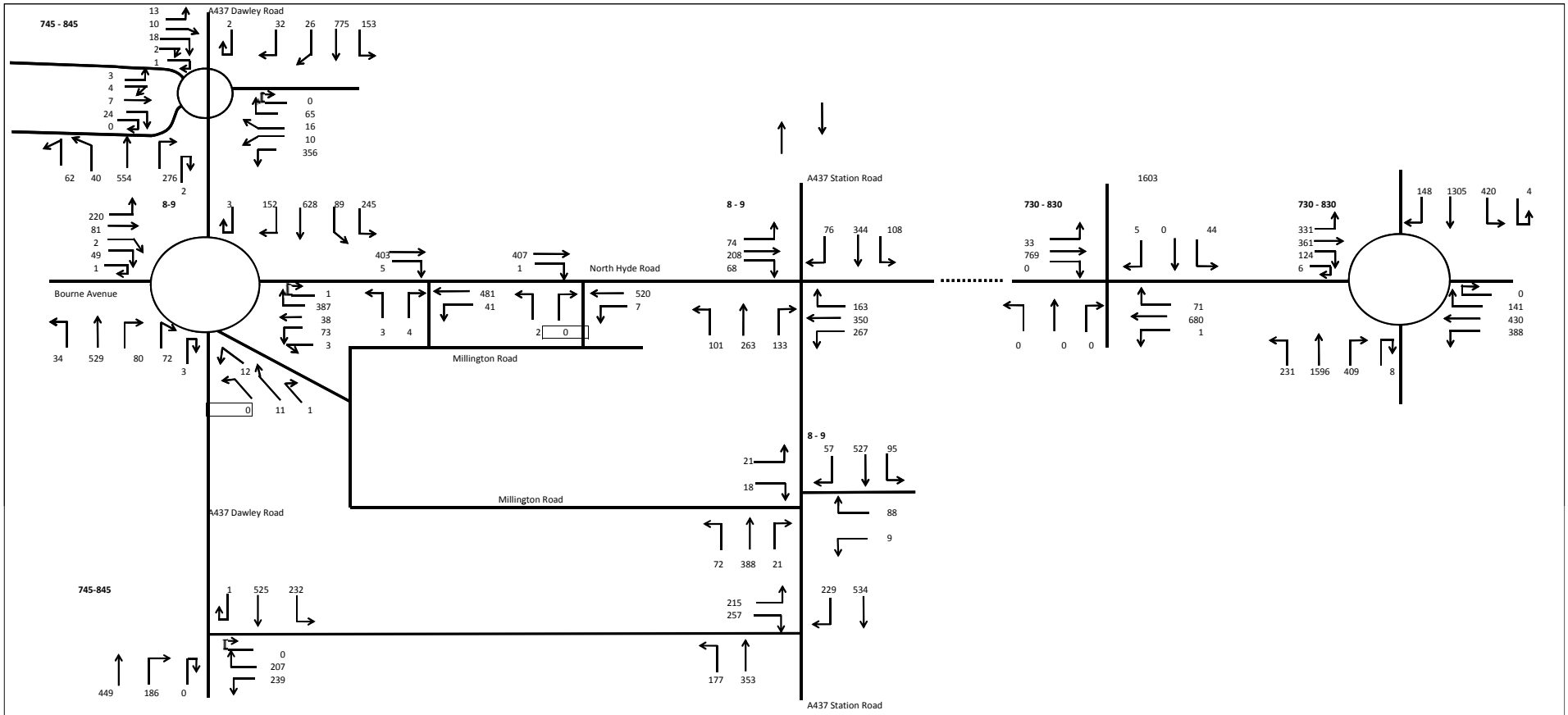
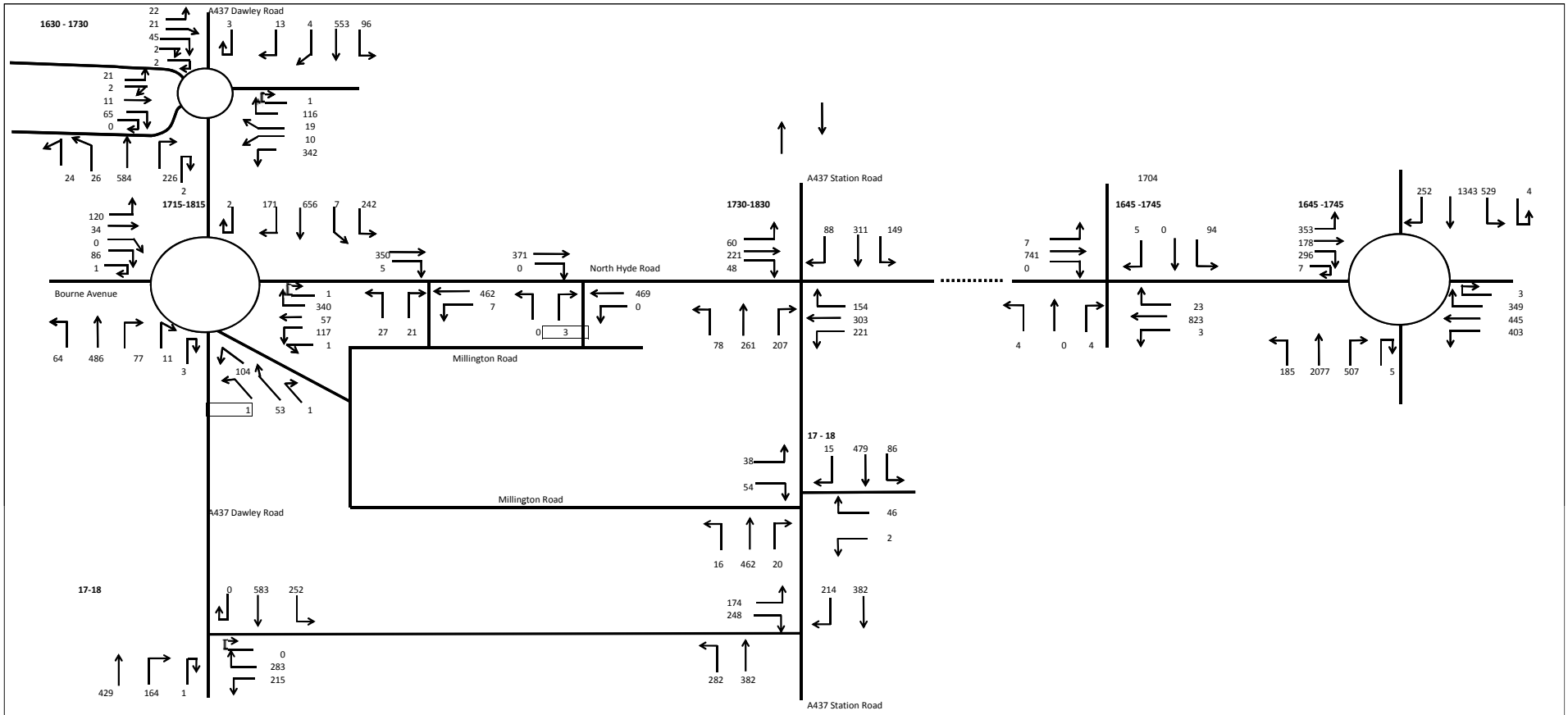
APPENDIX C

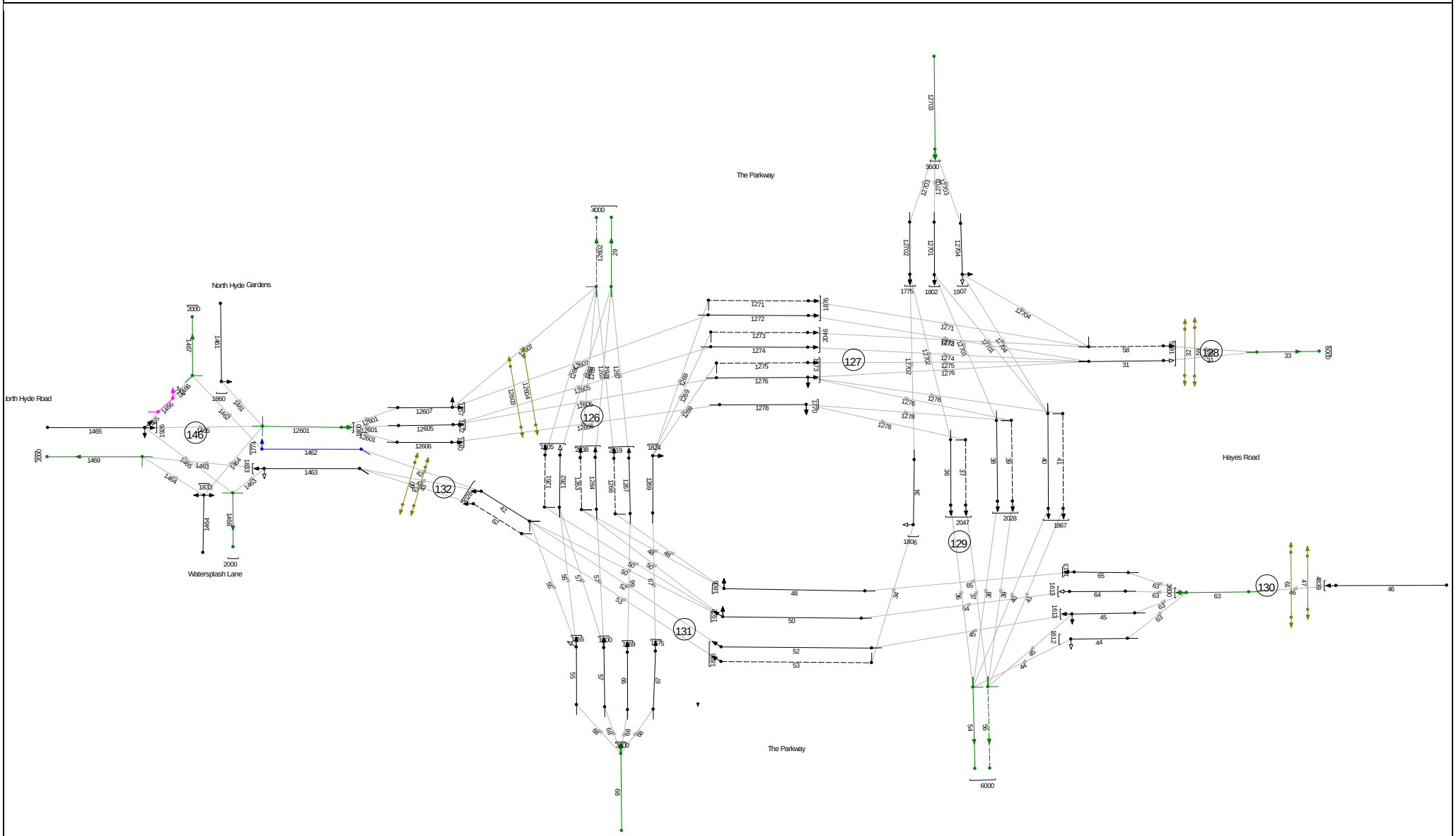


Drawing title: **AM Peak Base 2012 PCUs**	Client: –	SKM COLIN BUCHANAN	Scale: NTS Designed by: LL Drawn by: LL Ckd/Appd: JSB 1st Issued: APR	Full extension: Drg no: **Figure**
	Job Title: **Hyde Park Hayes**			



Drawing title: PM Peak Base 2012 PCUs	Client: –	SKM COLIN BUCHANAN	Scale: NTS
	Job Title: Hyde Park Hayes		Designed by: LL
			Drawn by: LL
			Ckd/Appd: JSB
			1st Issued: APR
			Full extension:
			Drg no: Figure

Network Diagram



<Enter Report 1 Title Here>

PRT File
AM Base

```
1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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          ____________________________________________________


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 ------------------------------------------------------------------------
 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
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 ------------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_AM_MC_4.DAT"  at 18:36  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                 =   8
  NUMBER OF LINKS                 =  70
  NUMBER OF OPTIMISED NODES       =   8
  MAXIMUM NUMBER OF GRAPHIC PLOTS   =   0
  NUMBER OF STEPS IN CYCLE        =  65
  MAXIMUM NUMBER OF SHARED STOPLINES =   2
  MAXIMUM NUMBER OF TIMING POINTS   =   3
  MAXIMUM LINKS AT ANY NODE       =  12


  CORE REQUESTED =  14800 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     65     65     60      2      3      0      1    100    100      0      0      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                       LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                              NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126            7      7
  19)=  10    127            7      7
  20)=  10    128            7      7
  21)=  10    129            7      7
  22)=  10    130            7      7
  23)=  10    131            7      7
  24)=  10    132            7      7
  25)=  10    146            7      7      7

                              NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126            6      6
  27)=  11    127            5      5
  28)=  11    128            6      6
  29)=  11    129            5      5
  30)=  11    130            6      6
  31)=  11    131            5      5
  32)=  11    132            5      6
  33)=  11    146            7      8      8

                              NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE   Sgl/Dbl  S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.   Cycled
  34)=  12    126      1      2     35
  35)=  12    127      1     30     58
  36)=  12    128      1     27     14
  37)=  12    129      1     14     36
  38)=  12    130      1      7     59
```

```
 39)=  12    131      1      0     29
 40)=  12    132      1      7     59
 41)=  12    146      1     18     47      3
```

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS LINK1 NO.	LINK2 % FLOW	LINK1 GIVEWAY COEFFS. ONLY X100	A1 X100	A2 X100				LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
42)=	30	1462	1465	0	0	50	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	22	0	0	0	0	0	31	0	715	0	0

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START STAGE	FIRST GREEN START LAG	FIRST GREEN END STAGE	FIRST GREEN END LAG	SECOND GREEN START STAGE	SECOND GREEN START LAG	SECOND GREEN END STAGE	SECOND GREEN END LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
44)=	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0
45)=	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0
46)=	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
48)=	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0
49)=	31	36	129	2	5	1	0	0	0	0	0	53	0	2047	0	0
50)=	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0
51)=	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0
52)=	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0
53)=	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0
54)=	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0
55)=	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0
56)=	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
57)=	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0
58)=	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
59)=	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0
60)=	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
61)=	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0
62)=	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0
63)=	31	52	131	2	5	1	0	0	0	0	0	63	0	1886	0	0
64)=	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0
65)=	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
66)=	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0
67)=	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0
68)=	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0
69)=	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0
70)=	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
71)=	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
72)=	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
73)=	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0
74)=	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0
75)=	31	64	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
76)=	31	65	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
77)=	31	66	131	1	5	2	0	0	0	0	0	40	0	1969	0	0
78)=	31	67	131	1	5	2	0	0	0	0	0	40	0	1875	0	0
79)=	31	68	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
80)=	31	1261	0	0	0	0	0	0	0	0	0	55	0	0	0	0
81)=	31	1262	126	1	6	2	1	0	0	0	0	55	0	1905	0	0
82)=	31	1263	0	0	0	0	0	0	0	0	0	55	0	0	0	0
83)=	31	1264	126	1	6	2	1	0	0	0	0	55	0	2038	0	0
84)=	31	1266	0	0	0	0	0	0	0	0	0	55	0	0	0	0
85)=	31	1267	126	1	6	2	1	0	0	0	0	55	0	2019	0	0
86)=	31	1269	126	1	6	2	1	0	0	0	0	55	0	1824	0	0
87)=	31	1271	0	0	0	0	0	0	0	0	0	67	0	0	0	0
88)=	31	1272	127	2	5	1	0	0	0	0	0	67	0	1876	0	0
89)=	31	1273	0	0	0	0	0	0	0	0	0	67	0	0	0	0
90)=	31	1274	127	2	5	1	0	0	0	0	0	67	0	2046	0	0
91)=	31	1275	0	0	0	0	0	0	0	0	0	67	0	0	0	0
92)=	31	1276	127	2	5	1	0	0	0	0	0	67	0	1973	0	0
93)=	31	1278	127	2	5	1	0	0	0	0	0	67	0	1770	0	0
94)=	31	1461	146	2	1	3	0	0	0	0	0	200	0	1860	0	0
95)=	31	1462	146	1	0	3	0	0	0	0	0	130	0	1774	0	0
96)=	31	1463	146	1	0	3	6	0	0	0	0	130	0	1833	0	0
97)=	31	1464	146	3	8	1	0	0	0	0	0	200	0	1833	0	0
98)=	31	1465	146	1	0	2	1	0	0	0	0	200	0	1926	0	0
99)=	31	1467	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
100)=	31	1468	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
101)=	31	1469	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
102)=	31	12601	0	0	0	0	0	0	0	0	0	156	0	1800	0	0
103)=	31	12602	0	0	0	0	0	0	0	0	0	200	0	0	0	0
104)=	31	12603	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
105)=	31	12604	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
106)=	31	12605	126	2	6	1	0	0	0	0	0	20	0	1522	0	0
107)=	31	12606	126	2	6	1	0	0	0	0	0	20	0	1640	0	0
108)=	31	12607	126	2	6	1	0	0	0	0	0	20	0	1757	0	0
109)=	31	12701	127	1	5	2	0	0	0	0	0	23	0	1802	0	0
110)=	31	12702	127	1	5	2	0	0	0	0	0	23	0	1775	0	0
111)=	31	12703	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
112)=	31	12704	127	1	5	2	0	0	0	0	0	23	0	1907	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 ..... LINK NO.	ENTRY 1 ..... CRUISE FLOW	ENTRY 1 ..... CRUISE TIME	ENTRY 2 ..... LINK NO.	ENTRY 2 ..... CRUISE FLOW	ENTRY 2 ..... CRUISE TIME	ENTRY 3 ..... LINK NO.	ENTRY 3 ..... CRUISE FLOW	ENTRY 3 ..... CRUISE TIME	ENTRY 4 ..... LINK NO.	ENTRY 4 ..... CRUISE FLOW	ENTRY 4 ..... CRUISE TIME
113)=	32	29	1927	0	1262	593	18	1264	594	18	1267	409	18	12607	331	18
114)=	32	31	497	0	1272	121	9	1274	120	9	1275	136	9	1276	120	9
115)=	32	32	10	0	0	0	4	0	0	0	0	0	0	0	0	0
116)=	32	33	1190	0	31	497	18	58	693	18	0	0	0	0	0	0
117)=	32	34	148	0	12702	148	5	0	0	0	0	0	0	0	0	0
118)=	32	36	445	0	12701	10	5	12702	435	5	0	0	0	0	0	0
119)=	32	37	41	0	1278	41	7	0	0	0	0	0	0	0	0	0
120)=	32	38	570	0	12701	570	5	0	0	0	0	0	0	0	0	0
121)=	32	39	41	0	1276	10	7	1278	31	7	0	0	0	0	0	0
122)=	32	40	290	0	12701	10	5	12704	280	5	0	0	0	0	0	0
123)=	32	41	42	0	1276	42	7	0	0	0	0	0	0	0	0	0
124)=	32	42	661	0	50	420	5	52	10	5	55	231	5	0	0	0
125)=	32	43	10	0	0	0	4	0	0	0	0	0	0	0	0	0
126)=	32	44	148	0	63	148	4	0	0	0	0	0	0	0	0	0
127)=	32	45	250	0	63	250	4	0	0	0	0	0	0	0	0	0
128)=	32	46	959	0	0	0	18	0	0	0	0	0	0	0	0	0
129)=	32	47	10	0	0	0	4	0	0	0	0	0	0	0	0	0
130)=	32	48	131	0	65	131	6	0	0	0	0	0	0	0	0	0
131)=	32	50	430	0	64	430	6	0	0	0	0	0	0	0	0	0
132)=	32	52	10	0	45	10	6	0	0	0	0	0	0	0	0	0
133)=	32	53	148	0	34	148	8	0	0	0	0	0	0	0	0	0
134)=	32	54	1683	0	36	445	18	38	570	18	40	290	18	44	148	18
135)=	32	55	559	0	68	559	4	0	0	0	0	0	0	0	0	0
136)=	32	56	134	0	37	41	18	39	41	18	41	42	18	45	240	18
137)=	32	57	559	0	68	559	4	0	0	0	0	0	0	0	0	0
138)=	32	58	693	0	1271	137	9	1273	136	9	12704	420	11	0	0	0
139)=	32	59	10	0	0	0	4	0	0	0	0	0	0	0	0	0
140)=	32	60	10	0	0	0	4	0	0	0	0	0	0	0	0	0
141)=	32	61	10	0	0	0	4	0	0	0	0	0	0	0	0	0
142)=	32	62	148	0	53	148	5	0	0	0	0	0	0	0	0	0
143)=	32	63	959	0	46	959	1	0	0	0	0	0	0	0	0	0
144)=	32	64	430	0	63	430	4	0	0	0	0	0	0	0	0	0
145)=	32	65	131	0	63	131	4	0	0	0	0	0	0	0	0	0
146)=	32	66	559	0	68	559	4	0	0	0	0	0	0	0	0	0

```
147)=  32     67    559      0     68    559      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2236      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     10      0     50     10      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    593      0     55    328      5     57    265      5      0      0      0      0      0      0
151)=  32   1263     10      0     48     10      7      0      0      0      0      0      0      0      0      0
152)=  32   1264    594      0     57    294      5     66    300      5      0      0      0      0      0      0
153)=  32   1266    121      0     48    121      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    409      0     66    259      5     67    150      5      0      0      0      0      0      0
155)=  32   1269    409      0     67    409      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    137      0   1269    137      8      0      0      0      0      0      0      0      0      0
157)=  32   1272    121      0  12607    121      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    136      0   1269    136      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    120      0  12605    120      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    136      0   1269    136      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    172      0  12605    172      6      0      0      0      0      0      0      0      0      0
162)=  32   1278     72      0  12606     72      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     44      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     71      0     42     71     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    738      0     42    590     13     62    148     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    812      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     33      0   1465     33      2      0      0      0      0      0      0      0      0      0
169)=  32   1467    104      0   1462     71     18   1466     33     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    738      0   1463    728     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601    816      0   1461     44     14   1464     10     17   1465    769     18      0      0      0
173)=  32  12602    141      0   1261     10     18   1263     10     18   1266    121     18      0      0      0
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    292      0  12601    292      2      0      0      0      0      0      0      0      0      0
177)=  32  12606     72      0  12601     72      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    452      0  12601    452      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    590      0  12703    590      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    583      0  12703    583      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   1873      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    700      0  12703    700      2      0      0      0      0      0      0      0      0      0

*****END OF SUBROUTINE TINPUT*****
.

    65 SECOND CYCLE  65 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2      2      35
  127      2     30      58
  128      2     27      14
  129      2     14      36
  130      2      7      59
  131      2      0      29
  132      2      7      59
  146      3     18      47      3

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                             DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
       (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

   29    1926   4000S    52  18.5   2.3    0.5 +  0.5  ( 13.9)    28  ( 11.3)     25              25.3
   31     497   5591S    29   9.5   3.5    0.3 +  0.1  (  5.9)    20  (  1.9)      4              7.8   128     33  14
   32      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0              1.1   128     20  27
   33    1190   6000     20  18.5   0.9    0.0 +  0.1  (  1.8)     1  (  0.1)      0              1.9
   34     148   1806     14   5.5   2.5    0.0 +  0.1  (  1.2)     5  (  0.2)      0              1.3   129     41  14
   36     445   2047S    40   5.5   3.0    0.0 +  0.3  (  4.4)     7  (  0.6)      1              5.1   129     41  14
   37      41    36L     40   7.5   4.8    0.0 +  0.0  (  0.7)    12  (  0.0)      1              0.7   129     41  14
   38     572   2028S    50   5.5   3.6    0.0 +  0.5  (  7.1)    10  (  1.2)      3              8.3   129     41  14
   39      41    38L     50   7.5   5.5    0.0 +  0.0  (  0.8)    13  (  0.1)      3              0.9   129     41  14
   40     290   1867S    30   5.5   2.8    0.0 +  0.2  (  2.7)     6  (  0.3)      1              3.0   129     41  14
   41      42    40L     30   7.5   5.5    0.0 +  0.0  (  0.8)    15  (  0.1)      1              0.9   129     41  14
   42     661   2028S    54   5.5   3.4    0.1 +  0.5  (  7.5)    10  (  1.6)      3              9.1   132     12  59
   43      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0              1.1   132      0   7
   44     148   1612     33   4.5  22.0    0.6 +  0.2  ( 12.5)    68  (  2.2)      2             14.8   129     19  36
   45     249   1613     56   4.5  26.4    1.2 +  0.6  ( 25.5)    85  (  4.7)      4             30.2   129     19  36
   46     959   4839     27  18.5   4.3    0.8 +  0.2  ( 14.5)    29  (  6.0)      6             20.5   130     13  59
   47      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0              1.1   130      0   7
   48     130   1806     15   6.5   9.7    0.2 +  0.1  (  4.7)    80  (  2.0)      2              6.7   131     34   0
   50     430   1922     45   6.5  10.8    0.8 +  0.4  ( 17.5)    88  (  7.2)      8             24.8   131     34   0
   52      10   1886S    17   6.5   7.5    0.0 +  0.0  (  0.3)    65  (  0.1)      1              0.4   131     34   0
   53     148    52L     17   8.5   8.4    0.2 +  0.1  (  4.6)    22  (  0.4)      1              5.0   131     34   0
   54    1684   6000S    30  18.5   0.9    0.0 +  0.2  (  2.9)     1  (  0.2)      0              3.1
   55     559   1855     78   4.5  29.5    2.7 +  1.8  ( 64.0)    98  (  9.3)     11    +        73.3   131      5  29
   56     134    54L     30  18.5   0.9    0.0 +  0.0  (  0.2)     1  (  0.0)      0              0.2
   57     559   1800     81   4.5  31.5    2.8 +  2.0  ( 68.3)   101  (  9.6)     11    +        77.9   131      5  29
   58     693    31L     29  10.7   1.9    0.1 +  0.1  (  3.8)    12  (  1.6)      4              5.4   128     33  14
   59      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0              1.1   128     20  27
   60      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0              1.1   132      0   7
   61      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0              1.1   130      0   7
   62     148    42L     54   5.5   9.6    0.3 +  0.1  (  5.3)    54  (  1.9)      3              7.2   132     12  59
   63     959   3600     27   1.5   1.3    0.0 +  0.2  (  3.2)     8  (  1.2)      5    +         4.4
   64     430   1613     96   4.5  78.5    2.4 +  6.9  (132.3)   160  ( 15.4)     14    +       147.7   129     19  36
   65     130   1613     29   4.5  21.6    0.6 +  0.2  ( 10.8)    64  (  1.9)      2              12.7   129     19  36
   66     559   1969     74   4.5  26.6    2.7 +  1.4  ( 57.6)    92  (  8.8)     10    +        66.4   131      5  29
   67     559   1875     78   4.5  28.9    2.7 +  1.7  ( 62.6)    96  (  9.2)     10    +        71.8   131      5  29
   68    2236   3600     62  18.5   1.8    0.0 +  0.8  ( 11.6)     2  (  1.0)      1             12.6
 1261      10   1262L    71   7.5  32.8    0.1 +  0.0  (  1.3)   114  (  0.1)      4              1.4   126      8  36
 1262     593   1905S    71   5.5   7.9    0.0 +  1.2  ( 17.3)    13  (  1.6)      4             18.9   126      8  36
 1263      10   1264L    66   7.5  34.8    0.1 +  0.0  (  1.4)   108  (  0.1)      1              1.5   126      8  36
 1264     594   2038S    66   5.5   6.5    0.0 +  1.0  ( 14.1)     9  (  1.2)      1             15.2   126      8  36
.

    65 SECOND CYCLE  65 STEPS

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                             DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
       (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

 1266     121   1267L    59   7.5  35.5    1.0 +  0.2  ( 16.7)   107  (  1.4)      5             18.1   126      8  36
 1267     409   2019S    59   5.5   5.8    0.1 +  0.5  (  8.5)    17  (  1.5)      5             10.0   126      8  36
 1269     409   1824     50   5.5   5.1    0.0 +  0.5  (  7.4)     7  (  0.6)      1              8.0   126      8  36
 1271     137   1272L    27   8.5  12.8    0.4 +  0.1  (  6.7)    39  (  0.7)      3              7.3   127     63  30
 1272     121   1876S    27   6.5  11.5    0.3 +  0.1  (  5.2)    76  (  2.0)      3              7.3   127     63  30
 1273     136   1274L    25   8.5  12.5    0.4 +  0.1  (  6.5)    38  (  0.7)      3              7.1   127     63  30
 1274     120   2046S    25   6.5  11.2    0.3 +  0.1  (  5.0)    73  (  2.0)      3              7.0   127     63  30
 1275     136   1276L    31   8.5  12.8    0.4 +  0.1  (  6.6)    39  (  0.7)      4              7.3   127     63  30
 1276     172   1973S    31   6.5  12.2    0.4 +  0.1  (  8.0)    79  (  3.0)      4             11.0   127     63  30
 1278      72   1770      8   6.5   9.8    0.1 +  0.0  (  2.6)    64  (  1.0)      1              3.7   127     63  30
```

1461	44	1860	7	18.5	19.0	0.2	+	0.0	(3.2)	69	(0.6)	1		3.9	146	48	3
1462	71	1774	12	13.5	6.2	0.0	+	0.1	(1.6)	37	(0.5)	0		2.1	146	18	3
1463	738	1833	46	13.5	2.6	0.0	+	0.4	(6.2)	4	(0.5)	1		6.8	146	18	9
1464	20	1833	9	18.5	34.7	0.1	+	0.0	(2.7)	96	(0.4)	0		3.1	146	11	18
1465	812	1926	88	18.5	31.7	3.5	+	3.6	(100.0)	105	(18.0)	17		118.0	146	18	48
1466	32	715	5	2.5	3.2	0.0	+	0.0	(0.3)	0	(0.0)	0		0.3			
1467	104	2000	5	18.5	1.4	0.0	+	0.0	(0.4)	1	(0.0)	0		0.4			
1468	20	2000	1	18.5	1.4	0.0	+	0.0	(0.1)	1	(0.0)	0		0.1			
1469	737	2000	37	18.5	1.9	0.0	+	0.3	(4.1)	2	(0.3)	0		4.5			
12601	815	1800	45	18.3	2.3	0.0	+	0.4	(5.9)	3	(0.5)	0		6.4			
12602	141	29L	52	18.5	1.7	0.0	+	0.0	(0.6)	9	(0.3)	25		0.9			
12603	10	10000	0	4.5	11.7	0.0	+	0.0	(0.4)	57	(0.0)	0		0.4	126	8	35
12604	10	10000	0	4.5	11.7	0.0	+	0.0	(0.4)	57	(0.0)	0		0.4	126	8	35
12605	292	1522	46	2.5	9.4	0.3	+	0.4	(10.3)	29	(1.4)	2		11.7	126	41	2
12606	72	1640	11	2.5	6.8	0.1	+	0.1	(1.8)	21	(0.3)	0		2.0	126	41	2
12607	452	1757	62	2.5	10.8	0.5	+	0.8	(18.4)	35	(2.7)	4	+	21.1	126	41	2
12701	592	1802	89	2.5	42.0	3.2	+	3.7	(97.0)	118	(16.3)	14	+	113.3	127	35	58
12702	584	1775	89	2.5	42.7	3.1	+	3.7	(97.3)	119	(16.3)	14	+	113.6	127	35	58
12703	1873	3600	52	18.5	1.5	0.0	+	0.5	(7.7)	2	(0.6)	1		8.3			
12704	701	1907	99	2.5	84.4	4.0	+	12.4	(232.0)	169	(27.7)	25	+	259.7	127	35	58

TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+ OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY ($/H)	TOTAL COST OF STOPS ($/H)	PENALTY FOR EXCESS QUEUES ($/H)	TOTAL PERFORMANCE INDEX ($/H)	
3278.9	172.7	19.0	38.2	50.0	(1253.2) +	(203.5) +	(0.0) =	1456.7	TOTALS

ROUTE

****

	CRUISE LITRES PER HOUR		DELAY LITRES PER HOUR		STOPS LITRES PER HOUR		TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	182.8	+	101.5	+	92.7	=	377.0

NO. OF ENTRIES TO SUBPT = 1
NO. OF LINKS RECALCULATED= 70

PROGRAM TRANSYT FINISHED

<Enter Report 1 Title Here>

PRT File
PM Base

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1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
 IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION
 ------------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_PM_MC_2.DAT"  at 18:42  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                 =    8
  NUMBER OF LINKS                 =   70
  NUMBER OF OPTIMISED NODES        =    8
  MAXIMUM NUMBER OF GRAPHIC PLOTS   =    8
  NUMBER OF STEPS IN CYCLE         =   66
  MAXIMUM NUMBER OF SHARED STOPLINES =    2
  MAXIMUM NUMBER OF TIMING POINTS   =    3
  MAXIMUM LINKS AT ANY NODE        =   12


  CORE REQUESTED =  14914 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     66     66     60      2      3      0      1    100    100      0      1      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                       LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                              NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126            7      7
  19)=  10    127            7      7
  20)=  10    128            7      7
  21)=  10    129            7      7
  22)=  10    130            7      7
  23)=  10    131            7      7
  24)=  10    132            7      7
  25)=  10    146            7      7      7

                              NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126            6      6
  27)=  11    127            5      5
  28)=  11    128            6      6
  29)=  11    129            5      5
  30)=  11    130            6      6
  31)=  11    131            5      5
  32)=  11    132            5      6
  33)=  11    146            7      8      8

                              NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE   Sgl/Dbl  S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.   Cycled
  34)=  12    126      1     30      7
  35)=  12    127      1     33      2
  36)=  12    128      1     48     35
  37)=  12    129      1      6     30
  38)=  12    130      1      6     59
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 39)=  12    131      1     35      3
 40)=  12    132      1     52     39
 41)=  12    146      1     50      9     35
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LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS LINK1 NO.	LINK2 NO.	GIVEWAY COEFFS. ONLY % FLOW	A1 X100	A2 X100				LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
42)=	30	1462	1465	0	0	50	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	22	0	0	0	0	0	31	0	715	0	0

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START STAGE	LAG	END STAGE	LAG	SECOND GREEN START STAGE	LAG	END STAGE	LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
44)=	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0
45)=	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0
46)=	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
48)=	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0
49)=	31	36	129	2	5	1	0	0	0	0	0	53	0	2047	0	0
50)=	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0
51)=	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0
52)=	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0
53)=	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0
54)=	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0
55)=	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0
56)=	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
57)=	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0
58)=	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
59)=	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0
60)=	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
61)=	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0
62)=	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0
63)=	31	52	131	2	5	1	0	0	0	0	0	63	0	1886	0	0
64)=	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0
65)=	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
66)=	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0
67)=	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0
68)=	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0
69)=	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0
70)=	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
71)=	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
72)=	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
73)=	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0
74)=	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0
75)=	31	64	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
76)=	31	65	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
77)=	31	66	131	1	5	2	0	0	0	0	0	40	0	1969	0	0
78)=	31	67	131	1	5	2	0	0	0	0	0	40	0	1875	0	0
79)=	31	68	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
80)=	31	1261	0	0	0	0	0	0	0	0	0	55	0	0	0	0
81)=	31	1262	126	1	6	2	1	0	0	0	0	55	0	1905	0	0
82)=	31	1263	0	0	0	0	0	0	0	0	0	55	0	0	0	0
83)=	31	1264	126	1	6	2	1	0	0	0	0	55	0	2038	0	0
84)=	31	1266	0	0	0	0	0	0	0	0	0	55	0	0	0	0
85)=	31	1267	126	1	6	2	1	0	0	0	0	55	0	2019	0	0
86)=	31	1269	126	1	6	2	1	0	0	0	0	55	0	1824	0	0
87)=	31	1271	0	0	0	0	0	0	0	0	0	67	0	0	0	0
88)=	31	1272	127	2	5	1	0	0	0	0	0	67	0	1876	0	0
89)=	31	1273	0	0	0	0	0	0	0	0	0	67	0	0	0	0
90)=	31	1274	127	2	5	1	0	0	0	0	0	67	0	2046	0	0
91)=	31	1275	0	0	0	0	0	0	0	0	0	67	0	0	0	0
92)=	31	1276	127	2	5	1	0	0	0	0	0	67	0	1973	0	0
93)=	31	1278	127	2	5	1	0	0	0	0	0	67	0	1770	0	0
94)=	31	1461	146	2	0	3	0	0	0	0	0	200	0	1860	0	0
95)=	31	1462	146	1	0	3	2	0	0	0	0	130	0	1774	0	0
96)=	31	1463	146	1	0	3	8	0	0	0	0	130	0	1833	0	0
97)=	31	1464	146	3	8	1	0	0	0	0	0	200	0	1833	0	0
98)=	31	1465	146	1	0	2	3	0	0	0	0	200	0	1926	0	0
99)=	31	1467	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
100)=	31	1468	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
101)=	31	1469	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
102)=	31	12601	0	0	0	0	0	0	0	0	0	156	0	1800	0	0
103)=	31	12602	0	0	0	0	0	0	0	0	0	200	0	0	0	0
104)=	31	12603	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
105)=	31	12604	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
106)=	31	12605	126	2	6	1	0	0	0	0	0	20	0	1522	0	0
107)=	31	12606	126	2	6	1	0	0	0	0	0	20	0	1640	0	0
108)=	31	12607	126	2	6	1	0	0	0	0	0	20	0	1757	0	0
109)=	31	12701	127	1	5	2	0	0	0	0	0	23	0	1802	0	0
110)=	31	12702	127	1	5	2	0	0	0	0	0	23	0	1775	0	0
111)=	31	12703	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
112)=	31	12704	127	1	5	2	0	0	0	0	0	23	0	1907	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 2 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 3 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 4 ..... LINK NO.	CRUISE FLOW	CRUISE TIME
113)=	32	29	2077	0	1262	592	18	1264	692	18	1267	793	18	0	0	0
114)=	32	31	347	0	1272	80	9	1274	88	9	1275	169	9	1276	10	9
115)=	32	32	10	0	0	0	4	0	0	0	0	0	0	0	0	0
116)=	32	33	1214	0	31	347	18	58	867	18	0	0	0	0	0	0
117)=	32	34	252	0	12702	252	5	0	0	0	0	0	0	0	0	0
118)=	32	36	248	0	12702	248	5	0	0	0	0	0	0	0	0	0
119)=	32	37	98	0	1278	98	7	0	0	0	0	0	0	0	0	0
120)=	32	38	552	0	12701	552	5	0	0	0	0	0	0	0	0	0
121)=	32	39	99	0	1276	49	7	1278	50	7	0	0	0	0	0	0
122)=	32	40	543	0	12701	248	5	12704	295	5	0	0	0	0	0	0
123)=	32	41	99	0	1276	99	7	0	0	0	0	0	0	0	0	0
124)=	32	42	630	0	50	295	5	52	150	5	55	185	5	0	0	0
125)=	32	43	10	0	0	0	4	0	0	0	0	0	0	0	0	0
126)=	32	44	150	0	63	150	4	0	0	0	0	0	0	0	0	0
127)=	32	45	403	0	63	403	4	0	0	0	0	0	0	0	0	0
128)=	32	46	1197	0	0	0	18	0	0	0	0	0	0	0	0	0
129)=	32	47	10	0	0	0	4	0	0	0	0	0	0	0	0	0
130)=	32	48	267	0	65	267	6	0	0	0	0	0	0	0	0	0
131)=	32	50	377	0	64	377	6	0	0	0	0	0	0	0	0	0
132)=	32	52	150	0	45	150	6	0	0	0	0	0	0	0	0	0
133)=	32	53	252	0	34	252	8	0	0	0	0	0	0	0	0	0
134)=	32	54	1646	0	36	248	18	38	552	18	40	543	18	44	150	18
135)=	32	55	767	0	68	767	4	0	0	0	0	0	0	0	0	0
136)=	32	56	396	0	37	98	18	39	99	18	41	99	18	45	253	18
137)=	32	57	702	0	68	702	4	0	0	0	0	0	0	0	0	0
138)=	32	58	867	0	1271	169	9	1273	169	9	12704	529	11	0	0	0
139)=	32	59	10	0	0	0	4	0	0	0	0	0	0	0	0	0
140)=	32	60	10	0	0	0	4	0	0	0	0	0	0	0	0	0
141)=	32	61	10	0	0	0	4	0	0	0	0	0	0	0	0	0
142)=	32	62	252	0	53	252	5	0	0	0	0	0	0	0	0	0
143)=	32	63	1197	0	46	1197	1	0	0	0	0	0	0	0	0	0
144)=	32	64	377	0	63	377	4	0	0	0	0	0	0	0	0	0
145)=	32	65	267	0	63	267	4	0	0	0	0	0	0	0	0	0
146)=	32	66	793	0	68	793	4	0	0	0	0	0	0	0	0	0

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147)=  32     67    507      0     68    507      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2769      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     72      0     50     72      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    592      0     55    582      5     57     10      5      0      0      0      0      0      0
151)=  32   1263    150      0     48    140      7     50     10      7      0      0      0      0      0      0
152)=  32   1264    692      0     57    692      5      0      0      0      0      0      0      0      0      0
153)=  32   1266    127      0     48    127      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    793      0     66    793      5      0      0      0      0      0      0      0      0      0
155)=  32   1269    507      0     67    507      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    169      0   1269    169      8      0      0      0      0      0      0      0      0      0
157)=  32   1272     80      0  12607     80      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    169      0   1269    169      8      0      0      0      0      0      0      0      0      0
159)=  32   1274     88      0  12605     88      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    169      0   1269    169      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    158      0  12605    158      6      0      0      0      0      0      0      0      0      0
162)=  32   1278    148      0  12606    148      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     94      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     23      0     42     23     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    859      0     42    607     13     62    252     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    748      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     10      0   1465     10      2      0      0      0      0      0      0      0      0      0
169)=  32   1467     33      0   1462     23     18   1466     10     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    859      0   1463    849     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601    827      0   1461     94     17   1464     10     17   1465    741     15      0      0      0
173)=  32  12602    702      0   1261     72     18   1263    150     18   1266    127     18  12607    353     18
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    246      0  12601    246      2      0      0      0      0      0      0      0      0      0
177)=  32  12606    148      0  12601    148      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    433      0  12601    433      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    800      0  12703    800      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    500      0  12703    500      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   2124      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    824      0  12703    824      2      0      0      0      0      0      0      0      0      0

                                    GRAPH  PLOT  CARDS
CARD   CARD   LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO.   TYPE    NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.
183)=  35   1271     42      52      53      0       0       0       0       0       0       0       0       0       0

                                      USER-DEFINED ROUTES

CARD   CARD  ROUTE     ROUTE
 NO.   TYPE  NUMBER  DESCRIPTION

184)=  41      1    <Route Name>
185)=  41      2    <Route Name>
186)=  41      3    <Route Name>
187)=  41      4    <Route Name>

CARD   CARD  ROUTE    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO    TYPE  NUMBER   NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.

188)=  42      1      57    1264     29
189)=  42      2      34      53     62
190)=  42      3      45      52     42
191)=  42      4      50      42

*****END OF SUBROUTINE TINPUT*****
.

    66 SECOND CYCLE  66 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2      30       7
  127      2      33       2
  128      2      48      35
  129      2       6      30
  130      2       6      59
  131      2      35       3
  132      2      52      39
  146      3      50       9     35

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

   29    2075   4000S    69  18.5   3.6    1.0 +  0.8  ( 25.7)    41  ( 18.2)     33             43.9
   31     348   5591S    30   9.5   3.9    0.3 +  0.1  (  4.7)    20  (  1.3)      4             5.9   128    54  35
   32      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128    41  48
   33    1218   6000     20  18.5   0.9    0.0 +  0.1  (  1.8)     1  (  0.1)      0             2.0
   34     253   1806     24   5.5   3.3    0.0 +  0.2  (  2.8)     6  (  0.3)      0             3.1   129    35   6
   36     249   2047S    29   5.5   3.2    0.0 +  0.1  (  2.7)     5  (  0.3)      2             2.9   129    35   6
   37      97    36L     29   7.5   9.2    0.2 +  0.1  (  3.3)    71  (  0.7)      2             4.0   129    35   6
   38     551   2028S    56   5.5   4.7    0.1 +  0.5  (  9.1)     8  (  0.9)      2             9.9   129    35   6
   39      99    38L     56   7.5  10.2    0.2 +  0.1  (  3.8)    73  (  0.7)      2             4.5   129    35   6
   40     543   1867S    60   5.5   5.3    0.1 +  0.6  ( 10.3)     9  (  0.9)      3            11.2   129    35   6
   41      99    40L     60   7.5  10.6    0.2 +  0.1  (  3.9)    73  (  0.7)      3             4.7   129    35   6
   42     628   2028S    59   5.5   4.8    0.3 +  0.5  ( 10.7)    19  (  2.8)      3            13.5   132    57  39
   43      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    45  52
   44     151   1612     31   4.5  21.7    0.7 +  0.2  ( 12.6)    60  (  2.0)      2            14.6   129    11  30
   45     402   1613     82   4.5  38.2    2.0 +  2.2  ( 59.7)    97  (  8.7)      9     +      68.4   129    11  30
   46    1197   4839     34  18.5   4.5    1.1 +  0.3  ( 19.1)    31  (  7.8)      8            26.9   130    12  59
   47      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130    65   6
   48     268   1806     35   6.5   5.3    0.1 +  0.3  (  5.1)     9  (  0.4)      0             5.6   131     8  35
   50     376   1922     46   6.5   5.8    0.1 +  0.4  (  7.9)    10  (  0.7)      1             8.6   131     8  35
   52     150   1886S    50   6.5   6.4    0.1 +  0.2  (  3.5)    11  (  0.3)      5             3.8   131     8  35
   53     253    52L     50   8.5  22.0    1.2 +  0.3  ( 21.5)   103  (  2.8)      5            24.3   131     8  35
   54    1645   6000S    34  18.5   1.0    0.0 +  0.2  (  2.9)     1  (  0.2)      0             3.2
   55     764   1855     91   4.5  37.7    3.5 +  4.4  (112.2)   113  ( 14.8)     17     +      127.0   131    40   3
   56     395    54L     34  18.5   1.0    0.0 +  0.0  (  0.7)     1  (  0.1)      0             0.8
   57     703   1800     86   4.5  31.5    3.1 +  2.9  ( 86.1)   103  ( 12.3)     14     +       98.4   131    40   3
   58     869    31L     30  10.7   1.6    0.1 +  0.2  (  3.6)     9  (  1.4)      4             5.1   128    54  35
   59      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128    41  48
   60      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    45  52
   61      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130    65   6
   62     253    42L     59   5.5   3.4    0.0 +  0.2  (  2.9)     4  (  0.3)      3             3.1   132    57  39
   63    1197   3600     33   1.5   1.5    0.1 +  0.2  (  4.9)    11  (  2.3)      8     +       7.2
   64     376   1613     77   4.5  33.4    1.8 +  1.6  ( 48.8)    85  (  7.1)      7            56.0   129    11  30
   65     268   1613     55   4.5  25.1    1.2 +  0.6  ( 26.0)    64  (  3.8)      3            29.9   129    11  30
   66     792   1969     88   4.5  33.2    3.6 +  3.6  (102.3)   106  ( 14.4)     17     +      116.7   131    40   3
   67     509   1875     60   4.5  19.2    1.9 +  0.7  ( 37.6)    76  (  6.6)      8     +      44.2   131    40   3
   68    2769   3600     77  18.5   2.7    0.0 +  1.7  ( 23.6)     3  (  1.9)      2            25.5
 1261      71   1262L    59   7.5   9.7    0.1 +  0.1  (  2.6)    66  (  0.5)      2             3.1   126    36   8
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 1262    589  1905S    59  5.5  4.7   0.1 +  0.6 (  9.8)     7 (  0.9)      2            10.7   126    36  8
 1263    150  1264L    70  7.5 12.5   0.3 +  0.2 (  7.1)    81 (  1.3)      4             8.4   126    36  8
 1264    693  2038S    70  5.5  5.8   0.1 +  1.0 ( 14.5)     9 (  1.3)      4            15.7   126    36  8
.

