



01/06/2011

22393201 - Toronto Airport Rail Link Ridership Forecasts

Draft Base Case 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	Steer Davies Gleave	Exclusion per Committee Direction
Project	22393201 - Toronto Airport Rail Link Ridership Forecasts - Draft Base Case Forecasts	
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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 Gleave
Project	22393201 - Toronto Airport Rail Link Ridership Forecasts - Draft Base Case Forecasts
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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%

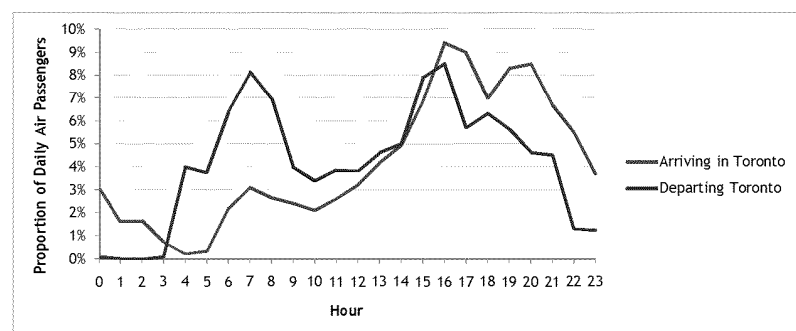
Proportions In Operating Hours

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

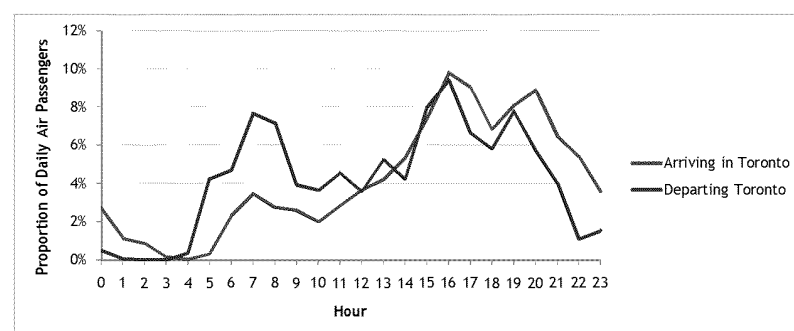
Proportion in operating hours	Dom	Trans	Int
Average annual	97.5%	93.5%	91.4%
Highest day	96.6%	96.2%	95.3%

Charts

Average Annual Traffic by Hour Entering/Leaving Airport



Highest Day Traffic by Hour Entering/Leaving Airport



END

Owner	Steer 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		65%	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

END

Exclusion per Committee Direction

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Sheet	Capture and Mode Split

Key Year ARL Ridership Exclusion per Committee Direction (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

