

 **University of Toronto**

01/06/2011

22393201 - Toronto Airport Rail Link Ridership Forecasts

Exclusion per Committee Direction

Owner	Steer Davies Gleave	
Project	22393201 - Toronto Airport Rail Link Ridership Forecasts - Draft Base Case Forecasts	Exclusion per Committee Decision
Version	1	
Sheet	Info	

List of Zones

Owner	Steer Davies Gleave
Project No	22393201
Project Name	Toronto Airport Rail Link Ridership Forecasts
Subject	
Description	Draft Base Case Forecasts; Exclusion per Committee Direction

Version 1.0

Version Control

	Precursor	Version	Description	Source Data	Developed by		Issued by	
1		1.0	Draft Base Case forecasts		SEB	01-Jul-11	DXC	01-Jul-11

User Instructions

Contents

Legend

END

Owner	Steel Davies Gleave
Project	22393201 - Toronto Airport Rail Link Ridership Forecasts - Draft Base Case Forecasts
Version	1
Sheet	Assumptions

ARL Service Assumptions

Dates

ARL Opening Date 05/04/2015

	Year 1	Year 2	Year 3	Year 4
Year	2015	2016	2017	2018
Ramp Up	65%	80%	90%	100%

Service Specification

ARL opening time 05:00
ARL closing time 01:00

ARL Headway (minutes)

2009	2015	2020	2025	2031
15	15	15	15	15

Exclusion per Committee Direction

Assumed Passengers per Vehicle

Taxi	1.07
Car (Terminal)	1.12
Car (Reduced)	1.15
Drop off	1.24

END

Owner	Steele Davies Cleave
Project	2235231 - Toronto Airport Rail Link Ridership Forecasts - Draft Base Case Forecasts
Version	1
Sheet	Hourly Air Traffic

Proportions entering or leaving airport by time of day

Direction	Sector	Hour of Day																							
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23

Average Annual

Total	Domestic	1.5%	0.7%	0.1%	0.0%	0.0%	1.9%	4.7%	7.1%	6.3%	4.8%	3.7%	4.0%	4.4%	5.3%	5.1%	6.7%	6.1%	6.2%	5.8%	6.9%	6.4%	6.0%	3.8%	2.4%
Total	Transborder	2.7%	0.8%	0.3%	0.1%	2.2%	3.5%	4.1%	5.8%	5.2%	4.4%	4.0%	4.1%	4.4%	5.0%	5.8%	6.7%	7.8%	6.9%	6.4%	5.5%	4.6%	3.8%	3.2%	2.9%
Total	International	0.7%	1.0%	1.9%	1.0%	3.8%	1.1%	4.0%	4.2%	3.2%	0.9%	0.9%	1.9%	2.1%	3.2%	4.2%	8.5%	12.4%	8.8%	7.6%	8.3%	8.3%	6.7%	3.2%	2.2%
Arriving in Toronto	All	3.0%	1.6%	1.7%	0.7%	0.2%	0.3%	2.2%	3.1%	2.7%	2.4%	2.1%	2.6%	3.2%	4.2%	4.9%	6.9%	9.4%	9.0%	7.0%	8.3%	8.5%	6.7%	5.5%	3.7%
Departing Toronto	All	0.1%	0.0%	0.0%	0.1%	4.0%	3.8%	6.4%	8.2%	7.0%	4.0%	3.4%	3.9%	3.8%	4.6%	5.0%	7.9%	8.5%	5.7%	6.3%	5.7%	4.6%	4.5%	1.3%	1.2%
Grand Total		1.6%	0.8%	0.8%	0.4%	2.1%	2.0%	4.3%	5.6%	4.8%	3.2%	2.8%	3.2%	3.5%	4.4%	5.0%	7.4%	9.0%	7.4%	6.7%	7.0%	6.6%	5.6%	3.4%	2.5%

Highest Day (Friday in August)

Total	Domestic	3.0%	1.3%	0.3%	0.1%	0.0%	0.4%	2.7%	6.1%	5.5%	4.2%	3.2%	3.3%	4.0%	4.6%	5.4%	6.3%	7.0%	4.5%	6.2%	7.7%	7.4%	6.9%	5.7%	4.2%
Total	Transborder	4.8%	0.9%	0.2%	0.0%	0.0%	0.5%	1.9%	2.0%	1.5%	2.7%	2.5%	4.1%	4.5%	4.7%	5.7%	6.0%	8.7%	9.9%	7.6%	5.6%	7.7%	6.8%	6.1%	5.6%
Total	International	0.7%	0.8%	3.1%	0.4%	0.1%	0.0%	2.1%	2.5%	0.5%	0.1%	0.0%	1.8%	2.4%	3.4%	5.7%	9.9%	14.7%	11.2%	7.7%	10.8%	11.1%	5.7%	3.7%	1.8%
Arriving in Toronto	All	2.8%	1.1%	0.9%	0.2%	0.0%	0.3%	2.3%	3.5%	2.8%	2.6%	2.0%	2.8%	3.6%	4.2%	5.3%	7.4%	9.8%	9.1%	6.8%	8.1%	8.9%	6.5%	5.4%	3.6%
Departing Toronto	All	0.5%	0.1%	0.0%	0.0%	0.4%	4.2%	4.7%	7.7%	7.2%	3.9%	3.6%	4.6%	3.6%	5.2%	4.2%	8.0%	9.4%	6.7%	5.8%	7.8%	5.7%	4.0%	1.1%	1.5%
Grand Total		1.6%	0.6%	0.4%	0.1%	0.2%	2.3%	3.5%	5.6%	5.0%	3.3%	2.8%	3.7%	3.6%	4.7%	4.8%	7.7%	9.6%	7.8%	6.3%	7.9%	7.3%	5.2%	3.2%	2.5%

