



# ST. LOUIS DISTRICT MOBILITY

JULY/AUGUST 2017

## GUIDEPOST

- OVERALL FREEWAY MOBILITY HAS DECREASED IN BOTH THE AM AND PM PEAK PERIODS FROM JULY TO AUGUST
- AVERAGE INCIDENT / LANE CLEARANCE TIMES CLIMBED AS LONG DURATION EVENTS LIKE A TRAIN DERAILMENT ON I-55 CONTRIBUTED TO INCREASED CLEARANCE TIMES
- MAJOR AND MODERATE WORK ZONE IMPACTS CONTINUED ON THE EASTBOUND POPLAR STREET BRIDGE, I-55 SOUTHBOUND AT ROUTE A, I-70 AT ROUTE Z AND WESTBOUND I-44 AT ROUTE 109 TO ROUTE 141 PROJECTS
- NUMEROUS INCIDENTS INVOLVING POLICE ACTIVITY NEGATIVELY IMPACTED THE REGION'S MOBILITY AND ARE NOTED AMONG THE MAJOR INCIDENT REPORTS



AVERAGE INCIDENT / LANE CLEARANCE TIMES CLIMBED IN AUGUST AS LONG DURATION EVENTS LIKE THE TRAIN DERAILMENT ON I-55 THAT CLOSED I-55 AND THE I-270 RAMPS TO I-55 CONTRIBUTED TO THE INCREASE

## MOBILITY SNAPSHOT



### **FREEWAY MOBILITY**

JULY TO AUGUST COMPARISON:

AM MOBILITY DECREASED

PM MOBILITY DECREASED



### **MAJOR INCIDENTS**

JULY 2017: 7 → AUGUST 2017: 7



### **AVERAGE INCIDENT DURATION JULY → AUGUST**

LANE CLEARANCE: 24:43 → 29:30

INCIDENT CLEARANCE: 28:35 → 34:24  
(MIN: SEC)



### **MAJOR IMPACT WORK ZONES**

JULY → 21 AUGUST → 15

### **MODERATE IMPACT WORK ZONES**

JULY → 46 AUGUST → 34

## ZONING IN

### **TMS WORK ZONES**

- ♦ JULY 2017: 305
- ♦ AUGUST 2017: 366

### **WORK ZONE BREAKDOWN:**

- ♦ MAJOR: 36 - 7.0%
- ♦ MODERATE: 80 - 15.0%
- ♦ MINOR: 401 - 78.0%

WORK ZONE CRASHES: 17



GATEWAY GUIDE  
TRANSPORTATION MANAGEMENT CENTER



# WORK ZONES

| TMC Observed Work Zones<br>July - August 2017 |                      |                             |                      |
|-----------------------------------------------|----------------------|-----------------------------|----------------------|
| July                                          |                      | August                      |                      |
| Level of Travel Time Impact                   | Number of Work Zones | Level of Travel Time Impact | Number of Work Zones |
| Major Impact                                  | 21                   | Major Impact                | 15                   |
| Moderate Impact                               | 46                   | Moderate Impact             | 34                   |
| Minor Impact                                  | 178                  | Minor Impact                | 223                  |
| Total                                         | 245                  | Total                       | 272                  |

\*Impact Levels described in Data Key

## SL Mobility Rating:

- ◆ Jul 2017: 92%
- ◆ Aug 2017: 91%
- ◆ Goal: 91%

## SL Visibility levels:

- ◆ Jul 2017: 93%
- ◆ Aug 2017: 92%
- ◆ Goal: 91%

## Additional Travel Time Impacts through Work Zones

### **Major Impact (15 Minutes or Above)**

### **Moderate Impact (10-14 Minutes)**

#### **7/1 – 8/31 (Daily) Eastbound I-64 – Poplar Street Bridge 3 right lanes (25 Major 58 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

#### **7/14 – 7/16, 8/11 – 8/14, 8/25 – 8/27 (Weekend) Southbound I-55 — Jefferson County right lane (5 Major 10 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 48 minutes

#### **7/12– 7/13 (Nightly) Westbound I-44 – 109 to 141 right lanes (2 Major 4 Moderate)**

- Traffic reduced to one lane during overnight hours for coring
- Hours on westbound traffic were adjusted to 10:00 pm start time
- RITIS data recorded additional travel times up to 17 minutes

#### **7/16 (Monday) Westbound I-70 – Route Z (1 Major 2 Moderate)**

- Traffic reduced to one lane during daytime for high friction treatment application
- Weekend work was scheduled for traffic considerations
- RITIS data recorded additional travel times up to 54 minutes



# WORK ZONES

## **8/12 (Saturday) Eastbound I-70 – between Foristell & Wentzville Parkway (1 Major 2 Moderate)**

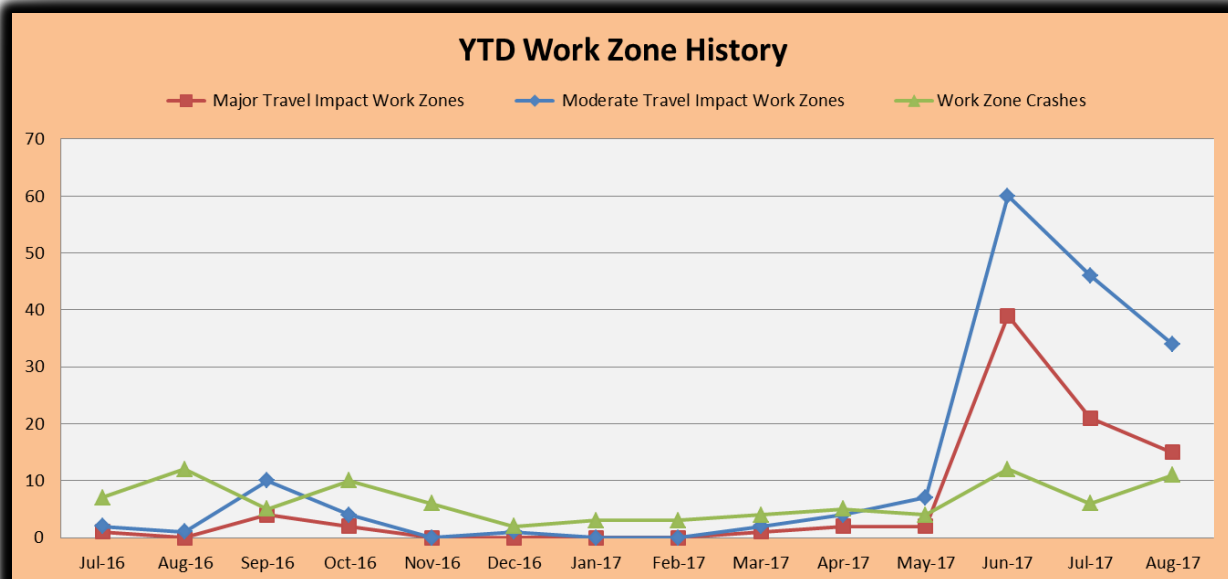
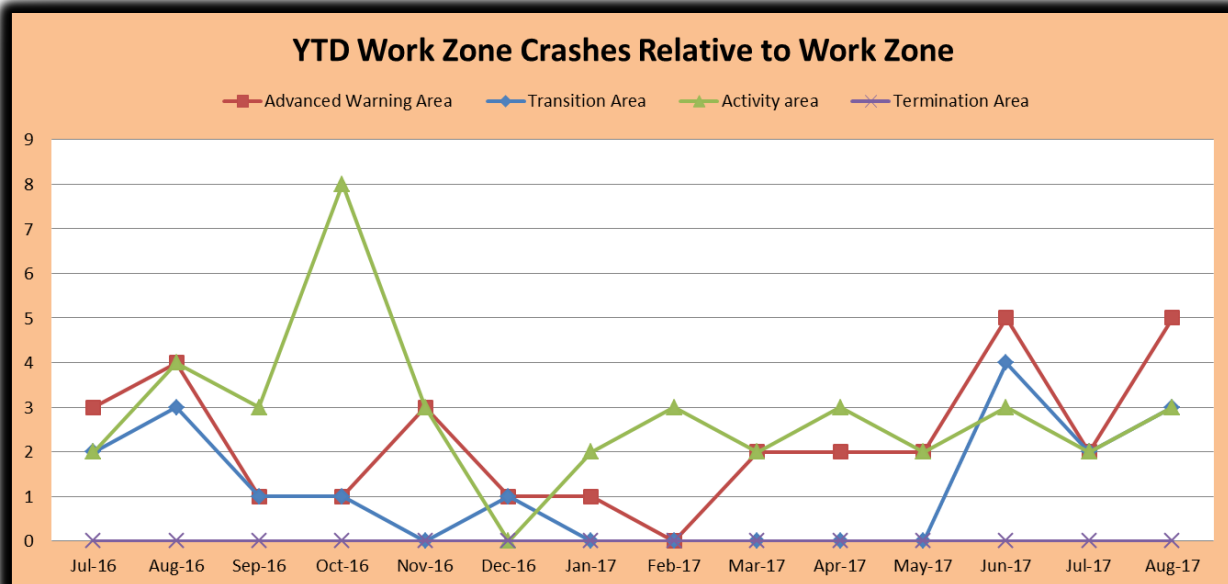
- Traffic reduced to one lane during weekend for full-depth pavement repair
- All mitigation efforts were in use
- RITIS data recorded additional travel times up to 53 minutes

## **8/25 – 8/27 (Weekend) Westbound I-70 – Route Z right lane (2 Major 4 Moderate)**

- Traffic reduced to one lane during weekend for full-depth pavement repair
- All mitigation efforts were in use
- RITIS data recorded additional travel times up to 37 minutes

### **Work Zone Related Crashes with Mobility Impact**

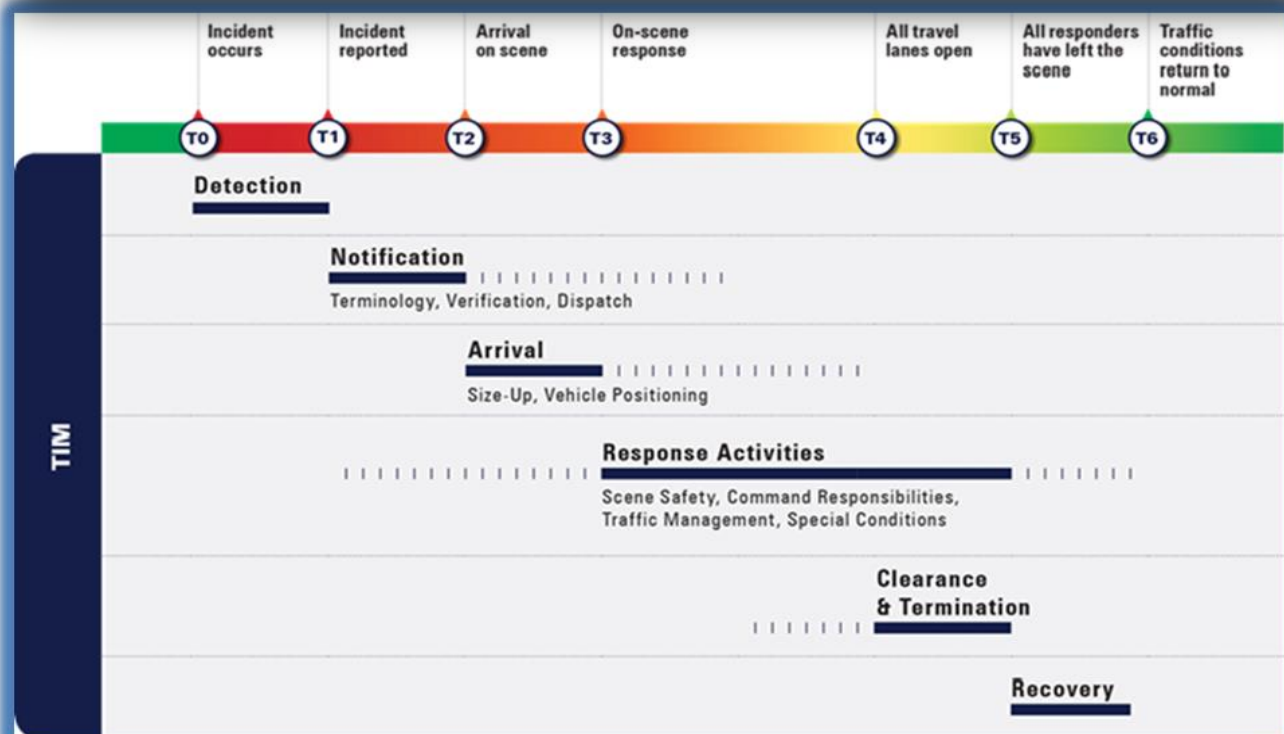
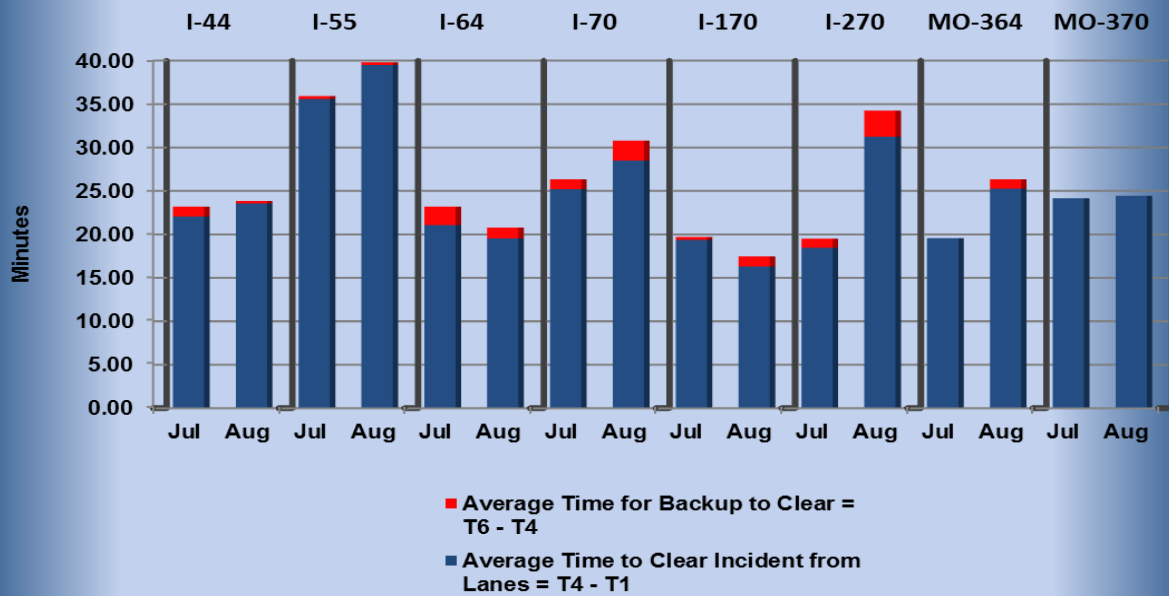
- 7/23 (Sunday) 3:49 am – 9:19 am Westbound I-64 at Exit to I-44 – Crash closed two exit lanes



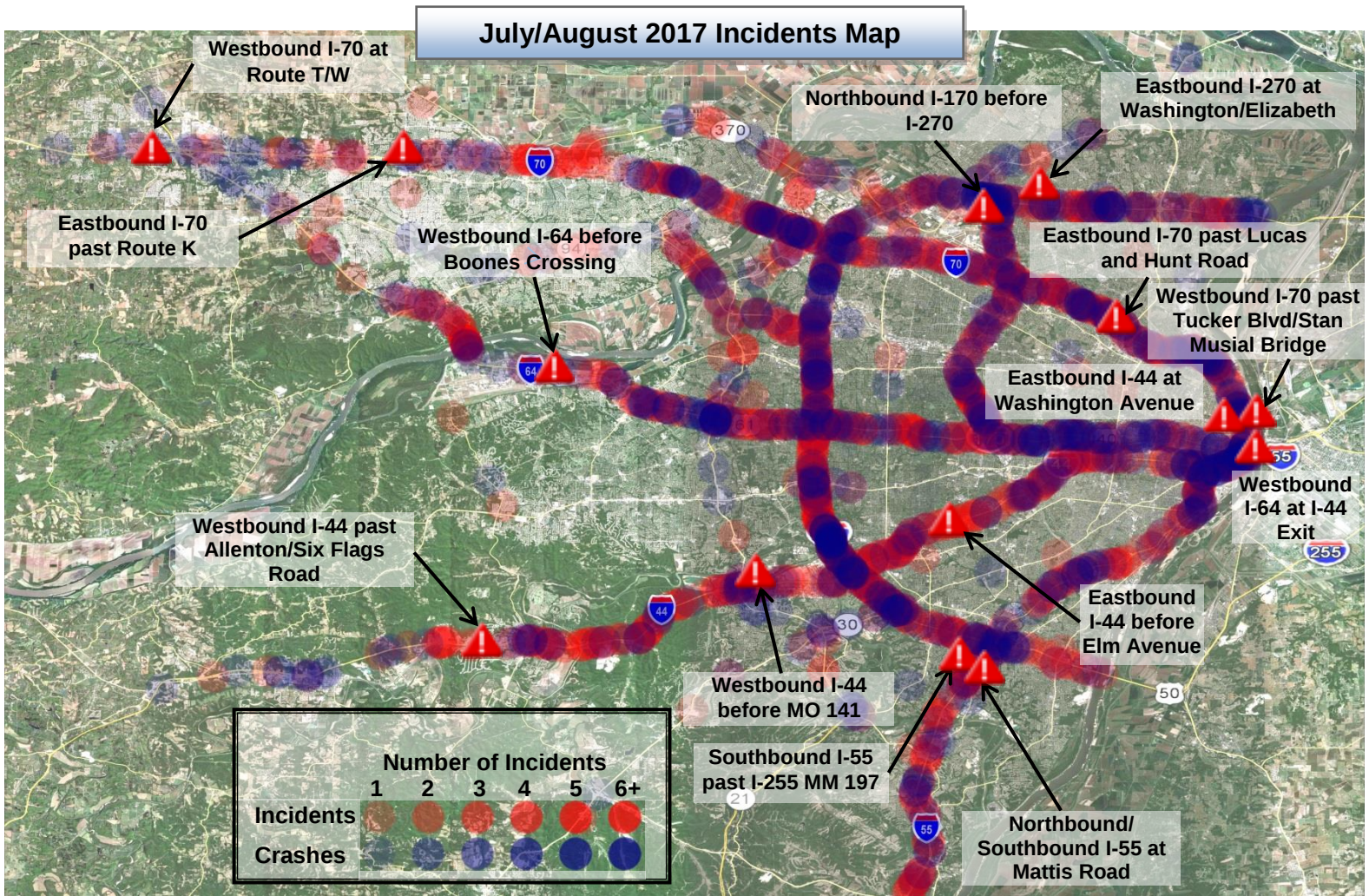


# INCIDENT MANAGEMENT

July 2017 vs. August 2017  
Incidents Summary

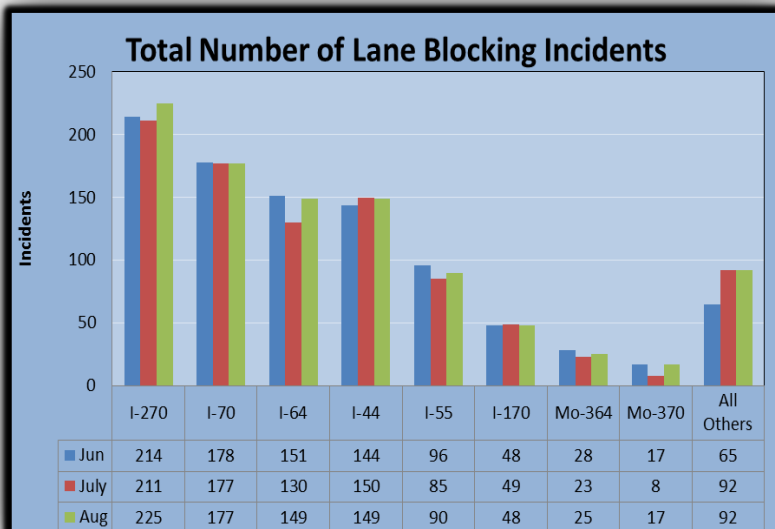


# INCIDENT MANAGEMENT



Denotes Location of Major Impact Traffic Incidents

**Total Number of Incidents: June: 941 / July: 925 / August: 972**



## Major Impact Incidents

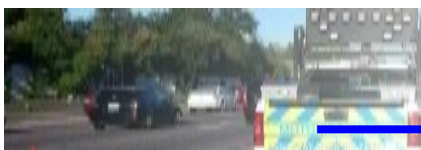
July 2017 vs. August 2017  
(7) (7)

## Fatal Incidents

July 2017 vs. August 2017  
(9) (4)

## Tractor Trailer Incidents

July 2017 vs. August 2017  
(49) (50)



