Appendix D

# Local Highway Network: Junction Analyses

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



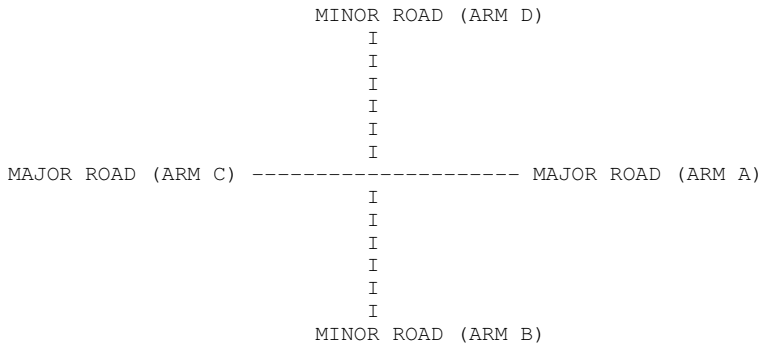
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 4. B4030 Lower Heyford Rd - Port Way\2006 Base\AM\Site 4.Lower Heyford - Port Way 2006 Base AM.vpi"
(drive-on-the-left ) at 08:49:43 on Wednesday, 11 July 2007

RUN INFORMATION

RUN TITLE: Site 4. Lower Heyford Rd - Port Way 2006 Base AM
LOCATION: Oxfordshire
DATE: 06/12/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: chris.morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA




ARM A IS Lower Heyford Road (E)
ARM B IS Port Way (S)
ARM C IS Lower Heyford Road (W)
ARM D IS Port Way (N)

STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | MINOR ROAD D |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.00 M. | ( W ) 7.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. | (WA-D) 2.20 M. |
| - VISIBILITY | (VC-B) 150.0 M. | (VA-D) 150.0 M. |
| - BLOCKS TRAFFIC | YES | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 38.0 M. | (VD-A) 95.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 72.0 M. | (VD-C) 92.0 M. |
| - LANE 1 WIDTH | (WB-C) - | (WD-A) - |
| - LANE 2 WIDTH | (WB-A) - | (WD-C) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. | 8.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.50 M. | 5.80 M. |
| - WIDTH AT 15 M FROM JUNC. | 4.10 M. | 4.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.70 M. | 3.20 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 1 PCU | 2 VEHS |

.SLOPES AND INTERCPET

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

will be adjusted )

B-C Stream

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 615.66 | 0.23 | 0.09 |

D-A Stream

| Intercept For Stream D-A | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|
| 627.24 | 0.23 | 0.09 |

B-A Stream

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream D-A | Slope For Opposing Stream D-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.21 | 0.21 |

| Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C |
|---|---|---|---|
| 0.08 | 0.13 | 0.30 | 0.11 |

D-C Stream

| Intercept For Stream D-C | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream B-C | Slope For Opposing Stream B-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.22 | 0.22 |

| Slope For Opposing Stream C-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream B-A |
|---|---|---|---|
| 0.09 | 0.14 | 0.32 | 0.11 |

C-B Stream

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

A-D Stream

| Intercept For Stream A-D | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

B-D Stream From Left Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 | 0.13 | 0.13 |

B-D Stream From Right Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 | 0.13 | 0.13 |

D-B Stream From Left Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 | 0.14 | 0.14 |

D-B Stream From Right Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream C-D | Slope For Opposing Stream A-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 | 0.14 | 0.14 |

TRAFFIC DEMAND DATA

| ARM | FLOW SCALE(%) |
|---|---|
| A | 100 |
| B | 100 |
| C | 100 |
| D | 100 |

Demand set: Site 4. Lower Heyford Rd - Port Way 2006 Existing AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 1.69 | 2.53 | 1.69 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.91 | 1.37 | 0.91 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.56 | 3.84 | 2.56 |
| ARM D | 15.00 | 45.00 | 75.00 | 0.28 | 0.41 | 0.28 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C | ARM D |
|---|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.111 | 0.889 | 0.000 |
| | | 0.0 | 15.0 | 120.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.534 | 0.000 | 0.411 | 0.055 |
| | | 39.0 | 0.0 | 30.0 | 4.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.761 | 0.239 | 0.000 | 0.000 |
| | | 156.0 | 49.0 | 0.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM D | 0.091 | 0.818 | 0.091 | 0.000 |
| | | 2.0 | 18.0 | 2.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-CD | 0.40 | 10.65 | 0.038 | | 0.00 | 0.04 | 0.6 | | 0.10 |
| B-AD | 0.51 | 8.27 | 0.062 | | 0.00 | 0.07 | 0.9 | | 0.13 |
| A-BCD | 0.00 | 9.38 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.14 | 10.43 | 0.013 | | 0.00 | 0.01 | 0.2 | | 0.10 |
| D-BC | 0.14 | 8.28 | 0.017 | | 0.00 | 0.02 | 0.2 | | 0.12 |
| C-ABD | 0.61 | 10.60 | 0.058 | | 0.00 | 0.06 | 0.9 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.104 | 0.002 | 0.002 | 0.001 | 0.010 |
| B-AD | 0.078 | 0.004 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.115 | 0.002 | | 0.009 | |
| D-AB | 0.087 | 0.005 | 0.022 | 0.006 | 0.010 |
| D-BC | 0.083 | 0.004 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.112 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-CD | 0.48 | 10.52 | 0.046 | | 0.04 | 0.05 | 0.7 | | 0.10 |
| B-AD | 0.61 | 8.08 | 0.076 | | 0.07 | 0.08 | 1.2 | | 0.13 |
| A-BCD | 0.00 | 9.26 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.17 | 10.22 | 0.016 | | 0.01 | 0.02 | 0.2 | | 0.10 |
| D-BC | 0.16 | 8.10 | 0.020 | | 0.02 | 0.02 | 0.3 | | 0.13 |
| C-ABD | 0.73 | 10.52 | 0.070 | | 0.06 | 0.08 | 1.1 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.102 | 0.002 | 0.002 | 0.001 | 0.010 |
| B-AD | 0.077 | 0.005 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.114 | 0.002 | | 0.009 | |
| D-AB | 0.085 | 0.006 | 0.022 | 0.005 | 0.009 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.111 | 0.004 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-CD | 0.59 | 10.34 | 0.057 | | 0.05 | 0.06 | 0.9 | | 0.10 |
| B-AD | 0.75 | 7.82 | 0.096 | | 0.08 | 0.10 | 1.5 | | 0.14 |
| A-BCD | 0.00 | 9.09 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.20 | 9.93 | 0.020 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| D-BC | 0.20 | 7.86 | 0.026 | | 0.02 | 0.03 | 0.4 | | 0.13 |
| C-ABD | 0.90 | 10.41 | 0.086 | | 0.08 | 0.10 | 1.4 | | 0.11 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.101 | 0.003 | 0.003 | 0.001 | 0.009 |
| B-AD | 0.074 | 0.006 | 0.021 | 0.005 | 0.007 |
| C-ABD | 0.113 | 0.003 | | 0.009 | |
| D-AB | 0.083 | 0.007 | 0.022 | 0.005 | 0.009 |
| D-BC | 0.079 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.109 | 0.005 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-CD | 0.59 | 10.34 | 0.057 | | 0.06 | 0.06 | 0.9 | | 0.10 |
| B-AD | 0.75 | 7.82 | 0.096 | | 0.10 | 0.11 | 1.6 | | 0.14 |
| A-BCD | 0.00 | 9.09 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.20 | 9.93 | 0.020 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| D-BC | 0.20 | 7.86 | 0.026 | | 0.03 | 0.03 | 0.4 | | 0.13 |
| C-ABD | 0.90 | 10.41 | 0.086 | | 0.10 | 0.10 | 1.5 | | 0.11 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.101 | 0.003 | 0.003 | 0.001 | 0.009 |
| B-AD | 0.074 | 0.006 | 0.021 | 0.005 | 0.007 |
| C-ABD | 0.113 | 0.003 | | 0.009 | |
| D-AB | 0.083 | 0.007 | 0.022 | 0.005 | 0.009 |
| D-BC | 0.079 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.109 | 0.005 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-CD | 0.48 | 10.52 | 0.046 | | 0.06 | 0.05 | 0.7 | | 0.10 |
| B-AD | 0.61 | 8.08 | 0.076 | | 0.11 | 0.08 | 1.3 | | 0.13 |
| A-BCD | 0.00 | 9.26 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.17 | 10.22 | 0.016 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| D-BC | 0.16 | 8.10 | 0.020 | | 0.03 | 0.02 | 0.3 | | 0.13 |
| C-ABD | 0.73 | 10.52 | 0.070 | | 0.10 | 0.08 | 1.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.102 | 0.002 | 0.002 | 0.001 | 0.010 |
| B-AD | 0.077 | 0.005 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.114 | 0.002 | | 0.009 | |
| D-AB | 0.085 | 0.006 | 0.022 | 0.005 | 0.009 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.111 | 0.004 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-CD | 0.40 | 10.65 | 0.038 | | 0.05 | 0.04 | 0.6 | | 0.10 |
| B-AD | 0.51 | 8.26 | 0.062 | | 0.08 | 0.07 | 1.0 | | 0.13 |
| A-BCD | 0.00 | 9.38 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.14 | 10.43 | 0.013 | | 0.02 | 0.01 | 0.2 | | 0.10 |
| D-BC | 0.14 | 8.28 | 0.017 | | 0.02 | 0.02 | 0.3 | | 0.12 |
| C-ABD | 0.61 | 10.60 | 0.058 | | 0.08 | 0.06 | 0.9 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.104 | 0.002 | 0.002 | 0.001 | 0.010 |
| B-AD | 0.078 | 0.004 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.115 | 0.002 | | 0.009 | |
| D-AB | 0.087 | 0.005 | 0.022 | 0.006 | 0.010 |
| D-BC | 0.083 | 0.004 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.112 | 0.003 | | 0.009 | |

QUEUE FOR STREAM B-CD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.0 |
| 08.15 | 0.0 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.0 |
| 09.15 | 0.0 |

QUEUE FOR STREAM B-AD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUE FOR STREAM A-BCD

| 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 D-AB

| 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 D-BC

| 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 C-ABD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-CD | 44.3 | 29.5 | 4.4 0.10 | 4.4 | 0.10 |
| B-AD | 56.2 | 37.5 | 7.6 0.13 | 7.6 | 0.13 |
| A-BCD | 0.0 | 0.0 | 0.0 0.00 | 0.0 | 0.00 |
| D-AB | 15.2 | 10.1 | 1.5 0.10 | 1.5 | 0.10 |
| D-BC | 15.1 | 10.1 | 1.9 0.13 | 1.9 | 0.13 |
| C-ABD | 67.4 | 45.0 | 7.0 0.10 | 7.0 | 0.10 |
| ALL | 598.7 | 399.2 | 22.4 0.04 | 22.4 | 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.

END OF JOB

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

[Printed at 10:21:27 on 02/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



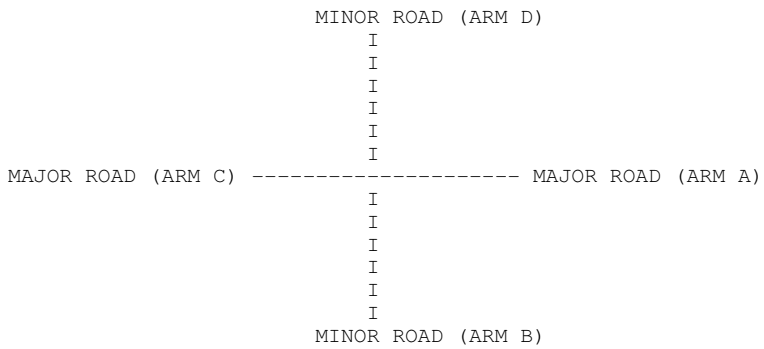
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 4. B4030 Lower Heyford Rd - Port Way\2006 Base\PM\Site 4.Lower Heyford - Port Way 2006 Base PM.vpi"
(drive-on-the-left ) at 08:52:01 on Wednesday, 11 July 2007

RUN INFORMATION

RUN TITLE: Site 4. Lower Heyford Rd - Port Way 2006 Base PM
LOCATION: Oxfordshire
DATE: 06/12/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: chris.morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA




ARM A IS Lower Heyford Road (E)
ARM B IS Port Way (S)
ARM C IS Lower Heyford Road (W)
ARM D IS Port Way (N)

STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | MINOR ROAD D |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.00 M. | ( W ) 7.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. | (WA-D) 2.20 M. |
| - VISIBILITY | (VC-B) 150.0 M. | (VA-D) 150.0 M. |
| - BLOCKS TRAFFIC | YES | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 38.0 M. | (VD-A) 95.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 72.0 M. | (VD-C) 92.0 M. |
| - LANE 1 WIDTH | (WB-C) - | (WD-A) - |
| - LANE 2 WIDTH | (WB-A) - | (WD-C) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. | 8.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.50 M. | 5.80 M. |
| - WIDTH AT 15 M FROM JUNC. | 4.10 M. | 4.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.70 M. | 3.20 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 1 PCU | 2 VEHS |

.SLOPES AND INTERCPET

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

will be adjusted )

B-C Stream

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 615.66 | 0.23 | 0.09 |

D-A Stream

| Intercept For Stream D-A | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|
| 627.24 | 0.23 | 0.09 |

B-A Stream

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream D-A | Slope For Opposing Stream D-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.21 | 0.21 |

| Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C |
|---|---|---|---|
| 0.08 | 0.13 | 0.30 | 0.11 |

D-C Stream

| Intercept For Stream D-C | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream B-C | Slope For Opposing Stream B-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.22 | 0.22 |

| Slope For Opposing Stream C-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream B-A |
|---|---|---|---|
| 0.09 | 0.14 | 0.32 | 0.11 |

C-B Stream

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

A-D Stream

| Intercept For Stream A-D | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

B-D Stream From Left Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 |

| Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|
| 0.13 | 0.13 |

B-D Stream From Right Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 |

| Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|
| 0.13 | 0.13 |

D-B Stream From Left Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C | Slope For Opposing Stream A-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 |

| Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|
| 0.14 | 0.14 |

D-B Stream From Right Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream C-D | Slope For Opposing Stream A-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 |

| Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|
| 0.14 | 0.14 |

TRAFFIC DEMAND DATA

| ARM | FLOW SCALE(%) |
|---|---|
| A | 100 |
| B | 100 |
| C | 100 |
| D | 100 |

Demand set: Site 4. Lower Heyford Rd - Port Way 2006 Existing PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 1.88 | 2.81 | 1.88 |
| ARM B | 15.00 | 45.00 | 75.00 | 3.36 | 5.04 | 3.36 |
| ARM C | 15.00 | 45.00 | 75.00 | 1.83 | 2.74 | 1.83 |
| ARM D | 15.00 | 45.00 | 75.00 | 0.09 | 0.13 | 0.09 |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

| TIME | FROM/TO | ARM A | ARM B | ARM C | ARM D |
|---|---|---|---|---|---|
| 16.45 - 18.15 | ARM A | 0.000 | 0.000 | 0.993 | 0.007 |
| | | 0.0 | 0.0 | 149.0 | 1.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.383 | 0.000 | 0.513 | 0.104 |
| | | 103.0 | 0.0 | 138.0 | 28.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.760 | 0.055 | 0.000 | 0.185 |
| | | 111.0 | 8.0 | 0.0 | 27.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM D | 0.143 | 0.714 | 0.143 | 0.000 |
| | | 1.0 | 5.0 | 1.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-CD | 1.93 | 10.28 | 0.188 | | 0.00 | 0.23 | 3.3 | | 0.12 |
| B-AD | 1.44 | 8.35 | 0.173 | | 0.00 | 0.21 | 3.0 | | 0.14 |
| A-BCD | 0.01 | 10.55 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.09 |
| D-AB | 0.04 | 10.94 | 0.004 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| D-BC | 0.04 | 8.31 | 0.005 | | 0.00 | 0.01 | 0.1 | | 0.12 |
| C-ABD | 0.10 | 10.55 | 0.010 | | 0.00 | 0.01 | 0.1 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.099 | 0.002 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.081 | 0.003 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.115 | 0.002 | | 0.009 | |
| D-AB | 0.091 | 0.003 | 0.020 | 0.005 | 0.010 |
| D-BC | 0.084 | 0.004 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.115 | 0.002 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-CD | 2.32 | 10.02 | 0.231 | | 0.23 | 0.30 | 4.4 | | 0.13 |
| B-AD | 1.71 | 8.19 | 0.209 | | 0.21 | 0.26 | 3.8 | | 0.15 |
| A-BCD | 0.01 | 10.47 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.05 | 10.79 | 0.005 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| D-BC | 0.05 | 8.13 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-ABD | 0.12 | 10.46 | 0.011 | | 0.01 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.097 | 0.003 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.079 | 0.004 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.114 | 0.003 | | 0.009 | |
| D-AB | 0.090 | 0.004 | 0.020 | 0.005 | 0.010 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.114 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-CD | 2.85 | 9.64 | 0.296 | | 0.30 | 0.41 | 6.0 | | 0.15 |
| B-AD | 2.09 | 7.96 | 0.262 | | 0.26 | 0.35 | 5.1 | | 0.17 |
| A-BCD | 0.02 | 10.34 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.06 | 10.58 | 0.006 | | 0.00 | 0.01 | 0.1 | | 0.10 |
| D-BC | 0.06 | 7.89 | 0.008 | | 0.01 | 0.01 | 0.1 | | 0.13 |
| C-ABD | 0.15 | 10.34 | 0.014 | | 0.01 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.094 | 0.003 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.077 | 0.005 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.088 | 0.005 | 0.020 | 0.005 | 0.010 |
| D-BC | 0.079 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.113 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-CD | 2.85 | 9.63 | 0.296 | | 0.41 | 0.42 | 6.2 | | 0.15 |
| B-AD | 2.09 | 7.96 | 0.262 | | 0.35 | 0.35 | 5.3 | | 0.17 |
| A-BCD | 0.02 | 10.34 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.06 | 10.58 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| D-BC | 0.06 | 7.89 | 0.008 | | 0.01 | 0.01 | 0.1 | | 0.13 |
| C-ABD | 0.15 | 10.34 | 0.014 | | 0.01 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.094 | 0.003 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.077 | 0.005 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.088 | 0.005 | 0.020 | 0.005 | 0.010 |
| D-BC | 0.079 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.112 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-CD | 2.32 | 10.02 | 0.231 | | 0.42 | 0.30 | 4.7 | | 0.13 |
| B-AD | 1.71 | 8.19 | 0.209 | | 0.35 | 0.27 | 4.1 | | 0.15 |
| A-BCD | 0.01 | 10.47 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.05 | 10.79 | 0.005 | | 0.01 | 0.00 | 0.1 | | 0.09 |
| D-BC | 0.05 | 8.13 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-ABD | 0.12 | 10.46 | 0.011 | | 0.01 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.097 | 0.003 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.079 | 0.004 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.114 | 0.003 | | 0.009 | |
| D-AB | 0.090 | 0.004 | 0.020 | 0.005 | 0.010 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.114 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-CD | 1.93 | 10.27 | 0.188 | | 0.30 | 0.23 | 3.6 | | 0.12 |
| B-AD | 1.44 | 8.35 | 0.173 | | 0.27 | 0.21 | 3.2 | | 0.14 |
| A-BCD | 0.01 | 10.55 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.09 |
| D-AB | 0.04 | 10.94 | 0.004 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| D-BC | 0.04 | 8.31 | 0.005 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-ABD | 0.10 | 10.55 | 0.010 | | 0.01 | 0.01 | 0.1 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.099 | 0.002 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.081 | 0.003 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.115 | 0.002 | | 0.009 | |
| D-AB | 0.091 | 0.003 | 0.020 | 0.005 | 0.010 |
| D-BC | 0.084 | 0.004 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.115 | 0.002 | | 0.009 | |

QUEUE FOR STREAM B-CD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.2 |
| 17.15 | 0.3 |
| 17.30 | 0.4 |
| 17.45 | 0.4 |
| 18.00 | 0.3 |
| 18.15 | 0.2 |

QUEUE FOR STREAM B-AD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.2 |
| 17.15 | 0.3 |
| 17.30 | 0.3 |
| 17.45 | 0.4 |
| 18.00 | 0.3 |
| 18.15 | 0.2 |

QUEUE FOR STREAM A-BCD

| 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 D-AB

| 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 D-BC

| 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 C-ABD

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-CD | 213.1 | 142.0 | 28.2 | 0.13 | 28.2 | 0.13 |
| B-AD | 157.2 | 104.8 | 24.5 | 0.16 | 24.5 | 0.16 |
| A-BCD | 1.4 | 0.9 | 0.1 | 0.09 | 0.1 | 0.09 |
| D-AB | 4.8 | 3.2 | 0.4 | 0.09 | 0.4 | 0.09 |
| D-BC | 4.8 | 3.2 | 0.6 | 0.12 | 0.6 | 0.12 |
| C-ABD | 11.0 | 7.3 | 1.1 | 0.10 | 1.1 | 0.10 |
| ALL | 787.3 | 524.9 | 55.0 | 0.07 | 55.0 | 0.07 |

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

END OF JOB

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

[Printed at 10:23:17 on 02/08/2007]

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



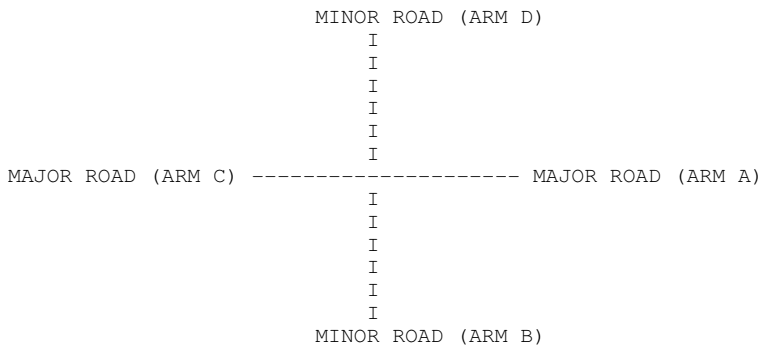
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 4. B4030 Lower Heyford Rd - Port Way\2013 Base\AM\Site 4.Lower Heyford - Port Way 2013 Base AM.vpi"
(drive-on-the-left ) at 09:01:20 on Wednesday, 11 July 2007

RUN INFORMATION
**********

RUN TITLE: Site 4. Lower Heyford Rd - Port Way 2013 Base AM
LOCATION: Oxfordshire
DATE: 06/12/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: chris.morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Lower Heyford Road (E)
ARM B IS Port Way (S)
ARM C IS Lower Heyford Road (W)
ARM D IS Port Way (N)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | MINOR ROAD D |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.00 M. | ( W ) 7.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. | (WA-D) 2.20 M. |
| - VISIBILITY | (VC-B) 150.0 M. | (VA-D) 150.0 M. |
| - BLOCKS TRAFFIC | YES | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 38.0 M. | (VD-A) 95.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 72.0 M. | (VD-C) 92.0 M. |
| - LANE 1 WIDTH | (WB-C) - | (WD-A) - |
| - LANE 2 WIDTH | (WB-A) - | (WD-C) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. | 8.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.50 M. | 5.80 M. |
| - WIDTH AT 15 M FROM JUNC. | 4.10 M. | 4.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.70 M. | 3.20 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 1 PCU | 2 VEHS |

.SLOPES AND INTERCPET

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

will be adjusted )

B-C Stream

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 615.66 | 0.23 | 0.09 |

D-A Stream

| Intercept For Stream D-A | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|
| 627.24 | 0.23 | 0.09 |

B-A Stream

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream D-A | Slope For Opposing Stream D-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.21 | 0.21 |

| Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C |
|---|---|---|---|
| 0.08 | 0.13 | 0.30 | 0.11 |

D-C Stream

| Intercept For Stream D-C | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream B-C | Slope For Opposing Stream B-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.22 | 0.22 |

| Slope For Opposing Stream C-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream B-A |
|---|---|---|---|
| 0.09 | 0.14 | 0.32 | 0.11 |

C-B Stream

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

A-D Stream

| Intercept For Stream A-D | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

B-D Stream From Left Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 | 0.13 | 0.13 |

B-D Stream From Right Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 | 0.13 | 0.13 |

D-B Stream From Left Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 | 0.14 | 0.14 |

D-B Stream From Right Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream C-D | Slope For Opposing Stream A-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 | 0.14 | 0.14 |