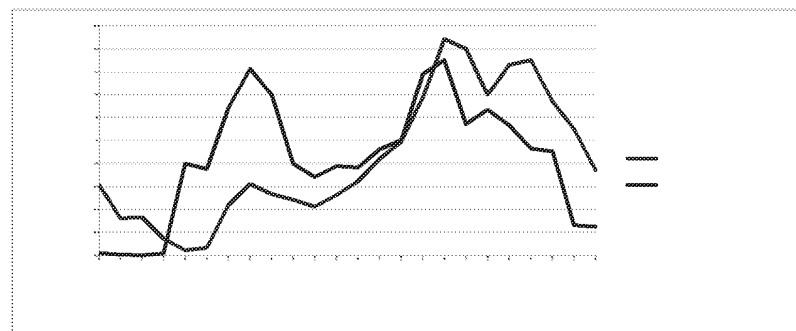
Proportions In Operating Hours

ARL operating?	Hour of Day																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	0.5	0	0	0	0	0.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

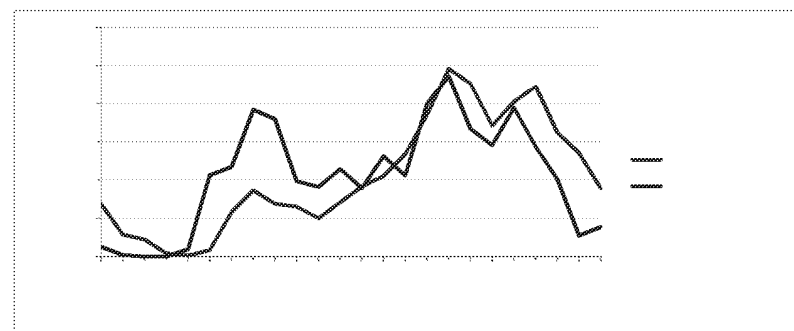
Proportion in operating hours	Dom	Trans	Int
Average annual	97.5%	93.5%	91.4%
Highest day	96.6%	96.2%	95.3%

Charts

Average Annual Traffic by Hour Entering/Leaving Airport



Highest Day Traffic by Hour Entering/Leaving Airport



END

Owner	Steele Davies Gleave
Project	22393201 - Toronto Airport Rail Link Ridership Forecasts - Draft Base Case Forecasts
Version	1
Sheet	Annual Forecasts

Years in **red** are model years - other results attained by interpolation

Potential Airport Rail Link Passengers (exc LBPIA staff, meeters & greeters)

Year		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
LBPIA Passengers	millions	36.53	37.34	38.20	39.07	39.97	40.80	41.61	42.43	43.27	44.13	45.00	45.70	46.40	47.12	47.84	48.58	49.12
Transferring passengers	millions	9.89	10.09	10.30	10.51	10.73	10.93	11.13	11.33	11.54	11.75	11.97	12.13	12.30	12.48	12.65	12.83	12.96
Out of hours passengers	millions	1.62	1.66	1.70	1.75	1.79	1.84	1.88	1.92	1.96	2.00	2.05	2.08	2.12	2.16	2.19	2.23	2.26
Out of scope OD passengers	millions	13.20	13.53	13.88	14.24	14.61	14.95	15.28	15.61	15.96	16.31	16.67	16.98	17.28	17.59	17.91	18.24	18.48
Passengers using non-competitive modes	millions	1.15	1.17	1.20	1.22	1.25	1.28	1.30	1.32	1.35	1.37	1.40	1.42	1.44	1.46	1.48	1.50	1.52
In-scope passengers	millions	10.66	10.88	11.11	11.35	11.59	11.81	12.02	12.24	12.46	12.68	12.91	13.08	13.26	13.43	13.61	13.79	13.91

Central Case ARL Ridership (excluding ramp up)

Year		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Capture rate	%	26.3%	26.3%	26.2%	26.2%	26.2%	26.1%	26.1%	26.0%	26.0%	25.9%	25.9%	25.8%	25.8%	25.8%	25.7%	25.7%	25.6%
Forecast ARL ridership (one-way)	millions	2.81	2.86	2.92	2.97	3.03	3.08	3.13	3.18	3.24	3.29	3.34	3.38	3.42	3.46	3.50	3.54	3.57

Exclusion per Committee Direction

Central Case ARL Ridership (including ramp up)

Year		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Ramp Up		85%	80%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Capture rate	%	17.1%	21.0%	23.6%	26.2%	26.2%	26.1%	26.1%	26.0%	26.0%	25.9%	25.9%	25.8%	25.8%	25.8%	25.7%	25.7%	25.6%
Forecast ARL ridership (one-way)	millions	1.82	2.29	2.62	2.97	3.03	3.08	3.13	3.18	3.24	3.29	3.34	3.38	3.42	3.46	3.50	3.54	3.57

