

Washington Metropolitan Area Transit Authority

## Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:  
201749

Resolution:  
☐ Yes ☒ No

### TITLE:

SAFE Quarterly Report

### PRESENTATION SUMMARY:

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

### PURPOSE:

The Metro SAFE Quarterly Report informs the Safety and Security Committee regarding the ongoing safety culture in the Metro system through established performance measurements 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 Quarterly Safety Report will provide data for the period of January – March 2016 (1Q/2016), compared with the same period of time in 2015 and against the 2016 targets; in addition to summary status of Corrective Action Plans (CAPs).

### DESCRIPTION:

Two key measures of a safety culture are the customer and employee injury rates. As such, both performance measures are included as part of Metro's Strategic Plan. The 2016 targets are: Customer Injury Rate (CIR) at less than 1.75 injuries per million Passenger Trips and the Employee Injury Rate (EIR) at less than 4.5 injuries per 200,000 work hours.

#### Key Highlights:

- Customer Injury Rate (CIR) – For the 1Q/2016, the CIR was 2.32 customer injuries per one million passenger trips, which did not meet the target of 1.75. This rate is 22% lower than 1Q/2015's rate of 3.03. The 1Q/2016 is also higher than the CY15 year-end rate of 2.05.
- There were 173 NTD reportable customer injuries in the 1Q/2016, down from 235 in the 1Q/2015.
- Employee Injury Rate (EIR) – For the 1Q/2016, the EIR was 5.53 per 200,000 hours worked (equivalent to 100 employees working one year); this a 20% decrease over 1Q/2015 (6.93).
- There were 166 OSHA Recordable Injuries in the 1Q/2016, up from 202 in the 1Q/2015. Select actions underway or in development to reduce all injuries below the Authority's target are listed further.

## **Background and History:**

The Department of Safety & Environmental Management utilizes two KPIs, the CIR and EIR, as overall indicators of improving 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 employees and passengers. The EIR measures are based on the OSHA Recordable Injury Criteria and the CIR measures are based on National Transit Database (NTD) Reporting Criteria. The data in the attachments support the two KPIs.

## **Discussion:**

### **Employee Injuries**

The 1Q/2016 rate is 20% lower, at 5.53, than the rate during the same time period last year (i.e., 6.93). When compared to the Bureau of Labor Statistics (BLS) average for Urban and Transit Systems (i.e., NAICS code 4851), the EIR is 7% lower than the 5.90 BLS average rate.

Bus Transportation accounted for nearly one half of all employee injuries in the 1Q/2016, followed by Rail Transportation (18%), Elevator/Escalator Maintenance and MTPD (both at 6%).

The main injury types behind the EIR are:

- Slip/Trip/Falls (i.e., 49 injuries);
- Motor Vehicle Collisions (32 injuries);
- Struck By/Against (21 injuries); and
- Stress (15 injuries).

Bus Transportation had the most injuries in the 1Q/2016 with 80 OSHA Recordable Injuries. Over one quarter of BTRA injuries were the result of non-preventable collisions. Slips/Trip/Falls account for 20% of BTRA's injury total, nearly split evenly among ice-related falls and falls due to employee inattention. These two types are followed by crime-related injuries at 17%, due to stress-related verbal assaults, being physically assaulted by passengers, or by witnessing crime while driving. An increase in ergonomic injuries has also occurred in BTRA, accounting for 11% of injuries, primarily due to repetitive motion and improper operator cockpit configuration.

There are efforts in place to assist employees that are at risk of these injuries. WMATA's Employee Assistance Program (EAP) is actively working with Bus Transportation to provide counseling and guidance for these at risk employees. Additionally, Bus Operator Training is working with employees on how to de-escalate situations with passengers that can lead to verbal assaults.

Bus Services and MTPD have teamed up to launch Metro's SafeWatch, which is an effort to ensure the safety of bus operators working late at night. Bus Services and MTPD will make random checks with bus operators on selected lines late night to confirm that their operating conditions are safe and that they are not experiencing any unusual activities. In addition to random personal contacts, the Bus Operations Control Center will make radio calls to bus operators at the end of each line, and MTPD will

monitor problem areas and conduct 'ride-alongs' where possible.

Bus Transportation is also exploring a mock operator cockpit at each division where operators can learn how to properly set up their bus cockpit.

Rail Transportation had 29 injuries in the 1Q/2016, with Slips/Trips/Falls amounting to almost one third of its injuries. As with Bus Transportation, these injuries are almost evenly split among weather-related injuries and employee inattention. Struck By/Against is the second leading injury type with over 20% in this category; these injuries primarily occur to Train Operators opening/closing cab or bulkhead doors, or closing train windows. The third main category is stress-related injuries due to attempted suicides and crime-related activities, which account for nearly 20% of Rail Transportation injuries.

In an attempt to get ahead of ice-related injuries, Rail Transportation produced a video in-house that educates employees on how to avoid these types of injuries. With that said, there were still injuries in this category, albeit less than last year. Rail Transportation will also be focusing on situational awareness training, which will identify common hazards in the workplace that may contribute to injuries if employees become complacent. Finally, as with Bus Transportation, the EAP is proactively working with employees that encounter situations that may lead to mental stress.

After a very strong performance in CY15, Elevator/Escalator Maintenance (ELES) has struggled the first two months of the year which negatively impacted its 1Q/2016 performance. With that said, ELES only had one injury in March. Fifty percent of its injuries were the result of Slips/Trips/Falls, followed by Lifting/Lowering injuries. The majority of the injuries were due to employee inattention, followed by poor ergonomic practices.

To ward off any additional injury increases, ELES will be reviewing employee safety training to review proper body mechanics and inspect working areas for proper housekeeping in an effort to reduce tripping hazards. ELES will also be conducting incident investigation workshops at the supervisor level to improve investigation quality and root cause analysis on all incidents. Finally, all supervisors have completed OSHA 10 Hour training and managers OSHA 30 Hour training, which will enhance employee awareness of safety regulations and hazard identification.

