

APPENDIX 2.5

TRAFFIC MODELLING – INTERNAL TRAFFIC MOVEMENTS

RESIDENTIAL

Plot Location Relative to Critical Junction	Plot	Dwellings	Percentage	Dwellings	Trip Generation					
					AM Peak			PM Peak		
					Arr	Dep	Tot	Arr	Dep	Tot
RESIDENTIAL TRIP RATES					0.169	0.405	0.574	0.396	0.247	0.643
North	None	0	0.00%	0	0	0	0	0	0	0
	Sub-Total	0		0	0	0	0	0	0	0
South	A1	62	100%	62	10	25	36	25	15	40
	A7	162	100%	162	27	66	93	64	40	104
	A8	141	100%	141	24	57	81	56	35	91
	A16	26	100%	26	4	11	15	10	6	17
	Other	82	100%	82	14	33	47	32	20	53
	Persimmon Site	1,600	100%	1,600	270	648	918	634	395	1029
	Sub-Total	2,073		2,073	350	840	1,190	821	512	1,333
East	A2	135	100%	135	23	55	77	53	33	87
	A3	115	100%	115	19	47	66	46	28	74
	A4	-	100%	-	0	0	0	0	0	0
	A5	69	100%	69	12	28	40	27	17	44
	A6	26	100%	26	4	11	15	10	6	17
	Other	82	100%	82	14	33	47	32	20	53
	Sub-Total	427		427	72	173	245	169	105	275
TOTAL					423	1,013	1,435	990	618	1,608

Does no. dwellings total 2,500? TRUE 0

EDUCATION

School Location Relative to Critical Junction	Plot	External School Places	Trip Generation						
			AM Peak			PM Peak			
			Arr	Dep	Tot	Arr	Dep	Tot	
PRIMARY SCHOOL TRIP RATES			0.351	0.237	0.588	0.006	0.027	0.033	
North	Sub-Total	0	0	0	0	0	0	0	
South	1 Form Entry School	46	16	11	27	0	1	2	
	2 Form Entry School	91	32	22	54	1	2	3	
	Sub-Total	137	48	32	81	1	4	5	
East	Sub-Total	0	0	0	0	0	0	0	
TOTAL			137	48	32	81	1	4	5

Total No. School Places 630
 No. Internal School Places 493
 No. External School Places 137

To/From South (no. external school places) 91
 To/From South (no. external school places) 46

EMPLOYMENT

Employment Location Relative to Critical Junction	Plot	SQM	Trip Generation						
			AM Peak			PM Peak			
			Arr	Dep	Tot	Arr	Dep	Tot	
EMPLOYMENT TRIP RATES			1.225	0.198	1.423	0.212	1.151	1.363	
North	Sub-Total	0	0	0	0	0	0	0	
South	D1 Healthcare	3,000	37	6	43	6	35	41	
	Sub-Total	3,000	37	6	43	6	35	41	
East	Sub-Total	0	0	0	0	0	0	0	
TOTAL			3,000	37	6	43	6	35	41

RESI + EDUCATION

Trip Origin / Destination Relative to Critical Junction	Plot	Trip Generation					
		AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot
NORTH		0	0	0	0	0	0
SOUTH		398	872	1,270	822	516	1,337
EAST		72	173	245	169	105	275
TOTAL		471	1,045	1,516	991	621	1,612

TOTAL SUMMARY

Trip Origin / Destination Relative to Critical Junction	Plot	Trip Generation					
		AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot
NORTH		0	0	0	0	0	0
SOUTH		435	878	1,313	828	550	1,378
EAST		72	173	245	169	105	275
TOTAL		507	1,051	1,558	997	656	1,653

GEOGRAPHIC DISTRIBUTION

	Resi Traffic	Employment Traffic
North	13.60%	18.00%
West	41%	25%
South	24%	19%
East	22%	37%
	99.90%	99.90%

ACCESS DISTRIBUTION

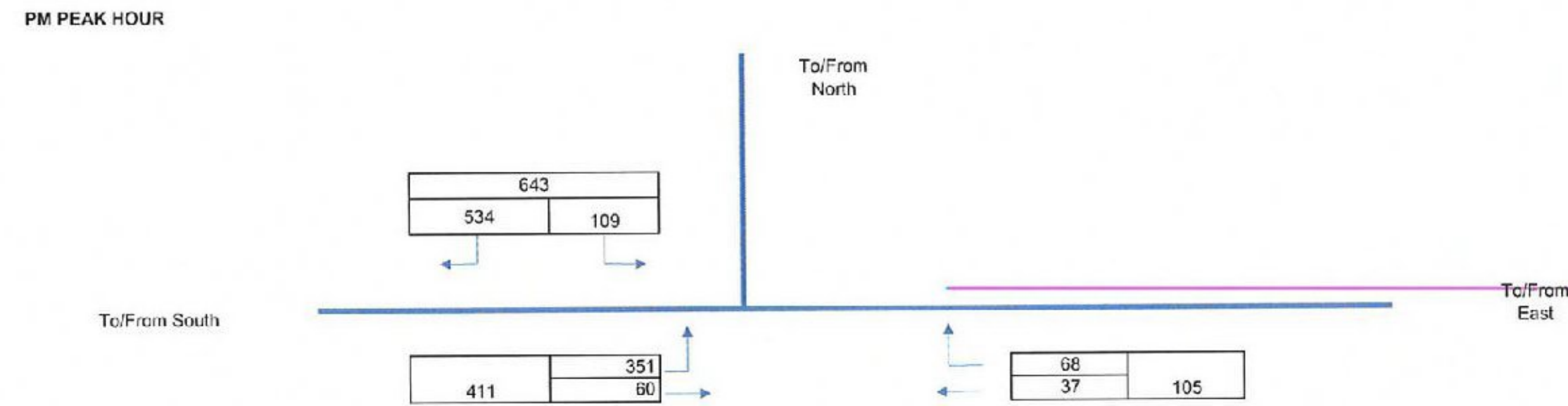
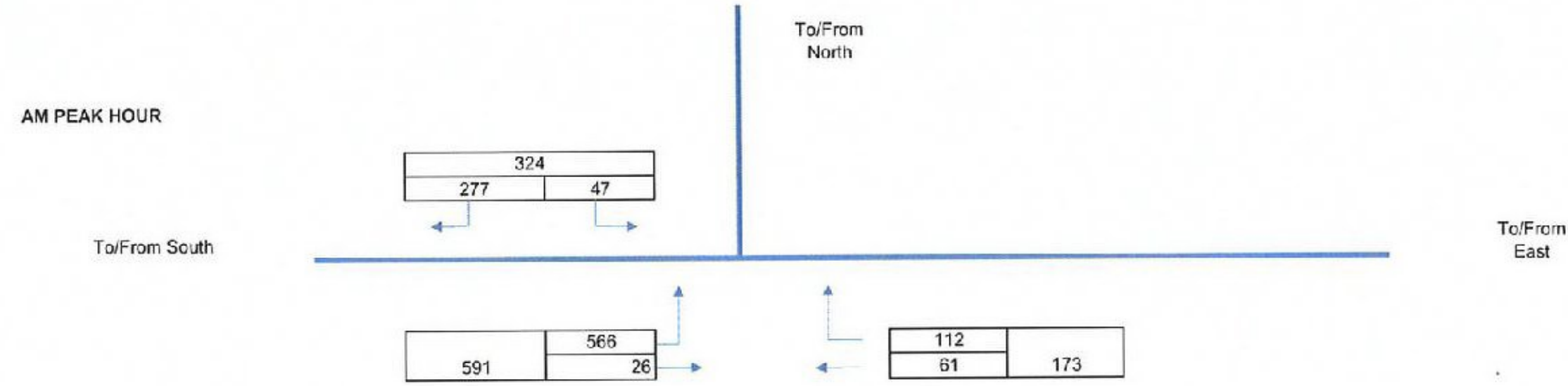
	North	West	South	East
Northern Access	100%	90%	50%	10%
Southern Access	0%	10%	50%	90%

