

ARCADY 7
Version: 7.0.0.99 [10 July 2009] © Copyright Transport Research Laboratory 2009
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File: P:\Projects\7000-0710-64 Barton Farm, Winchester\ARCADY\October 2009\Three Maids Hill Roundabout\2009 AM Base + Dev.arc7

Report generation date: 15/10/2009 18:07:36

« A1 - (Default Analysis Set) - D1 - 2009 AMBD, AM

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File summary

File Description

Title	Existing Andover Road North/A272/Down Farm Lane Junction AM Peak Hr Assessments
Location	Winchester
Site Number	
Date	21/05/2009
Version	
Status	TIA
Identifier	
Client	Cala Homes (South) Limited
Jobnumber	0710-64
Enumerator	Mike.fuller
Description	
Results Upto Date	True

Analysis Options

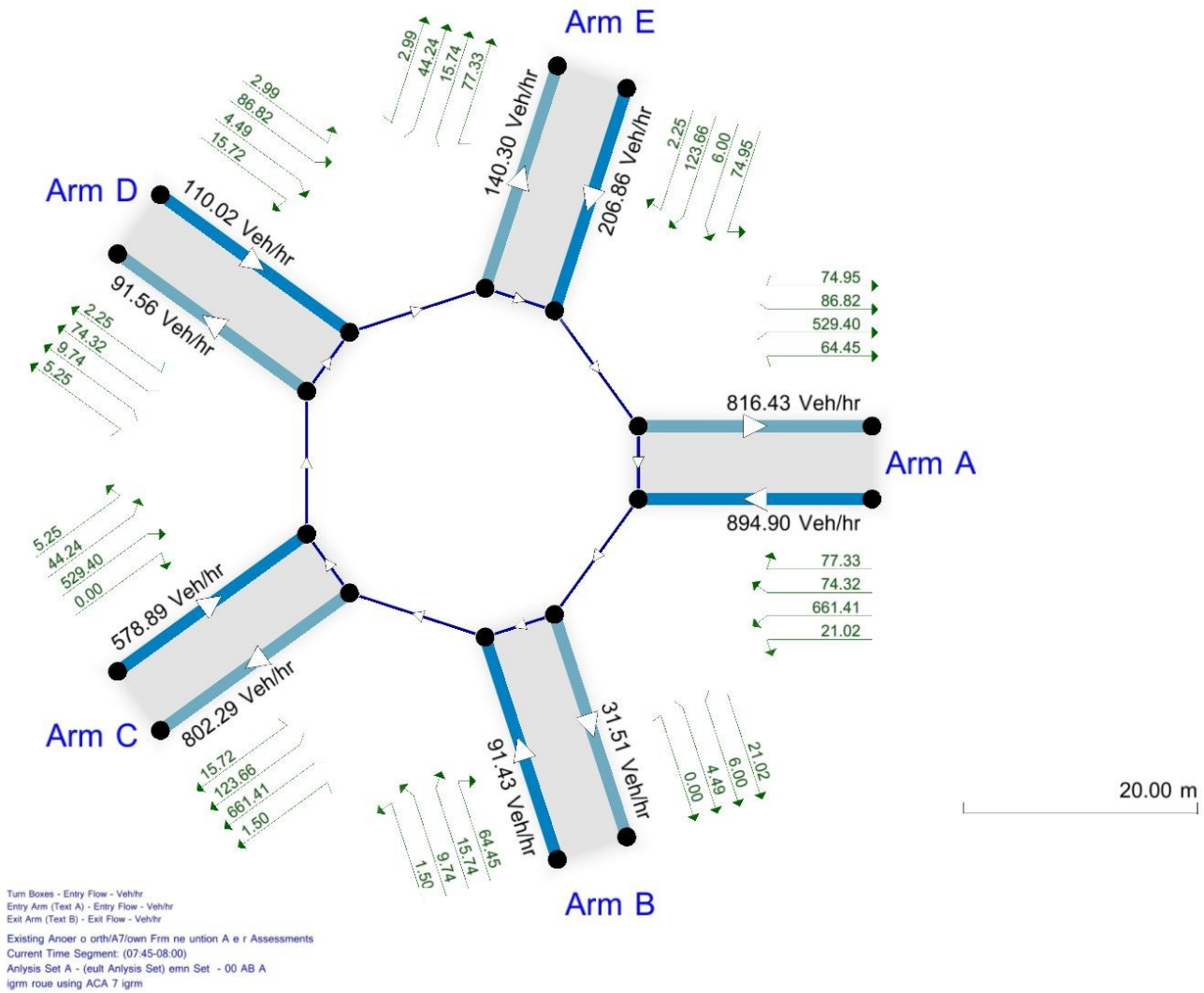
RFC Threshold	Vehicle Length (m)	Do Queue Variations
0.85	5.75	

Sorting and Display

Show Arm Names	Arm Grouping	Sorting Direction	Sorting Type	Data Matrix Style	Time Style
	Order	Ascending	Numerical	By Destination	Absolute Time

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



The junction diagram reflects the last run of ARCADY.