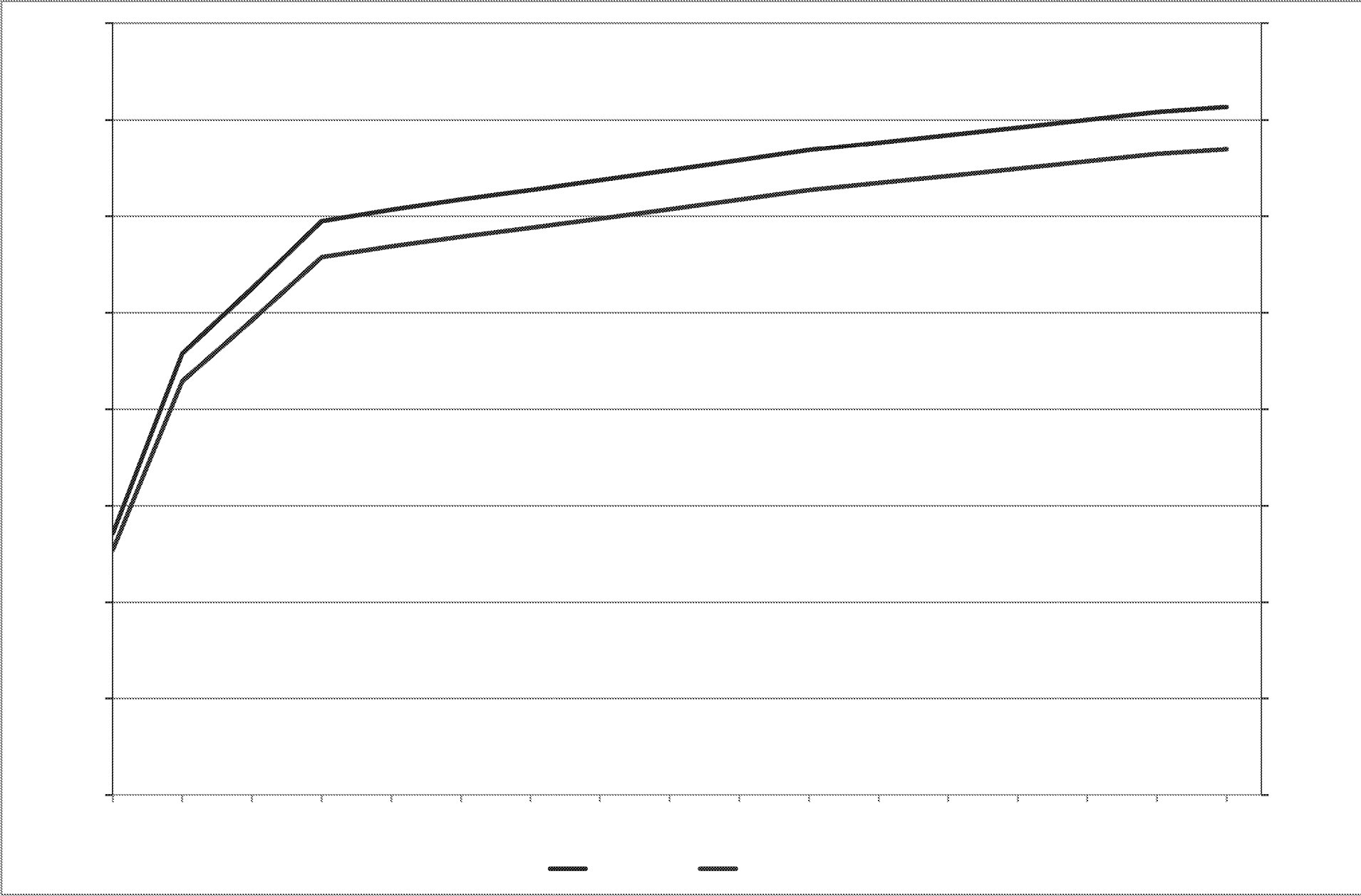
Exclusion per Committee Direction

Central Case ARL Ridership (incorporating part year 2015)

Year		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Proportion of Year		74%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Forecast ARL ridership (one-way)	millions	1.35	2.29	2.62	2.97	3.03	3.08	3.13	3.18	3.24	3.29	3.34	3.38	3.42	3.46	3.50	3.54	3.57

Exclusion per Committee Direction

END



Owner	Greer Davies Gleave
Project	22333201 - Toronto Airport Rail Link Ridership Forecasts - Draft Base Case Forecasts
Version	1
Sheet	Capture and Mode Split

Exclusion per Committee Direction

Key Year ARL Ridership (full year, excluding ramp up)

		2009	2015	2020	2025	2031
Total						
In-scope passengers	millions	8.93	10.66	11.81	12.91	13.91
Overall capture rate	%	0.0%	26.3%	26.1%	25.9%	25.6%
Forecast ARL ridership (one-way)	millions	0.00	2.81	3.08	3.34	3.57

Exclusion per Committee Direction

Key Years by Mode (full year, excluding ramp up)

		2009	2015	2020	2025	2031
Taxi						
In-scope passengers	millions	3.76	4.45	4.91	5.35	5.74
ARL capture rate	%	0.0%	40.1%	39.0%	38.1%	37.1%
ARL passengers	millions	0.00	1.78	1.91	2.04	2.13
Taxi passengers	millions	3.76	2.66	2.99	3.31	3.61

