

Reducing Injuries and Eliminating Turning Bus-Pedestrian Collisions

Pamela McCombe, M.Eng. P.Eng.

Director of Safety, GCRTA

Cleveland, OH



2012 BUS & PARATRANSIT CONFERENCE

Advancing the Safety Culture Problem

2008:

21.36 Injuries/200,000 Hours Worked



Advancing the Safety Culture Solution

- Developed Six Criteria

Top Management

Visibly Committed

Middle Management

Actively Involved

Supervision

Performance Based

Hourly Employees

Problem Solvers

Freedom to Express Safety Concerns

Safety Is Positively Received



Advancing The Safety Culture


Top Management

- Safety Leadership Roundtable Training
- Quarterly Management Meeting
- Root Cause Analysis of Incidents
- Executive Safety Committee
- Performance Measures
- Operations Commitment
- Updates to Board and Regional Leaders



Advancing The Safety Culture Middle Management

Performance Measures

- Safety Training Observation Program (STOP)
 - Weekly Toolbox Sessions
 - Rule-of-the-Month
 - JHA's
 - Recommendations from Audits/Inspections
 - Encouraging Hazard Reporting
 - Safety Improvement Team
 - Attendance at Safety Committees
- 

Advancing The Safety Culture

STOP Training

Benefits of STOP

- Reducing injuries and incidents using safety awareness
- Trains leaders on formal observations and discussions with employees
- Non-Punitive. Designed to develop safety awareness in a positive way.
- Long term tracking of inefficiencies and resolutions to problems.



Advancing The Safety Culture Toolbox Sessions

Forklift Safety

Facilities Maintenance / CBMF

Meeting Attendance Sheet

MEETING DATE: 4/13/12
11:30 AM

Signing this sheet indicates that I have attended a meeting presented by my employer on the above date on the subject indicated. I understand that this is part of an ongoing training effort and I was given the opportunity to ask questions to ensure my full understanding of what was addressed.

- | | |
|----------------------------------|-----------|
| 1. <u>Gilbert Casper (02567)</u> | 23. _____ |
| 2. <u>Joseph Uhere (02506)</u> | 24. _____ |
| 3. <u>Keith Conway (02549)</u> | 25. _____ |
| 4. <u>Ed Betlikay 100199</u> | 26. _____ |
| 5. <u>Doug Ryant 02473</u> | 27. _____ |
| 6. <u>Robert Coleman 02483</u> | 28. _____ |
| 7. _____ | 29. _____ |
| 8. _____ | 30. _____ |
| 9. _____ | 31. _____ |
| 10. _____ | 32. _____ |
| 11. _____ | 33. _____ |
| 12. _____ | 34. _____ |
| 13. _____ | 35. _____ |
| 14. _____ | 36. _____ |
| 15. _____ | 37. _____ |
| 16. _____ | 38. _____ |
| 17. _____ | 39. _____ |
| 18. _____ | 40. _____ |
| 19. _____ | |
| 20. _____ | |
| 21. _____ | |
| 22. _____ | |

By signing here, I certify that, as the trainer, I have performed a safety meeting with my associates on the topic provided in accordance with my safety responsibilities.

Trainer's Signature

- Required Monthly
- Topic Issued by Safety Dept.
- Supervisor Delivers Issue and Provides Feedback
- Documentation is Delivered to Safety Dept.



Advancing The Safety Culture

Job Hazard Analysis

Greater Cleveland Regional Transit Authority

THINK SAFETY...



SAFETY DEPARTMENT
WORK SAFELY

Job Hazard Analysis Form

JHA Number: CRMF 1102 Title of JHA: Remove and Replace Tokyu HRV G.E. Linebreaker

Location (Facility or Project Description): Central Rail Maintenance Facility / Rail Equip. Electrical