NORTH / SOUTH ACCESS SPLIT

	Resi / Education				65%	Employment				54%
	North	West	South	East		North	West	South	East	
Northern Access	14%	37%	12%	2%		18%	23%	10%	4%	

Southern Access	0%	4%	12%	19%	35%	0%	3%	10%	33%	46%
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PLOT	via Northern Access						Southern Access					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	257	563	820	530	333	863	141	309	450	291	183
	EAST	47	112	158	109	68	177	26	61	87	60	37
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	20	3	23	3	19	22	17	3	19	3	16
	EAST	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	277	566	843	534	351	885	158	311	469	294	198
	EAST	47	112	158	109	68	177	26	61	87	60	37



5% Sensitivity Test

PLOT	via Northern Access						via Southern Access					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	13	28	41	27	17	43	7	15	22	15	9
	EAST	2	6	8	5	3	9	1	3	4	3	2
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	1	0	1	0	1	1	1	0	1	0	1
	EAST	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	14	28	42	27	18	44	8	16	23	15	10
	EAST	2	6	8	5	3	9	1	3	4	3	2

PLOT	via Northern Access						Southern Access					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	270	591	861	557	349	906	148	324	472	305	192
	EAST	49	117	166	115	71	186	27	64	91	63	39
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	21	3	24	4	20	23	18	3	20	3	17
	EAST	0	0	0	0	0	0	0	0	0	0	0
NORTH	0	0	0	0	0	0	0	0	0	0	0	0

Current Layout without flare i.e west-east priority

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-AC	2.1	21.68	0.68	C	88.9	557.51	1.27	F
Stream C-AB	0.2	7.75	0.16	A	0.1	6.98	0.08	A

Current Layout with 1PCU flare

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.1	6.98	0.09	A	8.2	265.56	1.09	F
Stream B-A	1.4	17.01	0.59	C	29.8	175.64	1.07	F
Stream C-AB	0.2	7.75	0.16	A	0.1	6.98	0.08	A

Changed priority (no flare) i.e west-north priority

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-AC	0.6	12.23	0.39	B	0.4	12.09	0.28	B
Stream C-AB	0.2	4.65	0.09	A	0.5	6.35	0.2	A

Changed Priority (with 1PCU flare)

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.2	8.45	0.14	A	0.1	8.93	0.09	A
Stream B-A	0.4	12.93	0.31	B	0.2	13.46	0.22	B
Stream C-AB	0.2	4.65	0.09	A	0.5	6.35	0.2	A

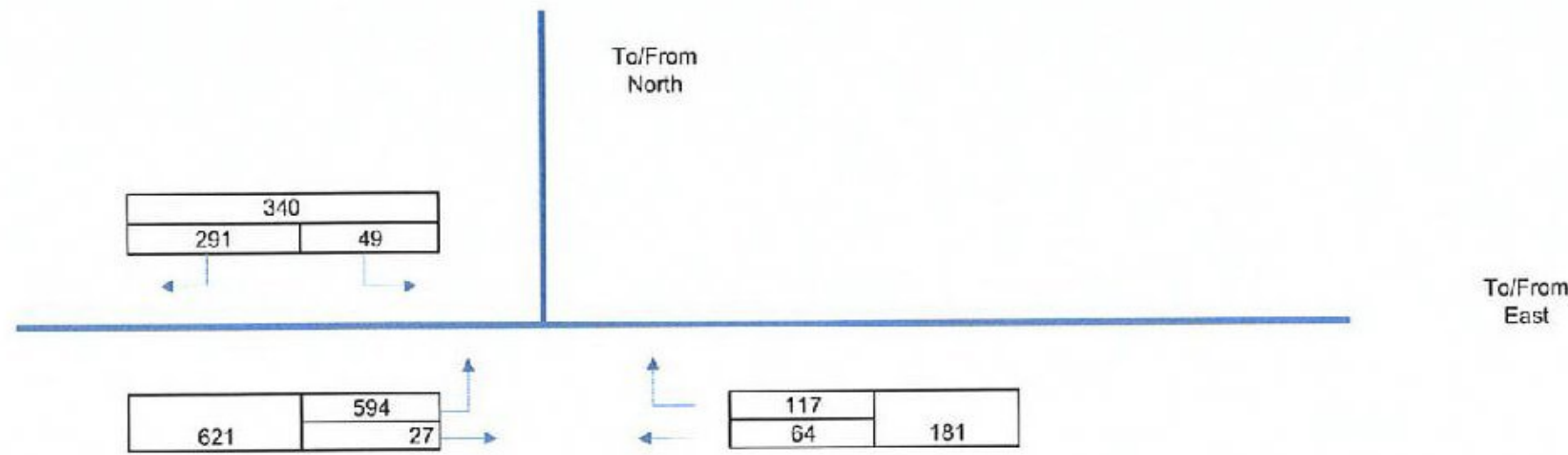
Roundabout

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Arm 1	1.7	9.55	0.63	A	0.8	6.02	0.43	A
Arm 2	0.6	6.24	0.38	A	3.3	17.18	0.77	C
Arm 3	0.3	5.89	0.23	A	0.2	6.64	0.17	A

Total	SOUTH	291	594	885	560	369	929	166	327	493	308	208	517
	EAST	49	117	166	115	71	186	27	64	91	63	39	102

