

Metropolitan Tram Load Standards Survey Report

May 2017

TABLE OF CONTENTS

1	Summary and Key Results.....	2
1.1	Introduction	2
1.2	Key Results.....	2
2	Background and Definitions	3
2.1	Background.....	3
2.2	Terminology	3
3	Cordon Locations	4
3.1	Rolling Hour Breaches – Cordon Locations	4
3.1.1	Key Results.....	5
3.1.2	AM Peak Rolling Hour Breaches	6
3.1.3	PM Peak Rolling Hour Breaches	6
3.2	Average Daily Observed Loads - Cordon Locations	7
3.2.1	AM Peak Observed Loads	7
3.2.2	PM Peak Observed Loads	9
4	Non-cordon Locations.....	10
4.1.1	AM Peak Rolling Hour Breaches	10
4.1.2	PM Peak Rolling Hour Breaches	11
4.2	Average Daily Observed Loads – Non-cordon Locations.....	11
4.2.1	AM Peak Observed Loads	11
4.2.2	PM Peak Observed Loads	13
4.3	Data Collection and Analysis.....	15
4.4	Limitations of manual counts for determining loads.....	15
5	Appendices	16

1 Summary and Key Results

1.1 Introduction

The Metropolitan Tram Load Standards Surveys (Tram Load Surveys) are conducted each year in May to measure passenger loads against agreed load standards of rolling stock.

The survey's findings help pinpoint at which sections on each route and at which times loads exceed the desired standards to assist in planning for rolling stock and service changes. The main surveying is undertaken during the AM and PM peaks when the network is at its most crowded.

This report details the key findings from the May 2017 survey.

1.2 Key Results

Table 1 Rolling hour average loads above desired standards recorded in May 2017 survey

Rolling Hour Cordon Breaches May 2017			
AM Hourly Breaches		PM Hourly Breaches	
<i>Rolling Hour</i>	<i>No. of breaches</i>	<i>Rolling Hour</i>	<i>No. of breaches</i>
7:01-8:00	0	15:01-16:00	0
7:31-8:30	1	15:31-16:30	0
8:01-9:00	3	16:01-17:00	0
8:31-9:30	1	16:31-17:30	1
9:01-10:00	0	17:01-18:00	1
Total	5	17:31-18:30	0
		18:01-19:00	1
		19:01-19:30	0
		Total	3

Key high level impacts on results for the May 2017 Tram Load Survey include:

- The ongoing cascade of new fleets of trams continues to increase the capacity provided on the Metropolitan Tram network.
- The reduction in PM breaches was mainly observed at the three cordons: Elgin St / Lygon St, Swanston St Federation Square and Wellington Pde / Jolimont Rd.

2 Background and Definitions

2.1 Background

Tram Load Surveys have been conducted since 2000 as part of the Franchise Agreement (the Agreement) between the metropolitan tram operator and the State Government.

When developing the survey, cordon locations in addition to locations previously recording rolling hour load breaches (breaches) or rolling hour average loads are considered. In addition, locations impacted by service changes either to the tram or train timetables may be included. External stakeholder feedback and consultation is also considered when developing the final stop list.

Survey results are useful to review and re-allocate tram rolling stock across the network. In addition, transport modellers frequently rely on data gathered on average or total passenger load counts for information about demand for tram services.

2.2 Terminology

AM Peak – AM Peak Services are defined in the Agreement as services that are scheduled to arrive or depart from their Operational Performance Region (OPR) monitoring point between 7:31am and 9:30am. For the Tram Load Survey and within this document, the AM Peak period refers to services that arrive at a survey point travelling in the survey direction between 7:01am and 10:00am.

CBD monitoring point – Any point in the Central Business District (CBD), or any other point determined by Transport For Victoria (TFV), at which passenger counts are conducted in accordance with the Agreement, utilising CBD Maximum Capacities for each vehicle.

Cordon – Historical points designed to capture the expected maximum load of passengers entering the CBD.

Corridor – A group of tram routes at a location that have or will share/d substantial sections of track and are expected to be interchangeable to passengers. The loads and capacities of these corridors are aggregated for the calculation of rolling hour breach estimates.

Counter Peak Direction – The direction opposite to which most passengers are expected to travel. In the AM Peak this is services that are travelling away from the CBD and in the PM Peak this is services that are travelling towards the CBD.

Load – For a service, the number of passengers travelling on a tram at a given point in time.

Location – A generic term indicating a monitoring point, with CBD or Non CBD or Cordon as context requires.

Maximum Capacity – The desired maximum capacity of a tram in service. (See Appendix 4 for details of capacities for each tram class). The maximum capacity is often higher for trams operating in the CBD than for trams operating outside the CBD. This is also referred to as *desired standard* or *standard* in this report. This standard does not relate to a safety requirement but to the relative comfort level.

Non-CBD monitoring point – Any point that is not a CBD monitoring point at which passenger counts are conducted in accordance with the Agreement, utilising non-CBD Maximum Capacities for each vehicle.

Peak – Either or both the AM Peak and the PM Peak, as the context requires.

Peak Direction – The direction in which most passengers are expected to travel. In the AM Peak this is services that are travelling towards the CBD and in the PM Peak this is services that are travelling away from the CBD.

PM Peak – PM Peak Services are defined in the Agreement as services that are scheduled to arrive or depart from their OPR monitoring point between 3:31pm and 6:30pm. For the Tram Load Survey and within this document, the PM Peak period refers to services that depart from a survey point travelling in the survey direction between 3:01pm and 7:00pm.

Rolling hour – Each hour from 6:31am to 6:31pm, commencing on each half-hour during that period (e.g. 6:31am to 7:30am, 7:01am to 8:00am).

Survey direction – The direction of travel of services that are to be included in passenger counts conducted at CBD monitoring points or non-CBD monitoring points in accordance with the Agreement.

3 Cordon Locations

There are fourteen cordon locations that represent entry or exit points for all routes through the CBD.

Twelve of these locations have been consistently surveyed since October 2011.

As of May 2016, two additional survey locations have been included as cordons for the measurement of passenger loads; these are *Collins Street West End (Southern Cross Station)* and *Docklands (Flinders Street West End)*. These locations have been surveyed since 2014 and 2013 respectively and are included to capture the growing loads for services running between Docklands and the CBD. Notably, the decline in breaches observed since 2014 has been sustained and may reflect the ongoing success of the cascade program to increase the capacity provided on the Metropolitan Tram network.

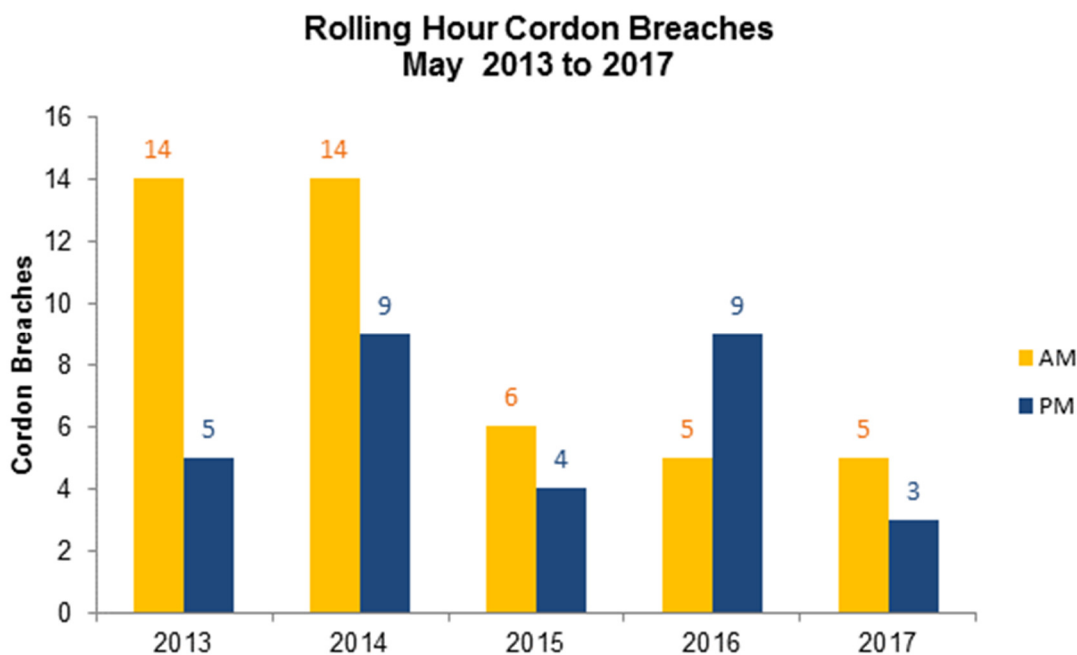


Figure 1 - Rolling Hour Cordon Breaches in May - AM Peak and PM Peak - From 2013 to 2017

3.1 Rolling Hour Breaches – Cordon Locations

Only breaches that occur at cordons in the peak direction are included as cordon breaches, with the exception of the *Swanston St / Flinders St (Federation Square)* and *Collins St West End (Southern Cross Station)* cordons where cordon breaches are included in both directions. These

locations have been included as it is recognised that trams travelling counter peak facilitate large commuter loads to the St Kilda Road and Docklands business districts.

3.1.1 Key Results

In the May 2017 Tram Load Survey the number of breaches at cordons was unchanged on the prior year in the AM Peak and decreased to three breaches in the PM Peak period, being the lowest number of cordon breaches since 2013.

3.1.2 AM Peak Rolling Hour Breaches

There was no change in rolling hour breaches for the AM Peak. The breaches reported here are highly aggregated and calculated as average total load per rolling hour over average capacity per rolling hour. The numbers in the table below may therefore understate the crowding discomfort experienced by tram passengers. Please refer to Appendix 7 for detailed results using this measure.

Table 2 - Rolling Hour Cordon Breaches in May by Location and Route or Corridor - AM Peak - From 2014 to 2017

Rolling Hour Cordon Load Breaches - May - AM Peak						
Cordon Location	Direction	Route/s	2014	2015	2016	2017
Clarendon St (Crown Casino)	North	Route 112 (12)*	-	-	-	-
Elgin St / Lygon St	South	Corridor - Routes 1 and 6^	4	3	2	2
Errol St / Victoria St	South	Route 57	-	-	-	-
Haymarket (Elizabeth St)	South	Route 59	2	-	-	-
Peel St / Victoria St	South	Route 58^^	3	-	-	-
St Vincent's Plaza	West	Route 112 (12)*	2	-	-	-
Swanston St / Flinders St (Federation Sq)	South	Corridor - Routes 3, 5, 6^, 16, 64, 67, and 72	-	2	1	1
Wellington Pde / Jolimont Rd	West	Route 48	3	-	2	2
Wellington Pde / Jolimont Rd	West	Route 75	1	-	-	-
Total			15	5	5	5

^From May 1, 2017 route 55 and 8 were discontinued. Route 58 was introduced covering the Domain to Toorak section of previous route 8 and the Domain to West Coburg of previous route 55. The northern section of route 8 is serviced by extending route 6 to terminate at Moreland Station.

*From July 2015 route 112 was discontinued and routes 11 and 12 were introduced which have similar network coverage.

3.1.3 PM Peak Rolling Hour Breaches

Breaches in the PM Peak reduced in May 2017. In total, only two locations recorded cordon breaches in the PM Peak period: *Elgin St/Lygon St* with one breach and *Wellington Pde / Jolimont Rd* with two breaches.

