

Junctions 9
ARCADY 9 - Roundabout Module
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Path: H:_Planning 2\Current Jobs\SPRust(BrookLane).1\Analysis\Arcady

Report generation date: 19/04/2017 10:07:03

»2017 Observed Weekday, PM

»2019 Base + Com Dev, PM

»2022 Base + Com Dev, PM

»2019 Base + Com Dev + Dev, PM

»2022 Base + Com Dev + Dev, PM

Summary of junction performance

	PM				
	Queue (Veh)	Delay (min)	RFC	LOS	Network Residual Capacity
	2017 Observed Weekday				
Arm A	1.4	0.07	0.59	A	20 % [Arm E]
Arm B	1.3	0.14	0.56	A	
Arm C	1.2	0.12	0.54	A	
Arm D	2.3	0.10	0.70	A	
Arm E	0.8	0.20	0.45	B	
	2019 Base + Com Dev				
Arm A	1.7	0.08	0.63	A	16 % [Arm E]
Arm B	1.5	0.16	0.60	A	
Arm C	1.4	0.13	0.58	A	
Arm D	2.5	0.11	0.72	A	
Arm E	0.9	0.22	0.49	B	
	2022 Base + Com Dev				
Arm A	2.0	0.09	0.67	A	11 % [Arm E]
Arm B	1.8	0.19	0.65	B	
Arm C	1.6	0.15	0.62	A	
Arm D	3.1	0.13	0.76	A	
Arm E	1.2	0.27	0.55	C	
	2019 Base + Com Dev + Dev				
Arm A	1.8	0.08	0.64	A	15 % [Arm E]
Arm B	1.5	0.17	0.60	A	
Arm C	1.4	0.13	0.58	A	
Arm D	2.6	0.11	0.73	A	
Arm E	1.0	0.23	0.50	B	
	2022 Base + Com Dev + Dev				
Arm A	2.1	0.09	0.68	A	10 % [Arm E]
Arm B	1.9	0.20	0.66	B	
Arm C	1.7	0.16	0.63	A	
Arm D	3.2	0.13	0.76	A	
Arm E	1.2	0.28	0.56	C	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	The Body Shop Roundabout
Location	Rustington, West Sussex
Site number	
Date	19/09/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MAYERBROWN2Kloneaves
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	min	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)
5.75			✓	Delay	0.85	0.60	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017 Observed Weekday	PM	ONE HOUR	16:15	17:45	15	✓
D2	2019 Base + Com Dev	PM	ONE HOUR	16:15	17:45	15	✓
D3	2022 Base + Com Dev	PM	ONE HOUR	16:15	17:45	15	✓
D4	2019 Base + Com Dev + Dev	PM	ONE HOUR	16:15	17:45	15	✓
D5	2022 Base + Com Dev + Dev	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2017 Observed Weekday, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Standard Roundabout	A,B,C,D,E	0.11	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	20	Arm E

Arms

Arms

Arm	Name	Description
A	A259 East	
B	B2187 Worthing Road	
C	B2187 Horsham Road	
D	A259 Worthing Road	
E	Norway Lane	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	7.20	10.00	21.7	25.0	75.0	42.0	
B	3.35	7.00	21.7	21.0	75.0	35.0	
C	3.70	7.60	14.5	33.0	75.0	35.0	
D	3.75	11.70	22.5	37.6	75.0	36.0	
E	3.50	7.00	5.6	18.5	75.0	43.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.629	2693
B	0.484	1708
C	0.496	1760
D	0.573	2272
E	0.421	1345

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017 Observed Weekday	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1138	100.000
B		ONE HOUR	✓	487	100.000
C		ONE HOUR	✓	547	100.000
D		ONE HOUR	✓	1240	100.000
E		ONE HOUR	✓	229	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		A	B	C	D	E
From	A	8	16	411	695	8
	B	14	2	151	315	5
	C	304	90	0	144	9
	D	684	439	90	6	21
	E	106	24	35	64	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		A	B	C	D	E
From	A	13	0	0	2	0
	B	0	0	5	4	0
	C	1	7	0	3	0
	D	1	3	1	0	10
	E	4	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.59	0.07	1.4	A	1044	1566
B	0.56	0.14	1.3	A	447	670
C	0.54	0.12	1.2	A	502	753
D	0.70	0.10	2.3	A	1138	1707
E	0.45	0.20	0.8	B	210	315