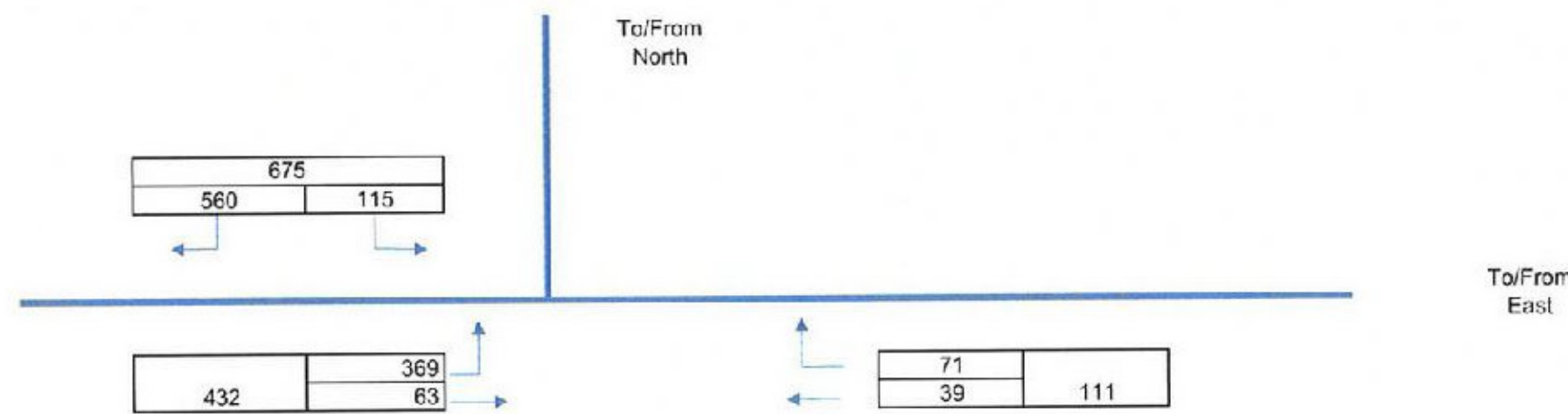
AM PEAK HOUR

To/From South



PM PEAK HOUR

To/From South



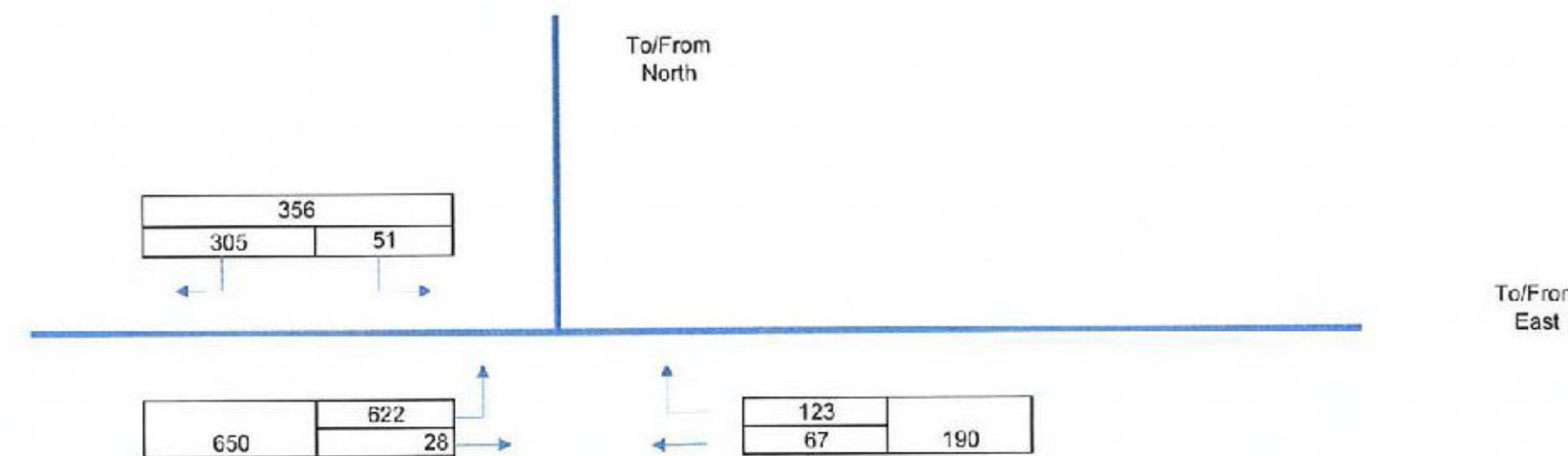
10% Sensivity Test

PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	26	56	82	53	33	86	14	31	45	29	18	47
	EAST	5	11	16	11	7	18	3	6	9	6	4	10
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	2	0	2	0	2	2	2	0	2	0	2	2
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	28	57	84	53	35	86	16	31	47	29	20	49
	EAST	5	11	16	11	7	18	3	6	9	6	4	10

PLOT		via Northern Access						Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	283	619	902	583	366	949	155	339	495	320	201	521
	EAST	51	123	174	120	75	195	28	67	95	66	41	107
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	22	4	25	4	21	24	18	3	21	3	17	21
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	305	622	927	587	387	973	174	342	516	323	218	541
	EAST	51	123	174	120	75	195	28	67	95	66	41	107

AM PEAK HOUR

To/From South



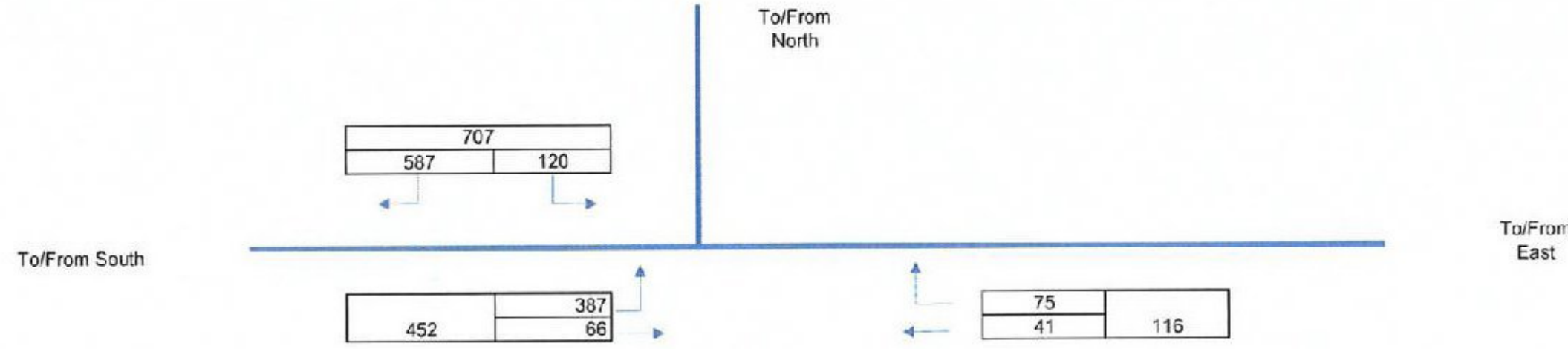
Changed Priority (with 1PCU flare)

