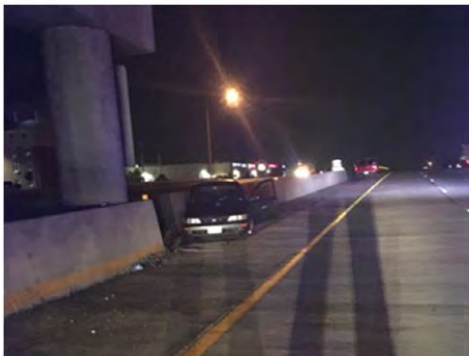
INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

6/9/2017 (Friday)

- **Time:** 2:27 am – 4:47 am *** Fatality ***
- **Location:** Jefferson County - Northbound I-55 at Church Road
- **Event Type:** Single Vehicle Crash
- **Estimated Initial Impact:** Non-Rush Hour: 4 of 5 lanes affected equals (=) 80%
- **Incident Details:** For unknown reasons, a motorist drifted off onto the right shoulder while traveling Northbound on I-55. The driver then over-corrected causing the vehicle to spin across all lanes of traffic before striking the concrete center median wall. The force of the impact resulted in the driver suffering a fatal neck/spinal injury. He was pronounced on scene by EMS. At the start of the incident, only the left lane was closed. However, as emergency crews arrived, the situation became more serious and additional lanes were closed until just the right lane remained open.
- **Action Taken:** TMC operators monitoring police scanner traffic heard units being dispatched to an accident. They confirmed the location via CCTV and activated the only available DMS board within 1 minute. The incident was entered into TMS to alert the public. MoDOT Emergency Response was dispatched to assist Arnold PD, and Rock Community Fire and EMS with traffic control. Due to the fatality, an accident reconstruction had to be completed which extended the duration of the event. The I55IM and SLAdminText were sent out and communications were notified. The traffic queue reach approximately 1 mile at 4:00 am, but quickly cleared once all lanes were reopened.
- **Event Duration:** 2 hours 20 minutes

Northbound I- 55 at Church Road	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5	Right Shoulder
							
Closed Hours/Minutes	2:20	2:20	1:54	1:54	1:54	0:00	0:00






INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

6/10/2017 (Saturday)

- **Time:** 12:47 am – 2:52 am
- **Location:** St. Louis City - Eastbound I-270 at Riverview Boulevard
- **Event Type:** Single-Vehicle Crash
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 2 travel lanes affected equals (=) 100%
- **Incident Details:** Crash reportedly resulted from a police pursuit. The suspect struck the guardrail and the vehicle overturned.
- **Action Taken:** TMC operators monitoring police scanner traffic heard units being dispatched to an accident. When it was first confirmed via CCTV, all lanes were closed, but traffic appeared to be getting through on the right shoulder. St. Louis City Police then closed the right shoulder and allowed traffic through in the right lane. Once St. Louis City Fire and EMS arrived, all lanes were closed. The TMC messaged for the incident and subsequent closure, and entered it into TMS to notify the public. MoDOT Emergency Response was dispatched to assist with traffic control. Traffic was diverted off at Riverview Blvd. around the incident, then back on to I-270. This resulted in no significant impact to traffic noted.
- **Event Duration:** 2 hours 5 minutes

Eastbound I-270 at Riverview Boulevard	Lane 1	Lane 2	Right Shoulder
			
Closed Hours/Minutes	2:05	1:47	2:03



Major Impact Traffic Incidents and Mitigation

6/14/2017 (Wednesday)

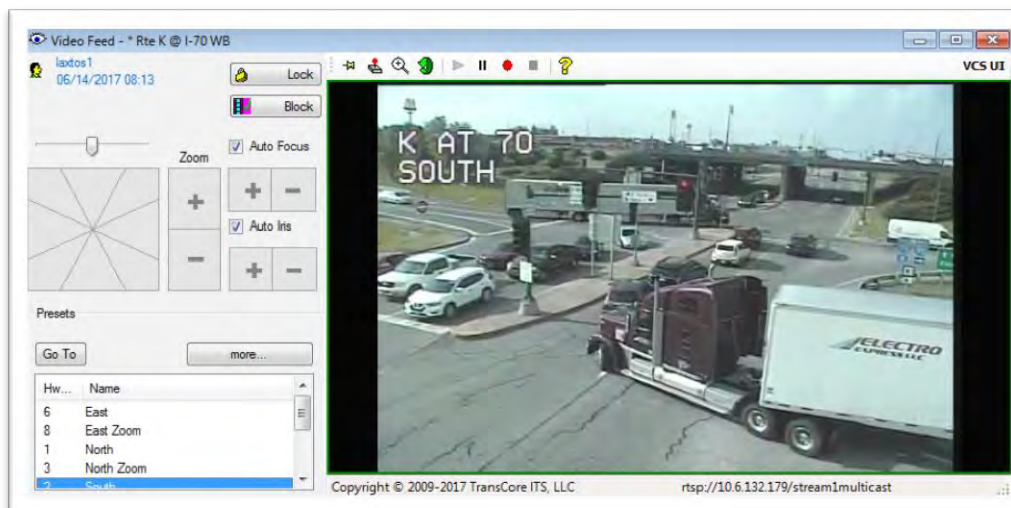
- **Time:** 4:57 am – 8:40 am
- **Location:** St. Charles County – Westbound I-70 at Route K
- **Event:** 2 Vehicle Crash
- **Estimated Initial Impact:** Non-Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- **Incident Details:** Reports indicate the driver of one tractor trailer ran off of the right side of the road, and when he returned to the road he struck a second tractor trailers. Both tractor trailers overturned blocking all lanes and shoulders of Westbound I-70. One driver was transported with minor injuries.
- **Action:** O'Fallon Police and Fire, St. Charles County EMS, and the MSHP all responded. At the time of the incident, there were no MoDOT Emergency Response Units on duty. The supervisor was contacted and the first ER units arrived approximately 30 minutes later. The TMC messaged for the event on all available DMS boards back to decision points on I-70 and I-270. It was entered into TMS to notify the public. Advanced warning signs were placed on I-70 at ROUTE 79 and Mid Rivers Mall Drive. Traffic was diverted off at Route K and then right back on to I-70, bypassing the incident. The TMC contacted MoDOT Traffic Engineers to have the traffic signals adjusted on Route K to favor the exiting traffic. Vehicles were being diverted off the highway at the Route K @ I-70 Westbound ramp and entered back on the interstate via the westbound on ramp. Vehicles were also using W Terra, making the westbound left at Route K followed by the southbound right to enter back on the interstate. Scanning of the pre-developed timing plans for both intersections resulted in selecting pattern 36 which provided the most time for the westbound ramp and the most time for the westbound movement at W Terra. A max recall was also programmed on phase 3 in pattern 36 at the westbound ramp due to tractor trailers allowing the signal to gap out. After several cycles, unused green time was observed for the northbound and southbound movements. Twenty seconds was reallocated from phase 2, 5, & 6 and given to Phase 3.
- **Result:** The extra time for the westbound ramp and westbound movement at W Terra allowed additional vehicles to enter back on the interstate via the on ramp but still was hindered by the capacity of the intersections. Due to the proximity of the intersections, the offsets could have used an adjustment to better utilize the extra time the westbound movement at W Terra received. Northbound through volume was moderate and not impacted by the additional time the westbound ramp received. The southbound volume was light and no issues were observed.
- MoDOT EOC, Motor Carriers, Communications, Area Engineer, and Incident Coordinator were all notified. The traffic queued 2.5 miles at the peak of rush hour, but cleared quickly once the lanes were reopened.
- **Event Duration:** 3 hours 47 minutes

Westbound I-70 at Route K 	Left Shoulder	Lane 1	Lane 2	Lane 3	Right Shoulder
Closed Hours/Minutes	3:22	3:22	3:22	3:43	3:47



INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation






INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

6/15/2017 (Thursday)

- **Time:** 7:09 am – 8:58 am *** Weather Related ***
- **Location:** St. Louis County – Eastbound I-70 at Lucas & Hunt Road
- **Event:** Multi-Vehicle Crash
- **Estimated Initial Impact:** Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- **Incident Details:** Reported as a seven vehicle crash that occurred during rainy conditions, and closed all eastbound lanes during rush hour. No injuries were reported.
- **Action:** MoDOT Emergency Response units responded to assist St. Louis County Police, MSHP, and Normandy PD with traffic control. Traffic was diverted off onto Lucas & Hunt Road. The TMC messaged for the event using all appropriate DMS boards, and it was entered into TMS to notify the public. A MoDOT Traffic Engineer was contacted to adjust the traffic signals at Lucas & Hunt and I-70 to favor the exiting traffic. The EOC and Motor Carriers were advised, and I70IM was sent out. Duration was extended due to the number of vehicles involved, of which, five had to be towed from the scene. Traffic queued 4.5 miles, back to Airflight.
- **Event Duration:** 1 hour 49 minutes

Eastbound I-70 at Lucas & Hunt Road	Left Shoulder	Lane 1	Lane 2	Lane 3	Right Shoulder
					
Closed Hours/Minutes	1:49	1:49	1:49	1:23	1:20






INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

6/21/2017 (Wednesday)

- **Time:** 2:20 pm – 4:55 pm
- **Location:** St. Louis County – Eastbound I-70 at St. Charles Rock Road
- **Event:** Traffic Hazard
- **Estimated Initial Impact:** Rush Hour: 1 of 4 travel lanes affected equals (=) 25%
- **Incident Details:** The TMC was contacted by the Bridgeton Police Department who requested assistance after a motorist reported to them an unknown object fell off the St. Charles Rock Road overpass and struck their vehicle on the interstate below.
- **Action:** A MoDOT Emergency Response unit was dispatched and upon their arrival they blocked the right lane. The TMC activated the appropriate DMS boards to notify drivers of the lane closure. Hampton Bridge was contacted and they responded to inspect the overpass. Due to the lane being closed into rush hour, traffic queued for 3 miles, and took approximately 15 minutes to return to normal after the lane was reopened.
- **Event Duration:** 2 hours 35 minutes

Eastbound I-70 at St. Charles Rock Road 	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
Closed Hours/Minutes	0:00	0:00	0:00	0:00	2:00	2:20

Major Impact Traffic Incidents and Mitigation

6/23/2017 (Friday)

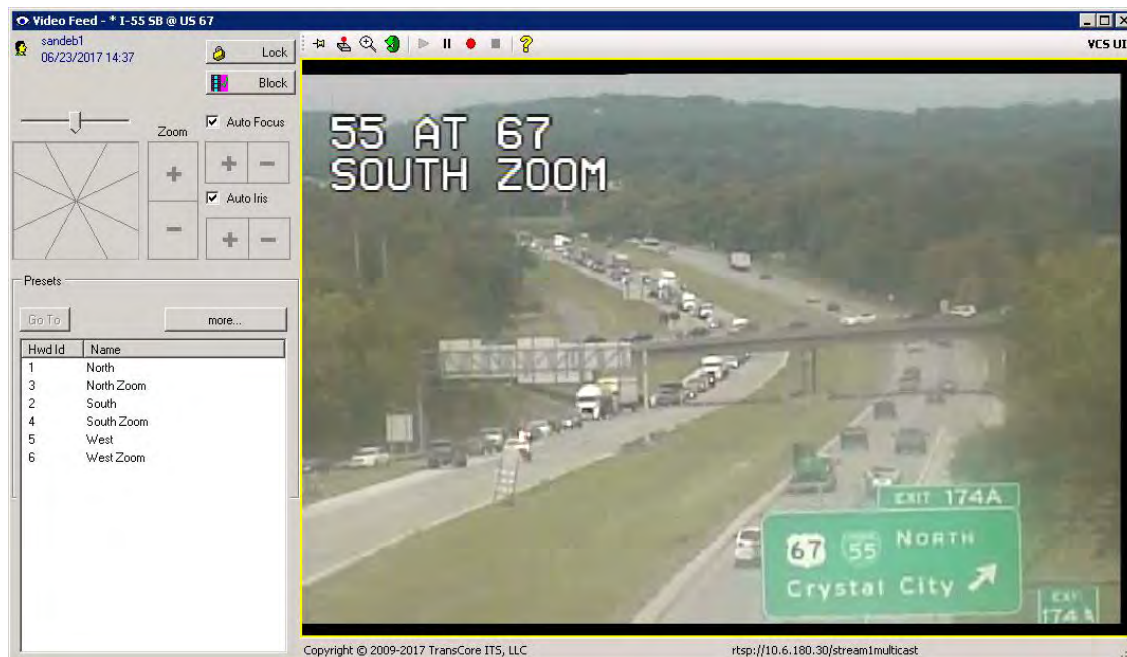
- **Time:** 1:42 pm – 5:26 pm *** Fatality ***
- **Location:** Jefferson County - Northbound I-55 at Route A
- **Event Type:** Multi-Vehicle Crash in a Work Zone
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 2 lanes affected equals (=) 100%
- **Incident Details:** According to the police report, an SUV was stopped for traffic ahead and a small passenger car was coming to a stop behind it. A third vehicle, reported as a large Ford F450 pickup truck, failed to stop and struck the rear of the car. The force of the impact pushed the car into the rear of the SUV. The driver of the passenger car was pronounced deceased at the hospital, and four others were transported with injuries ranging from minor to serious.
- **Action Taken:** TMC operators monitoring police scanner traffic heard units being dispatched to an accident. They confirmed the location via CCTV and activated the appropriate DMS board within 1 minute. The incident was entered into TMS to alert the public. Three MoDOT Emergency Response units were dispatched to assist Festus Police and Fire, MSHP and Joachim-Plattin EMS with traffic control. Due to the fatality, the MSHP completed an accident reconstruction which extended the duration of the event. The I55IM and SLAdminText were sent out, and the EOC, Motor Carriers, Communications, Area Engineer, and Incident Coordinator were all notified. Jim Connell was also notified as the crash occurred in a work zone. Traffic was diverted onto Route A, and the Traffic Engineers were contacted to look into adjusting traffic signals to assist with the diversion. Northbound traffic was being diverted off the interstate at US 67 immediately impacting the intersections of US 61 @ US 67-American Legion, St. Pius, and Route A. Vehicles were observed to be attempting to take the northbound LT at ROUTE A to access the interstate and continue northbound. This surge of left turning vehicles impacted ROUTE A @ South Mill and Route A @ West Gannon. After reviewing the pre developed plans, it was decided to manually run plan 84 due to its high cycle length and a high northbound LT split at US 67 @ Route A. Shortly after pattern 84 was downloaded, law enforcement took control of US 67 @ Route A. After law enforcement released control of US 67 @ Route A, the volume began to pick up at US 67 @ Beffa and US 67 @ Bailey. At this time, pattern 84 was also downloaded at these intersections. Pattern 84 was left operating as part of the detour for the construction on Northbound I-55 north of Route A. Monitoring continued until 6:00 pm at these intersections as well as the intersections to the north on US 67. The I-55 Construction signal consultant will continue monitoring throughout the weekend or duration of the closure.
- **Result:** The higher cycle length pattern gives priority to the northbound traffic and the northbound LT at US 67 @ Route A, however, due to the intersection being controlled by law enforcement, the intersection became a choke point until law enforcement left at approximately 5:20 pm. Residual queuing eventually began flowing. The traffic queue reached an estimated 5 miles at its peak, and took approximately 16 minutes to clear once all lanes were opened.
- **Event Duration:** 3 hours 44 minutes



INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

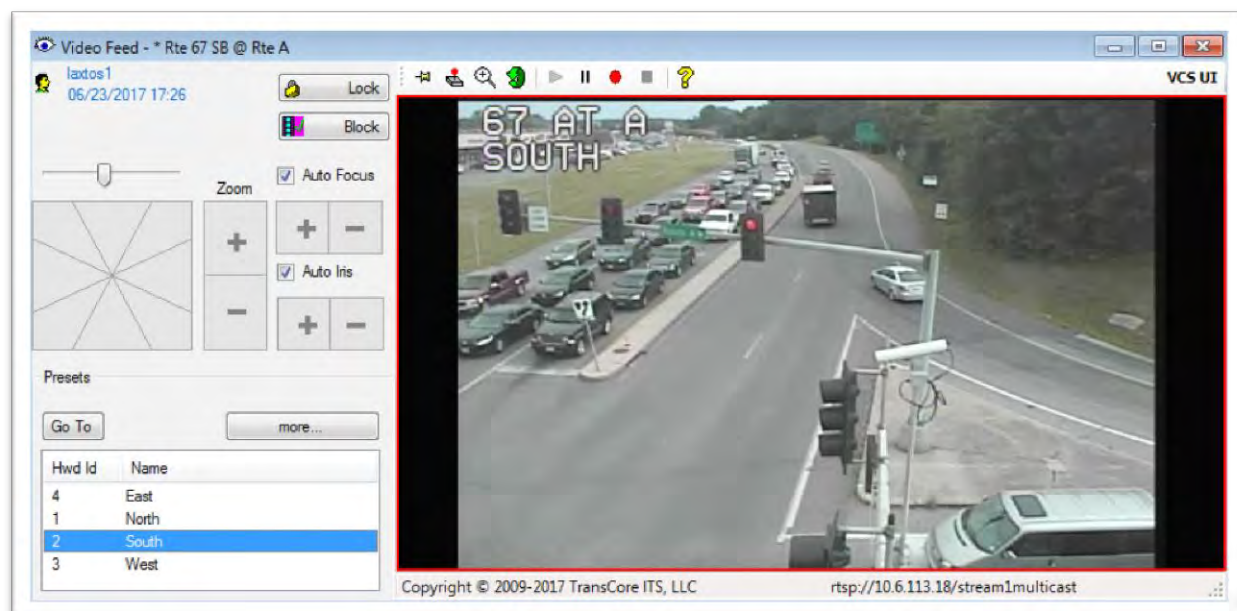
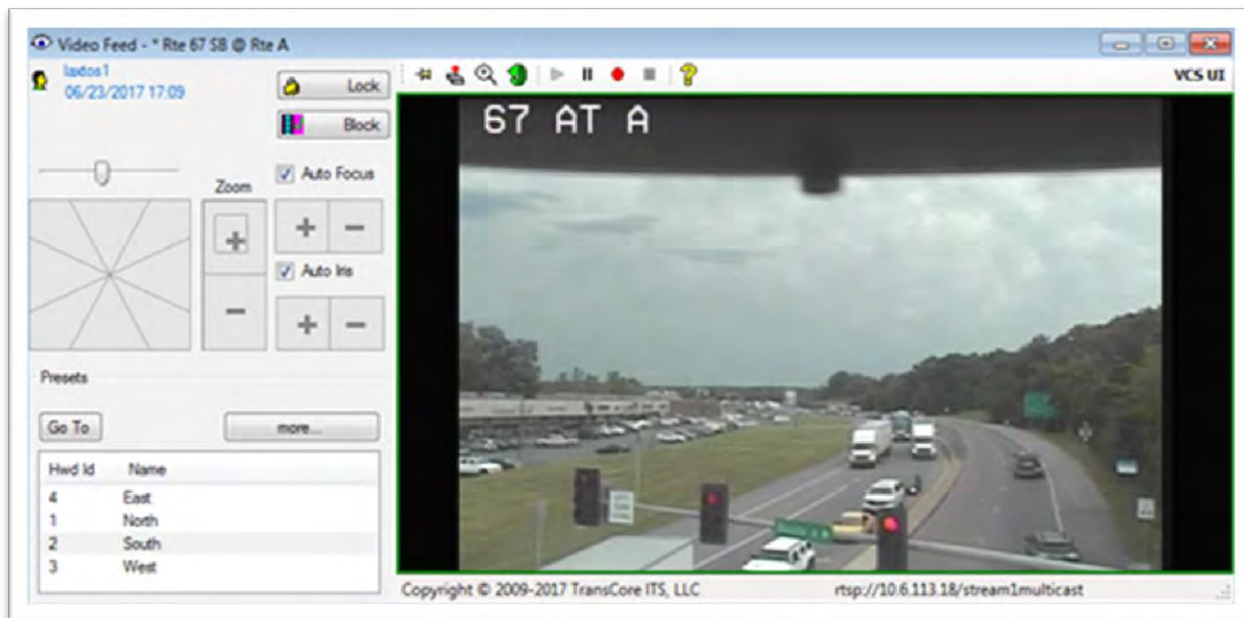
Northbound I-55 at Route A	Left Shoulder	Lane 1	Lane 2	Right Shoulder
				
