OFF-PEAK DELIVERIES

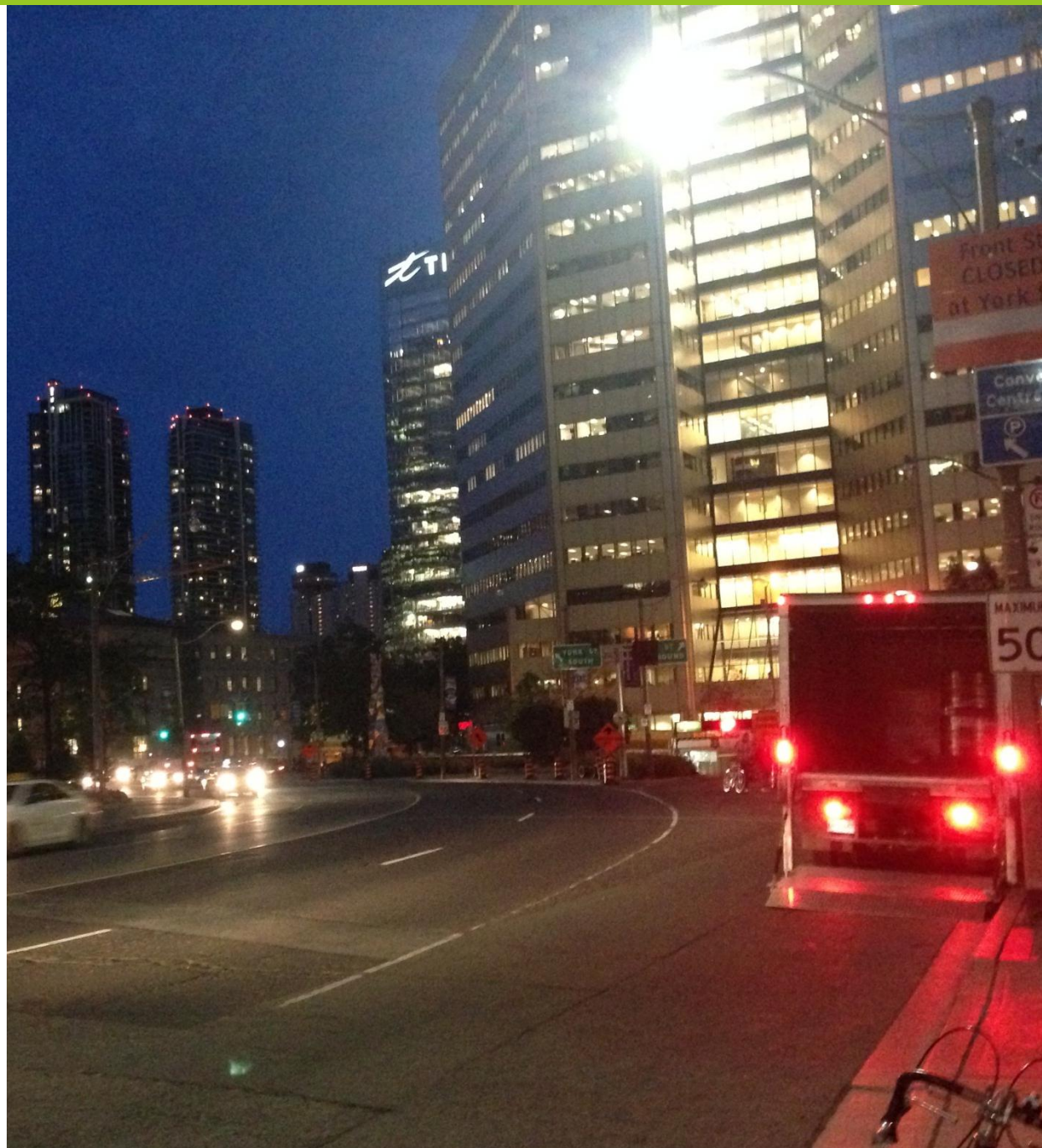
U of T Freight Day IV

February 10th 2015

Goods Movement Office
Transportation Policy Branch
Ministry of Transportation

Outline

- Off-Peak Deliveries Background
- Phase One Results
- OPD: Advantages & Challenges
- Phase Two Approach
- Outreach Plan



Off-Peak Deliveries: Background

- Off-Peak Deliveries (OPD) has been used as a strategy in other jurisdictions to alleviate congestion in urban areas during peak periods and at large multi sport events.
- Many municipalities restrict deliveries between certain hours.
  - The City of Toronto has a bylaw that prohibits “noise as a result of deliveries” between 11pm and 7am.
- The 2015 Pan/Parapan American Games provides a unique opportunity to implement an OPD Pilot.
- MTO developed a two-phased pilot to test applicability of OPD in Ontario and help address Games-time transportation challenges.
  - Phase One (August 2014): small-scale pilot in Toronto’s downtown core.
  - Phase Two (July, August 2015): coincides with the Games.
- For the purposes of this pilot, off-peak hours refers to anytime between 7pm and 6am.