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.2	8.71	0.15	A	0.1	9.21	0.1	A
Stream B-A	0.5	13.74	0.33	B	0.3	14.38	0.24	B
Stream C-AB	0.2	4.6	0.09	A	0.5	6.41	0.21	A

Changed Priority (with 1PCU flare)

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.2	9.04	0.16	A	0.1	9.56	0.11	A
Stream B-A	0.5	14.72	0.36	B	0.4	15.53	0.26	B
Stream C-AB	0.2	4.55	0.1	A	0.6	6.49	0.23	A

PM PEAK HOUR

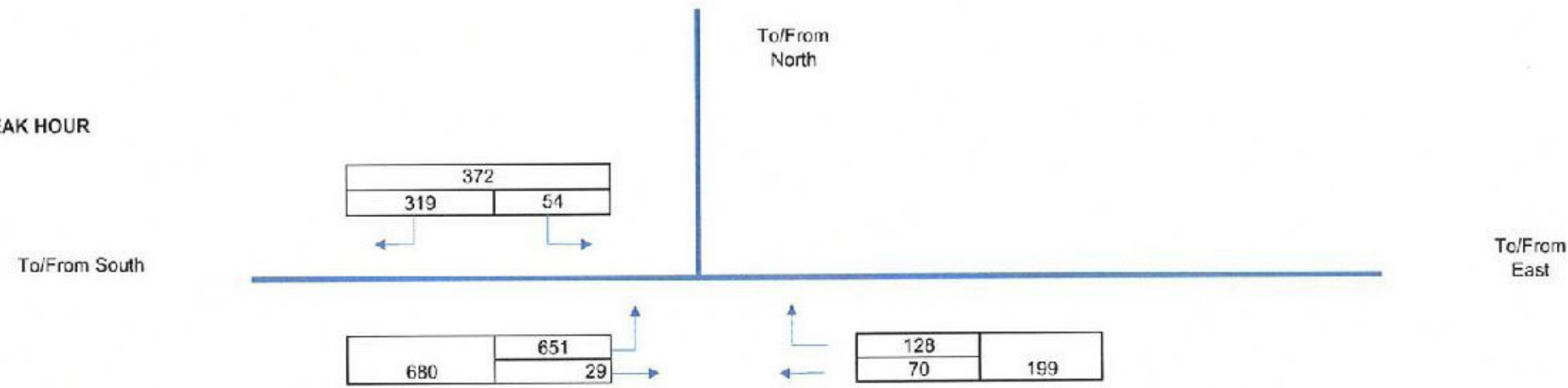


15% Sensitivity Test

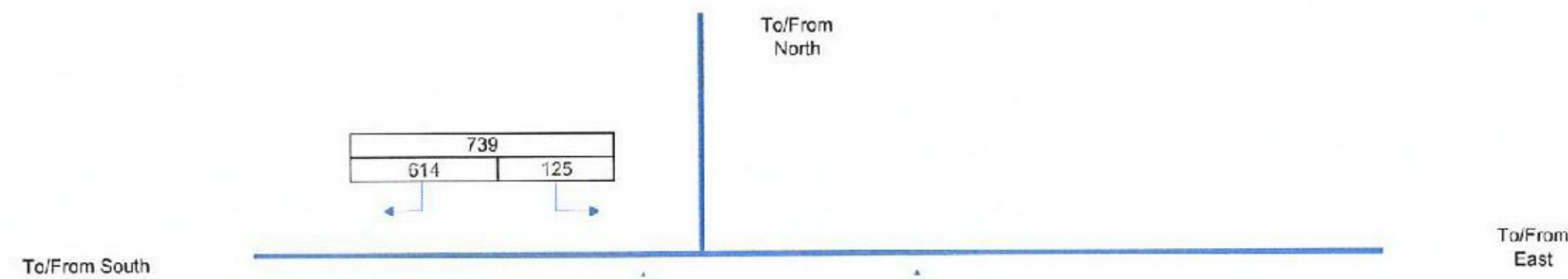
PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	39	84	123	80	50	129	21	46	67	44	27	71
	EAST	7	17	24	16	10	27	4	9	13	9	6	15
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	3	0	3	1	3	3	3	0	3	0	2	3
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	42	85	126	80	53	133	24	47	70	44	30	74
	EAST	7	17	24	16	10	27	4	9	13	9	6	15

PLOT		via Northern Access						Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	296	647	943	610	383	992	162	355	517	334	210	544
	EAST	54	128	182	125	78	204	29	70	100	69	43	112
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	23	4	27	4	22	26	19	3	22	3	18	21
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	0	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	319	651	969	614	404	1018	181	358	539	338	228	566
	EAST	54	128	182	125	78	204	29	70	100	69	43	112

AM PEAK HOUR



PM PEAK HOUR



Changed Priority (with 1PCU flare)