Car (Terminal)						
In-scope passengers	millions	0.28	0.32	0.35	0.38	0.41
ARL capture rate	%	0.0%	22.2%	21.7%	21.3%	20.9%
ARL passengers	millions	0.00	0.07	0.08	0.08	0.09
Car (Terminal) passengers	millions	0.28	0.25	0.28	0.30	0.33

Car (Reduced)						
In-scope passengers	millions	0.36	0.42	0.47	0.52	0.56
ARL capture rate	%	0.0%	18.4%	18.2%	18.0%	17.7%
ARL passengers	millions	0.00	0.08	0.09	0.09	0.10
Car (Reduced) passengers	millions	0.36	0.35	0.39	0.42	0.46

Drop off						
In-scope passengers	millions	3.52	4.26	4.73	5.19	5.60
ARL capture rate	%	0.0%	12.5%	13.2%	13.7%	14.2%
ARL passengers	millions	0.00	0.53	0.63	0.71	0.80
Drop off passengers	millions	3.52	3.73	4.10	4.48	4.81

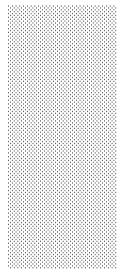
Express bus						
In-scope passengers	millions	0.34	0.42	0.47	0.51	0.56
ARL capture rate	%	0.0%	70.2%	70.1%	70.1%	70.1%
ARL passengers	millions	0.00	0.29	0.33	0.36	0.39
Express bus passengers	millions	0.34	0.12	0.14	0.15	0.17

Rental Car						
In-scope passengers	millions	0.67	0.80	0.88	0.96	1.03
ARL capture rate	%	0.0%	6.1%	6.1%	6.1%	6.1%
ARL passengers	millions	0.00	0.05	0.05	0.06	0.06
Rental Car passengers	millions	0.67	0.75	0.83	0.90	0.96

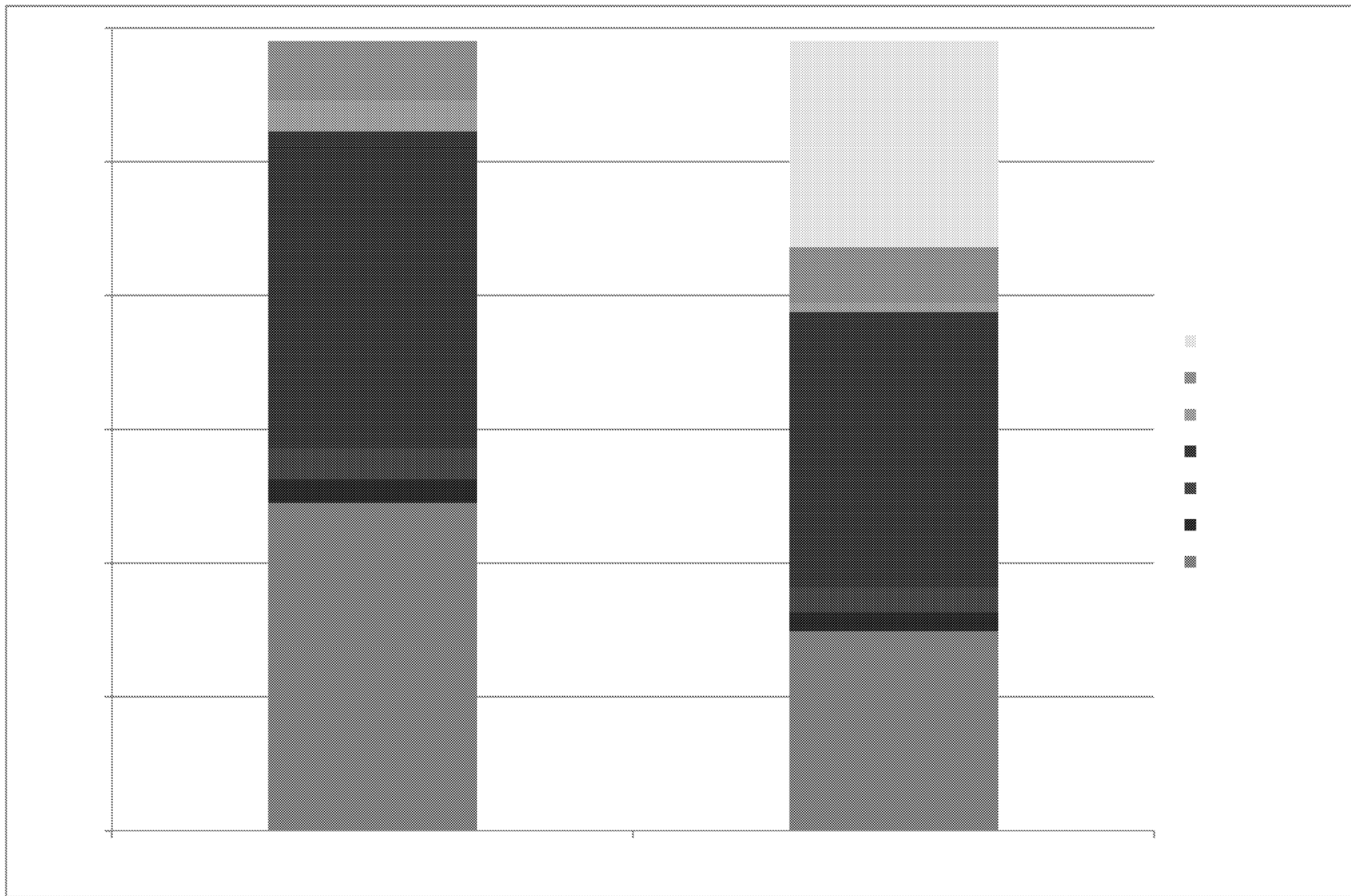
Passenger Mode Split (full year, excluding ramp up)

