

Washington Metropolitan Area Transit Authority

## Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:  
201720

Resolution:  
☐ Yes ☒ No

### TITLE:

Annual Safety Report for Calendar Year 2015

### PRESENTATION SUMMARY:

The Department of Safety & Environmental Management (SAFE) Annual Report (CY2015) publicly communicates safety-related information and statistics.

### PURPOSE:

The Metro Safety Annual Report informs the Safety and Security Committee regarding ongoing safety culture in the Metro system and indicates performance measurement in accordance with Authority goals. Further, the public report increases communication to enhance safety of our employees, customers and surrounding Washington metropolitan area community. The Annual Safety Report will highlight progress in 2015 and provide data for the period of January-December 2015, comparisons against the same period of time in 2014, the 2015 targets, and other relevant safety actions.

### DESCRIPTION:

Two key measures of an improving safety culture are the customer and employee injury rates. As such, both performance measures are included as part of Metro's Strategic Plan. The 2015 targets for the Customer Injury Rate (CIR) is less than 1.8 injuries per million passenger trips; the Employee Injury Rate (EIR) is less than 4.6 injuries per 200,000 work hours.

#### Key Highlights:

- Employee Injury Rate (EIR) – For CY2015, the EIR is 5.30; this is a 27% increase over last year's rate of 4.18 injuries per 200,000 man-hours worked (equivalent to 100 employees working for a year) and 11% below the Bureau of Labor Statistics average for transit industries. There were 625 OSHA recordable employee injuries in CY2015, 132 more injuries than CY2014. This is the first time since CY2010 that WMATA did not meet the employee injury rate target.
- Customer Injury Rate (CIR) – For CY2015, the CIR was 2.05; although overall a low rate, it did not meet the target of 1.8 injuries per million passengers trips and is higher than CY2014's rate of 1.97. The rate was the result of a higher number of rail customer injuries while on-board, largely driven by the January 12, 2015 L'Enfant incident which resulted in 69 customer injuries and one fatality. There were 682 National Transit Database (NTD) reportable customer injuries for CY2015 or 84 more than permissible to achieve the established target.

- There are eight National Transportation Safety Board (NTSB) recommendations open; four from the original 29 recommendations and four from the January 12th L'Enfant incident. One recommendation was submitted for closure (event recorder for lead pair / rail car) and awaiting NTSB response.
- Corrective Action Plans (CAPs) – Federal Transit Administration (FTA) Safety Management Inspection (SMI) approved CAPs are progressing according to FTA approved project management plan. Over 300 actionable items have been submitted that address the 91 SMI findings. From January through September of this year, 95 CAPs from previous TOC findings have also been closed. There are 222 "open and approved" CAPs.

## **Background and History:**

The Annual Safety Report is required by the Board of Directors system safety policy statement as part of the approved System Safety Program Plan (SSPP). The SSPP is required under FTA Final Rule Code of Federal Regulations 49, part 659; *Rail Fixed Guideway Systems: State Safety Oversight*.

The Department of Safety and Environmental Management utilizes two KPIs, the CIR and EIR, as overall indicators of improvements in the safety culture among employees and the riding public. Daily review of incidents, systematic inspections of facilities and regulatory programs, and employee/contractor training are effective uses of resources which ensure a safer workplace and environment for our passengers. The EIR measures are based on the OSHA Recordable Injury Criteria and the CIR measures are based on NTD Reporting Criteria. The data in the appendix support the two KPIs.

## **Discussion:**

CY2015 was challenging with a series of high profile incidents. Following the January 12 L'Enfant incident, the NTSB launched an investigation and in the Spring of 2015, the FTA initiated an SMI. Both led to a series of findings and recommendations that eventually led to FTA assuming direct safety oversight of WMATA commencing in the Fall of 2015. FTA and WMATA continue to work on transitioning from the Tri-State Oversight Committee (TOC) to FTA Oversight.

Both KPIs, the EIR and CIR, did not meet the established targets. The CY2015 CIR was 2.05 per one million passenger trips, which was above the corporate target of less than 1.8 and CY2014's rate of 1.97. The higher rate was the result of a higher number of Rail customer injuries occurring while on board; largely driven by the January 12 L'Enfant incident, which resulted in 69 customer injuries and one fatality. Customer injury rates for all other modes improved when compared to CY2014.

### **CIR - Metrobus**

The CIR for Metrobus in 2015 was 2.25; down from 2.47 in 2014. There were 294 customer injuries in 2015 compared to 334 in 2014, a 12% decrease. The decrease is attributed to declines in both collision and non-collision related customer injuries.

The routes with the highest number of customer injuries in 2015 were X2, 90, 70, C8,

79, A12 and P6. Collision-related injuries were the leading injury type (61%) followed by Slips/Trips/Falls (31%), Striking/Struck by (4%), Caught In/By (2%), Boarding/Alighting, and Maneuvering (1% each).

The leading key factors for Bus customer injuries in 2015 were:

- Non-Preventable Rear-end Collisions (18%);
- Other Non-Preventable Collisions (16%);
- Falling while Bus is in Motion (13%);
- Non-Preventable Sideswipe (11%); and
- Hard Braking (10%).

In 2015 there were 46 Pedestrian/Cyclist incidents resulting in 22 injuries; there were 40 incidents resulting in 20 injuries in 2014. The top five key factors for Pedestrian/Cyclist incidents in 2015 were Operator Inattention, Improper Operation, Improper Position, Rule Violation and Situational Awareness.

### **CIR - Metrorail**

The overall CIR for Rail was 1.75 in 2015 compared to 1.39 in 2014. There were 348 customer injuries in 2015 compared to 288 in 2014. The leading Rail mode of customer injuries in 2015 were injuries inside the Rail Facility (37%), Escalators (32%), Rail on Board (31%) and Elevators (<1%). The leading causes of customer injuries in 2015 were Slips/Trips/Falls (68%), Smoke (21%), Caught In/By (8%), Striking/Struck by (4%). Nearly all the injury types associated with Rail experienced drops, with the exception of Smoke Inhalation and Caught In/By train doors.

### **CIR - MetroAccess**

The MetroAccess CIR decreased by almost 30 percent, driven by a drastic decline in the number of non-collision-related injuries. The CIR for MACS in 2015 is 17.80; down from 33.77 in 2014. There were 15 fewer injuries in 2015 compared to 2014. In 2015 the leading incident types for customer injuries were Collision related (33) followed by Slips/Trips/Falls (5) and Non-Collision (2). In 2015 the leading key factors for customer injuries were Collision-Related Non-Preventable (18) followed by Collision-Related Preventable (14), Boarding/Alighting (2).

In 2015, some of the significant actions taken to prevent customer injuries were the deployment of additional staff to assist and manage excessive crowding during service interruptions, review of vehicle interior design to identify opportunities to improve customer safety, worked with the Commonwealth of Virginia legislature to allow installation of strobe lights on Metrobus to improve pedestrian safety, support and contribute to the Street Smart campaign to educate community about pedestrian safety, evaluate the effectiveness of reflective chevrons on buses to minimize rear-end collisions, install closed circuit television (CCTV) cameras on MetroAccess vehicles, continue to improve lighting to reduce Slips/Trips/Falls and enhance personal security, revise and expand bus operator training; including training at night, and improve rail operator response to customer emergency intercom calls.

### **Employee Injuries Performance**

Following the January 12 smoke incident at L'Enfant Plaza that resulted in 22 employee

injuries and an EIR of 8.69, the Authority continued an overall downward trend that resulted in a year-end EIR of 5.30 (625 injuries total), which is 11% below the Bureau of Labor Statistics average for the industry.

However, the corporate target of less than 4.6 injuries per 100 full-time employees was met only three months in 2015. When compared to the injury data from 2014, an additional 132 employees suffered an OSHA-reportable injury and the EIR rose by 27%.

The most common injury types across the Authority were Slip/Trip/Fall (154), Collision-related (117), and Struck By/Against (79), which is consistent with previous years. Stress-related injuries represent the most significant increase of any injury type, showing a 155% increase from 2014. Bus Transportation was most affected by the increase in Stress injuries, followed by Rail Transportation. When comparing all injury types, the most injured jobs were, Bus Operator (260), Train Operator (71), Police Officer (68), and Station Manager (43).

