



2016 LRT STATION ACTIVITY & PASSENGER FLOW SUMMARY REPORT

CAPITAL and METRO LINES

Edmonton Transit Service
Planning and Scheduling
Transit Data Analysis

December, 2016

ETS

2016 LRT STATION ACTIVITY AND PASSENGER FLOW SUMMARY

The 2016 LRT Station Activity and Passenger Flow Summary report provides quick statistics on station activity (boardings and alightings) at the North LRT, North East LRT, Downtown and South LRT stations.

The survey was conducted between September 4 and December 3, 2016 with the assistance of the Transportation Strategies section of the City Planning Branch. The purpose of the survey is to describe boardings and alightings on the Capital and Metro Lines during a time when service hours are at their highest level and post-secondary institutions and schools are in session. This report describes the station activity at LRT stations and the average daily passenger flow on the Capital and Metro Lines for a typical fall weekday.

ETS started Light Rail Transit (LRT) service in 1978 starting with the North East LRT, the Capital Line which now is a 16.1 km line from Clareview station in northeast Edmonton to Century Park station in south Edmonton. The North LRT, operating as the Metro Line opened on Sunday, September 6, 2015 as a 3.3 km extension from Churchill LRT Station in downtown Edmonton north to the Northern Alberta Institute of Technology (NAIT). The Metro and Capital Lines share the tracks between Century Park and Churchill stations on the Downtown and South LRT portions. ETS is operating the Metro Line on a line of sight basis. This means that in the short term, Metro Line trains run every 15 minutes between Century Park and NAIT stations, and is operating with reduced speed (25 km/h) between MacEwan station and NAIT station. In the longer term, once the new signalling system is fully operational, Metro Line trains will run at roughly 50 km/h every 10 minutes between Health Sciences/Jubilee station and NAIT station, as originally designed.

The Metro Line trains operate between NAIT and Century Park stations on weekdays until 10:05 p.m. and Saturdays until 7:05 p.m. After 10:05 p.m. on weekdays, 7:05 p.m. on Saturdays, and all day on Sundays, Metro Line trains operate between NAIT and Health Sciences/Jubilee stations only. This routing allows ETS to match the level of passenger demand during peak and non-peak hours.

Today, ETS operates the service with 94 light-rail vehicles (LRV) on the Capital and Metro Lines connecting 18 LRT stations, 10 of which are connected to an ETS Transit Centre. The Capital Line provides 125 weekday trips between Clareview and Century Park stations while the Metro Line provides 76 weekday trips between NAIT and Century Park stations.

The survey's methodology counts passengers at every LRV door for each train from the beginning to the end of the service day. This train-level methodology provides accurate data while reducing counting errors and stages the data for analysis and reporting.

In addition to the regular scheduled service, ETS operates extra service on the lines for special events such as hockey or football games or other major events at venues near the LRT lines. While the project team tries to avoid doing passenger counts during these major events, not all events can be avoided. Passenger counts from these special events are sometimes blended in with the regular scheduled service passenger count. The number of events from one year's counting to the next may produce a positive or negative variance on the passenger count and may have an impact on the final passenger count reported.

The full 2016 LRT Station Activity and Passenger Flow Report along with its supplementary reports provide a more detailed analysis of the LRT station activity and passenger flow. Please view the following reports for additional information:

- LRT Station Activity and Passenger Flow Report
- LRT Detailed Train List
- LRT Passenger Volumes by Time Period
- LRT Passenger Volume by Rolling One Hour and Two Hours Period
- LRT Average Daily Passenger Flow Map
- LRT A.M. Peak Hour Average Daily Passenger Flow Map
- LRT P.M. Peak Hour Average Daily Passenger Flow Map

2016 KEY FINDINGS

Station Activity (Boardings and Alightings)

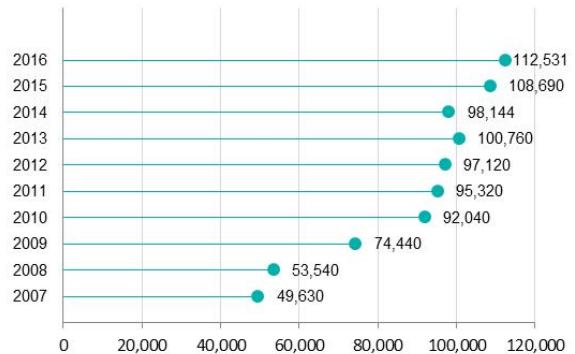
The LRT Station Activity and Passenger Flow report describes the boarding and alighting activity at each LRT station and the passenger flow between LRT stations. This summary reports the LRT stations by the following groups:

The North LRT includes the NAIT to MacEwan stations while the North East LRT includes the Clareview to Stadium stations. The Downtown LRT includes the Churchill to Grandin/ Govt' Centre stations and the South LRT includes the University to Century Park stations. The North LRT stations are served by the Metro Line while the North East LRT stations are served by the Capital Line. The Downtown and South LRT stations are served by both the Metro Line and the Capital Line.