TRAFFIC DEMAND DATA

| ARM | FLOW SCALE(%) |
|---|---|
| A | 100 |
| B | 100 |
| C | 100 |
| D | 100 |

Demand set: Site 4. Lower Heyford Rd - Port Way 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 1.90 | 2.85 | 1.90 |
| ARM B | 15.00 | 45.00 | 75.00 | 1.02 | 1.54 | 1.02 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.89 | 4.33 | 2.89 |
| ARM D | 15.00 | 45.00 | 75.00 | 0.30 | 0.45 | 0.30 |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

| TIME | FROM/TO | ARM A | ARM B | ARM C | ARM D |
|---|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.105 | 0.895 | 0.000 |
| | | 0.0 | 16.0 | 136.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.537 | 0.000 | 0.415 | 0.049 |
| | | 44.0 | 0.0 | 34.0 | 4.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.762 | 0.238 | 0.000 | 0.000 |
| | | 176.0 | 55.0 | 0.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM D | 0.083 | 0.833 | 0.083 | 0.000 |
| | | 2.0 | 20.0 | 2.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-CD | 0.45 | 10.59 | 0.043 | | 0.00 | 0.04 | 0.6 | | 0.10 |
| B-AD | 0.58 | 8.15 | 0.071 | | 0.00 | 0.08 | 1.1 | | 0.13 |
| A-BCD | 0.00 | 9.30 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.15 | 10.26 | 0.015 | | 0.00 | 0.01 | 0.2 | | 0.10 |
| D-BC | 0.15 | 8.17 | 0.018 | | 0.00 | 0.02 | 0.3 | | 0.12 |
| C-ABD | 0.69 | 10.55 | 0.065 | | 0.00 | 0.07 | 1.0 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.103 | 0.002 | 0.002 | 0.001 | 0.010 |
| B-AD | 0.077 | 0.005 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.115 | 0.002 | | 0.009 | |
| D-AB | 0.086 | 0.005 | 0.022 | 0.006 | 0.009 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.111 | 0.004 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-CD | 0.54 | 10.44 | 0.052 | | 0.04 | 0.05 | 0.8 | | 0.10 |
| B-AD | 0.69 | 7.94 | 0.087 | | 0.08 | 0.09 | 1.4 | | 0.14 |
| A-BCD | 0.00 | 9.16 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.18 | 10.02 | 0.018 | | 0.01 | 0.02 | 0.3 | | 0.10 |
| D-BC | 0.18 | 7.97 | 0.022 | | 0.02 | 0.02 | 0.3 | | 0.13 |
| C-ABD | 0.82 | 10.46 | 0.079 | | 0.07 | 0.09 | 1.3 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.102 | 0.003 | 0.002 | 0.001 | 0.010 |
| B-AD | 0.075 | 0.006 | 0.021 | 0.005 | 0.007 |
| C-ABD | 0.114 | 0.003 | | 0.009 | |
| D-AB | 0.084 | 0.006 | 0.022 | 0.005 | 0.009 |
| D-BC | 0.080 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.110 | 0.004 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-CD | 0.66 | 10.23 | 0.065 | | 0.05 | 0.07 | 1.0 | | 0.10 |
| B-AD | 0.84 | 7.64 | 0.110 | | 0.09 | 0.12 | 1.8 | | 0.15 |
| A-BCD | 0.00 | 8.97 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.22 | 9.70 | 0.023 | | 0.02 | 0.02 | 0.3 | | 0.11 |
| D-BC | 0.22 | 7.69 | 0.029 | | 0.02 | 0.03 | 0.4 | | 0.13 |
| C-ABD | 1.01 | 10.33 | 0.098 | | 0.09 | 0.11 | 1.7 | | 0.11 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.100 | 0.003 | 0.002 | 0.001 | 0.009 |
| B-AD | 0.073 | 0.007 | 0.021 | 0.005 | 0.007 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.081 | 0.008 | 0.023 | 0.005 | 0.009 |
| D-BC | 0.077 | 0.007 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.107 | 0.005 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-CD | 0.66 | 10.23 | 0.065 | | 0.07 | 0.07 | 1.0 | | 0.10 |
| B-AD | 0.84 | 7.64 | 0.110 | | 0.12 | 0.12 | 1.8 | | 0.15 |
| A-BCD | 0.00 | 8.97 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.22 | 9.70 | 0.023 | | 0.02 | 0.02 | 0.3 | | 0.11 |
| D-BC | 0.22 | 7.69 | 0.029 | | 0.03 | 0.03 | 0.4 | | 0.13 |
| C-ABD | 1.01 | 10.33 | 0.098 | | 0.11 | 0.11 | 1.7 | | 0.11 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.100 | 0.003 | 0.002 | 0.001 | 0.009 |
| B-AD | 0.073 | 0.007 | 0.021 | 0.005 | 0.007 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.081 | 0.008 | 0.023 | 0.005 | 0.009 |
| D-BC | 0.077 | 0.007 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.107 | 0.005 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-CD | 0.54 | 10.44 | 0.052 | | 0.07 | 0.06 | 0.8 | | 0.10 |
| B-AD | 0.69 | 7.94 | 0.087 | | 0.12 | 0.10 | 1.5 | | 0.14 |
| A-BCD | 0.00 | 9.16 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.18 | 10.02 | 0.018 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| D-BC | 0.18 | 7.97 | 0.022 | | 0.03 | 0.02 | 0.4 | | 0.13 |
| C-ABD | 0.82 | 10.46 | 0.079 | | 0.11 | 0.09 | 1.3 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.102 | 0.003 | 0.002 | 0.001 | 0.010 |
| B-AD | 0.075 | 0.006 | 0.021 | 0.005 | 0.007 |
| C-ABD | 0.114 | 0.003 | | 0.009 | |
| D-AB | 0.084 | 0.006 | 0.022 | 0.005 | 0.009 |
| D-BC | 0.080 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.110 | 0.004 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-CD | 0.45 | 10.59 | 0.043 | | 0.06 | 0.05 | 0.7 | | 0.10 |
| B-AD | 0.58 | 8.15 | 0.071 | | 0.10 | 0.08 | 1.2 | | 0.13 |
| A-BCD | 0.00 | 9.30 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.15 | 10.25 | 0.015 | | 0.02 | 0.02 | 0.2 | | 0.10 |
| D-BC | 0.15 | 8.16 | 0.018 | | 0.02 | 0.02 | 0.3 | | 0.12 |
| C-ABD | 0.69 | 10.55 | 0.065 | | 0.09 | 0.07 | 1.1 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.103 | 0.002 | 0.002 | 0.001 | 0.010 |
| B-AD | 0.077 | 0.005 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.115 | 0.002 | | 0.009 | |
| D-AB | 0.085 | 0.005 | 0.022 | 0.006 | 0.009 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.111 | 0.004 | | 0.009 | |

QUEUE FOR STREAM B-CD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.0 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.0 |

QUEUE FOR STREAM B-AD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUE FOR STREAM A-BCD

| 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 D-AB

| 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 D-BC

| 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 C-ABD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-CD | 49.8 | 33.2 | 5.0 | 0.10 | 5.0 | 0.10 |
| B-AD | 63.1 | 42.0 | 8.7 | 0.14 | 8.7 | 0.14 |
| A-BCD | 0.0 | 0.0 | 0.0 | 0.00 | 0.0 | 0.00 |
| D-AB | 16.6 | 11.0 | 1.7 | 0.10 | 1.7 | 0.10 |
| D-BC | 16.5 | 11.0 | 2.1 | 0.13 | 2.1 | 0.13 |
| C-ABD | 75.7 | 50.5 | 8.1 | 0.11 | 8.1 | 0.11 |
| ALL | 673.1 | 448.7 | 25.6 | 0.04 | 25.6 | 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.

END OF JOB

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

[Printed at 10:25:03 on 02/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



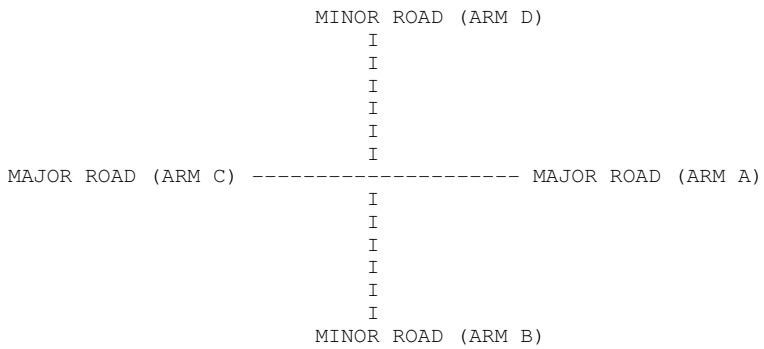
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 4. B4030 Lower Heyford Rd - Port Way\2013 Base\PM\Site 4.Lower Heyford - Port Way 2013 Base PM.vpi"
(drive-on-the-left ) at 09:04:28 on Wednesday, 11 July 2007

RUN INFORMATION
**********

RUN TITLE: Site 4. Lower Heyford Rd - Port Way 2013 Base PM
LOCATION: Oxfordshire
DATE: 06/12/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: chris.morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Lower Heyford Road (E)
ARM B IS Port Way (S)
ARM C IS Lower Heyford Road (W)
ARM D IS Port Way (N)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | MINOR ROAD D |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.00 M. | ( W ) 7.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. | (WA-D) 2.20 M. |
| - VISIBILITY | (VC-B) 150.0 M. | (VA-D) 150.0 M. |
| - BLOCKS TRAFFIC | YES | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 38.0 M. | (VD-A) 95.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 72.0 M. | (VD-C) 92.0 M. |
| - LANE 1 WIDTH | (WB-C) - | (WD-A) - |
| - LANE 2 WIDTH | (WB-A) - | (WD-C) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. | 8.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.50 M. | 5.80 M. |
| - WIDTH AT 15 M FROM JUNC. | 4.10 M. | 4.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.70 M. | 3.20 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 1 PCU | 2 VEHS |

.SLOPES AND INTERCPET

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

will be adjusted )

B-C Stream

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 615.66 | 0.23 | 0.09 |

D-A Stream

| Intercept For Stream D-A | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|
| 627.24 | 0.23 | 0.09 |

B-A Stream

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream D-A | Slope For Opposing Stream D-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.21 | 0.21 |

| Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C |
|---|---|---|---|
| 0.08 | 0.13 | 0.30 | 0.11 |

D-C Stream

| Intercept For Stream D-C | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream B-C | Slope For Opposing Stream B-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.22 | 0.22 |

| Slope For Opposing Stream C-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream B-A |
|---|---|---|---|
| 0.09 | 0.14 | 0.32 | 0.11 |

C-B Stream

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

A-D Stream

| Intercept For Stream A-D | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

B-D Stream From Left Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 |

| Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|
| 0.13 | 0.13 |

B-D Stream From Right Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 |

| Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|
| 0.13 | 0.13 |

D-B Stream From Left Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C | Slope For Opposing Stream A-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 |

| Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|
| 0.14 | 0.14 |

D-B Stream From Right Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream C-D | Slope For Opposing Stream A-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 |

| Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|
| 0.14 | 0.14 |

TRAFFIC DEMAND DATA

| ARM | FLOW SCALE(%) |
|---|---|
| A | 100 |
| B | 100 |
| C | 100 |
| D | 100 |

Demand set: Site 4. Lower Heyford Rd - Port Way 2013 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 2.11 | 3.17 | 2.11 |
| ARM B | 15.00 | 45.00 | 75.00 | 3.79 | 5.68 | 3.79 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.06 | 3.09 | 2.06 |
| ARM D | 15.00 | 45.00 | 75.00 | 0.11 | 0.17 | 0.11 |

| TIME | FROM/TO | ARM A | ARM B | ARM C | ARM D |
|---|---|---|---|---|---|
| 16.45 - 18.15 | ARM A | 0.000 | 0.000 | 0.994 | 0.006 |
| | | 0.0 | 0.0 | 168.0 | 1.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.383 | 0.000 | 0.515 | 0.102 |
| | | 116.0 | 0.0 | 156.0 | 31.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.758 | 0.061 | 0.000 | 0.182 |
| | | 125.0 | 10.0 | 0.0 | 30.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM D | 0.111 | 0.667 | 0.222 | 0.000 |
| | | 1.0 | 6.0 | 2.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-CD | 2.19 | 10.13 | 0.216 | | 0.00 | 0.27 | 3.9 | | 0.13 |
| B-AD | 1.62 | 8.24 | 0.196 | | 0.00 | 0.24 | 3.5 | | 0.15 |
| A-BCD | 0.01 | 10.49 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.05 | 10.65 | 0.005 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| D-BC | 0.06 | 8.19 | 0.008 | | 0.00 | 0.01 | 0.1 | | 0.12 |
| C-ABD | 0.13 | 10.49 | 0.012 | | 0.00 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.098 | 0.003 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.080 | 0.004 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.114 | 0.002 | | 0.009 | |
| D-AB | 0.090 | 0.004 | 0.021 | 0.005 | 0.010 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.114 | 0.002 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-CD | 2.62 | 9.82 | 0.267 | | 0.27 | 0.36 | 5.2 | | 0.14 |
| B-AD | 1.92 | 8.05 | 0.238 | | 0.24 | 0.31 | 4.5 | | 0.16 |
| A-BCD | 0.01 | 10.39 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.06 | 10.48 | 0.006 | | 0.00 | 0.01 | 0.1 | | 0.10 |
| D-BC | 0.07 | 7.97 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.13 |
| C-ABD | 0.15 | 10.39 | 0.014 | | 0.01 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.095 | 0.003 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.078 | 0.004 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.113 | 0.003 | | 0.009 | |
| D-AB | 0.088 | 0.005 | 0.021 | 0.005 | 0.010 |
| D-BC | 0.079 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.113 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-CD | 3.22 | 9.35 | 0.345 | | 0.36 | 0.52 | 7.5 | | 0.16 |
| B-AD | 2.34 | 7.76 | 0.301 | | 0.31 | 0.42 | 6.1 | | 0.18 |
| A-BCD | 0.02 | 10.25 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.07 | 10.24 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| D-BC | 0.09 | 7.66 | 0.012 | | 0.01 | 0.01 | 0.2 | | 0.13 |
| C-ABD | 0.18 | 10.25 | 0.018 | | 0.01 | 0.02 | 0.3 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.092 | 0.004 | 0.004 | 0.001 | 0.008 |
| B-AD | 0.076 | 0.005 | 0.020 | 0.005 | 0.007 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.086 | 0.006 | 0.021 | 0.005 | 0.009 |
| D-BC | 0.076 | 0.007 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.112 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-CD | 3.22 | 9.34 | 0.345 | | 0.52 | 0.52 | 7.8 | | 0.16 |
| B-AD | 2.34 | 7.76 | 0.301 | | 0.42 | 0.43 | 6.4 | | 0.18 |
| A-BCD | 0.02 | 10.25 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.07 | 10.24 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| D-BC | 0.09 | 7.66 | 0.012 | | 0.01 | 0.01 | 0.2 | | 0.13 |
| C-ABD | 0.18 | 10.25 | 0.018 | | 0.02 | 0.02 | 0.3 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.092 | 0.004 | 0.004 | 0.001 | 0.008 |
| B-AD | 0.076 | 0.005 | 0.020 | 0.005 | 0.007 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.086 | 0.006 | 0.021 | 0.005 | 0.009 |
| D-BC | 0.076 | 0.007 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.112 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-CD | 2.62 | 9.82 | 0.267 | | 0.52 | 0.37 | 5.7 | | 0.14 |
| B-AD | 1.92 | 8.05 | 0.238 | | 0.43 | 0.32 | 4.9 | | 0.16 |
| A-BCD | 0.01 | 10.39 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.06 | 10.48 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| D-BC | 0.07 | 7.96 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.13 |
| C-ABD | 0.15 | 10.39 | 0.014 | | 0.02 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.095 | 0.003 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.078 | 0.004 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.113 | 0.003 | | 0.009 | |
| D-AB | 0.088 | 0.005 | 0.021 | 0.005 | 0.010 |
| D-BC | 0.079 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.113 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-CD | 2.19 | 10.12 | 0.216 | | 0.37 | 0.28 | 4.3 | | 0.13 |
| B-AD | 1.62 | 8.24 | 0.196 | | 0.32 | 0.25 | 3.8 | | 0.15 |
| A-BCD | 0.01 | 10.49 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.05 | 10.65 | 0.005 | | 0.01 | 0.00 | 0.1 | | 0.09 |
| D-BC | 0.06 | 8.18 | 0.008 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-ABD | 0.13 | 10.49 | 0.012 | | 0.01 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.098 | 0.003 | 0.004 | 0.001 | 0.009 |
| B-AD | 0.080 | 0.004 | 0.020 | 0.005 | 0.008 |
| C-ABD | 0.114 | 0.002 | | 0.009 | |
| D-AB | 0.090 | 0.004 | 0.021 | 0.005 | 0.010 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.114 | 0.002 | | 0.009 | |

QUEUE FOR STREAM B-CD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.3 | |
| 17.15 | 0.4 | |
| 17.30 | 0.5 | * |
| 17.45 | 0.5 | * |
| 18.00 | 0.4 | |
| 18.15 | 0.3 | |

QUEUE FOR STREAM B-AD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.2 |
| 17.15 | 0.3 |
| 17.30 | 0.4 |
| 17.45 | 0.4 |
| 18.00 | 0.3 |
| 18.15 | 0.2 |

QUEUE FOR STREAM A-BCD

| 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 D-AB

| 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 D-BC

| 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 C-ABD

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-CD | 240.9 | 160.6 | 34.5 | 0.14 | 34.5 | 0.14 |
| B-AD | 176.1 | 117.4 | 29.2 | 0.17 | 29.2 | 0.17 |
| A-BCD | 1.4 | 0.9 | 0.1 | 0.10 | 0.1 | 0.10 |
| D-AB | 5.5 | 3.7 | 0.5 | 0.10 | 0.5 | 0.10 |
| D-BC | 6.9 | 4.6 | 0.9 | 0.13 | 0.9 | 0.13 |
| C-ABD | 13.8 | 9.2 | 1.4 | 0.10 | 1.4 | 0.10 |
| ALL | 889.2 | 592.8 | 66.6 | 0.07 | 66.6 | 0.07 |

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

END OF JOB

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

[Printed at 10:25:34 on 02/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



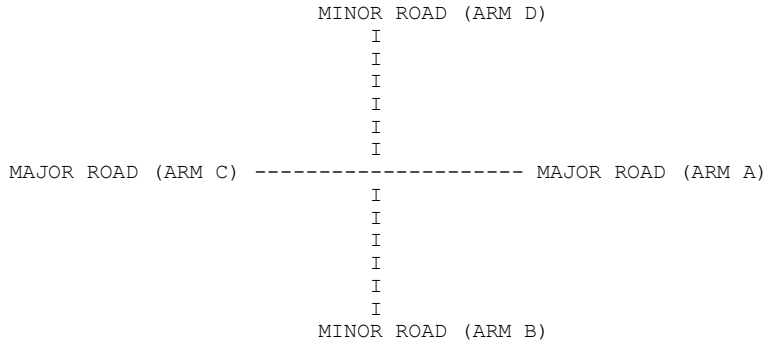
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 4. B4030 Lower Heyford Rd - Port Way\2013 Base + Gen\AM\
Site 4.Lower Heyford - Port Way 2013 Base + Full Development AM.vpi"
(drive-on-the-left ) at 15:20:22 on Monday, 30 July 2007

## RUN INFORMATION

RUN TITLE: Site 4. Lower Heyford Rd - Port Way 2013 Base & Full Development AM
LOCATION: Oxfordshire
DATE: 30/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

## .MAJOR/MINOR JUNCTION CAPACITY AND DELAY

### INPUT DATA




ARM A IS Lower Heyford Road (E)
ARM B IS Port Way (S)
ARM C IS Lower Heyford Road (W)
ARM D IS Port Way (N)

STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | MINOR ROAD D |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.00 M. | ( W ) 7.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. | (WA-D) 2.20 M. |
| - VISIBILITY | (VC-B) 150.0 M. | (VA-D) 150.0 M. |
| - BLOCKS TRAFFIC | YES | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 38.0 M. | (VD-A) 95.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 72.0 M. | (VD-C) 92.0 M. |
| - LANE 1 WIDTH | (WB-C) - | (WD-A) - |
| - LANE 2 WIDTH | (WB-A) - | (WD-C) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. | 8.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.50 M. | 5.80 M. |
| - WIDTH AT 15 M FROM JUNC. | 4.10 M. | 4.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.70 M. | 3.20 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 1 PCU | 2 VEHS |

.SLOPES AND INTERCPET

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

will be adjusted )

B-C Stream

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 615.66 | 0.23 | 0.09 |

D-A Stream

| Intercept For Stream D-A | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|
| 627.24 | 0.23 | 0.09 |

B-A Stream

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream D-A | Slope For Opposing Stream D-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.21 | 0.21 |

| Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C |
|---|---|---|---|
| 0.08 | 0.13 | 0.30 | 0.11 |

D-C Stream

| Intercept For Stream D-C | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream B-C | Slope For Opposing Stream B-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.22 | 0.22 |

| Slope For Opposing Stream C-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream B-A |
|---|---|---|---|
| 0.09 | 0.14 | 0.32 | 0.11 |

C-B Stream

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

A-D Stream

| Intercept For Stream A-D | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

B-D Stream From Left Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 |

| Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|
| 0.13 | 0.13 |

B-D Stream From Right Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 |

| Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|
| 0.13 | 0.13 |

D-B Stream From Left Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C | Slope For Opposing Stream A-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 |

| Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|
| 0.14 | 0.14 |

D-B Stream From Right Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream C-D | Slope For Opposing Stream A-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 |

| Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|
| 0.14 | 0.14 |

TRAFFIC DEMAND DATA

| ARM | FLOW SCALE(%) |
|---|---|
| A | 100 |
| B | 100 |
| C | 100 |
| D | 100 |

Demand set: Site 4. Lower Heyford Rd - Port Way 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 1.90 | 2.85 | 1.90 |
| ARM B | 15.00 | 45.00 | 75.00 | 1.69 | 2.53 | 1.69 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.89 | 4.33 | 2.89 |
| ARM D | 15.00 | 45.00 | 75.00 | 1.29 | 1.93 | 1.29 |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

| TIME | FROM/TO | ARM A | ARM B | ARM C | ARM D |
|---|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.105 | 0.895 | 0.000 |
| | | 0.0 | 16.0 | 136.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.326 | 0.000 | 0.252 | 0.422 |
| | | 44.0 | 0.0 | 34.0 | 57.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.762 | 0.238 | 0.000 | 0.000 |
| | | 176.0 | 55.0 | 0.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM D | 0.019 | 0.961 | 0.019 | 0.000 |
| | | 2.0 | 99.0 | 2.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-CD | 0.81 | 9.72 | 0.083 | | 0.00 | 0.09 | 1.3 | | 0.11 |
| B-AD | 0.88 | 7.45 | 0.118 | | 0.00 | 0.13 | 1.9 | | 0.15 |
| A-BCD | 0.00 | 9.30 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.65 | 9.79 | 0.066 | | 0.00 | 0.07 | 1.0 | | 0.11 |
| D-BC | 0.64 | 8.18 | 0.079 | | 0.00 | 0.08 | 1.2 | | 0.13 |
| C-ABD | 0.69 | 10.55 | 0.065 | | 0.00 | 0.07 | 1.0 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.088 | 0.004 | 0.014 | 0.003 | 0.009 |
| B-AD | 0.076 | 0.005 | 0.019 | 0.005 | 0.007 |
| C-ABD | 0.115 | 0.002 | | 0.009 | |
| D-AB | 0.082 | 0.005 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.111 | 0.004 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-CD | 0.98 | 9.47 | 0.103 | | 0.09 | 0.11 | 1.7 | | 0.12 |
| B-AD | 1.05 | 7.22 | 0.145 | | 0.13 | 0.17 | 2.4 | | 0.16 |
| A-BCD | 0.00 | 9.16 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.77 | 9.52 | 0.081 | | 0.07 | 0.09 | 1.3 | | 0.11 |
| D-BC | 0.77 | 7.98 | 0.096 | | 0.08 | 0.11 | 1.5 | | 0.14 |
| C-ABD | 0.82 | 10.46 | 0.079 | | 0.07 | 0.09 | 1.3 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.086 | 0.005 | 0.014 | 0.003 | 0.009 |
| B-AD | 0.074 | 0.006 | 0.019 | 0.005 | 0.007 |
| C-ABD | 0.114 | 0.003 | | 0.009 | |
| D-AB | 0.079 | 0.006 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.080 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.110 | 0.004 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-CD | 1.21 | 9.11 | 0.133 | | 0.11 | 0.15 | 2.2 | | 0.13 |
| B-AD | 1.27 | 6.90 | 0.184 | | 0.17 | 0.22 | 3.2 | | 0.18 |
| A-BCD | 0.00 | 8.97 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.95 | 9.15 | 0.104 | | 0.09 | 0.11 | 1.7 | | 0.12 |
| D-BC | 0.94 | 7.71 | 0.122 | | 0.11 | 0.14 | 2.0 | | 0.15 |
| C-ABD | 1.01 | 10.33 | 0.098 | | 0.09 | 0.11 | 1.7 | | 0.11 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.083 | 0.006 | 0.015 | 0.003 | 0.008 |
| B-AD | 0.071 | 0.008 | 0.019 | 0.004 | 0.007 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.076 | 0.008 | 0.024 | 0.006 | 0.008 |
| D-BC | 0.078 | 0.007 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.107 | 0.005 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-CD | 1.21 | 9.11 | 0.133 | | 0.15 | 0.15 | 2.3 | | 0.13 |
| B-AD | 1.27 | 6.90 | 0.184 | | 0.22 | 0.22 | 3.3 | | 0.18 |
| A-BCD | 0.00 | 8.97 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.95 | 9.15 | 0.104 | | 0.11 | 0.12 | 1.7 | | 0.12 |
| D-BC | 0.94 | 7.71 | 0.122 | | 0.14 | 0.14 | 2.1 | | 0.15 |
| C-ABD | 1.01 | 10.33 | 0.098 | | 0.11 | 0.11 | 1.7 | | 0.11 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.083 | 0.006 | 0.015 | 0.003 | 0.008 |
| B-AD | 0.071 | 0.008 | 0.019 | 0.004 | 0.007 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.076 | 0.008 | 0.024 | 0.006 | 0.008 |
| D-BC | 0.078 | 0.007 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.107 | 0.005 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-CD | 0.98 | 9.46 | 0.103 | | 0.15 | 0.12 | 1.8 | | 0.12 |
| B-AD | 1.05 | 7.22 | 0.145 | | 0.22 | 0.17 | 2.6 | | 0.16 |
| A-BCD | 0.00 | 9.16 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.77 | 9.52 | 0.081 | | 0.12 | 0.09 | 1.4 | | 0.11 |
| D-BC | 0.77 | 7.98 | 0.096 | | 0.14 | 0.11 | 1.7 | | 0.14 |
| C-ABD | 0.82 | 10.46 | 0.079 | | 0.11 | 0.09 | 1.3 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.086 | 0.005 | 0.014 | 0.003 | 0.009 |
| B-AD | 0.074 | 0.006 | 0.019 | 0.005 | 0.007 |
| C-ABD | 0.114 | 0.003 | | 0.009 | |
| D-AB | 0.079 | 0.006 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.080 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.110 | 0.004 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-CD | 0.81 | 9.72 | 0.084 | | 0.12 | 0.09 | 1.4 | | 0.11 |
| B-AD | 0.88 | 7.45 | 0.118 | | 0.17 | 0.14 | 2.1 | | 0.15 |
| A-BCD | 0.00 | 9.30 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| D-AB | 0.65 | 9.79 | 0.066 | | 0.09 | 0.07 | 1.1 | | 0.11 |
| D-BC | 0.64 | 8.18 | 0.079 | | 0.11 | 0.09 | 1.3 | | 0.13 |
| C-ABD | 0.69 | 10.55 | 0.065 | | 0.09 | 0.07 | 1.1 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.088 | 0.004 | 0.014 | 0.003 | 0.009 |
| B-AD | 0.076 | 0.005 | 0.019 | 0.005 | 0.007 |
| C-ABD | 0.115 | 0.002 | | 0.009 | |
| D-AB | 0.082 | 0.005 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.111 | 0.004 | | 0.009 | |