Nearly one-third of MTPD's injuries are the result of one motor vehicle incident, where three officers were injured as the result of the collision. The remaining injury types include Slips/Trips/Falls and Pursuits/Arrests, both at 33%. MTPD had no injuries in February. In an effort to reduce injuries and increase officer safety, the MTPD has expanded its safety committee structure to its divisions. This will provide a localized response to safety issues. In addition, defensive driving and arresting tactics training will be reviewed and re-emphasized at the divisions.

#### Customer Injuries

The MetroBus CIR for the 1Q/2016 is 2.98 injuries per million passenger trips with a total of 87 NTD Reportable Injuries; this rate was 65% higher than the 1Q/2015 rate and injury totals, which was 1.80 and 55 injuries.

The leading customer injuries for the 1Q/2016 are Collision-related (30%) and Slips/Trips/Falls (19%); the former has been the leading cause of customer injuries for the last three years.

Similarly to Bus Transportation employee injuries, the majority of all MetroBus customer injuries are the result of non-preventable collisions (nearly 50%). Customers falling due to not holding onto a handrail or inattention is the second leading factor for injuries, with over 17% of injuries falling into this category. Customers falling as a result of hard braking is the final leading injury type (15%), with one incident sending 10 customers to the hospital when the operator had to brake to avoid a collision.

Bus Operator Training continues to emphasize defensive driving tactics with the overall goal of reducing non preventable collisions, which are the leading injury types for both employees and customers. In addition, WMATA's Customer Service, Communications, and Marketing Department is working on a safe riding campaign to that will emphasize how to safety ride on a MetroBus (e.g., holding handrails, standing behind the yellow line).

The MetroRail CIR for the 1Q/2016 is 1.70 injuries per million passenger trips with a total of 76 NTD Reportable Injuries; this rate was 54% lower than the 1Q/2015 rate and injury total, which was 3.65 and 170 injuries. Ninety percent of all MetroRail injures are Slips/Trips/Falls, followed by Struck By (6%) and Caught In/By (4%).

Escalator: The 1Q/2016 escalator injury rate (i.e., 0.83) has increased 4% when compared to the same time period in 2015. The leading factors causing escalator injuries are passenger inattention (40%) and being struck by another passenger while descending an escalator (12%).

Rail Facilities: The 1Q/2016 Rail Facility injury rate (i.e., 0.74) has decreased 35% when compared to the same time period in 2015. Passenger inattention/distraction is the leading Slips/Trips/Falls factor at 29%, followed by slipping on a wet surface (20%) and tripping and falling while running (12%).

Rail On-Board: The 1Q/2016 Rail On-Board injury rate (i.e., 0.13) has decreased 92% when compared to the same time period in 2014. The leading injury factor was when passengers were caught in a closing train door after the chimes were given (33%, or two injuries)

The MetroAccess 1Q/2016 CIR is 18.53, down 4% from 19.31 during the same time period in 2015. The leading causes of customer injuries are non-preventable rear-end collisions (45%) and non-preventable sideswipes (12%).

## **FUNDING IMPACT:**

Define current or potential funding impact, including source of reimbursable funds.	
Project Manager:	Patrick Lavin
Project	SAFE
Department/Office:	Necessary funding within the approved operating budget.

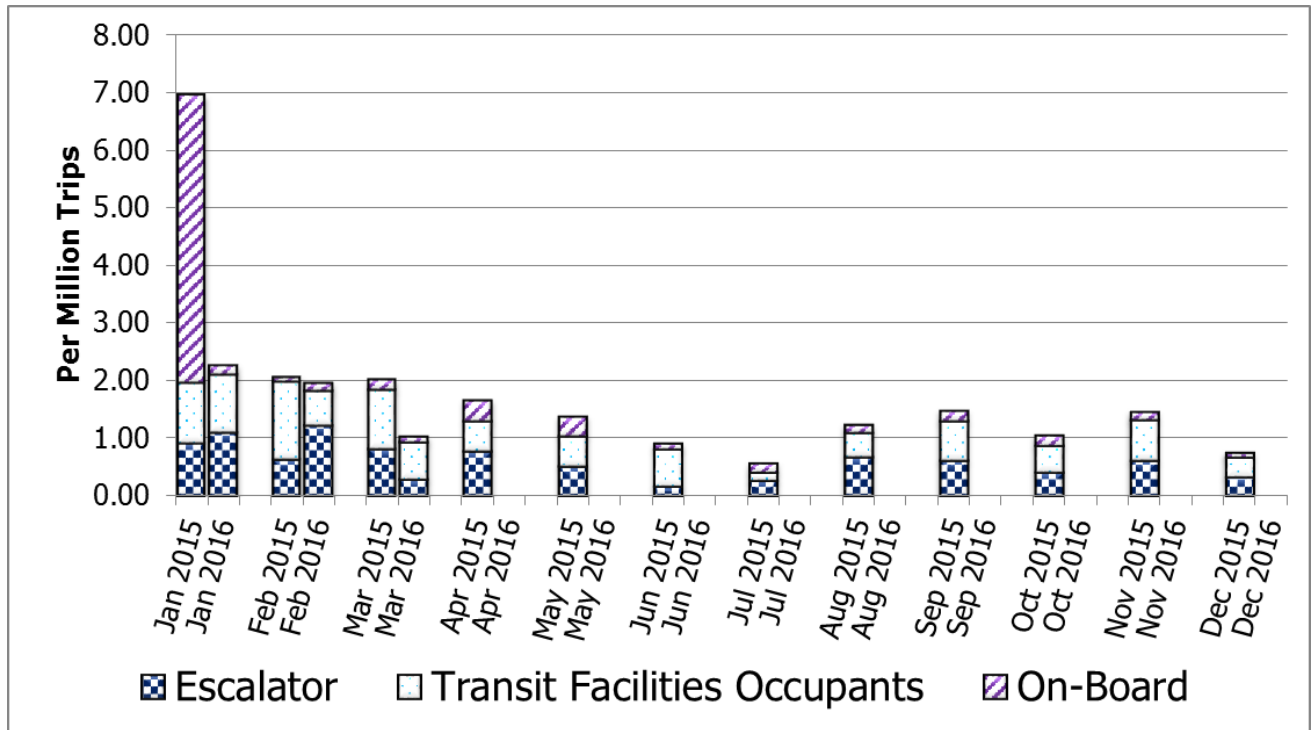
**TIMELINE:**

<b>Previous Actions</b>	<ul style="list-style-type: none"><li>• January 28, 2016 - Safety Annual Report</li></ul>
<b>Anticipated actions after presentation</b>	<ul style="list-style-type: none"><li>• Continue to fully implement all NTSB and FTA CAPs</li><li>• Continue to strengthen safety culture</li></ul>