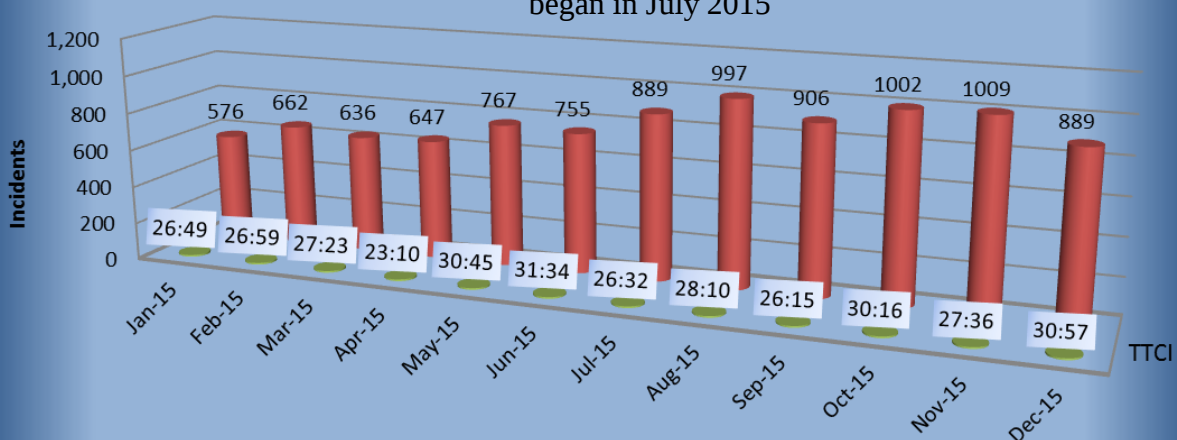
# INCIDENT MANAGEMENT

## Lane Blocking Incidents by Freeway July and August 2017

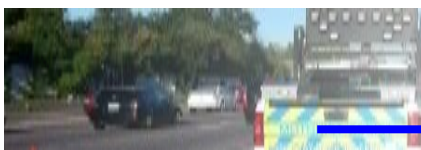
| Interstate | Month   | Number of Incidents | Average Time to Clear Incident from Lanes = T4 - T1 | Average Time for Backup to Clear = T6 - T4 | Freeway Miles | Incidents per Mile |
|------------|---------|---------------------|-----------------------------------------------------|--------------------------------------------|---------------|--------------------|
| I-44       | Jul     | 150                 | 22:07                                               | 01:14                                      | 33            | 4.55               |
| I-44       | Aug     | 149                 | 23:56                                               | 00:30                                      | 33            | 4.52               |
| I-55       | Jul     | 85                  | 35:58                                               | 00:34                                      | 23            | 3.70               |
| I-55       | Aug     | 90                  | 39:50                                               | 00:31                                      | 23            | 3.91               |
| I-64       | Jul     | 130                 | 21:08                                               | 02:12                                      | 40            | 3.25               |
| I-64       | Aug     | 149                 | 19:53                                               | 01:25                                      | 40            | 3.73               |
| I-70       | Jul     | 177                 | 19:38                                               | 00:33                                      | 38            | 4.66               |
| I-70       | Aug     | 177                 | 28:50                                               | 02:29                                      | 38            | 4.66               |
| I-170      | Jul     | 49                  | 23:53                                               | 00:33                                      | 11            | 4.45               |
| I-170      | Aug     | 48                  | 16:31                                               | 01:17                                      | 11            | 4.36               |
| I-270      | Jul     | 211                 | 18:47                                               | 01:05                                      | 36            | 5.86               |
| I-270      | Aug     | 225                 | 31:25                                               | 03:00                                      | 36            | 6.25               |
| MO-364     | Jul     | 23                  | 19:57                                               | 00:00                                      | 11            | 2.09               |
| MO-364     | Aug     | 25                  | 25:26                                               | 01:07                                      | 11            | 2.27               |
| MO-370     | Jul     | 8                   | 24:15                                               | 00:00                                      | 13            | 0.62               |
| MO-370     | Aug     | 17                  | 24:43                                               | 00:00                                      | 13            | 1.31               |
| Total      | Jul/Aug | 1897                | 24:46                                               | 01:02                                      | 410           | 4.63               |

## 2015 Number of Incidents and Time to Clear Lanes

\*Note changes in Incident reporting data began in July 2015

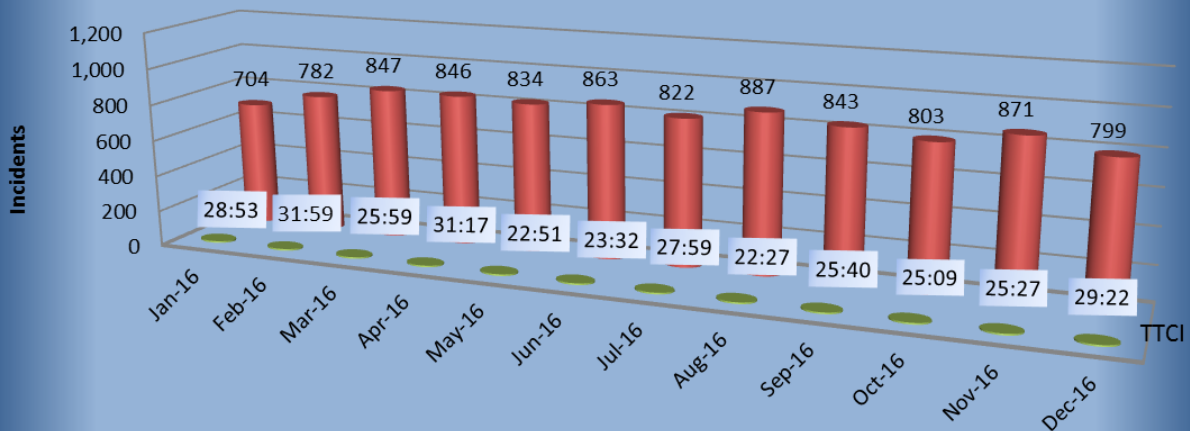


|           | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TTCI      | 26:49  | 26:59  | 27:23  | 23:10  | 30:45  | 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    |



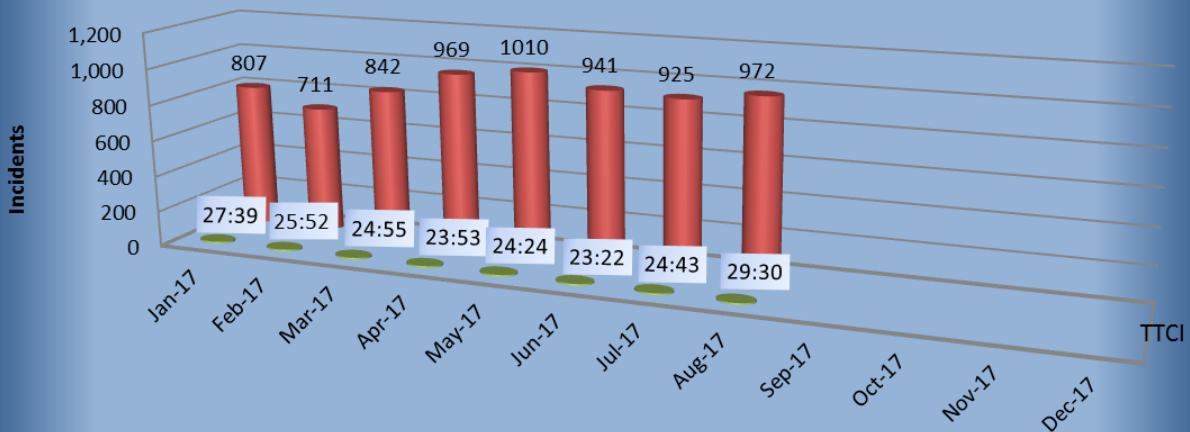
# INCIDENT MANAGEMENT

## 2016 Number of Incidents and Time to Clear Lanes

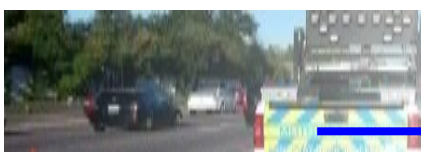


|           | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TTCI      | 28:53  | 31:59  | 25:59  | 31:17  | 22:51  | 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

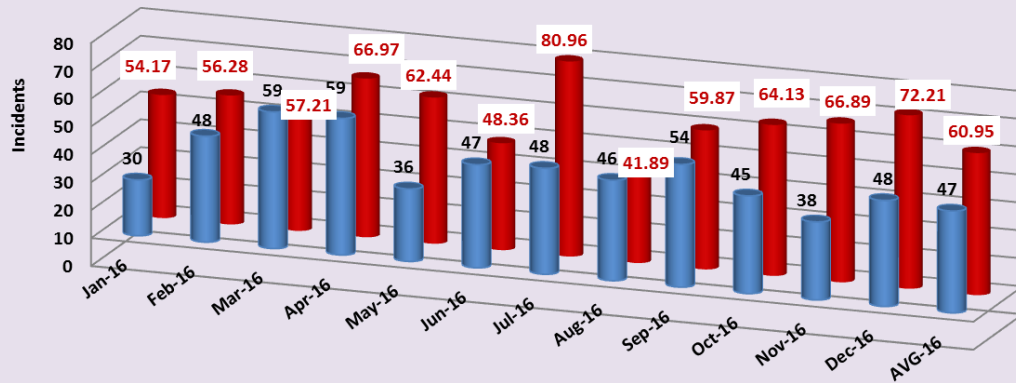


|           | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TTCI      | 27:39  | 25:52  | 24:55  | 23:53  | 24:24  | 23:22  | 24:43  | 29:30  |        |        |        |        |
| Incidents | 807    | 711    | 842    | 969    | 1010   | 941    | 925    | 972    |        |        |        |        |



# INCIDENT MANAGEMENT

2016 Tractor Trailer Incidents / Time to Clear



|           | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | AVG-16 |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Incidents | 30     | 48     | 59     | 59     | 36     | 47     | 48     | 46     | 54     | 45     | 38     | 48     | 47     |
| TTCI      | 54.17  | 56.28  | 57.21  | 66.97  | 62.44  | 48.36  | 80.96  | 41.89  | 59.87  | 64.13  | 66.89  | 72.21  | 60.95  |



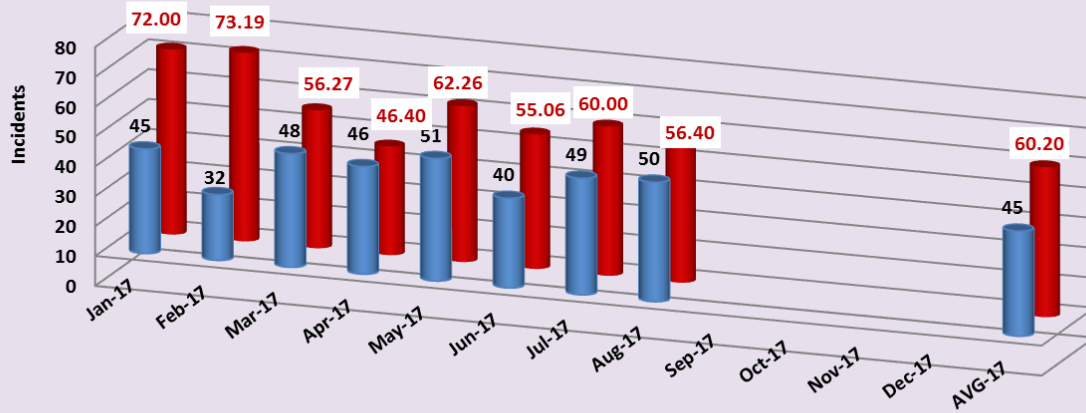
| 2016      | I-44 | I-55 | I-64 | I-70 | I-170 | I-255 / I-270 | Route 364 | Route 370 | * Other | Total |
|-----------|------|------|------|------|-------|---------------|-----------|-----------|---------|-------|
| Jan       | 7    | 3    | 4    | 5    | 1     | 10            | 0         | 0         | 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

2017 Number of Tractor Trailer Incidents / Time to Clear



|           | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | AVG-17 |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Incidents | 45     | 32     | 48     | 46     | 51     | 40     | 49     | 50     |        |        |        |        | 45     |
| TTCI      | 72.00  | 73.19  | 56.27  | 46.40  | 62.26  | 55.06  | 60.00  | 56.40  |        |        |        |        | 60.20  |



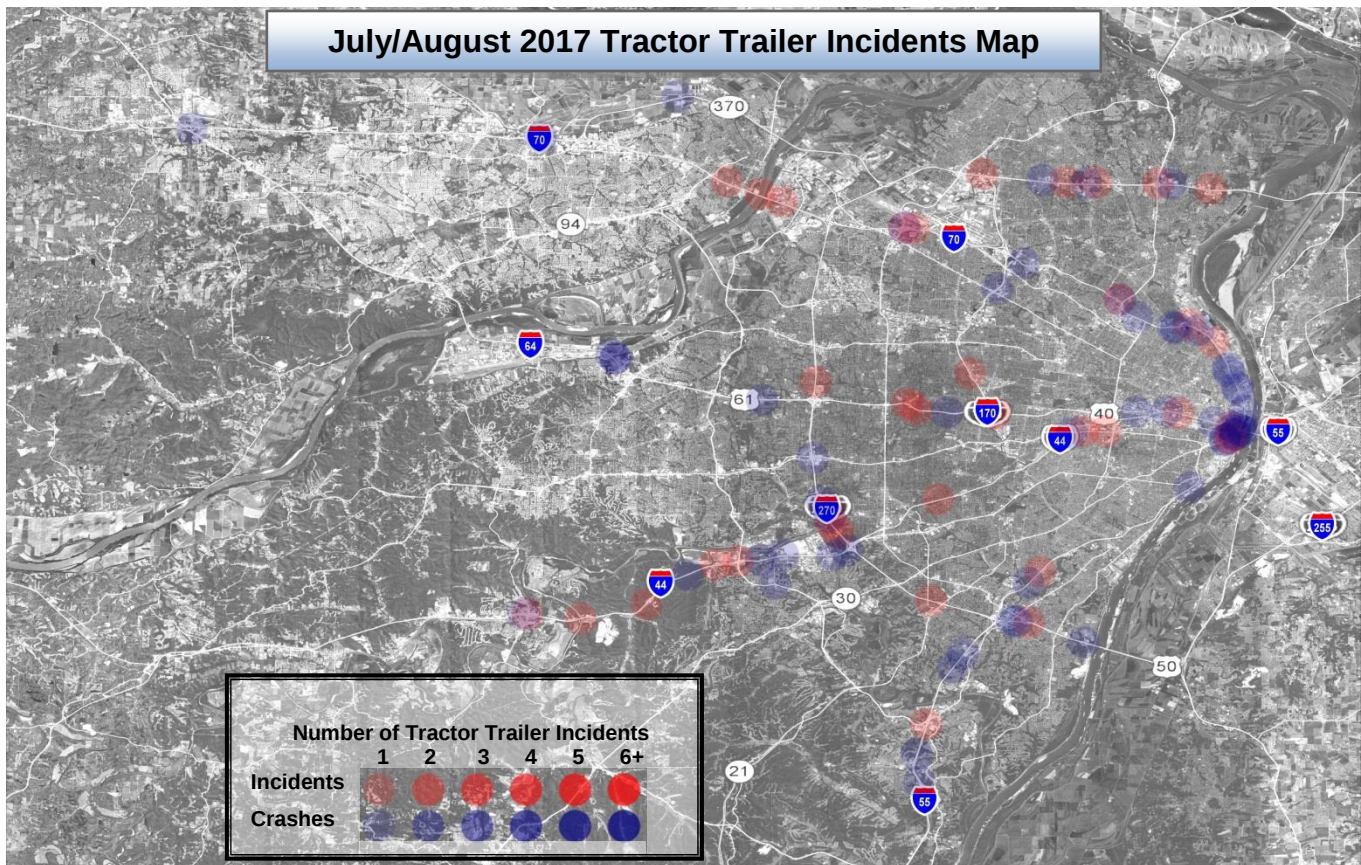
| 2017      | I-44 | I-55 | I-64 | I-70 | I-170 | I-255 / I-270 | Route 364 | Route 370 | Other * | Total |
|-----------|------|------|------|------|-------|---------------|-----------|-----------|---------|-------|
| Jan       | 11   | 4    | 4    | 11   | 0     | 15            | 0         | 0         | 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       | 19   | 5    | 7    | 11   | 1     | 6             | 0         | 0         | 0       | 49    |
| Aug       | 7    | 4    | 9    | 11   | 1     | 13            | 0         | 1         | 4       | 50    |
| Sep       |      |      |      |      |       |               |           |           |         | 0     |
| Oct       |      |      |      |      |       |               |           |           |         | 0     |
| Nov       |      |      |      |      |       |               |           |           |         | 0     |
| Dec       |      |      |      |      |       |               |           |           |         | 0     |
| YR Totals | 101  | 36   | 39   | 82   | 6     | 80            | 0         | 3         | 14      | 361   |

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

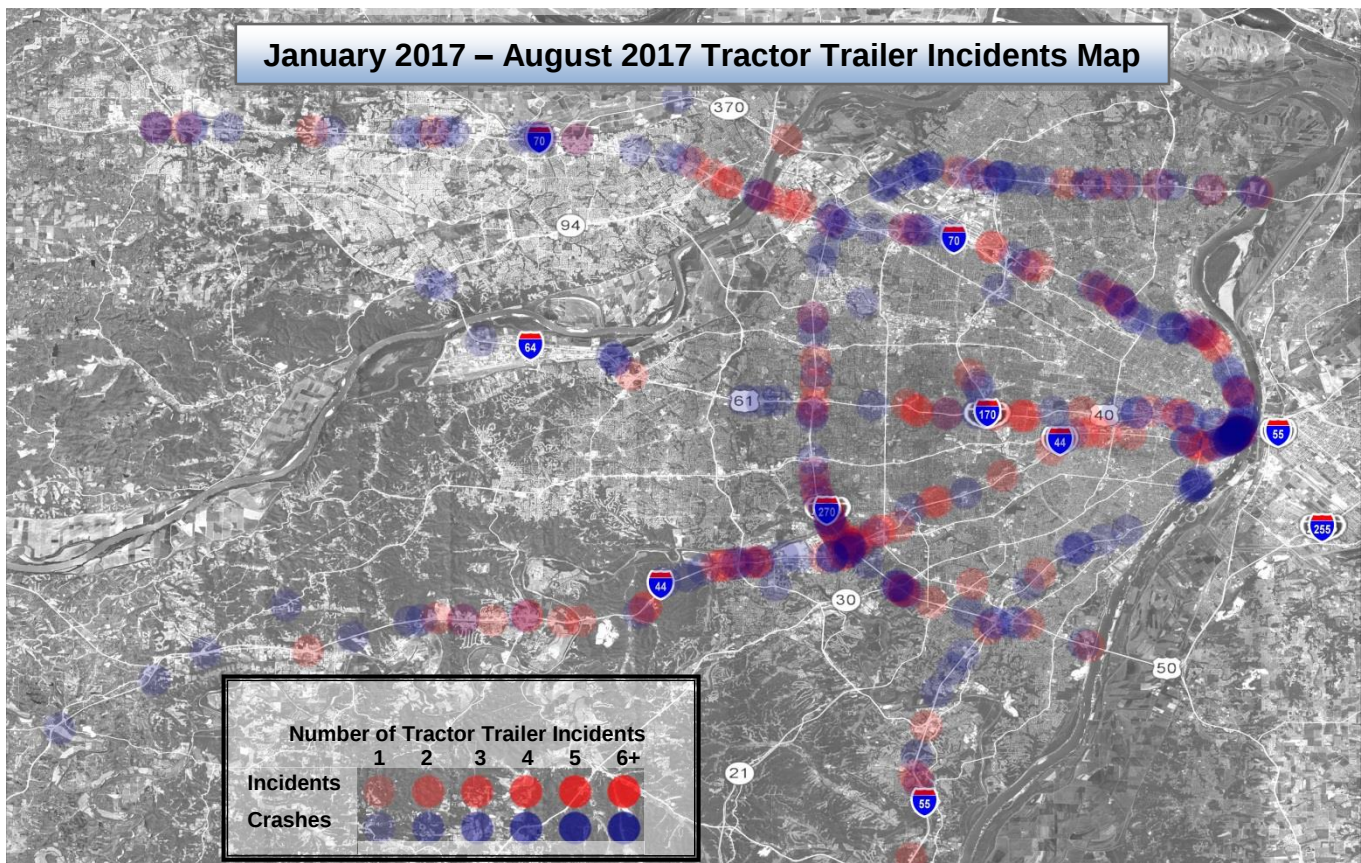


# INCIDENT MANAGEMENT

July/August 2017 Tractor Trailer Incidents Map



January 2017 – August 2017 Tractor Trailer Incidents Map

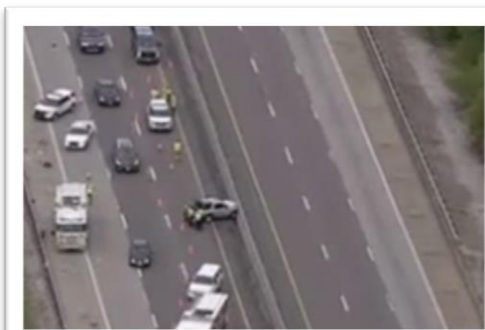


## Major Impact Traffic Incidents and Mitigation

7/5/2017 (Wednesday)

- **Time:** 2:37 pm – 5:24 pm \*\*\* Fatality/Weather Related \*\*\*
- **Location:** St. Louis County – Westbound I-44 past Allenton/Six Flags Road
- **Event:** Two-Vehicle Crash
- **Estimated Initial Impact:** Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- **Incident Details:** The Missouri State Highway Patrol report states that the driver of an SUV was traveling too fast for conditions and ran off the right side of the roadway striking the guardrail. Both passengers were ejected from the vehicle. The SUV then returned to the roadway where it crossed all lanes of traffic and struck the concrete median wall. One of the passengers who was ejected was pronounced deceased at the scene, the other was transported with serious injuries. A second vehicle traveling through the area ran into debris from the crash. Reports also indicate that it was raining at the time of the crash.
- **Action:** The TMC dispatched four MoDOT Emergency Response units to the scene to assist with traffic control. Eureka Police, Fire and EMS responded and blocked all lanes of traffic. MSHP arrived and took command of the scene. The TMC activated all appropriate DMS boards, and entered the event into TMS to alert the public. ER assisted with diverting traffic off onto the Allenton/Six Flags Road exit, where drivers were able to take MO 100/Manchester Road to get back to I-44. Traffic Engineers were able to adjust traffic signals to improve flow through the detour. Emergency vehicles also blocked Eastbound I-44 exit ramp to Allenton Six Flags Road for two hours to help flow of traffic. The EOC, AE, Communications, Motor Carriers, and the Incident Management Coordinator were all notified. Reconstruction, tow and the coroner all had a delayed response which contributed to the duration. Traffic queued approximately 6 miles, but returned to normal thirty minutes after all lanes were reopened.
- **Event Duration:** 2 hours 47 minutes

| Westbound I-44<br>past Allenton/Six Flags<br>Road                                   | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Right<br>Shoulder |
|-------------------------------------------------------------------------------------|------------------|--------|--------|--------|-------------------|
|  |                  |        |        |        |                   |
| Closed Hours/Minutes                                                                | 2:47             | 2:47   | 2:44   | 2:41   | 2:41              |

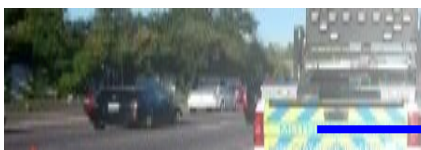




# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation





# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

7/9/2017 (Sunday)

