

TL'

Appendix A

METRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I
PERMITTED MOVEMENTS	I	LS	I	L R	I	SR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS	I	5.35 M	I	4.20 M	I	5.20 M	I
LEFT TURN RADII	I	12.0 M	I	10.0 M	I	N/A	I
RIGHT TURN RADII	I	N/A	I	5.0 M	I	10.0 M	I

ST WIDTH FOR IMAGINARY ARM D = 50.10

FFIC DEMAND DATA

AND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

AULT VEHICLE TYPE PROPORTIONS ARE USED

AND DATA SUPPLIED BETWEEN TIMES - 07.45 TO 09.15
 IOD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 08.00 TO 09.00

FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

FFIC SCALING FACTOR HAS BEEN SET TO 100 %

FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
ARM A	I	0.0	I	128.0	I	114.0	I
ARM B	I	140.0	I	0.0	I	114.0	I
ARM C	I	53.0	I	138.0	I	0.0	I

TIME PERIOD	I	ARM	I	CARS AND LIGHT GOODS	MEDIUM GOODS	HEAVY GOODS	BUSES AND COACHES	MOTOR CYCLES	PEDAL CYCLES	I
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000	I

DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

TRY/EXIT FLOWS	I	ARM	I	TIME WHEN FLOW STARTS TO RISE	I	TIME WHEN TOP OF PEAK IS REACHED	I	TIME WHEN FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
TRY	I	A	I	08.00	I	08.30	I	09.00	I	3.03	I	4.54	I	3.03	I
	I	B	I	08.00	I	08.30	I	09.00	I	3.17	I	4.76	I	3.17	I
	I	C	I	08.00	I	08.30	I	09.00	I	2.39	I	3.58	I	2.39	I

ANAL TIMING DETAILS FOR SIGNAL SET 1

SIGNALING OPTION- VEHICLE ACTUATED MODE

MINIMUM CYCLE TIME-

60.0 SECONDS

GLOBAL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
 END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I
LANES ON GREEN: ARM A	I	1	I		I		I
B	I		I	1	I		I
C	I		I		I	1	I
MINIMUM GREEN TIME (SECS)	I	7.0	I	7.0	I	7.0	I
PRECEDING INTERSTAGE	I	5.0	I	5.0	I	5.0	I

AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE (SECS)	FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM Lanes								I
8.00-08.15								I
A 1	L S	3.61	2016.7	31.79	8.6		7.20	I
B 1	L R	3.79	1650.9	26.02	10.5		7.17	I
C 1	S R	2.85	1926.2	30.36	8.5		6.76	I
8.15-08.30								I
A 1	L S	4.42	2016.7	31.79	9.6		7.57	I
B 1	L R	4.64	1650.9	26.02	11.8		7.59	I
C 1	S R	3.49	1926.2	30.36	8.5		6.39	I
8.30-08.45								I
A 1	L S	4.42	2016.7	31.79	9.6		7.57	I
B 1	L R	4.64	1650.9	26.02	11.8		7.59	I
C 1	S R	3.49	1926.2	30.36	8.5		6.39	I
8.45-09.00								I
A 1	L S	3.61	2016.7	31.79	8.6		7.20	I
B 1	L R	3.79	1650.9	26.02	10.5		7.17	I
C 1	S R	2.85	1926.2	30.36	8.5		6.76	I

E AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	MAXIMUM (END OF RED) (VEHS/LANE)	QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
ARM Lanes									I
8.00-08.15									I
A 1	L S	3.61	7.20	0.501	1.1	2.1	16.0		I
B 1	L R	3.79	7.17	0.529	1.1	2.1	16.3		I
C 1	S R	2.85	6.76	0.421	0.8	1.6	11.8		I
8.15-08.30									I
A 1	L S	4.42	7.57	0.584	1.5	2.8	22.3		I
B 1	L R	4.64	7.59	0.611	1.5	2.8	22.8		I
C 1	S R	3.49	6.39	0.547	1.2	2.2	18.2		I
8.30-08.45									I
A 1	L S	4.42	7.57	0.584	1.5	2.8	22.5		I
B 1	L R	4.64	7.59	0.611	1.5	2.8	23.0		I
C 1	S R	3.49	6.39	0.547	1.2	2.2	18.4		I

08.45-09.00									I
A	1	L S	3.61	7.20	0.501	1.1	2.1	16.3	I
B	1	L R	3.79	7.17	0.529	1.1	2.1	16.6	I
C	1	S R	2.85	6.76	0.421	0.8	1.6	11.9	I

QUEUES FOR ARM A

TIME SEGMENT ENDING	LANE	NUMBER OF MEAN (PHASE AVERAGED) *	VEHICLES IN QUEUE MAXIMUM (AT END OF RED) +	
08.15	1	1.1	2.1	*+
08.30	1	1.5	2.8	***
08.45	1	1.5	2.8	***
09.00	1	1.1	2.1	*+

QUEUES FOR ARM B

TIME SEGMENT ENDING	LANE	NUMBER OF MEAN (PHASE AVERAGED) *	VEHICLES IN QUEUE MAXIMUM (AT END OF RED) +	
08.15	1	1.1	2.1	*+
08.30	1	1.5	2.8	***
08.45	1	1.5	2.8	***
09.00	1	1.1	2.1	*+

QUEUES FOR ARM C

TIME SEGMENT ENDING	LANE	NUMBER OF MEAN (PHASE AVERAGED) *	VEHICLES IN QUEUE MAXIMUM (AT END OF RED) +	
08.15	1	0.8	1.6	*+
08.30	1	1.2	2.2	*+
08.45	1	1.2	2.2	*+
09.00	1	0.8	1.6	*+

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD (08.00-09.00)

STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
	I	(EXCL 2-WHEEL)		I	* DELAY *		I	* DELAY *		I
	I			I			I			I
	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
A-B	I	127.5	I 127.5	I	40.8	I 0.32	I	40.8	I 0.32	I
A-C	I	113.6	I 113.6	I	36.3	I 0.32	I	36.3	I 0.32	I
B-C	I	113.6	I 113.6	I	35.3	I 0.31	I	35.3	I 0.31	I
B-A	I	139.5	I 139.5	I	43.3	I 0.31	I	43.4	I 0.31	I
C-A	I	52.8	I 52.8	I	16.7	I 0.32	I	16.7	I 0.32	I
C-B	I	137.5	I 137.5	I	43.5	I 0.32	I	43.6	I 0.32	I
ALL	I	684.4	I 684.4	I	215.9	I 0.32	I	216.1	I 0.32	I

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 BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

TOTAL GEOMETRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD.
 THE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS
 A LARGE QUEUE AT THE END OF THE TIME PERIOD.

**** OSCADY 4 run completed
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TRANSPORT RESEARCH LABORATORY

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OPTIMISED SIGNAL CAPACITY AND DELAY

Visual OSCADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (MAR 1999)

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with file:- "o:\doncaster road, goldthorpe\high st oscady\high street 2004 pm base.voi" at 14:19:39 on Thursday

FILE

Doncaster Road and High Street 2004 pm base

* ERROR AND WARNING MESSAGES *

errors or warnings in the data.

TRAFFIC SIGNAL JUNCTION ANALYSIS

INPUT DATA

M C----- TEE TO A -----> ARM A
<----- FROM A
I
I
I
I
I
I
ARM B

A IS Doncaster Road Eastbound
B IS High Street
C IS Doncaster Road Westbound

METRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I
PERMITTED MOVEMENTS LANE 1	I	LS	I	L R	I	SR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS LANE 1	I	5.35 M	I	4.20 M	I	5.20 M	I
LEFT TURN RADII LANE 1	I	12.0 M	I	10.0 M	I	N/A	I
RIGHT TURN RADII LANE 1	I	N/A	I	5.0 M	I	10.0 M	I

IT WIT FOR IMAGINARY ARM D = 50.10

FFIC DEMAND DATA

AND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

FAULT VEHICLE TYPE PROPORTIONS ARE USED

AND DATA SUPPLIED BETWEEN TIMES - 16.45 TO 18.15
 IOD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 17.00 TO 18.00

THE FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

FFIC SCALING FACTOR HAS BEEN SET TO 100 %

FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
ARM A	I	0.0	I	181.0	I	153.0	I
ARM B	I	168.0	I	0.0	I	111.0	I
ARM C	I	103.0	I	220.0	I	0.0	I

TIME PERIOD	I	ARM	I	CARS AND LIGHT GOODS	MEDIUM GOODS	HEAVY GOODS	BUSES AND COACHES	MOTOR CYCLES	PEDAL CYCLES	I
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000	I

A DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

ENTRY/EXIT FLOWS	I	ARM	I	TIME WHEN FLOW STARTS TO RISE	I	TIME WHEN TOP OF PEAK IS REACHED	I	TIME WHEN FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
ENTRY	I	A	I	17.00	I	17.30	I	18.00	I	4.18	I	6.26	I	4.18	I
	I	B	I	17.00	I	17.30	I	18.00	I	3.49	I	5.23	I	3.49	I
	I	C	I	17.00	I	17.30	I	18.00	I	4.04	I	6.06	I	4.04	I

SIGNAL TIMING DETAILS FOR SIGNAL SET 1

TIMING OPTION- VEHICLE ACTUATED MODE

CIRCUIT CYCLE TIME-

60.0 SECONDS

GLOBAL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
 END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I
LANES ON GREEN: ARM A	I	1	I		I		I
B	I		I	1	I		I
C	I		I		I	1	I
MINIMUM GREEN TIME (SECS)	I	7.0	I	7.0	I	7.0	I
PRECEDING INTERSTAGE	I	5.0	I	5.0	I	5.0	I

AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE (SECS)	FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES								
7.00-17.15								I
A 1	L S	4.99	2013.6	31.74	10.2		7.85	I
B 1	L R	4.16	1640.7	25.86	10.4		6.48	I
C 1	S R	4.82	1937.1	30.54	10.3		7.58	I
7.15-17.30								I
A 1	L S	6.11	2013.6	31.74	13.8		8.40	I
B 1	L R	5.10	1640.7	25.86	14.0		6.95	I
C 1	S R	5.90	1937.1	30.54	13.9		8.11	I
7.30-17.45								I
A 1	L S	6.11	2013.6	31.74	13.8		8.40	I
B 1	L R	5.10	1640.7	25.86	14.0		6.95	I
C 1	S R	5.90	1937.1	30.54	13.9		8.11	I
7.45-18.00								I
1	L S	4.99	2013.6	31.74	10.2		7.85	I
1	L R	4.16	1640.7	25.86	10.4		6.48	I
C 1	S R	4.82	1937.1	30.54	10.3		7.58	I

GEOMETRIC DELAY AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	MAXIMUM (END OF RED) (VEHS/LANE)	QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
ARM LANES									
7.00-17.15									I
A 1	L S	4.99	7.85	0.635	1.8	3.2	26.7		I
B 1	L R	4.16	6.48	0.643	1.6	2.8	24.0		I
C 1	S R	4.82	7.58	0.636	1.8	3.1	26.1		I
7.15-17.30									I
A 1	L S	6.11	8.40	0.727	2.9	5.0	43.3		I
B 1	L R	5.10	6.95	0.734	2.6	4.4	39.3		I
C 1	S R	5.90	8.11	0.728	2.8	4.9	42.5		I
7.30-17.45									I
A 1	L S	6.11	8.40	0.727	2.9	5.0	44.0		I
B 1	L R	5.10	6.95	0.734	2.6	4.4	40.2		I
C 1	S R	5.90	8.11	0.728	2.9	4.9	43.2		I

7.45-18.00										I
A	1	L S	4.99	7.85	0.635	1.8	3.3	27.7		I
B	1	L R	4.16	6.48	0.643	1.7	2.9	25.4		I
C	1	S R	4.82	7.58	0.636	1.8	3.2	27.2		I

QUES FOR ARM A

TIME ELEMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
7.15	1	1.8	3.2	***
7.30	1	2.9	5.0	*****
7.45	1	2.9	5.0	*****
18.00	1	1.8	3.3	***

QUES FOR ARM B

TIME ELEMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
7.15	1	1.6	2.8	***
7.30	1	2.6	4.4	***+
7.45	1	2.6	4.4	***+
18.00	1	1.7	2.9	***

QUES FOR ARM C

TIME ELEMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
7.15	1	1.8	3.1	***
7.30	1	2.8	4.9	*****
7.45	1	2.9	4.9	*****
18.00	1	1.8	3.2	***

UEING DELAY INFORMATION OVER WHOLE PERIOD (17.00-18.00)

TREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
	I	(EXCL 2-WHEEL)	I	* DELAY *	I	* DELAY *	I
	I		I		I		I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A-B	I	180.3	I	180.3	I	76.8	I
A-C	I	152.4	I	152.4	I	64.9	I
B-C	I	110.6	I	110.6	I	51.3	I
B-A	I	167.4	I	167.4	I	77.6	I
C-A	I	102.6	I	102.6	I	44.3	I
C-B	I	219.2	I	219.2	I	94.7	I
ALL	I	932.5	I	932.5	I	409.7	I

ELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

NCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
HESE WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

OTAL METRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD.
HE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS
LARGE QUEUE AT THE END OF THE TIME PERIOD.

*** OSCADY 4 run completed

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TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\high st oscady\high street 2008 am without develo

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RELEASE 2.1 (MAR 1999)

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LE

Doncaster Road and High Street 2008 am Without Development

* ERROR AND WARNING MESSAGES ****

errors or warnings in the data.

TRAFIC SIGNAL JUNCTION ANALYSIS

INPUT DATA

C-----
TO A ---->
TEE ----- ARM A
----- FROM A
I
I
I
I
I
I
ARM B

A IS Doncaster Road Eastbound
B IS High Street
C IS Doncaster Road Westbound

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\high st oscady\high street 2008 am without develo

METRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I
PERMITTED MOVEMENTS LANE 1	I	LS	I	L R	I	SR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS LANE 1	I	5.35 M	I	4.20 M	I	5.20 M	I
LEFT TURN RADII LANE 1	I	15.0 M	I	15.0 M	I	N/A	I
RIGHT TURN RADII LANE 1	I	N/A	I	5.0 M	I	5.0 M	I

T WIDTH FOR IMAGINARY ARM D = 50.10

FFIC DEMAND DATA

AND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

AULT VEHICLE TYPE PROPORTIONS ARE USED

AND DATA SUPPLIED BETWEEN TIMES - 07.45 TO 09.15
MOD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 08.00 TO 09.00

FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

FFIC SCALING FACTOR HAS BEEN SET TO 100 %

TOTAL TRAFFIC DEMAND (VEHICLES / HOUR)							I
FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
ARM A	I	0.0	I	135.0	I	120.0	I
ARM B	I	147.0	I	0.0	I	120.0	I
ARM C	I	56.0	I	145.0	I	0.0	I

TIME PERIOD	I	ARM	I	VEHICLE TYPE			PROPORTIONS			I
	I		I	CARS AND	MEDIUM	HEAVY	BUSES AND	MOTOR	PEDAL	I
	I		I	LIGHT GOODS	GOODS	GOODS	COACHES	CYCLES	CYCLES	I
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000	I

DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

RY/EXIT	I	ARM	I	TIME WHEN	I	TIME WHEN	I	TIME WHEN	I	RATE OF FLOW (VEH/MIN)					I
LOWS	I		I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I
	I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
RY	I	A	I	08.00	I	08.30	I	09.00	I	3.19	I	4.78	I	3.19	I
	I	B	I	08.00	I	08.30	I	09.00	I	3.34	I	5.01	I	3.34	I
	I	C	I	08.00	I	08.30	I	09.00	I	2.51	I	3.77	I	2.51	I

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\high st oscady\high street 2008 am without develo

IGNAL TIMING DETAILS FOR SIGNAL SET 1

ING OPTION- VEHICLE ACTUATED MODE

IMUM CYCLE TIME- 60.0 SECONDS

DBAL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I
LANES ON GREEN: ARM A	I	1	I		I		I
B	I		I	1	I		I
C	I		I		I	1	I
MINIMUM GREEN TIME (SECS)	I	7.0	I	7.0	I	7.0	I
PRECEDING INTERSTAGE	I	5.0	I	5.0	I	5.0	I

AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE (SECS)	FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES								
8.00-08.15								
A 1	L S	3.81	2041.9	32.19	8.6		7.26	I
B 1	L R	3.99	1681.7	26.51	10.4		7.24	I
C 1	S R	3.00	1755.2	27.67	8.5		6.20	I
8.15-08.30								
A 1	L S	4.66	2041.9	32.19	9.5		7.58	I
B 1	L R	4.88	1681.7	26.51	11.7		7.64	I
C 1	S R	3.67	1755.2	27.67	8.8		6.01	I
8.30-08.45								
A 1	L S	4.66	2041.9	32.19	9.5		7.58	I
B 1	L R	4.88	1681.7	26.51	11.7		7.64	I
C 1	S R	3.67	1755.2	27.67	8.8		6.01	I
8.45-09.00								
1	L S	3.81	2041.9	32.19	8.6		7.26	I
1	L R	3.99	1681.7	26.51	10.4		7.24	I
C 1	S R	3.00	1755.2	27.67	8.5		6.20	I

IE AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	MAXIMUM (END OF RED) (VEHS/LANE)	QUEUEING DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	I
RM LANES									
8.00-08.15									
A 1	L S	3.81	7.26	0.524	1.2	2.2	17.3		I
B 1	L R	3.99	7.24	0.550	1.2	2.2	17.6		I
C 1	S R	3.00	6.20	0.484	0.9	1.7	13.5		I
8.15-08.30									
A 1	L S	4.66	7.58	0.615	1.6	3.0	24.8		I
B 1	L R	4.88	7.64	0.639	1.7	3.0	25.3		I
C 1	S R	3.67	6.01	0.611	1.4	2.5	21.5		I
8.30-08.45									
A 1	L S	4.66	7.58	0.615	1.7	3.0	24.9		I
B 1	L R	4.88	7.64	0.639	1.7	3.0	25.5		I
C 1	S R	3.67	6.01	0.611	1.4	2.5	21.8		I

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08.45-09.00										I
A	1	L S	3.81	7.26	0.524	1.2	2.2	17.6		I
B	1	L R	3.99	7.24	0.550	1.2	2.2	18.0		I
C	1	S R	3.00	6.20	0.484	0.9	1.7	13.8		I

QUES FOR ARM A

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
8.15	1	1.2	2.2	++
8.30	1	1.6	3.0	+++
8.45	1	1.7	3.0	+++
9.00	1	1.2	2.2	++

QUES FOR ARM B

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
.15	1	1.2	2.2	++
.30	1	1.7	3.0	+++
.45	1	1.7	3.0	+++
.00	1	1.2	2.2	++

UES FOR ARM C

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
.15	1	0.9	1.7	++
.30	1	1.4	2.5	++
.45	1	1.4	2.5	+++
.00	1	0.9	1.7	++

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\high st oscady\high street 2008 am without develo

JEING DELAY INFORMATION OVER WHOLE PERIOD (08.00-09.00)

	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
	I	(EXCL 2-WHEEL)	I	* DELAY *	I	* DELAY *	I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A-B	I	134.5	I	134.5	I	44.8	I
A-C	I	119.5	I	119.5	I	39.8	I
B-C	I	119.5	I	119.5	I	38.8	I
B-A	I	146.4	I	146.4	I	47.6	I
C-A	I	55.8	I	55.8	I	19.7	I
C-B	I	144.5	I	144.5	I	51.0	I
ALL	I	720.3	I	720.3	I	241.8	I

ELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

NCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
HESE WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

OTAL METRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD.
HE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS
A LARGE QUEUE AT THE END OF THE TIME PERIOD.

*** OSCADY 4 run completed

===== end of file =====

inted at 12:55:43 on 11/10/04]

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Visual OSCADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (MAR 1999)

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with file:- "o:\doncaster road, goldthorpe\high st oscady\high street 2008 pm without development.voi" at 13:02:

FILE

Doncaster Road and High Street 2008 pm Without Development

* ERROR AND WARNING MESSAGES *****
=====

errors or warnings in the data.

FFIC SIGNAL JUNCTION ANALYSIS

UT DATA

1 C----- TEE TO A ----->
ARM A
<----- FROM A
I
I
I
I
I
I
ARM B

A IS Doncaster Road East
B IS High Street
C IS Doncaster Road West

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\high st oscady\high street 2008 pm without develo

METRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I
PERMITTED MOVEMENTS	I		I		I		I
LANE 1	I	LS	I	L R	I	SR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS	I		I		I		I
LANE 1	I	5.45 M	I	4.20 M	I	5.20 M	I
LEFT TURN RADII	I		I		I		I
LANE 1	I	15.0 M	I	15.0 M	I	N/A	I
RIGHT TURN RADII	I		I		I		I
LANE 1	I	N/A	I	5.0 M	I	5.0 M	I

T WID FOR IMAGINARY ARM D = 50.10

FFIC DEMAND DATA

AND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

AULT VEHICLE TYPE PROPORTIONS ARE USED

AND DATA SUPPLIED BETWEEN TIMES - 16.45 TO 18.15
[OD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 17.00 TO 18.00

FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

FFIC SCALING FACTOR HAS BEEN SET TO 100 %

TOTAL TRAFFIC DEMAND (VEHICLES / HOUR)							I
FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
ARM A	I	0.0	I	190.0	I	161.0	I
ARM B	I	177.0	I	0.0	I	117.0	I
ARM C	I	108.0	I	231.0	I	0.0	I

TIME PERIOD	I	ARM	I	VEHICLE TYPE PROPORTIONS					I
	I		I	CARS AND	MEDIUM	HEAVY	BUSES AND	MOTOR	PEDAL
	I		I	LIGHT GOODS	GOODS	GOODS	COACHES	CYCLES	CYCLES
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000

DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

TRY/EXIT	I	ARM	I	TIME WHEN	I	TIME WHEN	I	TIME WHEN	I	RATE OF FLOW (VEH/MIN)			I
FLOW	I		I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I
	I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I
	I		I		I		I		I		I		I
TRY	I	A	I	17.00	I	17.30	I	18.00	I	4.39	I	6.58	I
	I	B	I	17.00	I	17.30	I	18.00	I	3.67	I	5.51	I
	I	C	I	17.00	I	17.30	I	18.00	I	4.24	I	6.36	I

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\high st oscady\high street 2008 pm without develo

AL TIMING DETAILS FOR SIGNAL SET 1

NG OPTION- VEHICLE ACTUATED MODE

MUM CYCLE TIME- 60.0 SECONDS

AL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I
LANES ON GREEN: ARM A	I	1	I		I		I
B	I		I	1	I		I
C	I		I		I	1	I
MINIMUM GREEN TIME (SECS)	I	7.0	I	7.0	I	7.0	I
PRECEDING INTERSTAGE	I	5.0	I	5.0	I	5.0	I

AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE (SECS)	FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES								I
17.00-17.15								I
A 1	L S	5.24	2049.1	32.30	10.9		7.93	I
B 1	L R	4.39	1667.5	26.29	11.1		6.56	I
C 1	S R	5.06	1772.6	27.94	12.0		7.52	I
17.15-17.30								I
A 1	L S	6.42	2049.1	32.30	15.3		8.49	I
B 1	L R	5.37	1667.5	26.29	15.6		7.05	I
C 1	S R	6.20	1772.6	27.94	16.9		8.08	I
17.30-17.45								I
A 1	L S	6.42	2049.1	32.30	15.3		8.49	I
B 1	L R	5.37	1667.5	26.29	15.6		7.05	I
C 1	S R	6.20	1772.6	27.94	16.9		8.08	I
17.45-18.00								I
1	L S	5.24	2049.1	32.30	10.9		7.93	I
1	L R	4.39	1667.5	26.29	11.1		6.56	I
C 1	S R	5.06	1772.6	27.94	12.0		7.52	I

E AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	MAXIMUM (END OF RED) (VEHS/LANE)	QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
ARM LANES									I
17.00-17.15									I
A 1	L S	5.24	7.93	0.660	2.1	3.7	30.6		I
B 1	L R	4.39	6.56	0.669	1.9	3.2	27.6		I
C 1	S R	5.06	7.52	0.673	2.0	3.5	29.9		I
17.15-17.30									I
A 1	L S	6.42	8.49	0.756	3.4	5.9	51.6		I
B 1	L R	5.37	7.05	0.763	3.1	5.2	46.9		I
C 1	S R	6.20	8.08	0.767	3.4	5.7	50.5		I
17.30-17.45									I
A 1	L S	6.42	8.49	0.756	3.5	6.0	52.7		I
B 1	L R	5.37	7.05	0.763	3.2	5.2	48.2		I
C 1	S R	6.20	8.08	0.767	3.4	5.7	51.8		I

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\high st oscady\high street 2008 pm without develo

7.45-18.00										I
A	1	L S	5.24	7.93	0.660	2.1	3.7	32.0		I
B	1	L R	4.39	6.56	0.669	1.9	3.3	29.5		I
C	1	S R	5.06	7.52	0.673	2.1	3.6	31.6		I

UES FOR ARM A

ME MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
.15	1	2.1	3.7	****
.30	1	3.4	5.9	*****
.45	1	3.5	6.0	*****
.00	1	2.1	3.7	****

UES FOR ARM B

ME MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
.15	1	1.9	3.2	**+
.30	1	3.1	5.2	*****
.45	1	3.2	5.2	*****
.00	1	1.9	3.3	**+

JES FOR ARM C

ME MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
	1	2.0	3.5	****
30	1	3.4	5.7	*****
45	1	3.4	5.7	*****
00	1	2.1	3.6	****

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\high st oscady\high street 2008 pm without develo

UEING DELAY INFORMATION OVER WHOLE PERIOD (17.00-18.00)

TREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I						
	I	(EXCL 2-WHEEL)	I	* DELAY *	I	* DELAY *	I						
	I		I		I		I						
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)						
A-B	I	189.3	I	189.3	I	90.3	I	0.48	I	90.5	I	0.48	I
A-C	I	160.4	I	160.4	I	76.6	I	0.48	I	76.7	I	0.48	I
B-C	I	116.6	I	116.6	I	60.6	I	0.52	I	60.7	I	0.52	I
B-A	I	176.3	I	176.3	I	91.6	I	0.52	I	91.8	I	0.52	I
C-A	I	107.6	I	107.6	I	52.2	I	0.49	I	52.3	I	0.49	I
C-B	I	230.1	I	230.1	I	111.6	I	0.49	I	111.8	I	0.49	I
ALL	I	980.3	I	980.3	I	482.9	I	0.49	I	483.7	I	0.49	I

ELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

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

TOTAL METRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD.
THE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS
A LARGE QUEUE AT THE END OF THE TIME PERIOD.