### **EIR - Rail Transportation (RTRA)**

There were 41 additional injuries when comparing CY2015 to CY2014, with 2015 having a total of 123 injuries. July had the highest number of injuries at 18, with December capping off a strong 4th Quarter with only six injuries.

The leading negative reasons for the increase are Struck By/Against, Slip/Trip/Falls, and Stress. Slip/Trip/Fall cases increased by nearly 40%, while Struck By/Against and Stress cases doubled when compared to 2014. Train Operators are most at risk for these injury types. Operators are being struck by closing bulkhead doors and operator cab windows, and are most at risk of slipping/falling while walking in the rail yards and conducting pre-trip inspections. Although the number of customer attempted suicides decreased, the number of operators witnessing such events have increased, per incident, resulting in an increase of Stress injuries.

Additionally Station Managers have seen an increase in crime-related injuries from being assaulted to witnessing crime in the station that lead to Stress-related injuries. Contrary to many other groups, RTRA saw a decrease in ice-related injuries compared to 2014.

### **EIR - Rail Car Maintenance (CMNT)**

There were 11 fewer injuries when comparing CY2015 to CY2014, with 2015 having a total of 25 injuries. April had the highest number of injuries at six, with zero injuries in July.

Slip/Trip/Falls was the leading injury type for CY2015, with over half of these injuries being attributed to icy conditions. Nearly all the Struck By injuries resulted in hand and wrist injuries, as employees were using hand or power tools at the time of injury. All Caught In/By injuries occurred when the employee was manually installing components and their hands were caught between the component and the train. The median age of an injured employee was 46 and almost half of the employees injured had at least nine years of tenure.

CMNT had excellent attendance in the Body Mechanics class, and reinforced the need to practice proper lifting techniques during safety committee and toolbox meetings.

These efforts can be demonstrated in the positive decrease of Lifting/Lowering and Struck By/Against injuries.

#### **EIR - Plant Maintenance (PLNT)**

There were two fewer injuries when comparing CY2015 to CY2014, with 2015 having a total of 25 injuries. PLNT averaged approximately 2.1 injuries per month, while recording zero injuries in June.

The primary negative reason is Slip/Trip/Fall injuries, of which there have been five additional injuries when compared to CY2014. Only three of the 11 Slip/Trip/Fall injuries were the result of ice; the remainder was the result of inattention while walking or using stairs/steps. Sixty percent of PLNT's injured employees had 10 or more years of experience with a median age of 42.

Positive reasons include a decrease Lifting/Lowering, Collision-related, and Caught In/By injuries. As with CMNT, PLNT has emphasized attending safety training and reinforces safety principles during committee and tool box meetings. Additionally, PLNT was an active participant in SAFE's National Safety Council's Defensive Driving class, sending nearly all drivers through the course. As such, they had a 50% reduction in collision-related injuries; all of the collision-related injuries experienced in 2015 were from non-preventable collisions.

#### **EIR - Systems Maintenance (SMNT)**

There were 12 more injuries when comparing CY2015 to CY2014, with 2015 having a total of 25 injuries. January had the highest number of injuries at six, with six months having one or less injury.

The primary negative outliers are ice-related Slip/Trip/Falls and Smoke Exposure injuries. The five ice-related injuries did not occur in the field but rather exiting vehicles (two injuries) and walking through WMATA-operated parking lots (three injuries); there was only one ice-related Slip/Trip/Fall in CY2014. Three smoke exposure injuries were of employees that were on the stopped train during the January 12 L'Enfant incident. All Lifting/Lowering injuries occurred when employees were in the process of moving a piece of equipment from the ground up to a platform or truck bed. The majority of injured employees had more than 10 years of experience and were over the age of 50.

#### **EIR - Track and Structures (TRST)**

There have been eight fewer injuries when comparing the two periods, with 2015 ending with 19 injuries. June had the highest number at four, three of which were Lifting/Lowering injuries.

The primary positive reason is the reduction of Slip/Trip/Fall injuries. There was only one Slip/Trip/Fall injury this year that was attributed to ice. With that said, Struck By/Against injuries due to inattention and improper personal protective equipment usage still poses a risk to employees in the field and was one of the leading injury types in the 4th Quarter.

Almost half of the injured employees had less than five years of job experience and slightly more than 25% were under 30 years old.

### **EIR - Elevator and Escalator (ELES)**

There have been eight fewer injuries when comparing the two periods, with 2015 having 10 injuries. August had the highest number at three; with six months having zero injuries. There are no negative reasons when comparing the two periods. The most significant positive reason is the reduction of Lifting/Lowering incidents, of which there was one in 2015. The leading causal factors include wet conditions, inattention and equipment failure.

### **EIR - Bus Transportation (BTRA)**

There were 64 additional injuries when comparing CY2015 to CY2014, with 2015 having a total of 270 injuries. January had the highest number of injuries at 36, with November and December capping off a strong 4th Quarter with 16 and 14 injuries respectively.

The leading negative reasons for the increase are Slip/Trip/Falls, Stress, Assault-related injuries. Slip/Trip/Fall cases increased by nearly 24%, while Stress cases tripled and Operator assaults nearly doubled (73% increase) when compared to 2014. Bus Operators are most at risk for these injury types.

More than two-thirds of operators injured by Stress or Assault were 36-55 years of age and the median tenure of operators in that age range is eight years of service. The spike in Slip/Trip/Fall related injuries is attributed to the icy conditions present in the first three months of 2015. Collision-related injuries saw a 5% increase (95 in 2015 and 90 in 2014), with Non-Preventable Collision being the leading collision type resulting in injuries.

### **EIR - Bus Maintenance (BMNT)**

There were five additional injuries when comparing CY2015 to CY2014, with 2015 having a total of 30 injuries. August had the highest number of injuries at seven, with November and December capping off a strong 4th Quarter with zero injuries; February also had zero injuries.

The leading negative reasons for the increase are Pushing/Pulling, Slip/Trip/Falls, and Caught In/By. Pushing/Pulling injuries were due to poor ergonomics and equipment failures, while Caught In/By injuries were the result of inattention while using hand tools. Slip/Trip/Fall injuries increased by one-third, primarily due to ice. Mechanics are the main job category that are injured. Nearly half of the injured employees had less than five years of experience and the average age of that group was 39 years.

### **EIR - Transit Police (MTPD)**

There were 31 additional injuries when comparing CY2015 to CY2014, with 2015 having a total of 76 injuries. January had the highest number of injuries at 19, with July having only two injuries.

The leading negative reasons for the increase are Smoke Exposure, Pursuit/Arrests, and Collision-related injuries. Sixteen officers were injured due to smoke inhalation while responding to the January 12 L'Enfant incident; all but two officers have returned to duty. Pursuit/Arrest related injuries increased 25%, while Collision-related injuries increased 123%, primarily due to non-preventable collisions; one collision resulted in four officers being injured.

In an effort to minimize or prevent further employee injuries, some of the corrective actions for 2015 included the continuation of a safety strategy focused on changing behavior and bolstering the safety culture, following the FTA's safety management approach which includes: conducting regular executive, departmental and local safety committees to address concerns, monitor and respond to leading indicator and analysis of data, expanding close call reporting, stressing in training to conduct thorough injury investigation (including key factors and mitigating hazards) which data reveals lower the potential for future accidents/injuries, continuing the implementation of Fatigue Risk Management System (FRMS) with standard metric reports for front-line supervisors, implement plan to reduce Bus Operators assaults by installing bus shields, cameras and enhanced police patrols.

#### **FUNDING IMPACT:**

Define current or potential funding impact, including source of reimbursable funds.	
Project Manager:	Lou Brown, Acting Chief Safety Officer
Project Department/Office:	SAFE

Necessary funding within the approved operating and capital budget.