Closed Hours/Minutes	3:44	3:44	3:39	3:35





INCIDENT MANAGEMENT

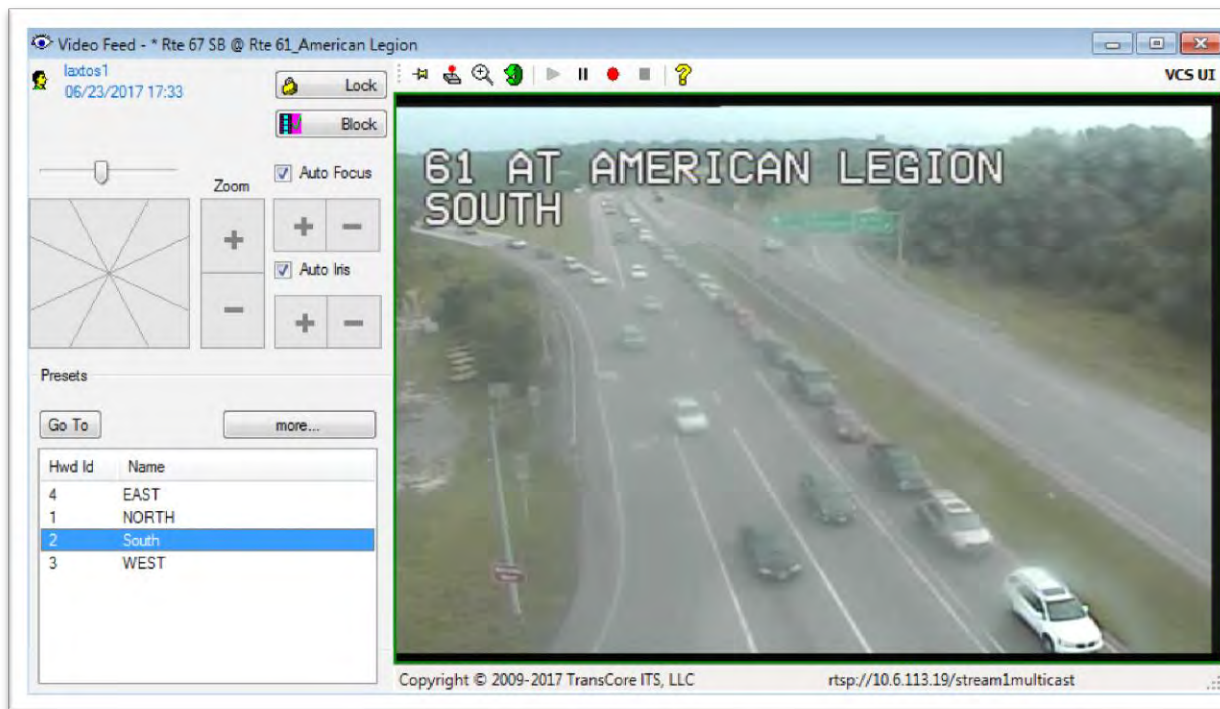
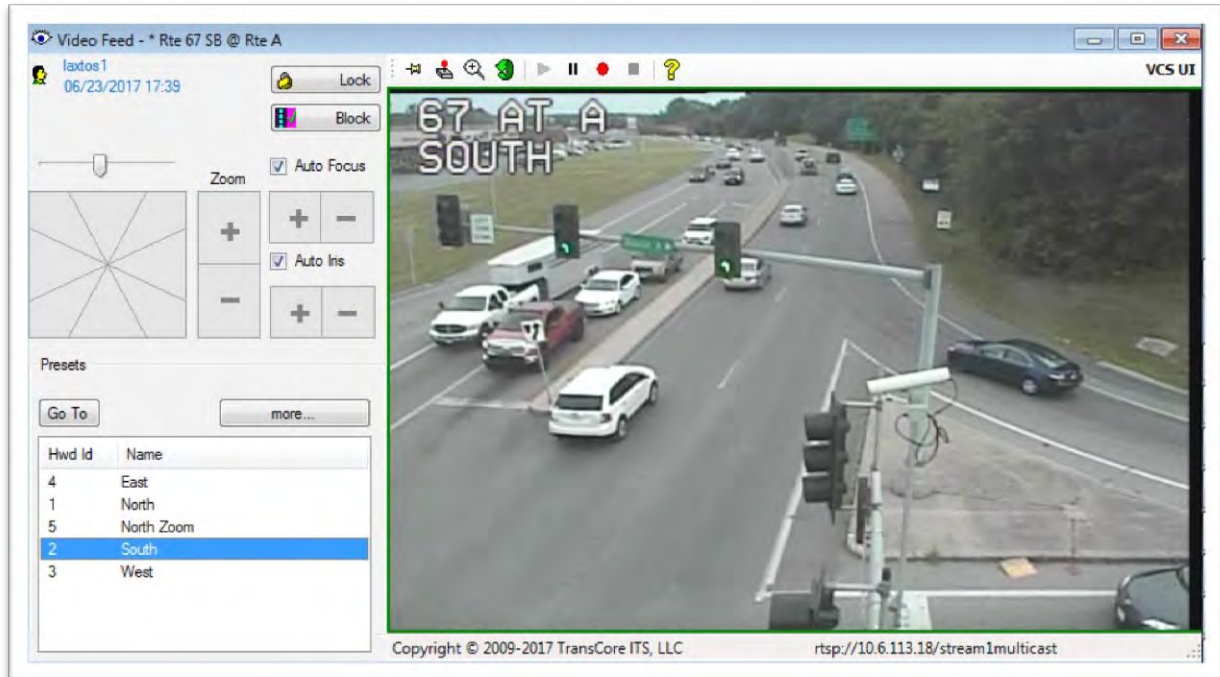
Major Impact Traffic Incidents and Mitigation





INCIDENT MANAGEMENT

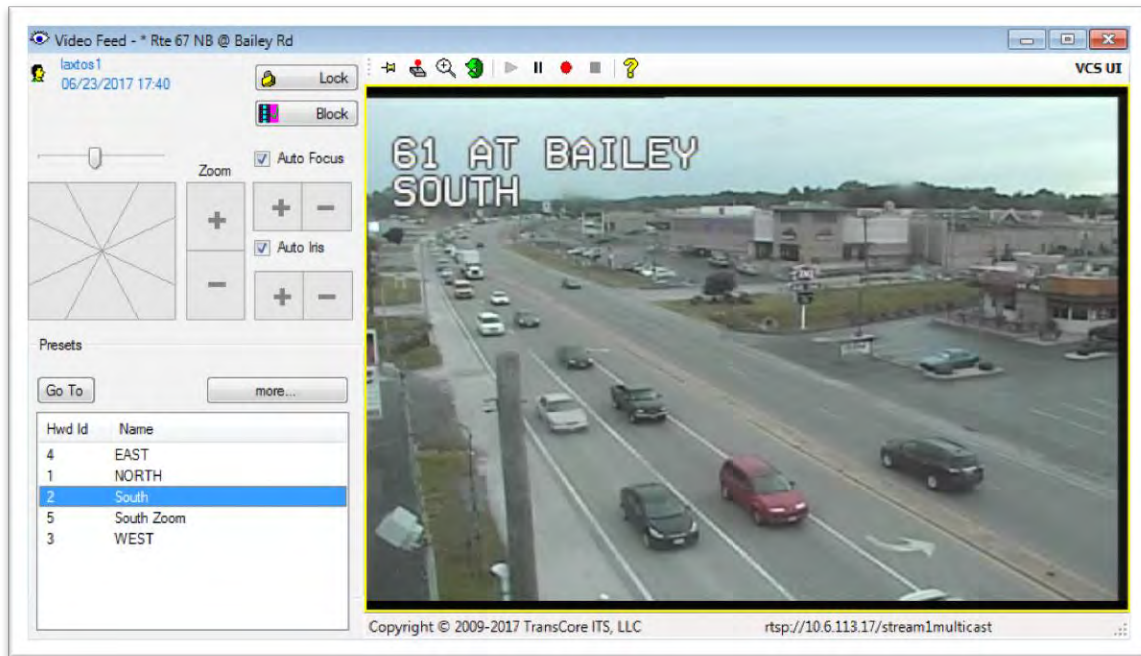
Major Impact Traffic Incidents and Mitigation





INCIDENT MANAGEMENT


Major Impact Traffic Incidents and Mitigation



Major Impact Traffic Incidents and Mitigation

6/30/2017 (Friday)

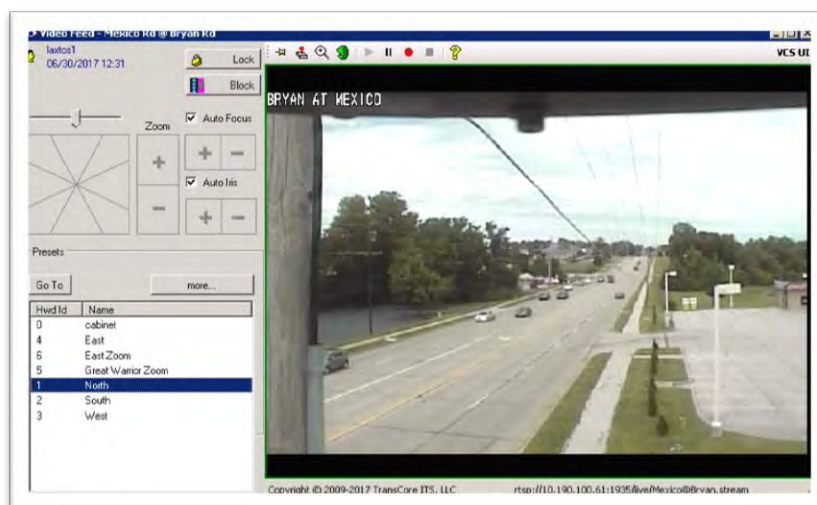
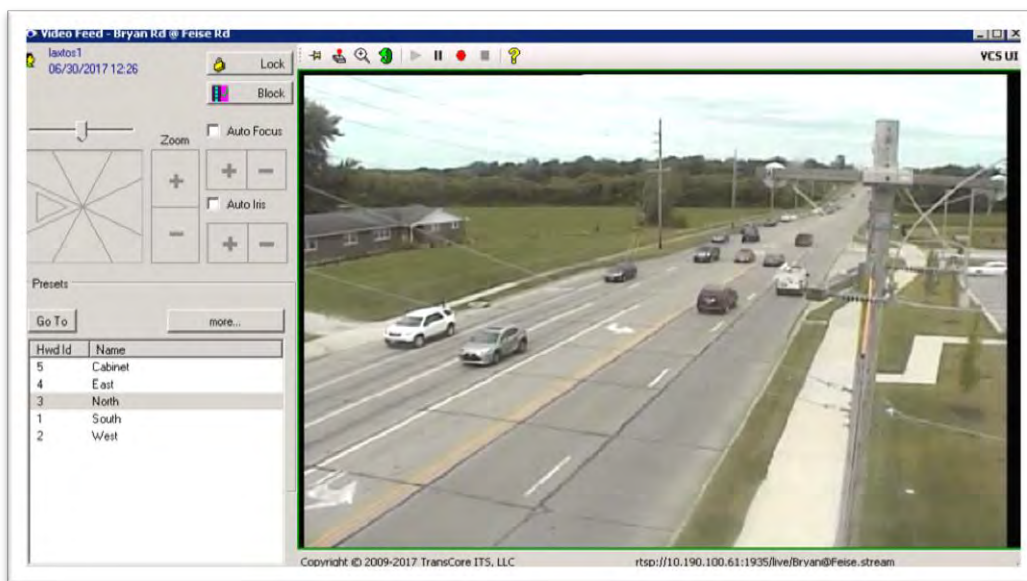
- **Time:** 11:59 am – 1:26 pm
- **Location:** St. Charles County - Westbound I-70 past Bryan Road
- **Event Type:** Multi-Vehicle Crash
- **Estimated Initial Impact:** Non-Rush Hour: 3 of 3 lanes affected equals (=) 100%
- **Incident Details:** According to the police report, the driver of a pickup truck failed to secure his load and a large metal container fell into the roadway. This resulted in a chain reaction accident involving eight other vehicles. Five ambulances responded and transported a total of eight people to various local hospitals with reported minor injuries.
- **Action Taken:** TMC operators monitoring police scanner traffic heard units being dispatched to an accident. They confirmed the location via CCTV and activated the appropriate DMS board within one minute. The incident was entered into TMS to alert the public. Two MoDOT Emergency Response units were dispatched to assist the Lake St. Louis Police and MSHP with traffic control. Traffic was diverted onto TR Hughes and along the I-70 South Outer Road. The EOC and Motor Carriers were notified. The Traffic Engineers were able to adjust traffic signals to improve flow through the detour. Once the interstate was shut down, traffic began to exit the interstate at Bryan Rd going north to the North Outer Road and south down to MO 364. Diversion plans or Free operation were identified and downloaded at the intersections of W Terra @ Bryan Rd through Bryan Rd @ Feise Rd to allow traffic to access the North Outer Road and Westbound MO 364. A diversion plan was implemented at I-70 North Outer Road @ Lake St. Louis Blvd giving priority to the westbound approach allowing vehicles to enter Westbound I-70 on the other side of the closure. Once it was decided to divert traffic off at I-70 @ TR Hughes, focus was turned to the intersection of I-70 North Outer Road @ TR Hughes where a diversion plan was downloaded giving priority to the northbound approach to open up access I-70 North Outer Road. When observing Route K @ I-70 North Outer Road (W Terra), it was determined to operate the signal in Free and increase the max value on phases 4 & 8 to accommodate the westbound surge.
- **Result:** The diversion plans and Free operation helped relieve the surges at the typically lower volume approaches. Implementation of these diversion plans was timely, allowing observations to continue at multiple congested areas and fine tune the signals where possible. Vehicles were taking the path of least resistance causing multiple congested intersections during the closure. As lanes on the interstate began to open up, the signals were returned to their normal operating programs. Event duration attributed to the number of vehicles involved and the number of emergency responders required. The traffic queue reached an estimated 6 miles at its peak.
- **Event Duration:** 1 hours 26 minutes

Westbound I-70 past Bryan Road	Left Shoulder	Lane 1	Lane 2	Lane 3	Right Shoulder
					
Closed Hours/Minutes	1:26	1:26	1:26	1:26	1:37



INCIDENT MANAGEMENT

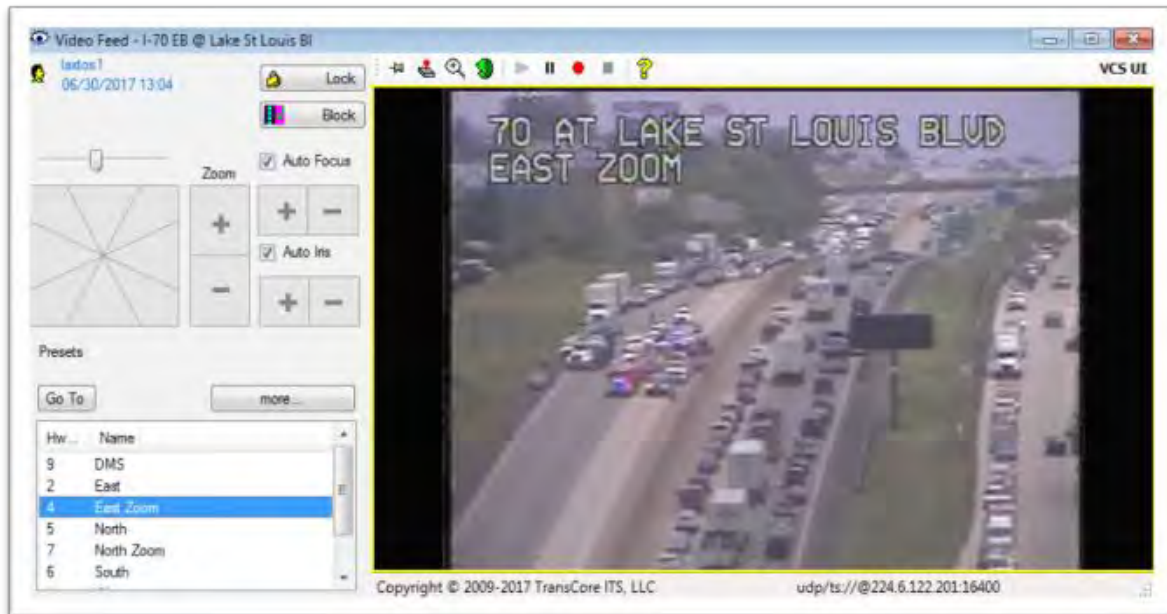
Major Impact Traffic Incidents and Mitigation





INCIDENT MANAGEMENT

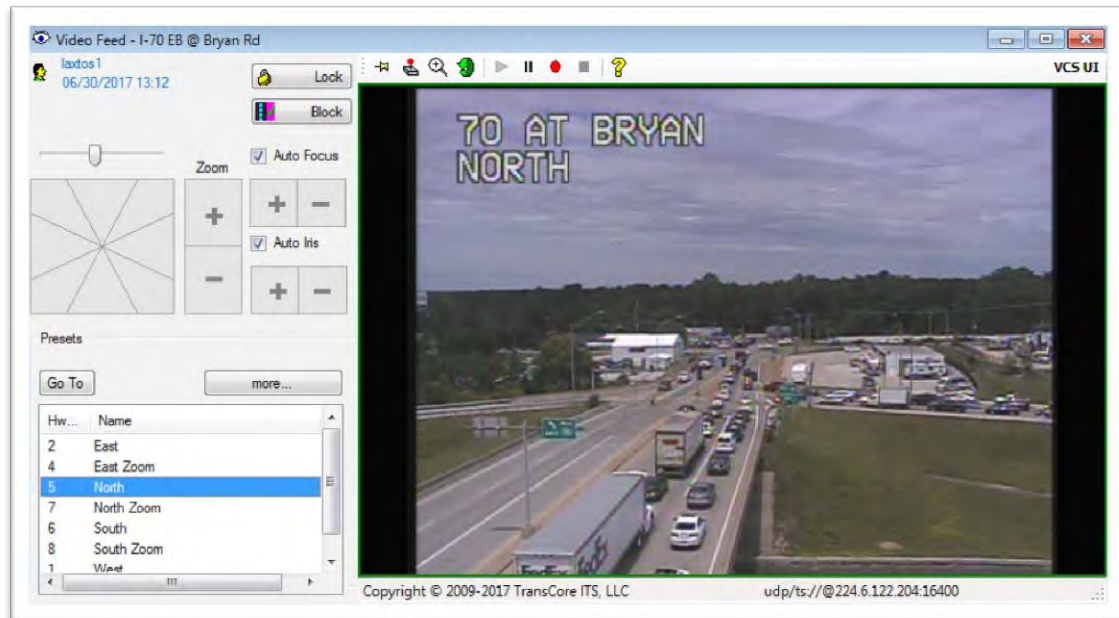
Major Impact Traffic Incidents and Mitigation





INCIDENT MANAGEMENT

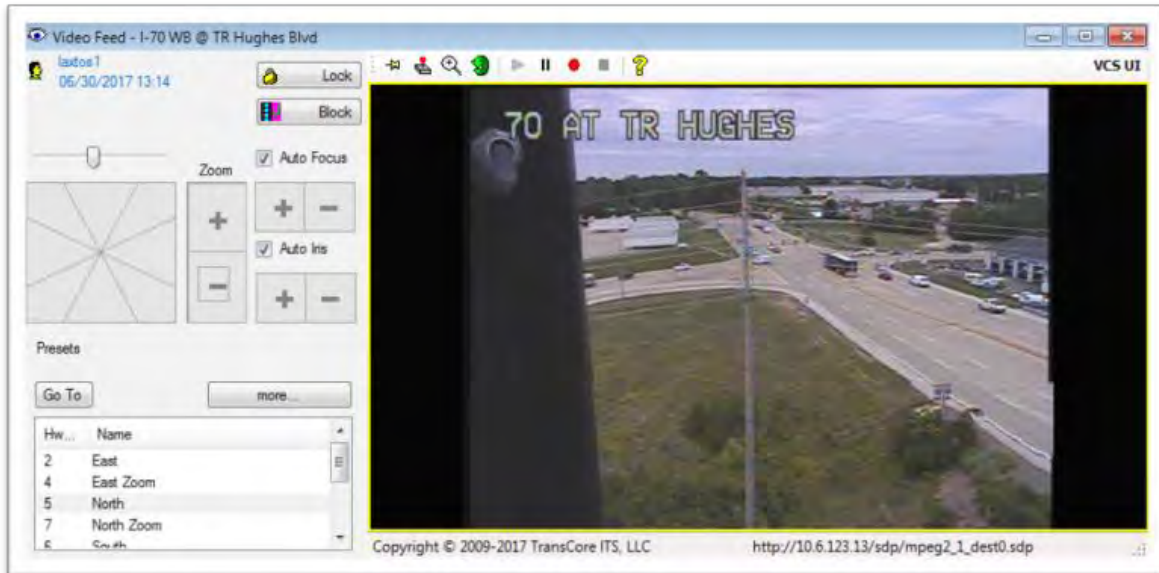
Major Impact Traffic Incidents and Mitigation





INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation



AM PEAK PERIOD MOBILITY MAY 2017

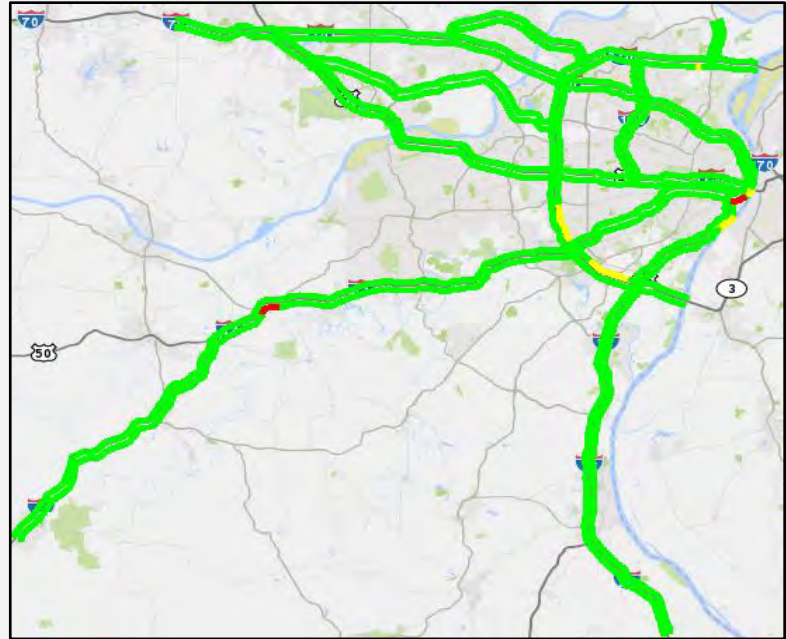
6 am – 7 am

LEGEND (Speed Index)

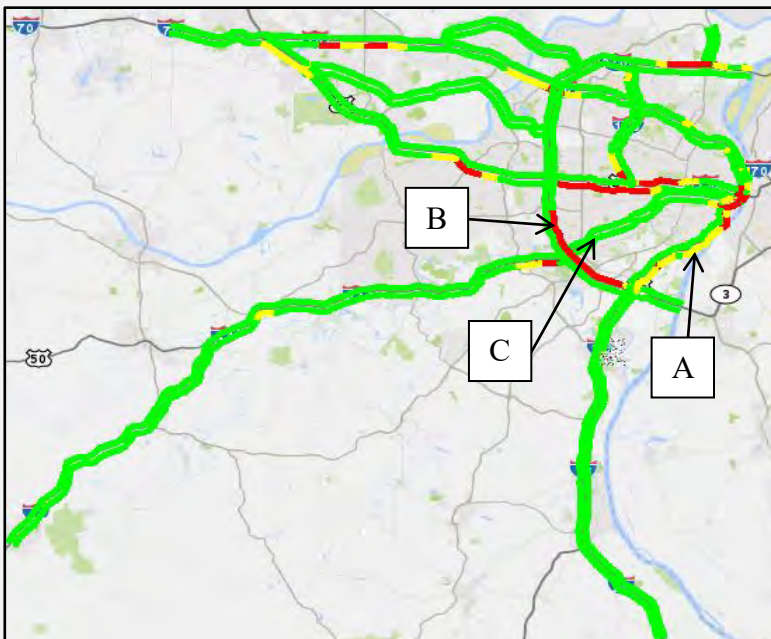
- High Mobility (.90+)
- Medium Mobility (.80-.90)
- Low Mobility (< .80)