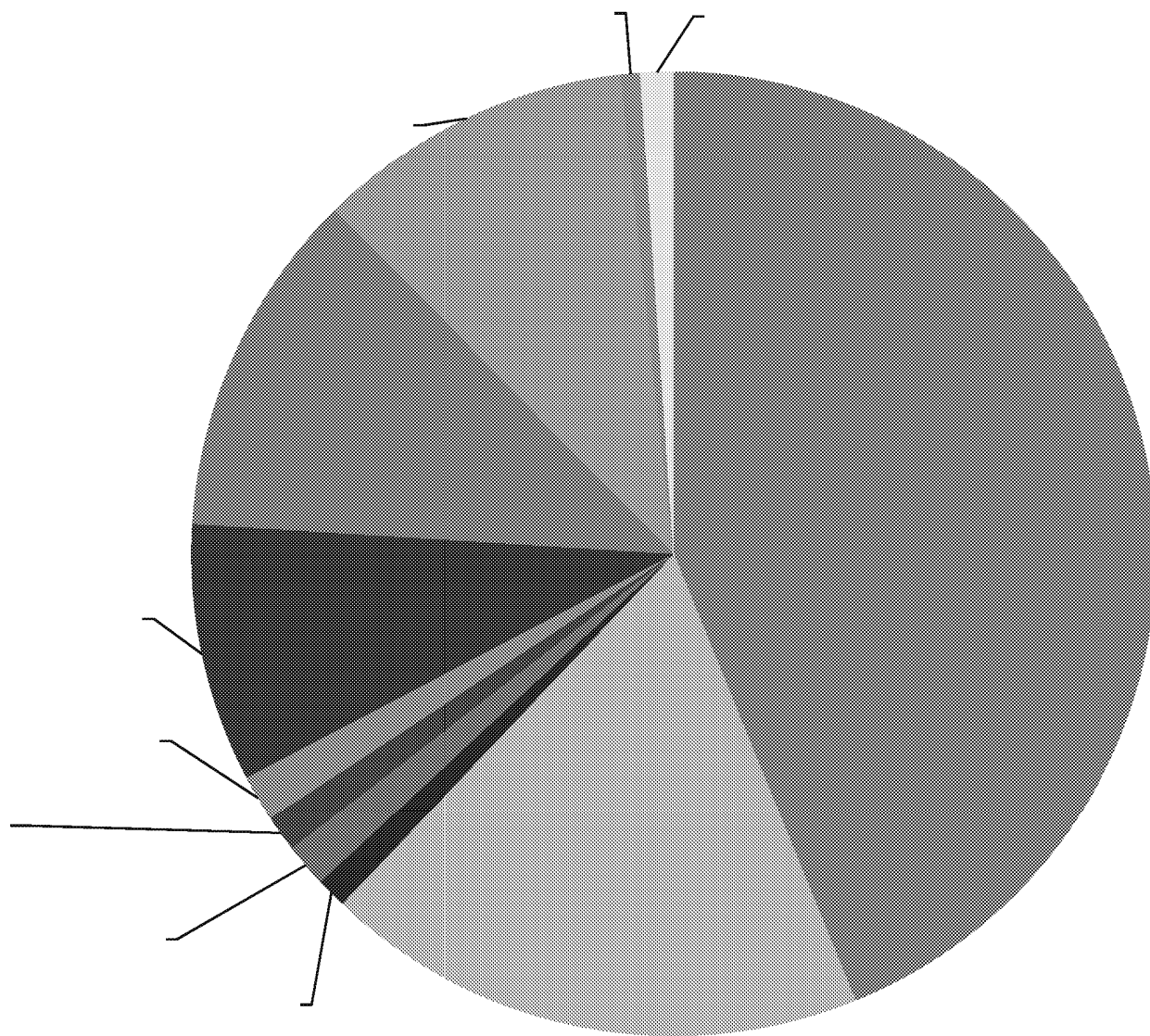
		2009	2015	2020	2025	2031	2009	2015	2020	2025	2031
Without ARL											
Taxi	millions	3.76	4.45	4.91	5.35	5.74	42.1%	41.7%	41.5%	41.4%	41.3%
Car (Terminal)	millions	0.28	0.32	0.35	0.38	0.41	3.1%	3.0%	3.0%	3.0%	3.0%
Car (Reduced)	millions	0.36	0.42	0.47	0.52	0.56	4.0%	4.0%	4.0%	4.0%	4.0%
Drop off	millions	3.52	4.26	4.73	5.19	5.60	39.4%	39.9%	40.1%	40.2%	40.3%
Express bus	millions	0.34	0.42	0.47	0.51	0.56	3.8%	3.9%	4.0%	4.0%	4.0%
Rental Car	millions	0.67	0.80	0.88	0.96	1.03	7.5%	7.5%	7.5%	7.4%	7.4%
Total	millions	8.93	10.66	11.81	12.91	13.91	100.0%	100.0%	100.0%	100.0%	100.0%
With ARL											
Taxi	millions	3.76	2.66	2.99	3.31	3.61	42.1%	25.0%	25.3%	25.6%	26.0%
Car (Terminal)	millions	0.28	0.25	0.28	0.30	0.33	3.1%	2.3%	2.3%	2.3%	2.4%
Car (Reduced)	millions	0.36	0.35	0.39	0.42	0.46	4.0%	3.2%	3.3%	3.3%	3.3%
Drop off	millions	3.52	3.73	4.10	4.48	4.81	39.4%	34.9%	34.8%	34.7%	34.6%
Express bus	millions	0.34	0.12	0.14	0.15	0.17	3.8%	1.2%	1.2%	1.2%	1.2%
Rental Car	millions	0.67	0.75	0.83	0.90	0.96	7.5%	7.0%	7.0%	7.0%	6.9%
ARL	millions	0.00	2.81	3.08	3.34	3.57	0.0%	26.3%	26.1%	25.9%	25.6%
Total	millions	8.93	10.66	11.81	12.91	13.91	100.0%	100.0%	100.0%	100.0%	100.0%