    66 SECOND CYCLE  66 STEPS

 LINK   FLOW  SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER  INTO  FLOW   OF    PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK         SAT    CRUISE            OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                           DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS        EXCESS  OF ( ) VALUES        1ST    2ND
     (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

 1266    128  1267L    77  7.5 13.8   0.2 +  0.2 (  6.7)    82 (  1.1)      4             7.8   126    36  8
 1267    792  2019S    77  5.5  7.3   0.1 +  1.4 ( 21.4)    11 (  1.8)      4            23.2   126    36  8
 1269    509  1824     47  5.5  4.0   0.0 +  0.4 (  7.0)     7 (  0.8)      3             7.8   126    36  8
 1271    170  1272L    33  8.5 17.0   0.6 +  0.2 ( 11.0)    93 (  2.0)      3            13.0   127     7  33
 1272     80  1876S    33  6.5  8.8   0.1 +  0.1 (  2.6)    18 (  0.3)      3             3.0   127     7  33
 1273    170  1274L    31  8.5 16.3   0.6 +  0.1 ( 10.6)    92 (  1.9)      3            12.5   127     7  33
 1274     88  2046S    31  6.5  6.8   0.1 +  0.1 (  2.2)    13 (  0.3)      3             2.4   127     7  33
 1275    170  1276L    41  8.5 17.2   0.6 +  0.2 ( 11.2)    93 (  2.0)      3            13.2   127     7  33
 1276    158  1973S    41  6.5  7.4   0.1 +  0.2 (  4.3)    14 (  0.5)      3             4.8   127     7  33
 1278    147  1770     20  6.5  6.7   0.1 +  0.1 (  3.6)    13 (  0.4)      0             4.0   127     7  33
 1461     94  1860     12 18.5 15.3   0.3 +  0.1 (  5.5)    61 (  1.2)      1             6.7   146     9  35
 1462     23  1774      3 13.5 11.2   0.1 +  0.0 (  1.0)    63 (  0.2)      0             1.2   146    50  37
 1463    858  1833     52 13.5  3.8   0.3 +  0.5 ( 11.1)    19 (  2.8)      4            13.9   146    50  43
 1464     20  1833      9 18.5 35.3   0.1 +  0.0 (  2.7)    97 (  0.4)      0             3.2   146    43  50
 1465    748  1926     88 18.5 34.5   3.5 +  3.5 (100.4)   108 ( 17.1)     16           117.5   146    50  12
 1466     10   715      1  2.5  3.2   0.0 +  0.0 (  0.1)     0 (  0.0)      0             0.1
 1467     33  2000      2 18.5  1.4   0.0 +  0.0 (  0.1)     1 (  0.0)      0             0.1
 1468     21  2000      1 18.5  1.4   0.0 +  0.0 (  0.1)     1 (  0.0)      0             0.1
 1469    858  2000     43 18.5  2.1   0.0 +  0.4 (  5.3)     2 (  0.4)      0             5.8
12601    827  1800     46 15.7  2.4   0.0 +  0.4 (  6.1)     4 (  0.5)      3             6.6
12602    703    29L    69 18.5  2.0   0.0 +  0.3 (  4.2)     4 (  0.5)     33             4.7
12603     10 10000      0  4.5  7.0   0.0 +  0.0 (  0.3)    42 (  0.0)      0             0.3   126    36  7
12604     10 10000      0  4.5  7.0   0.0 +  0.0 (  0.3)    42 (  0.0)      0             0.3   126    36  7
12605    247  1522     59  2.5 19.6   0.6 +  0.7 ( 18.6)    73 (  3.1)      4    +       21.7   126    13  30
12606    147  1640     33  2.5 14.1   0.3 +  0.2 (  7.9)    55 (  1.4)      2             9.3   126    13  30
12607    433  1757     90  2.5 44.6   1.3 +  4.0 ( 75.3)   122 (  9.0)     12    +       84.3   126    13  30
12701    799  1802     94  2.5 46.7   3.7 +  6.6 (145.6)   126 ( 23.7)     20    +      169.3   127    38   2
12702    501  1775     60  2.5 18.8   1.8 +  0.8 ( 36.2)    75 (  8.8)      7    +       45.0   127    38   2
12703   2124  3600     59 18.5  1.7   0.0 +  0.7 ( 10.2)     2 (  0.8)      1             11.0
12704    824  1907     92  2.5 38.9   3.7 +  5.0 (124.8)   116 ( 22.3)     19    +      147.1   127    38   2

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  3826.2        192.2      19.9        42.3    51.8   (1336.7) + (  222.6)  + (  0.0)  =   1559.4     TOTALS

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                             CRUISE             DELAY             STOPS            TOTALS
                          LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR

FUEL CONSUMPTION PREDICTIONS      214.3        +    108.3        +    101.4        =    424.0

NO. OF ENTRIES TO SUBPT  =   1
NO. OF LINKS RECALCULATED=  70
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9
 - (SECONDS)

  126      2     30      7
  127      2     33      2
  128      2     48     35
  129      2      6     30
  130      2      6     59
  131      2     35      3
  132      2     52     39
  146      3     50      9     35

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  3826.2        192.2      19.9        42.3    51.8   (1336.7) + (  222.6)  + (  0.0)  =   1559.4     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  495
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26
 - (SECONDS)

  126      2     30      7
  127      2     33      2
  128      2     48     35
  129      2      6     30
  130      2      6     59
  131      2     35      3
  132      2     52     39
  146      3     50      9     35

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  3826.2        192.2      19.9        42.3    51.8   (1336.7) + (  222.6)  + (  0.0)  =   1559.4     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  478
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9
 - (SECONDS)

  126      2     30      7
  127      2     33      2
  128      2     48     35
  129      2      6     30
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  130      2      6     59
  131      2     35      3
  132      2     52     39
  146      3     50      9     35

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  3826.2       192.2      19.9        42.3     51.8    (1336.7) + (  222.6)  + (   0.0)   =    1559.4     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  558
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26
 - (SECONDS)

  126      2     30      7
  127      2     33      2
  128      2     48     35
  129      2      6     30
  130      2      6     59
  131      2     35      3
  132      2     52     39
  146      3     50      9     35

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  3826.2       192.2      19.9        42.3     51.8    (1336.7) + (  222.6)  + (   0.0)   =    1559.4     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  548
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9
 - (SECONDS)

  126      2     30      7
  127      2     33      2
  128      2     48     35
  129      2      6     30
  130      2      6     59
  131      2     35      3
  132      2     52     39
  146      3     50      9     35

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  3826.2       192.2      19.9        42.3     51.8    (1336.7) + (  222.6)  + (   0.0)   =    1559.4     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  574
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9   1
 - (SECONDS)

  126      2     30      7
  127      2     33      2
  128      2     48     35
  129      2      6     30
  130      2      6     59
  131      2     35      3
  132      2     52     39
  146      3     50      9     35

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  3826.2       192.2      19.9        42.3     51.8    (1336.7) + (  222.6)  + (   0.0)   =    1559.4     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  574
.

     66 SECOND CYCLE  66 STEPS

FINAL SETTINGS OBTAINED WITH INCREMENTS :-   9  26   9  26   9   1   1
 - (SECONDS)

   NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
    NO   OF STAGES   1       2       3       4       5      6       7       8       9      10

  126      2     30      7
  127      2     33      2
  128      2     48     35
  129      2      6     30
  130      2      6     59
  131      2     35      3
  132      2     52     39
  146      3     50      9     35

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.      NODE   START  START
        LINK          SAT    CRUISE            OVERSAT  OF    STOPS    OF    MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

   29    2075  4000S    69  18.5   3.6    1.0 +  0.8  ( 25.7)    41  ( 18.2)     33             43.9
   31     348  5591S    30   9.5   3.9    0.3 +  0.1  (  4.7)    20  (  1.3)      4             5.9   128     54  35
   32      10 10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128     41  48
   33    1218  6000     20  18.5   0.9    0.0 +  0.1  (  1.8)     1  (  0.1)      0             2.0
   34     253  1806     24   5.5   3.3    0.0 +  0.2  (  2.8)     6  (  0.3)      0             3.1   129     35   6
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  36    249   2047S    29   5.5   3.2    0.0 +  0.1  (  2.7)     5  (  0.3)      2             2.9   129    35   6
  37     97     36L    29   7.5   9.2    0.2 +  0.1  (  3.3)    71  (  0.7)      2             4.0   129    35   6
  38    551   2028S    56   5.5   4.7    0.1 +  0.5  (  9.1)     8  (  0.9)      2             9.9   129    35   6
  39     99     38L    56   7.5  10.2    0.2 +  0.1  (  3.8)    73  (  0.7)      2             4.5   129    35   6
  40    543   1867S    60   5.5   5.3    0.1 +  0.6  ( 10.3)     9  (  0.9)      3            11.2   129    35   6
  41     99     40L    60   7.5  10.6    0.2 +  0.1  (  3.9)    73  (  0.7)      3             4.7   129    35   6
  42    628   2028S    59   5.5   4.8    0.3 +  0.5  ( 10.7)    19  (  2.8)      3            13.5   132    57  39
  43     10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    45  52
  44    151   1612     31   4.5  21.7    0.7 +  0.2  ( 12.6)    60  (  2.0)      2            14.6   129    11  30
  45    402   1613     82   4.5  38.2    2.0 +  2.2  ( 59.7)    97  (  8.7)      9    +       68.4   129    11  30
  46   1197   4839     34  18.5   4.5    1.1 +  0.3  ( 19.1)    31  (  7.8)      8            26.9   130    12  59
  47     10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130    65   6
  48    268   1806     35   6.5   5.3    0.1 +  0.3  (  5.1)     9  (  0.4)      0             5.6   131     8  35
  50    376   1922     46   6.5   5.8    0.1 +  0.4  (  7.9)    10  (  0.7)      1             8.6   131     8  35
  52    150   1886S    50   6.5   6.4    0.1 +  0.2  (  3.5)    11  (  0.3)      5             3.8   131     8  35
  53    253     52L    50   8.5  22.0    1.2 +  0.3  ( 21.5)   103  (  2.8)      5            24.3   131     8  35
  54   1645   6000S     34  18.5   1.0    0.0 +  0.2  (  2.9)     1  (  0.2)      0             3.2
  55    764   1855     91   4.5  37.7    3.5 +  4.4  (112.2)   113  ( 14.8)     17    +      127.0   131    40   3
  56    395     54L    34  18.5   1.0    0.0 +  0.0  (  0.7)     1  (  0.1)      0             0.8
  57    703   1800     86   4.5  31.5    3.1 +  2.9  ( 86.1)   103  ( 12.3)     14    +       98.4   131    40   3
  58    869     31L    30  10.7   1.6    0.1 +  0.2  (  3.6)     9  (  1.4)      4             5.1   128    54  35
  59     10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128    41  48
  60     10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    45  52
  61     10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130    65   6
  62    253     42L    59   5.5   3.4    0.0 +  0.2  (  2.9)     4  (  0.3)      3             3.1   132    57  39
  63   1197   3600     33   1.5   1.5    0.1 +  0.2  (  4.9)    11  (  2.3)      8    +        7.2
  64    376   1613     77   4.5  33.4    1.8 +  1.6  ( 48.8)    85  (  7.1)      7            56.0   129    11  30
  65    268   1613     55   4.5  25.1    1.2 +  0.6  ( 26.0)    64  (  3.8)      3            29.9   129    11  30
  66    792   1969     88   4.5  33.2    3.6 +  3.6  (102.3)   106  ( 14.4)     17    +      116.7   131    40   3
  67    509   1875     60   4.5  19.2    1.9 +  0.7  ( 37.6)    76  (  6.6)      8    +       44.2   131    40   3
  68   2769   3600     77  18.5   2.7    0.0 +  1.7  ( 23.6)     3  (  1.9)      2            25.5
1261     71   1262L    59   7.5   9.7    0.1 +  0.1  (  2.6)    66  (  0.5)      2             3.1   126    36   8
1262    589   1905S    59   5.5   4.7    0.1 +  0.6  (  9.8)     7  (  0.9)      2            10.7   126    36   8
1263    150   1264L    70   7.5  12.5    0.3 +  0.2  (  7.1)    81  (  1.3)      4             8.4   126    36   8
1264    693   2038S    70   5.5   5.8    0.1 +  1.0  ( 14.5)     9  (  1.3)      4            15.7   126    36   8
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    66 SECOND CYCLE  66 STEPS

 LINK   FLOW  SAT  DEGREE  MEAN TIMES  -------DELAY--------  ----STOPS----  ----QUEUE----  PERFORMANCE  EXIT  GREEN TIMES
NUMBER  INTO  FLOW   OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN          INDEX.     NODE  START  START
       LINK        SAT    CRUISE           OVERSAT  OF    STOPS    OF    MAX.  AVERAGE  WEIGHTED SUM          END    END
                             DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
     (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

1266    128   1267L    77  7.5 13.8    0.2 +  0.2  (  6.7)    82  (  1.1)      4             7.8   126    36   8
1267    792   2019S    77  5.5  7.3    0.1 +  1.4  ( 21.4)    11  (  1.8)      4            23.2   126    36   8
1269    509   1824     47  5.5  4.0    0.0 +  0.4  (  7.0)     7  (  0.8)      3             7.8   126    36   8
1271    170   1272L    33  8.5 17.0    0.6 +  0.2  ( 11.0)    93  (  2.0)      3            13.0   127     7  33
1272     80   1876S    33  6.5  8.8    0.1 +  0.1  (  2.6)    18  (  0.3)      3             3.0   127     7  33
1273    170   1274L    31  8.5 16.3    0.6 +  0.1  ( 10.6)    92  (  1.9)      3            12.5   127     7  33
1274     88   2046S    31  6.5  6.8    0.1 +  0.1  (  2.2)    13  (  0.3)      3             2.4   127     7  33
1275    170   1276L    41  8.5 17.2    0.6 +  0.2  ( 11.2)    93  (  2.0)      3            13.2   127     7  33
1276    158   1973S    41  6.5  7.4    0.1 +  0.2  (  4.3)    14  (  0.5)      3             4.8   127     7  33
1278    147   1770     20  6.5  6.7    0.1 +  0.1  (  3.6)    13  (  0.4)      0             4.0   127     7  33
1461     94   1860     12 18.5 15.3    0.3 +  0.1  (  5.5)    61  (  1.2)      1             6.7   146     9  35
1462     23   1774      3 13.5 11.2    0.1 +  0.0  (  1.0)    63  (  0.2)      0             1.2   146    50  37
1463    858   1833     52 13.5  3.8    0.3 +  0.5  ( 11.1)    19  (  2.8)      4            13.9   146    50  43
1464     20   1833      9 18.5 35.3    0.1 +  0.0  (  2.7)    97  (  0.4)      0             3.2   146    43  50
1465    748   1926     88 18.5 34.5    3.5 +  3.5 (100.4)   108  ( 17.1)     16           117.5   146    50  12
1466     10    715      1  2.5  3.2    0.0 +  0.0  (  0.1)     0  (  0.0)      0             0.1
1467     33   2000      2 18.5  1.4    0.0 +  0.0  (  0.1)     1  (  0.0)      0             0.1
1468     21   2000      1 18.5  1.4    0.0 +  0.0  (  0.1)     1  (  0.0)      0             0.1
1469    858   2000     43 18.5  2.1    0.0 +  0.4  (  5.3)     2  (  0.4)      0             5.8
12601   827   1800     46 15.7  2.4    0.0 +  0.4  (  6.1)     4  (  0.5)      3             6.6
12602   703     29L    69 18.5  2.0    0.0 +  0.3  (  4.2)     4  (  0.5)     33             4.7
12603    10  10000      0  4.5  7.0    0.0 +  0.0  (  0.3)    42  (  0.0)      0             0.3   126    36   7
12604    10  10000      0  4.5  7.0    0.0 +  0.0  (  0.3)    42  (  0.0)      0             0.3   126    36   7
12605   247   1522     59  2.5 19.6    0.6 +  0.7  ( 18.6)    73  (  3.1)      4    +        21.7   126    13  30
12606   147   1640     33  2.5 14.1    0.3 +  0.2  (  7.9)    55  (  1.4)      2             9.3   126    13  30
12607   433   1757     90  2.5 44.6    1.3 +  4.0  ( 75.3)   122  (  9.0)     12    +       84.3   126    13  30
12701   799   1802     94  2.5 46.7    3.7 +  6.6 (145.6)   126  ( 23.7)     20    +      169.3   127    38   2
12702   501   1775     60  2.5 18.8    1.8 +  0.8  ( 36.2)    75  (  8.8)      7    +       45.0   127    38   2
12703  2124   3600     59 18.5  1.7    0.0 +  0.7  ( 10.2)     2  (  0.8)      1             11.0
12704   824   1907     92  2.5 38.9    3.7 +  5.0  (124.8)   116  ( 22.3)     19    +      147.1   127    38   2

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL       TOTAL       PENALTY      TOTAL
 DISTANCE        TIME     JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT      SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY       STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)       ($/H)        ($/H)       ($/H)

  3826.2        192.2       19.9        42.3     51.8    (1336.7) + (  222.6)  + (   0.0)   =    1559.4     TOTALS
-------------------------------------------------------------------------------------------------------------------
                                                                                                    ROUTE
   481.5         21.0       22.9         4.2      4.7    ( 126.3) + (   31.8)  + (   0.0)   =     158.1        1
    43.8          3.2       13.8         1.2      0.7    (  27.2) + (    3.4)  + (   0.0)   =      30.5        2
    64.1          6.8        9.5         2.3      2.9    (  73.9) + (   11.9)  + (   0.0)   =      85.8        3
    60.3          2.8       21.4         0.4      0.9    (  18.6) + (    3.5)  + (   0.0)   =      22.1        4


*********************************************************************************************************************************************************
                              CRUISE             DELAY             STOPS             TOTALS
                          LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR

FUEL CONSUMPTION PREDICTIONS      214.3       +    108.3       +    101.4       =    424.0

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  574

CYCLIC FLOW PROFILE GRAPHS
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LINK  1271 FED BY  1269    0    0    0 M.M.E. 1.01
    I
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 2000+
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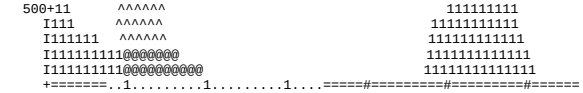

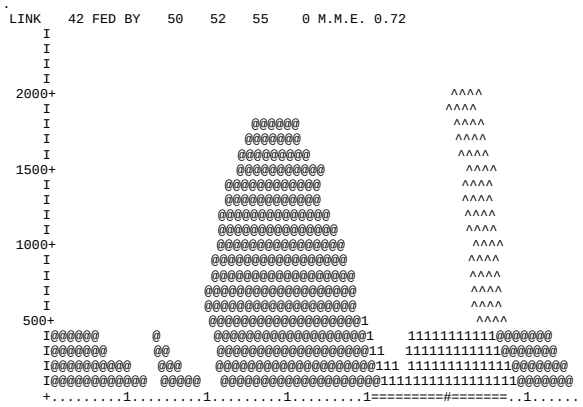

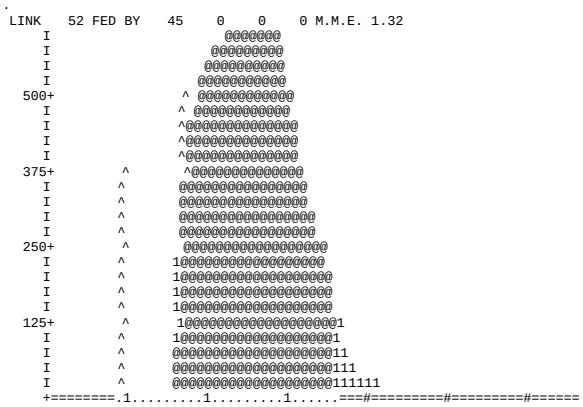

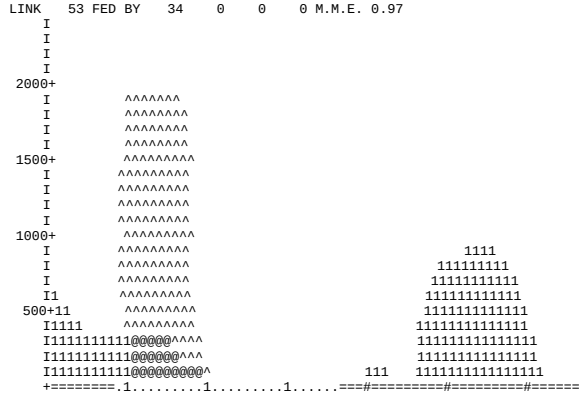

PROGRAM TRANSYT FINISHED

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd AM.vai"
(drive-on-the-left) at 09:54:45 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
ARM B	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
ARM C	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
ARM D	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
ARM E	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base 2012

T15

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	12.35	18.53	12.35
ARM B	15.00	45.00	75.00	5.59	8.38	5.59
ARM C	15.00	45.00	75.00	11.68	17.51	11.68
ARM D	15.00	45.00	75.00	0.47	0.71	0.47
ARM E	15.00	45.00	75.00	0.55	0.83	0.55

DEMAND SET TITLE: Base 2012

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
07.30 - 09.00	ARM A	0.002	0.155	0.784	0.026	0.032
		2.0	153.0	775.0	26.0	32.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.145	0.000	0.796	0.022	0.036
		65.0	0.0	356.0	10.0	16.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.593	0.296	0.002	0.066	0.043
		554.0	276.0	2.0	62.0	40.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.079	0.184	0.632	0.000	0.105
		3.0	7.0	24.0	0.0	4.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.295	0.227	0.409	0.045	0.023
		13.0	10.0	18.0	2.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.30-07.45									
ARM A	12.40	29.39	0.422	- - -	0.0	0.7	10.6	-	0.059
ARM B	5.61	13.70	0.409	- - -	0.0	0.7	9.8	-	0.122
ARM C	11.72	24.18	0.485	- - -	0.0	0.9	13.5	-	0.080
ARM D	0.48	10.80	0.044	- - -	0.0	0.0	0.7	-	0.097
ARM E	0.55	18.32	0.030	- - -	0.0	0.0	0.5	-	0.056

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									
ARM A	14.80	28.79	0.514	- - -	0.7	1.0	15.3	-	0.071
ARM B	6.70	12.55	0.534	- - -	0.7	1.1	16.0	-	0.169
ARM C	13.99	23.98	0.584	- - -	0.9	1.4	20.0	-	0.100
ARM D	0.57	9.77	0.058	- - -	0.0	0.1	0.9	-	0.109
ARM E	0.66	16.92	0.039	- - -	0.0	0.0	0.6	-	0.061

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									
ARM A	18.13	27.99	0.648	- - -	1.0	1.8	25.9	-	0.100
ARM B	8.20	10.99	0.747	- - -	1.1	2.7	36.2	-	0.334
ARM C	17.14	23.72	0.723	- - -	1.4	2.5	35.4	-	0.149
ARM D	0.70	8.40	0.083	- - -	0.1	0.1	1.3	-	0.130
ARM E	0.81	15.04	0.054	- - -	0.0	0.1	0.8	-	0.070

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									
ARM A	18.13	27.97	0.648	- - -	1.8	1.8	27.2	-	0.102
ARM B	8.20	10.96	0.748	- - -	2.7	2.8	41.8	-	0.358
ARM C	17.14	23.71	0.723	- - -	2.5	2.6	38.2	-	0.152
ARM D	0.70	8.37	0.083	- - -	0.1	0.1	1.4	-	0.130
ARM E	0.81	14.99	0.054	- - -	0.1	0.1	0.8	-	0.071

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									
ARM A	14.80	28.77	0.515	- - -	1.8	1.1	16.6	-	0.072
ARM B	6.70	12.52	0.535	- - -	2.8	1.2	19.0	-	0.178
ARM C	13.99	23.96	0.584	- - -	2.6	1.4	22.3	-	0.102
ARM D	0.57	9.72	0.059	- - -	0.1	0.1	1.0	-	0.109
ARM E	0.66	16.85	0.039	- - -	0.1	0.0	0.6	-	0.062

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									
ARM A	12.40	29.36	0.422	- - -	1.1	0.7	11.3	-	0.059
ARM B	5.61	13.67	0.410	- - -	1.2	0.7	11.0	-	0.125
ARM C	11.72	24.17	0.485	- - -	1.4	1.0	14.7	-	0.081
ARM D	0.48	10.75	0.044	- - -	0.1	0.0	0.7	-	0.097
ARM E	0.55	18.26	0.030	- - -	0.0	0.0	0.5	-	0.056

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.0	*
08.15	1.8	**
08.30	1.8	**
08.45	1.1	*
09.00	0.7	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.1	*
08.15	2.7	***
08.30	2.8	***
08.45	1.2	*
09.00	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.9	*
08.00	1.4	*
08.15	2.5	***
08.30	2.6	***
08.45	1.4	*
09.00	1.0	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.0

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1359.9	906.6	106.9	0.08	106.9	0.08
B	615.3	410.2	133.9	0.22	133.9	0.22
C	1285.6	857.1	144.0	0.11	144.1	0.11
D	52.3	34.9	5.9	0.11	5.9	0.11
E	60.6	40.4	3.8	0.06	3.8	0.06
ALL	3373.6	2249.1	394.6	0.12	394.6	0.12

T75

* 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 10:05:10 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd PM.vai"
(drive-on-the-left) at 10:06:26 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
ARM B	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
ARM C	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
ARM D	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
ARM E	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(16.15)AND ENDS(17.45)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base 2012

T15

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	8.36	12.54	8.36
ARM B	15.00	45.00	75.00	6.10	9.15	6.10
ARM C	15.00	45.00	75.00	10.77	16.16	10.77
ARM D	15.00	45.00	75.00	1.24	1.86	1.24
ARM E	15.00	45.00	75.00	1.15	1.72	1.15

DEMAND SET TITLE: Base 2012

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
16.15 - 17.45	ARM A	0.004	0.143	0.827	0.006	0.019
		3.0	96.0	553.0	4.0	13.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.238	0.002	0.701	0.020	0.039
		116.0	1.0	342.0	10.0	19.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.677	0.262	0.002	0.028	0.030
		584.0	226.0	2.0	24.0	26.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.212	0.111	0.657	0.000	0.020
		21.0	11.0	65.0	0.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.239	0.228	0.489	0.022	0.022
		22.0	21.0	45.0	2.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
ARM A	8.39	29.08	0.289	- - -	0.0	0.4	5.9	-	0.048
ARM B	6.12	14.98	0.409	- - -	0.0	0.7	9.8	-	0.112
ARM C	10.82	24.08	0.449	- - -	0.0	0.8	11.7	-	0.075
ARM D	1.24	10.78	0.115	- - -	0.0	0.1	1.9	-	0.105
ARM E	1.15	17.59	0.066	- - -	0.0	0.1	1.0	-	0.061
16.30-16.45									
ARM A	10.02	28.42	0.353	- - -	0.4	0.5	8.0	-	0.054
ARM B	7.31	14.08	0.519	- - -	0.7	1.1	15.2	-	0.147
ARM C	12.92	23.86	0.541	- - -	0.8	1.2	17.0	-	0.091
ARM D	1.48	9.75	0.152	- - -	0.1	0.2	2.6	-	0.121
ARM E	1.38	16.04	0.086	- - -	0.1	0.1	1.4	-	0.068
16.45-17.00									
ARM A	12.28	27.53	0.446	- - -	0.5	0.8	11.7	-	0.065
ARM B	8.95	12.85	0.697	- - -	1.1	2.2	30.0	-	0.248
ARM C	15.82	23.57	0.671	- - -	1.2	2.0	28.4	-	0.127
ARM D	1.82	8.37	0.217	- - -	0.2	0.3	4.0	-	0.152
ARM E	1.69	13.96	0.121	- - -	0.1	0.1	2.0	-	0.081
17.00-17.15									
ARM A	12.28	27.52	0.446	- - -	0.8	0.8	12.0	-	0.066
ARM B	8.95	12.84	0.697	- - -	2.2	2.2	33.3	-	0.256
ARM C	15.82	23.55	0.672	- - -	2.0	2.0	30.1	-	0.129
ARM D	1.82	8.34	0.218	- - -	0.3	0.3	4.1	-	0.153
ARM E	1.69	13.92	0.121	- - -	0.1	0.1	2.1	-	0.082
17.15-17.30									
ARM A	10.02	28.40	0.353	- - -	0.8	0.5	8.4	-	0.055
ARM B	7.31	14.07	0.520	- - -	2.2	1.1	17.5	-	0.151
ARM C	12.92	23.84	0.542	- - -	2.0	1.2	18.6	-	0.092
ARM D	1.48	9.70	0.153	- - -	0.3	0.2	2.8	-	0.122
ARM E	1.38	15.98	0.086	- - -	0.1	0.1	1.4	-	0.068
17.30-17.45									
ARM A	8.39	29.05	0.289	- - -	0.5	0.4	6.2	-	0.048
ARM B	6.12	14.96	0.409	- - -	1.1	0.7	10.9	-	0.114
ARM C	10.82	24.06	0.449	- - -	1.2	0.8	12.7	-	0.076
ARM D	1.24	10.73	0.116	- - -	0.2	0.1	2.0	-	0.106
ARM E	1.15	17.53	0.066	- - -	0.1	0.1	1.1	-	0.061

QUEUE AT ARM A

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

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.7	*
16.45	1.1	*
17.00	2.2	**
17.15	2.2	**
17.30	1.1	*
17.45	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.8	*
16.45	1.2	*
17.00	2.0	**
17.15	2.0	**
17.30	1.2	*
17.45	0.8	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.30	0.1
16.45	0.2
17.00	0.3
17.15	0.3
17.30	0.2
17.45	0.1

QUEUE AT ARM E

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	920.8	613.9	52.3	0.06	52.3	0.06
B	671.7	447.8	116.7	0.17	116.7	0.17
C	1186.5	791.0	118.5	0.10	118.5	0.10
D	136.3	90.8	17.4	0.13	17.4	0.13
E	126.6	84.4	9.0	0.07	9.0	0.07
ALL	3041.9	2027.9	313.9	0.10	314.0	0.10

T75

* 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 10:07:18 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd AM.vai"
(drive-on-the-left) at 10:41:20 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base 2012

T15

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	13.96	20.94	13.96
ARM B	15.00	45.00	75.00	6.28	9.41	6.28
ARM C	15.00	45.00	75.00	0.30	0.45	0.30
ARM D	15.00	45.00	75.00	8.98	13.46	8.98
ARM E	15.00	45.00	75.00	4.41	6.62	4.41

DEMAND SET TITLE: Base 2012

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
07.45 - 09.15	ARM A	0.003	0.219	0.080	0.562	0.136
		3.0	245.0	89.0	628.0	152.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.771	0.002	0.006	0.145	0.076
		387.0	1.0	3.0	73.0	38.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.458	0.042	0.000	0.500	0.000
		11.0	1.0	0.0	12.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.737	0.111	0.100	0.004	0.047
		529.0	80.0	72.0	3.0	34.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.623	0.229	0.006	0.139	0.003
		220.0	81.0	2.0	49.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.02	29.83	0.470	- - -	0.0	0.9	12.8	-	0.063
ARM B	6.30	21.33	0.295	- - -	0.0	0.4	6.1	-	0.066
ARM C	0.30	16.17	0.019	- - -	0.0	0.0	0.3	-	0.063
ARM D	9.01	19.79	0.455	- - -	0.0	0.8	11.9	-	0.092
ARM E	4.43	13.96	0.317	- - -	0.0	0.5	6.7	-	0.104

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									
ARM A	16.74	29.46	0.568	- - -	0.9	1.3	18.9	-	0.078
ARM B	7.52	20.18	0.373	- - -	0.4	0.6	8.6	-	0.079
ARM C	0.36	14.35	0.025	- - -	0.0	0.0	0.4	-	0.071
ARM D	10.76	19.17	0.561	- - -	0.8	1.3	18.1	-	0.118
ARM E	5.29	12.63	0.419	- - -	0.5	0.7	10.3	-	0.136

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									
ARM A	20.50	28.95	0.708	- - -	1.3	2.4	33.6	-	0.116
ARM B	9.21	18.64	0.494	- - -	0.6	1.0	14.0	-	0.105
ARM C	0.44	11.90	0.037	- - -	0.0	0.0	0.6	-	0.087
ARM D	13.18	18.33	0.719	- - -	1.3	2.4	34.1	-	0.189
ARM E	6.48	10.84	0.597	- - -	0.7	1.4	20.1	-	0.224

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									
ARM A	20.50	28.94	0.708	- - -	2.4	2.4	35.7	-	0.118
ARM B	9.21	18.60	0.495	- - -	1.0	1.0	14.6	-	0.106
ARM C	0.44	11.85	0.037	- - -	0.0	0.0	0.6	-	0.088
ARM D	13.18	18.32	0.719	- - -	2.4	2.5	37.2	-	0.194
ARM E	6.48	10.80	0.600	- - -	1.4	1.5	21.8	-	0.231

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									
ARM A	16.74	29.43	0.569	- - -	2.4	1.3	20.7	-	0.080
ARM B	7.52	20.14	0.373	- - -	1.0	0.6	9.3	-	0.080
ARM C	0.36	14.29	0.025	- - -	0.0	0.0	0.4	-	0.072
ARM D	10.76	19.15	0.562	- - -	2.5	1.3	20.5	-	0.121
ARM E	5.29	12.56	0.421	- - -	1.5	0.7	11.6	-	0.139

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									
ARM A	14.02	29.81	0.470	- - -	1.3	0.9	13.7	-	0.064
ARM B	6.30	21.29	0.296	- - -	0.6	0.4	6.5	-	0.067
ARM C	0.30	16.11	0.019	- - -	0.0	0.0	0.3	-	0.063
ARM D	9.01	19.77	0.456	- - -	1.3	0.8	13.1	-	0.094
ARM E	4.43	13.91	0.318	- - -	0.7	0.5	7.3	-	0.106

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.3	*
08.30	2.4	**
08.45	2.4	**
09.00	1.3	*
09.15	0.9	*

QUEUE AT ARM B

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

QUEUE AT ARM 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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	2.4	**
08.45	2.5	***
09.00	1.3	*
09.15	0.8	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.7	*
08.30	1.4	*
08.45	1.5	*
09.00	0.7	*
09.15	0.5	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1537.5	1025.0	135.6	0.09	135.6	0.09
B	691.0	460.6	59.0	0.09	59.0	0.09
C	33.0	22.0	2.5	0.08	2.5	0.08
D	988.3	658.8	135.0	0.14	135.0	0.14
E	485.9	323.9	77.7	0.16	77.7	0.16
ALL	3735.6	2490.4	409.7	0.11	409.8	0.11

T75

* 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 10:43:21 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd PM.vai"
(drive-on-the-left) at 10:43:29 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(17.00)AND ENDS(18.30)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base 2012

T15

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	13.48	20.21	13.48
ARM B	15.00	45.00	75.00	6.45	9.67	6.45
ARM C	15.00	45.00	75.00	1.99	2.98	1.99
ARM D	15.00	45.00	75.00	8.01	12.02	8.01
ARM E	15.00	45.00	75.00	3.01	4.52	3.01

DEMAND SET TITLE: Base 2012

T33

TIME	FROM/T	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
17.00 - 18.30	ARM A	0.002	0.224	0.006	0.609	0.159
		2.0	242.0	7.0	656.0	171.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.659	0.002	0.002	0.227	0.110
		340.0	1.0	1.0	117.0	57.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.333	0.006	0.000	0.654	0.006
		53.0	1.0	0.0	104.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.758	0.120	0.017	0.005	0.100
		486.0	77.0	11.0	3.0	64.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.498	0.141	0.000	0.357	0.004
		120.0	34.0	0.0	86.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	13.53	30.33	0.446	- - -	0.0	0.8	11.7	-	0.059
ARM B	6.47	21.69	0.298	- - -	0.0	0.4	6.2	-	0.065
ARM C	2.00	15.49	0.129	- - -	0.0	0.1	2.2	-	0.074
ARM D	8.04	19.61	0.410	- - -	0.0	0.7	10.0	-	0.086
ARM E	3.02	14.66	0.206	- - -	0.0	0.3	3.8	-	0.086
17.15-17.30									
ARM A	16.15	30.05	0.537	- - -	0.8	1.2	16.8	-	0.072
ARM B	7.73	20.62	0.375	- - -	0.4	0.6	8.7	-	0.077
ARM C	2.38	13.53	0.176	- - -	0.1	0.2	3.1	-	0.090
ARM D	9.60	18.96	0.507	- - -	0.7	1.0	14.7	-	0.106
ARM E	3.61	13.47	0.268	- - -	0.3	0.4	5.3	-	0.101
17.30-17.45									
ARM A	19.78	29.68	0.667	- - -	1.2	2.0	28.1	-	0.100
ARM B	9.47	19.16	0.494	- - -	0.6	1.0	14.0	-	0.103
ARM C	2.92	10.89	0.268	- - -	0.2	0.4	5.3	-	0.125
ARM D	11.76	18.08	0.651	- - -	1.0	1.8	25.6	-	0.156
ARM E	4.42	11.86	0.373	- - -	0.4	0.6	8.5	-	0.134
17.45-18.00									
ARM A	19.78	29.67	0.667	- - -	2.0	2.0	29.6	-	0.101
ARM B	9.47	19.13	0.495	- - -	1.0	1.0	14.5	-	0.104
ARM C	2.92	10.85	0.269	- - -	0.4	0.4	5.5	-	0.126
ARM D	11.76	18.06	0.651	- - -	1.8	1.8	27.4	-	0.158
ARM E	4.42	11.82	0.374	- - -	0.6	0.6	8.9	-	0.135
18.00-18.15									
ARM A	16.15	30.04	0.538	- - -	2.0	1.2	18.2	-	0.073
ARM B	7.73	20.58	0.376	- - -	1.0	0.6	9.3	-	0.078
ARM C	2.38	13.48	0.177	- - -	0.4	0.2	3.3	-	0.090
ARM D	9.60	18.94	0.507	- - -	1.8	1.0	16.3	-	0.108
ARM E	3.61	13.42	0.269	- - -	0.6	0.4	5.7	-	0.102
18.15-18.30									
ARM A	13.53	30.32	0.446	- - -	1.2	0.8	12.4	-	0.060
ARM B	6.47	21.66	0.299	- - -	0.6	0.4	6.6	-	0.066
ARM C	2.00	15.43	0.129	- - -	0.2	0.1	2.3	-	0.074
ARM D	8.04	19.59	0.411	- - -	1.0	0.7	10.8	-	0.087
ARM E	3.02	14.62	0.207	- - -	0.4	0.3	4.0	-	0.086

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.8	*
17.30	1.2	*
17.45	2.0	**
18.00	2.0	**
18.15	1.2	*
18.30	0.8	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.4	
17.30	0.6	*
17.45	1.0	*
18.00	1.0	*
18.15	0.6	*
18.30	0.4	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.1	
17.30	0.2	
17.45	0.4	
18.00	0.4	
18.15	0.2	
18.30	0.1	

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.7	*
17.30	1.0	*
17.45	1.8	**
18.00	1.8	**
18.15	1.0	*
18.30	0.7	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.4	
17.45	0.6	*
18.00	0.6	*
18.15	0.4	
18.30	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1483.8	989.2	116.8	0.08	116.9	0.08
B	710.2	473.5	59.4	0.08	59.4	0.08
C	218.9	145.9	21.6	0.10	21.6	0.10
D	882.3	588.2	104.9	0.12	104.9	0.12
E	331.7	221.1	36.2	0.11	36.2	0.11
ALL	3626.9	2417.9	338.9	0.09	338.9	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 10:44:11 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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RG40 3GA,UK

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd AM.vai"
(drive-on-the-left) at 13:00:24 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	17.234
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	15.216
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: AM PCU Peak

T15

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	9.46	14.19	9.46
ARM B	15.00	45.00	75.00	5.57	8.36	5.57
ARM C	15.00	45.00	75.00	7.94	11.91	7.94

DEMAND SET TITLE: AM PCU Peak

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.30 - 09.00	ARM A	0.000	0.306	0.694
		0.0	232.0	525.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.464	0.000	0.536
		207.0	0.0	239.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.707	0.293	0.000
		449.0	186.0	0.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
       in the s 90.0y as vehicular demand on the link. (=   times per hour)
ARM B: Frequency of use is distributed throughout the period
       in the s 30.0y as vehicular demand on the link. (=   times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.30-07.45										
ARM A	9.50	14.62	0.649		1.2	0.0	1.8	24.7	-	0.187
ARM B	5.60	11.38	0.492		0.4	0.0	0.9	13.3	-	0.169
ARM C	7.97	19.95	0.399		-	0.0	0.7	9.6	-	0.083
07.45-08.00										
ARM A	11.34	14.17	0.801		1.5	1.8	3.6	48.4	-	0.326
ARM B	6.68	10.63	0.628		0.5	0.9	1.6	22.7	-	0.247
ARM C	9.51	19.63	0.485		-	0.7	0.9	13.5	-	0.099
08.00-08.15										
ARM A	13.89	13.57	1.024		1.8	3.6	17.2	172.2	-	1.047
ARM B	8.18	9.91	0.826		0.6	1.6	4.0	51.0	-	0.493
ARM C	11.65	19.14	0.609		-	0.9	1.5	21.8	-	0.132
08.15-08.30										
ARM A	13.89	13.56	1.024		1.8	17.2	25.9	326.0	-	1.819
ARM B	8.18	9.78	0.837		0.6	4.0	4.5	64.9	-	0.590
ARM C	11.65	19.10	0.610		-	1.5	1.5	23.1	-	0.134
08.30-08.45										
ARM A	11.34	14.14	0.802		1.5	25.9	4.8	172.1	-	0.966
ARM B	6.68	10.01	0.668		0.5	4.5	2.1	35.6	-	0.330
ARM C	9.51	19.57	0.486		-	1.5	1.0	14.9	-	0.100
08.45-09.00										
ARM A	9.50	14.61	0.650		1.2	4.8	1.9	31.9	-	0.211
ARM B	5.60	11.26	0.497		0.4	2.1	1.0	16.1	-	0.181
ARM C	7.97	19.91	0.400		-	1.0	0.7	10.4	-	0.084

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.8	**
08.00	3.6	****
08.15	17.2	**********
08.30	25.9	**********
08.45	4.8	*****
09.00	1.9	**

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.9	*
08.00	1.6	**
08.15	4.0	****
08.30	4.5	*****
08.45	2.1	**
09.00	1.0	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	0.9	*
08.15	1.5	**
08.30	1.5	**
08.45	1.0	*
09.00	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1042.0	694.6	775.3	0.74	775.5	0.74
B	613.9	409.3	203.6	0.33	203.7	0.33
C	874.0	582.7	93.2	0.11	93.2	0.11
ALL	2529.9	1686.6	1072.2	0.42	1072.4	0.42

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
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* 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 13:02:51 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd PM.vai"
(drive-on-the-left) at 13:07:42 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	17.234
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	15.216
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: PM PCU Peak

T15

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	10.44	15.66	10.44
ARM B	15.00	45.00	75.00	6.22	9.34	6.22
ARM C	15.00	45.00	75.00	7.41	11.12	7.41

DEMAND SET TITLE: PM PCU Peak

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.302	0.698
		0.0	252.0	583.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.568	0.000	0.432
		283.0	0.0	215.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.723	0.277	0.000
		429.0	164.0	0.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
       in the s 90.0y as vehicular demand on the link. (=   times per hour)
ARM B: Frequency of use is distributed throughout the period
       in the s 30.0y as vehicular demand on the link. (=   times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	LENGTH OF CROSSING (M) (EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	10.48	14.76	0.710	- - 1.2	0.0	2.3	31.4	-	0.218
ARM B	6.25	10.97	0.570	- - 0.4	0.0	1.3	17.8	-	0.205
ARM C	7.44	19.43	0.383	- - -	0.0	0.6	8.9	-	0.083

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	12.51	14.33	0.873	- - 1.5	2.3	5.6	70.5	-	0.447
ARM B	7.46	10.16	0.734	- - 0.5	1.3	2.6	34.4	-	0.349
ARM C	8.88	19.00	0.468	- - -	0.6	0.9	12.7	-	0.099

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	15.32	13.77	1.113	- - 1.8	5.6	32.4	295.5	-	1.656
ARM B	9.14	9.65	0.947	- - 0.6	2.6	8.4	94.1	-	0.869
ARM C	10.88	18.36	0.593	- - -	0.9	1.4	20.4	-	0.133

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	15.32	13.77	1.113	- - 1.8	32.4	56.5	668.1	-	3.411
ARM B	9.14	9.57	0.955	- - 0.6	8.4	10.9	146.3	-	1.265
ARM C	10.88	18.27	0.595	- - -	1.4	1.5	21.6	-	0.135

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	12.51	14.31	0.874	- - 1.5	56.5	33.3	673.6	-	3.229
ARM B	7.46	9.43	0.791	- - 0.5	10.9	4.3	85.9	-	0.752
ARM C	8.88	18.82	0.472	- - -	1.5	0.9	14.1	-	0.101

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	10.48	14.74	0.711	- - 1.2	33.3	2.7	164.3	-	0.798
ARM B	6.25	10.07	0.621	- - 0.4	4.3	1.7	28.9	-	0.286
ARM C	7.44	19.35	0.385	- - -	0.9	0.6	9.7	-	0.084

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	2.3	**
17.15	5.6	******
17.30	32.4	********************************
17.45	56.5	***
18.00	33.3	*********************************
18.15	2.7	***

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.3	*
17.15	2.6	***
17.30	8.4	********
17.45	10.9	**********
18.00	4.3	****
18.15	1.7	**

