

# Queens Quay Bus Management Strategy – Summary Update

## Queens Quay Working Group Meeting

February 17, 2011



# ● ● ● overview

- + review of preliminary findings
  - prior Working Group Meeting presentation (September 21, 2010)
- + further analysis update:
  - bus activity mapping
  - analysis of overall demands
  - analysis of peak demands
  - nodes of activity analysis
- + next steps



# ● ● ● study scope & basic work plan

## *basic work plan – 6 key tasks*

### *Phase 1*

1. information collection & capacity building
2. analysis & synthesis
3. design & detailed design parameters
4. evaluation & refinement

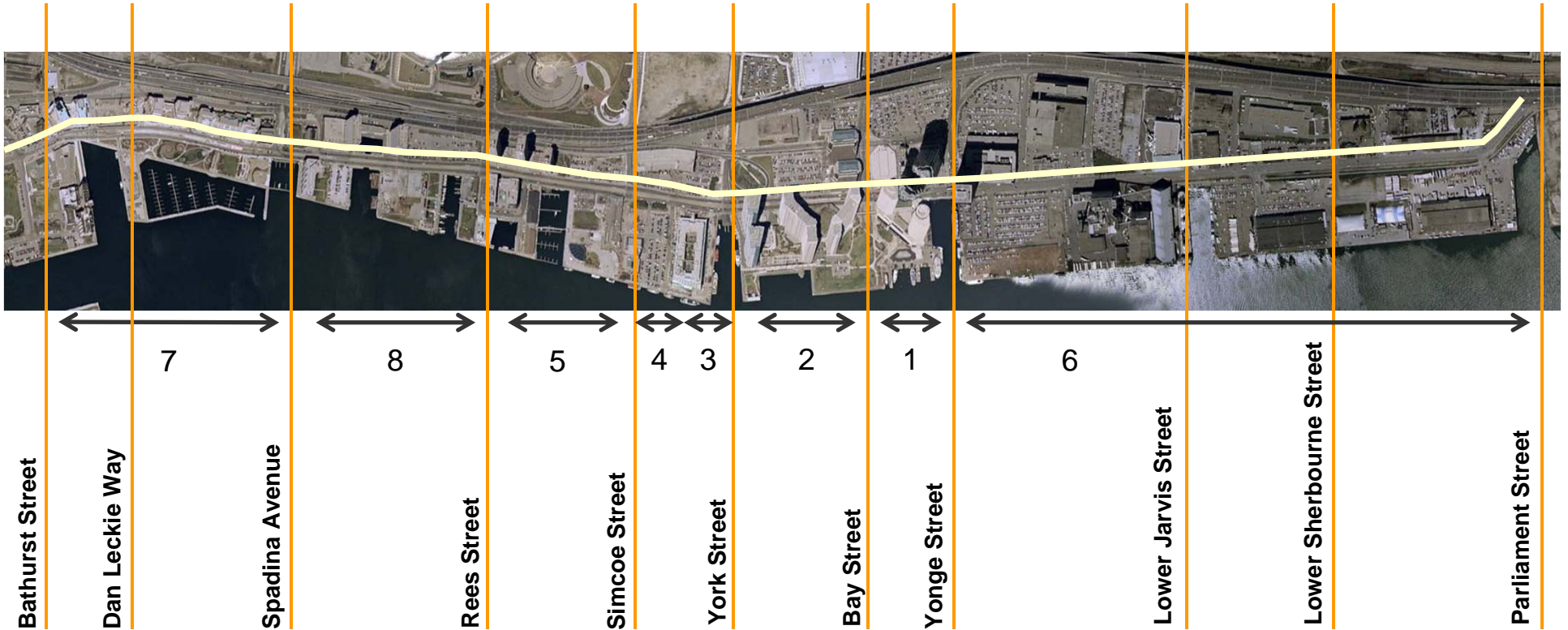
### *Phase 2*

5. potential pilot programme
6. input into bus management during construction



● ● ● study area

*broad study area*



- + considers Queens Quay from Dan Leckie to Parliament
- + demands & needs assessed using zones

# ● ● ● bus activity surveys

focussed study area – nodes of activity

A. South Side, Rees to Simcoe



B. Harbourfront Centre, east of Simcoe



C. Harbourfront Centre / Queens Quay Terminal, west of York

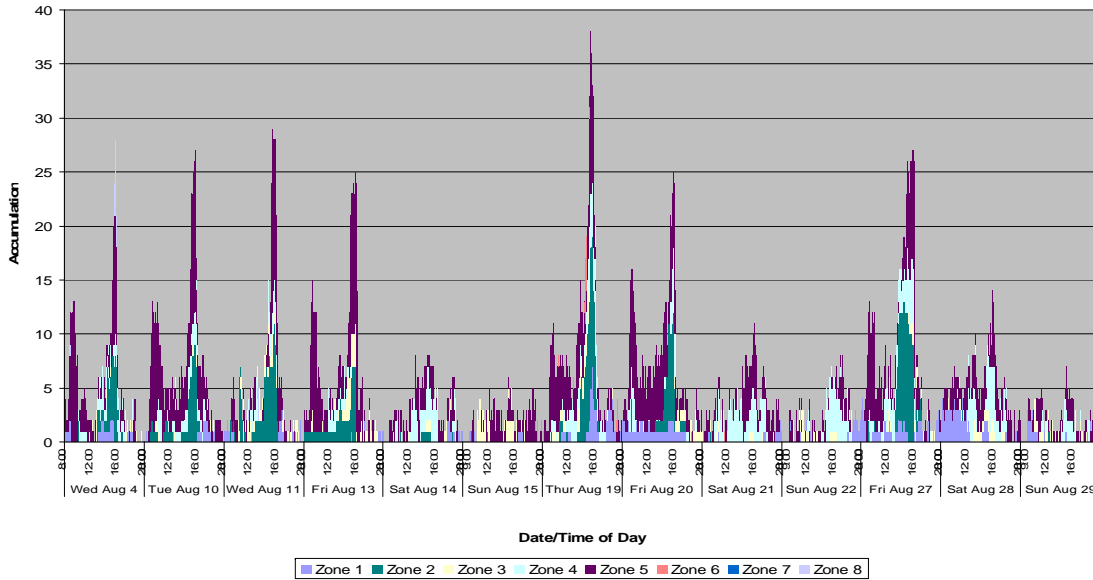


D. Westin Hotel & Conference Centre



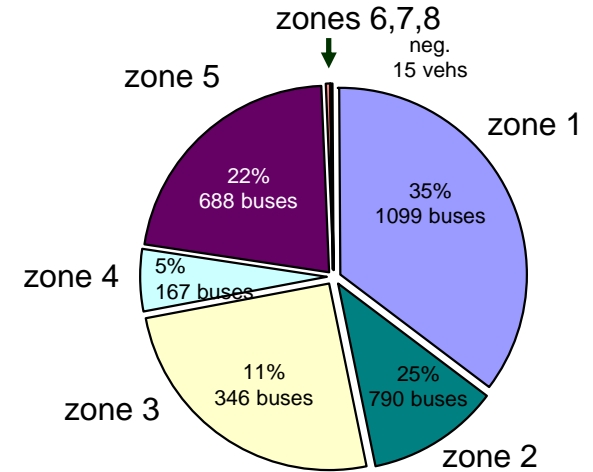
# ● ● ● overall bus activity surveys

## total bus accumulation by zone



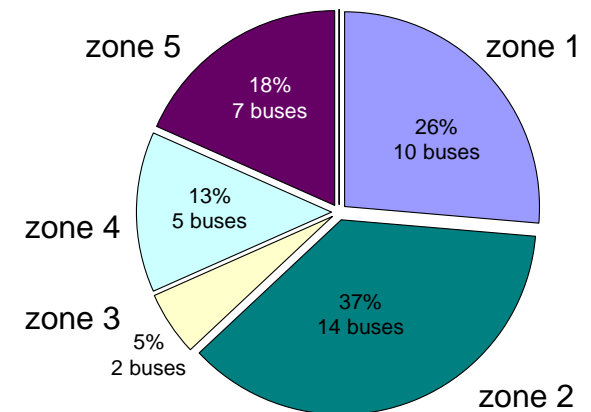
- + 38 / 15 / 7 buses  
max / 95<sup>th</sup> / 85<sup>th</sup> bus accumulation
- + average duration of stay: 12 minutes
- + mean duration of stay: 3 minutes
- + peak time: thurs, aug 19 at 3:15 pm

## total bus activity - by zone:



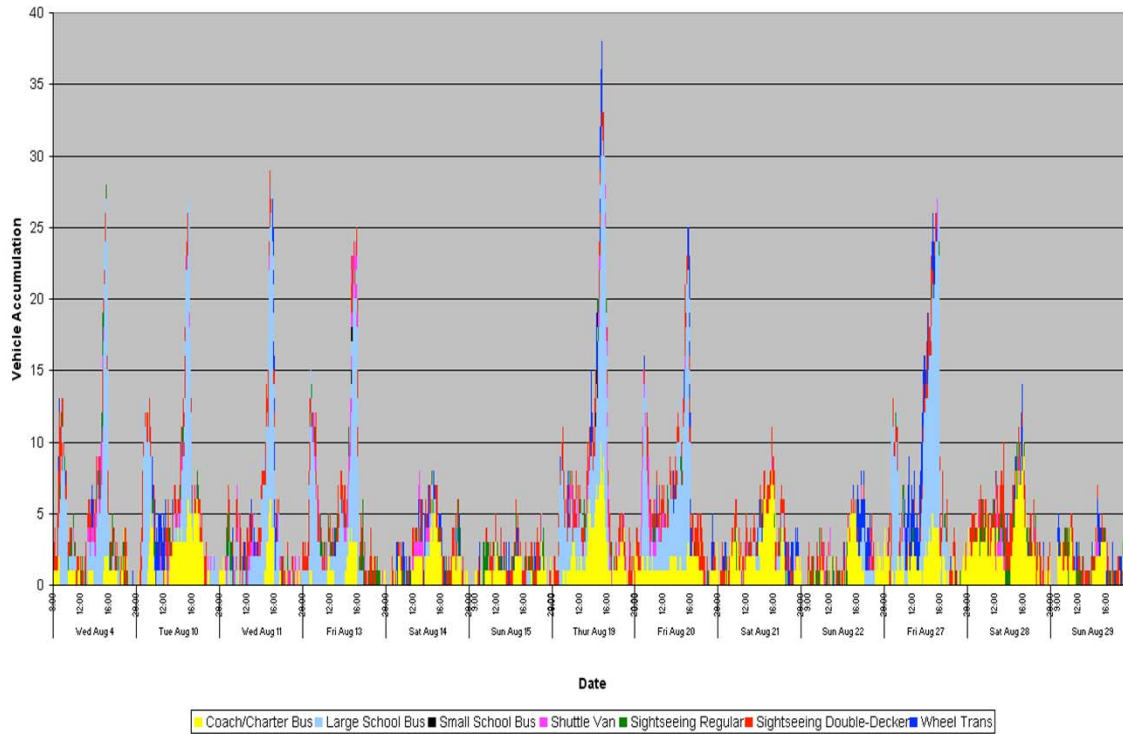
## peak accumulation by zone:

