Output for Table 8

TRL LIMITED

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
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FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

Run with file:-
"J:\211000\211967 BL Midland Road Access\4 Internal Project Data\4-04 Arup Calculations\PICADY Model\
New Layout\Future Flow New Junction - AM.vpo.vpi"
(drive-on-the-left) at 10:28:37 on Wednesday, 27 January 2010

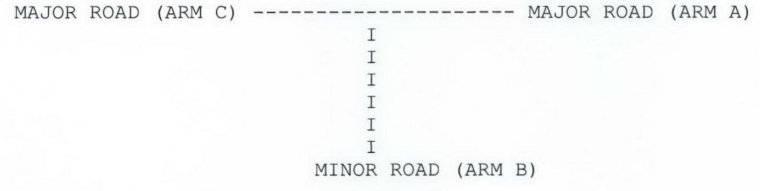
RUN INFORMATION
****

RUN TITLE: Future Flow AM Peak
LOCATION: BL Access Road
DATE: 14/01/10
CLIENT: British Library
ENUMERATOR: david.mccann [PLPPC061814]
JOB NUMBER: 211967-00
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA

WARNING SEGMENT LENGTH GREATER THAN 15 MINUTES.



ARM A IS Midland Road (South)
ARM B IS BL Access Road
ARM C IS Midland Road (North)

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

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.50 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.50 M.
- VISIBILITY	(VC-B)	250.0 M.
- BLOCKS TRAFFIC		NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	50.0 M.
- VISIBILITY TO RIGHT	(VB-A)	200.0 M.
- LANE 1 WIDTH	(WB-C)	4.75 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
881.22	0.32	0.13

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
697.15	0.30	0.12	0.19	0.43

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
820.43	0.30	0.30

NB These values do not allow for any site specific corrections

GEOMETRIC DELAY DATA

	ARM SPEED (KPH)		ENTRY RADIUS	EXIT RADIUS
	ENTRY	EXIT	ER (M)	EXR (M)
ARM A	48.0	48.0	2.5	
ARM B	30.0	30.0	2.0	4.0
ARM C	48.0	48.0		

JUNCTION VISIBILITIES DO NOT CONFORM TO STANDARDS LAID DOWN IN TD42/95

WARNING SEGMENT LENGTH GREATER THAN 15 MINUTES.

TRAFFIC DEMAND DATA

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

Demand set: Future Flow AM Peak - A+B

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 30 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
08.00 - 09.00	ARM A	0.000	0.000	0.000
		0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	1.000	0.000	0.000
		22.0	0.0	0.0
		(18.0)	(0.0)	(0.0)
	ARM C	0.966	0.034	0.000
		630.0	22.0	0.0
		(13.0)	(18.0)	(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 30 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
08.00-08.30									
B-AC	0.37	7.79	0.047		0.00	0.05	1.4	1.5	
C-A	10.50							0.0	
C-B	0.37	11.59	0.032		0.00	0.03	1.0	1.4	
A-B	0.00							0.0	
A-C	0.00							0.0	

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)
08.30-09.00									
B-AC	0.37	7.79	0.047		0.05	0.05	1.5	1.5	
C-A	10.50							0.0	
C-B	0.37	11.59	0.032		0.03	0.03	1.0	1.4	
A-B	0.00							0.0	
A-C	0.00							0.0	

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
09.00	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	22.0	22.0	2.9	0.13	2.9	0.13
C-A	630.0	630.0				
C-B	22.0	22.0	1.9	0.09	1.9	0.09
A-B	0.0	0.0				
A-C	0.0	0.0				
ALL	674.0	674.0	4.9	0.01	4.9	0.01

INCLUSIVE GEOMETRIC DELAY

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	GEOMETRIC DELAY BY TURN (VEH MIN) (GEOMETRIC DELAY PER LIGHT VEHICLE (SEC)) ARM A	ARM B	ARM C	TOTAL GEOM. DELAY VEH MIN
A	0.0	0.0	0.0 (0.0)	0.0 (7.9)	0.0 (0.0)	0.0
B	22.0	22.0	3.0 (7.8)	0.0 (0.0)	0.0 (8.4)	3.0
C	652.0	652.0	0.0 (0.0)	2.8 (7.2)	0.0 (0.0)	2.8
ALL	674.0	674.0				5.8

. POINT TO POINT JOURNEY TIME TABLE

Point to point journey times From / To (entry point)	(exit point)	Arm A	Arm B	Arm C	Arm D
ArmA		0.0	28.9	20.1	0.0
ArmB		31.0	0.0	29.4	0.0
ArmC		21.3	35.7	0.0	0.0
ArmD		0.0	0.0	0.0	0.0

* JOURNEY TIME CALCULATION STARTING/ENDING ON ARM A BEGINS/ENDS 200.0M FROM STOP LINE/AFTER EXIT
* JOURNEY TIME CALCULATION STARTING/ENDING ON ARM B BEGINS/ENDS 50.0M FROM STOP LINE/AFTER EXIT
* JOURNEY TIME CALCULATION STARTING/ENDING ON ARM C BEGINS/ENDS 200.0M FROM STOP LINE/AFTER EXIT

* 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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[Printed at 12:41:03 on 25/06/2010]

TRL LIMITED

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

PICADY 5.0 ANALYSIS PROGRAM
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EMAIL: SoftwareBureau@trl.co.uk