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.4	*
17.45	1.5	*
18.00	0.9	*
18.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1149.3	766.2	1903.4	1.66	1903.7	1.66
B	685.5	457.0	407.4	0.59	407.5	0.59
C	816.2	544.1	87.4	0.11	87.4	0.11
ALL	2651.0	1767.3	2398.2	0.90	2398.6	0.90

* 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 ==========

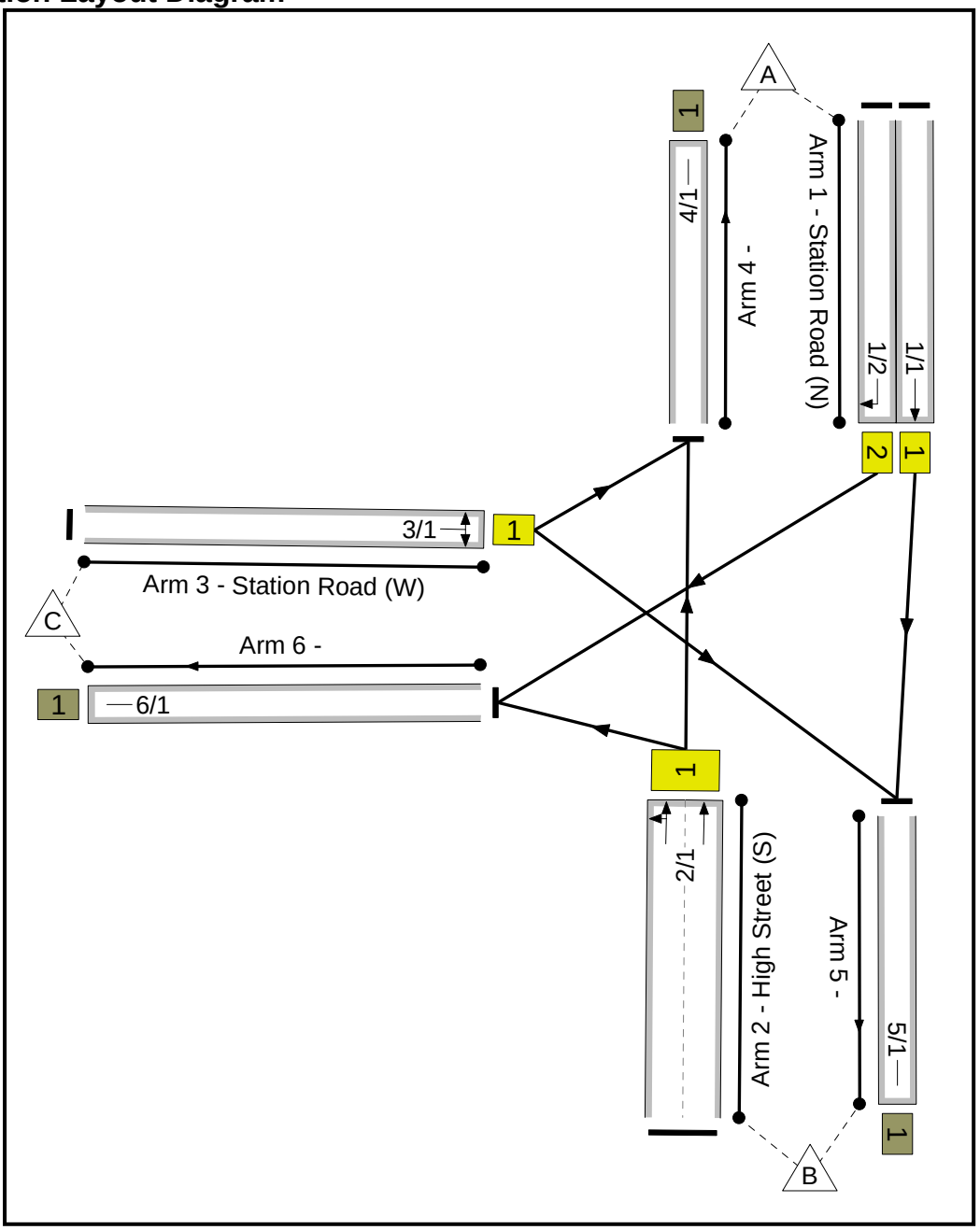
Printed at 13:08:10 on 05/08/2012]

Full Input Data And Results

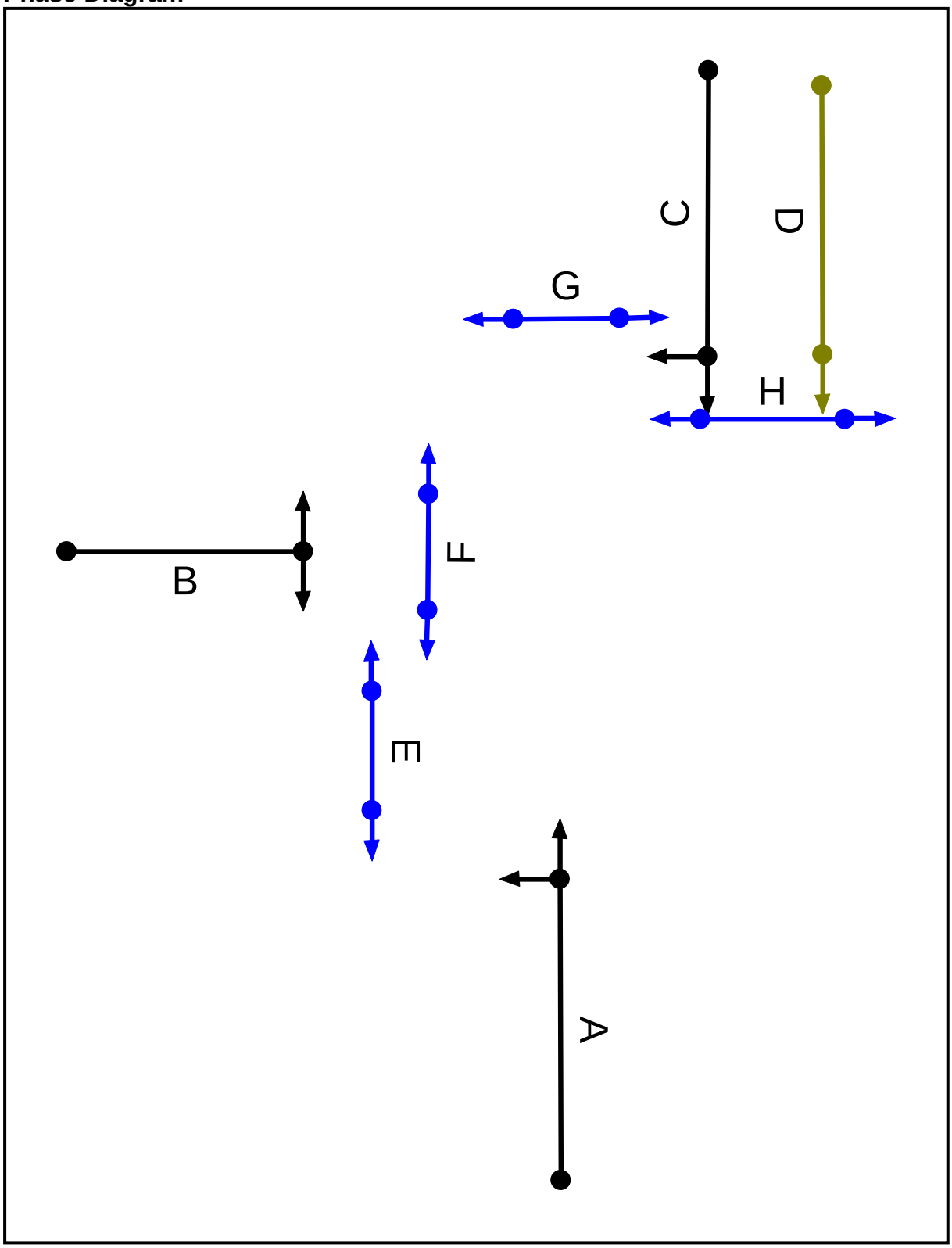
User and Project Details

Project:	
Title:	
Location:	
File name:	Station Rd_High Street.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Filter	C	4	0
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5

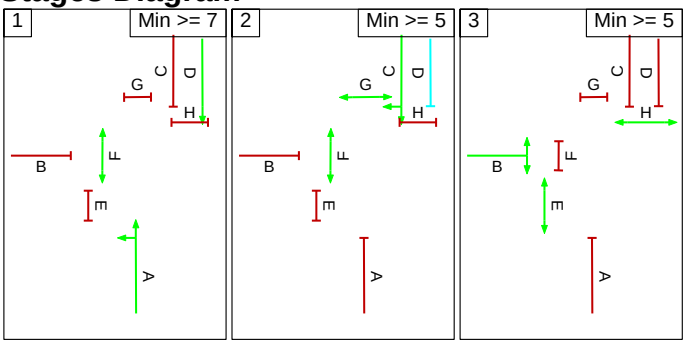
Phase Intergreens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		5	5	-	7	-	8	-
	B	5		5	5	-	5	8	-
	C	8	5		-	10	-	-	5
	D	-	5	-		-	-	-	5
	E	8	-	8	-		-	-	-
	F	-	8	-	-	-		-	-
	G	8	8	-	-	-	-		-
	H	-	-	8	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A D F
2	C F G
3	B E H

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	3	3
3	1	B	Losing	3	3

Prohibited Stage Changes

From Stage \ To Stage	1	2	3
1		8	X
2	8		13
3	8	8	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Road (N) Ahead	U	1	C D	2	3
1/2	Station Road (N) Right	U	1	C	2	3
2/1	High Street (S) Ahead Left	U	2	A	2	3
3/1	Station Road (W) Left Right	U	1	B	2	3
4/1		U	1		2	3
5/1		U	1		2	3
6/1		U	1		2	3

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Road (N) Lane 1)	Link 1 (Station Road (N) Ahead)	Inf	Inf	User	1766	3.25	0.00	Y	Arm 5 Ahead	Inf
1/2 (Station Road (N) Lane 2)	Link 2 (Station Road (N) Right)	Inf	Inf	User	1929	3.25	0.00	Y	Arm 6 Right	Inf
2/1 (High Street (S) Lane 1)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1763	3.25	0.00	Y	Arm 4 Ahead Arm 6 Left	Inf Inf
2/2 (High Street (S) Lane 2)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1877	3.25	0.00	Y	Arm 4 Ahead	Inf
3/1 (Station Road (W) Lane 1)	Link 1 (Station Road (W) Left Right)	Inf	Inf	User	1691	3.25	0.00	Y	Arm 4 Left Arm 5 Right	Inf Inf
4/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak'	08:00	09:00	01:00	
2: 'PM Peak'	17:00	18:00	01:00	

Scenario 1: 'Base 2012 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 1: 'AM Peak'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	534	229	763
	B	353	0	177	530
	C	215	257	0	472
	Tot.	568	791	406	1765

Link Traffic Flows

Arm/Link	Flow Group 1: AM Peak
1/1	534
1/2	229
2/1	530
3/1	472
4/1	568
5/1	791
6/1	406

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 2: 'Base 2012 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 2: 'PM Peak'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	382	214	596
	B	382	0	282	664
	C	174	248	0	422
	Tot.	556	630	496	1682

Link Traffic Flows

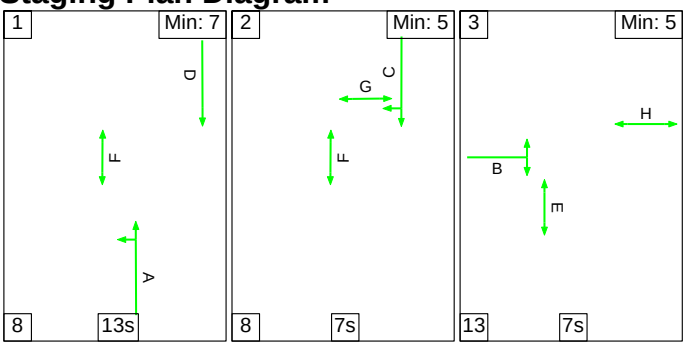
Arm/Link	Flow Group 2: PM Peak
1/1	382
1/2	214
2/1	664
3/1	422
4/1	556
5/1	630
6/1	496

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 1: 'Base 2012 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 1: 'AM Peak'

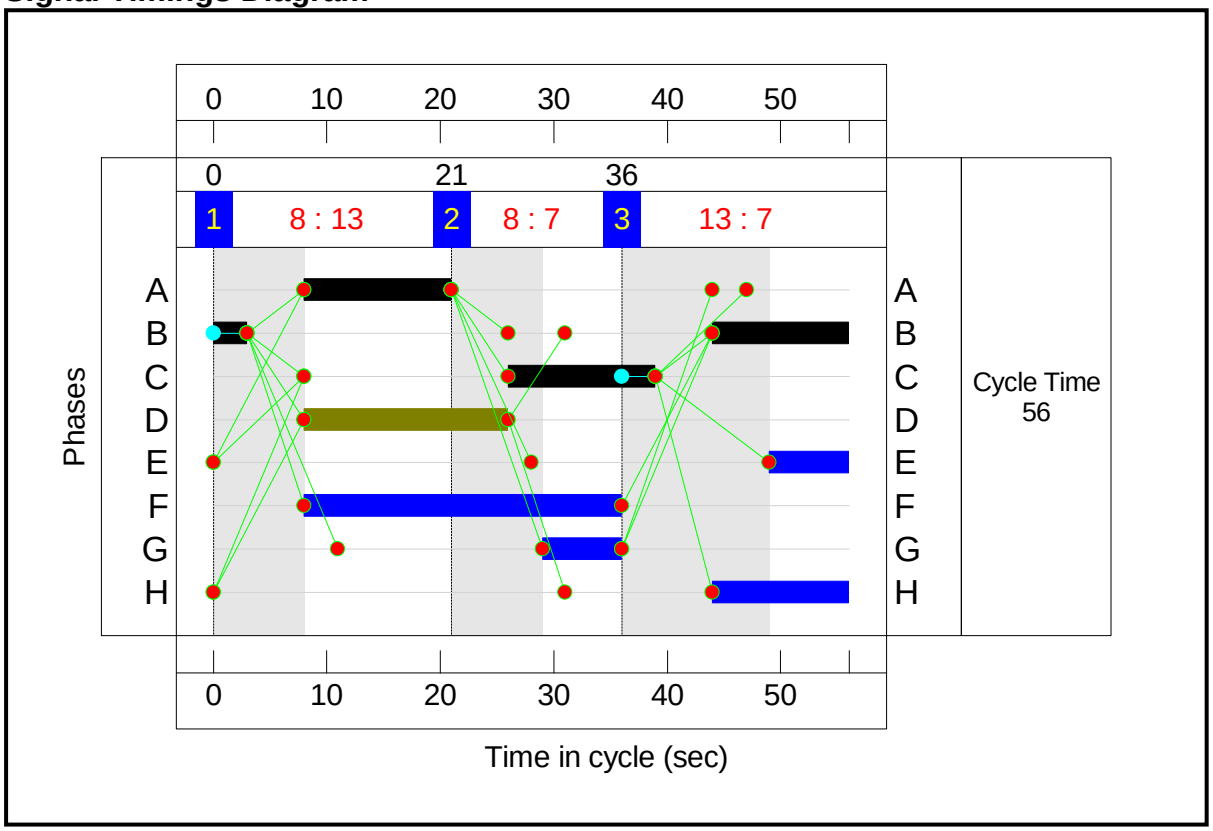
Staging Plan Diagram



Stage Timings

Stage	1	2	3
Duration	13	7	7
Change Point	0	21	36

Signal Timings Diagram



Link Results

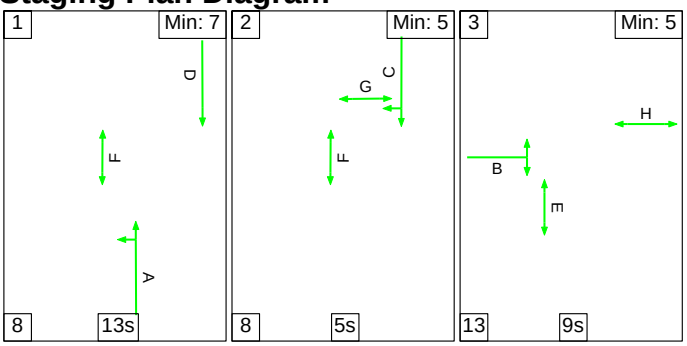
Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	31	18	534	1766	1766	1009	52.9
1/2	Station Road (N) Right	U	N/A	N/A	C		1	13	-	229	1929	1929	482	47.5
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	13	-	530	3640	3640	910	58.2
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	15	-	472	1691	1691	483	97.7
4/1		U	N/A	N/A	-		-	-	-	568	1800	1800	1800	31.6
5/1		U	N/A	N/A	-		-	-	-	791	1800	1800	1800	43.9
6/1		U	N/A	N/A	-		-	-	-	406	1800	1800	1800	22.6

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	534	534	-	-	-	1.1	0.6	-	1.7	11.2	5.0	0.6	5.6	
1/2	229	229	-	-	-	1.1	0.5	-	1.6	25.0	3.0	0.5	3.4	
2/1	530	530	-	-	-	2.7	0.7	-	3.4	23.2	7.2	0.7	7.9	
3/1	472	472	-	-	-	2.6	8.4	-	11.0	84.1	7.2	8.4	15.6	
4/1	568	568	-	-	-	0.0	0.2	-	0.2	1.5	2.6	0.2	2.8	
5/1	791	791	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4	
6/1	406	406	-	-	-	0.0	0.1	-	0.1	1.3	0.0	0.1	0.1	

PRC for Signalled Links (%): -8.5 Total Delay for Signalled Links (pcuHr): 17.68
PRC Over All Links (%): -8.5 Total Delay Over All Links(pcuHr): 18.46 Cycle Time (s): 56

Scenario 2: 'Base 2012 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 2: 'PM Peak'

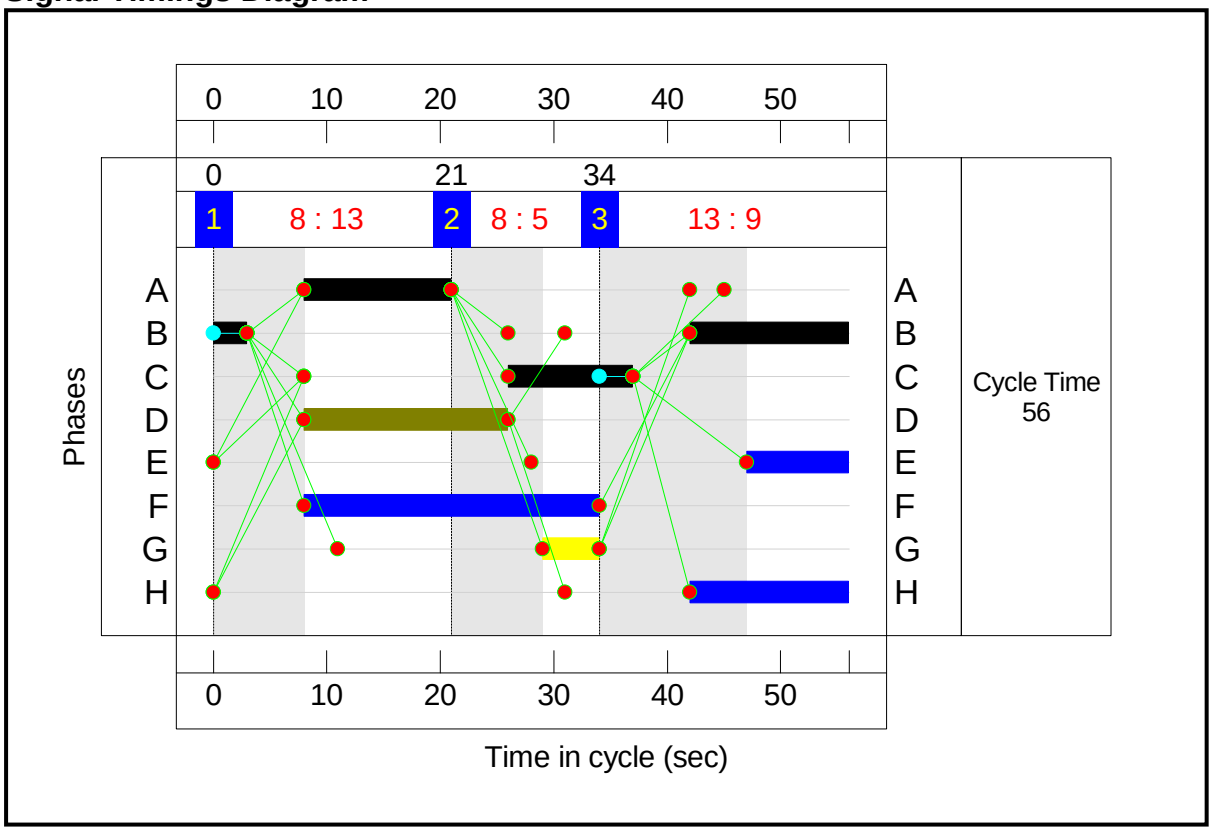
Staging Plan Diagram



Stage Timings

Stage	1	2	3
Duration	13	5	9
Change Point	0	21	34

Signal Timings Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	29	18	382	1766	1766	946	40.4
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	214	1929	1929	413	51.8
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	13	-	664	3640	3640	910	73.0
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	17	-	422	1691	1691	544	77.6
4/1		U	N/A	N/A	-		-	-	-	556	1800	1800	1800	30.9
5/1		U	N/A	N/A	-		-	-	-	630	1800	1800	1800	35.0
6/1		U	N/A	N/A	-		-	-	-	496	1800	1800	1800	27.6

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	382	382	-	-	-	0.8	0.3	-	1.2	10.9	3.5	0.3	3.8	
1/2	214	214	-	-	-	1.2	0.5	-	1.7	28.4	2.9	0.5	3.4	
2/1	664	664	-	-	-	3.6	1.3	-	4.9	26.5	9.4	1.3	10.7	
3/1	422	422	-	-	-	2.0	1.7	-	3.7	31.6	5.9	1.7	7.6	
4/1	556	556	-	-	-	0.0	0.2	-	0.2	1.5	2.1	0.2	2.3	
5/1	630	630	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	
6/1	496	496	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): 15.9 Total Delay for Signalled Links (pcuHr): 11.44

PRC Over All Links (%): 15.9 Total Delay Over All Links(pcuHr): 12.13 Cycle Time (s): 56

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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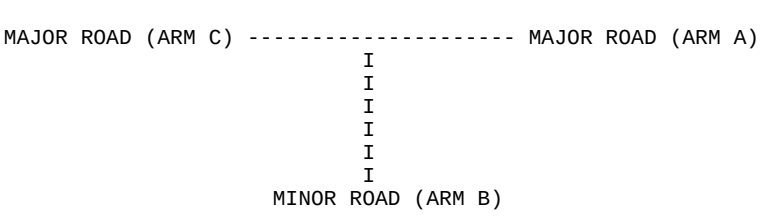
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd AM.vpi"
(drive-on-the-left) at 11:35:23 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 2
LOCATION	: North Hyde Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde 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) 7.64 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)119.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 23.0 M.
- VISIBILITY TO RIGHT	(VB-A) 19.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 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
635.90	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
494.40	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
642.88	0.23	0.23

(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: Base 2012

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	6.53	9.79	6.53
ARM B	15.00	45.00	75.00	0.09	0.13	0.09
ARM C	15.00	45.00	75.00	5.10	7.65	5.10

Demand set: Base 2012

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.079	0.921
		0.0	41.0	481.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.571	0.000	0.429
		4.0	0.0	3.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.988	0.012	0.000
		403.0	5.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Base 2012
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	0.09	7.22	0.012		0.00	0.01	0.2		0.14
C-A	5.06								
C-B	0.06	9.20	0.007		0.00	0.01	0.1		0.11
A-B	0.51								
A-C	6.04								

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	0.10	6.85	0.015		0.01	0.02	0.2		0.15
C-A	6.04								
C-B	0.07	8.91	0.008		0.01	0.01	0.1		0.11
A-B	0.61								
A-C	7.21								

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)
08.15-08.30									
B-AC	0.13	6.32	0.020		0.02	0.02	0.3		0.16
C-A	7.40								
C-B	0.09	8.50	0.011		0.01	0.01	0.2		0.12
A-B	0.75								
A-C	8.83								

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	0.13	6.32	0.020		0.02	0.02	0.3		0.16
C-A	7.40								
C-B	0.09	8.50	0.011		0.01	0.01	0.2		0.12
A-B	0.75								
A-C	8.83								

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	0.10	6.85	0.015		0.02	0.02	0.2		0.15
C-A	6.04								
C-B	0.07	8.91	0.008		0.01	0.01	0.1		0.11
A-B	0.61								
A-C	7.21								

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)
09.00-09.15									
B-AC	0.09	7.22	0.012		0.02	0.01	0.2		0.14
C-A	5.06								
C-B	0.06	9.20	0.007		0.01	0.01	0.1		0.11
A-B	0.51								
A-C	6.04								

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-B

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	9.6	6.4	1.4	0.15	1.4	0.15
C-A	554.7	369.8				
C-B	6.9	4.6	0.8	0.11	0.8	0.11
A-B	56.4	37.6				
A-C	662.1	441.4				
ALL	1289.7	859.8	2.2	0.00	2.2	0.00

* 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 RUN*******

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

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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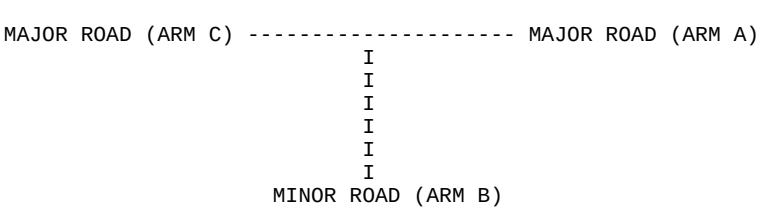
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 08:42:48 on Friday, 10 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 2
LOCATION	: North Hyde Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde 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) 7.64 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)119.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 23.0 M.
- VISIBILITY TO RIGHT	(VB-A) 19.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 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
635.90	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
494.40	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
642.88	0.23	0.23

(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: Base 2012

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

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

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	5.86	8.79	5.86
ARM B	15.00	45.00	75.00	0.60	0.90	0.60
ARM C	15.00	45.00	75.00	4.44	6.66	4.44

Demand set: Base 2012

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
17.00 - 18.30	ARM A	0.000	0.015	0.985
		0.0	7.0	462.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.438	0.000	0.563
		21.0	0.0	27.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.986	0.014	0.000
		350.0	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 DEMAND SET Base 2012
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)
17.00-17.15										
	B-AC	0.60	7.75	0.078		0.00	0.08	1.2		0.14
	C-A	4.39								
	C-B	0.06	9.35	0.007		0.00	0.01	0.1		0.11
	A-B	0.09								
	A-C	5.80								
17.15-17.30										
	B-AC	0.72	7.42	0.097		0.08	0.11	1.6		0.15
	C-A	5.24								
	C-B	0.07	9.09	0.008		0.01	0.01	0.1		0.11
	A-B	0.10								
	A-C	6.92								
17.30-17.45										
	B-AC	0.88	6.95	0.127		0.11	0.14	2.1		0.16
	C-A	6.42								
	C-B	0.09	8.72	0.011		0.01	0.01	0.2		0.12
	A-B	0.13								
	A-C	8.48								
17.45-18.00										
	B-AC	0.88	6.95	0.127		0.14	0.14	2.2		0.16
	C-A	6.42								
	C-B	0.09	8.72	0.011		0.01	0.01	0.2		0.12
	A-B	0.13								
	A-C	8.48								

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-AC	0.72	7.42	0.097		0.14	0.11	1.7		0.15
C-A	5.24								
C-B	0.07	9.09	0.008		0.01	0.01	0.1		0.11
A-B	0.10								
A-C	6.92								

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)
18.15-18.30									
B-AC	0.60	7.75	0.078		0.11	0.09	1.3		0.14
C-A	4.39								
C-B	0.06	9.35	0.007		0.01	0.01	0.1		0.11
A-B	0.09								
A-C	5.80								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	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	66.1	44.0	10.0	0.15	10.0	0.15
C-A	481.7	321.2				
C-B	6.9	4.6	0.8	0.11	0.8	0.11
A-B	9.6	6.4				
A-C	635.9	423.9				
ALL	1200.2	800.2	10.8	0.01	10.8	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 RUN*******

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

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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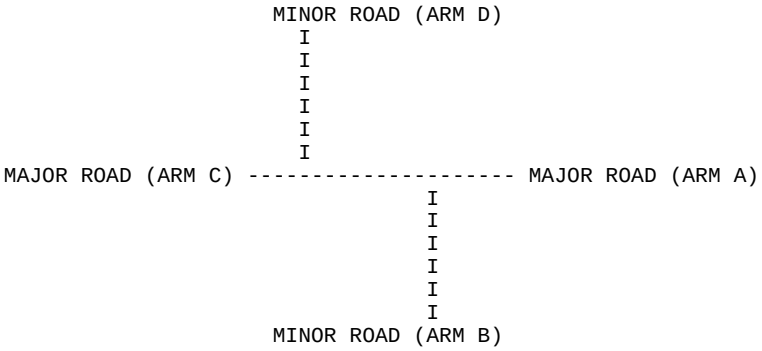
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd AM.vpi"
(drive-on-the-left) at 12:28:57 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 4
LOCATION	: Station Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

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) 8.25 M.	(W) 8.25 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) 60.00 M.	(VA-D) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (2)	YES (2)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 31.0 M.
- VISIBILITY TO RIGHT	(VB-A) 41.0 M.	(VD-C) 26.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.	(WD-A) 3.52 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B	Slope For Opposing
0.16	0.36	0.36	

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D	Slope For Opposing
0.14	0.31	0.31	

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing
620.29	0.21	0.21	0.25	

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing
620.29	0.22	0.22	0.22	

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base 2012

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	6.01	9.02	6.01
ARM B	15.00	45.00	75.00	0.49	0.73	0.49
ARM C	15.00	45.00	75.00	8.49	12.73	8.49
ARM D	15.00	45.00	75.00	1.21	1.82	1.21

Demand set: Base 2012

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.150	0.807	0.044
		0.0	72.0	388.0	21.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.462	0.000	0.538	0.000
		18.0	0.0	21.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.776	0.084	0.000	0.140
		527.0	57.0	0.0	95.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.093	0.000	0.907	0.000
		9.0	0.0	88.0	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-ACD	0.49	9.18	0.053		0.00	0.06	0.8		0.11
A-B	0.90								
A-C	4.87								
A-D	0.26								
AB-CD	(0.26)	8.49	0.031		0.00	0.03	0.5		0.12
AB-C	(5.13)								
D-ABC	1.22	6.48	0.188		0.00	0.23	3.2		0.19
C-D	1.19								
C-A	6.61								
C-B	0.72								
CD-AB	(0.72)	8.86	0.081		0.00	0.08	1.2		0.12
CD-A	(6.72)								

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)
08.00-08.15									
B-ACD	0.58	8.70	0.067		0.06	0.07	1.0		0.12
A-B	1.08								
A-C	5.81								
A-D	0.31								
AB-CD	(0.31)	8.13	0.039		0.03	0.04	0.6		0.13
AB-C	(6.13)								
D-ABC	1.45	6.00	0.242		0.23	0.31	4.5		0.22
C-D	1.42								
C-A	7.90								
C-B	0.85								
CD-AB	(0.85)	8.61	0.099		0.08	0.10	1.5		0.13
CD-A	(8.03)								

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-ACD	0.72	8.03	0.089		0.07	0.10	1.4		0.14
A-B	1.32								
A-C	7.12								
A-D	0.39								
AB-CD	(0.39)	7.64	0.050		0.04	0.05	0.8		0.14
AB-C	(7.50)								
D-ABC	1.78	5.32	0.334		0.31	0.49	7.0		0.28
C-D	1.74								
C-A	9.67								
C-B	1.05								
CD-AB	(1.05)	8.27	0.127		0.10	0.13	1.9		0.14
CD-A	(9.83)								

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-ACD	0.72	8.03	0.089		0.10	0.10	1.5		0.14
A-B	1.32								
A-C	7.12								
A-D	0.39								
AB-CD	(0.39)	7.64	0.050		0.05	0.05	0.8		0.14
AB-C	(7.51)								
D-ABC	1.78	5.32	0.334		0.49	0.50	7.4		0.28
C-D	1.74								
C-A	9.67								
C-B	1.05								
CD-AB	(1.05)	8.27	0.127		0.13	0.13	1.9		0.14
CD-A	(9.84)								

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-ACD	0.58	8.70	0.067		0.10	0.07	1.1		0.12
A-B	1.08								
A-C	5.81								
A-D	0.31								
AB-CD	(0.31)	8.13	0.039		0.05	0.04	0.6		0.13
AB-C	(6.13)								
D-ABC	1.45	6.00	0.242		0.50	0.33	5.1		0.22
C-D	1.42								
C-A	7.90								
C-B	0.85								
CD-AB	(0.85)	8.61	0.099		0.13	0.10	1.5		0.13
CD-A	(8.03)								

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-ACD	0.49	9.18	0.053		0.07	0.06	0.9		0.12
A-B	0.90								
A-C	4.87								
A-D	0.26								
AB-CD	(0.26)	8.49	0.031		0.04	0.03	0.5		0.12
AB-C	(5.13)								
D-ABC	1.22	6.48	0.188		0.33	0.23	3.6		0.19
C-D	1.19								
C-A	6.61								
C-B	0.72								
CD-AB	(0.72)	8.86	0.081		0.10	0.08	1.2		0.12
CD-A	(6.73)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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 AB-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 D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.2

QUEUE FOR STREAM CD-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-ACD	53.7	35.8	6.7	0.13	6.7	0.13
A-B	99.1	66.1				
A-C	534.1	356.0				
A-D	28.9	19.3				
AB-CD	(28.9)	(19.3)	3.6	0.12	3.6	0.12
AB-C	(562.9)	(375.3)				
D-ABC	133.5	89.0	30.9	0.23	30.9	0.23
C-D	130.8	87.2				
C-A	725.4	483.6				
C-B	78.5	52.3				
CD-AB	(78.5)	(52.3)	9.2	0.12	9.2	0.12
CD-A	(737.7)	(491.8)				
ALL	1783.8	1189.2	50.4	0.03	50.4	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 RUN*******

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

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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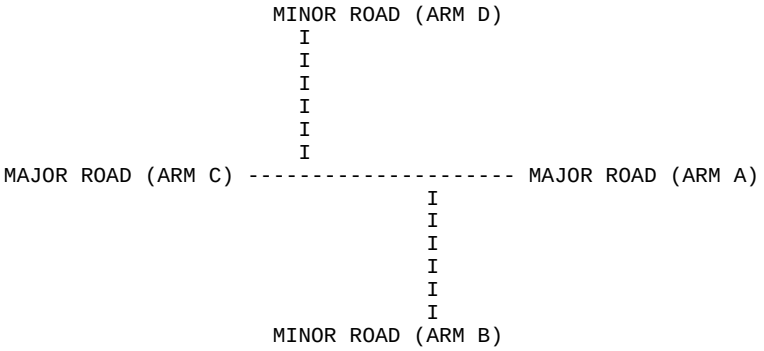
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 12:30:22 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 4
LOCATION	: Station Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

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) 8.25 M.	(W) 8.25 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) 60.00 M.	(VA-D) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (2)	YES (2)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 31.0 M.
- VISIBILITY TO RIGHT	(VB-A) 41.0 M.	(VD-C) 26.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.	(WD-A) 3.52 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B	Slope For Opposing
0.16	0.36	0.36	

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D	Slope For Opposing
0.14	0.31	0.31	

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing
620.29	0.21	0.21	0.25	

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing
620.29	0.22	0.22	0.22	

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base 2012

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.22	9.34	6.22
ARM B	15.00	45.00	75.00	1.15	1.72	1.15
ARM C	15.00	45.00	75.00	7.25	10.88	7.25
ARM D	15.00	45.00	75.00	0.60	0.90	0.60

Demand set: Base 2012

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.032	0.928	0.040
		0.0	16.0	462.0	20.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.587	0.000	0.413	0.000
		54.0	0.0	38.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.826	0.026	0.000	0.148
		479.0	15.0	0.0	86.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.042	0.000	0.958	0.000
		2.0	0.0	46.0	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-ACD	1.15	8.77	0.132		0.00	0.15	2.2		0.13
A-B	0.20								
A-C	5.80								
A-D	0.25								
AB-CD	(0.25)	8.76	0.029		0.00	0.03	0.4		0.12
AB-C	(6.27)								
D-ABC	0.60	6.48	0.093		0.00	0.10	1.5		0.17
C-D	1.08								
C-A	6.01								
C-B	0.19								
CD-AB	(0.19)	8.82	0.021		0.00	0.02	0.3		0.12
CD-A	(6.04)								

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-ACD	1.38	8.29	0.166		0.15	0.20	2.9		0.14
A-B	0.24								
A-C	6.92								
A-D	0.30								
AB-CD	(0.30)	8.45	0.035		0.03	0.04	0.5		0.12
AB-C	(7.49)								
D-ABC	0.72	6.01	0.120		0.10	0.13	2.0		0.19
C-D	1.29								
C-A	7.18								
C-B	0.22								
CD-AB	(0.22)	8.56	0.026		0.02	0.03	0.4		0.12
CD-A	(7.21)								

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)
17.15-17.30									
B-ACD	1.69	7.62	0.221		0.20	0.28	4.1		0.17
A-B	0.29								
A-C	8.48								
A-D	0.37								
AB-CD	(0.37)	8.03	0.046		0.04	0.05	0.7		0.13
AB-C	(9.17)								
D-ABC	0.88	5.37	0.164		0.13	0.19	2.8		0.22
C-D	1.58								
C-A	8.79								
C-B	0.28								
CD-AB	(0.28)	8.20	0.034		0.03	0.03	0.5		0.13
CD-A	(8.83)								

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-ACD	1.69	7.62	0.221		0.28	0.28	4.2		0.17
A-B	0.29								
A-C	8.48								
A-D	0.37								
AB-CD	(0.37)	8.03	0.046		0.05	0.05	0.7		0.13
AB-C	(9.18)								
D-ABC	0.88	5.37	0.164		0.19	0.19	2.9		0.22
C-D	1.58								
C-A	8.79								
C-B	0.28								
CD-AB	(0.28)	8.20	0.034		0.03	0.03	0.5		0.13
CD-A	(8.83)								

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-ACD	1.38	8.29	0.166		0.28	0.20	3.1		0.14
A-B	0.24								
A-C	6.92								
A-D	0.30								
AB-CD	(0.30)	8.45	0.035		0.05	0.04	0.5		0.12
AB-C	(7.49)								
D-ABC	0.72	6.01	0.120		0.19	0.14	2.1		0.19
C-D	1.29								
C-A	7.18								
C-B	0.22								
CD-AB	(0.22)	8.56	0.026		0.03	0.03	0.4		0.12
CD-A	(7.21)								

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)
18.00-18.15									
B-ACD	1.15	8.77	0.132		0.20	0.15	2.4		0.13
A-B	0.20								
A-C	5.80								
A-D	0.25								
AB-CD	(0.25)	8.76	0.029		0.04	0.03	0.4		0.12
AB-C	(6.28)								
D-ABC	0.60	6.47	0.093		0.14	0.10	1.6		0.17
C-D	1.08								
C-A	6.01								
C-B	0.19								
CD-AB	(0.19)	8.82	0.021		0.03	0.02	0.3		0.12
CD-A	(6.04)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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

QUEUE FOR STREAM AB-CD

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-ABC

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

QUEUE FOR STREAM CD-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-ACD	126.6	84.4	18.8	0.15	18.8	0.15
A-B	22.0	14.7				
A-C	635.9	423.9				
A-D	27.5	18.4				
AB-CD	(27.5)	(18.4)	3.3	0.12	3.3	0.12
AB-C	(688.1)	(458.8)				
D-ABC	66.1	44.0	12.8	0.19	12.8	0.19
C-D	118.4	78.9				
C-A	659.3	439.5				
C-B	20.6	13.8				
CD-AB	(20.6)	(13.8)	2.4	0.12	2.4	0.12
CD-A	(662.1)	(441.4)				
ALL	1676.5	1117.7	37.4	0.02	37.4	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 RUN*******

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

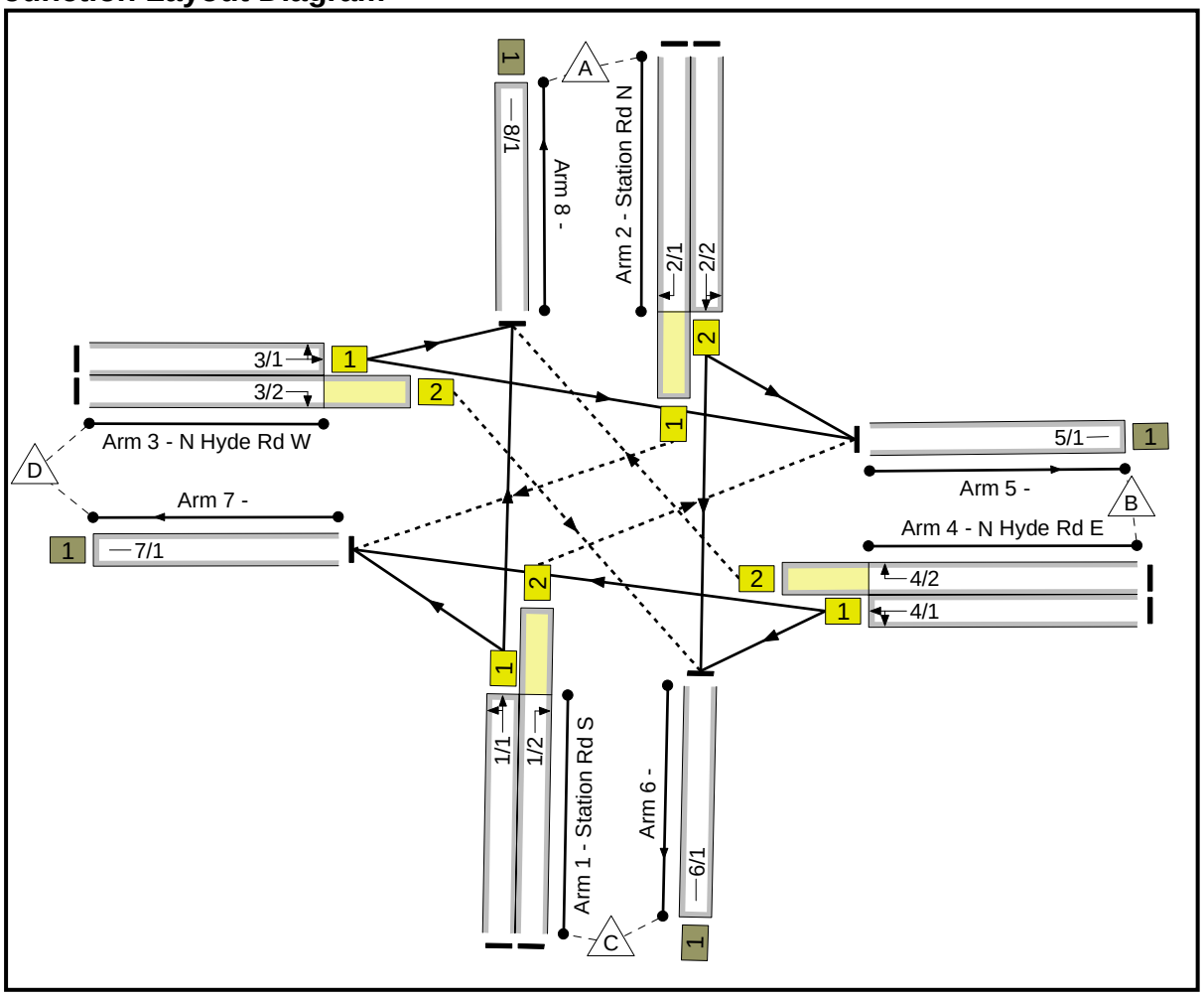
Printed at 12:30:53 on 05/08/2012]

Full Input Data And Results

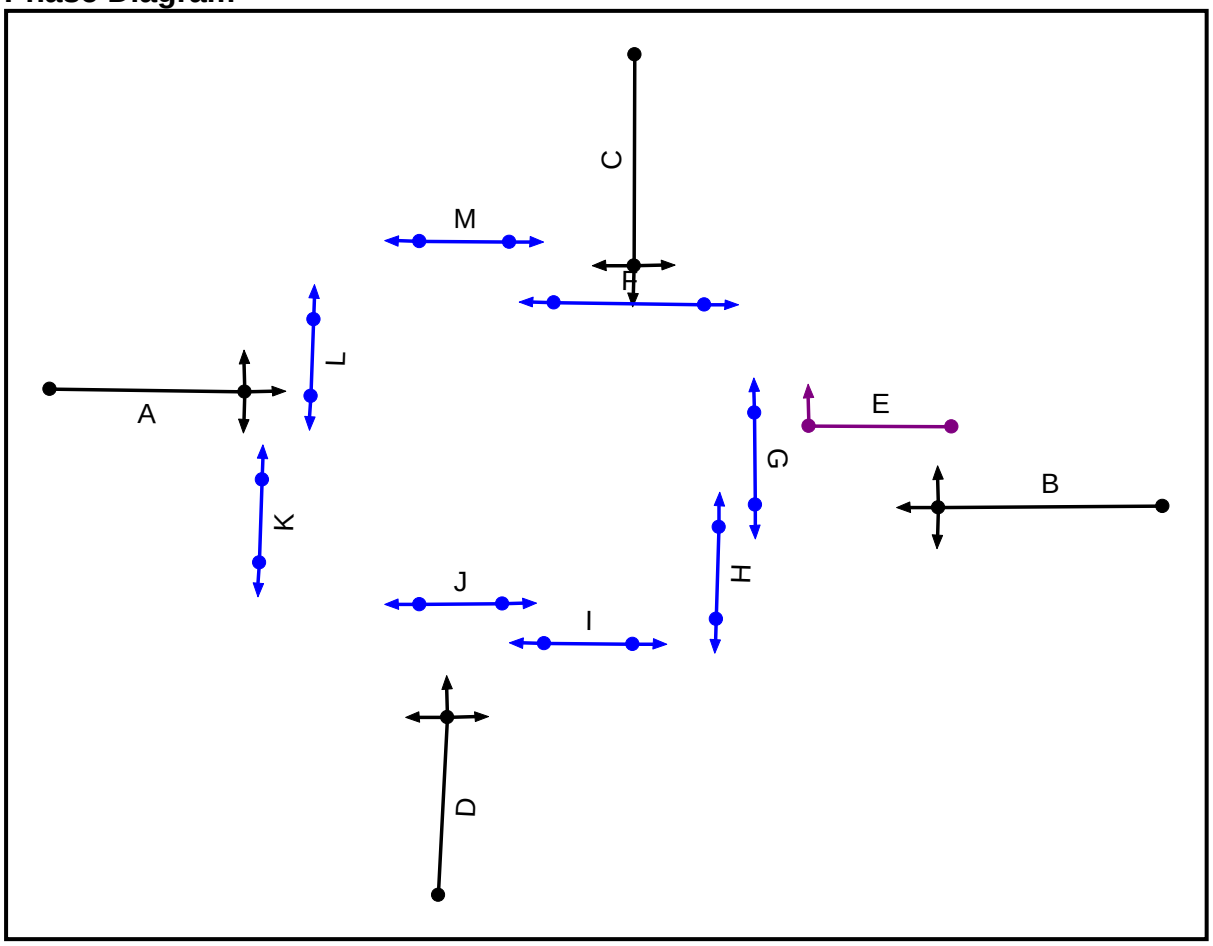
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10AM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		1	1
G	Pedestrian		1	1
H	Pedestrian		1	1
I	Pedestrian		4	4
J	Pedestrian		1	1
K	Pedestrian		4	4
L	Pedestrian		1	1
M	Pedestrian		4	4