Table 3 - Rolling Hour Cordon Breaches In May by Location and Route or Corridor - PM Peak - From 2014 to 2017

Rolling Hour Cordon Load Breaches - May - PM Peak						
Cordon Location	Direction	Route/s	2014	2015	2016	2017
Collins St West End (Southern Cross Station)	East	Corridor - Routes 11, 48, and 112*	1	-	-	-
Elgin St / Lygon St	North	Corridor - Routes 1 and 6^	3	1	3	1
Swanston St / Flinders St (Federation Sq)	North	Corridor - Routes 3, 5, 6^, 16, 64, 67, and 72	2	-	2	-
Swanston St / Flinders St (Federation Sq)	North	Route 1	1	-	-	-
Wellington Pde / Jolimont Rd	East	Route 48	3	3	4	2
Total			10	4	9	3

^From May 1, 2017 route 55 and 8 were discontinued. Route 58 was introduced covering the Domain to Toorak section of previous route 8 and the Domain to West Coburg of previous route 55. The northern section of route 8 is serviced by extending route 6 to terminate at Moreland Station.

*From July 2015 route 112 was discontinued and routes 11 and 12 were introduced which have similar network coverage.

3.2 Average Daily Observed Loads - Cordon Locations

The survey counts at cordon locations are used to provide an estimate of the number of people arriving in the CBD by tram in the AM Peak and the number of people departing the CBD by tram during the PM Peak.

3.2.1 AM Peak Observed Loads

Consistent year on year growth in the AM Peak is observed at half of the 14 cordon stops: *Collins St West End (Southern Cross Station)*, *Docklands (Flinders St West End)*, *Docklands (LaTrobe St West End)*, *Flinders St / Russell St*, *Haymarket (Elizabeth St)*, *Queensbridge St (Casino East)* and *Wellington Pde / Jolimont Rd*.

Of the 14 stops surveyed, *Swanston St / Flinders St (Federation Square)* remained the most frequented cordon (16per cent of passenger arrivals into the CBD) with an average of 6,852 passengers passing between 7:01 and 10:00 AM. This represents an increase of 5 per cent on May 2016.

A large slice of passenger demand (11 per cent each of CDB arrivals) enters the CBD via stops at *Clarendon St (Crown Casino)*, *Haymarket (Elizabeth St)* and *St Vincent's Plaza*. The growth pattern associated with these stops is mixed: reducing slightly for *St Vincent's Plaza* and *Clarendon St (Crown Casino)*, but showing an increase at *Haymarket (Elizabeth St)*.

The greatest percentage growth came from *Queensbridge St (Crown Casino)*, which increased 28per cent (an additional 350 passengers to a total of 1,608). This follows solid growth (18per cent) at this location in 2016.

The growth observed at *Bourke St / Spring St* and *Peel St / Victoria St* last year was not sustained into 2017. A 13 per cent and 17 per cent respectively drop in arriving passengers

placed these stops behind *St Vincent's Plaza*, *Clarendon St (Crown Casino)*, and *Haymarket (Elizabeth St)*.

Table 4 - May Cordon Passenger Loads by Location with Growth Rate - AM Peak - From 2015 to 2017

AM Peak Direction (7:01-10:00) May Cordon Loads - 2015 to 2017								
Location	Routes	Direction	2015	2016	2017	% Change In Load From 2015 to 2016	% Change In Load From 2016 to 2017	
Bourke St / Spring St	86, 96	West	4,001	5,053	4,395	26.3	-13.0	
Clarendon St (Crown Casino)	12*, 96, 109	North	4,591	4,801	4,770	4.6	-0.6	
Collins St West End (Southern Cross Station)	11*, 48	East	1,005	1,504	1,753	49.7	16.6	
Docklands (Flinders St West End)	35, 70, 75	East	416	525	595	26.2	13.3	
Docklands (LaTrobe St West End)	30, 35, 86	East	644	866	973	34.5	12.4	
Elgin St / Lygon St	1, 6 [^]	South	3,298	3,130	3,283	-5.1	4.9	
Errol St / Victoria St	57	South	1,102	1,087	1,297	-1.4	19.3	
Flinders St / Russell St	35, 70, 75	West	1,429	1,685	2,002	17.9	18.8	
Haymarket (Elizabeth St)	19, 59	South	4,071	4,366	4,484	7.2	2.7	
Peel St / Victoria St	58 [^]	South	1,970	2,686	2,219	36.3	-17.4	
Queensbridge St (Casino East)	58 [^]	North	1,064	1,258	1,608	18.2	27.8	
St Vincent's Plaza	11*, 12*, 24, 30, 109	West	4,645	4,911	4,764	5.7	-3.0	
Swanston St / Flinders St (Federation Sq)	1, 3, 5, 6 [^] , 16, 64, 67, 72	North	6,715	6,525	6,852	-2.8	5.0	
Wellington Pde / Jolimont Rd	48, 75	West	2,459	2,801	3,018	13.9	7.7	
Total			37,410	41,198	42,013	9.2	1.9	

[^]From May 1, 2017 route 55 and 8 were discontinued. Route 58 was introduced covering the Domain to Toorak section of previous route 8 and the Domain to West Coburg of previous route 55. The northern section of route 8 is serviced by extending route 6 to terminate at Moreland Station.

*From July 2015 route 112 was discontinued and routes 11 and 12 were introduced which have similar network coverage.

X = Not surveyed in this year

3.2.2 PM Peak Observed Loads

Similar to the AM Peak, the PM Peak saw *Swanston St / Flinders St (Federation Square)* remain the busiest cordon location with an average of 9,238 passengers exiting the CBD between 15:01 and 19:00. Continuing and increasing demand for tram services is shown by a rise in observed loads of nearly 5per cent in the past twelve months. Second to Melbourne's busiest tram stop are the four stops at *Bourke St / Spring St*, *Clarendon St (Crown Casino)*, *Haymarket (Elizabeth St)* and *St Vincent's Plaza*. These stops have a PM Peak load between 5,500 to 6,000 passengers.

Table 5 - May Cordon Passenger Loads by Location with Growth Rate - PM Peak - From 2015 to 2017

PM Peak Direction (15:01-19:00) May Cordon Loads - 2015 to 2017								
Location	Routes	Direction	2015	2016	2017	% Change In Load From 2015 to 2016	% Change In Load From 2016 to 2017	
Bourke St / Spring St	86, 96	East	5,126	6,164	5,526	20.2	-10.4	
Clarendon St (Crown Casino)	12*, 96, 109	South	5,806	5,989	6,017	3.2	0.5	
Collins St West End (Southern Cross Station)	11*, 48	West	1,379	1,676	2,102	21.5	25.4	
Docklands (Flinders St West End)	35, 70, 75	West	1,135	1,306	1,261	15.1	-3.4	
Docklands (LaTrobe St West End)	30, 35, 86	West	1,195	1,382	1,378	15.6	-0.3	
Elgin St / Lygon St	1, 6^	North	3,222	3,808	3,645	18.2	-4.3	
Errol St / Victoria St	57	North	1,448	1,301	1,273	-10.2	-2.2	
Flinders St / Russell St	35, 70, 75	East	2,506	2,930	2,967	16.9	1.3	
Haymarket (Elizabeth St)	19, 59	North	4,992	5,531	5,502	10.8	-0.5	
Peel St / Victoria St	58^	North	2,045	2,104	2,383	2.9	13.2	
Queensbridge St (Casino East)	58^	South	827	981	1,365	18.6	39.1	
St Vincent's Plaza	11*, 12*, 24, 30, 109	East	5,299	5,363	5,349	1.2	-0.3	
Swanston St / Flinders St (Federation Sq)	1, 3, 5, 6^, 16, 64, 67, 72	South	8,559	8,805	9,238	2.9	4.9	
Wellington Pde / Jolimont Rd	48, 75	East	2,455	3,532	3,484	43.9	-1.4	
Total			45,994	50,872	51,490	10.6	1.2	

^From May 1, 2017 route 55 and 8 were discontinued. Route 58 was introduced covering the Domain to Toorak section of previous route 8 and the Domain to West Coburg of previous route 55. The northern section of route 8 is serviced by extending route 6 to terminate at Moreland Station.

*From July 2015 route 112 was discontinued and routes 11 and 12 were introduced which have similar network coverage.

X = Not surveyed in this year

Six of the 14 cordon stops show a consistent year on year growth: *Clarendon St (Crown Casino), Collins St West End (Southern Cross Station), Flinders St / Russell St, Peel St / Victoria St and Queensbridge St (Casino East)*. Of the remaining eight stops there was a decline in passenger loads in 2017 (*Bourke St / Spring St, Docklands (Flinders St West End), Docklands (LaTrobe St West End)*)

Elgin St / Lygon St, Haymarket (Elizabeth St), St Vincent's Plaza, Wellington Pde / Jolimont Rd, while one stop, *Errol St / Victoria* appears less frequented by commuters showing declines in 2016 and 2017.

4 Non-cordon Locations

While the cordon locations are consistently recorded to provide a long term time series on load standard breaches and to analyse the impact of network changes, other, non-cordon locations are included after consultation with stakeholders from TFV (Network Planning) and Yarra Trams.

Selection of non-cordon locations may occur for several reasons: a need to understand tram load bottlenecks outside the CBD or to provide before and after analysis for planned network changes. Breaches and the total loads in these locations are reported below.

4.1.1 AM Peak Rolling Hour Breaches

14 non-cordon locations were surveyed in the AM Peak during the May 2017 Tram Load Survey.

In May 2017, only one load standard breach was observed, which occurred at the *St Kilda Rd / Commercial Rd* stop during the AM Peak.

Table 6 - Rolling Hour Non-cordon Breaches in May by Location and Route or Corridor - AM Peak - From 2014 to 2017

Rolling Hour Non-Cordon Load Breaches - May - AM Peak						
Location	Direction	Route/s	2014	2015	2016	2017
Dandenong Rd / Hornby St	West	Corridor - Routes 5 and 64	2	1	1	-
Grantham St / Brunswick Rd	South	Route 55	-	-	-	X
Southbank Blvd / Sturt St	South	Route 1	X	X	1	X
St Kilda Rd / Commercial Rd	North	Corridor - Routes 3, 5, 16, 64, and 67	1	1	1	1
St Kilda Rd / Commercial Rd	North	Route 72	-	-	1	1
St Kilda Rd / High St	North	Corridor - Routes 3, 5, 16, 64, and 67	1	1	1	-

X = Not surveyed in this year.

4.1.2 PM Peak Rolling Hour Breaches

There were no breaches in May 2017.

Table 7 - Rolling Hour Non-cordon Breaches In May by Location and Route or Corridor - PM Peak - From 2014 to 2017

Rolling Hour Non-Cordon Load Breaches - May - PM Peak						
Cordon Location	Direction	Route/s	2014	2015	2016	2017
Dandenong Rd / Hornby St	East	Corridor - Routes 5 and 64	1	-	-	-
Domain Interchange (St Kilda Rd)	North	Corridor - Routes 3, 5, 6, 16, 64, 67, and 72	X	-	1	-

X = Not surveyed in this year.

4.2 Average Daily Observed Loads – Non-cordon Locations

4.2.1 AM Peak Observed Loads

Of the locations that were surveyed in both 2016 and 2017, the busiest stops were *St Kilda Rd / High St*, *Domain Interchange (St Kilda Rd)* and *St Kilda Rd / Commercial Rd*. In May 2017, *Domain Interchange* has exceeded *Swanston St / Flinders St (Federation Square)* as the location with the highest average load count surveyed (7,165).

Growth is strong in the St Kilda Rd corridor (over 10 per cent) in southern direction.

