TORONTO

Richard Leary
Acting CEO – Toronto Transit Commission

Toronto Transit Commission
1900 Yonge Street,
Toronto, Ontario, M4S1Z2

Tel: (416) 393-3890
Fax: (416) 488-6198
Richard.Leary@ttc.ca
www.ttc.ca

2018 OPERATING BUDGET BRIEFING NOTE

Toronto Transit Commission: Options to Address Bus Overcrowding, Bus Availability & Garage Storage Capacity

Issue/Background:

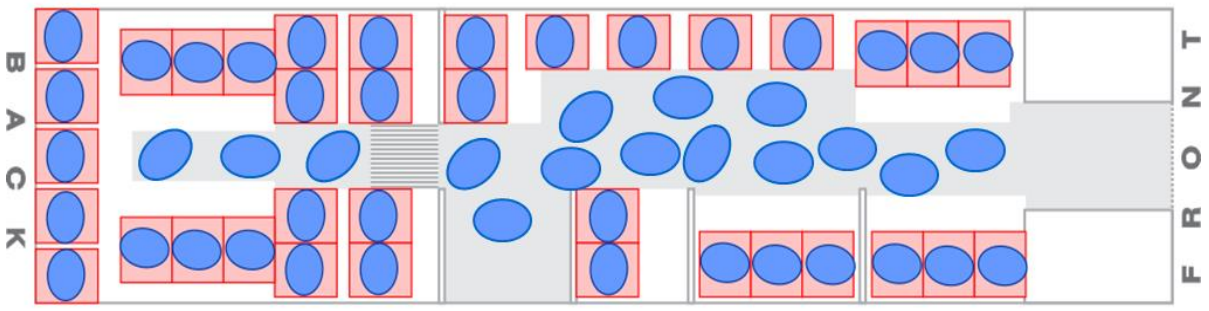
- At its December 18, 2017 meeting, the City Budget Committee requested the Toronto Transit Commission to provide briefing notes on the following topics:
  a. Options to address bus overcrowding, noting costs and ridership/crowding benefits.
  b. The adequacy of the current bus fleet and garages to accommodate modest ridership growth and to address overcrowding.
- Both items are addressed in this briefing note.

TTC CROWDING STANDARDS

- The current crowding standards were endorsed by the TTC Board in August 2014 as part of the "Opportunities to Improve Transit in Toronto" report and approved again in May 2017 as part of the "Update to TTC Service Standards" report.
- The TTC service standards set "crowding standards" by vehicle type and by time of day; peak periods (weekdays 6:00 am – 9:00 am, 3:00 pm – 7:00 pm) and off-peak periods.
- On bus routes, in the peak period, the crowding standard is set to accommodate seated and standing customers. Figure 1 is an illustrative example of the crowding standard for a 12 metre bus. The crowding standard for this bus model is set at 51 customers per bus on average.

Figure 1: Bus Crowding Standard, Peak Periods

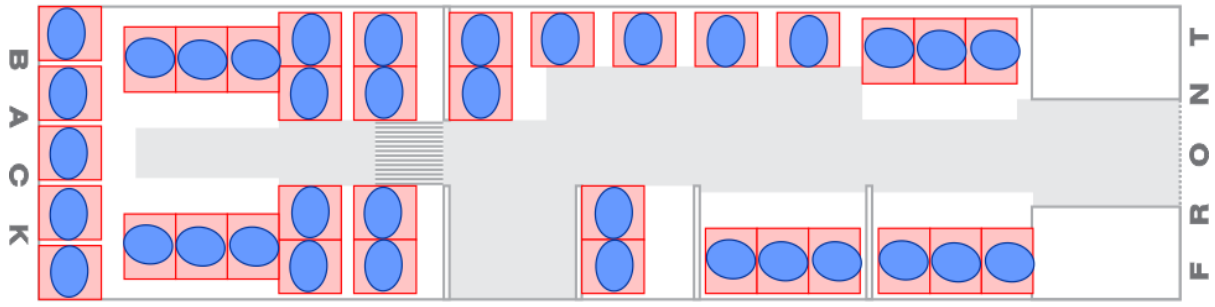
51 customers per bus on average



- On bus routes, in off-peak periods, the crowding standard is set to accommodate seated customers only. Figure 2 is an illustrative example of the crowding standard for a 12 metre bus. The crowding standard for this bus model is set at 36 customers per bus on average.

Figure 2: Bus Crowding Standard, Off-Peak Periods

36 customers per bus on average



OVERCROWDING ON BUS ROUTES

- As of December 2017, approximately 8% of all TTC bus routes' periods of operation exceed their crowding standard as shown in Table 1 below.