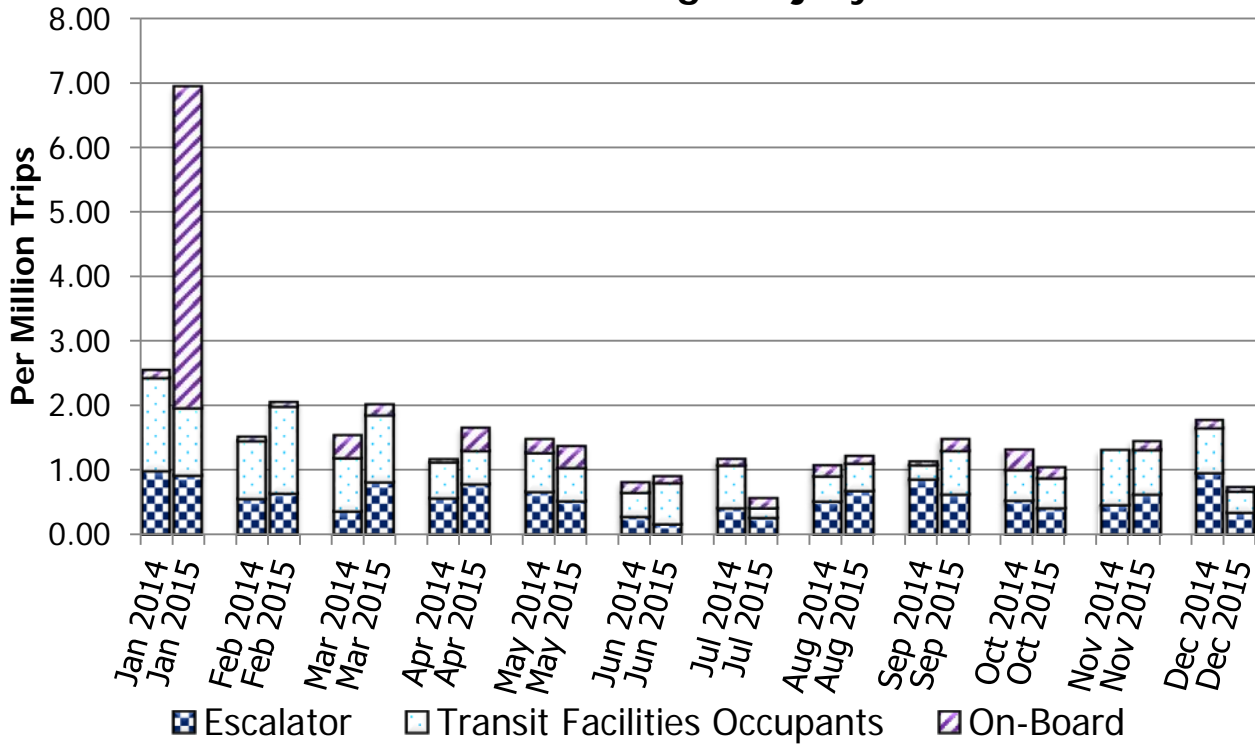
#### **TIMELINE:**

<b>Previous Actions</b>	<ul style="list-style-type: none"> <li>•Continue to implement programs and processes that strengthens the safety culture</li> <li>•Continue to close out all CAPs and NTSB recommendations</li> </ul>
<b>Anticipated actions after presentation</b>	<ul style="list-style-type: none"> <li>•Continue to build premiere safety culture and system</li> <li>•Fully implement all CAPs</li> <li>•Mitigate human factors as potential safety risks</li> </ul>

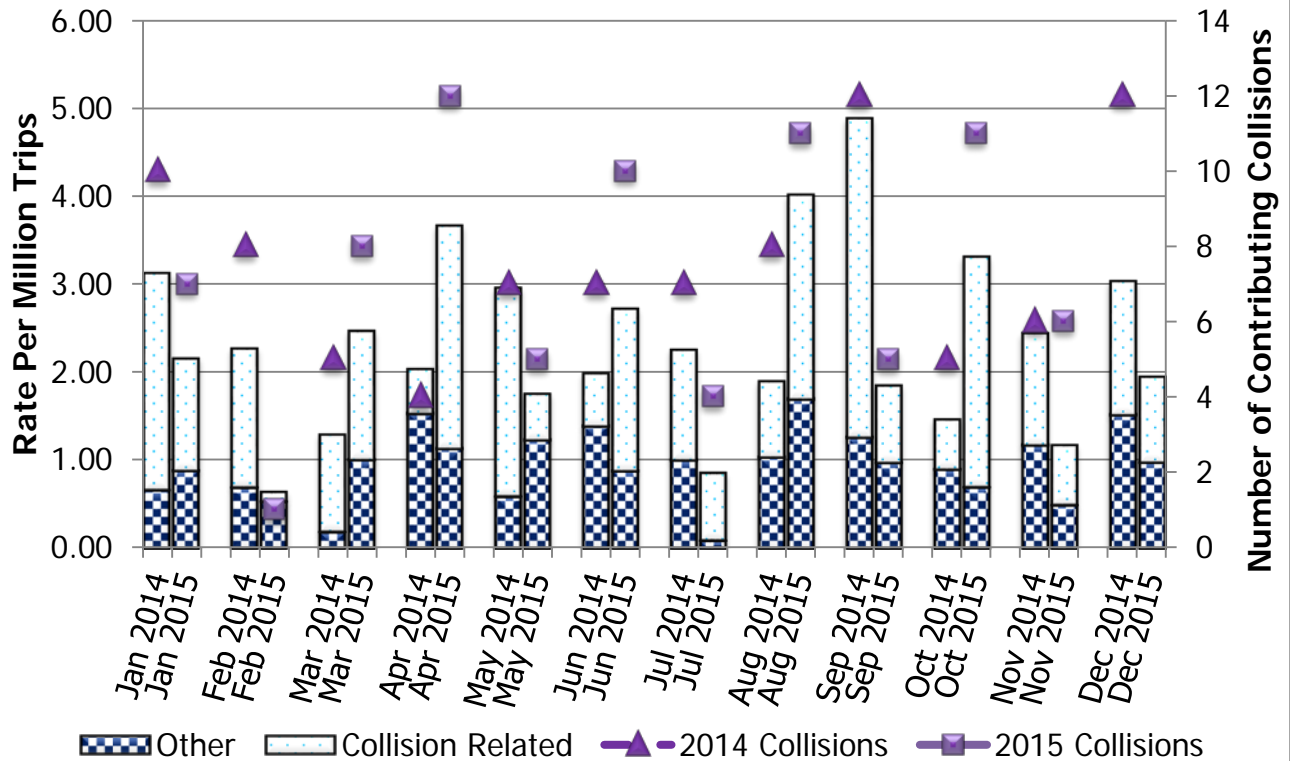
#### **RECOMMENDATION:**

To inform the Board's Safety & Security Committee of the status of the positive and proactive safety foundation being implemented and accomplishments for the calendar year 2015.