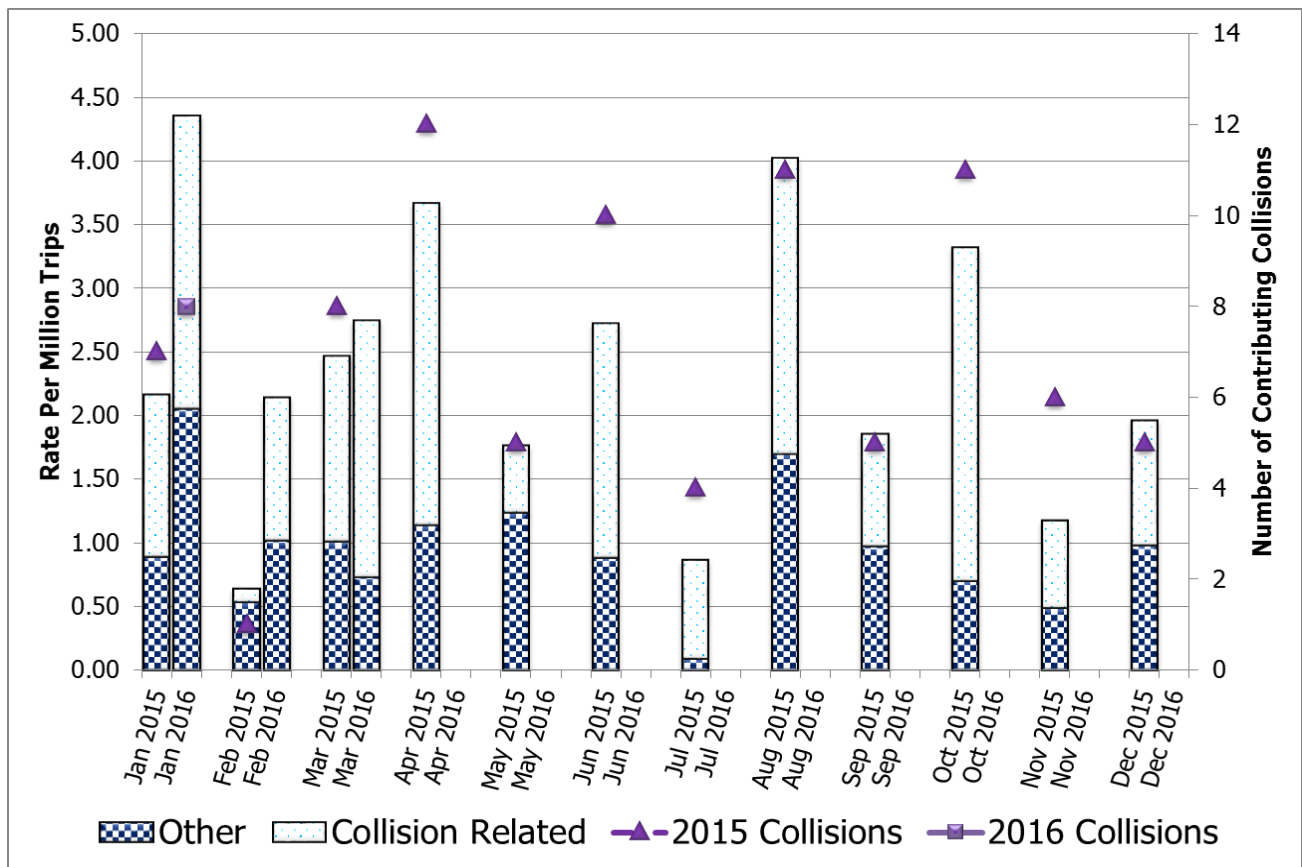
**RECOMMENDATION:**

To inform the Board's Safety Committee of the quarterly safety performance measures and actions.

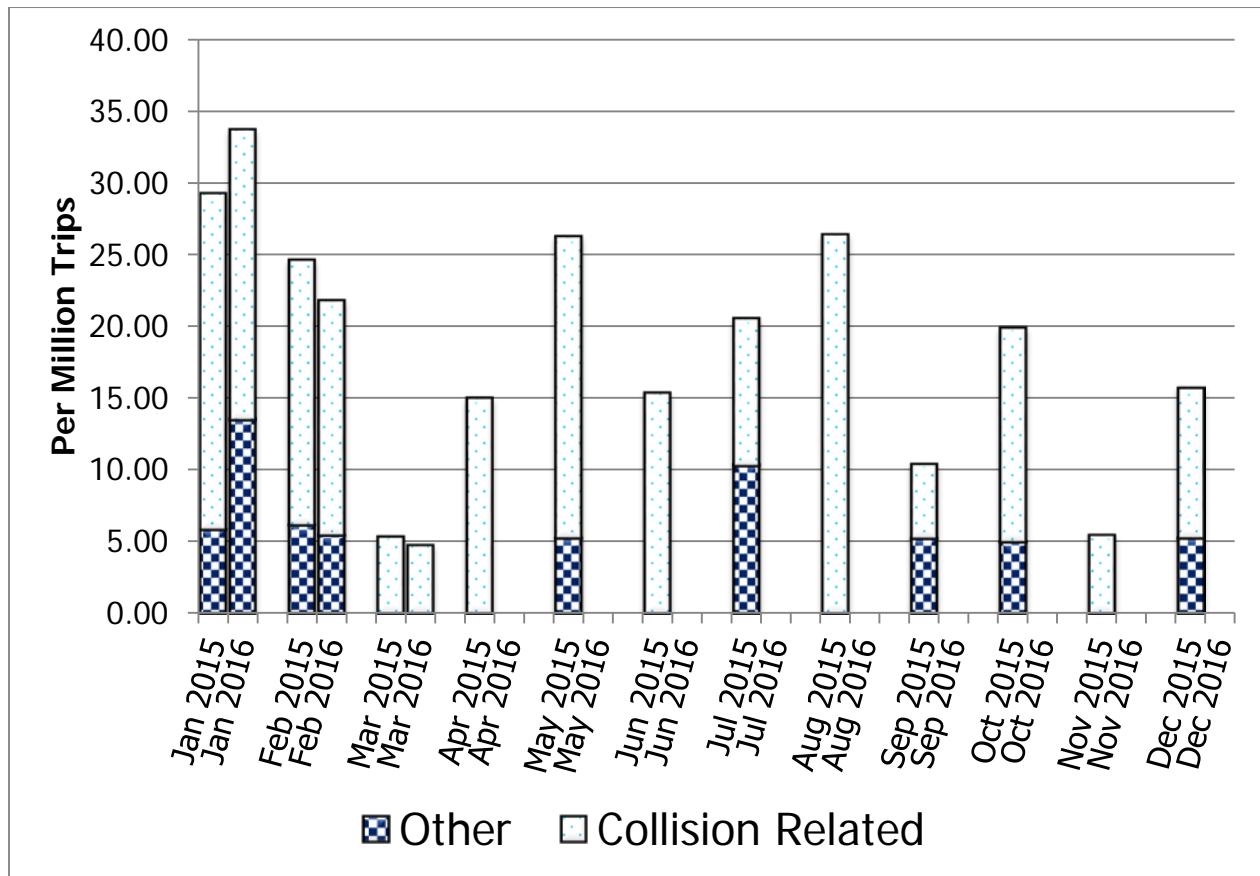
### Chart 1: Rail Passenger Injury Rates