*** OSCADY 4 run completed

===== end of file =====

inted at 13:02:40 on 11/10/04]

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OPTIMISED SIGNAL CAPACITY AND DELAY

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n with file:- "o:\dlt0050 former goldthorpe colliery\doncaster road, goldthorpe\high st oscady\high street 2008 am

TITLE

Doncaster Road and High Street 2008 am With Development

** ERROR AND WARNING MESSAGES ****

errors or warnings in the data.

AFFIC SIGNAL JUNCTION ANALYSIS

PUT DATA

UM C ----- TEE TO A -----> ARM A
<----- FROM A
I
I
I
I
I
I
I
ARM B

(A IS Doncaster Road East
I B IS High Street
I C IS Doncaster Road West

METRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I
PERMITTED MOVEMENTS LANE 1	I	LS	I	L R	I	SR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS LANE 1	I	5.35 M	I	4.20 M	I	5.20 M	I
LEFT TURN RADII LANE 1	I	15.0 M	I	15.0 M	I	N/A	I
RIGHT TURN RADII LANE 1	I	N/A	I	5.0 M	I	5.0 M	I

IT WI FOR IMAGINARY ARM D = 50.10

TRAFFIC DEMAND DATA

MAND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

FAULT VEHICLE TYPE PROPORTIONS ARE USED

MAND DATA SUPPLIED BETWEEN TIMES - 07.45 TO 09.15
 IOD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 08.00 TO 09.00

2 FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

TRAFFIC SCALING FACTOR HAS BEEN SET TO 100 %

TOTAL TRAFFIC DEMAND (VEHICLES / HOUR)							I
FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
ARM A	I	0.0	I	190.0	I	169.0	I
ARM B	I	200.0	I	0.0	I	120.0	I
ARM C	I	76.0	I	145.0	I	0.0	I

TIME PERIOD	I	ARM	I	VEHICLE TYPE PROPORTIONS						I
	I		I	CARS AND	MEDIUM	HEAVY	BUSES AND	MOTOR	PEDAL	I
	I		I	LIGHT GOODS	GOODS	GOODS	COACHES	CYCLES	CYCLES	I
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000	I

TA DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

ENTRY/EXIT FLOWS	I	ARM	I	TIME WHEN	I	TIME WHEN	I	TIME WHEN	I	RATE OF FLOW (VEH/MIN)					I				
				FLOW STARTS		I		TOP OF PEAK		I	FLOW STOPS	I	BEFORE	I		AT TOP	I	AFTER	I
				TO RISE				IS REACHED			FALLING		PEAK			OF PEAK		PEAK	
ENTRY	I	A	I	08.00	I	08.30	I	09.00	I	4.49	I	6.73	I	4.49	I				
	I	B	I	08.00	I	08.30	I	09.00	I	4.00	I	6.00	I	4.00	I				
	I	C	I	08.00	I	08.30	I	09.00	I	2.76	I	4.14	I	2.76	I				

NAL TIMING DETAILS FOR SIGNAL SET 1

ING OPTION- VEHICLE ACTUATED MODE

IMUM CYCLE TIME-

60.0 SECONDS

BAL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I
LANES ON GREEN: ARM A	I	1	I		I		I
B	I		I	1	I		I
C	I		I		I	1	I
MINIMUM GREEN TIME (SECS)	I	7.0	I	7.0	I	7.0	I
PRECEDING INTERSTAGE	I	5.0	I	5.0	I	5.0	I

AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE (SECS)	FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES								I
08.00-08.15								I
A 1	L S	5.36	2041.9	32.19	11.3		8.59	I
B 1	L R	4.78	1661.2	26.19	12.1		7.47	I
C 1	S R	3.30	1783.9	28.12	8.5		5.63	I
08.15-08.30								I
A 1	L S	6.56	2041.9	32.19	14.4		9.10	I
B 1	L R	5.85	1661.2	26.19	15.6		7.99	I
C 1	S R	4.04	1783.9	28.12	10.5		5.81	I
08.30-08.45								I
A 1	L S	6.56	2041.9	32.19	14.4		9.10	I
B 1	L R	5.85	1661.2	26.19	15.6		7.99	I
C 1	S R	4.04	1783.9	28.12	10.5		5.81	I
08.45-09.00								I
A 1	L S	5.36	2041.9	32.19	11.3		8.59	I
B 1	L R	4.78	1661.2	26.19	12.1		7.47	I
C 1	S R	3.30	1783.9	28.12	8.5		5.63	I

AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	MAXIMUM (END OF RED) (VEHS/LANE)	QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
08.00-08.15									I
A 1	L S	5.36	8.59	0.624	1.8	3.4	27.1		I
B 1	L R	4.78	7.47	0.639	1.7	3.1	25.4		I
C 1	S R	3.30	5.63	0.586	1.3	2.3	19.7		I
08.15-08.30									I
A 1	L S	6.56	9.10	0.721	2.9	5.1	43.1		I
B 1	L R	5.85	7.99	0.732	2.7	4.6	40.3		I
C 1	S R	4.04	5.81	0.696	2.2	3.6	32.5		I
08.30-08.45									I
A 1	L S	6.56	9.10	0.721	2.9	5.1	43.7		I
B 1	L R	5.85	7.99	0.732	2.7	4.6	41.1		I
C 1	S R	4.04	5.81	0.696	2.2	3.7	33.2		I

3.45-09.00										I
A	1	L S	5.36	8.59	0.624	1.9	3.4	28.0		I
B	1	L R	4.78	7.47	0.639	1.8	3.1	26.5		I
C	1	S R	3.30	5.63	0.586	1.4	2.4	20.6		I

JES FOR ARM A

VE MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
.15	1	1.8	3.4	***
.30	1	2.9	5.1	*****
.45	1	2.9	5.1	*****
.00	1	1.9	3.4	***

JES FOR ARM B

VE MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
.15	1	1.7	3.1	***
.30	1	2.7	4.6	*****
.45	1	2.7	4.6	*****
.00	1	1.8	3.1	***

JES FOR ARM C

VE MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
.15	1	1.3	2.3	**
.30	1	2.2	3.6	****
.45	1	2.2	3.7	****
.00	1	1.4	2.4	**

JEING DELAY INFORMATION OVER WHOLE PERIOD (08.00-09.00)

TREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
	I	(EXCL 2-WHEEL)		I	* DELAY *		I	* DELAY *		I
	I			I			I			I
	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
A-B	I	189.3	I 189.3	I	75.1	I 0.40	I	75.2	I 0.40	I
A-C	I	168.4	I 168.4	I	66.8	I 0.40	I	66.9	I 0.40	I
B-C	I	119.5	I 119.5	I	50.0	I 0.42	I	50.1	I 0.42	I
B-A	I	199.2	I 199.2	I	83.3	I 0.42	I	83.5	I 0.42	I
C-A	I	75.7	I 75.7	I	36.4	I 0.48	I	36.5	I 0.48	I
C-B	I	144.5	I 144.5	I	69.5	I 0.48	I	69.6	I 0.48	I
ALL	I	896.6	I 896.6	I	381.2	I 0.43	I	381.8	I 0.43	I

ELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

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

TOTAL METRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD. THE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE AT THE END OF THE TIME PERIOD.

*** OSCADY 4 run completed

***** end of file *****

inted at 11:26:41 on 04/11/04]

TRANSPORT RESEARCH LABORATORY

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OPTIMISED SIGNAL CAPACITY AND DELAY

Visual OSCADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (MAR 1999)

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with file:- "o:\dlt0050 former goldthorpe colliery\doncaster road, goldthorpe\high st oscady\high street 2008 pm

FILE

Doncaster Road and High Street 2008 pm With Development

* ERROR AND WARNING MESSAGES ****

errors or warnings in the data.

PFIC SIGNAL JUNCTION ANALYSIS

JT DATA

1 C ----- TEE TO A ----->
----- ARM A
<----- FROM A
I
I
I
I
I
I
ARM B

A IS Doncaster Road East
B IS High Street
C IS Doncaster Road West

ETRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I
PERMITTED MOVEMENTS LANE 1	I	LS	I	L R	I	SR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS LANE 1	I	5.45 M	I	4.20 M	I	5.20 M	I
LEFT TURN RADII LANE 1	I	15.0 M	I	15.0 M	I	N/A	I
RIGHT TURN RADII LANE 1	I	N/A	I	5.0 M	I	5.0 M	I

WIDT FOR IMAGINARY ARM D = 50.10

FIC DEMAND DATA

ND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

ULT VEHICLE TYPE PROPORTIONS ARE USED

ND DATA SUPPLIED BETWEEN TIMES - 16.45 TO 18.15
 OD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 17.00 TO 18.00

FOLLOWING DATA HAS BEEN INPUT
 / DEFAULTED

FIC SCALING FACTOR HAS BEEN SET TO 100 %

FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
ARM A	I	0.0	I	224.0	I	190.0	I
ARM B	I	221.0	I	0.0	I	117.0	I
ARM C	I	135.0	I	231.0	I	0.0	I

TIME PERIOD	I	ARM	I	VEHICLE TYPE PROPORTIONS	I
	I	I	I	CARS AND MEDIUM HEAVY BUSES AND MOTOR PEDAL	I
	I	I	I	LIGHT GOODS GOODS GOODS COACHES CYCLES CYCLES	I
ALL	I	ALL	I	0.927 0.041 0.016 0.016 0.000 0.000	I

DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

TRY/EXIT	I	ARM	I	TIME WHEN	I	TIME WHEN	I	TIME WHEN	I	RATE OF FLOW (VEH/MIN)	I
LOWS	I	I	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I
	I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	AT TOP	I
	I	I	I		I		I		I	OF PEAK	I
RY	I	A	I	17.00	I	17.30	I	18.00	I	5.18	I
	I	B	I	17.00	I	17.30	I	18.00	I	4.22	I
	I	C	I	17.00	I	17.30	I	18.00	I	4.57	I

AL TIMING DETAILS FOR SIGNAL SET 1

NG OPTION- VEHICLE ACTUATED MODE

MUM CYCLE TIME- 60.0 SECONDS

AL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
END = 2.9

ATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I
ANES ON GREEN: ARM A	I	1	I		I		I
B	I		I	1	I		I
C	I		I		I	1	I
MINIMUM GREEN TIME (SECS)	I	7.0	I	7.0	I	7.0	I
PRECEDING INTERSTAGE	I	5.0	I	5.0	I	5.0	I

AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE (SECS)	FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES								I
17.00-17.15								I
A 1	L S	6.18	2049.1	32.30	13.7		8.56	I
B 1	L R	5.05	1653.4	26.06	13.8		6.93	I
C 1	S R	5.46	1795.1	28.30	13.8		7.53	I
17.15-17.30								I
A 1	L S	7.57	2049.1	32.30	16.4		8.83	I
B 1	L R	6.18	1653.4	26.06	16.6		7.20	I
C 1	S R	6.69	1795.1	28.30	16.5		7.80	I
17.30-17.45								I
A 1	L S	7.57	2049.1	32.30	16.4		8.83	I
B 1	L R	6.18	1653.4	26.06	16.6		7.20	I
C 1	S R	6.69	1795.1	28.30	16.5		7.80	I
17.45-18.00								I
A 1	L S	6.18	2049.1	32.30	13.7		8.56	I
B 1	L R	5.05	1653.4	26.06	13.8		6.93	I
C 1	S R	5.46	1795.1	28.30	13.8		7.53	I

AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RPC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	MAXIMUM (END OF RED) (VEHS/LANE)	QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
ARM LANES									I
17.00-17.15									I
A 1	L S	6.18	8.56	0.722	2.8	5.0	42.0		I
B 1	L R	5.05	6.93	0.728	2.5	4.3	37.2		I
C 1	S R	5.46	7.53	0.725	2.7	4.5	39.0		I
17.15-17.30									I
A 1	L S	7.57	8.83	0.857	5.2	8.1	77.2		I
B 1	L R	6.18	7.20	0.859	4.7	7.0	69.2		I
C 1	S R	6.69	7.80	0.858	4.9	7.4	72.1		I
17.30-17.45									I
A 1	L S	7.57	8.83	0.857	5.4	8.3	83.4		I
B 1	L R	6.18	7.20	0.859	4.9	7.3	75.9		I
C 1	S R	6.69	7.80	0.858	5.1	7.6	78.6		I

7.45-18.00										I
A	1	L S	6.18	8.56	0.722	3.0	5.1	46.3		I
B	1	L R	5.05	6.93	0.728	2.7	4.4	42.7		I
C	1	S R	5.46	7.53	0.725	2.8	4.7	44.0		I

UES FOR ARM A

ME MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +	
.15	1	2.8	5.0	++++
.30	1	5.2	8.1	++++++
.45	1	5.4	8.3	++++++
.00	1	3.0	5.1	++++

UES FOR ARM B

ME MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +	
.15	1	2.5	4.3	+++
.30	1	4.7	7.0	++++++
.45	1	4.9	7.3	++++++
.00	1	2.7	4.4	+++

JES FOR ARM C

ME MENT ING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +	
	1	2.7	4.5	++++
30	1	4.9	7.4	++++++
45	1	5.1	7.6	++++++
00	1	2.8	4.7	++++

JEING DELAY INFORMATION OVER WHOLE PERIOD (17.00-18.00)

STREAM	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *	
	(EXCL 2-WHEEL)		* DELAY *		* DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A-B	223.2	223.2	134.6	0.60	134.9	0.60
A-C	189.3	189.3	114.2	0.60	114.4	0.60
B-C	116.6	116.6	77.9	0.67	78.1	0.67
B-A	220.2	220.2	147.1	0.67	147.5	0.67
C-A	134.5	134.5	86.2	0.64	86.4	0.64
C-B	230.1	230.1	147.4	0.64	147.8	0.64
ALL	1113.8	1113.8	707.5	0.64	709.0	0.64

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 BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

TOTAL GEOMETRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD. THE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE AT THE END OF THE TIME PERIOD.

*** OSCADY 4 run completed

===== end of file =====

Printed at 11:27:08 on 04/11/04

Appendix B

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\bypass picady\12811 a635 bypass and doncaster roa

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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with file:- "o:\doncaster road, goldthorpe\bypass picady\12811 a635 bypass and doncaster road 2004 am base.vpi"

FILE TITLE

Doncaster Road and A635 Bypass 2004 am base

JUNCTION/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I

MINOR ROAD (ARM B)

A IS A635 Bypass Eastbound
B IS Doncaster Road
C IS A635 Bypass Westbound

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

ETC.

GEOMETRIC DATA

DATA ITEM	I	MINOR ROAD B	I
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	6.00 M.	I
CENTRAL RESERVE WIDTH	I (WCR)	9.00 M.	I
	I		I
MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.50 M.	I
- VISIBILITY	I (VC-B)	215.0 M.	I
- BLOCKS TRAFFIC	I	NO	I
	I		I
MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	215.0 M.	I
- VISIBILITY TO RIGHT	I (VB-A)	215.0 M.	I
- LANE 1 WIDTH	I (WB-C)	4.30 M.	I
- LANE 2 WIDTH	I (WB-A)	4.60 M.	I
- LENGTH OF FLARED SECTION	I	4 VEHS	I

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\bypass picady\12811 a635 bypass and doncaster roa

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	6.45	9.67	6.45
ARM B	15.00	45.00	75.00	1.51	2.27	1.51
ARM C	15.00	45.00	75.00	5.36	8.04	5.36

TIME	TURNING PROPORTIONS					
	TURNING COUNTS (VEH/HR)					
	(PERCENTAGE OF H.V.S)					
	FROM/TO	ARM A	ARM B	ARM C		
07.45 - 09.15	ARM A	0.000	0.324	0.676		
		0.0	167.0	349.0		
		(0.0)	(10.0)	(10.0)		
	ARM B	0.942	0.000	0.058		
		114.0	0.0	7.0		
		(10.0)	(0.0)	(10.0)		
	ARM C	0.995	0.005	0.000		
		427.0	2.0	0.0		
		(10.0)	(10.0)	(0.0)		

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
B-C	0.09	10.91	0.008		0.0	0.0	0.1	
B-A	1.42	10.97	0.130		0.0	0.1	2.2	
C-A	5.34							
C-B	0.03	10.09	0.002		0.0	0.0	0.0	
A-B	2.09							
A-C	4.36							

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)
08.00-08.15								
B-C	0.10	10.49	0.010		0.0	0.0	0.1	
B-A	1.70	10.38	0.164		0.1	0.2	2.9	
C-A	6.37							
C-B	0.03	9.70	0.003		0.0	0.0	0.0	
A-B	2.49							
A-C	5.21							

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\bypass picady\12811 a635 bypass and doncaster roa

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)	I
8.15-08.30									I
B-C	0.13	9.90	0.013		0.0	0.0	0.2		I
B-A	2.08	9.57	0.218		0.2	0.3	4.0		I
C-A	7.81								I
C-B	0.04	9.17	0.004		0.0	0.0	0.1		I
A-B	3.05								I
A-C	6.38								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)	I
08.30-08.45									I
B-C	0.13	9.90	0.013		0.0	0.0	0.2		I
B-A	2.08	9.57	0.218		0.3	0.3	4.1		I
C-A	7.81								I
C-B	0.04	9.17	0.004		0.0	0.0	0.1		I
A-B	3.05								I
A-C	6.38								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)	I
08.45-09.00									I
B-C	0.10	10.49	0.010		0.0	0.0	0.2		I
B-A	1.70	10.38	0.164		0.3	0.2	3.0		I
C-A	6.37								I
C-B	0.03	9.70	0.003		0.0	0.0	0.0		I
A-B	2.49								I
A-C	5.21								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)	I
09.00-09.15									I
B-C	0.09	10.91	0.008		0.0	0.0	0.1		I
B-A	1.42	10.97	0.130		0.2	0.2	2.3		I
C-A	5.34								I
C-B	0.03	10.09	0.002		0.0	0.0	0.0		I
A-B	2.09								I
A-C	4.36								I

ARNING* THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

QUE FOR STREAM B-C

ME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUE FOR STREAM B-A

ME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.2

QUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	9.6	6.4	0.9	0.10	0.9	0.10
B-A	156.3	104.2	18.5	0.12	18.5	0.12
C-A	585.5	390.3				
C-B	2.7	1.8	0.3	0.10	0.3	0.10
A-B	229.0	152.7				
	478.6	319.0				
ALL	1461.7	974.5	19.7	0.01	19.7	0.01

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.
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OF JOB

===== end of file =====

Printed at 14:36:53 on 07/10/04]

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\bypass picady\12811 a635 bypass and doncaster roa

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

with file:- "o:\doncaster road, goldthorpe\bypass picady\12811 a635 bypass and doncaster road 2004 pm base.vpi"

IN TITLE

Doncaster Road and A635 Bypass 2004 pm base

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

M A IS A635 Bypass Eastbound
M B IS Doncaster Road
M C IS A635 Bypass Westbound

STREAM LABELLING CONVENTION

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

METRIC DATA

DATA ITEM	I	MINOR ROAD B	I
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	6.00 M.	I
CENTRAL RESERVE WIDTH	I (WCR)	9.00 M.	I
	I		I
MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.50 M.	I
- VISIBILITY	I (VC-B)	215.0 M.	I
- BLOCKS TRAFFIC	I	NO	I
	I		I
MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	215.0 M.	I
- VISIBILITY TO RIGHT	I (VB-A)	215.0 M.	I
- LANE 1 WIDTH	I (WB-C)	4.30 M.	I
- LANE 2 WIDTH	I (WB-A)	4.60 M.	I
- LENGTH OF FLARED SECTION	I	4 VEHS	I

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\bypass picady\12811 a635 bypass and doncaster roa

FFIC DEMAND DATA

E PERIOD BEGINS 07.45 AND ENDS 09.15

3TH OF TIME PERIOD - 90 MINUTES.
3TH OF TIME SEGMENT - 15 MINUTES.

AND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
RM A	15.00	45.00	75.00	7.81	11.72	7.81
RM B	15.00	45.00	75.00	2.30	3.45	2.30
RM C	15.00	45.00	75.00	3.90	5.85	3.90

TIME	TURNING PROPORTIONS		
	TURNING COUNTS (VEH/HR)		
	(PERCENTAGE OF H.V.S)		
	FROM/TO	ARM A	ARM B
07.45 - 09.15	ARM A	0.000	0.286
		0.0	179.0
		(0.0)	(10.0)
	ARM B	0.967	0.000
		178.0	0.0
		(10.0)	(0.0)
	ARM C	0.974	0.026
		304.0	8.0
		(10.0)	(10.0)

NING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

AULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
07.00-08.00								
B-C	0.08	10.30	0.007		0.0	0.0	0.1	
B-A	2.22	10.83	0.205		0.0	0.3	3.7	
C-A	3.80							
C-B	0.10	9.67	0.010		0.0	0.0	0.2	
A-B	2.24							
A-C	5.57							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
8.00-08.15								
B-C	0.09	9.75	0.009		0.0	0.0	0.1	
B-A	2.66	10.21	0.260		0.3	0.3	5.1	
C-A	4.54							
C-B	0.12	9.20	0.013		0.0	0.0	0.2	
A-B	2.67							
A-C	6.66							

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)	I
08.15-08.30									I
B-C	0.11	8.98	0.012		0.0	0.0	0.2		I
B-A	3.25	9.35	0.348		0.3	0.5	7.6		I
C-A	5.56								I
C-B	0.15	8.55	0.017		0.0	0.0	0.3		I
A-B	3.27								I
A-C	8.15								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)	I
08.30-08.45									I
B-C	0.11	8.98	0.012		0.0	0.0	0.2		I
B-A	3.25	9.35	0.348		0.5	0.5	7.9		I
C-A	5.56								I
C-B	0.15	8.55	0.017		0.0	0.0	0.3		I
A-B	3.27								I
A-C	8.15								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)	I
08.45-09.00									I
B-C	0.09	9.75	0.009		0.0	0.0	0.1		I
B-A	2.66	10.21	0.260		0.5	0.4	5.5		I
C-A	4.54								I
C-B	0.12	9.20	0.013		0.0	0.0	0.2		I
A-B	2.67								I
A-C	6.66								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)	I
09.00-09.15									I
B-C	0.08	10.29	0.007		0.0	0.0	0.1		I
B-A	2.22	10.83	0.206		0.4	0.3	4.0		I
C-A	3.80								I
C-B	0.10	9.67	0.010		0.0	0.0	0.2		I
B	2.24								I
C	5.57								I

WARNING* THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.3
08.30	0.5 *
08.45	0.5 *
09.00	0.4
09.15	0.3

UE FOR STREAM C-B

E SEGMENT NDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
	I		I	* DELAY *	I	* DELAY *	I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	I	8.2	I 5.5	I 0.9	I 0.11	I 0.9	I 0.11
B-A	I	244.1	I 162.7	I 33.8	I 0.14	I 33.8	I 0.14
C-A	I	416.8	I 277.9	I	I	I	I
C-B	I	11.0	I 7.3	I 1.2	I 0.11	I 1.2	I 0.11
A-B	I	245.4	I 163.6	I	I	I	I
	I	611.6	I 407.7	I	I	I	I
ALL	I	1537.1	I 1024.8	I 35.9	I 0.02	I 35.9	I 0.02

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D OF JOB

===== end of file =====

TRAFFIC DEMAND DATA

E PERIOD BEGINS 07.45 AND ENDS 09.15

DURATION OF TIME PERIOD - 90 MINUTES.

DURATION OF TIME SEGMENT - 15 MINUTES.