### Chart 1: Rail Passenger Injury Rates

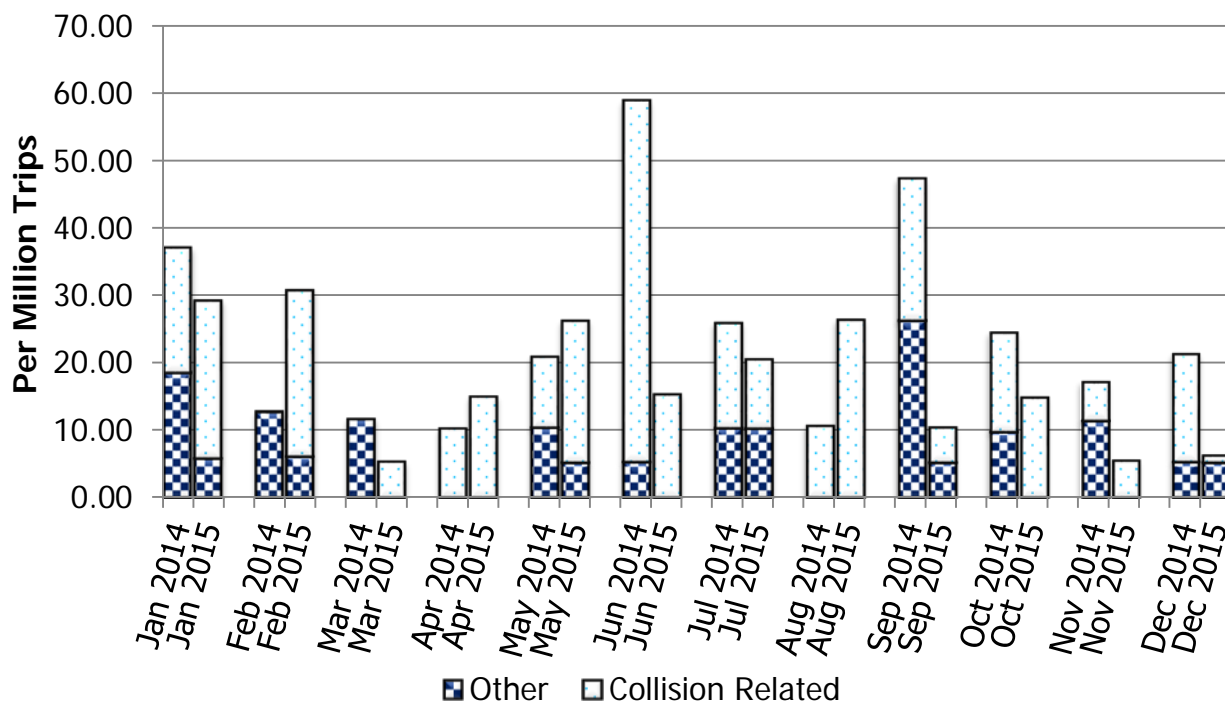


### Chart 2: Bus Passenger Injury Rates

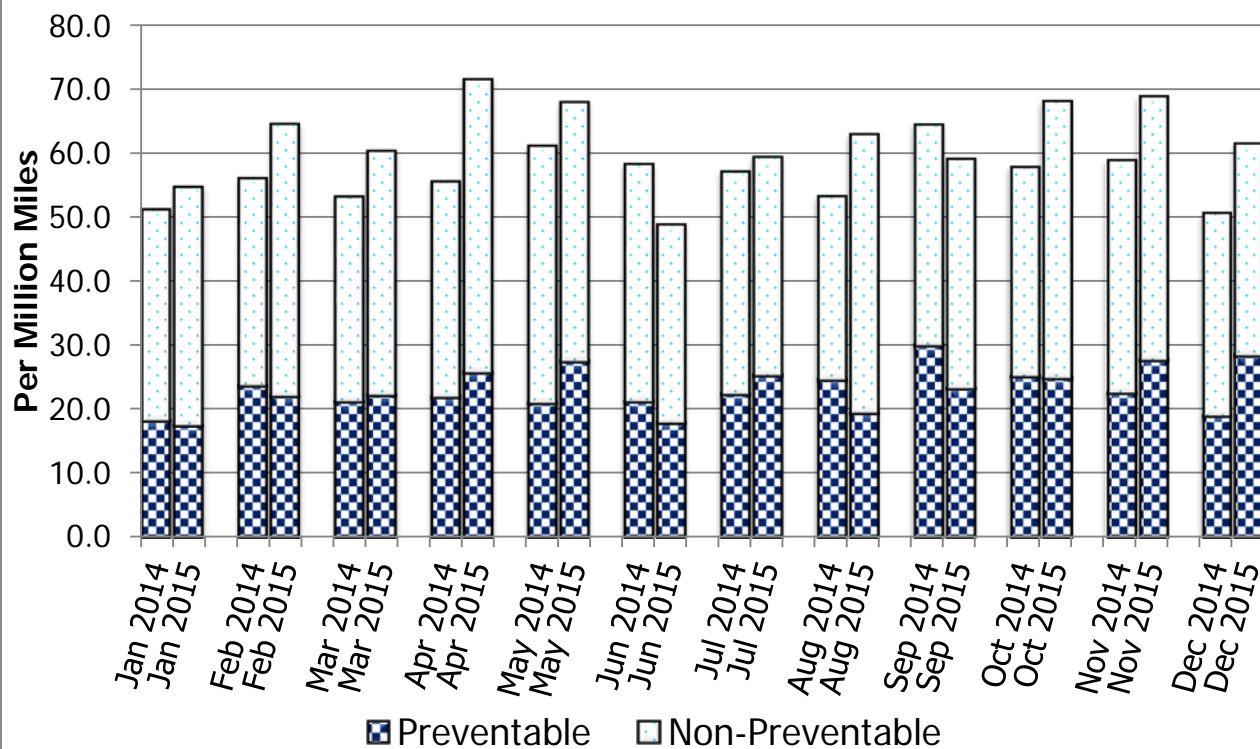




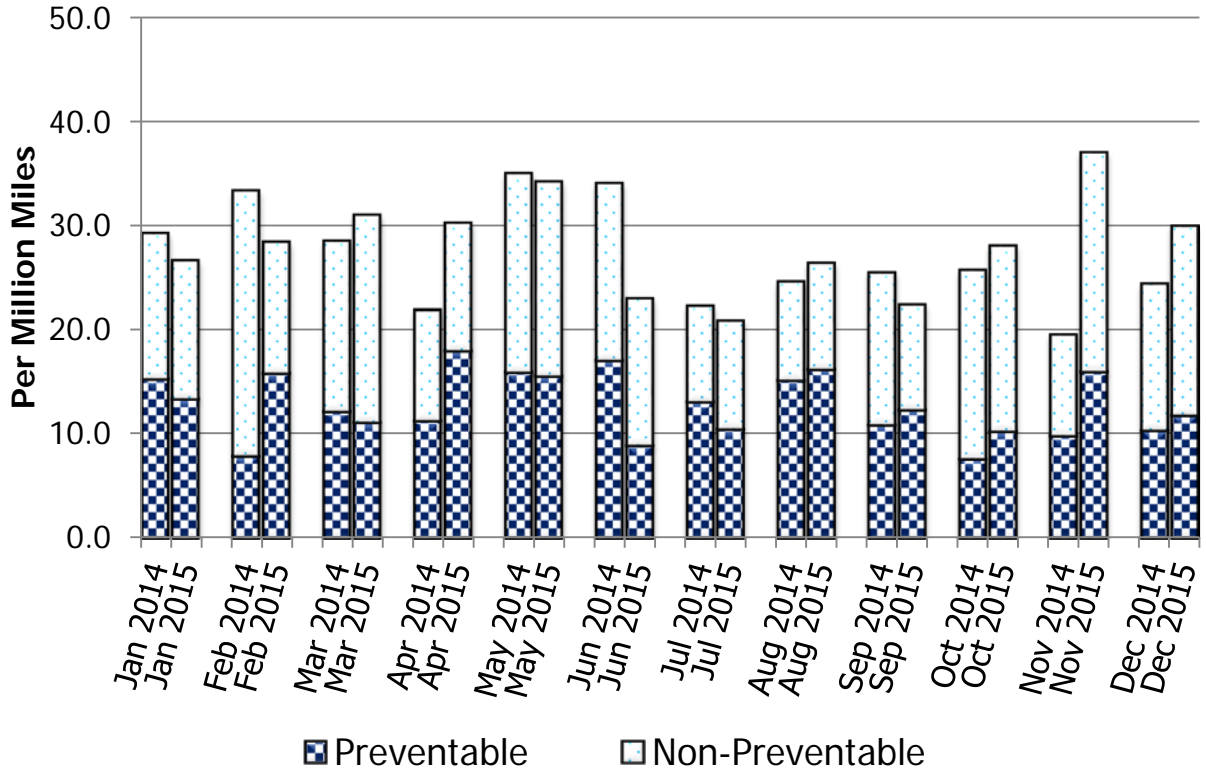
### Chart 3: MetroAccess Injury Rates