Highlighted Heat Map Locations

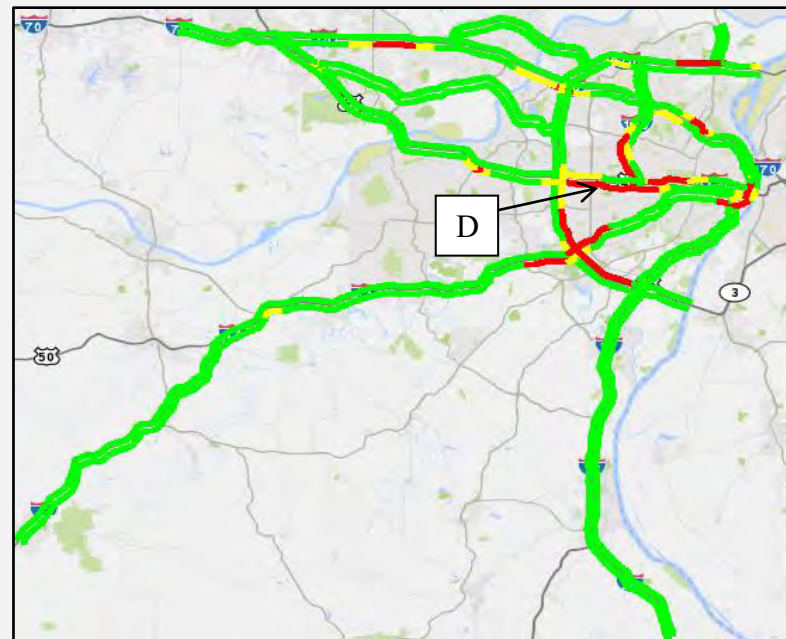
- A. NB I-55 from Lindbergh to I-64/I-70/US-40
- B. NB I-270 from I-55 to I-64/US-40/US-61
- C. EB I-44 from Route 141 to Elm Ave.
- D. EB I-64 from I-270 to McCausland



7 am – 8 am



8 am – 9 am



AM PEAK PERIOD MOBILITY JUNE 2017

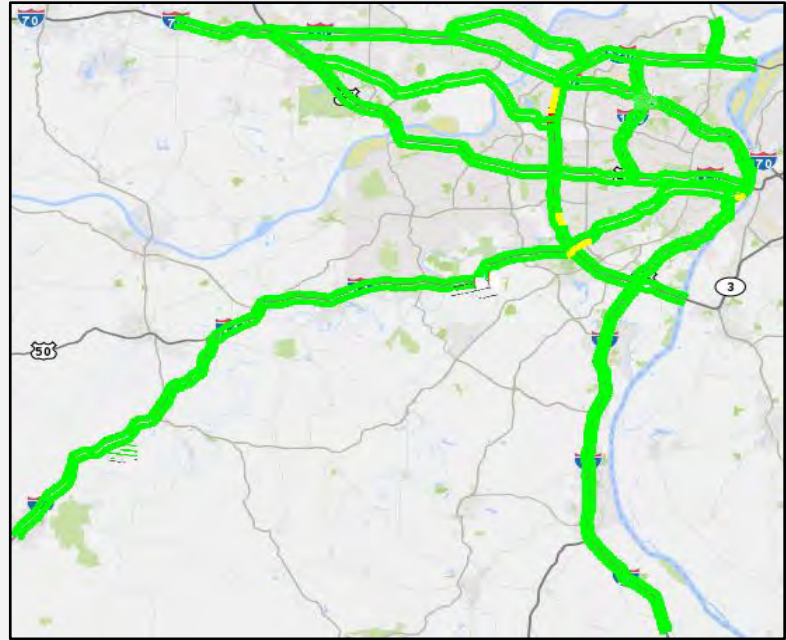
6 am – 7 am

LEGEND (Speed Index)

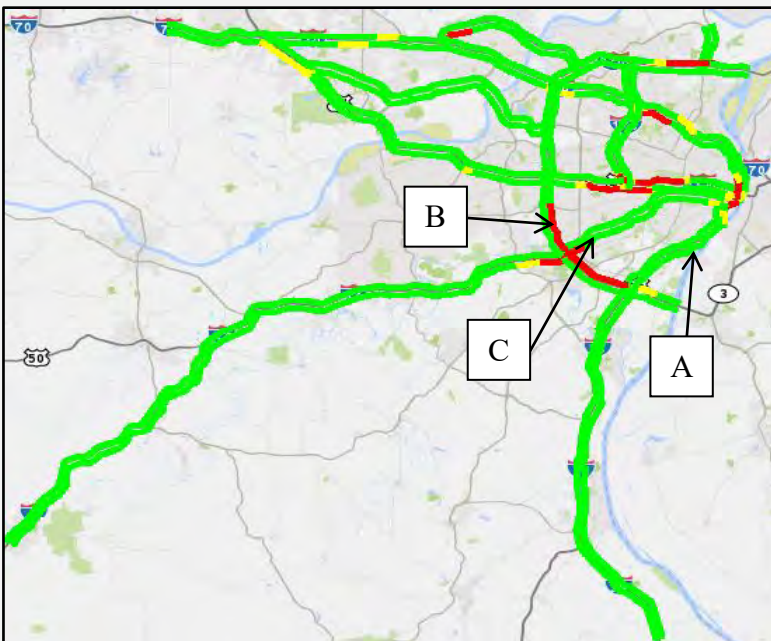
- High Mobility (.90+)
- Medium Mobility (.80-.90)
- Low Mobility (< .80)

Highlighted Heat Map Locations

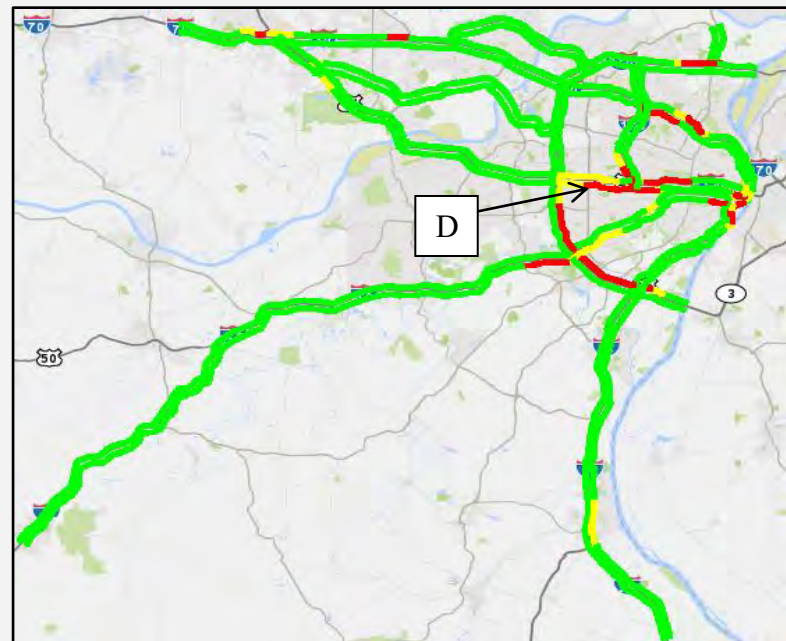
- A. NB I-55 from Lindbergh to I-64/I-70/US-40
- B. NB I-270 from I-55 to I-64/US-40/US-61
- C. EB I-44 from Route 141 to Elm Ave.
- D. EB I-64 from I-270 to McCausland



7 am – 8 am



8 am – 9 am

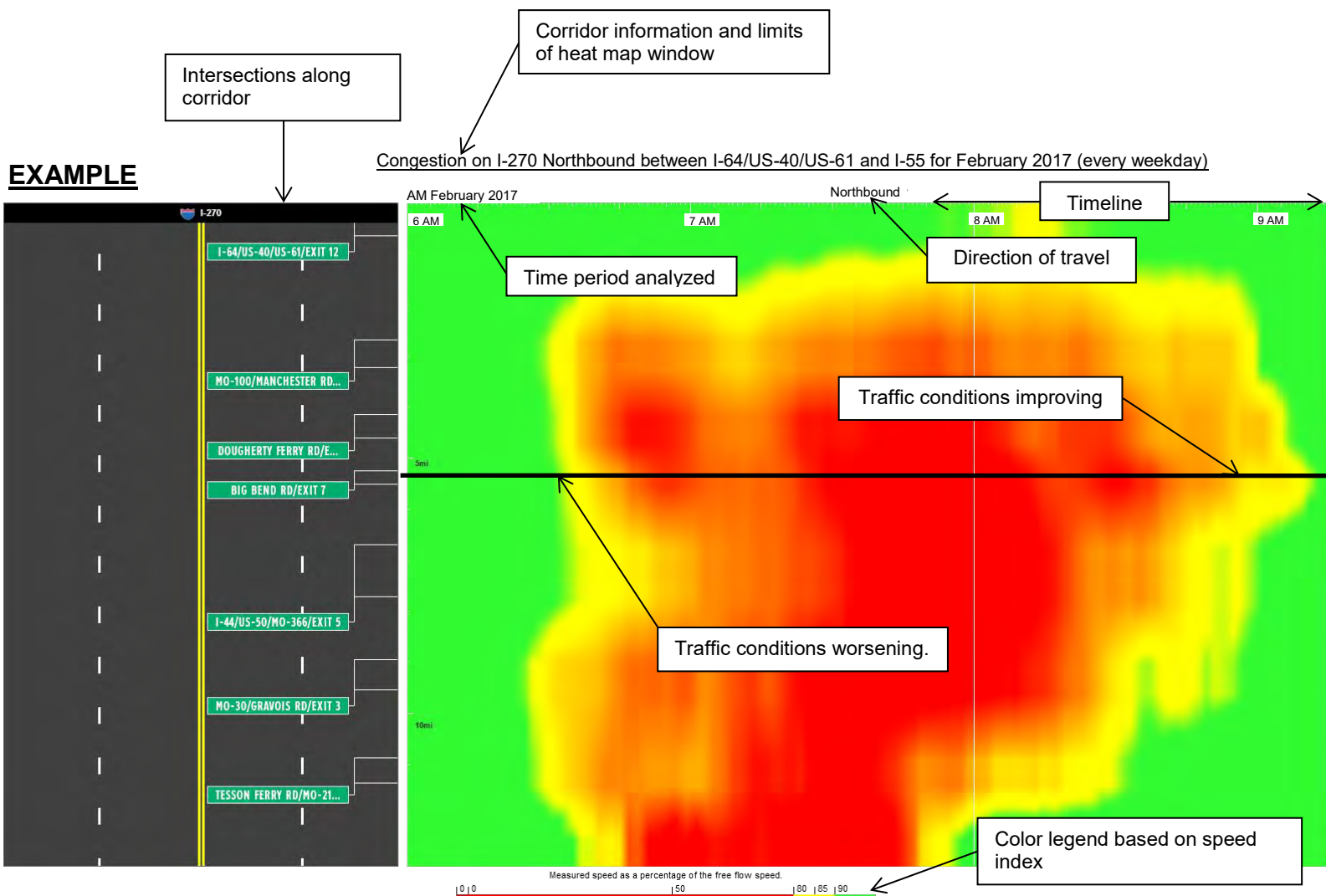


FREEWAY MANAGEMENT

How to read the Congestion Scan Heat Maps

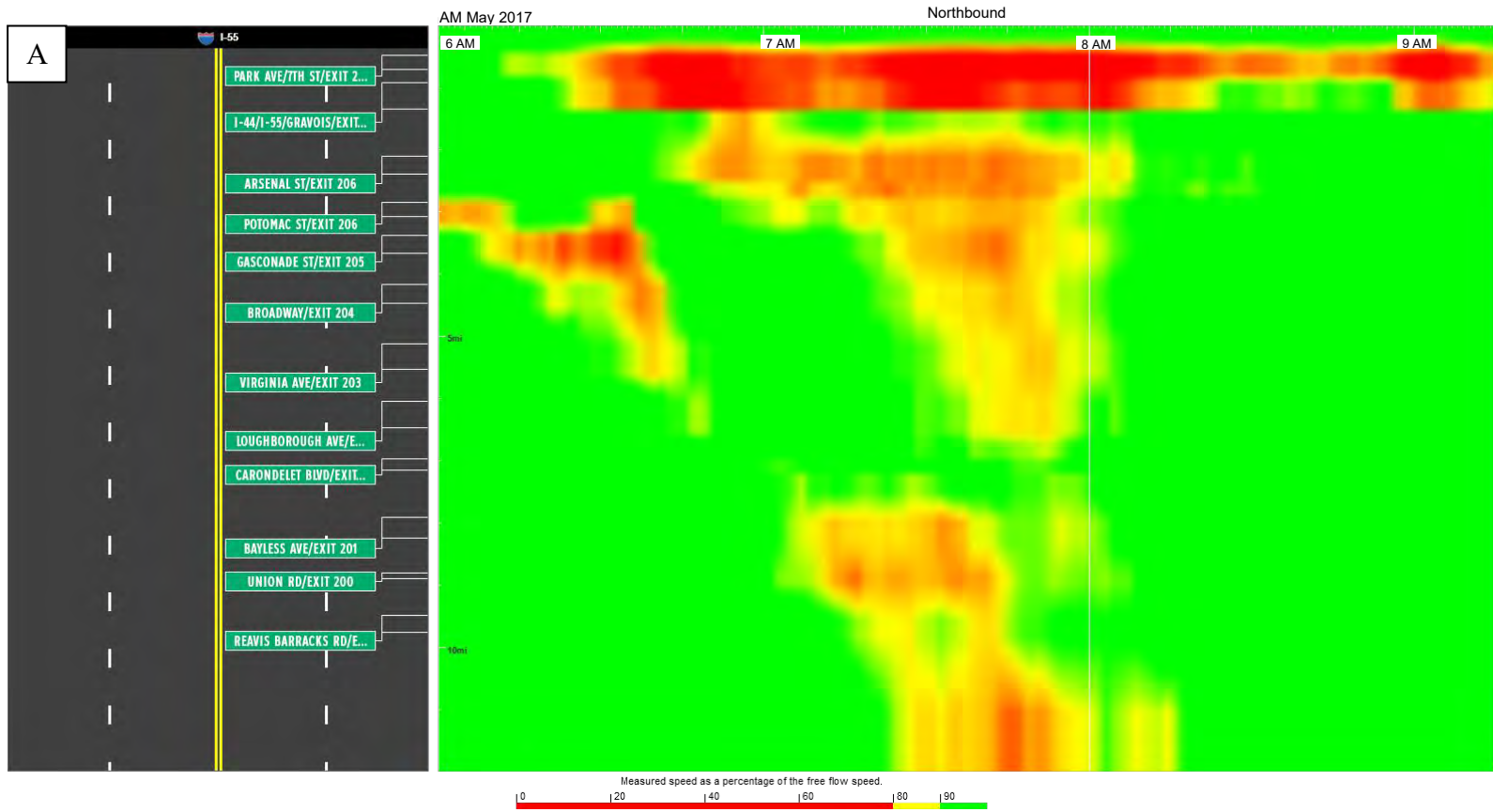
- The heat maps depict congestion along a corridor over a set time period.
- The map below shows Northbound I-270 from I-55 to I-64 during the hours of 6am – 9am for the month of February 2017.
- Following a horizontal line across the heat map at a given intersection will show traffic conditions at that location over time. Using the intersection of Big Bend Road as an example the heat map depicts conditions worsening around 6:30am, starting to improve around 8:45am and near free flow speeds by 9:15am.
- Alternatively, tracing the heat map vertically depicts traffic conditions along the corridor at that moment in time.

EXAMPLE

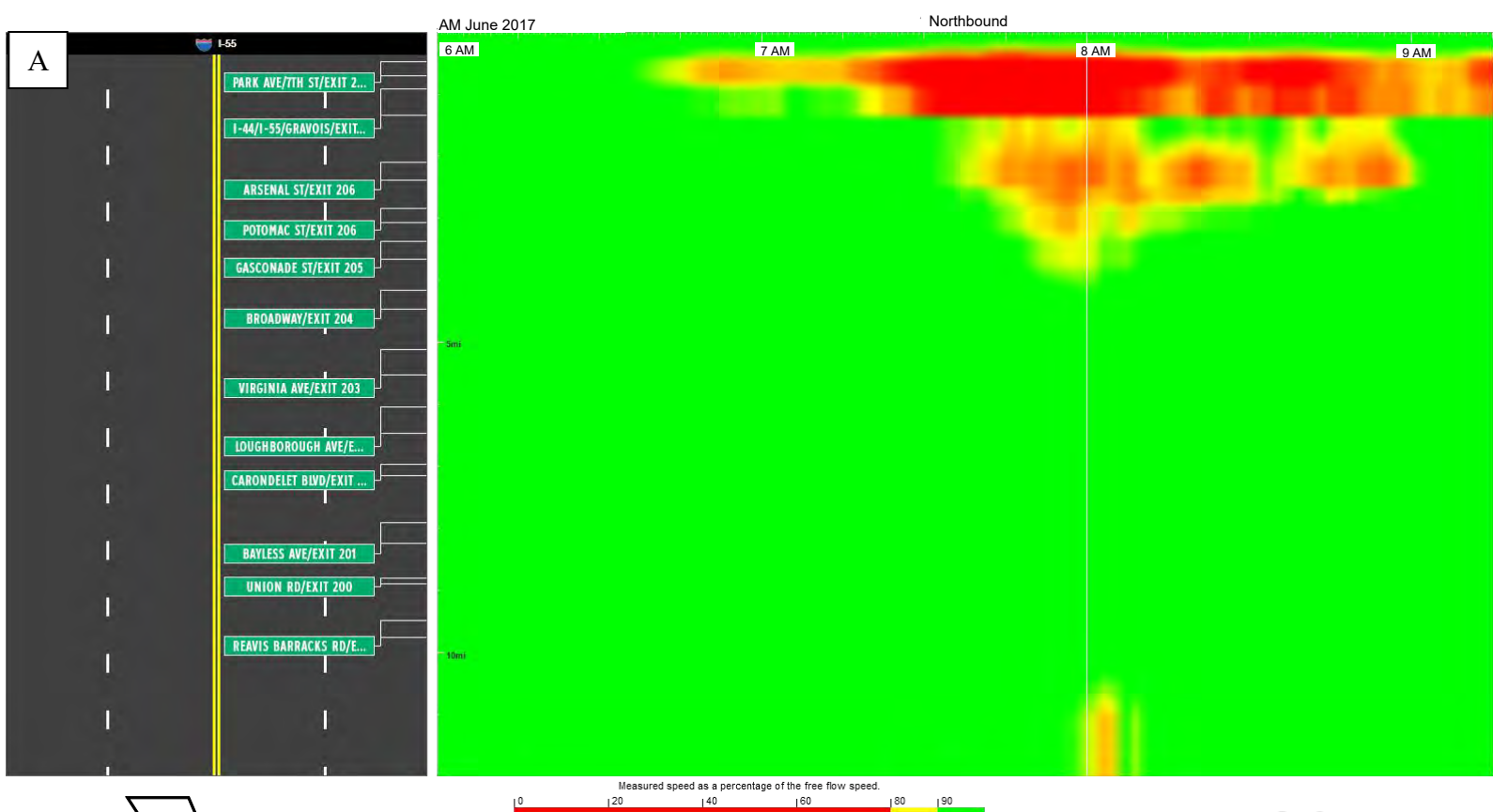


FREEWAY MANAGEMENT

Congestion on I-55 Northbound between Lindbergh Blvd (US-50/US-61/67) and I-64/I-70/US-40 May 2017 (every weekday)



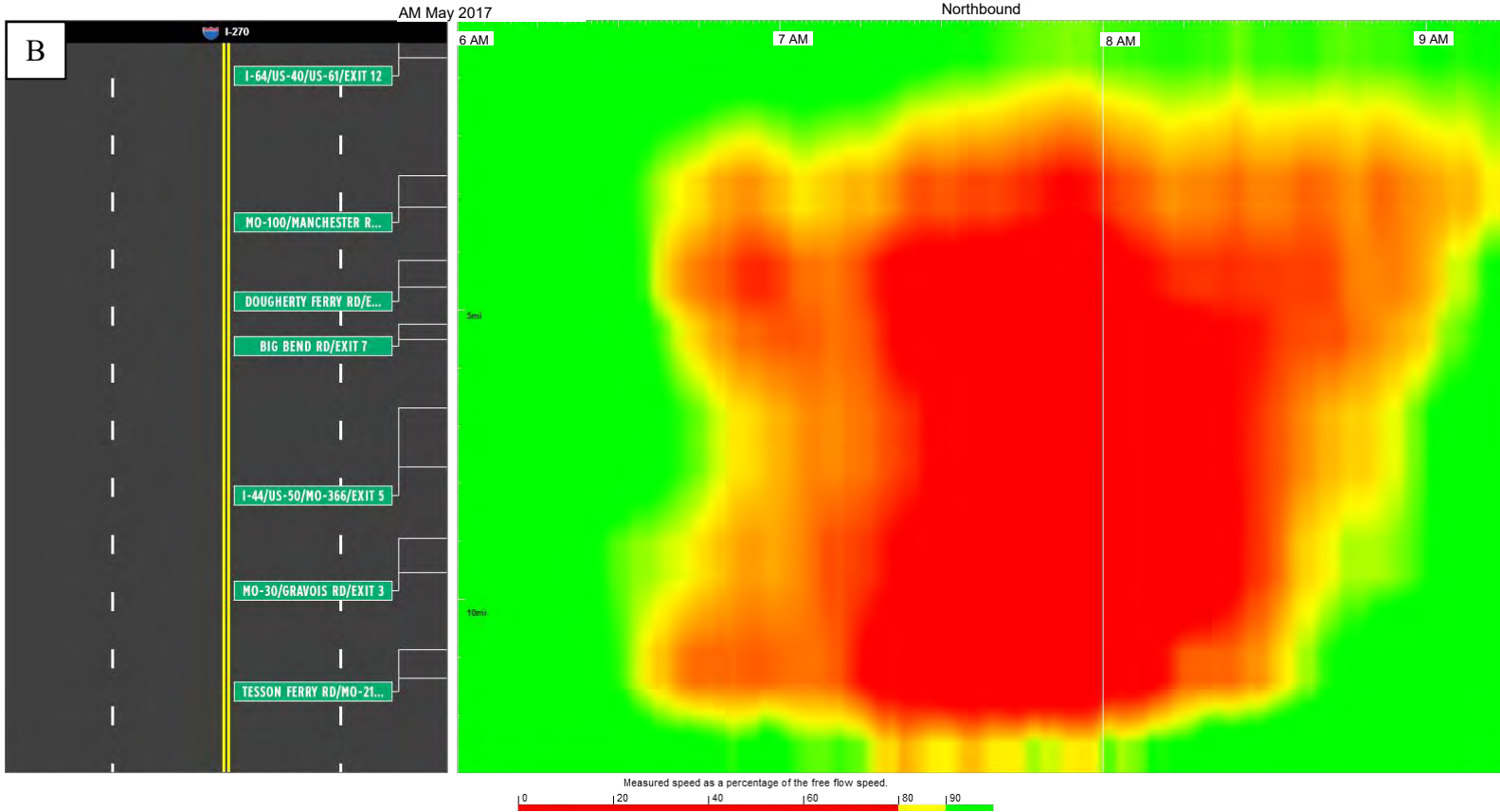
Congestion on I-55 Northbound between Lindbergh Blvd (US-50/US-61/67) and I-64/I-70/US-40 June 2017 (every weekday)