QUEUE FOR STREAM B-CD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.2 |
| 08.45 | 0.2 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUE FOR STREAM B-AD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.2 |
| 08.30 | 0.2 |
| 08.45 | 0.2 |
| 09.00 | 0.2 |
| 09.15 | 0.1 |

QUEUE FOR STREAM A-BCD

| 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 D-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUE FOR STREAM D-BC

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUE FOR STREAM C-ABD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-CD | 89.9 | 60.0 | 10.7 0.12 | 10.7 | 0.12 |
| B-AD | 95.9 | 63.9 | 15.7 0.16 | 15.7 | 0.16 |
| A-BCD | 0.0 | 0.0 | 0.0 0.00 | 0.0 | 0.00 |
| D-AB | 71.2 | 47.4 | 8.2 0.12 | 8.2 | 0.12 |
| D-BC | 70.6 | 47.1 | 9.8 0.14 | 9.8 | 0.14 |
| C-ABD | 75.7 | 50.5 | 8.1 0.11 | 8.1 | 0.11 |
| ALL | 854.8 | 569.8 | 52.4 0.06 | 52.4 | 0.06 |

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

END OF JOB

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

[Printed at 12:42:04 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



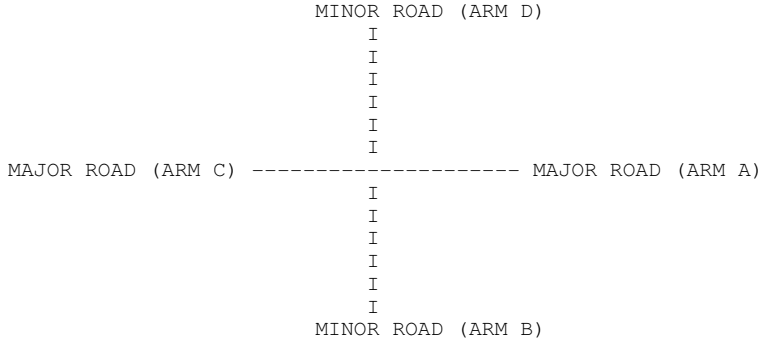
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 4. B4030 Lower Heyford Rd - Port Way\2013 Base + Gen\PM\
Site 4.Lower Heyford - Port Way 2013 Base + Full Development PM.vpi"
(drive-on-the-left ) at 12:34:40 on Tuesday, 7 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 4. Lower Heyford Rd - Port Way 2013 Base & Full Development PM
LOCATION: Oxfordshire
DATE: 07/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Lower Heyford Road (E)
ARM B IS Port Way (S)
ARM C IS Lower Heyford Road (W)
ARM D IS Port Way (N)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | MINOR ROAD D |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.00 M. | ( W ) 7.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. | (WA-D) 2.20 M. |
| - VISIBILITY | (VC-B) 150.0 M. | (VA-D) 150.0 M. |
| - BLOCKS TRAFFIC | YES | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 38.0 M. | (VD-A) 95.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 72.0 M. | (VD-C) 92.0 M. |
| - LANE 1 WIDTH | (WB-C) - | (WD-A) - |
| - LANE 2 WIDTH | (WB-A) - | (WD-C) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. | 8.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.50 M. | 5.80 M. |
| - WIDTH AT 15 M FROM JUNC. | 4.10 M. | 4.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.70 M. | 3.20 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 1 PCU | 2 VEHS |

.SLOPES AND INTERCPET

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

will be adjusted )

B-C Stream

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 615.66 | 0.23 | 0.09 |

D-A Stream

| Intercept For Stream D-A | Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|---|
| 627.24 | 0.23 | 0.09 |

B-A Stream

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream D-A | Slope For Opposing Stream D-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.21 | 0.21 |

| Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C |
|---|---|---|---|
| 0.08 | 0.13 | 0.30 | 0.11 |

D-C Stream

| Intercept For Stream D-C | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream B-C | Slope For Opposing Stream B-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.22 | 0.22 |

| Slope For Opposing Stream C-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream B-A |
|---|---|---|---|
| 0.09 | 0.14 | 0.32 | 0.11 |

C-B Stream

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

A-D Stream

| Intercept For Stream A-D | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|
| 660.83 | 0.24 | 0.35 |

B-D Stream From Left Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 |

| Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|
| 0.13 | 0.13 |

B-D Stream From Right Hand Lane

| Intercept For Stream B-D | Slope For Opposing Stream A-C | Slope For Opposing Stream A-D | Slope For Opposing Stream A-B | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 483.33 | 0.21 | 0.21 | 0.08 | 0.30 |

| Slope For Opposing Stream C-A | Slope For Opposing Stream C-D |
|---|---|
| 0.13 | 0.13 |

D-B Stream From Left Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream D-C | Slope For Opposing Stream A-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 |

| Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|
| 0.14 | 0.14 |

D-B Stream From Right Hand Lane

| Intercept For Stream D-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B | Slope For Opposing Stream C-D | Slope For Opposing Stream A-D |
|---|---|---|---|---|
| 510.47 | 0.22 | 0.22 | 0.09 | 0.32 |

| Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|
| 0.14 | 0.14 |

TRAFFIC DEMAND DATA

| ARM | FLOW SCALE(%) |
|---|---|
| A | 100 |
| B | 100 |
| C | 100 |
| D | 100 |

Demand set: Site 4. Lower Heyford Rd - Port Way 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 2.11 | 3.17 | 2.11 |
| ARM B | 15.00 | 45.00 | 75.00 | 4.63 | 6.94 | 4.63 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.06 | 3.09 | 2.06 |
| ARM D | 15.00 | 45.00 | 75.00 | 0.89 | 1.33 | 0.89 |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

| TIME | FROM/TO | ARM A | ARM B | ARM C | ARM D |
|---|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.000 | 0.994 | 0.006 |
| | | 0.0 | 0.0 | 168.0 | 1.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.314 | 0.000 | 0.422 | 0.265 |
| | | 116.0 | 0.0 | 156.0 | 98.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.758 | 0.061 | 0.000 | 0.182 |
| | | 125.0 | 10.0 | 0.0 | 30.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM D | 0.014 | 0.958 | 0.028 | 0.000 |
| | | 1.0 | 68.0 | 2.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-CD | 2.68 | 9.15 | 0.293 | | 0.00 | 0.41 | 5.8 | | 0.15 |
| B-AD | 1.96 | 8.27 | 0.237 | | 0.00 | 0.31 | 4.4 | | 0.16 |
| A-BCD | 0.01 | 10.49 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.44 | 10.09 | 0.044 | | 0.00 | 0.05 | 0.7 | | 0.10 |
| D-BC | 0.45 | 8.35 | 0.054 | | 0.00 | 0.06 | 0.8 | | 0.13 |
| C-ABD | 0.13 | 10.49 | 0.012 | | 0.00 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.092 | 0.003 | 0.008 | 0.002 | 0.008 |
| B-AD | 0.078 | 0.005 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.114 | 0.002 | | 0.009 | |
| D-AB | 0.084 | 0.004 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.084 | 0.004 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.114 | 0.002 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-CD | 3.23 | 8.77 | 0.368 | | 0.41 | 0.57 | 8.3 | | 0.18 |
| B-AD | 2.31 | 7.96 | 0.291 | | 0.31 | 0.40 | 5.9 | | 0.18 |
| A-BCD | 0.01 | 10.39 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.53 | 9.88 | 0.053 | | 0.05 | 0.06 | 0.8 | | 0.11 |
| D-BC | 0.54 | 8.19 | 0.066 | | 0.06 | 0.07 | 1.0 | | 0.13 |
| C-ABD | 0.15 | 10.39 | 0.014 | | 0.01 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.089 | 0.003 | 0.008 | 0.002 | 0.008 |
| B-AD | 0.077 | 0.005 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.113 | 0.003 | | 0.009 | |
| D-AB | 0.082 | 0.005 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.113 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-CD | 4.01 | 8.16 | 0.491 | | 0.57 | 0.94 | 13.3 | | 0.24 |
| B-AD | 2.78 | 7.37 | 0.377 | | 0.40 | 0.59 | 8.5 | | 0.22 |
| A-BCD | 0.02 | 10.25 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.65 | 9.60 | 0.067 | | 0.06 | 0.07 | 1.1 | | 0.11 |
| D-BC | 0.66 | 7.96 | 0.083 | | 0.07 | 0.09 | 1.3 | | 0.14 |
| C-ABD | 0.18 | 10.25 | 0.018 | | 0.01 | 0.02 | 0.3 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.086 | 0.004 | 0.009 | 0.002 | 0.007 |
| B-AD | 0.074 | 0.007 | 0.021 | 0.005 | 0.007 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.080 | 0.006 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.080 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.112 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-CD | 4.01 | 8.15 | 0.492 | | 0.94 | 0.95 | 14.2 | | 0.24 |
| B-AD | 2.78 | 7.36 | 0.378 | | 0.59 | 0.60 | 9.0 | | 0.22 |
| A-BCD | 0.02 | 10.25 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.65 | 9.60 | 0.067 | | 0.07 | 0.07 | 1.1 | | 0.11 |
| D-BC | 0.66 | 7.96 | 0.083 | | 0.09 | 0.09 | 1.3 | | 0.14 |
| C-ABD | 0.18 | 10.25 | 0.018 | | 0.02 | 0.02 | 0.3 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.086 | 0.004 | 0.009 | 0.002 | 0.007 |
| B-AD | 0.074 | 0.007 | 0.021 | 0.005 | 0.007 |
| C-ABD | 0.112 | 0.003 | | 0.009 | |
| D-AB | 0.080 | 0.006 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.080 | 0.006 | 0.021 | 0.005 | 0.007 |
| A-BCD | 0.112 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-CD | 3.23 | 8.75 | 0.369 | | 0.95 | 0.60 | 9.4 | | 0.18 |
| B-AD | 2.31 | 7.95 | 0.291 | | 0.60 | 0.42 | 6.5 | | 0.18 |
| A-BCD | 0.01 | 10.39 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.53 | 9.88 | 0.053 | | 0.07 | 0.06 | 0.9 | | 0.11 |
| D-BC | 0.54 | 8.19 | 0.066 | | 0.09 | 0.07 | 1.1 | | 0.13 |
| C-ABD | 0.15 | 10.39 | 0.014 | | 0.02 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.089 | 0.003 | 0.008 | 0.002 | 0.008 |
| B-AD | 0.077 | 0.005 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.113 | 0.003 | | 0.009 | |
| D-AB | 0.082 | 0.005 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.082 | 0.005 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.113 | 0.003 | | 0.009 | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-CD | 2.68 | 9.13 | 0.294 | | 0.60 | 0.42 | 6.5 | | 0.16 |
| B-AD | 1.96 | 8.26 | 0.237 | | 0.42 | 0.32 | 4.9 | | 0.16 |
| A-BCD | 0.01 | 10.49 | 0.001 | | 0.00 | 0.00 | 0.0 | | 0.10 |
| D-AB | 0.44 | 10.09 | 0.044 | | 0.06 | 0.05 | 0.7 | | 0.10 |
| D-BC | 0.45 | 8.35 | 0.054 | | 0.07 | 0.06 | 0.9 | | 0.13 |
| C-ABD | 0.13 | 10.49 | 0.012 | | 0.01 | 0.01 | 0.2 | | 0.10 |

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

| MARGINAL CHANGE: | LANE WIDTH (.1M) | MAJOR RD. WIDTH (.1M) | CENT RES WIDTH (.1M) | VIS TO LEFT (AHEAD FOR MAJOR) (M) | VISIBILITY TO RIGHT (M) |
|---|---|---|---|---|---|
| B-CD | 0.092 | 0.003 | 0.008 | 0.002 | 0.008 |
| B-AD | 0.078 | 0.005 | 0.021 | 0.005 | 0.008 |
| C-ABD | 0.114 | 0.002 | | 0.009 | |
| D-AB | 0.084 | 0.004 | 0.024 | 0.006 | 0.009 |
| D-BC | 0.084 | 0.004 | 0.021 | 0.005 | 0.008 |
| A-BCD | 0.114 | 0.002 | | 0.009 | |

QUEUE FOR STREAM B-CD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 0.4 | |
| 08.15 | 0.6 | * |
| 08.30 | 0.9 | * |
| 08.45 | 1.0 | * |
| 09.00 | 0.6 | * |
| 09.15 | 0.4 | |

QUEUE FOR STREAM B-AD

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 0.3 | |
| 08.15 | 0.4 | |
| 08.30 | 0.6 | * |
| 08.45 | 0.6 | * |
| 09.00 | 0.4 | |
| 09.15 | 0.3 | |

QUEUE FOR STREAM A-BCD

| 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 D-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.0 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.0 |

QUEUE FOR STREAM D-BC

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUE FOR STREAM C-ABD

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-CD | 297.6 | 198.4 | 57.5 | 0.19 | 57.5 | 0.19 |
| B-AD | 211.7 | 141.1 | 39.1 | 0.18 | 39.1 | 0.18 |
| A-BCD | 1.4 | 0.9 | 0.1 | 0.10 | 0.1 | 0.10 |
| D-AB | 48.4 | 32.3 | 5.2 | 0.11 | 5.2 | 0.11 |
| D-BC | 49.3 | 32.9 | 6.5 | 0.13 | 6.5 | 0.13 |
| C-ABD | 13.8 | 9.2 | 1.4 | 0.10 | 1.4 | 0.10 |
| ALL | 1066.7 | 711.2 | 109.7 | 0.10 | 109.7 | 0.10 |

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

END OF JOB

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

[Printed at 12:38:16 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



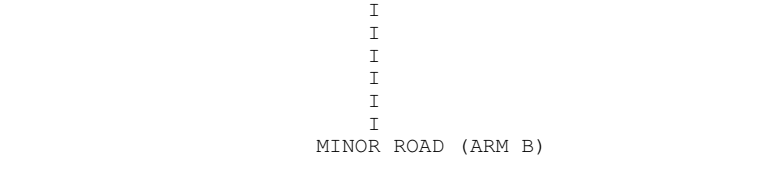
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 9. Ardley Rd - Unnamed Rd\2006 base\AM\Site 9. Ardley Rd - Unnamed Rd 2006 Base AM.vpi"
(drive-on-the-left ) at 09:37:24 on Wednesday, 11 July 2007

RUN INFORMATION

RUN TITLE: Site 9. Ardley Rd - Unnamed Rd 2006 Base AM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA




ARM A IS Ardley Rd (S)
ARM B IS Unnamed Rd (W)
ARM C IS Ardley Rd (N)

STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.80 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 3.40 M. |
| - VISIBILITY | (VC-B) 100.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 100.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 9.10 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.90 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.50 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 515.84 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 714.40 | 0.26 | 0.26 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 9. Ardley Rd - Camp Hill - Station Rd Existing AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 3.67 | 5.51 | 3.67 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.38 | 0.56 | 0.38 |
| ARM C | 15.00 | 45.00 | 75.00 | 7.34 | 11.01 | 7.34 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | | | | |
| | ARM A | 0.000 | 0.017 | 0.983 |
| | | 0.0 | 5.0 | 289.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.000 | 0.000 | 1.000 |
| | | 0.0 | 0.0 | 30.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.877 | 0.123 | 0.000 |
| | | 515.0 | 72.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.38 | 11.69 | 0.032 | | 0.00 | 0.03 | 0.5 | | 0.09 |
| B-A | 0.00 | 6.57 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 0.90 | 10.97 | 0.082 | | 0.00 | 0.09 | 1.3 | | 0.10 |
| A-B | 0.06 | | | | | | | | |
| A-C | 3.63 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.45 | 11.50 | 0.039 | | 0.03 | 0.04 | 0.6 | | 0.09 |
| B-A | 0.00 | 6.19 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.08 | 10.78 | 0.100 | | 0.09 | 0.11 | 1.7 | | 0.10 |
| A-B | 0.07 | | | | | | | | |
| A-C | 4.33 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.55 | 11.23 | 0.049 | | 0.04 | 0.05 | 0.8 | | 0.09 |
| B-A | 0.00 | 5.66 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.32 | 10.53 | 0.125 | | 0.11 | 0.14 | 2.1 | | 0.11 |
| A-B | 0.09 | | | | | | | | |
| A-C | 5.30 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.55 | 11.23 | 0.049 | | 0.05 | 0.05 | 0.8 | | 0.09 |
| B-A | 0.00 | 5.66 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.32 | 10.53 | 0.125 | | 0.14 | 0.14 | 2.2 | | 0.11 |
| A-B | 0.09 | | | | | | | | |
| A-C | 5.30 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.45 | 11.50 | 0.039 | | 0.05 | 0.04 | 0.6 | | 0.09 |
| B-A | 0.00 | 6.19 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.08 | 10.78 | 0.100 | | 0.14 | 0.11 | 1.7 | | 0.10 |
| A-B | 0.07 | | | | | | | | |
| A-C | 4.33 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.38 | 11.69 | 0.032 | | 0.04 | 0.03 | 0.5 | | 0.09 |
| B-A | 0.00 | 6.57 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 0.90 | 10.97 | 0.082 | | 0.11 | 0.09 | 1.4 | | 0.10 |
| A-B | 0.06 | | | | | | | | |
| A-C | 3.63 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.0 |
| 08.15 | 0.0 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.0 |
| 09.15 | 0.0 |

QUEUE FOR STREAM B-A

| 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 C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 41.3 | 27.5 | 3.7 | 0.09 | 3.7 | 0.09 |
| B-A | 0.0 | 0.0 | 0.0 | 0.00 | 0.0 | 0.00 |
| C-AB | 99.1 | 66.1 | 10.3 | 0.10 | 10.3 | 0.10 |
| A-B | 6.9 | 4.6 | | | | |
| A-C | 397.8 | 265.2 | | | | |
| ALL | 1253.9 | 835.9 | 14.1 | 0.01 | 14.1 | 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.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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

[Printed at 10:27:09 on 02/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
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EMAIL: SoftwareBureau@trl.co.uk



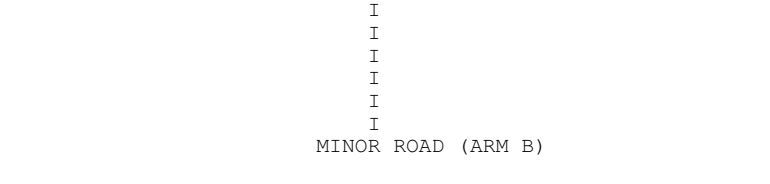
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 9. Ardley Rd - Unnamed Rd\2006 base\PM\Site 9. Ardley Rd - Unnamed Rd 2006 Base PM.vpi"
(drive-on-the-left ) at 09:42:55 on Wednesday, 11 July 2007

RUN INFORMATION

RUN TITLE: Site 9. Ardley Rd - Unnamed Rd 2006 Base PM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA




ARM A IS Ardley Rd (S)
ARM B IS Unnamed Rd (W)
ARM C IS Ardley Rd (N)

STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.80 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 3.40 M. |
| - VISIBILITY | (VC-B) 100.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 100.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 9.10 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.90 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.50 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 515.84 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 714.40 | 0.26 | 0.26 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 9. Ardley Rd - Camp Hill - Station Rd Existing PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 5.19 | 7.78 | 5.19 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.55 | 0.83 | 0.55 |
| ARM C | 15.00 | 45.00 | 75.00 | 3.67 | 5.51 | 3.67 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) | | |
|---|---|---|---|---|
| | | ARM A | ARM B | ARM C |
| 16.45 - 18.15 | ARM A | 0.000 | 0.000 | 1.000 |
| | | 0.0 | 0.0 | 415.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.023 | 0.000 | 0.977 |
| | | 1.0 | 0.0 | 43.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.932 | 0.068 | 0.000 |
| | | 274.0 | 20.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 0.54 | 11.24 | 0.048 | | 0.00 | 0.05 | 0.7 | | 0.09 |
| B-A | 0.01 | 7.56 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.13 |
| C-AB | 0.25 | 10.58 | 0.024 | | 0.00 | 0.02 | 0.4 | | 0.10 |
| A-B | 0.00 | | | | | | | | |
| A-C | 5.21 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 0.64 | 10.97 | 0.059 | | 0.05 | 0.06 | 0.9 | | 0.10 |
| B-A | 0.01 | 7.20 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.14 |
| C-AB | 0.30 | 10.32 | 0.029 | | 0.02 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.00 | | | | | | | | |
| A-C | 6.22 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 0.79 | 10.59 | 0.075 | | 0.06 | 0.08 | 1.2 | | 0.10 |
| B-A | 0.02 | 6.70 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.15 |
| C-AB | 0.37 | 9.96 | 0.037 | | 0.03 | 0.04 | 0.6 | | 0.10 |
| A-B | 0.00 | | | | | | | | |
| A-C | 7.62 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 0.79 | 10.59 | 0.075 | | 0.08 | 0.08 | 1.2 | | 0.10 |
| B-A | 0.02 | 6.70 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.15 |
| C-AB | 0.37 | 9.96 | 0.037 | | 0.04 | 0.04 | 0.6 | | 0.10 |
| A-B | 0.00 | | | | | | | | |
| A-C | 7.62 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 0.64 | 10.97 | 0.059 | | 0.08 | 0.06 | 1.0 | | 0.10 |
| B-A | 0.01 | 7.20 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.14 |
| C-AB | 0.30 | 10.32 | 0.029 | | 0.04 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.00 | | | | | | | | |
| A-C | 6.22 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 0.54 | 11.24 | 0.048 | | 0.06 | 0.05 | 0.8 | | 0.09 |
| B-A | 0.01 | 7.56 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.13 |
| C-AB | 0.25 | 10.58 | 0.024 | | 0.03 | 0.02 | 0.4 | | 0.10 |
| A-B | 0.00 | | | | | | | | |
| A-C | 5.21 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.1 |
| 17.15 | 0.1 |
| 17.30 | 0.1 |
| 17.45 | 0.1 |
| 18.00 | 0.1 |
| 18.15 | 0.1 |

QUEUE FOR STREAM B-A

| 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 C-AB

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 59.2 | 39.5 | 5.8 | 0.10 | 5.8 | 0.10 |
| B-A | 1.4 | 0.9 | 0.2 | 0.14 | 0.2 | 0.14 |
| C-AB | 27.5 | 18.4 | 2.8 | 0.10 | 2.8 | 0.10 |
| A-B | 0.0 | 0.0 | | | | |
| A-C | 571.2 | 380.8 | | | | |
| ALL | 1036.4 | 691.0 | 8.7 | 0.01 | 8.7 | 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.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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

[Printed at 10:27:53 on 02/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



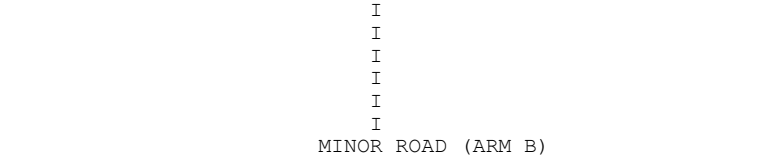
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 9. Ardley Rd - Unnamed Rd\2013 Base\AM\Site 9. Ardley Rd - Unnamed Rd 2013 Base AM.vpi"
(drive-on-the-left ) at 13:59:22 on Tuesday, 7 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 9. Ardley Rd - Unnamed Rd 2013 Base AM
LOCATION: Oxfordshire
DATE: 07/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Ardley Rd (S)
ARM B IS Unnamed Rd (W)
ARM C IS Ardley Rd (N)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 7.80 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 3.40 M. |
| - VISIBILITY | (VC-B) | 100.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 100.0 M. |
| - LANE 1 WIDTH | (WB-C) | - |
| - LANE 2 WIDTH | (WB-A) | - |
| - WIDTH AT 0 M FROM JUNC. | | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | | 9.10 M. |
| - WIDTH AT 10 M FROM JUNC. | | 4.90 M. |
| - WIDTH AT 15 M FROM JUNC. | | 3.00 M. |
| - WIDTH AT 20 M FROM JUNC. | | 2.50 M. |
| - LENGTH OF FLARED SECTION | | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 515.84 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 714.40 | 0.26 | 0.26 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 9. Ardley Rd - Camp Hill - Station Rd Existing AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 4.14 | 6.21 | 4.14 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.41 | 0.62 | 0.41 |
| ARM C | 15.00 | 45.00 | 75.00 | 8.26 | 12.39 | 8.26 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.018 | 0.982 |
| | | 0.0 | 6.0 | 325.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.000 | 0.000 | 1.000 |
| | | 0.0 | 0.0 | 33.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.877 | 0.123 | 0.000 |
| | | 580.0 | 81.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.41 | 11.57 | 0.036 | | 0.00 | 0.04 | 0.5 | | 0.09 |
| B-A | 0.00 | 6.32 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.02 | 10.85 | 0.094 | | 0.00 | 0.10 | 1.5 | | 0.10 |
| A-B | 0.08 | | | | | | | | |
| A-C | 4.08 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.49 | 11.35 | 0.044 | | 0.04 | 0.05 | 0.7 | | 0.09 |
| B-A | 0.00 | 5.90 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.21 | 10.64 | 0.114 | | 0.10 | 0.13 | 1.9 | | 0.11 |
| A-B | 0.09 | | | | | | | | |
| A-C | 4.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.61 | 11.05 | 0.055 | | 0.05 | 0.06 | 0.8 | | 0.10 |
| B-A | 0.00 | 5.30 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.49 | 10.36 | 0.144 | | 0.13 | 0.17 | 2.5 | | 0.11 |
| A-B | 0.11 | | | | | | | | |
| A-C | 5.96 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.61 | 11.05 | 0.055 | | 0.06 | 0.06 | 0.9 | | 0.10 |
| B-A | 0.00 | 5.30 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.49 | 10.36 | 0.144 | | 0.17 | 0.17 | 2.5 | | 0.11 |
| A-B | 0.11 | | | | | | | | |
| A-C | 5.96 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.49 | 11.35 | 0.044 | | 0.06 | 0.05 | 0.7 | | 0.09 |
| B-A | 0.00 | 5.89 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.21 | 10.64 | 0.114 | | 0.17 | 0.13 | 1.9 | | 0.11 |
| A-B | 0.09 | | | | | | | | |
| A-C | 4.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.41 | 11.57 | 0.036 | | 0.05 | 0.04 | 0.6 | | 0.09 |
| B-A | 0.00 | 6.32 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 1.02 | 10.85 | 0.094 | | 0.13 | 0.10 | 1.6 | | 0.10 |
| A-B | 0.08 | | | | | | | | |
| A-C | 4.08 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.0 |
| 08.15 | 0.0 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.0 |
| 09.15 | 0.0 |