Key Findings

- Average Daily LRT Boardings increased by **3.5%** to **112,531** boardings. This is an increase of **3,841** boardings
- Boardings at the North LRT stations (NAIT, Kingsway/RAH, MacEwan) increased by **27.8%** to **8,317** boardings. This is an increase of **1,808** boardings
- Over the past ten years, LRT boardings have grown by **62,901** passengers, or **126.7%**

10 Years - Average Daily LRT Boardings Weekday Service



2016 Total Station Activity

	Boardings And Alightings	% of Total
NORTH STATIONS ---->	16,237	7.2%
NORTH EAST STATIONS ---->	39,513	17.6%
DOWNTOWN STATIONS---->	66,557	29.6%
SOUTH STATIONS---->	102,755	45.7%
Total	225,062	100.0%

Station Activity (High to Low)		
Century Park	27,205	12.1%
University	26,277	11.7%
Churchill	20,921	9.3%
Southgate	18,938	8.4%
Clareview	17,076	7.6%
Corona	15,622	6.9%
Health Sciences/Jubilee	15,601	6.9%
Central	13,150	5.8%
Bay/Enterprise Square	11,200	5.0%
South Campus/FT. Edmonton	10,324	4.6%
Belvedere	8,825	3.9%
Coliseum	7,626	3.4%
N.A.I.T.	6,388	2.8%
Stadium	5,986	2.7%
MacEwan	5,777	2.6%
Grandin	5,664	2.5%
McKernan/Belgravia	4,410	2.0%
Kingsway/RAH	4,072	1.8%
Total	225,062	100%

CHANGE IN STATION ACTIVITY 2015 - 2016

NORTH LRT STATIONS

LRT Station	2016 Boarding	2015 Boarding	% Change Boarding	2016 Alighting	2015 Alighting	% Change Alighting	2016 Station Total	2015 Station Total	% Change Total
N.A.I.T.	3,424	2,601	31.6%	2,964	2,336	26.9%	6,388	4,937	29.4%
Kingsway/RAH	1,947	1,452	34.1%	2,125	1,635	30.0%	4,072	3,087	31.9%
MacEwan	2,946	2,456	20.0%	2,831	2,281	24.1%	5,777	4,737	22.0%
Total ---->	8,317	6,509	27.8%	7,920	6,252	26.7%	16,237	12,761	27.2%

NORTH EAST LRT STATIONS

LRT Station	2016 Boarding	2015 Boarding	% Change Boarding	2016 Alighting	2015 Alighting	% Change Alighting	2016 Station Total	2015 Station Total	% Change Total
Clareview	8,916	8,417	5.9%	8,160	8,060	1.2%	17,076	16,477	3.6%
Belvedere	4,525	4,752	-4.8%	4,300	4,618	-6.9%	8,825	9,370	-5.8%
Coliseum	3,777	4,145	-8.9%	3,849	5,007	-23.1%	7,626	9,152	-16.7%
Stadium	3,027	3,171	-4.5%	2,959	3,042	-2.7%	5,986	6,213	-3.7%
Total ---->	20,245	20,485	-1.2%	19,268	20,727	-7.0%	39,513	41,212	-4.1%