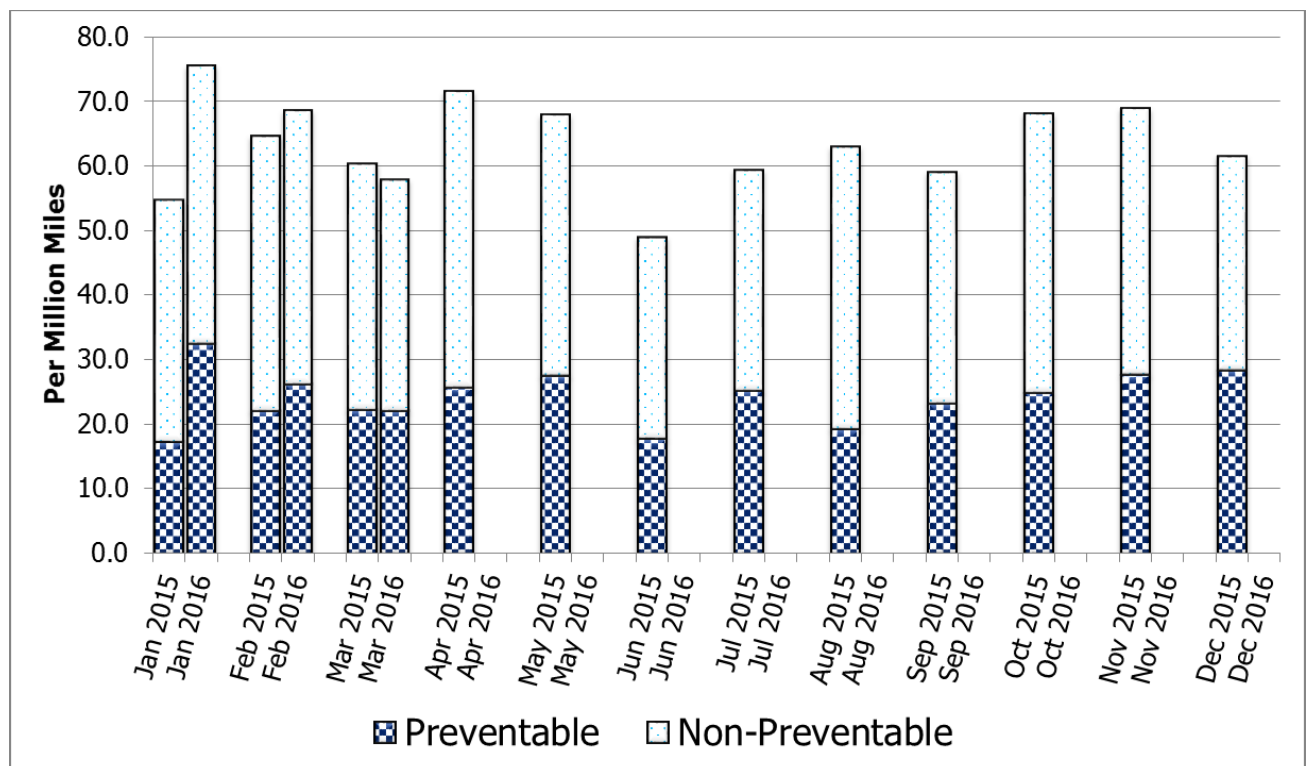
### Chart 2: Bus Passenger Injury Rates



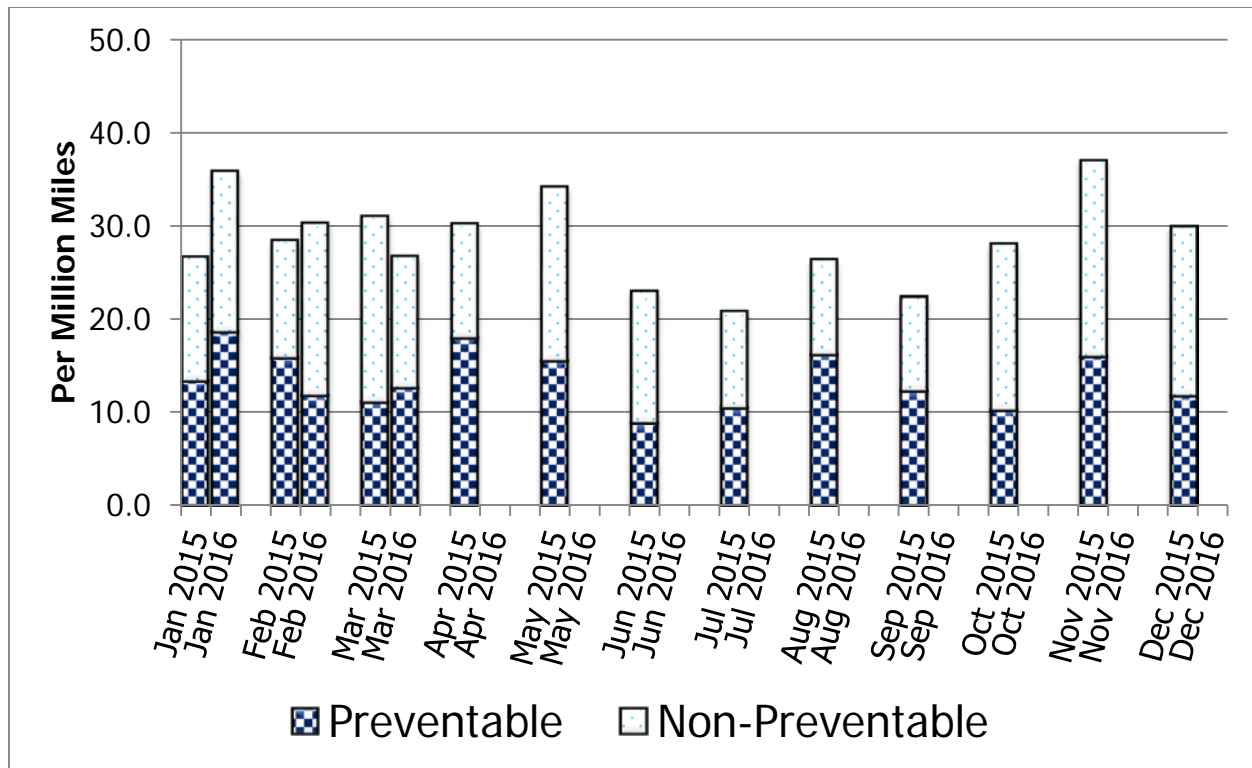
### Chart 3: MetroAccess Passenger Injury Rates