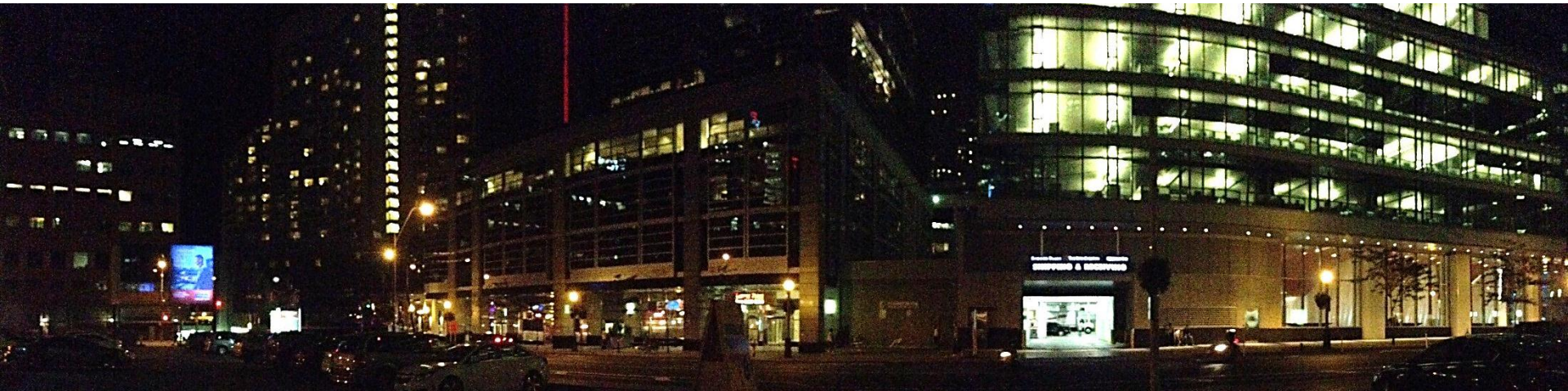
Phase One: Background

- **Location:**
  - Downtown Toronto Core (Bloor to Lakeshore, Dufferin to DVP)
- **Length of Pilot:**
  - 4 weeks in August 2014
- **Data collected:**
  - Noise impacts
  - Travel time
  - Participant's experiences
- **Partners/Participants:**
  - City of Toronto
  - 5 carriers
  - 30+ businesses (customers of carriers)

Phase One: Noise

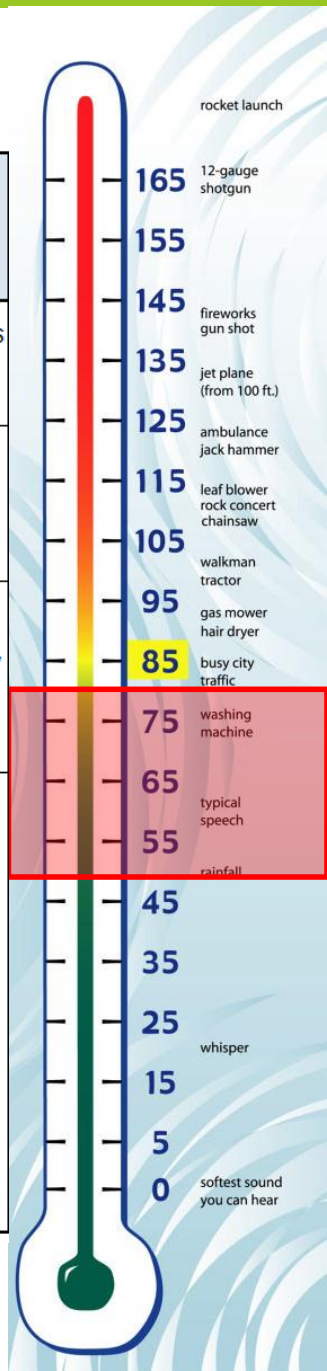
- Measured background and delivery-related noise at select delivery locations during business-as-usual and off-peak hours.
  - At most of the downtown delivery locations the “urban hum” or background noise was enough to mask the majority of noise generated by delivery activity.
  - In quieter neighbourhoods, noise related to deliveries was low enough to likely not disturb nearby residents.