A1 - (Default Analysis Set) - D1 - 2009 AMBD, AM

Data Errors and Warnings

Severity	Area	Description
Warning	Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

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Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2009 AMBD, AM	2009 AMBD	AM			Yes			07:45	09:15	90	15	Varies by Arm

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	A,B,C,D,E	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
A	A34	
B	Down Farm Lane	
C	B3420	
D	Country Lane	
E	A272 North West	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00
E	0.00	99999.00		0.00

Standard 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	7.50	9.00	10.00	25.00	87.00	32.00	
B	3.00	7.50	7.50	20.00	84.00	16.50	
C	3.50	6.00	35.00	35.00	86.50	17.00	
D	2.00	6.50	10.00	12.50	86.00	37.00	
E	3.25	5.00	20.00	25.00	87.00	17.00	

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None
D	None
E	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		((calculated))	((calculated))	0.587	2586.921
B		((calculated))	((calculated))	0.437	1440.409
C		((calculated))	((calculated))	0.487	1787.869
D		((calculated))	((calculated))	0.364	1102.343
E		((calculated))	((calculated))	0.440	1475.799

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)	PHF
A	ONE HOUR	Yes	1192.00	100.000	N/A
B	ONE HOUR	Yes	122.00	100.000	N/A
C	ONE HOUR	Yes	772.00	100.000	N/A
D	ONE HOUR	Yes	147.00	100.000	N/A
E	ONE HOUR	Yes	276.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	897.40	963.21	N/A	N/A
07:45-08:00	B	91.85	91.85	N/A	N/A
07:45-08:00	C	581.20	600.25	N/A	N/A
07:45-08:00	D	110.67	112.21	N/A	N/A
07:45-08:00	E	207.79	214.53	N/A	N/A
08:00-08:15	A	1071.58	1150.17	N/A	N/A
08:00-08:15	B	109.68	109.68	N/A	N/A
08:00-08:15	C	694.01	716.76	N/A	N/A
08:00-08:15	D	132.15	133.99	N/A	N/A
08:00-08:15	E	248.12	256.17	N/A	N/A
08:15-08:30	A	1312.42	1408.66	N/A	N/A
08:15-08:30	B	134.32	134.32	N/A	N/A
08:15-08:30	C	849.99	877.85	N/A	N/A
08:15-08:30	D	161.85	164.11	N/A	N/A
08:15-08:30	E	303.88	313.75	N/A	N/A
08:30-08:45	A	1312.42	1408.66	N/A	N/A

08:30-08:45	B	134.32	134.32	N/A	N/A
08:30-08:45	C	849.99	877.85	N/A	N/A
08:30-08:45	D	161.85	164.11	N/A	N/A
08:30-08:45	E	303.88	313.75	N/A	N/A
08:45-09:00	A	1071.58	1150.17	N/A	N/A
08:45-09:00	B	109.68	109.68	N/A	N/A
08:45-09:00	C	694.01	716.76	N/A	N/A
08:45-09:00	D	132.15	133.99	N/A	N/A
08:45-09:00	E	248.12	256.17	N/A	N/A
09:00-09:15	A	897.40	963.21	N/A	N/A
09:00-09:15	B	91.85	91.85	N/A	N/A
09:00-09:15	C	581.20	600.25	N/A	N/A
09:00-09:15	D	110.67	112.21	N/A	N/A
09:00-09:15	E	207.79	214.53	N/A	N/A

Turning Proportions

Turning Counts or Proportions (Veh/hr) - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	81.00	28.00	881.00	99.00	103.00
	B	86.00	0.00	2.00	13.00	21.00
	C	706.00	0.00	0.00	7.00	59.00
	D	116.00	6.00	21.00	0.00	4.00
	E	100.00	8.00	165.00	3.00	0.00

Turning Proportions (Veh) - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	0.07	0.02	0.74	0.08	0.09
	B	0.70	0.00	0.02	0.11	0.17
	C	0.91	0.00	0.00	0.01	0.08
	D	0.79	0.04	0.14	0.00	0.03
	E	0.36	0.03	0.60	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	1.10	1.04	1.08	1.02	1.05
	B	1.00	1.00	1.00	1.00	1.00
	C	1.03	1.00	1.00	1.00	1.03
	D	1.01	1.00	1.05	1.00	1.00
	E	1.05	1.00	1.02	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	9.90	3.60	8.10	2.00	4.90