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	857	214	562	2299	0.373	854	837	0.0	0.6	0.041	A
B	367	92	988	1174	0.312	365	428	0.0	0.5	0.074	A
C	412	103	838	1301	0.317	410	515	0.0	0.5	0.067	A
D	934	233	330	2040	0.458	930	918	0.0	0.8	0.054	A
E	172	43	1228	796	0.217	171	32	0.0	0.3	0.096	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1023	256	673	2228	0.459	1022	1002	0.6	0.8	0.050	A
B	438	109	1183	1083	0.404	437	513	0.5	0.7	0.093	A
C	492	123	1003	1219	0.403	491	617	0.5	0.7	0.082	A
D	1115	279	395	2003	0.557	1113	1099	0.8	1.2	0.067	A
E	206	51	1469	695	0.296	205	39	0.3	0.4	0.122	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1253	313	823	2132	0.588	1251	1225	0.8	1.4	0.068	A
B	536	134	1447	959	0.559	534	627	0.7	1.2	0.141	A
C	602	151	1226	1108	0.544	600	754	0.7	1.2	0.118	A
D	1365	341	483	1952	0.699	1361	1344	1.2	2.3	0.101	A
E	252	63	1797	558	0.452	251	47	0.4	0.8	0.194	B

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1253	313	826	2130	0.588	1253	1229	1.4	1.4	0.068	A
B	536	134	1450	957	0.560	536	629	1.2	1.3	0.143	A
C	602	151	1230	1106	0.544	602	756	1.2	1.2	0.119	A
D	1365	341	484	1951	0.700	1365	1348	2.3	2.3	0.102	A
E	252	63	1802	556	0.454	252	47	0.8	0.8	0.197	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1023	256	677	2225	0.460	1025	1007	1.4	0.9	0.050	A
B	438	109	1187	1081	0.405	440	515	1.3	0.7	0.094	A
C	492	123	1008	1216	0.404	494	620	1.2	0.7	0.083	A
D	1115	279	397	2001	0.557	1119	1104	2.3	1.3	0.068	A
E	206	51	1477	692	0.298	207	39	0.8	0.4	0.124	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	857	214	566	2297	0.373	858	842	0.9	0.6	0.042	A
B	367	92	993	1172	0.313	368	431	0.7	0.5	0.075	A
C	412	103	842	1299	0.317	413	518	0.7	0.5	0.068	A
D	934	233	332	2039	0.458	935	923	1.3	0.9	0.054	A
E	172	43	1235	793	0.217	173	32	0.4	0.3	0.097	A

2019 Base + Com Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Standard Roundabout	A,B,C,D,E	0.12	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	16	Arm E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base + Com Dev	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1227	100.000
B		ONE HOUR	✓	501	100.000
C		ONE HOUR	✓	566	100.000
D		ONE HOUR	✓	1255	100.000
E		ONE HOUR	✓	236	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
	A	B	C	D	E	
From	A	19	21	446	733	8
	B	15	5	155	321	5
	C	328	93	0	136	9
	D	705	449	73	6	22
	E	109	25	36	66	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		A	B	C	D	E
From	A	5	0	0	2	0
	B	0	0	5	4	0
	C	1	6	0	3	0
	D	1	3	1	0	9
	E	4	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.63	0.08	1.7	A	1126	1689
B	0.60	0.16	1.5	A	460	690
C	0.58	0.13	1.4	A	519	779
D	0.72	0.11	2.5	A	1152	1727
E	0.49	0.22	0.9	B	217	325