Thursday, August 19, 2010 – 38 buses @ 3:15 pm



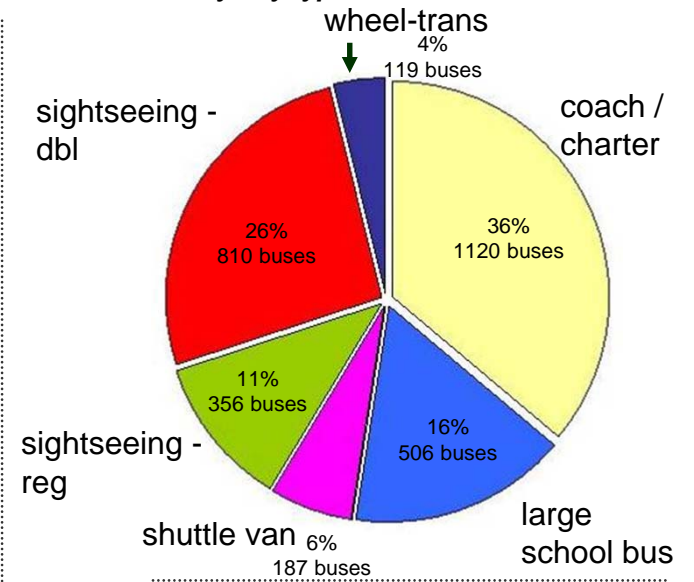
# ● ● ● overall bus activity surveys

## total bus accumulation by type



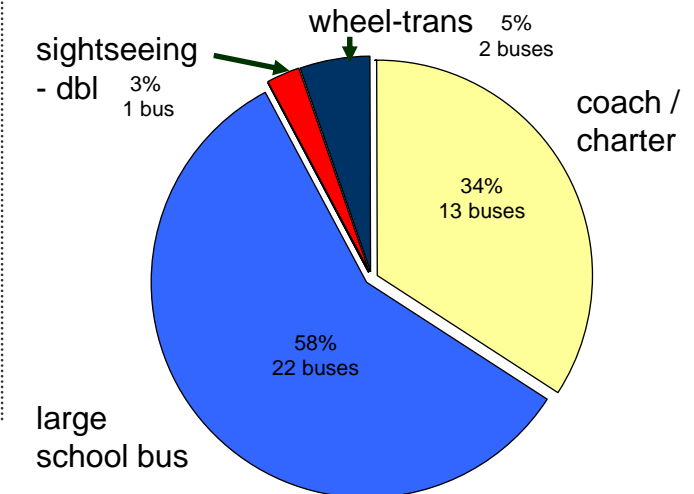
- + peak accumulation: 38 buses
- + 7 vehicle types ranging from large coaches to small shuttle buses and wheel-trans
- + significant school bus activity
  - 16% of all activity,
  - 58% of peak accumulation (22 buses)

## total bus activity - by type:



## peak accumulation by type:

Thursday, August 19, 2010 – 38 buses @ 3:15 pm



# ● ● ● bus activity mapping zones 1-5

Thursday, August 19, 2010 – busiest day, all day (8 am – 6 pm)





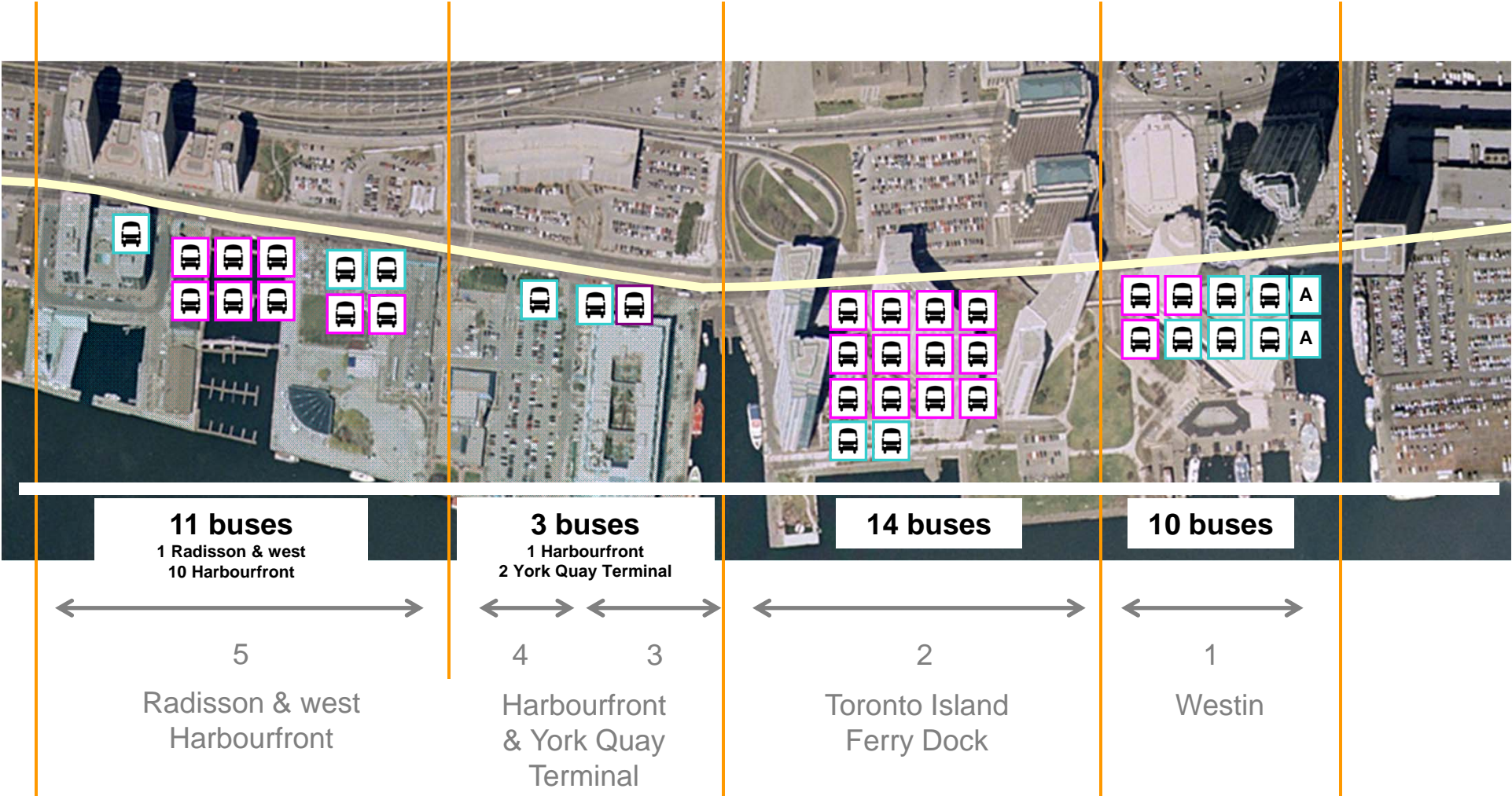
# ● ● ● bus activity mapping zones 1-5

Thursday, August 19, 2010 – peak time, 3:13 pm analysis...



# ● ● ● bus activity mapping zones 1-5

Thursday, August 19, 2010 – peak time, 3:13 pm  
summary findings...