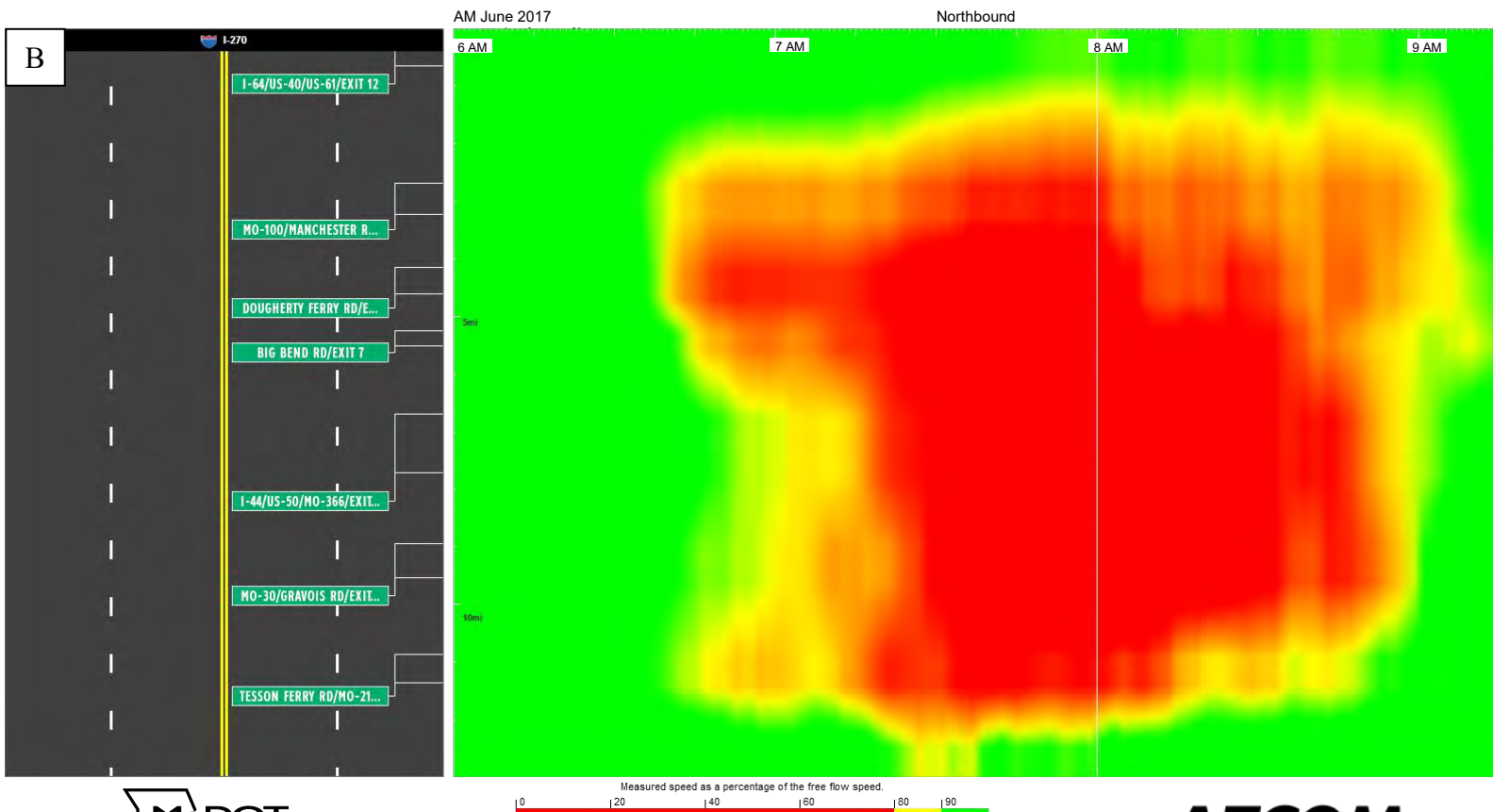


FREEWAY MANAGEMENT

Congestion on I-270 Northbound between I-55 and I-64/US-40/61 for May 2017 (every weekday)

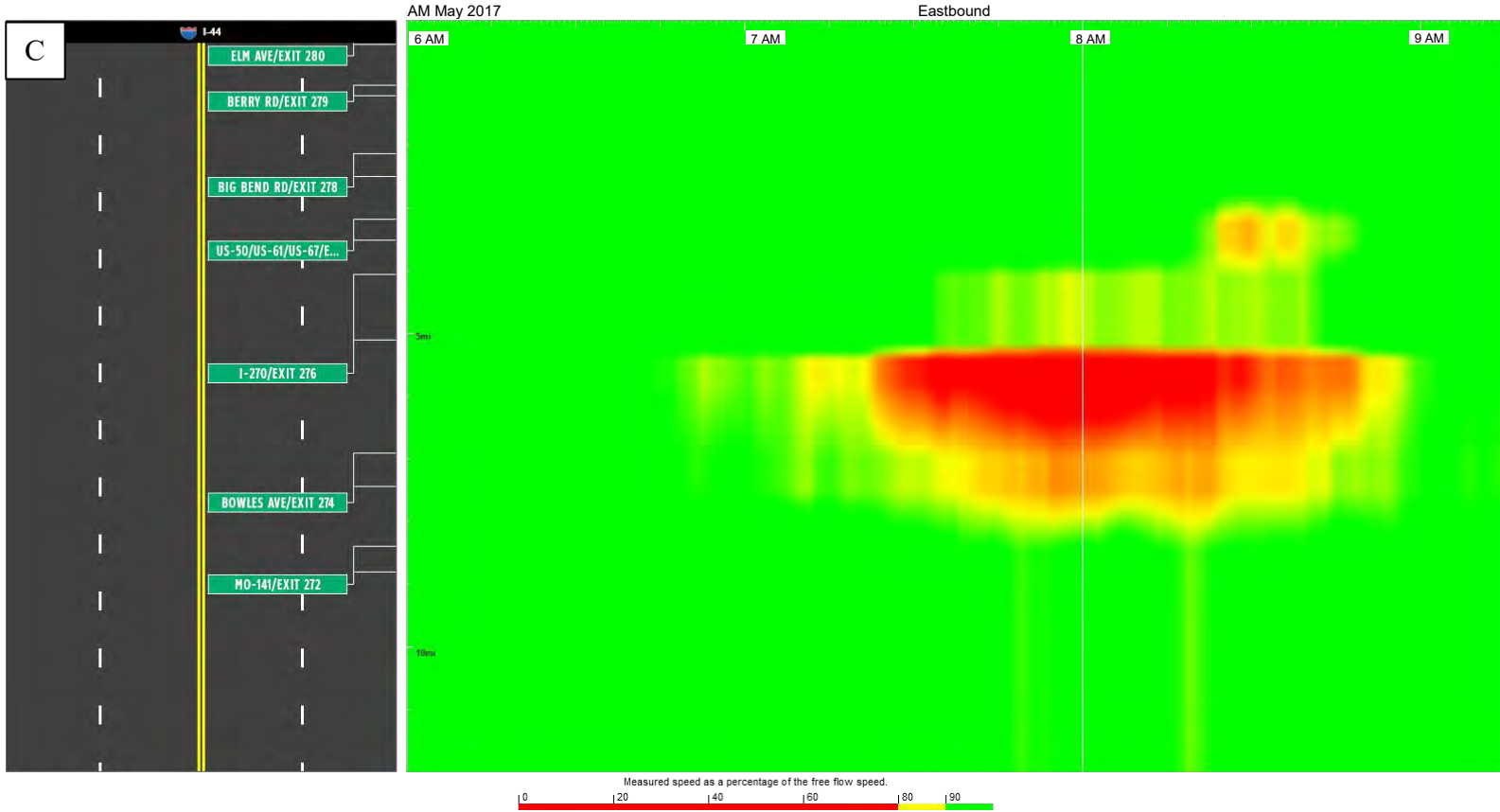


Congestion on I-270 Northbound between I-55 and I-64/US-40/61 for June 2017 (every weekday)

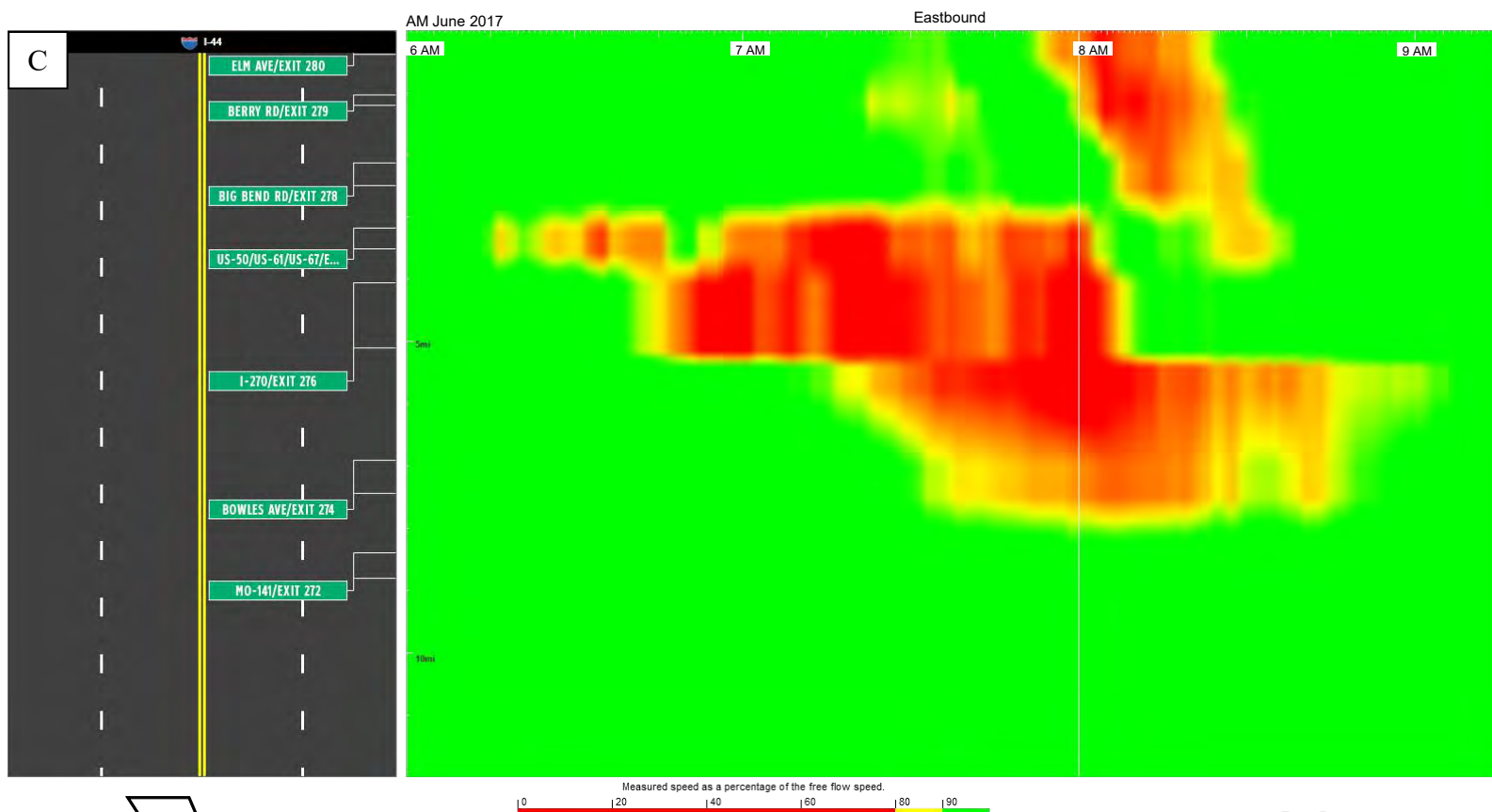


FREEWAY MANAGEMENT

Congestion on I-44 Eastbound between Route 141 and Elm Ave. for May 2017 (every weekday)



Congestion on I-44 Eastbound between Route 141 and Elm Ave. for June 2017 (every weekday)

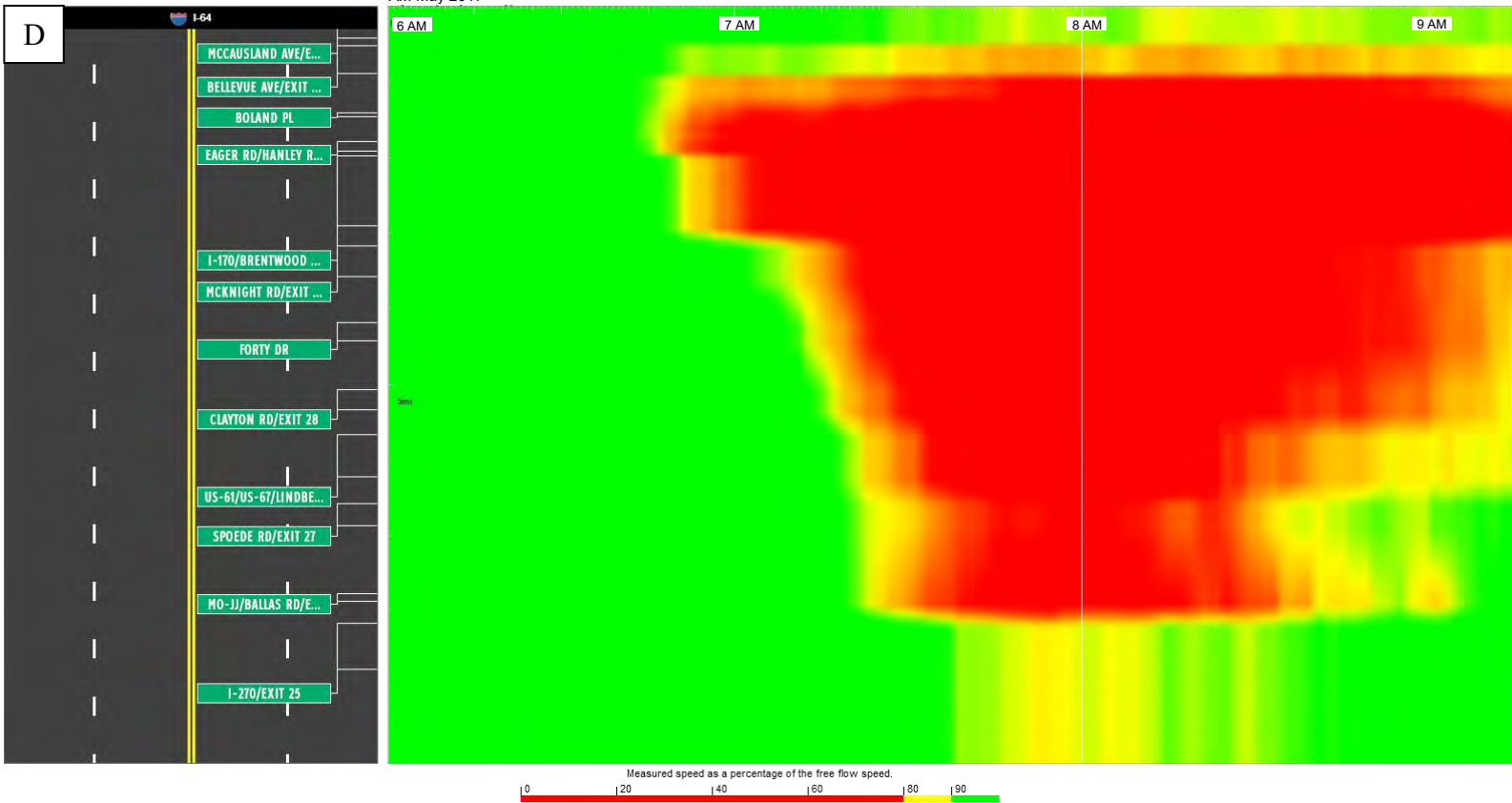


FREEWAY MANAGEMENT

Congestion on I-64 Eastbound between I-270 and McCausland for May 2017 (every weekday)

AM May 2017

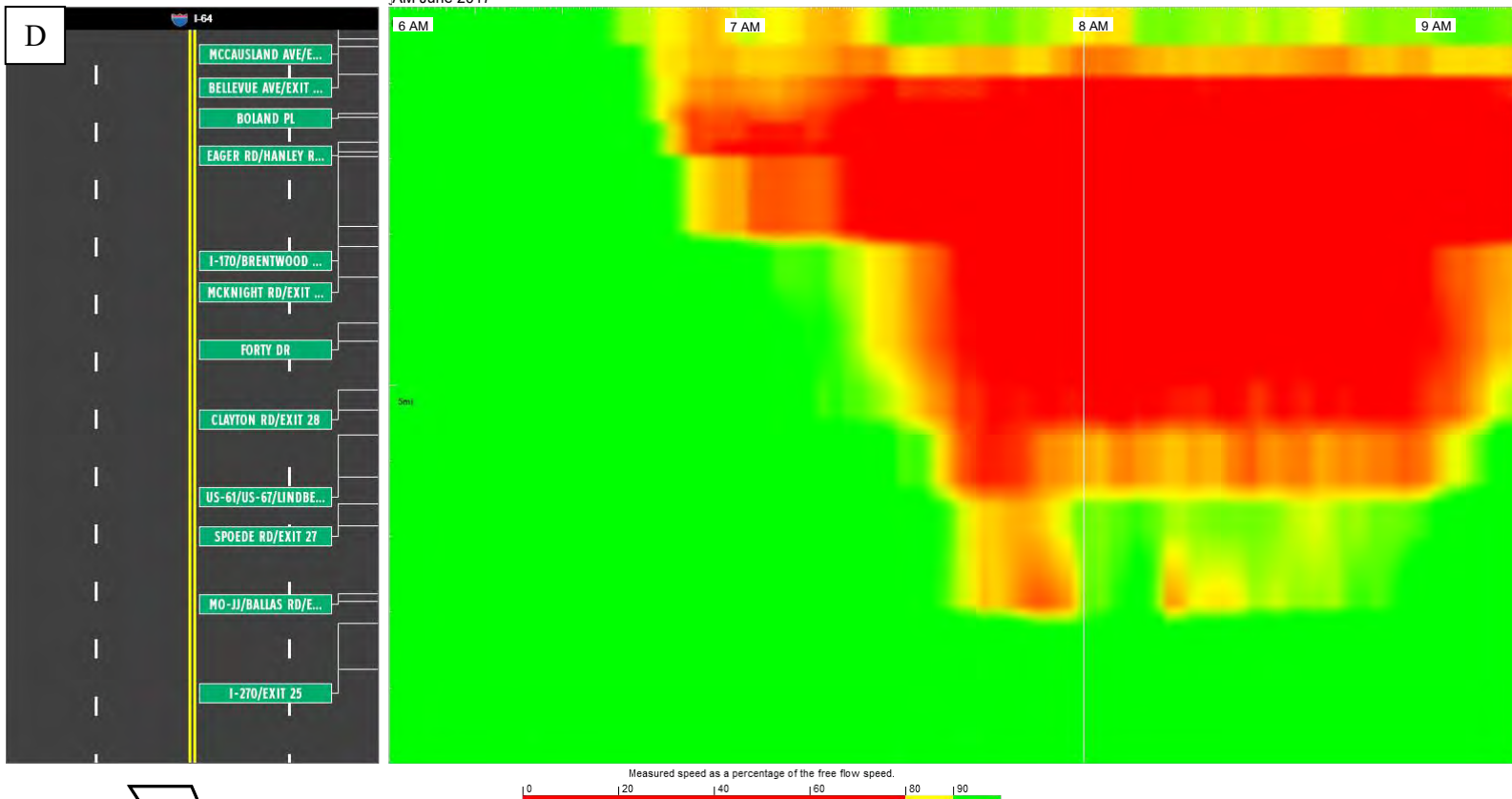
Eastbound



Congestion on I-64 Eastbound between I-270 and McCausland for June 2017 (every weekday)

AM June 2017

Eastbound





FREEWAY MANAGEMENT

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PM PEAK PERIOD MOBILITY MAY 2017

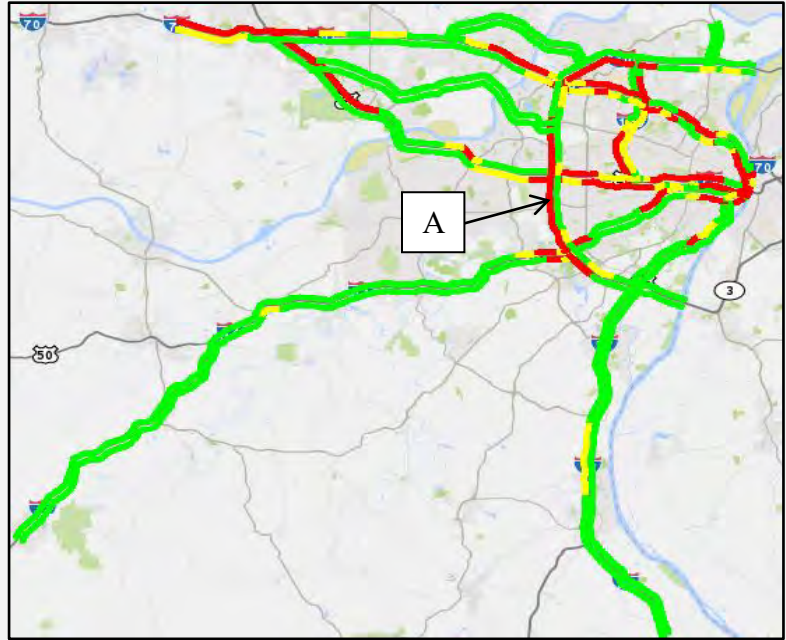
4 pm – 5 pm

LEGEND (Speed Index)