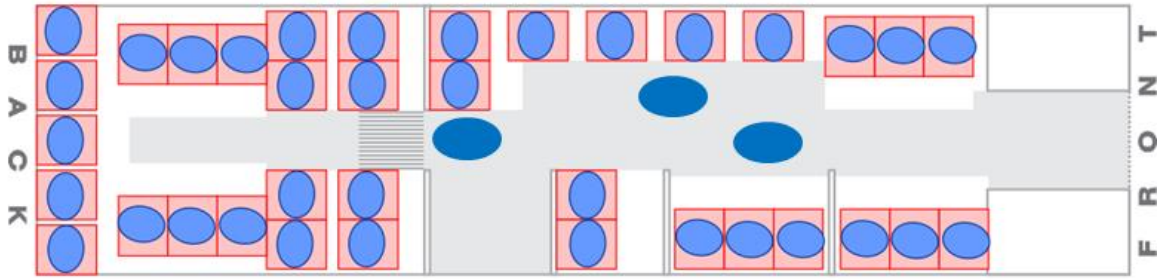
Table 1: Overcrowding on Bus Routes, Number of Routes & Periods of Operation

Mode	Number of Routes	Number of Peak Periods	Number of Off-Peak Periods	Total Periods
Bus	54	25	118	143

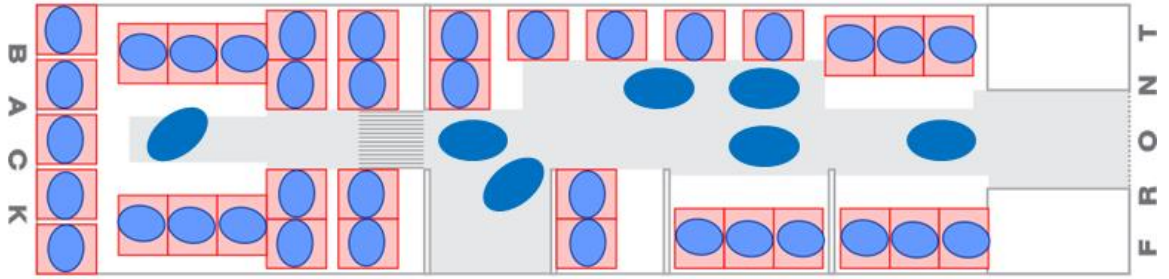
- Figure 3 illustrates the degree of overcrowding in off-peak periods on bus routes including the number of customers standing and number of periods of operation. Note that some bus routes operate articulated buses which allow for more seated and standing customers. For the purpose of this example, 12 metre buses are assumed to illustrate overcrowding.

Figure 3: Off-Peak Overcrowding on Bus Routes – Number of Customers Standing

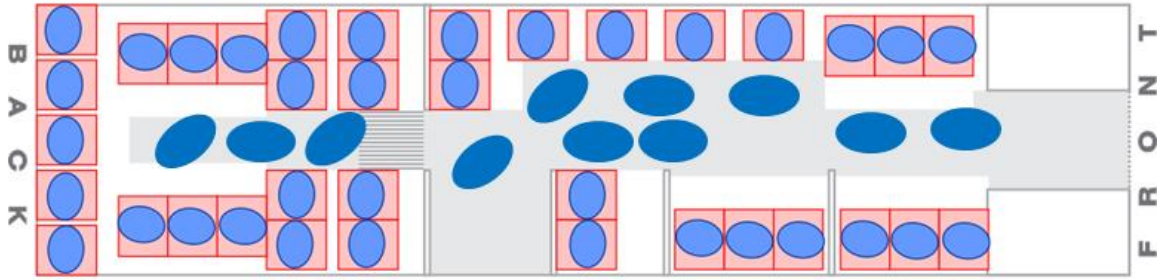
10% Overcrowded
36 Seated, 3 Standees
(84 periods less than 10%)



20% Overcrowded
36 Seated, 7 Standees
(24 periods btw 10%-20%)



30% Overcrowded
36 Seated, 11 Standees
(6 periods btw 20%-30%)
(4 periods greater than 30%)



OPERATING COSTS TO RELIEVE OVERCROWDING ON BUS ROUTES

- In peak periods, the TTC requires approximately 24 AM / 19 PM additional buses and $3.5 million in annual operating costs to address overcrowding on bus routes to bring them in-line with current crowding standards as seen in Table 2.
- In off-peak periods, the TTC requires no additional buses and approximately $9.0 million in annual operating costs to address overcrowding on bus routes to bring them in-line with current crowding standards as seen in Table 2.