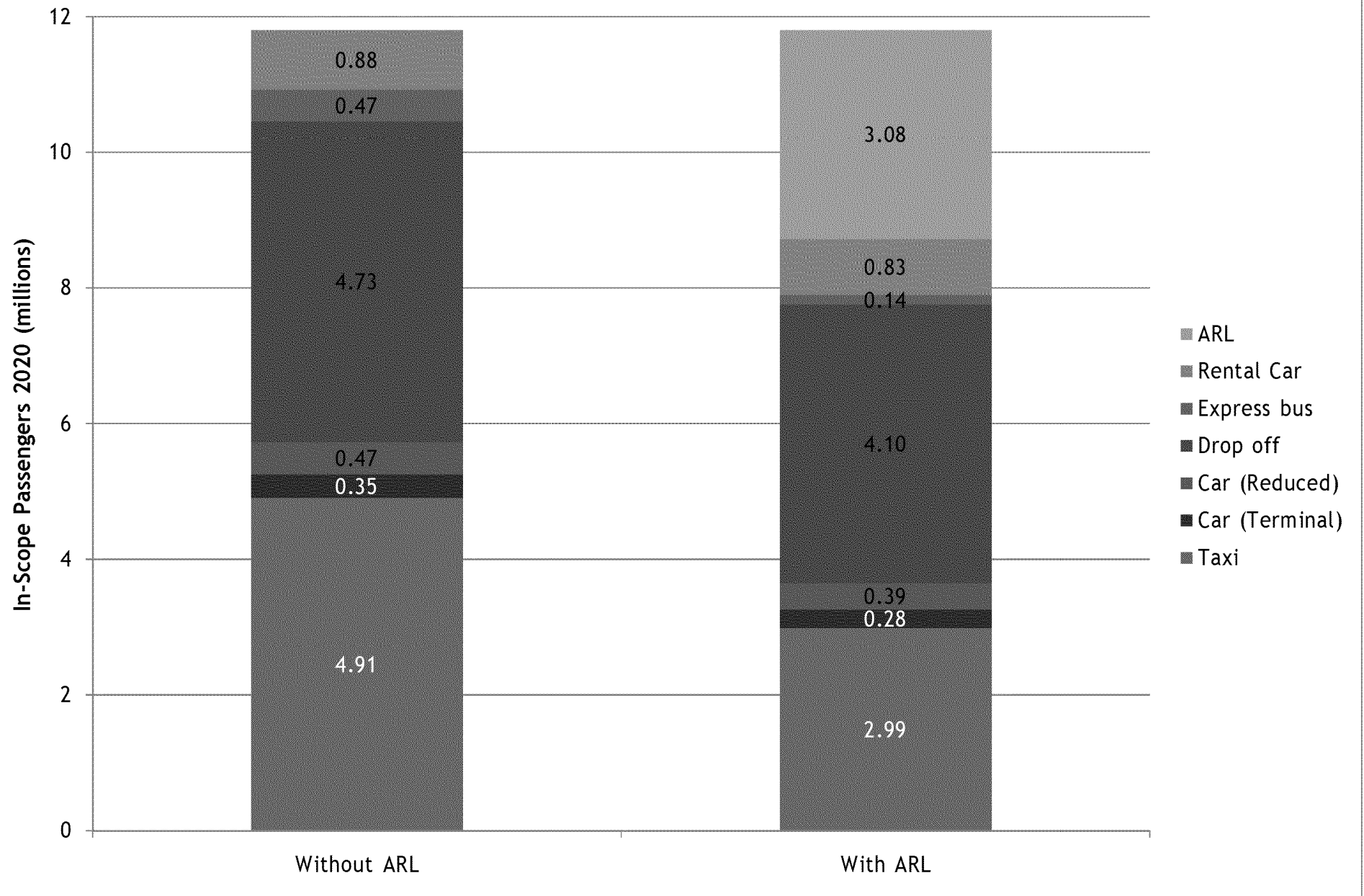
Passenger Mode Split (full year, excluding ramp up)