AND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
	FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	6.79	10.18	6.79
ARM B	15.00	45.00	75.00	1.59	2.38	1.59
ARM C	15.00	45.00	75.00	5.64	8.46	5.64

TIME	TURNING PROPORTIONS		
	TURNING COUNTS (VEH/HR)		
FROM/TO	(PERCENTAGE OF H.V.S)		
	ARM A	ARM B	ARM C
07.45 - 09.15			
ARM A	0.000	0.324	0.676
	0.0	176.0	367.0
	(0.0)	(10.0)	(10.0)
ARM B	0.945	0.000	0.055
	120.0	0.0	7.0
	(10.0)	(0.0)	(10.0)
ARM C	0.996	0.004	0.000
	449.0	2.0	0.0
	(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
B-C	0.09	10.80	0.008		0.0	0.0	0.1	
B-A	1.50	10.82	0.139		0.0	0.2	2.3	
C-A	5.61							
C-B	0.03	9.98	0.003		0.0	0.0	0.0	
A-B	2.20							
A-C	4.59							

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)
08.00-08.15								
B-C	0.10	10.36	0.010		0.0	0.0	0.1	
B-A	1.79	10.20	0.176		0.2	0.2	3.1	
C-A	6.70							
C-B	0.03	9.58	0.003		0.0	0.0	0.0	
A-B	2.63							
A-C	5.48							

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\bypass picady\bypass and doncaster road 2008 am w

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)	I
8.15-08.30									I
B-C	0.13	9.73	0.013		0.0	0.0	0.2		I
B-A	2.19	9.34	0.235		0.2	0.3	4.4		I
C-A	8.21								I
C-B	0.04	9.01	0.004		0.0	0.0	0.1		I
A-B	3.22								I
A-C	6.71								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)	I
8.30-08.45									I
B-C	0.13	9.73	0.013		0.0	0.0	0.2		I
B-A	2.19	9.34	0.235		0.3	0.3	4.6		I
C-A	8.21								I
C-B	0.04	9.01	0.004		0.0	0.0	0.1		I
A-B	3.22								I
A-C	6.71								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)	I
8.45-09.00									I
B-C	0.10	10.35	0.010		0.0	0.0	0.2		I
B-A	1.79	10.20	0.176		0.3	0.2	3.3		I
C-A	6.70								I
C-B	0.03	9.58	0.003		0.0	0.0	0.0		I
A-B	2.63								I
A-C	5.48								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)	I
9.00-09.15									I
B-C	0.09	10.80	0.008		0.0	0.0	0.1		I
B-A	1.50	10.82	0.139		0.2	0.2	2.5		I
C-A	5.61								I
C-B	0.03	9.98	0.003		0.0	0.0	0.0		I
A-B	2.20								I
A-C	4.59								I

MORNING* THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

QUEUE FOR STREAM B-C

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
8.00	0.0
8.15	0.0
8.30	0.0
8.45	0.0
9.00	0.0
9.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
8.00	0.2
8.15	0.2
8.30	0.3
8.45	0.3
9.00	0.2
9.15	0.2

UE FOR STREAM C-B

E SEGMENT	NO. OF
NDING	VEHICLES
	IN QUEUE
8.00	0.0
8.15	0.0
8.30	0.0
8.45	0.0
9.00	0.0
9.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
	I		I	* DELAY *	I	* DELAY *	I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	I	9.6	I 6.4	I 0.9	I 0.10	I 0.9	I 0.10
B-A	I	164.5	I 109.7	I 20.2	I 0.12	I 20.2	I 0.12
C-A	I	615.7	I 410.4	I	I	I	I
C-B	I	2.7	I 1.8	I 0.3	I 0.11	I 0.3	I 0.11
	I	241.3	I 160.9	I	I	I	I
	I	503.2	I 335.5	I	I	I	I
ALL	I	1537.1	I 1024.8	I 21.4	I 0.01	I 21.4	I 0.01

DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
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OF JOB

===== end of file =====

rinted at 14:43:36 on 07/10/04]

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\bypass picady\bypass and doncaster road 2008 pm w

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Run with file:- "o:\doncaster road, goldthorpe\bypass picady\bypass and doncaster road 2008 pm without.vpi" at 14:45

RUN TITLE

Doncaster Road and A635 Bypass 2008 pm without

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS A635 Bypass Eastbound

ARM B IS Doncaster Road

ARM C IS A635 Bypass Westbound

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

ETC.

GEOMETRIC DATA

DATA ITEM	I	MINOR ROAD B	I
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	6.00 M.	I
CENTRAL RESERVE WIDTH	I (WCR)	9.00 M.	I
	I		I
MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.50 M.	I
- VISIBILITY	I (VC-B)	215.0 M.	I
- BLOCKS TRAFFIC	I	NO	I
	I		I
MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	215.0 M.	I
- VISIBILITY TO RIGHT	I (VB-A)	215.0 M.	I
- LANE 1 WIDTH	I (WB-C)	4.30 M.	I
- LANE 2 WIDTH	I (WB-A)	4.60 M.	I
- LENGTH OF FLARED SECTION	I	4 VEHS	I

TRL VIEWER 2.0 AA o:\doncaster road, goldthorpe\bypass picady\bypass and doncaster road 2008 pm w

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	7.93	11.89	7.93
ARM B	15.00	45.00	75.00	2.41	3.62	2.41
ARM C	15.00	45.00	75.00	4.10	6.15	4.10

TIME	TURNING PROPORTIONS			I					
	TURNING COUNTS (VEH/HR)				I				
	(PERCENTAGE OF H.V.S)					I			
I	FROM/TO	I	ARM A	I	ARM B		I	ARM C	I
16.45 - 18.15	I		I		I		I		I
	I	ARM A	I	0.000	I	0.297	I	0.703	I
	I		I	0.0	I	188.0	I	446.0	I
	I		I	(0.0)	I	(10.0)	I	(10.0)	I
	I		I		I		I		I
	I	ARM B	I	0.969	I	0.000	I	0.031	I
	I		I	187.0	I	0.0	I	6.0	I
	I		I	(10.0)	I	(0.0)	I	(10.0)	I
	I		I		I		I		I
	I	ARM C	I	0.976	I	0.024	I	0.000	I
	I		I	320.0	I	8.0	I	0.0	I
	I		I	(10.0)	I	(10.0)	I	(0.0)	I
	I		I		I		I		I
	I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
16.45-17.00								
B-C	0.08	10.25	0.007		0.0	0.0	0.1	
B-A	2.34	10.77	0.217		0.0	0.3	4.0	
C-A	4.00							
C-B	0.10	9.63	0.010		0.0	0.0	0.2	
A-B	2.35							
A-C	5.57							

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)
17.00-17.15								
B-C	0.09	9.69	0.009		0.0	0.0	0.1	
B-A	2.79	10.14	0.275		0.3	0.4	5.5	
C-A	4.78							
C-B	0.12	9.16	0.013		0.0	0.0	0.2	
A-B	2.81							
A-C	6.66							

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)	I
17.15-17.30									I
B-C	0.11	8.90	0.012		0.0	0.0	0.2		I
B-A	3.42	9.26	0.369		0.4	0.6	8.3		I
C-A	5.85								I
C-B	0.15	8.50	0.017		0.0	0.0	0.3		I
A-B	3.44								I
A-C	8.15								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)	I
17.30-17.45									I
B-C	0.11	8.90	0.012		0.0	0.0	0.2		I
B-A	3.42	9.26	0.369		0.6	0.6	8.7		I
C-A	5.85								I
C-B	0.15	8.50	0.017		0.0	0.0	0.3		I
A-B	3.44								I
A-C	8.15								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)	I
17.45-18.00									I
B-C	0.09	9.69	0.009		0.0	0.0	0.1		I
B-A	2.79	10.14	0.275		0.6	0.4	6.0		I
C-A	4.78								I
C-B	0.12	9.16	0.013		0.0	0.0	0.2		I
A-B	2.81								I
A-C	6.66								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)	I
18.00-18.15									I
B-C	0.08	10.24	0.007		0.0	0.0	0.1		I
B-A	2.34	10.77	0.217		0.4	0.3	4.3		I
C-A	4.00								I
C-B	0.10	9.63	0.010		0.0	0.0	0.2		I
A-B	2.35								I
A-C	5.57								I

WARNING* THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.6 *
17.45	0.6 *
18.00	0.4
18.15	0.3

UE FOR STREAM C-B

E SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
7.00	0.0
7.15	0.0
7.30	0.0
7.45	0.0
8.00	0.0
8.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
	I		I	* DELAY *	I	* DELAY *	I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	I	8.2	I 5.5	I 0.9	I 0.11	I 0.9	I 0.11
B-A	I	256.4	I 170.9	I 36.7	I 0.14	I 36.7	I 0.14
C-A	I	438.8	I 292.5	I	I	I	I
C-B	I	11.0	I 7.3	I 1.2	I 0.11	I 1.2	I 0.11
A-B	I	257.8	I 171.9	I	I	I	I
I	I	611.6	I 407.7	I	I	I	I
ALL	I	1583.7	I 1055.8	I 38.8	I 0.02	I 38.8	I 0.02

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.

D OF JOB

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

Visual PICADY 4 ANALYSIS PROGRAM
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Run with file:- "o:\dlt0050 former goldthorpe colliery\doncaster road, goldthorpe\bypass picady\bypass and doncaster

UN TITLE

Doncaster Road and A635 Bypass 2008 am With Development

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

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      MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
                      I
                      I
                      I
                      I
                      I
                      I
                      I
                      MINOR ROAD (ARM B)
  
```

M A IS A635 Bypass Eastbound
M B IS Doncaster Road
M C IS A635 Bypass Westbound

STREAM LABELLING CONVENTION

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

GEOMETRIC DATA

DATA ITEM	I	MINOR ROAD B	I
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	6.00 M.	I
CENTRAL RESERVE WIDTH	I (WCR)	9.00 M.	I
	I		I
MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.50 M.	I
- VISIBILITY	I (VC-B)	215.0 M.	I
- BLOCKS TRAFFIC	I	NO	I
	I		I
MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	215.0 M.	I
- VISIBILITY TO RIGHT	I (VB-A)	215.0 M.	I
- LANE 1 WIDTH	I (WB-C)	4.30 M.	I
- LANE 2 WIDTH	I (WB-A)	4.60 M.	I
- LENGTH OF FLARED SECTION	I	4 VEHS	I

TRAFFIC DEMAND DATA

ME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.

LENGTH OF TIME SEGMENT - 15 MINUTES.

MAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	7.35	11.02	7.35
ARM B	15.00	45.00	75.00	2.41	3.62	2.41
ARM C	15.00	45.00	75.00	5.65	8.48	5.65

TIME	TURNING PROPORTIONS		
	TURNING COUNTS (VEH/HR)		
	(PERCENTAGE OF H.V.S)		
	FROM/TO	ARM A	ARM B
07.45 - 09.15	ARM A	0.000	0.376
		0.0	221.0
		(0.0)	(10.0)
	ARM B	0.943	0.000
		182.0	0.0
		(10.0)	(0.0)
	ARM C	0.993	0.007
		449.0	3.0
		(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
B-C	0.14	10.52	0.013		0.0	0.0	0.2	
B-A	2.28	10.73	0.212		0.0	0.3	3.9	
C-A	5.61							
C-B	0.04	9.81	0.004		0.0	0.0	0.1	
A-B	2.76							
A-C	4.59							

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)
08.00-08.15								
B-C	0.16	10.01	0.016		0.0	0.0	0.2	
B-A	2.72	10.09	0.269		0.3	0.4	5.3	
C-A	6.70							
C-B	0.04	9.37	0.005		0.0	0.0	0.1	
A-B	3.30							
A-C	5.48							

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)	I
08.15-08.30									I
B-C	0.20	9.29	0.022		0.0	0.0	0.3		I
B-A	3.33	9.21	0.361		0.4	0.6	8.0		I
C-A	8.21								I
C-B	0.05	8.76	0.006		0.0	0.0	0.1		I
A-B	4.04								I
A-C	6.71								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)	I
08.30-08.45									I
B-C	0.20	9.28	0.022		0.0	0.0	0.3		I
B-A	3.33	9.21	0.361		0.6	0.6	8.4		I
C-A	8.21								I
C-B	0.05	8.76	0.006		0.0	0.0	0.1		I
A-B	4.04								I
A-C	6.71								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)	I
08.45-09.00									I
B-C	0.16	10.01	0.016		0.0	0.0	0.3		I
B-A	2.72	10.09	0.269		0.6	0.4	5.8		I
C-A	6.70								I
C-B	0.04	9.37	0.005		0.0	0.0	0.1		I
A-B	3.30								I
A-C	5.48								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)	I
09.00-09.15									I
B-C	0.14	10.52	0.013		0.0	0.0	0.2		I
B-A	2.28	10.73	0.212		0.4	0.3	4.2		I
C-A	5.61								I
C-B	0.04	9.81	0.004		0.0	0.0	0.1		I
A-B	2.76								I
A-C	4.59								I

ARNING* THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

UE FOR STREAM B-C

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
8.00	0.0
8.15	0.0
8.30	0.0
8.45	0.0
9.00	0.0
9.15	0.0

UE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
8.00	0.3
8.15	0.4
8.30	0.6 *
8.45	0.6 *
9.00	0.4
9.15	0.3

JEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
	I		I	* DELAY *	I	* DELAY *	I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	I	15.1	I 10.1	I 1.5	I 0.10	I 1.5	I 0.10
B-A	I	249.6	I 166.4	I 35.5	I 0.14	I 35.5	I 0.14
C-A	I	615.7	I 410.4	I	I	I	I
C-B	I	4.1	I 2.7	I 0.4	I 0.11	I 0.4	I 0.11
-B	I	303.0	I 202.0	I	I	I	I
C	I	503.2	I 335.5	I	I	I	I
ALL	I	1690.7	I 1127.1	I 37.5	I 0.02	I 37.5	I 0.02

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.

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

Visual PICADY 4 ANALYSIS PROGRAM
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1 with file:- "o:\dlt0050 former goldthorpe colliery\doncaster road, goldthorpe\bypass picady\bypass and doncaster

JN TITLE

Doncaster Road and A635 Bypass 2008 pm With Development

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

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MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
                        I
                        I
                        I
                        I
                        I
                        I
MINOR ROAD (ARM B)
  
```

1 A IS A635 Bypass Eastbound
1 B IS Doncaster Road
1 C IS A635 Bypass Westbound

STREAM LABELLING CONVENTION

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

METRIC DATA

DATA ITEM	I	MINOR ROAD B	I
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	6.00 M.	I
CENTRAL RESERVE WIDTH	I (WCR)	9.00 M.	I
	I		I
MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.50 M.	I
- VISIBILITY	I (VC-B)	215.0 M.	I
- BLOCKS TRAFFIC	I	NO	I
	I		I
MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	215.0 M.	I
- VISIBILITY TO RIGHT	I (VB-A)	215.0 M.	I
- LANE 1 WIDTH	I (WB-C)	4.30 M.	I
- LANE 2 WIDTH	I (WB-A)	4.60 M.	I
- LENGTH OF FLARED SECTION	I	4 VEHS	I

AFFIC DEMAND DATA

ME PERIOD BEGINS 16.45 AND ENDS 18.15

NGTH OF TIME PERIOD - 90 MINUTES.

NGTH OF TIME SEGMENT - 15 MINUTES.

MAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	8.85	13.28	8.85
ARM B	15.00	45.00	75.00	3.28	4.91	3.28
ARM C	15.00	45.00	75.00	4.14	6.21	4.14

TIME	TURNING PROPORTIONS		
	TURNING COUNTS (VEH/HR)		
	(PERCENTAGE OF H.V.S)		
	FROM/TO	ARM A	ARM B
16.45 - 18.15	ARM A	0.000	0.370
		0.0	262.0
		(0.0)	(10.0)
	ARM B	0.969	0.000
		254.0	0.0
		(10.0)	(0.0)
	ARM C	0.967	0.033
		320.0	11.0
		(10.0)	(10.0)

NING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

AULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
6.00-17.00								
B-C	0.10	9.91	0.010		0.0	0.0	0.1	
B-A	3.17	10.62	0.299		0.0	0.4	6.1	
C-A	4.00							
C-B	0.14	9.35	0.015		0.0	0.0	0.2	
A-B	3.28							
A-C	5.57							

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)
7.00-17.15								
B-C	0.12	9.26	0.013		0.0	0.0	0.2	
B-A	3.79	9.96	0.381		0.4	0.6	8.8	
C-A	4.78							
C-B	0.16	8.82	0.019		0.0	0.0	0.3	
A-B	3.91							
A-C	6.66							

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)	I
17.15-17.30									
B-C	0.15	8.25	0.018		0.0	0.0	0.3		I
B-A	4.64	9.05	0.513		0.6	1.0	14.5		I
C-A	5.85								I
C-B	0.20	8.08	0.025		0.0	0.0	0.4		I
A-B	4.79								I
A-C	8.15								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)	I
17.30-17.45									
B-C	0.15	8.24	0.018		0.0	0.0	0.3		I
B-A	4.64	9.05	0.513		1.0	1.0	15.5		I
C-A	5.85								I
C-B	0.20	8.08	0.025		0.0	0.0	0.4		I
A-B	4.79								I
A-C	8.15								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)	I
17.45-18.00									
B-C	0.12	9.25	0.013		0.0	0.0	0.2		I
B-A	3.79	9.96	0.381		1.0	0.6	9.8		I
C-A	4.78								I
C-B	0.16	8.82	0.019		0.0	0.0	0.3		I
A-B	3.91								I
A-C	6.66								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)	I
18.00-18.15									
B-C	0.10	9.90	0.010		0.0	0.0	0.2		I
B-A	3.17	10.62	0.299		0.6	0.4	6.7		I
C-A	4.00								I
C-B	0.14	9.35	0.015		0.0	0.0	0.2		I
A-B	3.28								I
A-C	5.57								I

RNING* THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

UE FOR STREAM B-C

SEGMENT	NO. OF VEHICLES IN QUEUE
7.00	0.0
7.15	0.0
7.30	0.0
7.45	0.0
8.00	0.0
8.15	0.0

UE FOR STREAM B-A

SEGMENT	NO. OF VEHICLES IN QUEUE	
7.00	0.4	
7.15	0.6	*
7.30	1.0	*
7.45	1.0	*
8.00	0.6	*
8.15	0.4	

QUE FOR STREAM C-B

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
	I		I	* DELAY *	I	* DELAY *	I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	I	11.0	I 7.3	I 1.2	I 0.11	I 1.2	I 0.11
B-A	I	348.3	I 232.2	I 61.3	I 0.18	I 61.3	I 0.18
C-A	I	438.8	I 292.5	I	I	I	I
C-B	I	15.1	I 10.1	I 1.8	I 0.12	I 1.8	I 0.12
	I	359.3	I 239.5	I	I	I	I
	I	611.6	I 407.7	I	I	I	I
ALL	I	1783.9	I 1189.3	I 64.3	I 0.04	I 64.3	I 0.04

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.

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Printed at 11:03:02 on 04/11/04]

Appendix C

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : A - HOUSES PRIVATELY OWNED

Selected regions and areas:

02 SOUTH EAST	
HC HAMPSHIRE	2 days
SC SURREY	2 days
05 EAST MIDLANDS	
NT NOTTINGHAMSHIRE	2 days
08 NORTH WEST	
GM GREATER MANCHESTER	6 days
LC LANCASHIRE	3 days
09 NORTH	
TW TYNE & WEAR	1 days
SCOTLAND	
FI FIFE	1 days
HI HIGHLAND	5 days
12 NORTHERN IRELAND	
NI NORTHERN IRELAND	7 days
14 REPUBLIC OF IRELAND	
IR REPUBLIC OF IRELAND	1 days

Main parameter selection:

Parameter: Number of households

Range: 5 to 4334 (units:)

Date Range: 01/01/96 to 03/10/03

Selected survey days:

Monday	3 days
Tuesday	6 days
Wednesday	6 days
Thursday	8 days
Friday	7 days

Selected survey types:

Manual count	20 days
One way ATC count	10 days

Optional parameter selection:Use Class:

C3	30 days
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Location:

Neighbourhood Centre	6 days
Suburban Area	10 days
Edge of Town	10 days
Free Standing	4 days

Optional parameter selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	6 days
5,001 to 10,000	7 days
10,001 to 15,000	8 days
15,001 to 20,000	3 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days

Population within 5 miles:

5,001 to 25,000	8 days
25,001 to 50,000	3 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days
100,001 to 125,000	2 days
125,001 to 250,000	8 days
250,001 to 500,000	4 days
500,001 or More	2 days

Car ownership within 5 miles:

0.6 to 1.0	17 days
1.1 to 1.5	10 days
1.6 to 2.0	2 days

Buses/Trains per day (both directions):

<u>Frequency</u>	<u>Per Hour</u>	<u>Per Day</u>	<u>Surveys</u>
Not Known			0 days
0	0	0	0 days
<20 per day	1	20	4 days
20-39 per day	2	40	5 days
40-59 per day	3	60	2 days
60-79 per day	4	80	5 days
80+ per day	> 4	> 80	14 days

LIST OF SITES relevant to selection parameters

- | | | | |
|---|------------|---------------------------------------|--------------------------|
| 1 | FI-03-A-01 | BALMULLO HOUSING, NEAR CUPAR | FIFE |
| | | HILLVIEW ROAD | |
| | | BALMULLO | |
| | | Total Number of households: 118 ***** | |
| | | Survey date: THURSDAY 24/06/99 | Survey Type: MANUAL |
| 2 | GM-03-A-01 | BOLTON HOUSING | GREATER MANCHESTER |
| | | COLLINGWOOD WAY | |
| | | WESTHOUGHTON | |
| | | BOLTON | |
| | | Total Number of households: 83 ***** | |
| | | Survey date: FRIDAY 07/03/97 | Survey Type: ONE WAY ATC |
| 3 | GM-03-A-04 | BOLTON HOUSING | GREATER MANCHESTER |
| | | BEAUMONT CHASE | |
| | | HUNGER HILL | |
| | | BOLTON | |
| | | Total Number of households: 204 ***** | |
| | | Survey date: WEDNESDAY 27/11/96 | Survey Type: MANUAL |
| 4 | GM-03-A-05 | TAMESIDE HOUSING | GREATER MANCHESTER |
| | | STATION ROAD | |
| | | GODLEY | |
| | | TAMESIDE | |
| | | Total Number of households: 65 ***** | |
| | | Survey date: WEDNESDAY 27/11/96 | Survey Type: MANUAL |
| 5 | GM-03-A-06 | WIGAN HOUSING | GREATER MANCHESTER |
| | | RECTORY LANE | |
| | | STANDISH | |
| | | WIGAN | |
| | | Total Number of households: 222 ***** | |
| | | Survey date: THURSDAY 18/06/98 | Survey Type: ONE WAY ATC |
| 6 | GM-03-A-07 | MANCHESTER HOUSING | GREATER MANCHESTER |
| | | MILFORD DRIVE | |
| | | LEVENSHULME | |
| | | MANCHESTER | |
| | | Total Number of households: 138 ***** | |
| | | Survey date: FRIDAY 09/11/01 | Survey Type: MANUAL |
| 7 | GM-03-A-08 | STOCKPORT HOUSING | GREATER MANCHESTER |
| | | ELM TREE ROAD | |
| | | LOWER BREDBURY | |
| | | STOCKPORT | |
| | | Total Number of households: 247 ***** | |
| | | Survey date: FRIDAY 12/10/01 | Survey Type: MANUAL |
| 8 | HC-03-A-01 | EASTLEIGH HOUSING | HAMPSHIRE |
| | | KNIGHTWOOD ROAD | |
| | | KNIGHT WOOD | |
| | | EASTLEIGH | |
| | | Total Number of households: 300 ***** | |
| | | Survey date: THURSDAY 19/08/99 | Survey Type: MANUAL |
| 9 | HC-03-A-10 | EASTLEIGH HOUSING | HAMPSHIRE |
| | | KINGHTWOOD ROAD | |
| | | BADGER'S COPSE | |
| | | EASTLEIGH | |
| | | Total Number of households: 700 ***** | |
| | | Survey date: WEDNESDAY 18/08/99 | Survey Type: MANUAL |

LIST OF SITES relevant to selection parameters (Cont.)