Description of ARL Demand July 2016 to July 2024



Description of ARL Demand July 2025 to July 2031





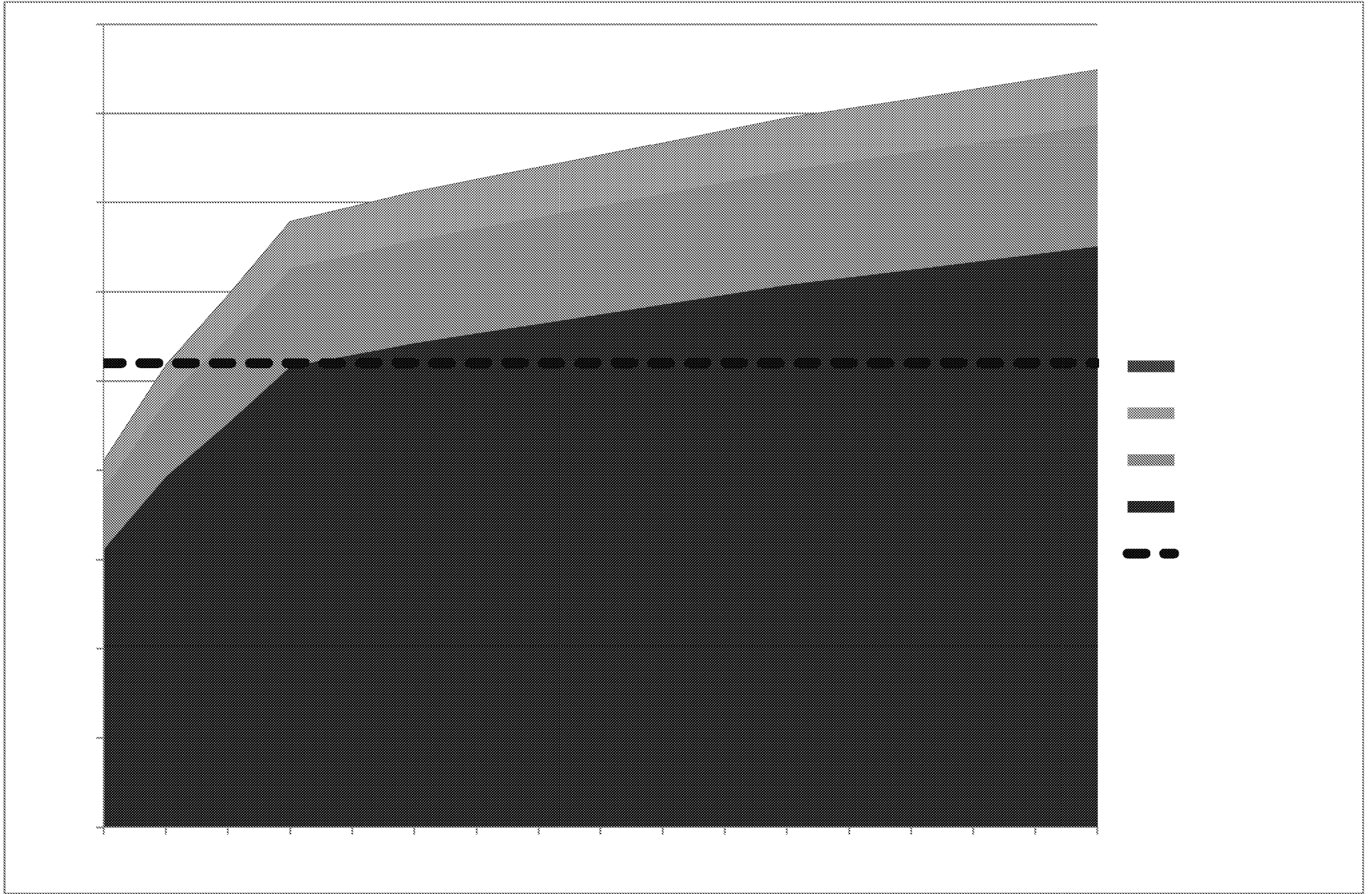
Owner	Steele Davies Gleaves	
Project	22393201 - Toronto Airport Rail Link Ridership Forecasts - Draft Base Case Forecast	Revision per Committee Direction
Version	1	
Sheet	Peak Hour ARL Ridership	