Table 8 - May Non-cordon Passenger Loads by Location with Growth Rate - AM Peak - From 2015 to 2017

AM Peak Direction (7:01-10:00) May Non-Cordon Loads - 2015 to 2017							
Location	Routes	Direction	2015	2016	2017	% Change In Load From 2015 to 2016	% Change In Load From 2016 to 2017
Domain Interchange (St Kilda Rd)	3, 5, 6 [^] , 58 ^{*^} , 16, 64, 67, 72	North	6,279	5,919	5,572	-5.7	-5.9
Domain Interchange (St Kilda Rd)	3, 5, 6 [^] , 58 ^{*^} , 16, 64, 67, 72	South	6,880	6,347	7,165	-8	12.9
Collins St West End (Southern Cross Station)	11*, 48	West	X	X	2,846	na	na
Clarendon St (Crown Casino)	12*, 96, 109	South	X	X	4,076	na	na
Dandenong Rd / Hornby St	5, 64	West	1,695	1,758	1,905	3.7	8.4
Lygon St / Brunswick Rd	1, 8	South	X	2,285	2,422	na	6.0
St Kilda Rd / Commercial Rd	3, 5, 6 [^] , 16, 64, 67, 72	North	5,361	5,845	6,549	9.0	12.0
St Kilda Rd / Commercial Rd	3, 5, 6 [^] , 16, 64, 67, 72	South			2,475	na	na
St Kilda Rd / High St	3, 5, 6, 16, 64, 67	North	4,814	4,777	5,426	-0.8	13.6
St Kilda Rd / High St	3, 5, 6, 16, 64, 67	South			1,295	na	na
Park St / Toorak Rd	58 [^]	South	X	X	217	na	na
Smith St / Johnston St	86	South	X	2,220	2,256	na	1.6
Abbotsford St Interchange	57	South	X	X	923	na	na
Flemington Rd / Abbotsford St	58 [^] , 59	South	X	X	4,803	na	na
Bridge Rd / Yarra Blvd	48, 75	West	X	X	2,008	na	na
Clarendon St / Park St	12	North	X	X	752	na	na
Park St / Clarendon St	1	North	X	X	772	na	na
Sydney Rd / Brunswick Rd	19	South	X	X	2,393	na	na

[^]From May 1, 2017 route 55 and 8 were discontinued. Route 58 was introduced covering the Domain to Toorak section of previous route 8 and the Domain to West Coburg of previous route 55. The northern section of route 8 is serviced by extending route 6 to terminate at Moreland Station.

*From July 2015, route 112 was discontinued and routes 11 and 12 were introduced which have similar network coverage.

*^ Route 58 was not counted in 2017 at Domain Interchange

X = Not surveyed in this year

4.2.2 PM Peak Observed Loads

14 non-cordon locations were surveyed in the PM Peak during the May 2017 Tram Load Survey.

Generally, where comparable data existed in 2016, growth was moderate at best. The most striking decrease in demand occurred at *Domain Interchange (St Kilda Rd)* (North Bound routes 3, 5, 6, 58, 16, 64, 67, 72) from strong growth of 24 per cent in 2016 back to 2015 levels by 2017.

Table 9 - May Non-cordon Passenger Loads by Location with Growth Rate - PM Peak - From 2015 to 2017

PM Peak Direction (15:01-19:00) May Non-Cordon Loads - 2015 to 2017							
Location	Routes	Direction	2015	2016	2017	% Change In Load From 2015 to 2016	% Change In Load From 2016 to 2017
Collins St West End (Southern Cross Station)	11*, 48	East	4,194	4,848	5,056	15.6	4.3
Swanston St / Flinders St (Federation Sq)	1, 3, 5, 6 [^] , 16, 64, 67, 72	North	12,036	13,430	11,908	11.6	-11.3
Domain Interchange (St Kilda Rd)	3, 5, 6 [^] , 58* [^] , 16, 64, 67, 72	North	9,815	12,141	9,888	23.7	-18.6
Domain Interchange (St Kilda Rd)	3, 5, 6 [^] , 16, 64, 58* [^] 67, 72	South	7,958	7,699	7,286	-3.3	-5.4
St Kilda Rd / Commercial Rd	3, 5, 6 [^] , 16, 64, 67, 72	South	6,275	7,137	7,054	13.7	-1.2
St Kilda Rd / Commercial Rd	3, 5, 6 [^] , 16, 64, 67, 72	North	X	X	5,553	na	na
St Kilda Rd / High St	3, 5, 6 [^] , 16, 64, 67	South	5,353	5,569	6,216	4.0	11.6
St Kilda Rd / High St	3, 5, 6 [^] , 16, 64, 67	North	X	X	3,100	na	na
Dandenong Rd / Hornby St	5, 64	East	1,815	1,856	1,919	2.3	3.4
Lygon St / Brunswick Rd	1, 8	North	X	2,492	2,378	na	na
Abbotsford St Interchange	57	North	X	X	966	na	na
Bridge Rd / Yarra Blvd	48, 75	East	X	X	2,245	na	na
Clarendon St (Crown Casino)	12*, 96, 109	North	X	X	5,481	na	na
Clarendon St / Park St	12	South	X	X	799	na	na
Dandenong Rd / Hornby St	5, 64	East	X	1,865	1,919	na	2.9
Flemington Rd / Abbotsford St	58 [^] , 59	North	X	X	5,056	na	na
Lygon St / Brunswick Rd	1, 6 [^]	North	X	2,492	2,378	na	-4.6
Park St / Clarendon St	12*	South	X	X	851	na	na
Park St / Toorak Rd	58*	South	X	X	765	na	na
Queen Vic Market / Elizabeth St	19, 57, 59	North	X	X	9,117	na	na
Smith St / Johnston St	86	North	X	X	2,184	na	na
Sydney Rd / Brunswick Rd	19	North	X	X	2,713	na	na

[^]From May 1, 2017 route 55 and 8 were discontinued. Route 58 was introduced covering the Domain to Toorak section of previous route 8 and the Domain to West Coburg of previous route 55. The northern section of route 8 is serviced by extending route 6 to terminate at Moreland Station.

*From July 2015 route, 112 was discontinued and routes 11 and 12 were introduced which have similar network coverage.

*[^] Route 58 was not counted in 2017 at Domain Interchange

X = Not surveyed in this year

4.3 Data Collection and Analysis

Data was collected over weekdays between the 1st of May to the 26th of May 2017 on Tuesdays, Wednesdays and Thursdays, by independent surveyors from a contracted labour supply company.

Passenger counts were undertaken between 7.00 am and 10.00 am and between 3.00 pm and 7.00 pm at selected tram stops across the network, with all services under the Master Timetable surveyed. In addition, late pm counts (7:00 pm and 9:00 pm) were also recorded at the following 5 stops, *Bourke St / Spring St, Elgin St / Lygon St, Queen Victoria Market / Elizabeth St, Swanston St / Flinders St (Federation Sq) and St Vincent's Plaza* in 2017.

In accordance with the Agreement each survey location was surveyed at least three times, on different weekdays, to form a Sampled Service Set.

At most locations passenger counts were conducted in the direction of heading into the city in the morning and heading out of the city in the evening. However, at specific locations where high bi-directional passenger loads are known to occur, surveying was conducted in both directions.

Between one and six surveyors counted loads at each tram stop, depending on the frequency and volume of services at the stop. If more than one surveyor was present, surveyors worked in pairs with one recording the information and the other conducting the passenger count.

The surveyors recorded the tram number, route number, arrival time and arrival or departure load. Arrival loads were recorded for morning shifts and departure loads for evening shifts, except at selected locations as specified by stakeholders, where exceptions to this rule applied. (See Appendix 2 for a list of survey locations)

On lightly loaded trams, each passenger was counted. On heavily loaded trams, the number of people standing and the empty seats were counted. The number of standing passengers was added to the known number of seats on the tram and the number of empty seats subtracted. Information on the seating capacity of each tram type is included in the table at Appendix 4.

Most routes passing through the CBD, and other routes that share substantial sections of track, have been combined into corridors. A list of the routes aggregated into corridors is at Appendix 3.

The average load for a route or corridor at each survey location was calculated by adding together the total number of passengers on each service surveyed in a rolling hour, and dividing that by the number of services in that rolling hour. The average passenger loads are then measured against desired load standards.

The average maximum capacity is calculated by totalling the individual maximum capacities of each service on each route and dividing that by the number of services for each rolling hour. Maximum capacity for each tram class is considered greater at CBD locations than at non-CBD locations (refer to Appendix 4).

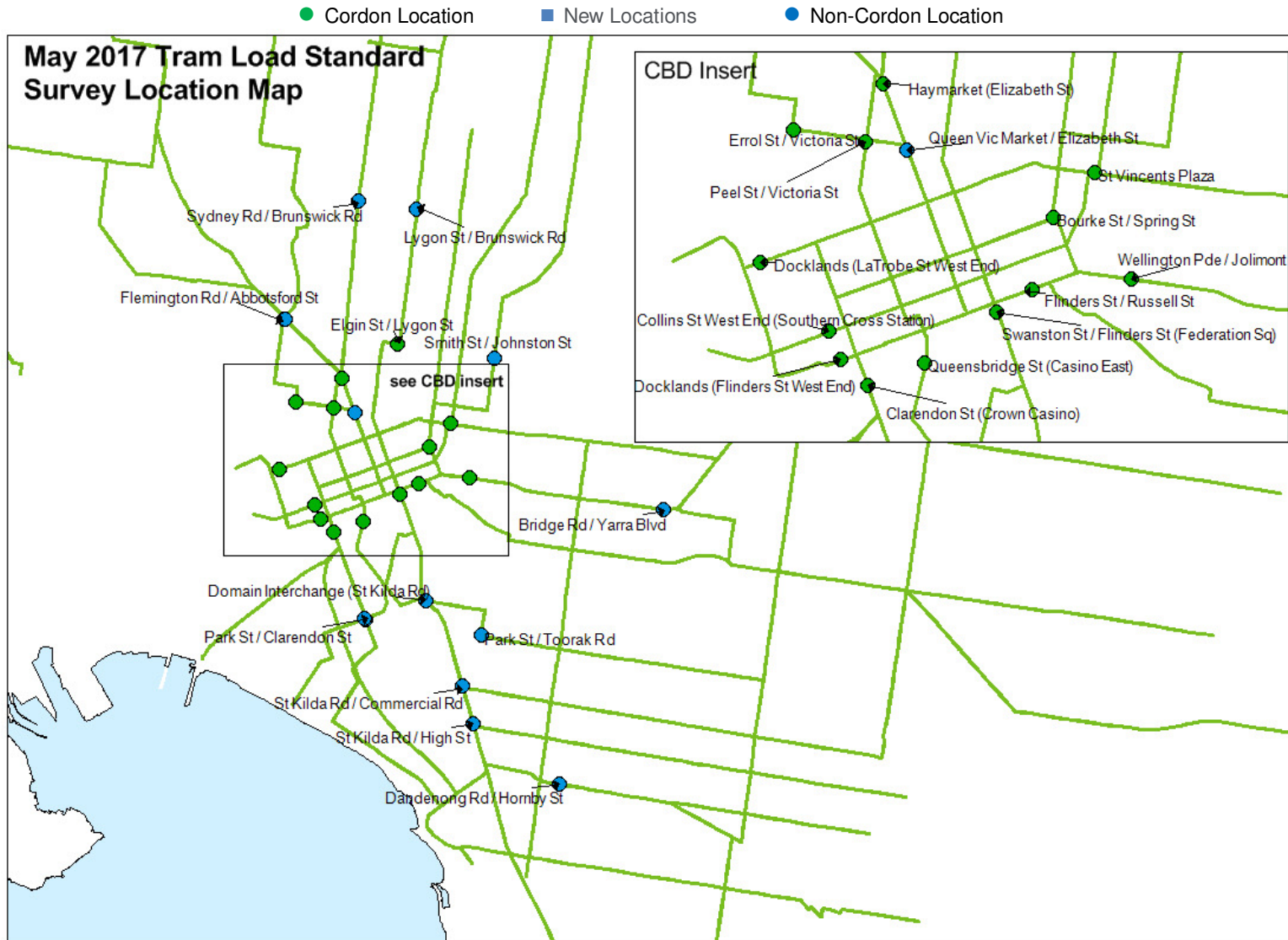
4.4 Limitations of manual counts for determining loads

Loads for each vehicle (train or tram) are estimated by surveyors, and thus subjective. Factors such as glare, advertising signage, and variations of seating capacity within otherwise identical rolling stock create additional challenges to estimate occupancy accurately. Services impacted by disruptions can exhibit unusually high or low loads and these are therefore excluded from the results, and this limits the reliability of the estimated load based on the remaining data points.