- | | | | |
|----|-----------------------------|-------------------------|--------------------------|
| 10 | HI-03-A-06 | HOUSING, FORTROSE | HIGHLAND |
| | NESS WAY | | |
| | FORTROSE | | |
| | Total Number of households: | 7 ***** | |
| | Survey date: WEDNESDAY | 09/12/98 | Survey Type: ONE WAY ATC |
| 11 | HI-03-A-07 | FORTROSE HOUSING | HIGHLAND |
| | THE ORCHARD (PART OF) | | |
| | FORTROSE | | |
| | Total Number of households: | 5 ***** | |
| | Survey date: WEDNESDAY | 09/12/98 | Survey Type: ONE WAY ATC |
| 12 | HI-03-A-08 | MARYBANK HOUSING | HIGHLAND |
| | BADDON DRIVE | | |
| | MARYBANK | | |
| | Total Number of households: | 9 ***** | |
| | Survey date: FRIDAY | 18/12/98 | Survey Type: ONE WAY ATC |
| 13 | HI-03-A-09 | ROSEMARKIE HOUSING | HIGHLAND |
| | GOLLANHEAD AVENUE | | |
| | ROSEMARKIE | | |
| | Total Number of households: | 14 ***** | |
| | Survey date: TUESDAY | 08/12/98 | Survey Type: ONE WAY ATC |
| 14 | HI-03-A-10 | HOUSING, INVERNESS | HIGHLAND |
| | BOSWELL ROAD | | |
| | CASTLE HEATHER | | |
| | INVERNESS | | |
| | Total Number of households: | 11 ***** | |
| | Survey date: TUESDAY | 08/12/98 | Survey Type: ONE WAY ATC |
| 15 | IR-03-A-02 | PRIVATE HOUSING, DUBLIN | REPUBLIC OF IRELAND |
| | KILMACUD ROAD UPPER | | |
| | GOATSTOWN | | |
| | DUBLIN | | |
| | Total Number of households: | 208 ***** | |
| | Survey date: FRIDAY | 22/11/02 | Survey Type: MANUAL |
| 16 | LC-03-A-12 | LANCASTER HOUSING | LANCASHIRE |
| | PENNINE VIEW | | |
| | GLASSON | | |
| | LANCASTER | | |
| | Total Number of households: | 29 ***** | |
| | Survey date: TUESDAY | 13/05/97 | Survey Type: MANUAL |
| 17 | LC-03-A-13 | CHORLEY HOUSING | LANCASHIRE |
| | DUNROBIN DRIVE | | |
| | EUXTON | | |
| | CHORLEY | | |
| | Total Number of households: | 37 ***** | |
| | Survey date: MONDAY | 21/07/97 | Survey Type: MANUAL |
| 18 | LC-03-A-16 | PRESTON HOUSING | LANCASHIRE |
| | DRAKES HOLLOW | | |
| | WALTON-LE-DALE | | |
| | PRESTON | | |
| | Total Number of households: | 18 ***** | |
| | Survey date: THURSDAY | 26/03/98 | Survey Type: MANUAL |

LIST OF SITES relevant to selection parameters (Cont.)

19	NI-03-A-02	TERRACED HOUSING, BANBRIDGE RATHFRILAND ROAD	NORTHERN IRELAND
		BANBRIDGE	
		Total Number of households: 161 *****	
		Survey date: FRIDAY 18/10/02	Survey Type: MANUAL
20	NI-03-A-03	PRIVATE HOUSING, BELFAST CAIRNSHILL ROAD CAIRNSHILL BELFAST	NORTHERN IRELAND
		Total Number of households: 370 *****	
		Survey date: THURSDAY 14/11/02	Survey Type: MANUAL
21	NI-03-A-04	PRIVATE HOUSING, LISBURN KNOCKMORE ROAD	NORTHERN IRELAND
		LISBURN	
		Total Number of households: 86 *****	
		Survey date: THURSDAY 14/11/02	Survey Type: MANUAL
22	NI-03-A-05	PRIVATE HOUSING, ENNISKILLEN CASTLECOOLE ROAD	NORTHERN IRELAND
		ENNISKILLEN	
		Total Number of households: 132 *****	
		Survey date: FRIDAY 08/11/02	Survey Type: ONE WAY ATC
23	NI-03-A-06	PRIVATE HOUSING, MAGHERAFELT STATION ROAD	NORTHERN IRELAND
		MAGHERAFELT	
		Total Number of households: 106 *****	
		Survey date: MONDAY 11/11/02	Survey Type: ONE WAY ATC
24	NI-03-A-07	PRIVATE HOUSING, COLERAINE GREENHALL HIGHWAY	NORTHERN IRELAND
		COLERAINE	
		Total Number of households: 112 *****	
		Survey date: MONDAY 11/11/02	Survey Type: ONE WAY ATC
25	NI-03-A-08	LONDONDERRY HOUSING ABBEYDALE KILFENNAN LONDONDERRY	NORTHERN IRELAND
		Total Number of households: 160 *****	
		Survey date: THURSDAY 02/10/03	Survey Type: MANUAL
26	NT-03-A-01	COLLINGHAM HOUSING THE HEMPLANDS	NOTTINGHAMSHIRE
		COLLINGHAM	
		Total Number of households: 125 *****	
		Survey date: THURSDAY 26/11/98	Survey Type: MANUAL
27	NT-03-A-02	NOTTINGHAM HOUSING LODGE FARM LANE GEDLING NOTTINGHAM	NOTTINGHAMSHIRE
		Total Number of households: 201 *****	
		Survey date: TUESDAY 24/11/98	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

28	SC-03-A-02	EPSOM HOUSING	SURREY
	WELLS ROAD		
	THE WELLS		
	EPSOM		
	Total Number of households:	514 *****	
	Survey date: TUESDAY	03/10/00	Survey Type: MANUAL
29	SC-03-A-03	DETACHED HOUSES, E. MOLESEY	SURREY
	RIVERMEAD		
	HURST PARK		
	EAST MOLESEY		
	Total Number of households:	54 *****	
	Survey date: TUESDAY	12/11/02	Survey Type: MANUAL
30	TW-03-A-01	PRIVATE HOUSING, SUNDERLAND	TYNE & WEAR
	MYRELLA CRESCENT		
	HILLVIEW		
	SUNDERLAND		
	Total Number of households:	81 *****	
	Survey date: WEDNESDAY	18/09/02	Survey Type: MANUAL

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

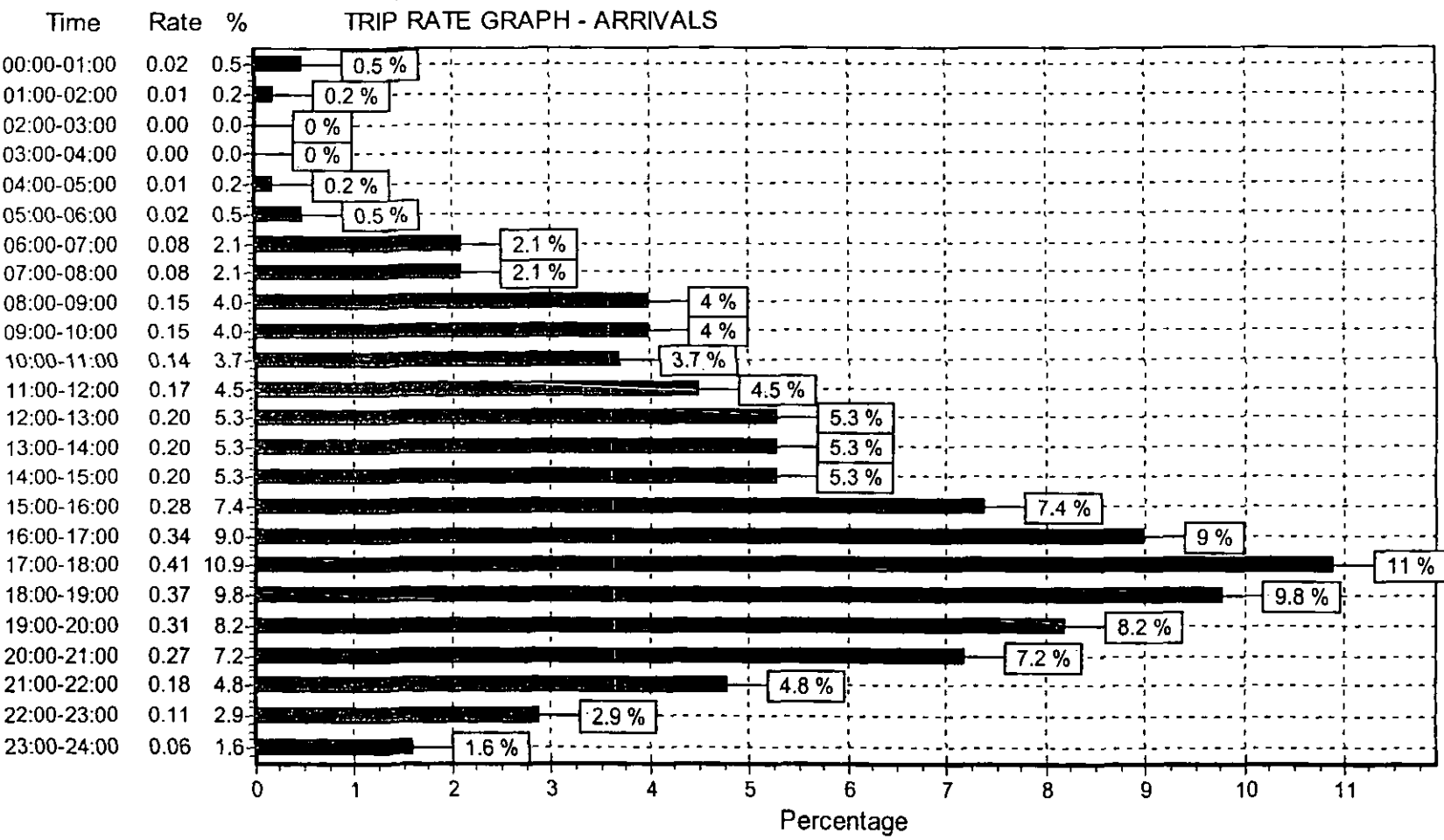
Calculation factor: 1 HHOLDS

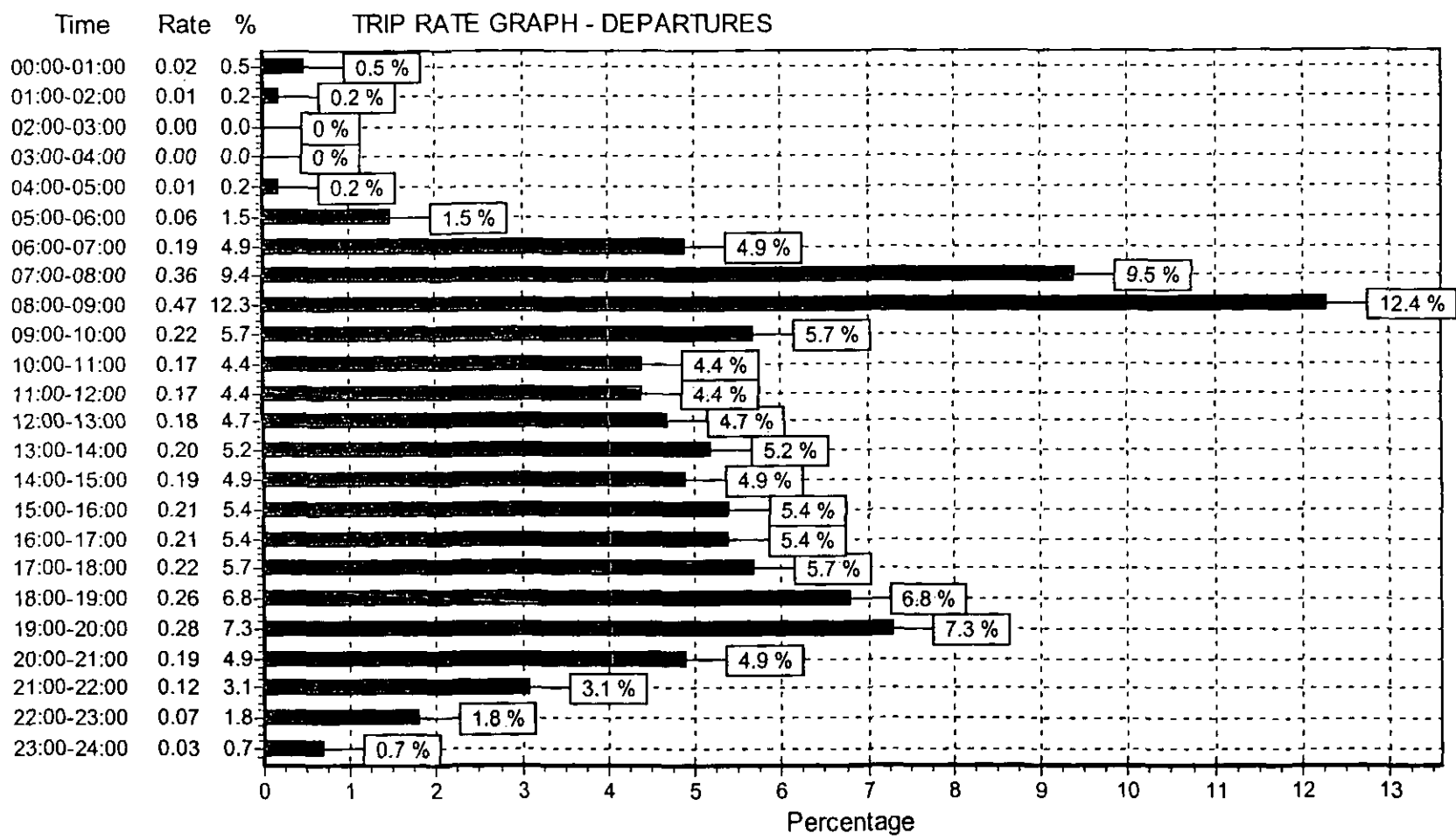
BOLD print indicates peak (busiest) period

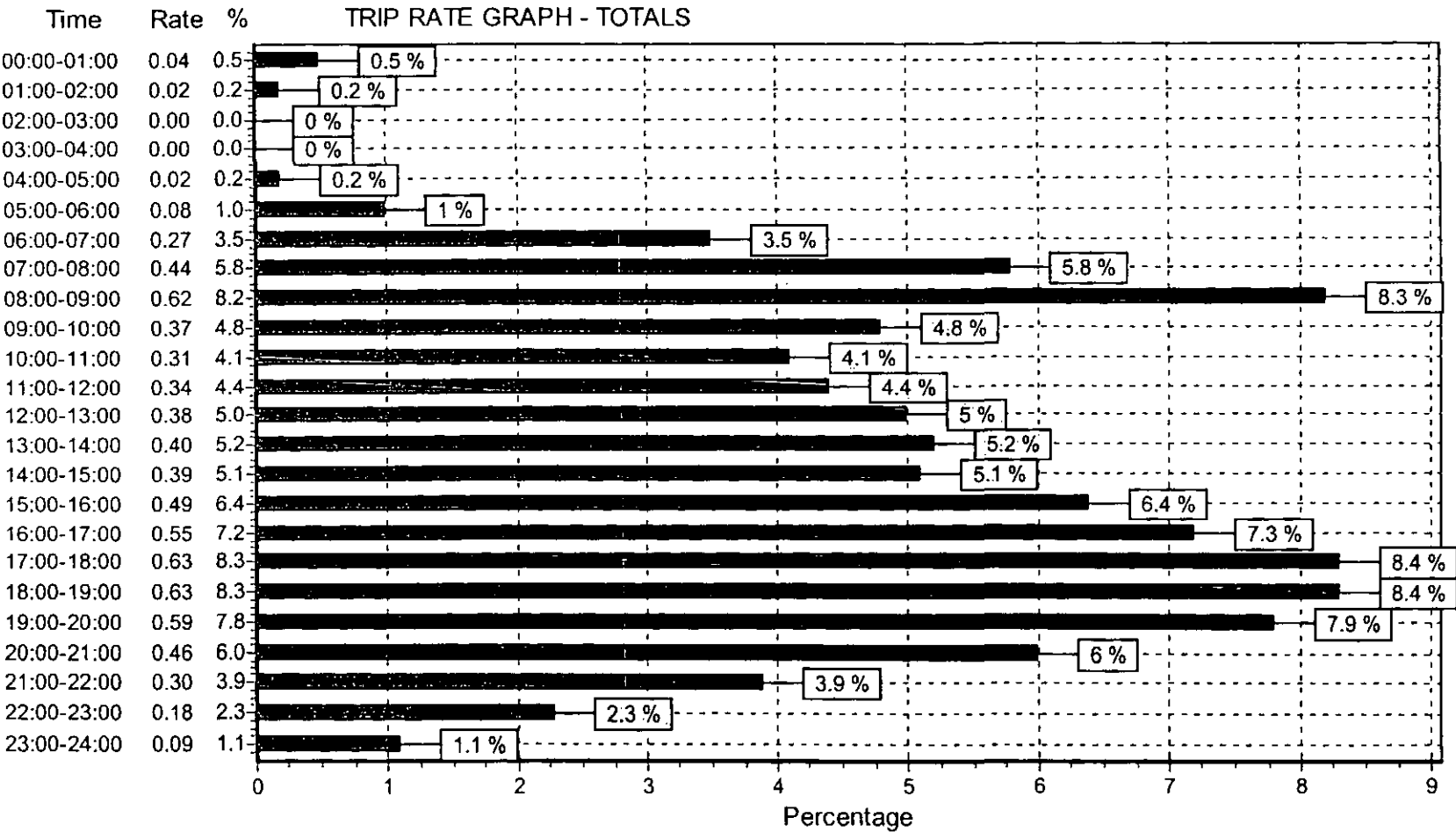
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate
00:00 - 01:00	10	70	0.02	10	70	0.02	10	70	0.04
01:00 - 02:00	10	70	0.01	10	70	0.01	10	70	0.02
02:00 - 03:00	10	70	0.00	10	70	0.00	10	70	0.00
03:00 - 04:00	10	70	0.00	10	70	0.00	10	70	0.00
04:00 - 05:00	10	70	0.01	10	70	0.01	10	70	0.02
05:00 - 06:00	10	70	0.02	10	70	0.06	10	70	0.08
06:00 - 07:00	10	70	0.08	10	70	0.19	10	70	0.27
07:00 - 08:00	30	151	0.08	30	151	0.36	30	151	0.44
08:00 - 09:00	30	151	0.15	30	151	0.47	30	151	0.62
09:00 - 10:00	30	151	0.15	30	151	0.22	30	151	0.37
10:00 - 11:00	30	151	0.14	30	151	0.17	30	151	0.31
11:00 - 12:00	30	151	0.17	30	151	0.17	30	151	0.34
12:00 - 13:00	30	151	0.20	30	151	0.18	30	151	0.38
13:00 - 14:00	30	151	0.20	30	151	0.20	30	151	0.40
14:00 - 15:00	30	151	0.20	30	151	0.19	30	151	0.39
15:00 - 16:00	30	151	0.28	30	151	0.21	30	151	0.49
16:00 - 17:00	30	151	0.34	30	151	0.21	30	151	0.55
17:00 - 18:00	30	151	0.41	30	151	0.22	30	151	0.63
18:00 - 19:00	30	151	0.37	30	151	0.26	30	151	0.63
19:00 - 20:00	10	70	0.31	10	70	0.28	10	70	0.59
20:00 - 21:00	10	70	0.27	10	70	0.19	10	70	0.46
21:00 - 22:00	10	70	0.18	10	70	0.12	10	70	0.30
22:00 - 23:00	10	70	0.11	10	70	0.07	10	70	0.18
23:00 - 24:00	10	70	0.06	10	70	0.03	10	70	0.09
Daily Trip Rates:			3.76	3.83			7.60		

Parameter summary

Trip rate parameter range selected: 5 - 4334 (units:)
 Survey date range: 01/01/96 - 03/10/03
 Number of weekdays (Monday-Friday): 30
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: YES
 Surveys manually removed from selection: 27







TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : A - OFFICE

Selected regions and areas:

02 SOUTH EAST	
EX ESSEX	1 days
HF HERTFORDSHIRE	1 days
OX OXFORDSHIRE	1 days
SC SURREY	2 days
WS WEST SUSSEX	2 days
03 SOUTH WEST	
DC DORSET	1 days
04 EAST ANGLIA	
CA CAMBRIDGESHIRE	1 days
05 EAST MIDLANDS	
LE LEICESTERSHIRE	1 days
09 NORTH	
CB CUMBRIA	1 days
TV TEES VALLEY	1 days
11 SCOTLAND	
AS ABERDEENSHIRE	2 days

Main parameter selection:

Parameter: Gross floor area
 Range: 686 to 175000 (units: sqm)

Date Range: 01/01/96 to 05/09/02

Selected survey days:

Monday	1 days
Tuesday	2 days
Wednesday	3 days
Thursday	7 days
Friday	1 days

Selected survey types:

Manual count	12 days
One way ATC count	2 days

Optional parameter selection:Use Class:

A2	1 days
B1	13 days

Location:

Suburban Area	1 days
Edge of Town	6 days
Edge of Town Centre	5 days
Industrial Zone	1 days
Development Zone	1 days

LIST OF SITES relevant to selection parameters

- | | | | |
|---|------------|--|--------------------------|
| 1 | AS-02-A-01 | CLYDESDALE BANK, WESTHILL
PEREGRINE ROAD | ABERDEENSHIRE |
| | | WESTHILL
Total Gross floor area: 1200 sqm
Survey date: WEDNESDAY 01/09/99 | Survey Type: ONE WAY ATC |
| 2 | AS-02-A-02 | COUNCIL OFFICES
WESTBURN ROAD
WESTBURN
ABERDEEN | ABERDEENSHIRE |
| | | Total Gross floor area: 18363 sqm
Survey date: THURSDAY 18/03/99 | Survey Type: MANUAL |
| 3 | CA-02-A-01 | DEMETER HOUSE, CAMBRIDGE
STATION ROAD
NEWTOWN
CAMBRIDGE | CAMBRIDGESHIRE |
| | | Total Gross floor area: 4344 sqm
Survey date: FRIDAY 24/11/00 | Survey Type: MANUAL |
| 4 | CB-02-A-01 | BBC RADIO CUMBRIA, CARLISLE
ANNETWELL STREET | CUMBRIA |
| | | CARLISLE
Total Gross floor area: 999 sqm
Survey date: MONDAY 24/06/02 | Survey Type: MANUAL |
| 5 | DC-02-A-01 | OFFICES, BOURNEMOUTH
DEANSLEIGH ROAD, OFF CASTLE LANE EAST
LITTLEDOWN
BOURNEMOUTH | DORSET |
| | | Total Gross floor area: 5585 sqm
Survey date: WEDNESDAY 24/04/96 | Survey Type: MANUAL |
| 6 | EX-02-A-02 | BRITISH TELECOM, BRENTWOOD
LONDON ROAD | ESSEX |
| | | BRENTWOOD
Total Gross floor area: 19667 sqm
Survey date: THURSDAY 05/04/01 | Survey Type: MANUAL |
| 7 | HF-02-A-02 | COUNCIL OFFICES, WELWYN GC
BRIDGE ROAD EAST | HERTFORDSHIRE |
| | | WELWYN GARDEN CITY
Total Gross floor area: 2700 sqm
Survey date: THURSDAY 05/09/02 | Survey Type: MANUAL |
| 8 | LE-02-A-01 | COUNCIL OFFICES, M. MOWBRAY
NOTTINGHAM ROAD
MELTON
MELTON MOWBRAY | LEICESTERSHIRE |
| | | Total Gross floor area: 4710 sqm
Survey date: THURSDAY 29/06/00 | Survey Type: MANUAL |
| 9 | OX-02-A-01 | COUNTY COUNCIL OFFICES
SPEEDWELL STREET | OXFORDSHIRE |
| | | OXFORD
Total Gross floor area: 2633 sqm
Survey date: THURSDAY 20/06/02 | Survey Type: MANUAL |