QUEUE FOR STREAM B-A

| 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 C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.2 |
| 08.45 | 0.2 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 45.4 | 30.3 | 4.2 | 0.09 | 4.2 | 0.09 |
| B-A | 0.0 | 0.0 | 0.0 | 0.00 | 0.0 | 0.00 |
| C-AB | 111.5 | 74.3 | 12.0 | 0.11 | 12.0 | 0.11 |
| A-B | 8.3 | 5.5 | | | | |
| A-C | 447.3 | 298.2 | | | | |
| ALL | 1410.8 | 940.6 | 16.2 | 0.01 | 16.2 | 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.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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

[Printed at 14:02:26 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



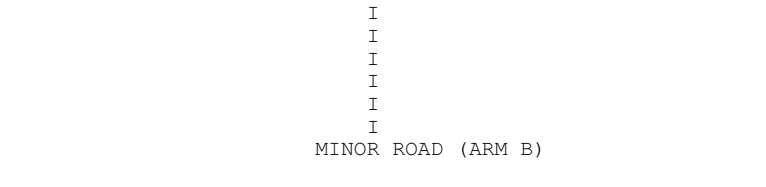
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 9. Ardley Rd - Unnamed Rd\2013 Base\PM\Site 9. Ardley Rd - Unnamed Rd 2013 Base PM.vpi"
(drive-on-the-left ) at 14:05:34 on Tuesday, 7 August 2007

## RUN INFORMATION

RUN TITLE: Site 9. Ardley Rd - Unnamed Rd 2013 Base PM
LOCATION: Oxfordshire
DATE: 07/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

### INPUT DATA




ARM A IS Ardley Rd (S)
ARM B IS Unnamed Rd (W)
ARM C IS Ardley Rd (N)

### STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 7.80 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 3.40 M. |
| - VISIBILITY | (VC-B) | 100.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 100.0 M. |
| - LANE 1 WIDTH | (WB-C) | - |
| - LANE 2 WIDTH | (WB-A) | - |
| - WIDTH AT 0 M FROM JUNC. | | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | | 9.10 M. |
| - WIDTH AT 10 M FROM JUNC. | | 4.90 M. |
| - WIDTH AT 15 M FROM JUNC. | | 3.00 M. |
| - WIDTH AT 20 M FROM JUNC. | | 2.50 M. |
| - LENGTH OF FLARED SECTION | | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 515.84 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 714.40 | 0.26 | 0.26 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 9. Ardley Rd - Camp Hill - Station Rd Existing AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 5.86 | 8.79 | 5.86 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.61 | 0.92 | 0.61 |
| ARM C | 15.00 | 45.00 | 75.00 | 4.15 | 6.23 | 4.15 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | | | | |
| | ARM A | 0.000 | 0.002 | 0.998 |
| | | 0.0 | 1.0 | 468.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.020 | 0.000 | 0.980 |
| | | 1.0 | 0.0 | 48.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.931 | 0.069 | 0.000 |
| | | 309.0 | 23.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.60 | 11.06 | 0.054 | | 0.00 | 0.06 | 0.8 | | 0.10 |
| B-A | 0.01 | 7.32 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.14 |
| C-AB | 0.29 | 10.41 | 0.028 | | 0.00 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.01 | | | | | | | | |
| A-C | 5.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.72 | 10.75 | 0.067 | | 0.06 | 0.07 | 1.0 | | 0.10 |
| B-A | 0.01 | 6.91 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.15 |
| C-AB | 0.34 | 10.11 | 0.034 | | 0.03 | 0.04 | 0.5 | | 0.10 |
| A-B | 0.01 | | | | | | | | |
| A-C | 7.01 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.88 | 10.32 | 0.085 | | 0.07 | 0.09 | 1.4 | | 0.11 |
| B-A | 0.02 | 6.35 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.16 |
| C-AB | 0.42 | 9.71 | 0.043 | | 0.04 | 0.05 | 0.7 | | 0.11 |
| A-B | 0.02 | | | | | | | | |
| A-C | 8.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.88 | 10.32 | 0.085 | | 0.09 | 0.09 | 1.4 | | 0.11 |
| B-A | 0.02 | 6.35 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.16 |
| C-AB | 0.42 | 9.71 | 0.043 | | 0.05 | 0.05 | 0.7 | | 0.11 |
| A-B | 0.02 | | | | | | | | |
| A-C | 8.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.72 | 10.75 | 0.067 | | 0.09 | 0.07 | 1.1 | | 0.10 |
| B-A | 0.01 | 6.91 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.15 |
| C-AB | 0.34 | 10.11 | 0.034 | | 0.05 | 0.04 | 0.5 | | 0.10 |
| A-B | 0.01 | | | | | | | | |
| A-C | 7.01 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.60 | 11.06 | 0.054 | | 0.07 | 0.06 | 0.9 | | 0.10 |
| B-A | 0.01 | 7.32 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.14 |
| C-AB | 0.29 | 10.41 | 0.028 | | 0.04 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.01 | | | | | | | | |
| A-C | 5.87 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUE FOR STREAM B-A

| 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 C-AB

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 66.1 | 44.0 | 6.6 | 0.10 | 6.6 | 0.10 |
| B-A | 1.4 | 0.9 | 0.2 | 0.15 | 0.2 | 0.15 |
| C-AB | 31.7 | 21.1 | 3.3 | 0.10 | 3.3 | 0.10 |
| A-B | 1.4 | 0.9 | | | | |
| A-C | 644.2 | 429.4 | | | | |
| ALL | 1170.0 | 780.0 | 10.1 | 0.01 | 10.1 | 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.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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

[Printed at 14:06:37 on 07/08/2007]

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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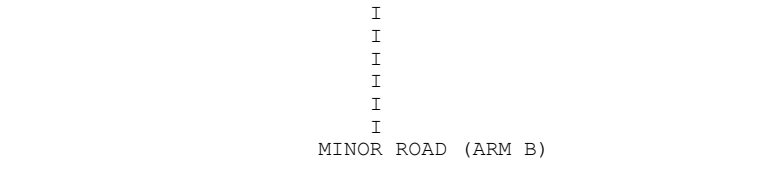
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 9. Ardley Rd - Unnamed Rd\2013 Base + Gen\AM\Site 9. Ardley Rd - Unnamed Rd 2013 Base + Gen AM.vpi"
(drive-on-the-left ) at 13:43:29 on Tuesday, 7 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 9. Ardley Rd - Unnamed Rd 2013 Base + Full Development AM
LOCATION: Oxfordshire
DATE: 07/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Ardley Rd (S)
ARM B IS Unnamed Rd (W)
ARM C IS Ardley Rd (N)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.80 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 3.40 M. |
| - VISIBILITY | (VC-B) 100.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 100.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 9.10 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.90 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.50 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 515.84 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 714.40 | 0.26 | 0.26 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 9. Ardley Rd - Camp Hill - Station Rd 2013 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 4.14 | 6.21 | 4.14 |
| ARM B | 15.00 | 45.00 | 75.00 | 3.66 | 5.49 | 3.66 |
| ARM C | 15.00 | 45.00 | 75.00 | 12.57 | 18.86 | 12.57 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | ARM A | 0.000 | 0.018 | 0.982 |
| | | 0.0 | 6.0 | 325.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.000 | 0.000 | 1.000 |
| | | 0.0 | 0.0 | 293.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.577 | 0.423 | 0.000 |
| | | 580.0 | 426.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 3.68 | 11.57 | 0.318 | | 0.00 | 0.46 | 6.6 | | 0.13 |
| B-A | 0.00 | 4.98 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 5.35 | 10.85 | 0.493 | | 0.00 | 0.96 | 14.0 | | 0.18 |
| A-B | 0.08 | | | | | | | | |
| A-C | 4.08 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 4.39 | 11.35 | 0.387 | | 0.46 | 0.62 | 9.0 | | 0.14 |
| B-A | 0.00 | 4.27 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 6.38 | 10.64 | 0.600 | | 0.96 | 1.49 | 22.2 | | 0.23 |
| A-B | 0.09 | | | | | | | | |
| A-C | 4.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 5.38 | 11.05 | 0.486 | | 0.62 | 0.93 | 13.3 | | 0.17 |
| B-A | 0.00 | 3.31 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 7.82 | 10.36 | 0.755 | | 1.49 | 3.22 | 45.3 | | 0.37 |
| A-B | 0.11 | | | | | | | | |
| A-C | 5.96 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 5.38 | 11.05 | 0.486 | | 0.93 | 0.94 | 14.0 | | 0.18 |
| B-A | 0.00 | 3.28 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 7.82 | 10.36 | 0.755 | | 3.22 | 3.41 | 52.8 | | 0.40 |
| A-B | 0.11 | | | | | | | | |
| A-C | 5.96 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 4.39 | 11.35 | 0.387 | | 0.94 | 0.64 | 10.0 | | 0.14 |
| B-A | 0.00 | 4.22 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 6.38 | 10.64 | 0.600 | | 3.41 | 1.62 | 25.3 | | 0.25 |
| A-B | 0.09 | | | | | | | | |
| A-C | 4.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 3.68 | 11.57 | 0.318 | | 0.64 | 0.47 | 7.3 | | 0.13 |
| B-A | 0.00 | 4.95 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 5.35 | 10.85 | 0.493 | | 1.62 | 1.00 | 15.3 | | 0.18 |
| A-B | 0.08 | | | | | | | | |
| A-C | 4.08 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.5 | |
| 17.15 | 0.6 | * |
| 17.30 | 0.9 | * |
| 17.45 | 0.9 | * |
| 18.00 | 0.6 | * |
| 18.15 | 0.5 | |

QUEUE FOR STREAM B-A

| 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 C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 1.0 | * |
| 17.15 | 1.5 | * |
| 17.30 | 3.2 | *** |
| 17.45 | 3.4 | *** |
| 18.00 | 1.6 | ** |
| 18.15 | 1.0 | * |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 403.3 | 268.9 | 60.2 | 0.15 | 60.2 | 0.15 |
| B-A | 0.0 | 0.0 | 0.0 | 0.00 | 0.0 | 0.00 |
| C-AB | 586.4 | 390.9 | 174.9 | 0.30 | 174.9 | 0.30 |
| A-B | 8.3 | 5.5 | | | | |
| A-C | 447.3 | 298.2 | | | | |
| ALL | 2243.6 | 1495.7 | 235.1 | 0.10 | 235.1 | 0.10 |

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

END OF JOB

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

[Printed at 13:45:09 on 07/08/2007]

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



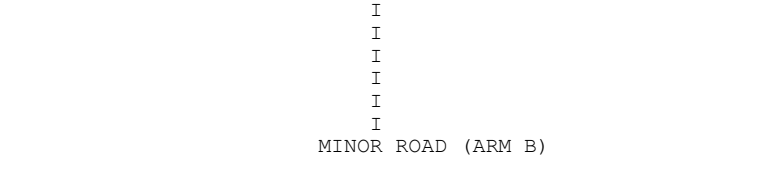
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 9. Ardley Rd - Unnamed Rd\2013 Base + Gen\PM\Site 9. Ardley Rd - Unnamed Rd 2013 Base + Gen PM.vpi"
(drive-on-the-left ) at 13:50:53 on Tuesday, 7 August 2007

RUN INFORMATION
***************

RUN TITLE: Site 9. Ardley Rd - Unnamed Rd 2013 Base + Full Development PM
LOCATION: Oxfordshire
DATE: 07/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
----------




ARM A IS Ardley Rd (S)
ARM B IS Unnamed Rd (W)
ARM C IS Ardley Rd (N)

STREAM LABELLING CONVENTION
---------------------------

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.80 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 3.40 M. |
| - VISIBILITY | (VC-B) 100.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 100.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 9.10 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.90 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.50 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 515.84 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 714.40 | 0.26 | 0.26 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 9. Ardley Rd - Camp Hill - Station Rd 2013 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 5.86 | 8.79 | 5.86 |
| ARM B | 15.00 | 45.00 | 75.00 | 4.94 | 7.41 | 4.94 |
| ARM C | 15.00 | 45.00 | 75.00 | 7.10 | 10.65 | 7.10 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | TURNING PROPORTIONS | | | |
| | TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) | | | |
| | ARM A | 0.000 | 0.002 | 0.998 |
| | | 0.0 | 1.0 | 468.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.003 | 0.000 | 0.997 |
| | | 1.0 | 0.0 | 394.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.544 | 0.456 | 0.000 |
| | | 309.0 | 259.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 4.94 | 11.08 | 0.446 | | 0.00 | 0.79 | 11.2 | | 0.16 |
| B-A | 0.01 | 5.73 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.17 |
| C-AB | 3.25 | 10.41 | 0.312 | | 0.00 | 0.45 | 6.6 | | 0.14 |
| A-B | 0.01 | | | | | | | | |
| A-C | 5.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 5.90 | 10.77 | 0.548 | | 0.79 | 1.18 | 16.8 | | 0.20 |
| B-A | 0.01 | 4.72 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.21 |
| C-AB | 3.88 | 10.11 | 0.384 | | 0.45 | 0.61 | 9.2 | | 0.16 |
| A-B | 0.01 | | | | | | | | |
| A-C | 7.01 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 7.23 | 10.34 | 0.699 | | 1.18 | 2.18 | 29.9 | | 0.31 |
| B-A | 0.02 | 3.14 | 0.006 | | 0.00 | 0.01 | 0.1 | | 0.32 |
| C-AB | 4.75 | 9.71 | 0.489 | | 0.61 | 0.94 | 14.0 | | 0.20 |
| A-B | 0.02 | | | | | | | | |
| A-C | 8.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 7.23 | 10.34 | 0.699 | | 2.18 | 2.25 | 33.4 | | 0.32 |
| B-A | 0.02 | 3.09 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.33 |
| C-AB | 4.75 | 9.71 | 0.489 | | 0.94 | 0.95 | 14.5 | | 0.20 |
| A-B | 0.02 | | | | | | | | |
| A-C | 8.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 5.90 | 10.77 | 0.548 | | 2.25 | 1.25 | 20.0 | | 0.21 |
| B-A | 0.01 | 4.66 | 0.003 | | 0.01 | 0.00 | 0.1 | | 0.22 |
| C-AB | 3.88 | 10.11 | 0.384 | | 0.95 | 0.63 | 9.6 | | 0.16 |
| A-B | 0.01 | | | | | | | | |
| A-C | 7.01 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 4.94 | 11.08 | 0.446 | | 1.25 | 0.82 | 12.9 | | 0.16 |
| B-A | 0.01 | 5.69 | 0.002 | | 0.00 | 0.00 | 0.0 | | 0.18 |
| C-AB | 3.25 | 10.41 | 0.312 | | 0.63 | 0.46 | 6.9 | | 0.14 |
| A-B | 0.01 | | | | | | | | |
| A-C | 5.87 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.8 | * |
| 17.15 | 1.2 | * |
| 17.30 | 2.2 | ** |
| 17.45 | 2.3 | ** |
| 18.00 | 1.2 | * |
| 18.15 | 0.8 | * |

QUEUE FOR STREAM B-A

| 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 C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.4 | |
| 17.15 | 0.6 | * |
| 17.30 | 0.9 | * |
| 17.45 | 1.0 | * |
| 18.00 | 0.6 | * |
| 18.15 | 0.5 | |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 542.3 | 361.5 | 124.1 | 0.23 | 124.2 | 0.23 |
| B-A | 1.4 | 0.9 | 0.3 | 0.24 | 0.3 | 0.24 |
| C-AB | 356.5 | 237.7 | 60.9 | 0.17 | 60.9 | 0.17 |
| A-B | 1.4 | 0.9 | | | | |
| A-C | 644.2 | 429.4 | | | | |
| ALL | 1971.0 | 1314.0 | 185.3 | 0.09 | 185.3 | 0.09 |

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

END OF JOB

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

[Printed at 13:55:05 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



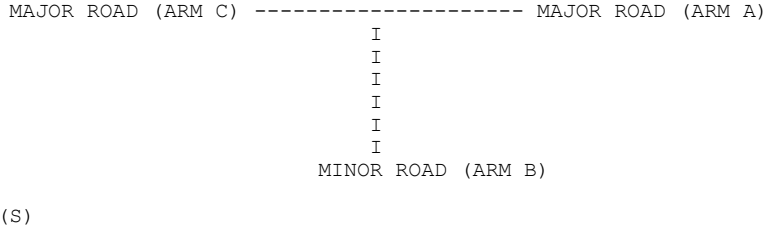
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 9. Ardley Rd - Unnamed Rd\Sensitivity Test\AM\
Site 9. Ardley Rd - Unnamed Rd 2013 Base + Full Development ST AM.vpi"
(drive-on-the-left ) at 11:04:56 on Friday, 3 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 9. Ardley Rd - Unnamed Rd 2013 Base + Full Development ST AM
LOCATION: Oxfordshire
DATE: 31/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Ardley Rd (S)
ARM B IS Unnamed Rd (W)
ARM C IS Ardley Rd (N)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.80 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 3.40 M. |
| - VISIBILITY | (VC-B) 100.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 100.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 9.10 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.90 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.50 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 515.84 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 714.40 | 0.26 | 0.26 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 9. Ardley Rd - Camp Hill - Station Rd 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 4.14 | 6.21 | 4.14 |
| ARM B | 15.00 | 45.00 | 75.00 | 5.11 | 7.67 | 5.11 |
| ARM C | 15.00 | 45.00 | 75.00 | 13.52 | 20.29 | 13.52 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.018 | 0.982 |
| | | 0.0 | 6.0 | 325.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.000 | 0.000 | 1.000 |
| | | 0.0 | 0.0 | 409.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.536 | 0.464 | 0.000 |
| | | 580.0 | 502.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 5.13 | 11.57 | 0.444 | | 0.00 | 0.78 | 11.1 | | 0.15 |
| B-A | 0.00 | 4.69 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 6.30 | 10.85 | 0.581 | | 0.00 | 1.37 | 19.8 | | 0.21 |
| A-B | 0.08 | | | | | | | | |
| A-C | 4.08 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 6.13 | 11.35 | 0.540 | | 0.78 | 1.14 | 16.4 | | 0.19 |
| B-A | 0.00 | 3.91 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 7.52 | 10.64 | 0.707 | | 1.37 | 2.45 | 35.5 | | 0.31 |
| A-B | 0.09 | | | | | | | | |
| A-C | 4.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 7.51 | 11.05 | 0.679 | | 1.14 | 2.01 | 27.8 | | 0.27 |
| B-A | 0.00 | 2.86 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 9.21 | 10.36 | 0.889 | | 2.45 | 7.69 | 99.5 | | 0.64 |
| A-B | 0.11 | | | | | | | | |
| A-C | 5.96 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 7.51 | 11.05 | 0.679 | | 2.01 | 2.06 | 30.6 | | 0.28 |
| B-A | 0.00 | 2.75 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 9.21 | 10.36 | 0.889 | | 7.69 | 9.22 | 145.0 | | 0.85 |
| A-B | 0.11 | | | | | | | | |
| A-C | 5.96 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 6.13 | 11.35 | 0.540 | | 2.06 | 1.20 | 19.2 | | 0.20 |
| B-A | 0.00 | 3.75 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 7.52 | 10.64 | 0.707 | | 9.22 | 2.89 | 56.2 | | 0.42 |
| A-B | 0.09 | | | | | | | | |
| A-C | 4.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 5.13 | 11.57 | 0.444 | | 1.20 | 0.81 | 12.7 | | 0.16 |
| B-A | 0.00 | 4.63 | 0.000 | | 0.00 | 0.00 | 0.0 | | 0.00 |
| C-AB | 6.30 | 10.85 | 0.581 | | 2.89 | 1.47 | 22.8 | | 0.23 |
| A-B | 0.08 | | | | | | | | |
| A-C | 4.08 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 0.8 | * |
| 08.15 | 1.1 | * |
| 08.30 | 2.0 | ** |
| 08.45 | 2.1 | ** |
| 09.00 | 1.2 | * |
| 09.15 | 0.8 | * |

QUEUE FOR STREAM B-A

| 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 C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 1.4 | * |
| 08.15 | 2.4 | ** |
| 08.30 | 7.7 | ******** |
| 08.45 | 9.2 | ********* |
| 09.00 | 2.9 | *** |
| 09.15 | 1.5 | * |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 563.0 | 375.3 | 117.7 | 0.21 | 117.7 | 0.21 |
| B-A | 0.0 | 0.0 | 0.0 | 0.00 | 0.0 | 0.00 |
| C-AB | 691.0 | 460.6 | 378.9 | 0.55 | 379.0 | 0.55 |
| A-B | 8.3 | 5.5 | | | | |
| A-C | 447.3 | 298.2 | | | | |
| ALL | 2507.8 | 1671.9 | 496.5 | 0.20 | 496.7 | 0.20 |

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

END OF JOB

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

[Printed at 14:11:32 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



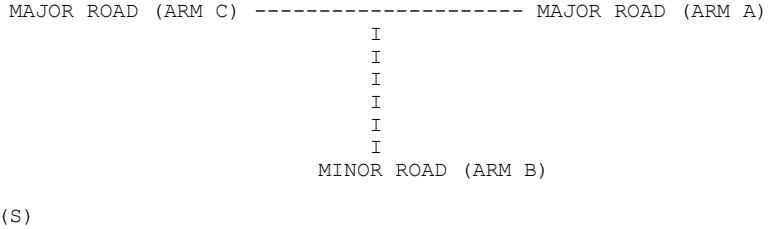
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 9. Ardley Rd - Unnamed Rd\Sensitivity Test\PM\
Site 9. Ardley Rd - Unnamed Rd 2013 Base + Full Development ST PM.vpi"
(drive-on-the-left ) at 11:05:45 on Friday, 3 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 9. Ardley Rd - Unnamed Rd 2013 Base + Full Development ST PM
LOCATION: Oxfordshire
DATE: 31/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Ardley Rd (S)
ARM B IS Unnamed Rd (W)
ARM C IS Ardley Rd (N)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.80 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 3.40 M. |
| - VISIBILITY | (VC-B) 100.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 100.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 9.10 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.90 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.00 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.50 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 515.84 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 714.40 | 0.26 | 0.26 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 9. Ardley Rd - Camp Hill - Station Rd 2013 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 5.86 | 8.79 | 5.86 |
| ARM B | 15.00 | 45.00 | 75.00 | 6.06 | 9.09 | 6.06 |
| ARM C | 15.00 | 45.00 | 75.00 | 8.34 | 12.51 | 8.34 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | ARM A | 0.000 | 0.002 | 0.998 |
| | | 0.0 | 1.0 | 468.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.002 | 0.000 | 0.998 |
| | | 1.0 | 0.0 | 484.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.463 | 0.537 | 0.000 |
| | | 309.0 | 358.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 6.07 | 11.08 | 0.548 | | 0.00 | 1.18 | 16.4 | | 0.19 |
| B-A | 0.01 | 4.90 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.20 |
| C-AB | 4.49 | 10.41 | 0.432 | | 0.00 | 0.75 | 11.0 | | 0.17 |
| A-B | 0.01 | | | | | | | | |
| A-C | 5.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 7.25 | 10.77 | 0.673 | | 1.18 | 1.96 | 27.2 | | 0.28 |
| B-A | 0.01 | 3.54 | 0.004 | | 0.00 | 0.00 | 0.1 | | 0.28 |
| C-AB | 5.36 | 10.11 | 0.530 | | 0.75 | 1.11 | 16.5 | | 0.21 |
| A-B | 0.01 | | | | | | | | |
| A-C | 7.01 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 8.88 | 10.34 | 0.859 | | 1.96 | 4.87 | 60.8 | | 0.55 |
| B-A | 0.02 | 1.43 | 0.013 | | 0.00 | 0.01 | 0.2 | | 0.71 |
| C-AB | 6.57 | 9.71 | 0.676 | | 1.11 | 2.06 | 30.0 | | 0.31 |
| A-B | 0.02 | | | | | | | | |
| A-C | 8.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 8.88 | 10.34 | 0.859 | | 4.87 | 5.35 | 77.3 | | 0.64 |
| B-A | 0.02 | 1.24 | 0.015 | | 0.01 | 0.01 | 0.2 | | 0.82 |
| C-AB | 6.57 | 9.71 | 0.676 | | 2.06 | 2.13 | 32.7 | | 0.32 |
| A-B | 0.02 | | | | | | | | |
| A-C | 8.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 7.25 | 10.77 | 0.673 | | 5.35 | 2.18 | 37.3 | | 0.32 |
| B-A | 0.01 | 3.33 | 0.005 | | 0.01 | 0.00 | 0.1 | | 0.30 |
| C-AB | 5.36 | 10.11 | 0.530 | | 2.13 | 1.17 | 18.0 | | 0.22 |
| A-B | 0.01 | | | | | | | | |
| A-C | 7.01 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 6.07 | 11.08 | 0.548 | | 2.18 | 1.25 | 19.9 | | 0.20 |
| B-A | 0.01 | 4.81 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.21 |
| C-AB | 4.49 | 10.41 | 0.432 | | 1.17 | 0.78 | 11.8 | | 0.17 |
| A-B | 0.01 | | | | | | | | |
| A-C | 5.87 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 1.2 | * |
| 17.15 | 2.0 | ** |
| 17.30 | 4.9 | ***** |
| 17.45 | 5.4 | ***** |
| 18.00 | 2.2 | ** |
| 18.15 | 1.2 | * |