The future of load standard reporting requires moving away from manual counts, and instead using technology. Vehicle loads can be inferred from analysis of myki transactions, or in some cases measured directly with automatic passenger counters. In addition to addressing the limitation of manual counts outlined above, technology based solutions have the advantage of providing information on loads all year round, on any given day, and at any location in the network. TFV have started development of automated load standard models for metropolitan train, tram and bus and will continue to invest in these technologies with a view to replacing manual counts by 2018.

5 Appendices

Appendix 1 Map of Survey Locations



Appendix 2 List of survey locations

Stop ID	Loc_ID	Loc_Desc	Routes	Stop	Tram_Track er_ID	irectio	Cordon
18536	3102	Abbotsford St Interchange	57	19	3829	D	no
17961	3102	Abbotsford St Interchange	57	19	3929	U	no
17891	3081	Bourke St / Spring St	86, 96	9	3309	D	yes
17882	3081	Bourke St / Spring St	86, 96	9	3209	U	yes
19713	3060	Bridge Rd / Yarra Blvd	48,75	22	2922	D	no
19714	3060	Bridge Rd / Yarra Blvd	48,75	22	1922	U	no
18185	3063	Clarendon St (Crown Casino)	12, 96, 109	115	3357	D	yes
18197	3063	Clarendon St (Crown Casino)	12, 96, 109	115	3257	U	yes
4084	3161	Clarendon St / Park St	12	129	1396	D	no
4332	3161	Clarendon St / Park St	12	129	2396	U	no
43477	3073	Collins St West End (Southern Cross	11, 48	D14	3400	D	yes
43472	3073	Collins St West End (Southern Cross	11, 48	D15	3500	U	yes
18448	3064	Dandenong Rd / Homby St	5, 64	33	1103	D	no
19033	3064	Dandenong Rd / Homby St	5, 64	33	2103	U	no
18056	3074	Docklands (Flinders St West End)	35, 70, 75	D6	3600	D	yes
18179	3074	Docklands (Flinders St West End)	35, 70, 75	D6	3700	U	yes
18040	3075	Docklands (LaTrobe St West End)	30,35,86	D1	3550	D	yes
20981	3075	Docklands (LaTrobe St West End)	30,35,86	D1	3650	U	yes
19678	3035	Domain Interchange (St Kilda Rd)	3, 5, 6, 16, 58, 64, 67, 72	20	3120	D	no
19505	3035	Domain Interchange (St Kilda Rd)	3, 5, 6, 16, 58, 64, 67, 72	20	3020	U	no
18789	3022	Elgin St / Lygon St	1, 6	112	2224	D	yes
19340	3022	Elgin St / Lygon St	1, 6	112	1224	U	yes
17860	3024	Errol St / Victoria St	57	11	3821	D	yes
17861	3024	Errol St / Victoria St	57	11	3921	U	yes
19594	3025	Flemington Rd / Abbotsford St	58,59	19	3074	D	no
	3025	Flemington Rd / Abbotsford St	58,59	19	3177	U	no
18091	3104	Flinders St / Russell St	35, 70, 75	6	3606	D	yes
18174	3104	Flinders St / Russell St	35, 70, 75	6	3706	U	yes
17866	3028	Haymarket (Elizabeth St)	19, 59	9	3809	D	yes
17869	3028	Haymarket (Elizabeth St)	19, 59	9	3909	U	yes
18712	3047	Lygon St / Brunswick Rd	1,6	120	2216	D	no
19348	3047	Lygon St / Brunswick Rd	1,6	120	1216	U	no
18483	3129	Park St / Clarendon St	1	24	1234	D	no
19307	3129	Park St / Clarendon St	1	24	2234	U	no
19321	3226	Park St / Toorak Rd	58	26	2561	D	no
18670	3226	Park St / Toorak Rd	58	26	1561	U	no
18203	3098	Peel St / Victoria St	58	10	3067	D	yes
18204	3098	Peel St / Victoria St	58	10	3169	U	yes
17856	3179	Queen Vic Market / Elizabeth St	59	7	3807	D	no
18450	3099	Queensbridge St (Casino East)	58	112	3057	D	yes
18215	3099	Queensbridge St (Casino East)	58	112	3159	U	yes
#N/A	3134	Smith St / Johnston St	86	19	2819	D	no
6126	3134	Smith St / Johnston St	86	19	1819	U	no
19573	3204	St Kilda Rd / Commercial Rd	3, 5, 6, 16, 64, 67, 72	25	1025	D	no
19561	3204	St Kilda Rd / Commercial Rd	3, 5, 6, 16, 64, 67, 72	25	2025	U	no
19571	3205	St Kilda Rd / High St	3, 5, 6, 16, 64, 67	27	1027	D	no
19563	3205	St Kilda Rd / High St	3, 5, 6, 16, 64, 67	27	2027	U	no
18051	3053	St Vincents Plaza	11, 12,30, 109	12	3412	D	yes
17895	3053	St Vincents Plaza	11, 12,30, 109	12	3512	U	yes
19685	3032	Swanston St / Flinders St	1, 3, 5, 6, 16, 64, 67, 72	13	3113	D	yes
19499	3032	Swanston St / Flinders St	1, 3, 5, 6, 16, 64, 67, 72	13	3013	U	yes
16728	3109	Sydney Rd / Brunswick Rd	19	19	2419	D	no
17327	3109	Sydney Rd / Brunswick Rd	19	19	1419	U	no
18094	3090	Wellington Pde / Jolimont Rd	48, 75	10	3610	D	yes
18103	3090	Wellington Pde / Jolimont Rd	48, 75	10	3710	U	yes

Appendix 3 Locations where routes are combined into corridors for breach reporting

Corridor Routes	Location	CBD
All Routes - CBD Locations	Bourke St / Spring St	Yes
All Routes - CBD Locations	Clarendon St (Crown Casino)	Yes
All Routes - CBD Locations	Collins St West End (Southern Cross Station)	Yes
All Routes - CBD Locations	Docklands (Flinders St West End)	Yes
All Routes - CBD Locations	Docklands (LaTrobe St West End)	Yes
All Routes - CBD Locations	Domain Interchange (St Kilda Rd)	Yes
All Routes - CBD Locations	Flinders St / Russell St	Yes
All Routes - CBD Locations	Swanston St / Flinders St (Federation Sq)	Yes
Routes 1 and 6	Elgin St / Lygon St	No
Routes 1 and 6	Lygon St / Brunswick Rd	No
Routes 12 and 109	St Vincent's Plaza	No
Routes 12 and 109	St Vincent's Plaza	No
Routes 3, 5, 16, 64, 67	St Kilda Rd / Commercial Rd	No
Routes 3, 5, 16, 64, 67	St Kilda Rd / High St	No
Routes 3, 5, 6, 16, 64, 67, 72	Domain Interchange (St Kilda Rd)	Yes

Routes 3, 5, 6, 16, 64, 67, 72	Swanston St / Flinders St (Federation Sq)	Yes
Routes 48 and 75	Wellington Pde / Jolimont Rd	No
Routes 5 and 64	Dandenong Rd / Hornby St	No

Appendix 4 Maximum capacities by tram type

Tram type	Seating Capacity	Non-CBD maximum capacity	CBD maximum capacity
A-Class	42	55	65
Z-Class	42	60	70
W-Class	46	65	75
B-Class	52	110	120
Three section C-Class Citadis	40	100	110
Three section D-Class Combino	36	80	90
Five section D-Class Combino	58	120	130
B-Class Modified (Apollo)	40	110	120
Five section C2-Class Citadis	54	130	150
E-Class	64	180	180

[Appendix 5 Load Standards data by route and rolling hour \(charts\)](#)

[Appendix 6 Load Standards data by route and rolling hour \(tables\)](#)

Available on request or by accessing the Tram dashboard with Power BI. Please contact

Transport Demand Analysis and Economics

Transport Analysis and Assessment

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Appendix 7 Cordon Locations

Comparison of routes and locations/directions with rolling hour average loads above and within 10% desired standards, May 2016 and 2017

	Within 20% of Load Standard
	Within 10% of Load Standard
	Load Standard Breach

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
			AM Peak								
Bourke St / Spring St	86, 96	West Bound	7:01-8:00	73.9	143.7	51.4	67.2	159.0	42.3	-9	11
			7:31-8:30	108.4	146.5	74.0	91.5	155.2	58.9	-16	6
			8:01-9:00	121.0	148.6	81.4	101.8	152.0	67.0	-16	2
			8:31-9:30	99.7	147.7	67.5	88.4	149.6	59.1	-11	1
			9:01-10:00	67.9	148.5	45.7	65.1	157.0	41.5	-4	6
			Total Ave	94.2	147.0	64.0	82.8	154.6	53.7	-11	5
			PM Peak								
Bourke St / Spring St	86, 96	East Bound	16:01-17:00	71.8	150.5	47.7	68.9	159.0	43.3	-4	6
			16:31-17:30	86.9	148.4	58.6	80.2	157.8	50.8	-8	6
			17:01-18:00	121.2	145.3	83.4	94.5	154.8	61.1	-22	7
			17:31-18:30	123.5	145.0	85.2	95.4	156.2	61.1	-23	8
			18:01-19:00	86.5	145.7	59.4	77.3	154.1	50.2	-11	6
			Total Ave	98.0	147.0	66.8	83.3	156.4	53.3	-13	6
			AM Peak								

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
Clarendon St (Crown Casino)	12	North Bound	7:01-8:00	31.7	65.0	48.8	41.2	65.0	63.4	30	0
			7:31-8:30	54.5	65.0	83.8	58.6	65.0	90.1	7	0
			8:01-9:00	59.3	65.0	91.2	62.8	65.0	96.6	6	0
			8:31-9:30	46.6	65.0	71.7	52.7	65.0	81.1	13	0
			9:01-10:00	32.6	65.0	50.2	37.6	65.0	57.9	15	0
Clarendon St (Crown Casino)	96	North Bound	7:01-8:00	54.9	172.0	31.9	54.1	175.3	30.9	-1	2
			7:31-8:30	87.4	175.8	49.7	91.0	173.5	52.5	4	-1
			8:01-9:00	111.3	176.3	63.1	117.5	173.5	67.7	6	-2
			8:31-9:30	96.1	173.0	55.5	94.7	174.0	54.4	-1	1
			9:01-10:00	68.2	173.6	39.3	69.1	172.0	40.2	1	-1
Clarendon St (Crown Casino)	109	North Bound	7:01-8:00	55.9	110.0	50.8	57.2	107.5	53.2	2	-2
			7:31-8:30	72.8	110.0	66.2	69.6	110.0	63.3	-4	0
			8:01-9:00	73.5	110.0	66.8	73.7	110.0	67.0	0	0
			8:31-9:30	56.9	110.0	51.7	66.0	108.0	61.1	16	-2
			9:01-10:00	36.3	110.0	33.0	40.5	108.0	37.5	12	-2
			Total Ave	62.5	116.4	53.7	65.8	115.8	61.1	7	0
			PM Peak								
Clarendon St (Crown Casino)	12	South Bound	16:01-17:00	29.0	65.0	44.6	46.1	65.0	70.9	59	0
			16:31-17:30	43.1	65.0	66.3	49.7	65.0	76.4	15	0
			17:01-18:00	60.5	65.0	93.1	57.5	65.0	88.5	-5	0
			17:31-18:30	55.7	65.0	85.7	60.0	65.2	92.1	8	0
			18:01-19:00	45.1	65.0	69.4	53.5	65.2	82.0	19	0