Name of Person(s) Completing JHA: Ray Bleiler

Date Completed: 10/11/2011 Date Revised: _____ Date Reviewed: _____

Basic Job Steps	Identified Hazards Associated With Job Steps	Hazard Controls and Personal Protective Equipment Required
1) PRE required – see also SOP 32.61.25	Electrical shock, dirt & debris, bump hazards	Safety glasses, electrically rated bump hat, electrical hazard rated steel toe footwear, lockout / tagout, where required.
2) Transport tools & materials to the job	Slip, trip, fall Struck by Strain, overexertion	Watch for slippery floors. Use caution ascending / descending stairs in pits. Be aware of movements of transfer table and other equipment. Use proper lifting methods when handling linebreakers as they are heavy (two persons recommended).
3) Prepare vehicle	Struck by	Chock wheels. Use blue cones per shop practice.
4) Isolate car electrically from all 600 volt and 37.5 volt power sources	Electrical shock	Ensure that pantograph is lowered and locked and that there are no Pringle stinger connections to the car. Ensure that the battery main C/B is off. Verify with meter. Lockout / tagout as required.
5) Remove the linebreaker from the vehicle following the procedures in SOP 32.61.25.	Strain Overexertion Struck by	Use an appropriate lifting device, i.e., lifting table, transmission jack, etc. to remove the linebreaker. Use the proper hand tools. Be aware of pinch points.
6) Install the linebreaker on the vehicle following the procedures in SOP 32.61.25.	Strain Overexertion Struck by	Use an appropriate lifting device, i.e., lifting table, transmission jack, etc. to install the linebreaker. Use the proper hand tools. Be aware of pinch points.
7) Prepare the vehicle for testing	Electrical shock	Requires a Gr. 5 RTI Electrician present. Remove lockouts / tagouts as necessary. Restore 37.5 volt and 600 volt power sources to car after Gr. 5 verifies completeness of work.
8) Prepare vehicle for road test	Struck by	Remove wheel chocks and blue cones.
9) Transport tools & materials to shop	Slip, trip, fall Struck by Strain, overexertion	Clean up work area. Watch for slippery floors when transporting tools and equipment. Use caution ascending / descending stairs in pits. Be aware of movements of transfer table and other equipment. Use proper lifting methods when handling linebreakers as they are heavy (two persons recommended).

- Completed JHAs to be reviewed by Safety Committees and Supervisors to provide feedback.
- Finalized JHA will be discussed with affected employees and posted in their work area.
- Supervisors will conduct toolbox sessions about the JHA. Employees will sign-in and completed list will be sent to the Safety Department.

Advancing The Safety Culture Recommendations

Status	Date	Mode Type	Incident	Report Number	Root Cause(s)	Recommendation(s)	Responsible Party	Revised Due Dates/ Comments	Original Due Date
Closed	6/19/11	2297	Coach 2297 Struck by Bicyclist	B11-07NR	Management System SPAC Not Used Enforcement NI There were no entries of retraining or positive discipline in the Employee General Record for safety related SOR's.	Ensure retraining and/or positive discipline is utilized and documented in the Employee General Record for safety related SOR's.	Hayden: K.Vest	8/30/2011	
OPEN	9/15/11	2278	Pedestrian contact with Coach 2278	B11-09NR	Procedure, No Procedure Courtesy Stops are taught in operator training courses, but no defined procedure is in the Bus	Update Bus Operator Handbook to include procedure about Courtesy Stops.	Service Mgmt: A. Erenrich		5/15/11
Closed	12/14/11	2645	Bicyclist Contact with Coach 2645	B11-16NR	Management System, SPAC Not Used, Enforcement NI - There was no entry of retrain or positive discipline in the Employee General Record for the violation occurring on 2/18/05	Ensure retraining and/or positive discipline is utilized and documented in the Employee General Record for safety related SOR's.	Triskett: W. Eltrich		2/28/12
OPEN	11/8/12	2487	Coach 2487 Contacted by bicyclist	B11-15NR	Management System, SPAC Not Used - Pre-Trip Inspection and Defect Cards for Coach 2487 were not being collected per section 5 of the Operations Pre-Trip SOP	Reinstruct Starters and Hostlers at the District regarding the collection and processing of Pre-Trip Inspection and Defect Cards. Provide training evidence to the Safety Department when complete.	Hayden: K.Vest		6/1/12

Advancing The Safety Culture Hazard Reporting



The Greater Cleveland
Regional Transit Authority

Main Office
1240 West 8th Street
Cleveland, Ohio 44119-1331
Phone 216 506-5218
Fax 216 791-4043
email: jcalabrese@gcrta.org
website: www.rta.com

Greater Cleveland Regional Transit Authority Non-Punitive Hazard Reporting Policy

The Greater Cleveland Regional Transit Authority (GCRTA) is committed to the safest transit operation possible; as a result, GCRTA is committed to having uninhibited reporting of all incidents, hazards and occurrences which may compromise the safe conduct of our operations. To this end, every employee is responsible for communicating any information that may affect the integrity of transit safety. Such communication must be completely free of any form of reprisal.