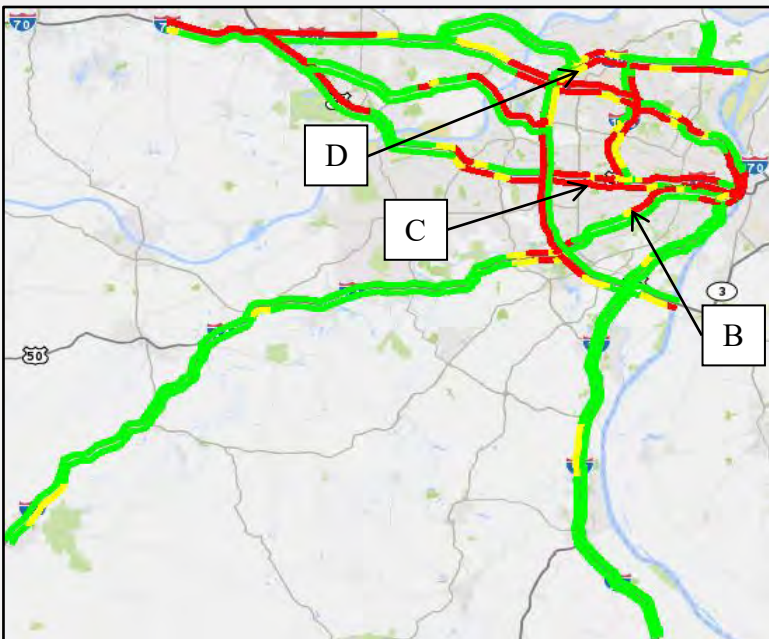
- High Mobility (.90+)
- Medium Mobility (.80-.90)
- Low Mobility (< .80)

Highlighted Heat Map Locations

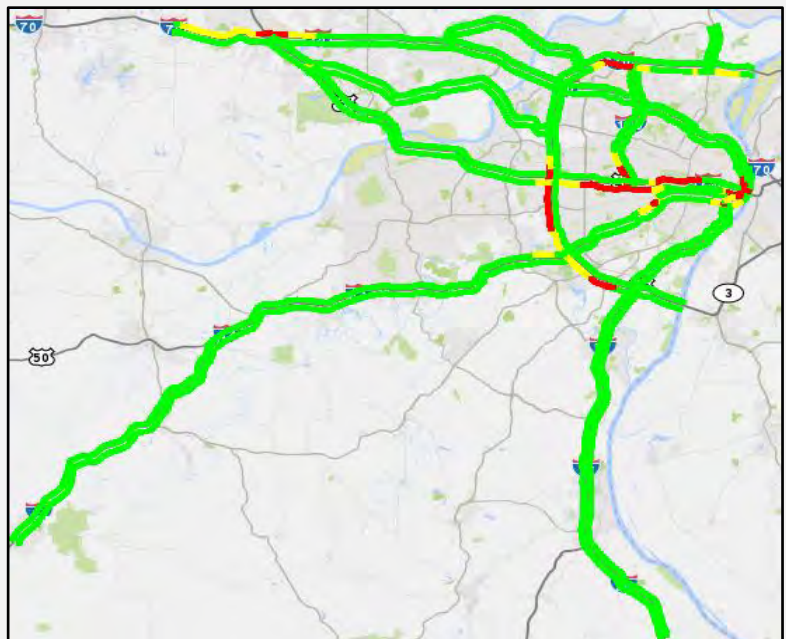
- A. SB I-270/EB I-255 from Dorsett to Mississippi River
- B. WB I-44 from I-55 to Route 141
- C. WB I-64 from I-55/I-70/US-40 (Downtown) to I-70
- D. NB/EB I-270 from Dorsett to Riverview



5 pm – 6 pm



6 pm – 7 pm



FREEWAY MANAGEMENT

PM PEAK PERIOD MOBILITY JUNE 2017

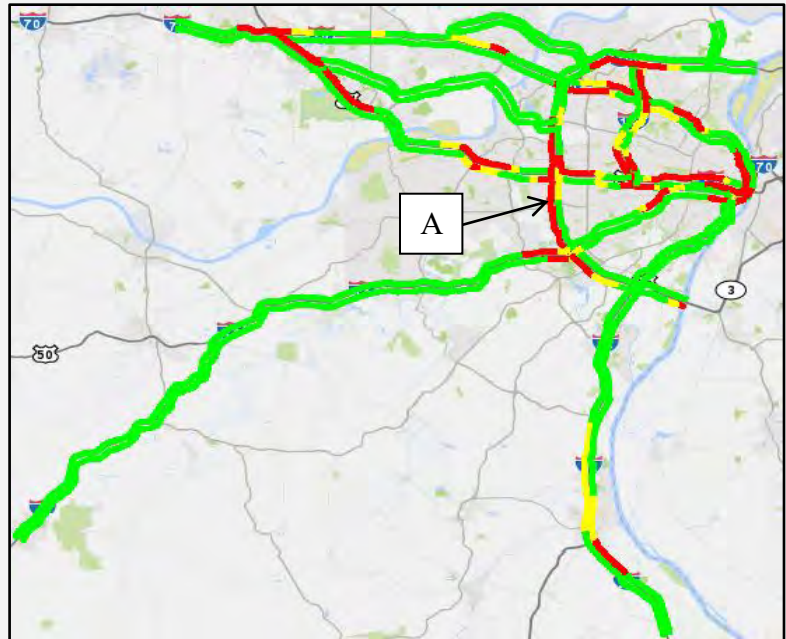
4 pm – 5 pm

LEGEND (Speed Index)

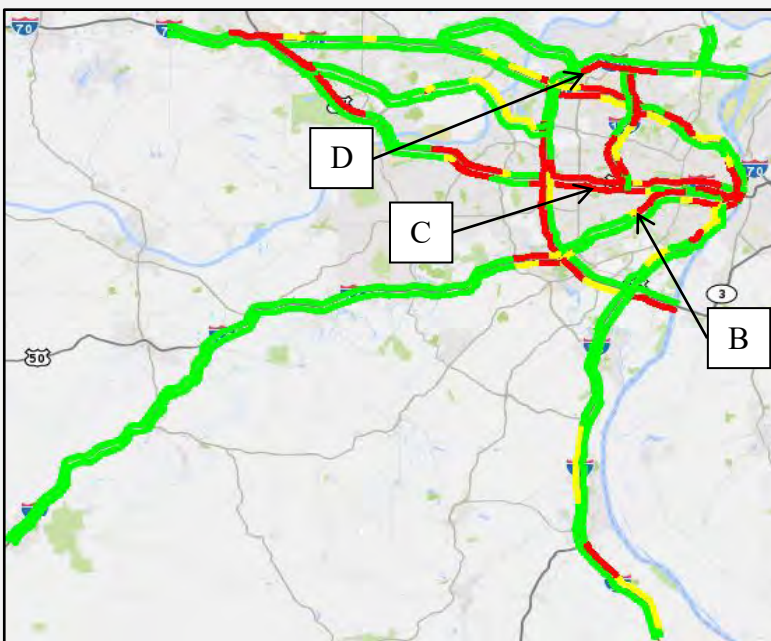
- High Mobility (.90+)
- Medium Mobility (.80-.90)
- Low Mobility (< .80)

Highlighted Heat Map Locations

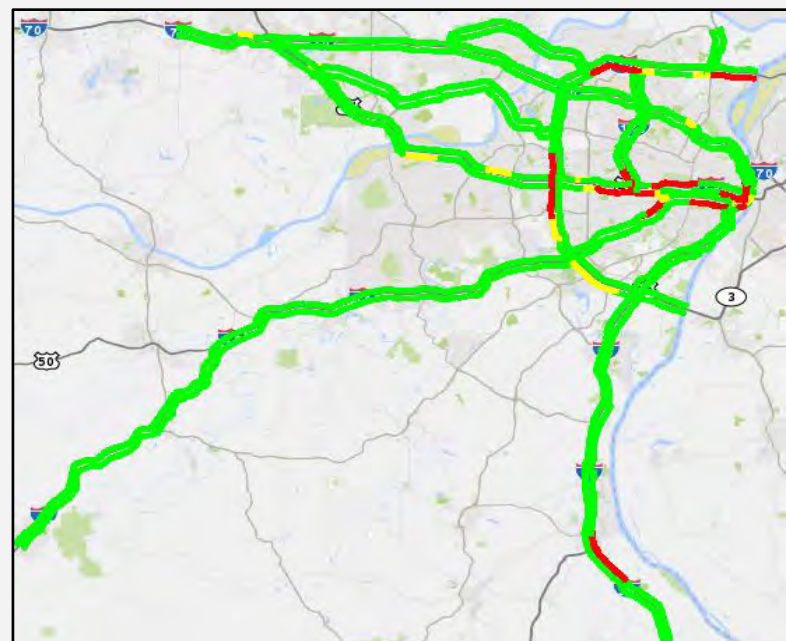
- A. SB I-270/EB I-255 from Dorsett to Mississippi River
- B. WB I-44 from I-55 to Route 141
- C. WB I-64 from I-55/I-70/US-40 (Downtown) to I-70
- D. NB/EB I-270 from Dorsett to Riverview



5 pm – 6 pm

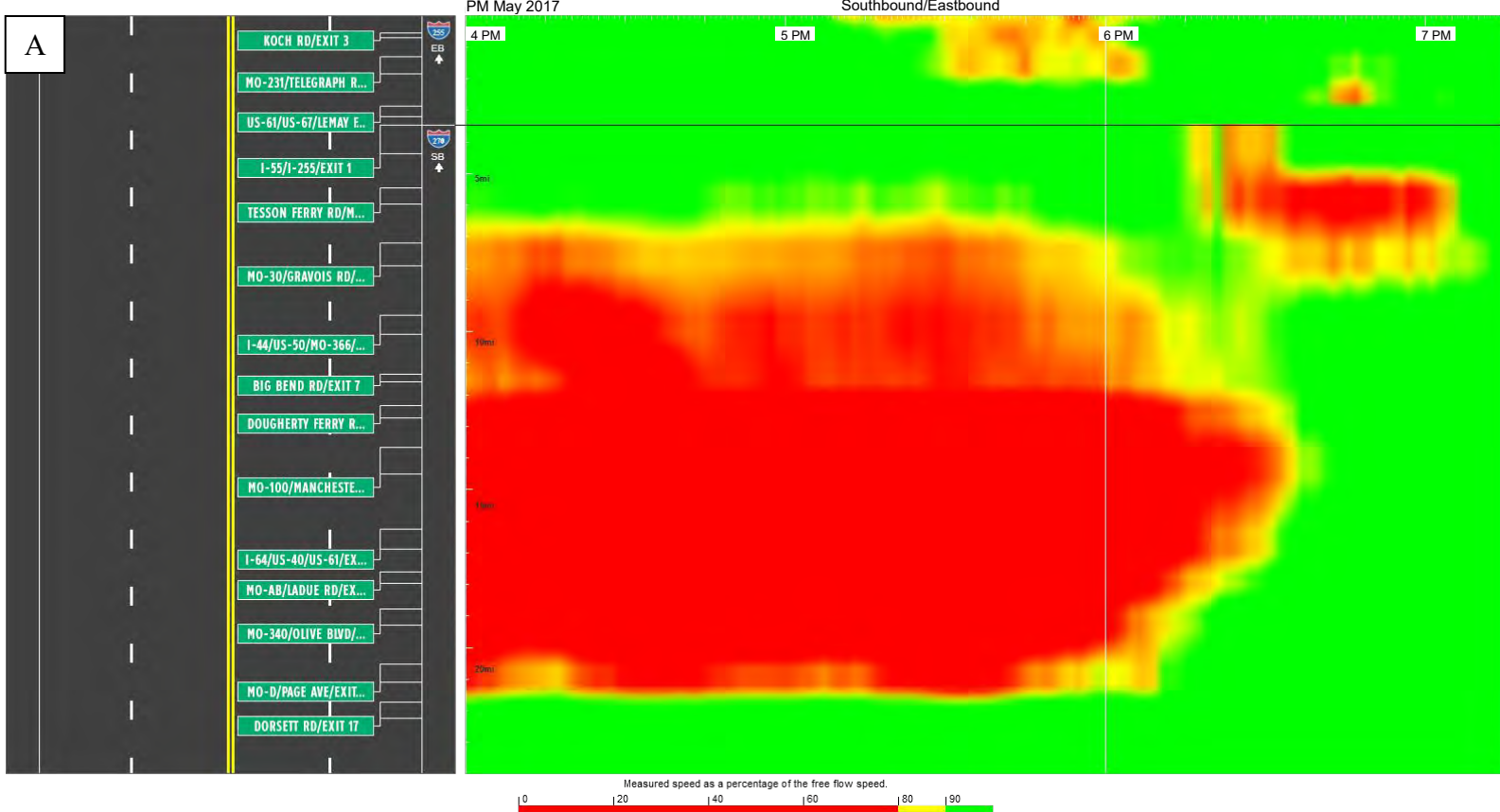


6 pm – 7 pm

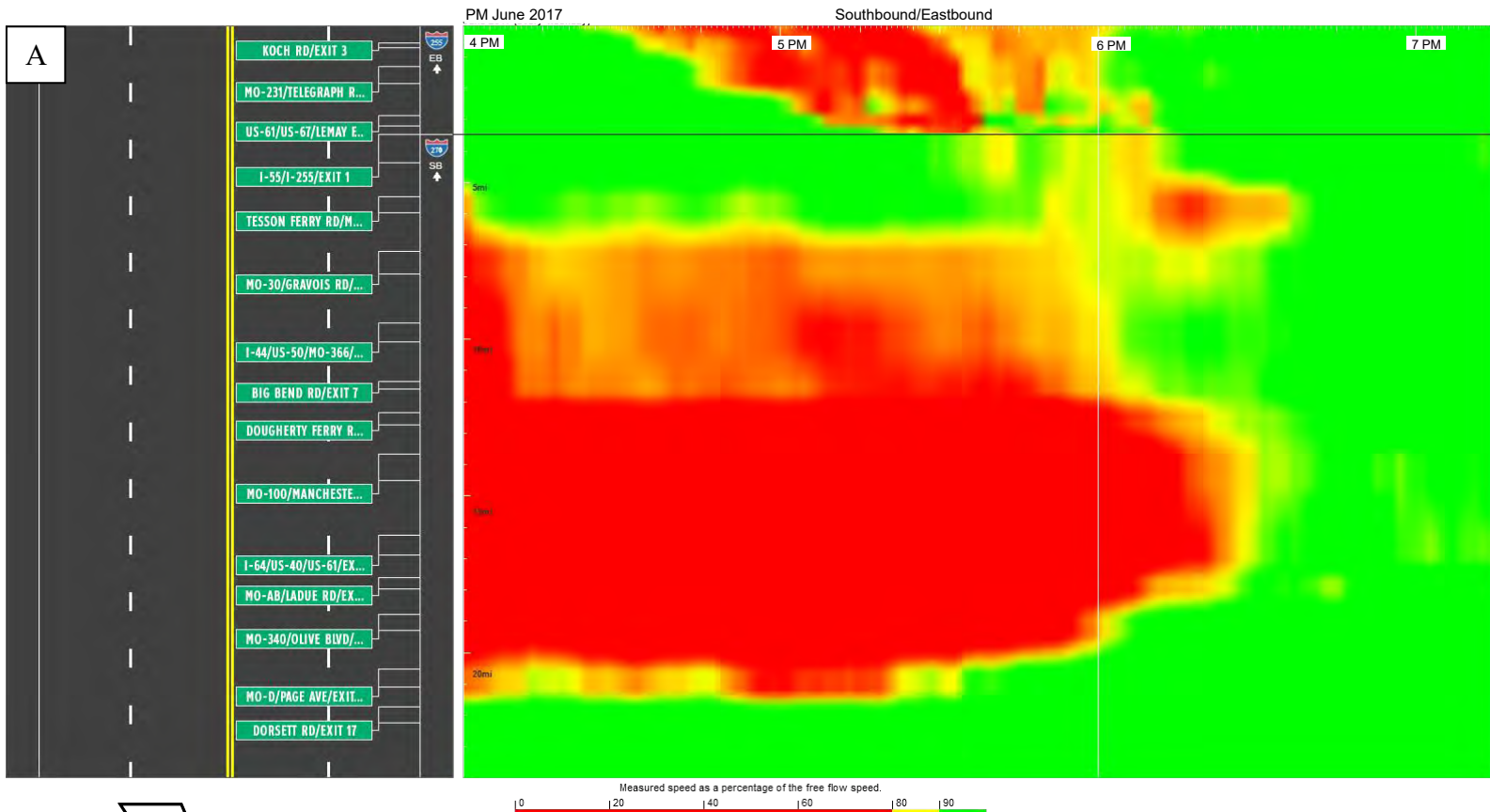


FREEWAY MANAGEMENT

Congestion on I-270 Southbound/I-255 Eastbound between Dorsett Rd and Mississippi River for May 2017 (every weekday)

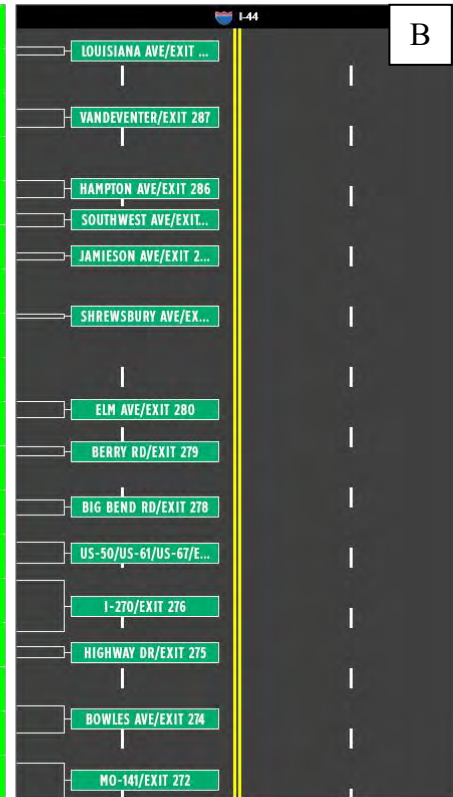
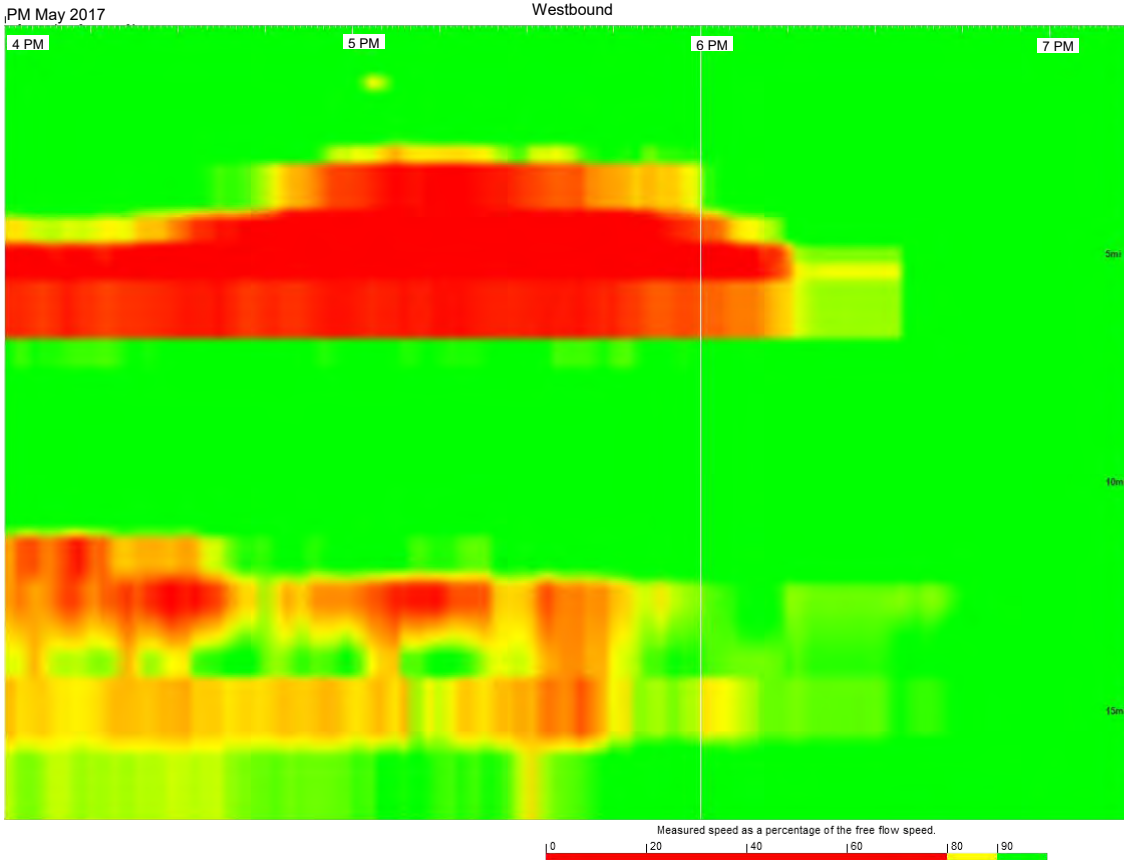


Congestion on I-270 Southbound/I-255 Eastbound between Dorsett Rd and Mississippi River for June 2017 (every weekday)