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
Clarendon St (Crown Casino)	96	South Bound	16:01-17:00	81.2	176.1	46.1	67.0	172.2	38.9	-17	-2
			16:31-17:30	92.7	177.6	52.2	81.3	172.5	47.2	-12	-3
			17:01-18:00	98.8	175.9	56.2	104.2	171.9	60.6	5	-2
			17:31-18:30	99.6	176.3	56.5	119.3	172.1	69.3	20	-2
			18:01-19:00	100.1	176.0	56.9	107.5	178.8	60.2	7	2
Clarendon St (Crown Casino)	109	South Bound	16:01-17:00	39.7	110.0	36.1	46.4	110.5	42.0	17	0
			16:31-17:30	45.4	108.4	41.9	46.8	110.0	42.5	3	1
			17:01-18:00	58.9	108.8	54.1	51.3	108.3	47.4	-13	0
			17:31-18:30	58.3	110.4	52.8	62.1	106.7	58.3	7	-3
			18:01-19:00	51.9	110.0	47.2	55.4	108.3	51.2	7	-2
			Total Ave	64.0	117.0	54.7	67.2	115.8	61.8	8	-1
			AM Peak								
Collins St West End (Southern Cross Station)	11, 48	East Bound	7:01-8:00	21.7	122.7	17.7	23.2	138.6	16.7	7	13
			7:31-8:30	32.3	122.7	26.3	40.3	135.7	29.7	25	11
			8:01-9:00	40.4	122.8	32.9	51.2	135.9	37.6	27	11
			8:31-9:30	33.6	121.0	27.8	41.4	133.8	31.0	23	11
			9:01-10:00	25.8	120.8	21.4	33.0	131.8	25.0	28	9
			Total Ave	30.8	122.0	25.2	37.8	135.1	28.0	22	11
			PM Peak								
Collins St West End (Southern Cross)	11, 48	East Bound	16:01-17:00	80.7	124.9	64.6	82.8	140.3	59.0	3	12
			16:31-17:30	95.1	129.9	73.2	101.6	143.2	70.9	7	10
			17:01-18:00	107.0	124.4	86.0	108.5	129.3	83.9	1	4

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
Station)			17:31-18:30	95.7	115.4	82.9	81.9	122.1	67.1	-14	6
			18:01-19:00	58.2	120.5	48.3	59.9	135.2	44.3	3	12
			Total Ave	87.4	123.0	71.1	86.9	134.0	65.0	0	9
			AM Peak								
Collins St West End (Southern Cross Station)	11, 48	West Bound	7:01-8:00	47.4	119.9	39.5	45.0	136.2	33.0	-5	14
			7:31-8:30	62.6	123.3	50.8	62.0	130.2	47.6	-1	6
			8:01-9:00	75.7	118.9	63.7	75.0	133.9	56.0	-1	13
			8:31-9:30	79.0	118.7	66.6	67.5	132.7	50.9	-15	12
			9:01-10:00	66.4	127.9	51.9	56.0	131.7	42.5	-16	3
			Total Ave	66.2	121.7	54.4	61.1	132.9	46.0	-7	9
			PM Peak								
Collins St West End (Southern Cross Station)	11, 48	West Bound	16:01-17:00	24.0	124.2	19.3	28.6	143.5	20.0	19	16
			16:31-17:30	26.2	125.9	20.8	29.0	135.0	21.5	11	7
			17:01-18:00	33.9	122.2	27.7	36.0	121.1	29.7	6	-1
			17:31-18:30	34.2	117.0	29.2	41.1	130.4	31.5	20	11
			18:01-19:00	21.4	123.7	17.3	33.0	137.3	24.0	54	11
			Total Ave	27.9	122.6	22.8	33.5	133.5	25.3	22	9
			AM Peak								
Docklands (Flinders St West End)	35, 70, 75	East Bound	7:01-8:00	10.6	93.3	11.4	9.7	95.0	10.2	-9	2
			7:31-8:30	15.9	92.5	17.2	19.4	91.7	21.1	22	-1
			8:01-9:00	18.4	94.6	19.5	24.9	94.0	26.5	35	-1
			8:31-9:30	14.4	95.6	15.1	22.8	95.0	24.0	58	-1

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
			9:01-10:00	11.8	95.6	12.3	16.6	89.9	18.5	41	-6
			Total Ave	14.2	94.3	15.1	18.7	93.1	20.1	30	-1
			PM Peak								
Docklands (Flinders St West End)	35, 70, 75	West Bound	16:01-17:00	16.6	89.0	18.7	20.8	89.2	23.3	25	0
			16:31-17:30	20.3	88.9	22.8	21.6	85.4	25.2	6	-4
			17:01-18:00	24.3	89.0	27.3	25.8	86.6	29.8	6	-3
			17:31-18:30	24.0	91.1	26.3	24.9	89.9	27.7	4	-1
			18:01-19:00	21.8	93.1	23.4	18.1	93.3	19.4	-17	0
			Total Ave	21.4	90.2	23.7	22.2	88.9	25.1	5	-1
			AM Peak								
Docklands (LaTrobe St West End)	30, 35, 86	East Bound	7:01-8:00	14.6	95.9	15.2	18.2	112.7	16.1	25	17
			7:31-8:30	23.0	96.4	23.9	29.5	109.0	27.0	28	13
			8:01-9:00	26.6	97.2	27.4	33.8	110.0	30.8	27	13
			8:31-9:30	21.6	98.7	21.9	24.5	106.5	23.0	13	8
			9:01-10:00	16.4	96.5	17.0	18.9	103.8	18.2	16	8
			Total Ave	20.4	97.0	21.0	25.0	108.4	23.0	22	12
			PM Peak								
Docklands (LaTrobe St West End)	30, 35, 86	West Bound	16:01-17:00	20.5	93.2	22.0	28.0	106.3	26.4	37	14
			16:31-17:30	19.2	95.0	20.2	27.6	108.2	25.5	44	14
			17:01-18:00	20.5	92.9	22.1	27.2	105.9	25.7	33	14
			17:31-18:30	20.9	96.1	21.7	27.0	112.5	24.0	29	17
			18:01-19:00	22.1	105.5	20.9	31.5	123.8	25.4	42	17

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
			Total Ave	20.6	96.5	21.3	28.2	111.3	25.4	37	15
			AM Peak								
Elgin St / Lygon St	1,6*	South Bound	7:01-8:00	53.7	71.8	74.8	52.3	82.8	63.1	-3	15
			7:31-8:30	79.7	81.9	97.3	83.4	84.2	99.0	5	3
			8:01-9:00	93.6	88.1	106.2	97.8	83.6	117.0	5	-5
			8:31-9:30	87.8	76.7	114.5	86.4	83.8	103.1	-2	9
			9:01-10:00	65.7	72.1	91.1	65.8	86.8	75.8	0	20
			Total Ave	76.1	78.1	97.4	77.1	84.2	91.6	1	8
			PM Peak								
Elgin St / Lygon St	1,6*	North Bound	16:01-17:00	54.7	80.7	67.8	51.5	86.3	59.6	-6	7
			16:31-17:30	66.7	78.3	85.2	58.0	87.6	66.2	-13	12
			17:01-18:00	89.5	81.4	110.0	67.0	85.7	78.2	-25	5
			17:31-18:30	95.9	86.3	111.1	74.3	80.0	92.9	-22	-7
			18:01-19:00	87.6	83.6	104.8	83.0	82.0	101.1	-5	-2
			Total Ave	78.9	82.0	96.2	66.7	84.3	79.6	-14	3
			AM Peak								
Errol St / Victoria St	57	South Bound	7:01-8:00	41.5	60.0	69.2	49.1	60.0	81.9	18	0
			7:31-8:30	57.2	60.0	95.3	57.8	60.0	96.4	1	0
			8:01-9:00	55.5	60.0	92.5	56.9	60.0	94.8	2	0
			8:31-9:30	46.6	60.0	77.7	52.9	60.0	88.1	13	0
			9:01-10:00	37.1	60.0	61.8	43.4	60.0	72.3	17	0
			Total Ave	47.6	60.0	79.3	52.0	60.0	86.7	10	0

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
			PM Peak								
Errol St / Victoria St	57	North Bound	16:01-17:00	36.6	60.0	61.0	35.7	60.0	59.5	-2	0
			16:31-17:30	36.9	60.0	61.5	39.3	60.0	65.4	6	0
			17:01-18:00	42.0	60.0	70.0	41.3	60.0	68.8	-2	0
			17:31-18:30	43.8	60.0	73.0	42.7	60.0	71.2	-2	0
			18:01-19:00	42.5	60.0	70.8	49.8	60.0	83.0	17	0
			Total Ave	40.4	60.0	67.3	41.8	60.0	69.6	3	0
			AM Peak								
Flinders St / Russell St	35, 70, 75	West Bound	7:01-8:00	36.2	91.8	39.4	45.1	93.9	48.0	25	2
			7:31-8:30	51.5	94.6	54.4	63.2	92.5	68.4	23	-2
			8:01-9:00	53.7	94.4	56.9	73.6	89.1	82.6	37	-6
			8:31-9:30	48.3	96.0	50.3	63.0	93.3	67.5	30	-3
			9:01-10:00	34.0	93.9	36.2	48.1	93.3	51.5	41	-1
			Total Ave	44.8	94.1	47.6	58.6	92.4	63.6	31	-2
			PM Peak								
Flinders St / Russell St	35, 70, 75	East Bound	16:01-17:00	39.7	89.7	44.3	43.1	89.2	48.3	8	-1
			16:31-17:30	45.7	87.4	52.3	49.7	89.7	55.5	9	3
			17:01-18:00	57.4	87.2	65.8	59.0	89.9	65.6	3	3
			17:31-18:30	57.8	89.5	64.6	63.7	89.1	71.5	10	0
			18:01-19:00	48.4	91.9	52.7	60.1	86.4	69.6	24	-6
			Total Ave	49.8	89.1	55.9	55.1	88.9	62.1	11	0
			AM Peak								

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
Haymarket (Elizabeth St)	19	South Bound	7:01-8:00	51.8	119.2	43.5	61.6	120.0	51.4	19	1
			7:31-8:30	67.3	118.3	56.9	72.5	118.9	61.0	8	0
			8:01-9:00	80.2	119.8	66.9	75.3	117.9	63.8	-6	-2
			8:31-9:30	76.2	121.2	62.9	71.8	118.1	60.8	-6	-3
			9:01-10:00	56.5	118.2	47.8	60.9	119.1	51.2	8	1
Haymarket (Elizabeth St)	59	South Bound	7:01-8:00	65.7	110.0	59.7	77.3	107.1	72.2	18	-3
			7:31-8:30	74.0	110.0	67.3	94.9	110.0	86.3	28	0
			8:01-9:00	78.9	110.0	71.7	96.0	110.0	87.2	22	0
			8:31-9:30	91.5	110.0	83.2	98.4	110.0	89.4	8	0
			9:01-10:00	92.5	110.0	84.1	91.0	106.3	85.6	-2	-3
			Total Ave	73.5	114.7	64.1	80.0	113.7	70.9	10	-1
			PM Peak								
Haymarket (Elizabeth St)	19	North Bound	16:01-17:00	62.9	121.3	51.9	56.1	118.9	47.2	-11	-2
			16:31-17:30	75.3	118.8	63.4	67.9	118.5	57.3	-10	0
			17:01-18:00	85.2	119.1	71.5	85.5	117.5	72.7	0	-1
			17:31-18:30	81.4	119.4	68.2	81.1	118.1	68.7	0	-1
			18:01-19:00	73.2	119.0	61.5	81.2	118.5	68.5	11	0
Haymarket (Elizabeth St)	59	North Bound	16:01-17:00	64.1	110.0	58.3	72.3	110.0	65.7	13	0
			16:31-17:30	81.3	110.0	73.9	78.2	110.0	71.1	-4	0
			17:01-18:00	91.4	110.0	83.1	86.9	110.0	79.0	-5	0
			17:31-18:30	95.5	110.0	86.8	93.5	110.0	85.0	-2	0
			18:01-19:00	98.6	110.0	89.6	102.1	110.0	92.8	4	0