		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%

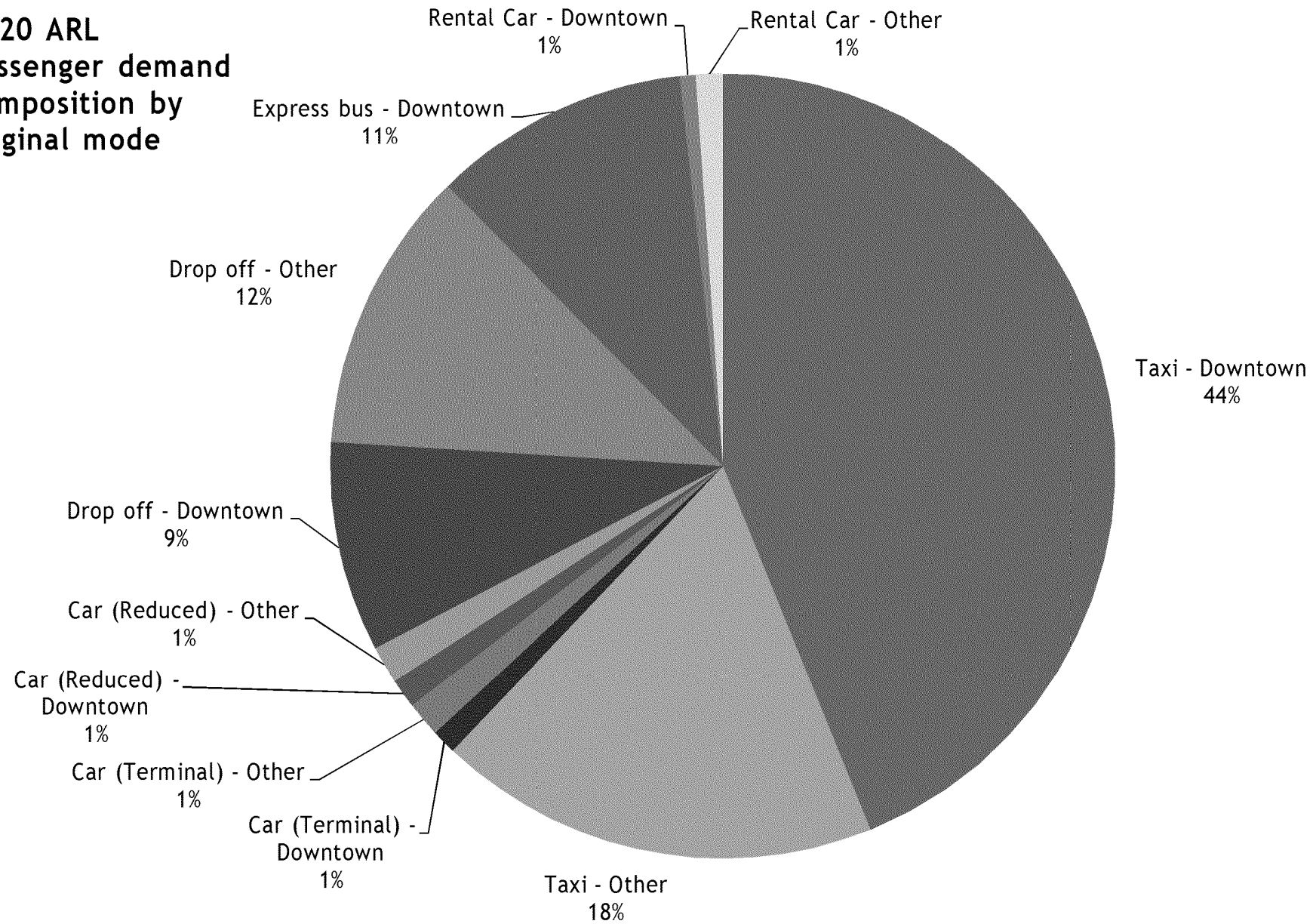
Composition of ARL Demand (full year, excluding ramp up)

		2009	2015	2020	2025	2031	2009	2015	2020	2025	2031
Taxi - Downtown	millions		1.23	1.35	1.47	1.56		43.9%	43.9%	43.9%	43.9%
Taxi - Other	millions		0.55	0.56	0.57	0.57		19.7%	18.2%	17.1%	15.9%
Car (Terminal) - Downtown	millions		0.03	0.03	0.03	0.04		1.0%	1.0%	1.0%	1.0%
Car (Terminal) - Other	millions		0.04	0.04	0.05	0.05		1.5%	1.5%	1.4%	1.4%
Car (Reduced) - Downtown	millions		0.03	0.04	0.04	0.05		1.2%	1.2%	1.2%	1.3%
Car (Reduced) - Other	millions		0.04	0.05	0.05	0.05		1.6%	1.6%	1.5%	1.5%
Drop off - Downtown	millions		0.23	0.27	0.30	0.34		8.2%	8.7%	9.0%	9.5%
Drop off - Other	millions		0.30	0.36	0.41	0.46		10.8%	11.6%	12.2%	12.8%
Express bus - Downtown	millions		0.29	0.33	0.36	0.39		10.4%	10.6%	10.8%	11.0%
Express bus - Other	millions		0.00	0.00	0.00	0.00		0.0%	0.0%	0.0%	0.0%
Rental Car - Downtown	millions		0.02	0.02	0.02	0.02		0.6%	0.6%	0.6%	0.7%
Rental Car - Other	millions		0.03	0.03	0.04	0.04		1.1%	1.1%	1.1%	1.1%
Total	millions		2.81	3.08	3.34	3.57		100.0%	100.0%	100.0%	100.0%