- **Time:** 10:23 pm – 1:57 am \*\*\* Fatality \*\*\*
- **Location:** St. Louis County – Eastbound I-44 before Elm Avenue
- **Event Type:** Police Investigation
- **Estimated Initial Impact:** Non-Rush Hour: 4 of 4 travel lanes affected equals (=) 100%
- **Incident Details:** The Incident initially came over the scanner as an accident. Kirkwood PD contacted the TMC and advised it was a homicide in Webster Groves venue and requested eastbound traffic to be diverted onto Big Bend with the eastbound entrance ramp to I-44 to be blocked as well. It was discovered that three people had been shot while traveling east on I-44 by a suspect in a second vehicle also traveling east. All three victims were transported to a local hospital where one victim died. Police initially had right lane and shoulder closed. Lanes 2 and 3 were closed when fire and EMS arrived and 30 minutes later all lanes were closed. Police found shell casings and had to wait for St. Louis County crime scene to arrive. Crime Scene arrived at 11:44 pm. At 1:33 am, Webster Groves PD started documenting evidence for their investigation.
- **Action Taken:** The incident was entered into ATMS, DMS messages were activated and ER was dispatched. ER briefly closed the left lane of Westbound I-44 to speak with Police about the diversion point. Both dispatch and ER attempted to get Police to move the closure back to Lindbergh Boulevard as it was a better diversion point. Police kept the closure at Big Bend. ER Supervision and EOC were notified and the I-44 page sent. After police advised they would not be able to reopen the interstate until the Crime Scene Investigations Unit arrived, EOC was updated and Motor Carriers, Area Engineer, Communications and the ER Supervisor were notified. All lanes were reopened at 1:57 am.
- **Event Duration:** 3 hours 33 minutes

| Eastbound I-44<br>before Elm Avenue                                                 | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Right<br>Shoulder |
|-------------------------------------------------------------------------------------|------------------|--------|--------|--------|--------|-------------------|
|  |                  |        |        |        |        |                   |
| Closed Hours/Minutes                                                                | 2:51             | 2:51   | 3:24   | 3:24   | 3:33   | 3:33              |



## Major Impact Traffic Incidents and Mitigation



7/23/2017 (Sunday)

- **Time:** 12:56 am – 3:38 am \*\*\*Fatality\*\*\*
- **Location:** St. Louis County – Eastbound I-70 past Lucas and Hunt Road
- **Event:** Police Investigation
- **Estimated Initial Impact:** Non-Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- **Incident Details:** St. Louis County PD closed Eastbound I-70 east of Lucas and Hunt Road to conduct an investigation into a shooting that occurred inside a taxi cab on the interstate. It was discovered the cab driver shot the passenger in an apparent self-defense after the two got into an altercation.
- **Action:** St. Louis County PD closed the interstate and diverted traffic onto Lucas and Hunt. TMC personnel put the incident into ATMS and it was automatically populated onto the Traveler Map. TMC personnel sent out the SLAdminText and the i70IM alert. DMS boards were activated within one minute of the event start. EOC, ER Supervision, Communications and Motor Carriers were notified. ER was notified as well, but due to the nature of the incident, ER was not permitted to respond. All lanes were re-opened when the investigation was complete. Traffic queue approximately a half mile.
- **Event Duration:** 2 hours 42 minutes

| Eastbound I-70<br>past Lucas & Hunt Road                                            | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Right<br>Shoulder |
|-------------------------------------------------------------------------------------|------------------|--------|--------|--------|-------------------|
|  |                  |        |        |        |                   |
| Closed Hours/Minutes                                                                | 2:42             | 2:42   | 2:42   | 2:42   | 2:42              |

## Major Impact Traffic Incidents and Mitigation

7/23/2017 (Sunday)

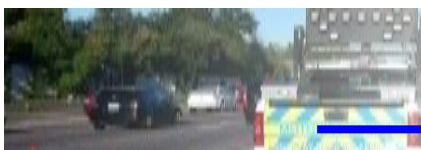
- **Time:** 3:49 am – 9:19 am
- **Location:** St. Louis City – Westbound I-64 at I-44 Exit
- **Event:** Multi-Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 4 travel lanes affected equals (=) 50%
- **Incident Details:** TMC personnel were notified of incident via phone call from a motorist who stated people were swerving on the PSB. When operator confirmed on CCTV, 3 vehicles were observed swerving into construction equipment. One vehicle was observed careening through the work zone equipment by skidding on an arrow board. When vehicles came to rest, three were counted. Two vehicles were able to leave the scene under their own power. However, the third which was tangled in a digital arrow board sign and left abandoned at the scene.
- **Action:** TMC personnel immediately entered the event into ATMS, which populated an incident in the Traveler Map. ER was dispatched to set up traffic control. IDOT was contacted to activate boards on their side of the river, as there were not any boards to use on the Missouri side. Initially both exit lanes to I-44 were blocked, as the exit was already closed due to construction. Lane 2 of Westbound I-64 was also blocked by the abandoned vehicle that was partially sitting on top of the arrow board. However, once ER arrived he was able to quickly push the vehicle and arrow board over to the closed exit lanes and out of mainline traffic. St. Louis City PD was notified at 4:06 am, and they arrived shortly thereafter and began investigating the abandoned vehicle. City Tow responded to remove the vehicle at 5:20 am. From that point on, ER held the exit lanes closed waiting for the contractor to arrive to reset their lane drop and signage for the already scheduled and active ramp closure.
- **Event Duration:** 5 hours 30 minutes

| Westbound I-64<br>at I-44 Exit                                                      | Lane 1 | Lane 2 | Exit Lane 1 | Exit Lane 2 |
|-------------------------------------------------------------------------------------|--------|--------|-------------|-------------|
|  |        |        |             |             |
| Closed Hours/Minutes                                                                | 0:00   | 0:16   | 5:30        | 5:30        |

## Major Impact Traffic Incidents and Mitigation

7/24/2017 (Monday)

- **Time:** 9:10 am – 12:29 pm \*\*\*Single Vehicle Accident/Armed Carjacking\*\*\*
- **Location:** St. Louis County – Southbound I-55 past I-255 (mile marker 197)
- **Event Type:** Single Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 4 travel lanes affected equals (=) 50%
- **Time:** 9:31 am to 11:28 pm \*\*\*Police Pursuit/Police Investigation/Fatality\*\*\*
- **Event Type:** Police Investigation
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 2 travel lanes affected equals (=) 100%
- **Incident Details:** The TMC operators received a phone call from the Missouri State Highway Patrol advising of a police pursuit. The suspect had lost control of his vehicle and spun off Southbound I-55 just past I-255 and into the grass. Motorists that witnessed the accident pulled over to check on the suspect after which the suspect carjacked a Good Samaritan's vehicle and fled the scene going south on I-55. Police pursued the suspect and were able to deploy spike strips on the interstate which the suspect subsequently ran over. The vehicle was stopped at mile marker 171 of Southbound I-55 south of US 67/61. The TMC dispatched MoDOT ER to assist with traffic control.
- **Action Taken:** St. Louis County PD blocked lanes 3 and 4 of Southbound I-55 at the 197 MM, the location of the original accident and subsequent carjacking, to secure the crime scene. Jefferson County PD, Jefferson County SWAT and MSHP engaged the suspect who was still inside the disabled carjacked vehicle on Southbound I-55 at the 171 mile marker. A shoot-out ensued and the suspect was fatally injured. ER, MSHP, and Police blocked Southbound I-55 at the 174 mile marker and started diverting traffic onto Southbound US 61. Festus Maintenance responded to relieve ER, MSHP, and Police to set up traffic control. PD and MSHP blocked Northbound I-55 at the 162 mile marker and started diverting traffic on Route OO to Northbound US 61. Jefferson County PD closed the ramp from Route TT to Northbound I-55 at the 165 mile marker. Traffic engineers were notified to adjust necessary signal timing.
- The diversion consisted of traversing through the clover leaf off ramp to a right turn at US 61 @ US 67-American Legion and finally a right turn at I-55 @ US 61 to reenter the interstate. Northbound traffic was being diverted at I-55 @ US 61 ramps which consisted of monitoring I-55 southbound ramps @ US 61 due to no southbound demand and implementing pattern 64 at US 61 @ US 67-American Legion. The SB LT at US 61 @ American Legion began to fail so an additional 20 seconds were added to the cycle length, giving the time to the SB LT phase. Also, the coordination phase was changed to Phase 4 so that any additional time would go to the northbound movement. At approximately 12:00 pm, three highway patrol officers took control of US 61 @ American Legion. At approximately 12:50 pm, the Northbound I-55 lanes were opened but it wasn't until approximately 1:40 pm when law enforcement released control of US 61 @ American Legion. Due to the shift in demand, diversion plan 87 was downloaded and observations continued. At approximately 3:50 pm, the SB LT queue at US 61 @ American Legion reached just south of US 61 @ Route A. Pattern 87 was implemented at US 61 @ St. Pius and monitoring of the NB RT and SB LT at US 61 @ American Legion continued.
- **Result:** The diversion plans at American Legion accommodated the northbound demand on US 61 and the northbound demand on US 67 and managed queues. The EOC, AE, Communication Staff, Motor Carriers, and the MoDOT Incident Management Coordinator were all notified. The TMC messaged for the event and entered it into TMS to notify the public of the closure. An incident alert, update and cleared were used to notify management of the closures. Traffic for Northbound I-55 at the 162 mile marker queued approximately 6 miles at its peak, but returned to normal almost twenty (20) minutes after all lanes were opened. Traffic for Southbound I-55 at the 171 mile marker queued approximately 3.4 miles, but returned to normal after all lanes were opened. The duration for Southbound I-55 at the 171 mile marker was due to Police conducting the crime scene investigation and having to securely collect and package over one hundred (100) rounds of shell casings.
- **Event Duration (Southbound I-55 at 197 mile marker):** 3 hours 19 minutes
- **Event Duration (Northbound I-55 at 162 mile marker):** 3 hours 13 minutes
- **Event Duration (Southbound I-55 at 171 mile marker):** 13 hours 58 minutes



# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

|                                                                                                                    |               |        |        |        |        |                |
|--------------------------------------------------------------------------------------------------------------------|---------------|--------|--------|--------|--------|----------------|
| Southbound I-55<br>past I-255<br> | Left Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Right Shoulder |
| Closed Hours/Minutes                                                                                               | 0:00          | 0:00   | 0:00   | 0:18   | 3:19   | 3:19           |

|                                                                                                                    |               |        |        |        |        |                |
|--------------------------------------------------------------------------------------------------------------------|---------------|--------|--------|--------|--------|----------------|
| Northbound I-55<br>past I-255<br> | Left Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Right Shoulder |
| Closed Hours/Minutes                                                                                               | 0:00          | 0:00   | 0:00   | 0:18   | 3:13   | 3:13           |

|                                                                                                                     |               |        |        |                |
|---------------------------------------------------------------------------------------------------------------------|---------------|--------|--------|----------------|
| Southbound I-55<br>at MM 171<br> | Left Shoulder | Lane 1 | Lane 2 | Right Shoulder |
| Closed Hours/Minutes                                                                                                | 13:58         | 13:58  | 13:58  | 13:58          |





# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation



## Major Impact Traffic Incidents and Mitigation





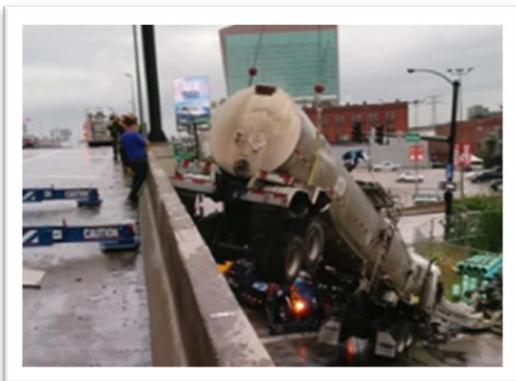
# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

7/27/2017 (Thursday)

- **Time:** 7:11 am – 9:26 am \*\*\* Weather Related \*\*\*
- **Location:** St. Louis City – Eastbound I-44 at Washington Avenue
- **Event:** Vehicle Accident
- **Estimated Initial Impact:** Rush Hour: 1 of 2 travel lanes affected equals (=) 50%
- **Incident Details:** An empty asphalt tanker truck was in lane 2 when the driver lost control on the wet roadway and jackknifed. The tanker portion crossed over into lane 1 and struck a passenger vehicle, pushing it into the center concrete barrier wall. The tractor trailer then traveled off the right side of the roadway where it struck a barrier wall before traveling over it, falling onto the street below with the tanker portion still hanging from I-44. After falling from the overpass, the tractor trailer began to leak diesel fuel onto roadway.
- **Action:** St. Louis City Police, Fire and EMS were the first on scene. TMC operators dispatched two Emergency Response units to assist with traffic control and activated all available message boards. MoDOT Broadway Maintenance was dispatched to apply sand to the fuel spill. The TMC operators also requested the Maintenance Superintendent assess the overpass for any structural damage. The mainline was reopened at 9:26 am, after the passenger vehicle was removed from the scene. Emergency personnel were able to remove the tanker truck while on the right shoulder. Traffic on Eastbound I-44 queued for one mile, while the queue on Northbound I-55 was noted at two miles. It took approximately 26 minutes for traffic to return to normal.
- **Event Duration:** 2 hours 15 minutes

| Eastbound I-44<br>at Washington Avenue                                              | Lane 1 | Lane 2 | Right<br>Shoulder |
|-------------------------------------------------------------------------------------|--------|--------|-------------------|
|  |        |        |                   |
| Closed Hours/Minutes                                                                | 0:30   | 0:38   | 2:15              |





# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

7/27/2017 (Thursday)

- **Time:** 3:30 pm – 5:40 pm
- **Location:** St. Louis County – Northbound I-170 before I-270
- **Event:** Multi-Vehicle Accident
- **Estimated Initial Impact:** Rush Hour: 1 of 2 travel lanes affected equals (=) 50%
- **Incident Details:** A passenger vehicle traveling north on I-170 struck the rear of an SUV causing a chain reaction accident involving six vehicles total. Three people were transported with minor injuries.
- **Action:** Hazelwood Police, Fire and EMS responded as did Christian Northeast EMS and the MSHP who took command of the scene. Emergency Response provided assistance with traffic control and the TMC activated all available message boards. Duration of the incident was extended due to the number of vehicles involved, with three of them having to be towed. Traffic queued for 3 miles, which took approximately 18 minutes to return to normal after the incident cleared
- **Event Duration:** 2 hours 10 minutes

| Northbound I-170<br>before I-270                                                   | Lane 1 | Lane 2 | Right<br>Shoulder |
|------------------------------------------------------------------------------------|--------|--------|-------------------|
|  |        |        |                   |
| Closed Hours/Minutes                                                               | 0:00   | 1:52   | 2:10              |

8/2/2017 (Wednesday)

- **Time:** 3:45 pm – 4:52 pm
- **Location:** St. Louis City – Westbound I-70 past Tucker Boulevard (Stan Musial Veterans Memorial Bridge)
- **Event:** Overtaken Tractor Trailer
- **Estimated Initial Impact:** Rush Hour: 2 of 2 travel lanes affected equals (=) 100%
- **Incident Details:** A tractor trailer hauling non-hazardous materials overturned while maneuvering a curve.
- **Action:** MoDOT Emergency Response was first on scene and made initial notification to the TMC. He closed the right lane of Eastbound I-44 at Madison, which was directly under the incident. IDOT Emergency Response assisted St. Louis City PD with traffic control on the bridge itself. The MSHP responded and took command of the scene. TMC operators activated appropriate DMS boards on both Eastbound I-44 and the bridge. Notifications were made to MoDOT EOC, Motor Carriers, Community Relations, and the AE. The TMC also coordinated with IDOT for updates. Traffic on Westbound I-70 queued two miles as traffic was detoured onto Tucker. Traffic on Eastbound I-44 queued three miles. Duration was extended for three heavy tow trucks needed to upright and remove the vehicle.
- **Event Duration:** 1 hour 7 minutes



# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

|                                                                                                                              |                  |        |        |                   |
|------------------------------------------------------------------------------------------------------------------------------|------------------|--------|--------|-------------------|
| Westbound I-70<br>past Tucker Boulevard<br> | Left<br>Shoulder | Lane 1 | Lane 2 | Right<br>Shoulder |
| Closed Hours/Minutes                                                                                                         | 1:07             | 1:07   | 1:07   | 1:07              |



## Major Impact Traffic Incidents and Mitigation

8/15/2017 (Tuesday)

- **Time:** 2:28 am – 8:58 am
- **Location:** St. Charles County – Westbound I-70 at Route T/W
- **Event:** Two-Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 2 travel lanes affected equals (=) 100%
- **Incident Details:** TMC operators heard an accident being dispatched while monitoring scanner traffic. They checked the area via CCTV's and were able to locate the accident which occurred just east of the exit ramp to Route T/W. Two tractor trailers had been traveling west on I-70 when one traveled off the left side of the roadway. The driver overcorrected causing the vehicle to overturn. The second semi struck the trailer portion of the first vehicle. The overturned tractor trailer was hauling several thousand riding lawnmower tires, and the top of the trailer ripped open allowing the tires to spill into the center median. The second semi was hauling large logs which broke loose and fell onto the interstate. This resulted in a total closure of Westbound I-70.
- **Action:** Foristell PD, Wentzville FD, and St. Charles County Ambulance District responded, as did the MSHP who took command of the scene. The TMC entered the accident into ATMS which populated it onto the Traveler Map, and activated all appropriate message boards within one minute to alert the traveling public. Emergency Response was dispatched to assist with traffic control, and traffic was diverted off at Route T/W, doing an up and over back onto the interstate. Due to size and amount of logs that were on the roadway, TMC operators contacted the MSHP to see if they wanted MoDOT maintenance to respond to assist with cleanup. They initially declined, advising that the tow company would handle it. However, MoDOT maintenance later responded to assist. As rush hour approached, two additional Emergency Response units responded, as did the ER supervisor, and the MoDOT Incident Management Coordinator. ER placed incident ahead warning signs up approximately four miles east of the scene. Police directed traffic at the top of the exit ramp until a traffic engineer arrived at the TMC and began managing the signals to favor exiting traffic. Notifications were made to the MoDOT EOC, Motor Carriers, AE, Community Relations, and the i70IM was sent out. Initially, due to the time of day and the placement of the up and over diversion, traffic queue was minimal. However, at the height of rush hour, the queue was estimated to be approximately 3 ½ miles, west of Wentzville Parkway.
- **Event Duration:** 6 hours 30 minutes

| Westbound I-70<br>at Route T/W                                                      | Left<br>Shoulder | Lane 1 | Lane 2 | Right<br>Shoulder |
|-------------------------------------------------------------------------------------|------------------|--------|--------|-------------------|
|  |                  |        |        |                   |
| Closed Hours/Minutes                                                                | 6:13             | 6:13   | 6:05   | 6:30              |

## Major Impact Traffic Incidents and Mitigation





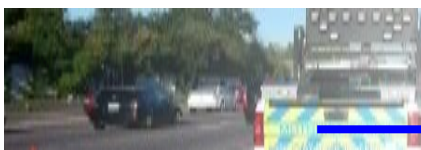
# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

8/16/2017 (Wednesday)

- **Time:** 9:41 am – 2:31 pm
- **Location:** St. Louis County – Westbound I-44 before MO 141
- **Event:** Single-Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 3 travel lanes affected equals (=) 67%
- **Incident Details:** A commercial vehicle left a boom up and struck the Maritz Road overpass causing substantial damage to the overpass. The vehicle continued west for some distance before finally pulling over. The boom, which broke free from the vehicle, fell into lanes 2 and 3 and required a heavy tow to remove.
- **Action:** St. Louis County PD responded as did Emergency Response who provided assistance with traffic control, and closed the Maritz overpass until inspectors could arrive to check structural integrity. The TMC activated appropriate message boards to notify drivers of the closure. The MoDOT Incident Management Commander, Community Relations, and inspectors with Hampton Bridge were all notified. MoDOT maintenance responded to assist with cleanup. After the overpass was inspected, both directions were reopened, but the shoulder remained closed for repairs. One tow company responded to remove the boom from the interstate, but it was determined they did not have the proper equipment to handle the job. A heavy tow was requested, which contributed to the duration of the incident. Traffic queued for 2.5 miles, but quickly cleared once all lanes were reopened.
- **Event Duration:** 4 hours 30 minutes

| Westbound I-44<br>before MO 141                                                     | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Right<br>Shoulder |
|-------------------------------------------------------------------------------------|------------------|--------|--------|--------|-------------------|
|  |                  |        |        |        |                   |
| Closed Hours/Minutes                                                                | 0:00             | 0:00   | 4:10   | 4:46   | 4:46              |



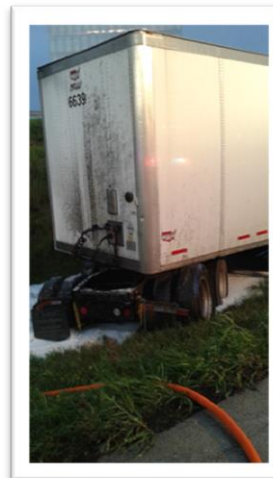
# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

8/16/2017 (Wednesday)

- **Time:** 7:26 pm – 11:14 pm \*\*\*Hazmat\*\*\*
- **Location:** St. Louis County – Westbound I-64 before Boones Crossing
- **Event:** Vehicle Accident with Overturned Tractor Trailer
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 3 travel lanes affected equals (=) 67%
- **Incident Details:** A tractor trailer driver lost control and ran off the right side of the roadway where the vehicle jackknifed. The trailer ripped the cab off and the cab landed in the ditch rupturing the fuel tank. It is estimated the tractor trailer leaked approximately 150 gallons of diesel fuel.
- **Action:** Chesterfield Police Department responded along with Monarch Fire and EMS. MoDOT Emergency Response assisted with traffic control and the TMC activated all appropriate message boards within 2 minutes of being notified. ER put down hazmat socks to block the drains while the Fire Department put foam over the fuel to prevent ignition. DNR was notified due to the amount of fuel leaked. MoDOT maintenance responded with a sweeper to assist in the clean-up of mud from the interstate. While attempting to upright the vehicle, the tow company damaged the pavement of lane #3. Due to the accident happening in a work zone, the project inspector responded to inspect the pavement. It was decided that ER would complete a temporary fix of the pavement damage, and the contractor would repair at a later time. All this contributed to the duration of the incident. The TMC was experiencing system failures which made it difficult to assess the exact impact to traffic. However, the queue was estimated to be less than a mile at its peak.
- **Event Duration:** 3 hours 48 minutes

| Westbound I-64<br>before Boones Crossing                                            | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Right<br>Shoulder |
|-------------------------------------------------------------------------------------|------------------|--------|--------|--------|-------------------|
|  |                  |        |        |        |                   |
| Closed Hours/Minutes                                                                | 0:00             | 0:00   | 3:43   | 3:48   | 3:48              |





# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

8/18/2017 (Friday)

- **Time:** 11:26 am – 7:30 pm \*\*\*Hazmat\*\*\*
- **Location:** St. Louis County – Eastbound I-270 at Washington/Elizabeth
- **Event:** Single Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 1 of 3 travel lanes affected equals (=) 33% + Exit Ramp
- **Incident Details:** A tractor trailer ran off the roadway and punctured both fuel tanks, spilling approximately 150 gallons of diesel fuel.
- **Action:** Florissant Police and Fire were first on scene and made initial notification to the TMC. Three Emergency Response units were dispatched to assist with traffic control. Upon arrival ER units closed 2 right lanes and the exit ramp to Washington/Elizabeth. TMC operators activated all appropriate message boards within a minute of being notified. Notifications were made to the MoDOT Incident Commander, DNR and the AE. Bellefontaine Maintenance was dispatched by the TMC to bring oil dry. Traffic on Eastbound I-270 queued 5.5 miles at the height of rush hour. The TMC extended the message boards back to notify the public of the significant delay. A heavy tow removed the tractor trailer approximately 2 hours into the incident and units were able to open all mainline traffic. However, the exit ramp remained closed an additional six hours. The extended duration was due to the response time for Environmental Restoration, as well as their cleanup time.
- **Event Duration:** 8 hours 4 minutes

| Eastbound I-270<br>at Washington/Elizabeth                                          | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Exit<br>Ramp | Right<br>Shoulder |
|-------------------------------------------------------------------------------------|------------------|--------|--------|--------|--------------|-------------------|
|  |                  |        |        |        |              |                   |
| Closed Hours/Minutes                                                                | 0:00             | 0:00   | 0:29   | 2:11   | 8:04         | 8:04              |



## Major Impact Traffic Incidents and Mitigation

8/26/2017 (Saturday)

- **Time:** 11:41 am – 1:33 pm \*\*\*Fatality\*\*\*
- **Location:** St. Charles County – Eastbound I-70 past Route K
- **Event:** Two-Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 1 of 3 travel lanes affected equals (=) 33%
- **Incident Details:** Two vehicles traveling east on I-70 when the first struck a piece of metal debris in the roadway. That vehicle sustained minor damage. However, the second vehicle struck the same piece of debris, which was thought to be a metal tie down bar from a tractor trailer. The metal punctured the vehicles fuel tank causing it to burst into flames. The driver was able to pull the vehicle to the side of the roadway. One passenger sustained critical burns and was air lifted to a local hospital where they passed 10 days later. Two passengers suffered moderate burns and were also transported.
- **Action:** O'Fallon Police and Fire, St. Charles County Ambulance District and the MSHP were first on scene and closed all eastbound lanes. The TMC dispatched two MoDOT Emergency Response units to assist with traffic control, and activated appropriate message boards within 2 minutes of being notified of the incident. Traffic was diverted off at Route K, and Police put the signals on flash and directed traffic at the intersection of Route K and Route M. The EOC, ER Supervisor, AE, and Motor Carriers were all notified, and the SL admin text was sent as was the i70IM. Police reopened 2 left lanes and the ramp at 12:42 pm, but held two right lanes for reconstruction. Traffic queue was estimated to be four miles at its peak, but progressively cleared as lanes were reopened.
- **Event Duration:** 1 hour 52 minutes

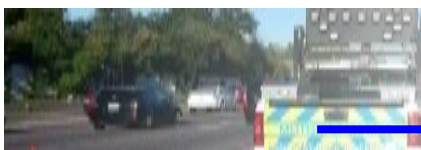
| Eastbound I-70<br>past Route K<br> | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Right<br>Shoulder |
|-----------------------------------------------------------------------------------------------------------------------|------------------|--------|--------|--------|--------|-------------------|
| Closed Hours/Minutes                                                                                                  | 0:00             | 1:00   | 1:00   | 1:23   | 1:52   | 1:52              |



## Major Impact Traffic Incidents and Mitigation

8/26/2017- 08/27/2017 (Saturday-Sunday)

- **Time:** 3:24 pm – 8:20 am
- **Location:** St. Louis County – Northbound/Southbound I-55 at Mattis Road
- **Event:** Train Derailment
- **Estimated Initial Impact:** Rush Hour: 5 of 5 travel lanes affected equals (=) 100% both directions
- **Incident Details:** Missouri State Highway Patrol contacted the TMC advising a Burlington Northern Santa Fe train had derailed over I-55 near Mattis Road. They requested both directions of the interstate be closed due to safety concerns that all train cars may overturn.
- **Action:** Three MoDOT Emergency Response units were dispatched to assist MSHP and the St. Louis County Police with the full closure in both directions. Traffic for northbound was diverted off onto Butler Hill while southbound was diverted off onto Lindbergh Boulevard (US 67). The I-255 westbound and I-270 southbound ramps to I-55 southbound were also closed. The EOC, AE, Communications Staff, Motor Carriers, Maintenance Superintendent, and the MoDOT Incident Management Coordinator were all notified. An i55IM was sent along with a SLAdminText to notify the SL District Leadership Team of the derailment. MoDOT Railroad Safety Inspectors arrived on scene to conduct an investigation. The TMC used DMS message boards along I-270, I-255, I-44, I-55, US 61/67, MO 141 and MO 30 to alert motorists of the closure. Along with messaging on I-55 to the Missouri/Arkansas State Line, IDOT Communications was contacted for messaging. Vehicles were being diverted to Lemay Ferry Road (US 61/67) from the I-55 @ Butler Hill ramps. Southbound I-55 traffic was directed southbound on US 61/67. Local traffic seemed to continue to use Lemay Ferry Road while travelers used the I-55 entrance at Meramec Bottom Road / Baumgartner Road just a little over a mile down from Butler Hill. Traffic Engineers switched the controller to free and changed many of the phases to accommodate the increased vehicle demand. Most notably, phase 6 (Southbound Through) max time of 30 sec was changed to 100 sec and the vehicle extension to 2 seconds at US 61/67 @ Butler Hill Road. The signal was set to free to increase the max times of the northbound/southbound through lanes by an additional 30 seconds and the recall to max. The Eastbound left turn from Butler Hill Road onto US 61/67 was changed from 25 seconds to 40 seconds. Vehicles going northbound were directed off at the Butler Hill Road interstate ramps. The AMI program was used to look into finding a diversion plan. The recommended plan was implemented on the detour route for all signals north of Butler Hill up to Central City signal. The time of day timing plans were change to TP 84. Tweaks to the signals were made throughout the event attempting to alleviate all the congestion.
- **Result:** The changes that were made took little time to start to see improvements, but the additional time at the signals greatly increased the flow of traffic. Due to the high demand, the signal at US 61/67 @ Butler Hill Road was in constant gridlock until after sunset. The southbound traffic was taken care of very easily as there was only one signal to get back on the interstate. The northbound traffic saw a lot of congestion during the peak time, but greatly began to die down later in the day. No other issues were noted. All signals were reverted to their original status promptly at 8:00 am on Sunday morning. Traffic queued approximately 3 miles for northbound lanes, but subsided as time progressed.
- **Event Duration:** (NB) 12 hours 43 minutes (SB) 16 hours 59 minutes



# INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

| Northbound I-55<br>at Mattis Road                                                 | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Lane 5 | Right<br>Shoulder |
|-----------------------------------------------------------------------------------|------------------|--------|--------|--------|--------|--------|-------------------|
|  |                  |        |        |        |        |        |                   |
| Closed Hours/Minutes                                                              | 12:43            | 12:43  | 12:43  | 12:43  | 12:43  | 12:43  | 12:43             |

| Southbound I-55<br>at Mattis Road                                                  | Left<br>Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Lane 5 | Right<br>Shoulder |
|------------------------------------------------------------------------------------|------------------|--------|--------|--------|--------|--------|-------------------|
|  |                  |        |        |        |        |        |                   |
| Closed Hours/Minutes                                                               | 16:59            | 16:59  | 16:59  | 16:59  | 16:59  | 16:59  | 16:59             |



5:36 PM



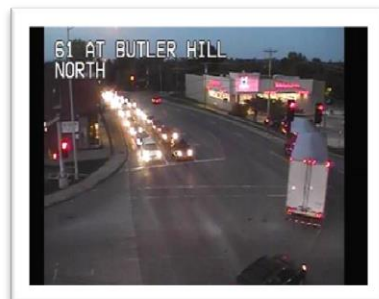
6:12 PM



6:51 PM



7:54 PM

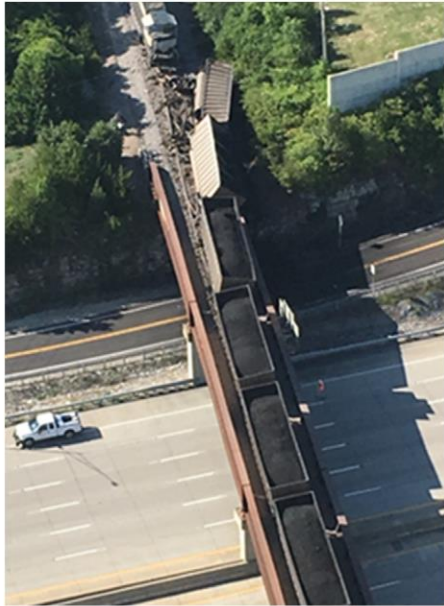


7:55 PM



8:59 PM

## Major Impact Traffic Incidents and Mitigation



## AM PEAK PERIOD MOBILITY JULY 2017

6 am – 7 am

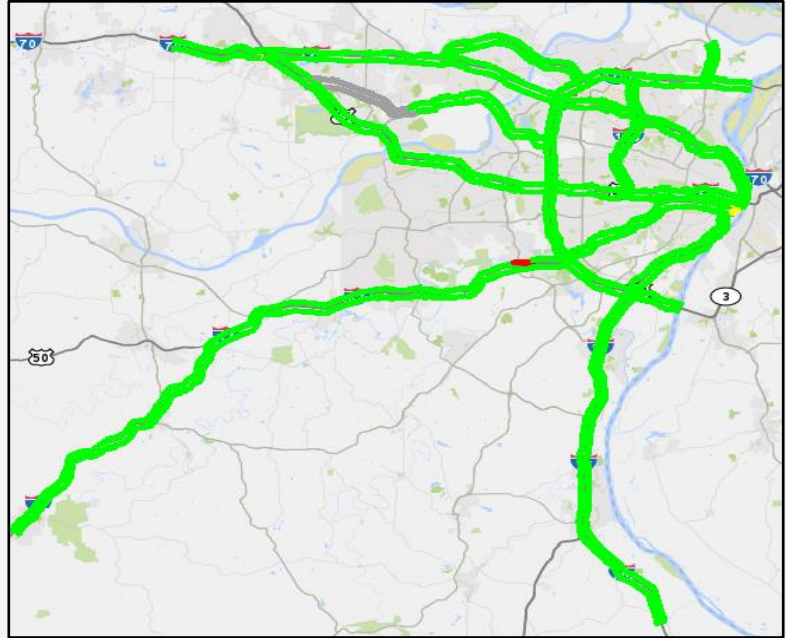
### LEGEND (Speed Index)

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

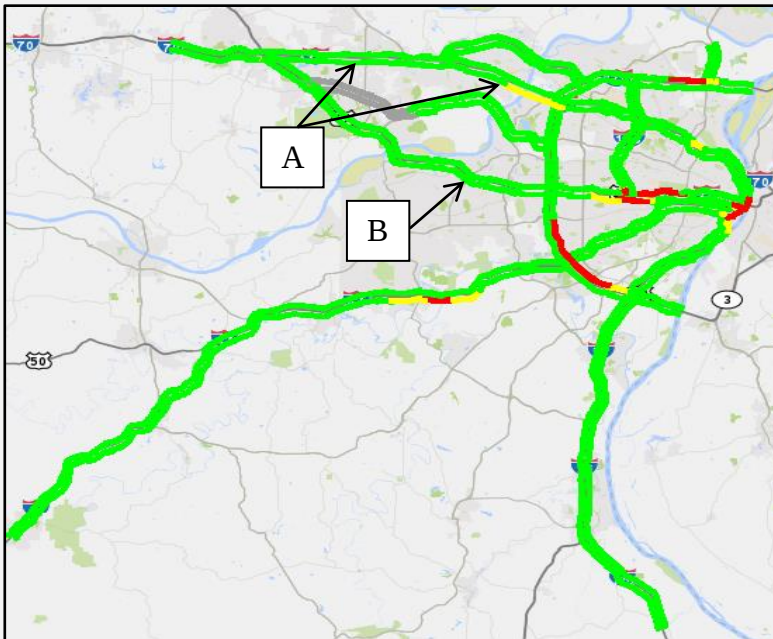
Overall AM Mobility from July to August **DECREASED**

### Highlighted Heat Map Locations

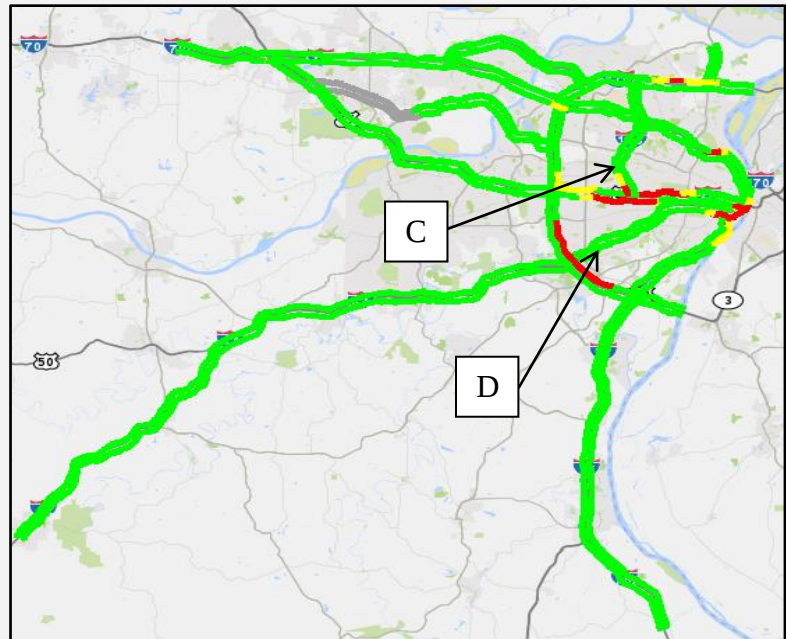
- A. EB I-70 from I-64/US-40/US-61 to Lindbergh (p. 35)
- B. EB I-64 from Boones Crossing to McCausland (p. 36)
- C. SB I-170 from St. Charles Rock Rd. to I-64 (p. 37)
- D. EB I-44 from Route 141 to Shrewsbury (p. 38)



7 am – 8 am



8 am – 9 am



## AM PEAK PERIOD MOBILITY AUGUST 2017

6 am – 7 am

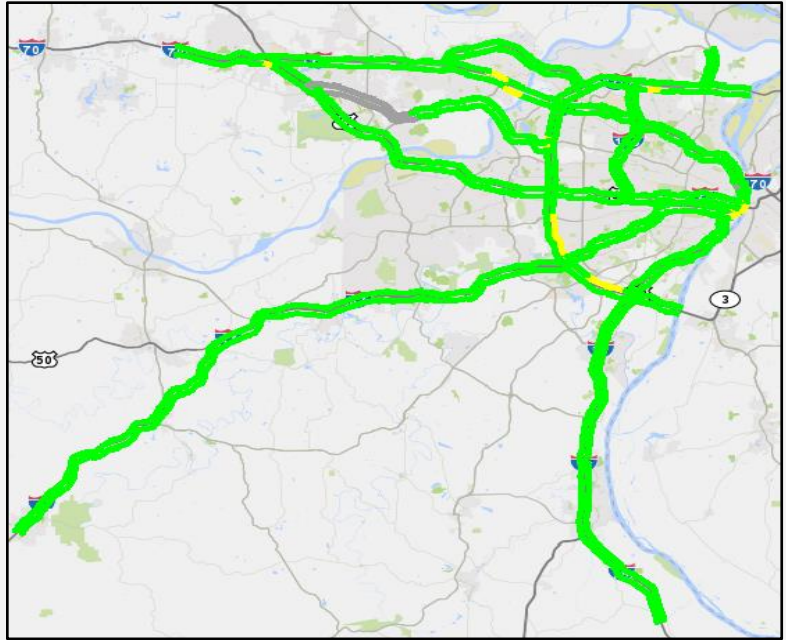
### LEGEND (Speed Index)

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

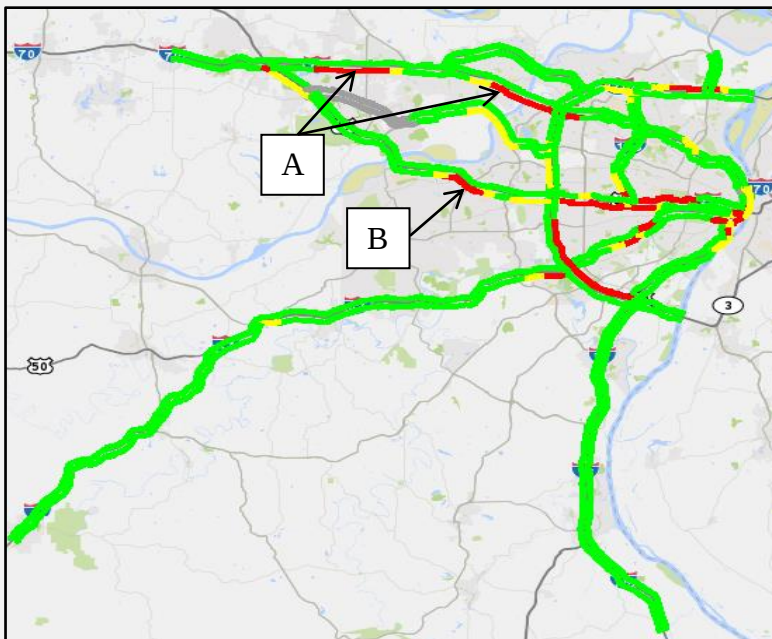
Overall AM Mobility from July to August **DECREASED**

### Highlighted Heat Map Locations

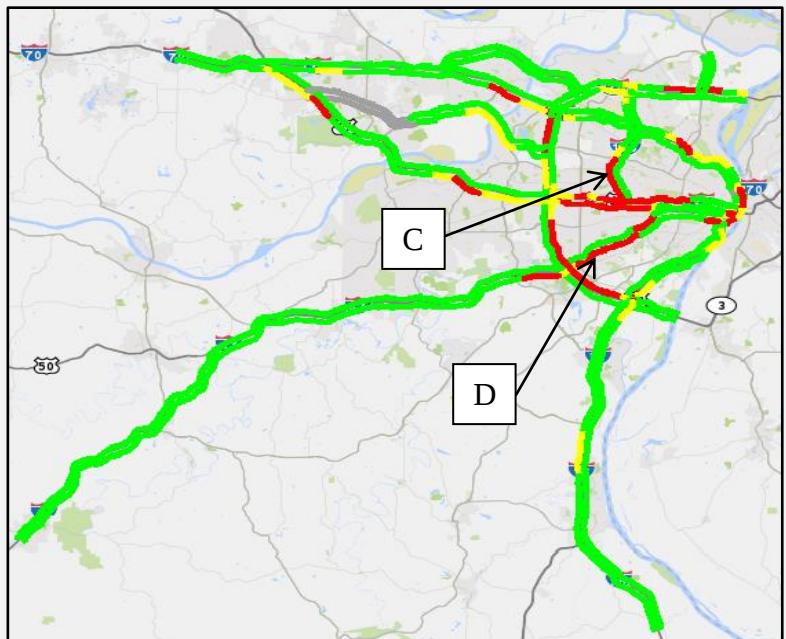
- A. EB I-70 from I-64/US-40/US-61 to Lindbergh (p. 35)
- B. EB I-64 from Boones Crossing to McCausland (p. 36)
- C. SB I-170 from St. Charles Rock Rd. to I-64 (p. 37)
- D. EB I-44 from Route 141 to Shrewsbury (p. 38)