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

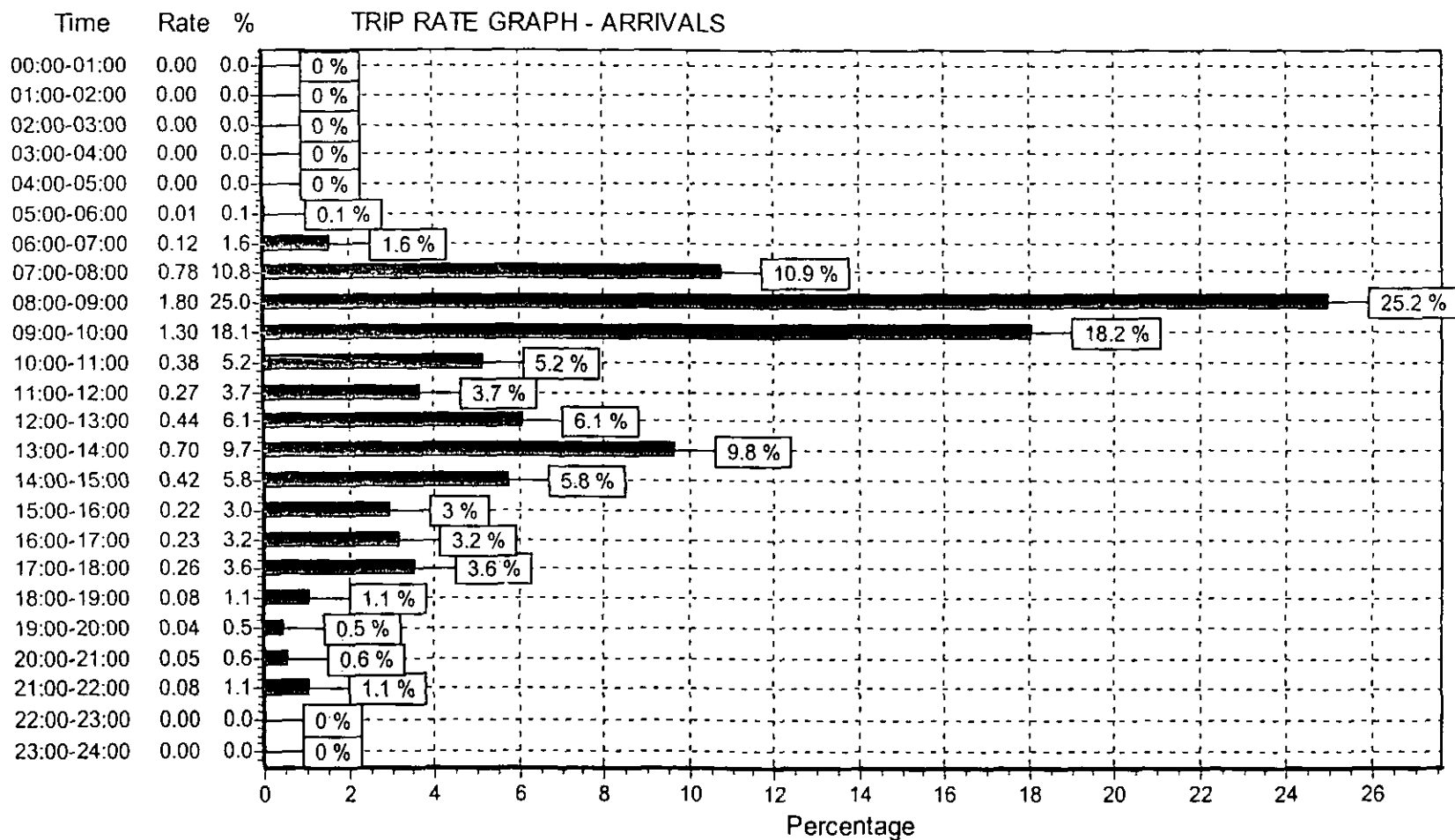
Calculation factor: 100 sqm

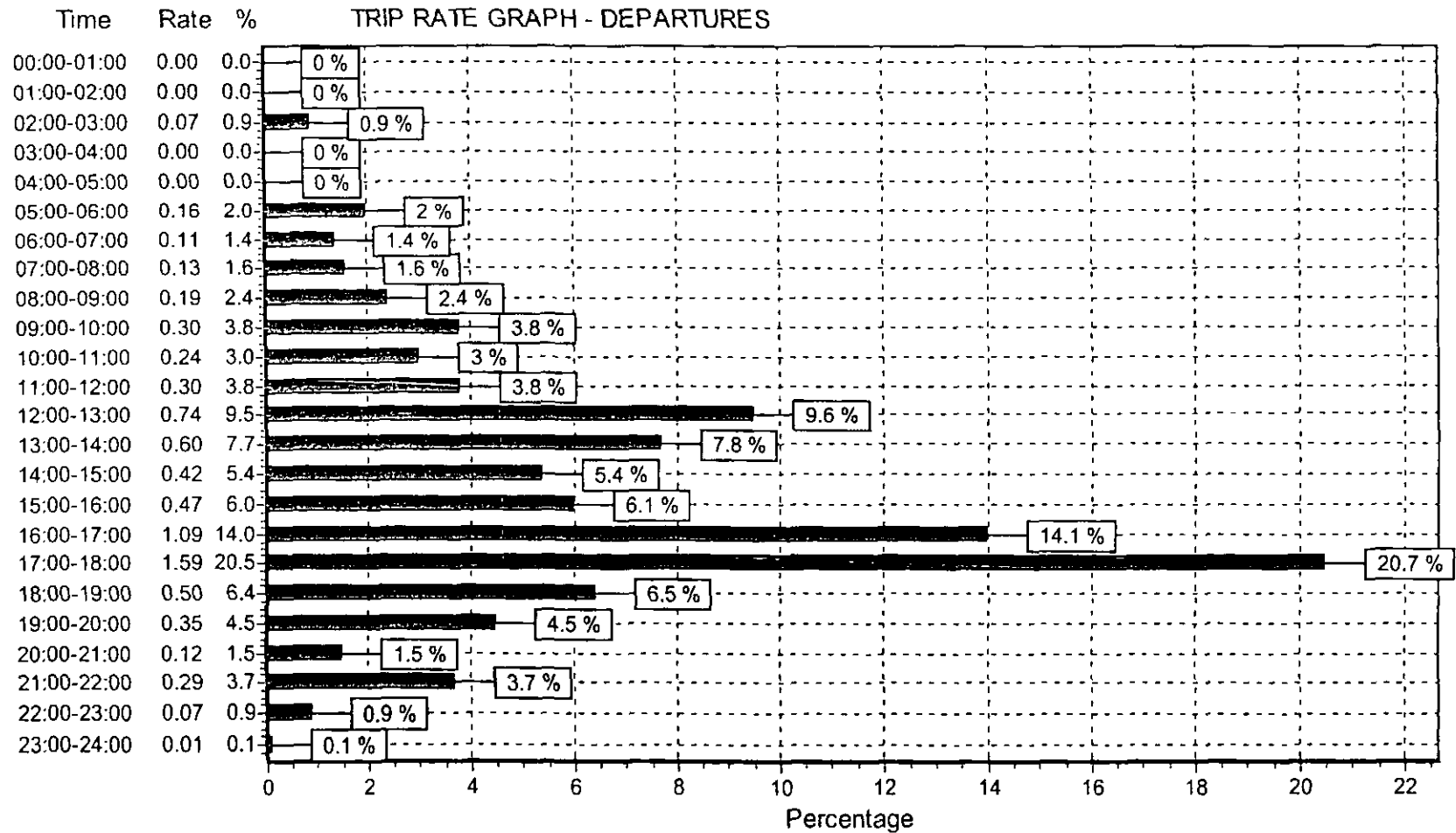
BOLD print indicates peak (busiest) period

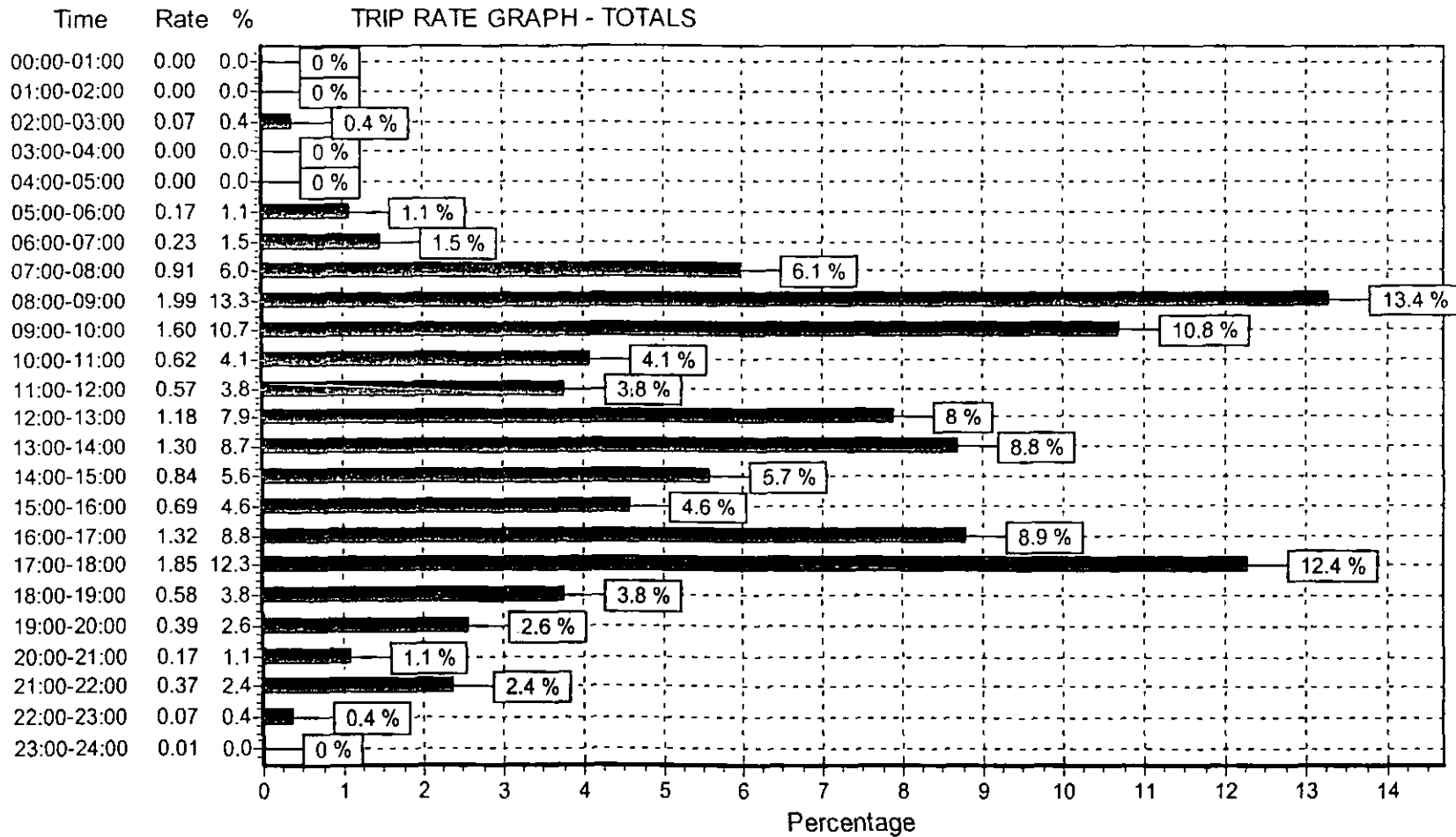
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	2	3851	0.00	2	3851	0.00	2	3851	0.00
00:30 - 01:00	2	3851	0.00	2	3851	0.00	2	3851	0.00
01:00 - 01:30	2	3851	0.00	2	3851	0.00	2	3851	0.00
01:30 - 02:00	2	3851	0.00	2	3851	0.00	2	3851	0.00
02:00 - 02:30	2	3851	0.00	2	3851	0.04	2	3851	0.04
02:30 - 03:00	2	3851	0.00	2	3851	0.03	2	3851	0.03
03:00 - 03:30	2	3851	0.00	2	3851	0.00	2	3851	0.00
03:30 - 04:00	2	3851	0.00	2	3851	0.00	2	3851	0.00
04:00 - 04:30	2	3851	0.00	2	3851	0.00	2	3851	0.00
04:30 - 05:00	2	3851	0.00	2	3851	0.00	2	3851	0.00
05:00 - 05:30	2	3851	0.01	2	3851	0.08	2	3851	0.09
05:30 - 06:00	2	3851	0.00	2	3851	0.08	2	3851	0.08
06:00 - 06:30	3	4429	0.07	3	4429	0.08	3	4429	0.15
06:30 - 07:00	3	4429	0.05	3	4429	0.03	3	4429	0.08
07:00 - 07:30	12	6002	0.25	12	6002	0.06	12	6002	0.31
07:30 - 08:00	12	6002	0.53	12	6002	0.07	12	6002	0.60
08:00 - 08:30	13	6953	0.73	13	6953	0.09	13	6953	0.82
08:30 - 09:00	13	6953	1.07	13	6953	0.10	13	6953	1.17
09:00 - 09:30	14	6528	0.81	14	6528	0.14	14	6528	0.95
09:30 - 10:00	14	6528	0.49	14	6528	0.16	14	6528	0.65
10:00 - 10:30	14	6528	0.21	14	6528	0.11	14	6528	0.32
10:30 - 11:00	14	6528	0.17	14	6528	0.13	14	6528	0.30
11:00 - 11:30	14	6528	0.12	14	6528	0.12	14	6528	0.24
11:30 - 12:00	14	6528	0.15	14	6528	0.18	14	6528	0.33
12:00 - 12:30	14	6528	0.20	14	6528	0.34	14	6528	0.54
12:30 - 13:00	14	6528	0.24	14	6528	0.40	14	6528	0.64
13:00 - 13:30	14	6528	0.34	14	6528	0.36	14	6528	0.70
13:30 - 14:00	14	6528	0.36	14	6528	0.24	14	6528	0.60
14:00 - 14:30	14	6528	0.27	14	6528	0.21	14	6528	0.48
14:30 - 15:00	14	6528	0.15	14	6528	0.21	14	6528	0.36
15:00 - 15:30	14	6528	0.10	14	6528	0.22	14	6528	0.32
15:30 - 16:00	14	6528	0.12	14	6528	0.25	14	6528	0.37
16:00 - 16:30	14	6528	0.10	14	6528	0.49	14	6528	0.59
16:30 - 17:00	14	6528	0.13	14	6528	0.60	14	6528	0.73
17:00 - 17:30	13	6953	0.13	13	6953	0.89	13	6953	1.02
17:30 - 18:00	13	6953	0.13	13	6953	0.70	13	6953	0.83
18:00 - 18:30	13	6953	0.05	13	6953	0.32	13	6953	0.37
18:30 - 19:00	13	6953	0.03	13	6953	0.18	13	6953	0.21
19:00 - 19:30	3	4429	0.02	3	4429	0.19	3	4429	0.21
19:30 - 20:00	3	4429	0.02	3	4429	0.16	3	4429	0.18
20:00 - 20:30	3	4429	0.02	3	4429	0.06	3	4429	0.08
20:30 - 21:00	3	4429	0.03	3	4429	0.06	3	4429	0.09
21:00 - 21:30	3	4429	0.05	3	4429	0.15	3	4429	0.20
21:30 - 22:00	3	4429	0.03	3	4429	0.14	3	4429	0.17
22:00 - 22:30	2	3851	0.00	2	3851	0.04	2	3851	0.04
22:30 - 23:00	2	3851	0.00	2	3851	0.03	2	3851	0.03
23:00 - 23:30	2	3851	0.00	2	3851	0.01	2	3851	0.01
23:30 - 24:00	2	3851	0.00	2	3851	0.00	2	3851	0.00
Daily Trip Rates:			7.18			7.72			14.93

Parameter summary

Trip rate parameter range selected:	686 - 175000 (units: sqm)
Survey date date range:	01/01/96 - 05/09/02
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	YES
Surveys manually removed from selection:	3







TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : F - WAREHOUSING (COMMERCIAL)

Selected regions and areas:

02	SOUTH EAST	
	BU BUCKINGHAMSHIRE	1 days
	HF HERTFORDSHIRE	2 days
	KC KENT	1 days
03	SOUTH WEST	
	DC DORSET	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
09	NORTH	
	TV TEES VALLEY	1 days
11	SCOTLAND	
	GC GLASGOW CITY	1 days
12	NORTHERN IRELAND	
	NI NORTHERN IRELAND	1 days

Main parameter selection:

Parameter: Gross floor area
 Range: 3065 to 55740 (units: sqm)

Date Range: 01/01/96 to 06/03/03

Selected survey days:

Monday	1 days
Wednesday	1 days
Thursday	5 days
Friday	2 days

Selected survey types:

Manual count	9 days
One way ATC count	0 days

Optional parameter selection:

Use Class:

B8	8 days
----	--------

Location:

Neighbourhood Centre	1 days
Suburban Area	1 days
Edge of Town	2 days
Free Standing	1 days
Commercial Zone	2 days
Industrial Zone	2 days

Optional parameter selection (Cont.):

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	1 days
10,001 to 15,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

Population within 5 miles:

5,001 to 25,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	3 days

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	5 days
1.1 to 1.5	3 days

Buses/Trains per day (both directions):

Frequency	Per Hour	Per Day	Surveys
Not Known			0 days
0	0	0	0 days
<20 per day	1	20	1 days
20-39 per day	2	40	1 days
40-59 per day	3	60	2 days
60-79 per day	4	80	1 days
80+ per day	> 4	> 80	4 days

LIST OF SITES relevant to selection parameters

1	BU-02-F-01	TESCO DISTRIBUTION CENTRE	BUCKINGHAMSHIRE
		BLETCHAM WAY	
		BLETCHLEY	
		MILTON KEYNES	
		Total Gross floor area:	52125 sqm
		Survey date: THURSDAY	07/02/02
2	DC-02-F-01	ASD YEOVIL, STALBRIDGE	DORSET
		STATION ROAD	
		STALBRIDGE	
		Total Gross floor area:	9100 sqm
		Survey date: FRIDAY	05/10/01
3	GC-02-F-01	DISTRIBUTION CTR, GLASGOW	GLASGOW CITY
		BARRACHNIE ROAD	
		GARROWHILL	
		GLASGOW	
		Total Gross floor area:	11504 sqm
		Survey date: MONDAY	10/09/01
4	HF-02-F-01	SAINSBURYS DISTRIB. DEPOT	HERTFORDSHIRE
		LONDON ROAD	
		BUNTINGFORD	
		Total Gross floor area:	47584 sqm
		Survey date: WEDNESDAY	06/12/00
5	HF-02-F-02	SAFEWAY, WELWYN GARDEN CTY	HERTFORDSHIRE
		BLACK FAN ROAD	
		PANSHANGER	
		WELWYN GARDEN CITY	
		Total Gross floor area:	18600 sqm
		Survey date: FRIDAY	06/09/02
6	KC-02-F-01	CHRISTIAN SALVESEN	KENT
		HOLBOROUGH ROAD	
		HOLBOROUGH	
		Total Gross floor area:	7500 sqm
		Survey date: THURSDAY	20/06/02
7	NI-02-F-01	TESCO DISTRIBUTION, BELFAST	NORTHERN IRELAND
		BOUCHER ROAD	
		WINDSOR	
		BELFAST	
		Total Gross floor area:	15700 sqm
		Survey date: THURSDAY	06/03/03
8	TV-02-F-01	SAFEWAY DISTRIBUTION CENTRE	TEES VALLEY
		MALLEABLE WAY	
		STOCKTON-ON-TEES	
		Total Gross floor area:	30187 sqm
		Survey date: THURSDAY	04/10/01
9	WO-02-F-01	SAINSBURYS DISTRIBUTION C.	WORCESTERSHIRE
		WAINWRIGHT ROAD	
		SHIRE BUSINESS PARK	
		WORCESTER	
		Total Gross floor area:	31416 sqm
		Survey date: THURSDAY	14/03/02

Survey Type: MANUAL

Survey Type: MANUAL

Survey Type: MANUAL

Survey Type: MANUAL

Survey Type: MANUAL

Survey Type: MANUAL

Survey Type: MANUAL

Survey Type: MANUAL

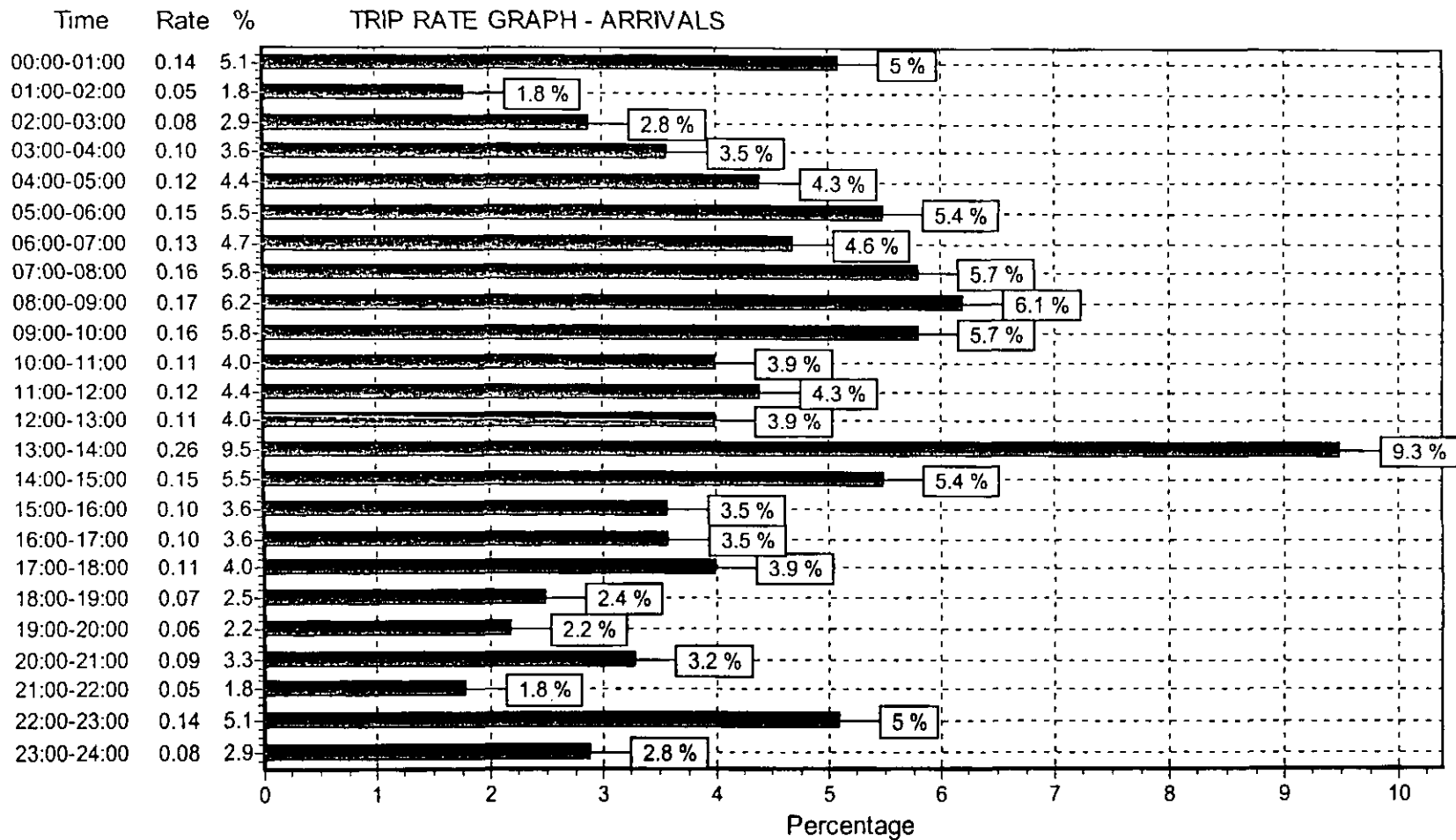
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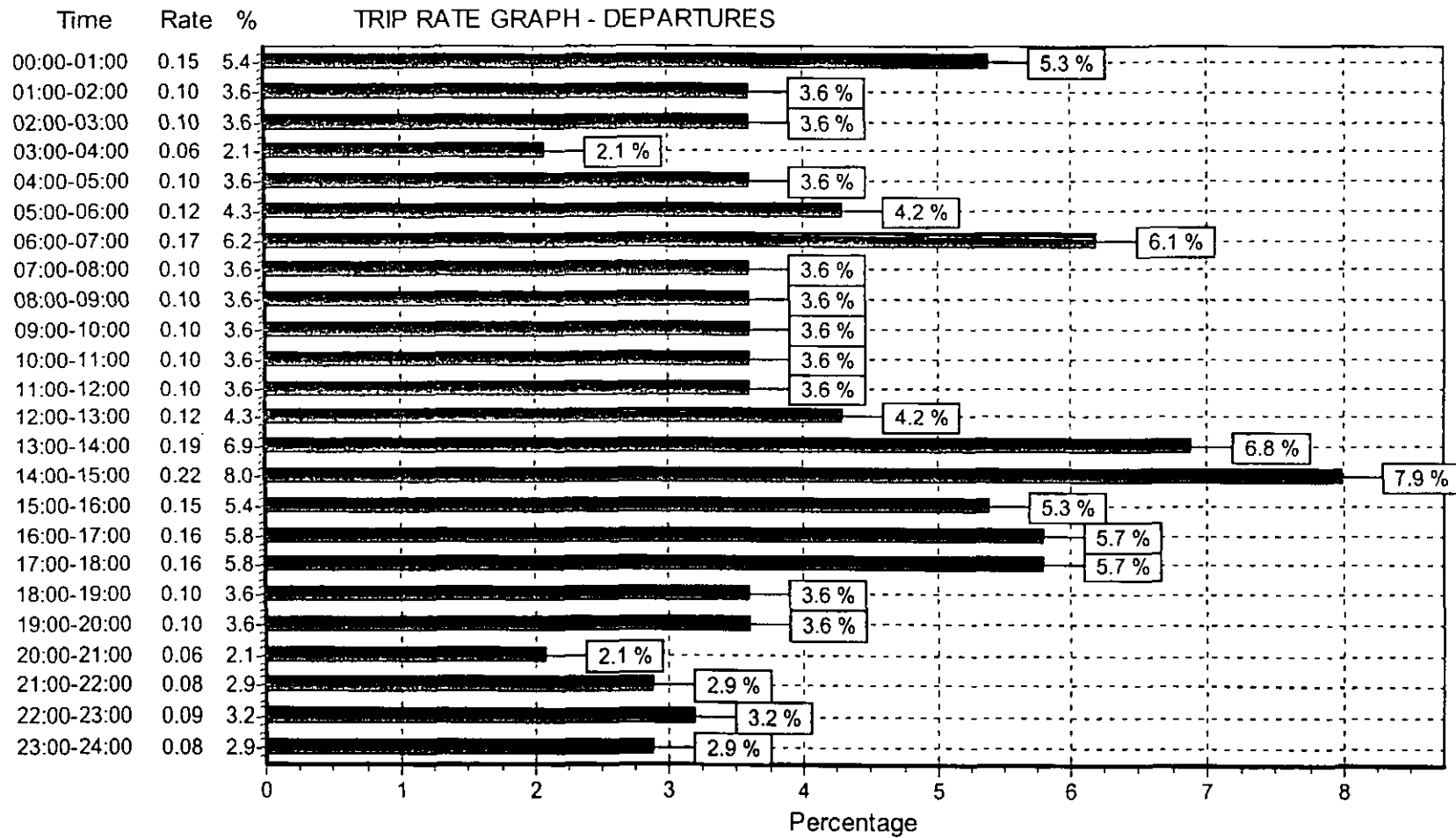
TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