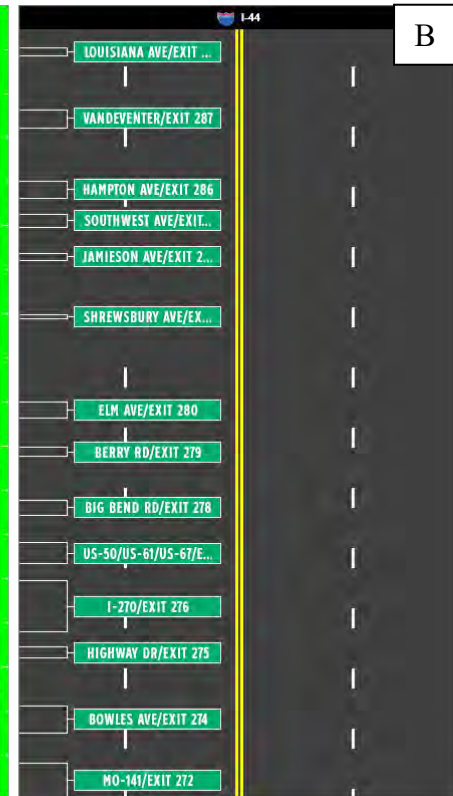
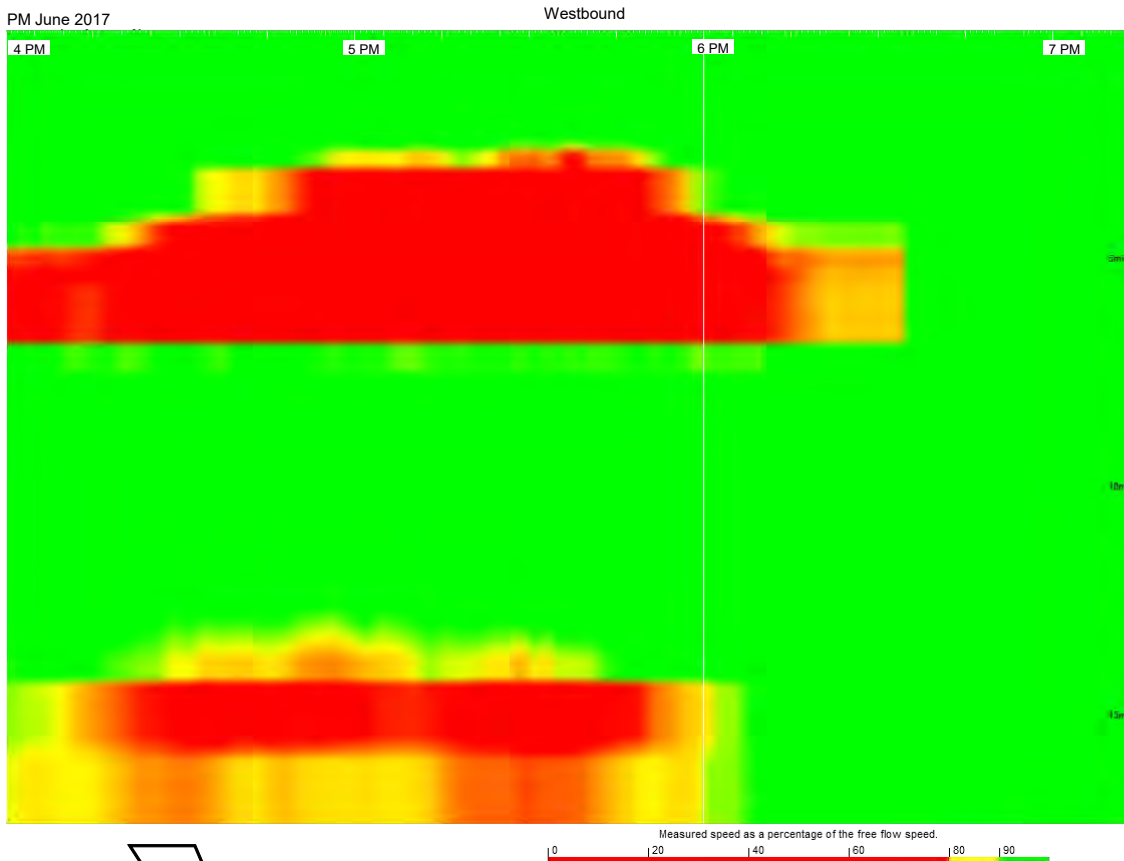


FREeway MANAGEMENT

Congestion on I-44 Westbound between I-55 and Route 141 for May 2017 (every weekday)

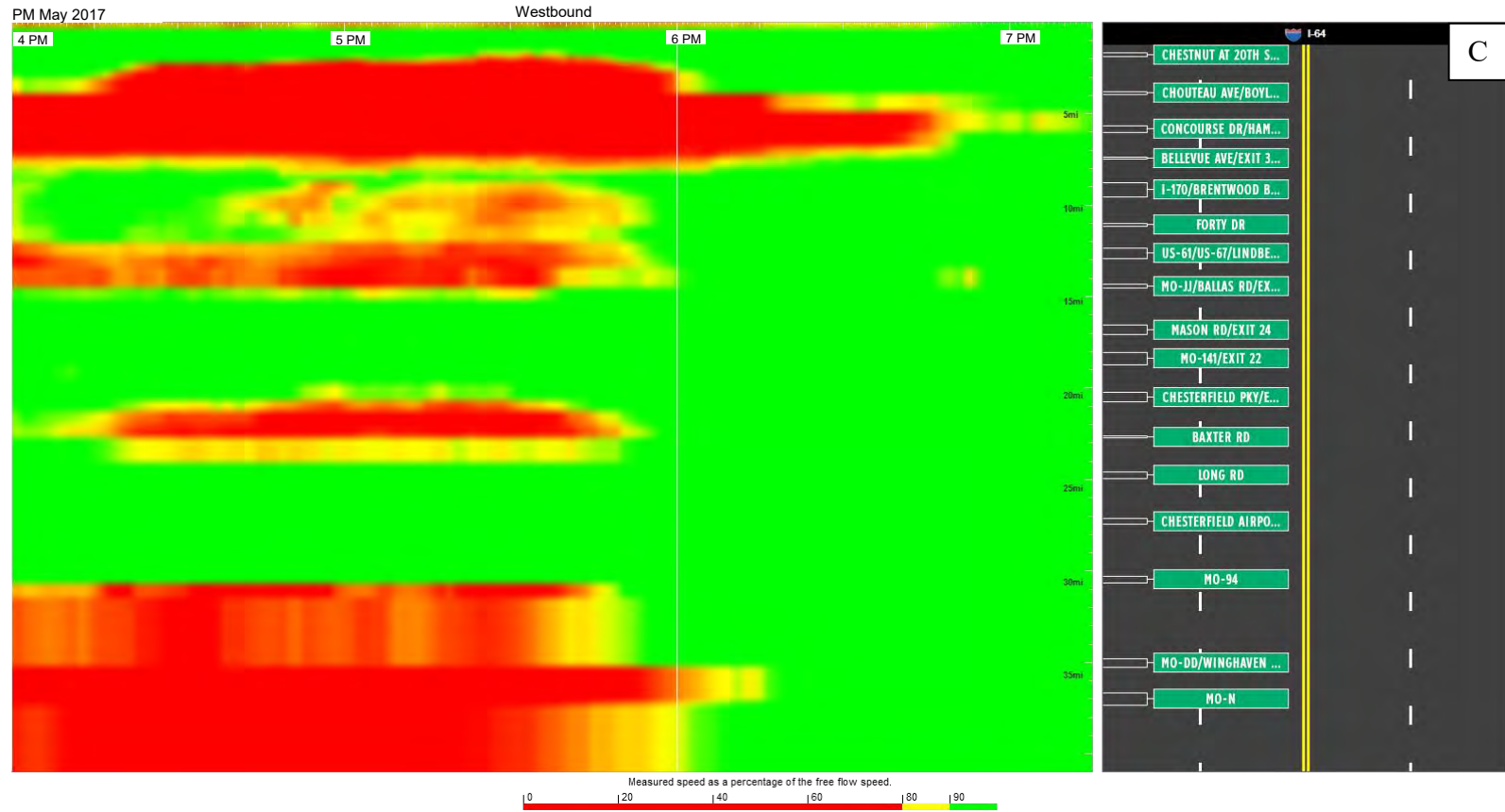


Congestion on I-44 Westbound between I-55 and Route 141 for June 2017 (every weekday)

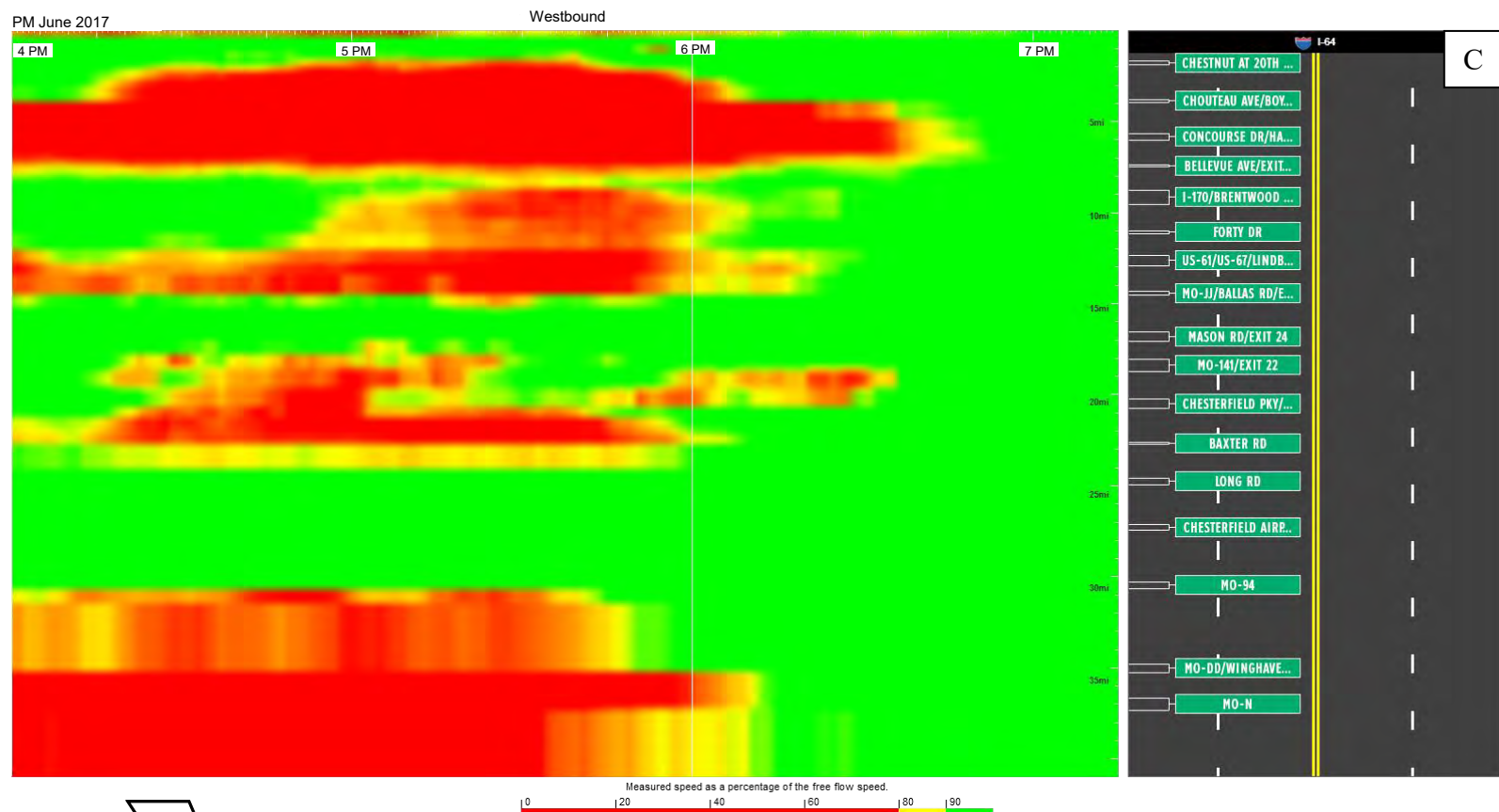


FREEWAY MANAGEMENT

Congestion on I-64 Westbound between I-55/I-70/US-40 and I-70 for May 2017 (every weekday)



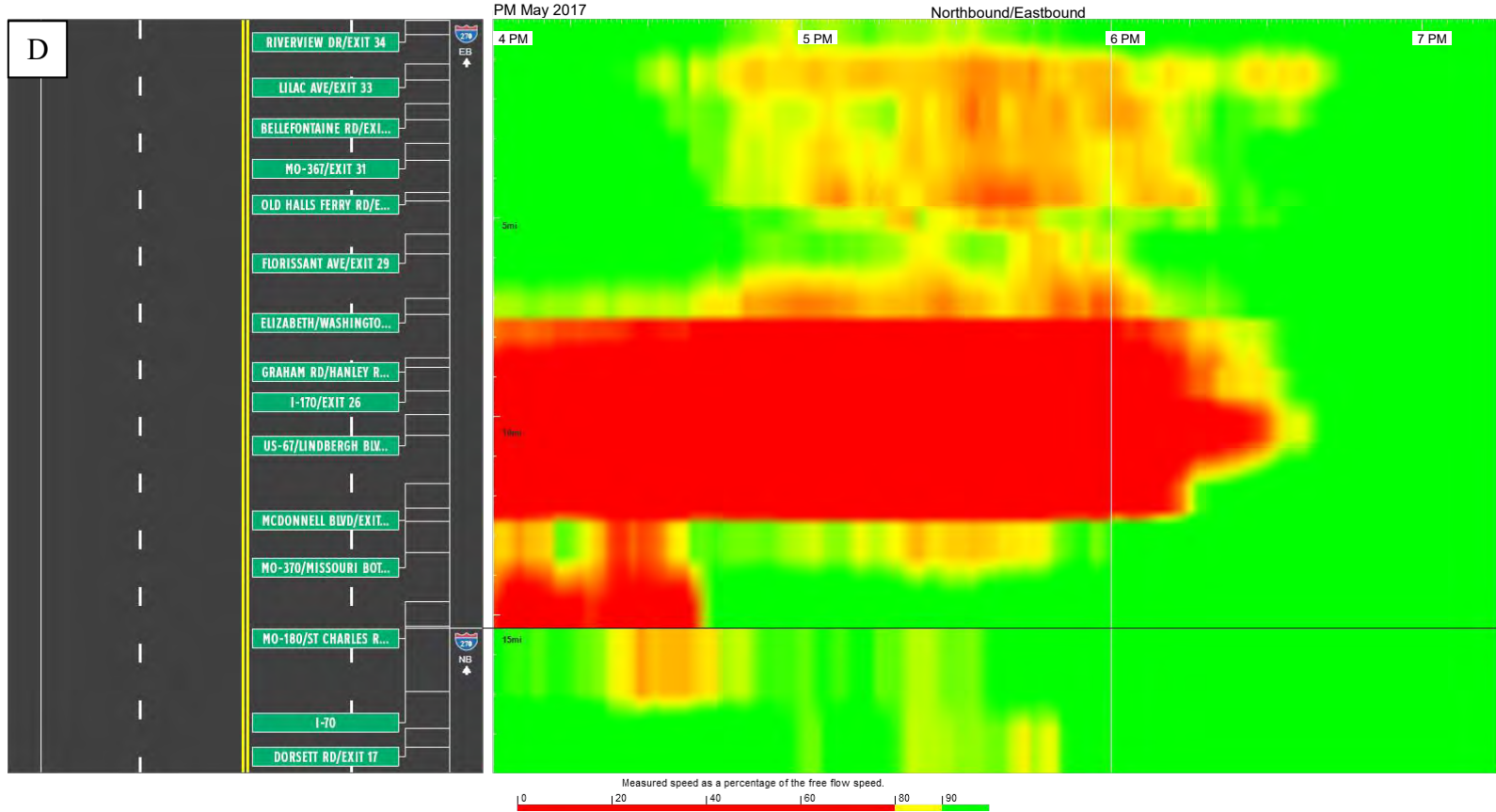
Congestion on I-64 Westbound between I-55/I-70/US-40 and I-70 for June 2017 (every weekday)



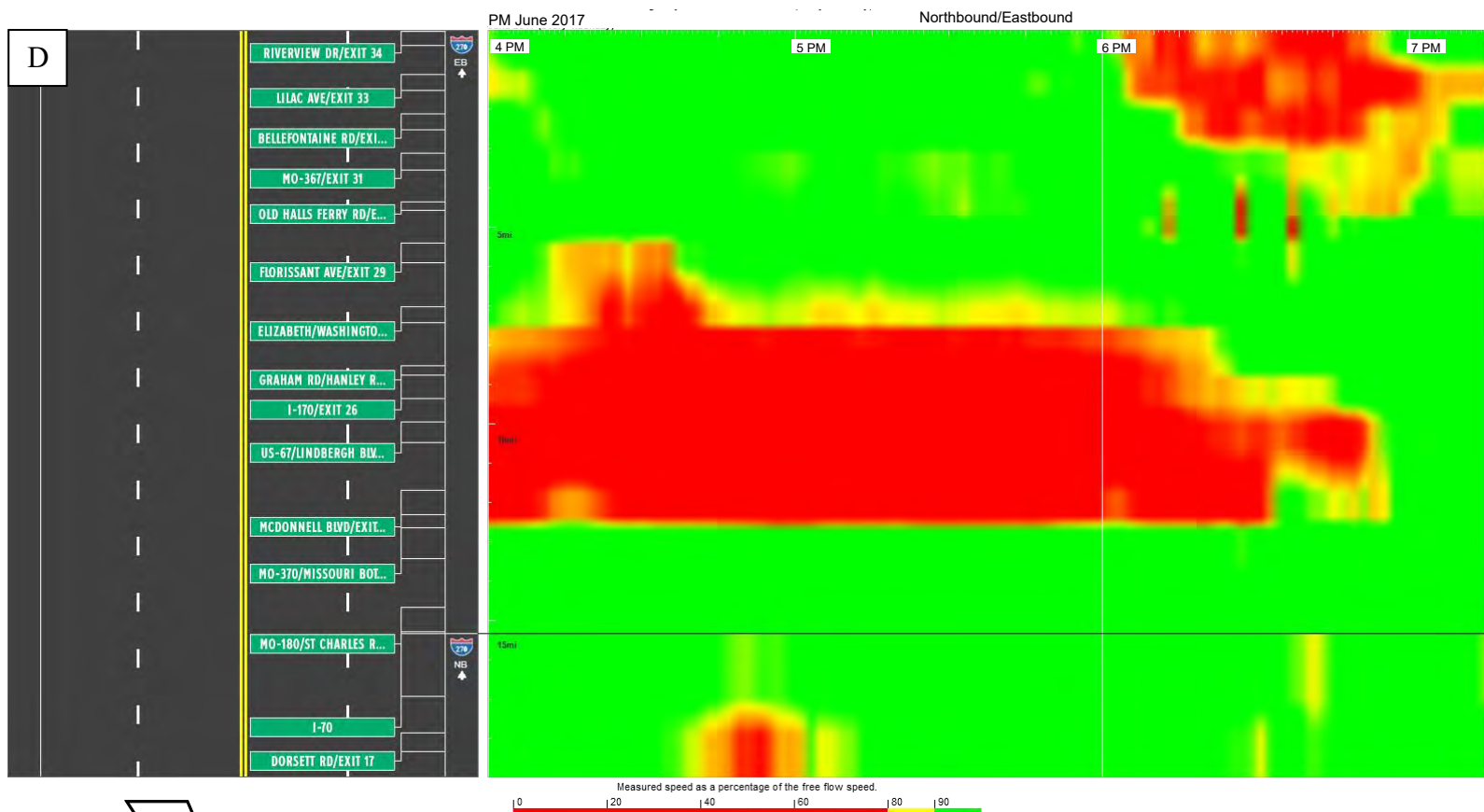


FREEWAY MANAGEMENT

Congestion on I-270 Northbound/Eastbound between Dorsett and Riverview for May 2017 (every weekday)

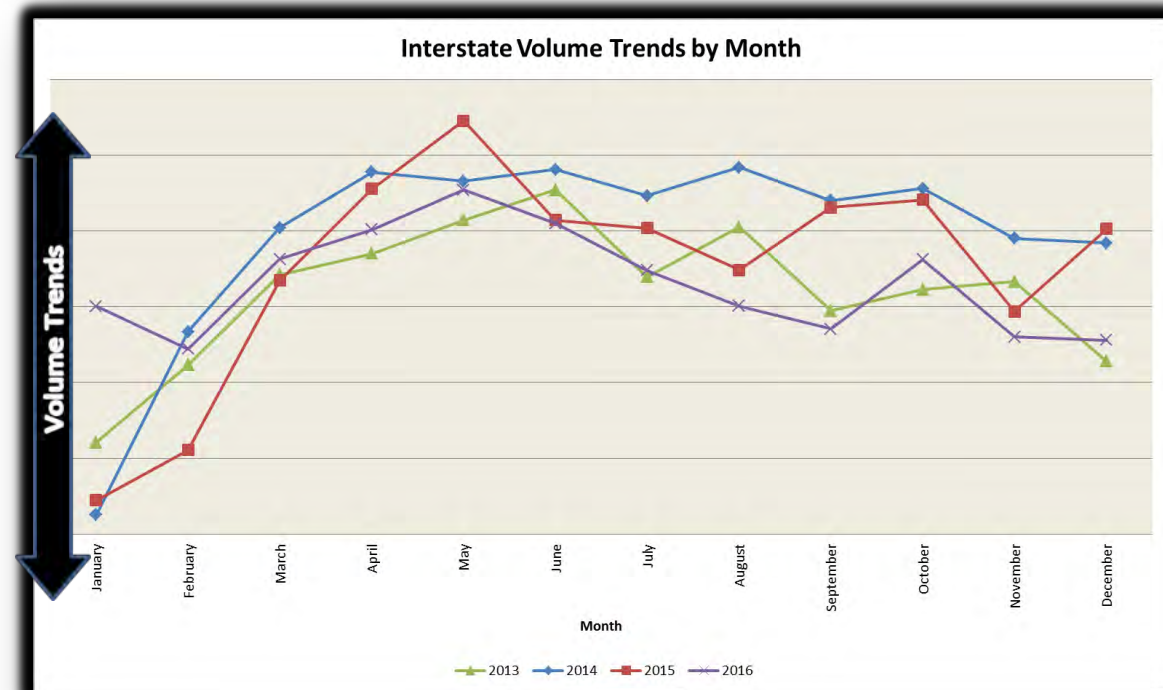
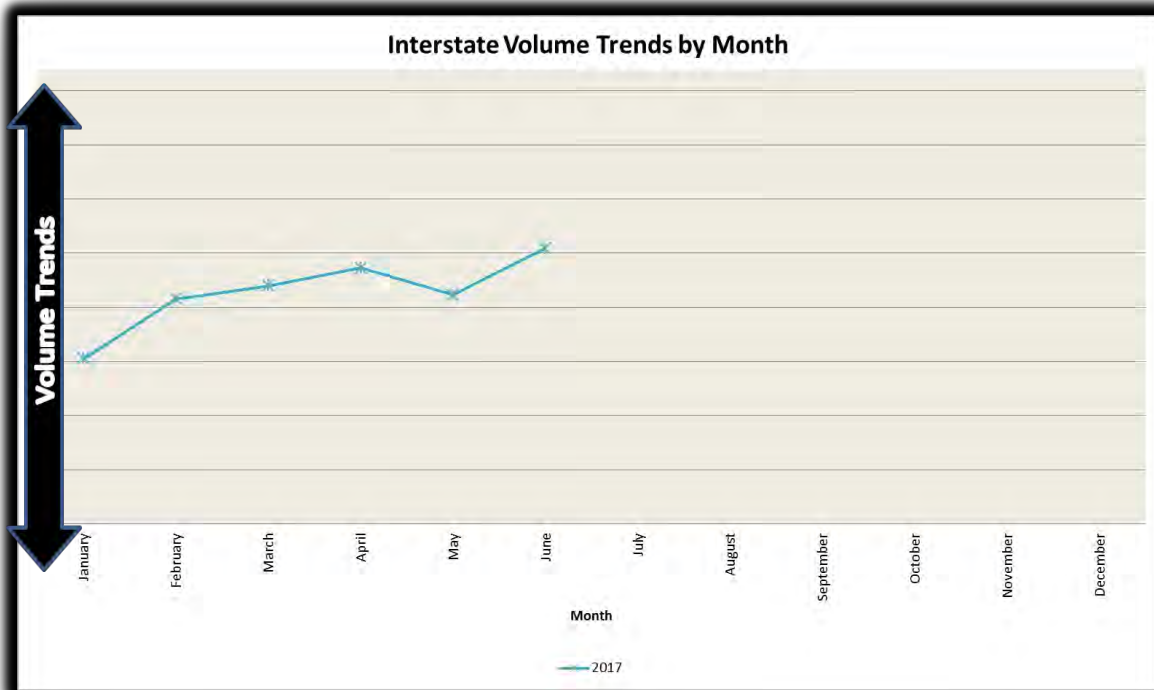