Full Input Data And Results

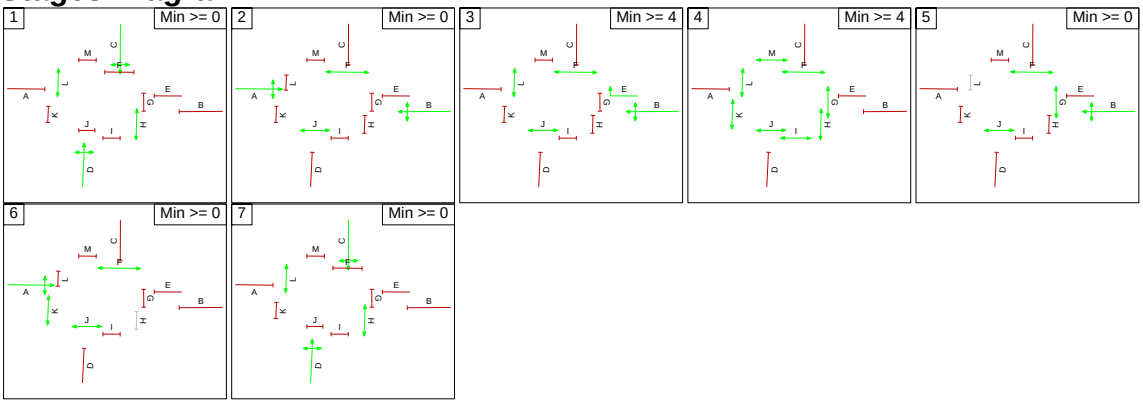
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	6	5	-	9	-	10	-	-	5	10
	B	-		6	6	-	-	-	5	10	-	10	-	10
	C	7	7		-	5	5	10	-	9	-	10	-	-
	D	7	7	-		5	-	10	-	-	5	10	-	10
	E	7	-	6	6		-	5	5	-	-	-	-	10
	F	-	-	9	-	-		-	-	-	-	-	-	-
	G	8	-	8	8	8	-		-	-	-	-	-	-
	H	-	10	-	-	10	-	-		-	-	-	-	-
	I	9	9	9	-	-	-	-	-		-	-	-	-
	J	-	-	-	9	-	-	-	-	-		-	-	-
	K	-	8	8	8	-	-	-	-	-	-		-	-
	L	9	-	-	-	-	-	-	-	-	-	-		-
	M	8	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	C D H L
2	A B F J
3	B E F J L
4	F G H I J K L M
5	B F G J
6	A F J K
7	C D H L

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

From Stage \ To Stage	1	2	3	4	5	6	7
1		10	10	10	10	10	0
2	9		5	10	9	10	9
3	9	9		10	5	10	9
4	9	10	10		10	9	9
5	9	8	8	10		10	9
6	9	8	X	10	9		9
7	0	10	10	10	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Base 2012 AM'	08:00	09:00	01:00	

Scenario 1: 'Base 2012 AM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 1: 'Base 2012 AM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	108	344	76	528
	B	163	0	267	350	780
	C	263	133	0	101	497
	D	74	208	68	0	350
	Tot.	500	449	679	527	2155

Link Traffic Flows

Arm/Link	Flow Group 1: Base 2012 AM
1/1	364
1/2	133
2/1	76
2/2	452
3/1	282
3/2	68
4/1	617
4/2	163
5/1	449
6/1	679
7/1	527
8/1	500

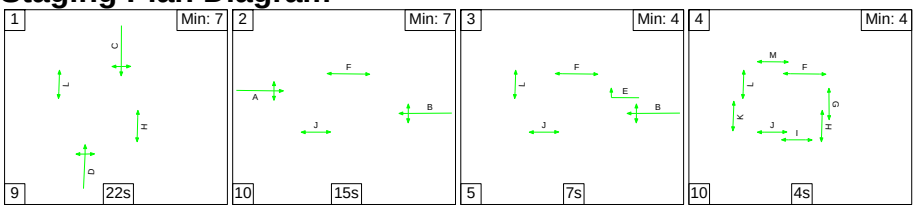
Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 1: 'Base 2012 AM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 1: 'Base 2012 AM'

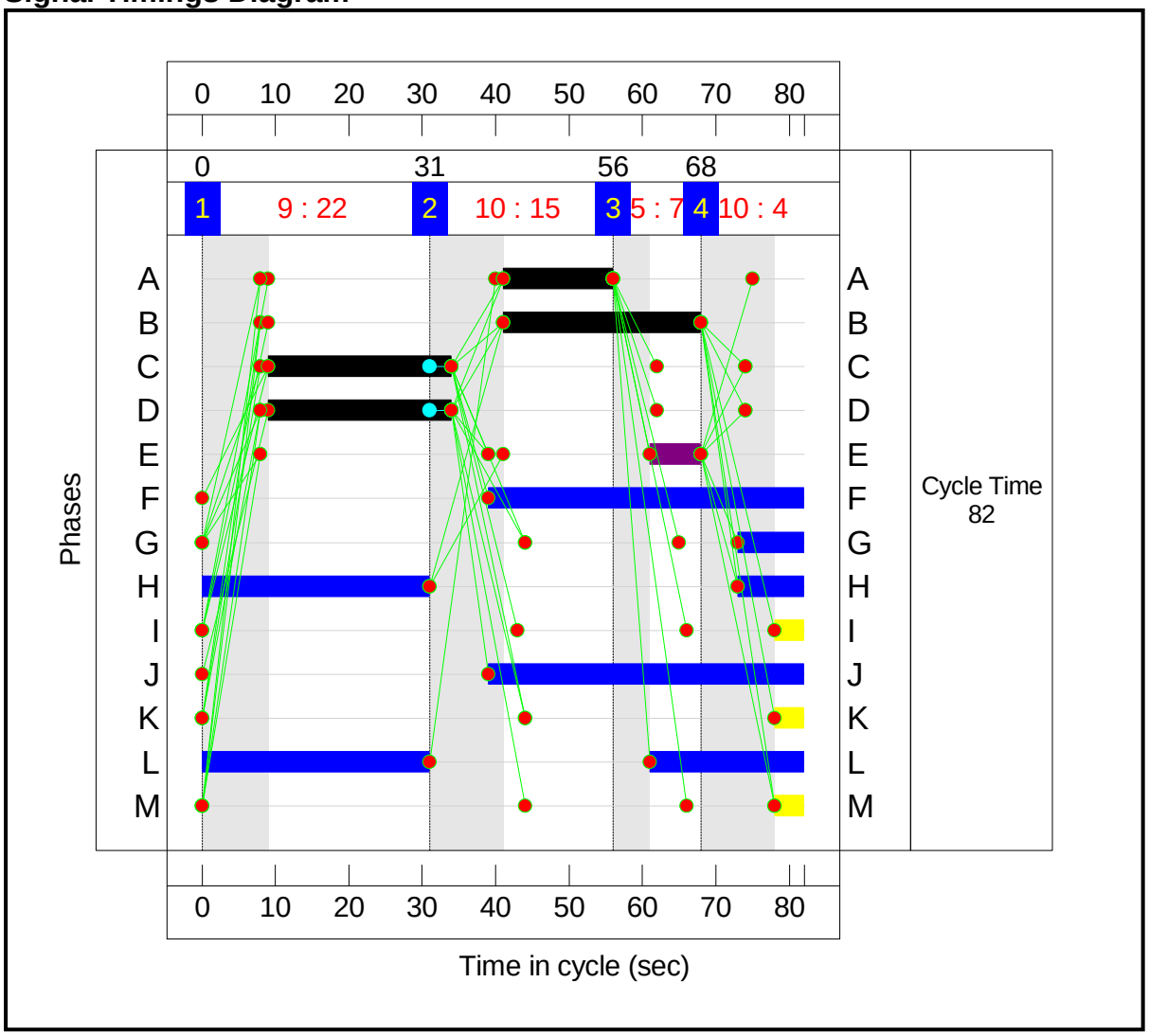
Staging Plan Diagram



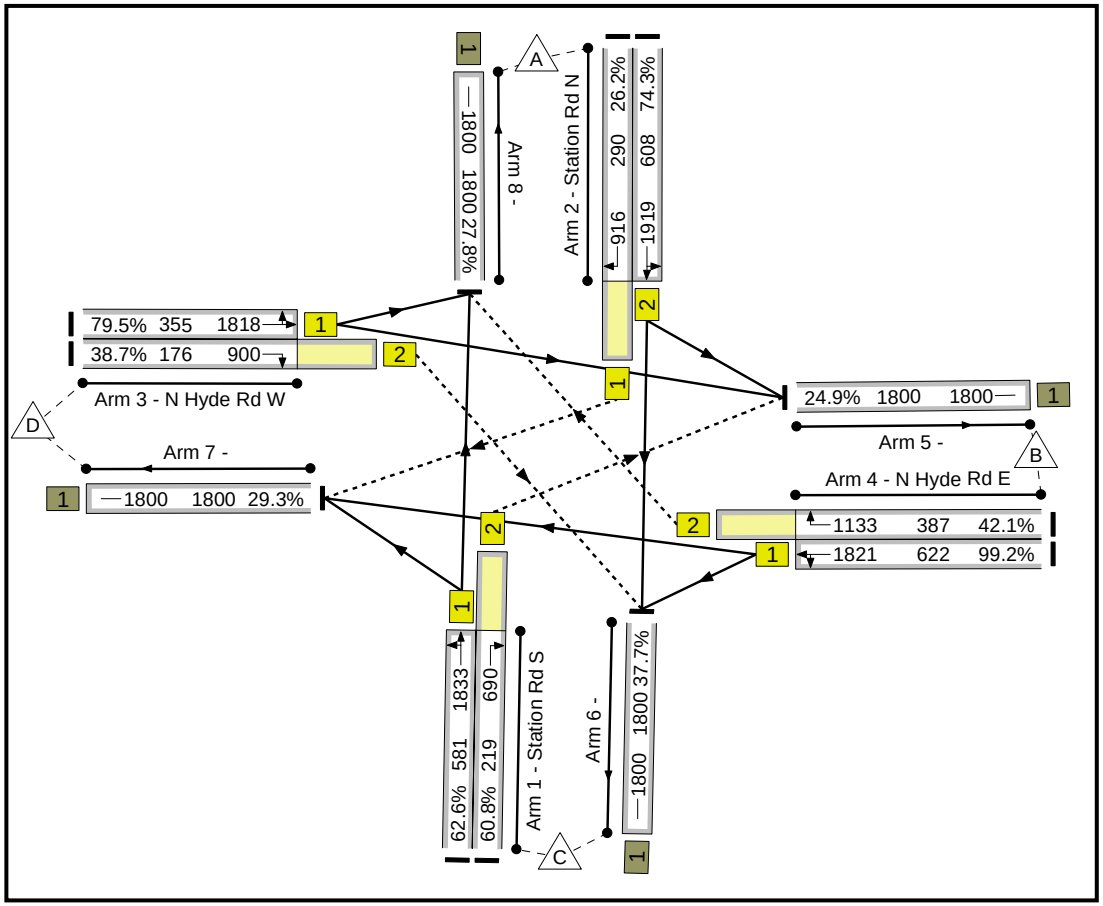
Stage Timings

Stage	1	2	3	4
Duration	22	15	7	4
Change Point	0	31	56	68

Signal Timings Diagram



Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	25	-	364	1833	1833	581	62.6
1/2	Station Rd S Right	O	N/A	N/A	D		1	25	-	133	1741	690	219	60.8
2/1	Station Rd N Right	O	N/A	N/A	C		1	25	-	76	1730	916	290	26.2
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	25	-	452	1919	1919	608	74.3
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	15	-	282	1818	1818	355	79.5
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	15	-	68	1760	900	176	38.7
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	27	-	617	1821	1821	622	99.2
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	27	7	163	1815	1133	387	42.1
5/1		U	N/A	N/A	-		-	-	-	449	1800	1800	1800	24.9
6/1		U	N/A	N/A	-		-	-	-	679	1800	1800	1800	37.7
7/1		U	N/A	N/A	-		-	-	-	527	1800	1800	1800	29.3
8/1		U	N/A	N/A	-		-	-	-	500	1800	1800	1800	27.8

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	364	364	-	-	-	2.4	0.8	-	3.2	32.1	7.0	0.8	7.8	
1/2	133	133	99	0	34	0.8	0.8	0.6	2.1	56.7	2.2	0.8	3.0	
2/1	76	76	74	0	2	0.4	0.2	0.2	0.8	38.8	1.2	0.2	1.4	
2/2	452	452	-	-	-	3.1	1.4	-	4.6	36.3	9.2	1.4	10.6	
3/1	282	282	-	-	-	2.5	1.8	-	4.3	55.0	6.1	1.8	8.0	
3/2	68	68	0	0	68	0.5	0.3	0.5	1.3	69.2	1.3	0.3	1.6	
4/1	617	617	-	-	-	4.6	11.3	-	15.9	92.7	13.9	11.3	25.2	
4/2	163	163	53	102	8	0.9	0.4	0.4	1.7	36.6	2.7	0.4	3.0	
5/1	449	449	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2	
6/1	679	679	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
7/1	527	527	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	
8/1	500	500	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): -10.3 Total Delay for Signalled Links (pcuHr): 33.88

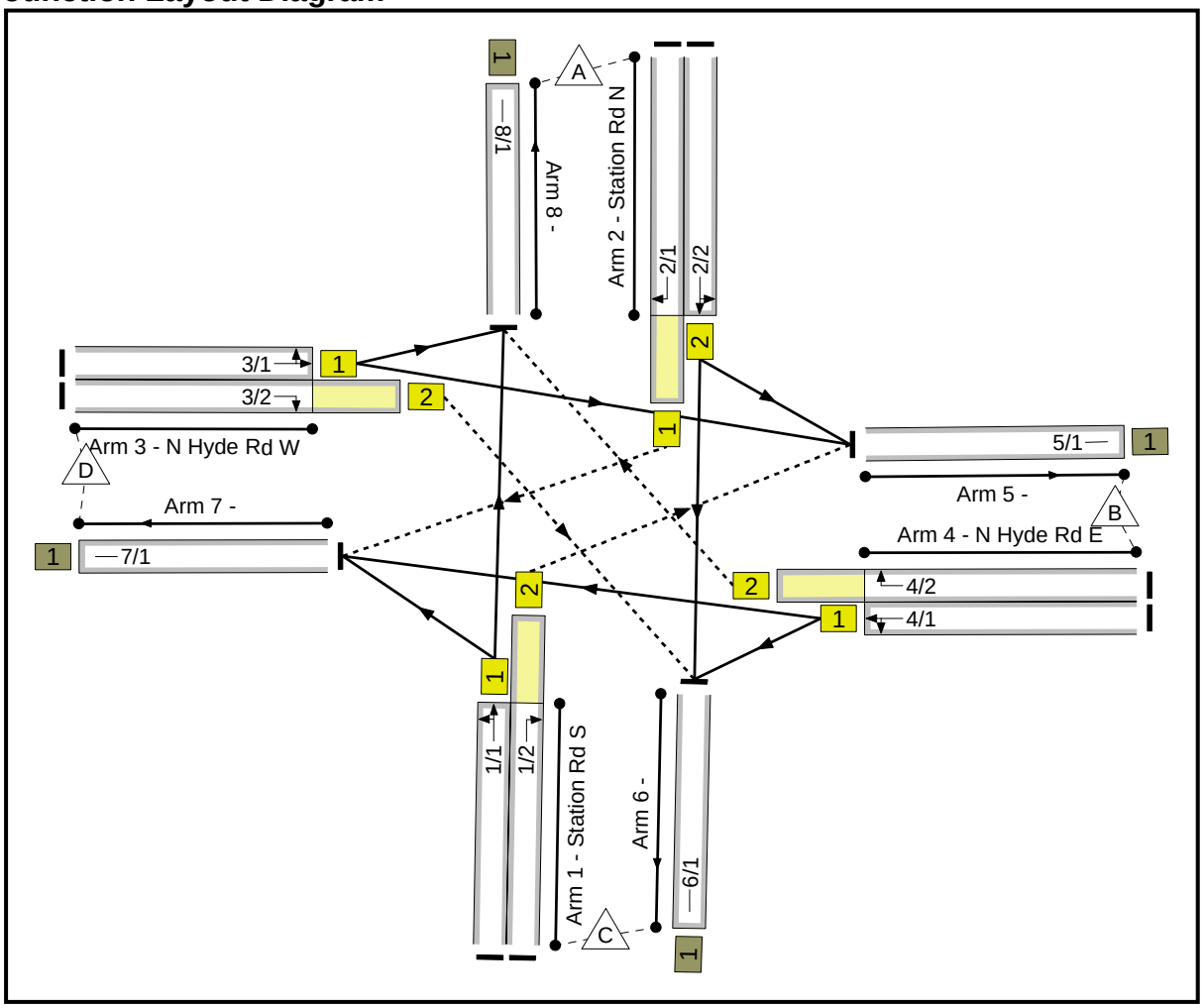
PRC Over All Links (%): -10.3 Total Delay Over All Links(pcuHr): 34.74 Cycle Time (s): 82

Full Input Data And Results

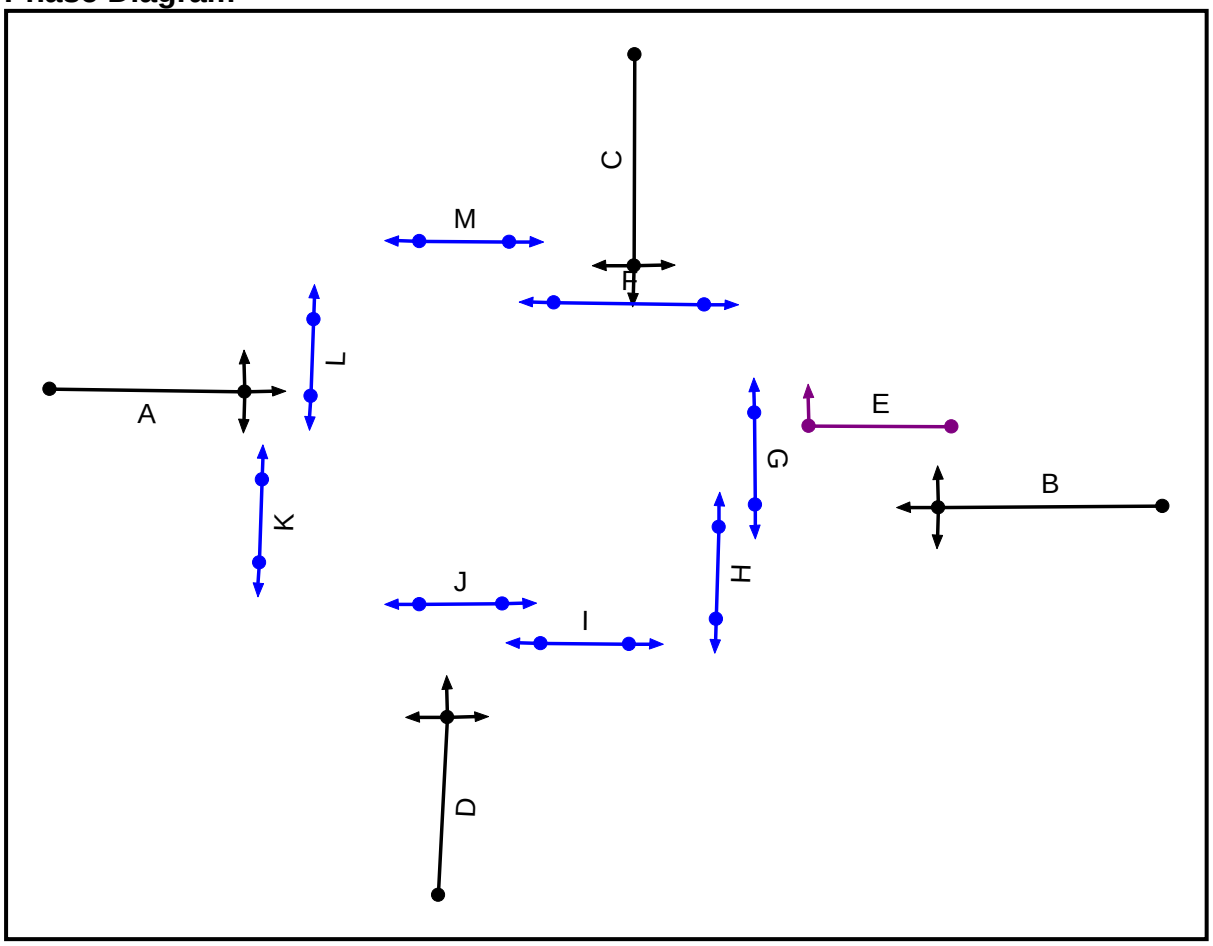
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10PM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5

Full Input Data And Results

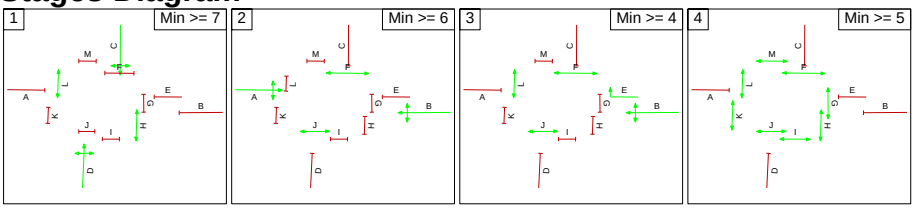
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	6	5	-	9	-	10	-	-	5	10
	B	-		6	6	-	-	-	5	10	-	10	-	10
	C	7	7		-	5	5	10	-	9	-	10	-	-
	D	7	7	-		5	-	10	-	-	5	10	-	10
	E	7	-	6	6		-	5	5	-	-	-	-	10
	F	-	-	9	-	-		-	-	-	-	-	-	-
	G	8	-	8	8	8	-		-	-	-	-	-	-
	H	-	10	-	-	10	-	-		-	-	-	-	-
	I	9	9	9	-	-	-	-	-		-	-	-	-
	J	-	-	-	9	-	-	-	-	-		-	-	-
	K	-	8	8	8	-	-	-	-	-	-		-	-
	L	9	-	-	-	-	-	-	-	-	-	-		-
	M	8	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	C D H L
2	A B F J
3	B E F J L
4	F G H I J K L M

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

		To Stage			
		1	2	3	4
From Stage	1		10	10	10
	2	9		5	10
	3	9	9		10
	4	9	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: 'Base 2012 PM'	17:30	18:30	01:00	

Scenario 1: 'Base 2012 PM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 2: 'Base 2012 PM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	149	311	88	548
	B	154	0	221	303	678
	C	261	207	0	78	546
	D	60	221	48	0	329
	Tot.	475	577	580	469	2101

Link Traffic Flows

Arm/Link	Flow Group 2: Base 2012 PM
1/1	339
1/2	207
2/1	88
2/2	460
3/1	281
3/2	48
4/1	524
4/2	154
5/1	577
6/1	580
7/1	469
8/1	475

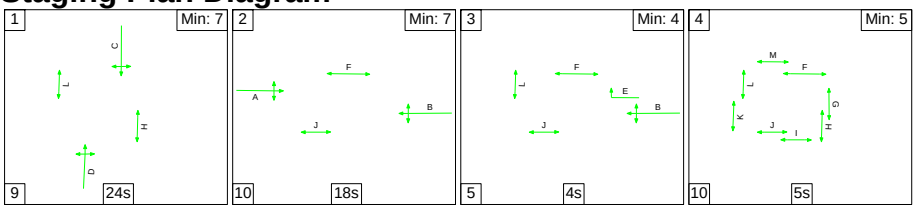
Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 1: 'Base 2012 PM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 2: 'Base 2012 PM'

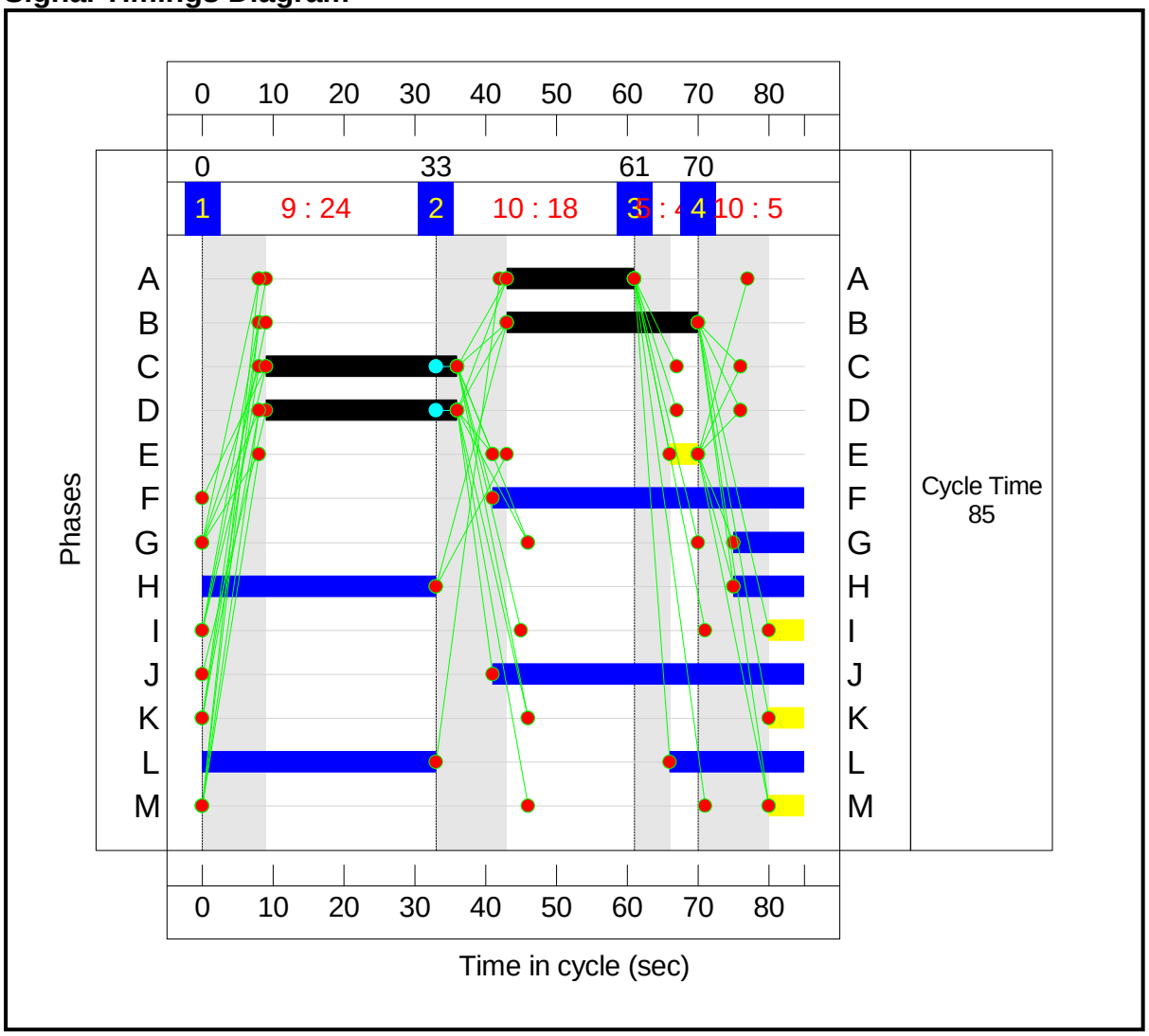
Staging Plan Diagram



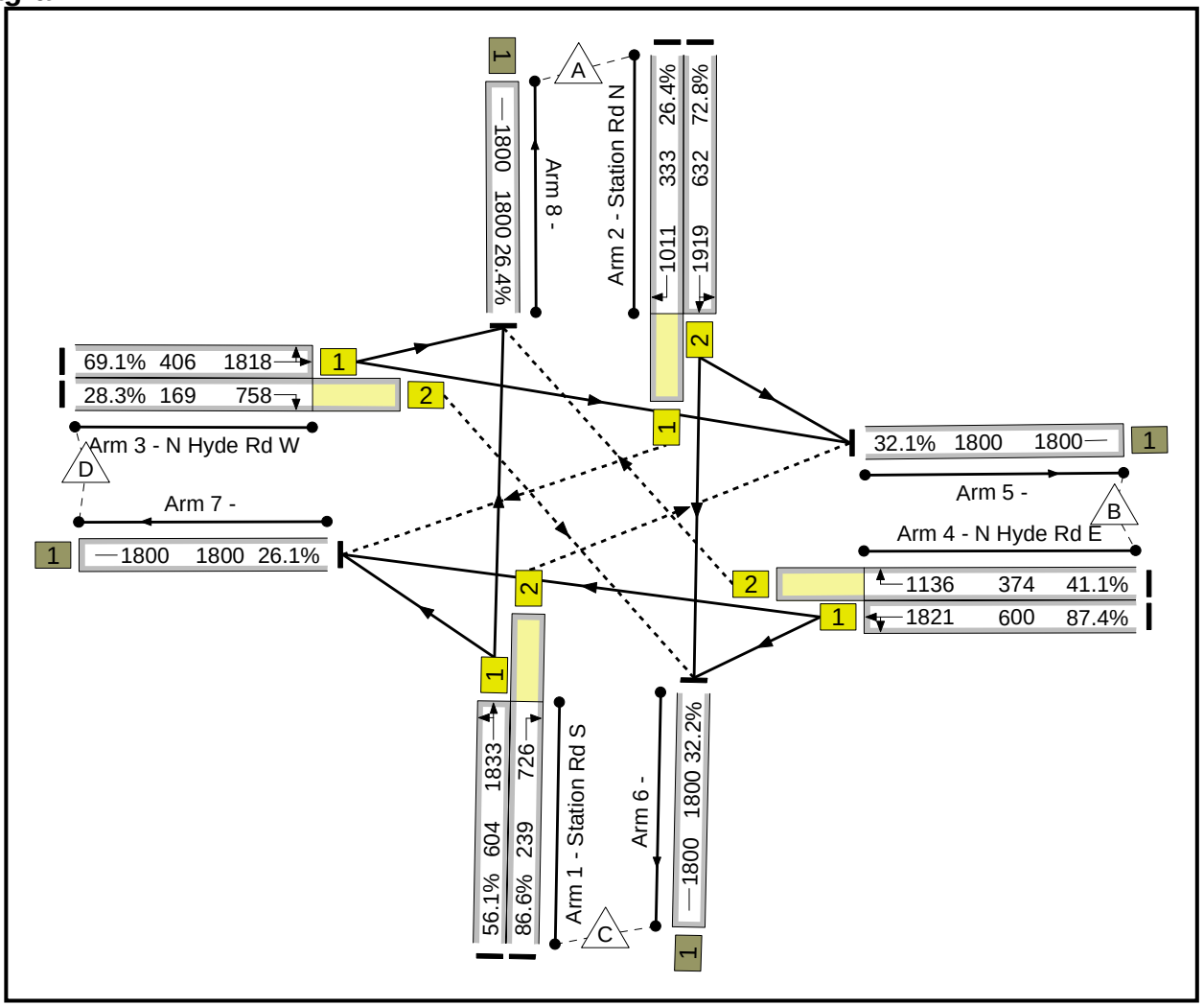
Stage Timings

Stage	1	2	3	4
Duration	24	18	4	5
Change Point	0	33	61	70

Signal Timings Diagram



Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	27	-	339	1833	1833	604	56.1
1/2	Station Rd S Right	O	N/A	N/A	D		1	27	-	207	1741	726	239	86.6
2/1	Station Rd N Right	O	N/A	N/A	C		1	27	-	88	1730	1011	333	26.4
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	27	-	460	1919	1919	632	72.8
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	18	-	281	1818	1818	406	69.1
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	18	-	48	1760	758	169	28.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	27	-	524	1821	1821	600	87.4
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	27	4	154	1815	1136	374	41.1
5/1		U	N/A	N/A	-		-	-	-	577	1800	1800	1800	32.1
6/1		U	N/A	N/A	-		-	-	-	580	1800	1800	1800	32.2
7/1		U	N/A	N/A	-		-	-	-	469	1800	1800	1800	26.1
8/1		U	N/A	N/A	-		-	-	-	475	1800	1800	1800	26.4

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	339	339	-	-	-	2.2	0.6	-	2.8	30.2	6.5	0.6	7.1	
1/2	207	207	110	0	97	1.3	2.8	0.9	5.0	86.8	3.7	2.8	6.4	
2/1	88	88	86	0	2	0.5	0.2	0.2	0.9	37.0	1.5	0.2	1.6	
2/2	460	460	-	-	-	3.2	1.3	-	4.5	35.4	9.5	1.3	10.8	
3/1	281	281	-	-	-	2.4	1.1	-	3.5	44.4	6.1	1.1	7.2	
3/2	48	48	48	0	0	0.4	0.2	0.3	0.8	61.7	0.9	0.2	1.1	
4/1	524	524	-	-	-	3.9	3.2	-	7.1	48.7	11.6	3.2	14.8	
4/2	154	154	92	55	7	0.9	0.3	0.4	1.7	38.6	2.7	0.3	3.0	
5/1	577	577	-	-	-	0.0	0.2	-	0.2	1.5	0.5	0.2	0.7	
6/1	580	580	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2	
7/1	469	469	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	
8/1	475	475	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): 3.0 Total Delay for Signalled Links (pcuHr): 26.30

PRC Over All Links (%): 3.0 Total Delay Over All Links(pcuHr): 27.13 Cycle Time (s): 85

APPENDIX D

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd AM_Int.vai"
(drive-on-the-left) at 13:09:43 on Sunday, 5 August 2012

FILE PROPERTIES
****

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA
****
ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	28.234*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	20.216*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	11.000
ARM B	5.000

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base 2012

T15

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	9.48	14.21	9.48
ARM B	15.00	45.00	75.00	5.57	8.36	5.57
ARM C	15.00	45.00	75.00	7.94	11.91	7.94

DEMAND SET TITLE: Base 2012

T33

TIME	FROM/T	ARM A	ARM B	ARM C
07.30 - 09.00	ARM A	0.001	0.306	0.693
		1.0	232.0	525.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.464	0.000	0.536
		207.0	0.0	239.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.707	0.293	0.000
		449.0	186.0	0.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
       in the s 90.0y as vehicular demand on the link. (=   times per hour)
ARM B: Frequency of use is distributed throughout the period
       in the s 30.0y as vehicular demand on the link. (=   times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.30-07.45											
ARM A		9.51	23.54	0.404	- -	1.2	0.0	0.7	9.8	-	0.071
ARM B		5.60	16.35	0.342	- -	0.4	0.0	0.5	7.5	-	0.092
ARM C		7.97	19.94	0.400	- -	-	0.0	0.7	9.6	-	0.083
07.45-08.00											
ARM A		11.36	22.77	0.499	- -	1.5	0.7	1.0	14.3	-	0.087
ARM B		6.68	15.58	0.429	- -	0.5	0.5	0.7	10.8	-	0.112
ARM C		9.51	19.61	0.485	- -	-	0.7	0.9	13.6	-	0.099
08.00-08.15											
ARM A		13.91	21.77	0.639	- -	1.8	1.0	1.7	24.7	-	0.126
ARM B		8.18	14.55	0.562	- -	0.6	0.7	1.3	18.0	-	0.155
ARM C		11.65	19.10	0.610	- -	-	0.9	1.5	21.9	-	0.133
08.15-08.30											
ARM A		13.91	21.76	0.639	- -	1.8	1.7	1.8	26.1	-	0.127
ARM B		8.18	14.53	0.563	- -	0.6	1.3	1.3	19.0	-	0.158
ARM C		11.65	19.09	0.611	- -	-	1.5	1.5	23.1	-	0.134
08.30-08.45											
ARM A		11.36	22.76	0.499	- -	1.5	1.8	1.0	15.6	-	0.089
ARM B		6.68	15.55	0.430	- -	0.5	1.3	0.8	11.9	-	0.114
ARM C		9.51	19.60	0.486	- -	-	1.5	1.0	14.9	-	0.100
08.45-09.00											
ARM A		9.51	23.53	0.404	- -	1.2	1.0	0.7	10.5	-	0.072
ARM B		5.60	16.32	0.343	- -	0.4	0.8	0.5	8.1	-	0.094
ARM C		7.97	19.92	0.400	- -	-	1.0	0.7	10.4	-	0.084

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.0	*
08.15	1.7	**
08.30	1.8	**
08.45	1.0	*
09.00	0.7	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.5	*
08.00	0.7	*
08.15	1.3	*
08.30	1.3	*
08.45	0.8	*
09.00	0.5	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	0.9	*
08.15	1.5	**
08.30	1.5	**
08.45	1.0	*
09.00	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1043.3	695.6	101.1	0.10	101.2	0.10
B	613.9	409.3	75.2	0.12	75.2	0.12
C	874.0	582.7	93.4	0.11	93.4	0.11
ALL	2531.2	1687.5	269.8	0.11	269.8	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 13:10:27 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd PM_Int.vai"
(drive-on-the-left) at 13:10:37 on Sunday, 5 August 2012

FILE PROPERTIES
****

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA
****
ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	31.934*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	24.016*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	14.700
ARM B	8.800

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base 2012

T15

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	10.44	15.66	10.44
ARM B	15.00	45.00	75.00	6.22	9.34	6.22
ARM C	15.00	45.00	75.00	7.43	11.14	7.43

DEMAND SET TITLE: Base 2012

T33

TIME	FROM/T	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.302	0.698
		0.0	252.0	583.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.568	0.000	0.432
		283.0	0.0	215.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.722	0.276	0.002
		429.0	164.0	1.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
in the s 90.0y as vehicular demand on the link. (= times per hour)
ARM B: Frequency of use is distributed throughout the period
in the s 30.0y as vehicular demand on the link. (= times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00								
ARM A	10.48	26.46	0.396	- - 1.2	0.0	0.7	9.5	0.062
ARM B	6.25	19.72	0.317	- - 0.4	0.0	0.5	6.7	0.074
ARM C	7.45	19.42	0.384	- - -	0.0	0.6	9.0	0.083
17.00-17.15								
ARM A	12.51	25.58	0.489	- - 1.5	0.7	0.9	13.9	0.076
ARM B	7.46	18.87	0.395	- - 0.5	0.5	0.6	9.5	0.087
ARM C	8.90	18.97	0.469	- - -	0.6	0.9	12.7	0.099
17.15-17.30								
ARM A	15.32	24.44	0.627	- - 1.8	0.9	1.6	23.7	0.109
ARM B	9.14	17.72	0.516	- - 0.6	0.6	1.0	15.2	0.116
ARM C	10.90	18.26	0.597	- - -	0.9	1.4	20.8	0.135
17.30-17.45								
ARM A	15.32	24.43	0.627	- - 1.8	1.6	1.7	24.9	0.110
ARM B	9.14	17.70	0.516	- - 0.6	1.0	1.1	15.8	0.117
ARM C	10.90	18.25	0.597	- - -	1.4	1.5	21.9	0.136
17.45-18.00								
ARM A	12.51	25.57	0.489	- - 1.5	1.7	1.0	15.0	0.077
ARM B	7.46	18.84	0.396	- - 0.5	1.1	0.7	10.2	0.088
ARM C	8.90	18.96	0.469	- - -	1.5	0.9	13.9	0.100
18.00-18.15								
ARM A	10.48	26.45	0.396	- - 1.2	1.0	0.7	10.1	0.063
ARM B	6.25	19.69	0.317	- - 0.4	0.7	0.5	7.2	0.075
ARM C	7.45	19.40	0.384	- - -	0.9	0.6	9.7	0.084

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	0.9	*
17.30	1.6	**
17.45	1.7	**
18.00	1.0	*
18.15	0.7	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.6	*
17.30	1.0	*
17.45	1.1	*
18.00	0.7	*
18.15	0.5	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.4	*
17.45	1.5	*
18.00	0.9	*
18.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	1149.3	766.2	97.0	0.08	97.0	0.08	
B	685.5	457.0	64.6	0.09	64.6	0.09	
C	817.6	545.1	87.9	0.11	87.9	0.11	
ALL	2652.4	1768.2	249.5	0.09	249.6	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

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Printed at 13:11:02 on 05/08/2012]

APPENDIX E

1 High Street/Station Road LINSIG Model

1.1 Model Development

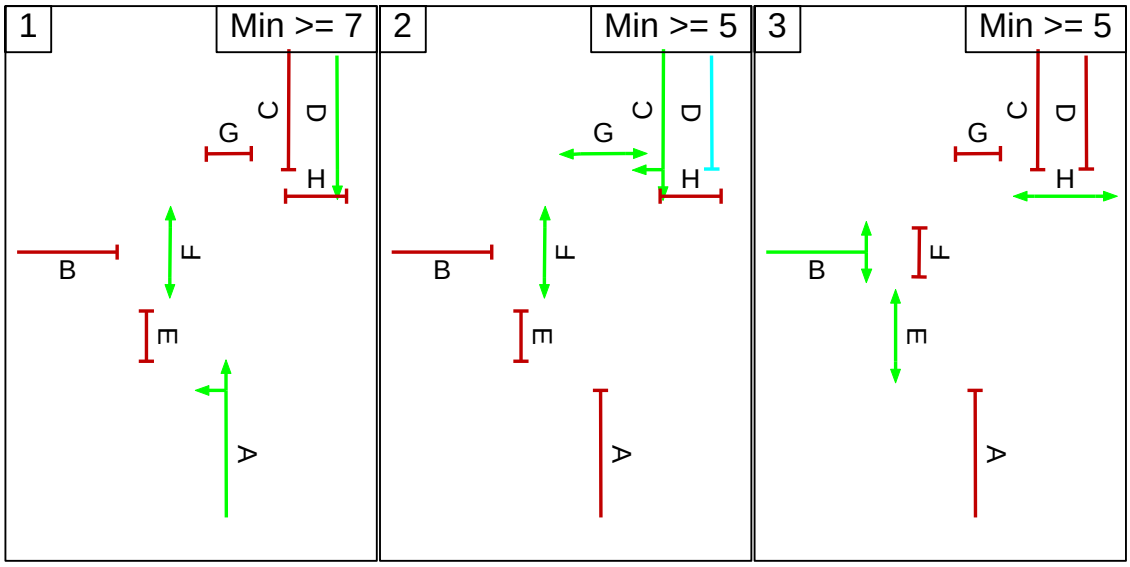
1.1.1 Traffic surveys for the junction of Station Road/High Street were carried out on Tuesday, 12h June 2012. The results of the survey show the AM Peak period to be 08:00-09:00 and PM Peak 17:00-18:00.

1.1.2 Cycle times, signal timings, saturation flows and degree of saturation were also recorded on the same day as the traffic surveys.

1.1.3 Based on the above survey data and traffic signal data supplied by Transport for London, LINSIG models have been built for the AM and PM peak periods.

1.1.4 The existing staging plan is shown in Figure 1 below.

Figure 1: Base LINSIG Model Staging Plan



1.1.5 The average cycle time was established from the survey and set at 56 seconds in both the AM and PM Peak periods.

1.2 Existing Model Validation

1.2.1 Table 1.1 below shows the validation between the surveyed and modelled degrees of saturation:

Table 1.1 – Base Model Validation

Degree of Saturation	AM			PM		
	Surveyed	Modelled	Diff	Surveyed	Modelled	Diff
Station Rd (N) Southbound Nearside	57.9	52.9	5	43.4	40.4	3
Station Rd (N) Southbound Offside	54.5	47.5	7	56	51.8	4.2
High Street (S) Northbound Nearside	58	58.2	-0.2	69.3	73	-3.7
High Street (S) Northbound Offside						
Station Rd (W) Eastbound	102.2	97.6	4.6	81.1	77.6	3.5

1.2.2 The results of the Base LINSIG validation show that all approaches validate within 5% of the data recorded on site, except on the Station Road N (Southbound Offside) which has a difference of 7%. The above validation shows the models accurately reflect the existing situation and are 'fit for purpose'.

1.3 Existing Model Results

1.3.1 The results of the Base LINSIG modelling are shown in Tables 1.2 and 1.3 below.

Table 1.2: Summary of Base Model Link Results – AM Peak

Link Num	Link Desc	Deg Sat (%)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	Station Road (N) Ahead	52.9	11.2	5.6
½	Station Road (N) Right	47.5	25.0	3.4
2/1	High Street (S) Ahead Left	58.2	23.2	7.9
3/1	Station Road (W) Left Right	97.7	84.1	15.6
PRC for Signalled Links (%):-8.5 PRC Over All Links (%): -8.5		Total Delay for Signalled Links (pcuHr): 17.68 Total Delay Over All Links(pcuHr): 18.46		Cycle Time (s): 56

**pcu – passenger car units*

Table 1.3: Summary of Base Model Link Results – PM Peak

Link Num	Link Desc	Deg Sat (%)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	Station Road (N) Ahead	40.4	10.9	3.8
1/2	Station Road (N) Right	51.8	28.4	3.4
2/1	High Street (S) Ahead Left	73.0	26.5	10.7
3/1	Station Road (W) Left Right	77.6	31.6	7.6
PRC for Signalled Links (%):15.9 PRC Over All Links (%):15.9		Total Delay for Signalled Links (pcuHr):11.44 Total Delay Over All Links(pcuHr): 12.13		Cycle Time (s): 56

1.3.2 The results of the Existing LINSIG modelling show that during the AM peak period the Station Road approach to the junction is at capacity at 97.7% with a queue of 15.6 PCUs. The degree of saturation on all other links, in both peak periods, is below 80% with a reasonable level of spare capacity available.