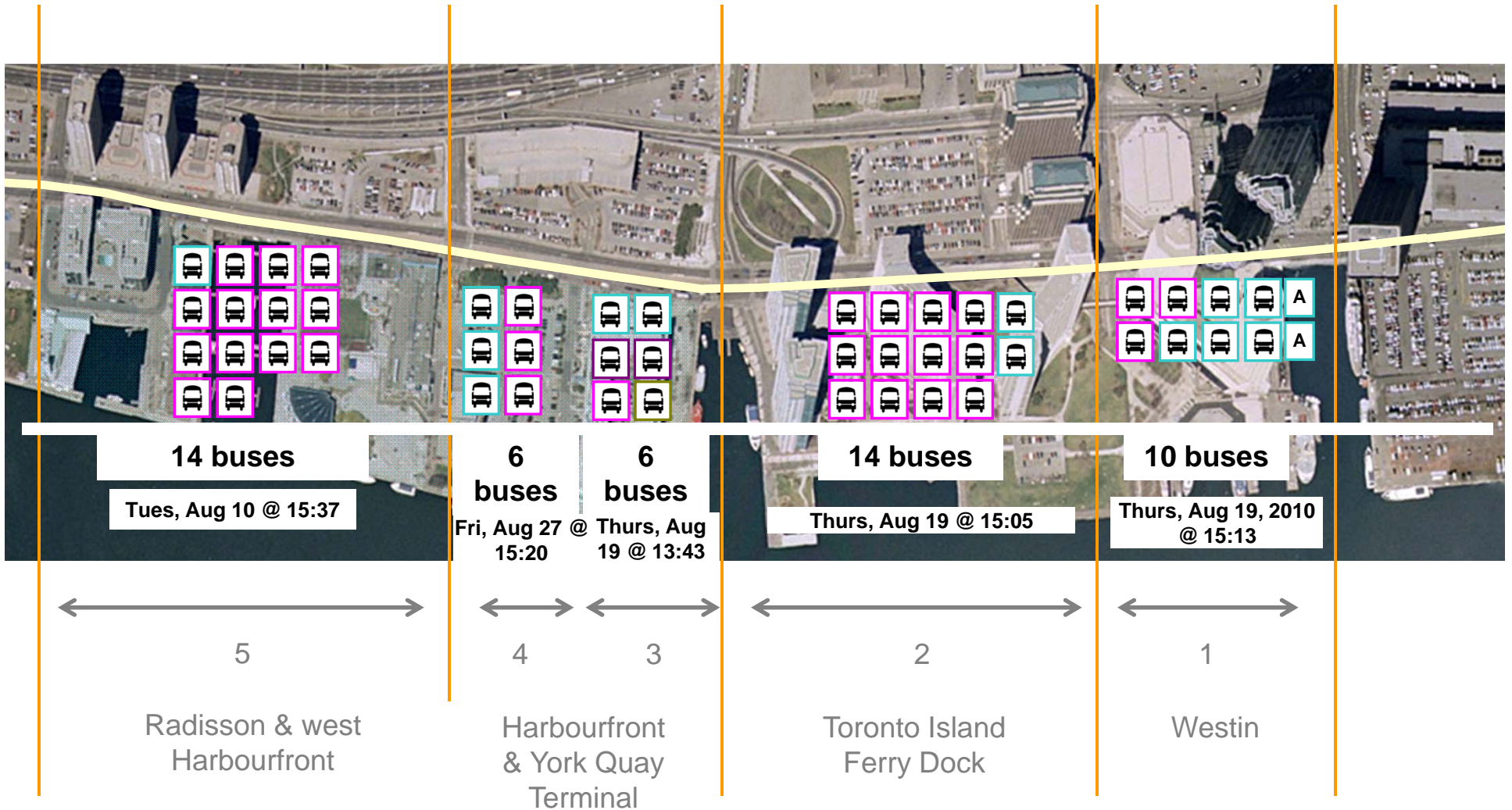
# ● ● ● peak snapshot of bus activity – by zone

focussed nodes of activity – peak level of activity



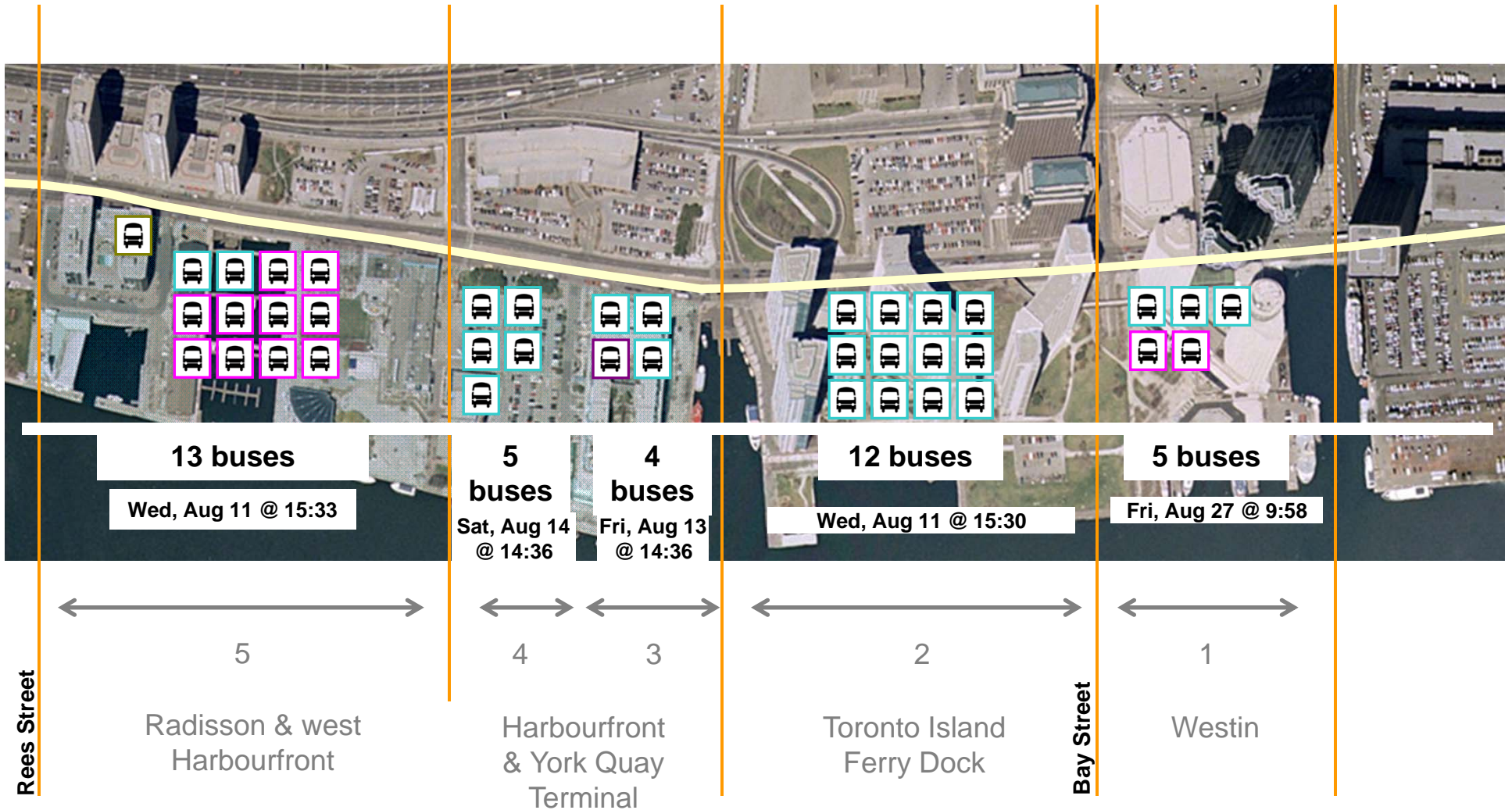
# ● ● ● peak snapshot of bus activity – by zone

focussed nodes of activity – peak level of activity



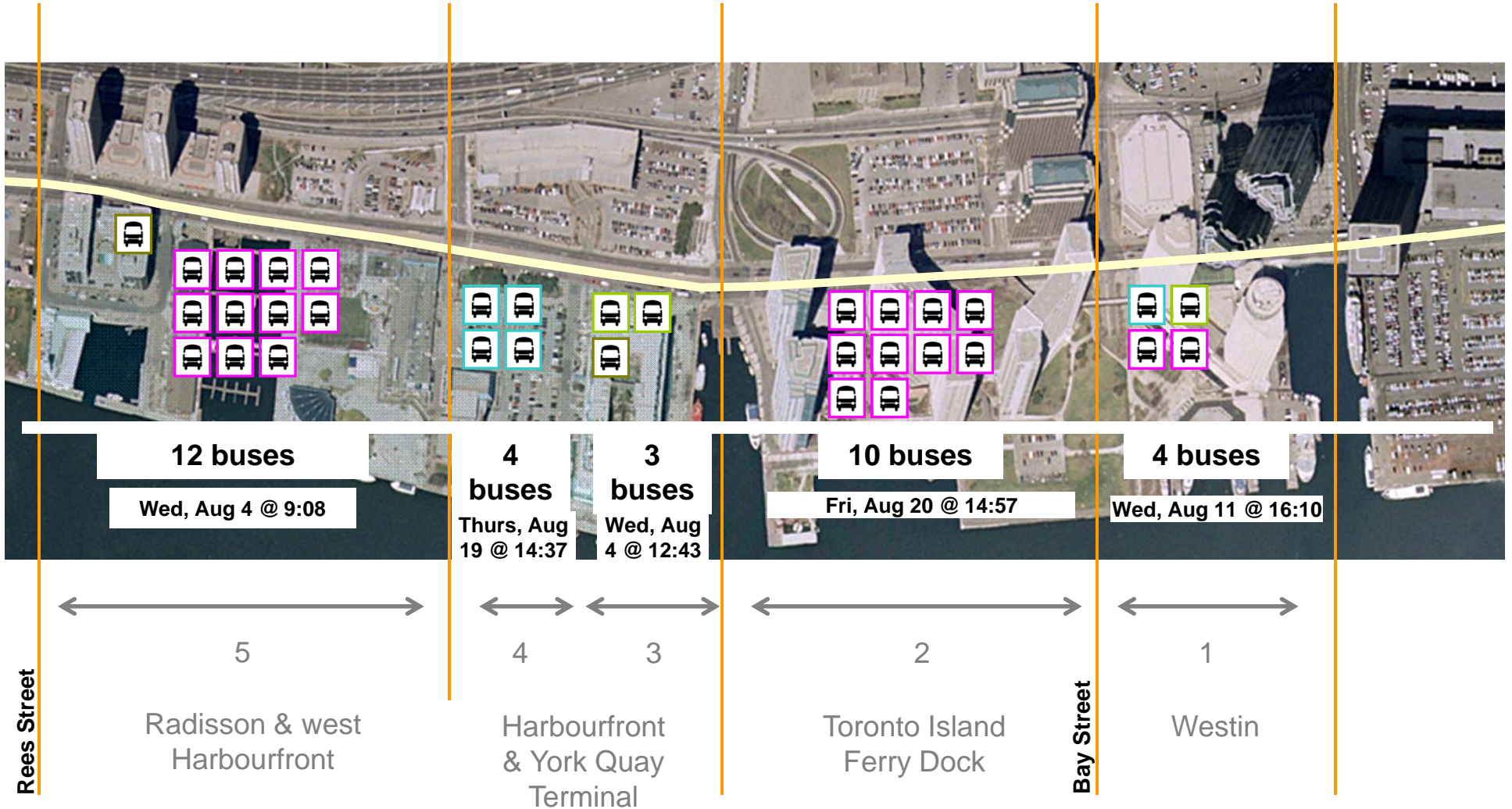
# ● ● ● peak snapshot of bus activity – by zone