7 am – 8 am



8 am – 9 am

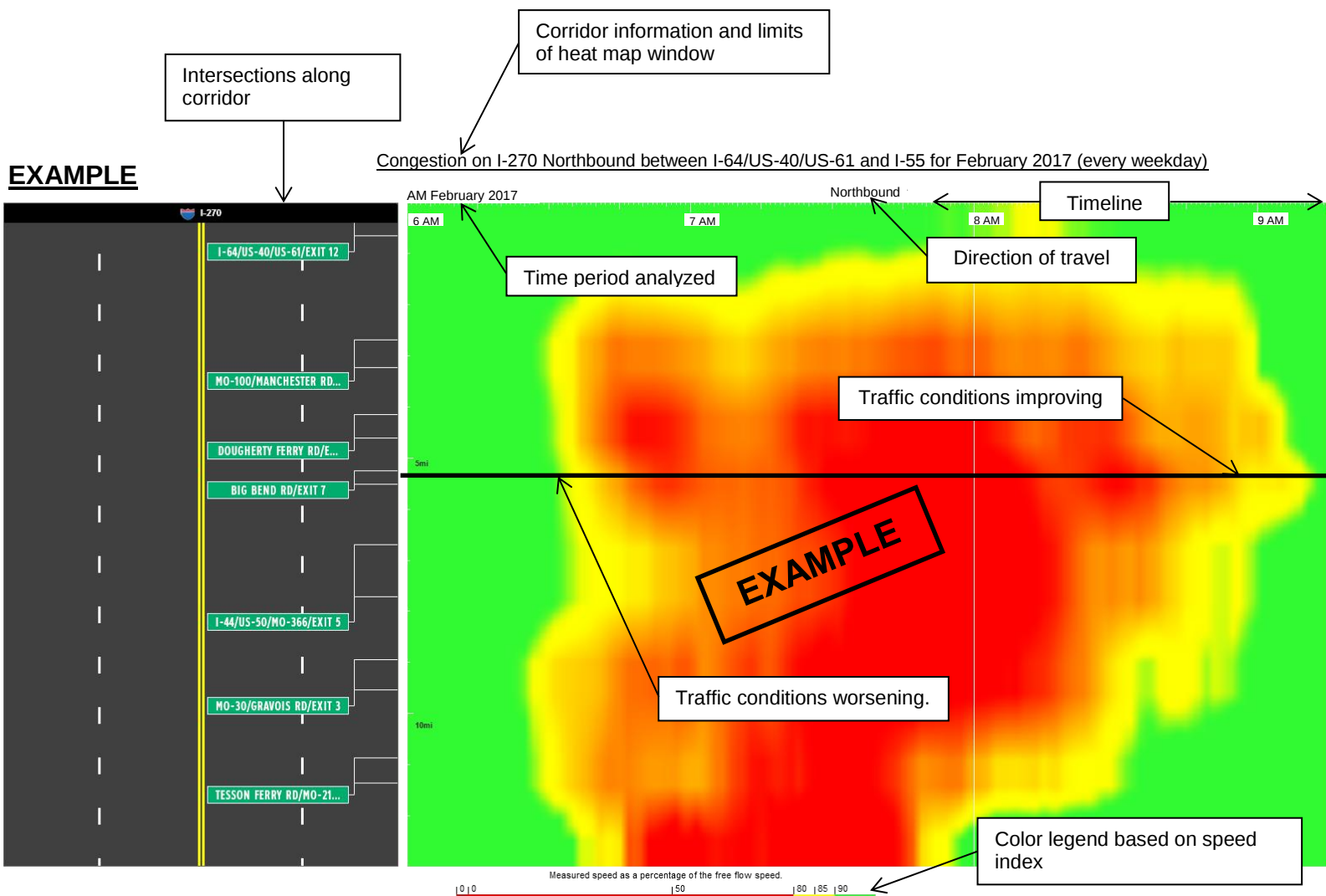


# FREEWAY MANAGEMENT

## How to read the Congestion Scan Heat Maps

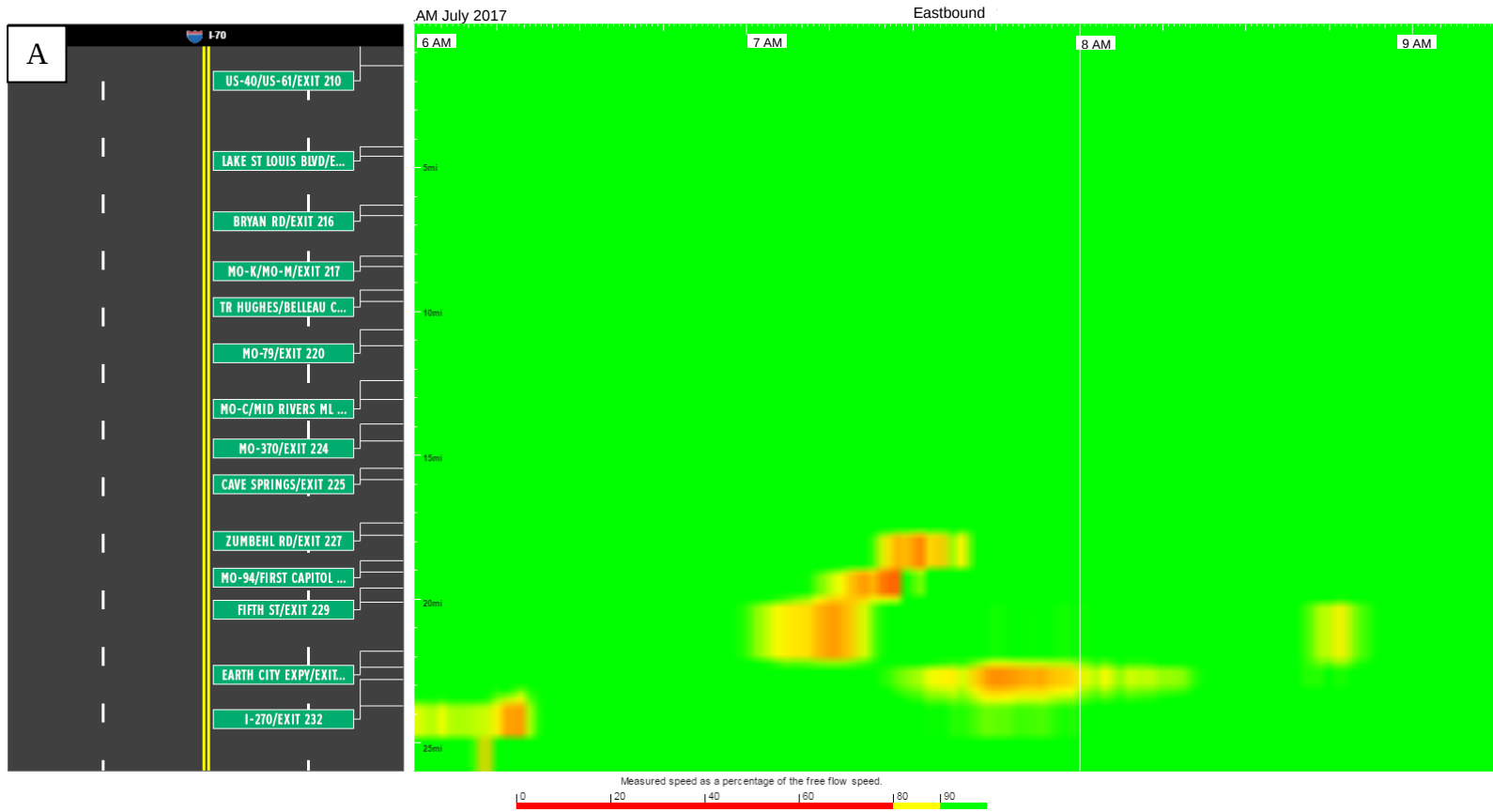
- The heat maps depict congestion along a corridor over a set time period.
- The map below shows Northbound I-270 from I-55 to I-64 during the hours of 6am – 9am for the month of February 2017.
- Following a horizontal line across the heat map at a given intersection will show traffic conditions at that 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

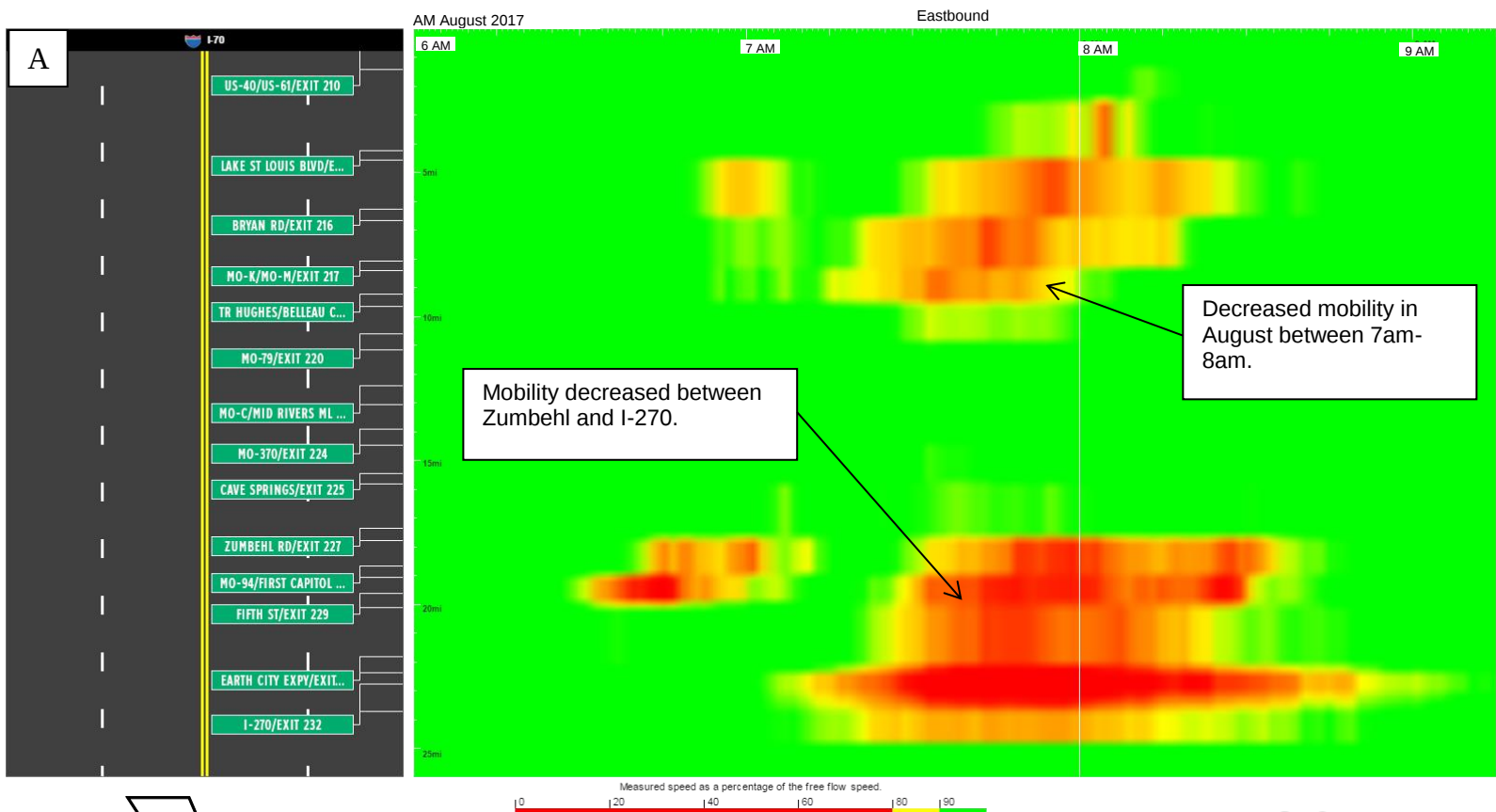


# FREEWAY MANAGEMENT

Congestion on I-70 Eastbound between I-64/US-40/US-61 and Lindbergh Blvd July 2017 (every weekday)

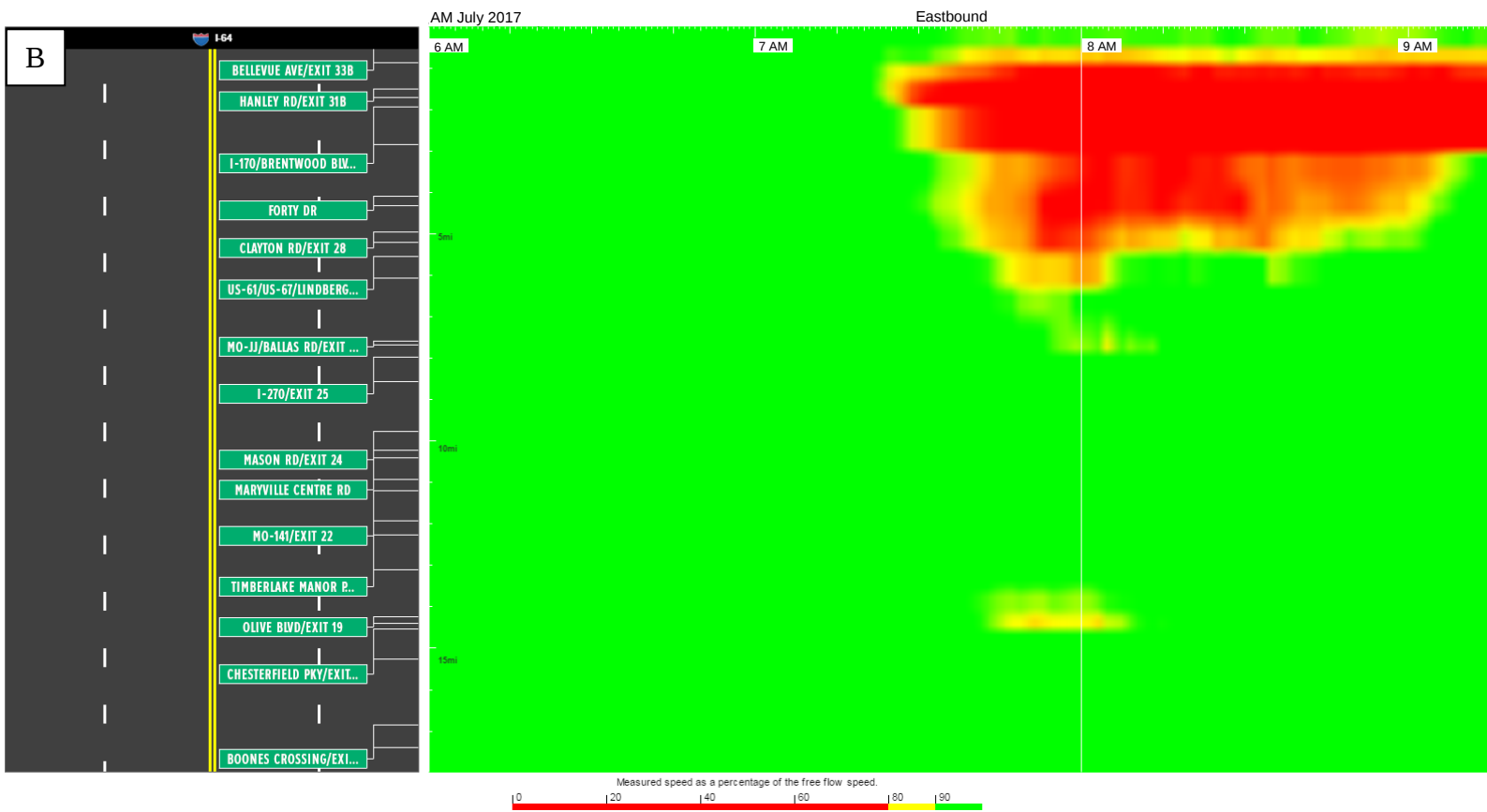


Congestion on I-70 Eastbound between I-64/US-40/US-61 and Lindbergh Blvd August 2017 (every weekday)

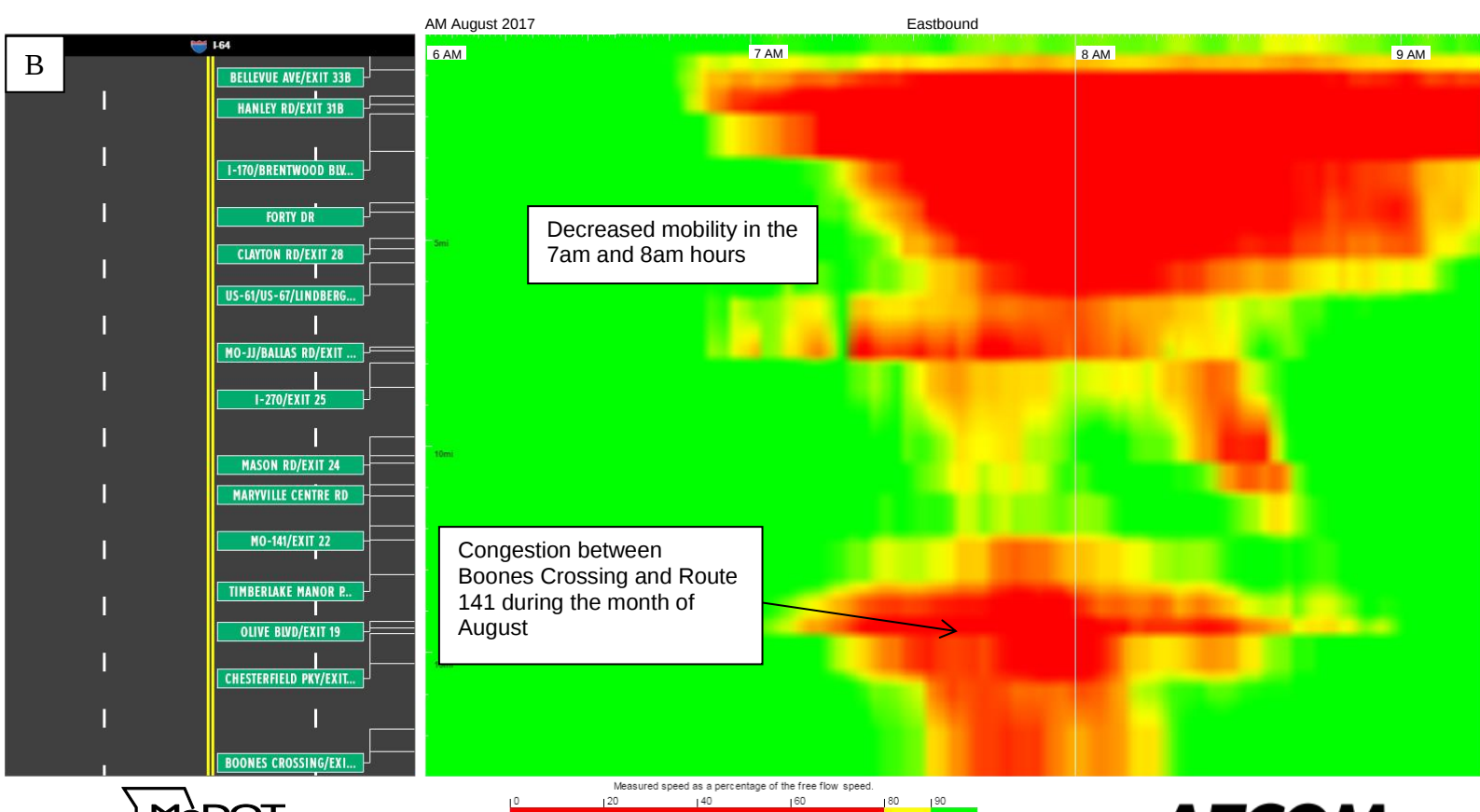


# FREEWAY MANAGEMENT

Congestion on I-64 Eastbound between Boones Crossing and McCausland for July 2017 (every weekday)



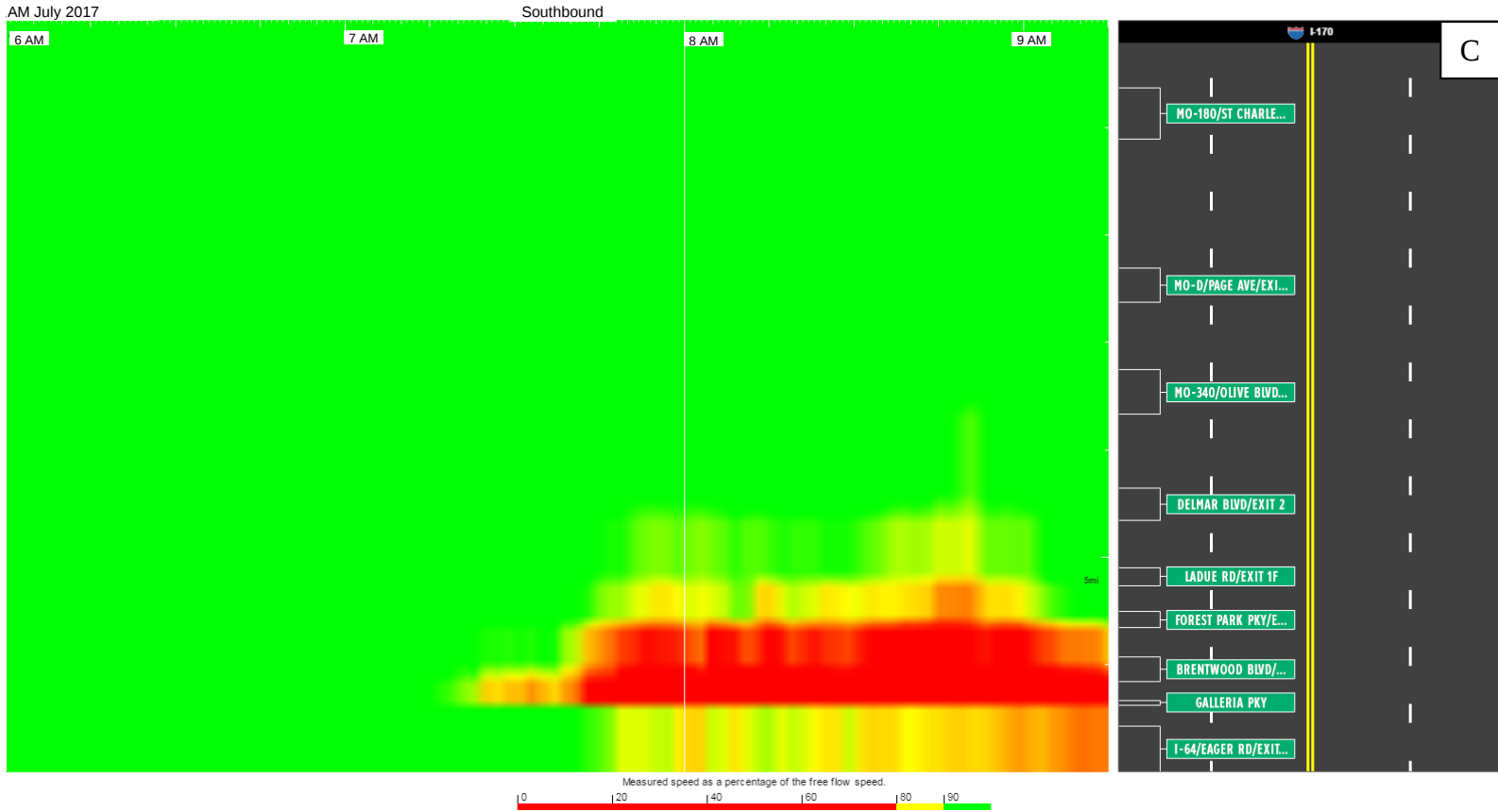
Congestion on I-64 Eastbound between Boones Crossing and McCausland for August 2017 (every weekday)