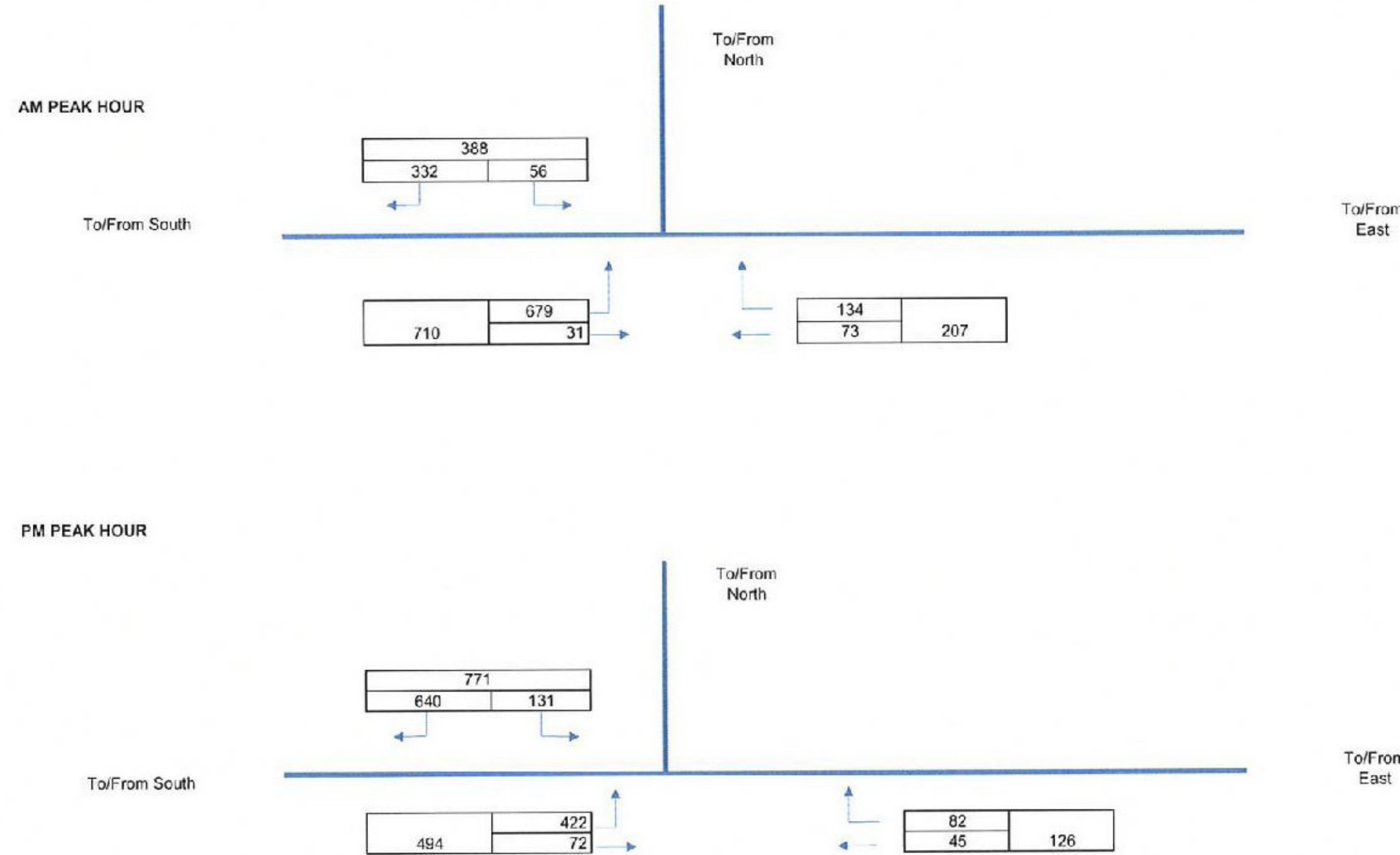
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.2	9.38	0.17	A	0.1	9.92	0.12	A
Stream B-A	0.6	15.81	0.38	C	0.4	16.77	0.29	C
Stream C-AB	0.2	4.5	0.11	A	0.7	6.59	0.25	A

473	404	78	121
	69	43	

20% Sensitivity Test

PLOT	via Northern Access						via Southern Access					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	51	113	164	106	67	173	28	62	90	58	37
	EAST	9	22	32	22	14	35	5	12	17	12	7
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	4	1	5	1	4	4	3	1	4	1	3
	EAST	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	55	113	169	107	70	177	32	62	94	59	40
	EAST	9	22	32	22	14	35	5	12	17	12	7

PLOT	via Northern Access						Southern Access					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	308	675	983	636	399	1035	189	370	540	349	219
	EAST	56	134	190	131	82	213	31	73	104	72	45
Employment	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	24	4	28	4	22	27	20	3	23	3	19
	EAST	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	0	0	0	0	0	0	0	0	0	0	0
	SOUTH	332	679	1011	640	422	1062	189	374	563	352	238
	EAST	56	134	190	131	82	213	31	73	104	72	45



Changed Priority (with 1PCU flare)

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.2	9.81	0.18	A	0.1	10.36	0.12	B
Stream B-A	0.7	17.16	0.41	C	0.5	18.34	0.32	C
Stream C-AB	0.3	4.46	0.12	A	0.8	6.7	0.27	A

Roundabout

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2500 Dwellings + 5%								
Arm 1	2	10.52	0.67	B	0.8	6.28	0.45	A
Arm 2	0.7	6.45	0.4	A	4.1	20.7	0.81	C
Arm 3	0.3	6.05	0.25	A	0.2	6.9	0.19	A
2500 Dwellings + 10%								
Arm 1	2.3	11.72	0.7	B	0.9	6.57	0.47	A
Arm 2	0.7	6.66	0.42	A	5.3	25.87	0.85	D
Arm 3	0.4	6.24	0.26	A	0.3	7.19	0.2	A
2500 Dwellings + 15%								
Arm 1	2.7	13.26	0.73	B	1	6.86	0.5	A
Arm 2	0.8	6.91	0.44	A	7.2	33.84	0.89	D
Arm 3	0.4	6.42	0.28	A	0.3	7.49	0.21	A
2500 Dwellings + 20%								
Arm 1	3.2	15.29	0.77	C	1.1	7.21	0.52	A
Arm 2	0.8	7.15	0.46	A	10.3	46.59	0.93	E
Arm 3	0.4	6.62	0.29	A	0.3	7.81	0.23	A

RESIDENTIAL

Plot Location Relative	Plot	Dwellings	Percentage	Dwellings	Trip Generation					
					AM Peak			PM Peak		
					Arr	Dep	Tot	Arr	Dep	Tot
RESIDENTIAL TRIP RATES					0.169	0.405	0.574	0.396	0.247	0.643
North	None	0	0.00%	0	0	0	0	0	0	0
	Sub-Total	0		0	0	0	0	0	0	0
South	A1	62	100%	62	10	25	36	25	15	40
	A7	162	100%	162	27	66	93	64	40	104
	A8	141	100%	141	24	57	81	56	35	91
	A16	26	100%	26	4	11	15	10	6	17
	Other	82	100%	82	14	33	47	32	20	53
	Sub-Total	473		473	80	192	272	187	117	304
East	A2	135	100%	135	23	55	77	53	33	87
	A3	115	100%	115	19	47	66	46	28	74
	A4	-	100%		0	0	0	0	0	0
	A5	69	100%	69	12	28	40	27	17	44
	A6	26	100%	26	4	11	15	10	6	17
	Other	82	100%	82	14	33	47	32	20	53
	Sub-Total	427		427	72	173	245	169	105	275
TOTAL					152	365	517	356	222	579

Does no. dwellings total 2,500? TRUE 0

EDUCATION

School Location Relative	Plot	External School Places	Trip Generation						
			AM Peak			PM Peak			
			Arr	Dep	Tot	Arr	Dep	Tot	
PRIMARY SCHOOL TRIP RATES			0.351	0.237	0.588	0.006	0.027	0.033	
North	Sub-Total	0	0	0	0	0	0	0	
South	2 Form Entry School	91	32	22	54	1	2	3	
	Sub-Total	91	32	22	54	1	2	3	
East	Sub-Total	0	0	0	0	0	0	0	
TOTAL			91	32	22	54	1	2	3

Total No. School Places 630
 No. Internal School Places 493
 No. External School Places 137