APPENDIX F

1 North Hyde Road/Station Road LINSIG Model

1.1 Model Development

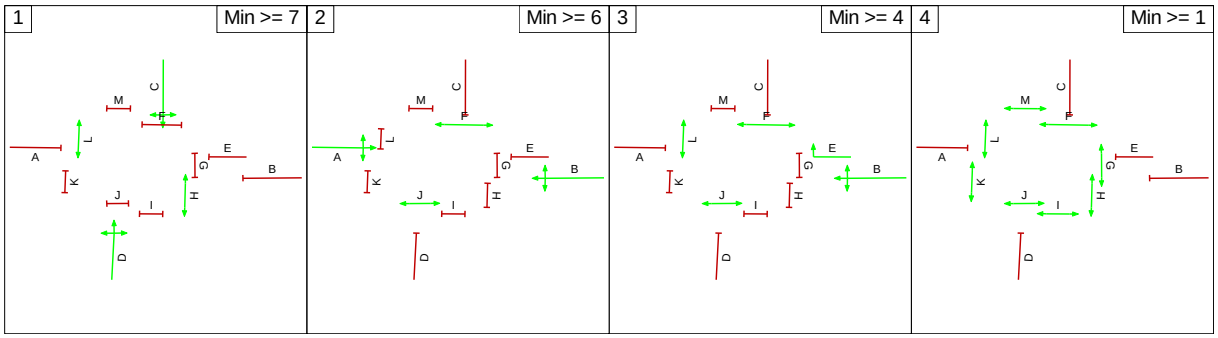
1.1.1 A base LINSIG model was built for the AM (08:00-09:00) and PM (17:30-18:30) peak periods based on the traffic flow surveys carried out on Wednesday, 14th March 2012.

1.1.2 Cycle times, signal timings, saturation flows and degree of saturation were established based on the survey carried out on Wednesday, 14th March 2012.

1.1.3 For the right turn opposed lanes, saturation flow was calculated using LINSIG, based on the turning proportions and turning radii.

1.1.4 The existing staging plan is shown in figure x below.

Figure 1: Base LINSIG Model Staging Plan



1.1.5 The average cycle time was established from the survey and set at 82 seconds in the AM peak and 85 seconds in the PM peak.

1.1.6 Average green times for Stage 1 and Stage 2/3 were obtained from the survey and are shown in Table 1.1 and 1.2 below.

1.1.7 The average length of Stage 3 (indicative arrow) was established in conjunction with Stage 2 and adjusted to allow for a reduced demand dependency on site (only one cycle modelled in LINSIG), using the degree of saturation data collected on site.

1.1.8 The minimum green time for pedestrian phases F-M was reduced from 5s to 1s to allow for a reduced demand dependency on site (only one cycle modelled in LINSIG).

1.1.9 All lanes are modelled as infinitely long lanes (LINSIGv2 does not allow short give way lanes to be modelled). The Station Rd S approach has a right turn flare of approximately 7 PCUs. The N Hyde Rd (W) has a right turn flare of approximately 6 PCUs. It is necessary to ensure that the queues on short lanes (flares) do not exceed their actual length.

1.2 Base LINSIG Model Validation

1.2.1 The base LINSIG Model was validated using the degree of saturation data collected on site. The degree of saturation should fall within 10% of the site data. Degree of saturation was validated only for the ahead/ left turn lanes as it is impossible to measure saturation flow/ degree of saturation for the right turn opposed lanes on site.

1.2.2 The results of the validation are shown in Tables 1.1 and 1.2 below,

Table 1.1: Base LINSIG Model Validation- AM peak

Link Num	Link Description	Green Time	Surveyed Deg Sat (%)	LINSIG Deg Sat (%)	Difference
1/1	Station Rd S (ahead/ left)	25	65.9	62.6	-3.3
2/2	Station Rd N (ahead/ left)	25	69.0	74.3	5.3
3/1	N Hyde Rd W (ahead/ left)	15	85.0	79.5	5.5
4/1	N Hyde Rd E (ahead/ left)	27	97.2	99.2	2.0

Table 1.2: Base LINSIG Model Validation- PM peak

Link Num	Link Description	Green Time	Surveyed Deg Sat (%)	LINSIG Deg Sat (%)	Difference
1/1	Station Rd S (ahead/ left)	28	53.3	54.2	0.9
2/2	Station Rd N (ahead/ left)	28	71.0	70.3	-0.7
3/1	N Hyde Rd W (ahead/ left)	14	92.7	93.8	1.1
4/1	N Hyde Rd E (ahead/ left)	26	90.9	90.6	-0.3

1.2.3 The results of the Base LINSIG validation show that all approaches validate well within the required 10% of the data recorded on site

1.3 Base LINSIG Model Results

1.3.1 The results of the Base LINSIG modelling are shown in Tables 1.3 and 1.4 below.

Table 1.3: Summary of Base Model Link Results – AM Peak

Link Num	Link Desc	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Mean Max Queue (pcu)
1/1	Station Rd S Left Ahead	364	62.6	3.2	7.8
1/2	Station Rd S Right	133	60.8	2.1	3.0
2/1	Station Rd N Right	76	26.2	0.8	1.4
2/2	Station Rd N Left Ahead	452	74.3	4.6	10.6
3/1	N Hyde Rd W Ahead Left	282	79.5	4.3	8.0
3/2	N Hyde Rd W Right	68	38.7	1.3	1.6
4/1	N Hyde Rd E Left Ahead	617	99.2	15.9	25.2
4/2	N Hyde Rd E Right	163	42.1	1.7	3.0

PRC for Signalled Links (%): -10.3 Total Delay for Signalled Links (pcuHr): 33.88
PRC Over All Links (%): -10.3 Total Delay Over All Links(pcuHr): 34.74 Cycle Time

**pcu – passenger car units*

Table 1.4: Summary of Base Model Link Results – PM Peak

Link Num	Link Desc	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Mean Max Queue (pcu)
1/1	Station Rd S Left Ahead	339	54.2	2.7	7.0
1/2	Station Rd S Right	207	79.7	4.0	5.5
2/1	Station Rd N Right	88	25.5	0.9	1.6
2/2	Station Rd N Left Ahead	460	70.3	4.3	10.5
3/1	N Hyde Rd W Ahead Left	281	93.8	7.7	11.4
3/2	N Hyde Rd W Right	48	28.3	0.9	1.2
4/1	N Hyde Rd E Left Ahead	524	90.6	8.2	16.0
4/2	N Hyde Rd E Right	154	46.3	1.8	3.1

PRC for Signalled Links (%): -4.3 Total Delay for Signalled Links (pcuHr): 30.46
PRC Over All Links (%): -4.3 Total Delay Over All Links(pcuHr): 31.29 Cycle Time

**pcu – passenger car units*

1.3.2 The results of the Base LINSIG modelling show that during the AM peak period the N Hyde Rd westbound approach to the junction (ahead/ left turn lane) is at capacity at 99.2% with a queue of 25 PCUs. The degree of saturation on all other links is below 85% with some spare capacity available. The queues on the flares do not exceed their length on any of the approaches.

1.3.3 During the PM peak period the most sensitive in terms of capacity is the N Hyde Rd approach to the junction, both in the east and westbound directions, with a degree of saturation exceeding 90%. All other links have a degree of saturation of below 85%. The queues on the flares do not exceed their length on any of the approaches.

APPENDIX G

Document Title:	**Bulls Bridge Roundabout TRANSYT modelling**
Version:	DRAFT
Date:	2nd August 2012
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1 Introduction

1.1 This technical note details the existing and proposed TRANSYT modelling of the Hayes Road/ A312 The Parkway/ A437 North Hyde Road- Bulls Bridge Roundabout and the North Hyde Road/ North Hyde Gardens/ Watersplash Lane junction.

2 Existing Traffic Surveys

2.1 Classified turning count surveys were carried out at both junctions on Tuesday, 19th June 2012. Based on the surveys, the network peak hours are as follows:

2.2 07:30- 08:30- AM Peak

2.3 16:45- 17:45- PM Peak

3 Traffic Signals

3.1 Both junctions are signal controlled and operate on UTC SCOOT. Timing sheets and Site Location Drawings (SLDs) were provided to SKM CB by Transport for London (TfL).

3.2 Average green times and cycle times for each junction were measured on site on the day of the traffic surveys (19th June 2012).

3.3 Offsets between junctions were optimised using TRANSYT.

3.4 For the proposed scenarios green times and offsets were optimised manually as well as using TRANSYT.

4 Saturation Flows

4.1 Saturation flows were measured on site on the day of the surveys (19th June 2012) and averaged based on the AM and PM peak measurements.

4.2 Where traffic conditions allowed for saturation flow measurement during one peak only, this value was used for both peak periods.

4.3 Where saturation flow could not be measured for one of the approach lanes, an average of saturation flows measured on the remaining lanes was used.

4.4 In some instances it was impossible to measure saturation flow on site due to traffic conditions (insufficient traffic, right turning opposed traffic). In this case the saturation flow was calculated using RR67.

4.5 All saturation flows used in TRANSYT modelling are shown in Table 5.1 in the TRANSYT Validation chapter.

5 TRANSYT Validation- Degree of Saturation

5.1 The existing base TRANSYT model was validated using Degree of Saturation.

5.2 Degree of saturation was calculated during a survey carried out on the same day as the traffic survey (19th June 2012). The results of the survey and a comparison with the degree of saturation recorded in TRANSYT are shown in Table 5.1 below.

TABLE 5.1- Saturation Flow and Degree of Saturation Validation

Approach	Sat Flow	Source	Survey DOS AM	TRANSYT DOS AM	DOS AM Difference	Survey DOS PM	TRANSYT DOS PM	DOS PM Difference
Bulls Bridge Roundabout								
Hayes Road EB nearside	1757	Averaged AM/ PM site measurement	83.9	62	-21.9	96.9	90	-6.9
Hayes Road EB lane 2	1522	measurement	53.1	46	-7.1	66.3	59	-7.3
Hayes Road EB lane 3	1640	Averaged nearside/ lane 2	no measurer	11	N/A	no measur	33	N/A
The Parkway SB nearside	1907	Averaged AM/ PM site measurement	103.1	99	-4.1	98.7	92	-6.7
The Parkway SB lane 2	1802	Averaged AM/ PM site measurement	84.6	89	4.4	86.4	96	9.6
The Parkway SB lane 3	1775	Averaged AM/ PM site measurement	79.6	89	9.4	65.6	60	-5.6
Hayes Road WB nearside	1612	PM measurement	no measurer	33	N/A	no measur	31	N/A
Hayes Road WB lane 2	1613	Averaged AM/ PM site measurement	51.5	56	4.5	90	82	-8
Hayes Road WB lane 3	1613	As Lane 2	95.4	96	0.6	83.8	77	-6.8
Hayes Road WB lane 4	1613	As Lane 2	no measurer	29	N/A	40.2	55	14.8
The Parkway NB nearside	1855	Averaged AM/ PM site measurement	75.1	78	2.9	90.1	91	0.9
The Parkway NB lane 2	1800	Averaged AM/ PM site measurement	81.4	81	-0.4	76.4	86	9.6
The Parkway NB lane 3	1969	Averaged AM/ PM site measurement	79.3	74	-5.3	85.1	88	2.9
The Parkway NB lane 4	1875	Averaged lanes 1-3	no measurer	78	N/A	no measur	60	N/a
North Hyde Rd/ North Hyde Gdns								
North Hyde Gnds SB	1860	RR67	no measurement		N/A	no measurement		N/A
Watersplash Ln	1833	RR67	no measurement		N/A	no measurement		N/A
North Hyde Rd EB	1926	Averaged AM/ PM site measurement	91.1	88	-3.1	95.2	88	-7.2
North Hyde Rd WB nearside	1833	Averaged AM/ PM site measurement	40.4	46	5.6	60.3	52	-8.3
North Hyde Rd WB RT	1774	RR67	no measurement		N/A	no measurement		N/A
Internal Links								
internal eb nearside	1876	RR67						
internal eb lane 3	1974	RR68						
internal eb lane 4	1770	RR69						
internal sb nearside	1867	RR70						
internal sb lane 2	2028	RR71						
inernal sb lane 3	2047	RR72						
internal sb lane 4	1806	RR73						
internal wb nearside	1886	RR74						
internal wb lane 2	1922	RR75						
internal wb lane 3	1806	RR76						
internal nb nearside	1905	RR77						
internal nb lane 2	2038	RR78						
intenral nb lane 3	2019	RR79						
internal nb lane 4	1824	RR80						

5.3 The results of the Degree of Saturation validation show that during the AM peak 67% of the measurements fall within 5% of the data recorded on site and further 25%, within 10% of the recorded data. During the PM peak 92% of the measurements fall within 10% of the data recorded on site.

5.4 The results of the Degree of Saturation validation show that the majority of the links in the TRANSYT model show degrees of saturation consistent to those recorded on site which proves that the model accurately reflects on site traffic conditions and is 'fit for purpose'.

6 Existing TRANSYT Results

TABLE 6.1- AM ExistingTRANSYT Results

Approach	DOS (%)	MMQ (PCU)	Delay (s)
Bulls Bridge Roundabout			
Hayes Road EB nearside	62	4	10
Hayes Road EB lane 2	46	2	9
Hayes Road EB lane 3	11	0	6
The Parkway SB nearside	99	25	84
The Parkway SB lane 2	89	14	42
The Parkway SB lane 3	89	14	42
Hayes Road WB nearside	33	2	22
Hayes Road WB lane 2	56	4	26
Hayes Road WB lane 3	96	14	78
Hayes Road WB lane 4	29	2	21
The Parkway NB nearside	78	11	29
The Parkway NB lane 2	81	11	31
The Parkway NB lane 3	74	10	26
The Parkway NB lane 4	78	10	28
North Hyde Rd/ North Hyde Gdns			
North Hyde Gnds SB	7	1	19
Watersplash Ln	9	0	34
North Hyde Rd EB	88	17	31
North Hyde Rd WB nearside	46	1	2
North Hyde Rd WB RT	12	0	6
Internal Links			
internal eb nearside	8	1	9
internal eb lane 2	31	4	12
internal eb lane 3	25	3	11
internal eb lane 4	27	3	12
internal sb nearside	30	1	5
internal sb lane 2	50	3	5
inernal sb lane 3	40	1	4
internal sb lane 4	14	0	2
internal wb nearside	17	1	8
internal wb lane 2	45	8	10
internal wb lane 3	15	2	9
internal nb nearside	71	4	7
internal nb lane 2	66	1	6
intenral nb lane 3	59	5	5
internal nb lane 4	50	1	5

6.1 The AM Existing TRANSYT results show that the Bulls Bridge Roundabout operates close to its capacity limit with the Parkway (SB) approach exceeding 90% degree of saturation. The Hayes Road (WB) approach shows a degree of saturation of 96% in lane 3.

TABLE 6.2- PM Existing TRANSYT Results

Approach	DOS (%)	MMQ (PCU)	Delay (s)
Bulls Bridge Roundabout			
Hayes Road EB nearside	90	12	44
Hayes Road EB lane 2	59	4	19
Hayes Road EB lane 3	33	2	14
The Parkway SB nearside	92	19	38
The Parkway SB lane 2	94	20	46
The Parkway SB lane 3	60	7	18
Hayes Road WB nearside	31	2	21
Hayes Road WB lane 2	82	9	38
Hayes Road WB lane 3	77	7	33
Hayes Road WB lane 4	55	3	25
The Parkway NB nearside	91	17	37
The Parkway NB lane 2	86	14	31
The Parkway NB lane 3	88	17	33
The Parkway NB lane 4	60	8	19
North Hyde Rd/ North Hyde Gdns			
North Hyde Gnds SB	12	1	15
Watersplash Ln	9	0	35
North Hyde Rd EB	88	16	34
North Hyde Rd WB nearside	52	4	3
North Hyde Rd WB RT	3	0	11
Internal Links			
internal eb nearside	20	0	6
internal eb lane 2	41	3	7
internal eb lane 3	31	3	6
internal eb lane 4	33	3	8
internal sb nearside	60	3	10
internal sb lane 2	56	2	10
inernal sb lane 3	29	2	9
internal sb lane 4	24	0	3
internal wb nearside	50	5	22
internal wb lane 2	46	1	5
internal wb lane 3	35	0	5
internal nb nearside	59	2	9
internal nb lane 2	70	4	12
intenral nb lane 3	77	4	13
internal nb lane 4	47	3	4

6.2 The PM Base TRANSYT results show that the Bulls Bridge Roundabout operate close to its capacity limit with some of the approaches exceeding 90% degree of saturation.

6.3 The most sensitive in terms of capacity is the Parkway (SB) approach, with degrees of saturation of 92% and 94% in the nearside lane and lane 2 respectively.

7 Base 2014 +Com/ Base 2014 +Com + H4&5 Results

7.1 For the proposed scenarios the existing cycle time was maintained. The green times and offsets were optimised manually, to reflect how SCOOT would operate, with the increased traffic flows.

7.2 The results for the 2014 AM base and proposed modelling are shown in the table below.

TABLE 7.1- 2014 AM Base and Proposed Results

	AM Base 2014 + Com			AM Base 2014 + Com + H4&5			Difference		
Approach	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**
Bulls Bridge Roundabout									
Hayes Road EB nearside	66	5	12	66	5	12	0	0	0
Hayes Road EB lane 2	50	2	10	50	2	10	0	0	0
Hayes Road EB lane 3	11	0	7	12	0	7	1	0	0
The Parkway SB nearside	85	13	33	88	15	36	3	2	3
The Parkway SB lane 2	86	13	34	88	14	37	2	1	3
The Parkway SB lane 3	87	13	36	87	13	36	0	0	0
Hayes Road WB nearside	67	4	30	67	4	30	0	0	0
Hayes Road WB lane 2	65	4	29	65	4	29	0	0	0
Hayes Road WB lane 3	62	4	28	65	4	29	3	0	1
Hayes Road WB lane 4	29	2	23	29	2	23	0	0	0
The Parkway NB nearside	73	10	24	74	10	25	1	0	1
The Parkway NB lane 2	75	10	26	76	10	26	1	0	0
The Parkway NB lane 3	68	9	23	69	9	23	1	0	0
The Parkway NB lane 4	72	10	24	73	10	24	1	0	0
North Hyde Rd/ North Hyde Gdns									
North Hyde Gnds SB	8	1	20	8	1	20	0	0	0
Watersplash Ln	9	0	34	9	0	34	0	0	0
North Hyde Rd EB	88	17	28	89	18	30	1	1	2
North Hyde Rd WB nearside	47	2	3	51	2	3	4	0	0
North Hyde Rd WB RT	13	0	7	13	1	10	0	1	3
Internal Links									
internal eb nearside	32	3	13	31	3	16	-1	0	3
internal eb lane 2	27	3	13	27	3	16	0	0	3
internal eb lane 3	34	4	14	35	4	17	1	0	3
internal eb lane 4	9	1	11	9	1	15	0	0	4
internal sb nearside	32	1	6	32	1	6	0	0	0
internal sb lane 2	46	3	5	46	2	5	0	-1	0
inernal sb lane 3	44	2	4	43	1	4	-1	-1	0
internal sb lane 4	13	0	2	16	0	2	3	0	0
internal wb nearside	39	4	12	43	5	17	4	1	5
internal wb lane 2	31	5	10	33	5	7	2	0	-3
internal wb lane 3	16	2	8	16	2	6	0	0	-2
internal nb nearside	71	5	33	72	5	32	1	0	-1
internal nb lane 2	65	4	34	67	5	33	2	1	-1
intenral nb lane 3	61	4	34	59	4	33	-2	0	-1
internal nb lane 4	51	1	5	51	1	5	0	0	0

7.3 From the results shown in the table above it can be seen that during the AM peak the network operates within the capacity for the Base 2014 + Com and Base 2014 + Com + H4&5 scenarios. All approaches operate below 90% degree of saturation and all internal queues do not exceed 5PCUs.

7.4 In should be noted that the difference in the degree of saturation between the 2014 base and proposed scenarios does not exceed 4%.

7.5 The results for the 2014 AM base and proposed modelling are shown in the table on the following page.

TABLE 7.2- 2014 PM Base and Proposed Results

	PM Base 2014 + Com			PM Base 2014 + Com + H4&5			Difference		
Approach	**DOS (%)**	**MMQ (PCU**	**Delay (s)**	**DOS (%)**	**MMQ (PCU**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**
Bulls Bridge Roundabout									
Hayes Road EB nearside	88	10	43	90	11	49	2	1	6
Hayes Road EB lane 2	85	8	40	87	9	45	2	1	5
Hayes Road EB lane 3	38	2	17	39	2	19	1	0	2
The Parkway SB nearside	84	15	25	85	16	26	1	1	1
The Parkway SB lane 2	86	16	28	87	16	28	1	0	0
The Parkway SB lane 3	58	7	16	57	7	16	-1	0	0
Hayes Road WB nearside	77	8	32	77	8	32	0	0	0
Hayes Road WB lane 2	31	2	20	31	2	20	0	0	0
Hayes Road WB lane 3	76	8	31	76	8	31	0	0	0
Hayes Road WB lane 4	65	5	26	65	5	26	0	0	0
The Parkway NB nearside	86	15	30	88	16	32	2	1	2
The Parkway NB lane 2	86	15	30	86	15	30	0	0	0
The Parkway NB lane 3	87	16	30	86	16	29	-1	0	-1
The Parkway NB lane 4	58	7	18	58	7	18	0	0	0
North Hyde Rd/ North Hyde Gdns									
North Hyde Gnds SB	15	1	18	17	1	21	2	0	3
Watersplash Ln	9	0	35	9	0	35	0	0	0
North Hyde Rd EB	84	15	26	84	16	23	0	1	-3
North Hyde Rd WB nearsid	57	7	5	58	4	4	1	-3	-1
North Hyde Rd WB RT	3	0	12	4	0	11	1	0	-1
Internal Links									
internal eb nearside	32	3	20	31	3	21	-1	0	1
internal eb lane 2	44	4	20	49	4	22	5	0	2
internal eb lane 3	47	4	21	50	4	22	3	0	1
internal eb lane 4	25	0	6	27	0	6	2	0	0
internal sb nearside	61	3	13	62	3	12	1	0	-1
internal sb lane 2	56	2	13	59	4	13	3	2	0
inernal sb lane 3	33	2	12	31	2	12	-2	0	0
internal sb lane 4	26	0	3	27	0	3	1	0	0
internal wb nearside	54	6	23	54	6	22	0	0	-1
internal wb lane 2	49	1	9	50	1	9	1	0	0
internal wb lane 3	45	1	8	45	1	8	0	0	0
internal nb nearside	57	1	7	59	1	8	2	0	1
internal nb lane 2	69	5	11	68	4	11	-1	-1	0
intenral nb lane 3	77	4	11	80	5	14	3	1	3
internal nb lane 4	46	3	4	47	3	4	1	0	0

7.1 From the results shown in the table above it can be seen that during the PM peak the network operates within the capacity for the Base 2014 + Com and Base 2014 + Com + H4&5 scenarios. All approaches operate below 90% degree of saturation and all internal queues do not exceed 5PCUs (with the exception of the internal westbound nearside link where a sliver queue of 6 PCUs is observed).

7.2 In should be noted that the difference in the degree of saturation between the 2014 base and proposed scenarios does not exceed 5%.

8 Base 2024 +Com/ Base 2024 +Com + H4&5 Results

8.1 The results for the 2024 AM base and proposed modelling are shown in the table below.

TABLE 7.3- 2024 AM Base and Proposed Results

	AM Base 2024 + Com			AM Base 2024 + Com + H4&5			Difference		
Approach	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**
Bulls Bridge Roundabout									
Hayes Road EB nearside	76	10	18	76	8	16	0	-2	-2
Hayes Road EB lane 2	57	5	13	58	4	12	1	-1	-1
Hayes Road EB lane 3	13	1	7	13	1	7	0	0	0
The Parkway SB nearside	88	16	32	88	16	32	0	0	0
The Parkway SB lane 2	83	13	27	86	15	31	3	2	4
The Parkway SB lane 3	88	15	32	87	15	32	-1	0	0
Hayes Road WB nearside	78	6	39	78	6	39	0	0	0
Hayes Road WB lane 2	86	8	49	86	8	50	0	0	1
Hayes Road WB lane 3	85	8	49	90	10	57	5	2	8
Hayes Road WB lane 4	39	2	25	39	2	26	0	0	1
The Parkway NB nearside	73	11	21	76	11	23	3	0	2
The Parkway NB lane 2	75	11	22	79	12	25	4	1	3
The Parkway NB lane 3	69	10	19	72	11	21	3	1	2
The Parkway NB lane 4	72	10	21	76	11	23	4	1	2
North Hyde Rd/ North Hyde Gdns									
North Hyde Gnds SB	12	1	25	12	1	25	0	0	0
Watersplash Ln	9	0	34	9	0	34	0	0	0
North Hyde Rd EB	90	20	27	91	20	29	1	0	2
North Hyde Rd WB nearside	54	10	5	58	8	6	4	-2	1
North Hyde Rd WB RT	18	1	21	18	1	27	0	0	6
Internal Links									
internal eb nearside	42	4	19	41	4	17	-1	0	-2
internal eb lane 2	34	3	18	36	4	16	2	1	-2
internal eb lane 3	47	4	19	46	4	18	-1	0	-1
internal eb lane 4	12	0	6	12	0	10	0	0	4
internal sb nearside	39	1	8	39	1	8	0	0	0
internal sb lane 2	48	1	10	48	2	9	0	1	-1
inernal sb lane 3	47	1	10	46	1	9	-1	0	-1
internal sb lane 4	14	0	2	17	0	3	3	0	1
internal wb nearside	48	3	16	50	4	18	2	1	2
internal wb lane 2	44	1	6	45	0	4	1	-1	-2
internal wb lane 3	21	0	5	20	0	3	-1	0	-2
internal nb nearside	82	5	21	82	6	23	0	1	2
internal nb lane 2	82	5	21	79	5	23	-3	0	2
intenral nb lane 3	65	6	17	67	6	21	2	0	4
internal nb lane 4	58	1	8	59	1	7	1	0	-1

8.2 From the results shown in the table above it can be seen that during the AM peak the network experiences capacity problems in the Base 2024 + Com and Base 2024 + Com + H4&5 scenarios. The degree of saturation exceeds 90% on the North Hyde Rd EB approach to the junction with Watersplash Lane/ North Hyde Gardens and internal queues on the Bulls Bridge Roundabout exceed 5 PCUs on more than one approach in the Base 2024 + Com +H4&5 scenario.

8.3 The difference in the degree of saturation between the two scenarios does not exceed 5%.

8.1 The results for the 2024 PM base and proposed modelling are shown in the table below.

TABLE 7.4- 2024 PM Base and Proposed Results

	PM Base 2024 + Com			PM Base 2024 + Com + H4&5			Difference		
Approach	**DOS (%)**	**MMQ (PCU**	**Delay (s)**	**DOS (%)**	**MMQ (PCU**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**
Bulls Bridge Roundabout									
Hayes Road EB nearside	101	20	106	101	22	105	0	2	-1
Hayes Road EB lane 2	91	11	58	90	11	51	-1	0	-7
Hayes Road EB lane 3	38	2	21	42	3	19	4	1	-2
The Parkway SB nearside	89	18	31	90	18	33	1	0	2
The Parkway SB lane 2	91	18	36	91	18	35	0	0	-1
The Parkway SB lane 3	94	20	42	93	20	41	-1	0	-1
Hayes Road WB nearside	86	11	39	86	10	41	0	-1	2
Hayes Road WB lane 2	75	8	29	82	9	35	7	1	6
Hayes Road WB lane 3	62	6	23	67	6	26	5	0	3
Hayes Road WB lane 4	52	4	21	53	4	22	1	0	1
The Parkway NB nearside	99	30	71	97	25	57	-2	-5	-14
The Parkway NB lane 2	99	29	73	103	38	105	4	9	32
The Parkway NB lane 3	94	22	43	94	22	43	0	0	0
The Parkway NB lane 4	65	9	19	65	9	19	0	0	0
North Hyde Rd/ North Hyde Gdns									
North Hyde Gnds SB	24	2	25	23	2	24	-1	0	-1
Watersplash Ln	9	0	35	9	0	35	0	0	0
North Hyde Rd EB	80	15	18	89	19	25	9	4	7
North Hyde Rd WB nearsid	66	7	5	67	9	6	1	2	1
North Hyde Rd WB RT	5	0	13	5	0	13	0	0	0
Internal Links									
internal eb nearside	38	4	21	36	4	20	-2	0	-1
internal eb lane 2	50	4	21	53	5	21	3	1	0
internal eb lane 3	52	4	21	51	5	22	-1	1	1
internal eb lane 4	25	0	6	30	1	7	5	1	1
internal sb nearside	54	2	12	63	3	13	9	1	1
internal sb lane 2	66	4	15	64	3	14	-2	-1	-1
inernal sb lane 3	58	3	15	57	3	14	-1	0	-1
internal sb lane 4	31	0	3	31	0	3	0	0	0
internal wb nearside	94	16	47	94	16	49	0	0	2
internal wb lane 2	44	1	9	45	1	9	1	0	0
internal wb lane 3	39	1	9	38	1	8	-1	0	-1
internal nb nearside	99	30	71	97	25	57	-2	-5	-14
internal nb lane 2	99	29	73	103	38	105	4	9	32
intenral nb lane 3	94	22	43	94	22	43	0	0	0
internal nb lane 4	65	9	19	65	9	19	0	0	0

8.1 From the results shown in the table above it can be seen that during the PM peak the network experiences capacity problems in the Base 2024 + Com and Base 2024 + Com + H4&5 scenarios. The degree of saturation exceeds 90% on numerous approaches and internal queues on the Bulls Bridge Roundabout exceed 5PCUs on more than one approach.

8.2 However, when comparing the Base and Proposed scenarios, the modelling shows that with the exception of the internal southbound nearside lane and the Hayes Road Westbound Lane 2, which have comfortable levels of spare capacity, the maximum variance in Degree of Saturation between the two scenarios is 5%.

9 Sensitivity Test- Base 2014 +Com/ Base 2014 +Com + H4&5 Results

9.1 The results for the 2014 AM base and proposed sensitivity test modelling are shown in the table below.

TABLE 9.1- 2014 AM Base and Proposed Results (sensitivity test)

	ST AM Base 2014 + Com			ST AM Base 2014 + Com + H4&5			Difference		
Approach	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**
Bulls Bridge Roundabout									
Hayes Road EB nearside	66	5	12	66	5	12	0	0	0
Hayes Road EB lane 2	43	2	9	45	2	9	2	0	0
Hayes Road EB lane 3	11	0	7	12	0	7	1	0	0
The Parkway SB nearside	85	13	33	88	15	36	3	2	3
The Parkway SB lane 2	86	13	34	86	13	35	0	0	1
The Parkway SB lane 3	87	13	36	87	13	36	0	0	0
Hayes Road WB nearside	67	4	30	67	4	30	0	0	0
Hayes Road WB lane 2	65	4	29	65	4	29	0	0	0
Hayes Road WB lane 3	62	4	28	65	4	29	3	0	1
Hayes Road WB lane 4	29	2	22	29	2	22	0	0	0
The Parkway NB nearside	29	3	16	39	4	17	10	1	1
The Parkway NB lane 2	84	13	32	85	13	32	1	0	0
The Parkway NB lane 3	89	16	37	89	16	36	0	0	-1
The Parkway NB lane 4	85	13	32	85	13	32	0	0	0
North Hyde Rd/ North Hyde Gdns									
North Hyde Gnds SB	8	1	20	8	1	20	0	0	0
Watersplash Ln	9	0	34	9	0	34	0	0	0
North Hyde Rd EB	84	15	25	85	16	26	1	1	1
North Hyde Rd WB nearside	47	2	3	54	2	3	7	0	0
North Hyde Rd WB RT	12	0	8	12	0	9	0	0	1
Internal Links									
internal eb nearside	33	4	15	32	4	17	-1	0	2
internal eb lane 2	27	3	15	27	3	17	0	0	2
internal eb lane 3	30	4	15	31	4	17	1	0	2
internal eb lane 4	9	1	12	9	1	15	0	0	3
internal sb nearside	30	1	5	31	1	5	1	0	0
internal sb lane 2	46	3	5	46	2	4	0	-1	-1
inernal sb lane 3	44	2	4	43	1	4	-1	-1	0
internal sb lane 4	13	0	2	15	0	2	2	0	0
internal wb nearside	39	4	12	42	5	17	3	1	5
internal wb lane 2	31	5	10	33	5	7	2	0	-3
internal wb lane 3	16	2	8	16	2	6	0	0	-2
internal nb nearside	63	1	31	64	1	31	1	0	0
internal nb lane 2	76	4	36	76	4	36	0	0	0
intenral nb lane 3	58	3	33	58	3	33	0	0	0
internal nb lane 4	51	1	5	51	1	5	0	0	0

9.2 From the results shown in the table above it can be seen that during the AM peak the network operates within capacity for the Base 2014 + Com and Base 2014 + Com + H4&5 sensitivity test scenarios. All approaches operate below 90% degree of saturation and all internal queues do not exceed 5 PCUs.

9.3 The difference in the degree of saturation between the two scenarios does not exceed 3%, except on the Parkway NB nearside lane and the North Hyde Rd WB nearside lane, which have comfortable levels of spare capacity.

9.4 The results for the 2014 PM base and proposed sensitivity test modelling are shown in the table below.

TABLE 9.1- 2014 PM Proposed (sensitivity test)

	ST PM Base 2014 + Com			ST PM Base 2014 + Com + H4&5			Difference		
Approach	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**	**DOS (%)**	**MMQ (PCU)**	**Delay (s)**
Bulls Bridge Roundabout									
Hayes Road EB nearside	77	7	32	87	10	41	10	3	9
Hayes Road EB lane 2	84	8	42	89	10	49	5	2	7
Hayes Road EB lane 3	38	2	20	39	2	19	1	0	-1
The Parkway SB nearside	84	15	25	85	16	25	1	1	0
The Parkway SB lane 2	85	15	26	85	15	27	0	0	1
The Parkway SB lane 3	58	7	16	57	7	16	-1	0	0
Hayes Road WB nearside	77	8	32	78	8	32	1	0	0
Hayes Road WB lane 2	27	1	19	26	1	19	-1	0	0
Hayes Road WB lane 3	76	8	31	76	8	31	0	0	0
Hayes Road WB lane 4	65	5	26	65	6	26	0	1	0
The Parkway NB nearside	86	15	30	88	16	32	2	1	2
The Parkway NB lane 2	87	15	31	86	15	30	-1	0	-1
The Parkway NB lane 3	86	16	29	86	16	29	0	0	0
The Parkway NB lane 4	58	8	18	58	8	18	0	0	0
North Hyde Rd/ North Hyde Gdns									
North Hyde Gnds SB	15	1	18	17	1	21	2	0	3
Watersplash Ln	9	0	35	9	0	35	0	0	0
North Hyde Rd EB	79	13	22	84	16	23	5	3	1
North Hyde Rd WB nearside	55	3	3	56	4	4	1	1	1
North Hyde Rd WB RT	3	0	9	4	0	11	1	0	2
Internal Links									
internal eb nearside	28	3	18	34	3	21	6	0	3
internal eb lane 2	44	4	19	42	4	21	-2	0	2
internal eb lane 3	47	4	20	55	4	23	8	0	3
internal eb lane 4	25	0	7	27	0	6	2	0	-1
internal sb nearside	59	2	12	65	4	13	6	2	1
internal sb lane 2	55	2	12	58	3	13	3	1	1
inernal sb lane 3	34	2	12	33	2	12	-1	0	0
internal sb lane 4	25	0	3	25	0	3	0	0	0
internal wb nearside	49	5	23	49	5	22	0	0	-1
internal wb lane 2	49	1	8	50	1	9	1	0	1
internal wb lane 3	45	1	7	45	1	8	0	0	1
internal nb nearside	58	1	8	60	1	8	2	0	0
internal nb lane 2	69	5	11	68	4	11	-1	-1	0
intenral nb lane 3	76	4	11	80	5	14	4	1	3
internal nb lane 4	47	3	4	47	3	4	0	0	0

9.1 From the results shown in the table above it can be seen that during the PM peak the network operates within capacity for the Base 2014 + Com and Base 2014 + Com + H4&5 scenarios. All approaches operate below 90% degree of saturation and all internal queues do not exceed 5PCUs.

9.2 The difference in the degree of saturation between the two scenarios does not exceed 10%.

10 Sensitivity Test- Base 2024 +Com/ Base 2024 +Com + H4&5 Results

10.1 The results for the 2024 AM base and proposed sensitivity test modelling are shown in the table below.

TABLE 10.1- 2024 AM Proposed (sensitivity test)

	ST AM Base 2024 + Com			ST AM Base 2024 + Com + H4&5			Difference		
Approach	**DOS (%)**	**MMQ (PC**	**Delay (s)**	**DOS (%)**	**MMQ (PC**	**Delay (s)**	**DOS (%)**	**MMQ (PC**	**Delay (s)**
Bulls Bridge Roundabout									
Hayes Road EB nearside	76	10	18	76	9	16	0	-1	-2
Hayes Road EB lane 2	51	4	12	52	4	11	1	0	-1
Hayes Road EB lane 3	13	1	7	13	1	7	0	0	0
The Parkway SB nearside	88	16	32	87	16	31	-1	0	-1
The Parkway SB lane 2	83	13	27	87	15	31	4	2	4
The Parkway SB lane 3	88	15	32	86	14	30	-2	-1	-2
Hayes Road WB nearside	78	6	39	78	6	39	0	0	0
Hayes Road WB lane 2	86	8	50	86	8	50	0	0	0
Hayes Road WB lane 3	86	8	50	90	10	57	4	2	7
Hayes Road WB lane 4	39	2	25	39	2	26	0	0	1
The Parkway NB nearside	29	3	13	39	4	15	10	1	2
The Parkway NB lane 2	88	15	31	90	16	36	2	1	5
The Parkway NB lane 3	86	16	28	89	17	33	3	1	5
The Parkway NB lane 4	87	16	30	90	17	35	3	1	5
North Hyde Rd/ North Hyde Gdns									
North Hyde Gnds SB	12	1	25	12	1	25	0	0	0
Watersplash Ln	9	0	34	9	0	34	0	0	0
North Hyde Rd EB	86	17	23	87	18	25	1	1	2
North Hyde Rd WB nearside	55	11	5	61	11	6	6	0	1
North Hyde Rd WB RT	17	1	20	18	1	26	1	0	6
Internal Links									
internal eb nearside	42	4	18	42	4	16	0	0	-2
internal eb lane 2	34	3	17	36	4	15	2	1	-19
internal eb lane 3	43	3	18	41	4	15	-2	1	-3
internal eb lane 4	12	0	5	12	0	10	0	0	5
internal sb nearside	38	1	8	38	1	7	0	0	-1
internal sb lane 2	47	1	10	48	2	8	1	1	-2
inernal sb lane 3	47	1	10	46	1	8	-1	0	-2
internal sb lane 4	14	0	2	16	0	3	2	0	1
internal wb nearside	48	3	16	49	4	18	1	1	2
internal wb lane 2	44	1	6	45	0	4	1	-1	-2
internal wb lane 3	21	0	5	20	0	3	-1	0	-2
internal nb nearside	88	5	27	88	5	28	0	0	1
internal nb lane 2	82	5	22	82	5	25	0	0	3
intenral nb lane 3	58	4	16	58	4	19	0	0	3
internal nb lane 4	59	1	8	59	1	7	0	0	-1

10.2 From the results shown in the table above it can be seen that during the AM peak the network operates within capacity for the Base 2024 + Com and Base 2024 + Com + H4&5 scenarios. All approaches operate at below 90% degree of saturation and all internal queues do not exceed 5PCUs.

10.3 The difference in the degree of saturation between the two scenarios does not exceed 10%.

10.4 The results for the 2024 PM base and proposed sensitivity test modelling are shown in the table below.

TABLE 10.2- 2024 PM Proposed (sensitivity test)

	ST PM Base 2024 + Com			ST PM Base 2024 + Com + H4&5			Difference		
Approach	**DOS (%)**	**MMQ (PC**	**Delay (s)**	**DOS (%)**	**MMQ (PC**	**Delay (s)**	**DOS (%)**	**MMQ (PC**	**Delay (s)**
Bulls Bridge Roundabout									
Hayes Road EB nearside	89	11	48	91	12	50	2	1	2
Hayes Road EB lane 2	92	11	59	99	17	94	7	6	35
Hayes Road EB lane 3	37	2	21	42	3	19	5	1	-2
The Parkway SB nearside	89	18	31	90	18	32	1	0	1
The Parkway SB lane 2	91	18	36	91	18	35	0	0	-1
The Parkway SB lane 3	92	19	38	92	18	37	0	-1	-1
Hayes Road WB nearside	86	11	39	86	10	41	0	-1	2
Hayes Road WB lane 2	70	7	26	78	8	32	8	1	6
Hayes Road WB lane 3	62	6	23	67	6	26	5	0	3
Hayes Road WB lane 4	52	4	21	53	4	22	1	0	1
The Parkway NB nearside	98	27	64	97	25	57	-1	-2	-7
The Parkway NB lane 2	100	30	77	103	38	105	3	8	28
The Parkway NB lane 3	95	23	44	94	22	43	-1	-1	-1
The Parkway NB lane 4	66	9	19	65	9	19	-1	0	0
North Hyde Rd/ North Hyde Gdns									
North Hyde Gnds SB	24	2	25	23	2	24	-1	0	-1
Watersplash Ln	9	0	35	9	0	35	0	0	0
North Hyde Rd EB	76	13	16	88	19	24	12	6	8
North Hyde Rd WB nearside	63	7	5	64	9	6	1	2	1
North Hyde Rd WB RT	5	0	12	5	0	13	0	0	1
Internal Links									
internal eb nearside	38	4	20	35	4	21	-3	0	1
internal eb lane 2	53	4	21	53	5	22	0	1	1
internal eb lane 3	49	4	21	57	5	23	8	1	2
internal eb lane 4	25	0	6	30	0	7	5	0	1
internal sb nearside	52	2	12	67	4	15	15	2	3
internal sb lane 2	66	4	15	64	3	14	-2	-1	-1
inernal sb lane 3	58	3	15	57	3	14	-1	0	-1
internal sb lane 4	30	0	3	29	0	3	-1	0	0
internal wb nearside	89	11	35	89	11	27	0	0	-8
internal wb lane 2	44	1	9	45	1	9	1	0	0
internal wb lane 3	39	1	9	38	1	8	-1	0	-1
internal nb nearside	68	3	11	71	4	13	3	1	2
internal nb lane 2	87	7	19	86	6	19	-1	-1	0
intenral nb lane 3	88	6	19	90	7	22	2	1	3
internal nb lane 4	55	4	4	57	4	5	2	0	1

10.1 From the results shown in the table above it can be seen that during the PM peak the network experiences capacity problems in the Base 2024 + Com and Base 2024 + Com + H4&5 scenarios. The degree of saturation exceeds 90% on numerous approaches and internal queues on the Bulls Bridge Roundabout exceed 5PCUs on more than one approach.

10.2 The difference in the degree of saturation between the two scenarios, on links with a degree of saturation greater than 90% does not exceed 3%, except on the Hayes Road Eastbound Lane 2 nearside lane.

11 Conclusions

11.1 The results of the modelling show that the increase in traffic flows, in the 2014 Base and Proposed scenarios can be accommodated within the network.

11.2 In the 2024 scenarios, the network experiences problems in both the base and proposed scenarios. However, as the results show, the increase in background traffic growth is the key factor in reducing the capacity of the network, with the variance in the degrees of saturation between the two scenarios being less than 5% in the AM and 3% in the PM on the critical approaches.

11.3 The modelling of the sensitivity tests shows that the AM peak flows, in both 2014 and 2024 can be accommodated within the network.

11.4 In the PM sensitivity rest scenarios, the 2014 flows can be accommodated within the network. However, in the 2024 scenario the degrees of saturation and queues exceed acceptable leves. However, similar to the previous scenarios, the increase in background traffic growth is the key factor in reducing the capacity of the network, with the variance in the degrees of saturation between the two scenarios being less than 3% on the critical approaches.