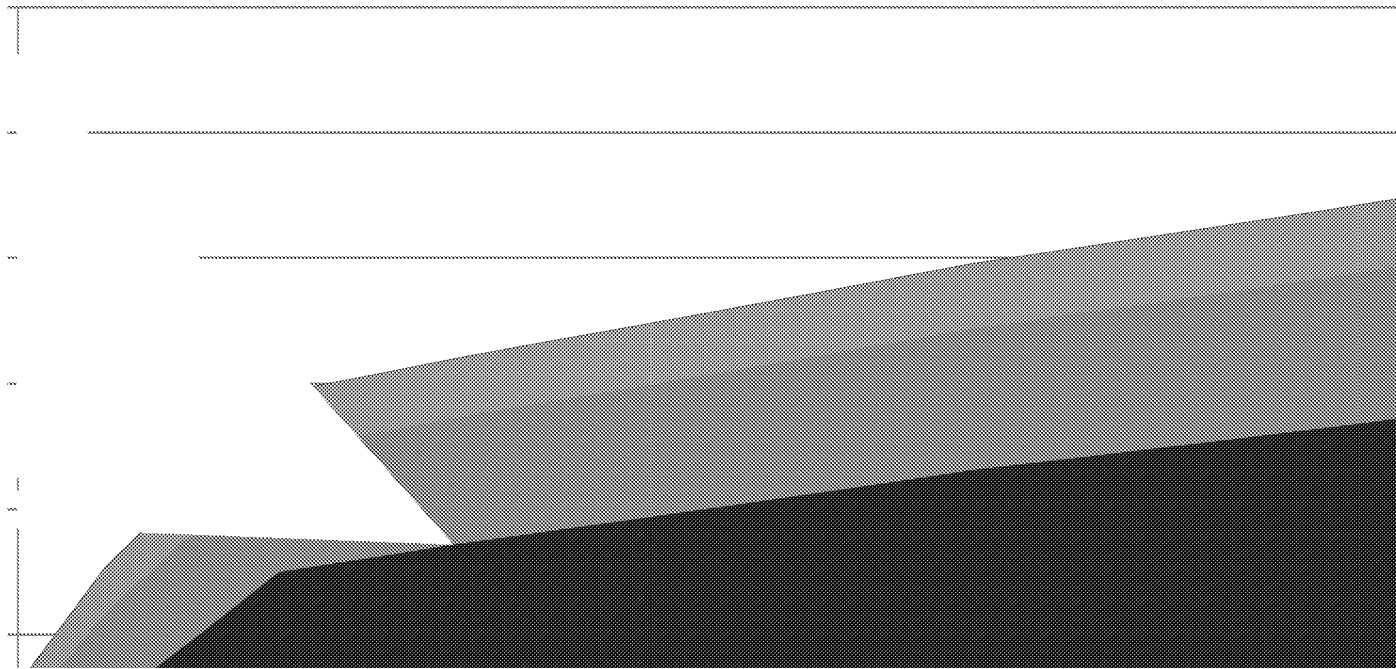
Peak Hour ARL Ridership - All Years, excluding ramp up

