

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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Run with file:-

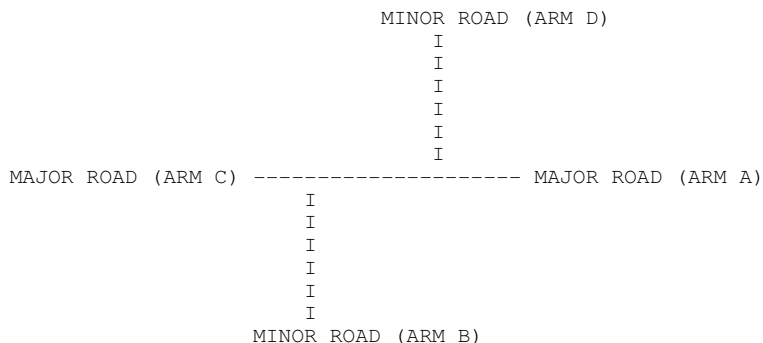
"P:\Projects\7000-\0710-64 Barton Farm, Winchester\PICADY\October 2009 Work\Harestock Road\Existing Junction\
2009 Base + Dev AM & PM.vpi"
(drive-on-the-left) at 10:58:56 on Wednesday, 21 October 2009

RUN INFORMATION

RUN TITLE: Well House Lane/ Harestock Road Crossroads 2009 AM & PM Base + Dev
LOCATION: Winchester
DATE: 09/03/09
CLIENT: Cala Homes (South)
ENUMERATOR: eddie.crews [WBRI1ECREWES]
JOB NUMBER: 0710-64
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Andover Road (South)
ARM B IS Harestock Road
ARM C IS Andover Road (North)
ARM D IS Well House Lane

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

 GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.00 M.	I	(W) 10.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 9.75 M.	I	(WCR) 10.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 5.00 M.	I	(WA-D) 3.00 M.	I
I	- VISIBILITY	I	(VC-B) 170.0 M.	I	(VA-D) 165.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 64.0 M.	I	(VD-A) 66.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 77.0 M.	I	(VD-C) 35.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I	(WD-C) -	I
I	- WIDTH AT 0 M FROM JUNC.	I	10.00 M.	I	10.00 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	7.50 M.	I	7.00 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	4.50 M.	I	4.50 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	3.00 M.	I	4.00 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	3.00 M.	I	4.50 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I	1 VEHS	I

 .SLOPES AND INTERCPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B	I
I	618.55	0.20	0.20	0.08	0.08	I

B-AD Stream

I	Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B	I
I	601.20	0.19	0.19	0.07	0.07	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	I
I	0.12	0.12	0.27	I

D-A Stream

I	Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B	I
I	594.23	0.19	0.19	0.08	0.08	I

D-BC Stream

I	Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D	I
I	580.95	0.18	0.18	0.07	0.07	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	I
I	0.11	0.11	0.26	I

C-B Stream

I Intercept For I Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B	I
877.32	0.28	0.28	0.28	0.28	I

A-D Stream

I Intercept For I Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-A	Slope For Opposing Stream B-D	I
877.32	0.23	0.23	0.23	0.23	I

TRAFFIC DEMAND DATA

I ARM I	FLOW SCALE (%) I
I A I	100 I
I B I	100 I
I C I	100 I
I D I	100 I

Demand set: Andover Road North/Well House Lane/ Harestock Road Staggered Crossroads

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MINUTES.
 LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I ARM I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN) I		
	I FLOW STARTS I TO RISE	I TOP OF PEAK I IS REACHED	I FLOW STOPS I FALLING	I BEFORE I PEAK	I AT TOP I OF PEAK	I AFTER I PEAK
I ARM A I	15.00 I	45.00 I	75.00 I	8.95 I	13.42 I	8.95 I
I ARM B I	15.00 I	45.00 I	75.00 I	5.94 I	8.91 I	5.94 I
I ARM C I	15.00 I	45.00 I	75.00 I	10.35 I	15.53 I	10.35 I
I ARM D I	15.00 I	45.00 I	75.00 I	3.25 I	4.88 I	3.25 I