APPENDIX H

PTAI Study Report File Details

Date	27/01/2012 08:28
Day of week	M-F
Time period	AM peak
Walk speed	4.8 kph
Walk file	PLSQLTest

POI Name: 509083, 179265

Bus Services

Reliability factor for this mode is 2
Maximum walk time for this mode is 8 minutes
Maximum walk distance for this mode is 640.0 metres

Stop DAWLEY ROAD BLYTH ROAD
Walk time to stop from POI is 5.24 minutes
Walk distance to stop from POI is 419.21 metres
Route 350 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
Stop STATION RD MILLINGTON RD
Walk time to stop from POI is 6.9 minutes
Walk distance to stop from POI is 552.29 metres
Route E6 Direction BACK Frequency 6.0 giving AWT of 5.0 minutes
Route H98 Direction OUT Frequency 7.5 giving AWT of 4.0 minutes
Route 140 Direction OUT Frequency 7.5 giving AWT of 4.0 minutes
Stop THE GREAT WESTERN
Walk time to stop from POI is 7.95 minutes
Walk distance to stop from POI is 636.11 metres
Route U4 Direction BACK Frequency 7.5 giving AWT of 4.0 minutes
Stop STATION RD NORTH HYDE RD
Walk time to stop from POI is 6.26 minutes
Walk distance to stop from POI is 500.47 metres
Route 90 Direction OUT Frequency 6.0 giving AWT of 5.0 minutes
Route 350 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
Route E6 Direction BACK Frequency 6.0 giving AWT of 5.0 minutes
Route U5 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
Route U4 Direction BACK Frequency 7.5 giving AWT of 4.0 minutes
Route H98 Direction OUT Frequency 7.5 giving AWT of 4.0 minutes

Route H98 Direction BACK Frequency 7.5 giving AWT of 4.0 minutes
Route 140 Direction OUT Frequency 7.5 giving AWT of 4.0 minutes
Route 140 Direction BACK Frequency 7.5 giving AWT of 4.0 minutes
Stop BOURNES BRIDGE
Walk time to stop from POI is 2.37 minutes
Walk distance to stop from POI is 189.81 metres
Route U4 Direction BACK Frequency 7.5 giving AWT of 4.0 minutes
Stop N HYDE RD OLD STATION RD
Walk time to stop from POI is 7.43 minutes
Walk distance to stop from POI is 594.3 metres
Route 195 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
Stop MILDRED AVE WALTHAM AVE
Walk time to stop from POI is 5.76 minutes
Walk distance to stop from POI is 460.44 metres
Route U4 Direction BACK Frequency 7.5 giving AWT of 4.0 minutes
Stop DAWLEY ROAD REDMEAD ROAD
Walk time to stop from POI is 5.6 minutes
Walk distance to stop from POI is 448.02 metres
Route U4 Direction BACK Frequency 7.5 giving AWT of 4.0 minutes
Stop NTH HYDE RD MILLINGTON R
Walk time to stop from POI is 4.64 minutes
Walk distance to stop from POI is 371.21 metres
Route 350 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
Route 350 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes

TATs for this mode
Route 350 Stop NTH HYDE RD MILLINGTON R TAT 12.64 minutes EDF 2.37
Route E6 Stop STATION RD NORTH HYDE RD TAT 13.26 minutes EDF 2.26
Route H98 Stop STATION RD NORTH HYDE RD TAT 12.26 minutes EDF 2.45
Route 140 Stop STATION RD NORTH HYDE RD TAT 12.26 minutes EDF 2.45
Route U4 Stop BOURNES BRIDGE TAT 8.37 minutes EDF 3.58
Route 90 Stop STATION RD NORTH HYDE RD TAT 13.26 minutes EDF 2.26
Route U5 Stop STATION RD NORTH HYDE RD TAT 14.26 minutes EDF 2.1
Route 195 Stop N HYDE RD OLD STATION RD TAT 15.43 minutes EDF 1.94

Best EDF is 3.58
Half of all other EDFs is 7.92

AI for this mode is 11.51

Underground Services

Reliability factor for this mode is .75
Maximum walk time for this mode is 12 minutes

Maximum walk distance for this mode is 960.0 metres

** No stops found within buffer for this POI

Rail Services

Reliability factor for this mode is .75
Maximum walk time for this mode is 12 minutes
Maximum walk distance for this mode is 960.0 metres

Stop HAYES AND HARLINGTON
Walk time to stop from POI is 10.07 minutes
Walk distance to stop from POI is 805.93 metres
Route BANBURY to LONDON PADDINGTON Direction T137-T109 Frequency 0.33 giving AWT of 90.91 minutes
Route LONDON PADDINGTON to Heathrow T4 Direction T109-T4 Frequency 2.0 giving AWT of 15.0 minutes
Route OXFORD to LONDON PADDINGTON Direction T115-T109 Frequency 1.3 giving AWT of 23.08 minutes
Route LONDON PADDINGTON to TWYFORD Direction T109-T122 Frequency 0.33 giving AWT of 90.91 minutes
Route LONDON PADDINGTON to READING Direction T109-T119 Frequency 2.0 giving AWT of 15.0 minutes
Route BANBURY to LONDON PADDINGTON Direction T137-T109 Frequency 0.33 giving AWT of 90.91 minutes
Route LONDON PADDINGTON to OXFORD Direction T109-T115 Frequency 0.67 giving AWT of 44.78 minutes
Route LONDON PADDINGTON to OXFORD Direction T109-T115 Frequency 0.6 giving AWT of 50.0 minutes

TATs for this mode
Route BANBURY to LONDON PADDINGTON Stop HAYES AND HARLINGTON TAT 101.73 minutes EDF 0.29
Route LONDON PADDINGTON to Heathrow T4 Stop HAYES AND HARLINGTON TAT 25.82 minutes EDF 1.16
Route OXFORD to LONDON PADDINGTON Stop HAYES AND HARLINGTON TAT 33.9 minutes EDF 0.88
Route LONDON PADDINGTON to TWYFORD Stop HAYES AND HARLINGTON TAT 101.73 minutes EDF 0.29
Route LONDON PADDINGTON to READING Stop HAYES AND HARLINGTON TAT 25.82 minutes EDF 1.16
Route BANBURY to LONDON PADDINGTON Stop HAYES AND HARLINGTON TAT 101.73 minutes EDF 0.29
Route LONDON PADDINGTON to OXFORD Stop HAYES AND HARLINGTON TAT 55.6 minutes EDF 0.54
Route LONDON PADDINGTON to OXFORD Stop HAYES AND HARLINGTON TAT 60.82 minutes EDF 0.49

Best EDF is 1.16
Half of all other EDFs is 1.98

AI for this mode is 3.14

Total AI for this POI is 14.65. X: 509083, Y: 179265.

PTAL Rating is 3.

APPENDIX I

TRAVL - Average Trip Rate by Mode and Time

Report ID 9

List of Surveys:

Name	Address	Postcode	Survey Date
Hounslow Civic Centre	Lampton Road	TW3 4DN	30/11/2004
Sky Headquarters	Grant Way,	TW7 5QD	09/07/2009
Tearfund Head Office	100 Church Road	TW11 8QE	16/03/2006
Number of sites considered	3		

Predictor Type : Gross Floor Area	100	Sqm
HPH 4	**7185**	**Sqm**
	71.85	

Counts By Mode:

Mode: All Modes

Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.17873	0.04622	0.22496						
07:30-08:00	3	0.46019	0.07293	0.53312	0.63892	0.11915	0.75808	45.9	8.6	54
08:00-08:30	3	0.88135	0.14895	1.03029						
08:30-09:00	3	1.25114	0.16230	1.41344	2.13249	0.31125	2.44373	153.2	22.4	176
09:00-09:30	3	0.97380	0.17771	1.15150						
09:30-10:00	3	0.65125	0.20339	0.85464	1.62505	0.38110	2.00614	116.8	27.4	144
10:00-10:30	3	0.37082	0.20236	0.57318						
10:30-11:00	3	0.30714	0.22188	0.52901	0.67796	0.42424	1.10219	48.7	30.5	79
11:00-11:30	3	0.35747	0.26605	0.62352						
11:30-12:00	3	0.30097	0.29070	0.59167	0.65844	0.55675	1.21519	47.3	40.0	87
12:00-12:30	3	0.38623	0.55469	0.94093						
12:30-13:00	3	0.49614	0.50539	1.00153	0.88237	1.06008	1.94246	63.4	76.2	140
13:00-13:30	3	0.54750	0.51155	1.05905						
13:30-14:00	3	0.57729	0.28351	0.86080	1.12479	0.79506	1.91985	80.8	57.1	138
14:00-14:30	3	0.41705	0.28248	0.69953						
14:30-15:00	3	0.35028	0.35028	0.70056	0.76733	0.63276	1.40009	55.1	45.5	101
15:00-15:30	3	0.32049	0.31638	0.63687						
15:30-16:00	3	0.32460	0.41602	0.74062	0.64509	0.73240	1.37749	46.3	52.6	99
16:00-16:30	3	0.22701	0.79095	1.01797						
16:30-17:00	3	0.21674	0.74165	0.95839	0.44375	1.53260	1.97636	31.9	110.1	142
17:00-17:30	3	0.16641	0.97071	1.13712						
17:30-18:00	3	0.16744	0.93887	1.10631	0.33385	1.90958	2.24343	24.0	137.2	161
18:00-18:30	3	0.10786	0.63995	0.74781						
18:30-19:00	3	0.11402	0.35644	0.47046	0.22188	0.99639	1.21827	15.9	71.6	88
Peak Period For	All Modes									
In	08:30-09:00	1.25								
Out	17:00-17:30	0.97								
Total	08:30-09:00	1.41								

Mode:	Bus									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00103	0.00000	0.00103						
07:30-08:00	3	0.00000	0.00000	0.00000	0.00103	0.00000	0.00103	0.1	0.0	0.1
08:00-08:30	3	0.00411	0.00000	0.00411						
08:30-09:00	3	0.01233	0.00000	0.01233	0.01644	0.00000	0.01644	1.2	0.0	1.2
09:00-09:30	3	0.00924	0.00000	0.00924						
09:30-10:00	3	0.00308	0.00000	0.00308	0.01232	0.00000	0.01232	0.9	0.0	0.9
10:00-10:30	3	0.00924	0.00205	0.01130						
10:30-11:00	3	0.00000	0.00000	0.00000	0.00924	0.00205	0.01130	0.7	0.1	0.8
11:00-11:30	3	0.00000	0.00000	0.00000						
11:30-12:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
12:00-12:30	3	0.00000	0.00000	0.00000						
12:30-13:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
13:00-13:30	3	0.00000	0.00000	0.00000						
13:30-14:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
14:00-14:30	3	0.00000	0.00000	0.00000						
14:30-15:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
15:00-15:30	3	0.00000	0.00000	0.00000						
15:30-16:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
16:00-16:30	3	0.00000	0.00514	0.00514						
16:30-17:00	3	0.00000	0.00000	0.00000	0.00000	0.00514	0.00514	0.0	0.4	0.4
17:00-17:30	3	0.00000	0.00514	0.00514						
17:30-18:00	3	0.00000	0.00719	0.00719	0.00000	0.01233	0.01233	0.0	0.9	0.9
18:00-18:30	3	0.00000	0.00103	0.00103						
18:30-19:00	3	0.00000	0.00000	0.00000	0.00000	0.00103	0.00103	0.0	0.1	0.1
Peak Period For		Bus								
In	08:30-09:00	0.01								
Out	16:00-16:30	0.01								
Total	08:30-09:00, 10:00-10:30	0.01								

Mode:	Car Driver + Passengers									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.13354	0.02054	0.15408						
07:30-08:00	3	0.29481	0.02568	0.32049	0.42835	0.04622	0.47457	30.8	3.3	34.1
08:00-08:30	3	0.46944	0.05547	0.52490						
08:30-09:00	3	0.55367	0.07190	0.62557	1.02311	0.12737	1.15047	73.5	9.2	82.7
09:00-09:30	3	0.42527	0.06780	0.49306						
09:30-10:00	3	0.29584	0.09039	0.38623	0.72111	0.15819	0.87929	51.8	11.4	63.2
10:00-10:30	3	0.18079	0.10375	0.28454						
10:30-11:00	3	0.15614	0.11197	0.26810	0.33693	0.21572	0.55264	24.2	15.5	39.7
11:00-11:30	3	0.18284	0.11197	0.29481						
11:30-12:00	3	0.15305	0.14176	0.29481	0.33589	0.25373	0.58962	24.1	18.2	42.4
12:00-12:30	3	0.16949	0.25475	0.42424						
12:30-13:00	3	0.19003	0.16744	0.35747	0.35952	0.42219	0.78171	25.8	30.3	56.2
13:00-13:30	3	0.20133	0.19517	0.39650						
13:30-14:00	3	0.22701	0.10580	0.33282	0.42834	0.30097	0.72932	30.8	21.6	52.4
14:00-14:30	3	0.20031	0.17154	0.37185						
14:30-15:00	3	0.17873	0.20236	0.38110	0.37904	0.37390	0.75295	27.2	26.9	54.1
15:00-15:30	3	0.13765	0.17976	0.31741						
15:30-16:00	3	0.18182	0.21982	0.40164	0.31947	0.39958	0.71905	23.0	28.7	51.7
16:00-16:30	3	0.12224	0.49820	0.62044						
16:30-17:00	3	0.10786	0.47046	0.57832	0.23010	0.96866	1.19876	16.5	69.6	86.1
17:00-17:30	3	0.08320	0.55264	0.63584						
17:30-18:00	3	0.09245	0.48484	0.57729	0.17565	1.03748	1.21313	12.6	74.5	87.2
18:00-18:30	3	0.06471	0.29995	0.36466						
18:30-19:00	3	0.06780	0.16024	0.22804	0.13251	0.46019	0.59270	9.5	33.1	42.6
Peak Period For		Car Driver + Passengers								
In	08:30-09:00	0.55								
Out	17:00-17:30	0.55								
Total	17:00-17:30	0.64								

Mode:	Car Driver									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.12018	0.01952	0.13970						
07:30-08:00	3	0.27324	0.02568	0.29892	0.39342	0.04520	0.43862	28.3	3.2	31.5
08:00-08:30	**3**	**0.42937**	**0.05136**	**0.48073**						
08:30-09:00	**3**	**0.49101**	**0.06780**	**0.55880**	**0.92038**	**0.11916**	**1.03953**	**66.1**	**8.6**	**74.7**
09:00-09:30	3	0.37493	0.06061	0.43554						
09:30-10:00	3	0.27940	0.08218	0.36158	0.65433	0.14279	0.79712	47.0	10.3	57.3
10:00-10:30	3	0.16538	0.09039	0.25578						
10:30-11:00	3	0.13148	0.09450	0.22599	0.29686	0.18489	0.48177	21.3	13.3	34.6
11:00-11:30	3	0.16127	0.09759	0.25886						
11:30-12:00	3	0.13662	0.12532	0.26194	0.29789	0.22291	0.52080	21.4	16.0	37.4
12:00-12:30	3	0.14792	0.23420	0.38212						
12:30-13:00	3	0.17360	0.14381	0.31741	0.32152	0.37801	0.69953	23.1	27.2	50.3
13:00-13:30	3	0.17668	0.17360	0.35028						
13:30-14:00	3	0.20236	0.09348	0.29584	0.37904	0.26708	0.64612	27.2	19.2	46.4
14:00-14:30	3	0.17668	0.15203	0.32871						
14:30-15:00	3	0.15203	0.17257	0.32460	0.32871	0.32460	0.65331	23.6	23.3	46.9
15:00-15:30	3	0.11916	0.15305	0.27221						
15:30-16:00	3	0.15716	0.19209	0.34925	0.27632	0.34514	0.62146	19.9	24.8	44.7
16:00-16:30	3	0.10272	0.44786	0.55058						
16:30-17:00	3	0.09039	0.39548	0.48587	0.19311	0.84334	1.03645	13.9	60.6	74.5
17:00-17:30	**3**	**0.07499**	**0.49922**	**0.57421**						
17:30-18:00	**3**	**0.08731**	**0.43040**	**0.51771**	**0.16230**	**0.92962**	**1.09192**	**11.7**	**66.8**	**78.5**
18:00-18:30	3	0.06266	0.27118	0.33384						
18:30-19:00	3	0.06677	0.14176	0.20852	0.12943	0.41294	0.54236	9.3	29.7	39.0

Peak Period For		Car Driver
In	08:30-09:00	0.49
Out	17:00-17:30	0.50
Total	17:00-17:30	0.57

Mode:	Car Passenger									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.01335	0.00103	0.01438						
07:30-08:00	3	0.02157	0.00000	0.02157	0.03492	0.00103	0.03595	2.5	0.1	2.6
08:00-08:30	3	0.04006	0.00411	0.04417						
08:30-09:00	3	0.06266	0.00411	0.06677	0.10272	0.00822	0.11094	7.4	0.6	8.0
09:00-09:30	3	0.05033	0.00719	0.05752						
09:30-10:00	3	0.01644	0.00822	0.02465	0.06677	0.01541	0.08217	4.8	1.1	5.9
10:00-10:30	3	0.01541	0.01335	0.02876						
10:30-11:00	3	0.02465	0.01746	0.04212	0.04006	0.03081	0.07088	2.9	2.2	5.1
11:00-11:30	3	0.02157	0.01438	0.03595						
11:30-12:00	3	0.01644	0.01644	0.03287	0.03801	0.03082	0.06882	2.7	2.2	4.9
12:00-12:30	3	0.02157	0.02054	0.04212						
12:30-13:00	3	0.01644	0.02363	0.04006	0.03801	0.04417	0.08218	2.7	3.2	5.9
13:00-13:30	3	0.02465	0.02157	0.04622						
13:30-14:00	3	0.02465	0.01233	0.03698	0.04930	0.03390	0.08320	3.5	2.4	6.0
14:00-14:30	3	0.02363	0.01952	0.04314						
14:30-15:00	3	0.02671	0.02979	0.05650	0.05034	0.04931	0.09964	3.6	3.5	7.2
15:00-15:30	3	0.01849	0.02671	0.04520						
15:30-16:00	3	0.02465	0.02773	0.05239	0.04314	0.05444	0.09759	3.1	3.9	7.0
16:00-16:30	3	0.01952	0.05033	0.06985						
16:30-17:00	3	0.01746	0.07499	0.09245	0.03698	0.12532	0.16230	2.7	9.0	11.7
17:00-17:30	3	0.00822	0.05341	0.06163						
17:30-18:00	3	0.00514	0.05444	0.05958	0.01336	0.10785	0.12121	1.0	7.7	8.7
18:00-18:30	3	0.00205	0.02876	0.03082						
18:30-19:00	3	0.00103	0.01849	0.01952	0.00308	0.04725	0.05034	0.2	3.4	3.6
Peak Period For		Car Passenger								
In	08:30-09:00	0.06								
Out	16:30-17:00	0.07								
Total	16:30-17:00	0.09								

Mode:	Coach									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00822	0.00000	0.00822						
07:30-08:00	3	0.02260	0.00924	0.03184	0.03082	0.00924	0.04006	2.2	0.7	2.9
08:00-08:30	3	0.03698	0.01335	0.05033						
08:30-09:00	3	0.06266	0.00514	0.06780	0.09964	0.01849	0.11813	7.2	1.3	8.5
09:00-09:30	3	0.04212	0.01027	0.05239						
09:30-10:00	3	0.05033	0.00719	0.05752	0.09245	0.01746	0.10991	6.6	1.3	7.9
10:00-10:30	3	0.03082	0.01027	0.04109						
10:30-11:00	3	0.01644	0.00308	0.01952	0.04726	0.01335	0.06061	3.4	1.0	4.4
11:00-11:30	3	0.02363	0.01644	0.04006						
11:30-12:00	3	0.00924	0.00514	0.01438	0.03287	0.02158	0.05444	2.4	1.6	3.9
12:00-12:30	3	0.00514	0.00308	0.00822						
12:30-13:00	3	0.00719	0.01027	0.01746	0.01233	0.01335	0.02568	0.9	1.0	1.8
13:00-13:30	3	0.01335	0.00616	0.01952						
13:30-14:00	3	0.00719	0.00205	0.00924	0.02054	0.00821	0.02876	1.5	0.6	2.1
14:00-14:30	3	0.00924	0.00308	0.01233						
14:30-15:00	3	0.00924	0.00411	0.01335	0.01848	0.00719	0.02568	1.3	0.5	1.8
15:00-15:30	3	0.00924	0.00308	0.01233						
15:30-16:00	3	0.00924	0.00205	0.01130	0.01848	0.00513	0.02363	1.3	0.4	1.7
16:00-16:30	3	0.01644	0.01849	0.03493						
16:30-17:00	3	0.01130	0.02876	0.04006	0.02774	0.04725	0.07499	2.0	3.4	5.4
17:00-17:30	3	0.00822	0.05650	0.06471						
17:30-18:00	3	0.01644	0.09656	0.11299	0.02466	0.15306	0.17770	1.8	11.0	12.8
18:00-18:30	3	0.00719	0.05547	0.06266						
18:30-19:00	3	0.01849	0.03390	0.05239	0.02568	0.08937	0.11505	1.8	6.4	8.3
Peak Period For		Coach								
In	08:30-09:00	0.06								
Out	17:30-18:00	0.10								
Total	17:30-18:00	0.11								

Mode:	Motor Cycle								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00411	0.00000	0.00411						
07:30-08:00	3	0.01746	0.00000	0.01746	0.02157	0.00000	0.02157	1.5	0.0	1.5
08:00-08:30	3	0.01746	0.00000	0.01746						
08:30-09:00	3	0.02568	0.00000	0.02568	0.04314	0.00000	0.04314	3.1	0.0	3.1
09:00-09:30	3	0.01130	0.00103	0.01233						
09:30-10:00	3	0.00924	0.00411	0.01335	0.02054	0.00514	0.02568	1.5	0.4	1.8
10:00-10:30	3	0.00822	0.00514	0.01335						
10:30-11:00	3	0.00000	0.00103	0.00103	0.00822	0.00617	0.01438	0.6	0.4	1.0
11:00-11:30	3	0.00719	0.00205	0.00924						
11:30-12:00	3	0.00514	0.00411	0.00924	0.01233	0.00616	0.01848	0.9	0.4	1.3
12:00-12:30	3	0.00616	0.00616	0.01233						
12:30-13:00	3	0.00308	0.00411	0.00719	0.00924	0.01027	0.01952	0.7	0.7	1.4
13:00-13:30	3	0.00103	0.00205	0.00308						
13:30-14:00	3	0.00205	0.00000	0.00205	0.00308	0.00205	0.00513	0.2	0.1	0.4
14:00-14:30	3	0.00514	0.00000	0.00514						
14:30-15:00	3	0.00719	0.00308	0.01027	0.01233	0.00308	0.01541	0.9	0.2	1.1
15:00-15:30	3	0.00000	0.00411	0.00411						
15:30-16:00	3	0.00514	0.00616	0.01130	0.00514	0.01027	0.01541	0.4	0.7	1.1
16:00-16:30	3	0.00411	0.00616	0.01027						
16:30-17:00	3	0.00103	0.00616	0.00719	0.00514	0.01232	0.01746	0.4	0.9	1.3
17:00-17:30	3	0.00000	0.02876	0.02876						
17:30-18:00	3	0.00103	0.02260	0.02363	0.00103	0.05136	0.05239	0.1	3.7	3.8
18:00-18:30	3	0.00205	0.01952	0.02157						
18:30-19:00	3	0.00308	0.01027	0.01335	0.00513	0.02979	0.03492	0.4	2.1	2.5
Peak Period For		Motor Cycle								
In	08:30-09:00	0.03								
Out	17:00-17:30	0.03								
Total	08:30-09:00	0.03								

Mode:	Other									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00103	0.00616	0.00719						
07:30-08:00	3	0.00103	0.00103	0.00205	0.00206	0.00719	0.00924	0.1	0.5	0.7
08:00-08:30	3	0.00822	0.00205	0.01027						
08:30-09:00	3	0.00205	0.00103	0.00308	0.01027	0.00308	0.01335	0.7	0.2	1.0
09:00-09:30	3	0.00205	0.00000	0.00205						
09:30-10:00	3	0.00103	0.00205	0.00308	0.00308	0.00205	0.00513	0.2	0.1	0.4
10:00-10:30	3	0.00205	0.00822	0.01027						
10:30-11:00	3	0.00103	0.00000	0.00103	0.00308	0.00822	0.01130	0.2	0.6	0.8
11:00-11:30	3	0.00616	0.00822	0.01438						
11:30-12:00	3	0.00000	0.00205	0.00205	0.00616	0.01027	0.01643	0.4	0.7	1.2
12:00-12:30	3	0.00000	0.00000	0.00000						
12:30-13:00	3	0.00000	0.00103	0.00103	0.00000	0.00103	0.00103	0.0	0.1	0.1
13:00-13:30	3	0.00000	0.00616	0.00616						
13:30-14:00	3	0.00308	0.00000	0.00308	0.00308	0.00616	0.00924	0.2	0.4	0.7
14:00-14:30	3	0.00103	0.00103	0.00205						
14:30-15:00	3	0.00822	0.00514	0.01335	0.00925	0.00617	0.01540	0.7	0.4	1.1
15:00-15:30	3	0.00514	0.00205	0.00719						
15:30-16:00	3	0.00308	0.01027	0.01335	0.00822	0.01232	0.02054	0.6	0.9	1.5
16:00-16:30	3	0.00000	0.00103	0.00103						
16:30-17:00	3	0.00103	0.00308	0.00411	0.00103	0.00411	0.00514	0.1	0.3	0.4
17:00-17:30	3	0.00103	0.00000	0.00103						
17:30-18:00	3	0.00205	0.00308	0.00514	0.00308	0.00308	0.00617	0.2	0.2	0.4
18:00-18:30	3	0.00103	0.00000	0.00103						
18:30-19:00	3	0.00000	0.00308	0.00308	0.00103	0.00308	0.00411	0.1	0.2	0.3
Peak Period For		Other								
In	08:00-08:30	0.01								
Out	15:30-16:00	0.01								
Total	11:00-11:30, 14:30-15:00, 15:30-16:00	0.01								

Mode:	Pedal Cycle									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00719	0.00000	0.00719						
07:30-08:00	3	0.04314	0.00103	0.04417	0.05033	0.00103	0.05136	3.6	0.1	3.7
08:00-08:30	3	0.05650	0.00205	0.05855						
08:30-09:00	3	0.06882	0.00205	0.07088	0.12532	0.00410	0.12943	9.0	0.3	9.3
09:00-09:30	3	0.04622	0.00308	0.04931						
09:30-10:00	3	0.01541	0.00103	0.01644	0.06163	0.00411	0.06575	4.4	0.3	4.7
10:00-10:30	3	0.00822	0.00103	0.00924						
10:30-11:00	3	0.00616	0.00000	0.00616	0.01438	0.00103	0.01540	1.0	0.1	1.1
11:00-11:30	3	0.00822	0.00411	0.01233						
11:30-12:00	3	0.00411	0.00103	0.00514	0.01233	0.00514	0.01747	0.9	0.4	1.3
12:00-12:30	3	0.00308	0.00103	0.00411						
12:30-13:00	3	0.00514	0.00514	0.01027	0.00822	0.00617	0.01438	0.6	0.4	1.0
13:00-13:30	3	0.00205	0.00308	0.00514						
13:30-14:00	3	0.01027	0.00411	0.01438	0.01232	0.00719	0.01952	0.9	0.5	1.4
14:00-14:30	3	0.00514	0.00103	0.00616						
14:30-15:00	3	0.00411	0.00411	0.00822	0.00925	0.00514	0.01438	0.7	0.4	1.0
15:00-15:30	3	0.00411	0.00103	0.00514						
15:30-16:00	3	0.00411	0.00719	0.01130	0.00822	0.00822	0.01644	0.6	0.6	1.2
16:00-16:30	3	0.00205	0.01952	0.02157						
16:30-17:00	3	0.00411	0.01746	0.02157	0.00616	0.03698	0.04314	0.4	2.7	3.1
17:00-17:30	3	0.00103	0.04417	0.04520						
17:30-18:00	3	0.00000	0.06882	0.06882	0.00103	0.11299	0.11402	0.1	8.1	8.2
18:00-18:30	3	0.00205	0.04622	0.04828						
18:30-19:00	3	0.00205	0.02568	0.02773	0.00410	0.07190	0.07601	0.3	5.2	5.5
Peak Period For		Pedal Cycle								
In	08:30-09:00	0.07								
Out	17:30-18:00	0.07								
Total	08:30-09:00	0.07								

Mode:	Taxi								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00205	0.00000	0.00205						
07:30-08:00	3	0.00411	0.00000	0.00411	0.00616	0.00000	0.00616	0.4	0.0	0.4
08:00-08:30	3	0.00616	0.00000	0.00616						
08:30-09:00	3	0.01027	0.00205	0.01233	0.01643	0.00205	0.01849	1.2	0.1	1.3
09:00-09:30	3	0.00616	0.00411	0.01027						
09:30-10:00	3	0.00411	0.00411	0.00822	0.01027	0.00822	0.01849	0.7	0.6	1.3
10:00-10:30	3	0.00411	0.00205	0.00616						
10:30-11:00	3	0.00411	0.00205	0.00616	0.00822	0.00410	0.01232	0.6	0.3	0.9
11:00-11:30	3	0.00000	0.00103	0.00103						
11:30-12:00	3	0.00000	0.00616	0.00616	0.00000	0.00719	0.00719	0.0	0.5	0.5
12:00-12:30	3	0.00000	0.00308	0.00308						
12:30-13:00	3	0.00514	0.00514	0.01027	0.00514	0.00822	0.01335	0.4	0.6	1.0
13:00-13:30	3	0.00308	0.00103	0.00411						
13:30-14:00	3	0.00514	0.00103	0.00616	0.00822	0.00206	0.01027	0.6	0.1	0.7
14:00-14:30	3	0.00000	0.00205	0.00205						
14:30-15:00	3	0.00308	0.00103	0.00411	0.00308	0.00308	0.00616	0.2	0.2	0.4
15:00-15:30	3	0.00411	0.00103	0.00514						
15:30-16:00	3	0.00205	0.00205	0.00411	0.00616	0.00308	0.00925	0.4	0.2	0.7
16:00-16:30	3	0.00514	0.00616	0.01130						
16:30-17:00	3	0.00205	0.01027	0.01233	0.00719	0.01643	0.02363	0.5	1.2	1.7
17:00-17:30	3	0.00000	0.00308	0.00308						
17:30-18:00	3	0.00000	0.01541	0.01541	0.00000	0.01849	0.01849	0.0	1.3	1.3
18:00-18:30	3	0.00000	0.02157	0.02157						
18:30-19:00	3	0.00103	0.00205	0.00308	0.00103	0.02362	0.02465	0.1	1.7	1.8
Peak Period For		Taxi								
In	08:30-09:00	0.01								
Out	18:00-18:30	0.02								
Total	18:00-18:30	0.02								

Mode:	Walk & PT								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.01233	0.00103	0.01335						
07:30-08:00	3	0.03184	0.00308	0.03493	0.04417	0.00411	0.04828	3.2	0.3	3.5
08:00-08:30	3	0.05752	0.00616	0.06369						
08:30-09:00	3	0.11916	0.01027	0.12943	0.17668	0.01643	0.19312	12.7	1.2	13.9
09:00-09:30	3	0.14278	0.01849	0.16127						
09:30-10:00	3	0.07396	0.03698	0.11094	0.21674	0.05547	0.27221	15.6	4.0	19.6
10:00-10:30	3	0.04520	0.03903	0.08423						
10:30-11:00	3	0.05958	0.05752	0.11710	0.10478	0.09655	0.20133	7.5	6.9	14.5
11:00-11:30	3	0.05752	0.05855	0.11607						
11:30-12:00	3	0.04622	0.06882	0.11505	0.10374	0.12737	0.23112	7.5	9.2	16.6
12:00-12:30	3	0.08629	0.15922	0.24550						
12:30-13:00	3	0.10991	0.15305	0.26297	0.19620	0.31227	0.50847	14.1	22.4	36.5
13:00-13:30	3	0.14586	0.16127	0.30714						
13:30-14:00	3	0.15408	0.09142	0.24550	0.29994	0.25269	0.55264	21.6	18.2	39.7
14:00-14:30	3	0.13148	0.05650	0.18798						
14:30-15:00	3	0.07088	0.06882	0.13970	0.20236	0.12532	0.32768	14.5	9.0	23.5
15:00-15:30	3	0.07601	0.07088	0.14689						
15:30-16:00	3	0.05855	0.08218	0.14073	0.13456	0.15306	0.28762	9.7	11.0	20.7
16:00-16:30	3	0.02979	0.06061	0.09039						
16:30-17:00	3	0.02568	0.07601	0.10169	0.05547	0.13662	0.19208	4.0	9.8	13.8
17:00-17:30	3	0.01849	0.11813	0.13662						
17:30-18:00	3	0.00719	0.05033	0.05752	0.02568	0.16846	0.19414	1.8	12.1	13.9
18:00-18:30	3	0.00719	0.03801	0.04520						
18:30-19:00	3	0.00616	0.02054	0.02671	0.01335	0.05855	0.07191	1.0	4.2	5.2
Peak Period For		Walk & PT								
In	13:30-14:00	0.15								
Out	13:00-13:30	0.16								
Total	13:00-13:30	0.31								

Mode:	Walk only									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00924	0.01849	0.02773						
07:30-08:00	3	0.04520	0.03287	0.07807	0.05444	0.05136	0.10580	3.9	3.7	7.6
08:00-08:30	3	0.22496	0.06985	0.29481						
08:30-09:00	3	0.39650	0.06985	0.46635	0.62146	0.13970	0.76116	44.7	10.0	54.7
09:00-09:30	3	0.28865	0.07293	0.36158						
09:30-10:00	3	0.19825	0.05752	0.25578	0.48690	0.13045	0.61736	35.0	9.4	44.4
10:00-10:30	3	0.08218	0.03082	0.11299						
10:30-11:00	3	0.06369	0.04622	0.10991	0.14587	0.07704	0.22290	10.5	5.5	16.0
11:00-11:30	3	0.07190	0.06369	0.13559						
11:30-12:00	3	0.08320	0.06163	0.14484	0.15510	0.12532	0.28043	11.1	9.0	20.1
12:00-12:30	3	0.11607	0.12737	0.24345						
12:30-13:00	3	0.17565	0.15922	0.33487	0.29172	0.28659	0.57832	21.0	20.6	41.6
13:00-13:30	3	0.18079	0.13662	0.31741						
13:30-14:00	3	0.16846	0.07910	0.24756	0.34925	0.21572	0.56497	25.1	15.5	40.6
14:00-14:30	3	0.06471	0.04725	0.11197						
14:30-15:00	3	0.06882	0.06163	0.13046	0.13353	0.10888	0.24243	9.6	7.8	17.4
15:00-15:30	3	0.08423	0.05444	0.13867						
15:30-16:00	3	0.06061	0.08629	0.14689	0.14484	0.14073	0.28556	10.4	10.1	20.5
16:00-16:30	3	0.04725	0.17565	0.22290						
16:30-17:00	3	0.06369	0.12943	0.19312	0.11094	0.30508	0.41602	8.0	21.9	29.9
17:00-17:30	3	0.05444	0.16230	0.21674						
17:30-18:00	3	0.04828	0.19003	0.23831	0.10272	0.35233	0.45505	7.4	25.3	32.7
18:00-18:30	3	0.02363	0.15819	0.18182						
18:30-19:00	3	0.01541	0.10067	0.11607	0.03904	0.25886	0.29789	2.8	18.6	21.4
Peak Period For		Walk only								
In	08:30-09:00	0.40								
Out	17:30-18:00	0.19								
Total	08:30-09:00	0.47								

TRAVL - Average Trip Rate by Mode and Time

Report ID 9

List of Surveys:

Name	Address	Postcode	Survey Date
Hounslow Civic Centre	Lampton Road	TW3 4DN	30/11/2004
Sky Headquarters	Grant Way,	TW7 5QD	09/07/2009
Tearfund Head Office	100 Church Road	TW11 8QE	16/03/2006
Number of sites considered	3		

Predictor Type : Gross Floor Area	100	Sqm
HPH 5	**13991**	**Sqm**
	139.91	

Counts By Mode:

Mode: All Modes

Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.17873	0.04622	0.22496						
07:30-08:00	3	0.46019	0.07293	0.53312	0.63892	0.11915	0.75808	89.4	16.7	106.1
08:00-08:30	3	0.88135	0.14895	1.03029						
08:30-09:00	3	1.25114	0.16230	1.41344	2.13249	0.31125	2.44373	298.4	43.5	341.9
09:00-09:30	3	0.97380	0.17771	1.15150						
09:30-10:00	3	0.65125	0.20339	0.85464	1.62505	0.38110	2.00614	227.4	53.3	280.7
10:00-10:30	3	0.37082	0.20236	0.57318						
10:30-11:00	3	0.30714	0.22188	0.52901	0.67796	0.42424	1.10219	94.9	59.4	154.2
11:00-11:30	3	0.35747	0.26605	0.62352						
11:30-12:00	3	0.30097	0.29070	0.59167	0.65844	0.55675	1.21519	92.1	77.9	170.0
12:00-12:30	3	0.38623	0.55469	0.94093						
12:30-13:00	3	0.49614	0.50539	1.00153	0.88237	1.06008	1.94246	123.5	148.3	271.8
13:00-13:30	3	0.54750	0.51155	1.05905						
13:30-14:00	3	0.57729	0.28351	0.86080	1.12479	0.79506	1.91985	157.4	111.2	268.6
14:00-14:30	3	0.41705	0.28248	0.69953						
14:30-15:00	3	0.35028	0.35028	0.70056	0.76733	0.63276	1.40009	107.4	88.5	195.9
15:00-15:30	3	0.32049	0.31638	0.63687						
15:30-16:00	3	0.32460	0.41602	0.74062	0.64509	0.73240	1.37749	90.3	102.5	192.7
16:00-16:30	3	0.22701	0.79095	1.01797						
16:30-17:00	3	0.21674	0.74165	0.95839	0.44375	1.53260	1.97636	62.1	214.4	276.5
17:00-17:30	3	0.16641	0.97071	1.13712						
17:30-18:00	3	0.16744	0.93887	1.10631	0.33385	1.90958	2.24343	46.7	267.2	313.9
18:00-18:30	3	0.10786	0.63995	0.74781						
18:30-19:00	3	0.11402	0.35644	0.47046	0.22188	0.99639	1.21827	31.0	139.4	170.4
Peak Period For	All Modes									
In	08:30-09:00	1.25								
Out	17:00-17:30	0.97								
Total	08:30-09:00	1.41								

Mode:	Bus									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00103	0.00000	0.00103						
07:30-08:00	3	0.00000	0.00000	0.00000	0.00103	0.00000	0.00103	0.1	0.0	0.1
08:00-08:30	3	0.00411	0.00000	0.00411						
08:30-09:00	3	0.01233	0.00000	0.01233	0.01644	0.00000	0.01644	2.3	0.0	2.3
09:00-09:30	3	0.00924	0.00000	0.00924						
09:30-10:00	3	0.00308	0.00000	0.00308	0.01232	0.00000	0.01232	1.7	0.0	1.7
10:00-10:30	3	0.00924	0.00205	0.01130						
10:30-11:00	3	0.00000	0.00000	0.00000	0.00924	0.00205	0.01130	1.3	0.3	1.6
11:00-11:30	3	0.00000	0.00000	0.00000						
11:30-12:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
12:00-12:30	3	0.00000	0.00000	0.00000						
12:30-13:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
13:00-13:30	3	0.00000	0.00000	0.00000						
13:30-14:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
14:00-14:30	3	0.00000	0.00000	0.00000						
14:30-15:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
15:00-15:30	3	0.00000	0.00000	0.00000						
15:30-16:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
16:00-16:30	3	0.00000	0.00514	0.00514						
16:30-17:00	3	0.00000	0.00000	0.00000	0.00000	0.00514	0.00514	0.0	0.7	0.7
17:00-17:30	3	0.00000	0.00514	0.00514						
17:30-18:00	3	0.00000	0.00719	0.00719	0.00000	0.01233	0.01233	0.0	1.7	1.7
18:00-18:30	3	0.00000	0.00103	0.00103						
18:30-19:00	3	0.00000	0.00000	0.00000	0.00000	0.00103	0.00103	0.0	0.1	0.1
Peak Period For		Bus								
In	08:30-09:00	0.01								
Out	16:00-16:30	0.01								
Total	08:30-09:00, 10:00-10:30	0.01								

Mode:	Car Driver + Passengers									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.13354	0.02054	0.15408						
07:30-08:00	3	0.29481	0.02568	0.32049	0.42835	0.04622	0.47457	59.9	6.5	66.4
08:00-08:30	3	0.46944	0.05547	0.52490						
08:30-09:00	3	0.55367	0.07190	0.62557	1.02311	0.12737	1.15047	143.1	17.8	161.0
09:00-09:30	3	0.42527	0.06780	0.49306						
09:30-10:00	3	0.29584	0.09039	0.38623	0.72111	0.15819	0.87929	100.9	22.1	123.0
10:00-10:30	3	0.18079	0.10375	0.28454						
10:30-11:00	3	0.15614	0.11197	0.26810	0.33693	0.21572	0.55264	47.1	30.2	77.3
11:00-11:30	3	0.18284	0.11197	0.29481						
11:30-12:00	3	0.15305	0.14176	0.29481	0.33589	0.25373	0.58962	47.0	35.5	82.5
12:00-12:30	3	0.16949	0.25475	0.42424						
12:30-13:00	3	0.19003	0.16744	0.35747	0.35952	0.42219	0.78171	50.3	59.1	109.4
13:00-13:30	3	0.20133	0.19517	0.39650						
13:30-14:00	3	0.22701	0.10580	0.33282	0.42834	0.30097	0.72932	59.9	42.1	102.0
14:00-14:30	3	0.20031	0.17154	0.37185						
14:30-15:00	3	0.17873	0.20236	0.38110	0.37904	0.37390	0.75295	53.0	52.3	105.3
15:00-15:30	3	0.13765	0.17976	0.31741						
15:30-16:00	3	0.18182	0.21982	0.40164	0.31947	0.39958	0.71905	44.7	55.9	100.6
16:00-16:30	3	0.12224	0.49820	0.62044						
16:30-17:00	3	0.10786	0.47046	0.57832	0.23010	0.96866	1.19876	32.2	135.5	167.7
17:00-17:30	3	0.08320	0.55264	0.63584						
17:30-18:00	3	0.09245	0.48484	0.57729	0.17565	1.03748	1.21313	24.6	145.2	169.7
18:00-18:30	3	0.06471	0.29995	0.36466						
18:30-19:00	3	0.06780	0.16024	0.22804	0.13251	0.46019	0.59270	18.5	64.4	82.9
Peak Period For		Car Driver + Passengers								
In	08:30-09:00	0.55								
Out	17:00-17:30	0.55								
Total	17:00-17:30	0.64								

Mode:	Car Driver									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.12018	0.01952	0.13970						
07:30-08:00	3	0.27324	0.02568	0.29892	0.39342	0.04520	0.43862	55.0	6.3	61.4
08:00-08:30	**3**	**0.42937**	**0.05136**	**0.48073**						
08:30-09:00	**3**	**0.49101**	**0.06780**	**0.55880**	**0.92038**	**0.11916**	**1.03953**	**128.8**	**16.7**	**145.4**
09:00-09:30	3	0.37493	0.06061	0.43554						
09:30-10:00	3	0.27940	0.08218	0.36158	0.65433	0.14279	0.79712	91.5	20.0	111.5
10:00-10:30	3	0.16538	0.09039	0.25578						
10:30-11:00	3	0.13148	0.09450	0.22599	0.29686	0.18489	0.48177	41.5	25.9	67.4
11:00-11:30	3	0.16127	0.09759	0.25886						
11:30-12:00	3	0.13662	0.12532	0.26194	0.29789	0.22291	0.52080	41.7	31.2	72.9
12:00-12:30	3	0.14792	0.23420	0.38212						
12:30-13:00	3	0.17360	0.14381	0.31741	0.32152	0.37801	0.69953	45.0	52.9	97.9
13:00-13:30	3	0.17668	0.17360	0.35028						
13:30-14:00	3	0.20236	0.09348	0.29584	0.37904	0.26708	0.64612	53.0	37.4	90.4
14:00-14:30	3	0.17668	0.15203	0.32871						
14:30-15:00	3	0.15203	0.17257	0.32460	0.32871	0.32460	0.65331	46.0	45.4	91.4
15:00-15:30	3	0.11916	0.15305	0.27221						
15:30-16:00	3	0.15716	0.19209	0.34925	0.27632	0.34514	0.62146	38.7	48.3	86.9
16:00-16:30	3	0.10272	0.44786	0.55058						
16:30-17:00	3	0.09039	0.39548	0.48587	0.19311	0.84334	1.03645	27.0	118.0	145.0
17:00-17:30	**3**	**0.07499**	**0.49922**	**0.57421**						
17:30-18:00	**3**	**0.08731**	**0.43040**	**0.51771**	**0.16230**	**0.92962**	**1.09192**	**22.7**	**130.1**	**152.8**
18:00-18:30	3	0.06266	0.27118	0.33384						
18:30-19:00	3	0.06677	0.14176	0.20852	0.12943	0.41294	0.54236	18.1	57.8	75.9

Peak Period For		Car Driver
In	08:30-09:00	0.49
Out	17:00-17:30	0.50
Total	17:00-17:30	0.57

Mode:	Car Passenger									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.01335	0.00103	0.01438						
07:30-08:00	3	0.02157	0.00000	0.02157	0.03492	0.00103	0.03595	4.9	0.1	5.0
08:00-08:30	3	0.04006	0.00411	0.04417						
08:30-09:00	3	0.06266	0.00411	0.06677	0.10272	0.00822	0.11094	14.4	1.2	15.5
09:00-09:30	3	0.05033	0.00719	0.05752						
09:30-10:00	3	0.01644	0.00822	0.02465	0.06677	0.01541	0.08217	9.3	2.2	11.5
10:00-10:30	3	0.01541	0.01335	0.02876						
10:30-11:00	3	0.02465	0.01746	0.04212	0.04006	0.03081	0.07088	5.6	4.3	9.9
11:00-11:30	3	0.02157	0.01438	0.03595						
11:30-12:00	3	0.01644	0.01644	0.03287	0.03801	0.03082	0.06882	5.3	4.3	9.6
12:00-12:30	3	0.02157	0.02054	0.04212						
12:30-13:00	3	0.01644	0.02363	0.04006	0.03801	0.04417	0.08218	5.3	6.2	11.5
13:00-13:30	3	0.02465	0.02157	0.04622						
13:30-14:00	3	0.02465	0.01233	0.03698	0.04930	0.03390	0.08320	6.9	4.7	11.6
14:00-14:30	3	0.02363	0.01952	0.04314						
14:30-15:00	3	0.02671	0.02979	0.05650	0.05034	0.04931	0.09964	7.0	6.9	13.9
15:00-15:30	3	0.01849	0.02671	0.04520						
15:30-16:00	3	0.02465	0.02773	0.05239	0.04314	0.05444	0.09759	6.0	7.6	13.7
16:00-16:30	3	0.01952	0.05033	0.06985						
16:30-17:00	3	0.01746	0.07499	0.09245	0.03698	0.12532	0.16230	5.2	17.5	22.7
17:00-17:30	3	0.00822	0.05341	0.06163						
17:30-18:00	3	0.00514	0.05444	0.05958	0.01336	0.10785	0.12121	1.9	15.1	17.0
18:00-18:30	3	0.00205	0.02876	0.03082						
18:30-19:00	3	0.00103	0.01849	0.01952	0.00308	0.04725	0.05034	0.4	6.6	7.0
Peak Period For		Car Passenger								
In	08:30-09:00	0.06								
Out	16:30-17:00	0.07								
Total	16:30-17:00	0.09								

Mode:	Coach								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00822	0.00000	0.00822						
07:30-08:00	3	0.02260	0.00924	0.03184	0.03082	0.00924	0.04006	4.3	1.3	5.6
08:00-08:30	3	0.03698	0.01335	0.05033						
08:30-09:00	3	0.06266	0.00514	0.06780	0.09964	0.01849	0.11813	13.9	2.6	16.5
09:00-09:30	3	0.04212	0.01027	0.05239						
09:30-10:00	3	0.05033	0.00719	0.05752	0.09245	0.01746	0.10991	12.9	2.4	15.4
10:00-10:30	3	0.03082	0.01027	0.04109						
10:30-11:00	3	0.01644	0.00308	0.01952	0.04726	0.01335	0.06061	6.6	1.9	8.5
11:00-11:30	3	0.02363	0.01644	0.04006						
11:30-12:00	3	0.00924	0.00514	0.01438	0.03287	0.02158	0.05444	4.6	3.0	7.6
12:00-12:30	3	0.00514	0.00308	0.00822						
12:30-13:00	3	0.00719	0.01027	0.01746	0.01233	0.01335	0.02568	1.7	1.9	3.6
13:00-13:30	3	0.01335	0.00616	0.01952						
13:30-14:00	3	0.00719	0.00205	0.00924	0.02054	0.00821	0.02876	2.9	1.1	4.0
14:00-14:30	3	0.00924	0.00308	0.01233						
14:30-15:00	3	0.00924	0.00411	0.01335	0.01848	0.00719	0.02568	2.6	1.0	3.6
15:00-15:30	3	0.00924	0.00308	0.01233						
15:30-16:00	3	0.00924	0.00205	0.01130	0.01848	0.00513	0.02363	2.6	0.7	3.3
16:00-16:30	3	0.01644	0.01849	0.03493						
16:30-17:00	3	0.01130	0.02876	0.04006	0.02774	0.04725	0.07499	3.9	6.6	10.5
17:00-17:30	3	0.00822	0.05650	0.06471						
17:30-18:00	3	0.01644	0.09656	0.11299	0.02466	0.15306	0.17770	3.5	21.4	24.9
18:00-18:30	3	0.00719	0.05547	0.06266						
18:30-19:00	3	0.01849	0.03390	0.05239	0.02568	0.08937	0.11505	3.6	12.5	16.1
Peak Period For		Coach								
In	08:30-09:00	0.06								
Out	17:30-18:00	0.10								
Total	17:30-18:00	0.11								