- City of Toronto monitored 311 for any complaints related to deliveries during the pilot.
  - No delivery-related noise complaints were received during the pilot.



Noise Impacts

Location	Time of Measurement	Background Sound Level in dBA*	Measured Sound Level During Delivery Activity in dBA*	Duration of Delivery or Measurement	Delivering or Leaving	Distance to Nearest Homes
Maple Leaf Gardens Delivery Doors	8:30 PM	60 dBA	73 dBA at entrance of loading dock	2 minutes	Leaving	Approximately 40 m and numerous balconies with clear site lines of the loading dock entrance
Curbside at Yonge and College	9:00 PM	65 dBA	76 dBA Curbside at front of truck 73 dBA Curbside at rear of truck	15 minutes	Delivering	Approximately 20 m. Multi-story residential building on the opposite side of Yonge Street.
Spadina & King St Area	11:30 PM	60 dBA	77 dBA (garbage truck) at entrance to loading dock	10 minutes	Both	Approximately 65 m from the loading dock. High rise multi-story building with some visibility depending on floor.
	11:45 PM	62 dBA	76 dBA (delivery truck) at entrance to loading dock	2 minutes	Delivering	
Queen & Dufferin Area	3:45 AM	51 dBA		5 minutes	Both	Approximately 8 m. Numerous home in the vicinity of the delivery.
	4:45 AM		63 dBA (75 dBA for the first 2 minutes) at entrance to loading dock	120 minutes		
	6:45 AM	55 (city awake)		5 minutes		



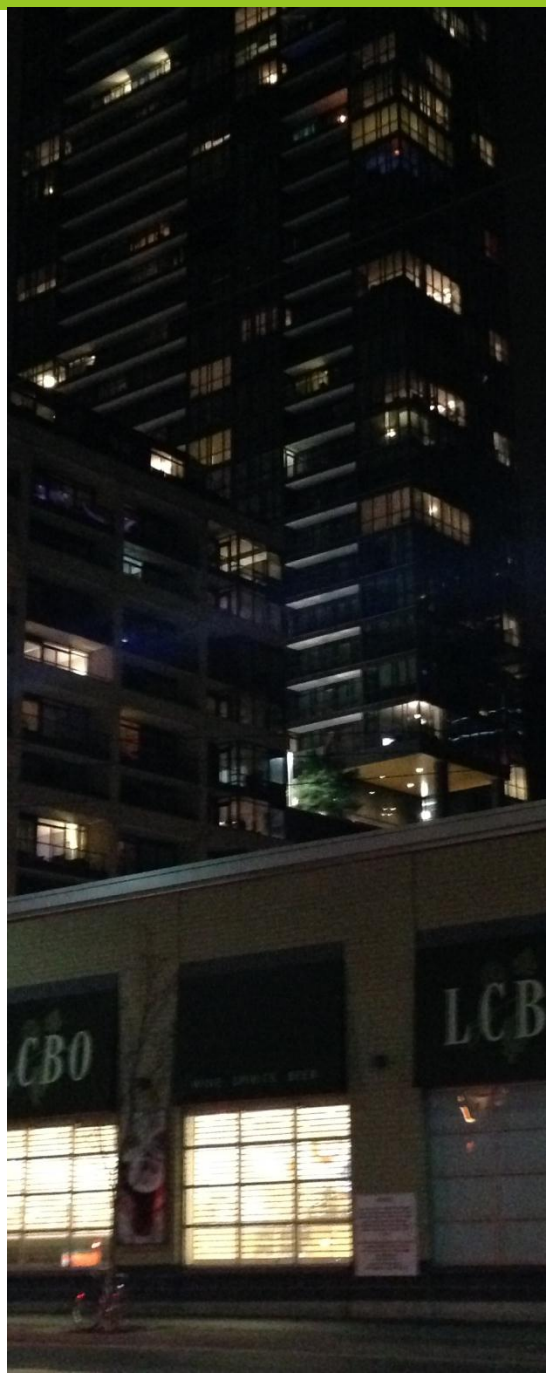
***dBA is an expression of the relative loudness of sounds in the air, as perceived by the human ear.**

Phase One: Travel Time

- Retiming of deliveries to off-peak hours can result in travel time savings:
  - Based on historical GPS travel speeds, the optimal period to travel into downtown Toronto is between midnight to 6am. (The slowest travel times occurs between 7am-10am and 3pm-7pm).
  - Data reported by industry participants showed almost all carriers noted some travel time savings from/to their distribution center (Whitby or Brampton). 2 carriers saw travel time savings of up to one hour.