Congestion on I-270 Northbound/Eastbound between Dorsett and Riverview for June 2017 (every weekday)





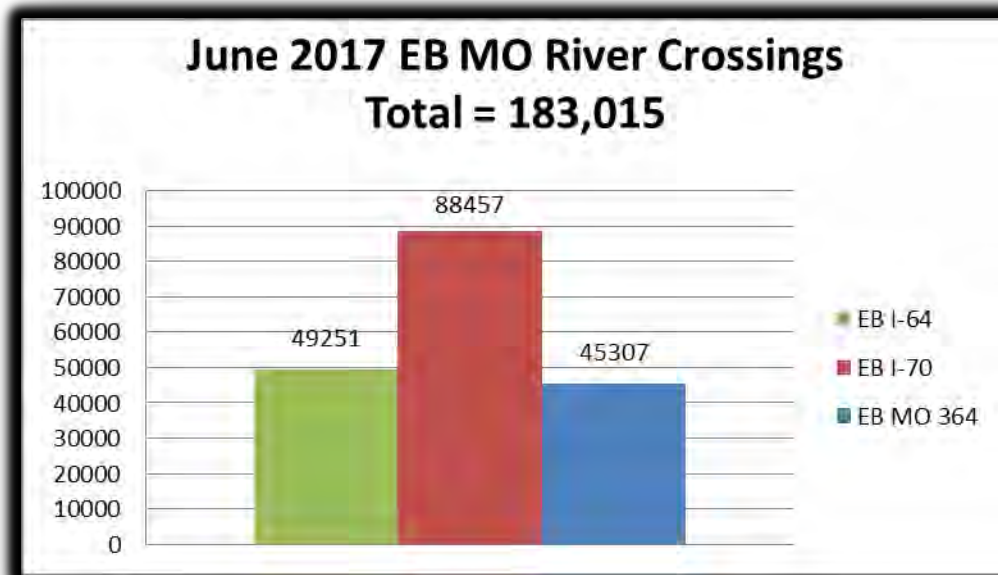
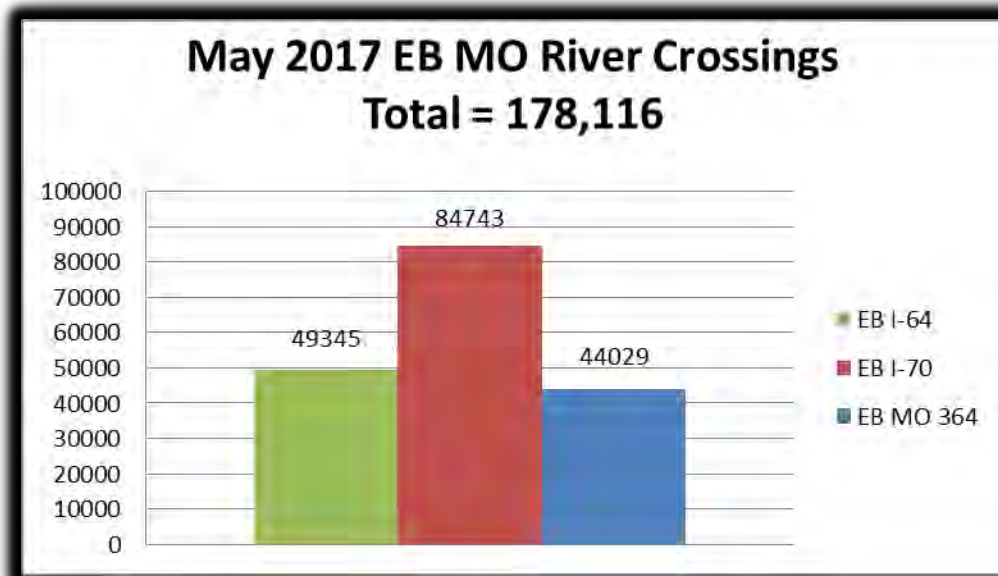
FREEWAY MANAGEMENT



NEW for 2017! The focus area for calculating the average 24 hour volumes was revisited to include all SL District Urban Freeways including Route 364 from I-64 to I-270, Route 367 from I-270 to Route 67, and Route 370 from I-70 to I-270. These freeways are now included in this calculation while the loss of probe data sensors will cause some routes to be excluded. 2017 volumes will be reported for trending purpose only as actual volumes are not comparable to previous years.

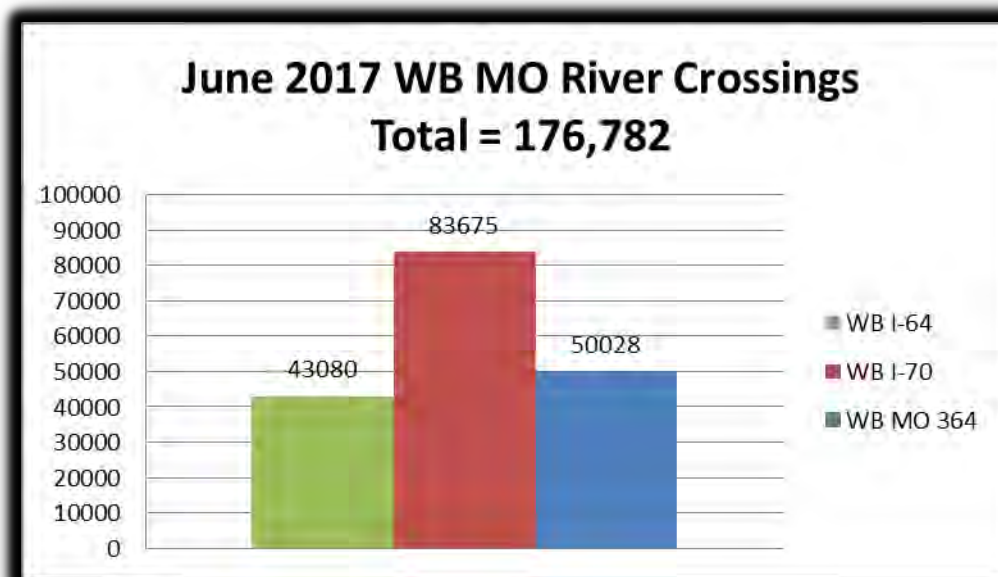
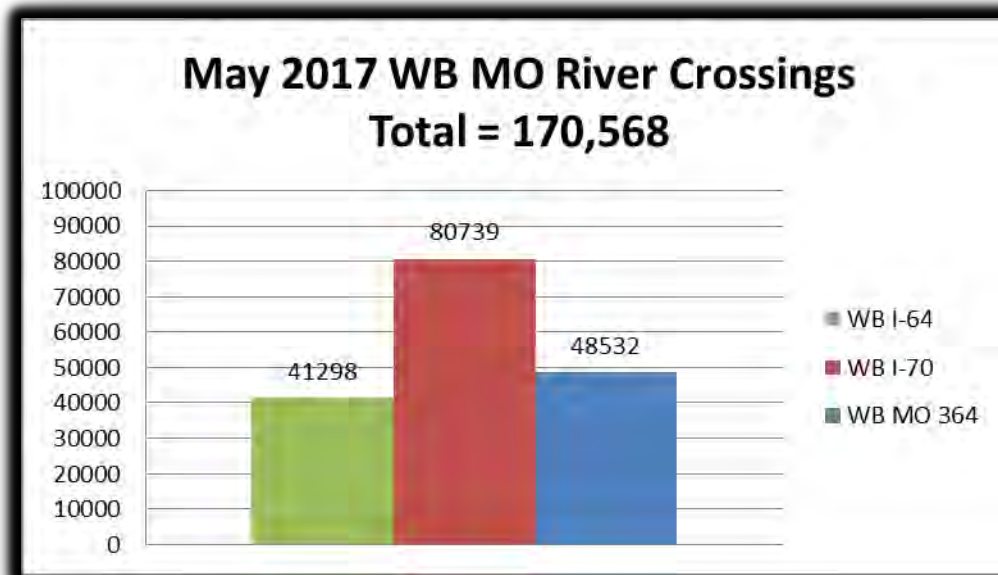


FREEWAY MANAGEMENT



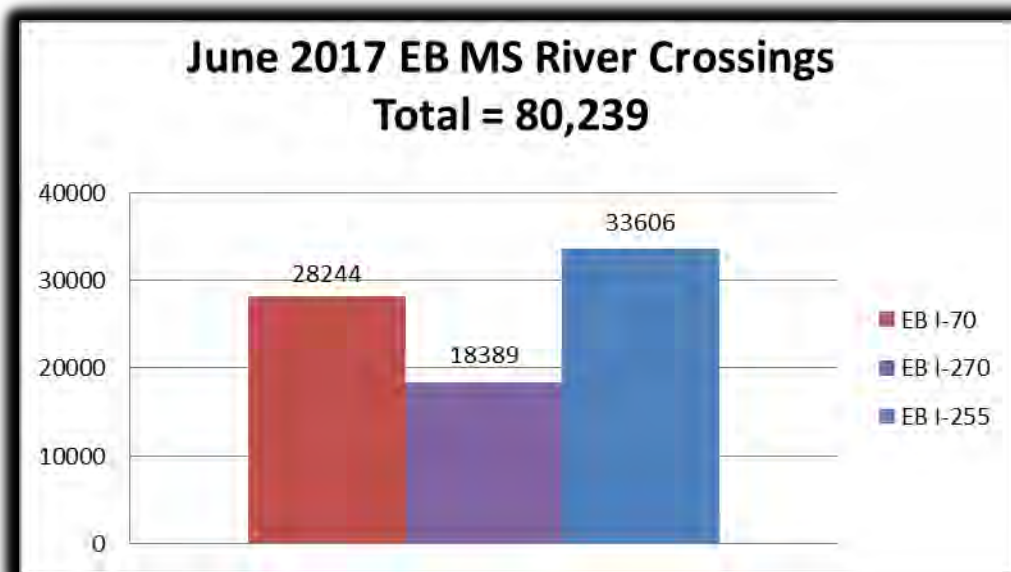
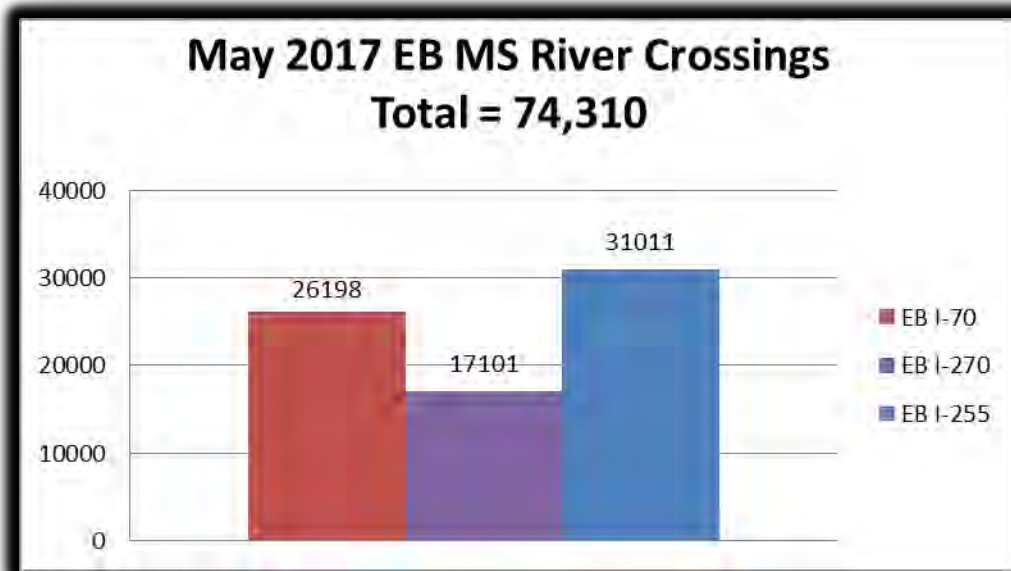


FREEWAY MANAGEMENT



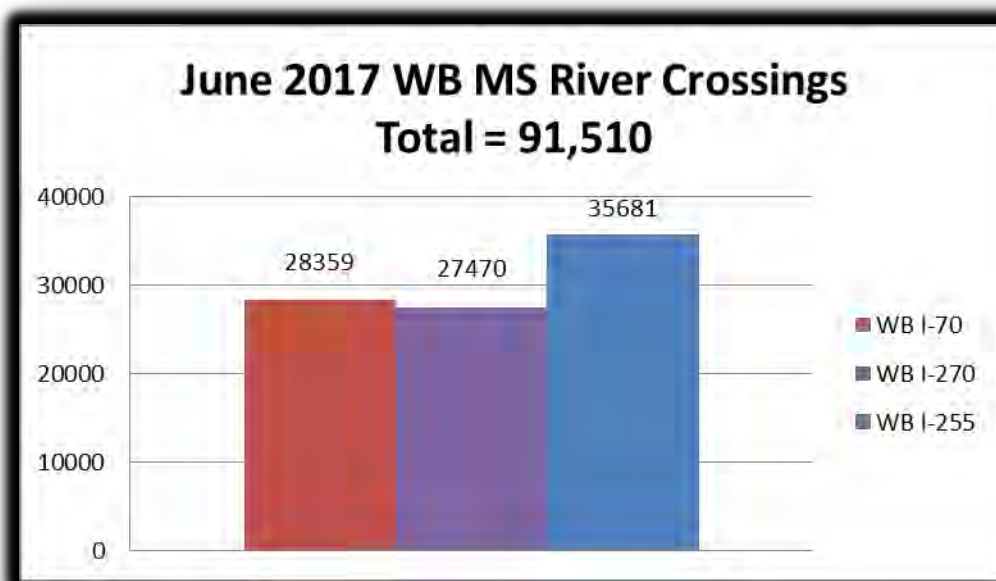
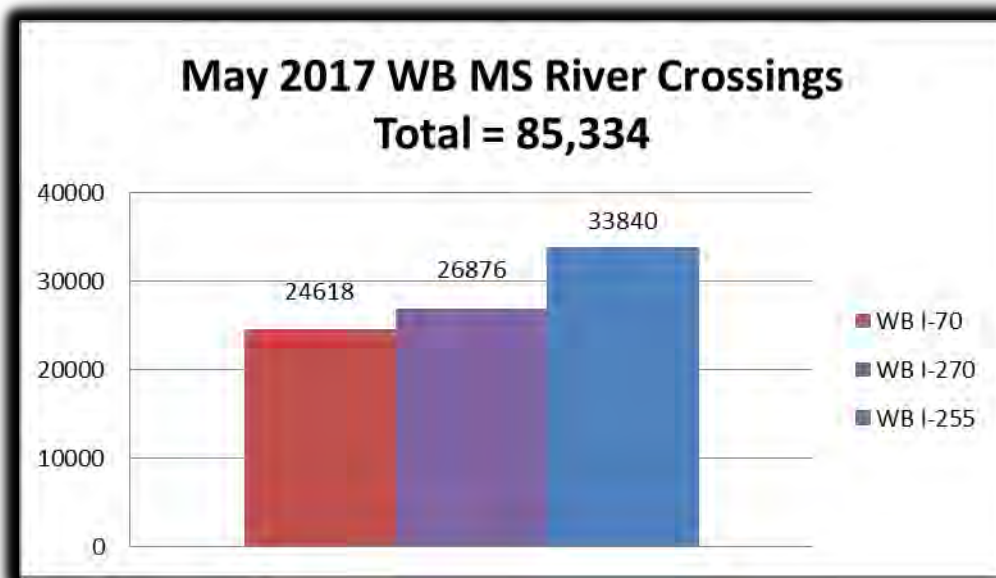


FREEWAY MANAGEMENT





FREWAY MANAGEMENT





Work Zones

Whenever additional travel time is reported, this additional time shall be evaluated using this chart and adequate mitigation measures should begin within the parameters of this chart. TMC and field personnel are partners in the mitigation of traffic and notification of additional travel times should trigger the appropriate response from both parties.

Chart is designed to be an additional travel time reference to establish parameters for gauging the travel impact through work zones and to provide guidance for taking mitigation actions. Travel times can be collected or reported via Blue Toad technology, field personnel, call reports, ITS, TMC cameras, etc.

Major and Moderate impacts trigger an IAR (Immediate Action Required) event. IAR means work zone user and TMC partner together to take immediate actions to reduce or eliminate distress. During an IAR event mitigation procedures can range from increased driver notification up to and including removal of work zone. Additional mitigation procedures may require involvement of administration through use of the work zone resolution ladder.

Level of Impact	Additional Travel Time Expected	Mitigation Actions
<p>Major (Red) <u>IAR Event</u></p> <p>SEVERE DISTRESS PRESENT</p> <p>Return of roadway to free flow traffic is Priority #1</p>	<p>15 minutes or above</p> <p>TMC and field personnel take all steps possible up to and including removal of lane closure to achieve free flow threshold</p>	<p>Immediate Action Required</p> <p>Supervisory mitigation assistance is required using the St. Louis District Work Zone Resolution Ladder as a tool to restore free flow traffic threshold</p>
<p>Moderate (Yellow) <u>IAR Event</u></p> <p>CAUTIONARY STAGE:</p> <p>Action required by Field/ TMC to prevent escalation to a major event</p>	<p>10 – 14 minutes</p> <p>TMC increases driver messaging. Field begins efforts to restore free flow traffic</p>	<p>TMC and field shall reach a consensus on mitigation success within 15 minutes or less. If a consensus cannot be reached, mitigation should be scaled upwards in accordance with the St. Louis District Work Zone Resolution Ladder</p>



Incident Levels

Major Impact Traffic Incident – Road closure > 2 hours

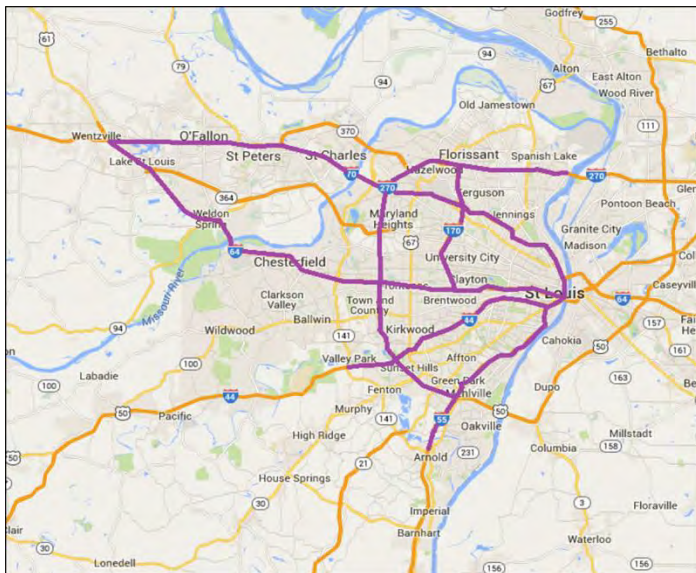
Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.

Moderate Impact Traffic Incident – Blocked travel lanes/closure 30 min – 2 hours

Moderate traffic impact incidents typically affect travel lanes for a time period of 30 minutes to 2 hours, and usually require traffic control on the scene to divert road users past the blockage. Full roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks.

Minor Impact Traffic Incident – Lane closures < 30 minutes

Minor traffic incidents are typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders are typically law enforcement and towing companies, and occasionally highway agency service patrol vehicles.



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Definitions

ACTRA – Traffic signal management software program

Alert – Email message sent regarding an incident or event on the roadway

Arterial – Missouri State Highway Numbered Routes, not fully access controlled

Arterial Device – ITS equipment located along MoDOT arterials

Defined Sensor – A single sensor with an individual ID focused on a particular roadway; multiple defined sensors may be located at one physical sensor location

DMS – Dynamic Message Signs along highway displaying incident and travel time information

DNR – Department of Natural Resources

Driver messaging – Messages placed on DMS boards to alert drivers of incidents ahead of their direction of travel

EOC – Emergency Operations Center operated by MoDOT in Jefferson City

EMS – Emergency Medical Services

ER – MoDOT's Emergency Response units that provide emergency assistance, incident management and traffic control to mitigate incidents and restore free flow traffic within the St. Louis region

Freeway Device – ITS device located along a MoDOT freeway, such as interstates and other fully access controlled highways

Gatewayguide.com – Gateway Guide's website for local St. Louis area traffic information

GGL – Gateway Green Light is the St. Charles County regional integrated corridor management for a cooperative multi-jurisdictional effort to better manage and coordinate travel on the interstates (I-70, I-64), state routes (MO 94, MO 364, MO 370, US 61) and local arterials through the installation of Intelligent Transportation Systems (ITS) in Cottleville, Dardenne Prairie, Lake St. Louis, O'Fallon, St. Charles, St. Peters, and Wentzville.