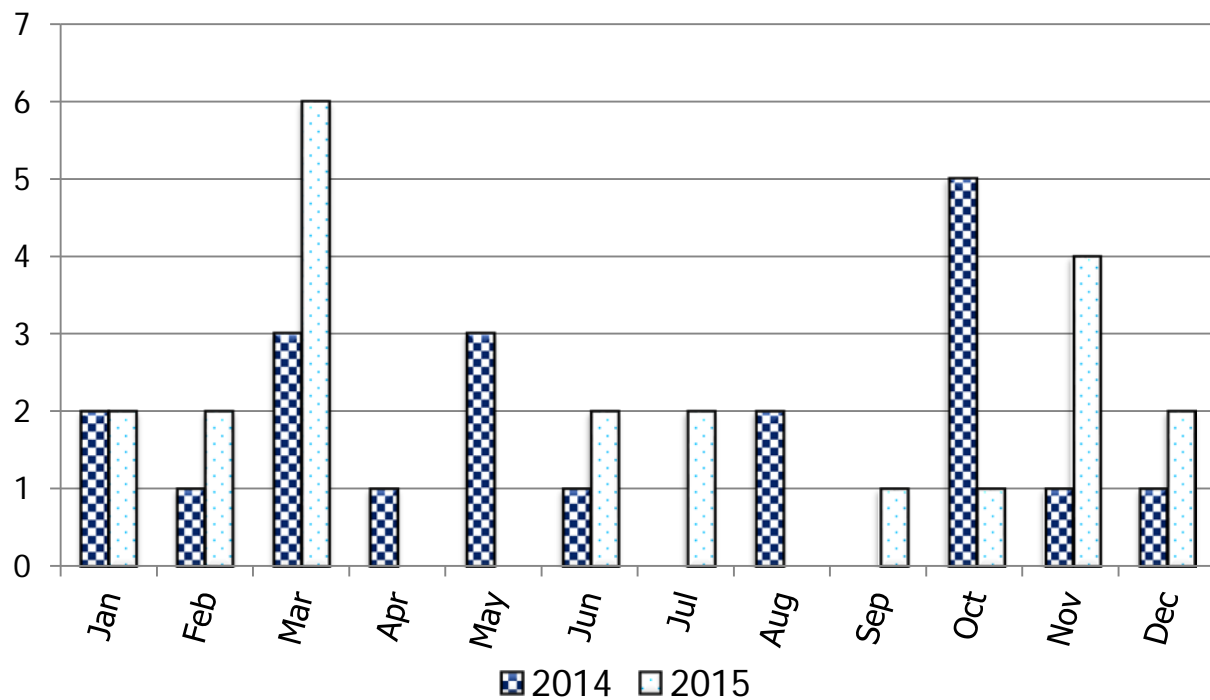
### Chart 4: Bus Collision Rates



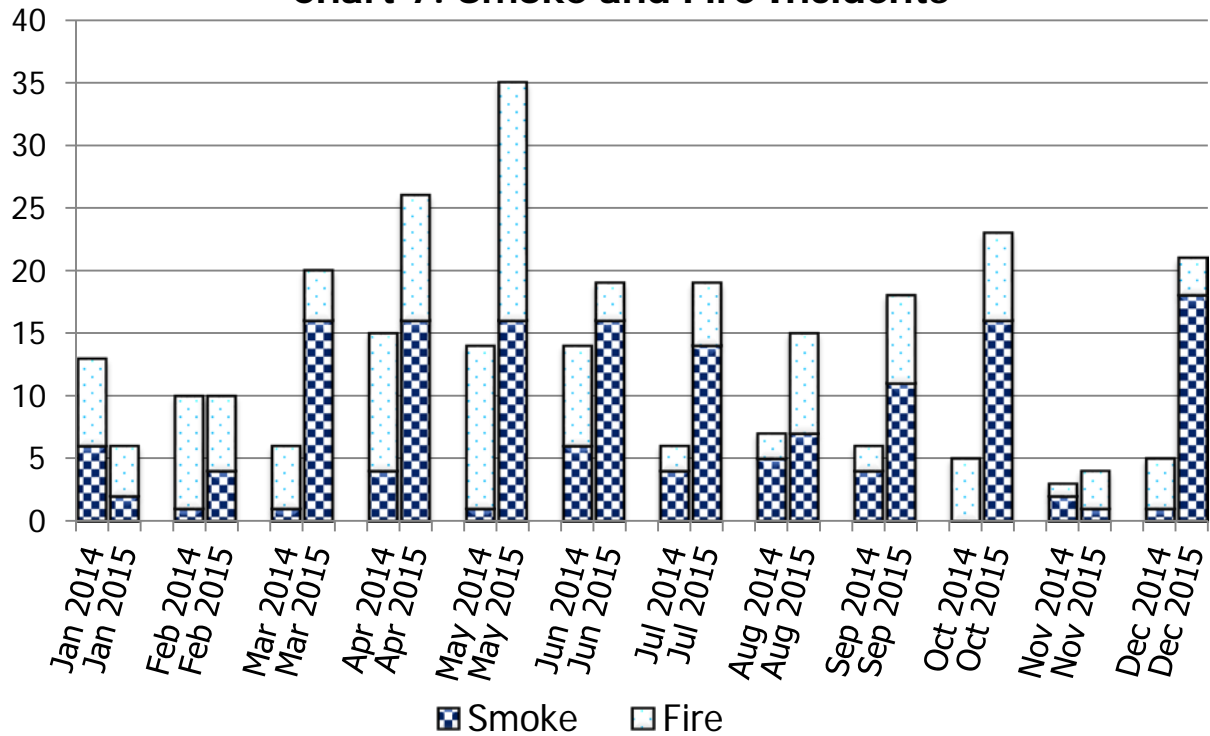
### Chart 5: MetroAccess Collision Rates



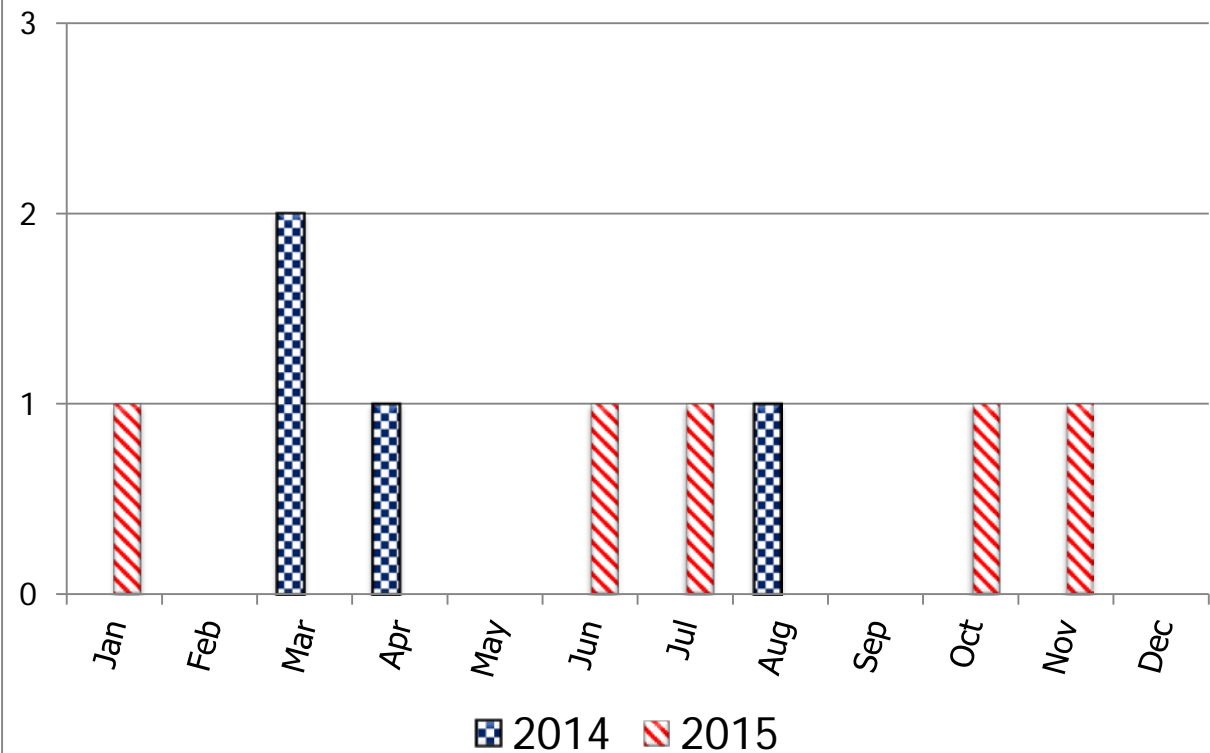
### Chart 6: Pedestrian/Cyclist Incidents