- Based on an analysis of a sample of routes, MTO determined travel time savings from shifting to OPD *could* produce a financial savings for carriers.

- Due to the limited sample size and pilot period, MTO could not identify impacts on:
  - Travel time savings associated with deliveries (from one delivery to another).
  - Travel time savings for all road users.
  - Extent of broader impacts of OPD (e.g., environmental savings)



OPD Advantages

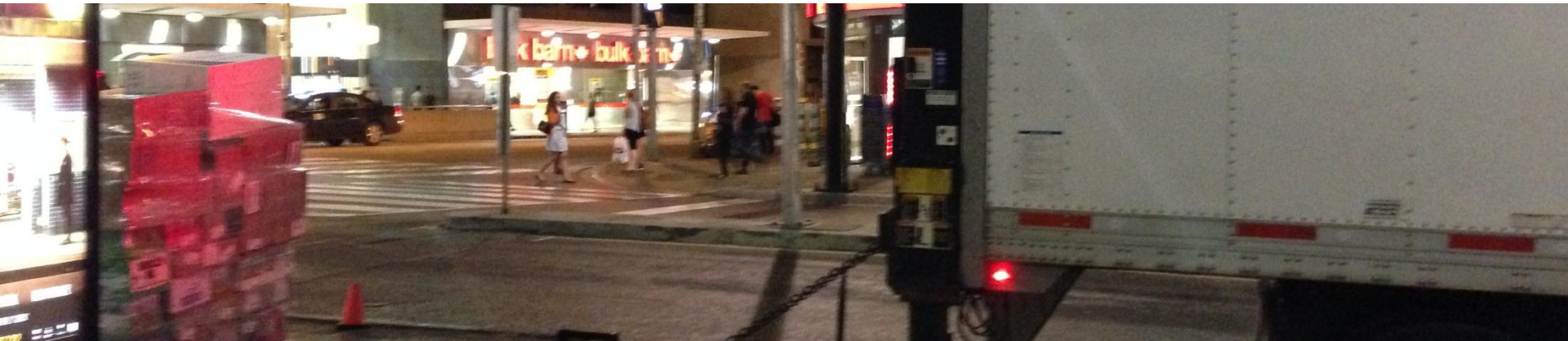
- Lower traffic volumes on provincial highways showed the greatest potential to decrease the travel time as it impacts the first and last legs of a carriers journey (e.g., warehouse to the first stop/ last stop to warehouse).
- Loading bays and freight elevators were not as busy in the off-peak hours, which offered the potential to decrease time spent at the delivery point.
- Drivers perceived less traffic, an increased ease in driving around and a decrease in driving-related stress.
- Increased availability of parking resulted in greater options for drivers to unload, along with the identified reduction in parking tickets.
- Increased productivity for businesses, as receiving staff could be brought in early to stock shelves before store opening.

OPD Challenges

- Change management is difficult:
  - Some carriers experienced an increase in customer complaints due to confusion amongst receivers around delivery times.
  - For drivers and receiving staff who are accustom to daytime shifts, the switch to night shifts can be difficult.
- Operational adjustments may be required to adjust to changes in the work environment, e.g.:
  - Retro reflective clothing and auxiliary lighting may be needed for curbside deliveries at night.
  - Late hours and dark street may increase a drivers risk for unfavorable encounters with strangers.
  - Carriers who have drivers collect money from receivers may want to find alternate collection options.
- Operating off-peak does not guarantee decreased travel times.
  - Travel time between downtown stores have high volumes of intersections and traffic signals which reduces traffic speed.
  - Some off-peak time periods on the provincial highway and city streets may still carry high volumes of traffic.

Phase Two - Outline

- **Location:**
  - City of Toronto and other volunteer municipal partners
- **Length of Pilot:**
  - Games time – June 29th – August 15th 2015
- **Objective:**
  - Support the Games: Alleviate network pressures in localized areas as a single component of the greater TDM strategy being implemented for the Games.
  - Support OPD policy analysis: Obtain additional data on benefits and experiences with OPD from interested municipal partners to inform Post-Games analysis.



Municipal Outreach

- MTO has met with staff from 64 municipalities in order to discuss OPD and its potential implementation in their jurisdiction for the Games.

- MTO will offer each municipality assistance with OPD right up to Games time and share valuable information obtained through the pilot with participating municipalities.

Industry Outreach

- MTO will encourage businesses and carriers to shift to off-peak deliveries during the Games.
- MTO will also be requesting voluntary data sharing and participation in interviews as part of the pilot.
- A key factor for success in Phase Two will be finding willing municipal and business participants.

Contact Information / Questions

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