END



**2020 ARL
Passenger demand
composition by
original mode**



Owner	Steer Davies Gleave
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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
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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
	Woodbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	633	648	663	679	695	712	726	739	753	767	781	795	806	816	827	838	849

Alighting Pax (From Airport)	Union	420	430	440	450	461	472	482	491	501	511	521	532	540	548	556	565	573
	Bloor	91	92	94	96	99	101	103	105	107	109	111	113	114	116	118	119	121
	Weston	44	44	45	46	46	47	48	48	49	50	51	51	52	52	53	53	54
	Woodbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	554	567	579	592	606	620	632	644	657	670	683	696	706	716	727	737	748

Highest Day (Friday in August)

Boarding Pax (To Airport)	Union	481	493	506	518	532	545	556	567	578	589	600	611	620	629	638	647	656
	Bloor	103	105	108	110	113	115	117	120	122	124	126	129	130	132	134	135	137
	Weston	50	51	52	53	54	54	55	56	57	58	59	59	60	60	61	61	62
	Woodbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	634	649	665	681	698	715	729	743	757	771	785	799	810	821	832	843	855

Alighting Pax (From Airport)	Union	445	455	466	477	488	500	510	520	531	541	552	563	571	580	589	598	607
	Bloor	96	98	100	102	105	107	109	111	113	115	118	120	121	123	125	127	128
	Weston	46	47	47	48	49	50	51	51	52	53	54	54	55	55	56	57	57
	Woodbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	587	600	614	627	642	656	670	683	696	709	723	737	748	759	770	781	792

Peak Hour ARL Ridership - All Years, including ramp up

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
	65%	80%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Average August Weekday

Boarding Pax (To Airport) Peak hour 16:00	Union	312	393	453	516	529	543	554	564	575	586	597	608	616	625	633	642	651
	Bloor	67	84	97	110	113	115	117	120	122	124	126	128	130	132	133	135	137
	Weston	32	41	46	52	53	54	55	56	57	57	58	59	59	60	60	61	61
	Woodbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	411	518	597	679	695	712	726	739	753	767	781	795	806	816	827	838	849