focussed nodes of activity – 2<sup>nd</sup> level of peak activity



# ● ● ● peak snapshot of bus activity – by zone

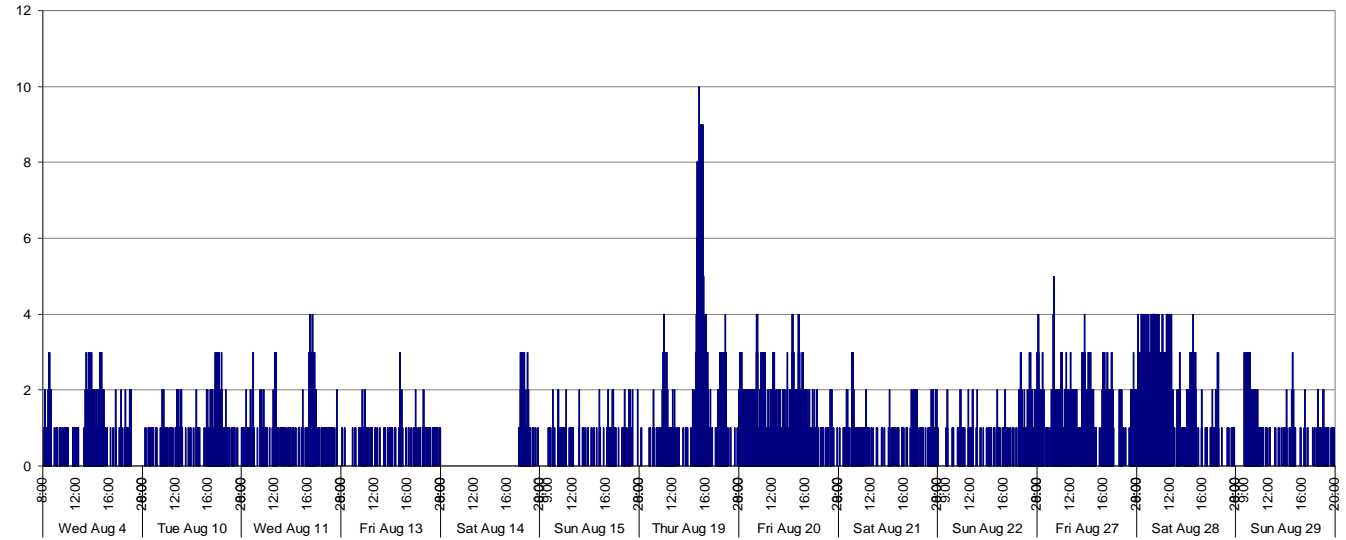
focussed nodes of activity – 3<sup>rd</sup> level of peak activity



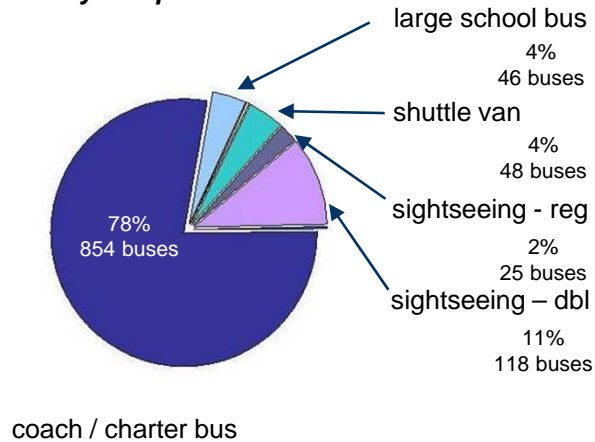
# ● ● ● zone 1 (Westin) analysis



vehicle accumulation

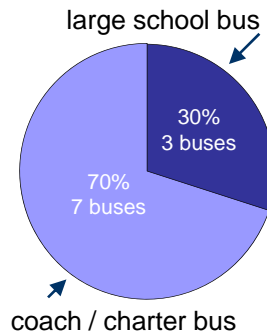


activity composition



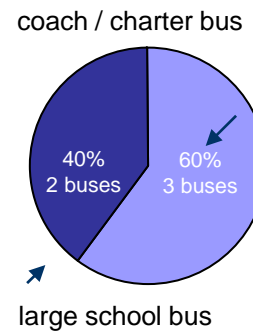
peak accumulation

10 buses, Thurs, Aug 19, @ 15:13



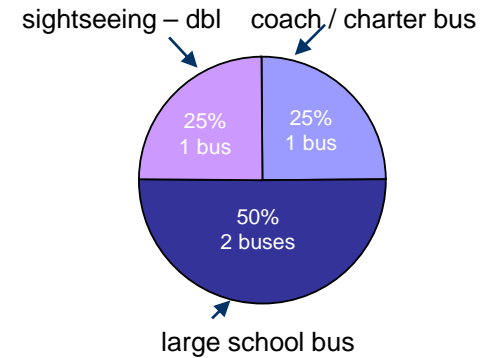
2<sup>nd</sup> peak accumulation

5 buses, Fri, Aug 27 @ 9:58



3<sup>rd</sup> peak accumulation

4 buses, Wed, Aug 11 @ 16:10



# ● ● ● zone 1 (Westin) analysis

Vehicle Type	Coach / Charter	Large School Bus	Small School Bus	Shuttle Van	Sightseeing Bus – Regular	Sightseeing Double-Decker bus	Wheel Trans	Total
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Peak Accumulation

min	0:01	0:01	0:01	0:01	0:01	0:01	0:05	0:01
max	4:00	1:56	0:19	0:43	0:05	0:14	0:19	4:00
85th	0:05	0:43	0:13	0:14	0:03	0:02	0:16	0:06
95th	0:22	1:18	0:17	0:31	0:03	0:03	0:18	0:24
avg	0:05	0:19	0:07	0:07	0:01	0:01	0:12	0:05

**1099**  
observations  
related to Westin /  
school buses

**10 / 3 / 2**  
max / 95<sup>th</sup> / 85<sup>th</sup>  
buses at peak

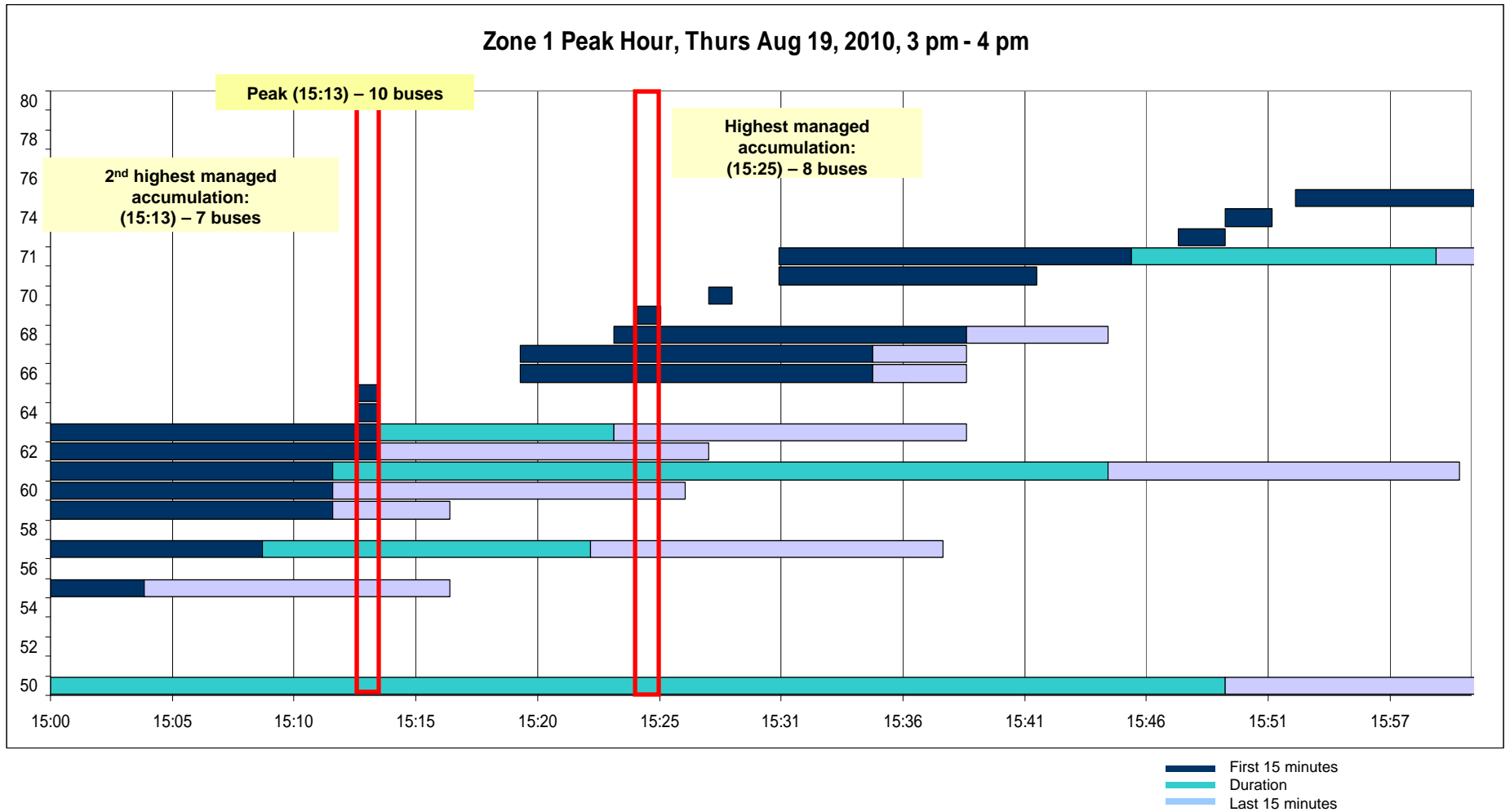
**4 hrs / 24' / 6' / 5'**  
max / 95<sup>th</sup> / 85<sup>th</sup> / avg  
duration of stay