I TIME	TURNING PROPORTIONS								
	TURNING COUNTS (VEH/HR)								
	(PERCENTAGE OF H.V.S)								
	I FROM/TO I	I ARM A I	I ARM B I	I ARM C I	I ARM D I				
I 07.30 - 09.00 I	I ARM A I	0.000 I	0.288 I	0.662 I	0.050 I				
		0.0 I	206.0 I	474.0 I	36.0 I				
		(0.0) I	(1.5) I	(4.0) I	(2.8) I				
	I ARM B I	0.211 I	0.000 I	0.535 I	0.255 I				
		100.0 I	0.0 I	254.0 I	121.0 I				
		(2.0) I	(0.0) I	(3.9) I	(0.0) I				
	I ARM C I	0.733 I	0.250 I	0.000 I	0.017 I				
		607.0 I	207.0 I	0.0 I	14.0 I				
		(9.1) I	(4.8) I	(0.0) I	(14.3) I				
	I ARM D I	0.308 I	0.631 I	0.062 I	0.000 I				
		80.0 I	164.0 I	16.0 I	0.0 I				
		(1.3) I	(5.5) I	(0.0) I	(0.0) I				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.30-07.45										I
I	B-C	3.19	8.82	0.361		0.00	0.56	7.9		0.18	I
I	B-AD	2.77	7.24	0.383		0.00	0.61	8.5		0.22	I
I	A-B	2.58									I
I	A-C	5.95									I
I	A-D	0.45	9.24	0.049		0.00	0.05	0.7		0.11	I
I	D-A	1.00	7.65	0.131		0.00	0.15	2.2		0.15	I
I	D-BC	2.26	7.83	0.289		0.00	0.40	5.7		0.18	I
I	C-D	0.18									I
I	C-A	7.62									I
I	C-B	2.60	10.96	0.237		0.00	0.31	4.4		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-C	3.81	7.83	0.486		0.56	0.92	13.0		0.25	I
I	B-AD	3.31	6.11	0.542		0.61	1.13	15.6		0.35	I
I	A-B	3.09									I
I	A-C	7.10									I
I	A-D	0.54	8.73	0.062		0.05	0.07	1.0		0.12	I
I	D-A	1.20	6.91	0.173		0.15	0.21	3.0		0.17	I
I	D-BC	2.70	7.11	0.379		0.40	0.60	8.6		0.23	I
I	C-D	0.21									I
I	C-A	9.09									I
I	C-B	3.10	10.37	0.299		0.31	0.42	6.1		0.14	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	4.66	4.69	0.993		0.92	7.76	77.7		1.46	I
I	B-AD	4.06	4.10	0.988		1.13	7.12	72.3		1.59	I
I	A-B	3.78									I
I	A-C	8.70									I
I	A-D	0.66	8.04	0.082		0.07	0.09	1.3		0.14	I
I	D-A	1.47	5.61	0.262		0.21	0.35	5.0		0.24	I
I	D-BC	3.30	6.08	0.543		0.60	1.13	15.7		0.35	I
I	C-D	0.26									I
I	C-A	11.14									I
I	C-B	3.80	9.56	0.397		0.42	0.65	9.3		0.17	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	4.66	4.64	1.004		7.76	11.45	145.6		2.47	I
I	B-AD	4.06	4.06	0.999		7.12	10.36	132.6		2.61	I
I	A-B	3.78									I
I	A-C	8.70									I
I	A-D	0.66	7.94	0.083		0.09	0.09	1.3		0.14	I
I	D-A	1.47	5.50	0.267		0.35	0.36	5.3		0.25	I
I	D-BC	3.30	6.01	0.549		1.13	1.18	17.5		0.37	I
I	C-D	0.26									I
I	C-A	11.14									I
I	C-B	3.80	9.55	0.398		0.65	0.65	9.8		0.17	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	3.81	6.90	0.552		11.45	1.30	41.0		0.52
B-AD	3.31	5.46	0.606		10.36	1.69	49.5		0.81
A-B	3.09								
A-C	7.10								
A-D	0.54	8.58	0.063		0.09	0.07	1.0		0.12
D-A	1.20	6.78	0.177		0.36	0.22	3.4		0.18
D-BC	2.70	7.01	0.385		1.18	0.64	10.2		0.24
C-D	0.21								
C-A	9.09								
C-B	3.10	10.35	0.300		0.65	0.43	6.7		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	3.19	8.74	0.365		1.30	0.58	9.3		0.18
B-AD	2.77	7.18	0.386		1.69	0.64	10.5		0.23
A-B	2.58								
A-C	5.95								
A-D	0.45	9.21	0.049		0.07	0.05	0.8		0.11
D-A	1.00	7.61	0.132		0.22	0.15	2.4		0.15
D-BC	2.26	7.81	0.289		0.64	0.41	6.5		0.18
C-D	0.18								
C-A	7.62								
C-B	2.60	10.94	0.237		0.43	0.31	4.8		0.12