**Chart 7: Smoke and Fire Incidents**



**Chart 8: Suicides/Fatalities**



<b>Customer Injury Rate Performance Summary</b>						
Injuries per million passenger trips						
Transportation Mode		Injuries		Rate		
		YTD		YTD		
		2014	2015	2014	2015	% Δ
<b>Rail</b>	<i>On Board</i>	31	109	0.15	0.55	<b>264%</b>
	<i>Facility</i>	135	128	0.65	0.64	<b>-2%</b>
	<i>Vertical</i>	121	111	0.59	0.56	<b>-5%</b>
<b>Bus</b>	<i>Collision-related</i>	199	178	1.47	1.36	<b>-8%</b>
	<i>Non Collision-related</i>	135	116	1.00	0.89	<b>-11%</b>
<b>MA</b>	<i>Collision-related</i>	33	33	15.04	14.68	<b>-2%</b>
	<i>Non Collision-related</i>	22	7	10.03	3.11	<b>-69%</b>
<b>TOTAL</b>		<b>676</b>	<b>682</b>	<b>1.97</b>	<b>2.05</b>	<b>4%</b>

<b>OSHA Employee Injury Rate Summary</b>					
Injuries per 200k hours worked, or 100 employees					
	Injuries		Rate		
	CYTD		CYTD		
DEPT	2014	2015	2014	2015	% Δ
MTPD	45	<b>76</b>	7.28	12.16	<b>67%</b>
BTRA	206	<b>270</b>	7.35	9.36	<b>27%</b>
RTRA	82	<b>123</b>	5.50	7.78	<b>41%</b>
ELES	18	<b>10</b>	7.13	3.91	<b>-45%</b>
BMNT	25	<b>30</b>	2.61	3.06	<b>17%</b>
TRST	27	<b>19</b>	4.06	3.03	<b>-25%</b>
PLNT	27	<b>25</b>	2.96	2.91	<b>-2%</b>
SMNT	13	<b>25</b>	1.10	2.53	<b>131%</b>
CMNT	35	<b>25</b>	3.16	2.36	<b>-25%</b>
All Other	15	<b>22</b>	0.84	1.13	<b>35%</b>
<b>Total</b>	<b>493</b>	<b>625</b>	<b>4.18</b>	<b>5.30</b>	<b>27%</b>

<b>RTRA Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Slip/Trip/Fall	2.08	2.59	10
Struck By/Against	0.74	1.45	12
Stress	0.67	1.20	9
Pushing/Pulling	0.47	0.51	1
Repetitive Motion	0.40	0.44	1
Exposure	0.47	0.44	0
Assault	0.20	0.44	4
Lifting/Lowering	0.27	0.32	1
Caught In/By	0.20	0.19	0
Collision-Related	0.00	0.19	3
<b>Grand Total</b>	<b>5.50</b>	<b>7.78</b>	<b>41</b>

<b>CMNT Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Slip/Trip/Fall	0.54	0.57	0
Struck By/Against	0.99	0.47	- 6
Caught In/By	0.18	0.28	1
Pushing/Pulling	0.54	0.28	- 3
Shock/Burn	0.00	0.19	2
Exposure	0.09	0.19	1
Lifting/Lowering	0.54	0.19	- 4
Repetitive Motion	0.00	0.09	1
Collision-Related	0.09	0.09	0
Assault	0.27	0.00	- 3
<b>Grand Total</b>	<b>3.25</b>	<b>2.36</b>	<b>- 11</b>

<b>PLNT Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Slip/Trip/Fall	0.77	1.28	5
Struck By/Against	0.55	0.58	0
Lifting/Lowering	0.77	0.35	- 4
Collision-Related	0.66	0.35	- 3
Exposure	0.00	0.23	2
Pushing/Pulling	0.00	0.12	1
Caught In/By	0.11	0.00	- 1
Assault	0.11	0.00	- 1
<b>Grand Total</b>	<b>2.96</b>	<b>2.91</b>	<b>- 2</b>

<b>SMNT Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Slip/Trip/Fall	0.42	0.71	2
Lifting/Lowering	0.17	0.51	3
Exposure	0.08	0.40	3
Struck By/Against	0.17	0.40	2
Collision-Related	0.17	0.20	0
Caught In/By	0.00	0.20	2
Pushing/Pulling	0.08	0.10	0
<b>Grand Total</b>	<b>1.10</b>	<b>2.53</b>	<b>12</b>

<b>TRST Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Slip/Trip/Fall	1.80	1.12	-5
Struck By/Against	0.60	0.64	0
Lifting/Lowering	0.90	0.64	-2
Pushing/Pulling	0.60	0.32	-2
Repetitive Motion	0.00	0.16	1
Caught In/By	0.15	0.16	0
<b>Grand Total</b>	<b>4.06</b>	<b>3.03</b>	<b>-8</b>

<b>ELES Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Slip/Trip/Fall	1.58	1.57	0
Caught In/By	0.40	0.39	0
Repetitive Motion	0.00	0.39	1
Collision-Related	0.40	0.39	0
Struck By/Against	1.19	0.39	-2
Lifting/Lowering	3.17	0.39	-7
Pushing/Pulling	0.40	0.39	0
<b>Grand Total</b>	<b>7.13</b>	<b>3.91</b>	<b>-8</b>

<b>BTRA Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Collision-Related	3.21	3.29	5
Slip/Trip/Fall	1.50	1.80	10
Stress	0.43	1.25	24
Assault	0.54	0.90	11
Struck By/Against	0.57	0.59	1
Pushing/Pulling	0.54	0.59	2
Exposure	0.14	0.35	6
Repetitive Motion	0.32	0.35	1
Lifting/Lowering	0.11	0.17	2
Caught In/By	0.00	0.07	2
<b>Grand Total</b>	<b>7.35</b>	<b>9.36</b>	<b>64</b>

<b>BMNT Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Struck By/Against	1.25	1.02	-2
Slip/Trip/Fall	0.63	0.82	2
Pushing/Pulling	0.00	0.31	3
Caught In/By	0.10	0.31	2
Exposure	0.10	0.20	1
Lifting/Lowering	0.52	0.20	-3
Repetitive Motion	0.00	0.10	1
Collision-Related	0.00	0.10	1
<b>Grand Total</b>	<b>2.61</b>	<b>3.06</b>	<b>5</b>

<b>MTPD Employee Injury Rate</b> Injuries per 200k hours worked, or 100 employees			
Injury Type	CY		Injury Diff.
	2014	2015	
Pursuit/Arrest	3.72	4.64	6
Exposure	0.00	3.04	19
Slip/Trip/Fall	1.62	1.60	0
Collision-Related	0.65	1.44	5
Struck By/Against	0.65	0.96	2
Pushing/Pulling	0.00	0.32	2
Caught In/By	0.00	0.16	1
Repetitive Motion	0.32	0.00	-2
Lifting/Lowering	0.32	0.00	-2
<b>Grand Total</b>	<b>7.28</b>	<b>12.16</b>	<b>31</b>



# Washington Metropolitan Area Transit Authority

## Annual Safety Report

Moving Metro Forward **Safely**

Safety and Security Committee  
February 25, 2016

# Purpose

- To present to the Committee the:
  - Annual 2015 Safety Report
  - FTA Proposed Rulemaking for Agency Safety Plan
  - FTA Reclassification of Safety Corrective Actions







# How is **SAFETY** measured

- Two Key Performance Indicators
  - Employee Injury Rate (EIR) per 200,000 Hours Worked
  - Customer Injury Rate (CIR) per 1,000,000 Passenger Trips
- Tri-State Oversight Committee / FTA Oversight
- Employee Surveys / Feedback
- External / Internal Safety Audits and Inspections



# 2015 Key Performance Indicators



Employee Injury Rate: **5.30**

(Injuries per 200,000 Hours Worked)