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	924	231	564	2299	0.402	921	882	0.0	0.7	0.043	A
B	377	94	1041	1150	0.328	375	445	0.0	0.5	0.077	A
C	426	107	884	1281	0.333	424	533	0.0	0.5	0.070	A
D	945	236	361	2023	0.467	941	946	0.0	0.9	0.055	A
E	178	44	1270	779	0.228	177	33	0.0	0.3	0.099	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1103	276	676	2228	0.495	1102	1055	0.7	1.0	0.053	A
B	450	113	1245	1054	0.427	449	532	0.5	0.7	0.099	A
C	509	127	1057	1195	0.426	508	637	0.5	0.7	0.087	A
D	1128	282	433	1982	0.569	1126	1133	0.9	1.3	0.070	A
E	212	53	1519	675	0.315	212	39	0.3	0.5	0.129	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1351	338	826	2132	0.634	1348	1290	1.0	1.7	0.076	A
B	552	138	1523	923	0.598	549	651	0.7	1.4	0.159	A
C	623	156	1293	1078	0.578	621	779	0.7	1.3	0.131	A
D	1382	345	529	1927	0.717	1377	1385	1.3	2.5	0.108	A
E	260	65	1857	533	0.487	258	48	0.5	0.9	0.216	B

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1351	338	829	2130	0.634	1351	1295	1.7	1.7	0.077	A
B	552	138	1527	921	0.599	552	653	1.4	1.5	0.162	A
C	623	156	1297	1075	0.579	623	782	1.3	1.4	0.133	A
D	1382	345	531	1926	0.718	1382	1389	2.5	2.5	0.110	A
E	260	65	1864	531	0.490	260	48	0.9	0.9	0.221	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1103	276	680	2225	0.496	1106	1062	1.7	1.0	0.054	A
B	450	113	1251	1051	0.428	453	535	1.5	0.8	0.101	A
C	509	127	1063	1192	0.427	511	641	1.4	0.8	0.089	A
D	1128	282	435	1980	0.570	1133	1139	2.5	1.3	0.071	A
E	212	53	1529	671	0.316	214	40	0.9	0.5	0.132	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	924	231	568	2296	0.402	925	887	1.0	0.7	0.044	A
B	377	94	1046	1148	0.329	378	447	0.8	0.5	0.078	A
C	426	107	889	1278	0.333	427	536	0.8	0.5	0.071	A
D	945	236	364	2021	0.467	947	952	1.3	0.9	0.056	A
E	178	44	1277	776	0.229	178	33	0.5	0.3	0.101	A

2022 Base + Com Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Standard Roundabout	A,B,C,D,E	0.14	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	11	Arm E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2022 Base + Com Dev	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1281	100.000
B		ONE HOUR	✓	524	100.000
C		ONE HOUR	✓	592	100.000
D		ONE HOUR	✓	1314	100.000
E		ONE HOUR	✓	247	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
	A	B	C	D	E	
From	A	20	22	465	765	9
	B	16	5	162	336	5
	C	342	97	0	143	10
	D	738	470	77	6	23
	E	114	26	38	69	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		A	B	C	D	E
From	A	5	0	0	2	0
	B	0	0	6	4	0
	C	1	6	0	3	0
	D	1	3	1	0	9
	E	4	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.67	0.09	2.0	A	1175	1763
B	0.65	0.19	1.8	B	481	721
C	0.62	0.15	1.6	A	543	815
D	0.76	0.13	3.1	A	1206	1809
E	0.55	0.27	1.2	C	227	340

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	964	241	591	2282	0.423	961	922	0.0	0.7	0.045	A
B	394	99	1087	1125	0.351	392	465	0.0	0.5	0.082	A
C	446	111	923	1261	0.353	444	556	0.0	0.5	0.073	A
D	989	247	378	2013	0.491	985	989	0.0	1.0	0.058	A
E	186	46	1328	755	0.246	185	35	0.0	0.3	0.105	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1152	288	707	2208	0.522	1150	1104	0.7	1.1	0.057	A
B	471	118	1301	1025	0.460	470	556	0.5	0.8	0.108	A
C	532	133	1105	1171	0.454	531	666	0.5	0.8	0.094	A
D	1181	295	452	1971	0.599	1179	1184	1.0	1.5	0.076	A
E	222	56	1589	646	0.344	221	42	0.3	0.5	0.141	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1410	353	863	2108	0.669	1407	1348	1.1	2.0	0.085	A
B	577	144	1590	889	0.649	573	680	0.8	1.8	0.188	B
C	652	163	1350	1049	0.621	649	814	0.8	1.6	0.149	A
D	1447	362	552	1913	0.756	1441	1446	1.5	3.0	0.125	A
E	272	68	1941	498	0.546	269	52	0.5	1.2	0.259	C