QUEUE FOR STREAM B-A

| 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 C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.7 | * |
| 17.15 | 1.1 | * |
| 17.30 | 2.1 | ** |
| 17.45 | 2.1 | ** |
| 18.00 | 1.2 | * |
| 18.15 | 0.8 | * |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 666.2 | 444.1 | 238.9 | 0.36 | 239.0 | 0.36 |
| B-A | 1.4 | 0.9 | 0.6 | 0.43 | 0.6 | 0.43 |
| C-AB | 492.8 | 328.5 | 120.0 | 0.24 | 120.1 | 0.24 |
| A-B | 1.4 | 0.9 | | | | |
| A-C | 644.2 | 429.4 | | | | |
| ALL | 2231.2 | 1487.5 | 359.6 | 0.16 | 359.7 | 0.16 |

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

END OF JOB

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

[Printed at 14:13:17 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



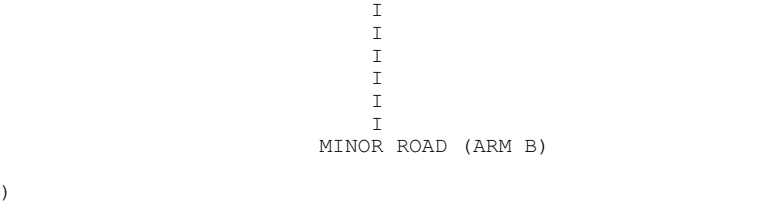
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 10. Camp Rd - B430 to Ardley\2006 Base\AM\Site 10. Camp Rd - Unnamed Rd 2006 Base AM.vpi"
(drive-on-the-left ) at 11:04:22 on Wednesday, 11 July 2007

RUN INFORMATION
**********

RUN TITLE: Site 10. Camp Road - Unnamed Rd towards B430 2006 Base AM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Rd (W)
ARM B IS Unnamed Rd (E) towards B430
ARM C IS Unnamed Rd (S) towards Middleton Stoney

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.10 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 130.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 120.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 145.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.30 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.40 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.40 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 657.93 | 0.25 | 0.10 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 543.76 | 0.25 | 0.10 | 0.16 | 0.36 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 649.25 | 0.25 | 0.25 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 10. Camp Road - B430 to Ardley Existing AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.61 | 0.92 | 0.61 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.59 | 0.88 | 0.59 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.32 | 0.49 | 0.32 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.469 | 0.531 |
| | | 0.0 | 23.0 | 26.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.617 | 0.000 | 0.383 |
| | | 29.0 | 0.0 | 18.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.692 | 0.308 | 0.000 |
| | | 18.0 | 8.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.23 | 12.46 | 0.018 | | 0.00 | 0.02 | 0.3 | | 0.08 |
| B-A | 0.36 | 10.96 | 0.033 | | 0.00 | 0.03 | 0.5 | | 0.09 |
| C-AB | 0.10 | 10.67 | 0.009 | | 0.00 | 0.01 | 0.1 | | 0.09 |
| A-B | 0.29 | | | | | | | | |
| A-C | 0.33 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.27 | 12.41 | 0.022 | | 0.02 | 0.02 | 0.3 | | 0.08 |
| B-A | 0.43 | 10.92 | 0.040 | | 0.03 | 0.04 | 0.6 | | 0.10 |
| C-AB | 0.12 | 10.64 | 0.011 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.34 | | | | | | | | |
| A-C | 0.39 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.33 | 12.35 | 0.027 | | 0.02 | 0.03 | 0.4 | | 0.08 |
| B-A | 0.53 | 10.86 | 0.049 | | 0.04 | 0.05 | 0.8 | | 0.10 |
| C-AB | 0.15 | 10.60 | 0.014 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.42 | | | | | | | | |
| A-C | 0.48 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.33 | 12.35 | 0.027 | | 0.03 | 0.03 | 0.4 | | 0.08 |
| B-A | 0.53 | 10.86 | 0.049 | | 0.05 | 0.05 | 0.8 | | 0.10 |
| C-AB | 0.15 | 10.60 | 0.014 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.42 | | | | | | | | |
| A-C | 0.48 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.27 | 12.41 | 0.022 | | 0.03 | 0.02 | 0.3 | | 0.08 |
| B-A | 0.43 | 10.92 | 0.040 | | 0.05 | 0.04 | 0.6 | | 0.10 |
| C-AB | 0.12 | 10.64 | 0.011 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.34 | | | | | | | | |
| A-C | 0.39 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.23 | 12.46 | 0.018 | | 0.02 | 0.02 | 0.3 | | 0.08 |
| B-A | 0.36 | 10.96 | 0.033 | | 0.04 | 0.03 | 0.5 | | 0.09 |
| C-AB | 0.10 | 10.67 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.09 |
| A-B | 0.29 | | | | | | | | |
| A-C | 0.33 | | | | | | | | |

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 | 0.0 |
| 08.15 | 0.0 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.0 |
| 09.15 | 0.0 |

QUEUE FOR STREAM C-AB

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 24.8 | 16.5 | 2.0 | 0.08 | 2.0 | 0.08 |
| B-A | 39.9 | 26.6 | 3.8 | 0.10 | 3.8 | 0.10 |
| C-AB | 11.0 | 7.3 | 1.0 | 0.10 | 1.0 | 0.10 |
| A-B | 31.7 | 21.1 | | | | |
| A-C | 35.8 | 23.9 | | | | |
| ALL | 167.9 | 111.9 | 6.9 | 0.04 | 6.9 | 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.

END OF JOB

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[Printed at 10:31:10 on 02/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 10. Camp Rd - B430 to Ardley\2006 Base\PM\Site 10. Camp Rd - Unnamed Rd 2006 Base PM.vpi"
(drive-on-the-left ) at 11:15:02 on Wednesday, 11 July 2007

RUN INFORMATION
**********

RUN TITLE: Site 10. Camp Road - Unnamed Rd towards B430 2006 Base PM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

.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 Camp Rd (W)
ARM B IS Unnamed Rd (E) towards B430
ARM C IS Unnamed Rd (S) towards Middleton Stoney

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | | MINOR ROAD B |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.10 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 130.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 120.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 145.0 M. |
| - LANE 1 WIDTH | (WB-C) | - |
| - LANE 2 WIDTH | (WB-A) | - |
| - WIDTH AT 0 M FROM JUNC. | | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | | 6.00 M. |
| - WIDTH AT 10 M FROM JUNC. | | 4.30 M. |
| - WIDTH AT 15 M FROM JUNC. | | 3.40 M. |
| - WIDTH AT 20 M FROM JUNC. | | 3.40 M. |
| - LENGTH OF FLARED SECTION | | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 657.93 | 0.25 | 0.10 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 543.76 | 0.25 | 0.10 | 0.16 | 0.36 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 649.25 | 0.25 | 0.25 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 10. Camp Road - B430 to Ardley Existing PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.64 | 0.96 | 0.64 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.22 | 0.34 | 0.22 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.43 | 0.64 | 0.43 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | | TURNING PROPORTIONS | | |
| | | TURNING COUNTS (VEH/HR) | | |
| | | (PERCENTAGE OF H.V.S) | | |
| | ARM A | 0.000 | 0.510 | 0.490 |
| | | 0.0 | 26.0 | 25.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.833 | 0.000 | 0.167 |
| | | 15.0 | 0.0 | 3.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.500 | 0.500 | 0.000 |
| | | 17.0 | 17.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 0.04 | 11.75 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.09 |
| B-A | 0.19 | 10.79 | 0.017 | | 0.00 | 0.02 | 0.3 | | 0.09 |
| C-AB | 0.21 | 10.66 | 0.020 | | 0.00 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.33 | | | | | | | | |
| A-C | 0.31 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 0.04 | 11.71 | 0.004 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| B-A | 0.22 | 10.73 | 0.021 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| C-AB | 0.25 | 10.63 | 0.024 | | 0.02 | 0.02 | 0.4 | | 0.10 |
| A-B | 0.39 | | | | | | | | |
| A-C | 0.37 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 0.06 | 11.67 | 0.005 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| B-A | 0.28 | 10.66 | 0.026 | | 0.02 | 0.03 | 0.4 | | 0.10 |
| C-AB | 0.31 | 10.59 | 0.029 | | 0.02 | 0.03 | 0.5 | | 0.10 |
| A-B | 0.48 | | | | | | | | |
| A-C | 0.46 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 0.06 | 11.67 | 0.005 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| B-A | 0.28 | 10.66 | 0.026 | | 0.03 | 0.03 | 0.4 | | 0.10 |
| C-AB | 0.31 | 10.59 | 0.029 | | 0.03 | 0.03 | 0.5 | | 0.10 |
| A-B | 0.48 | | | | | | | | |
| A-C | 0.46 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 0.04 | 11.71 | 0.004 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| B-A | 0.22 | 10.73 | 0.021 | | 0.03 | 0.02 | 0.3 | | 0.10 |
| C-AB | 0.25 | 10.63 | 0.024 | | 0.03 | 0.02 | 0.4 | | 0.10 |
| A-B | 0.39 | | | | | | | | |
| A-C | 0.37 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 0.04 | 11.75 | 0.003 | | 0.00 | 0.00 | 0.0 | | 0.09 |
| B-A | 0.19 | 10.79 | 0.017 | | 0.02 | 0.02 | 0.3 | | 0.09 |
| C-AB | 0.21 | 10.66 | 0.020 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.33 | | | | | | | | |
| A-C | 0.31 | | | | | | | | |

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 | 0.0 |
| 17.15 | 0.0 |
| 17.30 | 0.0 |
| 17.45 | 0.0 |
| 18.00 | 0.0 |
| 18.15 | 0.0 |

QUEUE FOR STREAM C-AB

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 4.1 | 2.8 | 0.4 | 0.09 | 0.4 | 0.09 |
| B-A | 20.6 | 13.8 | 2.0 | 0.09 | 2.0 | 0.09 |
| C-AB | 23.4 | 15.6 | 2.3 | 0.10 | 2.3 | 0.10 |
| A-B | 35.8 | 23.9 | | | | |
| A-C | 34.4 | 22.9 | | | | |
| ALL | 141.8 | 94.5 | 4.6 | 0.03 | 4.6 | 0.03 |

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

END OF JOB

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

[Printed at 10:31:38 on 02/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
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EMAIL: SoftwareBureau@trl.co.uk



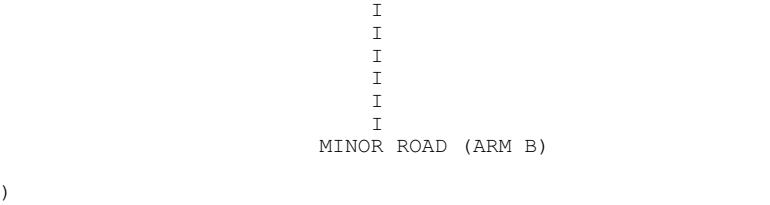
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 10. Camp Rd - B430 to Ardley\2013 Base\AM\Site 10. Camp Rd - Unnamed Rd 2013 Base AM.vpi"
(drive-on-the-left ) at 11:24:54 on Wednesday, 11 July 2007

RUN INFORMATION
**********

RUN TITLE: Site 10. Camp Road - Unnamed Rd towards B430 2013 Base AM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Rd (W)
ARM B IS Unnamed Rd (E) towards B430
ARM C IS Unnamed Rd (S) towards Middleton Stoney

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.10 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 130.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 120.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 145.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.30 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.40 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.40 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 657.93 | 0.25 | 0.10 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 543.76 | 0.25 | 0.10 | 0.16 | 0.36 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 649.25 | 0.25 | 0.25 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 10. Camp Road - B430 to Ardley 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.70 | 1.05 | 0.70 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.68 | 1.01 | 0.68 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.36 | 0.54 | 0.36 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | | | | |
| | ARM A | 0.000 | 0.464 | 0.536 |
| | | 0.0 | 26.0 | 30.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.611 | 0.000 | 0.389 |
| | | 33.0 | 0.0 | 21.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.690 | 0.310 | 0.000 |
| | | 20.0 | 9.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.26 | 12.45 | 0.021 | | 0.00 | 0.02 | 0.3 | | 0.08 |
| B-A | 0.41 | 10.91 | 0.038 | | 0.00 | 0.04 | 0.6 | | 0.10 |
| C-AB | 0.11 | 10.64 | 0.011 | | 0.00 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.33 | | | | | | | | |
| A-C | 0.38 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.31 | 12.39 | 0.025 | | 0.02 | 0.03 | 0.4 | | 0.08 |
| B-A | 0.49 | 10.86 | 0.046 | | 0.04 | 0.05 | 0.7 | | 0.10 |
| C-AB | 0.13 | 10.61 | 0.013 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.39 | | | | | | | | |
| A-C | 0.45 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.39 | 12.32 | 0.031 | | 0.03 | 0.03 | 0.5 | | 0.08 |
| B-A | 0.61 | 10.80 | 0.056 | | 0.05 | 0.06 | 0.9 | | 0.10 |
| C-AB | 0.17 | 10.56 | 0.016 | | 0.01 | 0.02 | 0.2 | | 0.10 |
| A-B | 0.48 | | | | | | | | |
| A-C | 0.55 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.39 | 12.32 | 0.031 | | 0.03 | 0.03 | 0.5 | | 0.08 |
| B-A | 0.61 | 10.80 | 0.056 | | 0.06 | 0.06 | 0.9 | | 0.10 |
| C-AB | 0.17 | 10.56 | 0.016 | | 0.02 | 0.02 | 0.2 | | 0.10 |
| A-B | 0.48 | | | | | | | | |
| A-C | 0.55 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.31 | 12.39 | 0.025 | | 0.03 | 0.03 | 0.4 | | 0.08 |
| B-A | 0.49 | 10.86 | 0.046 | | 0.06 | 0.05 | 0.7 | | 0.10 |
| C-AB | 0.13 | 10.61 | 0.013 | | 0.02 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.39 | | | | | | | | |
| A-C | 0.45 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.26 | 12.45 | 0.021 | | 0.03 | 0.02 | 0.3 | | 0.08 |
| B-A | 0.41 | 10.91 | 0.038 | | 0.05 | 0.04 | 0.6 | | 0.10 |
| C-AB | 0.11 | 10.64 | 0.011 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.33 | | | | | | | | |
| A-C | 0.38 | | | | | | | | |

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 | 0.0 |
| 08.15 | 0.0 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.0 |
| 09.15 | 0.0 |

QUEUE FOR STREAM C-AB

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 28.9 | 19.3 | 2.4 | 0.08 | 2.4 | 0.08 |
| B-A | 45.4 | 30.3 | 4.4 | 0.10 | 4.4 | 0.10 |
| C-AB | 12.4 | 8.3 | 1.2 | 0.10 | 1.2 | 0.10 |
| A-B | 35.8 | 23.9 | | | | |
| A-C | 41.3 | 27.5 | | | | |
| ALL | 191.3 | 127.5 | 7.9 | 0.04 | 7.9 | 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.

END OF JOB

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

[Printed at 10:33:30 on 02/08/2007]

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Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 10. Camp Rd - B430 to Ardley\2013 Base\PM\Site 10. Camp Rd - Unnamed Rd 2013 Base PM.vpi"
(drive-on-the-left ) at 11:29:13 on Wednesday, 11 July 2007

RUN INFORMATION
**********

RUN TITLE: Site 10. Camp Road - Unnamed Rd towards B430 2013 Base PM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

.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 Camp Rd (W)
ARM B IS Unnamed Rd (E) towards B430
ARM C IS Unnamed Rd (S) towards Middleton Stoney

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.10 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 130.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 120.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 145.0 M. |
| - LANE 1 WIDTH | (WB-C) | - |
| - LANE 2 WIDTH | (WB-A) | - |
| - WIDTH AT 0 M FROM JUNC. | | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | | 6.00 M. |
| - WIDTH AT 10 M FROM JUNC. | | 4.30 M. |
| - WIDTH AT 15 M FROM JUNC. | | 3.40 M. |
| - WIDTH AT 20 M FROM JUNC. | | 3.40 M. |
| - LENGTH OF FLARED SECTION | | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 657.93 | 0.25 | 0.10 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 543.76 | 0.25 | 0.10 | 0.16 | 0.36 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 649.25 | 0.25 | 0.25 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 10. Camp Road - B430 to Ardley 2013 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.73 | 1.09 | 0.73 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.26 | 0.39 | 0.26 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.49 | 0.73 | 0.49 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | ARM A | 0.000 | 0.517 | 0.483 |
| | | 0.0 | 30.0 | 28.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.810 | 0.000 | 0.190 |
| | | 17.0 | 0.0 | 4.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.487 | 0.513 | 0.000 |
| | | 19.0 | 20.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 0.05 | 11.81 | 0.004 | | 0.00 | 0.00 | 0.1 | | 0.09 |
| B-A | 0.21 | 10.72 | 0.020 | | 0.00 | 0.02 | 0.3 | | 0.10 |
| C-AB | 0.25 | 10.64 | 0.024 | | 0.00 | 0.02 | 0.4 | | 0.10 |
| A-B | 0.38 | | | | | | | | |
| A-C | 0.35 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 0.06 | 11.77 | 0.005 | | 0.00 | 0.01 | 0.1 | | 0.09 |
| B-A | 0.25 | 10.66 | 0.024 | | 0.02 | 0.02 | 0.4 | | 0.10 |
| C-AB | 0.30 | 10.60 | 0.028 | | 0.02 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.45 | | | | | | | | |
| A-C | 0.42 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 0.07 | 11.71 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.09 |
| B-A | 0.31 | 10.58 | 0.029 | | 0.02 | 0.03 | 0.4 | | 0.10 |
| C-AB | 0.37 | 10.55 | 0.035 | | 0.03 | 0.04 | 0.5 | | 0.10 |
| A-B | 0.55 | | | | | | | | |
| A-C | 0.51 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 0.07 | 11.71 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.09 |
| B-A | 0.31 | 10.58 | 0.029 | | 0.03 | 0.03 | 0.5 | | 0.10 |
| C-AB | 0.37 | 10.55 | 0.035 | | 0.04 | 0.04 | 0.5 | | 0.10 |
| A-B | 0.55 | | | | | | | | |
| A-C | 0.51 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 0.06 | 11.77 | 0.005 | | 0.01 | 0.01 | 0.1 | | 0.09 |
| B-A | 0.25 | 10.66 | 0.024 | | 0.03 | 0.02 | 0.4 | | 0.10 |
| C-AB | 0.30 | 10.60 | 0.028 | | 0.04 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.45 | | | | | | | | |
| A-C | 0.42 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 0.05 | 11.81 | 0.004 | | 0.01 | 0.00 | 0.1 | | 0.09 |
| B-A | 0.21 | 10.72 | 0.020 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| C-AB | 0.25 | 10.64 | 0.024 | | 0.03 | 0.02 | 0.4 | | 0.10 |
| A-B | 0.38 | | | | | | | | |
| A-C | 0.35 | | | | | | | | |

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 | 0.0 |
| 17.15 | 0.0 |
| 17.30 | 0.0 |
| 17.45 | 0.0 |
| 18.00 | 0.0 |
| 18.15 | 0.0 |

QUEUE FOR STREAM C-AB

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 5.5 | 3.7 | 0.5 | 0.09 | 0.5 | 0.09 |
| B-A | 23.4 | 15.6 | 2.2 | 0.10 | 2.2 | 0.10 |
| C-AB | 27.5 | 18.4 | 2.7 | 0.10 | 2.7 | 0.10 |
| A-B | 41.3 | 27.5 | | | | |
| A-C | 38.5 | 25.7 | | | | |
| ALL | 162.4 | 108.3 | 5.4 | 0.03 | 5.4 | 0.03 |

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

END OF JOB

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

[Printed at 10:33:57 on 02/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



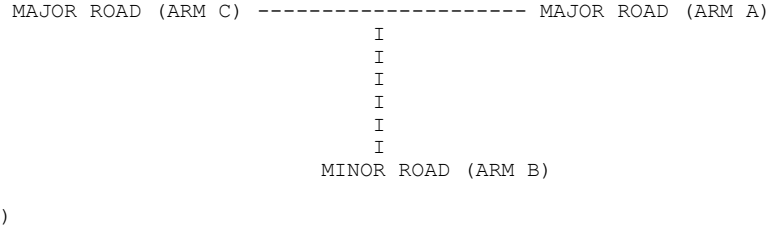
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 10. Camp Rd - B430 to Ardley\2013 Base + Gen\AM\
Site 10. Camp Rd - Unnamed Rd 2013 Base + Full Development AM.vpi"
(drive-on-the-left ) at 11:15:02 on Tuesday, 31 July 2007

RUN INFORMATION
***************

RUN TITLE: Site 10. Camp Road - Unnamed Rd towards B430 2013 Base + Full Development AM
LOCATION: Oxfordshire
DATE: 31/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
----------




ARM A IS Camp Rd (W)
ARM B IS Unnamed Rd (E) towards B430
ARM C IS Unnamed Rd (S) towards Middleton Stoney

STREAM LABELLING CONVENTION
---------------------------

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.10 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 130.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 120.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 145.0 M. |
| - LANE 1 WIDTH | (WB-C) | - |
| - LANE 2 WIDTH | (WB-A) | - |
| - WIDTH AT 0 M FROM JUNC. | | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | | 6.00 M. |
| - WIDTH AT 10 M FROM JUNC. | | 4.30 M. |
| - WIDTH AT 15 M FROM JUNC. | | 3.40 M. |
| - WIDTH AT 20 M FROM JUNC. | | 3.40 M. |
| - LENGTH OF FLARED SECTION | | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 657.93 | 0.25 | 0.10 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 543.76 | 0.25 | 0.10 | 0.16 | 0.36 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 649.25 | 0.25 | 0.25 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 10. Camp Road - B430 to Ardley 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 8.10 | 12.15 | 8.10 |
| ARM B | 15.00 | 45.00 | 75.00 | 4.97 | 7.46 | 4.97 |
| ARM C | 15.00 | 45.00 | 75.00 | 3.08 | 4.61 | 3.08 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | | TURNING PROPORTIONS<br>TURNING COUNTS (VEH/HR)<br>(PERCENTAGE OF H.V.S) | | |
| | ARM A | 0.000<br>0.0<br>( 0.0) | 0.440<br>285.0<br>( 0.0) | 0.560<br>363.0<br>( 0.0) |
| | ARM B | 0.947<br>377.0<br>( 0.0) | 0.000<br>0.0<br>( 0.0) | 0.053<br>21.0<br>( 0.0) |
| | ARM C | 0.963<br>237.0<br>( 0.0) | 0.037<br>9.0<br>( 0.0) | 0.000<br>0.0<br>( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.26 | 7.47 | 0.035 | | 0.00 | 0.04 | 0.5 | | 0.14 |
| B-A | 4.73 | 8.62 | 0.549 | | 0.00 | 1.17 | 16.1 | | 0.25 |
| C-AB | 0.11 | 8.78 | 0.013 | | 0.00 | 0.01 | 0.2 | | 0.12 |
| A-B | 3.58 | | | | | | | | |
| A-C | 4.55 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.31 | 5.49 | 0.057 | | 0.04 | 0.06 | 0.9 | | 0.19 |
| B-A | 5.65 | 8.14 | 0.694 | | 1.17 | 2.10 | 28.6 | | 0.38 |
| C-AB | 0.13 | 8.39 | 0.016 | | 0.01 | 0.02 | 0.2 | | 0.12 |
| A-B | 4.27 | | | | | | | | |
| A-C | 5.44 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.39 | 1.49 | 0.258 | | 0.06 | 0.32 | 4.2 | | 0.88 |
| B-A | 6.92 | 7.48 | 0.925 | | 2.10 | 6.68 | 76.2 | | 0.93 |
| C-AB | 0.17 | 7.84 | 0.021 | | 0.02 | 0.02 | 0.3 | | 0.13 |
| A-B | 5.23 | | | | | | | | |
| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.39 | 0.71 | 0.546 | | 0.32 | 0.89 | 10.6 | | 2.57 |
| B-A | 6.92 | 7.47 | 0.926 | | 6.68 | 8.14 | 112.4 | | 1.27 |
| C-AB | 0.17 | 7.84 | 0.021 | | 0.02 | 0.02 | 0.3 | | 0.13 |
| A-B | 5.23 | | | | | | | | |
| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.31 | 4.71 | 0.067 | | 0.89 | 0.07 | 1.3 | | 0.23 |
| B-A | 5.65 | 8.14 | 0.694 | | 8.14 | 2.47 | 49.4 | | 0.54 |
| C-AB | 0.13 | 8.39 | 0.016 | | 0.02 | 0.02 | 0.2 | | 0.12 |
| A-B | 4.27 | | | | | | | | |
| A-C | 5.44 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.26 | 7.28 | 0.036 | | 0.07 | 0.04 | 0.6 | | 0.14 |
| B-A | 4.73 | 8.62 | 0.549 | | 2.47 | 1.26 | 20.4 | | 0.27 |
| C-AB | 0.11 | 8.78 | 0.013 | | 0.02 | 0.01 | 0.2 | | 0.12 |
| A-B | 3.58 | | | | | | | | |
| A-C | 4.55 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 0.0 | |
| 08.15 | 0.1 | |
| 08.30 | 0.3 | |
| 08.45 | 0.9 | * |
| 09.00 | 0.1 | |
| 09.15 | 0.0 | |