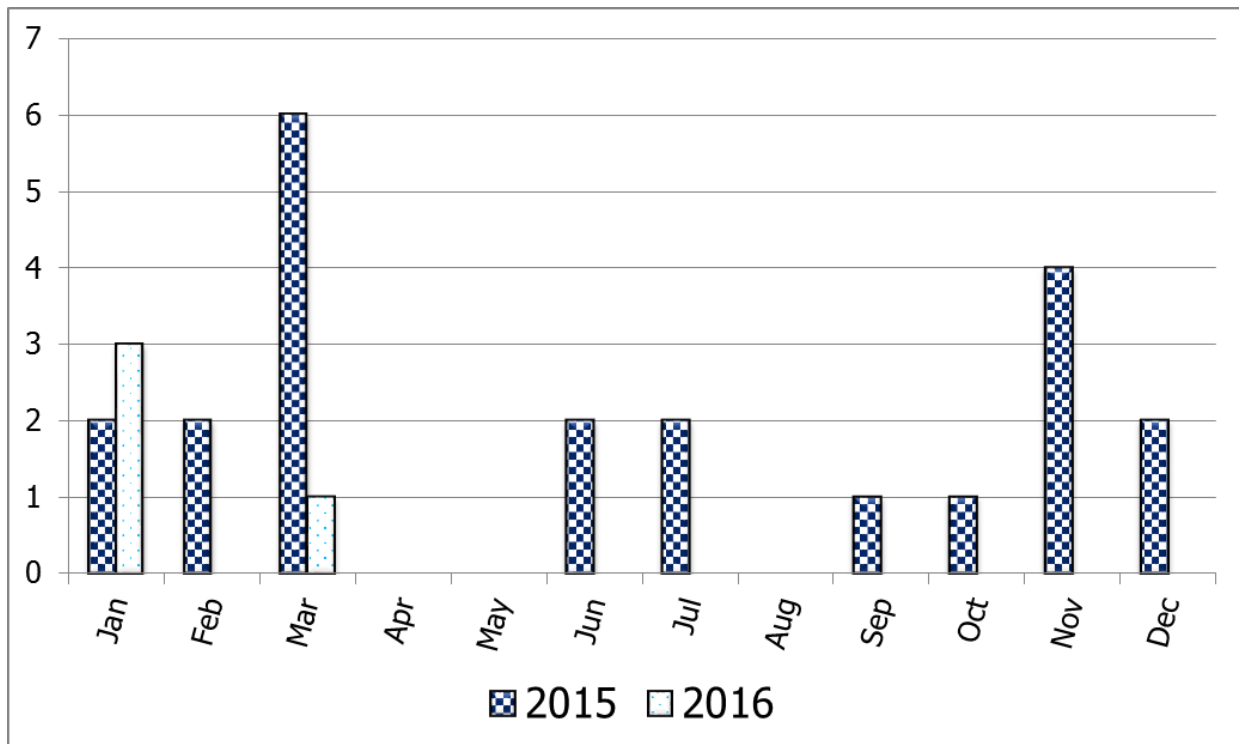
### Chart 4: MetroBus Collision Rates



**Chart 5: MetroAccess Collision Rates**

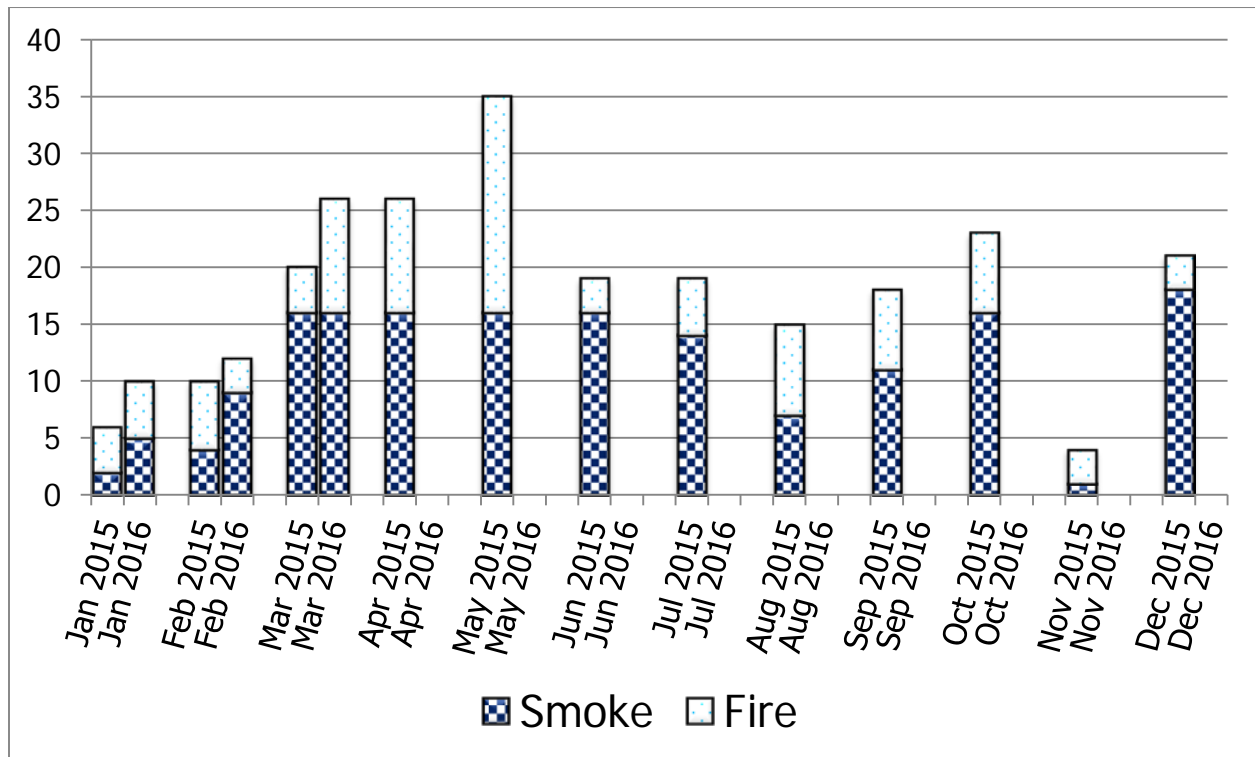


**Chart 6: Pedestrian / Cyclist Trasported to Hospital**

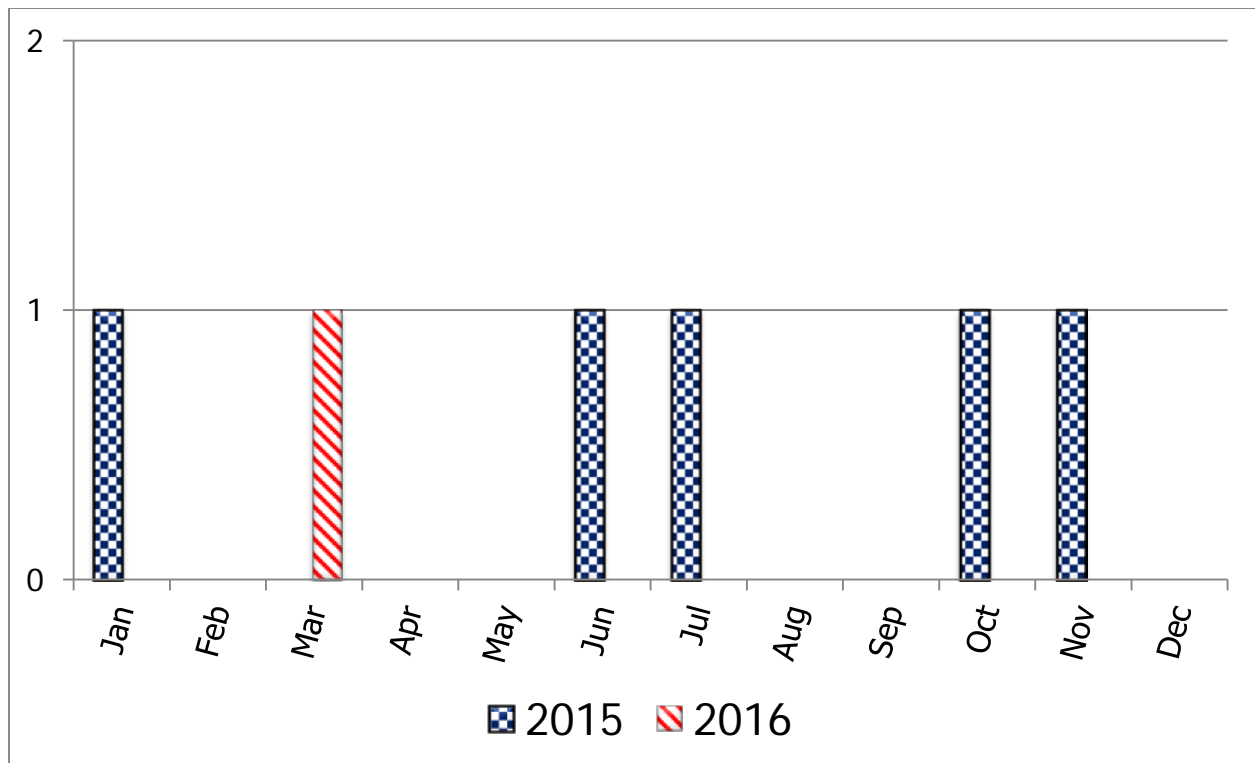




### Chart 7: Smoke/Fire Incidents



### Chart 8: Suicides/Fatalities



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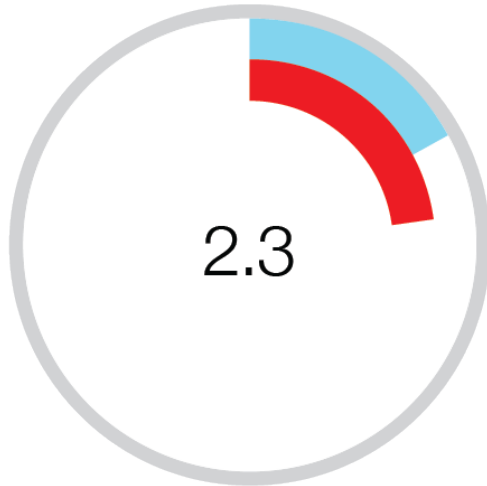
**Washington Metropolitan Area Transit Authority**