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.6	*
08.00	0.9	*
08.15	7.8	*****
08.30	11.4	*****
08.45	1.3	*
09.00	0.6	*

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.6	*
08.00	1.1	*
08.15	7.1	*****
08.30	10.4	*****
08.45	1.7	**
09.00	0.6	*

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.1
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM D-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.1
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.2
09.00	0.2

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.4	
08.00	0.6	*
08.15	1.1	*
08.30	1.2	*
08.45	0.6	*
09.00	0.4	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.3	
08.00	0.4	
08.15	0.6	*
08.30	0.7	*
08.45	0.4	
09.00	0.3	

I 0.11 0.11 0.26 I

C-B Stream

I Intercept For I Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B	I
877.32	0.28	0.28	0.28	0.28	I

A-D Stream

I Intercept For I Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-A	Slope For Opposing Stream B-D	I
877.32	0.23	0.23	0.23	0.23	I

TRAFFIC DEMAND DATA

I ARM	I FLOW SCALE (%)	I
I A	100	I
I B	100	I
I C	100	I
I D	100	I

Demand set: Andover Road North/Well House Lane/ Harestock Road Staggered Crossroads Demand

TIME PERIOD BEGINS 16.15 AND ENDS 17.45

LENGTH OF TIME PERIOD - 90 MINUTES.
 LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
	I FLOW STARTS TO RISE	I TOP OF PEAK IS REACHED	I FLOW STOPS FALLING	I BEFORE PEAK	I AT TOP OF PEAK	I AFTER PEAK
I ARM A	15.00	45.00	75.00	8.32	12.49	8.32
I ARM B	15.00	45.00	75.00	7.04	10.56	7.04
I ARM C	15.00	45.00	75.00	9.56	14.34	9.56
I ARM D	15.00	45.00	75.00	2.49	3.73	2.49

TIME	TURNING PROPORTIONS				
	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.15 - 17.45	ARM A	0.000 0.0 (0.0)	0.228 152.0 (0.7)	0.710 473.0 (1.7)	0.062 41.0 (0.0)
	ARM B	0.387 218.0 (0.9)	0.000 0.0 (0.0)	0.416 234.0 (3.0)	0.197 111.0 (0.0)
	ARM C	0.647 495.0 (10.1)	0.332 254.0 (3.5)	0.000 0.0 (0.0)	0.021 16.0 (6.3)
	ARM D	0.216 43.0 (2.3)	0.719 143.0 (3.5)	0.065 13.0 (30.8)	0.000 0.0 (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
 THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
 FOR COMBINED DEMAND SETS
 AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
B-C	2.94	7.55	0.389		0.00	0.62	8.7		0.21
B-AD	4.13	7.65	0.540		0.00	1.13	15.4		0.27
A-B	1.91								
A-C	5.93								
A-D	0.51	9.52	0.054		0.00	0.06	0.8		0.11
D-A	0.54	7.57	0.071		0.00	0.08	1.1		0.14
D-BC	1.96	8.03	0.244		0.00	0.32	4.5		0.16
C-D	0.20								
C-A	6.21								
C-B	3.19	11.41	0.279		0.00	0.38	5.5		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	3.51	5.64	0.622		0.62	1.53	20.5		0.44
B-AD	4.93	6.37	0.774		1.13	2.92	37.2		0.60
A-B	2.28								
A-C	7.09								
A-D	0.61	9.00	0.068		0.06	0.07	1.1		0.12
D-A	0.64	6.94	0.093		0.08	0.10	1.5		0.16
D-BC	2.34	7.35	0.318		0.32	0.46	6.6		0.20
C-D	0.24								
C-A	7.42								
C-B	3.81	10.87	0.350		0.38	0.53	7.7		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	4.29	3.54	1.214		1.53	15.31	133.8		3.02
B-AD	6.04	5.01	1.204		2.92	20.46	181.9		2.84
A-B	2.79								
A-C	8.68								
A-D	0.75	8.27	0.091		0.07	0.10	1.5		0.13
D-A	0.79	5.90	0.134		0.10	0.15	2.2		0.20
D-BC	2.86	6.39	0.448		0.46	0.79	11.1		0.28
C-D	0.29								
C-A	9.08								
C-B	4.66	10.14	0.460		0.53	0.83	11.9		0.18