QUEUE FOR STREAM B-A

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 1.2 | * |
| 08.15 | 2.1 | ** |
| 08.30 | 6.7 | ******* |
| 08.45 | 8.1 | ******** |
| 09.00 | 2.5 | ** |
| 09.15 | 1.3 | * |

QUEUE FOR STREAM C-AB

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 28.9 | 19.3 | 18.1 | 0.63 | 18.1 | 0.63 |
| B-A | 518.9 | 345.9 | 303.1 | 0.58 | 303.2 | 0.58 |
| C-AB | 12.4 | 8.3 | 1.5 | 0.12 | 1.5 | 0.12 |
| A-B | 392.3 | 261.5 | | | | |
| A-C | 499.6 | 333.1 | | | | |
| ALL | 1778.3 | 1185.6 | 322.8 | 0.18 | 322.9 | 0.18 |

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

END OF JOB

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

[Printed at 11:46:25 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



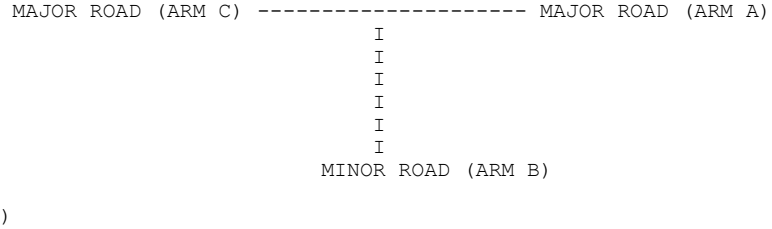
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 10. Camp Rd - B430 to Ardley\2013 Base + Gen\PM\
Site 10. Camp Rd - Unnamed Rd 2013 Base + Full Development PM.vpi"
(drive-on-the-left ) at 17:30:21 on Tuesday, 7 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 10. Camp Road - Unnamed Rd towards B430 2013 Base + Full Development PM
LOCATION: Oxfordshire
DATE: 07/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Rd (W)
ARM B IS Unnamed Rd (E) towards B430
ARM C IS Unnamed Rd (S) towards Middleton Stoney

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.10 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 130.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 120.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 145.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.30 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.40 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.40 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 657.93 | 0.25 | 0.10 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 543.76 | 0.25 | 0.10 | 0.16 | 0.36 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 649.25 | 0.25 | 0.25 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 10. Camp Road - B430 to Ardley 2013 Base + Gen PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 8.29 | 12.43 | 8.29 |
| ARM B | 15.00 | 45.00 | 75.00 | 3.22 | 4.84 | 3.22 |
| ARM C | 15.00 | 45.00 | 75.00 | 4.01 | 6.02 | 4.01 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.567 | 0.433 |
| | | 0.0 | 376.0 | 287.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.984 | 0.000 | 0.016 |
| | | 254.0 | 0.0 | 4.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.938 | 0.062 | 0.000 |
| | | 301.0 | 20.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.05 | 8.96 | 0.006 | | 0.00 | 0.01 | 0.1 | | 0.11 |
| B-A | 3.19 | 8.56 | 0.372 | | 0.00 | 0.58 | 8.2 | | 0.18 |
| C-AB | 0.25 | 8.74 | 0.029 | | 0.00 | 0.03 | 0.4 | | 0.12 |
| A-B | 4.72 | | | | | | | | |
| A-C | 3.60 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.06 | 7.97 | 0.008 | | 0.01 | 0.01 | 0.1 | | 0.13 |
| B-A | 3.81 | 8.08 | 0.471 | | 0.58 | 0.87 | 12.4 | | 0.23 |
| C-AB | 0.30 | 8.33 | 0.036 | | 0.03 | 0.04 | 0.6 | | 0.12 |
| A-B | 5.63 | | | | | | | | |
| A-C | 4.30 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.07 | 6.08 | 0.012 | | 0.01 | 0.01 | 0.2 | | 0.17 |
| B-A | 4.66 | 7.41 | 0.629 | | 0.87 | 1.60 | 22.0 | | 0.35 |
| C-AB | 0.37 | 7.77 | 0.047 | | 0.04 | 0.05 | 0.8 | | 0.14 |
| A-B | 6.90 | | | | | | | | |
| A-C | 5.27 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.07 | 6.01 | 0.012 | | 0.01 | 0.01 | 0.2 | | 0.17 |
| B-A | 4.66 | 7.41 | 0.629 | | 1.60 | 1.65 | 24.4 | | 0.36 |
| C-AB | 0.37 | 7.77 | 0.047 | | 0.05 | 0.05 | 0.8 | | 0.14 |
| A-B | 6.90 | | | | | | | | |
| A-C | 5.27 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.06 | 7.89 | 0.008 | | 0.01 | 0.01 | 0.1 | | 0.13 |
| B-A | 3.81 | 8.08 | 0.471 | | 1.65 | 0.92 | 14.6 | | 0.24 |
| C-AB | 0.30 | 8.33 | 0.036 | | 0.05 | 0.04 | 0.6 | | 0.12 |
| A-B | 5.63 | | | | | | | | |
| A-C | 4.30 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.05 | 8.92 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.11 |
| B-A | 3.19 | 8.56 | 0.372 | | 0.92 | 0.60 | 9.5 | | 0.19 |
| C-AB | 0.25 | 8.74 | 0.029 | | 0.04 | 0.03 | 0.5 | | 0.12 |
| A-B | 4.72 | | | | | | | | |
| A-C | 3.60 | | | | | | | | |

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 | 0.6 | * |
| 08.15 | 0.9 | * |
| 08.30 | 1.6 | ** |
| 08.45 | 1.6 | ** |
| 09.00 | 0.9 | * |
| 09.15 | 0.6 | * |

QUEUE FOR STREAM C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.0 |
| 08.15 | 0.0 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.0 |
| 09.15 | 0.0 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 5.5 | 3.7 | 0.8 | 0.14 | 0.8 | 0.14 |
| B-A | 349.6 | 233.1 | 91.2 | 0.26 | 91.2 | 0.26 |
| C-AB | 27.5 | 18.4 | 3.6 | 0.13 | 3.6 | 0.13 |
| A-B | 517.5 | 345.0 | | | | |
| A-C | 395.0 | 263.4 | | | | |
| ALL | 1709.5 | 1139.7 | 95.5 | 0.06 | 95.5 | 0.06 |

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

END OF JOB

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

[Printed at 17:31:48 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



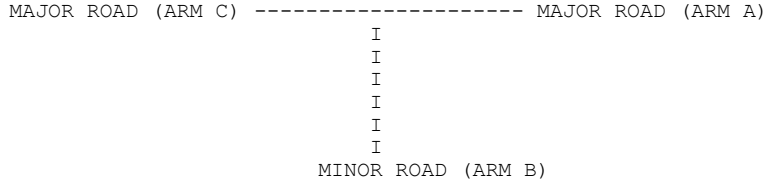
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 10. Camp Rd - B430 to Ardley\Sensitivity Test\AM\
Site 10. Camp Rd - Unnamed Rd 2013 Base + Full Development ST AM.vpi"
(drive-on-the-left ) at 11:07:34 on Friday, 3 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 10. Camp Road - Unnamed Rd towards B430 2013 Base + Full Development ST AM
LOCATION: Oxfordshire
DATE: 31/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Rd (W)
ARM B IS Unnamed Rd (E) towards B430
ARM C IS Unnamed Rd (S) towards Middleton Stoney

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.10 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 130.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 120.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 145.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.30 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.40 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.40 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 657.93 | 0.25 | 0.10 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 543.76 | 0.25 | 0.10 | 0.16 | 0.36 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 649.25 | 0.25 | 0.25 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 10. Camp Road - B430 to Ardley 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 8.11 | 12.17 | 8.11 |
| ARM B | 15.00 | 45.00 | 75.00 | 5.93 | 8.89 | 5.93 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.13 | 3.19 | 2.13 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.619 | 0.381 |
| | | 0.0 | 402.0 | 247.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.956 | 0.000 | 0.044 |
| | | 453.0 | 0.0 | 21.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.947 | 0.053 | 0.000 |
| | | 161.0 | 9.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.26 | 6.78 | 0.039 | | 0.00 | 0.04 | 0.6 | | 0.15 |
| B-A | 5.68 | 9.07 | 0.627 | | 0.00 | 1.60 | 21.6 | | 0.28 |
| C-AB | 0.11 | 8.78 | 0.013 | | 0.00 | 0.01 | 0.2 | | 0.12 |
| A-B | 5.04 | | | | | | | | |
| A-C | 3.10 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.31 | 4.28 | 0.074 | | 0.04 | 0.08 | 1.1 | | 0.25 |
| B-A | 6.79 | 8.68 | 0.782 | | 1.60 | 3.16 | 41.6 | | 0.48 |
| C-AB | 0.13 | 8.39 | 0.016 | | 0.01 | 0.02 | 0.2 | | 0.12 |
| A-B | 6.02 | | | | | | | | |
| A-C | 3.70 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.39 | 0.37 | 1.034 | | 0.08 | 2.05 | 18.9 | | 6.07 |
| B-A | 8.31 | 8.13 | 1.022 | | 3.16 | 12.73 | 130.0 | | 1.36 |
| C-AB | 0.17 | 7.84 | 0.021 | | 0.02 | 0.02 | 0.3 | | 0.13 |
| A-B | 7.38 | | | | | | | | |
| A-C | 4.53 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.39 | 0.46 | 0.832 | | 2.05 | 2.44 | 33.9 | | 6.12 |
| B-A | 8.31 | 8.12 | 1.023 | | 12.73 | 18.79 | 238.2 | | 2.26 |
| C-AB | 0.17 | 7.84 | 0.021 | | 0.02 | 0.02 | 0.3 | | 0.13 |
| A-B | 7.38 | | | | | | | | |
| A-C | 4.53 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.31 | 1.96 | 0.160 | | 2.44 | 0.20 | 5.6 | | 0.73 |
| B-A | 6.79 | 8.66 | 0.784 | | 18.79 | 4.45 | 140.1 | | 1.32 |
| C-AB | 0.13 | 8.39 | 0.016 | | 0.02 | 0.02 | 0.2 | | 0.12 |
| A-B | 6.02 | | | | | | | | |
| A-C | 3.70 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.26 | 6.37 | 0.041 | | 0.20 | 0.04 | 0.7 | | 0.16 |
| B-A | 5.68 | 9.06 | 0.627 | | 4.45 | 1.77 | 30.2 | | 0.33 |
| C-AB | 0.11 | 8.78 | 0.013 | | 0.02 | 0.01 | 0.2 | | 0.12 |
| A-B | 5.04 | | | | | | | | |
| A-C | 3.10 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 0.0 | |
| 08.15 | 0.1 | |
| 08.30 | 2.1 | ** |
| 08.45 | 2.4 | ** |
| 09.00 | 0.2 | |
| 09.15 | 0.0 | |

QUEUE FOR STREAM B-A

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 1.6 | ** |
| 08.15 | 3.2 | *** |
| 08.30 | 12.7 | ************ |
| 08.45 | 18.8 | ****************** |
| 09.00 | 4.5 | **** |
| 09.15 | 1.8 | ** |

QUEUE FOR STREAM C-AB

| 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 (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 28.9 | 19.3 | 60.7 | 2.10 | 60.7 | 2.10 |
| B-A | 623.5 | 415.7 | 601.6 | 0.96 | 601.8 | 0.97 |
| C-AB | 12.4 | 8.3 | 1.5 | 0.12 | 1.5 | 0.12 |
| A-B | 553.3 | 368.9 | | | | |
| A-C | 340.0 | 226.7 | | | | |
| ALL | 1779.7 | 1186.5 | 663.9 | 0.37 | 664.0 | 0.37 |

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

END OF JOB

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

[Printed at 17:17:46 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



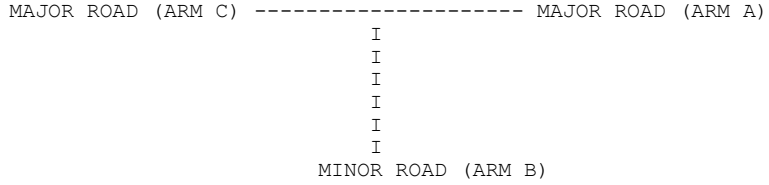
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 10. Camp Rd - B430 to Ardley\Sensitivity Test\PM\
Site 10. Camp Rd - Unnamed Rd 2013 Base + Full Development ST PM.vpi"
(drive-on-the-left ) at 11:03:53 on Friday, 3 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 10. Camp Road - Unnamed Rd towards B430 2013 Base + Full Development ST PM
LOCATION: Oxfordshire
DATE: 31/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Rd (W)
ARM B IS Unnamed Rd (E) towards B430
ARM C IS Unnamed Rd (S) towards Middleton Stoney

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.10 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 130.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 120.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 145.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 10.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 6.00 M. |
| - WIDTH AT 10 M FROM JUNC. | 4.30 M. |
| - WIDTH AT 15 M FROM JUNC. | 3.40 M. |
| - WIDTH AT 20 M FROM JUNC. | 3.40 M. |
| - LENGTH OF FLARED SECTION | 1 VEHS |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 657.93 | 0.25 | 0.10 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 543.76 | 0.25 | 0.10 | 0.16 | 0.36 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 649.25 | 0.25 | 0.25 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 10. Camp Road - B430 to Ardley 2013 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 8.27 | 12.41 | 8.27 |
| ARM B | 15.00 | 45.00 | 75.00 | 4.45 | 6.67 | 4.45 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.79 | 4.18 | 2.79 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | ARM A | 0.000 | 0.704 | 0.296 |
| | | 0.0 | 466.0 | 196.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.989 | 0.000 | 0.011 |
| | | 352.0 | 0.0 | 4.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.910 | 0.090 | 0.000 |
| | | 203.0 | 20.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 0.05 | 8.22 | 0.006 | | 0.00 | 0.01 | 0.1 | | 0.12 |
| B-A | 4.42 | 9.01 | 0.490 | | 0.00 | 0.94 | 13.1 | | 0.21 |
| C-AB | 0.25 | 8.74 | 0.029 | | 0.00 | 0.03 | 0.4 | | 0.12 |
| A-B | 5.85 | | | | | | | | |
| A-C | 2.46 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 0.06 | 6.68 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.15 |
| B-A | 5.27 | 8.61 | 0.613 | | 0.94 | 1.51 | 21.1 | | 0.29 |
| C-AB | 0.30 | 8.34 | 0.036 | | 0.03 | 0.04 | 0.6 | | 0.12 |
| A-B | 6.98 | | | | | | | | |
| A-C | 2.94 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 0.07 | 3.72 | 0.020 | | 0.01 | 0.02 | 0.3 | | 0.27 |
| B-A | 6.46 | 8.06 | 0.801 | | 1.51 | 3.44 | 44.1 | | 0.54 |
| C-AB | 0.37 | 7.78 | 0.047 | | 0.04 | 0.05 | 0.8 | | 0.13 |
| A-B | 8.55 | | | | | | | | |
| A-C | 3.60 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 0.07 | 3.44 | 0.021 | | 0.02 | 0.02 | 0.3 | | 0.30 |
| B-A | 6.46 | 8.06 | 0.802 | | 3.44 | 3.69 | 53.8 | | 0.60 |
| C-AB | 0.37 | 7.78 | 0.047 | | 0.05 | 0.05 | 0.8 | | 0.13 |
| A-B | 8.55 | | | | | | | | |
| A-C | 3.60 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 0.06 | 6.42 | 0.009 | | 0.02 | 0.01 | 0.1 | | 0.16 |
| B-A | 5.27 | 8.61 | 0.613 | | 3.69 | 1.66 | 27.7 | | 0.32 |
| C-AB | 0.30 | 8.34 | 0.036 | | 0.05 | 0.04 | 0.6 | | 0.12 |
| A-B | 6.98 | | | | | | | | |
| A-C | 2.94 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 0.05 | 8.11 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| B-A | 4.42 | 9.01 | 0.490 | | 1.66 | 0.99 | 15.7 | | 0.22 |
| C-AB | 0.25 | 8.74 | 0.029 | | 0.04 | 0.03 | 0.4 | | 0.12 |
| A-B | 5.85 | | | | | | | | |
| A-C | 2.46 | | | | | | | | |

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 | 0.9 | * |
| 17.15 | 1.5 | ** |
| 17.30 | 3.4 | *** |
| 17.45 | 3.7 | **** |
| 18.00 | 1.7 | ** |
| 18.15 | 1.0 | * |

QUEUE FOR STREAM C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.0 |
| 17.15 | 0.0 |
| 17.30 | 0.1 |
| 17.45 | 0.1 |
| 18.00 | 0.0 |
| 18.15 | 0.0 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 5.5 | 3.7 | 1.1 | 0.19 | 1.1 | 0.19 |
| B-A | 484.5 | 323.0 | 175.5 | 0.36 | 175.5 | 0.36 |
| C-AB | 27.5 | 18.4 | 3.5 | 0.13 | 3.5 | 0.13 |
| A-B | 641.4 | 427.6 | | | | |
| A-C | 269.8 | 179.9 | | | | |
| ALL | 1708.1 | 1138.8 | 180.1 | 0.11 | 180.1 | 0.11 |

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

END OF JOB

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

[Printed at 17:19:31 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



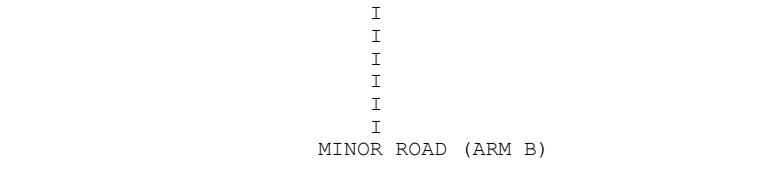
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 11. Camp Rd - Kirtlington Rd\2006 base\AM\Site 11.Camp Rd - Kirtlington Rd 2006 Base AM.vpi"
(drive-on-the-left ) at 10:03:33 on Wednesday, 8 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 11. Camp Rd - Kirtlington Rd 2006 Base AM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Road (E)
ARM B IS Kirtlington Rd
ARM C IS Camp Road (W)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | | MINOR ROAD B |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 95.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 21.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 16.0 M. |
| - LANE 1 WIDTH | (WB-C) | 2.50 M. |
| - LANE 2 WIDTH | (WB-A) | 0.00 M. |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 602.27 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 467.65 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 628.98 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 11. Camp Rd - Kirtlington Rd 2006 base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.70 | 1.05 | 0.70 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.04 | 0.06 | 0.04 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.69 | 1.03 | 0.69 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | | TURNING PROPORTIONS | | |
| | | TURNING COUNTS (VEH/HR) | | |
| | | (PERCENTAGE OF H.V.S) | | |
| | ARM A | 0.000 | 0.143 | 0.857 |
| | | 0.0 | 8.0 | 48.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.333 | 0.000 | 0.667 |
| | | 1.0 | 0.0 | 2.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.727 | 0.273 | 0.000 |
| | | 40.0 | 15.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-AC | 0.04 | 8.95 | 0.004 | | 0.00 | 0.00 | 0.1 | | 0.11 |
| C-AB | 0.19 | 10.31 | 0.018 | | 0.00 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.10 | | | | | | | | |
| A-C | 0.60 | | | | | | | | |
| 08.00-08.15 | | | | | | | | | |
| B-AC | 0.04 | 8.91 | 0.005 | | 0.00 | 0.01 | 0.1 | | 0.11 |
| C-AB | 0.22 | 10.28 | 0.022 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.12 | | | | | | | | |
| A-C | 0.72 | | | | | | | | |
| 08.15-08.30 | | | | | | | | | |
| B-AC | 0.06 | 8.86 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.11 |
| C-AB | 0.28 | 10.23 | 0.027 | | 0.02 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.15 | | | | | | | | |
| A-C | 0.88 | | | | | | | | |
| 08.30-08.45 | | | | | | | | | |
| B-AC | 0.06 | 8.86 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.11 |
| C-AB | 0.28 | 10.23 | 0.027 | | 0.03 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.15 | | | | | | | | |
| A-C | 0.88 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-AC | 0.04 | 8.91 | 0.005 | | 0.01 | 0.01 | 0.1 | | 0.11 |
| C-AB | 0.22 | 10.28 | 0.022 | | 0.03 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.12 | | | | | | | | |
| A-C | 0.72 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-AC | 0.04 | 8.95 | 0.004 | | 0.01 | 0.00 | 0.1 | | 0.11 |
| C-AB | 0.19 | 10.31 | 0.018 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.10 | | | | | | | | |
| A-C | 0.60 | | | | | | | | |

QUEUE FOR STREAM B-AC

| 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 C-AB

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-AC | 4.1 | 2.8 | 0.5 | 0.11 | 0.5 | 0.11 |
| C-AB | 20.6 | 13.8 | 2.1 | 0.10 | 2.1 | 0.10 |
| A-B | 11.0 | 7.3 | | | | |
| A-C | 66.1 | 44.0 | | | | |
| ALL | 156.9 | 104.6 | 2.5 | 0.02 | 2.5 | 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.

END OF JOB

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

[Printed at 10:07:17 on 08/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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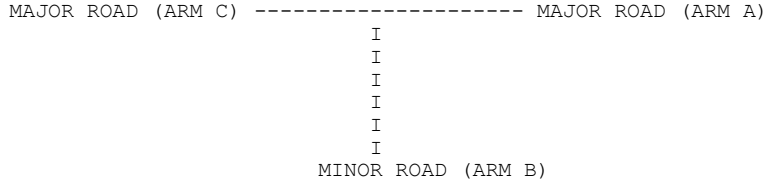
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 11. Camp Rd - Kirtlington Rd\2006 base\PM\Site 11.Camp Rd - Kirtlington Rd 2006 Base PM.vpi"
(drive-on-the-left ) at 10:11:07 on Wednesday, 8 August 2007

## RUN INFORMATION

RUN TITLE: Site 11. Camp Rd - Kirtlington Rd 2006 Base PM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

## .MAJOR/MINOR JUNCTION CAPACITY AND DELAY

### INPUT DATA




ARM A IS Camp Road (E)
ARM B IS Kirtlington Rd
ARM C IS Camp Road (W)

### STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | | MINOR ROAD B |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 95.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 21.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 16.0 M. |
| - LANE 1 WIDTH | (WB-C) | 2.50 M. |
| - LANE 2 WIDTH | (WB-A) | 0.00 M. |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 602.27 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 467.65 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 628.98 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 11. Camp Rd - Kirtlington Rd 2006 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.29 | 0.43 | 0.29 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.74 | 1.11 | 0.74 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.59 | 0.88 | 0.59 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | | | | |
| | ARM A | 0.000 | 0.130 | 0.870 |
| | | 0.0 | 3.0 | 20.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.220 | 0.000 | 0.780 |
| | | 13.0 | 0.0 | 46.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.894 | 0.106 | 0.000 |
| | | 42.0 | 5.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-AC | 0.74 | 9.35 | 0.079 | | 0.00 | 0.09 | 1.2 | | 0.12 |
| C-AB | 0.06 | 10.41 | 0.006 | | 0.00 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.04 | | | | | | | | |
| A-C | 0.25 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-AC | 0.88 | 9.33 | 0.095 | | 0.09 | 0.10 | 1.5 | | 0.12 |
| C-AB | 0.07 | 10.40 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.04 | | | | | | | | |
| A-C | 0.30 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-AC | 1.08 | 9.31 | 0.116 | | 0.10 | 0.13 | 1.9 | | 0.12 |
| C-AB | 0.09 | 10.38 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.06 | | | | | | | | |
| A-C | 0.37 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-AC | 1.08 | 9.31 | 0.116 | | 0.13 | 0.13 | 2.0 | | 0.12 |
| C-AB | 0.09 | 10.38 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.06 | | | | | | | | |
| A-C | 0.37 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-AC | 0.88 | 9.33 | 0.095 | | 0.13 | 0.11 | 1.6 | | 0.12 |
| C-AB | 0.07 | 10.40 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.04 | | | | | | | | |
| A-C | 0.30 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-AC | 0.74 | 9.35 | 0.079 | | 0.11 | 0.09 | 1.3 | | 0.12 |
| C-AB | 0.06 | 10.41 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.04 | | | | | | | | |
| A-C | 0.25 | | | | | | | | |

QUEUE FOR STREAM B-AC

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.1 |
| 17.15 | 0.1 |
| 17.30 | 0.1 |
| 17.45 | 0.1 |
| 18.00 | 0.1 |
| 18.15 | 0.1 |

QUEUE FOR STREAM C-AB

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-AC | 81.2 | 54.1 | 9.6 | 0.12 | 9.6 | 0.12 |
| C-AB | 6.9 | 4.6 | 0.7 | 0.10 | 0.7 | 0.10 |
| A-B | 4.1 | 2.8 | | | | |
| A-C | 27.5 | 18.4 | | | | |
| ALL | 177.6 | 118.4 | 10.3 | 0.06 | 10.3 | 0.06 |

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

END OF JOB

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

[Printed at 10:11:52 on 08/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



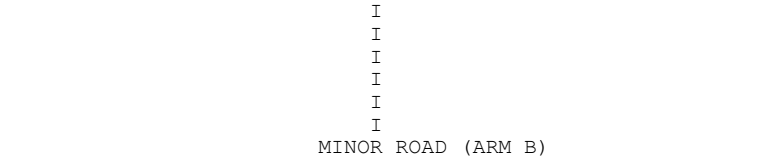
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 11. Camp Rd - Kirtlington Rd\2013 Base\AM\Site 11.Camp Rd - Kirtlington Rd 2013 Base AM.vpi"
(drive-on-the-left ) at 10:16:49 on Wednesday, 8 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 11. Camp Rd - Kirtlington Rd 2013 Base AM
LOCATION: Oxfordshire
DATE: 13/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian.Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Road (E)
ARM B IS Kirtlington Rd
ARM C IS Camp Road (W)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | | MINOR ROAD B |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 95.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 21.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 16.0 M. |
| - LANE 1 WIDTH | (WB-C) | 2.50 M. |
| - LANE 2 WIDTH | (WB-A) | 0.00 M. |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 602.27 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 467.65 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 628.98 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 11. Camp Rd - Kirtlington Rd 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.77 | 1.16 | 0.77 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.05 | 0.08 | 0.05 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.77 | 1.16 | 0.77 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | | | | |
| | ARM A | 0.000 | 0.129 | 0.871 |
| | | 0.0 | 8.0 | 54.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.500 | 0.000 | 0.500 |
| | | 2.0 | 0.0 | 2.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.726 | 0.274 | 0.000 |
| | | 45.0 | 17.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-AC | 0.05 | 8.52 | 0.006 | | 0.00 | 0.01 | 0.1 | | 0.12 |
| C-AB | 0.21 | 10.29 | 0.021 | | 0.00 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.10 | | | | | | | | |
| A-C | 0.68 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-AC | 0.06 | 8.47 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-AB | 0.25 | 10.26 | 0.025 | | 0.02 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.12 | | | | | | | | |
| A-C | 0.81 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-AC | 0.07 | 8.40 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-AB | 0.31 | 10.21 | 0.031 | | 0.03 | 0.03 | 0.5 | | 0.10 |
| A-B | 0.15 | | | | | | | | |
| A-C | 0.99 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-AC | 0.07 | 8.40 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-AB | 0.31 | 10.21 | 0.031 | | 0.03 | 0.03 | 0.5 | | 0.10 |
| A-B | 0.15 | | | | | | | | |
| A-C | 0.99 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-AC | 0.06 | 8.47 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-AB | 0.25 | 10.26 | 0.025 | | 0.03 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.12 | | | | | | | | |
| A-C | 0.81 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-AC | 0.05 | 8.52 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.12 |
| C-AB | 0.21 | 10.29 | 0.021 | | 0.03 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.10 | | | | | | | | |
| A-C | 0.68 | | | | | | | | |

QUEUE FOR STREAM B-AC

| 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 C-AB

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-AC | 5.5 | 3.7 | 0.7 | 0.12 | 0.7 | 0.12 |
| C-AB | 23.4 | 15.6 | 2.3 | 0.10 | 2.3 | 0.10 |
| A-B | 11.0 | 7.3 | | | | |
| A-C | 74.3 | 49.6 | | | | |
| ALL | 176.2 | 117.5 | 3.0 | 0.02 | 3.0 | 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.