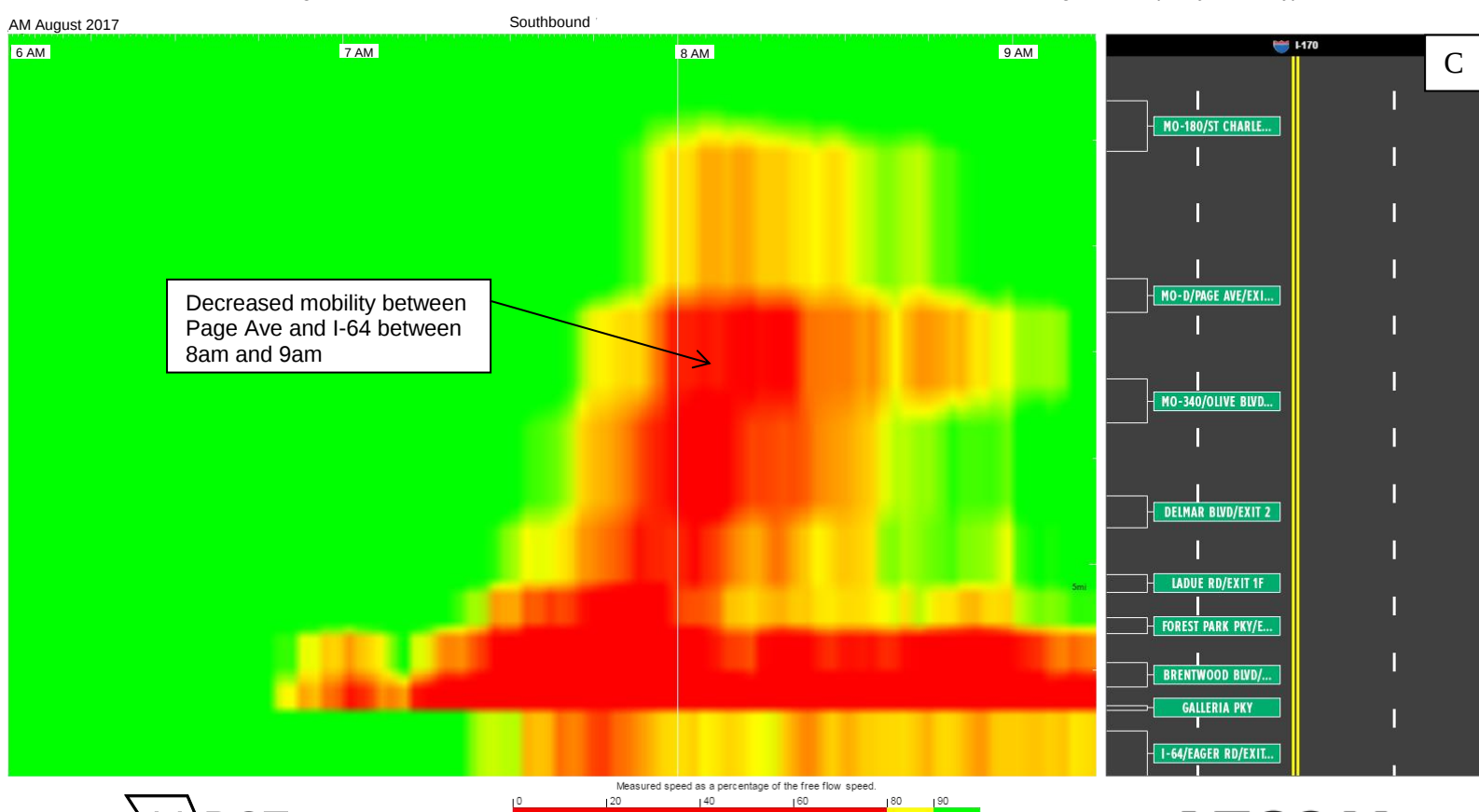


# FREEWAY MANAGEMENT

Congestion on I-170 Southbound between MO-180/St. Charles Rock Road and I-64 for July 2017 (every weekday)



Congestion on I-170 Southbound between MO-180/St. Charles Rock Road and I-64 for August 2017 (every weekday)



# 

Congestion on I-44 Eastbound between Route 141 and Shrewsbury for July 2017 (every weekday)

AM July 2017

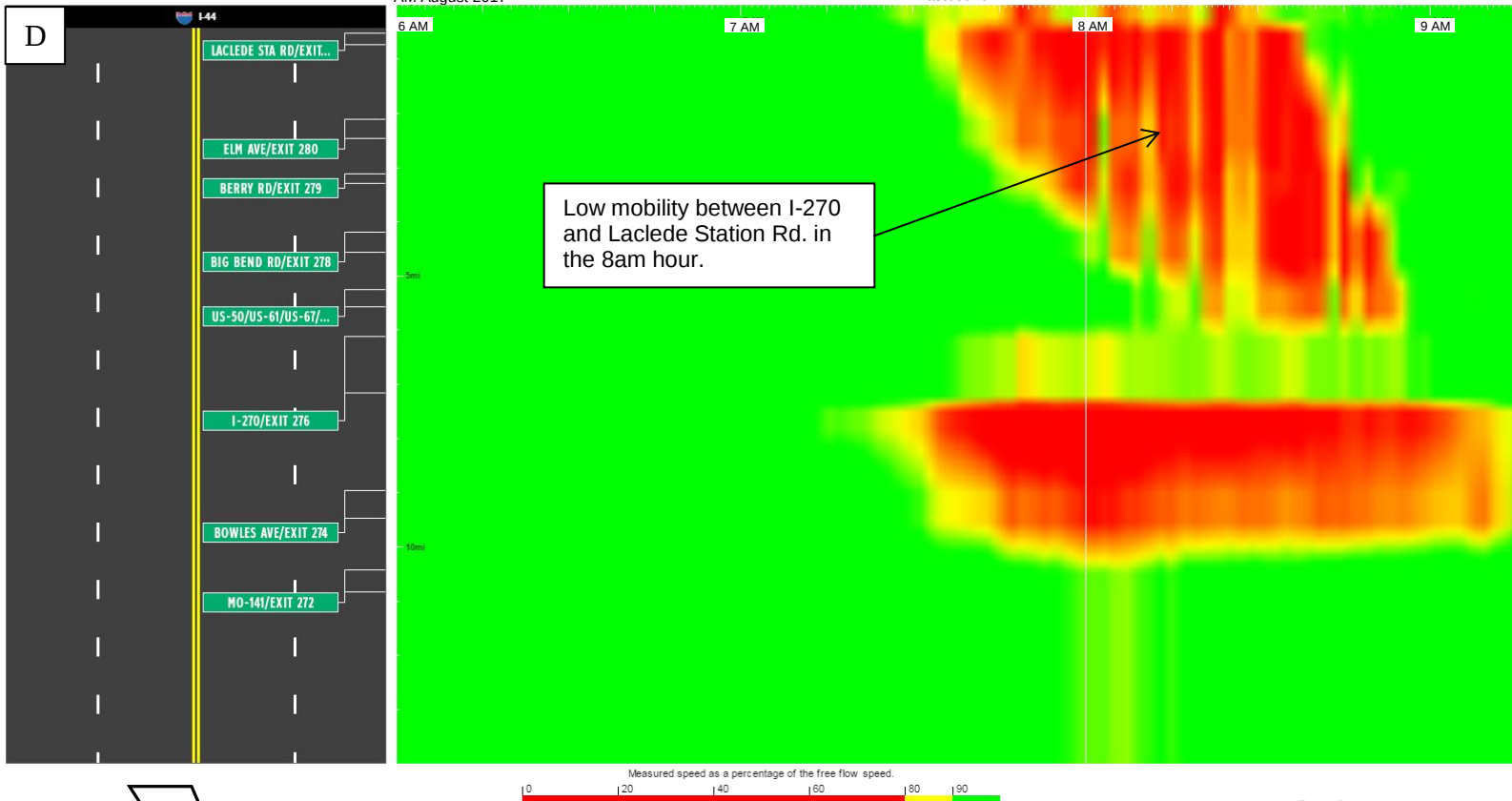
Eastbound



Congestion on I-44 Eastbound between Route 141 and Shrewsbury for August 2017 (every weekday)

AM August 2017

Eastbound





# FREEWAY MANAGEMENT

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# FREEWAY MANAGEMENT

## PM PEAK PERIOD MOBILITY JULY 2017

4 pm – 5 pm

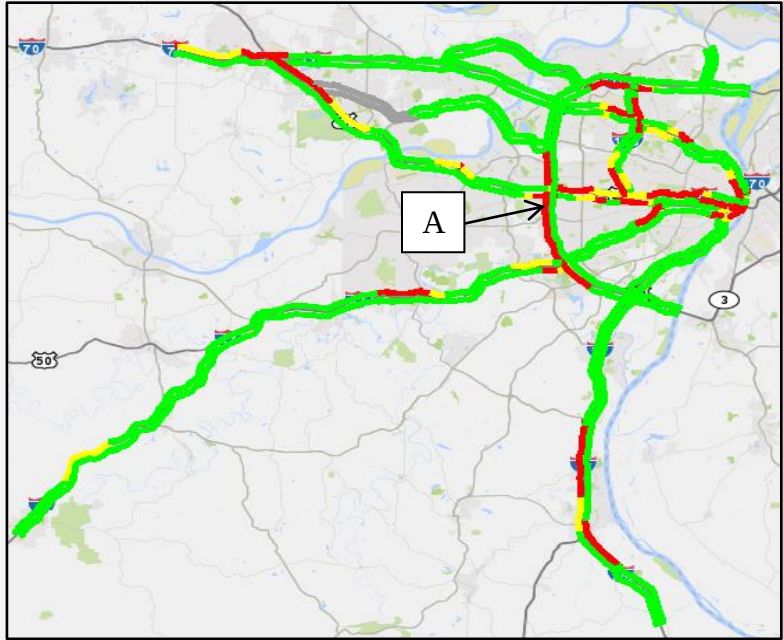
### LEGEND (Speed Index)

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

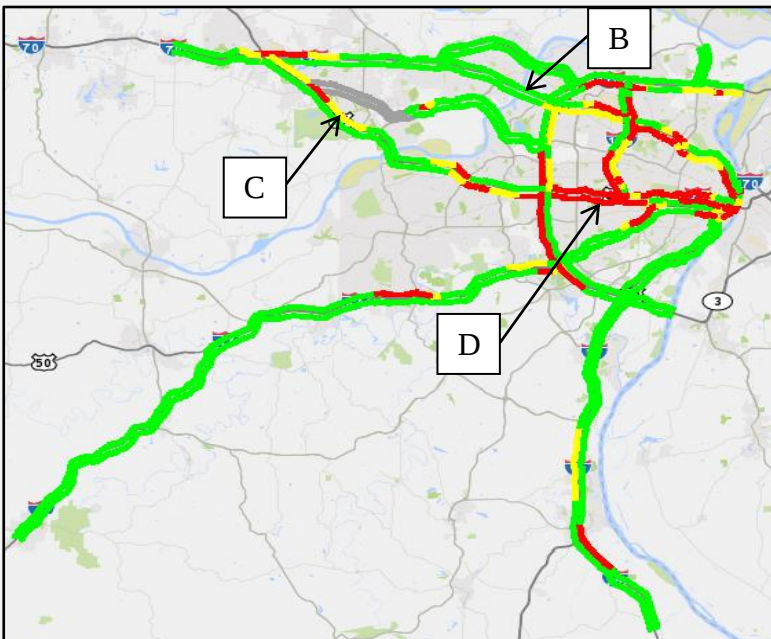
Overall PM Mobility from July to August **DECREASED**

### Highlighted Heat Map Locations

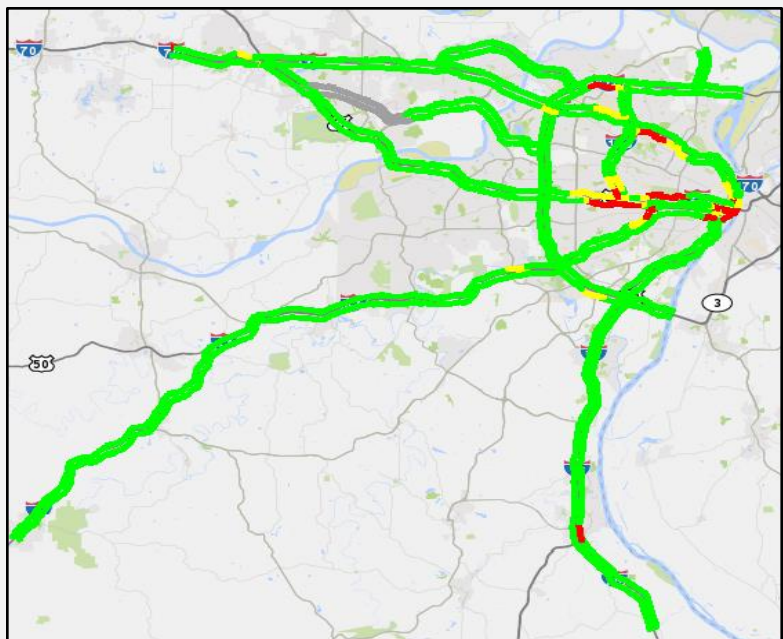
- A. SB I-270 from Dorsett to I-55 (p. 42)
- B. WB I-70 from I-170 to Route 370 (p. 43)
- C. WB I-64 from I-55/I-70/US-40(Downtown) to I-70 (p. 44)
- D. EB I-64 from Boones Crossing to McCausland (p. 45)



5 pm – 6 pm



6 pm – 7 pm



## PM PEAK PERIOD MOBILITY AUGUST 2017

4 pm – 5 pm

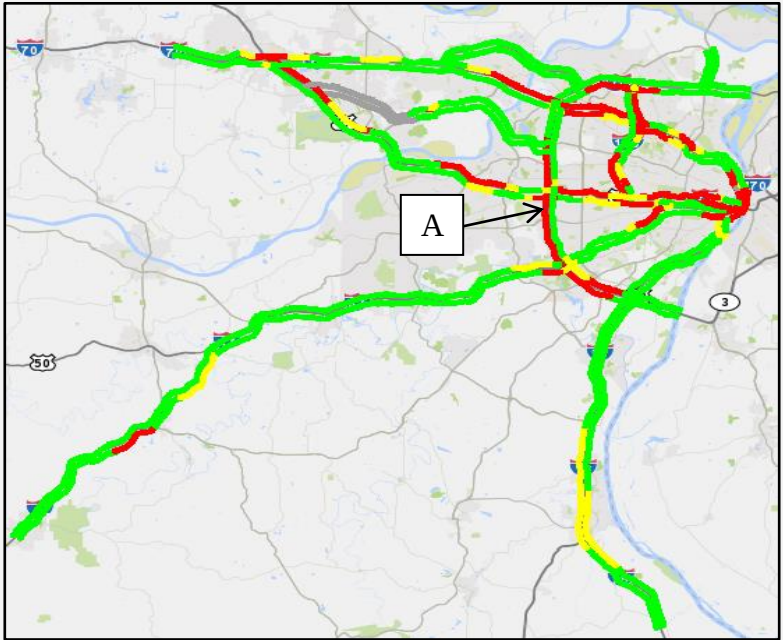
### LEGEND (Speed Index)

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

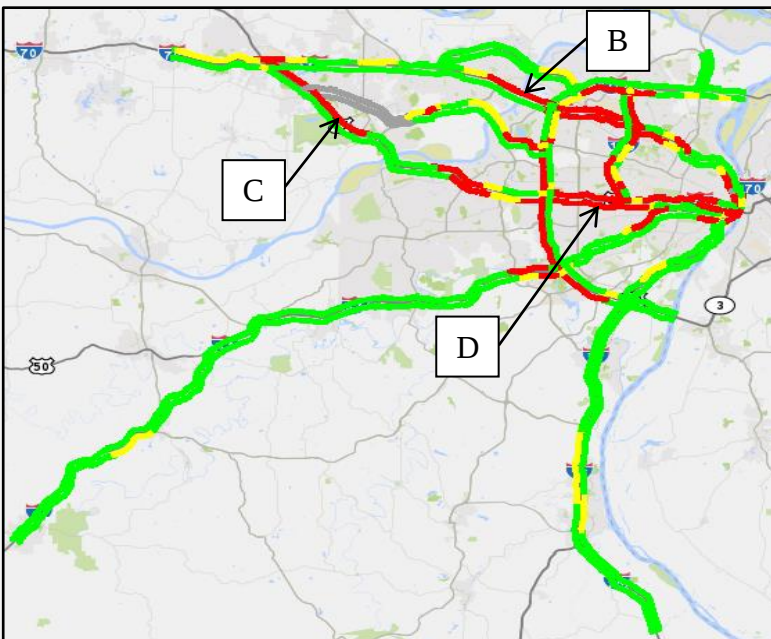
Overall PM Mobility from July to August **DECREASED**

### Highlighted Heat Map Locations

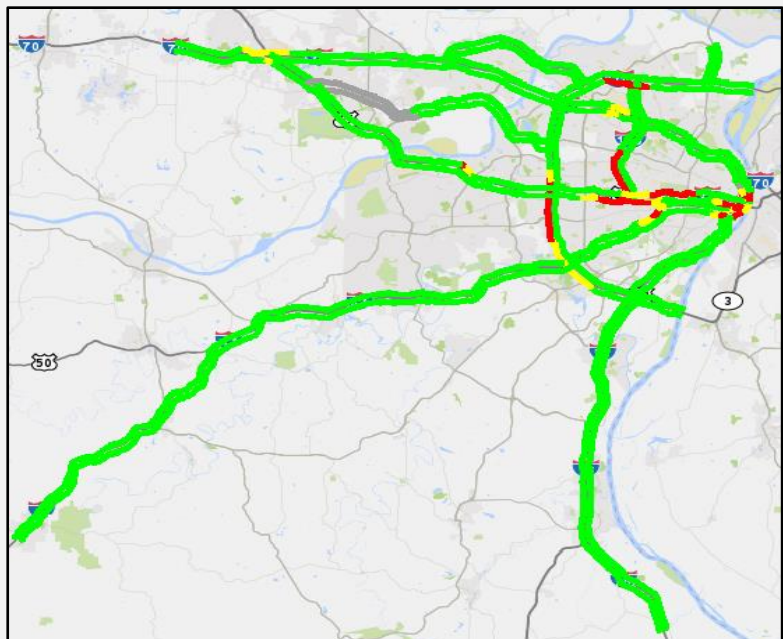
- A. SB I-270 from Dorsett to I-55 (p. 42)
- B. WB I-70 from I-170 to Route 370 (p. 43)
- C. WB I-64 from I-55/I-70/US-40(Downtown) to I-70 (p. 44)
- D. EB I-64 from Boones Crossing to McCausland (p. 45)



5 pm – 6 pm

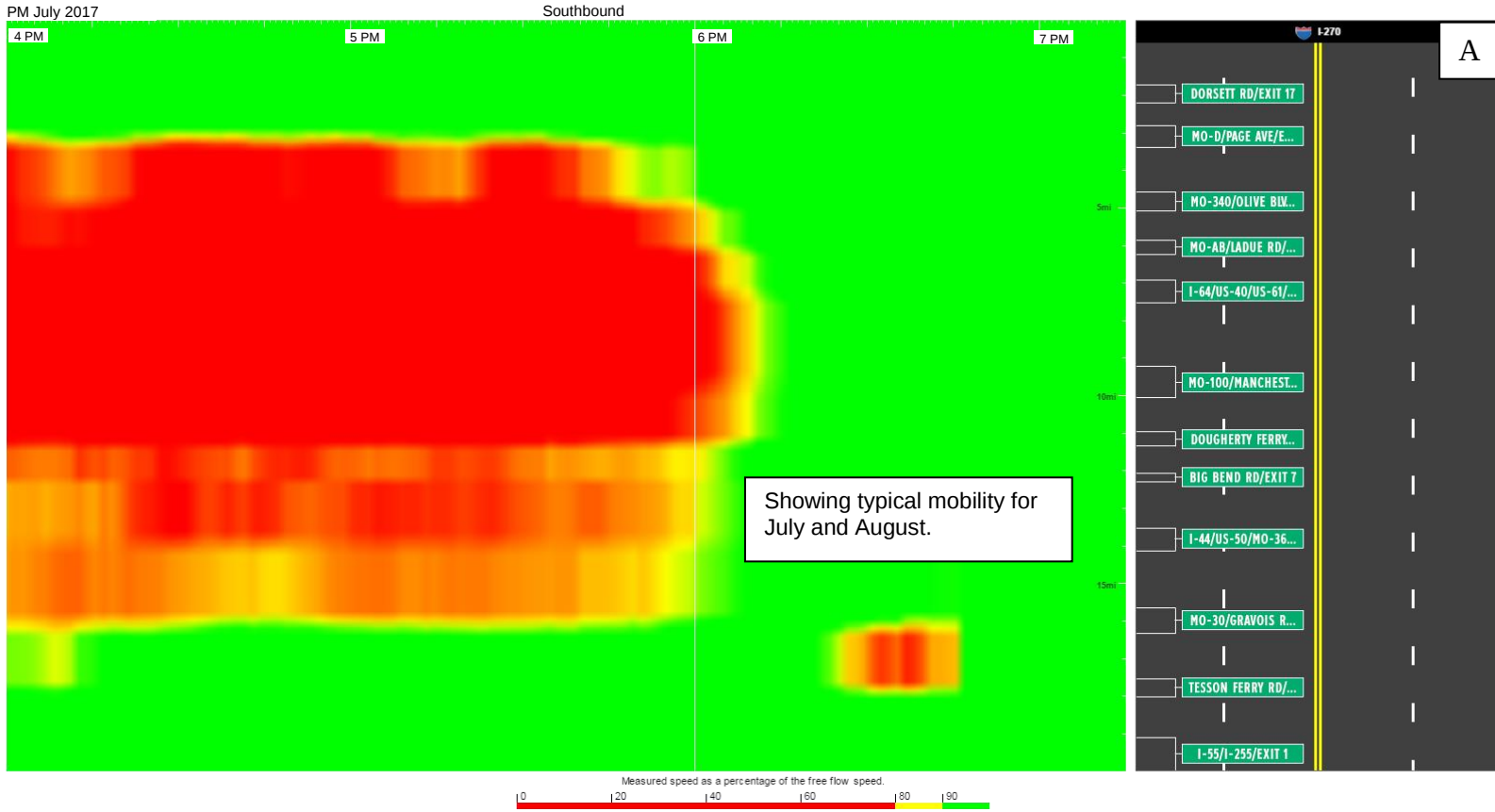


6 pm – 7 pm

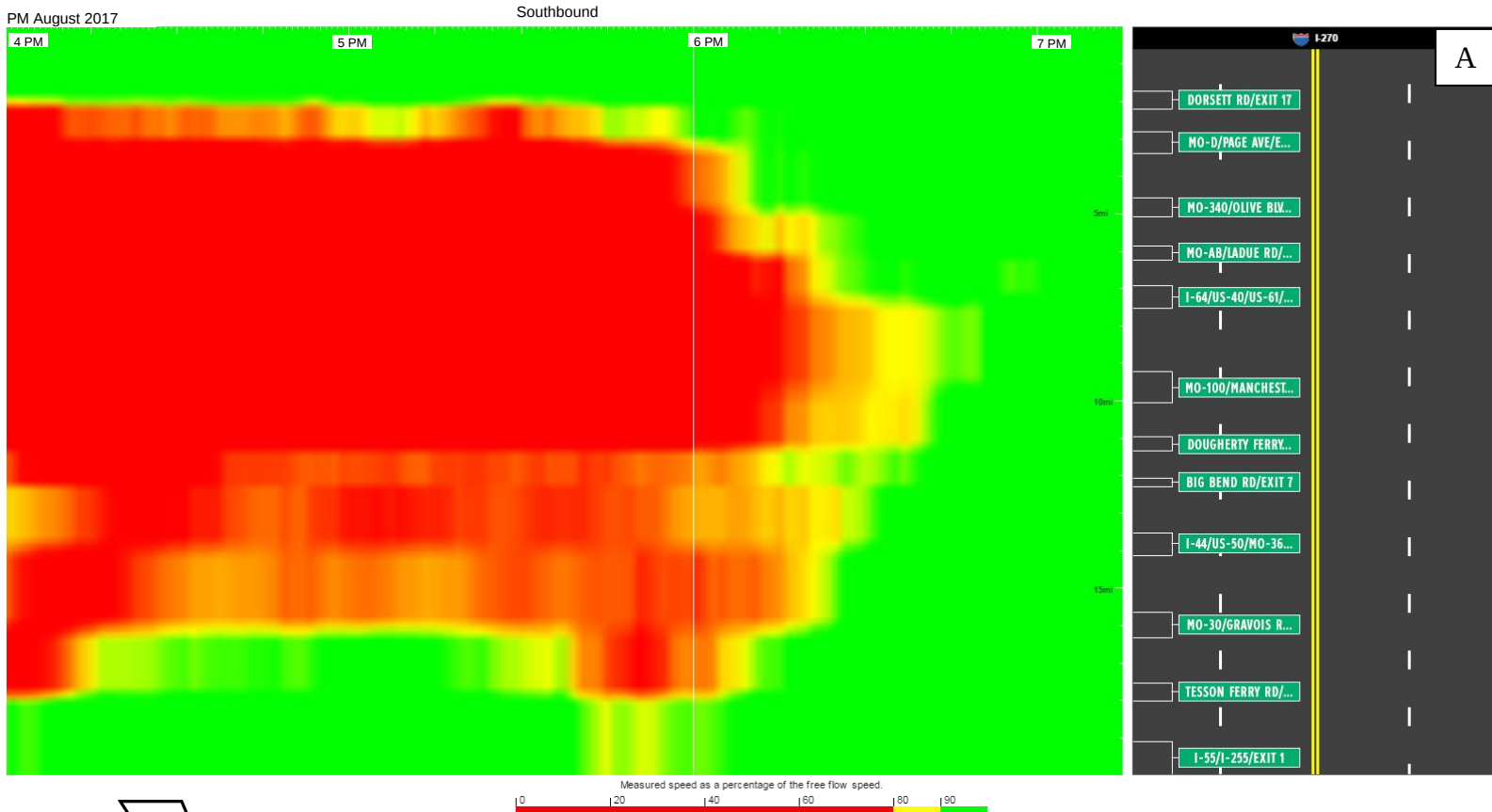


# FREEWAY MANAGEMENT

Congestion on I-270 Southbound between Dorsett Rd and I-55 for July 2017 (every weekday)