DOWNTOWN LRT STATIONS

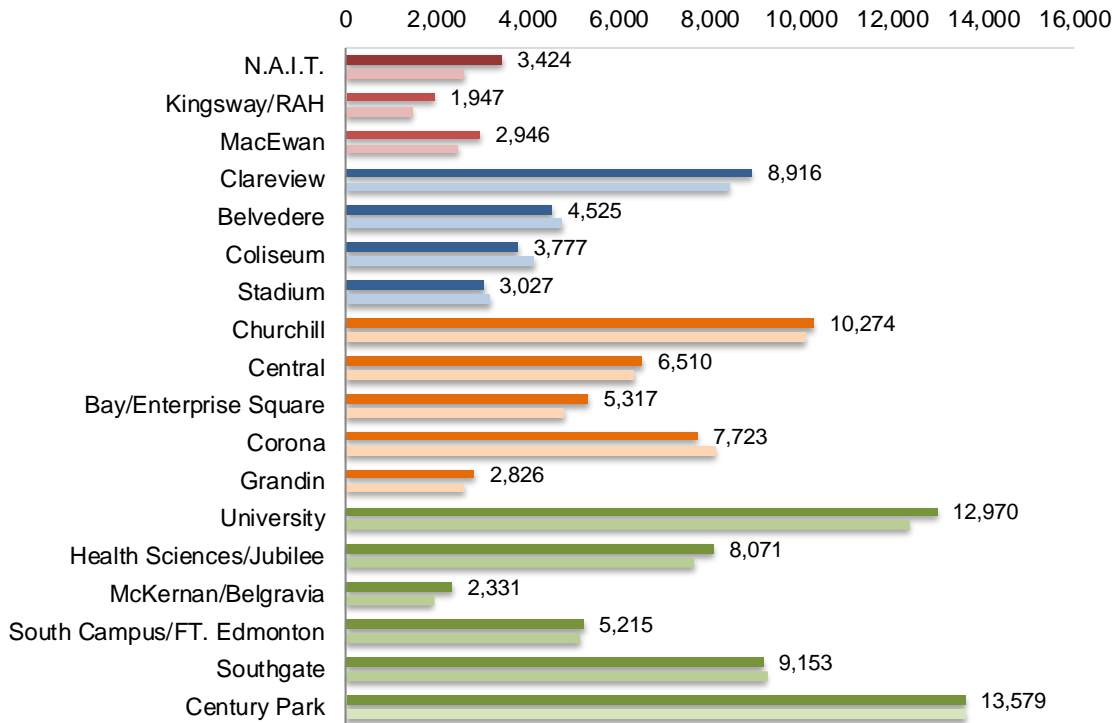
LRT Station	2016 Boarding	2015 Boarding	% Change Boarding	2016 Alighting	2015 Alighting	% Change Alighting	2016 Station Total	2015 Station Total	% Change Total
Churchill	10,274	10,087	1.9%	10,647	9,981	6.7%	20,921	20,068	4.3%
Central	6,510	6,299	3.3%	6,640	6,430	3.3%	13,150	12,729	3.3%
Bay/Enterprise Square	5,317	4,777	11.3%	5,883	4,825	21.9%	11,200	9,602	16.6%
Corona	7,723	8,102	-4.7%	7,899	7,833	0.8%	15,622	15,935	-2.0%
Grandin	2,826	2,584	9.4%	2,838	2,527	12.3%	5,664	5,111	10.8%
Total ---->	32,650	31,849	2.5%	33,907	31,596	7.3%	66,557	63,445	4.9%