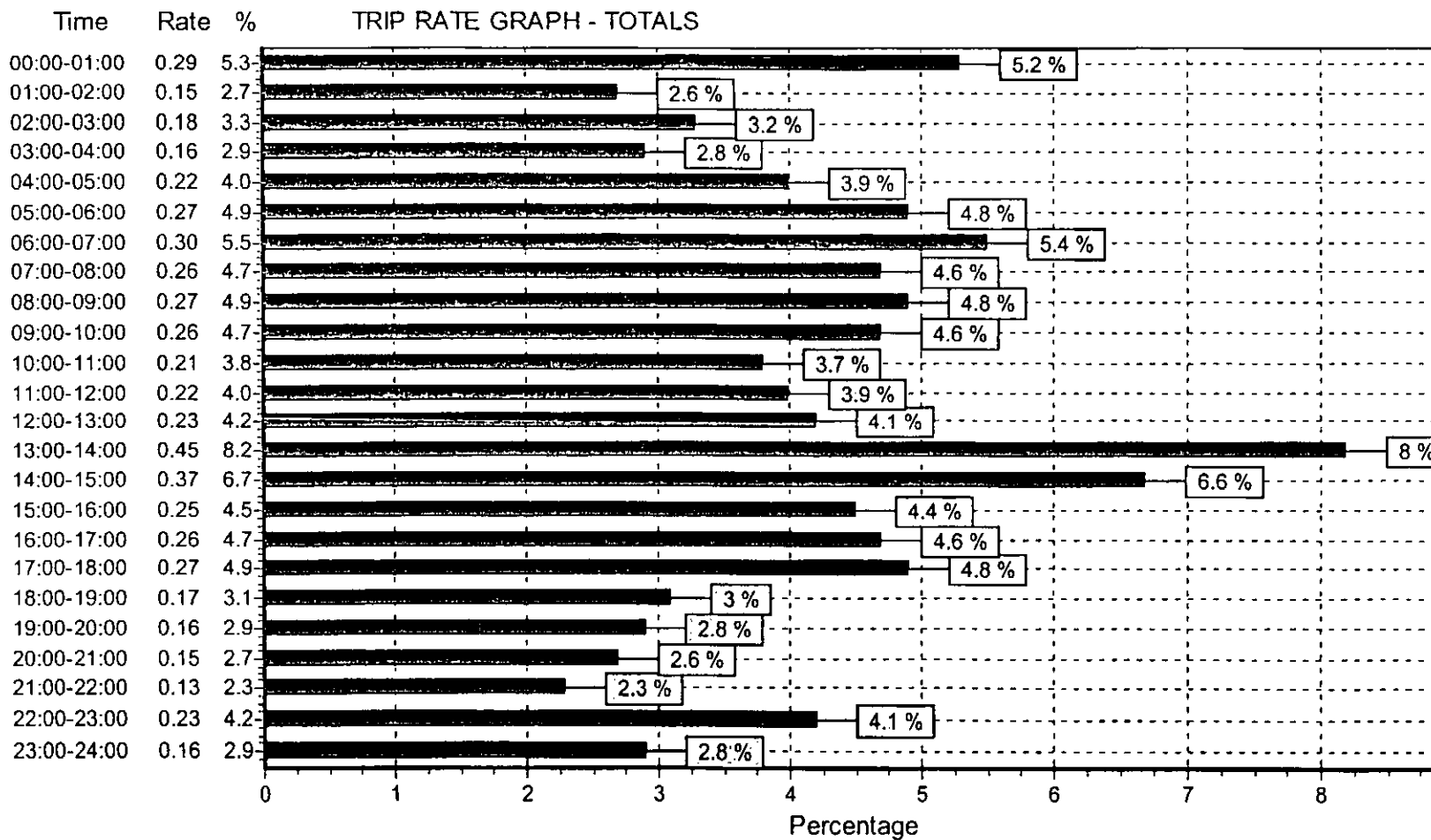
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	7500	0.09	1	7500	0.08	1	7500	0.17
00:30 - 01:00	1	7500	0.05	1	7500	0.07	1	7500	0.12
01:00 - 01:30	1	7500	0.01	1	7500	0.03	1	7500	0.04
01:30 - 02:00	1	7500	0.04	1	7500	0.07	1	7500	0.11
02:00 - 02:30	1	7500	0.03	1	7500	0.03	1	7500	0.06
02:30 - 03:00	1	7500	0.05	1	7500	0.07	1	7500	0.12
03:00 - 03:30	1	7500	0.03	1	7500	0.01	1	7500	0.04
03:30 - 04:00	1	7500	0.07	1	7500	0.05	1	7500	0.12
04:00 - 04:30	1	7500	0.05	1	7500	0.05	1	7500	0.10
04:30 - 05:00	1	7500	0.07	1	7500	0.05	1	7500	0.12
05:00 - 05:30	1	7500	0.08	1	7500	0.07	1	7500	0.15
05:30 - 06:00	1	7500	0.07	1	7500	0.05	1	7500	0.12
06:00 - 06:30	2	18844	0.06	2	18844	0.10	2	18844	0.16
06:30 - 07:00	2	18844	0.07	2	18844	0.07	2	18844	0.14
07:00 - 07:30	9	24857	0.06	9	24857	0.06	9	24857	0.12
07:30 - 08:00	9	24857	0.10	9	24857	0.04	9	24857	0.14
08:00 - 08:30	9	24857	0.08	9	24857	0.05	9	24857	0.13
08:30 - 09:00	9	24857	0.09	9	24857	0.05	9	24857	0.14
09:00 - 09:30	9	24857	0.08	9	24857	0.05	9	24857	0.13
09:30 - 10:00	9	24857	0.08	9	24857	0.05	9	24857	0.13
10:00 - 10:30	9	24857	0.06	9	24857	0.05	9	24857	0.11
10:30 - 11:00	9	24857	0.05	9	24857	0.05	9	24857	0.10
11:00 - 11:30	9	24857	0.06	9	24857	0.05	9	24857	0.11
11:30 - 12:00	9	24857	0.06	9	24857	0.05	9	24857	0.11
12:00 - 12:30	9	24857	0.06	9	24857	0.07	9	24857	0.13
12:30 - 13:00	9	24857	0.05	9	24857	0.05	9	24857	0.10
13:00 - 13:30	9	24857	0.09	9	24857	0.07	9	24857	0.16
13:30 - 14:00	9	24857	0.17	9	24857	0.12	9	24857	0.29
14:00 - 14:30	9	24857	0.07	9	24857	0.13	9	24857	0.20
14:30 - 15:00	9	24857	0.08	9	24857	0.09	9	24857	0.17
15:00 - 15:30	9	24857	0.05	9	24857	0.08	9	24857	0.13
15:30 - 16:00	9	24857	0.05	9	24857	0.07	9	24857	0.12
16:00 - 16:30	9	24857	0.05	9	24857	0.08	9	24857	0.13
16:30 - 17:00	9	24857	0.05	9	24857	0.08	9	24857	0.13
17:00 - 17:30	9	24857	0.04	9	24857	0.09	9	24857	0.13
17:30 - 18:00	9	24857	0.07	9	24857	0.07	9	24857	0.14
18:00 - 18:30	8	24191	0.04	8	24191	0.07	8	24191	0.11
18:30 - 19:00	8	24191	0.03	8	24191	0.03	8	24191	0.06
19:00 - 19:30	1	7500	0.05	1	7500	0.03	1	7500	0.08
19:30 - 20:00	1	7500	0.01	1	7500	0.07	1	7500	0.08
20:00 - 20:30	1	7500	0.05	1	7500	0.01	1	7500	0.06
20:30 - 21:00	1	7500	0.04	1	7500	0.05	1	7500	0.09
21:00 - 21:30	1	7500	0.04	1	7500	0.05	1	7500	0.09
21:30 - 22:00	1	7500	0.01	1	7500	0.03	1	7500	0.04
22:00 - 22:30	1	7500	0.07	1	7500	0.05	1	7500	0.12
22:30 - 23:00	1	7500	0.07	1	7500	0.04	1	7500	0.11
23:00 - 23:30	1	7500	0.04	1	7500	0.04	1	7500	0.08
23:30 - 24:00	1	7500	0.04	1	7500	0.04	1	7500	0.08
Daily Trip Rates:			2.81						5.62

Parameter summary

Trip rate parameter range selected:	3065 - 55740 (units: sqm)
Survey date date range:	01/01/96 - 06/03/03
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	YES
Surveys manually removed from selection:	2







TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : D - INDUSTRIAL ESTATE

Selected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	KH KINGSTON UPON HULL	1 days
11	SCOTLAND	
	ER EAST RENFREWSHIRE	2 days
14	REPUBLIC OF IRELAND	
	IR REPUBLIC OF IRELAND	2 days

Main parameter selection:

Parameter: Gross floor area
 Range: 708 to 234115 (units: sqm)

Date Range: 01/01/96 to 28/07/03

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	4 days
Thursday	1 days
Friday	2 days

Selected survey types:

Manual count	9 days
One way ATC count	0 days

Optional parameter selection:

Use Class:

B1	4 days
B2	3 days
B8	1 days

Location:

Suburban Area	1 days
Edge of Town	1 days
Edge of Town Centre	1 days
Commercial Zone	1 days
Industrial Zone	5 days

Optional parameter selection (Cont.):

Population within 1 mile:

10,001 to 15,000	2 days
15,001 to 20,000	5 days
20,001 to 25,000	2 days

Population within 5 miles:

25,001 to 50,000	1 days
50,001 to 75,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	3 days

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	5 days

Buses/Trains per day (both directions):

Frequency	Per Hour	Per Day	Surveys
Not Known			0 days
0	0	0	0 days
<20 per day	1	20	0 days
20-39 per day	2	40	1 days
40-59 per day	3	60	0 days
60-79 per day	4	80	1 days
80+ per day	> 4	> 80	7 days

1	ER-02-D-01	INDUSTRIAL ESTATE, BARRHEAD	EAST RENFREWSHIRE
	MURIEL STREET		
	BARRHEAD		
	Total Gross floor area:	7211 sqm	
	Survey date:	WEDNESDAY 19/09/01	Survey Type: MANUAL
2	ER-02-D-02	INDUSTRIAL ESTATE, GIFFNOCK	EAST RENFREWSHIRE
	SPIERSBRIDGE AVENUE		
	THORNLIEBANK		
	GIFFNOCK		
	Total Gross floor area:	4233 sqm	
	Survey date:	WEDNESDAY 10/10/01	Survey Type: MANUAL
3	IR-02-D-01	INDUSTRIAL ESTATE, DUBLIN	REPUBLIC OF IRELAND
	SWORDS ROAD		
	SANTRY		
	DUBLIN		
	Total Gross floor area:	83000 sqm	
	Survey date:	WEDNESDAY 16/07/03	Survey Type: MANUAL
4	IR-02-D-02	INDUSTRIAL ESTATE, DUBLIN	REPUBLIC OF IRELAND
	GRANGE ROAD		
	BALDOYLE		
	DUBLIN		
	Total Gross floor area:	100000 sqm	
	Survey date:	TUESDAY 15/07/03	Survey Type: MANUAL
5	KH-02-D-02	INDUSTRIAL ESTATE, HULL	KINGSTON UPON HULL
	BOULEVARD STREET		
	HULL		
	Total Gross floor area:	2220 sqm	
	Survey date:	THURSDAY 18/10/01	Survey Type: MANUAL
6	NF-02-D-02	INDUSTRIAL ESTATE, DEREHAM	NORFOLK
	RASHES GREEN		
	BRECKLAND		
	DEREHAM		
	Total Gross floor area:	51000 sqm	
	Survey date:	WEDNESDAY 22/11/00	Survey Type: MANUAL
7	SF-02-D-01	INDUSTRIAL ESTATE, IPSWICH	SUFFOLK
	RAPIER STREET		
	STOKE		
	IPSWICH		
	Total Gross floor area:	17500 sqm	
	Survey date:	MONDAY 28/07/03	Survey Type: MANUAL
8	ST-02-D-04	INDUSTRIAL ESTATE, LICHFIELD	STAFFORDSHIRE
	BURTON OLD ROAD		
	BOLEY PARK		
	LICHFIELD		
	Total Gross floor area:	40905 sqm	
	Survey date:	FRIDAY 08/09/00	Survey Type: MANUAL
9	WM-02-D-01	LIGHT INDUSTRY, BIRMINGHAM	WEST MIDLANDS
	MELCHETT ROAD		
	KINGS NORTON		
	BIRMINGHAM		
	Total Gross floor area:	2510 sqm	
	Survey date:	FRIDAY 24/03/00	Survey Type: MANUAL

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

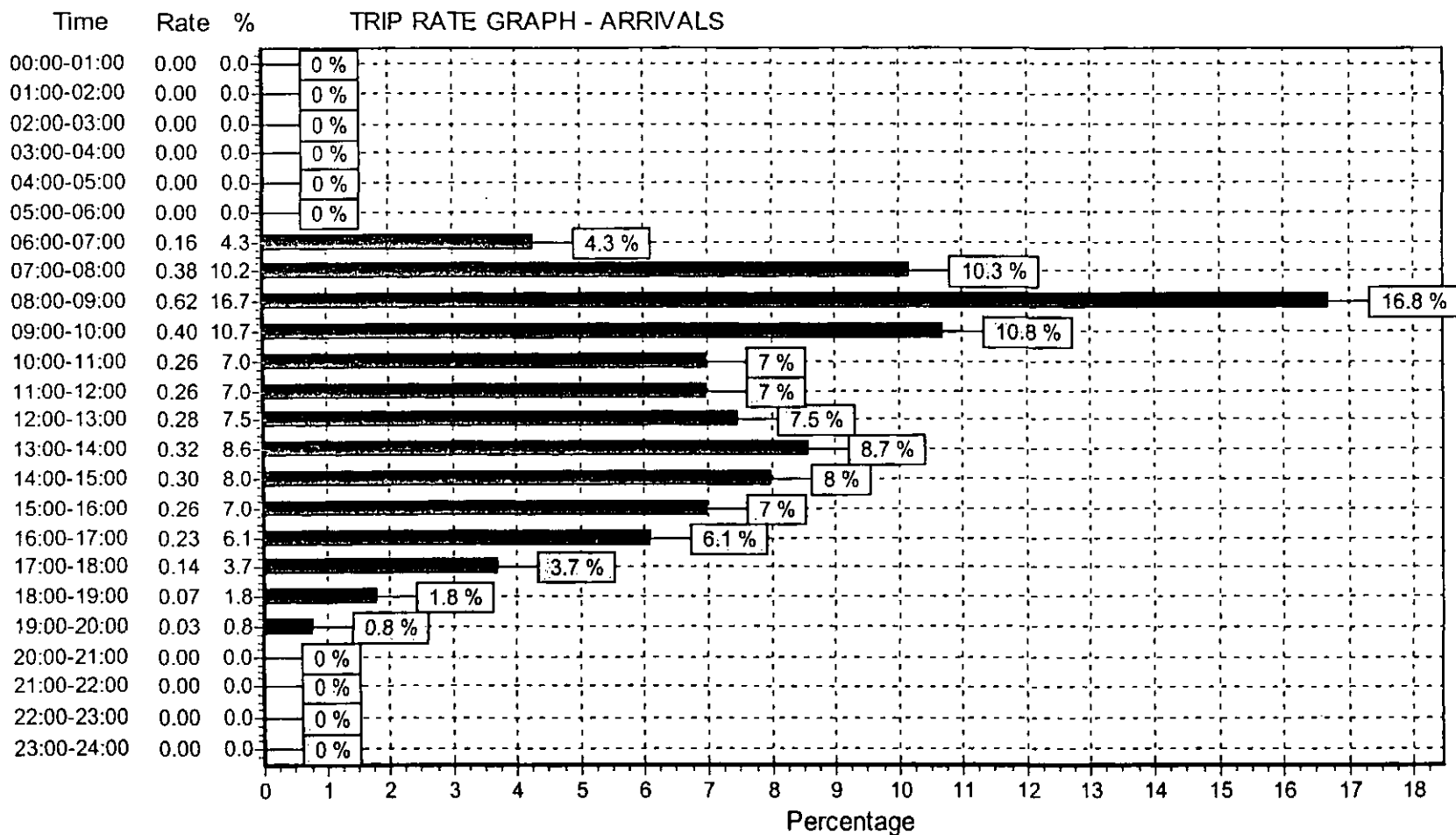
Calculation factor: 100 sqm

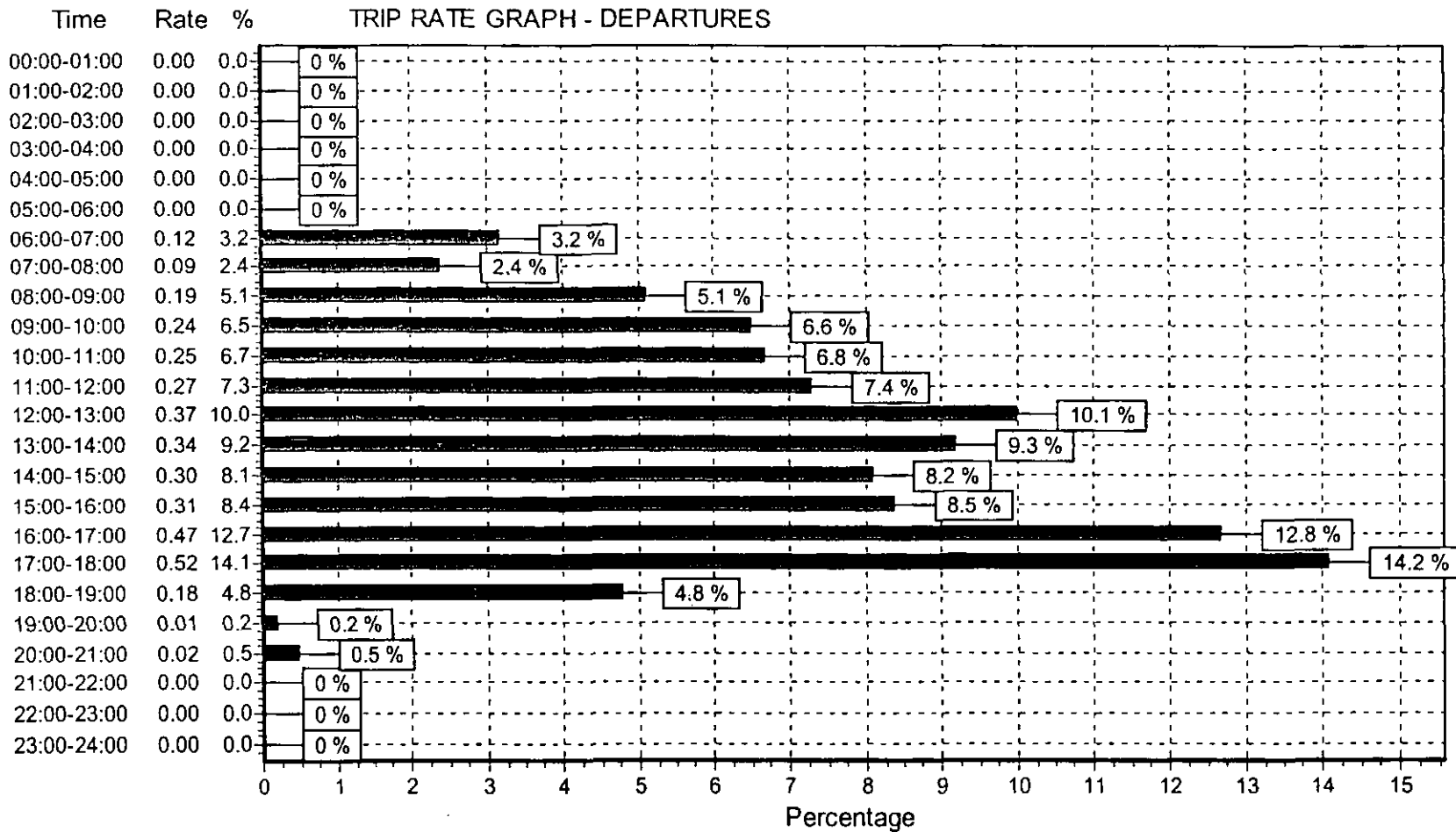
BOLD print indicates peak (busiest) period

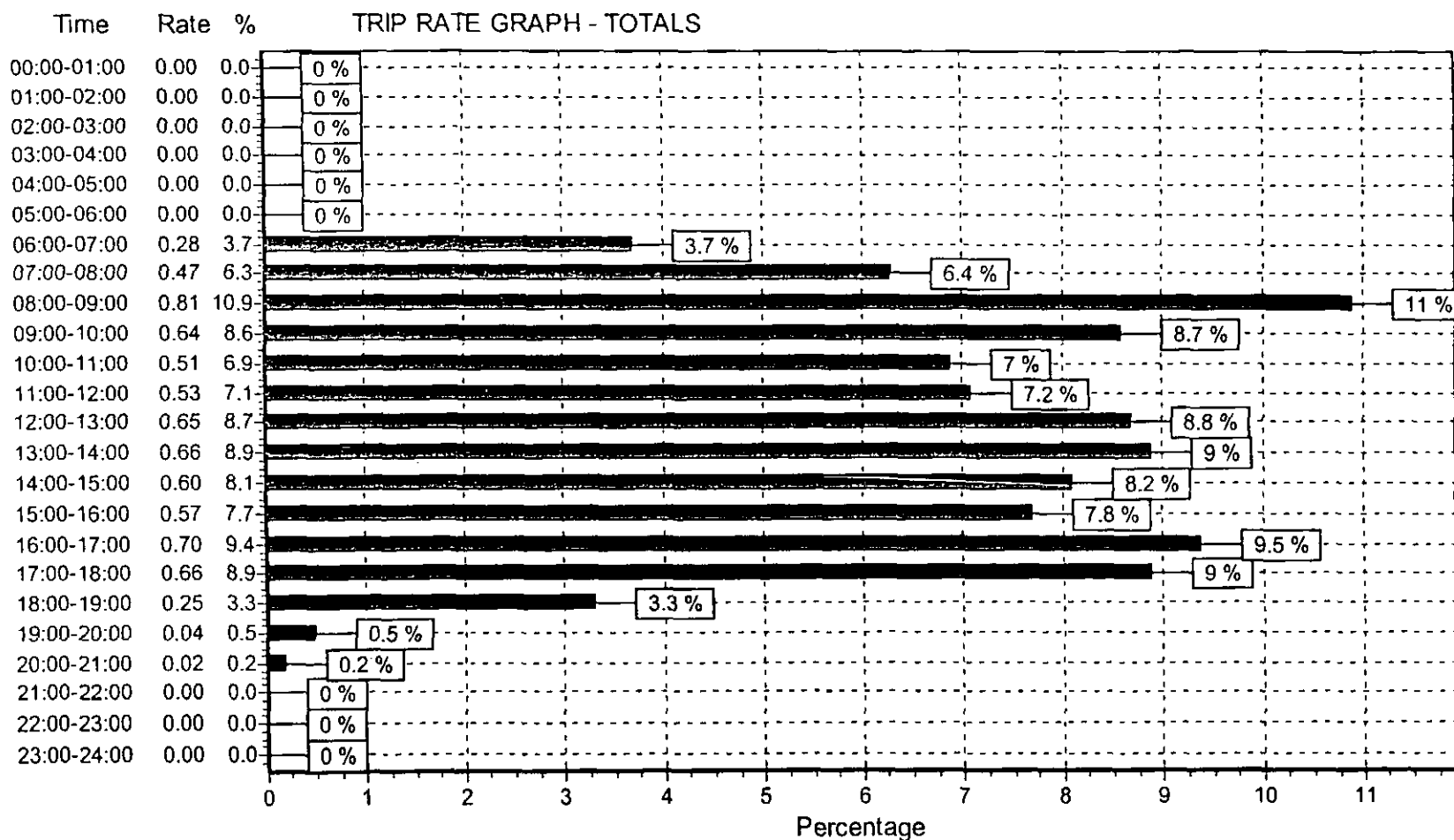
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	0	0	0.00	0	0	0.00	0	0	0.00
00:30 - 01:00	0	0	0.00	0	0	0.00	0	0	0.00
01:00 - 01:30	0	0	0.00	0	0	0.00	0	0	0.00
01:30 - 02:00	0	0	0.00	0	0	0.00	0	0	0.00
02:00 - 02:30	0	0	0.00	0	0	0.00	0	0	0.00
02:30 - 03:00	0	0	0.00	0	0	0.00	0	0	0.00
03:00 - 03:30	0	0	0.00	0	0	0.00	0	0	0.00
03:30 - 04:00	0	0	0.00	0	0	0.00	0	0	0.00
04:00 - 04:30	0	0	0.00	0	0	0.00	0	0	0.00
04:30 - 05:00	0	0	0.00	0	0	0.00	0	0	0.00
05:00 - 05:30	0	0	0.00	0	0	0.00	0	0	0.00
05:30 - 06:00	0	0	0.00	0	0	0.00	0	0	0.00
06:00 - 06:30	2	5722	0.07	2	5722	0.06	2	5722	0.13
06:30 - 07:00	2	5722	0.09	2	5722	0.06	2	5722	0.15
07:00 - 07:30	8	38259	0.12	8	38259	0.04	8	38259	0.16
07:30 - 08:00	8	38259	0.26	8	38259	0.05	8	38259	0.31
08:00 - 08:30	9	34287	0.31	9	34287	0.09	9	34287	0.40
08:30 - 09:00	9	34287	0.31	9	34287	0.10	9	34287	0.41
09:00 - 09:30	9	34287	0.24	9	34287	0.11	9	34287	0.35
09:30 - 10:00	9	34287	0.16	9	34287	0.13	9	34287	0.29
10:00 - 10:30	9	34287	0.13	9	34287	0.12	9	34287	0.25
10:30 - 11:00	9	34287	0.13	9	34287	0.13	9	34287	0.26
11:00 - 11:30	9	34287	0.13	9	34287	0.13	9	34287	0.26
11:30 - 12:00	9	34287	0.13	9	34287	0.14	9	34287	0.27
12:00 - 12:30	9	34287	0.14	9	34287	0.17	9	34287	0.31
12:30 - 13:00	9	34287	0.14	9	34287	0.20	9	34287	0.34
13:00 - 13:30	9	34287	0.15	9	34287	0.18	9	34287	0.33
13:30 - 14:00	9	34287	0.17	9	34287	0.16	9	34287	0.33
14:00 - 14:30	9	34287	0.16	9	34287	0.15	9	34287	0.31
14:30 - 15:00	9	34287	0.14	9	34287	0.15	9	34287	0.29
15:00 - 15:30	9	34287	0.13	9	34287	0.15	9	34287	0.28
15:30 - 16:00	9	34287	0.13	9	34287	0.16	9	34287	0.29
16:00 - 16:30	9	34287	0.13	9	34287	0.20	9	34287	0.33
16:30 - 17:00	9	34287	0.10	9	34287	0.27	9	34287	0.37
17:00 - 17:30	9	34287	0.08	9	34287	0.31	9	34287	0.39
17:30 - 18:00	9	34287	0.06	9	34287	0.21	9	34287	0.27
18:00 - 18:30	8	38259	0.04	8	38259	0.12	8	38259	0.16
18:30 - 19:00	8	38259	0.03	8	38259	0.06	8	38259	0.09
19:00 - 19:30	1	7211	0.00	1	7211	0.00	1	7211	0.00
19:30 - 20:00	1	7211	0.03	1	7211	0.01	1	7211	0.04
20:00 - 20:30	1	7211	0.00	1	7211	0.01	1	7211	0.01
20:30 - 21:00	1	7211	0.00	1	7211	0.01	1	7211	0.01
21:00 - 21:30	1	7211	0.00	1	7211	0.00	1	7211	0.00
21:30 - 22:00	1	7211	0.00	1	7211	0.00	1	7211	0.00
22:00 - 22:30	0	0	0.00	0	0	0.00	0	0	0.00
22:30 - 23:00	0	0	0.00	0	0	0.00	0	0	0.00
23:00 - 23:30	0	0	0.00	0	0	0.00	0	0	0.00
23:30 - 24:00	0	0	0.00	0	0	0.00	0	0	0.00
Daily Trip Rates:			3.69			3.70			7.39