To/From South (no. external school places) 91
 To/From South (no. external school places) 46 *Not considered*

EMPLOYMENT

Employment Location	Plot	SQM	Trip Generation						
			AM Peak			PM Peak			
			Arr	Dep	Tot	Arr	Dep	Tot	
EMPLOYMENT TRIP RATES			1.225	0.198	1.423	0.212	1.151	1.363	
North	Sub-Total	0	0	0	0	0	0	0	
South	D1 Healthcare	3,000	37	6	43	6	35	41	
	Sub-Total	3,000	37	6	43	6	35	41	
East	Sub-Total	0	0	0	0	0	0	0	
TOTAL			3,000	37	6	43	6	35	41

RESI + EDUCATION

Trip Origin /Destinati	Plot	Trip Generation					
		AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot
NORTH		0	0	0	0	0	0
SOUTH		112	213	325	188	119	307
EAST		72	173	245	169	105	275
TOTAL		184	386	570	357	225	582

TOTAL SUMMARY

Trip Origin /Destinati	Plot	Trip Generation					
		AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot
NORTH		0	0	0	0	0	0
SOUTH		149	219	368	194	154	348
EAST		72	173	245	169	105	275
TOTAL		221	392	613	363	259	623

GEOGRAPHIC DISTRIBUTION

	Resi Traffic	Employment Traffic
North	13.60%	18.00%
West	41%	25%
South	24%	19%
East	22%	37%
	99.90%	99.90%

ACCESS DISTRIBUTION

	North	West	South	East
Northern A	100%	90%	50%	10%
Southern A	0%	10%	50%	90%

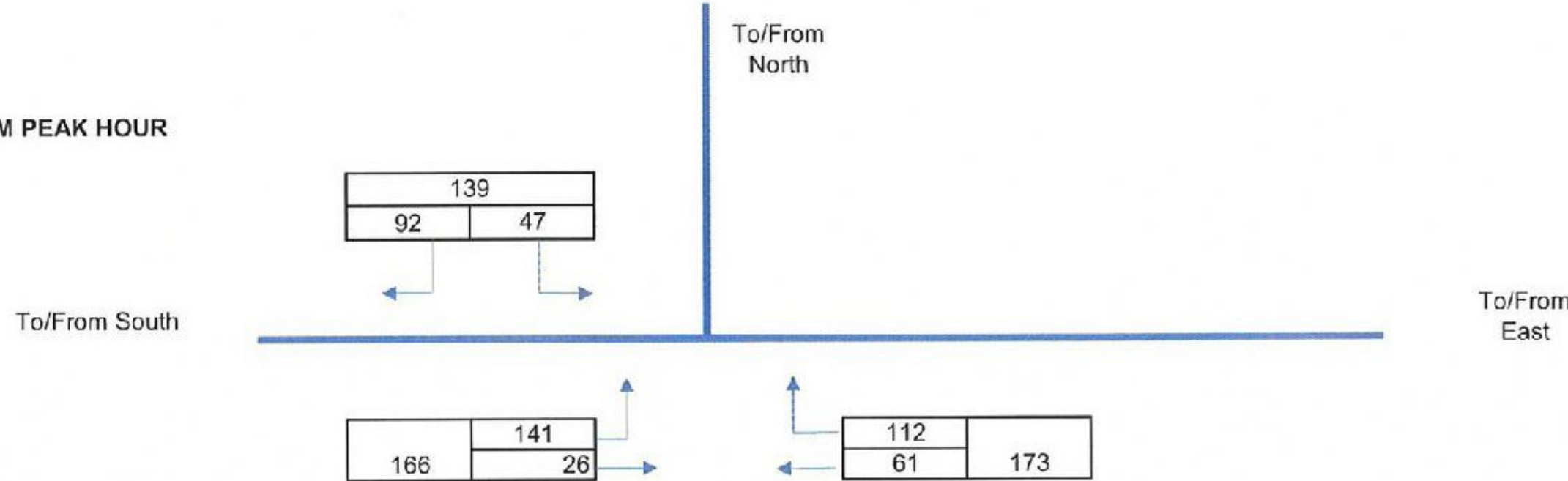
NORTH / SOUTH ACCESS SPLIT

Resi / Education				
	North	West	South	East
Northern A	14%	37%	12%	2%
Southern A	0%	4%	12%	19%

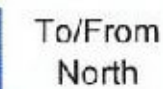
Employment				
	North	West	South	East
Northern A	18%	23%	10%	4%
Southern A	0%	3%	10%	33%

PLOT	via Northern Access						Southern Access					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Educat	0	0	0	0	0	0	0	0	0	0	0	0
	72	138	210	121	77	198	40	75	115	66	42	109
	47	112	158	109	68	177	26	61	87	60	37	97
Employment	0	0	0	0	0	0	0	0	0	0	0	0
	20	3	23	3	19	22	17	3	19	3	16	19
	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
	92	141	233	125	96	220	56	78	135	69	58	127
	47	112	158	109	68	177	26	61	87	60	37	97

AM PEAK HOUR



PM PEAK HOUR



Existing layout (without flare)

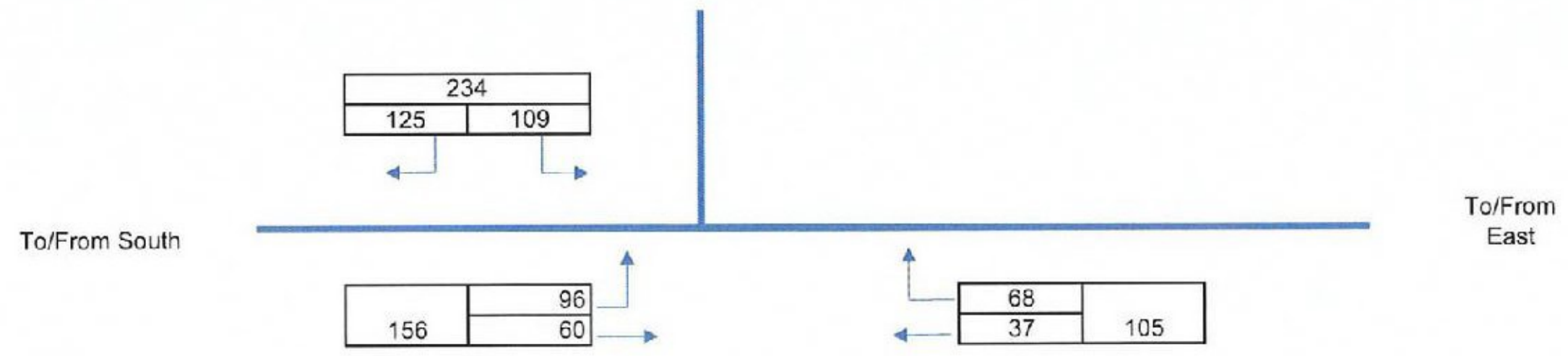
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-AC	0.3	8.18	0.26	A	0.7	9.78	0.41	A
Stream C-AB	0.3	7.48	0.22	A	0.2	6.83	0.13	A