Mode:	Motor Cycle								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00411	0.00000	0.00411						
07:30-08:00	3	0.01746	0.00000	0.01746	0.02157	0.00000	0.02157	3.0	0.0	3.0
08:00-08:30	3	0.01746	0.00000	0.01746						
08:30-09:00	3	0.02568	0.00000	0.02568	0.04314	0.00000	0.04314	6.0	0.0	6.0
09:00-09:30	3	0.01130	0.00103	0.01233						
09:30-10:00	3	0.00924	0.00411	0.01335	0.02054	0.00514	0.02568	2.9	0.7	3.6
10:00-10:30	3	0.00822	0.00514	0.01335						
10:30-11:00	3	0.00000	0.00103	0.00103	0.00822	0.00617	0.01438	1.2	0.9	2.0
11:00-11:30	3	0.00719	0.00205	0.00924						
11:30-12:00	3	0.00514	0.00411	0.00924	0.01233	0.00616	0.01848	1.7	0.9	2.6
12:00-12:30	3	0.00616	0.00616	0.01233						
12:30-13:00	3	0.00308	0.00411	0.00719	0.00924	0.01027	0.01952	1.3	1.4	2.7
13:00-13:30	3	0.00103	0.00205	0.00308						
13:30-14:00	3	0.00205	0.00000	0.00205	0.00308	0.00205	0.00513	0.4	0.3	0.7
14:00-14:30	3	0.00514	0.00000	0.00514						
14:30-15:00	3	0.00719	0.00308	0.01027	0.01233	0.00308	0.01541	1.7	0.4	2.2
15:00-15:30	3	0.00000	0.00411	0.00411						
15:30-16:00	3	0.00514	0.00616	0.01130	0.00514	0.01027	0.01541	0.7	1.4	2.2
16:00-16:30	3	0.00411	0.00616	0.01027						
16:30-17:00	3	0.00103	0.00616	0.00719	0.00514	0.01232	0.01746	0.7	1.7	2.4
17:00-17:30	3	0.00000	0.02876	0.02876						
17:30-18:00	3	0.00103	0.02260	0.02363	0.00103	0.05136	0.05239	0.1	7.2	7.3
18:00-18:30	3	0.00205	0.01952	0.02157						
18:30-19:00	3	0.00308	0.01027	0.01335	0.00513	0.02979	0.03492	0.7	4.2	4.9
Peak Period For		Motor Cycle								
In	08:30-09:00	0.03								
Out	17:00-17:30	0.03								
Total	08:30-09:00	0.03								

Mode:	Other									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00103	0.00616	0.00719						
07:30-08:00	3	0.00103	0.00103	0.00205	0.00206	0.00719	0.00924	0.3	1.0	1.3
08:00-08:30	3	0.00822	0.00205	0.01027						
08:30-09:00	3	0.00205	0.00103	0.00308	0.01027	0.00308	0.01335	1.4	0.4	1.9
09:00-09:30	3	0.00205	0.00000	0.00205						
09:30-10:00	3	0.00103	0.00205	0.00308	0.00308	0.00205	0.00513	0.4	0.3	0.7
10:00-10:30	3	0.00205	0.00822	0.01027						
10:30-11:00	3	0.00103	0.00000	0.00103	0.00308	0.00822	0.01130	0.4	1.2	1.6
11:00-11:30	3	0.00616	0.00822	0.01438						
11:30-12:00	3	0.00000	0.00205	0.00205	0.00616	0.01027	0.01643	0.9	1.4	2.3
12:00-12:30	3	0.00000	0.00000	0.00000						
12:30-13:00	3	0.00000	0.00103	0.00103	0.00000	0.00103	0.00103	0.0	0.1	0.1
13:00-13:30	3	0.00000	0.00616	0.00616						
13:30-14:00	3	0.00308	0.00000	0.00308	0.00308	0.00616	0.00924	0.4	0.9	1.3
14:00-14:30	3	0.00103	0.00103	0.00205						
14:30-15:00	3	0.00822	0.00514	0.01335	0.00925	0.00617	0.01540	1.3	0.9	2.2
15:00-15:30	3	0.00514	0.00205	0.00719						
15:30-16:00	3	0.00308	0.01027	0.01335	0.00822	0.01232	0.02054	1.2	1.7	2.9
16:00-16:30	3	0.00000	0.00103	0.00103						
16:30-17:00	3	0.00103	0.00308	0.00411	0.00103	0.00411	0.00514	0.1	0.6	0.7
17:00-17:30	3	0.00103	0.00000	0.00103						
17:30-18:00	3	0.00205	0.00308	0.00514	0.00308	0.00308	0.00617	0.4	0.4	0.9
18:00-18:30	3	0.00103	0.00000	0.00103						
18:30-19:00	3	0.00000	0.00308	0.00308	0.00103	0.00308	0.00411	0.1	0.4	0.6
Peak Period For		Other								
In	08:00-08:30	0.01								
Out	15:30-16:00	0.01								
Total	11:00-11:30, 14:30-15:00, 15:30-16:00	0.01								

Mode:	Pedal Cycle								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00719	0.00000	0.00719						
07:30-08:00	3	0.04314	0.00103	0.04417	0.05033	0.00103	0.05136	7.0	0.1	7.2
08:00-08:30	3	0.05650	0.00205	0.05855						
08:30-09:00	3	0.06882	0.00205	0.07088	0.12532	0.00410	0.12943	17.5	0.6	18.1
09:00-09:30	3	0.04622	0.00308	0.04931						
09:30-10:00	3	0.01541	0.00103	0.01644	0.06163	0.00411	0.06575	8.6	0.6	9.2
10:00-10:30	3	0.00822	0.00103	0.00924						
10:30-11:00	3	0.00616	0.00000	0.00616	0.01438	0.00103	0.01540	2.0	0.1	2.2
11:00-11:30	3	0.00822	0.00411	0.01233						
11:30-12:00	3	0.00411	0.00103	0.00514	0.01233	0.00514	0.01747	1.7	0.7	2.4
12:00-12:30	3	0.00308	0.00103	0.00411						
12:30-13:00	3	0.00514	0.00514	0.01027	0.00822	0.00617	0.01438	1.2	0.9	2.0
13:00-13:30	3	0.00205	0.00308	0.00514						
13:30-14:00	3	0.01027	0.00411	0.01438	0.01232	0.00719	0.01952	1.7	1.0	2.7
14:00-14:30	3	0.00514	0.00103	0.00616						
14:30-15:00	3	0.00411	0.00411	0.00822	0.00925	0.00514	0.01438	1.3	0.7	2.0
15:00-15:30	3	0.00411	0.00103	0.00514						
15:30-16:00	3	0.00411	0.00719	0.01130	0.00822	0.00822	0.01644	1.2	1.2	2.3
16:00-16:30	3	0.00205	0.01952	0.02157						
16:30-17:00	3	0.00411	0.01746	0.02157	0.00616	0.03698	0.04314	0.9	5.2	6.0
17:00-17:30	3	0.00103	0.04417	0.04520						
17:30-18:00	3	0.00000	0.06882	0.06882	0.00103	0.11299	0.11402	0.1	15.8	16.0
18:00-18:30	3	0.00205	0.04622	0.04828						
18:30-19:00	3	0.00205	0.02568	0.02773	0.00410	0.07190	0.07601	0.6	10.1	10.6
Peak Period For		Pedal Cycle								
In	08:30-09:00	0.07								
Out	17:30-18:00	0.07								
Total	08:30-09:00	0.07								

Mode:	Taxi									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00205	0.00000	0.00205						
07:30-08:00	3	0.00411	0.00000	0.00411	0.00616	0.00000	0.00616	0.9	0.0	0.9
08:00-08:30	3	0.00616	0.00000	0.00616						
08:30-09:00	3	0.01027	0.00205	0.01233	0.01643	0.00205	0.01849	2.3	0.3	2.6
09:00-09:30	3	0.00616	0.00411	0.01027						
09:30-10:00	3	0.00411	0.00411	0.00822	0.01027	0.00822	0.01849	1.4	1.2	2.6
10:00-10:30	3	0.00411	0.00205	0.00616						
10:30-11:00	3	0.00411	0.00205	0.00616	0.00822	0.00410	0.01232	1.2	0.6	1.7
11:00-11:30	3	0.00000	0.00103	0.00103						
11:30-12:00	3	0.00000	0.00616	0.00616	0.00000	0.00719	0.00719	0.0	1.0	1.0
12:00-12:30	3	0.00000	0.00308	0.00308						
12:30-13:00	3	0.00514	0.00514	0.01027	0.00514	0.00822	0.01335	0.7	1.2	1.9
13:00-13:30	3	0.00308	0.00103	0.00411						
13:30-14:00	3	0.00514	0.00103	0.00616	0.00822	0.00206	0.01027	1.2	0.3	1.4
14:00-14:30	3	0.00000	0.00205	0.00205						
14:30-15:00	3	0.00308	0.00103	0.00411	0.00308	0.00308	0.00616	0.4	0.4	0.9
15:00-15:30	3	0.00411	0.00103	0.00514						
15:30-16:00	3	0.00205	0.00205	0.00411	0.00616	0.00308	0.00925	0.9	0.4	1.3
16:00-16:30	3	0.00514	0.00616	0.01130						
16:30-17:00	3	0.00205	0.01027	0.01233	0.00719	0.01643	0.02363	1.0	2.3	3.3
17:00-17:30	3	0.00000	0.00308	0.00308						
17:30-18:00	3	0.00000	0.01541	0.01541	0.00000	0.01849	0.01849	0.0	2.6	2.6
18:00-18:30	3	0.00000	0.02157	0.02157						
18:30-19:00	3	0.00103	0.00205	0.00308	0.00103	0.02362	0.02465	0.1	3.3	3.4
Peak Period For		Taxi								
In	08:30-09:00	0.01								
Out	18:00-18:30	0.02								
Total	18:00-18:30	0.02								

Mode:	Walk & PT								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.01233	0.00103	0.01335						
07:30-08:00	3	0.03184	0.00308	0.03493	0.04417	0.00411	0.04828	6.2	0.6	6.8
08:00-08:30	3	0.05752	0.00616	0.06369						
08:30-09:00	3	0.11916	0.01027	0.12943	0.17668	0.01643	0.19312	24.7	2.3	27.0
09:00-09:30	3	0.14278	0.01849	0.16127						
09:30-10:00	3	0.07396	0.03698	0.11094	0.21674	0.05547	0.27221	30.3	7.8	38.1
10:00-10:30	3	0.04520	0.03903	0.08423						
10:30-11:00	3	0.05958	0.05752	0.11710	0.10478	0.09655	0.20133	14.7	13.5	28.2
11:00-11:30	3	0.05752	0.05855	0.11607						
11:30-12:00	3	0.04622	0.06882	0.11505	0.10374	0.12737	0.23112	14.5	17.8	32.3
12:00-12:30	3	0.08629	0.15922	0.24550						
12:30-13:00	3	0.10991	0.15305	0.26297	0.19620	0.31227	0.50847	27.5	43.7	71.1
13:00-13:30	3	0.14586	0.16127	0.30714						
13:30-14:00	3	0.15408	0.09142	0.24550	0.29994	0.25269	0.55264	42.0	35.4	77.3
14:00-14:30	3	0.13148	0.05650	0.18798						
14:30-15:00	3	0.07088	0.06882	0.13970	0.20236	0.12532	0.32768	28.3	17.5	45.8
15:00-15:30	3	0.07601	0.07088	0.14689						
15:30-16:00	3	0.05855	0.08218	0.14073	0.13456	0.15306	0.28762	18.8	21.4	40.2
16:00-16:30	3	0.02979	0.06061	0.09039						
16:30-17:00	3	0.02568	0.07601	0.10169	0.05547	0.13662	0.19208	7.8	19.1	26.9
17:00-17:30	3	0.01849	0.11813	0.13662						
17:30-18:00	3	0.00719	0.05033	0.05752	0.02568	0.16846	0.19414	3.6	23.6	27.2
18:00-18:30	3	0.00719	0.03801	0.04520						
18:30-19:00	3	0.00616	0.02054	0.02671	0.01335	0.05855	0.07191	1.9	8.2	10.1
Peak Period For		Walk & PT								
In	13:30-14:00	0.15								
Out	13:00-13:30	0.16								
Total	13:00-13:30	0.31								

Mode:	Walk only									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00924	0.01849	0.02773						
07:30-08:00	3	0.04520	0.03287	0.07807	0.05444	0.05136	0.10580	7.6	7.2	14.8
08:00-08:30	3	0.22496	0.06985	0.29481						
08:30-09:00	3	0.39650	0.06985	0.46635	0.62146	0.13970	0.76116	86.9	19.5	106.5
09:00-09:30	3	0.28865	0.07293	0.36158						
09:30-10:00	3	0.19825	0.05752	0.25578	0.48690	0.13045	0.61736	68.1	18.3	86.4
10:00-10:30	3	0.08218	0.03082	0.11299						
10:30-11:00	3	0.06369	0.04622	0.10991	0.14587	0.07704	0.22290	20.4	10.8	31.2
11:00-11:30	3	0.07190	0.06369	0.13559						
11:30-12:00	3	0.08320	0.06163	0.14484	0.15510	0.12532	0.28043	21.7	17.5	39.2
12:00-12:30	3	0.11607	0.12737	0.24345						
12:30-13:00	3	0.17565	0.15922	0.33487	0.29172	0.28659	0.57832	40.8	40.1	80.9
13:00-13:30	3	0.18079	0.13662	0.31741						
13:30-14:00	3	0.16846	0.07910	0.24756	0.34925	0.21572	0.56497	48.9	30.2	79.0
14:00-14:30	3	0.06471	0.04725	0.11197						
14:30-15:00	3	0.06882	0.06163	0.13046	0.13353	0.10888	0.24243	18.7	15.2	33.9
15:00-15:30	3	0.08423	0.05444	0.13867						
15:30-16:00	3	0.06061	0.08629	0.14689	0.14484	0.14073	0.28556	20.3	19.7	40.0
16:00-16:30	3	0.04725	0.17565	0.22290						
16:30-17:00	3	0.06369	0.12943	0.19312	0.11094	0.30508	0.41602	15.5	42.7	58.2
17:00-17:30	3	0.05444	0.16230	0.21674						
17:30-18:00	3	0.04828	0.19003	0.23831	0.10272	0.35233	0.45505	14.4	49.3	63.7
18:00-18:30	3	0.02363	0.15819	0.18182						
18:30-19:00	3	0.01541	0.10067	0.11607	0.03904	0.25886	0.29789	5.5	36.2	41.7
Peak Period For		Walk only								
In	08:30-09:00	0.40								
Out	17:30-18:00	0.19								
Total	08:30-09:00	0.47								

TRAVL - Average Trip Rate by Mode and Time

Report ID 9

List of Surveys:

Name	Address	Postcode	Survey Date
Hounslow Civic Centre	Lampton Road	TW3 4DN	30/11/2004
Sky Headquarters	Grant Way,	TW7 5QD	09/07/2009
Tearfund Head Office	100 Church Road	TW11 8QE	16/03/2006
Number of sites considered	3		

Predictor Type : Gross Floor Area	100	Sqm
HPH 5	**21176**	**Sqm**
	211.76	

Counts By Mode:

Mode: All Modes

Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.17873	0.04622	0.22496						
07:30-08:00	3	0.46019	0.07293	0.53312	0.63892	0.11915	0.75808	135.3	25.2	160.5
08:00-08:30	3	0.88135	0.14895	1.03029						
08:30-09:00	3	1.25114	0.16230	1.41344	2.13249	0.31125	2.44373	451.6	65.9	517.5
09:00-09:30	3	0.97380	0.17771	1.15150						
09:30-10:00	3	0.65125	0.20339	0.85464	1.62505	0.38110	2.00614	344.1	80.7	424.8
10:00-10:30	3	0.37082	0.20236	0.57318						
10:30-11:00	3	0.30714	0.22188	0.52901	0.67796	0.42424	1.10219	143.6	89.8	233.4
11:00-11:30	3	0.35747	0.26605	0.62352						
11:30-12:00	3	0.30097	0.29070	0.59167	0.65844	0.55675	1.21519	139.4	117.9	257.3
12:00-12:30	3	0.38623	0.55469	0.94093						
12:30-13:00	3	0.49614	0.50539	1.00153	0.88237	1.06008	1.94246	186.9	224.5	411.3
13:00-13:30	3	0.54750	0.51155	1.05905						
13:30-14:00	3	0.57729	0.28351	0.86080	1.12479	0.79506	1.91985	238.2	168.4	406.5
14:00-14:30	3	0.41705	0.28248	0.69953						
14:30-15:00	3	0.35028	0.35028	0.70056	0.76733	0.63276	1.40009	162.5	134.0	296.5
15:00-15:30	3	0.32049	0.31638	0.63687						
15:30-16:00	3	0.32460	0.41602	0.74062	0.64509	0.73240	1.37749	136.6	155.1	291.7
16:00-16:30	3	0.22701	0.79095	1.01797						
16:30-17:00	3	0.21674	0.74165	0.95839	0.44375	1.53260	1.97636	94.0	324.5	418.5
17:00-17:30	3	0.16641	0.97071	1.13712						
17:30-18:00	3	0.16744	0.93887	1.10631	0.33385	1.90958	2.24343	70.7	404.4	475.1
18:00-18:30	3	0.10786	0.63995	0.74781						
18:30-19:00	3	0.11402	0.35644	0.47046	0.22188	0.99639	1.21827	47.0	211.0	258.0
Peak Period For	All Modes									
In	08:30-09:00	1.25								
Out	17:00-17:30	0.97								
Total	08:30-09:00	1.41								

Mode:	Bus									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00103	0.00000	0.00103						
07:30-08:00	3	0.00000	0.00000	0.00000	0.00103	0.00000	0.00103	0.2	0.0	0.2
08:00-08:30	3	0.00411	0.00000	0.00411						
08:30-09:00	3	0.01233	0.00000	0.01233	0.01644	0.00000	0.01644	3.5	0.0	3.5
09:00-09:30	3	0.00924	0.00000	0.00924						
09:30-10:00	3	0.00308	0.00000	0.00308	0.01232	0.00000	0.01232	2.6	0.0	2.6
10:00-10:30	3	0.00924	0.00205	0.01130						
10:30-11:00	3	0.00000	0.00000	0.00000	0.00924	0.00205	0.01130	2.0	0.4	2.4
11:00-11:30	3	0.00000	0.00000	0.00000						
11:30-12:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
12:00-12:30	3	0.00000	0.00000	0.00000						
12:30-13:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
13:00-13:30	3	0.00000	0.00000	0.00000						
13:30-14:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
14:00-14:30	3	0.00000	0.00000	0.00000						
14:30-15:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
15:00-15:30	3	0.00000	0.00000	0.00000						
15:30-16:00	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0	0.0	0.0
16:00-16:30	3	0.00000	0.00514	0.00514						
16:30-17:00	3	0.00000	0.00000	0.00000	0.00000	0.00514	0.00514	0.0	1.1	1.1
17:00-17:30	3	0.00000	0.00514	0.00514						
17:30-18:00	3	0.00000	0.00719	0.00719	0.00000	0.01233	0.01233	0.0	2.6	2.6
18:00-18:30	3	0.00000	0.00103	0.00103						
18:30-19:00	3	0.00000	0.00000	0.00000	0.00000	0.00103	0.00103	0.0	0.2	0.2
Peak Period For		Bus								
In	08:30-09:00	0.01								
Out	16:00-16:30	0.01								
Total	08:30-09:00, 10:00-10:30	0.01								

Mode:	Car Driver + Passengers									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.13354	0.02054	0.15408						
07:30-08:00	3	0.29481	0.02568	0.32049	0.42835	0.04622	0.47457	90.7	9.8	100.5
08:00-08:30	3	0.46944	0.05547	0.52490						
08:30-09:00	3	0.55367	0.07190	0.62557	1.02311	0.12737	1.15047	216.7	27.0	243.6
09:00-09:30	3	0.42527	0.06780	0.49306						
09:30-10:00	3	0.29584	0.09039	0.38623	0.72111	0.15819	0.87929	152.7	33.5	186.2
10:00-10:30	3	0.18079	0.10375	0.28454						
10:30-11:00	3	0.15614	0.11197	0.26810	0.33693	0.21572	0.55264	71.3	45.7	117.0
11:00-11:30	3	0.18284	0.11197	0.29481						
11:30-12:00	3	0.15305	0.14176	0.29481	0.33589	0.25373	0.58962	71.1	53.7	124.9
12:00-12:30	3	0.16949	0.25475	0.42424						
12:30-13:00	3	0.19003	0.16744	0.35747	0.35952	0.42219	0.78171	76.1	89.4	165.5
13:00-13:30	3	0.20133	0.19517	0.39650						
13:30-14:00	3	0.22701	0.10580	0.33282	0.42834	0.30097	0.72932	90.7	63.7	154.4
14:00-14:30	3	0.20031	0.17154	0.37185						
14:30-15:00	3	0.17873	0.20236	0.38110	0.37904	0.37390	0.75295	80.3	79.2	159.4
15:00-15:30	3	0.13765	0.17976	0.31741						
15:30-16:00	3	0.18182	0.21982	0.40164	0.31947	0.39958	0.71905	67.7	84.6	152.3
16:00-16:30	3	0.12224	0.49820	0.62044						
16:30-17:00	3	0.10786	0.47046	0.57832	0.23010	0.96866	1.19876	48.7	205.1	253.8
17:00-17:30	3	0.08320	0.55264	0.63584						
17:30-18:00	3	0.09245	0.48484	0.57729	0.17565	1.03748	1.21313	37.2	219.7	256.9
18:00-18:30	3	0.06471	0.29995	0.36466						
18:30-19:00	3	0.06780	0.16024	0.22804	0.13251	0.46019	0.59270	28.1	97.4	125.5
Peak Period For		Car Driver + Passengers								
In	08:30-09:00	0.55								
Out	17:00-17:30	0.55								
Total	17:00-17:30	0.64								

Mode:	Car Driver									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.12018	0.01952	0.13970						
07:30-08:00	3	0.27324	0.02568	0.29892	0.39342	0.04520	0.43862	83.3	9.6	92.9
08:00-08:30	**3**	**0.42937**	**0.05136**	**0.48073**						
08:30-09:00	**3**	**0.49101**	**0.06780**	**0.55880**	**0.92038**	**0.11916**	**1.03953**	**194.9**	**25.2**	**220.1**
09:00-09:30	3	0.37493	0.06061	0.43554						
09:30-10:00	3	0.27940	0.08218	0.36158	0.65433	0.14279	0.79712	138.6	30.2	168.8
10:00-10:30	3	0.16538	0.09039	0.25578						
10:30-11:00	3	0.13148	0.09450	0.22599	0.29686	0.18489	0.48177	62.9	39.2	102.0
11:00-11:30	3	0.16127	0.09759	0.25886						
11:30-12:00	3	0.13662	0.12532	0.26194	0.29789	0.22291	0.52080	63.1	47.2	110.3
12:00-12:30	3	0.14792	0.23420	0.38212						
12:30-13:00	3	0.17360	0.14381	0.31741	0.32152	0.37801	0.69953	68.1	80.0	148.1
13:00-13:30	3	0.17668	0.17360	0.35028						
13:30-14:00	3	0.20236	0.09348	0.29584	0.37904	0.26708	0.64612	80.3	56.6	136.8
14:00-14:30	3	0.17668	0.15203	0.32871						
14:30-15:00	3	0.15203	0.17257	0.32460	0.32871	0.32460	0.65331	69.6	68.7	138.3
15:00-15:30	3	0.11916	0.15305	0.27221						
15:30-16:00	3	0.15716	0.19209	0.34925	0.27632	0.34514	0.62146	58.5	73.1	131.6
16:00-16:30	3	0.10272	0.44786	0.55058						
16:30-17:00	3	0.09039	0.39548	0.48587	0.19311	0.84334	1.03645	40.9	178.6	219.5
17:00-17:30	**3**	**0.07499**	**0.49922**	**0.57421**						
17:30-18:00	**3**	**0.08731**	**0.43040**	**0.51771**	**0.16230**	**0.92962**	**1.09192**	**34.4**	**196.9**	**231.2**
18:00-18:30	3	0.06266	0.27118	0.33384						
18:30-19:00	3	0.06677	0.14176	0.20852	0.12943	0.41294	0.54236	27.4	87.4	114.9

Peak Period For		Car Driver
In	08:30-09:00	0.49
Out	17:00-17:30	0.50
Total	17:00-17:30	0.57

Mode:	Car Passenger									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.01335	0.00103	0.01438						
07:30-08:00	3	0.02157	0.00000	0.02157	0.03492	0.00103	0.03595	7.4	0.2	7.6
08:00-08:30	3	0.04006	0.00411	0.04417						
08:30-09:00	3	0.06266	0.00411	0.06677	0.10272	0.00822	0.11094	21.8	1.7	23.5
09:00-09:30	3	0.05033	0.00719	0.05752						
09:30-10:00	3	0.01644	0.00822	0.02465	0.06677	0.01541	0.08217	14.1	3.3	17.4
10:00-10:30	3	0.01541	0.01335	0.02876						
10:30-11:00	3	0.02465	0.01746	0.04212	0.04006	0.03081	0.07088	8.5	6.5	15.0
11:00-11:30	3	0.02157	0.01438	0.03595						
11:30-12:00	3	0.01644	0.01644	0.03287	0.03801	0.03082	0.06882	8.0	6.5	14.6
12:00-12:30	3	0.02157	0.02054	0.04212						
12:30-13:00	3	0.01644	0.02363	0.04006	0.03801	0.04417	0.08218	8.0	9.4	17.4
13:00-13:30	3	0.02465	0.02157	0.04622						
13:30-14:00	3	0.02465	0.01233	0.03698	0.04930	0.03390	0.08320	10.4	7.2	17.6
14:00-14:30	3	0.02363	0.01952	0.04314						
14:30-15:00	3	0.02671	0.02979	0.05650	0.05034	0.04931	0.09964	10.7	10.4	21.1
15:00-15:30	3	0.01849	0.02671	0.04520						
15:30-16:00	3	0.02465	0.02773	0.05239	0.04314	0.05444	0.09759	9.1	11.5	20.7
16:00-16:30	3	0.01952	0.05033	0.06985						
16:30-17:00	3	0.01746	0.07499	0.09245	0.03698	0.12532	0.16230	7.8	26.5	34.4
17:00-17:30	3	0.00822	0.05341	0.06163						
17:30-18:00	3	0.00514	0.05444	0.05958	0.01336	0.10785	0.12121	2.8	22.8	25.7
18:00-18:30	3	0.00205	0.02876	0.03082						
18:30-19:00	3	0.00103	0.01849	0.01952	0.00308	0.04725	0.05034	0.7	10.0	10.7
Peak Period For		Car Passenger								
In	08:30-09:00	0.06								
Out	16:30-17:00	0.07								
Total	16:30-17:00	0.09								

Mode:	Coach								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00822	0.00000	0.00822						
07:30-08:00	3	0.02260	0.00924	0.03184	0.03082	0.00924	0.04006	6.5	2.0	8.5
08:00-08:30	3	0.03698	0.01335	0.05033						
08:30-09:00	3	0.06266	0.00514	0.06780	0.09964	0.01849	0.11813	21.1	3.9	25.0
09:00-09:30	3	0.04212	0.01027	0.05239						
09:30-10:00	3	0.05033	0.00719	0.05752	0.09245	0.01746	0.10991	19.6	3.7	23.3
10:00-10:30	3	0.03082	0.01027	0.04109						
10:30-11:00	3	0.01644	0.00308	0.01952	0.04726	0.01335	0.06061	10.0	2.8	12.8
11:00-11:30	3	0.02363	0.01644	0.04006						
11:30-12:00	3	0.00924	0.00514	0.01438	0.03287	0.02158	0.05444	7.0	4.6	11.5
12:00-12:30	3	0.00514	0.00308	0.00822						
12:30-13:00	3	0.00719	0.01027	0.01746	0.01233	0.01335	0.02568	2.6	2.8	5.4
13:00-13:30	3	0.01335	0.00616	0.01952						
13:30-14:00	3	0.00719	0.00205	0.00924	0.02054	0.00821	0.02876	4.3	1.7	6.1
14:00-14:30	3	0.00924	0.00308	0.01233						
14:30-15:00	3	0.00924	0.00411	0.01335	0.01848	0.00719	0.02568	3.9	1.5	5.4
15:00-15:30	3	0.00924	0.00308	0.01233						
15:30-16:00	3	0.00924	0.00205	0.01130	0.01848	0.00513	0.02363	3.9	1.1	5.0
16:00-16:30	3	0.01644	0.01849	0.03493						
16:30-17:00	3	0.01130	0.02876	0.04006	0.02774	0.04725	0.07499	5.9	10.0	15.9
17:00-17:30	3	0.00822	0.05650	0.06471						
17:30-18:00	3	0.01644	0.09656	0.11299	0.02466	0.15306	0.17770	5.2	32.4	37.6
18:00-18:30	3	0.00719	0.05547	0.06266						
18:30-19:00	3	0.01849	0.03390	0.05239	0.02568	0.08937	0.11505	5.4	18.9	24.4
Peak Period For		Coach								
In	08:30-09:00	0.06								
Out	17:30-18:00	0.10								
Total	17:30-18:00	0.11								

Mode:	Motor Cycle								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00411	0.00000	0.00411						
07:30-08:00	3	0.01746	0.00000	0.01746	0.02157	0.00000	0.02157	4.6	0.0	4.6
08:00-08:30	3	0.01746	0.00000	0.01746						
08:30-09:00	3	0.02568	0.00000	0.02568	0.04314	0.00000	0.04314	9.1	0.0	9.1
09:00-09:30	3	0.01130	0.00103	0.01233						
09:30-10:00	3	0.00924	0.00411	0.01335	0.02054	0.00514	0.02568	4.3	1.1	5.4
10:00-10:30	3	0.00822	0.00514	0.01335						
10:30-11:00	3	0.00000	0.00103	0.00103	0.00822	0.00617	0.01438	1.7	1.3	3.0
11:00-11:30	3	0.00719	0.00205	0.00924						
11:30-12:00	3	0.00514	0.00411	0.00924	0.01233	0.00616	0.01848	2.6	1.3	3.9
12:00-12:30	3	0.00616	0.00616	0.01233						
12:30-13:00	3	0.00308	0.00411	0.00719	0.00924	0.01027	0.01952	2.0	2.2	4.1
13:00-13:30	3	0.00103	0.00205	0.00308						
13:30-14:00	3	0.00205	0.00000	0.00205	0.00308	0.00205	0.00513	0.7	0.4	1.1
14:00-14:30	3	0.00514	0.00000	0.00514						
14:30-15:00	3	0.00719	0.00308	0.01027	0.01233	0.00308	0.01541	2.6	0.7	3.3
15:00-15:30	3	0.00000	0.00411	0.00411						
15:30-16:00	3	0.00514	0.00616	0.01130	0.00514	0.01027	0.01541	1.1	2.2	3.3
16:00-16:30	3	0.00411	0.00616	0.01027						
16:30-17:00	3	0.00103	0.00616	0.00719	0.00514	0.01232	0.01746	1.1	2.6	3.7
17:00-17:30	3	0.00000	0.02876	0.02876						
17:30-18:00	3	0.00103	0.02260	0.02363	0.00103	0.05136	0.05239	0.2	10.9	11.1
18:00-18:30	3	0.00205	0.01952	0.02157						
18:30-19:00	3	0.00308	0.01027	0.01335	0.00513	0.02979	0.03492	1.1	6.3	7.4
Peak Period For		Motor Cycle								
In	08:30-09:00	0.03								
Out	17:00-17:30	0.03								
Total	08:30-09:00	0.03								

Mode:	Other									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00103	0.00616	0.00719						
07:30-08:00	3	0.00103	0.00103	0.00205	0.00206	0.00719	0.00924	0.4	1.5	2.0
08:00-08:30	3	0.00822	0.00205	0.01027						
08:30-09:00	3	0.00205	0.00103	0.00308	0.01027	0.00308	0.01335	2.2	0.7	2.8
09:00-09:30	3	0.00205	0.00000	0.00205						
09:30-10:00	3	0.00103	0.00205	0.00308	0.00308	0.00205	0.00513	0.7	0.4	1.1
10:00-10:30	3	0.00205	0.00822	0.01027						
10:30-11:00	3	0.00103	0.00000	0.00103	0.00308	0.00822	0.01130	0.7	1.7	2.4
11:00-11:30	3	0.00616	0.00822	0.01438						
11:30-12:00	3	0.00000	0.00205	0.00205	0.00616	0.01027	0.01643	1.3	2.2	3.5
12:00-12:30	3	0.00000	0.00000	0.00000						
12:30-13:00	3	0.00000	0.00103	0.00103	0.00000	0.00103	0.00103	0.0	0.2	0.2
13:00-13:30	3	0.00000	0.00616	0.00616						
13:30-14:00	3	0.00308	0.00000	0.00308	0.00308	0.00616	0.00924	0.7	1.3	2.0
14:00-14:30	3	0.00103	0.00103	0.00205						
14:30-15:00	3	0.00822	0.00514	0.01335	0.00925	0.00617	0.01540	2.0	1.3	3.3
15:00-15:30	3	0.00514	0.00205	0.00719						
15:30-16:00	3	0.00308	0.01027	0.01335	0.00822	0.01232	0.02054	1.7	2.6	4.3
16:00-16:30	3	0.00000	0.00103	0.00103						
16:30-17:00	3	0.00103	0.00308	0.00411	0.00103	0.00411	0.00514	0.2	0.9	1.1
17:00-17:30	3	0.00103	0.00000	0.00103						
17:30-18:00	3	0.00205	0.00308	0.00514	0.00308	0.00308	0.00617	0.7	0.7	1.3
18:00-18:30	3	0.00103	0.00000	0.00103						
18:30-19:00	3	0.00000	0.00308	0.00308	0.00103	0.00308	0.00411	0.2	0.7	0.9
Peak Period For		Other								
In	08:00-08:30	0.01								
Out	15:30-16:00	0.01								
Total	11:00-11:30, 14:30-15:00, 15:30-16:00	0.01								

Mode:	Pedal Cycle								
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00719	0.00000	0.00719						
07:30-08:00	3	0.04314	0.00103	0.04417	0.05033	0.00103	0.05136	10.7	0.2	10.9
08:00-08:30	3	0.05650	0.00205	0.05855						
08:30-09:00	3	0.06882	0.00205	0.07088	0.12532	0.00410	0.12943	26.5	0.9	27.4
09:00-09:30	3	0.04622	0.00308	0.04931						
09:30-10:00	3	0.01541	0.00103	0.01644	0.06163	0.00411	0.06575	13.1	0.9	13.9
10:00-10:30	3	0.00822	0.00103	0.00924						
10:30-11:00	3	0.00616	0.00000	0.00616	0.01438	0.00103	0.01540	3.0	0.2	3.3
11:00-11:30	3	0.00822	0.00411	0.01233						
11:30-12:00	3	0.00411	0.00103	0.00514	0.01233	0.00514	0.01747	2.6	1.1	3.7
12:00-12:30	3	0.00308	0.00103	0.00411						
12:30-13:00	3	0.00514	0.00514	0.01027	0.00822	0.00617	0.01438	1.7	1.3	3.0
13:00-13:30	3	0.00205	0.00308	0.00514						
13:30-14:00	3	0.01027	0.00411	0.01438	0.01232	0.00719	0.01952	2.6	1.5	4.1
14:00-14:30	3	0.00514	0.00103	0.00616						
14:30-15:00	3	0.00411	0.00411	0.00822	0.00925	0.00514	0.01438	2.0	1.1	3.0
15:00-15:30	3	0.00411	0.00103	0.00514						
15:30-16:00	3	0.00411	0.00719	0.01130	0.00822	0.00822	0.01644	1.7	1.7	3.5
16:00-16:30	3	0.00205	0.01952	0.02157						
16:30-17:00	3	0.00411	0.01746	0.02157	0.00616	0.03698	0.04314	1.3	7.8	9.1
17:00-17:30	3	0.00103	0.04417	0.04520						
17:30-18:00	3	0.00000	0.06882	0.06882	0.00103	0.11299	0.11402	0.2	23.9	24.1
18:00-18:30	3	0.00205	0.04622	0.04828						
18:30-19:00	3	0.00205	0.02568	0.02773	0.00410	0.07190	0.07601	0.9	15.2	16.1
Peak Period For		Pedal Cycle								
In	08:30-09:00	0.07								
Out	17:30-18:00	0.07								
Total	08:30-09:00	0.07								

Mode:	Taxi									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00205	0.00000	0.00205						
07:30-08:00	3	0.00411	0.00000	0.00411	0.00616	0.00000	0.00616	1.3	0.0	1.3
08:00-08:30	3	0.00616	0.00000	0.00616						
08:30-09:00	3	0.01027	0.00205	0.01233	0.01643	0.00205	0.01849	3.5	0.4	3.9
09:00-09:30	3	0.00616	0.00411	0.01027						
09:30-10:00	3	0.00411	0.00411	0.00822	0.01027	0.00822	0.01849	2.2	1.7	3.9
10:00-10:30	3	0.00411	0.00205	0.00616						
10:30-11:00	3	0.00411	0.00205	0.00616	0.00822	0.00410	0.01232	1.7	0.9	2.6
11:00-11:30	3	0.00000	0.00103	0.00103						
11:30-12:00	3	0.00000	0.00616	0.00616	0.00000	0.00719	0.00719	0.0	1.5	1.5
12:00-12:30	3	0.00000	0.00308	0.00308						
12:30-13:00	3	0.00514	0.00514	0.01027	0.00514	0.00822	0.01335	1.1	1.7	2.8
13:00-13:30	3	0.00308	0.00103	0.00411						
13:30-14:00	3	0.00514	0.00103	0.00616	0.00822	0.00206	0.01027	1.7	0.4	2.2
14:00-14:30	3	0.00000	0.00205	0.00205						
14:30-15:00	3	0.00308	0.00103	0.00411	0.00308	0.00308	0.00616	0.7	0.7	1.3
15:00-15:30	3	0.00411	0.00103	0.00514						
15:30-16:00	3	0.00205	0.00205	0.00411	0.00616	0.00308	0.00925	1.3	0.7	2.0
16:00-16:30	3	0.00514	0.00616	0.01130						
16:30-17:00	3	0.00205	0.01027	0.01233	0.00719	0.01643	0.02363	1.5	3.5	5.0
17:00-17:30	3	0.00000	0.00308	0.00308						
17:30-18:00	3	0.00000	0.01541	0.01541	0.00000	0.01849	0.01849	0.0	3.9	3.9
18:00-18:30	3	0.00000	0.02157	0.02157						
18:30-19:00	3	0.00103	0.00205	0.00308	0.00103	0.02362	0.02465	0.2	5.0	5.2
Peak Period For		Taxi								
In	08:30-09:00	0.01								
Out	18:00-18:30	0.02								
Total	18:00-18:30	0.02								

Mode:	Walk & PT									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.01233	0.00103	0.01335						
07:30-08:00	3	0.03184	0.00308	0.03493	0.04417	0.00411	0.04828	9.4	0.9	10.2
08:00-08:30	3	0.05752	0.00616	0.06369						
08:30-09:00	3	0.11916	0.01027	0.12943	0.17668	0.01643	0.19312	37.4	3.5	40.9
09:00-09:30	3	0.14278	0.01849	0.16127						
09:30-10:00	3	0.07396	0.03698	0.11094	0.21674	0.05547	0.27221	45.9	11.7	57.6
10:00-10:30	3	0.04520	0.03903	0.08423						
10:30-11:00	3	0.05958	0.05752	0.11710	0.10478	0.09655	0.20133	22.2	20.4	42.6
11:00-11:30	3	0.05752	0.05855	0.11607						
11:30-12:00	3	0.04622	0.06882	0.11505	0.10374	0.12737	0.23112	22.0	27.0	48.9
12:00-12:30	3	0.08629	0.15922	0.24550						
12:30-13:00	3	0.10991	0.15305	0.26297	0.19620	0.31227	0.50847	41.5	66.1	107.7
13:00-13:30	3	0.14586	0.16127	0.30714						
13:30-14:00	3	0.15408	0.09142	0.24550	0.29994	0.25269	0.55264	63.5	53.5	117.0
14:00-14:30	3	0.13148	0.05650	0.18798						
14:30-15:00	3	0.07088	0.06882	0.13970	0.20236	0.12532	0.32768	42.9	26.5	69.4
15:00-15:30	3	0.07601	0.07088	0.14689						
15:30-16:00	3	0.05855	0.08218	0.14073	0.13456	0.15306	0.28762	28.5	32.4	60.9
16:00-16:30	3	0.02979	0.06061	0.09039						
16:30-17:00	3	0.02568	0.07601	0.10169	0.05547	0.13662	0.19208	11.7	28.9	40.7
17:00-17:30	3	0.01849	0.11813	0.13662						
17:30-18:00	3	0.00719	0.05033	0.05752	0.02568	0.16846	0.19414	5.4	35.7	41.1
18:00-18:30	3	0.00719	0.03801	0.04520						
18:30-19:00	3	0.00616	0.02054	0.02671	0.01335	0.05855	0.07191	2.8	12.4	15.2
Peak Period For		Walk & PT								
In	13:30-14:00	0.15								
Out	13:00-13:30	0.16								
Total	13:00-13:30	0.31								

Mode:	Walk only									
Time Band	No of Sites	Trip Rate In	Trip Rate Out	Total Trip	IN	OUT	TOTAL	Predicted Trips In	Predicted Trips Out	Predicted Trips Total
07:00-07:30	3	0.00924	0.01849	0.02773						
07:30-08:00	3	0.04520	0.03287	0.07807	0.05444	0.05136	0.10580	11.5	10.9	22.4
08:00-08:30	3	0.22496	0.06985	0.29481						
08:30-09:00	3	0.39650	0.06985	0.46635	0.62146	0.13970	0.76116	131.6	29.6	161.2
09:00-09:30	3	0.28865	0.07293	0.36158						
09:30-10:00	3	0.19825	0.05752	0.25578	0.48690	0.13045	0.61736	103.1	27.6	130.7
10:00-10:30	3	0.08218	0.03082	0.11299						
10:30-11:00	3	0.06369	0.04622	0.10991	0.14587	0.07704	0.22290	30.9	16.3	47.2
11:00-11:30	3	0.07190	0.06369	0.13559						
11:30-12:00	3	0.08320	0.06163	0.14484	0.15510	0.12532	0.28043	32.8	26.5	59.4
12:00-12:30	3	0.11607	0.12737	0.24345						
12:30-13:00	3	0.17565	0.15922	0.33487	0.29172	0.28659	0.57832	61.8	60.7	122.5
13:00-13:30	3	0.18079	0.13662	0.31741						
13:30-14:00	3	0.16846	0.07910	0.24756	0.34925	0.21572	0.56497	74.0	45.7	119.6
14:00-14:30	3	0.06471	0.04725	0.11197						
14:30-15:00	3	0.06882	0.06163	0.13046	0.13353	0.10888	0.24243	28.3	23.1	51.3
15:00-15:30	3	0.08423	0.05444	0.13867						
15:30-16:00	3	0.06061	0.08629	0.14689	0.14484	0.14073	0.28556	30.7	29.8	60.5
16:00-16:30	3	0.04725	0.17565	0.22290						
16:30-17:00	3	0.06369	0.12943	0.19312	0.11094	0.30508	0.41602	23.5	64.6	88.1
17:00-17:30	3	0.05444	0.16230	0.21674						
17:30-18:00	3	0.04828	0.19003	0.23831	0.10272	0.35233	0.45505	21.8	74.6	96.4
18:00-18:30	3	0.02363	0.15819	0.18182						
18:30-19:00	3	0.01541	0.10067	0.11607	0.03904	0.25886	0.29789	8.3	54.8	63.1
Peak Period For		Walk only								
In	08:30-09:00	0.40								
Out	17:30-18:00	0.19								
Total	08:30-09:00	0.47								

APPENDIX J

2001 census - UK travel flows (ward)

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cell	T203:25 (Car - driver : All people)
date	2001

area of residencelocal authority: district / unitary	area of workplace 00ASGW : Pinkwell
Darlington	0
County Durham	-
Hartlepool	0
Middlesbrough	6
Northumberland	-
Redcar and Cleveland	0
Stockton-on-Tees	0
Gateshead	0
Newcastle upon Tyne	0
North Tyneside	0
South Tyneside	0
Sunderland	0
Blackburn with Darwen	0
Blackpool	0
Cheshire East	0
Cheshire West and Chester	0
Halton	0
Warrington	0
Allerdale	3
Barrow-in-Furness	0
Carlisle	0
Copeland	0
Eden	0
South Lakeland	0
Bolton	0
Bury	0
Manchester	0
Oldham	0
Rochdale	0
Salford	0
Stockport	0
Tameside	0
Trafford	0
Wigan	0
Burnley	0
Chorley	0
Fylde	0
Hyndburn	0
Lancaster	0
Pendle	0
Preston	0
Ribble Valley	0
Rossendale	0
South Ribble	0
West Lancashire	0
Wyre	0
Knowsley	0
Liverpool	0
Sefton	0
St. Helens	0
Wirral	0
East Riding of Yorkshire	3

Kingston upon Hull, City of	0
North East Lincolnshire	0
North Lincolnshire	0
York	3
Craven	0
Hambleton	0
Harrogate	0
Richmondshire	0
Ryedale	0
Scarborough	0
Selby	0
Barnsley	0
Doncaster	0
Rotherham	0
Sheffield	0
Bradford	0
Calderdale	0
Kirklees	0
Leeds	3
Wakefield	0
Derby	0
Leicester	0
Nottingham	0
Rutland	0
Amber Valley	0
Bolsover	0
Chesterfield	0
Derbyshire Dales	0
Erewash	3
High Peak	3
North East Derbyshire	0
South Derbyshire	0
Blaby	0
Charnwood	0
Harborough	0
Hinckley and Bosworth	0
Melton	0
North West Leicestershire	0
Oadby and Wigston	0
Boston	0
East Lindsey	0
Lincoln	0
North Kesteven	0
South Holland	0
South Kesteven	0
West Lindsey	0
Corby	0
Daventry	0
East Northamptonshire	0
Kettering	0
Northampton	0
South Northamptonshire	0
Wellingborough	0
Ashfield	0
Bassetlaw	0
Broxtowe	0
Gedling	0
Mansfield	0
Newark and Sherwood	0
Rushcliffe	0
Herefordshire, County of	0
Shropshire	-
Stoke-on-Trent	0

Telford and Wrekin	0
Cannock Chase	0
East Staffordshire	0
Lichfield	0
Newcastle-under-Lyme	0
South Staffordshire	0
Stafford	0
Staffordshire Moorlands	0
Tamworth	0
North Warwickshire	0
Nuneaton and Bedworth	0
Rugby	0
Stratford-on-Avon	0
Warwick	0
Birmingham	6
Coventry	0
Dudley	0
Sandwell	3
Solihull	3
Walsall	0
Wolverhampton	0
Bromsgrove	0
Malvern Hills	0
Redditch	0
Worcester	0
Wychavon	0
Wyre Forest	6
Bedford	6
Central Bedfordshire	15
Luton	3
Peterborough	0
Southend-on-Sea	0
Thurrock	0
Cambridge	0
East Cambridgeshire	0
Fenland	0
Huntingdonshire	0
South Cambridgeshire	3
Basildon	0
Braintree	0
Brentwood	0
Castle Point	0
Chelmsford	0
Colchester	0
Epping Forest	0
Harlow	0
Maldon	0
Rochford	0
Tendring	0
Uttlesford	0
Broxbourne	0
Dacorum	18
East Hertfordshire	0
Hertsmere	12
North Hertfordshire	3
St Albans	15
Stevenage	0
Three Rivers	30
Watford	7
Welwyn Hatfield	0
Breckland	0
Broadland	0
Great Yarmouth	0

King`s Lynn and West Norfolk	0
North Norfolk	0
Norwich	0
South Norfolk	0
Babergh	0
Forest Heath	0
Ipswich	0
Mid Suffolk	0
St Edmundsbury	0
Suffolk Coastal	0
Waveney	0
Camden	6
City of London	0
Hackney	0
Hammersmith and Fulham	15
Haringey	18
Islington	0
Kensington and Chelsea	6
Lambeth	0
Lewisham	3
Newham	0
Southwark	6
Tower Hamlets	0
Wandsworth	9
Westminster	6
Barking and Dagenham	0
Barnet	12
Bexley	0
Brent	28
Bromley	0
Croydon	6
Ealing	229
Enfield	12
Greenwich	0
Harrow	60
Havering	0
Hillingdon	787
Hounslow	139
Kingston upon Thames	7
Merton	9
Redbridge	0
Richmond upon Thames	66
Sutton	0
Waltham Forest	0
Bracknell Forest	20
Brighton and Hove	0
Isle of Wight	0
Medway	3
Milton Keynes	9
Portsmouth	0
Reading	18
Slough	76
Southampton	3
West Berkshire	27
Windsor and Maidenhead	46
Wokingham	51
Aylesbury Vale	28
Chiltern	33
South Bucks	45
Wycombe	38
Eastbourne	0
Hastings	0
Lewes	0

Rother	0
Wealden	0
Basingstoke and Deane	12
East Hampshire	6
Eastleigh	6
Fareham	0
Gosport	0
Hart	6
Havant	0
New Forest	6
Rushmoor	9
Test Valley	0
Winchester	0
Ashford	0
Canterbury	0
Dartford	0
Dover	0
Gravesham	0
Maidstone	6
Sevenoaks	0
Shepway	0
Swale	3
Thanet	0
Tonbridge and Malling	0
Tunbridge Wells	3
Cherwell	12
Oxford	0
South Oxfordshire	39
Vale of White Horse	6
West Oxfordshire	0
Elmbridge	15
Epsom and Ewell	3
Guildford	18
Mole Valley	9
Reigate and Banstead	6
Runnymede	27
Spelthorne	45
Surrey Heath	11
Tandridge	0
Waverley	21
Woking	9
Adur	0
Arun	3
Chichester	0
Crawley	0
Horsham	6
Mid Sussex	3
Worthing	0
Bath and North East Somerset	0
Bournemouth	0
Bristol, City of	0
Cornwall	0
Isles of Scilly	0
North Somerset	0
Plymouth	0
Poole	0
South Gloucestershire	0
Swindon	3
Torbay	0
Wiltshire	-
East Devon	0
Exeter	0
Mid Devon	0

North Devon	0
South Hams	0
Teignbridge	0
Torridge	0
West Devon	0
Christchurch	0
East Dorset	12
North Dorset	0
Purbeck	0
West Dorset	3
Weymouth and Portland	0
Cheltenham	0
Cotswold	0
Forest of Dean	0
Gloucester	0
Stroud	0
Tewkesbury	0
Mendip	0
Sedgemoor	0
South Somerset	0
Taunton Deane	0
West Somerset	0
Anglesey	0
Gwynedd	0
Conwy	0
Denbighshire	0
Flintshire	0
Wrexham	0
Powys	0
Ceredigion	0
Pembrokeshire	0
Carmarthenshire	0
Swansea	0
Neath Port Talbot	0
Bridgend	0
The Vale of Glamorgan	0
Cardiff	0
Rhondda, Cynon, Taff	0
Merthyr Tydfil	0
Caerphilly	0
Blaenau Gwent	0
Torfaen	0
Monmouthshire	3
Newport	0
Aberdeen City	0
Aberdeenshire	0
Angus	0
Argyll and Bute	0
Clackmannanshire	0
Dumfries and Galloway	0
Dundee City	0
East Ayrshire	0
East Dunbartonshire	0
East Lothian	0
East Renfrewshire	0
Edinburgh, City of	0
Eilean Siar	0
Falkirk	0
Fife	0
Glasgow City	1
Highland	0
Inverclyde	0
Midlothian	0

Moray	0
North Ayrshire	0
North Lanarkshire	0
Orkney Islands	0
Perth and Kinross	0
Renfrewshire	0
Scottish Borders	0
Shetland Islands	0
South Ayrshire	0
South Lanarkshire	1
Stirling	0
West Dunbartonshire	0
West Lothian	1
Antrim	0
Ards	0
Armagh	0
Ballymena	0
Ballymoney	0
Banbridge	0
Belfast	0
Carrickfergus	0
Castlereagh	0
Coleraine	0
Cookstown	0
Craigavon	0
Derry	0
Down	0
Dungannon	0
Fermanagh	0
Larne	0
Limavady	0
Lisburn	0
Magherafelt	0
Moyle	0
Newry and Mourne	0
Newtownabbey	0
North Down	0
Omagh	0
Strabane	0
Column Total	**2,289**

- These figures are missing.