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
			Total Ave	80.9	114.8	70.8	80.5	114.1	70.8	0	-1
			AM Peak								
Peel St / Victoria St	58*	South Bound	7:01-8:00	65.5	100.0	65.5	61.6	85.7	71.9	-6	-14
			7:31-8:30	85.7	94.6	90.6	82.1	82.8	99.2	-4	-12
			8:01-9:00	92.5	95.4	97.0	83.0	84.9	97.7	-10	-11
			8:31-9:30	81.1	98.0	82.8	85.3	84.2	101.3	5	-14
			9:01-10:00	69.0	104.6	66.0	76.7	85.6	89.6	11	-18
			Total Ave	78.8	98.5	80.0	77.7	84.6	92.0	-1	-14
			PM Peak								
Peel St / Victoria St	58*	North Bound	16:01-17:00	49.3	108.2	45.6	59.7	88.1	67.7	21	-19
			16:31-17:30	56.0	101.9	55.0	60.2	86.4	69.7	8	-15
			17:01-18:00	61.5	104.9	58.6	71.0	88.0	80.7	15	-16
			17:31-18:30	63.3	110.0	57.5	76.9	88.8	86.7	22	-19
			18:01-19:00	58.0	108.2	53.6	72.2	83.5	86.5	25	-23
			Total Ave	57.6	106.6	54.0	68.0	86.9	78.3	18	-18
			AM Peak								
Queensbridge St (Casino East)	58*	North Bound	7:01-8:00	36.8	110.0	33.5	31.5	79.4	39.6	-15	-28
			7:31-8:30	65.2	101.7	64.1	64.6	86.3	74.9	-1	-15
			8:01-9:00	60.8	95.1	63.9	99.2	95.0	104.4	63	0
			8:31-9:30	37.2	94.8	39.2	86.4	86.5	99.9	132	-9
			9:01-10:00	21.5	96.3	22.3	51.8	91.3	56.7	141	-5
			Total Ave	44.3	99.6	44.5	66.7	87.7	75.1	64	-12

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
			PM Peak								
Queensbridge St (Casino East)	58*	South Bound	16:01-17:00	17.2	102.4	16.8	37.8	94.6	40.0	120	-8
			16:31-17:30	25.2	105.1	24.0	43.2	86.5	49.9	71	-18
			17:01-18:00	34.8	110.0	31.6	57.4	88.9	64.5	65	-19
			17:31-18:30	38.5	108.1	35.6	52.4	85.7	61.2	36	-21
			18:01-19:00	37.3	107.2	34.8	38.8	86.1	45.1	4	-20
			Total Ave	30.6	106.6	28.7	45.9	88.4	52.1	59	-17
			AM Peak								
Wellington Pde / Jolimont Rd	48	West Bound	7:01-8:00	60.0	63.2	94.9	60.9	79.5	76.6	2	26
			7:31-8:30	76.2	65.8	115.8	79.4	71.9	110.5	4	9
			8:01-9:00	83.3	70.0	119.0	82.4	73.3	112.4	-1	5
			8:31-9:30	69.5	70.0	99.3	74.9	85.0	88.1	8	21
			9:01-10:00	55.9	66.7	83.8	64.8	85.0	76.2	16	27
Wellington Pde / Jolimont Rd	75	West Bound	7:01-8:00	57.8	101.3	57.1	65.7	106.9	61.4	14	6
			7:31-8:30	81.3	102.1	79.6	98.2	106.9	91.8	21	5
			8:01-9:00	88.1	107.5	82.0	116.2	106.6	109.0	32	-1
			8:31-9:30	77.1	110.0	70.1	90.8	103.9	87.4	18	-6
			9:01-10:00	56.3	110.0	51.2	66.4	106.6	62.3	18	-3
			Total Ave	70.5	86.7	81.3	80.0	92.6	87.6	13	9
			PM Peak								
Wellington Pde / Jolimont Rd	48	East Bound	16:01-17:00	58.1	65.0	89.4	56.7	84.1	67.4	-2	29
			16:31-17:30	69.8	66.3	105.3	68.6	67.5	101.6	-2	2

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
			17:01-18:00	84.9	69.3	122.5	77.4	63.2	122.5	-9	-9
			17:31-18:30	78.4	67.1	116.8	72.0	76.7	93.8	-8	14
			18:01-19:00	63.4	63.0	100.6	61.8	81.7	75.7	-3	30
Wellington Pde / Jolimont Rd	75	East Bound	16:01-17:00	61.2	106.6	57.4	62.3	106.6	58.5	2	0
			16:31-17:30	80.7	106.3	75.9	72.1	110.0	65.5	-11	3
			17:01-18:00	95.5	100.8	94.7	77.7	100.4	77.4	-19	0
			17:31-18:30	89.2	102.8	86.8	91.1	99.5	91.6	2	-3
			18:01-19:00	75.7	110.0	68.8	85.1	106.9	79.5	12	-3
			Total Ave	75.7	85.7	88.3	72.5	89.7	83.4	-4	6
			AM Peak								
Swanston St / Flinders St (Federation Sq)	3, 5, 16, 64, 67, 72	South Bound	7:01-8:00	52.4	75.7	69.2	64.4	88.5	72.8	23	17
			7:31-8:30	79.1	82.6	95.8	92.1	86.2	106.9	16	4
			8:01-9:00	94.1	85.5	110.1	97.1	85.0	114.3	3	-1
			8:31-9:30	69.4	79.5	87.3	74.3	83.8	88.6	7	5
			9:01-10:00	40.8	75.9	53.8	46.1	87.0	53.0	13	15
Swanston St / Flinders St (Federation Sq)	1	South Bound	7:01-8:00	48.8	86.7	56.3	44.8	93.8	47.7	-8	8
			7:31-8:30	70.5	90.8	77.6	75.7	95.0	79.7	7	5
			8:01-9:00	76.4	96.1	79.5	83.1	95.0	87.5	9	-1
			8:31-9:30	64.4	95.0	67.8	63.9	95.0	67.3	-1	0
			9:01-10:00	43.6	81.8	53.3	47.8	96.2	49.7	10	18
Swanston St / Flinders St (Federation	6*	South Bound	7:01-8:00	57.0	78.9	72.3	56.6	84.1	67.3	-1	7
			7:31-8:30	78.4	78.8	99.6	94.3	82.1	114.9	20	4

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
Sq)			8:01-9:00	92.4	87.6	105.4	110.0	93.5	117.7	19	7
			8:31-9:30	69.0	88.1	78.3	83.3	92.0	90.6	21	4
			9:01-10:00	37.6	80.5	46.7	56.2	89.1	63.0	49	11
			Total Ave	64.9	84.2	77.1	72.7	89.8	81.4	13	7
			PM Peak								
Swanston St / Flinders St (Federation Sq)	3, 5, 16, 64, 67, 72	South Bound	16:01-17:00	41.0	79.6	51.5	43.8	85.9	51.0	7	8
			16:31-17:30	48.4	80.2	60.3	49.3	85.6	57.7	2	7
			17:01-18:00	55.8	83.3	67.0	61.6	84.9	72.6	10	2
			17:31-18:30	55.1	83.4	66.1	64.5	83.8	77.0	17	1
			18:01-19:00	47.9	80.3	59.7	55.2	85.8	64.3	15	7
Swanston St / Flinders St (Federation Sq)	1	South Bound	16:01-17:00	38.3	96.2	39.8	44.4	98.3	45.2	16	2
			16:31-17:30	43.5	108.6	40.1	52.0	95.0	54.7	19	-13
			17:01-18:00	57.7	96.1	60.0	63.0	101.3	62.3	9	5
			17:31-18:30	58.6	83.6	70.1	69.9	107.5	65.0	19	29
			18:01-19:00	51.1	87.9	58.1	57.9	99.4	58.2	13	13
Swanston St / Flinders St (Federation Sq)	6*	South Bound	16:01-17:00	38.2	79.4	48.1	37.4	81.4	45.9	-2	3
			16:31-17:30	44.4	77.4	57.3	46.2	89.5	51.6	4	16
			17:01-18:00	48.8	80.4	60.6	56.4	86.3	65.4	16	7
			17:31-18:30	48.3	80.0	60.4	53.2	81.2	65.5	10	1
			18:01-19:00	44.9	75.0	59.9	40.5	87.3	46.4	-10	16
			Total Ave	48.1	84.8	57.3	53.0	90.2	58.8	10	7
			AM Peak								

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
Swanston St / Flinders St (Federation Sq)	3, 6*, 16, 64, 67, 72	North Bound	7:01-8:00	27.8	82.3	33.8	32.9	86.7	38.0	18	5
			7:31-8:30	47.8	84.7	56.4	53.5	83.4	64.1	12	-1
			8:01-9:00	59.7	78.6	76.0	64.4	84.9	75.9	8	8
			8:31-9:30	48.6	75.3	64.5	58.8	85.2	69.0	21	13
			9:01-10:00	36.9	78.0	47.3	46.6	87.1	53.5	26	12
Swanston St / Flinders St (Federation Sq)	1	North Bound	7:01-8:00	43.9	97.4	45.1	37.1	92.2	40.2	-15	-5
			7:31-8:30	64.9	82.9	78.3	62.7	96.2	65.1	-3	16
			8:01-9:00	57.9	81.4	71.1	79.2	101.0	78.5	37	24
			8:31-9:30	46.1	89.6	51.5	59.8	92.2	64.9	30	3
			9:01-10:00	32.8	94.0	34.9	35.8	88.4	40.5	9	-6
Swanston St / Flinders St (Federation Sq)	6*	North Bound	7:01-8:00	25.9	75.7	34.2	25.7	92.0	27.9	-1	22
			7:31-8:30	52.6	82.2	64.0	54.1	88.5	61.1	3	8
			8:01-9:00	63.5	84.7	75.0	58.6	92.3	63.5	-8	9
			8:31-9:30	48.2	80.0	60.3	53.3	82.4	64.7	10	3
			9:01-10:00	36.5	77.4	47.2	44.0	87.7	50.1	20	13
			Total Ave	46.2	82.9	56.0	51.1	89.3	57.1	11	8
			PM Peak								
Swanston St / Flinders St (Federation Sq)	3, 5, 16, 64, 67, 72	North Bound	16:01-17:00	62.7	80.0	78.4	59.5	84.6	70.3	-5	6
			16:31-17:30	77.6	82.8	93.7	72.7	84.0	86.5	-6	1
			17:01-18:00	91.7	82.1	111.7	84.1	85.2	98.7	-8	4
			17:31-18:30	84.2	79.7	105.6	79.5	86.2	92.3	-6	8
			18:01-19:00	65.6	80.4	81.6	63.2	87.6	72.2	-4	9