Existing layout (with 1 PCU flare)

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.1	4.99	0.07	A	0.2	5.72	0.16	A
Stream B-A	0.2	7.89	0.18	A	0.3	8.23	0.24	A
Stream C-AB	0.3	7.48	0.22	A	0.2	6.86	0.13	A

Roundabout

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Arm 1	0.2	4.29	0.18	A	0.2	4.15	0.16	A
Arm 2	0.2	4.61	0.16	A	0.4	5.47	0.28	A
Arm 3	0.3	5.04	0.21	A	0.1	4.68	0.13	A

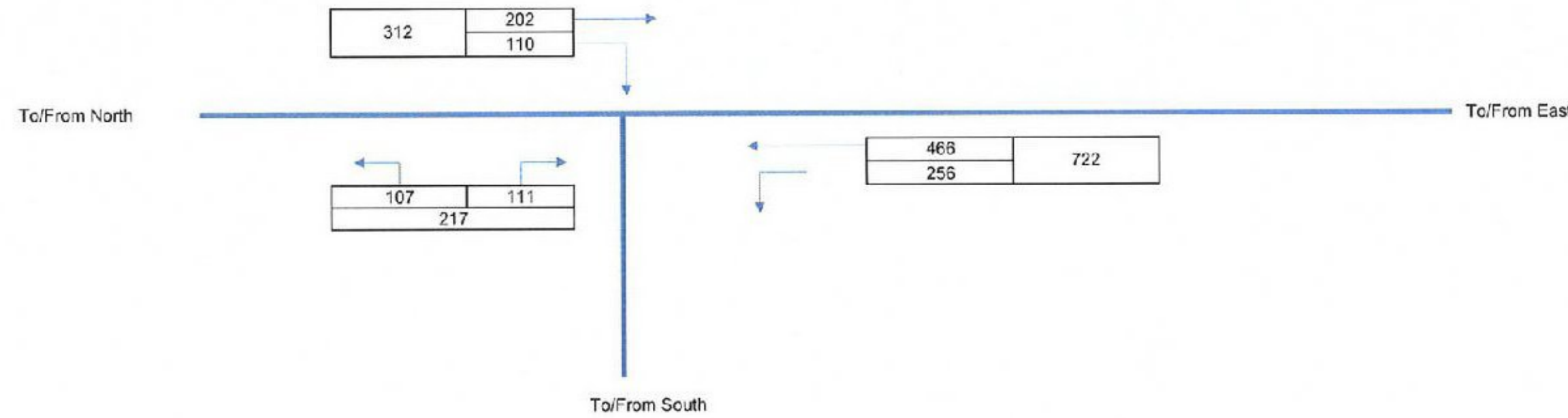


Northern Access	14%	37%	12%	2%	65%
Southern Access	0%	4%	12%	19%	35%

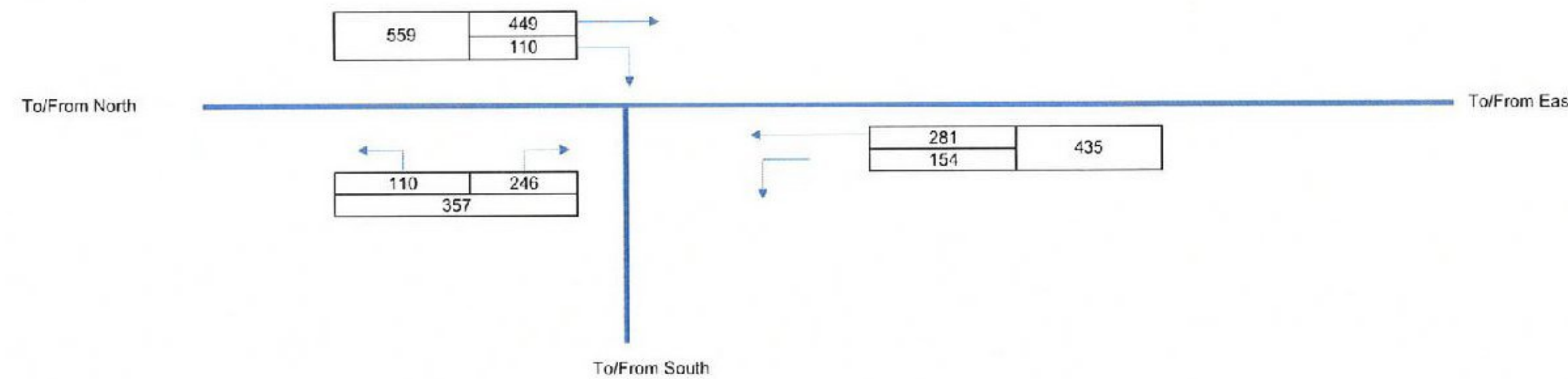
	18%	23%	10%	4%	54%
	0%	3%	10%	33%	46%

PLOT	via Northern Access						via Southern Access						
	AM Peak			PM Peak			AM Peak			PM Peak			
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	
Resi / Education	NORTH	81	159	240	142	90	232	45	87	132	78	49	127
	SOUTH	20	49	70	48	30	78	11	27	38	26	16	43
	EAST	202	466	668	449	281	730	111	256	366	246	154	400
Employment	NORTH	24	4	28	4	22	26	13	2	15	2	12	14
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	105	163	268	146	112	259	58	89	147	80	62	142
	SOUTH	20	49	70	48	30	78	11	27	38	26	16	43
	EAST	202	466	668	449	281	730	111	256	366	246	154	400

AM PEAK HOUR



PM PEAK HOUR



Existing Layout without flare i.e west-east priority

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-AC	1	15.85	0.5	C	4.4	42.67	0.82	E
Stream C-AB	0.6	7.94	0.28	A	0.7	5.77	0.29	A

Existing Layout with flare

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.2	7.23	0.18	A	0.3	9.56	0.23	A
Stream B-A	0.4	13.3	0.3	B	1.8	24.02	0.63	C
Stream C-AB	0.6	7.96	0.28	A	0.7	5.77	0.29	A