Table 2: Annual Operating Cost to Address Overcrowding

Period	Weekly Ridership	Peak Buses	Weekly Hours	Annual Operating Cost
Peak Periods	500,000 customer-trips	24 AM / 19 PM	700	$3,500,000
Off-Peak Periods	770,000 customer-trips	N/A	1,800	$9,000,000
Total	**1,270,000**	24 AM / 19 PM	**2,500**	**$12,500,000**

- In 2018, subject to an increase in operating subsidy, the TTC can focus on addressing overcrowding in peak periods and off-peak periods where overcrowding exceeds 30% (i.e. 11+ standing customers per bus on average).
- Based on bus availability further detailed in the following section of this briefing note, this change can be implemented starting in September 2018. The TTC would require approximately 24 AM / 19 PM additional buses and $1.0 million in operating costs in 2018 and $4.0 million annually thereafter ($3.5 million in peaks + $0.5 million for off-peak).
- Service increases to address overcrowding will be made on the following routes:
  - ✓ 7 Bathurst
  - ✓ 11 Bayview
  - ✓ 23 Dawes
  - ✓ 25 Don Mills
  - ✓ 26 Dupont
  - ✓ 29 Dufferin
  - ✓ 36 Finch West
  - ✓ 43 Kennedy
  - ✓ 56 Leaside
  - ✓ 72 Pape
  - ✓ 79 Scarlett Rd
  - ✓ 88 South Leaside
  - ✓ 91 Woodbine
  - ✓ 96 Wilson
  - ✓ 107 St Regis
  - ✓ 109 Ranee
  - ✓ 113 Danforth
  - ✓ 122 Graydon Hall
  - ✓ 165 Weston Rd North
  - ✓ 185 Don Mills Rocket
  - ✓ 195 Jane Rocket
  - ✓ 199 Finch Rocket

ACCOMODATING RIDERSHIP GROWTH

- Generally, TTC ridership growth can be attributed to either:
  - Background growth: increases in population and employment
  - Induced growth: service enhancements such as new express bus services or the all-day every-day network that TTC Board recently approved.
- TTC ridership is estimated to increase over the next two years due to increases in population and employment as follows:
  - 2017 Budget – 544 million, 2017 projected actual – 534 million
  - 2018 – 539 million
  - 2019 – 543 million
- The TTC requires the following number of buses to accommodate current overcrowding and ridership growth due to projected increases in population and employment:
  - 2018 – 24 buses (overcrowding)
  - 2019 – 6 buses (ridership growth)

BUS AVAILABILITY & GARAGE CAPACITY

- The TTC operates seven bus garages. The total design capacity of the seven bus garages is 1631. The total buses available for service, by design, is 1348.
- The TTC is currently operating over and above design capacity to accommodate service requirements. The current bus garage allocation has increased to 1906 and total buses available for service have increased to 1575.
- In 2018 and 2019, the TTC can further increase the number of buses available for service from 1575 to 1640. This is possible due to the purchase of:
  - A facility at 1810 Markham Road which is adjacent to the existing Malvern Bus Garage which expands the TTC's bus garage capacity by approximately 40 buses (30 in-service),
  - New buses through the Public Transit Infrastructure Fund will result in a net increase of 80 buses, allowing the TTC to add 65 in-service. This procurement allows the TTC to temporarily reduce its operating spare requirements and defer bus retirements without having an adverse impact on bus reliability and maintenance.
- Table 3 identifies total bus requirements and bus availability in 2018-2019. The total bus requirements include buses for:
  - Overcrowding (i.e. 24 buses in 2018)
  - Ridership growth (i.e. population and employment growth – 6 buses in 2019)
  - Service reliability (i.e. run as directed buses, schedule enhancements)
  - Supplementary service (i.e. buses on streetcar routes)
  - Rapid transit and City construction (i.e. Eglinton Crosstown, Finch West LRT, road resurfacing, watermain works)

Table 3: Bus Fleet Requirements and Availability

Year	Peak Bus Requirement	Bus Availability
2018	1620	1640
2019	1640	1640

- By 2019, the TTC's peak bus requirement will increase to 1640 (100% of the number of available buses) to address overcrowding, estimated ridership growth and other service requirements. This means that the TTC will not have additional buses between 2018-2019 to:
  - Supplement streetcar service should there be further delays in the delivery of new streetcars
  - Accommodate higher than projected increases in population and employment growth
  - Advance the implementation of service enhancements that are currently planned in 2020 to induce ridership growth (i.e. express bus services, new services etc.)
- The TTC will open the new McNicoll Bus Garage in 2020. The new total design capacity of for the eight garages will be 1881 and the new total buses available, by design, for service will be 1554.
- When McNicoll Bus Garage opens, the TTC will continue to operate above capacity with reduced spares ratio beyond 2020 to accommodate service requirements. The planned overcapacity will accommodate 2007 buses at the eight bus garages with 1673 buses available for service. The TTC is assessing locations and available properties for a ninth bus garage.

Prepared by: Jacqueline Darwood, Head of Strategy & Service Planning, Toronto Transit Commission, (416) 393-4499, jacqueline.darwood@ttc.ca

Further information: Jacqueline Darwood, Head of Strategy & Service Planning, Toronto Transit Commission, (416) 393-4499, jacqueline.darwood@ttc.ca

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