



Vehicle Accident

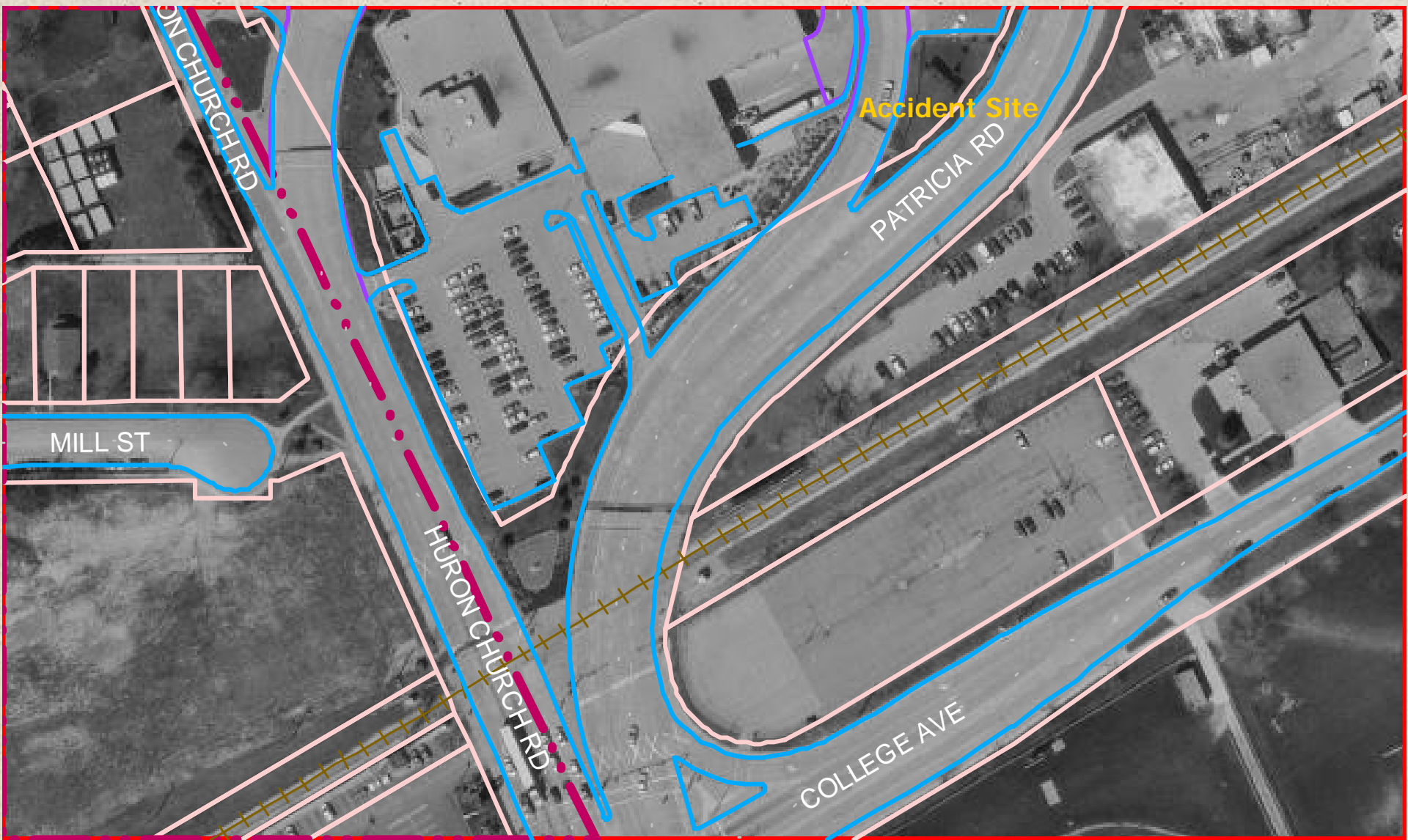
Windsor, Ontario

March 2, 2007



Prologue

- Engine 4 receives a medical call during driver training 
- Drivers switch seats to allow qualified driver to respond to call 