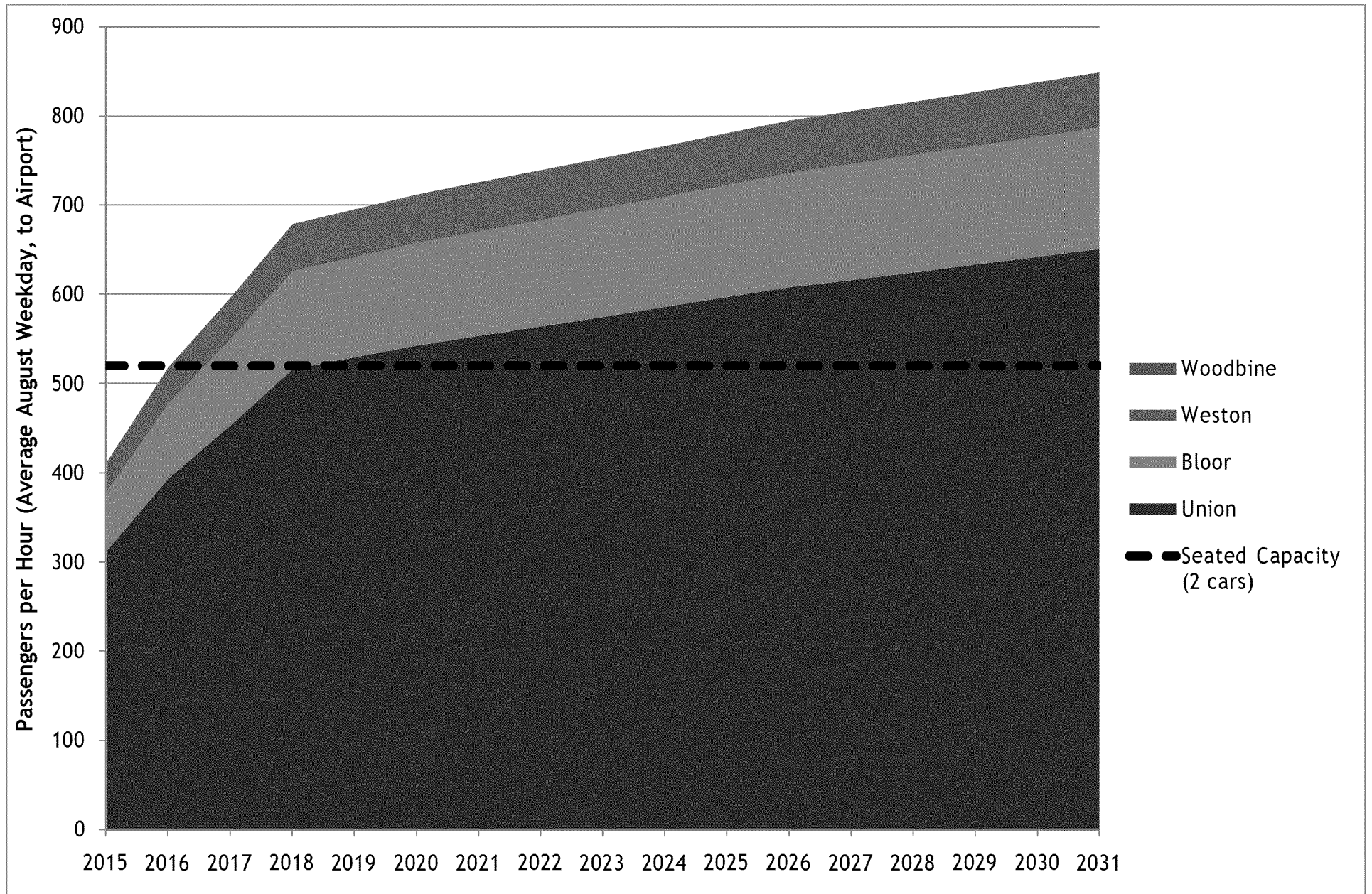
Alighting Pax (From Airport) Peak hour 16:00	Union	273	344	396	450	461	472	482	491	501	511	521	532	540	548	556	565	573
	Bloor	59	74	85	96	99	101	103	105	107	109	111	113	114	116	118	119	121
	Weston	28	35	40	46	46	47	48	48	49	50	51	51	52	52	53	53	54
	Woodbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	360	453	521	592	606	620	632	644	657	670	683	696	706	716	727	737	748