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1410	353	867	2105	0.670	1410	1354	2.0	2.0	0.086	A
B	577	144	1595	886	0.651	577	683	1.8	1.8	0.194	B
C	652	163	1355	1046	0.623	652	817	1.6	1.6	0.152	A
D	1447	362	555	1912	0.757	1447	1452	3.0	3.1	0.129	A
E	272	68	1950	495	0.550	272	52	1.2	1.2	0.269	C

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1152	288	713	2204	0.523	1155	1112	2.0	1.1	0.057	A
B	471	118	1308	1021	0.461	475	560	1.8	0.9	0.111	A
C	532	133	1112	1167	0.456	535	670	1.6	0.8	0.095	A
D	1181	295	456	1969	0.600	1187	1192	3.1	1.5	0.077	A
E	222	56	1601	641	0.347	225	42	1.2	0.5	0.145	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	964	241	595	2279	0.423	966	928	1.1	0.7	0.046	A
B	394	99	1093	1122	0.351	396	468	0.9	0.5	0.083	A
C	446	111	929	1258	0.354	447	560	0.8	0.6	0.074	A
D	989	247	380	2012	0.492	991	995	1.5	1.0	0.059	A
E	186	46	1336	751	0.248	187	35	0.5	0.3	0.107	A

2019 Base + Com Dev + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Standard Roundabout	A,B,C,D,E	0.12	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	15	Arm E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2019 Base + Com Dev + Dev	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1247	100.000
B		ONE HOUR	✓	501	100.000
C		ONE HOUR	✓	567	100.000
D		ONE HOUR	✓	1263	100.000
E		ONE HOUR	✓	236	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
	A	B	C	D	E	
From	A	34	21	447	737	8
	B	15	5	155	321	5
	C	329	93	0	136	9
	D	713	449	73	6	22
	E	109	25	36	66	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		A	B	C	D	E
From	A	3	0	0	1	0
	B	0	0	5	4	0
	C	1	6	0	3	0
	D	1	3	1	0	9
	E	4	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.64	0.08	1.8	A	1144	1716
B	0.60	0.17	1.5	A	460	690
C	0.58	0.13	1.4	A	520	780
D	0.73	0.11	2.6	A	1159	1738
E	0.50	0.23	1.0	B	217	325

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	939	235	564	2312	0.406	936	900	0.0	0.7	0.043	A
B	377	94	1056	1146	0.329	375	445	0.0	0.5	0.078	A
C	427	107	898	1277	0.334	425	533	0.0	0.5	0.070	A
D	951	238	373	2016	0.472	947	949	0.0	0.9	0.056	A
E	178	44	1288	772	0.230	176	33	0.0	0.3	0.101	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1121	280	676	2241	0.500	1120	1077	0.7	1.0	0.053	A
B	450	113	1263	1049	0.430	449	532	0.5	0.7	0.100	A
C	510	127	1074	1189	0.429	509	638	0.5	0.7	0.088	A
D	1135	284	447	1974	0.575	1134	1136	0.9	1.3	0.071	A
E	212	53	1541	666	0.319	211	39	0.3	0.5	0.132	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1373	343	825	2145	0.640	1370	1316	1.0	1.8	0.077	A
B	552	138	1545	917	0.602	549	650	0.7	1.5	0.162	A
C	624	156	1313	1071	0.583	622	780	0.7	1.4	0.133	A
D	1391	348	546	1917	0.725	1386	1389	1.3	2.6	0.112	A
E	260	65	1884	523	0.497	258	48	0.5	1.0	0.225	B