Congestion on I-270 Southbound between Dorsett Rd and I-55 for August 2017 (every weekday)

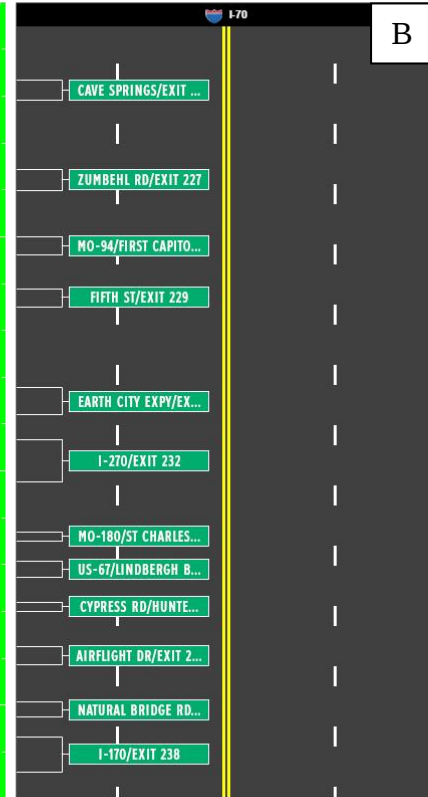
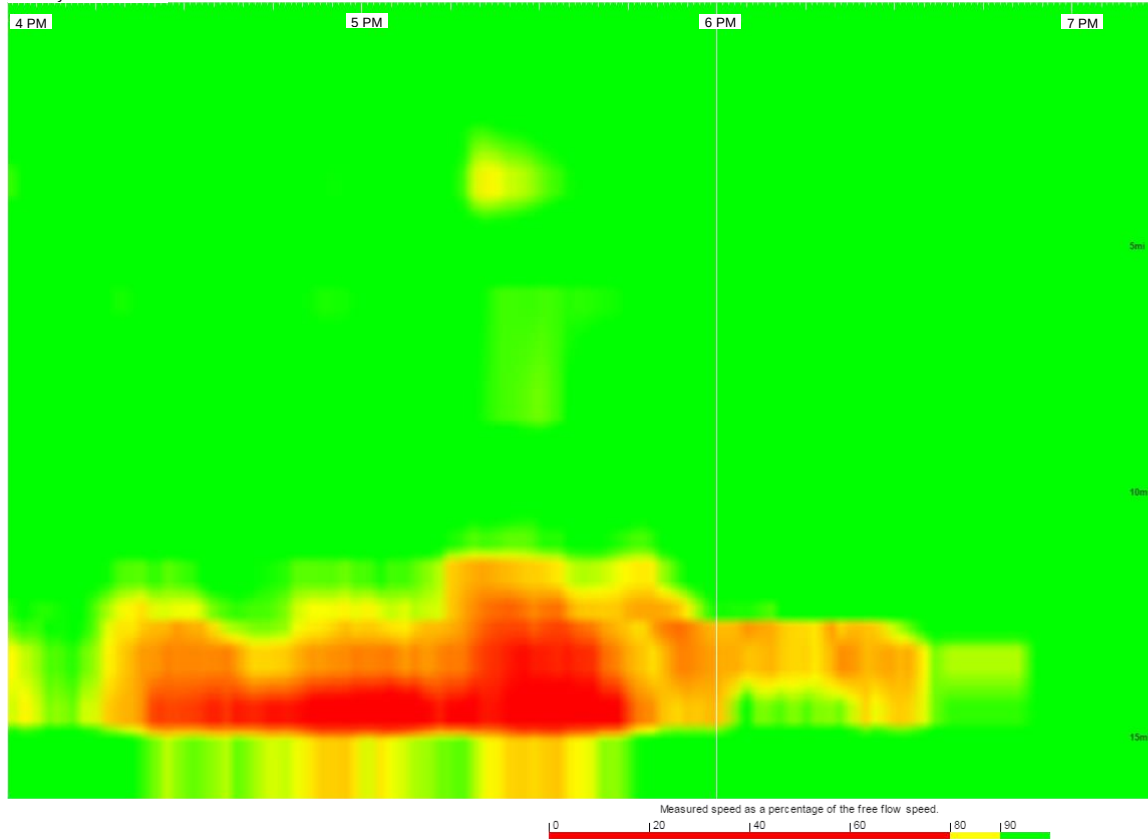


# FREEWAY MANAGEMENT

Congestion on I-70 Westbound between I-170 and Route 370 for July 2017 (every weekday)

PM July 2017

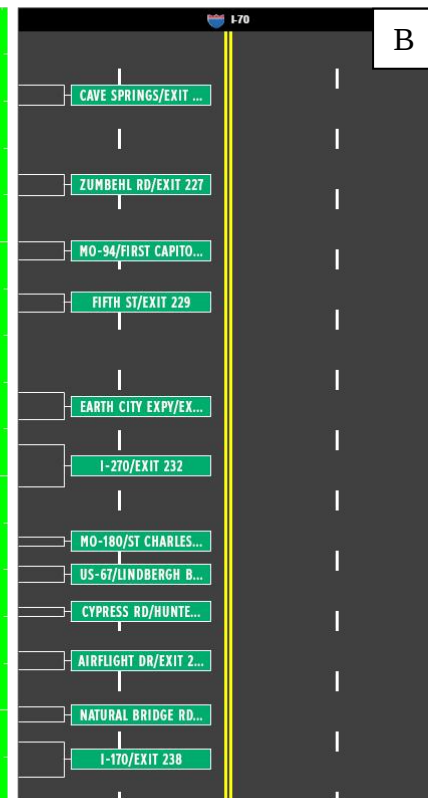
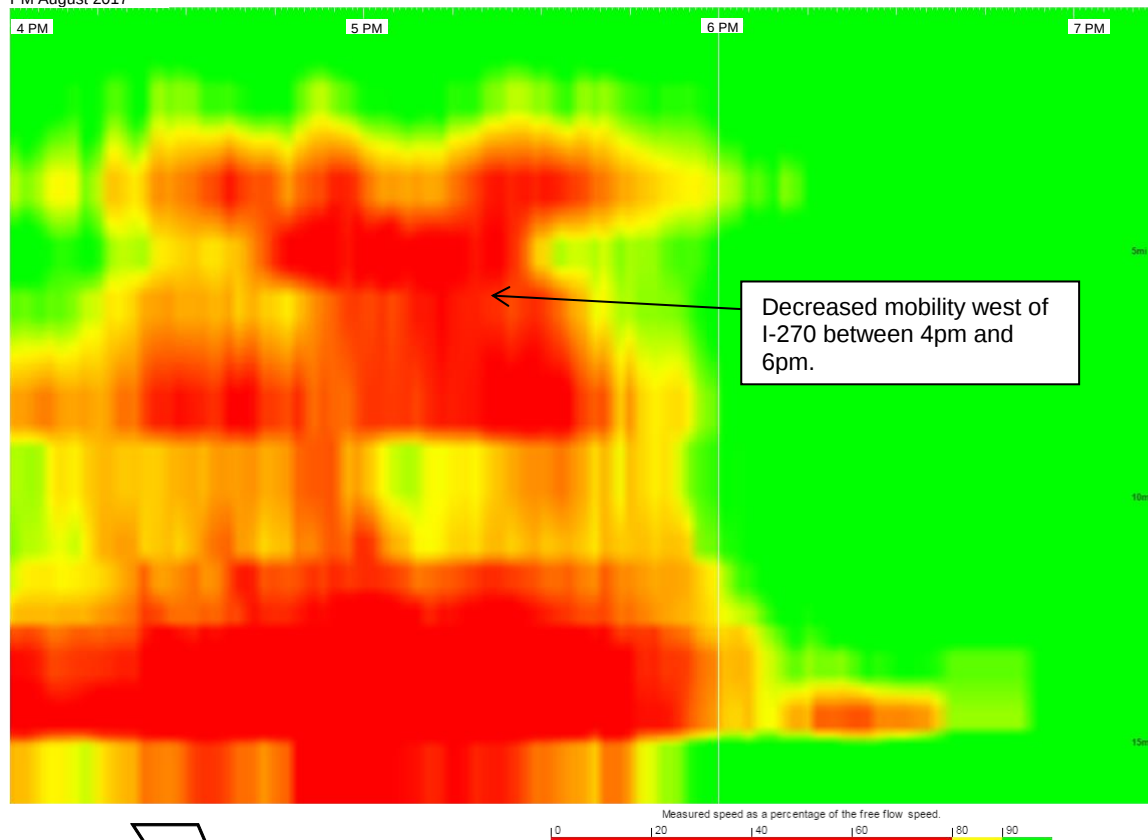
Westbound



Congestion on I-70 Westbound between I-170 and Route 370 for August 2017 (every weekday)

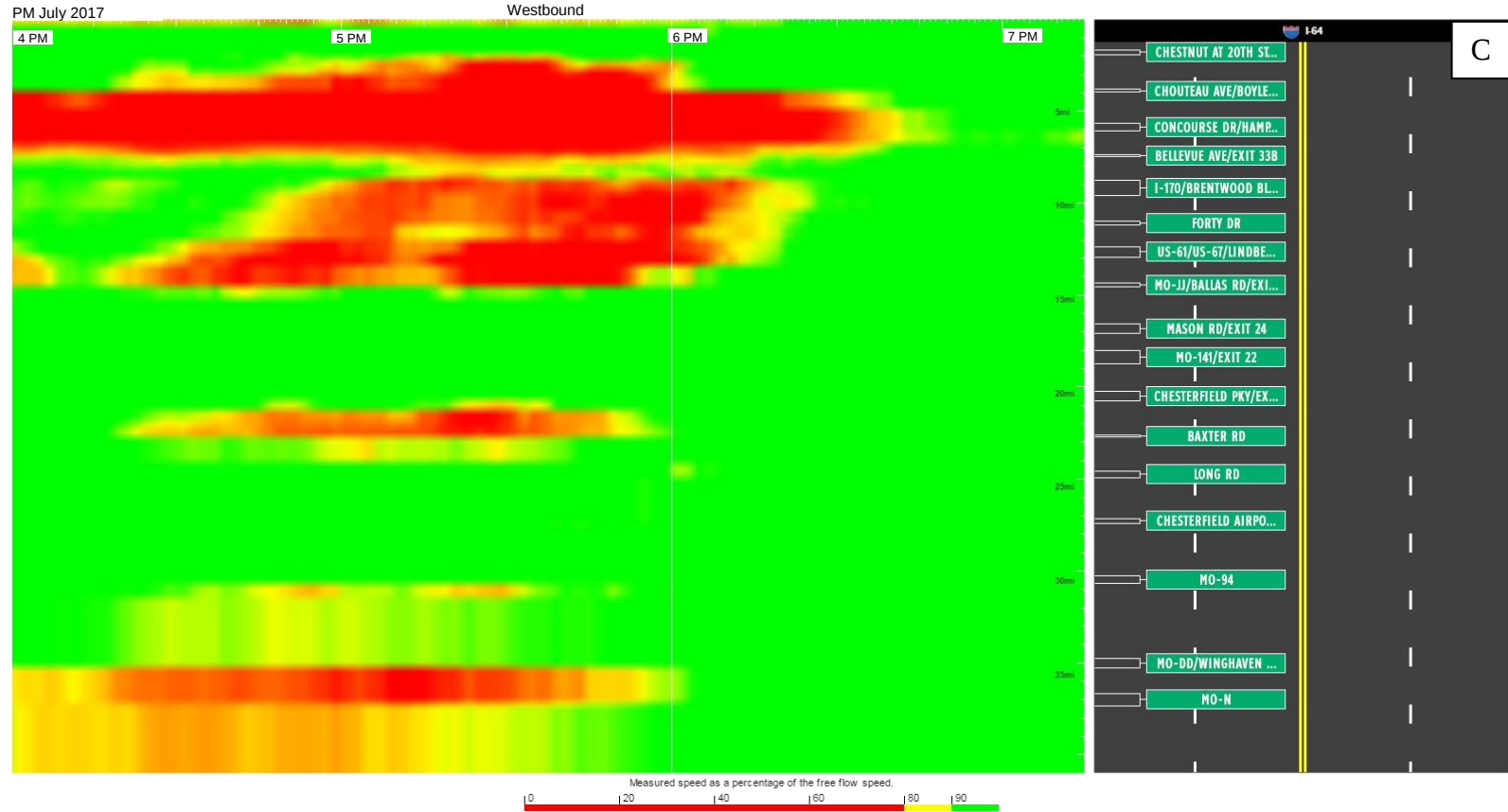
PM August 2017

Westbound

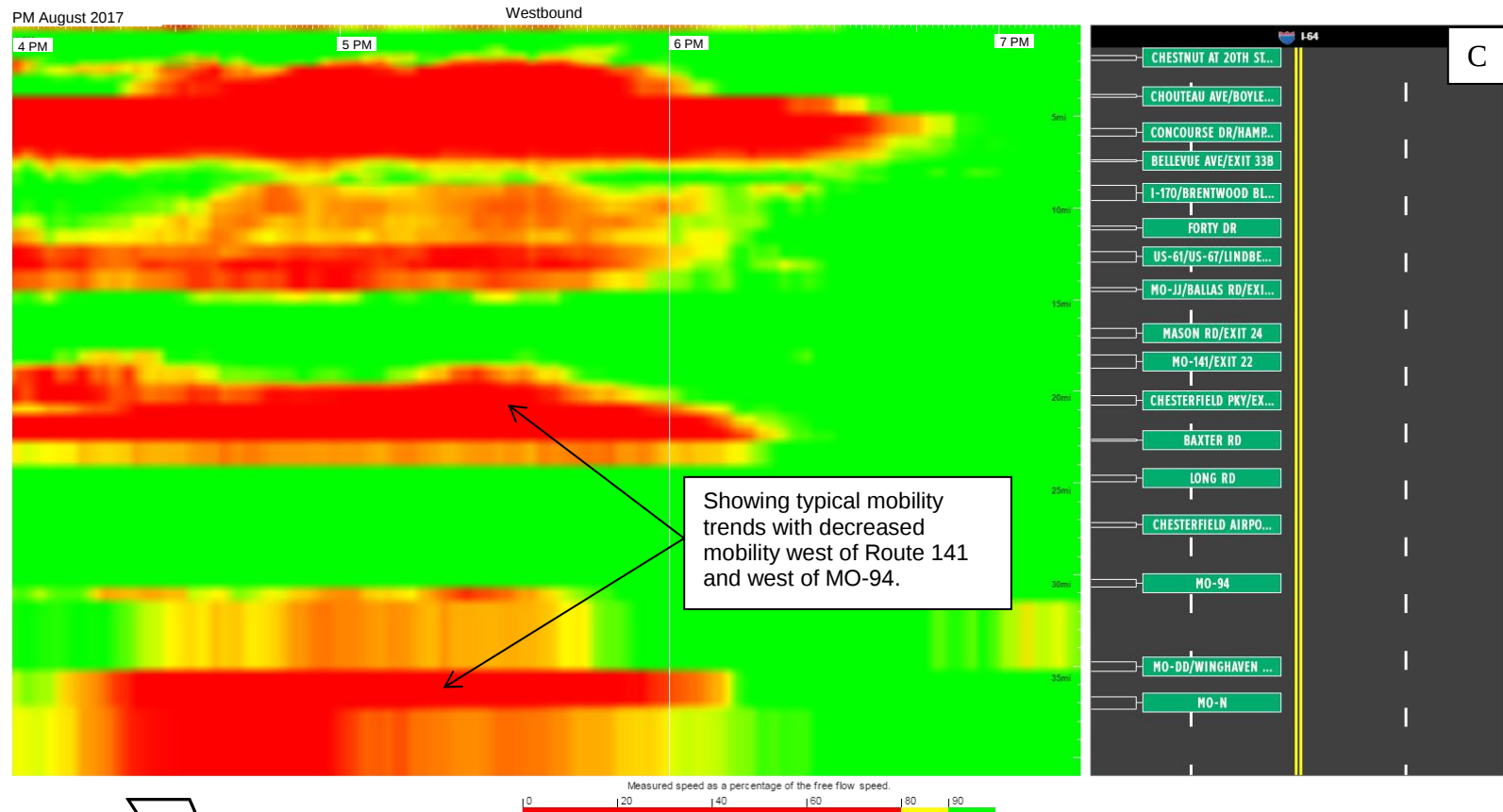


# FREeway MANAGEMENT

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

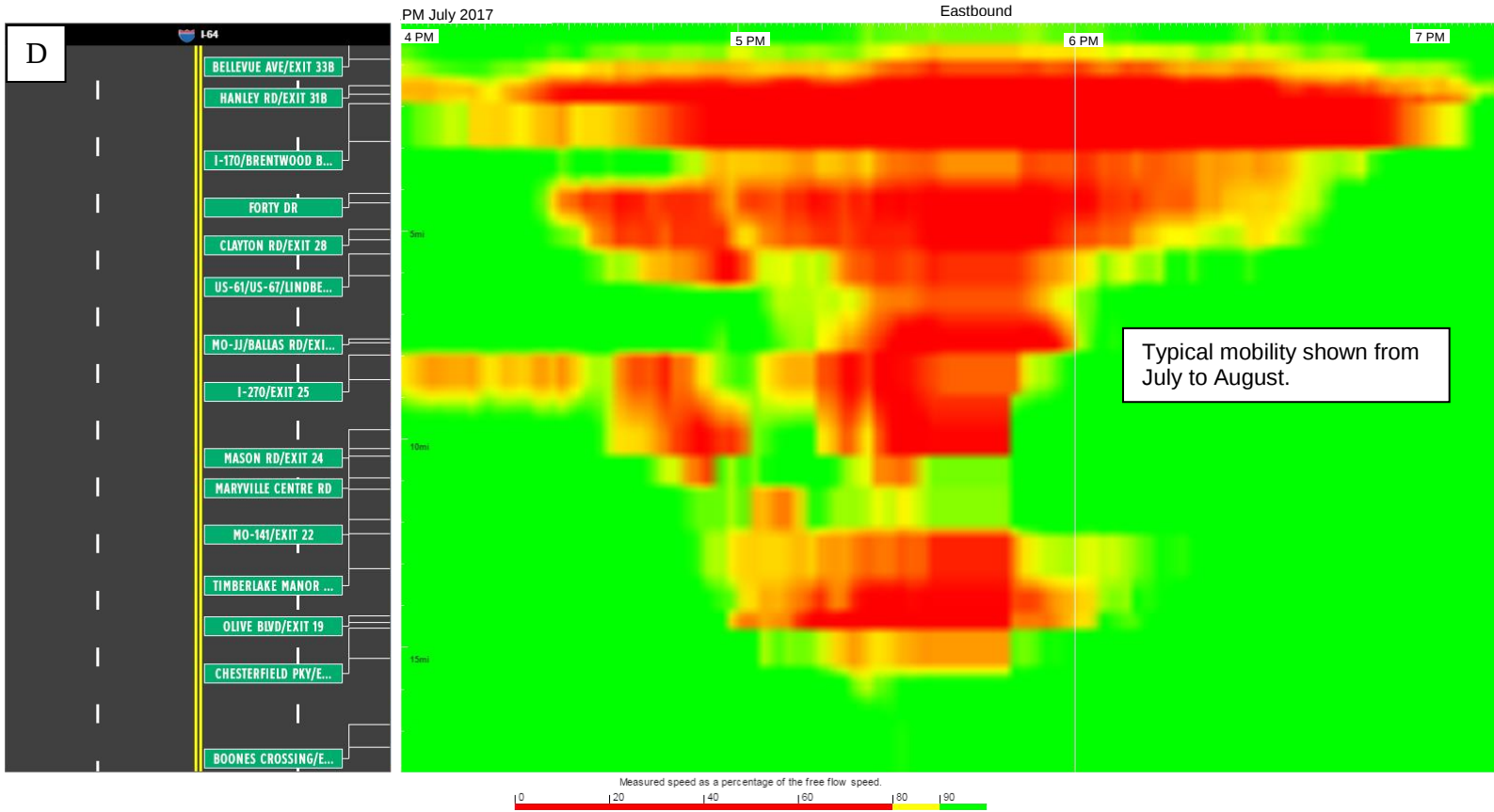


Congestion on I-64 Westbound between I-55/I-70/US-40 (Downtown) and I-70 for August 2017 (every weekday)