SOUTH LRT STATIONS

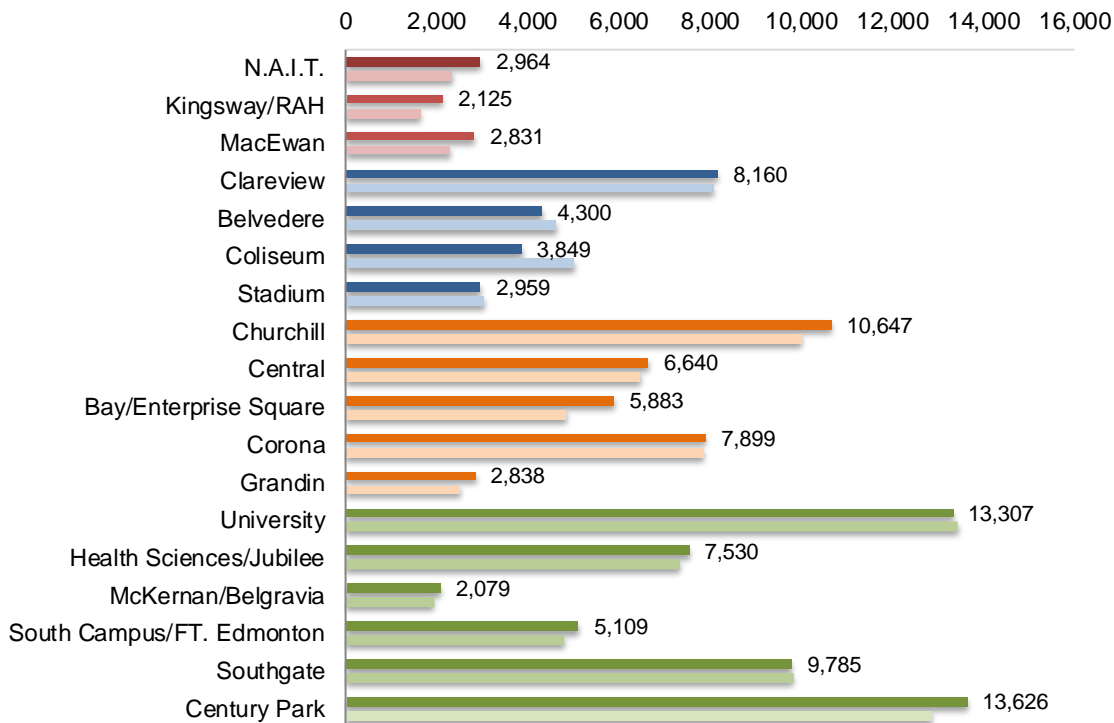
LRT Station	2016 Boarding	2015 Boarding	% Change Boarding	2016 Alighting	2015 Alighting	% Change Alighting	2016 Station Total	2015 Station Total	% Change Total
University	12,970	12,358	5.0%	13,307	13,425	-0.9%	26,277	25,783	1.9%
Health Sciences/Jubilee	8,071	7,640	5.6%	7,530	7,326	2.8%	15,601	14,966	4.2%
McKernan/Belgravia	2,331	1,911	22.0%	2,079	1,918	8.4%	4,410	3,829	15.2%
South Campus/FT. Edmonton	5,215	5,140	1.5%	5,109	4,792	6.6%	10,324	9,932	3.9%
Southgate	9,153	9,225	-0.8%	9,785	9,803	-0.2%	18,938	19,028	-0.5%
Century Park	13,579	13,573	0.0%	13,626	12,851	6.0%	27,205	26,424	3.0%
Total ---->	51,319	49,847	3.0%	51,436	50,115	2.6%	102,755	99,962	2.8%

	2016 Boarding	2015 Boarding	% Change Boarding	2016 Alighting	2015 Alighting	% Change Alighting	2016 Station Total	2015 Station Total	% Change Total
NORTH STATIONS ---->	8,317	6,509	27.8%	7,920	6,252	26.7%	16,237	12,761	27.2%
NORTH EAST STATIONS ---->	20,245	20,485	-1.2%	19,268	20,727	-7.0%	39,513	41,212	-4.1%
DOWNTOWN STATIONS---->	32,650	31,849	2.5%	33,907	31,596	7.3%	66,557	63,445	4.9%
SOUTH STATIONS---->	51,319	49,847	3.0%	51,436	50,115	2.6%	102,755	99,962	2.8%