Accident Site

ON CHURCH RD

MILL ST

HURON CHURCH RD

PATRICIA RD

COLLEGE AVE



BRIDGE TO USA
CARS BUSES AND RV'S

4001

9-1-1

ENGINE
4

WINDSOR FIRE & RESCUE

FIRE

TAX FREE
DUTY FREE
NEXT DAY
Your
96

2 4:33PM



ENGINE
4

2 4:30PM



2 4:34PM



2 8:34PM

Injuries Sustained

- Driver
 - Compression fracture of the C3 – C4 with no severing of the spinal cord
 - Not expect to live; paralyzed from shoulders down, pneumonia, intubated
- Captain
 - Left shoulder and left knee injuries
- Rear Driver Side (facing forward)
 - Broken rib (from SCBA), undiagnosed shoulder injury (likely from seatbelt), whiplash injuries
- Rear Passenger Side (facing backward)
 - Broken radial head (at elbow), detached bicep and tricep muscles (caught on handle of grab bar), head injury (2 gashes with 20 staples), whiplash

Considerations During Incident

- Notification of Joint Health & Safety Reps
- Notification of Corporate (City) Health & Safety Reps
- Notification of Ministry of Labour of Critical Incident
- Protection of the rest of the city
- Notification of next of kin
- Be accurate and make sure information is current
- Ensuring families arrive safely at hospital
- Notification of Fire Chief, Mayor and CAO
- Controlling access to emergency room
- Communication to staff and media
- Arrangements for medical staff to travel from US

Considerations After Incident

- Critical Incident Stress Debriefing Team
- Limiting visitation at the hospital
- Coordinating with hospital staff to keep family, friends, co-workers and media updated
- Use of websites to keep information flowing
- Updates given to Dispatchers to put out to stations and provide to callers
- Accident/injury reports are required to be submitted to the Ministry of Labour within 48 hours of the critical incident

Ministry of Labour Orders

Order No. 1

April 11, 2007

Pursuant to section 9(18)(c) of the Occupational Health and Safety Act, it is the function of a committee and it has power to, obtain information from the employer respecting the health and safety experience and work practices and standards of similar workplaces.

Note: The employer shall provide the safety committee with information regarding emergency response studies that may effect worker health and safety.

Pursuant to section 54(1)(o) of the Occupational Health and Safety Act, an inspector may, for the purposes of carrying out his or her duties and powers under this act and regulations, (o) require in writing, within such time as is specified, a person who is an employer to produce at the expense of the person, a report or evaluation made or to be made by a person specified by the inspector of any process used or intended for use in a workplace and the manner of use, including, the Ministry of Health dispatch to the Windsor Fire and Rescue Services, the policies and procedures that determine the level of response to emergency medical calls and the type of equipment and staffing levels that are or should be used for emergency medical calls. The employer, in consultation with the Joint Health and Safety Committee shall develop a report that addresses medical emergency responses and the effect on worker health and safety.

Improving the specificity of urban firefighter
"first response" by modeling the probability of
critical interventions before EMS paramedic arrival

Alan M. Craig, EMT-P, M.Sc.P.I.
Deputy Chief
City of Toronto EMS

Craig Report

- Require proper Medical Dispatch Protocol
- Risk vs. Benefit from multiple agency emergency response
- Other than heart attacks no previous studies conducted on patient outcomes for tiered response

- Present criteria is speculative rather than fact based
- Percentage of Fire first on scene
- Claims of Report
 - Evidence based optimization
 - Fully generalized impact – output model
 - Balanced risk/benefit approach
- Limitation of Study
 - Validation is required
 - Did not address effectiveness of intervention
 - Does not consider non-time sensitive supportive case

Firefighter Tiered Response:

A solid foundation for an essential program



Dr. Michael Feldman
Medical Director, Toronto Fire Services
Sunnybrook-Osler Centre for Prehospital Care

Dr. Feldman

1. Craig is an abstract
2. Need to validate input and output
3. Not evaluated prospectively in real time
4. Further Discussion on study needed before any changes are made

Order No. 1

May 15, 2007

Pursuant to section 25(2)(a) of the Occupational Health and Safety Act, without limiting the strict duty imposed by subsection (1), an employer shall, (a) provide information, instruction and supervision to a worker to protect the health or safety of the worker.

Note: To comply with this order the employer shall provide training specific to the type of vehicle being operated.

Order No. 2

May 15, 2007

Pursuant to section 57(4) of the Occupational Health and Safety Act, a provision of this Act or the regulations is being contravened, the employer shall submit to the Ministry a compliance plan prepared in the manner and including such items as required by the order. The compliance plan shall specify what the employer plans to do to comply with the order and when the employer intends to achieve compliance. The compliance plan shall be prepared in consultation with the Joint Health and Safety Committee and shall contain the elements to be included for the operation of each type of vehicle.

Order No. 1

April 5, 2007

Pursuant to section 28(2)(b) of the Occupational Health and Safety Act, no worker shall, (b) use or operate any equipment, machine, device or thing or work in a manner that may endanger himself, herself or any other worker.