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	4.29	3.56	1.205		15.31	26.73	315.8		6.26
B-AD	6.04	4.96	1.216		20.46	36.95	431.0		6.01
A-B	2.79								
A-C	8.68								
A-D	0.75	7.99	0.094		0.10	0.10	1.5		0.14
D-A	0.79	5.66	0.139		0.15	0.16	2.4		0.21
D-BC	2.86	6.19	0.463		0.79	0.84	12.3		0.30
C-D	0.29								
C-A	9.08								
C-B	4.66	10.13	0.460		0.83	0.84	12.6		0.18

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	3.51	3.97	0.882		26.73	21.87	364.5		6.26
B-AD	4.93	5.55	0.887		36.95	29.77	500.4		6.10
A-B	2.28								
A-C	7.09								
A-D	0.61	8.44	0.073		0.10	0.08	1.2		0.13
D-A	0.64	6.52	0.099		0.16	0.11	1.7		0.17
D-BC	2.34	6.94	0.337		0.84	0.52	8.2		0.22
C-D	0.24								
C-A	7.42								
C-B	3.81	10.86	0.350		0.84	0.55	8.5		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	2.94	4.49	0.654		21.87	2.73	176.1		3.05
B-AD	4.13	6.17	0.669		29.77	3.00	239.1		2.92
A-B	1.91								
A-C	5.93								
A-D	0.51	9.06	0.057		0.08	0.06	0.9		0.12
D-A	0.54	7.24	0.075		0.11	0.08	1.3		0.15
D-BC	1.96	7.69	0.255		0.52	0.35	5.4		0.18
C-D	0.20								
C-A	6.21								
C-B	3.19	11.40	0.280		0.55	0.39	6.1		0.12

 QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.6	*
16.45	1.5	**
17.00	15.3	*****
17.15	26.7	*****
17.30	21.9	*****
17.45	2.7	***

 QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	1.1	*
16.45	2.9	***
17.00	20.5	*****
17.15	37.0	*****
17.30	29.8	*****
17.45	3.0	***

 QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.1	
16.45	0.1	
17.00	0.1	
17.15	0.1	
17.30	0.1	
17.45	0.1	

 QUEUE FOR STREAM D-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.1	
16.45	0.1	
17.00	0.2	
17.15	0.2	
17.30	0.1	
17.45	0.1	

 QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.3	
16.45	0.5	
17.00	0.8	*
17.15	0.8	*
17.30	0.5	*
17.45	0.3	

 QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.4	
16.45	0.5	*
17.00	0.8	*
17.15	0.8	*
17.30	0.5	*
17.45	0.4	

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-C	322.1	214.7	1019.4
B-AD	452.8	301.9	1405.1
A-B	209.2	139.5	
A-C	651.0	434.0	
A-D	56.4	37.6	7.0
D-A	59.2	39.5	10.1
D-BC	214.7	143.1	48.2
C-D	22.0	14.7	
C-A	681.3	454.2	
C-B	349.6	233.1	52.3
ALL	3018.5	2012.3	2542.2

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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