2016 - 2015 Boardings at LRT Stations

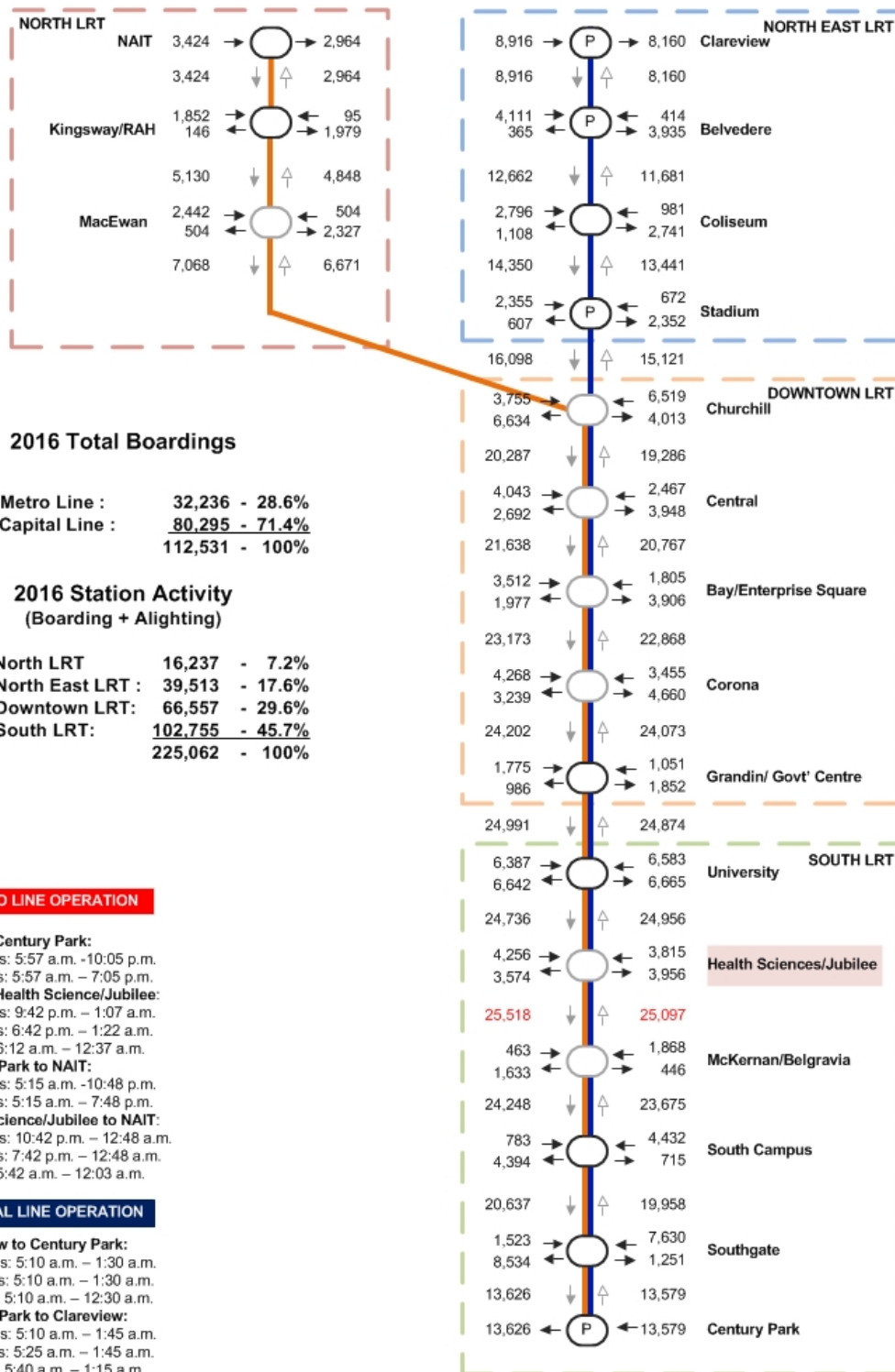


2016 - 2015 Alightings at LRT Stations



METRO AND CAPITAL LINES AVERAGE DAILY PASSENGER FLOW MAP

2016 - Typical Fall Weekday



A Note on Ridership and Boardings

Passenger count figures refer to the total number of Boarding on a transit vehicle (bus or LRT). Annual or monthly ridership figures refer to the total number of linked trips. This report describes the Boardings and Alightings on the LRT.

What is ridership?

Ridership is the total number of linked passenger trips.

- Trips: one-way trips from origin to destination
- Linked Trips: a trip connected by more than one public transit vehicle entry through transfers

Linked Trips:

A linked trip is the complete ride from an origin to a destination, no matter how many transfers between buses (or between LRT and buses) it takes to complete the trip. Traveling from home to work would be one linked trip, even if it meant taking a bus to an LRT station and then transferring to the LRT to get Downtown. Returning from work to home would count as a second linked trip.

The number of linked trips is obtained through an analysis of the monthly sales of the various fare media (e.g. monthly passes, ticket books, electronic fare boxes and cash).

What are Boardings?

Boardings are the number of passenger entries onto a public transit vehicle.

Boarding is counted each time a passenger boards a bus or LRT vehicle even though the boarding may be the result of a transfer from another route to complete the same one-way journey.

The number of boardings is obtained by counting passengers (manually or with a machine) as they board each transit vehicle.

Example of Ridership and Boarding

Jaime is trying to get to class. She leaves home and boards an ETS bus that takes her to an LRT Station/Transit Centre. Jamie transfers onto the LRT to reach her destination.

Ridership:

Jaime's trip counts as 1 for ridership. Her trip is a single linked trip, using one transit system.

Boarding:

Jaime's trip counts as 2 for boardings. One entry onto a vehicle was made on a bus and another on the LRT.

Disclaimer

The project team makes an extensive effort to assure the quality of information contained in this report is correct. Transit usage can vary by 10 percent or more from one day to the next or by season to season. Our team tries to minimize the variations by conducting surveys around the same time of the year. Year to Year variation may be due to random events such as weather, accidents or unforeseen events affecting service delivery. It is impossible to achieve complete accuracy and consistency in the reported data.

We recommend looking at trends, since variation that is consistent over a longer period is more likely to be real and not just the result of random events. Consideration and appropriate weighting of other sources is to be encouraged before making decisions.