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1373	343	829	2142	0.641	1373	1321	1.8	1.8	0.078	A
B	552	138	1549	915	0.603	552	653	1.5	1.5	0.165	A
C	624	156	1318	1069	0.584	624	783	1.4	1.4	0.135	A
D	1391	348	548	1916	0.726	1390	1394	2.6	2.6	0.114	A
E	260	65	1890	520	0.500	260	48	1.0	1.0	0.231	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1121	280	681	2238	0.501	1124	1084	1.8	1.0	0.054	A
B	450	113	1269	1046	0.431	453	536	1.5	0.8	0.102	A
C	510	127	1081	1186	0.430	512	642	1.4	0.8	0.089	A
D	1135	284	450	1972	0.576	1140	1143	2.6	1.4	0.073	A
E	212	53	1550	662	0.321	214	40	1.0	0.5	0.135	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	939	235	568	2310	0.406	940	905	1.0	0.7	0.044	A
B	377	94	1061	1143	0.330	378	447	0.8	0.5	0.079	A
C	427	107	903	1274	0.335	428	536	0.8	0.5	0.071	A
D	951	238	376	2015	0.472	953	955	1.4	0.9	0.057	A
E	178	44	1295	768	0.231	178	33	0.5	0.3	0.102	A

2022 Base + Com Dev + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Standard Roundabout	A,B,C,D,E	0.14	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	10	Arm E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2022 Base + Com Dev + Dev	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1301	100.000
B		ONE HOUR	✓	524	100.000
C		ONE HOUR	✓	593	100.000
D		ONE HOUR	✓	1321	100.000
E		ONE HOUR	✓	247	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
	A	B	C	D	E	
From	A	34	22	466	770	9
	B	16	5	162	336	5
	C	343	97	0	143	10
	D	745	470	77	6	23
	E	114	26	38	69	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		A	B	C	D	E
From	A	3	0	0	2	0
	B	0	0	6	4	0
	C	1	6	0	3	0
	D	1	3	1	0	9
	E	4	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.68	0.09	2.1	A	1194	1791
B	0.66	0.20	1.9	B	481	721
C	0.63	0.16	1.7	A	544	816
D	0.76	0.13	3.2	A	1212	1818
E	0.56	0.28	1.2	C	227	340

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	979	245	591	2282	0.429	976	938	0.0	0.7	0.046	A
B	394	99	1102	1118	0.353	392	465	0.0	0.5	0.082	A
C	446	112	937	1254	0.356	444	557	0.0	0.5	0.074	A
D	995	249	389	2007	0.495	991	993	0.0	1.0	0.059	A
E	186	46	1344	748	0.249	185	35	0.0	0.3	0.106	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1170	292	707	2208	0.530	1168	1123	0.7	1.1	0.058	A
B	471	118	1319	1016	0.463	470	556	0.5	0.9	0.110	A
C	533	133	1122	1163	0.458	532	667	0.5	0.8	0.095	A
D	1188	297	466	1963	0.605	1185	1188	1.0	1.5	0.077	A
E	222	56	1609	637	0.348	221	42	0.3	0.5	0.144	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1432	358	863	2108	0.679	1429	1371	1.1	2.1	0.088	A
B	577	144	1612	879	0.657	573	679	0.9	1.8	0.194	B
C	653	163	1370	1039	0.628	650	815	0.8	1.6	0.153	A
D	1454	364	569	1904	0.764	1448	1451	1.5	3.1	0.130	A
E	272	68	1965	489	0.557	269	52	0.5	1.2	0.270	C

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1432	358	867	2105	0.680	1432	1378	2.1	2.1	0.089	A
B	577	144	1617	876	0.658	577	683	1.8	1.9	0.200	B
C	653	163	1376	1036	0.630	653	818	1.6	1.7	0.156	A
D	1454	364	571	1902	0.765	1454	1457	3.1	3.2	0.134	A
E	272	68	1974	485	0.561	272	52	1.2	1.2	0.281	C

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	1170	292	713	2204	0.531	1173	1133	2.1	1.1	0.058	A
B	471	118	1326	1013	0.465	475	561	1.9	0.9	0.112	A
C	533	133	1130	1159	0.460	536	671	1.7	0.9	0.097	A
D	1188	297	469	1961	0.606	1194	1197	3.2	1.6	0.079	A
E	222	56	1621	632	0.351	225	42	1.2	0.5	0.148	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	979	245	595	2280	0.430	981	945	1.1	0.8	0.046	A
B	394	99	1108	1115	0.354	396	468	0.9	0.6	0.084	A
C	446	112	943	1251	0.357	448	561	0.9	0.6	0.075	A
D	995	249	392	2005	0.496	997	999	1.6	1.0	0.060	A
E	186	46	1353	744	0.250	187	35	0.5	0.3	0.108	A