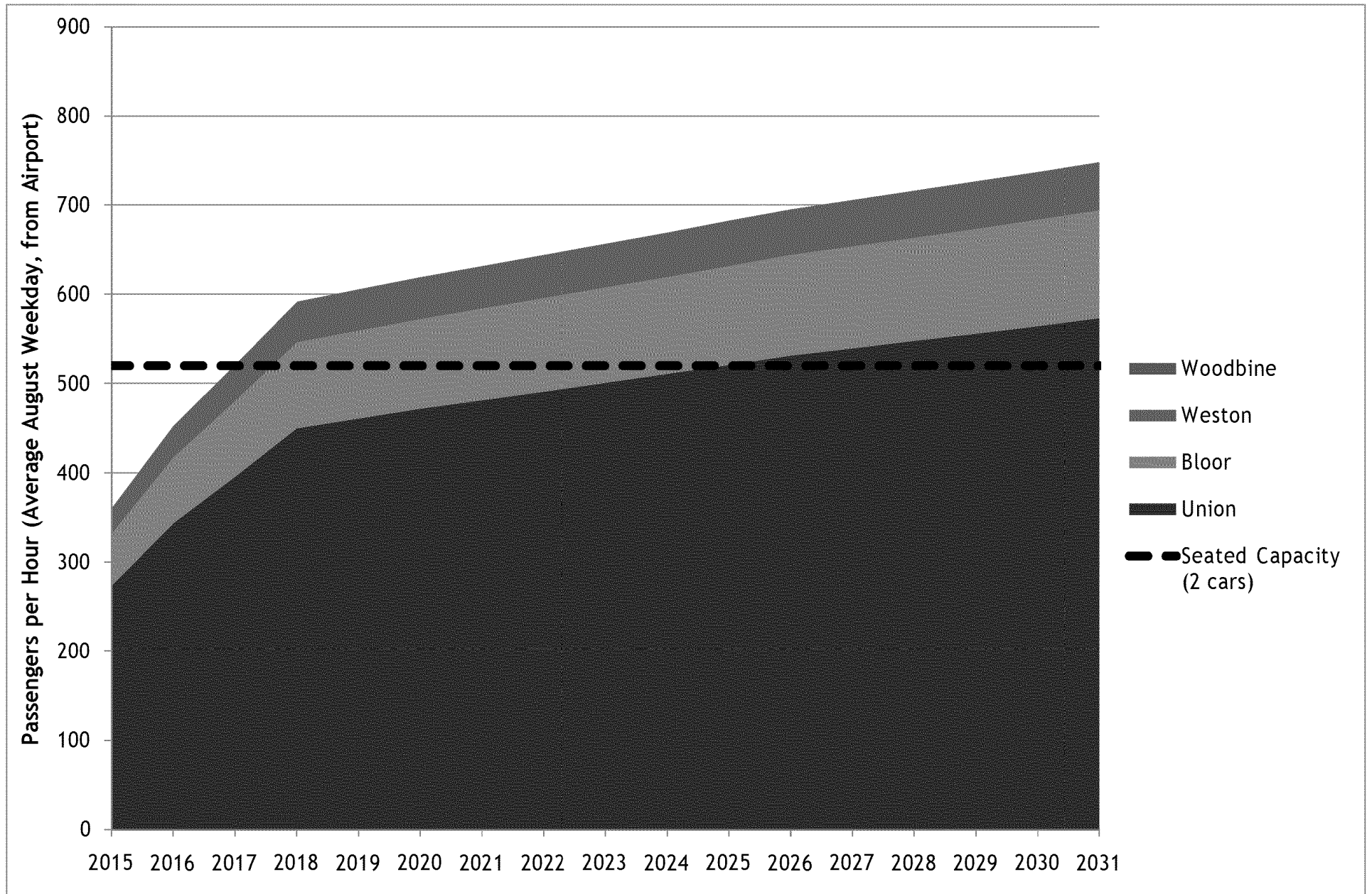
Highest Day (Friday in August)