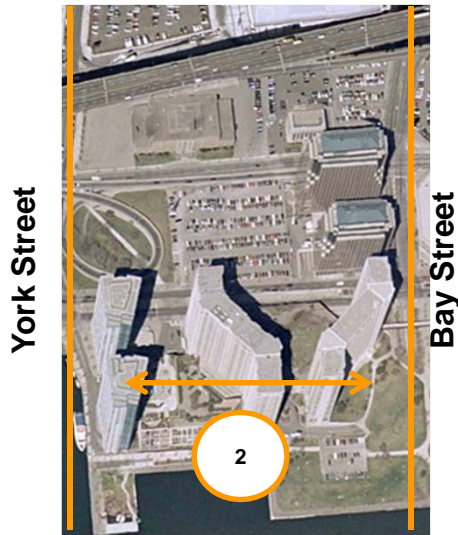
# ● ● ● zone 1 (Westin) analysis

peak activity: 10 buses, Thurs Aug 19 @ 15:13

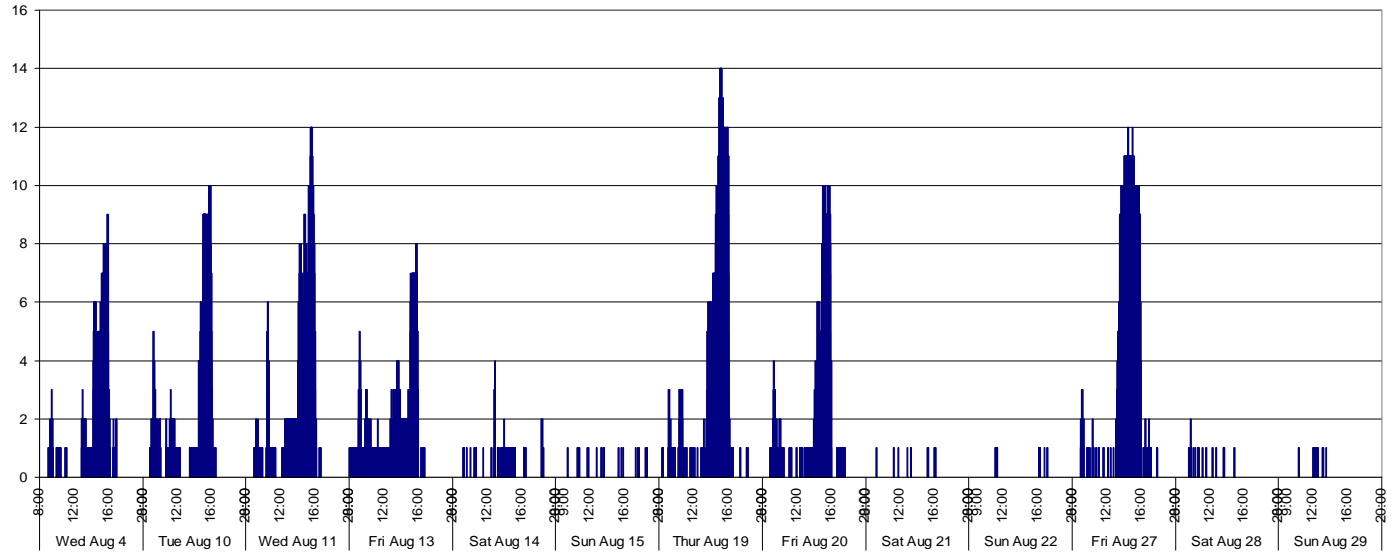
potential managed enforcement – 15 mins for pick-up/drop-off only



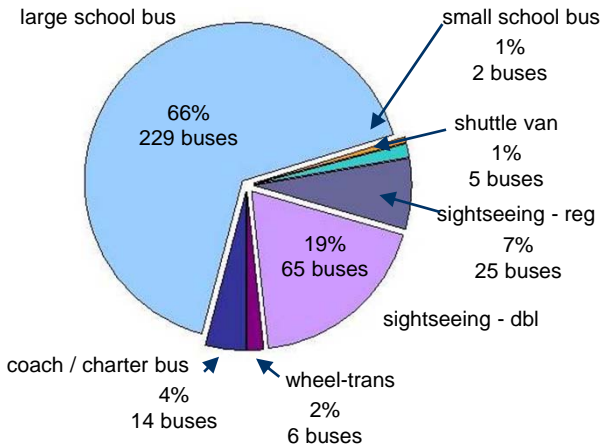
# ● ● ● zone 2 (Island Ferry Terminal) analysis



**vehicle accumulation**

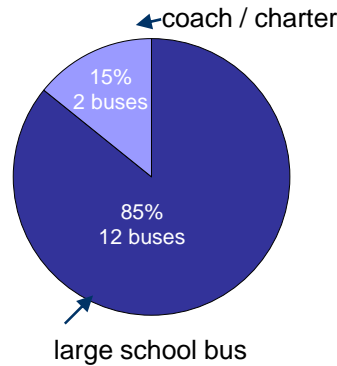


**activity composition**



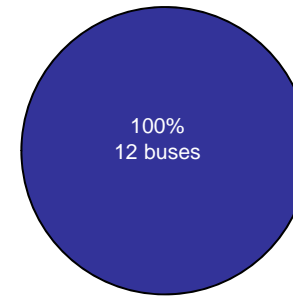
**peak accumulation**

14 buses, Thurs Aug 19, 15:05



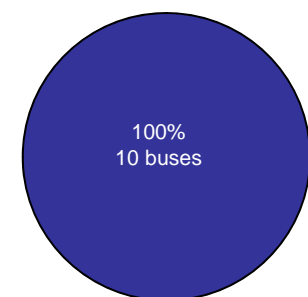
**2<sup>nd</sup> peak accumulation**

2 buses, Wed Aug 11, 15:30



**3<sup>rd</sup> peak accumulation**

10 buses, Fri, Aug 20, 14:57



# ● ● ● zone 2 (Island Ferry Terminal) analysis

Vehicle Type	Coach / Charter	Large School Bus	Small School Bus	Shuttle Van	Sightseeing Bus - Regular	Sightseeing Double-Decker bus	Wheel Trans	Total
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## Peak Accumulation

min	0:01	0:01	0:01	0:01	0:01	0:01	0:02	0:01
max	3:00	3:35	0:25	0:04	0:15	2:02	1:35	3:35
85th	0:16	1:22	0:21	0:02	0:03	0:03	0:46	0:58
95th	1:36	2:22	0:23	0:03	0:07	0:06	1:18	2:00
avg	0:22	0:33	0:13	0:02	0:02	0:04	0:24	0:24

**346**  
observations related  
to school buses

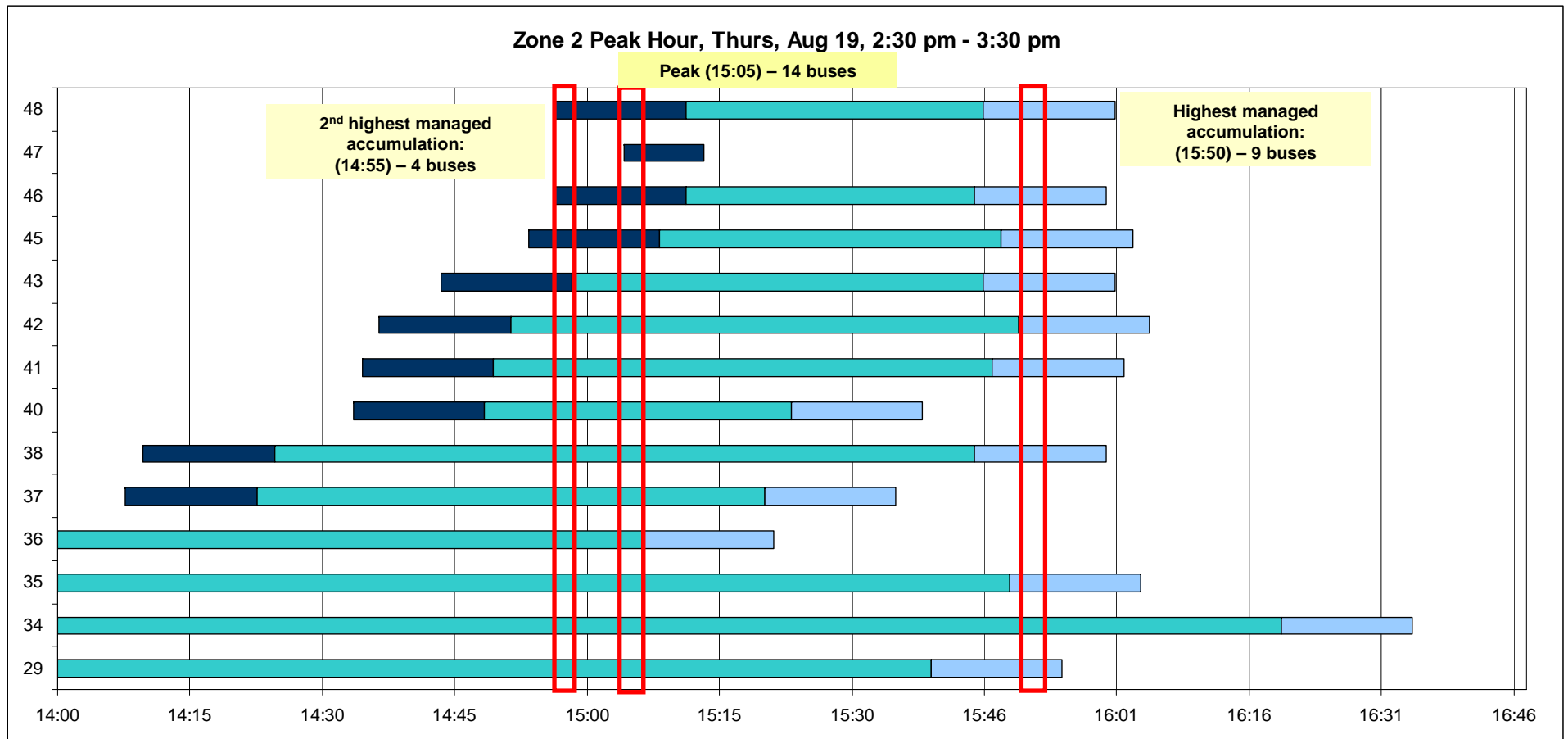
**14 / 7 / 1**  
max / 95<sup>th</sup> / 85<sup>th</sup>  
buses at peak