Parameter summary

Trip rate parameter range selected:	708 - 234115 (units: sqm)
Survey date date range:	01/01/96 - 28/07/03
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	YES
Surveys manually removed from selection:	0







Appendix D

Letter to RPS

My ref-bw

Your ref

Tel B Wilson 2177

2nd December 2003-12-02

Goldthorpe Colliery Access

Reference is made to your enquiry regarding the above.

The following comments are given in response: _

1. The OSCARDY information has been checked and is acceptable, indicating good reserve capacity.
2. The geometry of the junction could be improved which may bring the stop lines forward and help the Junction Intervisibility Zone (JIZ).
3. If the JIZ cannot be improved to meet TD 50/99, the Authority will agree a departure from standard, although every effort should be made to meet the standard and it should be demonstrated that the actual standard cannot be achieved for valid reasons.
4. It should be verified that full pedestrian facilities are needed, if not this may help the JIZ in that stop lines could be brought forward.
5. It must be confirmed that access to The Goldthorpe PH and the Surgery will be from the side streets and not the junction.
6. It must be confirmed that no access to private land or on street parking outside existing dwellings will be affected. If either is affected the design should address the situation as it may prevent a Traffic Regulation Order from being made thereby stopping the development.
7. The position of the secondary signal poles is not to standard and some are in locations susceptible to being hit by vehicles.
8. It is suggested that the detailed design is carried out by the Highway Authority.
9. A commuted sum for 15 years future maintenance will be required.

Hopefully, these comments will prove of assistance but should you require further information, please do not hesitate to make contact.

Please accept apologies with respect to the delay in responding to your enquiry but planning applications have to take priority due to staff shortages.

You are advised that this is an informal opinion, without prejudice, based on the facts and information at present available to the Council and its officers.

For and on behalf of
Strategic Policy Manager

Cc Mr B Hazlehurst-Highways, Engineering & Waste
Mr G McNaught- Highways, Engineering & Waste
Mr R Merryweather- Planning & Transportation.

Our Ref: CC/DLT0050/041203

E-mail: cordranc@rpsplc.co.uk

Date: 4th December 2003

Ms B. Wilson
Barnsley Metropolitan Borough Council
Planning and Transportation Service
Development Control Section
Central Offices
Kendray Street
Barnsley
S70 2TN

Dear Ms Wilson

PROPOSED RESIDENTIAL DEVELOPMENT AT FORMER GOLDTHORPE COLLIERY SITE LAND SOUTH OF DONCASTER ROAD, GOLDTHORPE, ROTHERHAM

Further to the your response dated 3rd December 2003 and having discussed matters with our client, the Ogden Group, I writing regarding the comments given by the Highways, Engineering and Waste Department on the proposed signalised junction layout, as set out below:

Intervisibility

Please find enclosed drawing DLT0050-01 Rev A showing that the stop line on Doncaster Road to the west of the proposed site access moved forwards to aid intervisibility.

Highways Agency Design Standard TD50/99 recognises that there may be circumstances, such as those applicable here, where the desirable junction intervisibility is not available due to the presence of buildings or limited land availability.

Both drivers and pedestrians approaching the junction on Doncaster Road would have good visibility of other vehicles/pedestrians on Doncaster Road. Furthermore, the traffic signalisation strategy proposed for the access road and Nora Street ensures that conflicts would be avoided by the operation of separate stages during which traffic movements would not be opposed by other traffic.

The signal control strategy also includes an extended intergreen period between each phase to allow one stage to clear the junction before another commences. The pedestrian crossings are located as close as possible to the junctions to maximise intervisibility between drivers and pedestrians. The pedestrian signals would be separately staged on an 'all red' stage to avoid conflicts between pedestrians and vehicles.

In our view therefore, whilst it is not possible to fully comply with TD50/99 in relation to intervisibility, the proposed traffic signal controlled junction will in our view provide safely and adequately for vehicle and pedestrians users.

Pedestrian Facilities

Full pedestrian facilities are envisaged due to the scale of the residential development and therefore potential number of pedestrians, and to enhance access to the playing fields/local facilities.

Access to Surgery and Public House

Access to the Surgery for both pedestrians and vehicles is via Nora Street, and will not be affected by the proposed signalised junction.

There is no vehicular access to the Goldthorpe PH via Doncaster Road, the former access has been closed and a wall constructed. There is a small amount of forecourt parking off Doncaster Road in front of the public house, however access to these parking spaces is not within the signal controlled area. The forecourt is not within our control, although we do not envisage the use of this area causing problems.

Access to Land and On-Street Parking Spaces

As can be seen on revised drawing DLT0050-01 Rev A access to private land or on street parking will not be adversely affected from the proposed signalised junction. The revised drawing shows how on street parking will be retained outside number 110 Doncaster Road. Initial plans are to demolish numbers 112, 114, 116 Doncaster Road before the construction of the new signalised junction.

Position of Signal Poles

The position of the secondary signal pole on Nora Street has been revised to meet standards as shown on the revised drawing.

We would welcome further comments on the positioning of the secondary signal poles, which you consider may be susceptible to being hit by vehicles. Our initial viewpoint is that there is flexibility to provide the signal poles in appropriate locations.

Detailed Design

This matter will be considered at a later stage.

Commuted Sum

A copy of any guidelines relating to the approach for deriving a commuted sum for future maintenance payments would be appreciated. However, we consider that this is a matter for discussion at a later stage.

We understand that whilst the comments made are informal, the junction is acceptable in principle subject to the amended details aforementioned. Thank you for your ongoing assistance in this matter, we look forward to hearing further from you.

Regards,

Carolyn Cordran
For RPS Transport Planning

Cc: Mr Bob Merryweather, BMBC
Cc: Mr Tim Garnett, The Ogden Group
Cc: Mr Brian Tinnion, The Ogden Group
Cc: Marianne McCallum, RPS

Enc. Drawing DLT0050-01A

Appendix E

TRANSPORT RESEARCH LABORATORY

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OPTIMISED SIGNAL CAPACITY AND DELAY

Visual OSCADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (MAR 1999)

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Run with file:- "o:\dlt0050 former goldthorpe colliery\doncaster road, goldthorpe\access oscady\site access 2008 am.

UN TITLE

Doncaster Road Site Access - 2008 Morning Peak Hour

* ERROR AND WARNING MESSAGES ****

0 errors or warnings in the data.

TRAFFIC SIGNAL JUNCTION ANALYSIS

INPUT DATA

ARM D

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TO A ----->

ARM C-----

RLSTAG

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ARM B

4 A IS Doncaster Road East
4 B IS Site Access
4 C IS Doncaster Road West
4 D IS Nora Street

GEOMETRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I	1	I
PERMITTED MOVEMENTS LANE 1	I	LSR	I	LSR	I	LSR	I	LSR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS LANE 1	I	4.00 M	I	3.65 M	I	3.65 M	I	3.65 M	I
LEFT TURN RADII LANE 1	I	10.0 M	I	10.0 M	I	5.0 M	I	5.0 M	I
RIGHT TURN RADII LANE 1	I	5.0 M	I	15.0 M	I	15.0 M	I	5.0 M	I
OPPOSING TRAFFIC MOVEMENTS FROM OPPOSITE ARM	I	STRAIGHT	I		I	STRAIGHT	I		I
	I	LEFT	I		I	LEFT	I		I
	I	RIGHT	I		I	RIGHT	I		I
STORAGE BEYOND STOPLINE LANE 1	I	2.0 VEHS	I	0.0 VEHS	I	2.0 VEHS	I	0.0 VEHS	I
LENGTH OF STAGGER							I	12.0 M	I
STAGE TOTAL ROAD WIDTH OF STAGGERED ARMS (B AND D)							I	7.3 M	I

TRAFFIC DEMAND DATA

DEMAND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

FAULT VEHICLE TYPE PROPORTIONS ARE USED

DEMAND DATA SUPPLIED BETWEEN TIMES - 07.45 TO 09.15
 RIOD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 08.00 TO 09.00

E FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

TRAFFIC SCALING FACTOR HAS BEEN SET TO 100 %

TOTAL TRAFFIC DEMAND (VEHICLES / HOUR)									
FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
ARM A	I	0.0	I	46.0	I	113.0	I	13.0	I
ARM B	I	66.0	I	0.0	I	104.0	I	0.0	I
ARM C	I	75.0	I	73.0	I	0.0	I	13.0	I
ARM D	I	25.0	I	0.0	I	25.0	I	0.0	I

TIME PERIOD	I	ARM	I	VEHICLE TYPE PROPORTIONS						I
	I		I	CARS AND	MEDIUM	HEAVY	BUSES AND	MOTOR	PEDAL	I
	I		I	LIGHT GOODS	GOODS	GOODS	COACHES	CYCLES	CYCLES	I
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000	I

A DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

ENTRY/EXIT FLOWS	I	ARM	I	TIME WHEN FLOW STARTS TO RISE	I	TIME WHEN TOP OF PEAK IS REACHED	I	TIME WHEN FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN)			I
	I		I		I		I		I	BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK	I
ENTRY	I	A	I	08.00	I	08.30	I	09.00	I	2.15	3.23	2.15	I
	I	B	I	08.00	I	08.30	I	09.00	I	2.13	3.19	2.13	I
	I	C	I	08.00	I	08.30	I	09.00	I	2.01	3.02	2.01	I
	I	D	I	08.00	I	08.30	I	09.00	I	0.63	0.94	0.63	I

SIGNAL TIMING DETAILS FOR SIGNAL SET 1

TIMING OPTION- VEHICLE ACTUATED MODE

MAXIMUM CYCLE TIME-

75.0 SECONDS

GLOBAL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I
LANES ON GREEN: ARM A	I	1	I		I		I
B	I		I	1	I		I
C	I	1	I		I		I
D	I		I		I	1	I
MINIMUM GREEN TIME (SECS)	I	5.0	I	5.0	I	5.0	I
PRECEDING INTERSTAGE	I	5.0	I	5.0	I	5.0	I

DEMAND AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE (SECS)	FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES								
08.00-08.15								
A 1	L S R	2.57	1618.3	25.51	12.9		8.62	I
B 1	L S R	2.54	1751.3	27.61	8.3		6.01	I
C 1	L S R	2.40	1346.9	21.23	12.9		7.18	I
D 1	L S R	0.75	1523.1	24.01	6.5		4.08	I
08.15-08.30								
A 1	L S R	3.14	1601.1	25.24	14.7		8.99	I
B 1	L S R	3.11	1751.3	27.61	9.6		6.41	I
C 1	L S R	2.94	1273.2	20.07	14.7		7.15	I
D 1	L S R	0.91	1523.1	24.01	6.5		3.78	I
08.30-08.45								
A 1	L S R	3.14	1601.1	25.24	14.7		8.99	I
B 1	L S R	3.11	1751.3	27.61	9.6		6.41	I
C 1	L S R	2.94	1273.2	20.07	14.7		7.15	I
D 1	L S R	0.91	1523.1	24.01	6.5		3.78	I
08.45-09.00								
A 1	L S R	2.57	1618.3	25.51	12.9		8.62	I
B 1	L S R	2.54	1751.3	27.61	8.3		6.01	I
C 1	L S R	2.40	1346.9	21.23	12.9		7.18	I
D 1	L S R	0.75	1523.1	24.01	6.5		4.08	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT		QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
ARM LANES					MEAN (PHASE AVERAGED) (VEHS/LANE)	MAXIMUM (END OF RED) (VEHS/LANE)			
08.00-08.15									
A 1	L S R	2.57	8.62	0.298	0.5	1.2	7.1		I
B 1	L S R	2.54	6.01	0.422	0.7	1.4	10.9		I
C 1	L S R	2.40	7.18	0.335	0.5	1.1	7.2		I
D 1	L S R	0.75	4.08	0.183	0.2	0.4	2.9		I
08.15-08.30									
A 1	L S R	3.14	8.99	0.350	0.6	1.5	9.4		I
B 1	L S R	3.11	6.41	0.485	1.0	1.9	14.7		I
C 1	L S R	2.94	7.15	0.411	0.7	1.5	9.9		I
D 1	L S R	0.91	3.78	0.242	0.3	0.6	4.2		I

I	08.30-08.45									I
I	A	1	L S R	3.14	8.99	0.350	0.6	1.5	9.4	I
I	B	1	L S R	3.11	6.41	0.485	1.0	1.9	14.8	I
I	C	1	L S R	2.94	7.15	0.411	0.7	1.5	10.0	I
I	D	1	L S R	0.91	3.78	0.242	0.3	0.6	4.2	I

I	08.45-09.00									I
I	A	1	L S R	2.57	8.62	0.298	0.5	1.2	7.1	I
I	B	1	L S R	2.54	6.01	0.422	0.7	1.5	11.0	I
I	C	1	L S R	2.40	7.18	0.335	0.5	1.1	7.2	I
I	D	1	L S R	0.75	4.08	0.183	0.2	0.4	2.9	I

QUEUES FOR ARM A

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES MEAN (PHASE AVERAGED) *	NUMBER OF VEHICLES IN QUEUE MAXIMUM (AT END OF RED) +	
08.15	1	0.5	1.2	+
08.30	1	0.6	1.5	*+
08.45	1	0.6	1.5	*+
09.00	1	0.5	1.2	+

QUEUES FOR ARM B

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES MEAN (PHASE AVERAGED) *	NUMBER OF VEHICLES IN QUEUE MAXIMUM (AT END OF RED) +	
08.15	1	0.7	1.4	*
08.30	1	1.0	1.9	*+
08.45	1	1.0	1.9	*+
09.00	1	0.7	1.5	*

QUEUES FOR ARM C

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES MEAN (PHASE AVERAGED) *	NUMBER OF VEHICLES IN QUEUE MAXIMUM (AT END OF RED) +	
08.15	1	0.5	1.1	+
08.30	1	0.7	1.5	*
08.45	1	0.7	1.5	*
09.00	1	0.5	1.1	+

QUEUES FOR ARM D

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE	
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +
08.15	1	0.2	0.4
08.30	1	0.3	0.6 +
08.45	1	0.3	0.6 +
09.00	1	0.2	0.4

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD (08.00-09.00)

STREAM	I	TOTAL DEMAND		* QUEUEING *		I * INCLUSIVE QUEUEING *		I
		(EXCL 2-WHEEL)	I	* DELAY *	I	* DELAY *	I	
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
A-B	I	45.8 I	45.8 I	8.8 I	0.19 I	8.8 I	0.19 I	I
A-C	I	112.6 I	112.6 I	21.7 I	0.19 I	21.7 I	0.19 I	I
A-D	I	13.0 I	13.0 I	2.5 I	0.19 I	2.5 I	0.19 I	I
B-	I	103.6 I	103.6 I	31.4 I	0.30 I	31.5 I	0.30 I	I
B-D	I	0.0 I	0.0 I	0.0 I	0.00 I	0.0 I	0.00 I	I
D	I	65.7 I	65.7 I	19.9 I	0.30 I	20.0 I	0.30 I	I
D	I	13.0 I	13.0 I	2.8 I	0.21 I	2.8 I	0.21 I	I
C-A	I	74.7 I	74.7 I	16.0 I	0.21 I	16.0 I	0.21 I	I
C-B	I	72.7 I	72.7 I	15.6 I	0.21 I	15.6 I	0.21 I	I
D-A	I	24.9 I	24.9 I	7.1 I	0.28 I	7.1 I	0.28 I	I
D-B	I	0.0 I	0.0 I	0.0 I	0.00 I	0.0 I	0.00 I	I
D-C	I	24.9 I	24.9 I	7.1 I	0.28 I	7.1 I	0.28 I	I
ALL	I	550.9 I	550.9 I	132.8 I	0.24 I	132.9 I	0.24 I	I

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 BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

TOTAL GEOMETRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD.
THE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS
A LARGE QUEUE AT THE END OF THE TIME PERIOD.

*** OSCADY 4 run completed

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Printed at 11:24:05 on 04/11/04]

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OPTIMISED SIGNAL CAPACITY AND DELAY

Visual OSCADY 4 ANALYSIS PROGRAM
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JN TITLE

once a year Road Site Access - 2008 Evening Peak Hour

ERROR AND WARNING MESSAGES ****

errors or warnings in the data.

TRAFFIC SIGNAL JUNCTION ANALYSIS

INPUT DATA

ARM D

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ARM B

ARM B

1 A IS Doncaster Road East
1 B IS Site Access
1 C IS Doncaster Road West
1 D IS Nora Street

GEOMETRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I	1	I
PERMITTED MOVEMENTS LANE 1	I	LSR	I	LSR	I	LSR	I	LSR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS LANE 1	I	4.00 M	I	3.65 M	I	3.65 M	I	3.65 M	I
LEFT TURN RADII LANE 1	I	10.0 M	I	10.0 M	I	5.0 M	I	5.0 M	I
RIGHT TURN RADII LANE 1	I	5.0 M	I	15.0 M	I	15.0 M	I	5.0 M	I
OPPOSING TRAFFIC MOVEMENTS FROM OPPOSITE ARM	I	STRAIGHT	I		I	STRAIGHT	I		I
	I	LEFT	I		I	LEFT	I		I
	I	RIGHT	I		I	RIGHT	I		I
STORAGE BEYOND STOPLINE LANE 1	I	2.0 VEHS	I	0.0 VEHS	I	2.0 VEHS	I	0.0 VEHS	I
LENGTH OF STAGGER	I		I		I	12.0 M	I		I
STAGGER TOTAL ROAD WIDTH OF STAGGERED ARMS (B AND D)	I		I		I	7.3 M	I		I

TRAFFIC DEMAND DATA

MAND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

FAULT VEHICLE TYPE PROPORTIONS ARE USED

MAND DATA SUPPLIED BETWEEN TIMES - 16.45 TO 18.15
 RIOD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 17.00 TO 18.00

E FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

TRAFFIC SCALING FACTOR HAS BEEN SET TO 100 %

TOTAL TRAFFIC DEMAND (VEHICLES / HOUR)									
FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
ARM A	I	0.0	I	77.0	I	142.0	I	25.0	I
ARM B	I	69.0	I	0.0	I	63.0	I	0.0	I
ARM C	I	146.0	I	71.0	I	0.0	I	25.0	I
ARM D	I	13.0	I	0.0	I	13.0	I	0.0	I

TIME PERIOD	I	ARM	I	VEHICLE TYPE PROPORTIONS					
	I		I	CARS AND	MEDIUM	HEAVY	BUSES AND	MOTOR	PEDAL
	I		I	LIGHT GOODS	GOODS	GOODS	COACHES	CYCLES	CYCLES
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000

A DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

ENTRY/EXIT FLOWS	I	ARM	I	TIME WHEN FLOW STARTS TO RISE	I	TIME WHEN TOP OF PEAK IS REACHED	I	TIME WHEN FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN)			I
	I		I		I		I		I	BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK	I
ENTRY	I	A	I	17.00	I	17.30	I	18.00	I	3.05	4.57	3.05	I
	I	B	I	17.00	I	17.30	I	18.00	I	1.65	2.47	1.65	I
	I	C	I	17.00	I	17.30	I	18.00	I	3.03	4.54	3.03	I
	I	D	I	17.00	I	17.30	I	18.00	I	0.32	0.49	0.32	I

SIGNAL TIMING DETAILS FOR SIGNAL SET 1

TIMING OPTION- VEHICLE ACTUATED MODE

MAXIMUM CYCLE TIME- 75.0 SECONDS

GLOBAL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I
LANES ON GREEN: ARM A	I	1	I		I		I
B	I		I	1	I		I
C	I	1	I		I		I
D	I		I		I	1	I
MINIMUM GREEN TIME (SECS)	I	5.0	I	5.0	I	5.0	I
PRECEDING INTERSTAGE	I	5.0	I	5.0	I	5.0	I

DEMAND AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES							
17.00-17.15							
A 1	L S R	3.64	1509.8	23.80	22.9	11.44	I
B 1	L S R	1.97	1761.8	27.77	7.8	4.52	I
C 1	L S R	3.61	1272.5	20.06	22.9	9.64	I
D 1	L S R	0.39	1523.1	24.01	6.5	3.27	I
17.15-17.30							
A 1	L S R	4.46	1485.7	23.42	26.1	11.72	I
B 1	L S R	2.41	1761.8	27.77	9.1	4.83	I
C 1	L S R	4.42	1221.4	19.25	26.1	9.64	I
D 1	L S R	0.48	1523.1	24.01	6.5	2.99	I
17.30-17.45							
A 1	L S R	4.46	1485.7	23.42	26.1	11.72	I
B 1	L S R	2.41	1761.8	27.77	9.1	4.83	I
C 1	L S R	4.42	1221.4	19.25	26.1	9.64	I
D 1	L S R	0.48	1523.1	24.01	6.5	2.99	I
17.45-18.00							
A 1	L S R	3.64	1509.8	23.80	22.9	11.44	I
B 1	L S R	1.97	1761.8	27.77	7.8	4.52	I
C 1	L S R	3.61	1272.5	20.06	22.9	9.64	I
D 1	L S R	0.39	1523.1	24.01	6.5	3.27	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
ARM LANES					MAXIMUM (END OF RED) (VEHS/LANE)			
17.00-17.15								
A 1	L S R	3.64	11.44	0.318	0.5	1.6	8.2	I
B 1	L S R	1.97	4.52	0.436	0.8	1.5	11.8	I
C 1	L S R	3.61	9.64	0.375	0.6	1.6	9.1	I
D 1	L S R	0.39	3.27	0.119	0.1	0.3	1.9	I
17.15-17.30								
A 1	L S R	4.46	11.72	0.381	0.7	2.1	11.1	I
B 1	L S R	2.41	4.83	0.500	1.1	2.0	16.2	I
C 1	L S R	4.42	9.64	0.459	0.9	2.2	12.8	I
D 1	L S R	0.48	2.99	0.159	0.2	0.4	2.7	I

17.30-17.45									
A	1	L S R	4.46	11.72	0.381	0.7	2.1	11.1	I
B	1	L S R	2.41	4.83	0.500	1.1	2.0	16.3	I
C	1	L S R	4.42	9.64	0.459	0.9	2.2	12.9	I
D	1	L S R	0.48	2.99	0.159	0.2	0.4	2.7	I

17.45-18.00									
A	1	L S R	3.64	11.44	0.318	0.6	1.6	8.3	I
B	1	L S R	1.97	4.52	0.436	0.8	1.5	11.9	I
C	1	L S R	3.61	9.64	0.375	0.6	1.6	9.1	I
D	1	L S R	0.39	3.27	0.119	0.1	0.3	1.9	I

QUEUES FOR ARM A

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		+	+	
17.15	1	0.5	1.6	*+
17.30	1	0.7	2.1	*+
17.45	1	0.7	2.1	*+
18.00	1	0.6	1.6	*+

QUEUES FOR ARM B

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		+	+	
7.15	1	0.8	1.5	*+
7.30	1	1.1	2.0	*+
7.45	1	1.1	2.0	*+
8.00	1	0.8	1.5	*+

QUEUES FOR ARM C

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		+	+	
7.15	1	0.6	1.6	*+
7.30	1	0.9	2.2	*+
7.45	1	0.9	2.2	*+
8.00	1	0.6	1.6	*+

QUEUES FOR ARM D

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE	
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +
17.15	1	0.1	0.3
17.30	1	0.2	0.4
17.45	1	0.2	0.4
18.00	1	0.1	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD (17.00-18.00)

STREAM	I	TOTAL DEMAND		* QUEUEING *		I * INCLUSIVE QUEUEING *		I
	I	(EXCL 2-WHEEL)		* DELAY *		* DELAY *		I
	I							I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I

A-B	I	76.7	76.7	12.2	0.16	12.2	0.16	I
A-C	I	141.5	141.5	22.5	0.16	22.5	0.16	I
A-D	I	24.9	24.9	4.0	0.16	4.0	0.16	I
B-C	I	62.8	62.8	26.8	0.43	26.8	0.43	I
B-D	I	0.0	0.0	0.0	0.00	0.0	0.00	I
C-A	I	68.7	68.7	29.4	0.43	29.4	0.43	I
C-D	I	24.9	24.9	4.5	0.18	4.5	0.18	I
C-B	I	145.4	145.4	26.5	0.18	26.5	0.18	I
D-A	I	70.7	70.7	12.9	0.18	12.9	0.18	I
D-B	I	13.0	13.0	4.6	0.35	4.6	0.35	I
D-C	I	0.0	0.0	0.0	0.00	0.0	0.00	I

ALL	I	641.6	641.6	147.9	0.23	148.0	0.23	I

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 BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

TOTAL GEOMETRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD.
THE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS
A LARGE QUEUE AT THE END OF THE TIME PERIOD.