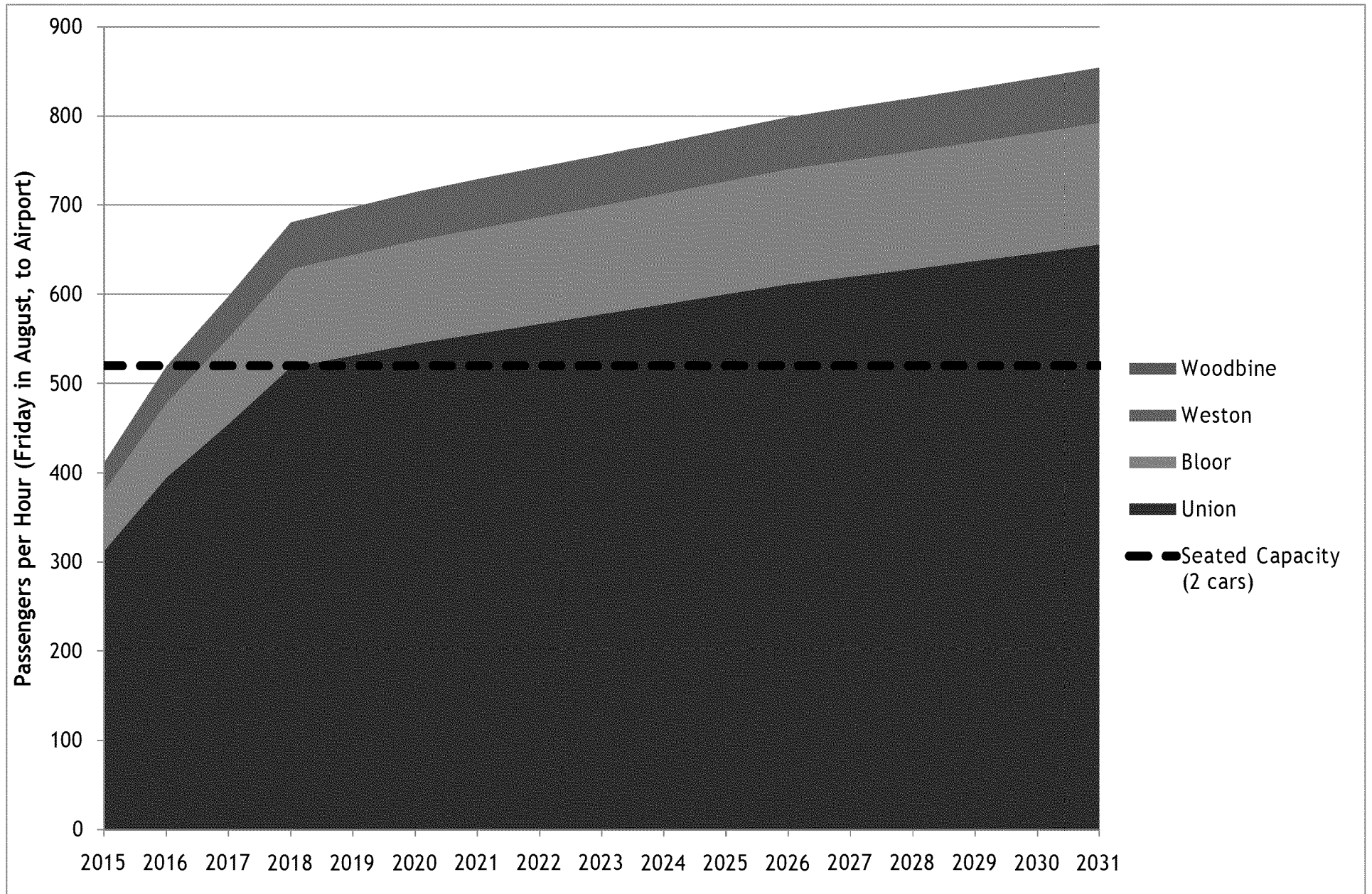
Boarding Pax (To Airport) Peak hour 16:00	Union	313	395	455	518	532	545	556	567	578	589	600	611	620	629	638	647	656
	Bloor	67	84	97	110	113	115	117	120	122	124	126	129	130	132	134	135	137
	Weston	33	41	47	53	54	54	55	56	57	58	59	59	60	60	61	61	62
	Woodbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	412	520	598	681	698	715	729	743	757	771	785	799	810	821	832	843	855