END OF JOB

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

[Printed at 10:17:36 on 08/08/2007]

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

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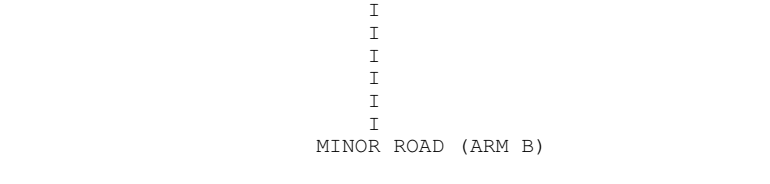
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 11. Camp Rd - Kirtlington Rd\2013 Base\PM\Site 11.Camp Rd - Kirtlington Rd 2013 Base PM.vpi"
(drive-on-the-left ) at 10:23:04 on Wednesday, 8 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 11. Camp Rd - Kirtlington Rd 2013 Base PM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Road (E)
ARM B IS Kirtlington Rd
ARM C IS Camp Road (W)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | | MINOR ROAD B | |
|---|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.00 M. | |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. | |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. | |
| - VISIBILITY | (VC-B) | 95.0 M. | |
| - BLOCKS TRAFFIC | | YES | |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 21.0 M. | |
| - VISIBILITY TO RIGHT | (VB-A) | 16.0 M. | |
| - LANE 1 WIDTH | (WB-C) | 2.50 M. | |
| - LANE 2 WIDTH | (WB-A) | 0.00 M. | |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 602.27 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 467.65 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 628.98 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 11. Camp Rd - Kirtlington Rd 2013 Base PM

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 FLOW STARTS TO RISE | TOP OF PEAK IS REACHED | FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | AT TOP OF PEAK | AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.31 | 0.47 | 0.31 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.82 | 1.24 | 0.82 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.66 | 0.99 | 0.66 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | | TURNING PROPORTIONS | | |
| | | TURNING COUNTS (VEH/HR) | | |
| | | (PERCENTAGE OF H.V.S) | | |
| | ARM A | 0.000 | 0.120 | 0.880 |
| | | 0.0 | 3.0 | 22.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.227 | 0.000 | 0.773 |
| | | 15.0 | 0.0 | 51.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.906 | 0.094 | 0.000 |
| | | 48.0 | 5.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-AC | 0.83 | 9.32 | 0.089 | | 0.00 | 0.10 | 1.4 | | 0.12 |
| C-AB | 0.06 | 10.41 | 0.006 | | 0.00 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.04 | | | | | | | | |
| A-C | 0.28 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-AC | 0.99 | 9.30 | 0.106 | | 0.10 | 0.12 | 1.7 | | 0.12 |
| C-AB | 0.07 | 10.39 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.04 | | | | | | | | |
| A-C | 0.33 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-AC | 1.21 | 9.27 | 0.131 | | 0.12 | 0.15 | 2.2 | | 0.12 |
| C-AB | 0.09 | 10.37 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.06 | | | | | | | | |
| A-C | 0.40 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-AC | 1.21 | 9.27 | 0.131 | | 0.15 | 0.15 | 2.2 | | 0.12 |
| C-AB | 0.09 | 10.37 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.06 | | | | | | | | |
| A-C | 0.40 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-AC | 0.99 | 9.30 | 0.106 | | 0.15 | 0.12 | 1.8 | | 0.12 |
| C-AB | 0.07 | 10.39 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.04 | | | | | | | | |
| A-C | 0.33 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-AC | 0.83 | 9.32 | 0.089 | | 0.12 | 0.10 | 1.5 | | 0.12 |
| C-AB | 0.06 | 10.41 | 0.006 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.04 | | | | | | | | |
| A-C | 0.28 | | | | | | | | |

QUEUE FOR STREAM B-AC

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.1 |
| 17.15 | 0.1 |
| 17.30 | 0.1 |
| 17.45 | 0.1 |
| 18.00 | 0.1 |
| 18.15 | 0.1 |

QUEUE FOR STREAM C-AB

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-AC | 90.8 | 60.6 | 10.9 | 0.12 | 10.9 | 0.12 |
| C-AB | 6.9 | 4.6 | 0.7 | 0.10 | 0.7 | 0.10 |
| A-B | 4.1 | 2.8 | | | | |
| A-C | 30.3 | 20.2 | | | | |
| ALL | 198.2 | 132.1 | 11.6 | 0.06 | 11.6 | 0.06 |

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

END OF JOB

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

[Printed at 10:23:44 on 08/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



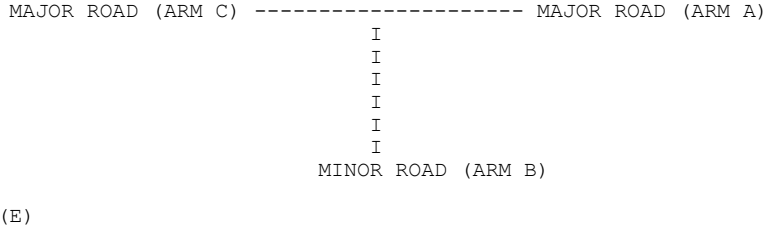
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 11. Camp Rd - Kirtlington Rd\2013 Base + Gen\AM\
Site 11.Camp Rd - Kirtlington Rd 2013 Base + Full Development AM.vpi"
(drive-on-the-left ) at 16:26:54 on Tuesday, 31 July 2007

RUN INFORMATION
**********

RUN TITLE: Site 11. Camp Rd - Kirtlington Rd 2013 Base + Full Development AM
LOCATION: Oxfordshire
DATE: 31/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian.Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Road (E)
ARM B IS Kirtlington Rd
ARM C IS Camp Road (W)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | | MINOR ROAD B |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 95.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 21.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 16.0 M. |
| - LANE 1 WIDTH | (WB-C) | 2.50 M. |
| - LANE 2 WIDTH | (WB-A) | 0.00 M. |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 602.27 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 467.65 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 628.98 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 11. Camp Rd - Kirtlington Rd 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 3.89 | 5.83 | 3.89 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.71 | 1.07 | 0.71 |
| ARM C | 15.00 | 45.00 | 75.00 | 3.42 | 5.14 | 3.42 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | | | | |
| | ARM A | 0.000 | 0.280 | 0.720 |
| | | 0.0 | 87.0 | 224.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.965 | 0.000 | 0.035 |
| | | 55.0 | 0.0 | 2.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.938 | 0.062 | 0.000 |
| | | 257.0 | 17.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS (PERCENTAGE OF H.V.S)
TURNING COUNTS (VEH/HR)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-AC | 0.72 | 6.66 | 0.107 | | 0.00 | 0.12 | 1.7 | | 0.17 |
| C-AB | 0.21 | 9.53 | 0.022 | | 0.00 | 0.02 | 0.3 | | 0.11 |
| A-B | 1.09 | | | | | | | | |
| A-C | 2.81 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-AC | 0.85 | 6.43 | 0.133 | | 0.12 | 0.15 | 2.2 | | 0.18 |
| C-AB | 0.25 | 9.35 | 0.027 | | 0.02 | 0.03 | 0.4 | | 0.11 |
| A-B | 1.30 | | | | | | | | |
| A-C | 3.36 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-AC | 1.05 | 6.11 | 0.171 | | 0.15 | 0.20 | 3.0 | | 0.20 |
| C-AB | 0.31 | 9.09 | 0.034 | | 0.03 | 0.04 | 0.5 | | 0.11 |
| A-B | 1.60 | | | | | | | | |
| A-C | 4.11 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-AC | 1.05 | 6.11 | 0.171 | | 0.20 | 0.21 | 3.1 | | 0.20 |
| C-AB | 0.31 | 9.09 | 0.034 | | 0.04 | 0.04 | 0.5 | | 0.11 |
| A-B | 1.60 | | | | | | | | |
| A-C | 4.11 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-AC | 0.85 | 6.43 | 0.133 | | 0.21 | 0.16 | 2.4 | | 0.18 |
| C-AB | 0.25 | 9.35 | 0.027 | | 0.04 | 0.03 | 0.4 | | 0.11 |
| A-B | 1.30 | | | | | | | | |
| A-C | 3.36 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-AC | 0.72 | 6.66 | 0.107 | | 0.16 | 0.12 | 1.9 | | 0.17 |
| C-AB | 0.21 | 9.53 | 0.022 | | 0.03 | 0.02 | 0.3 | | 0.11 |
| A-B | 1.09 | | | | | | | | |
| A-C | 2.81 | | | | | | | | |

QUEUE FOR STREAM B-AC

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.2 |
| 08.30 | 0.2 |
| 08.45 | 0.2 |
| 09.00 | 0.2 |
| 09.15 | 0.1 |

QUEUE FOR STREAM C-AB

| 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 (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-AC | 78.5 | 52.3 | 14.2 | 0.18 | 14.2 | 0.18 |
| C-AB | 23.4 | 15.6 | 2.6 | 0.11 | 2.6 | 0.11 |
| A-B | 119.7 | 79.8 | | | | |
| A-C | 308.3 | 205.5 | | | | |
| ALL | 883.7 | 589.1 | 16.8 | 0.02 | 16.8 | 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.

END OF JOB

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[Printed at 11:43:46 on 07/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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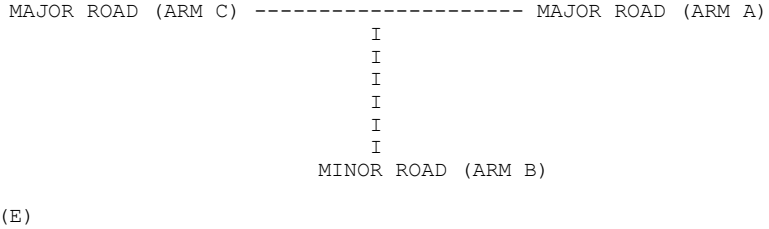
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 11. Camp Rd - Kirtlington Rd\2013 Base + Gen\PM\
Site 11.Camp Rd - Kirtlington Rd 2013 Base + Full Development PM.vpi"
(drive-on-the-left ) at 09:21:22 on Wednesday, 8 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 11. Camp Rd - Kirtlington Rd 2013 Base + Full Development PM
LOCATION: Oxfordshire
DATE: 08/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Camp Road (E)
ARM B IS Kirtlington Rd
ARM C IS Camp Road (W)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | | MINOR ROAD B |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 95.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 21.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 16.0 M. |
| - LANE 1 WIDTH | (WB-C) | 2.50 M. |
| - LANE 2 WIDTH | (WB-A) | 0.00 M. |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 602.27 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 467.65 | 0.22 | 0.09 | 0.14 | 0.31 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 628.98 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 11. Camp Rd - Kirtlington Rd 2013 Base + Gen PM

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 FLOW STARTS TO RISE | TOP OF PEAK IS REACHED | FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | AT TOP OF PEAK | AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 3.78 | 5.66 | 3.78 |
| ARM B | 15.00 | 45.00 | 75.00 | 1.65 | 2.47 | 1.65 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.58 | 3.86 | 2.58 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | | | | |
| | ARM A | 0.000 | 0.215 | 0.785 |
| | | 0.0 | 65.0 | 237.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.614 | 0.000 | 0.386 |
| | | 81.0 | 0.0 | 51.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.976 | 0.024 | 0.000 |
| | | 201.0 | 5.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-AC | 1.66 | 7.52 | 0.220 | | 0.00 | 0.28 | 4.0 | | 0.17 |
| C-AB | 0.06 | 9.56 | 0.007 | | 0.00 | 0.01 | 0.1 | | 0.11 |
| A-B | 0.82 | | | | | | | | |
| A-C | 2.97 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-AC | 1.98 | 7.32 | 0.270 | | 0.28 | 0.36 | 5.3 | | 0.19 |
| C-AB | 0.07 | 9.38 | 0.008 | | 0.01 | 0.01 | 0.1 | | 0.11 |
| A-B | 0.97 | | | | | | | | |
| A-C | 3.55 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-AC | 2.42 | 7.05 | 0.344 | | 0.36 | 0.51 | 7.4 | | 0.22 |
| C-AB | 0.09 | 9.13 | 0.010 | | 0.01 | 0.01 | 0.2 | | 0.11 |
| A-B | 1.19 | | | | | | | | |
| A-C | 4.35 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-AC | 2.42 | 7.05 | 0.344 | | 0.51 | 0.52 | 7.7 | | 0.22 |
| C-AB | 0.09 | 9.13 | 0.010 | | 0.01 | 0.01 | 0.2 | | 0.11 |
| A-B | 1.19 | | | | | | | | |
| A-C | 4.35 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-AC | 1.98 | 7.32 | 0.270 | | 0.52 | 0.38 | 5.9 | | 0.19 |
| C-AB | 0.07 | 9.38 | 0.008 | | 0.01 | 0.01 | 0.1 | | 0.11 |
| A-B | 0.97 | | | | | | | | |
| A-C | 3.55 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-AC | 1.66 | 7.52 | 0.220 | | 0.38 | 0.29 | 4.4 | | 0.17 |
| C-AB | 0.06 | 9.56 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.11 |
| A-B | 0.82 | | | | | | | | |
| A-C | 2.97 | | | | | | | | |

QUEUE FOR STREAM B-AC

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.3 | |
| 17.15 | 0.4 | |
| 17.30 | 0.5 | * |
| 17.45 | 0.5 | * |
| 18.00 | 0.4 | |
| 18.15 | 0.3 | |

QUEUE FOR STREAM C-AB

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-AC | 181.7 | 121.1 | 34.7 | 0.19 | 34.7 | 0.19 |
| C-AB | 6.9 | 4.6 | 0.7 | 0.11 | 0.7 | 0.11 |
| A-B | 89.5 | 59.6 | | | | |
| A-C | 326.2 | 217.5 | | | | |
| ALL | 880.9 | 587.3 | 35.4 | 0.04 | 35.4 | 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.

END OF JOB

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

[Printed at 09:23:05 on 08/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk



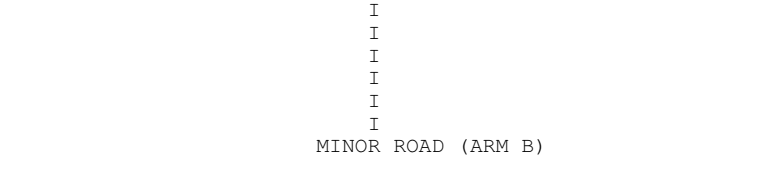
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 12. Somerton Rd - Camp Rd\2006 Base\AM\Site 12. Camp Rd - Somerton Rd 2006 Base AM.vpi"
(drive-on-the-left ) at 10:58:21 on Wednesday, 8 August 2007

## RUN INFORMATION

RUN TITLE: Site 12. Camp Road - Somerton Rd 2006 Base AM
LOCATION: Oxfordshire
DATE: 10/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

### INPUT DATA




ARM A IS Somerton Rd (N)
ARM B IS Camp Rd
ARM C IS Lower Heyford Rd (S)

### STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| | |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 89.0 M. |
| - BLOCKS TRAFFIC | YES |
| | |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 30.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 21.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 9.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 2.80 M. |
| - WIDTH AT 10 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 15 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.75 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 0 PCU |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 586.12 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 457.77 | 0.21 | 0.08 | 0.13 | 0.30 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 625.50 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 12. Somerton Rd - Camp Road 2006 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 1.25 | 1.88 | 1.25 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.64 | 0.96 | 0.64 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.60 | 0.90 | 0.60 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.420 | 0.580 |
| | | 0.0 | 42.0 | 58.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.255 | 0.000 | 0.745 |
| | | 13.0 | 0.0 | 38.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.729 | 0.271 | 0.000 |
| | | 35.0 | 13.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.48 | 10.56 | 0.045 | | 0.00 | 0.05 | 0.7 | | 0.10 |
| B-A | 0.16 | 8.76 | 0.019 | | 0.00 | 0.02 | 0.3 | | 0.12 |
| C-AB | 0.16 | 10.12 | 0.016 | | 0.00 | 0.02 | 0.2 | | 0.10 |
| A-B | 0.53 | | | | | | | | |
| A-C | 0.73 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.57 | 10.50 | 0.054 | | 0.05 | 0.06 | 0.8 | | 0.10 |
| B-A | 0.19 | 8.69 | 0.022 | | 0.02 | 0.02 | 0.3 | | 0.12 |
| C-AB | 0.19 | 10.06 | 0.019 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.63 | | | | | | | | |
| A-C | 0.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.70 | 10.42 | 0.067 | | 0.06 | 0.07 | 1.0 | | 0.10 |
| B-A | 0.24 | 8.59 | 0.028 | | 0.02 | 0.03 | 0.4 | | 0.12 |
| C-AB | 0.24 | 9.98 | 0.024 | | 0.02 | 0.02 | 0.4 | | 0.10 |
| A-B | 0.77 | | | | | | | | |
| A-C | 1.06 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.70 | 10.42 | 0.067 | | 0.07 | 0.07 | 1.1 | | 0.10 |
| B-A | 0.24 | 8.59 | 0.028 | | 0.03 | 0.03 | 0.4 | | 0.12 |
| C-AB | 0.24 | 9.98 | 0.024 | | 0.02 | 0.02 | 0.4 | | 0.10 |
| A-B | 0.77 | | | | | | | | |
| A-C | 1.06 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.57 | 10.50 | 0.054 | | 0.07 | 0.06 | 0.9 | | 0.10 |
| B-A | 0.19 | 8.69 | 0.022 | | 0.03 | 0.02 | 0.4 | | 0.12 |
| C-AB | 0.19 | 10.06 | 0.019 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.63 | | | | | | | | |
| A-C | 0.87 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.48 | 10.56 | 0.045 | | 0.06 | 0.05 | 0.7 | | 0.10 |
| B-A | 0.16 | 8.76 | 0.019 | | 0.02 | 0.02 | 0.3 | | 0.12 |
| C-AB | 0.16 | 10.12 | 0.016 | | 0.02 | 0.02 | 0.2 | | 0.10 |
| A-B | 0.53 | | | | | | | | |
| A-C | 0.73 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.0 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.0 |

QUEUE FOR STREAM B-A

| 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 C-AB

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 52.3 | 34.9 | 5.3 | 0.10 | 5.3 | 0.10 |
| B-A | 17.9 | 11.9 | 2.1 | 0.12 | 2.1 | 0.12 |
| C-AB | 17.9 | 11.9 | 1.8 | 0.10 | 1.8 | 0.10 |
| A-B | 57.8 | 38.5 | | | | |
| A-C | 79.8 | 53.2 | | | | |
| ALL | 273.9 | 182.6 | 9.2 | 0.03 | 9.2 | 0.03 |

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

END OF JOB

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

[Printed at 10:59:26 on 08/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



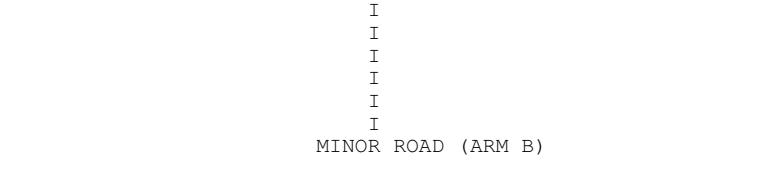
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 12. Somerton Rd - Camp Rd\2006 Base\PM\Site 12. Camp Rd - Somerton Rd 2006 Base PM.vpi"
(drive-on-the-left ) at 11:04:02 on Wednesday, 8 August 2007

## RUN INFORMATION

RUN TITLE: Site 12. Camp Road - Somerton Rd 2006 Base PM
LOCATION: Oxfordshire
DATE: 09/11/06
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Chris.Morris [MCCPC062011]
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

## .MAJOR/MINOR JUNCTION CAPACITY AND DELAY

### INPUT DATA




ARM A IS Somerton Rd (N)
ARM B IS Camp Rd
ARM C IS Lower Heyford Rd (S)

### STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B | |
|---|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) | 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) | 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) | 2.20 M. |
| - VISIBILITY | (VC-B) | 89.0 M. |
| - BLOCKS TRAFFIC | | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) | 30.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) | 21.0 M. |
| - LANE 1 WIDTH | (WB-C) | - |
| - LANE 2 WIDTH | (WB-A) | - |
| - WIDTH AT 0 M FROM JUNC. | | 9.00 M. |
| - WIDTH AT 5 M FROM JUNC. | | 2.80 M. |
| - WIDTH AT 10 M FROM JUNC. | | 2.75 M. |
| - WIDTH AT 15 M FROM JUNC. | | 2.75 M. |
| - WIDTH AT 20 M FROM JUNC. | | 2.75 M. |
| - LENGTH OF FLARED SECTION | DERIVED: | 0 PCU |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 586.12 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 457.77 | 0.21 | 0.08 | 0.13 | 0.30 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 625.50 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 12. Somerton Rd - Camp Road 2006 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.86 | 1.29 | 0.86 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.81 | 1.22 | 0.81 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.99 | 1.48 | 0.99 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | | TURNING PROPORTIONS<br>TURNING COUNTS (VEH/HR)<br>(PERCENTAGE OF H.V.S) | | |
| | ARM A | 0.000<br>0.0<br>( 0.0) | 0.594<br>41.0<br>( 0.0) | 0.406<br>28.0<br>( 0.0) |
| | ARM B | 0.646<br>42.0<br>( 0.0) | 0.000<br>0.0<br>( 0.0) | 0.354<br>23.0<br>( 0.0) |
| | ARM C | 0.924<br>73.0<br>( 0.0) | 0.076<br>6.0<br>( 0.0) | 0.000<br>0.0<br>( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 0.29 | 11.35 | 0.025 | | 0.00 | 0.03 | 0.4 | | 0.09 |
| B-A | 0.53 | 8.18 | 0.064 | | 0.00 | 0.07 | 1.0 | | 0.13 |
| C-AB | 0.08 | 10.22 | 0.007 | | 0.00 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.51 | | | | | | | | |
| A-C | 0.35 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 0.34 | 11.28 | 0.031 | | 0.03 | 0.03 | 0.5 | | 0.09 |
| B-A | 0.63 | 8.12 | 0.077 | | 0.07 | 0.08 | 1.2 | | 0.13 |
| C-AB | 0.09 | 10.17 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.61 | | | | | | | | |
| A-C | 0.42 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 0.42 | 11.19 | 0.038 | | 0.03 | 0.04 | 0.6 | | 0.09 |
| B-A | 0.77 | 8.04 | 0.096 | | 0.08 | 0.10 | 1.5 | | 0.14 |
| C-AB | 0.11 | 10.12 | 0.011 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.75 | | | | | | | | |
| A-C | 0.51 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 0.42 | 11.19 | 0.038 | | 0.04 | 0.04 | 0.6 | | 0.09 |
| B-A | 0.77 | 8.04 | 0.096 | | 0.10 | 0.11 | 1.6 | | 0.14 |
| C-AB | 0.11 | 10.12 | 0.011 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.75 | | | | | | | | |
| A-C | 0.51 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 0.34 | 11.28 | 0.031 | | 0.04 | 0.03 | 0.5 | | 0.09 |
| B-A | 0.63 | 8.12 | 0.077 | | 0.11 | 0.08 | 1.3 | | 0.13 |
| C-AB | 0.09 | 10.17 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.61 | | | | | | | | |
| A-C | 0.42 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 0.29 | 11.34 | 0.025 | | 0.03 | 0.03 | 0.4 | | 0.09 |
| B-A | 0.53 | 8.18 | 0.064 | | 0.08 | 0.07 | 1.1 | | 0.13 |
| C-AB | 0.08 | 10.22 | 0.007 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.51 | | | | | | | | |
| A-C | 0.35 | | | | | | | | |

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 | 0.1 |
| 17.15 | 0.1 |
| 17.30 | 0.1 |
| 17.45 | 0.1 |
| 18.00 | 0.1 |
| 18.15 | 0.1 |

QUEUE FOR STREAM C-AB

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 31.7 | 21.1 | 2.9 | 0.09 | 2.9 | 0.09 |
| B-A | 57.8 | 38.5 | 7.7 | 0.13 | 7.7 | 0.13 |
| C-AB | 8.3 | 5.5 | 0.8 | 0.10 | 0.8 | 0.10 |
| A-B | 56.4 | 37.6 | | | | |
| A-C | 38.5 | 25.7 | | | | |
| ALL | 293.2 | 195.5 | 11.4 | 0.04 | 11.4 | 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.