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
Swanston St / Flinders St (Federation Sq)	1	North Bound	16:01-17:00	63.9	88.8	72.0	57.3	102.6	55.8	-10	16
			16:31-17:30	77.5	85.2	91.0	67.6	98.6	68.6	-13	16
			17:01-18:00	93.5	98.9	94.5	80.9	101.6	79.7	-13	3
			17:31-18:30	80.5	110.0	73.2	78.6	100.4	78.3	-2	-9
			18:01-19:00	49.1	92.0	53.4	55.5	101.3	54.9	13	10
Swanston St / Flinders St (Federation Sq)	6*	North Bound	16:01-17:00	57.5	85.6	67.2	58.0	81.4	71.2	1	-5
			16:31-17:30	83.0	83.3	99.6	73.0	86.6	84.4	-12	4
			17:01-18:00	96.3	79.4	121.3	85.0	86.8	97.9	-12	9
			17:31-18:30	80.1	79.3	100.9	80.7	82.4	98.0	1	4
			18:01-19:00	67.9	78.3	86.7	65.4	92.1	70.9	-4	18
			Total Ave	75.4	85.7	88.7	70.7	90.8	78.6	-5	6
			AM Peak								
St Vincent's Plaza	12, 109	West Bound	7:01-8:00	36.4	81.5	44.7	36.6	61.6	59.5	1	-24
			7:31-8:30	54.3	76.4	71.1	58.5	55.0	106.4	8	-28
			8:01-9:00	68.6	74.4	92.2	71.7	55.0	130.4	5	-26
			8:31-9:30	59.5	76.6	77.7	58.0	55.0	105.5	-3	-28
			9:01-10:00	44.8	74.7	60.0	35.3	55.0	64.1	-21	-26
St Vincent's Plaza	11	West Bound	7:01-8:00	66.9	157.6	42.4	70.0	172.1	40.7	5	9
			7:31-8:30	97.0	157.5	61.6	91.0	173.0	52.6	-6	10
			8:01-9:00	100.2	155.9	64.3	97.2	168.3	57.8	-3	8
			8:31-9:30	89.5	152.9	58.5	83.9	166.9	50.3	-6	9
			9:01-10:00	72.6	154.1	47.1	66.0	171.9	38.4	-9	12

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - Change in Rolling Hour Average Load	2017 - Change in Average Maximum Capacity
St Vincent's Plaza	30	West Bound	7:01-8:00	5.7	55.0	10.4	4.0	55.0	7.3	-30	0
			7:31-8:30	10.6	55.0	19.3	3.3	55.0	6.1	-69	0
			8:01-9:00	14.1	55.0	25.6	4.2	55.0	7.6	-70	0
			8:31-9:30	11.8	55.0	21.5	6.0	55.0	10.9	-49	0
			9:01-10:00	7.4	55.0	13.5	8.0	55.0	14.5	8	0
			Total Ave	49.3	95.8	47.3	46.3	93.9	50.1	-16	-2
			PM Peak								
St Vincent's Plaza	12, 109	East Bound	16:01-17:00	44.8	70.7	63.4	39.4	55.0	71.7	-12	-22
			16:31-17:30	53.8	73.4	73.3	46.4	55.0	84.4	-14	-25
			17:01-18:00	70.9	79.4	89.3	51.6	55.0	93.8	-27	-31
			17:31-18:30	61.3	77.9	78.7	42.9	55.0	78.0	-30	-29
			18:01-19:00	45.9	77.9	58.9	34.3	55.0	62.3	-25	-29
St Vincent's Plaza	11	East Bound	16:01-17:00	92.2	145.0	63.6	84.7	180.0	47.0	-8	24
			16:31-17:30	95.4	160.6	59.4	80.8	176.5	45.8	-15	10
			17:01-18:00	104.0	161.6	64.4	93.3	172.2	54.2	-10	7
			17:31-18:30	108.1	146.8	73.6	123.5	171.8	71.9	14	17
			18:01-19:00	102.0	145.0	70.3	98.1	173.3	56.6	-4	20
			Total Ave	77.8	113.8	69.5	69.5	114.9	66.6	-13	-6

*From May 1, 2017 route 55 and 8 were discontinued. Route 58 was introduced covering the Domain to Toorak section of previous route 8 and the Domain to West Coburg of | serviced by extending route 6 to terminate at Moreland Station.

Appendix 8 Non-Cordon Locations

Comparison of routes and locations/directions with rolling hour average loads above and within 10% desired standards, May 2016 and 2017

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			AM Peak								
Collins St West End (Southern Cross Station)	11, 48	West Bound	7:01-8:00	47.4	119.9	39.5	45.0	136.2	33.0	-5.1	13.6
			7:31-8:30	62.6	123.3	50.8	62.0	130.2	47.6	-1.0	5.6
			8:01-9:00	75.7	118.9	63.7	75.0	133.9	56.0	-0.9	12.6
			8:31-9:30	79.0	118.7	66.6	67.5	132.7	50.9	-14.6	11.8
			9:01-10:00	66.4	127.9	51.9	56.0	131.7	42.5	-15.6	2.9
			Total Ave	66.2	121.7	54.4	61.1	132.9	46.0	-7.7	9.2
			PM Peak								
Collins St West End (Southern Cross Station)	11, 48	East Bound	16:01-17:00	80.7	124.9	64.6	82.8	140.3	59.0	2.5	12.4
			16:31-17:30	95.1	129.9	73.2	101.6	143.2	70.9	6.8	10.3
			17:01-18:00	107.0	124.4	86.0	108.5	129.3	83.9	1.4	4.0
			17:31-18:30	95.7	115.4	82.9	81.9	122.1	67.1	-14.4	5.8
			18:01-19:00	58.2	120.5	48.3	59.9	135.2	44.3	2.9	12.2
			Total Ave	87.4	123.0	71.1	86.9	134.0	64.8	-0.5	9.0
			AM Peak								
Domain Interchange (St Kilda Rd)	3, 5, 6*, 16, 64, 67, 72	North Bound	7:01-8:00	29.9	85.4	35.0	29.0	86.4	33.5	-3.2	1.1
			7:31-8:30	46.8	85.7	54.6	50.3	82.7	60.8	7.5	-3.5
			8:01-9:00	51.2	81.3	63.0	52.8	86.0	61.3	3.0	5.8

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			8:31-9:30	39.6	79.4	49.9	41.5	81.6	50.8	4.7	2.8
			9:01-10:00	30.0	83.3	36.0	32.4	84.6	38.3	7.9	1.5
Domain Interchange (St Kilda Rd)	6*	North Bound	7:01-8:00	29.5	90.9	32.5	na	na	na	na	na
			7:31-8:30	43.4	87.9	49.4	na	na	na	na	na
			8:01-9:00	41.2	83.8	49.2	na	na	na	na	na
			8:31-9:30	33.8	83.0	40.7	na	na	na	na	na
			9:01-10:00	23.5	88.8	26.5	na	na	na	na	na
			Total Ave	36.9	85.0	43.4					
			PM Peak								
Domain Interchange (St Kilda Rd)	3, 5, 6*, 16, 64, 67, 72	North Bound	16:01-17:00	52.0	80.1	64.9	53.2	88.0	60.5	2.4	9.9
			16:31-17:30	69.6	82.1	84.8	69.7	89.3	78.0	0.2	8.8
			17:01-18:00	82.0	81.9	100.1	79.6	83.2	95.7	-2.9	1.6
			17:31-18:30	70.9	80.2	88.4	69.9	80.7	86.6	-1.4	0.6
			18:01-19:00	53.8	80.0	67.3	50.9	88.9	57.3	-5.3	11.1
Domain Interchange (St Kilda Rd)	58*	North Bound	16:01-17:00	34.0	82.8	41.1	33.0	108.9	30.3	-2.9	31.5
			16:31-17:30	50.9	88.3	57.6	42.2	97.8	43.2	-17.0	10.7
			17:01-18:00	70.2	85.8	81.8	68.5	85.0	80.6	-2.4	-0.9
			17:31-18:30	58.9	79.4	74.2	61.3	92.2	66.5	4.1	16.1
			18:01-19:00	39.1	74.7	52.3	43.3	96.7	44.7	10.6	29.4
			Total Ave	58.1	81.5	71.3	57.2	91.1	64.3	-1.5	11.9
			AM Peak								

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
Domain Interchange (St Kilda Rd)	3, 5, 6*, 16, 64, 67, 72	South Bound	7:01-8:00	42.7	75.3	56.7	42.0	82.7	50.8	-1.7	9.8
			7:31-8:30	70.3	79.8	88.1	66.8	84.5	79.1	-4.9	5.8
			8:01-9:00	85.9	86.0	99.9	82.4	85.5	96.4	-4.0	-0.5
			8:31-9:30	68.0	82.3	82.6	66.1	83.9	78.8	-2.8	1.9
			9:01-10:00	39.7	77.7	51.1	44.7	86.3	51.8	12.6	11.1
Domain Interchange (St Kilda Rd)	58*	South Bound	7:01-8:00	24.8	81.3	30.5	31.1	83.6	37.2	25.4	2.9
			7:31-8:30	47.2	81.8	57.7	60.4	92.5	65.3	27.9	13.1
			8:01-9:00	55.3	91.3	60.6	72.5	101.7	71.3	31.1	11.4
			8:31-9:30	45.1	88.1	51.2	48.5	84.0	57.7	7.5	-4.7
			9:01-10:00	30.6	83.1	36.8	43.4	87.0	49.9	41.8	4.7
			Total Ave	50.9	82.7	61.5	55.8	87.2	63.8	13.3	5.5
			PM Peak								
Domain Interchange (St Kilda Rd)	3, 5, 6*, 16, 64, 67, 72	South Bound	16:01-17:00	41.1	81.0	50.7	38.9	79.7	48.8	-5.4	-1.6
			16:31-17:30	46.3	79.1	58.5	44.0	80.5	54.7	-4.9	1.7
			17:01-18:00	52.1	81.3	64.1	52.9	85.5	61.9	1.6	5.2
			17:31-18:30	53.3	82.0	65.0	50.6	81.1	62.3	-5.1	-1.1
			18:01-19:00	46.4	80.7	57.5	44.6	84.3	52.9	-3.9	4.5
	58*	South Bound	16:01-17:00	39.7	89.2	44.5	31.1	83.6	37.2	-21.7	-6.2
			16:31-17:30	38.6	77.3	49.9	60.4	92.5	65.3	56.4	19.7
			17:01-18:00	44.6	78.8	56.6	72.5	101.7	71.3	62.6	29.0
			17:31-18:30	49.7	77.5	64.1	48.5	84.0	57.7	-2.4	8.4

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			18:01-19:00	42.7	79.3	53.8	43.4	87.0	49.9	1.6	9.7
			Total Ave	45.5	80.6	56.5	48.7	86.0	56.2	7.9	6.9
			AM Peak								
Dandenong Rd / Hornby St	5, 64	West Bound	7:01-8:00	46.2	78.1	59.2	49.6	80.5	61.7	7.4	3.1
			7:31-8:30	72.3	73.9	97.8	70.4	78.6	89.5	-2.6	6.4
			8:01-9:00	74.2	61.3	121.0	73.9	84.8	87.1	-0.4	38.4
			8:31-9:30	46.9	69.7	67.3	59.3	89.4	66.3	26.4	28.3
			9:01-10:00	28.9	83.8	34.5	42.3	84.4	50.2	46.5	0.7
			Total Ave	53.7	73.4	73.2	59.1	83.5	71.0	15.5	15.4
			PM Peak								
Dandenong Rd / Hornby St	5, 64	East Bound	16:01-17:00	47.7	65.7	72.6	48.2	84.0	57.4	1.0	27.9
			16:31-17:30	48.4	66.8	72.5	52.5	86.9	60.5	8.5	30.1
			17:01-18:00	55.6	66.6	83.5	54.8	86.7	63.2	-1.4	30.2
			17:31-18:30	58.7	72.0	81.5	58.5	83.1	70.5	-0.3	15.4
			18:01-19:00	48.3	73.1	66.1	54.4	80.7	67.5	12.7	10.4
			Total Ave	51.7	68.9	75.0	53.7	84.3	63.8	4.1	22.8
			AM Peak								
Lygon St / Brunswick Rd	1, 6*	South Bound	7:01-8:00	41.6	72.1	57.6	44.7	81.3	55.0	7.6	12.8
			7:31-8:30	64.6	84.7	76.2	68.8	85.4	80.5	6.5	0.9
			8:01-9:00	73.9	86.3	85.6	79.9	87.9	90.9	8.2	1.8
			8:31-9:30	56.9	74.0	76.9	66.4	85.4	77.8	16.7	15.3