*** OSCADY 4 run completed

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OPTIMISED SIGNAL CAPACITY AND DELAY

Visual OSCADY 4 ANALYSIS PROGRAM
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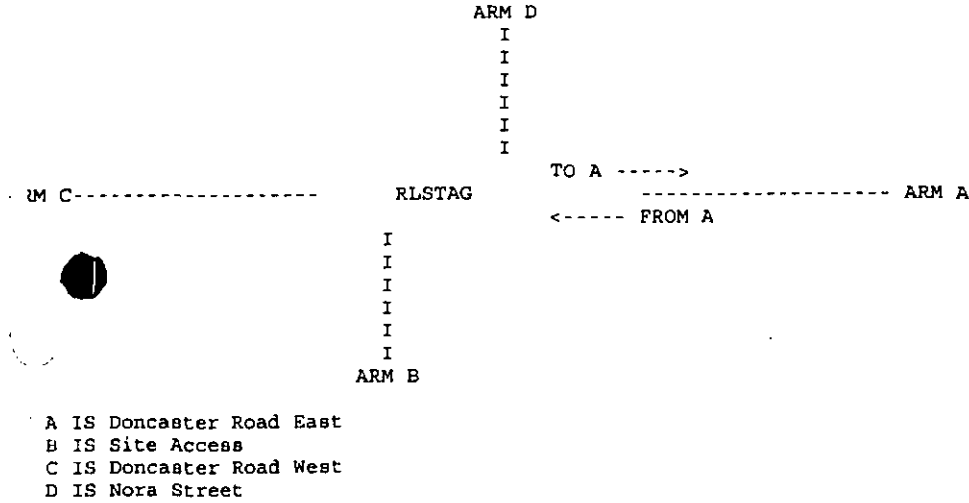
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ERROR AND WARNING MESSAGES ****

errors or warnings in the data.

AFFIC SIGNAL JUNCTION ANALYSIS

PUT DATA



GEOMETRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I	1	I
PERMITTED MOVEMENTS LANE 1	I	LSR	I	LSR	I	LSR	I	LSR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS LANE 1	I	4.00 M	I	3.65 M	I	3.65 M	I	3.65 M	I
LEFT TURN RADII LANE 1	I	10.0 M	I	10.0 M	I	5.0 M	I	5.0 M	I
RIGHT TURN RADII LANE 1	I	5.0 M	I	15.0 M	I	15.0 M	I	5.0 M	I
OPPOSING TRAFFIC MOVEMENTS FROM OPPOSITE ARM	I	STRAIGHT	I		I	STRAIGHT	I		I
	I	LEFT	I		I	LEFT	I		I
	I	RIGHT	I		I	RIGHT	I		I
STORAGE BEYOND STOPLINE LANE 1	I	2.0 VEHS	I	0.0 VEHS	I	2.0 VEHS	I	0.0 VEHS	I
LENGTH OF STAGGER							I	12.0 M	I
AVERAGE TOTAL ROAD WIDTH OF STAGGERED ARMS (B AND D)							I	7.3 M	I

TRAFFIC DEMAND DATA

DEMAND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

DEFAULT VEHICLE TYPE PROPORTIONS ARE USED

DEMAND DATA SUPPLIED BETWEEN TIMES - 07.45 TO 09.15
 PERIOD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 08.00 TO 09.00

THE FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

TRAFFIC SCALING FACTOR HAS BEEN SET TO 100 %

TOTAL TRAFFIC DEMAND (VEHICLES / HOUR)									
FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
ARM A	I	0.0	I	46.0	I	113.0	I	13.0	I
ARM B	I	66.0	I	0.0	I	104.0	I	0.0	I
ARM C	I	75.0	I	73.0	I	0.0	I	13.0	I
ARM D	I	25.0	I	0.0	I	25.0	I	0.0	I

TIME PERIOD	I	ARM	I	VEHICLE TYPE PROPORTIONS					I
	I		I	CARS AND	MEDIUM	HEAVY	BUSES AND	MOTOR	PEDAL
	I		I	LIGHT GOODS	GOODS	GOODS	COACHES	CYCLES	CYCLES
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000

A DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

ENTRY/EXIT	I	ARM	I	TIME WHEN	I	TIME WHEN	I	TIME WHEN	I	RATE OF FLOW (VEH/MIN)				I
FLOW	I		I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER
	I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
ENTRY	I	A	I	08.00	I	08.30	I	09.00	I	2.15	I	3.23	I	2.15
	I	B	I	08.00	I	08.30	I	09.00	I	2.13	I	3.19	I	2.13
	I	C	I	08.00	I	08.30	I	09.00	I	2.01	I	3.02	I	2.01
	I	D	I	08.00	I	08.30	I	09.00	I	0.63	I	0.94	I	0.63

SIGNAL TIMING DETAILS FOR SIGNAL SET 1

TIMING OPTION- VEHICLE ACTUATED MODE

MAXIMUM CYCLE TIME-

90.0 SECONDS

GLOBAL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I	STAGE 4	I
LANES ON GREEN: ARM A	I	1	I		I		I		I
B	I		I	1	I		I		I
C	I	1	I		I		I		I
D	I		I		I	1	I		I
MINIMUM GREEN TIME (SECS)	I	5.0	I	5.0	I	5.0	I	4.0	I
PRECEDING INTERSTAGE	I	7.0	I	5.0	I	5.0	I	5.0	I

DEMAND AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE (SECS)	FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES								
08.00-08.15								I
A 1	L S R	2.57	1578.2	24.88	19.4		8.17	I
B 1	L S R	2.54	1751.3	27.61	11.7		5.45	I
C 1	L S R	2.40	1168.2	18.41	19.4		6.05	I
D 1	L S R	0.75	1523.1	24.01	6.5		2.64	I
08.15-08.30								I
A 1	L S R	3.14	1560.3	24.60	22.1		8.57	I
B 1	L S R	3.11	1751.3	27.61	13.4		5.83	I
C 1	L S R	2.94	1101.8	17.37	22.1		6.05	I
D 1	L S R	0.91	1523.1	24.01	6.5		2.46	I
08.30-08.45								I
A 1	L S R	3.14	1560.3	24.60	22.1		8.57	I
B 1	L S R	3.11	1751.3	27.61	13.4		5.83	I
C 1	L S R	2.94	1101.8	17.37	22.1		6.05	I
D 1	L S R	0.91	1523.1	24.01	6.5		2.46	I
08.45-09.00								I
A 1	L S R	2.57	1578.2	24.88	19.4		8.17	I
B 1	L S R	2.54	1751.3	27.61	11.7		5.45	I
C 1	L S R	2.40	1168.2	18.41	19.4		6.05	I
D 1	L S R	0.75	1523.1	24.01	6.5		2.64	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 08.00 AND 09.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	MAXIMUM (END OF RED) (VEHS/LANE)	QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
ARM LANES									
08.00-08.15									I
A 1	L S R	2.57	8.17	0.314	0.7	1.8	10.8		I
B 1	L S R	2.54	5.45	0.465	1.1	2.2	16.8		I
C 1	L S R	2.40	6.05	0.397	0.8	1.7	11.5		I
D 1	L S R	0.75	2.64	0.283	0.4	0.7	5.5		I
08.15-08.30									I
A 1	L S R	3.14	8.57	0.367	0.9	2.3	14.1		I
B 1	L S R	3.11	5.83	0.533	1.5	3.0	22.7		I
C 1	L S R	2.94	6.05	0.487	1.1	2.3	16.0		I
D 1	L S R	0.91	2.46	0.372	0.5	1.0	8.0		I

I	08.30-08.45									I
I	A	1	L S R	3.14	8.57	0.367	0.9	2.3	14.1	I
I	B	1	L S R	3.11	5.83	0.533	1.5	3.0	22.8	I
I	C	1	L S R	2.94	6.05	0.487	1.1	2.3	16.1	I
I	D	1	L S R	0.91	2.46	0.372	0.5	1.0	8.1	I

I	08.45-09.00									I
I	A	1	L S R	2.57	8.17	0.314	0.7	1.8	10.8	I
I	B	1	L S R	2.54	5.45	0.465	1.1	2.3	17.0	I
I	C	1	L S R	2.40	6.05	0.397	0.8	1.7	11.6	I
I	D	1	L S R	0.75	2.64	0.283	0.4	0.7	5.5	I

QUEUES FOR ARM A

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +	
08.15	1	0.7	1.8	*+
08.30	1	0.9	2.3	*+
08.45	1	0.9	2.3	*+
09.00	1	0.7	1.8	*+

QUEUES FOR ARM B

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +	
08.15	1	1.1	2.2	*+
08.30	1	1.5	3.0	**+
08.45	1	1.5	3.0	**+
09.00	1	1.1	2.3	*+

QUEUES FOR ARM C

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +	
08.15	1	0.8	1.7	*+
08.30	1	1.1	2.3	*+
08.45	1	1.1	2.3	*+
09.00	1	0.8	1.7	*+

QUEUES FOR ARM D

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED) *	MAXIMUM (AT END OF RED) +	
08.15	1	0.4	0.7	+
08.30	1	0.5	1.0	*
08.45	1	0.5	1.0	*
09.00	1	0.4	0.7	+

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD (08.00-09.00)

STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
	I	{EXCL 2-WHEEL}		I	{ DELAY }		I	{ DELAY }		I
	I			I			I			I
	I	{VEH}	{VEH/H}	I	{MIN}	{MIN/VEH}	I	{MIN}	{MIN/VEH}	I
A-B	I	45.8	I 45.8	I	13.3	I 0.29	I	13.3	I 0.29	I
A-C	I	112.6	I 112.6	I	32.7	I 0.29	I	32.7	I 0.29	I
A-D	I	13.0	I 13.0	I	3.8	I 0.29	I	3.8	I 0.29	I
B-C	I	103.6	I 103.6	I	48.5	I 0.47	I	48.6	I 0.47	I
B-D	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0	I 0.00	I
C-A	I	65.7	I 65.7	I	30.8	I 0.47	I	30.8	I 0.47	I
C-D	I	13.0	I 13.0	I	4.5	I 0.34	I	4.5	I 0.34	I
C-A	I	74.7	I 74.7	I	25.7	I 0.34	I	25.8	I 0.34	I
C-B	I	72.7	I 72.7	I	25.1	I 0.34	I	25.1	I 0.34	I
D-A	I	24.9	I 24.9	I	13.6	I 0.54	I	13.6	I 0.54	I
D-B	I	0.0	I 0.0	I	0.0	I 0.00	I	0.0	I 0.00	I
D-C	I	24.9	I 24.9	I	13.6	I 0.54	I	13.6	I 0.54	I
ALL	I	550.9	I 550.9	I	211.4	I 0.38	I	211.7	I 0.38	I

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 BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

TOTAL GEOMETRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD.
THE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS
A LARGE QUEUE AT THE END OF THE TIME PERIOD.

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ERROR AND WARNING MESSAGES ****
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o errors or warnings in the data.

RAFFIC SIGNAL JUNCTION ANALYSIS

INPUT DATA

ARM D
I
I
I
I
I
I

TO A ----->

ARM C-----

RLSTAG

----- ARM A

<----- FROM A

I
I
I
I
I
I
ARM B

M A IS Doncaster Road East
M B IS Site Access
M C IS Doncaster Road West
M D IS Nora Street

OMETRIC DATA

DATA ITEM	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
GRADIENT	I	0.0 %	I	0.0 %	I	0.0 %	I	0.0 %	I
NUMBER OF LANES	I	1	I	1	I	1	I	1	I
PERMITTED MOVEMENTS	I	LSR	I	LSR	I	LSR	I	LSR	I
TOTAL EXIT WIDTH FOR STRAIGHT-AHEAD VEHICLES FROM THIS ARM	I	N/A	I	N/A	I	N/A	I	N/A	I
LANE WIDTHS	I	4.00 M	I	3.65 M	I	3.65 M	I	3.65 M	I
LEFT TURN RADII	I	10.0 M	I	10.0 M	I	5.0 M	I	5.0 M	I
RIGHT TURN RADII	I	5.0 M	I	15.0 M	I	15.0 M	I	5.0 M	I
OPPOSING TRAFFIC MOVEMENTS FROM OPPOSITE ARM	I	STRAIGHT	I		I	STRAIGHT	I		I
	I	LEFT	I		I	LEFT	I		I
	I	RIGHT	I		I	RIGHT	I		I
STORAGE BEYOND STOPLINE	I	2.0 VEHS	I	0.0 VEHS	I	2.0 VEHS	I	0.0 VEHS	I
LENGTH OF STAGGER	I		I		I	12.0 M	I		I
AVERAGE TOTAL ROAD WIDTH OF STAGGERED ARMS (B AND D)	I		I		I	7.3 M	I		I

TRAFFIC DEMAND DATA

MAND PROFILES ARE SYNTHESISED USING THE ** ODTAB ** OPTION

FAULT VEHICLE TYPE PROPORTIONS ARE USED

MAND DATA SUPPLIED BETWEEN TIMES - 16.45 TO 18.15
 MOD OF INTEREST (FOR QUEUE AND DELAY CALCULATIONS) - 17.00 TO 18.00

FOLLOWING DATA HAS BEEN INPUT / DEFAULTED

FFIC SCALING FACTOR HAS BEEN SET TO 100 %

TOTAL TRAFFIC DEMAND (VEHICLES / HOUR)									
FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
ARM A	I	0.0	I	77.0	I	142.0	I	25.0	I
ARM B	I	69.0	I	0.0	I	63.0	I	0.0	I
ARM C	I	146.0	I	71.0	I	0.0	I	25.0	I
ARM D	I	13.0	I	0.0	I	13.0	I	0.0	I

TIME PERIOD	I	ARM	I	VEHICLE TYPE PROPORTIONS			I	PEDAL		I
	I		I	CARS AND	MEDIUM	HEAVY	BUSES AND	MOTOR		
	I		I	LIGHT GOODS	GOODS	GOODS	COACHES	CYCLES		
ALL	I	ALL	I	0.927	0.041	0.016	0.016	0.000	0.000	I

DETERMINED FOR USE IN SYNTHESIS OF DEMAND PROFILES ARE AS FOLLOWS-

TRY/EXIT	I	ARM	I	TIME WHEN	I	TIME WHEN	I	TIME WHEN	I	RATE OF FLOW (VEH/MIN)			I
FLOW	I		I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I
	I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I
TRY	I	A	I	17.00	I	17.30	I	18.00	I	3.05	I	4.57	I
	I	B	I	17.00	I	17.30	I	18.00	I	1.65	I	2.47	I
	I	C	I	17.00	I	17.30	I	18.00	I	3.03	I	4.54	I
	I	D	I	17.00	I	17.30	I	18.00	I	0.32	I	0.49	I

IGNAL TIMING DETAILS FOR SIGNAL SET 1

IMING OPTION- VEHICLE ACTUATED MODE

AXIMUM CYCLE TIME-

90.0 SECONDS

GLOBAL EFFECTIVE GREEN DISPLACEMENTS - START = 1.4
END = 2.9

DATA ITEM	I	STAGE 1	I	STAGE 2	I	STAGE 3	I	STAGE 4	I
LANES ON GREEN: ARM A	I	1	I		I		I		I
B	I		I	1	I		I		I
C	I	1	I		I		I		I
D	I		I		I	1	I		I
MINIMUM GREEN TIME (SECS)	I	5.0	I	5.0	I	5.0	I	4.0	I
PRECEDING INTERSTAGE	I	7.0	I	5.0	I	5.0	I	5.0	I

MAND AND CAPACITY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND (VEHS/MIN)	SAT FLOW (PCU/HR)	SAT FLOW (VEHS/MIN)	EFFECTIVE GREEN-TIME TRUE FLARE+NOTIONL (SECS)	CAPACITY (VEHS /MIN)	I
ARM LANES							
17.00-17.15							I
A 1	L S R	3.64	1465.6	23.10	34.7	10.88	I
B 1	L S R	1.97	1761.8	27.77	10.9	4.13	I
C 1	L S R	3.61	1173.8	18.50	34.7	8.71	I
D 1	L S R	0.39	1523.1	24.01	6.5	2.12	I
17.15-17.30							I
A 1	L S R	4.46	1441.8	22.73	39.5	11.17	I
B 1	L S R	2.41	1761.8	27.77	12.8	4.44	I
C 1	L S R	4.42	1126.2	17.75	39.5	8.73	I
D 1	L S R	0.48	1523.1	24.01	6.5	1.94	I
17.30-17.45							I
A 1	L S R	4.46	1441.8	22.73	39.5	11.17	I
B 1	L S R	2.41	1761.8	27.77	12.8	4.44	I
C 1	L S R	4.42	1126.2	17.75	39.5	8.73	I
D 1	L S R	0.48	1523.1	24.01	6.5	1.94	I
17.45-18.00							I
A 1	L S R	3.64	1465.6	23.10	34.7	10.88	I
B 1	L S R	1.97	1761.8	27.77	10.9	4.13	I
C 1	L S R	3.61	1173.8	18.50	34.7	8.71	I
D 1	L S R	0.39	1523.1	24.01	6.5	2.12	I

UE AND DELAY INFORMATION FOR EACH 15 MINUTE TIME SEGMENT BETWEEN 17.00 AND 18.00

TIME	MOVEMENT	DEMAND EXCL 2-WHEEL (VEHS/MIN)	CAPACITY (VEHS/MIN)	DEGREE OF SAT (RFC)	QUEUE AT END OF SEGMENT MEAN (PHASE AVERAGED) (VEHS/LANE)	QUEUEING DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
ARM LANES					MAXIMUM (END OF RED) (VEHS/LANE)			
17.00-17.15								I
A 1	L S R	3.64	10.88	0.335	0.8	2.5	12.6	I
B 1	L S R	1.97	4.13	0.477	1.2	2.3	17.9	I
C 1	L S R	3.61	8.71	0.414	0.9	2.5	14.2	I
D 1	L S R	0.39	2.12	0.183	0.2	0.5	3.4	I
17.15-17.30								I
A 1	L S R	4.46	11.17	0.399	1.1	3.2	16.8	I
B 1	L S R	2.41	4.44	0.544	1.6	3.1	24.4	I
C 1	L S R	4.42	8.73	0.507	1.3	3.3	19.9	I
D 1	L S R	0.48	1.94	0.245	0.3	0.6	4.8	I

17.30-17.45										I
A	1	L S R	4.46	11.17	0.399	1.1	3.2	16.8		I
B	1	L S R	2.41	4.44	0.544	1.6	3.1	24.5		I
C	1	L S R	4.42	8.73	0.507	1.3	3.3	20.0		I
D	1	L S R	0.48	1.94	0.245	0.3	0.6	4.8		I
17.45-18.00										I
A	1	L S R	3.64	10.88	0.335	0.8	2.5	12.7		I
B	1	L S R	1.97	4.13	0.477	1.2	2.3	18.2		I
C	1	L S R	3.61	8.71	0.414	0.9	2.5	14.2		I
D	1	L S R	0.39	2.12	0.183	0.2	0.5	3.4		I

QUEUES FOR ARM A

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
17.15	1	0.8	2.5	*+
17.30	1	1.1	3.2	*++
17.45	1	1.1	3.2	*++
18.00	1	0.8	2.5	*+

QUEUES FOR ARM B

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
17.15	1	1.2	2.3	*+
17.30	1	1.6	3.1	**+
17.45	1	1.6	3.1	**+
18.00	1	1.2	2.3	*+

QUEUES FOR ARM C

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE		
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)	
		*	+	
17.15	1	0.9	2.5	*++
17.30	1	1.3	3.3	*++
17.45	1	1.3	3.3	*++
18.00	1	0.9	2.5	*++

JEUES FOR ARM D

TIME SEGMENT ENDING	LANE	NUMBER OF VEHICLES IN QUEUE	
		MEAN (PHASE AVERAGED)	MAXIMUM (AT END OF RED)
		*	+
17.15	1	0.2	0.5
17.30	1	0.3	0.6 +
17.45	1	0.3	0.6 +
18.00	1	0.2	0.5

JEUEING DELAY INFORMATION OVER WHOLE PERIOD (17.00-18.00)

STREAM	I	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *	
		(EXCL 2-WHEEL)		* DELAY *		* DELAY *	
		(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A-B	I	76.7 I	76.7 I	18.6 I	0.24 I	18.6 I	0.24 I
A-C	I	141.5 I	141.5 I	34.3 I	0.24 I	34.3 I	0.24 I
A-D	I	24.9 I	24.9 I	6.0 I	0.24 I	6.0 I	0.24 I
B-B	I	62.8 I	62.8 I	40.6 I	0.65 I	40.7 I	0.65 I
B-D	I	0.0 I	0.0 I	0.0 I	0.00 I	0.0 I	0.00 I
C-A	I	68.7 I	68.7 I	44.4 I	0.65 I	44.5 I	0.65 I
C-D	I	24.9 I	24.9 I	7.1 I	0.28 I	7.1 I	0.28 I
C-A	I	145.4 I	145.4 I	41.2 I	0.28 I	41.2 I	0.28 I
C-B	I	70.7 I	70.7 I	20.0 I	0.28 I	20.1 I	0.28 I
D-A	I	13.0 I	13.0 I	8.2 I	0.63 I	8.2 I	0.63 I
D-B	I	0.0 I	0.0 I	0.0 I	0.00 I	0.0 I	0.00 I
D-C	I	13.0 I	13.0 I	8.2 I	0.63 I	8.2 I	0.63 I
ALL	I	641.6 I	641.6 I	228.6 I	0.36 I	228.9 I	0.36 I

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 BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

TOTAL GEOMETRIC DELAY INCLUDES DELAY SUFFERED BY VEHICLES STILL QUEUEING AT THE END OF THE WHOLE TIME PERIOD.
THE SUM OF DELAYS FOR EACH SEGMENT AND THE TOTAL GEOMETRIC DELAY WILL BE SIGNIFICANTLY DIFFERENT ONLY IF THERE IS A LARGE QUEUE AT THE END OF THE TIME PERIOD.

**** OSCADY 4 run completed

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