# **Quarterly Safety Report**

Safety and Security Committee  
May 12, 2016

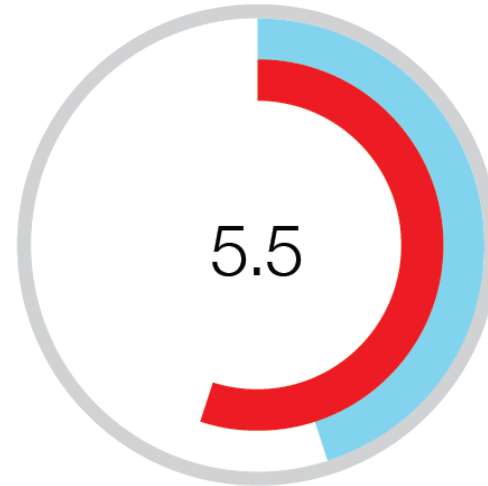
# 2016 Key Performance Indicators

Customer Injuries



● Target  $\leq 1.75$  per million passengers 

Employee Injuries

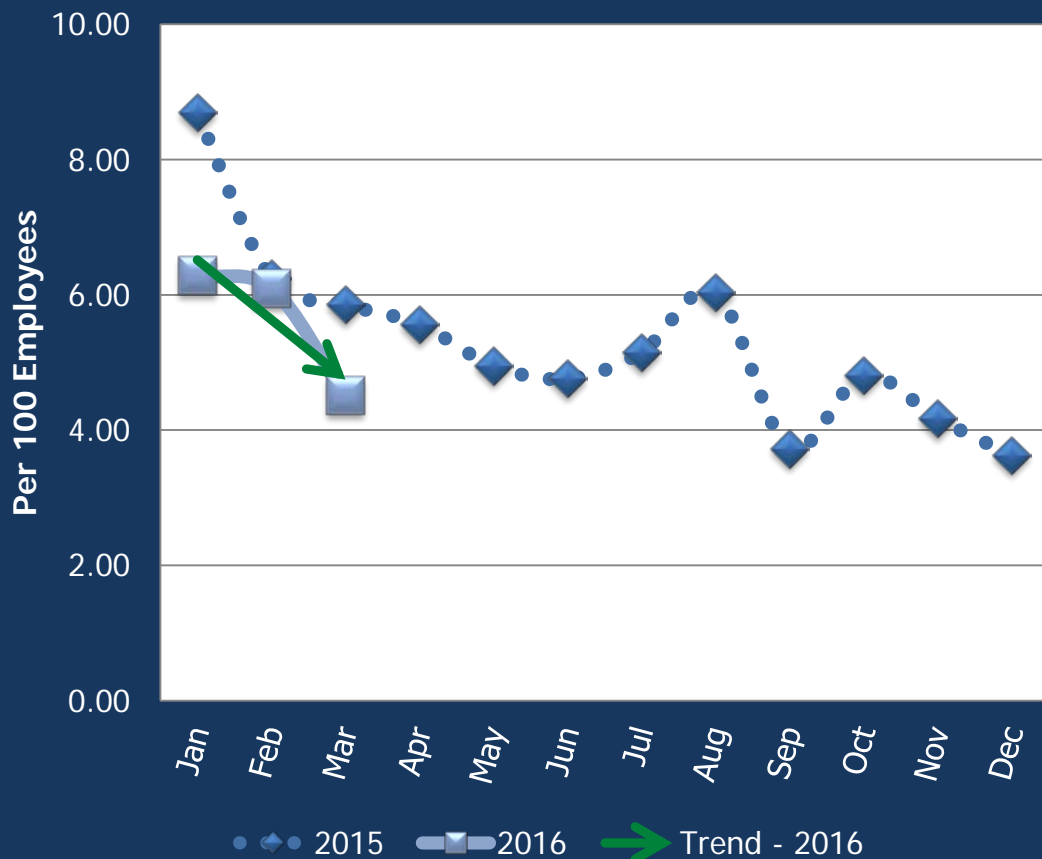


● Target  $\leq 4.5$  per 200,000 hours worked 



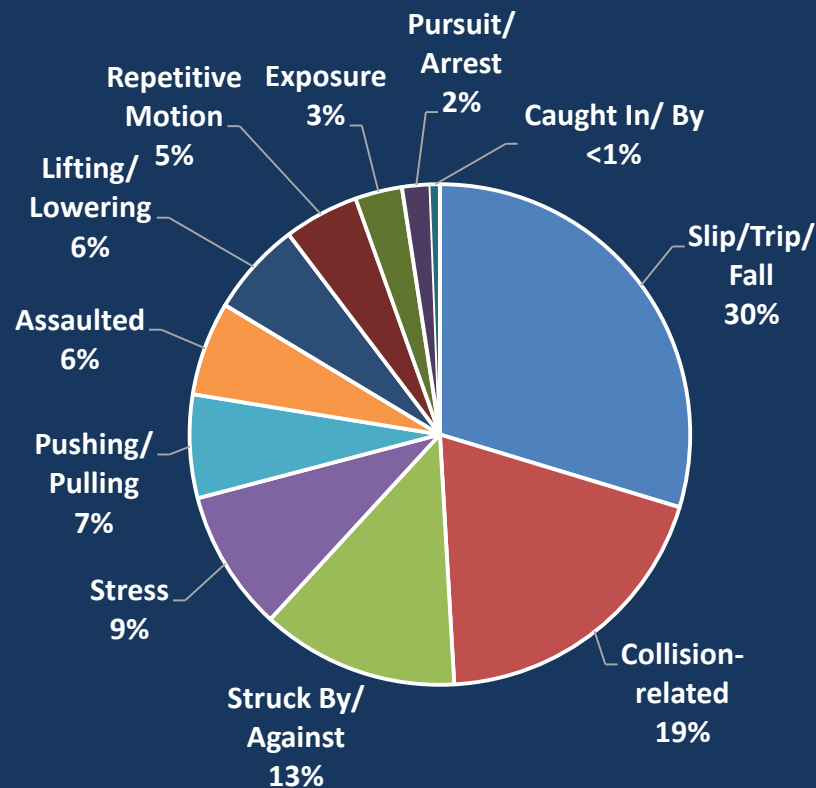
# Statistical Review

## Employee Injury Rate – *per 100 Employees*



JAN	FEB	MAR	CYTD	TARGET
6.28	6.10	4.30	5.53	<4.5

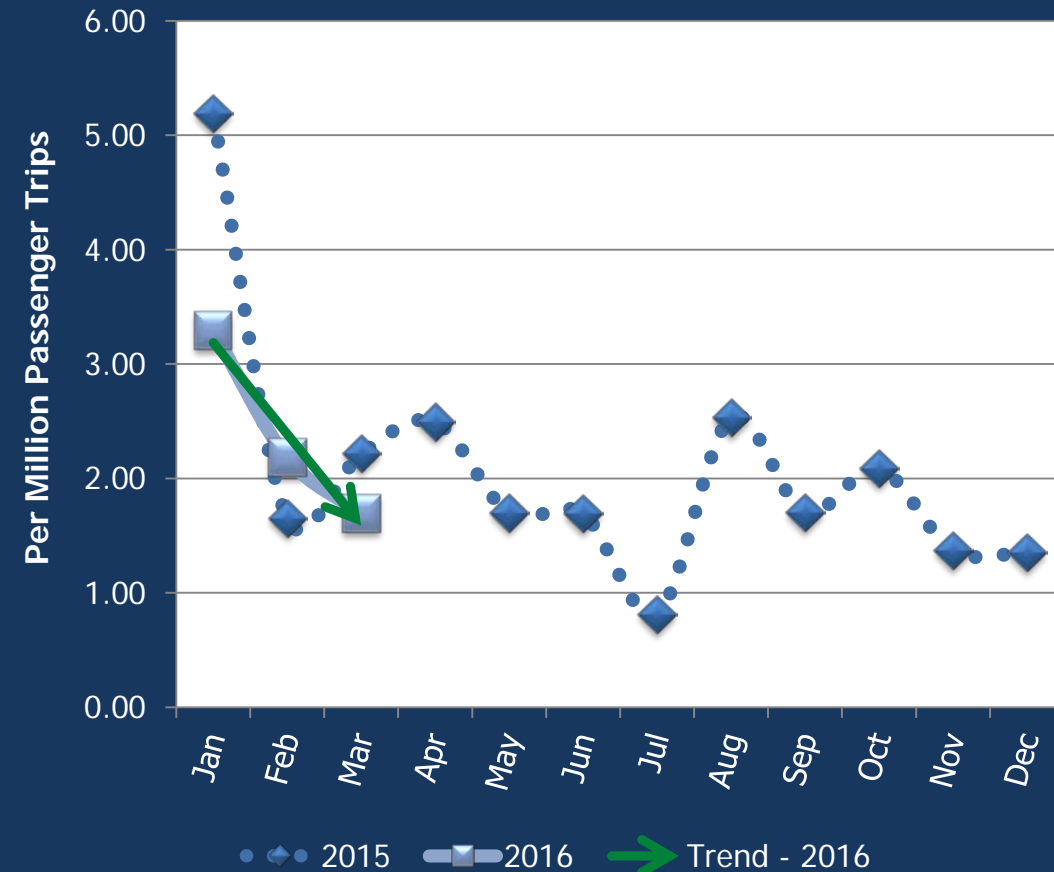
Injury Types  
1Q/2016





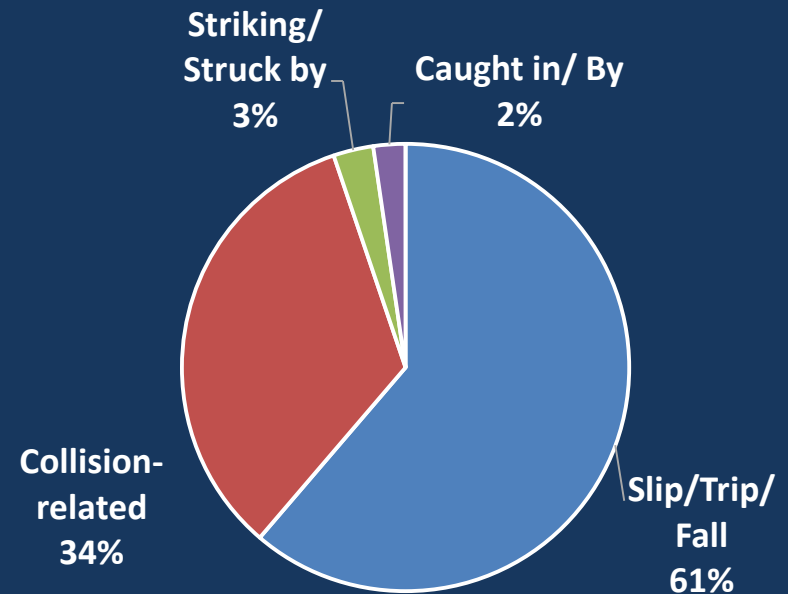
# Statistical Review

## Customer Injury Rate - *per million trips*



JAN	FEB	MAR	CYTD	TARGET
3.29	2.18	1.72	2.32	<1.75

Injury Types  
1Q/2016





# Injuries– Key Drivers

## 1Q/2016

### Slips/Trips/Falls



- Main factors:

- Inattention and weather-related (Customers and Employees)
- Hard Braking / Bus-in-Motion (Customers)

- Actions: Training, Signage, Customer Outreach

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### Non-Preventable Collisions

- Main factors: Rear End Collisions (Customers and Employees)

- Actions: Training, Pilot Accident Prevention Programs

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### Crime-related Incidents

- Main factors: Verbal & Physical Assaults, Stress (Employees)

- Actions: EAP, SafeWatch (MTPD and Bus Services)