From	B	0.00	0.00	0.00	0.00	0.00
	C	3.30	0.00	0.00	0.00	3.40
	D	0.90	0.00	4.80	0.00	0.00
	E	5.00	0.00	2.40	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Total Demand (Veh/hr)	Total Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Queueing Total Delay (Veh-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
A	0.57	0.06	1.34	A	1093.80	1640.71	84.52	0.05	0.94	84.53	0.05	0.587	2586.921
B	0.18	0.10	0.22	A	111.95	167.92	13.93	0.08	0.15	13.93	0.08	0.437	1440.409
C	0.56	0.09	1.27	A	708.40	1062.60	79.13	0.07	0.88	79.14	0.07	0.487	1787.869
D	0.25	0.12	0.33	A	134.89	202.33	21.07	0.10	0.23	21.08	0.10	0.364	1102.343
E	0.32	0.09	0.48	A	253.26	379.90	30.67	0.08	0.34	30.67	0.08	0.440	1475.799

Overview: Standard Roundabout Geometry

Standard 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	Final Slope	Final Intercept (PCU/hr)
A	7.50	9.00	10.00	25.00	87.00	32.00		0.587	2586.921
B	3.00	7.50	7.50	20.00	84.00	16.50		0.437	1440.409
C	3.50	6.00	35.00	35.00	86.50	17.00		0.487	1787.869
D	2.00	6.50	10.00	12.50	86.00	37.00		0.364	1102.343
E	3.25	5.00	20.00	25.00	87.00	17.00		0.440	1475.799

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (Veh)	End Queue (Veh)	Queueing Total Delay (Veh-min)	Geometric Total Delay (Veh-min)	Average Delay Per Arriving Vehicle (min)
07:45-08:00	A	897.40	2324.94	0.386	0.00	0.00	0.63	9.21	(0.00)	0.042
07:45-08:00	B	91.85	966.72	0.095	0.00	0.00	0.10	1.53	(0.00)	0.069
07:45-08:00	C	581.20	1582.06	0.367	0.00	0.00	0.58	8.44	(0.00)	0.060
07:45-08:00	D	110.67	792.77	0.140	0.00	0.00	0.16	2.35	(0.00)	0.088
07:45-08:00	E	207.79	1094.50	0.190	0.00	0.00	0.23	3.42	(0.00)	0.068
08:00-08:15	A	1071.59	2308.06	0.464	0.00	0.63	0.86	12.70	(0.00)	0.048
08:00-08:15	B	109.68	873.60	0.126	0.00	0.10	0.14	2.10	(0.00)	0.079
08:00-08:15	C	694.01	1552.73	0.447	0.00	0.58	0.80	11.76	(0.00)	0.070
08:00-08:15	D	132.15	734.72	0.180	0.00	0.16	0.22	3.20	(0.00)	0.100
08:00-08:15	E	248.12	1028.35	0.241	0.00	0.23	0.32	4.65	(0.00)	0.077
08:15-08:30	A	1312.42	2285.20	0.574	0.00	0.86	1.34	19.53	(0.00)	0.061
08:15-08:30	B	134.32	746.62	0.180	0.00	0.14	0.22	3.19	(0.00)	0.098
08:15-08:30	C	849.99	1512.77	0.562	0.00	0.80	1.27	18.36	(0.00)	0.090
08:15-08:30	D	161.85	655.87	0.247	0.00	0.22	0.32	4.73	(0.00)	0.121
08:15-08:30	E	303.88	938.64	0.324	0.00	0.32	0.47	6.94	(0.00)	0.094
08:30-08:45	A	1312.42	2284.94	0.574	0.00	1.34	1.34	20.11	(0.00)	0.062
08:30-08:45	B	134.32	745.56	0.180	0.00	0.22	0.22	3.28	(0.00)	0.098
08:30-08:45	C	849.99	1512.41	0.562	0.00	1.27	1.27	19.06	(0.00)	0.091

08:30-08:45	D	161.85	655.00	0.247	0.00	0.32	0.33	4.88	(0.00)	0.122
08:30-08:45	E	303.88	937.59	0.324	0.00	0.47	0.48	7.14	(0.00)	0.095
08:45-09:00	A	1071.59	2307.65	0.464	0.00	1.34	0.87	13.35	(0.00)	0.049
08:45-09:00	B	109.68	872.00	0.126	0.00	0.22	0.14	2.22	(0.00)	0.079
08:45-09:00	C	694.01	1552.18	0.447	0.00	1.27	0.82	12.56	(0.00)	0.070
08:45-09:00	D	132.15	733.41	0.180	0.00	0.33	0.22	3.41	(0.00)	0.100
08:45-09:00	E	248.12	1026.76	0.242	0.00	0.48	0.32	4.92	(0.00)	0.077
09:00-09:15	A	897.40	2324.40	0.386	0.00	0.87	0.63	9.62	(0.00)	0.042
09:00-09:15	B	91.85	964.73	0.095	0.00	0.14	0.11	1.61	(0.00)	0.069
09:00-09:15	C	581.20	1581.38	0.368	0.00	0.82	0.58	8.94	(0.00)	0.060
09:00-09:15	D	110.67	791.20	0.140	0.00	0.22	0.16	2.51	(0.00)	0.088
09:00-09:15	E	207.79	1092.55	0.190	0.00	0.32	0.24	3.61	(0.00)	0.068