GuidePost – Area of report highlighting important mobility topics for the month

IDOT – Illinois Department of Transportation

KC Scout – Gateway Guide's counterpart for the greater Kansas City Metropolitan area, a collaboration involving both MoDOT and the Kansas DOT

Mobility – Ease of movement over roadway, through system, and or work zone

MRB – Mississippi River Bridge under construction north of downtown St. Louis

MSHP – Missouri State Highway Patrol

Observed Work zone – Work zone tracked by traffic cameras at the TMC



DATA KEY

Peak Average – Daily speed sensor readings over an entire weekday average commute period averaged for an entire month

PSB – Poplar Street Bridge

Regional Mobility Overview – Map depicting congestion areas based on speed index ratings derived from speed sensor readings

SL – Designation for the St. Louis District

Speed Index – a ratio of the speed at which vehicles travel during a period to the speed at free-flow conditions

Stats to Watch – Area of report highlighting interesting trends for the report month, or data to be closely followed

STLtraffic – Email group consisting of Gateway Guide personnel and Gateway Guide's media partners, messages sent to the group are also posted on Twitter

TMC – Traffic Management Center (also referred to as Gateway Guide)

TMC Alert – Email alert sent to an internal group of Gateway Guide personnel

TMS – Traveler Map System is MoDOT's internal software for entering work zones and road conditions to populate the Traveler Information Map at www.traveler.modot.org/map

Travel Time Index – A ratio of the actual time to travel a corridor compared to travel time at posted speed limit without stops used

User Delay Costs – Puts a dollar amount on how much a road's performance impacts its users. Combines probe speed data with volume data provided by the Texas Transportation Institute to estimate the cost of delay experienced by drivers as a result of congestion. Vehicle costs used are Passenger Vehicle = \$17.67 and Commercial Vehicle = \$68.09.

Visibility – Concerning placement of traffic signs, signals, devices, barricades and warning lights for safety within work zone or construction area to help motorist and workers move within a work zone safely; Clearly visible and legible, distinguishable to approaching traffic during day and night, aligned with road user's line of vision, and positioned as to not obstruct other applicable traffic control devices. Must meet MUTCD standards for condition and must be covered, turned or properly stowed when not in use.

Zoning In – section of report highlighting important construction topics for the report month

I-70 Mile Markers

ST. CHARLES COUNTY		I-70 DISTRICT 6 WESTBOUND	I-70 DISTRICT 6 EASTBOUND	ST. CHARLES COUNTY	
5TH ST SOUTH (ST. CHARLES)	229A			229A	5TH ST SOUTH (ST. CHARLES)
5TH ST NORTH (ST. CHARLES)	229B			229B	5TH ST NORTH (ST. CHARLES)
ST. LOUIS COUNTY				ST. LOUIS COUNTY	
BLANCHETTE BRIDGE	230			230	BLANCHETTE BRIDGE
EARTH CITY EXPRESSWAY SOUTH	231A			231A	EARTH CITY EXPRESSWAY SOUTH
EARTH CITY EXPRESSWAY NORTH	231B			231B	EARTH CITY EXPRESSWAY NORTH
I-270	232			232	I-270
MCKELVEY RD OVERPASS (BRIDGETON)	233			233	MCKELVEY RD OVERPASS (BRIDGETON)
RTE 180/ST. CHARLES ROCK RD (BRIDGETON)	234			234	RTE 180/ST. CHARLES ROCK RD (BRIDGETON)
US 67 SOUTH (BRIDGETON)	235A			235A	US 67 SOUTH (BRIDGETON)
US 67 NORTH (BRIDGETON)	235B			235B	US 67 NORTH (BRIDGETON)
CYPRESS RD (BRIDGETON)	235C			235C	CYPRESS RD (BRIDGETON)
AIRFLIGHT (ST. ANN)	236			236	AIRFLIGHT (ST. ANN)
MCDONNELL OVERPASS (BERKELEY)	237			237	MCDONNELL OVERPASS (BERKELEY)
LAMBERT AIRPORT (BERKELEY)	238A			238A	LAMBERT AIRPORT (BERKELEY)
I-170 NORTH (BERKELEY)	238B			238B	I-170 NORTH (BERKELEY)
I-170 SOUTH (BERKELEY)	238C			238C	I-170 SOUTH (BERKELEY)
NORTH HANLEY (BERKELEY)	239			239	NORTH HANLEY (BERKELEY)
RTE N/FLORISSANT RD (COOL VALLEY)	240A			240A	RTE N/FLORISSANT RD (COOL VALLEY)
BERMUDA DR (NORMANDY)	240B	240B	BERMUDA DR (NORMANDY)		
RTE U/LUCAS AND HUNT RD	241B	241B	RTE U/LUCAS AND HUNT RD		
JENNINGS STATION RD (PINE LAWN)	242C	242C	JENNINGS STATION RD (PINE LAWN)		
ST. LOUIS CITY		ST. LOUIS CITY			
GOODFELLOW (ST. LOUIS)	243A	243A	GOODFELLOW (ST. LOUIS)		
RIVERVIEW/BIRCHER (ST. LOUIS)	243B	243B	RIVERVIEW/BIRCHER (ST. LOUIS)		
UNION (ST. LOUIS)	244A	244A	UNION (ST. LOUIS)		
KINGSHIGHWAY (ST. LOUIS)	244B	244B	KINGSHIGHWAY (ST. LOUIS)		
SHREVE (ST. LOUIS)	245A	245A	SHREVE (ST. LOUIS)		
WEST FLORISSANT AVE (ST LOUIS)	245B	245B	WEST FLORISSANT AVE (ST LOUIS)		
NORTH BROADWAY (ST. LOUIS)	246A	246A	NORTH BROADWAY (ST. LOUIS)		
ADELAIDE (ST LOUIS)	246B	246B	ADELAIDE (ST LOUIS)		
GRAND (ST. LOUIS)	247	247	GRAND (ST. LOUIS)		
SALISBURY (ST LOUIS)	248A	248A	SALISBURY (ST LOUIS)		
BRANCH (ST LOUIS)	248B	248B	BRANCH (ST LOUIS)		
MADISON (ST LOUIS)	249A	249A	MADISON (ST LOUIS)		
PINE ST OVERPASS (ST LOUIS)	250	250	PINE ST OVERPASS (ST LOUIS)		
CHESTNUT ST OVERPASS (ST LOUIS)	250	250	CHESTNUT ST OVERPASS (ST LOUIS)		
MARKET ST OVERPASS (ST. LOUIS)	250	250	MARKET ST OVERPASS (ST. LOUIS)		
WALNUT ST OVERPASS (ST LOUIS)	250	250	WALNUT ST OVERPASS (ST LOUIS)		



DATA KEY

I-70 St. Charles County Mile Markers

RTE A (WENTZVILLE)	212	I-70 DISTRICT 6 EASTBOUND	I-70 DISTRICT 6 WESTBOUND	212	RTE A (WENTZVILLE)
LAKE ST. LOUIS BLVD (LAKE ST. LOUIS)	214			214	LAKE ST. LOUIS BLVD (LAKE ST. LOUIS)
BRYAN RD (O'FALLON)	216			216	BRYAN RD (O'FALLON)
RTE K/RTE M (O'FALLON)	217			217	RTE K/RTE M (O'FALLON)
T.R. HUGHES BLVD (O'FALLON)	218			218	T.R. HUGHES BLVD (O'FALLON)
RTE 79 (ST. PETERS/O'FALLON)	220			220	RTE 79 (ST. PETERS/O'FALLON)
RTE C/MID RIVERS MALL DR (ST. PETERS)	222			222	RTE C/MID RIVERS MALL DR (ST. PETERS)
SPENCER RD OVERPASS (ST. PETERS)	223			223	SPENCER RD OVERPASS (ST. PETERS)
RTE 370 (ST. PETERS)	224			224	RTE 370 (ST. PETERS)
CAVE SPRINGS (ST. CHARLES)	225			225	CAVE SPRINGS (ST. CHARLES)
ZUMBEHL RD (ST. CHARLES)	227			227	ZUMBEHL RD (ST. CHARLES)
HAWK'S NEST OVERPASS (ST. CHARLES)	227			227	HAWK'S NEST OVERPASS (ST. CHARLES)
RTE 94 (ST. CHARLES)	228			228	RTE 94 (ST. CHARLES)
5TH ST SOUTH (ST. CHARLES)	229A			229A	5TH ST SOUTH (ST. CHARLES)
5TH ST NORTH (ST. CHARLES)	229B			229B	5TH ST NORTH (ST. CHARLES)

I-270 Mile Markers

3	KOCH RD	I-255 WESTBOUND I-255 EASTBOUND I-270 DISTRICT 6 COUNTER CLOCKWISE FROM RIVERVIEW DR. TO I-55 I-270 DISTRICT 6 CLOCKWISE FROM I-55 TO RIVERVIEW DR.	KOCH RD	3
2	SR 231 (TELEGRAPH RD)		SR 231 (TELEGRAPH RD)	2
1C	US61-67		US61-67	1B
1B	I-55 NORTH		I-55 NORTH	1B
1	I-55 SOUTH		I-55 SOUTH	1A
2	SR 21 (TESSON FERRY RD.)		SR 21 (TESSON FERRY RD.)	2
3	SR 30 (GRAVOIS RD.)		SR 30 (GRAVOIS RD.)	3
5	I-44 EAST/SR 366 (WATSON RD.)		I-44 EAST	5
5	I-44 WEST		I-44 WEST	5
			BIG BEND RD.	7
8	DOUGHERTY FERRY RD.		DOUGHERTY FERRY RD.	8
10	SR 100 (MANCHESTER RD.)		SR 100 (MANCHESTER RD.)	10
12	I-64 EAST/WEST/US 40-61 NORTH/SOUTH		I-64 EAST/WEST/US 40-61 NORTH/SOUTH	12 A/B
13	SR AB (LADUE RD)		SR AB (LADUE RD)	13
14	SR 340 (OLIVE BLVD)		SR 340 (OLIVE BLVD)	14
16	SR D (PAGE AVE.) EAST		SR D (PAGE AVE.) EAST	16A
16	SR 364 WEST		SR 364 WEST	16B
17	DORSETT RD		DORSETT RD	17
20	I-70 WEST/EAST		I-70 WEST	20B
			I-70 EAST	20A
20C	SR 180 (ST. CHARLES ROCK RD)		SR 180 (ST. CHARLES ROCK RD)	20C
22	MISSOURI BOTTOM RD/370 WEST		SR 370 WEST	22D
23	MCDONNELL BLVD		MCDONNELL BLVD	23
25A	US 67 SOUTH		US 67 NORTH	25A
25B	US 67 NORTH		US 67 SOUTH	25B
26	HANLEY/GRAHAM RD.		I-170 SOUTH (EXIT LEFT)	26A
26	I-170 SOUTH		HANLEY/GRAHAM	26B
27	NEW FLORISSANT RD		NEW FLORISSANT RD	27
28	WASHINGTON/ELIZABETH RD.		ELIZABETH/WASHINGTON	28
29	WEST FLORISSANT RD		WEST FLORISSANT RD	29
30	SR AC HALLS FERRY RD		SR AC NEW HALLS FERRY RD	30
			NEW HALLS FERRY RD.	30A
31A	SR 367 SOUTH		SR 367 SOUTH	31A
31B	SR 367 NORTH		SR 367 NORTH	31B
32	BELLEFONTAINE RD		BELLEFONTAINE RD	32
33	LILAC AVE.		LILAC AVE.	33
34	RIVERVIEW DR.		RIVERVIEW DR.	34



DATA KEY

I-64 Mile Markers

I-70 WEST EXIT RIGHT/EAST EXIT LEFT	1		1A	I-70 WEST
			1B	I-70 EAST
PROSPECT RD	1C		1C	PROSPECT RD
LAKE ST. LOUIS BLVD	2		2	LAKE ST. LOUIS BLVD
SR N	4		4	MO N
SR DD/WINGHAVEN	6		6	MO DD/Winghaven
SR K/SR 94	9		9	MO K
			10	MO 94
MISSOURI RESEARCH PARK/TECHNOLOGY DR	12		11	RESEARCH PARK CRL
DANIEL BOONE BRIDGE	13		13	DANIEL BOONE BRIDGE
CHESTERFIELD AIRPORT RD	14		14	SPIRIT OF ST LOUIS BLVD
			16	LONG RD
BOONE'S CROSSING	17		17	BOONE'S CROSSING
CHESTERFIELD PKWY	19A		19A	CHESTERFIELD PKWY
SR 340 (OLIVE/CLARKSON)	19B		19B	MO 340 (OLIVE/CLARKSON)
			20	CHESTERFIELD PKWY
TIMBERLAKE MANOR PKWY	21		21	TIMBERLAKE MANOR PKWY
SR 141	22		22	MO 141 (WOODS MILL RD)
MASON RD	23		23	MARYVILLE CENTRE DR
			24	MASON RD
I-270 SOUTH	25A		25A	I-270 SOUTH
I-270 NORTH	25B		25B	I-270 NORTH
SR JJ (BALLAS RD)	26		26	MO JJ (BALLAS RD)
SPOEDE RD	27		27	SPOEDE RD
US 61-67	28A		28A	US 61-67
			28B	CLAYTON RD
MCKNIGHT RD	30		30	MCKNIGHT RD
BRENTWOOD/HANLEY RD	31B		31A	I-170 NORTH
I-170 NORTH	31A		31B	HANLEY RD/BRENTWOOD BLVD
BELLEVUE AVE	33B			
BIG BEND	33A		33A	BIG BEND BLVD
MCCAUSLAND	33C			ST. LOUIS CITY
ST. LOUIS CITY			33C	MCCAUSLAND AVE
HAMPTON AVE/OAKLAND AVE	34B		34A	CLAYTON RD/SKINKER BLVD
			34B	HAMPTON AVE
KINGSHIGHWAY	36A		36A	KINGSHIGHWAY
VANDEVENTER AVE	36C		36B	BOYLE
MARKET ST/BERNARD ST	37A			
GRAND AVE	37B			
JEFFERSON AVE	38A		38A	FOREST PARK AVE/GRAND BLVD
CHESTNUT AT 20TH ST	38B		38B	MARKET ST AT 3000 WEST
14TH ST	39B		39A	MARKET ST AT 21ST
11TH ST EXIT LEFT	39C		40A	STADIUM/9TH ST/ TUCKER BLVD
BROADWAY/7TH ST (LAST MISSOURI EXIT)	40B		40C	I-44 WB/I-55 SB/ I-70 WB

I-64 DISTRICT 6 WESTBOUND
I-64 DISTRICT 6 EASTBOUND

I-55 Mile Markers

JEFFERSON COUNTY		I-55 DISTRICT 6 NORTHBOUND I-55 DISTRICT 6 SOUTHBOUND	JEFFERSON COUNTY	
RTE M	185		185	RTE M
MAIN ST(IMPERIAL)	186		186	MAIN ST(IMPERIAL)
RICHARDSON RD (ARNOLD)	190		190	RICHARDSON RD (ARNOLD)
RTE 141 (ARNOLD)	191		191	RTE 141 (ARNOLD)
ST. LOUIS COUNTY			ST. LOUIS COUNTY	
MERAMEC BOTTOM RD	193		193	MERAMEC BOTTOM RD
BUTLER HILL RD	195		195	BUTLER HILL RD
I-255 EAST	196A		196A	I-255 EAST
I-270 NORTH	196B		196B	I-270 NORTH
US67/LINDBERGH	197		197	US67/LINDBERGH
REAVIS BARRACKS RD	199		199	REAVIS BARRACKS RD
UNION RD	200		200	UNION RD
BAYLESS	201A		201A	BAYLESS
WEBER RD	201B		201B	WEBER RD
ST. LOUIS CITY			ST. LOUIS CITY	
GERMANIA (ST. LOUIS)	202B		202B	GERMANIA (ST. LOUIS)
LOUGHBOROUGH AVE (ST. LOUIS)	202C		202C	LOUGHBOROUGH AVE (ST. LOUIS)
BATES (ST. LOUIS)	203		203	BATES (ST. LOUIS)
BROADWAY (ST. LOUIS)	204		204	BROADWAY (ST. LOUIS)
GASCONADE (ST. LOUIS)	205		205	GASCONADE (ST. LOUIS)
ARSENAL (ST. LOUIS)	206C		206C	ARSENAL (ST. LOUIS)
SIDNEY OVERPASS	206		206	SIDNEY OVERPASS
GRAVOIS AVE OVERPASS	207		207	GRAVOIS AVE OVERPASS
I-44 WEST (ST. LOUIS)	207		207	I-44 WEST (ST. LOUIS)
7TH ST/PARK AVE (ST. LOUIS)	208		208	7TH ST/PARK AVE (ST. LOUIS)

I-44 Mile Markers

FRANKLIN COUNTY		I-44 DISTRICT 6 WESTBOUND I-44 DISTRICT 6 EASTBOUND	FRANKLIN COUNTY	
PACIFIC	257		257	PACIFIC
ST. LOUIS COUNTY			261	ALLENTON/SIX FLAGS
ALLENTON/SIX FLAGS	261		ST. LOUIS COUNTY	
RTE 109/RTE W	264		264	RTE 109/RTE W
WILLIAMS RD	265			
LEWIS RD	266		266	LEWIS RD
			269	ANTIRE
RTE 141	272		272	RTE 141
BOWLES	274		274	BOWLES
MRAZ	274			
			275	SOCCER PARK
I-270 NORTH	276B		276B	I-270 NORTH
I-270 SOUTH	276A		276A	I-270 SOUTH
RTE 366/WATSON	277A			
US 67/LINDBERGH	277B		277B	US 67/LINDBERGH
BIG BEND	278		278	BIG BEND
			279	BERRY
ELM	280		280	ELM
LACLEDE STATION	282			
ST. LOUIS CITY			283	SHREWSBURY
JAMIESON	284A		ST. LOUIS CITY	
			284B	ARSENAL
			285	SOUTHWEST
HAMPTON	286		287	KINGSHIGHWAY
KINGSHIGHWAY	287		288	GRAND AVE
GRAND AVE	288		289	JEFFERSON AVE
JEFFERSON AVE	289			
I-55 SOUTH	290A			
18TH ST	290B		290C	12TH ST./GRAVOIS

I-170 Mile Markers

I-64 WEST/US 40-61	1A	I-170 DISTRICT 6 SOUTHBOUND I-170 DISTRICT 6 NORTHBOUND	
I-64 EAST/US 40-61	1B		
			1C GALLERIA PARKWAY
BRENTWOOD BLVD	1D		
FOREST PARK PARKWAY	1E		1E FOREST PARK PARKWAY
LADUE RD	1F		1F LADUE RD
DELMAR	2		2 DELMAR
EAST/3B WEST SR 340 (OLIVE BLVD)	3A		3 SR 340 (OLIVE BLVD)
SRD/SR 364 (PAGE AVE)	4		4 SR D/SR 364 (PAGE AVE)
SR 180 (ST. CHARLES ROCK RD)	5		5 SR 180 (ST. CHARLES ROCK RD)
SR 115 (NATURAL BRIDGE RD)	6		6 SR 115 (NATURAL BRIDGE RD)
I-70 EAST (EXIT LEFT)	7A		7A I-70 EAST (EXIT RIGHT)
I-70 WEST (EXIT RIGHT)	7B		7B I-70 WEST (EXIT LEFT)
			7C LAMBERT ST. LOUIS AIRPORT
SCUDDER	8		8 SCUDDEN/N. HANLEY RD
AIRPORT RD	9A		9A AIRPORT
			9B BOEING (EXIT LEFT)
			9C N. HANLEY RD
			10A I-270 WEST (EXIT RIGHT)
			10B I-270 EAST (EXIT LEFT)

SR 364 Mile Markers

		SR 364 WESTBOUND SR 364 EASTBOUND	11B	HARVESTER RD
			12	HERITAGE CROSSING/JUNGS STATION RD
SR94 EAST/ST. CHARLES	13		13	SR 94 EAST/MUEGGE RD
ARENA PKWY/UPPER BOTTOM RD	14		14	UPPER BOTTOM/ARENA
MARYLAND HEIGHTS EXPRESSWAY	17		17	MARYLAND HEIGHTS EXPRESSWAY
BENNINGTON PL	19			
			21	BENNINGTON PL
I-270 SOUTH	22A			
I-270 NORTH	22B			

SR 370 Mile Markers

		SR 370 WESTBOUND SR 370 EASTBOUND	1A	I-70 WESTBOUND
			1B	I-70 EASTBOUND
			1C	SPENCER RD
TRUMAN/CAVE SPRINGS RD	2		2	TRUMAN/CAVE SPRINGS RD
ELM/NEW TOWN BLVD	5		5	ELM/NEW TOWN BLVD
N 3RD ST/SR 94	7		7	N 3RD ST/SR 94
DISCOVERY BRIDGE ST. CHAS CO/ ST. LOUIS CO	8		8	DISCOVERY BRIDGE ST. LOUIS CO/ ST. CHAS CO
EARTH CITY EXPRESSWAY	9		9	EARTH CITY EXPRESSWAY
ST. LOUIS MILLS BLVD	11		11	ST. LOUIS MILLS BLVD
MISSOURI BOTTOM RD	12			
I-270 WEST BOUND	12			
I-270 EAST BOUND	12			

SR 21 Mile Markers

RT B	164.8	SR 21 NORTHBOUND SR 21 SOUTHBOUND	164.8	RT B
RT BB	165.4		165.4	RT BB
STADIUM DR UNDERPASS	166.4		166.4	STADIUM DR UNDERPASS
RTE A	167.8		167.8	RTE A
SAND CREEK	169		169	SAND CREEK
HAYDEN RD	169.2		169.2	HAYDEN RD
GLADE CHAPEL RD OVERPASS	171.4		171.4	GLADE CHAPEL RD OVERPASS
OLD HWY 21 (GOLDMAN)	172.6		172.6	OLD HWY 21 (GOLDMAN)
KLABLE RD OVERPASS	174.2		174.2	KLABLE RD OVERPASS
SCHENK RD OVERPASS	175.2		175.2	SCHENK RD OVERPASS
HEADS CREEK	176.4		176.4	HEADS CREEK
RT MM	177.7		177.7	RT MM
W. FOUR RIDGE RD OVERPASS	179		179	W. FOUR RIDGE RD OVERPASS
OLD HWY 21 (SHADY VALLEY)	180.4		180.4	OLD HWY 21 (SHADY VALLEY)
OLD HWY 21 UNDERPASS	182		182	OLD HWY 21 UNDERPASS
WEST ROCK CREEK RD OVERPASS	182.8		182.8	WEST ROCK CREEK RD OVERPASS
OLD HWY 21 OVERPASS	183.2		183.2	OLD HWY 21 OVERPASS
LONDELL RD	184.2		184.2	LONDELL RD
OLD HWY 21	184.5		184.5	OLD HWY 21
SR 141	185.6		185.6	SR 141