END OF JOB

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

[Printed at 11:04:46 on 08/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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EMAIL: SoftwareBureau@trl.co.uk



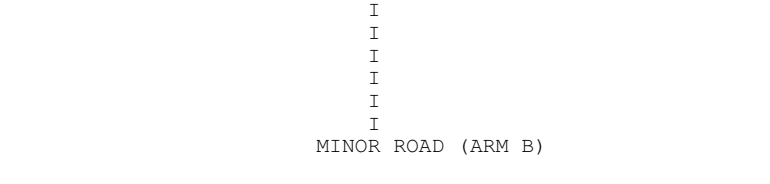
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 12. Somerton Rd - Camp Rd\2013 Base\AM\Site 12. Camp Rd - Somerton Rd 2013 Base AM.vpi"
(drive-on-the-left ) at 11:14:20 on Wednesday, 8 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 12. Camp Road - Somerton Rd 2013 Base AM
LOCATION: Oxfordshire
DATE: 08/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Somerton Rd (N)
ARM B IS Camp Rd
ARM C IS Lower Heyford Rd (S)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 89.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 30.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 21.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 9.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 2.80 M. |
| - WIDTH AT 10 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 15 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.75 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 0 PCU |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 586.12 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 457.77 | 0.21 | 0.08 | 0.13 | 0.30 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 625.50 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 12. Somerton Rd - Camp Road 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 1.41 | 2.12 | 1.41 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.71 | 1.07 | 0.71 |
| ARM C | 15.00 | 45.00 | 75.00 | 0.66 | 0.99 | 0.66 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | ARM A | 0.000 | 0.425 | 0.575 |
| | | 0.0 | 48.0 | 65.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.246 | 0.000 | 0.754 |
| | | 14.0 | 0.0 | 43.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.736 | 0.264 | 0.000 |
| | | 39.0 | 14.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 0.54 | 10.52 | 0.051 | | 0.00 | 0.05 | 0.8 | | 0.10 |
| B-A | 0.18 | 8.72 | 0.020 | | 0.00 | 0.02 | 0.3 | | 0.12 |
| C-AB | 0.18 | 10.08 | 0.017 | | 0.00 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.60 | | | | | | | | |
| A-C | 0.82 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 0.64 | 10.46 | 0.062 | | 0.05 | 0.07 | 1.0 | | 0.10 |
| B-A | 0.21 | 8.64 | 0.024 | | 0.02 | 0.02 | 0.4 | | 0.12 |
| C-AB | 0.21 | 10.01 | 0.021 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.72 | | | | | | | | |
| A-C | 0.97 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 0.79 | 10.37 | 0.076 | | 0.07 | 0.08 | 1.2 | | 0.10 |
| B-A | 0.26 | 8.53 | 0.030 | | 0.02 | 0.03 | 0.5 | | 0.12 |
| C-AB | 0.26 | 9.92 | 0.026 | | 0.02 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.88 | | | | | | | | |
| A-C | 1.19 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 0.79 | 10.37 | 0.076 | | 0.08 | 0.08 | 1.2 | | 0.10 |
| B-A | 0.26 | 8.53 | 0.030 | | 0.03 | 0.03 | 0.5 | | 0.12 |
| C-AB | 0.26 | 9.92 | 0.026 | | 0.03 | 0.03 | 0.4 | | 0.10 |
| A-B | 0.88 | | | | | | | | |
| A-C | 1.19 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 0.64 | 10.46 | 0.062 | | 0.08 | 0.07 | 1.0 | | 0.10 |
| B-A | 0.21 | 8.64 | 0.024 | | 0.03 | 0.03 | 0.4 | | 0.12 |
| C-AB | 0.21 | 10.01 | 0.021 | | 0.03 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.72 | | | | | | | | |
| A-C | 0.97 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 0.54 | 10.52 | 0.051 | | 0.07 | 0.05 | 0.8 | | 0.10 |
| B-A | 0.18 | 8.72 | 0.020 | | 0.03 | 0.02 | 0.3 | | 0.12 |
| C-AB | 0.18 | 10.08 | 0.017 | | 0.02 | 0.02 | 0.3 | | 0.10 |
| A-B | 0.60 | | | | | | | | |
| A-C | 0.82 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.1 |
| 08.30 | 0.1 |
| 08.45 | 0.1 |
| 09.00 | 0.1 |
| 09.15 | 0.1 |

QUEUE FOR STREAM B-A

| 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 C-AB

| 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 * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 59.2 | 39.5 | 6.0 | 0.10 | 6.0 | 0.10 |
| B-A | 19.3 | 12.8 | 2.3 | 0.12 | 2.3 | 0.12 |
| C-AB | 19.3 | 12.8 | 2.0 | 0.10 | 2.0 | 0.10 |
| A-B | 66.1 | 44.0 | | | | |
| A-C | 89.5 | 59.6 | | | | |
| ALL | 306.9 | 204.6 | 10.3 | 0.03 | 10.3 | 0.03 |

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

END OF JOB

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

[Printed at 11:15:57 on 08/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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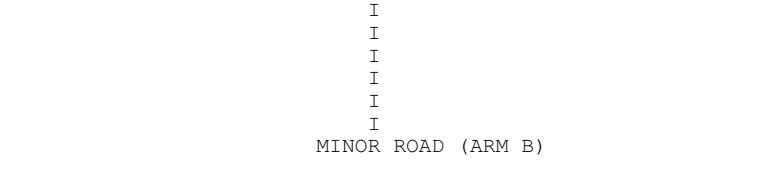
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 12. Somerton Rd - Camp Rd\2013 Base\PM\Site 12. Camp Rd - Somerton Rd 2013 Base PM.vpi"
(drive-on-the-left ) at 11:18:13 on Wednesday, 8 August 2007

RUN INFORMATION
**********

RUN TITLE: Site 12. Camp Road - Somerton Rd 2013 Base PM
LOCATION: Oxfordshire
DATE: 08/08/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

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

INPUT DATA
---




ARM A IS Somerton Rd (N)
ARM B IS Camp Rd
ARM C IS Lower Heyford Rd (S)

STREAM LABELLING CONVENTION
---

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| | |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 89.0 M. |
| - BLOCKS TRAFFIC | YES |
| | |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 30.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 21.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 9.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 2.80 M. |
| - WIDTH AT 10 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 15 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.75 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 0 PCU |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 586.12 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 457.77 | 0.21 | 0.08 | 0.13 | 0.30 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 625.50 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 12. Somertone Rd - Camp Road 2013 Base PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 0.99 | 1.48 | 0.99 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.93 | 1.39 | 0.93 |
| ARM C | 15.00 | 45.00 | 75.00 | 1.11 | 1.67 | 1.11 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | | TURNING PROPORTIONS | | |
| | | TURNING COUNTS (VEH/HR) | | |
| | | (PERCENTAGE OF H.V.S) | | |
| | ARM A | 0.000 | 0.595 | 0.405 |
| | | 0.0 | 47.0 | 32.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.649 | 0.000 | 0.351 |
| | | 48.0 | 0.0 | 26.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.921 | 0.079 | 0.000 |
| | | 82.0 | 7.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 0.33 | 11.30 | 0.029 | | 0.00 | 0.03 | 0.4 | | 0.09 |
| B-A | 0.60 | 8.14 | 0.074 | | 0.00 | 0.08 | 1.1 | | 0.13 |
| C-AB | 0.09 | 10.18 | 0.009 | | 0.00 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.59 | | | | | | | | |
| A-C | 0.40 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 0.39 | 11.22 | 0.035 | | 0.03 | 0.04 | 0.5 | | 0.09 |
| B-A | 0.72 | 8.07 | 0.089 | | 0.08 | 0.10 | 1.4 | | 0.14 |
| C-AB | 0.10 | 10.14 | 0.010 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.70 | | | | | | | | |
| A-C | 0.48 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 0.48 | 11.11 | 0.043 | | 0.04 | 0.04 | 0.7 | | 0.09 |
| B-A | 0.88 | 7.99 | 0.110 | | 0.10 | 0.12 | 1.8 | | 0.14 |
| C-AB | 0.13 | 10.07 | 0.013 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.86 | | | | | | | | |
| A-C | 0.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 0.48 | 11.11 | 0.043 | | 0.04 | 0.04 | 0.7 | | 0.09 |
| B-A | 0.88 | 7.99 | 0.110 | | 0.12 | 0.12 | 1.8 | | 0.14 |
| C-AB | 0.13 | 10.07 | 0.013 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.86 | | | | | | | | |
| A-C | 0.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 0.39 | 11.22 | 0.035 | | 0.04 | 0.04 | 0.6 | | 0.09 |
| B-A | 0.72 | 8.07 | 0.089 | | 0.12 | 0.10 | 1.5 | | 0.14 |
| C-AB | 0.10 | 10.14 | 0.010 | | 0.01 | 0.01 | 0.2 | | 0.10 |
| A-B | 0.70 | | | | | | | | |
| A-C | 0.48 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 0.33 | 11.29 | 0.029 | | 0.04 | 0.03 | 0.5 | | 0.09 |
| B-A | 0.60 | 8.14 | 0.074 | | 0.10 | 0.08 | 1.2 | | 0.13 |
| C-AB | 0.09 | 10.18 | 0.009 | | 0.01 | 0.01 | 0.1 | | 0.10 |
| A-B | 0.59 | | | | | | | | |
| A-C | 0.40 | | | | | | | | |

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 | 0.1 |
| 17.15 | 0.1 |
| 17.30 | 0.1 |
| 17.45 | 0.1 |
| 18.00 | 0.1 |
| 18.15 | 0.1 |

QUEUE FOR STREAM C-AB

| 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 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 35.8 | 23.9 | 3.3 | 0.09 | 3.3 | 0.09 |
| B-A | 66.1 | 44.0 | 9.0 | 0.14 | 9.0 | 0.14 |
| C-AB | 9.6 | 6.4 | 1.0 | 0.10 | 1.0 | 0.10 |
| A-B | 64.7 | 43.1 | | | | |
| A-C | 44.0 | 29.4 | | | | |
| ALL | 333.1 | 222.1 | 13.2 | 0.04 | 13.2 | 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.

END OF JOB

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

[Printed at 11:19:22 on 08/08/2007]

TRL LIMITED



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)



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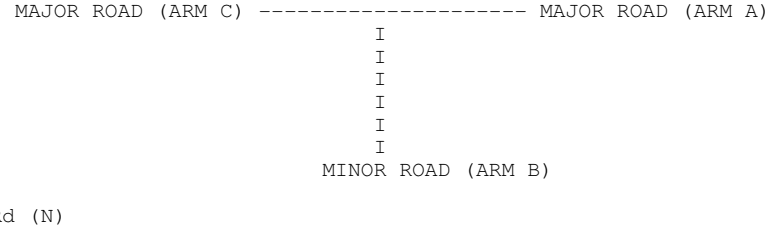
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 12. Somerton Rd - Camp Rd\2013 Base + Gen\AM\
Site 12. Camp Rd - Somerton Rd 2013 Base + Full Development AM.vpi"
(drive-on-the-left ) at 16:57:54 on Tuesday, 31 July 2007

## RUN INFORMATION

RUN TITLE: Site 12. Camp Road - Somerton Rd 2013 Base + Full Development AM
LOCATION: Oxfordshire
DATE: 31/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

## .MAJOR/MINOR JUNCTION CAPACITY AND DELAY

### INPUT DATA




ARM A IS Somerton Rd (N)
ARM B IS Camp Rd
ARM C IS Lower Heyford Rd (S)

### STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 89.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 30.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 21.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 9.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 2.80 M. |
| - WIDTH AT 10 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 15 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.75 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 0 PCU |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 586.12 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 457.77 | 0.21 | 0.08 | 0.13 | 0.30 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 625.50 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 12. Somertone Rd - Camp Road 2013 Base AM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 3.16 | 4.74 | 3.16 |
| ARM B | 15.00 | 45.00 | 75.00 | 2.84 | 4.26 | 2.84 |
| ARM C | 15.00 | 45.00 | 75.00 | 1.56 | 2.34 | 1.56 |

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 07.45 - 09.15 | TURNING PROPORTIONS | | | |
| | TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) | | | |
| | ARM A | 0.000 | 0.743 | 0.257 |
| | | 0.0 | 188.0 | 65.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.577 | 0.000 | 0.423 |
| | | 131.0 | 0.0 | 96.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.312 | 0.688 | 0.000 |
| | | 39.0 | 86.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-C | 1.20 | 10.60 | 0.114 | | 0.00 | 0.13 | 1.8 | | 0.11 |
| B-A | 1.64 | 7.63 | 0.216 | | 0.00 | 0.27 | 3.9 | | 0.17 |
| C-AB | 1.08 | 9.66 | 0.112 | | 0.00 | 0.13 | 1.9 | | 0.12 |
| A-B | 2.36 | | | | | | | | |
| A-C | 0.82 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-C | 1.44 | 10.38 | 0.139 | | 0.13 | 0.16 | 2.3 | | 0.11 |
| B-A | 1.96 | 7.46 | 0.263 | | 0.27 | 0.35 | 5.1 | | 0.18 |
| C-AB | 1.29 | 9.51 | 0.136 | | 0.13 | 0.16 | 2.4 | | 0.12 |
| A-B | 2.82 | | | | | | | | |
| A-C | 0.97 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-C | 1.76 | 10.07 | 0.175 | | 0.16 | 0.21 | 3.1 | | 0.12 |
| B-A | 2.40 | 7.23 | 0.332 | | 0.35 | 0.49 | 7.0 | | 0.21 |
| C-AB | 1.58 | 9.30 | 0.170 | | 0.16 | 0.20 | 3.1 | | 0.13 |
| A-B | 3.45 | | | | | | | | |
| A-C | 1.19 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-C | 1.76 | 10.06 | 0.175 | | 0.21 | 0.21 | 3.2 | | 0.12 |
| B-A | 2.40 | 7.23 | 0.332 | | 0.49 | 0.49 | 7.4 | | 0.21 |
| C-AB | 1.58 | 9.30 | 0.170 | | 0.20 | 0.21 | 3.1 | | 0.13 |
| A-B | 3.45 | | | | | | | | |
| A-C | 1.19 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-C | 1.44 | 10.37 | 0.139 | | 0.21 | 0.16 | 2.5 | | 0.11 |
| B-A | 1.96 | 7.46 | 0.263 | | 0.49 | 0.36 | 5.6 | | 0.18 |
| C-AB | 1.29 | 9.51 | 0.136 | | 0.21 | 0.16 | 2.4 | | 0.12 |
| A-B | 2.82 | | | | | | | | |
| A-C | 0.97 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-C | 1.20 | 10.59 | 0.114 | | 0.16 | 0.13 | 2.0 | | 0.11 |
| B-A | 1.64 | 7.62 | 0.216 | | 0.36 | 0.28 | 4.3 | | 0.17 |
| C-AB | 1.08 | 9.66 | 0.112 | | 0.16 | 0.13 | 1.9 | | 0.12 |
| A-B | 2.36 | | | | | | | | |
| A-C | 0.82 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.2 |
| 08.30 | 0.2 |
| 08.45 | 0.2 |
| 09.00 | 0.2 |
| 09.15 | 0.1 |

QUEUE FOR STREAM B-A

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

QUEUE FOR STREAM C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.1 |
| 08.15 | 0.2 |
| 08.30 | 0.2 |
| 08.45 | 0.2 |
| 09.00 | 0.2 |
| 09.15 | 0.1 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-C | 132.1 | 88.1 | 14.9 | 0.11 | 14.9 | 0.11 |
| B-A | 180.3 | 120.2 | 33.3 | 0.18 | 33.4 | 0.18 |
| C-AB | 118.4 | 78.9 | 14.7 | 0.12 | 14.7 | 0.12 |
| A-B | 258.8 | 172.5 | | | | |
| A-C | 89.5 | 59.6 | | | | |
| ALL | 832.7 | 555.2 | 63.0 | 0.08 | 63.0 | 0.08 |

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

END OF JOB

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

[Printed at 11:41:46 on 07/08/2007]

TRL LIMITED



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

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



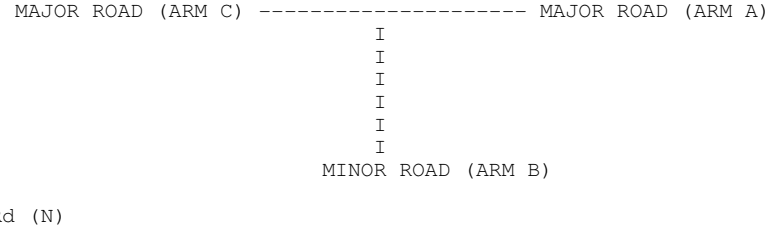
Run with file:-
"J:\120000\120669-00\4 Internal Project Data\4-04 Calculations\4-04-06 Junction Analysis\Picady\
Site 12. Somerton Rd - Camp Rd\2013 Base + Gen\PM\
Site 12. Camp Rd - Somerton Rd 2013 Base + Full Development PM.vpi"
(drive-on-the-left ) at 10:36:32 on Wednesday, 8 August 2007

## RUN INFORMATION

RUN TITLE: Site 12. Camp Road - Somerton Rd 2013 Base + Full Development PM
LOCATION: Oxfordshire
DATE: 31/07/07
CLIENT: North Oxfordshire Consortium
ENUMERATOR: Ian Clarke
JOB NUMBER: 120669
STATUS: TIA
DESCRIPTION:

## .MAJOR/MINOR JUNCTION CAPACITY AND DELAY

### INPUT DATA




ARM A IS Somerton Rd (N)
ARM B IS Camp Rd
ARM C IS Lower Heyford Rd (S)

STREAM LABELLING CONVENTION

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

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

ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 6.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 89.0 M. |
| - BLOCKS TRAFFIC | YES |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 30.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 21.0 M. |
| - LANE 1 WIDTH | (WB-C) - |
| - LANE 2 WIDTH | (WB-A) - |
| - WIDTH AT 0 M FROM JUNC. | 9.00 M. |
| - WIDTH AT 5 M FROM JUNC. | 2.80 M. |
| - WIDTH AT 10 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 15 M FROM JUNC. | 2.75 M. |
| - WIDTH AT 20 M FROM JUNC. | 2.75 M. |
| - LENGTH OF FLARED SECTION | DERIVED: 0 PCU |

.SLOPES AND INTERCEPT

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

will be adjusted )

| Intercept For Stream B-C | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 586.12 | 0.23 | 0.09 |

| Intercept For Stream B-A | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B | Slope For Opposing Stream C-A | Slope For Opposing Stream C-B |
|---|---|---|---|---|
| 457.77 | 0.21 | 0.08 | 0.13 | 0.30 |

| Intercept For Stream C-B | Slope For Opposing Stream A-C | Slope For Opposing Stream A-B |
|---|---|---|
| 625.50 | 0.24 | 0.24 |

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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

Demand set: Site 12. Somerton Rd - Camp Road 2013 Base + Gen PM

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 FLOW STARTS TO RISE | NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED | NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | RATE OF FLOW (VEH/MIN) AT TOP OF PEAK | RATE OF FLOW (VEH/MIN) AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 2.30 | 3.45 | 2.30 |
| ARM B | 15.00 | 45.00 | 75.00 | 3.60 | 5.40 | 3.60 |
| ARM C | 15.00 | 45.00 | 75.00 | 2.00 | 3.00 | 2.00 |

| TIME | FROM/TO | TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A | ARM B | ARM C |
|---|---|---|---|---|
| 16.45 - 18.15 | ARM A | 0.000 | 0.826 | 0.174 |
| | | 0.0 | 152.0 | 32.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM B | 0.663 | 0.000 | 0.337 |
| | | 191.0 | 0.0 | 97.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |
| | ARM C | 0.512 | 0.488 | 0.000 |
| | | 82.0 | 78.0 | 0.0 |
| | | ( 0.0) | ( 0.0) | ( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-C | 1.22 | 10.49 | 0.116 | | 0.00 | 0.13 | 1.9 | | 0.11 |
| B-A | 2.40 | 7.72 | 0.310 | | 0.00 | 0.44 | 6.3 | | 0.19 |
| C-AB | 0.98 | 9.87 | 0.099 | | 0.00 | 0.11 | 1.6 | | 0.11 |
| A-B | 1.91 | | | | | | | | |
| A-C | 0.40 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-C | 1.45 | 10.23 | 0.142 | | 0.13 | 0.16 | 2.4 | | 0.11 |
| B-A | 2.86 | 7.57 | 0.378 | | 0.44 | 0.59 | 8.6 | | 0.21 |
| C-AB | 1.17 | 9.76 | 0.120 | | 0.11 | 0.14 | 2.1 | | 0.12 |
| A-B | 2.28 | | | | | | | | |
| A-C | 0.48 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-C | 1.78 | 9.87 | 0.180 | | 0.16 | 0.22 | 3.2 | | 0.12 |
| B-A | 3.50 | 7.37 | 0.476 | | 0.59 | 0.88 | 12.5 | | 0.26 |
| C-AB | 1.43 | 9.61 | 0.149 | | 0.14 | 0.18 | 2.7 | | 0.12 |
| A-B | 2.79 | | | | | | | | |
| A-C | 0.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-C | 1.78 | 9.87 | 0.180 | | 0.22 | 0.22 | 3.3 | | 0.12 |
| B-A | 3.50 | 7.37 | 0.476 | | 0.88 | 0.89 | 13.3 | | 0.26 |
| C-AB | 1.43 | 9.61 | 0.149 | | 0.18 | 0.18 | 2.7 | | 0.12 |
| A-B | 2.79 | | | | | | | | |
| A-C | 0.59 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-C | 1.45 | 10.22 | 0.142 | | 0.22 | 0.17 | 2.6 | | 0.11 |
| B-A | 2.86 | 7.57 | 0.378 | | 0.89 | 0.62 | 9.7 | | 0.21 |
| C-AB | 1.17 | 9.76 | 0.120 | | 0.18 | 0.14 | 2.1 | | 0.12 |
| A-B | 2.28 | | | | | | | | |
| A-C | 0.48 | | | | | | | | |

| 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) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-C | 1.22 | 10.47 | 0.116 | | 0.17 | 0.13 | 2.0 | | 0.11 |
| B-A | 2.40 | 7.72 | 0.311 | | 0.62 | 0.46 | 7.1 | | 0.19 |
| C-AB | 0.98 | 9.87 | 0.099 | | 0.14 | 0.11 | 1.7 | | 0.11 |
| A-B | 1.91 | | | | | | | | |
| A-C | 0.40 | | | | | | | | |

QUEUE FOR STREAM B-C

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.1 | |
| 17.15 | 0.2 | |
| 17.30 | 0.2 | |
| 17.45 | 0.2 | |
| 18.00 | 0.2 | |
| 18.15 | 0.1 | |

QUEUE FOR STREAM B-A

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.4 | |
| 17.15 | 0.6 | * |
| 17.30 | 0.9 | * |
| 17.45 | 0.9 | * |
| 18.00 | 0.6 | * |
| 18.15 | 0.5 | |

QUEUE FOR STREAM C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.1 |
| 17.15 | 0.1 |
| 17.30 | 0.2 |
| 17.45 | 0.2 |
| 18.00 | 0.1 |
| 18.15 | 0.1 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-C | 133.5 | 89.0 | 15.4 | 0.12 | 15.4 | 0.12 |
| B-A | 262.9 | 175.3 | 57.6 | 0.22 | 57.6 | 0.22 |
| C-AB | 107.4 | 71.6 | 12.8 | 0.12 | 12.8 | 0.12 |
| A-B | 209.2 | 139.5 | | | | |
| A-C | 44.0 | 29.4 | | | | |
| ALL | 869.9 | 579.9 | 85.8 | 0.10 | 85.8 | 0.10 |

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

END OF JOB

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

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