Night Paving – Staying Safe

Occupational Health and Safety Update

April 6, 2017

Jim LaFontaine CRSP
Occupational Health and Safety – Night Paving; Staying Safe

International Choking Symbol

Old

New
Occupational Health and Safety – Night Paving; Staying Safe

- Taking every precaution reasonable means developing and communicating proper traffic protection plans – OTM Book 7
- Plan and organize a drive thru operation – Const. Regulation 104
- Ensuring a signal person present to assist reversing vehicles
- Adequate lighting – Const. Regulation 45
- Competent operators of vehicles and machinery
- PPE – mandatory CSA vests; hard hat tape; reflective arm/leg bands
- Full compliment of crash trucks to protect workers in the closed lanes
Occupational Health and Safety – Racing on the 400 April 2, 2017

• How can you protect your crews from motorists who disregard the law?
• Use of OPP Paid Duty; Request MTO speed reduction; Use of Pace Vehicles to control speed providing a gap to allow trucks to merge
Occupational Health and Safety – Night Paving; Staying Safe

- Pre-pave meeting with the brokers or haulers; communicate the traffic protection plan detailing access/egress
- Use of pace vehicles that create a gap to permit construction vehicles to merge into the live lane – use of TC 27 and magnetic signs
- Develop Internal Traffic Protection Plans – ITPP
- Train all personnel in Back Up Awareness to prevent reversing or struck by incidents
Occupational Health and Safety – Controlling Traffic

• Despite our best efforts… things go wrong
• November 2016 at the Dufferin Construction 427 paving project a pace vehicle was struck from behind while traveling 60-70 km/h
• The pace vehicle was slowing to allow a live bottom to merge into Lane 1
• Injuries to the Dufferin Construction driver required medical attention and light duty work for several months
• Work crews were conducting mainline paving operations
June 3, 2016 drunk driver traveling the wrong way on the 401 in Cambridge
Driver left the EnRoute service centre in the Eastbound lanes traveling westbound
Driver entered the closed lanes behind the QMB moveable barrier wall
Struck the Dufferin truck and injured the driver (Foreman) who was sitting in the vehicle completing time cards and production reports.
OPP charged the driver with DUI and reckless causing harm
Traffic Control and Traffic Protection Plans – Night Paving

- Traffic Protection and Traffic Control Plans must be developed and communicated to all staff prior to work commencing Construction Reg. 67

- Each and every employer on the project shall develop a traffic and control and traffic protection plan.

- Appropriate signage must be placed in accordance with Book 7 in advance of the project.

- Only trained personnel in Book 7 may set up and remove lane closures

- Ensure an adequate number of crash trucks are used on the project
Best Practices for Work Zone Safety

- Internal Traffic Control Plan (ITCP)

ANSI/ASSE A10.47 – 2015
Work Zone Safety for Highway Construction

American National Standard for Construction and Demolition Operations

ANSI/AI 0.47 – 2015
American Society of Safety Engineers

Dufferin Construction Company, a division of CRH Canada Group Inc.
Examples of ITCPs

- Diagram
- Access/Egress
- Rules/Notes
  - Pedestrian positioning
  - Truck movements
  - Go / No Go Zones
Occupational Health and Safety – Internal Traffic Control Plans

- OHSA Court order in the USA to develop ITCP
Internal Traffic Control Plans

- Internal Traffic Control Plans will help implement a Vehicle and Pedestrian Segregation program.
- As shown it may be a google earth image or a sketch to illustrate the flow of trucks or equipment on the job site.
- At the plant sites, use all means necessary to restrict pedestrians from walking near trucks and loaders – designate areas near the plant as “pedestrian free zones”
Safe Site Design: **Pedestrian Walkways – Good Examples**

Dufferin Concrete Mississauga
Ten Foot Rule and “Wait for the Wave” – Shared Roles

• Dufferin Construction has implemented a policy change…

• Operators must use extreme caution when there are workers on foot in proximity to their equipment and vehicles.

• Operators must not approach workers on foot within 10 feet of their equipment or vehicle until eye contact and confirmation has been received from the worker(s) on foot.

