

**APPENDIX K – STATIONS EMERGENCY EGRESS ANALYSIS RIDERSHIP DATA**

1. Introduction.....	2
2. Design Year .....	2
3. Ridership and Train Operations Data.....	2

**APPENDIX K – STATIONS EMERGENCY EGRESS ANALYSIS RIDERSHIP DATA**

**1. Introduction**

- (a) This Appendix K [Stations Emergency Egress Analysis Ridership Data] sets out the data to be used by Project Co to conduct emergency egress calculations for determination of the required size of egress routes in the Stations.

**2. Design Year**

- (a) Project Co shall design all Stations for a design year of 2045 as per the data set out in this Appendix K [Stations Emergency Egress Analysis Ridership Data].
- (b) This Appendix K [Stations Emergency Egress Analysis Ridership Data] was developed through the TransLink Regional Transportation (RTM) EMME 2045 forecast model. Projections corresponding with Arbutus Station as the terminus station versus extension of the line to UBC were evaluated, with the extension to UBC producing the most onerous results relative to emergency egress calculations. Accordingly, this Appendix K [Stations Emergency Egress Analysis Ridership Data] is derived from the data corresponding with extension of the line to UBC, with factors applied to represent additional growth and 99 B-Line data that indicates higher ridership in the PM peak period.

**3. Ridership and Train Operations Data**

- (a) Figure 3-1 lists the projected ridership, train headways and train crush load information to be used for emergency egress calculations for the Stations.
- (b) Figure 3-2 lists the projected ridership, train headways and train crush load information to be used for emergency egress calculations that consider the potential for either BSP or Canada Line service closures at Broadway-City Hall Station.

**SCHEDULE 4 APPENDIX K: STATION EMERGENCY EGRESS ANALYSIS RIDERSHIP  
DATA**

**Figure 3-1**

**Broadway Subway Project 2045 Ridership for Emergency Egress Calculations  
Ridership Forecast Scenario: BSP to UBC @ 3.5min headways, CL @ 2min headways**

**Broadway Subway**

BSP Headway (min)	3.5
Train Crush Load (pax)	796

**AM Westbound** **AM Eastbound**

Station	Boardings	Alightings	Volume	Station	Boardings	Alightings	Volume
VCC-Clark			8,747	MacDonald			2,156
Great Northern Way	231	-666	8,312	Arbutus	826	-255	2,728
Mount Pleasant	1,268	-483	9,096	South Granville	664	-176	3,218
Broadway-City Hall	2,213	-3,906	7,403	Fairview-VGH	659	-459	3,418
Fairview-VGH	491	-1,472	6,423	Broadway-City Hall	2,198	-1,766	3,850
South Granville	440	-1,081	5,783	Mount Pleasant	643	-473	4,020
Arbutus	618	-597		Great Northern Way	181	-367	

**PM Westbound** **PM Eastbound**

Station	Boardings	Alightings	Volume	Station	Boardings	Alightings	Volume
VCC-Clark			4,793	MacDonald			7,256
Great Northern Way	459	-226	5,025	Arbutus	746	-773	7,229
Mount Pleasant	591	-803	4,813	South Granville	1,352	-550	8,029
Broadway-City Hall	2,207	-2,747	4,273	Fairview-VGH	1,839	-614	9,254
Fairview-VGH	574	-824	4,023	Broadway-City Hall	4,882	-2,766	11,370
South Granville	219	-830	3,410	Mount Pleasant	604	-1,585	10,390
Arbutus	319	-1,033		Great Northern Way	832	-289	

**Canada Line**

CL Headway (min)	2.0
Train Crush Load (pax)	606

**AM Northbound** **AM Southbound**

	Boardings	Alightings	Volume		Boardings	Alightings	Volume
King Edward			10,696	Olympic Village			2,344
Broadway-City Hall	3,294	-3,484	10,506	Broadway-City Hall	2,603	-1,045	3,902
Olympic Village				King Edward			

**PM Northbound** **PM Southbound**

	Boardings	Alightings	Volume		Boardings	Alightings	Volume
King Edward			4,877	Olympic Village			13,132
Broadway-City Hall	1,306	-3,254	2,930	Broadway-City Hall	4,355	-4,118	13,370
Olympic Village				King Edward			

**END**

**SCHEDULE 4 APPENDIX K: STATION EMERGENCY EGRESS ANALYSIS RIDERSHIP  
DATA**

**Figure 3-2**

**Broadway Subway Project 2045 Ridership for Emergency Egress Calculations  
Ridership Forecast Scenario: Broadway-City Hall Integration, service closures**

**Broadway Subway, Canada Line closed**

BSP Headway (min) 3.5  
Train Crush Load (pax) 796

**AM Westbound**

Station	Boardings	Alightings	Volume
Mount Pleasant			7,565
Broadway-City Hall	579	-1,769	6,375
Fairview-VGH			

**AM Eastbound**

Station	Boardings	Alightings	Volume
Fairview-VGH			2,701
Broadway-City Hall	730	-770	2,662
Mount Pleasant			

**PM Westbound**

Station	Boardings	Alightings	Volume
Mount Pleasant			3,328
Broadway-City Hall	913	-962	3,377
Fairview-VGH			

**PM Eastbound**

Station	Boardings	Alightings	Volume
Fairview-VGH			7,968
Broadway-City Hall	2,211	-724	9,457
Mount Pleasant			

**Canada Line, Broadway Subway closed**

CL Headway (min) 2.0  
Train Crush Load (pax) 606

**AM Northbound**

	Boardings	Alightings	Volume
King Edward			9,924
Broadway-City Hall	1,901	-2,201	9,624
Olympic Village			

**AM Southbound**

	Boardings	Alightings	Volume
Olympic Village			2,240
Broadway-City Hall	1,993	-745	3,488
King Edward			

**PM Northbound**

	Boardings	Alightings	Volume
King Edward			4,361
Broadway-City Hall	932	-2,491	2,801
Olympic Village			

**PM Southbound**

	Boardings	Alightings	Volume
Olympic Village			12,030
Broadway-City Hall	2,751	-2,376	12,405
King Edward			

**END**