Joseph A. Calabrese, CEO
General Manager/
Secretary-Treasurer

The GCRTA will not take disciplinary action against any employee who discloses a hazard, incident or occurrence involving safety. This policy shall not apply to information received by the Authority from a source other than the employee, or which involves an illegal act, or a deliberate or willful disregard of promulgated regulations or procedures.

The primary responsibility for transit safety rests with supervisors and managers; however, safety is everyone's concern.

Our method of collecting, recording and disseminating information obtained from Hazard Reports and the Safety Hotline (216-566-5111) has been developed to protect, to the extent permissible by law, the identity of any employee who prefers to remain anonymous and who provides safety information.

I urge all staff to use our hazard-reporting program to help GCRTA become a leader in providing our customers and employees with the highest level of transit safety.



Joseph A. Calabrese, CEO
General Manager, Secretary-Treasurer

August 2011

- Non-Punitive
- Encourages Reporting of Hazards
- Safety Hotline also available

Advancing The Safety Culture

Safety Improvement Teams

Example –

Installing signage on utility poles to warn operators to stay clear:

- After installation, monitor to see if those utility poles are still being struck.
- State how many signs have been installed.



Advancing The Safety Culture

Safety Improvement Teams



Advancing The Safety Culture Attendance

Monthly Safety Meetings



Advancing The Safety Culture

Safety Committees

- Review Emergency Evacuation Plans
- Conduct a Fire Drill
- Review a JHA w/ Feedback
- Conduct an injury/accident investigation using Root Cause Analysis
- Conduct Left Hand Turn Review (Bus Committees)
- Pick Safety Issue that Needs Improvement In Your Area and Follow-up to Closure.



Advancing The Safety Culture Performance Measures

- Completed Monthly
- Supervisors and Managers
- Information Gathered in Database
- Progress is charted
- Completed Electronically using Google Docs



Advancing The Safety Culture Performance Measures

Performance Measures (Supervisors) - April 2012

* Required

Name *

Employee ID # *

District *

Toolbox Sessions for the Month *

Monthly Total

Toolbox Sessions for the Month

Monthly Total - Please List Topics Discussed

Job Briefings with Job Hazard Analysis *

Monthly Total

Job Briefings with Job Hazard Analysis *

Monthly Total - Please List Topics Discussed

Workplace Inspections *

Workplace Inspections *

How many inspections of your workplace have been completed this month?

STOP Program Tracking *

How many STOP Observations have been made this month?

Accident/Injury Investigations *

How many investigations have been done this month?

Near Miss Reporting *

How many near misses were experienced this month?

Hazard Reporting *

How many hazards were reported in your area?

Safety Committee *

Did you participate in a safety committee this month?

- Yes
 No

Safety Committee

If yes, what was discussed?

Safety Improvement Team *

Did you participate in a safety improvement team this month?

- Yes
 No

Safety Improvement Team

If yes, what was investigated?

Advancing the Safety Culture Results

2010:

10.07 Injuries/200,000 Hours Worked

53% Improvement!!



Eliminating Turning Bus/Pedestrian Collisions

2005:

10 Turning Bus/Pedestrian Collisions



Eliminating Turning Bus/Pedestrian Collisions

Innovation:

Greater Focus on Training and Efficiency
Checks

Safe Turn Alert



Eliminating Turning Bus/Pedestrian Collisions

<u>Date</u>	<u>Initiative</u>
2006	Training – First video prepared on proper left turn
2007	Monitoring – Operations, Safety and Training conducted ride checks
02/08	Corrective Actions Task Force – Safety Culture
05/08	Training – New video and training based on “inattentional blindness”
09/08	Awareness – “Watch For Peds” decals on every bus
10/08	Awareness – Left Turn blitz
10/08	Awareness – “Second Glance, Second Chance” posters
10/08	Enforcement – Radar Checks for speed while turning