Note: A Police report indicates that a fire truck was operated in a manner that endangered a worker.

Order No. 2

April 5, 2007

Pursuant to section 28(1)(b) of the Occupational Health and Safety Act, a worker shall, (b) use or wear the equipment, protective devices or clothing that the worker's employer requires to be used or worn.

Note: A worker was found to not use a seat belt on 02 March 2007.


Order No. 3

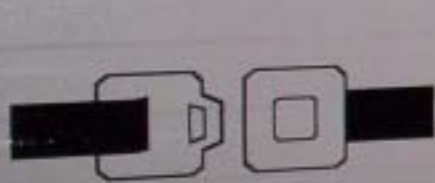
April 5, 2007

Pursuant to section 27(1)(b) of the Occupational Health and Safety Act, a supervisor shall ensure that a worker, (b) uses or wears the equipment, protective devices or clothing that the worker's employer requires to be used or worn.

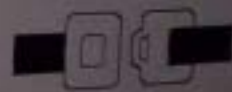
Note: A supervisor did not ensure that a worker used a seatbelt on 02 March 2007.

Changes Made After Incident

- Vehicle Improvements
 - Seatbelt extensions provided
 - Locks for breathing apparatus
 - Securing all possible projectiles in the cab
 - Side airbags on new vehicles
 - Roll stability on all new engine, trucks or rescues
 - Larger disc brakes
- New Departmental Driving Standard
- New Seatbelt Protocol 
- Signs on Bay Doors



HAVE YOU BUCKLED UP?



M.O.L. Concerns Regarding Driver Training

- Lack of standards for driver training for firefighters in Ontario.
- Lack of a probationary-type period following the initial qualification by our training division of a firefighter on a particular apparatus.
- Probationary period should include regular driving evaluations conducted by a Firefighter's Captain which would occur in 'real life emergency driving conditions'.
- A firefighter would only be considered qualified once they have successfully completed both the evaluation by the training division as well as the roadway evaluations.

Future Changes

- Driver Simulator Training
 - Drive Wise Simulator out of Markham Ontario



Recommendations

1. WFRS should encourage Central Ambulance Communication Centre and/or MoH to upgrade the Dispatch Priority Card Index (DPCI) System to an improved system that provides a predetermined set of algorithmic questions which will allow for various response levels based on the information received. This improved system must decrease the number of lights and sirens (L&S) response. CACC systems in place in Toronto, Niagara Falls and Ottawa have converted to the Medical Priority Dispatch System (MPDS). These jurisdictions are of the opinion that the MPDS system is an improvement over the DPCI system.

2. WFRS should expand its reporting system, in the case of medical emergency responses, to include information from their Medical Assist Report (MAR). This information, being input into the overall WFRS reporting system, will provide information required for future analysis of service being provided. Also, for determining the actual “life threatening” nature of the call, it will be beneficial if this reporting improvement included information as to whether the “patient” was admitted to hospital.

3. The communications system between CACC and WFRS must be improved to incorporate a method whereby an on-scene ambulance can advise (directly or indirectly) other responding agencies (both WFRS and Police) that their response can be down graded to terminated.
4. WFRS must encourage the CACC to incorporate an AVL (Automatic Vehicle Location System) whereby the closest available ambulance or fire vehicle is located and dispatched.

5. In conjunction with CACC, WFRS should review the need for more than the closest vehicle responding L&S to a medical emergency.
6. As part of their risk management system, WFRS should ensure that all WFRS firefighters receive appropriate initial and ongoing annual training in vehicle familiarity, practical driver training, mandatory use of seat belts and proper stowing of equipment. The use of simulators of real life emergency response driving should also be considered.

7. WFRS must review the present system used to control traffic signals in order to determine if an improved system is available.

8. A number of Operation Guidelines should be improved and/or developed and published that will include:

- Incorporation of information from their MAR into the WFRS reporting system to provide more detailed information regarding medical responses (see 2. above);
- Strict enforcement of mandatory use of seat belts;
- Strict enforcement of WFRS response policy speed limits;
- Procedures for downgrading and/or termination of medical response.

9. WFRS should submit to the MoL Section 21 Committee, a brief requesting the development of guidelines regarding the (a) appropriate use of L&S and (b) the levels of response requiring the use of L&S.
10. WFRS should encourage CACC and the MoH to develop a public information program that provides information to the general public as to the type of questions that will be asked by the call taker in the event of a medical emergency.