**3.58 hrs / 2 hrs / 85' / 24'**  
max / 95<sup>th</sup> / 85<sup>th</sup> / avg  
duration of stay

# ● ● ● zone 2 (Island Ferry Terminal) analysis

peak activity: 14 buses, Thurs Aug 19 @ 15:05

potential managed enforcement – 15 mins for pick-up/drop-off only

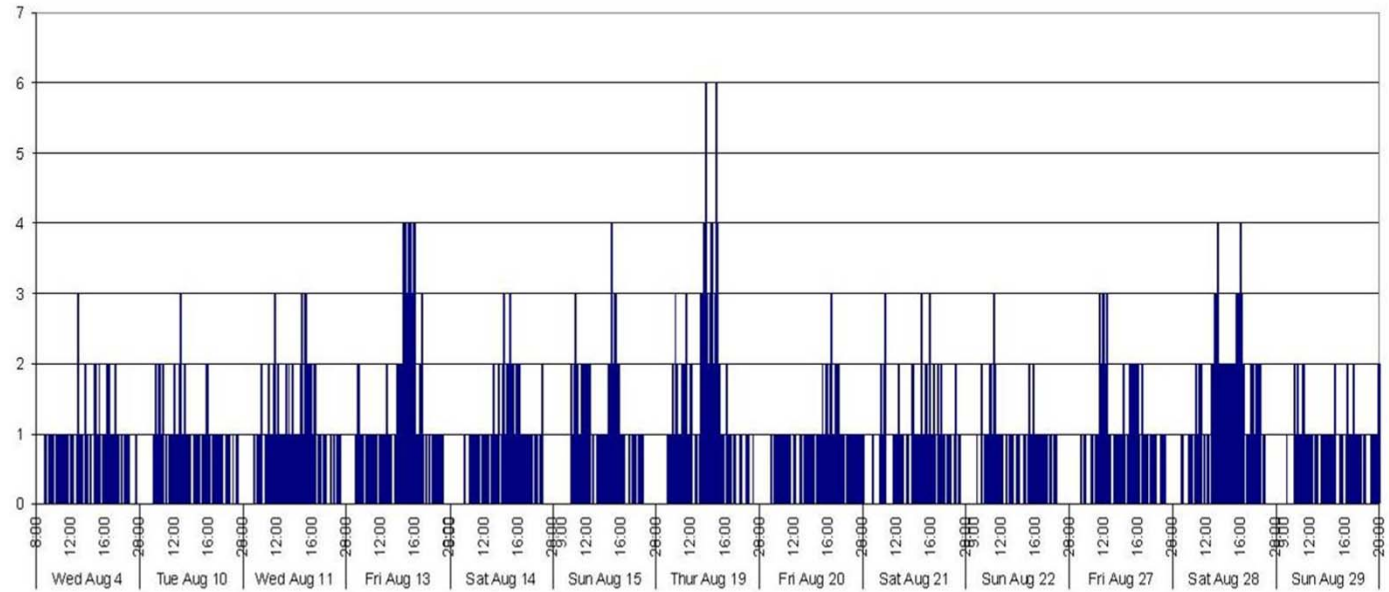


■ First 15 minutes  
■ Duration  
■ Last 15 minutes

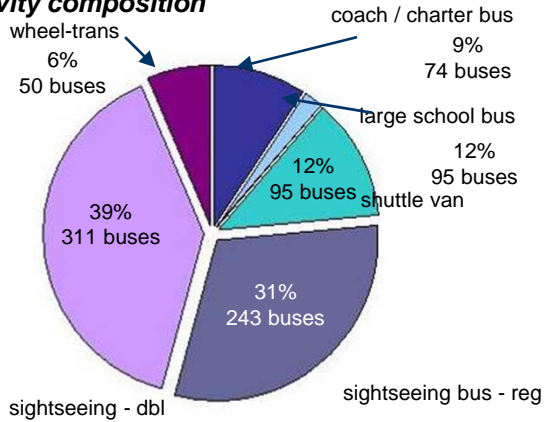
# ● ● ● zone 3 (York Quay Terminal) analysis



vehicle accumulation

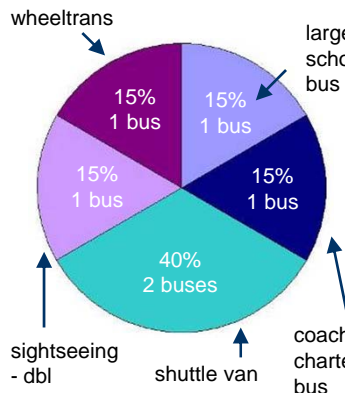


activity composition



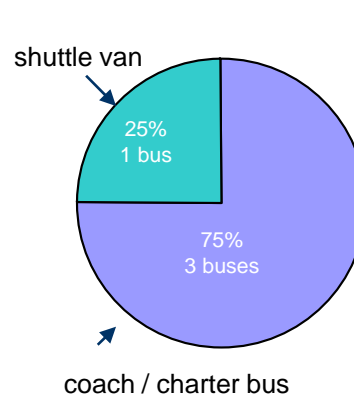
peak accumulation

6 buses, Thurs Aug 19 @ 13:43



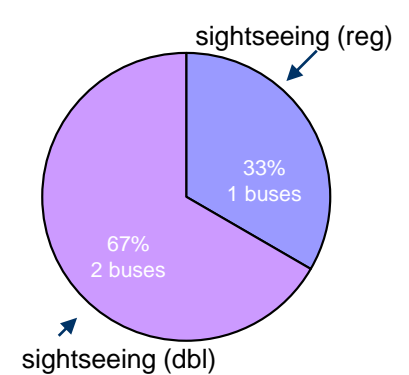
2nd peak accumulation

4 buses, Fri, Aug 13 @ 14:36



3rd peak accumulation

3 buses, Wed, Aug 4 @ 12:43



# ● ● ● zone 3 (York Quay Terminal) analysis

Vehicle Type	Coach / Charter	Large School Bus	Small School Bus	Shuttle Van	Sightseeing Bus - Regular	Sightseeing Double-Decker bus	Wheel Trans	Total
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Peak Accumulation

min	0:01	0:01	0:00	0:01	0:01	0:01	0:01	0:01
max	2:11	0:23	0:00	2:06	1:19	0:08	0:22	2:11
85th	0:57	0:14	0:00	0:03	0:05	0:03	0:09	0:05
95th	1:23	0:18	0:00	0:06	0:08	0:05	0:14	0:18
avg	0:25	0:06	0:00	0:03	0:03	0:02	0:04	0:05