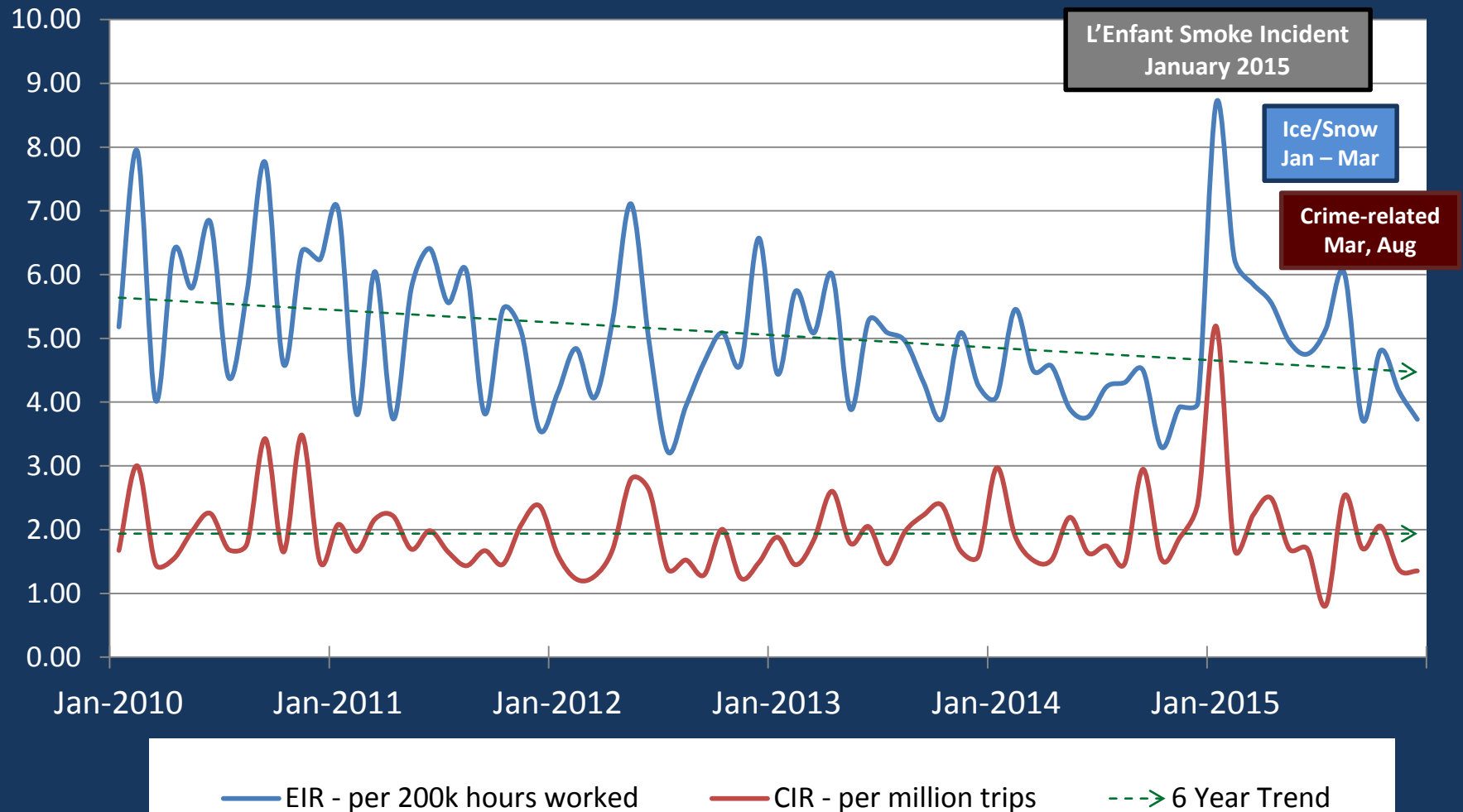
Customer Injury Rate: **2.05**

(Injuries per 1,000,000 Passenger Trips)



# Statistical Review - Six Year Trend

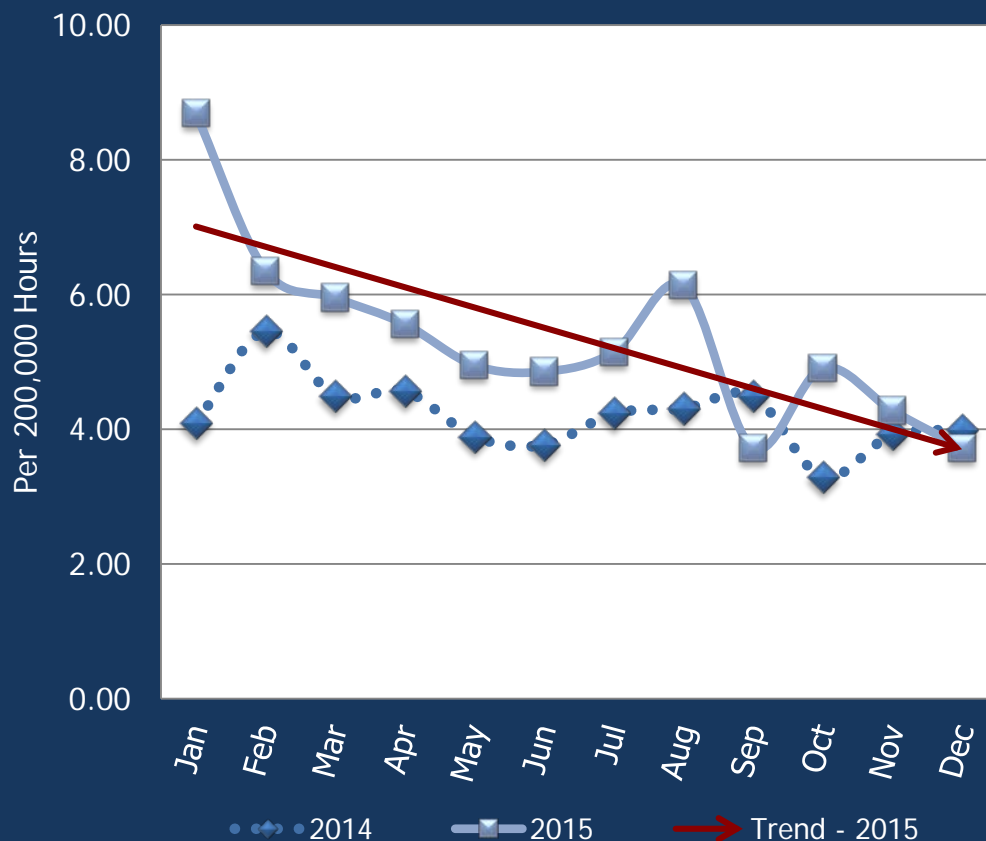
KPI – Employee & Customer Injury Rates





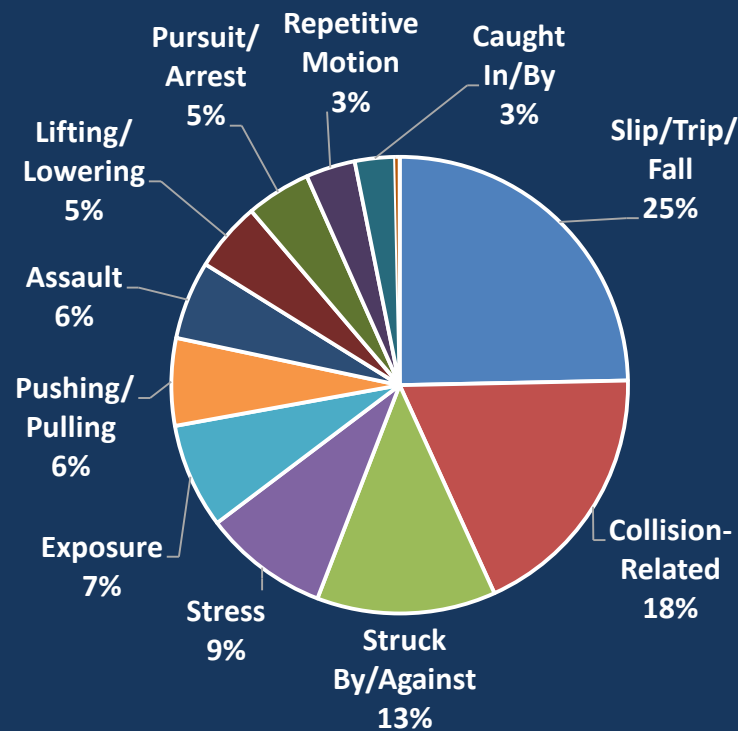
# Statistical Review

## Employee Injury Rate – *per 100 Employees*



CY14		CY15	
EIR	TARGET	EIR	TARGET
4.18	< 4.8	5.30	< 4.6

Injury Types  
CY15



# Employee Injury Rate – Key Drivers



- **Crime-related Incidents**

- Result: 84% increase, 46 more injuries
- Actions: Bus shields, defensive arrest tactics, Bus MTPD involvement, EAP