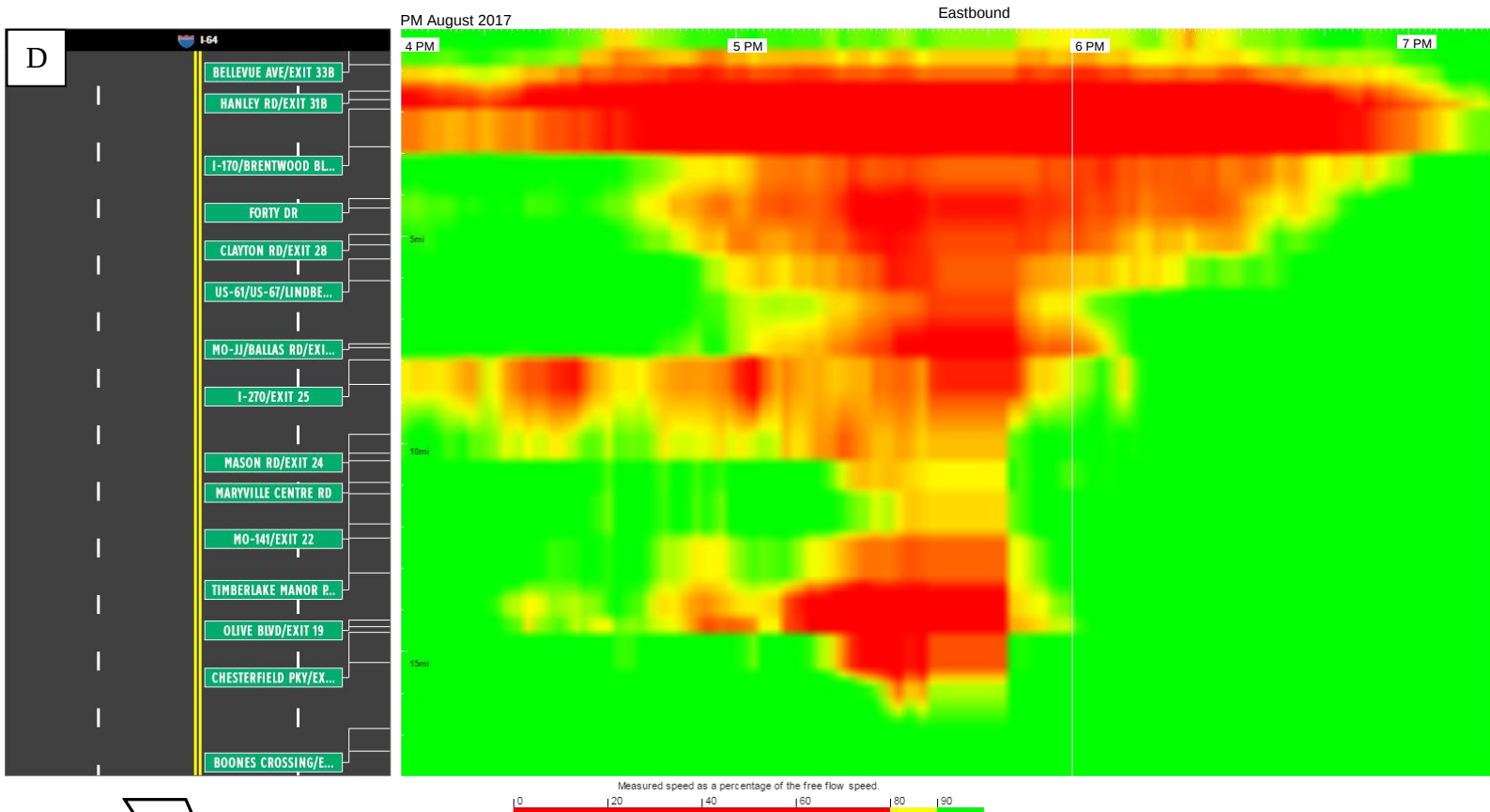


# FREEWAY MANAGEMENT

Congestion on I-64 Eastbound between Boones Crossing and McCausland for July 2017 (every weekday)

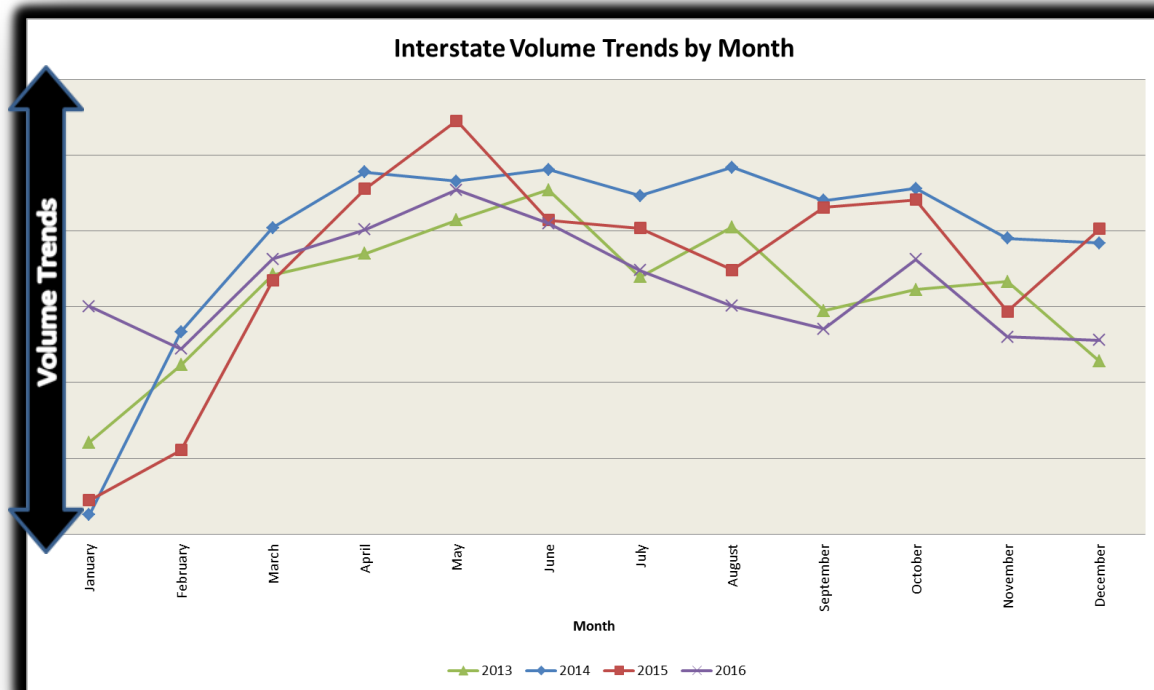
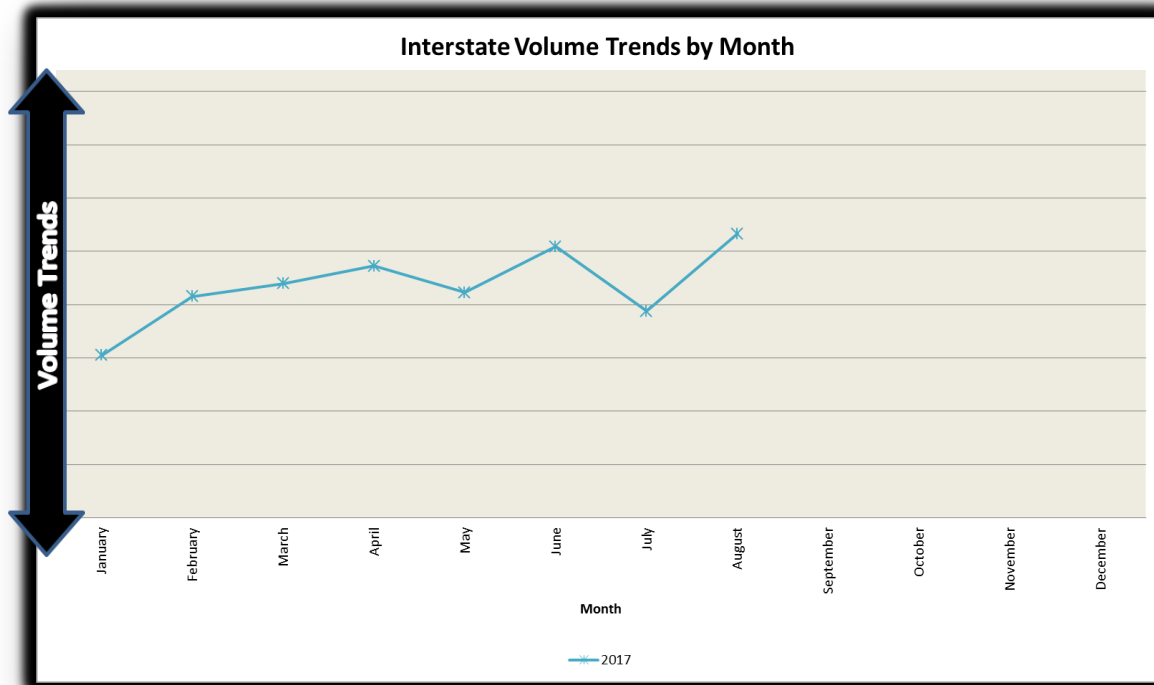


Congestion on I-64 Eastbound between Boones Crossing and McCausland for August 2017 (every weekday)





# FREEWAY MANAGEMENT

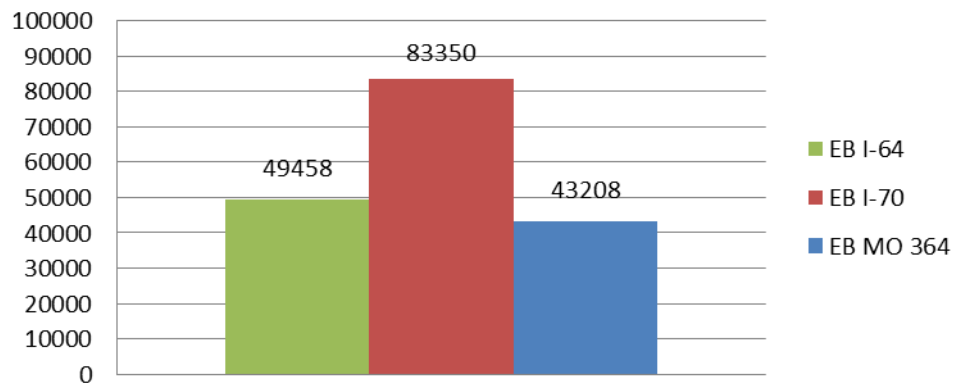


NEW for 2017! The focus area for calculating the average 24 hour volumes was revisited to include all SL District Urban Freeways including Route 364 from I-64 to I-270, Route 367 from I-270 to Route 67, and Route 370 from I-70 to I-270. These freeways are now included in this calculation while the loss 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.

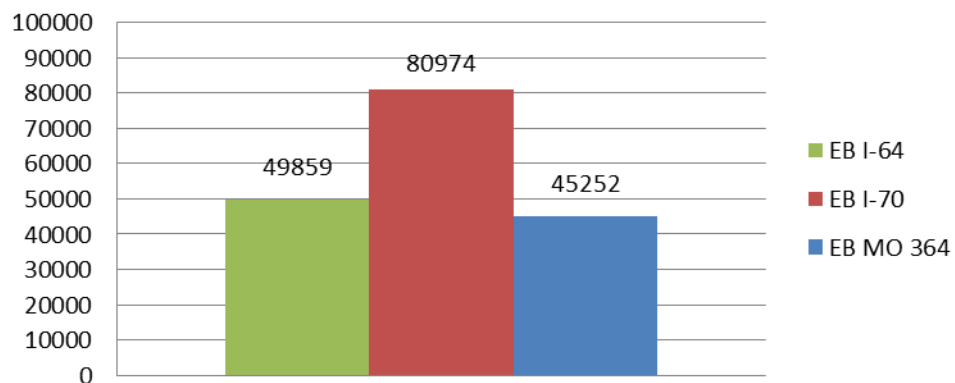


# FREEWAY MANAGEMENT

**July 2017 EB MO River Crossings**  
**Total = 176,016**



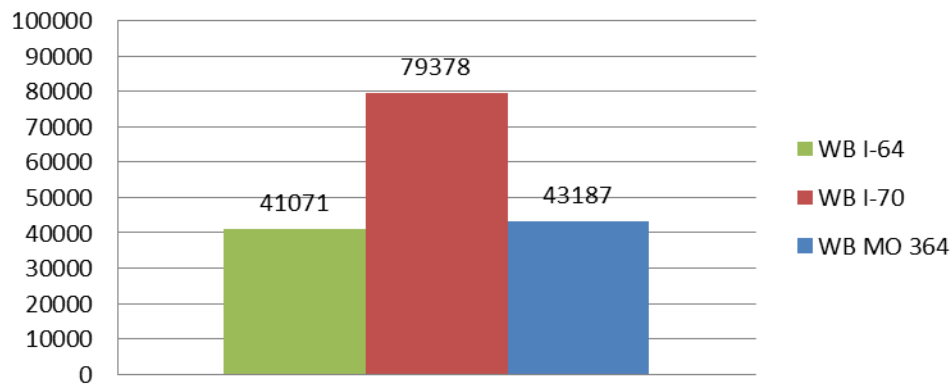
**Aug 2017 EB MO River Crossings**  
**Total = 175,684**



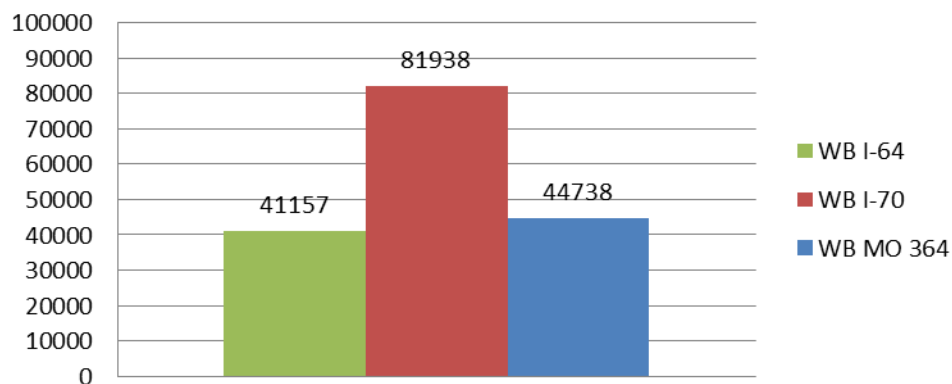


# FREEWAY MANAGEMENT

**July 2017 WB MO River Crossings  
Total = 163,636**



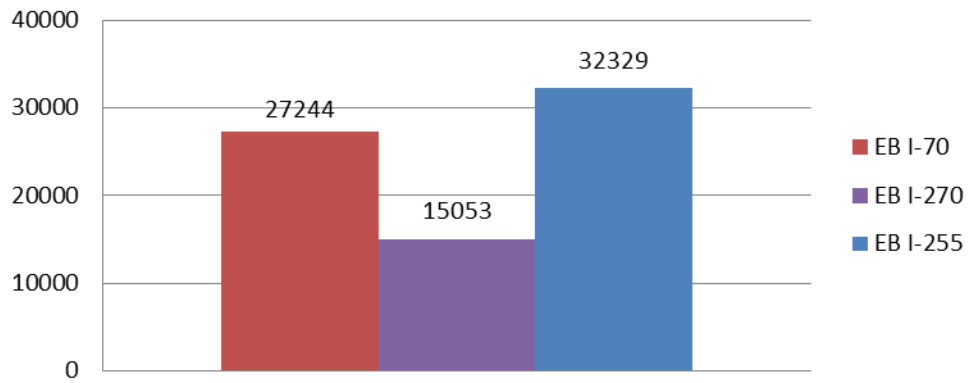
**Aug 2017 WB MO River Crossings  
Total = 167,833**



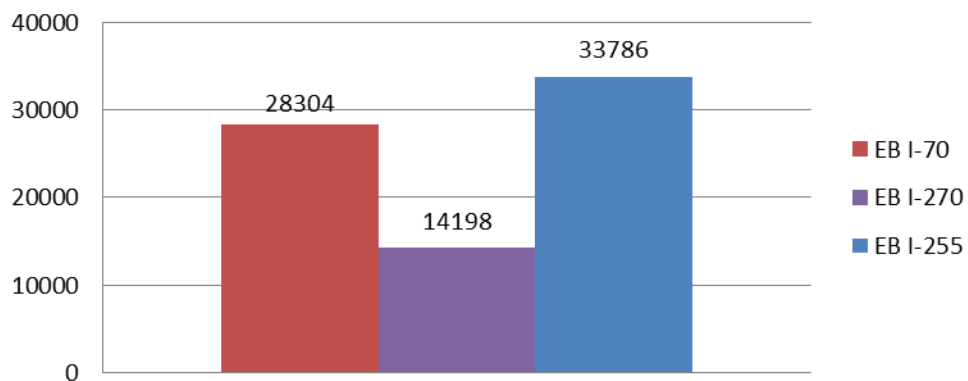


# FREEWAY MANAGEMENT

**July 2017 EB MS River Crossings**  
**Total = 74,626**



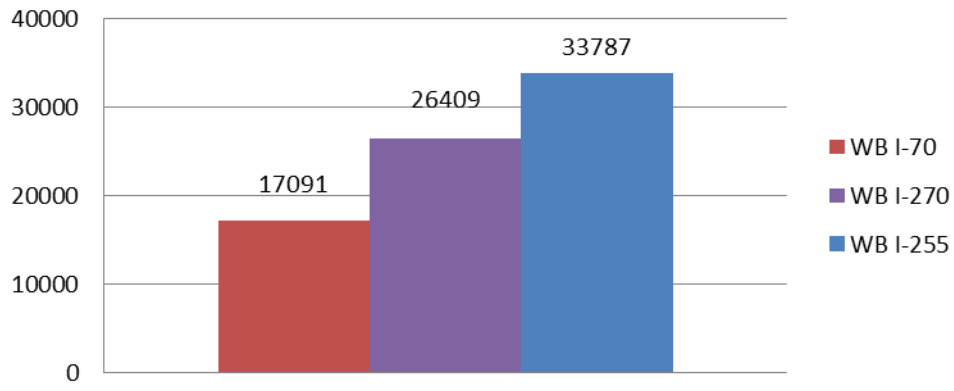
**August 2017 EB MS River Crossings**  
**Total = 76,288**



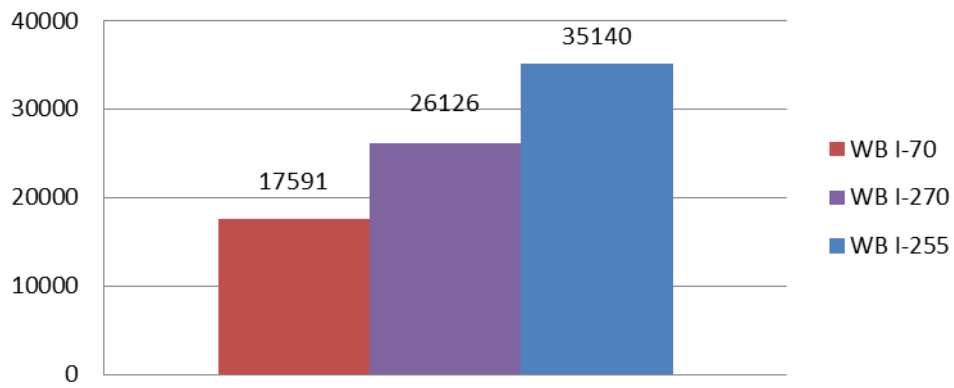


# FREEWAY MANAGEMENT

**July 2017 WB MS River Crossings**  
**Total = 77,287**



**August 2017 WB MS River Crossings**  
**Total = 78,857**





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



## DATA KEY

### Incident Levels

#### **Major Impact Traffic Incident – Road closure > 2 hours**

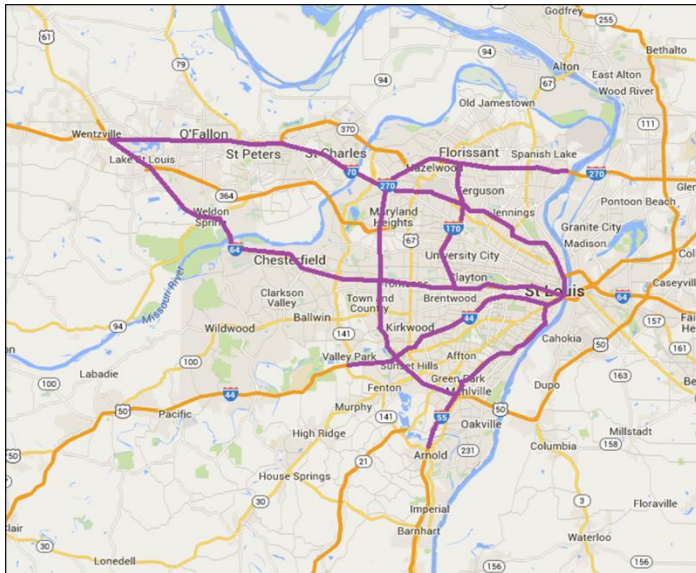
Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.

#### **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.



**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. Starting in 2017, these freeways will be included in this calculation while 2013-2016 will be based on the original urban interstate calculation.**



## **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

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**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](http://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<br>I-255 EASTBOUND<br>I-270 DISTRICT 6 COUNTER CLOCKWISE FROM RIVERVIEW DR. TO I-55<br>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 EASTBOUND

I-64 DISTRICT 6 WESTBOUND

## I-55 Mile Markers

| JEFFERSON COUNTY             |      | I-55 DISTRICT 6 NORTHBOUND<br>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<br>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 NORTHBOUND<br>I-170 DISTRICT 6 SOUTHBOUND |                                |
| 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<br>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<br>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/<br>ST. LOUIS CO | 8  |                                      | 8  | DISCOVERY BRIDGE ST. LOUIS CO/<br>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<br>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                      |