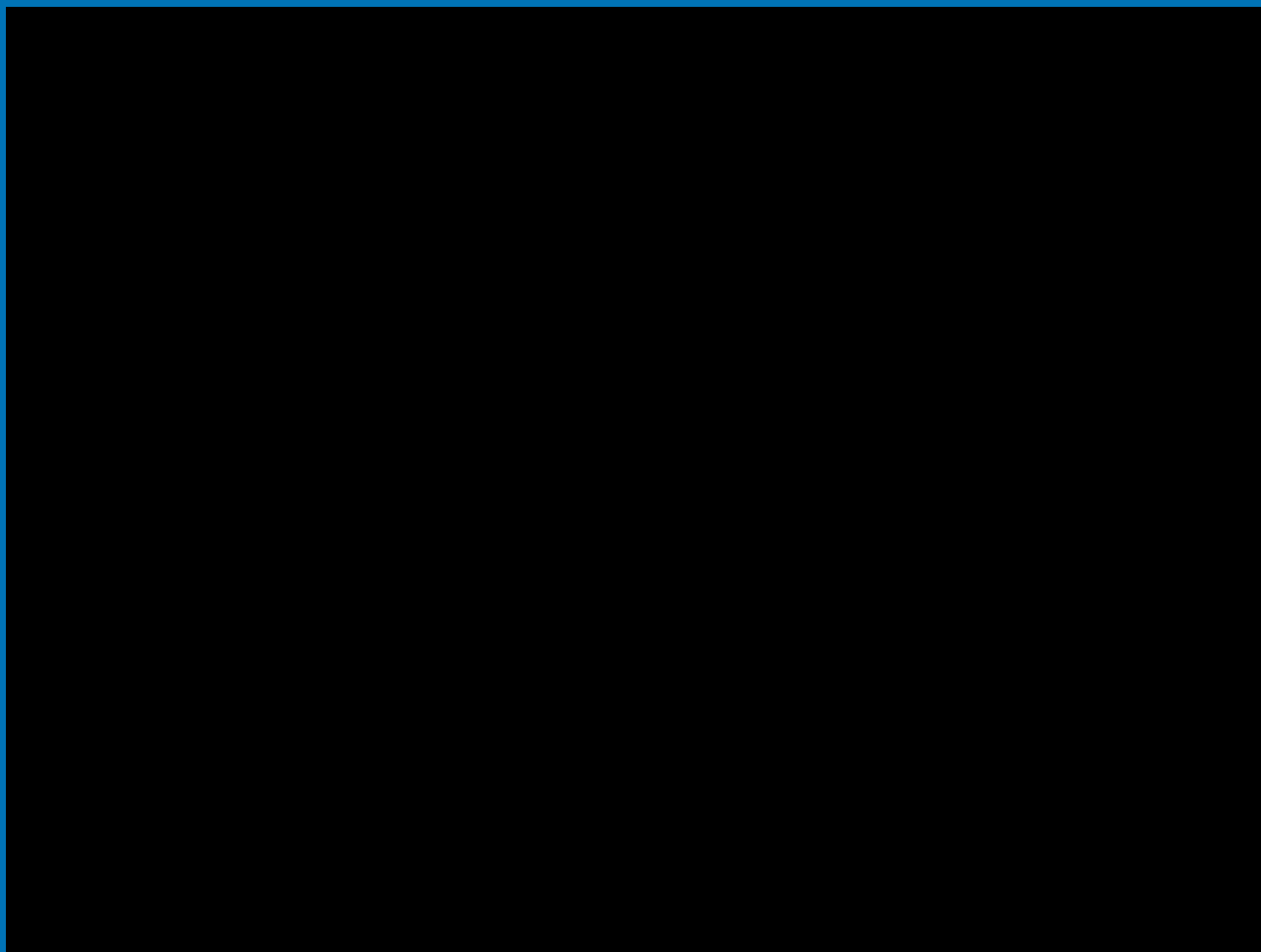


Eliminating Turning Bus/Pedestrian Collisions

<u>Date</u>	<u>Initiative</u>
11/08	Coaching and Enforcement – Conducted observations to determine if Operators observed a person in the crosswalk
01/09	Engineering Issue – Visors were redesigned.
01/09	Warning Devices – Audible beeping and strobe lights on buses while making turns
02/09	Engineering Issue – Rotated exterior left mirror 180 degrees
03/09	Safety Culture – Union management actions, Safety stand-downs, prohibition on cell phone use.
'09, '10	Data Analysis – Verification of Corrective Actions
03/10	Warning Device - Safe Turn Alert for Operators and Pedestrians