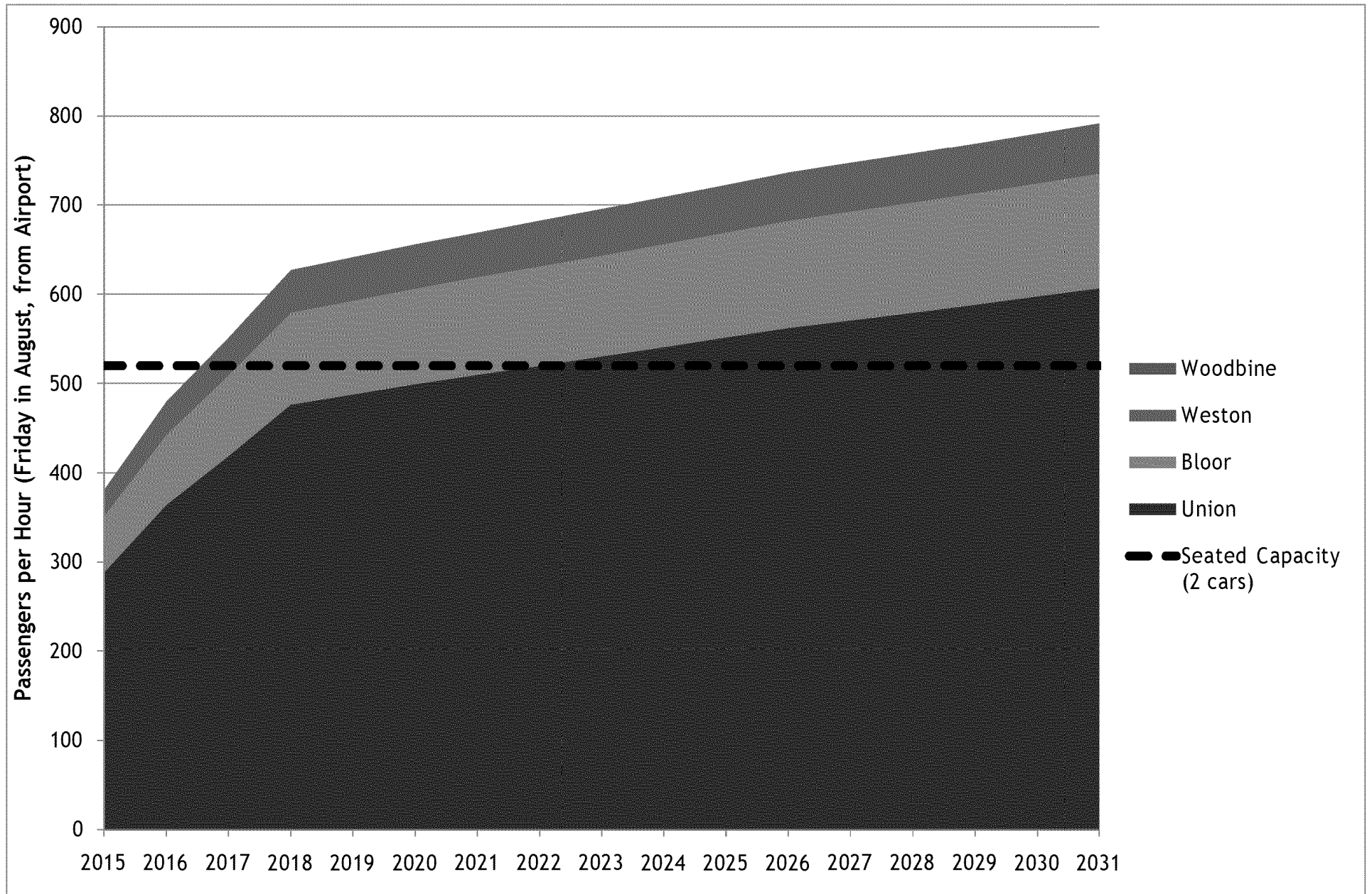
Alighting Pax (From Airport) Peak hour 16:00	Union	289	364	419	477	488	500	510	520	531	541	552	563	571	580	589	598	607
	Bloor	63	79	90	102	105	107	109	111	113	115	118	120	121	123	125	127	128
	Weston	30	37	43	48	49	50	51	51	52	53	54	54	55	55	56	57	57
	Woodbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	382	480	552	627	642	656	670	683	696	709	723	737	748	759	770	781	792

END









Exclusion per Committee Direction

Exclusion per Committee Direction