Roundabout

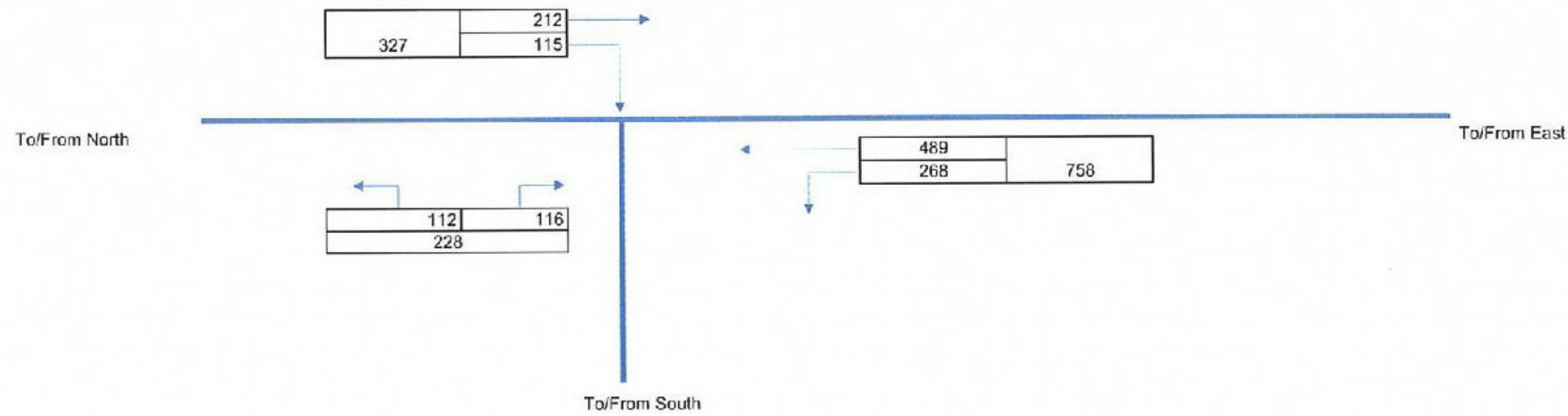
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2019								
Arm 1	4	18.73	0.8	C	1	7.33	0.48	A
Arm 2	0.5	8.09	0.34	A	1	9.05	0.48	A
Arm 3	0.6	6.08	0.36	A	2.3	13.75	0.69	B

5% Sensitivity Test

PLOT	via Northern Access						via Southern Access						
	AM Peak			PM Peak			AM Peak			PM Peak			
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	
Resi / Education	NORTH	4	8	12	7	5	12	2	4	7	4	2	6
	SOUTH	1	2	3	2	1	4	1	1	2	1	1	2
	EAST	10	23	33	22	14	36	6	13	18	12	8	20
Employment	NORTH	1	0	1	0	1	1	1	0	1	0	1	1
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	5	8	13	7	6	13	3	4	7	4	3	7
	SOUTH	1	2	3	2	1	4	1	1	2	1	1	2
	EAST	10	23	33	22	14	36	6	13	18	12	8	20

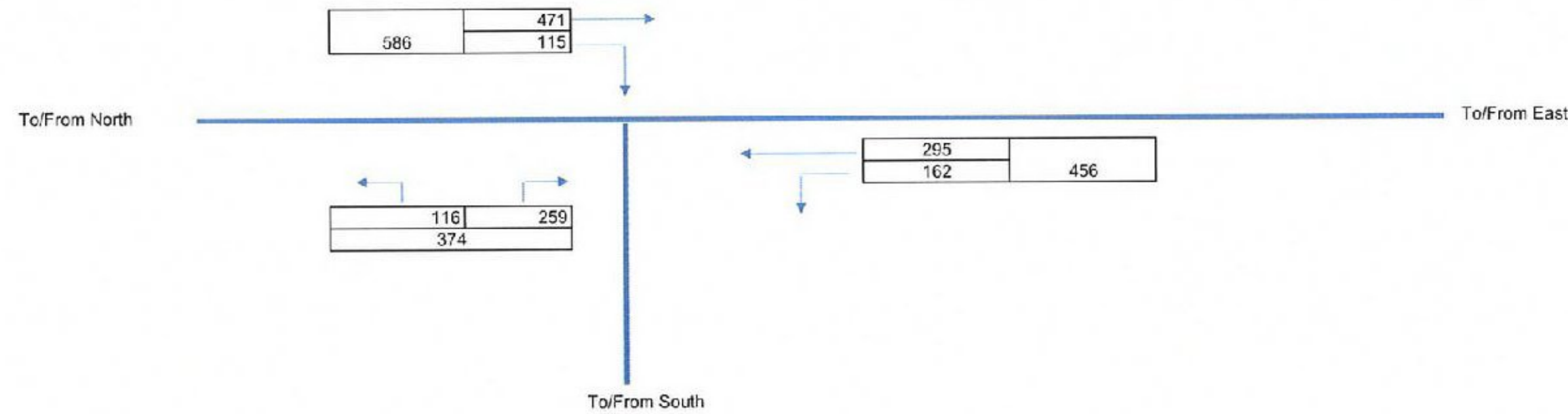
PLOT	via Northern Access						via Southern Access						
	AM Peak			PM Peak			AM Peak			PM Peak			
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	
Resi / Education	NORTH	85	167	252	149	95	244	47	92	138	82	52	134
	SOUTH	21	52	73	50	31	82	12	26	40	28	17	45
	EAST	212	489	701	471	295	766	116	268	385	259	162	420

Employment	NORTH	25	4	29	4	23	28	14	2	16	2	13	15
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	110	171	281	154	118	272	60	94	154	84	65	149
	SOUTH	21	52	73	50	31	82	12	28	40	28	17	45
	EAST	212	489	701	471	295	766	116	268	385	259	162	420



Existing Layout with flare

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2018							
Stream B-C	0.3	7.58	0.2	A	0.4	11.47	0.28	B
Stream B-A	0.5	14.35	0.33	B	2.3	29.61	0.69	D
Stream C-AB	0.6	8.2	0.3	A	0.8	5.88	0.31	A



10% Sensitivity Test

PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	8	16	24	14	9	23	4	9	13	8	5	13
	SOUTH	2	5	7	5	3	8	1	3	4	3	2	4
	EAST	20	47	67	45	28	73	11	26	37	25	15	40
Employment	NORTH	2	0	3	0	2	3	1	0	2	0	1	1
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	10	16	27	15	11	26	6	9	15	8	6	14
	SOUTH	2	5	7	5	3	8	1	3	4	3	2	4
	EAST	20	47	67	45	28	73	11	26	37	25	15	40

PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	89	175	264	156	99	255	49	96	145	86	54	140
	SOUTH	23	54	76	53	33	86	12	30	42	29	18	47
	EAST	222	513	735	494	309	803	122	281	403	271	169	440
Employment	NORTH	26	4	30	5	25	29	14	2	17	2	13	16
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	115	179	295	161	124	285	63	98	162	88	68	156
	SOUTH	23	54	76	53	33	86	12	30	42	29	18	47
	EAST	222	513	735	494	309	803	122	281	403	271	169	440