**790**

observations related to York / Queens Quay bus stop

**6 / 2 / 1**

max / 95<sup>th</sup> / 85<sup>th</sup> buses at peak

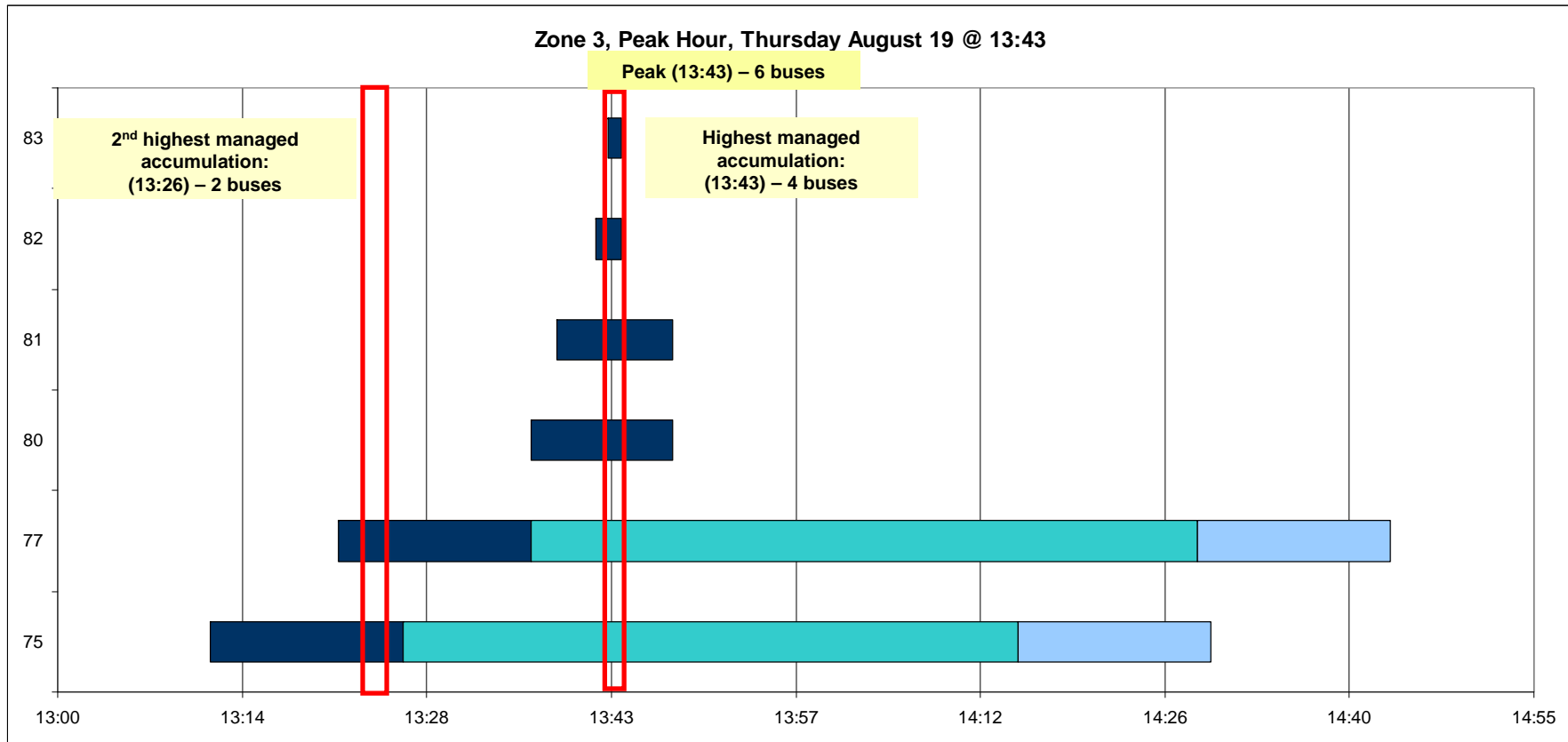
**2.18 hrs / 18' / 5' / 5'**

max / 95<sup>th</sup> / 85<sup>th</sup> / avg duration of stay

# ● ● ● zone 3 (York Quay Terminal) analysis

peak activity: 6 buses, Thurs Aug 19 @ 13:43

managed enforcement – 15 mins for pick-up/drop-off only

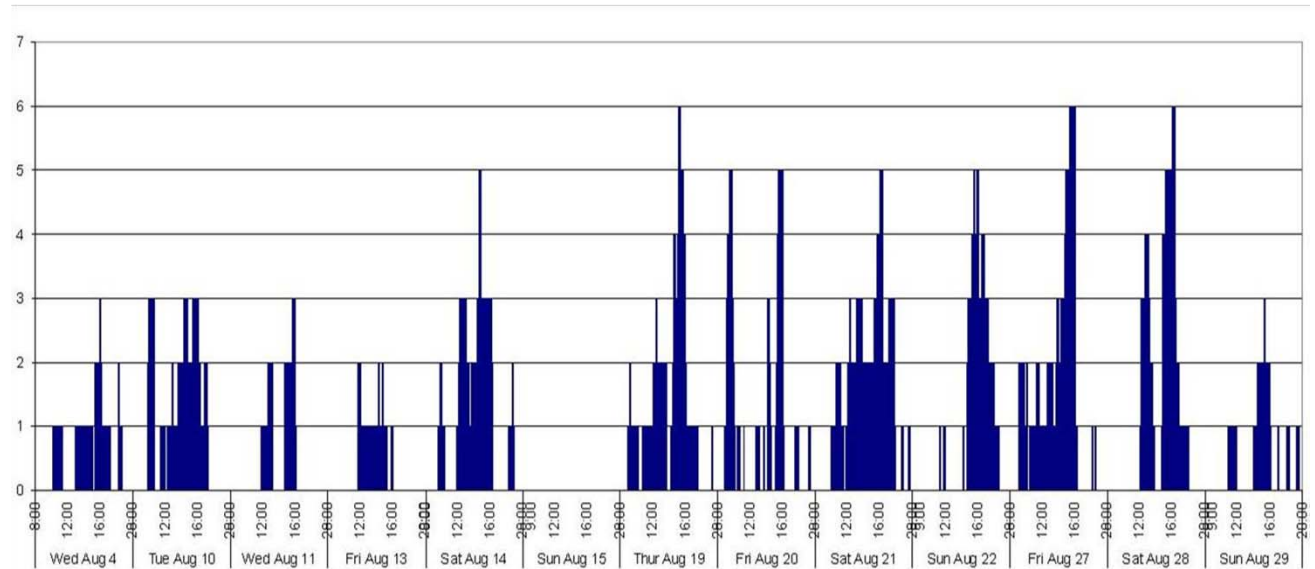


■ First 15 minutes  
■ Duration  
■ Last 15 minutes

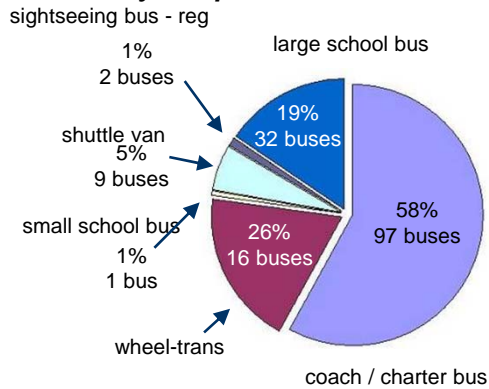
# ● ● ● zone 4 (Harbourfront Centre) analysis



**vehicle accumulation**

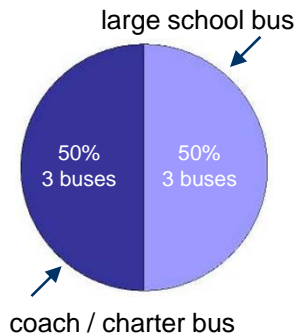


**activity composition**



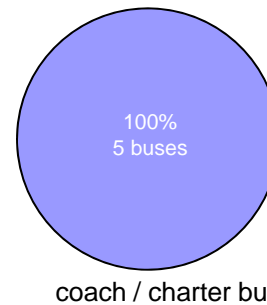
**peak accumulation**

**6 buses, Fri, Aug 27 @ 15:20**



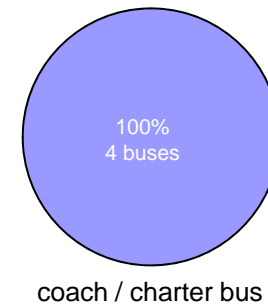
**2<sup>nd</sup> peak accumulation**

**5 buses, Sat, Aug 14 @ 14:36**



**3<sup>rd</sup> peak accumulation**

**4 buses, Thurs, Aug 19 @ 14:37**





# ● ● ● zone 4 (Harbourfront Centre) analysis

Vehicle Type	Coach / Charter	Large School Bus	Small School Bus	Shuttle Van	Sightseeing Bus - Regular	Sightseeing Double-Decker bus	Wheel Trans	Total
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Peak Accumulation

min	0:01	0:02	0:01	0:01	0:07	0:00	0:01	0:01
max	2:19	2:04	0:01	2:00	0:18	0:00	3:00	3:00
85th	1:32	1:13	0:01	1:28	0:16	0:00	0:12	1:24
95th	1:55	1:38	0:01	1:50	0:17	0:00	1:37	1:57
avg	0:53	0:40	0:01	0:47	0:12	0:00	0:16	0:43

**167**  
observations related to  
Harbourfront Centre

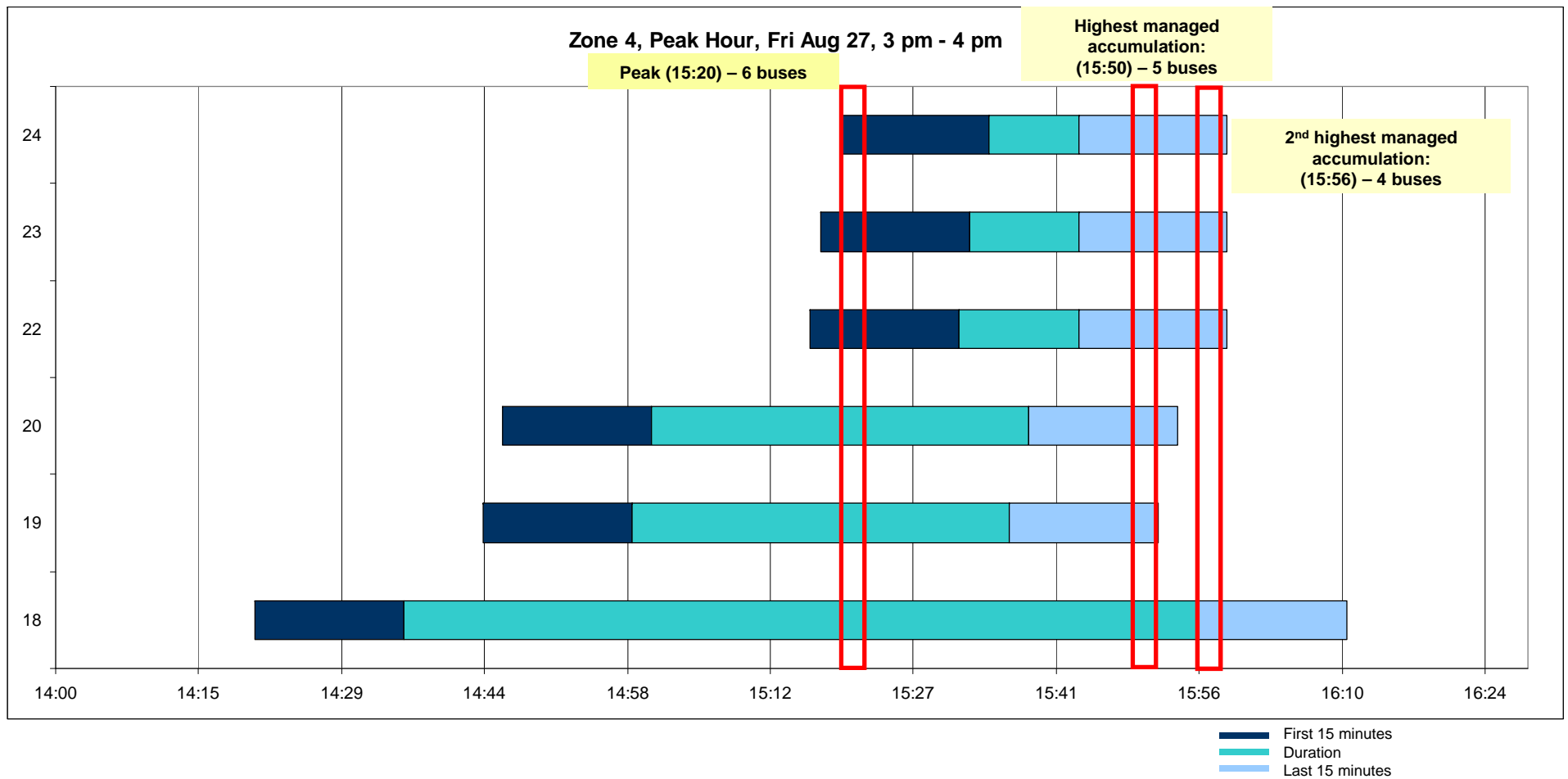
**6 / 4 / 2**  
max / 95<sup>th</sup> / 85<sup>th</sup>  
buses at peak