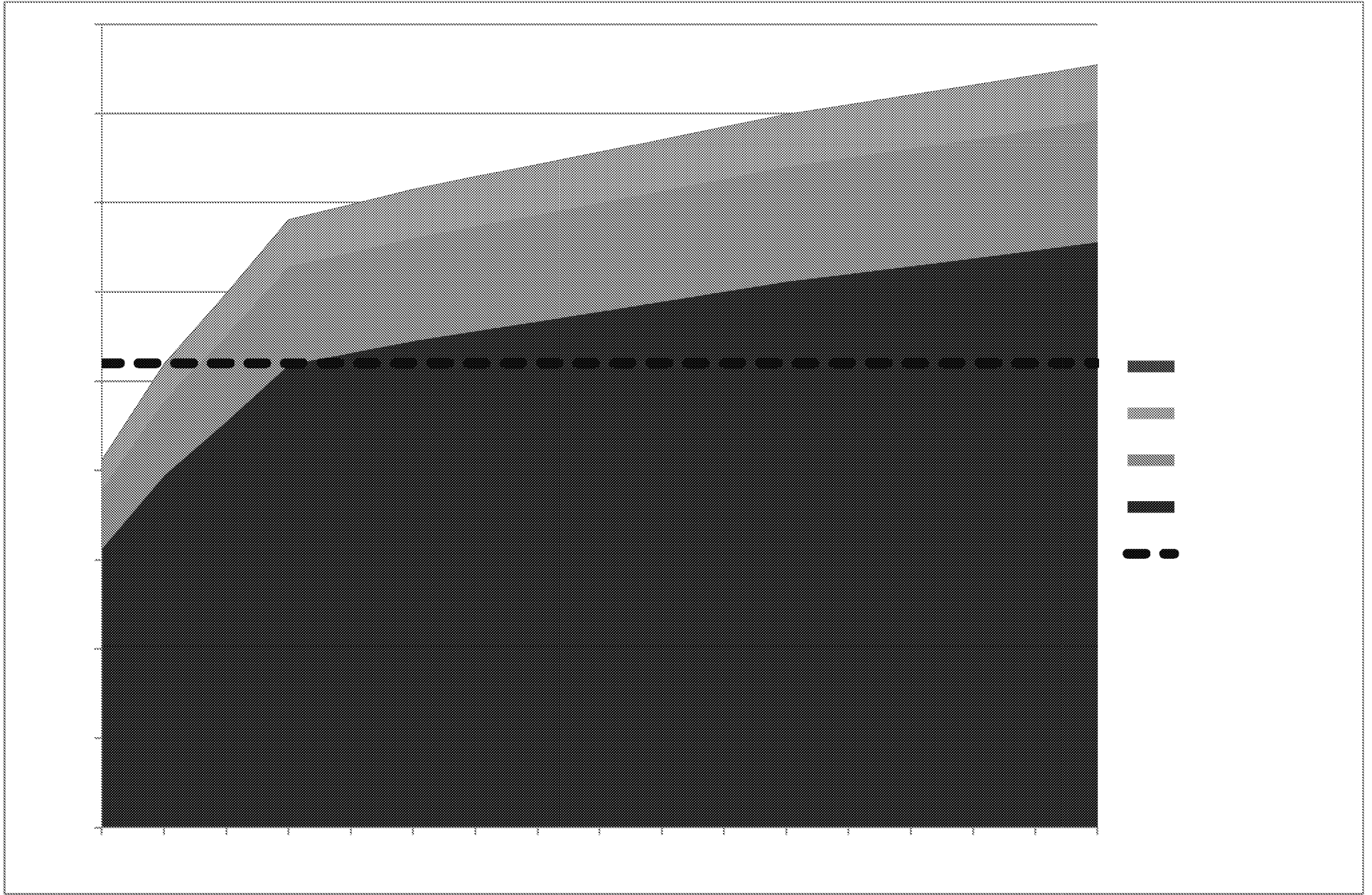
Year		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Average August Weekday																		
Boarding Pax (To Airport)	Union	480	492	504	516	529	543	554	564	575	586	597	608	616	625	633	642	651
	Bloor	103	105	108	110	113	115	117	120	122	124	126	128	130	132	133	135	137
	Weston	50	51	51	52	53	54	55	56	57	57	58	59	59	60	60	61	61
	<i>Peak hour</i> Woodbine	0	0	0	0	0	0											

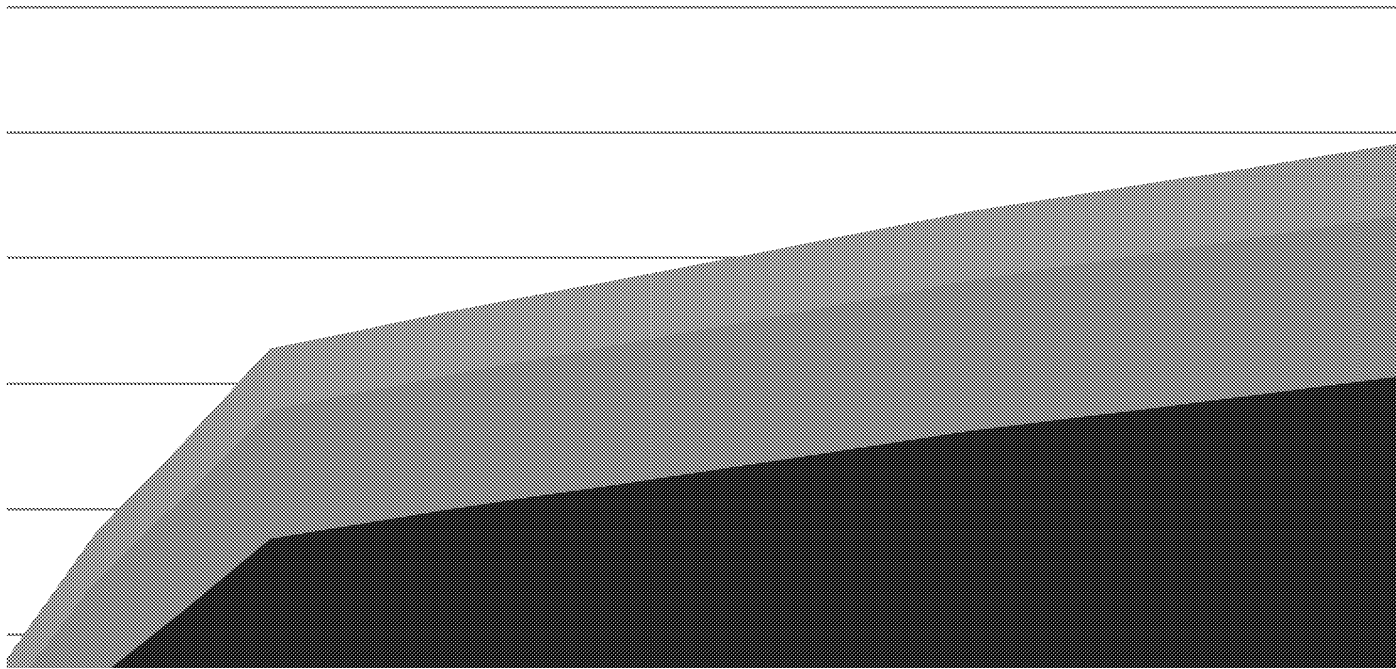












Exclusion per Committee Direction