- **Smoke Exposure**

- Result: 23 injuries
- Actions: ROCC Emergency Response Procedures, track inspections



- **Ice Related**

- Result: 105% increase, 21 more injuries
- Actions: Targeted snow removal, enhanced training, shoe spikes

# Employee Injury Rate – Key Drivers



- **Inattention – Hand Tool Use**

- Result: 100% increase, 9 more injuries
- Actions: Toolbox sessions, departmental targeting, enhanced training



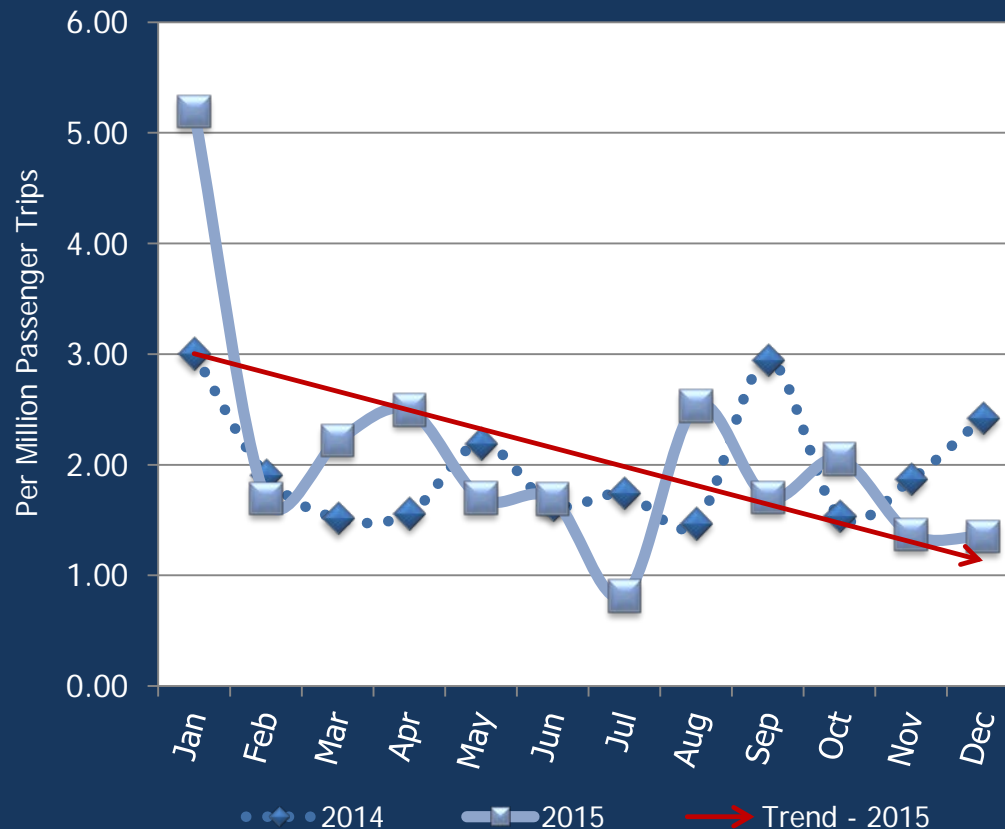
- **Non Preventable Collisions**

- Result: 8% increase, 6 more injuries
- Actions: Defensive driving tactics, expanding bus operator training



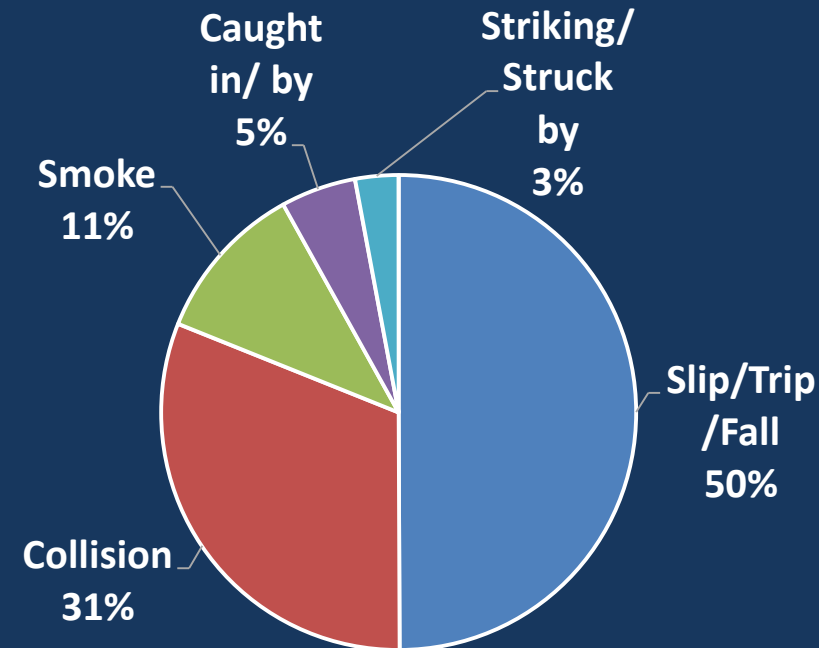
# Statistical Review

## Customer Injury Rate - *per million trips*



CY14		CY15	
CIR	TARGET	CIR	TARGET
1.97	< 1.8	2.05	< 1.8

Injury Types  
CY15





# Bus Customer Injury Rate – Key Drivers

## Collision-related

Cause: Majority from non-preventable collisions

Action: Improvements from defensive driving training & expanded training

## Slips/Trips/Falls

Cause: Majority from hard braking events and maneuvering through traffic

Action: Defensive driver training and customer outreach/education on proper riding techniques (e.g., holding onto handrails)

Injury Type	2014	2015	YOY % Change	Injury Diff
Collision Related	1.47	1.36	- 8%	- 21
Slips & Other Types	1.00	0.89	- 11%	- 19
<b>Total Rate</b>	<b>2.47</b>	<b>2.25</b>	<b>- 9%</b>	<b>- 40</b>

Rate: Customer Injuries per 1 million trips





# Rail Customer Injury Rate – Key Drivers

## Vertical Transportation

Cause: Slips and falls from running; being used as a walker

Action: Customer outreach/education on situational awareness; improve escalator availability

## Rail Facilities/Stations

Cause: Slips/Trips/Falls due to winter weather (e.g., ice)

Action: Snow and ice removal methods have been improved. Customer outreach/education on safety precautions will be targeted at station hot spots

## On Board

Cause: Smoke inhalation; caught in door due to station overcrowding

Action: Improvements to emergency response procedures; train availability to reduce station crowding

Injury Type	2014	2015	YOY % Change	Injury Diff
Vertical Transport	0.59	0.56	-5%	-10
Rail Facility	0.65	0.64	-2%	-7
On Board	0.15	0.55	264%	78
<b>Total Rate</b>	<b>1.39</b>	<b>1.75</b>	<b>26%</b>	<b>61</b>
<u>Rate</u> : Customer Injuries per 1 million trips				



# 2015 Key Accomplishments

- Closed a total of 25 of 29 National Transportation Safety Board (NTSB) recommendations
- Introduced into service 7000-series railcars
- Conducted 21 Internal Safety Audits (ISA); generating over 30% of all new CAPs
- Completed safety certification/opening of Phase I Silver Line
- Closed 95 corrective action plans (CAPs)
- Continued environmental compliance



# 2015 Key Accomplishments

- Completed 76% of all “safety hotline” calls by employees
- Hosted 7 DOT Transportation Safety Institute classes
- Expanded the Confidential Close Call Reporting to include Bus Service
- Continued implementing science-based Fatigue Risk Management System, milestones;
  - Fatigue Risk Management Policy
  - Hours of Service Policy
  - Fatigue Dashboard
- Continued development of SafeSTAT for trending and analysis