**3 hrs / 1.95 hrs / 1.4 hrs' /  
43'**  
max / 95<sup>th</sup> / 85<sup>th</sup> / avg  
duration of stay

# ● ● ● zone 4 (Harbourfront Centre) analysis

peak activity: 6 buses, Fri Aug 27 @ 15:20

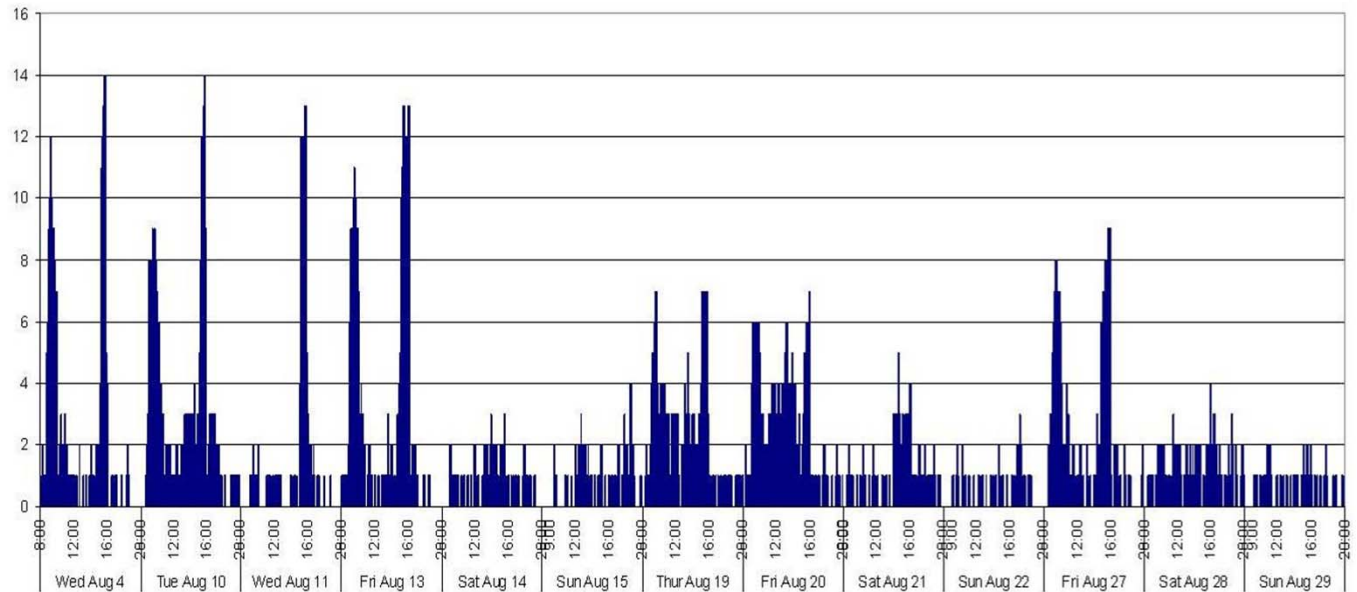
potential managed enforcement – 15 mins for pick-up/drop-off only



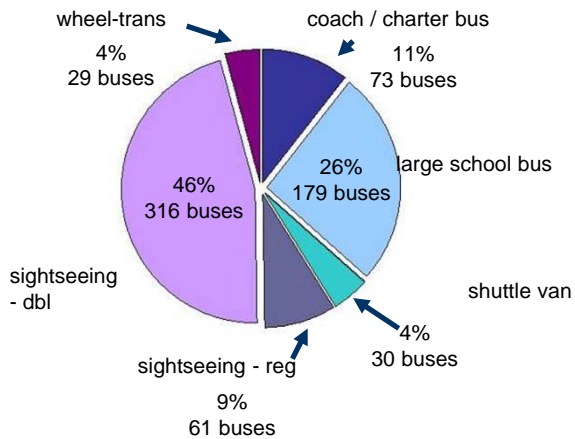
# ● ● ● zone 5 (Radisson) analysis



**vehicle accumulation**

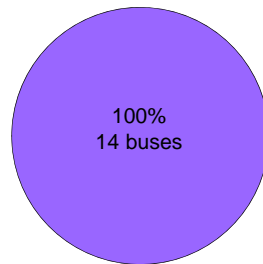


**activity composition**



**peak accumulation**

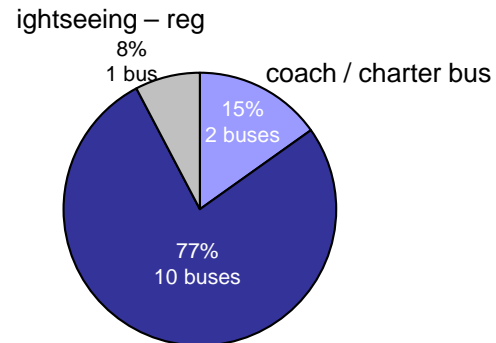
**14 buses, Tues, Aug 10 @ 15:37**



large school bus

**2<sup>nd</sup> peak accumulation**

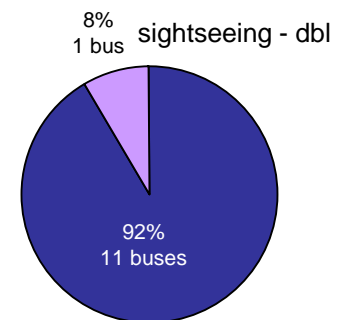
**13 buses, Wed, Aug 11 @ 15:33**



large school bus

**3<sup>rd</sup> peak accumulation**

**12 buses, Wed Aug 4 @ 9:08**



large school bus

# ● ● ● zone 5 (Radisson) analysis

Vehicle Type	Coach / Charter	Large School Bus	Small School Bus	Shuttle Van	Sightseeing Bus - Regular	Sightseeing Double-Decker bus	Wheel Trans	Total
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## Peak Accumulation

min	0:01	0:01	0:00	0:01	0:01	0:01	0:01	0:01
max	4:31	4:39	0:00	0:44	0:34	2:00	0:28	4:39
85th	0:50	1:06	0:00	0:29	0:10	0:10	0:08	0:42
95th	1:29	1:29	0:00	0:40	0:17	0:18	0:20	1:06
avg	0:27	0:40	0:00	0:12	0:06	0:06	0:05	0:18

**688**

observations related to  
Radisson Hotel &  
Harbourfront Centre

**14 / 7 / 2**

max / 95<sup>th</sup> / 85<sup>th</sup>  
buses at peak

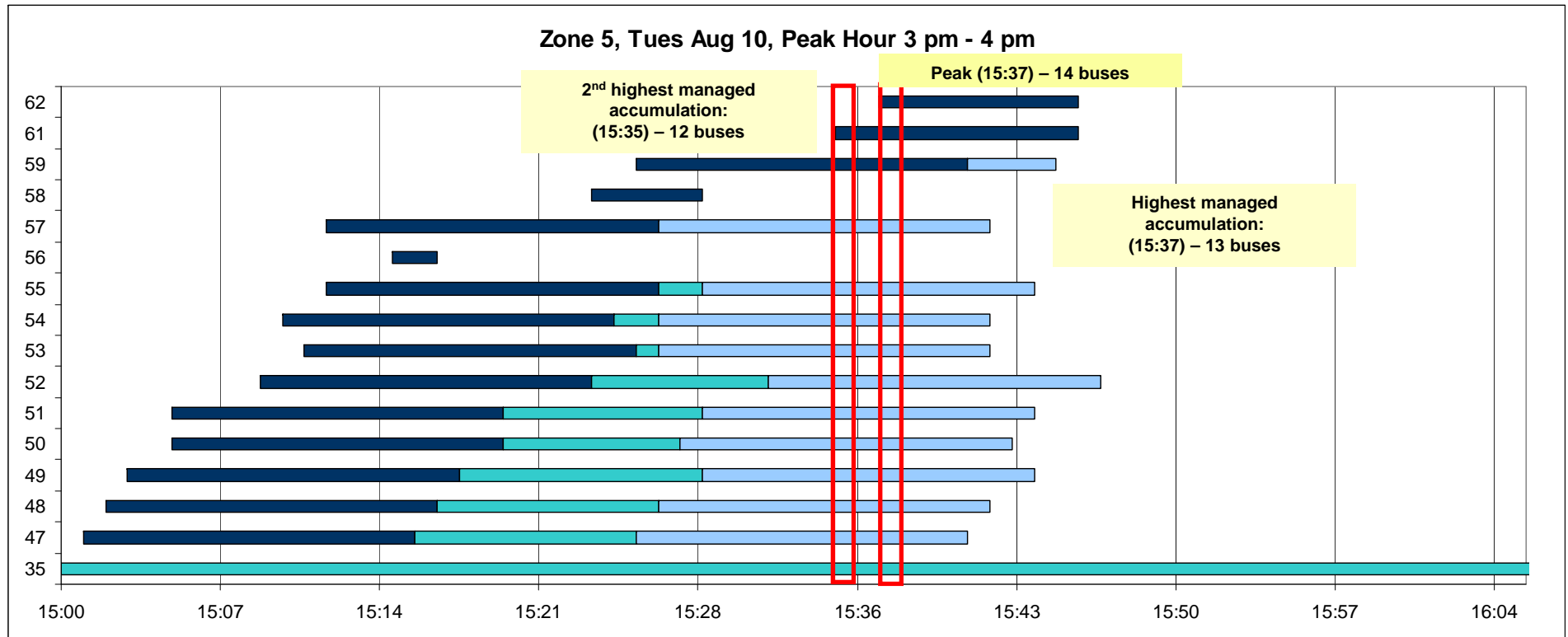
**4.65 hrs / 1.1 hrs / 42' / 18'**

max / 95<sup>th</sup> / 85<sup>th</sup> / avg  
duration of stay

# ● ● ● zone 5 (Radisson) analysis

peak activity: 14 buses, Tues Aug 10 @ 15:37

potential managed enforcement – 15 mins for pick-up/drop-off only



■ First 15 minutes  
■ Duration  
■ Last 15 minutes

## ● ● ● next steps

- + complete analysis & develop design parameters
- + presentation of proposed physical design alternatives (mid-March)
- + study of management alternatives & parking