Run with file:-
"J:\211000\211967 BL Midland Road Access\4 Internal Project Data\4-04 Arup Calculations\PICADY Model\
New Layout\Future Flow New Junction - PM.vpi"
(drive-on-the-left) at 10:32:48 on Wednesday, 27 January 2010

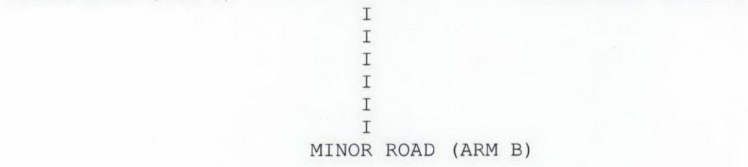
RUN INFORMATION

RUN TITLE: Future Flow AM Peak
LOCATION: BL Access Road
DATE: 14/01/10
CLIENT: British Library
ENUMERATOR: david.mccann [PLPPC061814]
JOB NUMBER: 211967-00
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

WARNING SEGMENT LENGTH GREATER THAN 15 MINUTES.



ARM A IS Midland Road (South)
ARM B IS BL Access Road
ARM C IS Midland Road (North)

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

DATA ITEM	MINOR ROAD B	
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.50 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.50 M.
- VISIBILITY	(VC-B)	250.0 M.
- BLOCKS TRAFFIC		NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	50.0 M.
- VISIBILITY TO RIGHT	(VB-A)	200.0 M.
- LANE 1 WIDTH	(WB-C)	4.75 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
881.22	0.32	0.13

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
697.15	0.30	0.12	0.19	0.43

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
820.43	0.30	0.30

NB These values do not allow for any site specific corrections

GEOMETRIC DELAY DATA

	ARM SPEED (KPH)		ENTRY RADIUS	EXIT RADIUS
	ENTRY	EXIT	ER (M)	EXR (M)
ARM A	48.0	48.0	2.5	
ARM B	30.0	30.0	2.0	4.0
ARM C	48.0	48.0		

JUNCTION VISIBILITIES DO NOT CONFORM TO STANDARDS LAID DOWN IN TD42/95

WARNING SEGMENT LENGTH GREATER THAN 15 MINUTES.

TRAFFIC DEMAND DATA

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

Demand set: Future Flow PM Peak - A+B

TIME PERIOD BEGINS 18.00 AND ENDS 19.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 30 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
18.00 - 19.00	ARM A	0.000	0.000	0.000
		0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	1.000	0.000	0.000
		5.0	0.0	0.0
		(14.0)	(0.0)	(0.0)
	ARM C	0.990	0.010	0.000
		512.0	5.0	0.0
		(9.0)	(12.0)	(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 30 MIN TIME SEGMENT

FOR DEMAND SET Future Flow PM Peak - A+B
AND FOR TIME PERIOD 1

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)
18.00-18.30									
B-AC	0.10	8.61	0.012		0.00	0.01	0.3	0.4	
C-A	8.55							0.0	
C-B	0.08	12.21	0.007		0.00	0.01	0.2	0.3	
A-B	0.00							0.0	
A-C	0.00							0.0	

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)
18.30-19.00									
B-AC	0.10	8.61	0.012		0.01	0.01	0.4	0.4	
C-A	8.55							0.0	
C-B	0.08	12.21	0.007		0.01	0.01	0.2	0.3	
A-B	0.00							0.0	
A-C	0.00							0.0	

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
18.30	0.0
19.00	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
18.30	0.0
19.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	6.0	6.0	0.7	0.12	0.7	0.12
C-A	513.0	513.0				
C-B	5.0	5.0	0.4	0.08	0.4	0.08
A-B	0.0	0.0				
A-C	0.0	0.0				
ALL	524.0	524.0	1.1	0.00	1.1	0.00

INCLUSIVE GEOMETRIC DELAY

ARM	TOTAL DEMAND		GEOMETRIC DELAY BY TURN (VEH MIN) (GEOMETRIC DELAY PER LIGHT VEHICLE (SEC))			TOTAL GEOM. DELAY VEH MIN
	(VEH)	(VEH/H)	ARM A	ARM B	ARM C	
A	0.0	0.0	0.0	0.0	0.0	0.0
			(0.0)	(7.9)	(0.0)	
B	6.0	6.0	0.8	0.0	0.0	0.8
			(7.8)	(0.0)	(8.4)	
C	518.0	518.0	0.0	0.6	0.0	0.6
			(0.0)	(7.2)	(0.0)	
ALL	524.0	524.0				1.4

. POINT TO POINT JOURNEY TIME TABLE

Point to point journey times From / To (entry point) (exit point)	Arm A	Arm B	Arm C	Arm D
ArmA	0.0	28.9	20.1	0.0
ArmB	30.6	0.0	29.4	0.0
ArmC	21.0	34.7	0.0	0.0
ArmD	0.0	0.0	0.0	0.0

* JOURNEY TIME CALCULATION STARTING/ENDING ON ARM A BEGINS/ENDS 200.0M FROM STOP LINE/AFTER EXIT
* JOURNEY TIME CALCULATION STARTING/ENDING ON ARM B BEGINS/ENDS 50.0M FROM STOP LINE/AFTER EXIT
* JOURNEY TIME CALCULATION STARTING/ENDING ON ARM C BEGINS/ENDS 200.0M FROM STOP LINE/AFTER EXIT

* 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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[Printed at 12:51:59 on 25/06/2010]