• “WAIT FOR THE WAVE”

• Workers must not approach the machine’s 10 foot rule without making eye contact and receiving confirmation from the operator.
Occupational Health and Safety – Night Paving; Staying Safe

Wait for the wave!

Workers
Use hand signals to communicate with the operator such as a wave or a safety hand gesture. Make sure you contact the operator before entering the path of the equipment.

Equipment operators
Learn where the blind spots are on all types of moving equipment and make sure no one is in your intended path. Make sure you contact workers on the ground.

A simple wave can save a life
It's important for workers on the ground to have an effective means of communicating with the operator of heavy equipment on a construction site. Construction operators also need to ensure they are aware of nearby workers and pedestrians in their vicinity.
Occupational Health and Safety – Raised Truck Box Incidents

• We spoke of this last year… but it keeps happening!

• August 2016 on Highway 410 in Brampton ON

• Proposed wording from CLRC to amend Construction Regulation 105

“Any truck/equipment that is required to raise any type of box, drum, cylinder which may have the potential to make contact with any overhead object shall be required to have a system to warn the operator the box, drum etc. is in the raised position”
Occupational Health and Safety – Raised Truck Box Incidents

• Photo of Highway 401 at the Highway 400 overpass Dec 2016
Daily Pre Shift Risk Assessments – Foreman Duties

• Required under the IHSA COR Program

• Daily pre shift risk assessments detail the hazards; rank the risk before controls in place and evaluate the residual risk after controls are implemented

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<th>HAZARDS and RISK RATING</th>
<th>CONTROLS IMPLEMENTED and RISK RATING</th>
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<td>Collapse of form crush/struck by</td>
<td>5 Ensure minimum 3 tie screws holding form until hoisted 1</td>
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<td>Hot Mix Paving</td>
<td>Reversing trucks</td>
<td>5 Drive thru operation planned: signal person 2</td>
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Hazards of Handling AC at the plant

- Strict protocols for unloading must include mandatory use of PPE – eye protection; shield; long sleeves and gloves; hard hats and other PPE as required
- Overfilling of tanks; improper labeling of valves; lack of inspection of hoses leading to burst lines
- Ensure emergency plan in place and this may include shower on site
Power Line Contacts

July 10, 2015 - 27,000 volt contact at DCC Hamilton Yard – No Injuries

November 24, 2015 – 24 year old worker from PGC killed after contacting high voltage line in York Region using Vac truck

Court Bulletin

Company Fined $150,000 After Worker Killed By Moving Construction Equipment

February 10, 2016 3:55 P.M. | Ministry of Labour

BRAMPTON, ON - Varcon Construction Co. Ltd. pleaded guilty and has been fined $150,000 after a worker was killed by moving equipment on a roadway.

On April 25, 2014, the company was working on a watermain installation project at Chinguacousy Road and Mayfield Road in Brampton. An excavator was removing material and placing it into dump trucks, which were moving on the road with the assistance of a signaler and a paid duty police officer who was directing traffic. In addition, a traffic control plan was in place which included traffic cones.
Other OHS Matters for Plant Personnel: Fall Arrest - WAH

• Who needs fall arrest training? Any worker who may use a fall protection system…
• Rescue procedures
  • Must be job specific
  • Posted and tested when possible
• System
  • Harness – Lanyard – Rope Grab – Rope – Anchor Point
Human Performance – Exercise before we break

- Count the number of times the letter F appears

- Give this all your attention

- There should be no variation.
Human Performance – Activity/Exercise

FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF YEARS.
Human Performance - Attention

- People pay attention to what they think is most important at the time

- When attention is focused on one thing, their focus is withdrawn from other things.

- Unexpected events may become invisible when attention is focused on one thing … how many F’s did you count?

- Most people count three of them. So much for perception, but it does not say anything about your IQ. Whoever counts the six F’s the first time is a genius, four is rather frequent, five is rather rare, three is normal. Less than three, and you must change glasses ; -)

- For some obscure reasons, we (or our brain) do not count the "f" in "of", maybe because the phonetic is similar to "ov", or because during (quick) reading the brain focus on "lexical" words, and not so much on "grammatical" words.