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			9:01-10:00	36.2	67.9	53.3	50.5	88.9	56.8	39.6	31.0
			Total Ave	54.6	77.0	69.9	62.1	85.8	72.2	15.7	12.4
			PM Peak								
Lygon St / Brunswick Rd	1, 6*	North Bound	16:01-17:00	32.7	79.8	41.0	31.5	86.1	36.6	-3.7	8.0
			16:31-17:30	42.1	76.0	55.4	40.2	86.1	46.6	-4.5	13.4
			17:01-18:00	53.2	79.8	66.7	46.7	87.1	53.6	-12.3	9.2
			17:31-18:30	59.1	83.8	70.5	50.4	82.1	61.4	-14.6	-2.0
			18:01-19:00	56.6	79.3	71.4	54.7	79.3	69.0	-3.4	-0.1
			Total Ave	48.7	79.7	61.0	44.7	84.1	53.4	-8.3	5.6
			AM Peak								
Abbotsford St Interchange	57	South Bound	7:01-8:00				34.7	60.0	57.9	na	na
			7:31-8:30				43.5	60.0	72.5	na	na
			8:01-9:00				44.0	60.0	73.3	na	na
			8:31-9:30				36.7	60.0	61.1	na	na
			9:01-10:00				30.3	60.0	50.5	na	na
Abbotsford St Interchange	57	North Bound	16:01-17:00				30.7	60.0	51.2	na	na
			16:31-17:30				34.9	60.0	58.2	na	na
			17:01-18:00				33.3	60.0	55.5	na	na
			17:31-18:30				28.0	60.0	46.6	na	na
			18:01-19:00				29.8	60.0	49.7	na	na
			Total Ave								

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			AM Peak								
St Kilda Rd / Commercial Rd	3, 5, 16, 64, 67	North Bound	7:01-8:00	42.0	76.1	55.2	54.0	76.5	70.5	28.5	0.6
			7:31-8:30	64.9	72.2	89.9	75.1	74.0	101.5	15.7	2.5
			8:01-9:00	69.3	66.1	104.8	84.1	77.5	108.5	21.3	17.2
			8:31-9:30	55.7	66.4	83.9	69.1	80.7	85.6	24.0	21.5
			9:01-10:00	40.6	70.5	57.6	49.1	78.8	62.3	20.9	11.8
St Kilda Rd / Commercial Rd	72	North Bound	7:01-8:00	42.4	68.8	61.6	46.8	67.1	69.7	10.3	-2.5
			7:31-8:30	60.1	70.0	85.9	65.3	66.3	98.5	8.7	-5.3
			8:01-9:00	74.9	66.2	113.1	69.2	68.0	101.8	-7.6	2.7
			8:31-9:30	56.1	62.9	89.2	49.0	65.3	75.0	-12.7	3.9
			9:01-10:00	31.9	64.3	49.6	35.1	65.0	53.9	9.9	1.1
			Total Ave	53.3	69.2	77.0	59.7	71.9	82.7	11.9	5.3
			PM Peak								
St Kilda Rd / Commercial Rd	3, 5, 16, 64, 67	South Bound	16:01-17:00	44.8	68.4	65.5	41.5	78.9	52.7	-7.3	15.3
			16:31-17:30	55.7	68.2	81.7	46.5	78.6	59.1	-16.6	15.2
			17:01-18:00	61.4	70.8	86.7	58.6	75.9	77.1	-4.6	7.3
			17:31-18:30	57.4	72.9	78.7	61.1	71.8	85.1	6.5	-1.5
			18:01-19:00	50.5	71.3	70.8	54.3	76.3	71.1	7.5	7.1
St Kilda Rd / Commercial Rd	6*	South Bound	16:01-17:00	41.6	70.6	58.9	30.4	76.1	39.9	-26.9	7.8
			16:31-17:30	45.7	70.0	65.3	38.0	72.9	52.1	-16.8	4.2
			17:01-18:00	53.6	66.7	80.4	53.4	81.3	65.7	-0.3	21.9

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			17:31-18:30	51.9	69.1	75.1	49.6	73.8	67.1	-4.5	6.9
			18:01-19:00	50.3	68.2	73.8	34.3	76.7	44.7	-31.8	12.4
St Kilda Rd / Commercial Rd	72	South Bound	16:01-17:00	46.6	69.3	67.2	39.8	64.2	62.0	-14.5	-7.3
			16:31-17:30	53.6	71.8	74.7	44.4	62.1	71.5	-17.1	-13.5
			17:01-18:00	60.2	74.7	80.6	53.8	65.6	82.0	-10.7	-12.2
			17:31-18:30	56.3	71.3	79.0	53.9	63.2	85.3	-4.3	-11.4
			18:01-19:00	47.0	72.0	65.3	50.0	65.3	76.5	6.4	-9.3
			Total Ave	51.8	70.3	73.7	47.3	72.2	66.2	-9.0	2.8
			AM Peak								
St Kilda Rd / High St	3, 5, 6*, 16, 64, 67	North Bound	7:01-8:00	40.0	77.8	51.4	45.4	75.3	60.4	13.6	-3.3
			7:31-8:30	63.5	72.1	88.1	66.9	71.9	93.0	5.4	-0.3
			8:01-9:00	65.2	64.5	101.1	75.7	77.6	97.6	16.2	20.3
			8:31-9:30	51.3	66.4	77.3	61.0	81.7	74.7	19.0	23.1
			9:01-10:00	34.5	72.9	47.3	41.2	77.3	53.3	19.3	6.0
			Total Ave	50.9	70.7	72.0	58.1	76.8	75.8	14.7	9.2
			PM Peak								
St Kilda Rd / High St	3, 5, 6*, 16, 64, 67	South Bound	16:01-17:00	39.5	68.5	57.7	44.6	76.6	58.3	13.0	11.9
			16:31-17:30	51.4	68.6	74.9	50.0	77.4	64.7	-2.7	12.8
			17:01-18:00	59.8	70.0	85.4	60.0	77.4	77.4	0.3	10.6
			17:31-18:30	53.7	73.3	73.3	61.6	72.3	85.2	14.7	-1.3

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			18:01-19:00	46.1	72.2	63.9	53.6	76.0	70.5	16.2	5.3
			Total Ave	50.1	70.5	71.1	54.0	76.0	71.2	8.3	7.9
			AM Peak								
St Kilda Rd / High St	3, 5, 6*, 16, 64, 67	South Bound	7:01-8:00	na	na	na	10.0	80.0	12.6	na	na
			7:31-8:30	na	na	na	14.8	83.5	17.8	na	na
			8:01-9:00	na	na	na	20.3	75.2	27.0	na	na
			8:31-9:30	na	na	na	16.8	74.5	22.6	na	na
			9:01-10:00	na	na	na	13.0	77.9	16.7	na	na
			Total Ave	na	na	na	15.0	78.2	19.3	na	na
			PM Peak								
St Kilda Rd / High St	3, 5, 6*, 16, 64, 67	North Bound	16:01-17:00	na	na	na	22.5	77.2	29.1	na	na
			16:31-17:30	na	na	na	31.1	73.8	42.1	na	na
			17:01-18:00	na	na	na	33.1	76.6	43.2	na	na
			17:31-18:30	na	na	na	27.4	78.2	35.1	na	na
			18:01-19:00	na	na	na	25.0	78.3	31.9	na	na
			Total Ave				27.8	76.8	36.3		
			AM Peak								
Bridge Rd / Yarra Blvd	11, 48	West Bound	7:01-8:00	na	na	na	42.0	89.2	47.1	na	na
			7:31-8:30	na	na	na	58.7	87.5	67.1	na	na
			8:01-9:00	na	na	na	65.2	87.5	74.5	na	na
			8:31-9:30	na	na	na	53.2	93.0	57.2	na	na

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016		Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			9:01-10:00	na	na	na		39.9	96.0	41.5	na	na
			Total Ave					51.8	90.6	57.5		
			PM Peak									
Bridge Rd / Yarra Blvd	72	East Bound	16:01-17:00	na	na	na		40.2	89.5	44.9	na	na
			16:31-17:30	na	na	na		47.9	90.9	52.7	na	na
			17:01-18:00	na	na	na		51.2	87.4	58.6	na	na
			17:31-18:30	na	na	na		49.8	81.1	61.4	na	na
			18:01-19:00	na	na	na		42.5	87.8	48.4	na	na
							46.3	87.3	53.2			
			AM Peak									
Park St / Toorak Rd	58*	North Bound	7:01-8:00	na	na	na		16.5	89.5	18.4	na	na
			7:31-8:30	na	na	na		24.1	86.1	28.0	na	na
			8:01-9:00	na	na	na		20.2	86.4	23.3	na	na
			8:31-9:30	na	na	na		14.2	88.0	16.1	na	na
			9:01-10:00	na	na	na		12.6	86.1	14.6	na	na
			Total Ave					17.5	87.2	20.1		
			PM Peak									
Park St / Toorak Rd	58*	South Bound	16:01-17:00	na	na	na		18.2	86.7	21.0	na	na
			16:31-17:30	na	na	na		19.1	87.4	21.9	na	na
			17:01-18:00	na	na	na		21.8	88.7	24.6	na	na
			17:31-18:30	na	na	na		22.7	86.2	26.3	na	na

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016	Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			18:01-19:00	na	na	na	23.1	87.4	26.5	na	na
			Total Ave	na	na	na	21.0	87.3	24.1		
			AM Peak								
Park St / Toorak Rd	58*	South Bound	7:01-8:00	66.7	110.0	60.6	75.3	147.9	50.9	12.9	34.5
			7:31-8:30	88.3	110.0	80.3	97.1	129.3	75.1	9.9	17.6
			8:01-9:00	95.9	110.0	87.2	91.8	126.5	72.6	-4.3	15.0
			8:31-9:30	89.0	110.0	80.9	73.6	134.1	54.9	-17.3	21.9
			9:01-10:00	70.8	110.0	64.4	65.7	130.0	50.5	-7.2	18.2
			Total Ave	82.1	110.0	74.6	80.7	133.6	60.8	-1.2	21.4
			PM Peak								
Smith St / Johnston St	86	South Bound	16:01-17:00	na	na	na	65.1	128.3	50.7	na	na
			16:31-17:30	na	na	na	70.1	128.8	54.4	na	na
			17:01-18:00	na	na	na	80.7	132.4	61.0	na	na
			17:31-18:30	na	na	na	72.7	131.5	55.3	na	na
			18:01-19:00	na	na	na	65.6	136.6	48.0	na	na
			AM Peak								
Park St / Toorak Rd	58*	South Bound	7:01-8:00	na	na	na	75.3	147.9	50.9	na	na
			7:31-8:30	na	na	na	97.1	129.3	75.1	na	na
			8:01-9:00	na	na	na	91.8	126.5	72.6	na	na
			8:31-9:30	na	na	na	73.6	134.1	54.9	na	na

Location	Route	Direction	Rolling Hour	Rolling Hour Average Load 2016	Average Maximum Capacity 2016	% Average Maximum Capacity 2016		Rolling Hour Average Load 2017	Average Maximum Capacity 2017	% Average Maximum Capacity 2017	2017 - % Change in Rolling Hour Average Load	2017 - % Change in Average Maximum Capacity
			9:01-10:00	na	na	na		65.7	130.0	50.5	na	na

*From May 1, 2017 route 55 and 8 were discontinued. Route 58 was introduced covering the Domain to Toorak section of previous route 8 and the Domain to West Coburg of | serviced by extending route 6 to terminate at Moreland Station.