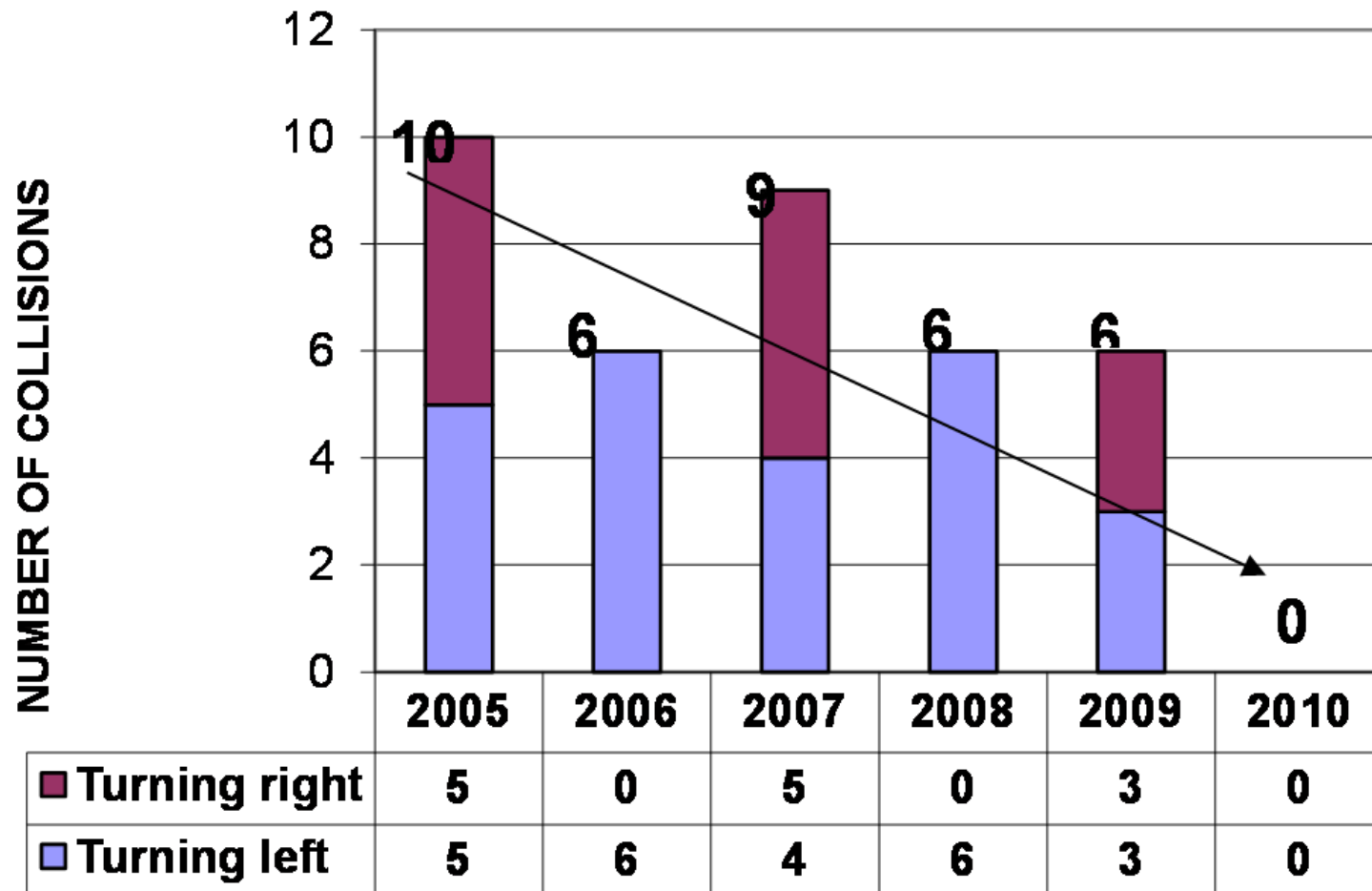


Eliminating Turning Bus/Pedestrian Collisions



Eliminating Turning Bus/Pedestrian Collisions

BUS COLLISIONS WITH PEDESTRIANS AND BICYCLISTS



Thank You!

Comments or Questions?