00ASGH : Botwell	42	1.8%	W	Dawley	N	
00ASGJ : Brunel	34	1.5%	W	Dawley	N	
00ASGL : Charville	46	2.0%	W	Dawley	N	
00ASGN : Harefield	13	0.6%	W	Dawley	N	
00ASGQ : Hillingdon East	23	1.0%	W	Dawley	N	
00ASGR : Ickenham	14	0.6%	W	Dawley	N	
00ASGZ : Uxbridge North	45	2.0%	W	Dawley	N	
00ASHA : Uxbridge South	34	1.5%	W	Dawley	N	
		11.0%				
00ASGP : Heathrow Villages	17	0.7%	W	Dawley	S	
00ASGW : Pinkwell	129	5.6%	W	Dawley	S	
00ASHC : West Ruislip	14	0.6%	W	Dawley	S	
00ASHE : Yiewsley	31	1.4%	W	Dawley	S	
Slough	76	3.3%	W	Dawley	S	
Wokingham	51	2.2%	W	Dawley	S	
Windsor and Maidenhead	46	2.0%	W	Dawley	S	
South Bucks	45	2.0%	W	Dawley	S	
South Oxfordshire	39	1.7%	W	Dawley	S	
Wycombe	38	1.7%	W	Dawley	S	
Chiltern	33	1.4%	W	Dawley	S	
Three Rivers	30	1.3%	W	Dawley	S	
Aylesbury Vale	28	1.2%	W	Dawley	S	
West Berkshire	27	1.2%	W	Dawley	S	
Waverley	21	0.9%	W	Dawley	S	
Bracknell Forest	20	0.9%	W	Dawley	S	
Dacorum	18	0.8%	W	Dawley	S	
Reading	18	0.8%	W	Dawley	S	
Guildford	18	0.8%	W	Dawley	S	
Central Bedfordshire	15	0.7%	W	Dawley	S	
St Albans	15	0.7%	W	Dawley	S	
Basingstoke and Deane	12	0.5%	W	Dawley	S	
Cherwell	12	0.5%	W	Dawley	S	
East Dorset	12	0.5%	W	Dawley	S	
Surrey Heath	11	0.5%	W	Dawley	S	
Milton Keynes	9	0.4%	W	Dawley	S	
Rushmoor	9	0.4%	W	Dawley	S	
Mole Valley	9	0.4%	W	Dawley	S	
Woking	9	0.4%	W	Dawley	S	
Watford	7	0.3%	W	Dawley	S	
Middlesbrough	6	0.3%	W	Dawley	S	
Birmingham	6	0.3%	W	Dawley	S	
Wyre Forest	6	0.3%	W	Dawley	S	
Bedford	6	0.3%	W	Dawley	S	
East Hampshire	6	0.3%	W	Dawley	S	
Eastleigh	6	0.3%	W	Dawley	S	
Hart	6	0.3%	W	Dawley	S	
New Forest	6	0.3%	W	Dawley	S	
Maidstone	6	0.3%	W	Dawley	S	
Vale of White Horse	6	0.3%	W	Dawley	S	
Reigate and Banstead	6	0.3%	W	Dawley	S	
Horsham	6	0.3%	W	Dawley	S	
Allerdale	3	0.1%	W	Dawley	S	
East Riding of Yorkshire	3	0.1%	W	Dawley	S	
York	3	0.1%	W	Dawley	S	
Leeds	3	0.1%	W	Dawley	S	
Erewash	3	0.1%	W	Dawley	S	
High Peak	3	0.1%	W	Dawley	S	
Sandwell	3	0.1%	W	Dawley	S	
Solihull	3	0.1%	W	Dawley	S	
Luton	3	0.1%	W	Dawley	S	
South Cambridgeshire	3	0.1%	W	Dawley	S	
North Hertfordshire	3	0.1%	W	Dawley	S	
Southampton	3	0.1%	W	Dawley	S	
Swale	3	0.1%	W	Dawley	S	
Tunbridge Wells	3	0.1%	W	Dawley	S	
Epsom and Ewell	3	0.1%	W	Dawley	S	
Arun	3	0.1%	W	Dawley	S	
Mid Sussex	3	0.1%	W	Dawley	S	
Swindon	3	0.1%	W	Dawley	S	
West Dorset	3	0.1%	W	Dawley	S	
Monmouthshire	3	0.1%	W	Dawley	S	
Glasgow City	1	0.0%	W	Dawley	S	
South Lanarkshire	1	0.0%	W	Dawley	S	
West Lothian	1	0.0%	W	Dawley	S	
		41.7%				
00ASHB : West Drayton	32	**1.4%**	W	Dawley	W	

00ASGY : Townfield	40	**1.7%**	E	Station	N	
00ASGP : Heathrow Villages	17	0.7%	E	Station	S	
00ASGW : Pinkwell	129	5.6%	E	Station	S	
		6.4%				

00ASGG : Barnhill	26	1%	E	Parkway	N	
00ASGK : Cavendish	18	1%	E	Parkway	N	
00ASGM : Eastcote and East Ruislip	7	0%	E	Parkway	N	
00ASGS : Manor	9	0%	E	Parkway	N	
00ASGT : Northwood	10	0%	E	Parkway	N	
00ASGU : Northwood Hills	4	0%	E	Parkway	N	
00ASGX : South Ruislip	15	1%	E	Parkway	N	
00ASHD : Yeading	38	2%	E	Parkway	N	
Ealing	229	5%	E	Parkway	N	
Harrow	60	3%	E	Parkway	N	
Brent	28	1%	E	Parkway	N	
Haringey	18	1%	E	Parkway	N	
Hertsmere	12	1%	E	Parkway	N	
Barnet	12	1%	E	Parkway	N	
Enfield	12	1%	E	Parkway	N	
Camden	6	0%	E	Parkway	N	
		17.0%				
Ealing	229	5%	E	Parkway	E	
Hounslow	139	3.0%	E	Parkway	E	
		8.0%				
Hounslow	139	3.0%	E	Parkway	S	
Richmond upon Thames	66	2.9%	E	Parkway	S	
Spelthorne	45	2.0%	E	Parkway	S	
Runnymede	27	1.2%	E	Parkway	S	
Hammersmith and Fulham	15	0.7%	E	Parkway	S	
Elmbridge	15	0.7%	E	Parkway	S	
Wandsworth	9	0.4%	E	Parkway	S	
Merton	9	0.4%	E	Parkway	S	
Kingston upon Thames	7	0.3%	E	Parkway	S	
Kensington and Chelsea	6	0.3%	E	Parkway	S	
Southwark	6	0.3%	E	Parkway	S	
Westminster	6	0.3%	E	Parkway	S	
Croydon	6	0.3%	E	Parkway	S	
Lewisham	3	0.1%	E	Parkway	S	
Medway	3	0.1%	E	Parkway	S	
		12.8%				

	Proportion of Trips
Station Road - South	6.4%
Station Road – North	1.7%
Dawley Road - North	11.0%
Dawley Road - South	41.7%
Bourne Avenue	1.4%
North Hyde Road - North (via Bullsbridge)	17.0%
North Hyde Road - East (via Bullsbridge)	8.0%
North Hyde Road - South (via Bullsbridge)	12.8%
	100.0%

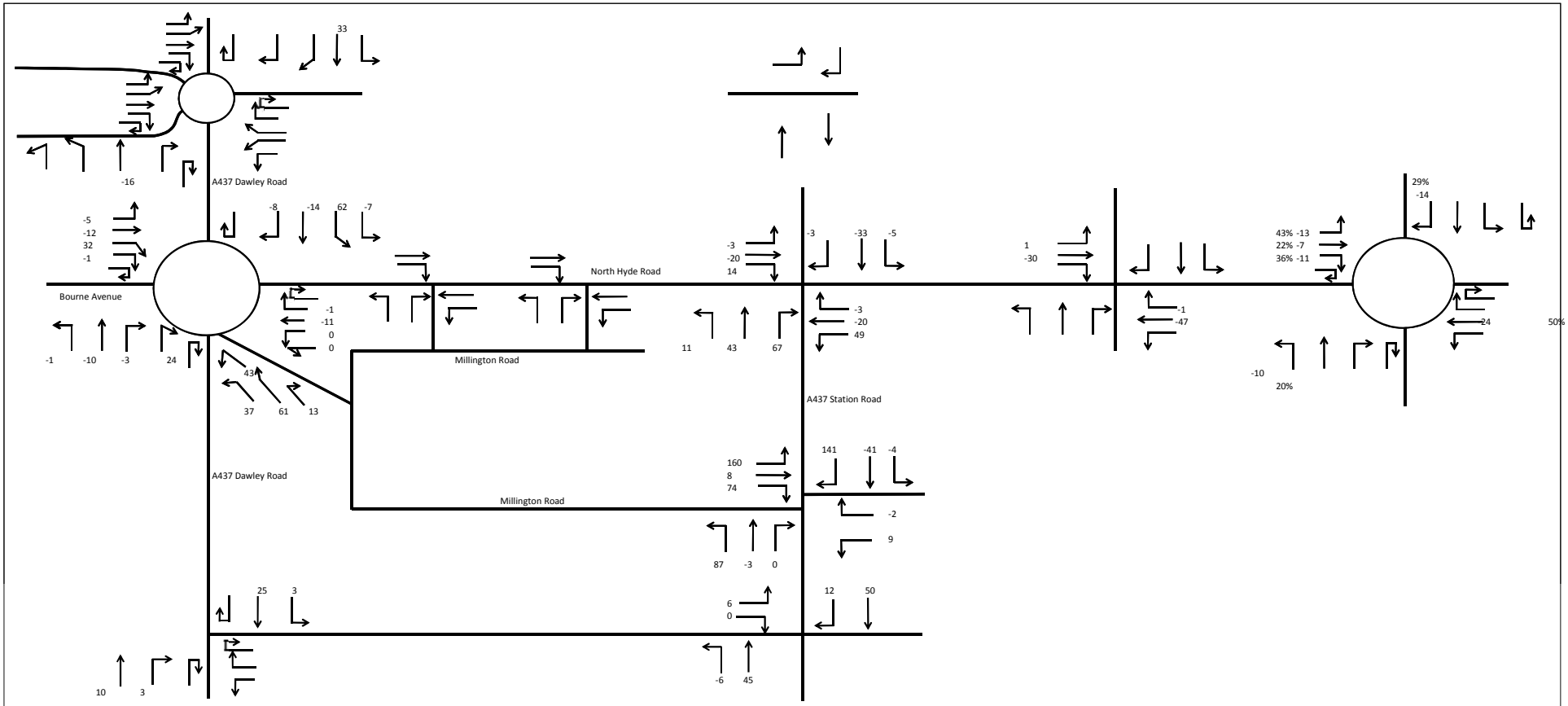
APPENDIX K

London Gate

Table 1 ABA TA Sept 2011

	Base									Proposed 2006	2007 Addendum	Extension to existing consent 2011									Gatefold Building 2011									
Building																														
Mercury	11475									11475	11475	11475																		
Vulcan	25528									25528	25528	25528																		
Phoenix	10760									10760	10760	10760																		
		AM		PM			Trips						AM		PM			Trips				AM		PM			Trips			
		arr	dep	arr	dep		arr	dep	arr	dep			arr	dep	arr	dep		arr	dep	arr	dep		arr	dep	arr	dep		arr	dep	arr	dep
Jubilee	6084	1.158	0.168	0.4	1.327		70	10	24	81	6084	6084	6084					70	10	24	81										
Apollo	12335	1.252	0.207	0.084	1.04		154	26	10	128	5267	5267	5267	1.158	0.168	0.4	1.327	61	9	21	70		3000	1.252	0.207	0.084	1.04	38	6	3	31
Neptune	1907	1.252	0.207	0.084	1.04		24	4	2	20	0	1907	1907					22	3	8	25										
																		154	22	53	176										
																		Trips										Trips			
Resi (units)										358	244	244	AM		PM			AM		PM			131	AM		PM		AM		PM	
													arr	dep	arr	dep		arr	dep	arr	dep			arr	dep	arr	dep	arr	dep	arr	dep
													0.3	0.027	0.297	0.225	0.117	2	22	16	9		0.3	0.027	0.297	0.225	0.117	1	12	9	5
													0.7	0.016	0.161	0.118	0.055	3	27	20	9		0.7	0.016	0.161	0.118	0.055	1	15	11	5
																		5	49	37	18							3	26	20	10
																		Trips										Trips			
Live/work										58			AM		PM			AM		PM				AM		PM		AM		PM	
Commercial (sqm)										827	1207	1207	arr	dep	arr	dep		arr	dep	arr	dep		arr	dep	arr	dep		arr	dep	arr	dep
													1.158	0.168	0.4	1.327		14	2	5	16		341	1.252	0.207	0.084	1.04	4	1	0	4
							249	**40**	**36**	**229**			Sum excluding resi with is in Gatefold					**168**	**24**	**58**	**192**							**-31**	**21**	**17**	**-18**
																		Trips										Trips			
																		AM		PM								AM		PM	
																		arr	dep	arr	dep							arr	dep	arr	dep
																		-81	-15	22	-37							-112	6	39	-55

Drawing title: **ASDA AM Peak**	Client: **Hyde Park Hayes Ltd**	SKM COLIN BUCHANAN	Scale: **NTS**	Full extension:
	Job Title: **Hyde Park Hayes**		Designed by: **LL**	
			Drawn by: **LL**	Drg no: **Figure**
			Ckd/Appd: **JSB**	
			1st issued: **APR**	

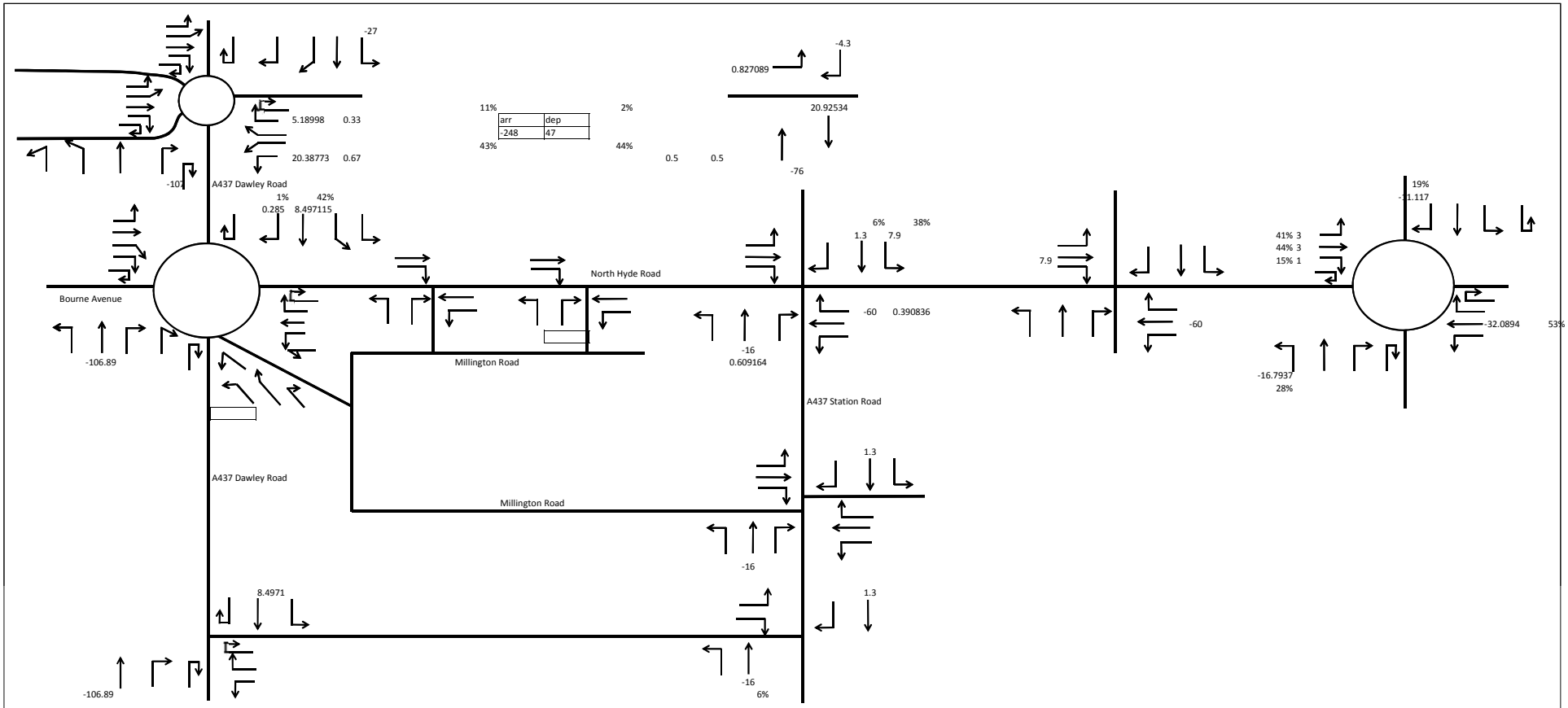


Drawing title: **ASDA PM Peak**	Client: **Hyde Park Hayes Ltd**	SKM COLIN BUCHANAN	Scale: **NTS**	Full extension:
	Job Title: **Hyde Park Hayes**		Designed by: **LL**	Drg no: **Figure**
			Drawn by: **LL**	
			Ckd/Appd: **JSB**	
			1st Issued: **APR**	

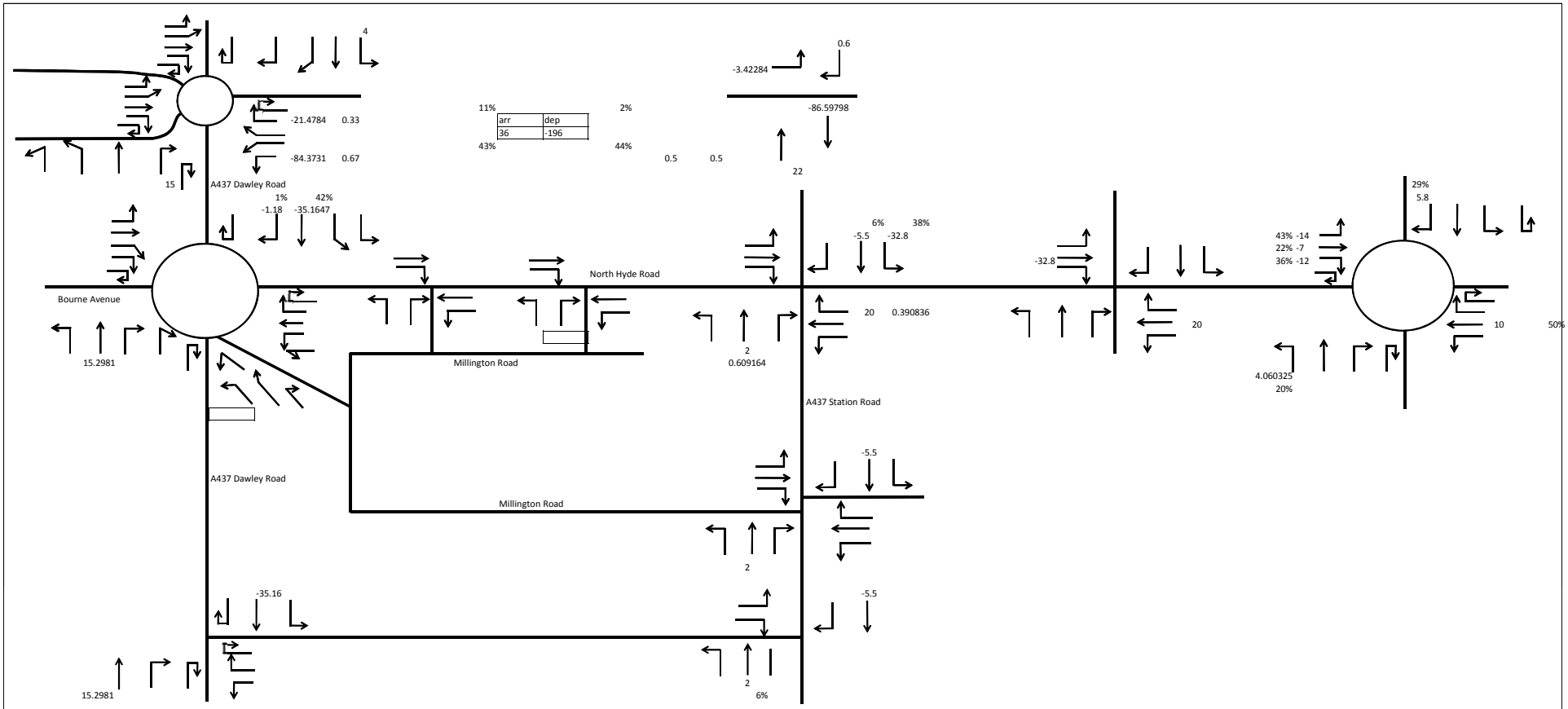
London Gate

Table 1 ABA TA Sept 2011

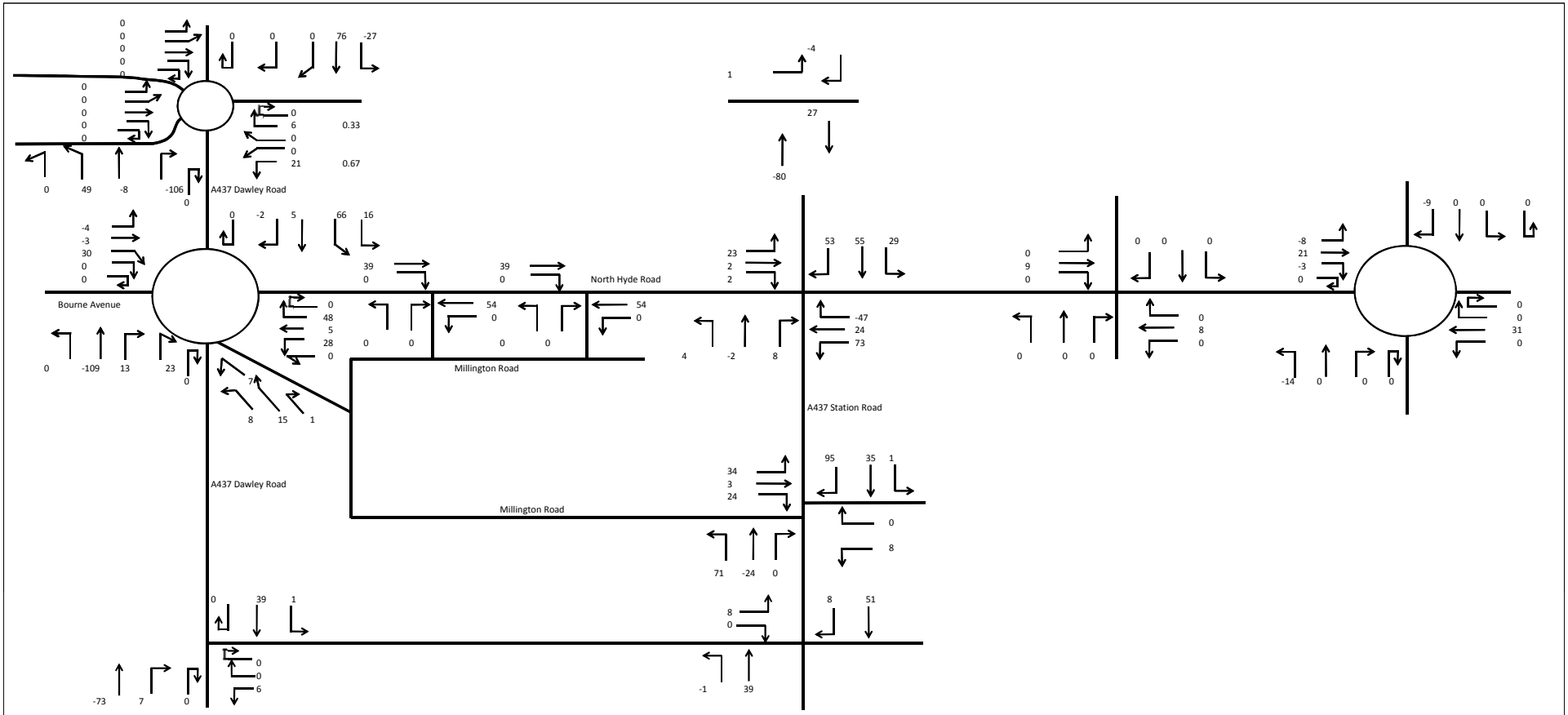
	Base									Proposed 2006	2007 Addendum	Extension to existing consent 2011									Gatefold Building 2011								
Building																													
Mercury	11475									11475	11475	11475																	
Vulcan	25528									25528	25528	25528																	
Phoenix	10760									10760	10760	10760																	
		AM			PM		Trips						AM		PM		Trips					AM		PM		Trips			
		arr	dep	arr	dep		arr	dep	arr	dep			arr	dep	arr	dep	arr	dep	arr	dep		arr	dep	arr	dep	arr	dep	arr	dep	
Jubilee	6084	1.158	0.168	0.4	1.327		70	10	24	81	6084	6084					0	0	0	0									
Apollo	12335	1.252	0.207	0.084	1.04		154	26	10	128	5267	5267	1954	1.158	0.168	0.4	1.327	23	3	8	26	3000	1.252	0.207	0.084	1.04	38	6	3	31
Neptune	**1907**	1.252	0.207	0.084	1.04		24	4	2	20	0	1907						0	0	0	0									
																		23	3	8	26									
																	Trips										Trips			
Resi (units)										358	244		AM		PM		AM		PM				AM		PM		AM		PM	
												309	arr	dep	arr	dep	arr	dep	arr	dep		131	arr	dep	arr	dep	arr	dep	arr	dep	
													0.3	0.027	0.297	0.225	0.117	2.5029	27.532	20.858	10.846		0.3	0.027	0.297	0.225	0.117	1	12	9	5
													0.7	0.016	0.161	0.118	0.055	3.4608	34.824	25.523	11.897		0.7	0.016	0.161	0.118	0.055	1	15	11	5
																		6	62	46	23							3	26	20	10
																	Trips										Trips			
Live/work										58			AM		PM		AM		PM				AM		PM		AM		PM	
Commercial (sqm)										827	1207	223	arr	dep	arr	dep	arr	dep	arr	dep		341	arr	dep	arr	dep	arr	dep	arr	dep	
												223	1.252	0.207	0.084	1.04	3	0	0	2		341	1.252	0.207	0.084	1.04	4	1	0	4
							249	**40**	**36**	**229**							**31**	**66**	**54**	**51**							**-31**	**21**	**17**	**-18**
																	Trips										Trips			
																	AM		PM								AM		PM	
																	arr	dep	arr	dep							arr	dep	arr	dep
																	-217	26	18	-178							-248	47	36	-196



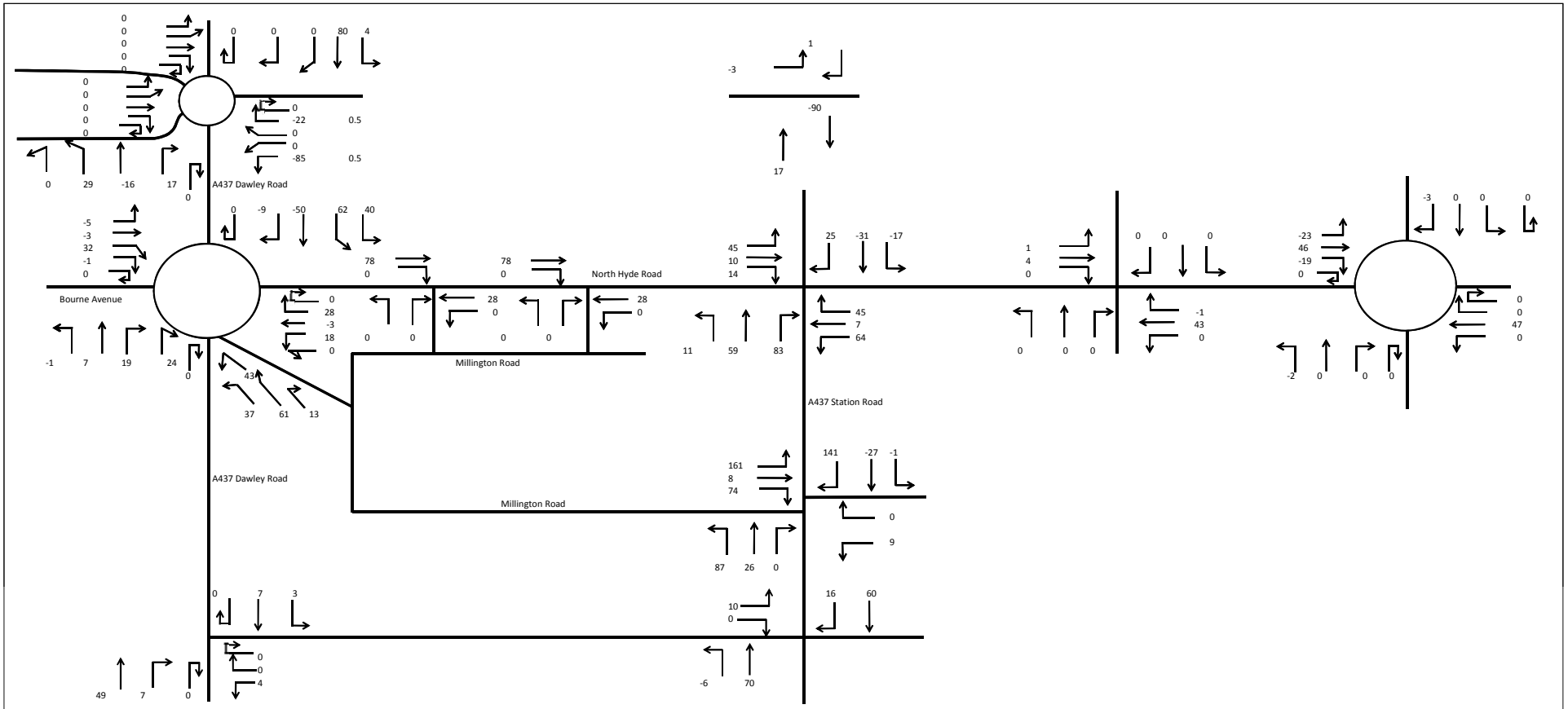
Drawing title: **EMI Sensitivity AM Peak**	Client: **Hyde Park Hayes Ltd**	SKM COLIN BUCHANAN	Scale: **NTS**
	Job Title: **Hyde Park Hayes**		Designed by: **LL**
			Drawn by: **LL**
			Chkd/Appd: **JSB**
			1st Issued: **APR**
			Full extension:
			Drg no: **Figure**



Drawing title: **EMI Sensitvity PM Peak**	Client: **Hyde Park Hayes Ltd**	SKM COLIN BUCHANAN	Scale: **NTS**
	Job Title: **Hyde Park Hayes**		Designed by: **LL**
			Drawn by: **LL**
			Ckd/Appd: **JSB**
			1st Issued: **APR**
			Full extension:
			Drg no: **Figure**

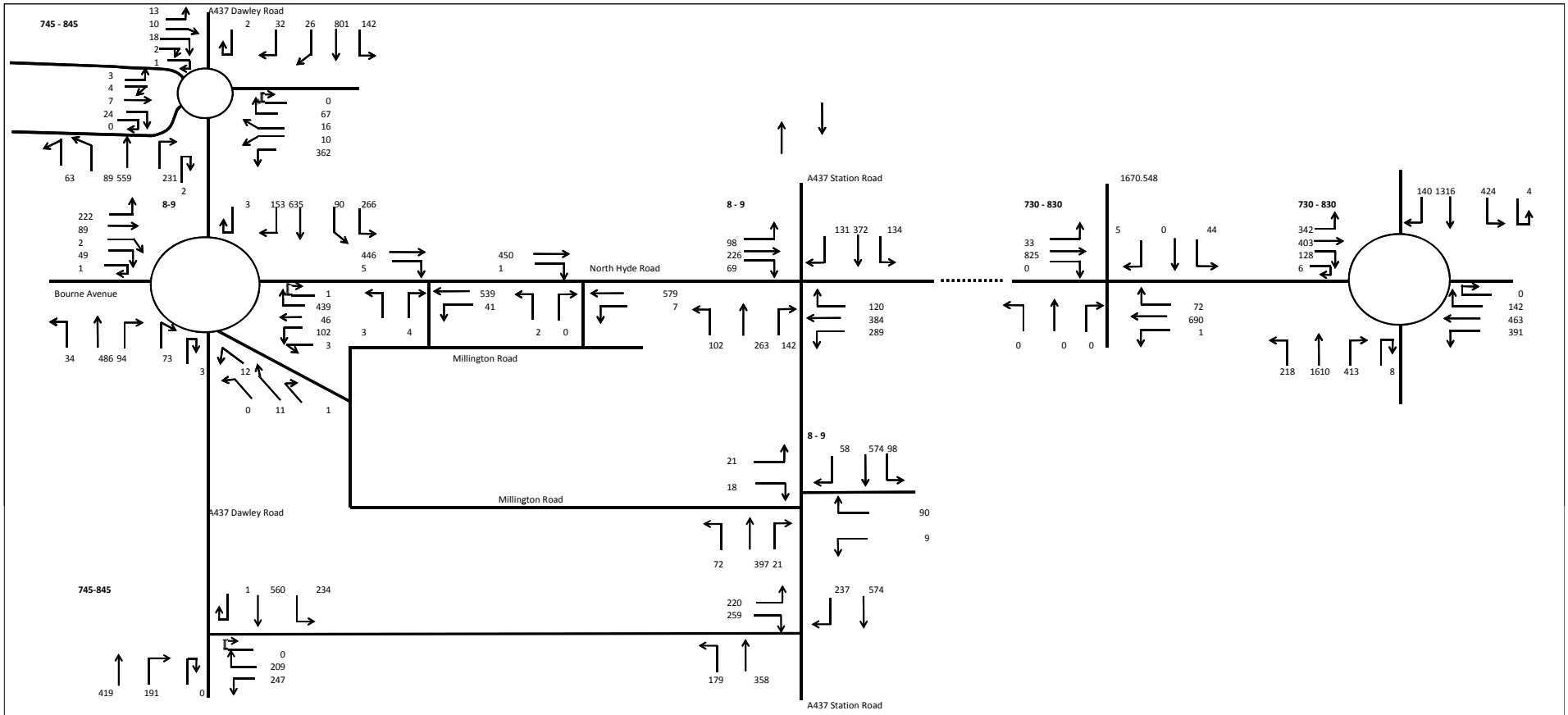


Drawing title: **Total Committed Development Sensitvity AM Peak**	Client: **Hyde Park Hayes Ltd**	SKM COLIN BUCHANAN	Scale: **NTS**
	Job Title: **Hyde Park Hayes**		Designed by: **LL**
			Drawn by: **LL**
			Ckd/Appd: **JSB**
			1st Issued: **APR**
			Full extension:
			Drg no: **Figure**

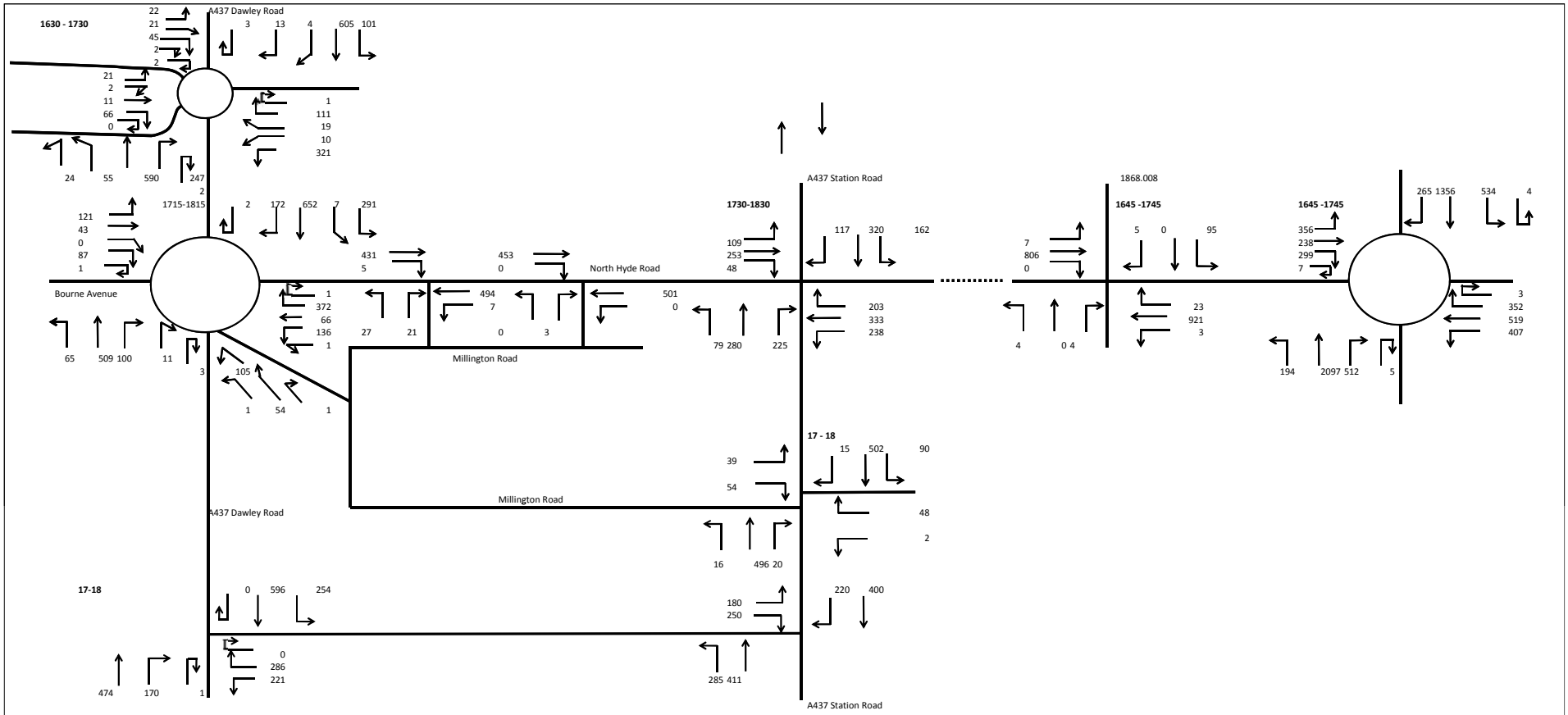


Drawing title: **Total Committed Development Sensitvity PM Peak**	Client: **Hyde Park Hayes Ltd**		Scale: **NTS**
	Job Title: **Hyde Park Hayes**	SKM COLIN BUCHANAN	Designed by: **LL**
			Drawn by: **LL**
			Chd/Appd: **JSB**
			1st Issued: **APR**
			Full extension:
			Drg no: **Figure**

APPENDIX L



Drawing title: **AM Peak Base 2014 + Committed Pcus**	Client: –	SKM COLIN BUCHANAN	Scale: NTS Designed by: LL Drawn by: LL Ckd/Appd: JSB 1st Issued: APR	Full extension: Drg no: **Figure**
	Job Title: **Hyde Park Hayes**			



Drawing title: **PM Peak Base 2014 + Committed Pcus**	Client: –	SKM COLIN BUCHANAN	Scale: NTS Designed by: LL Drawn by: LL Ckd/Appd: JSB 1st Issued: APR	Full extension: Drg no: **Figure**
	Job Title: **Hyde Park Hayes**			

<Enter Report 1 Title Here>

PRT File
AM Base B14+Com

```
1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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            _____________________________________________________


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 ------------------------------------------------------------------------
 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
 IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION
 ------------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_AM_MC_4.DAT"  at 18:36  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                =   8
  NUMBER OF LINKS                =  70
  NUMBER OF OPTIMISED NODES      =   8
  MAXIMUM NUMBER OF GRAPHIC PLOTS   =   0
  NUMBER OF STEPS IN CYCLE       =  65
  MAXIMUM NUMBER OF SHARED STOPLINES =   2
  MAXIMUM NUMBER OF TIMING POINTS   =   3
  MAXIMUM LINKS AT ANY NODE      =  12


  CORE REQUESTED =  14800 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     65     65     60      2      3      0      1    100    100      0      0      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                       LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                              NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126            7      7
  19)=  10    127            7      7
  20)=  10    128            7      7
  21)=  10    129            7      7
  22)=  10    130            7      7
  23)=  10    131            7      7
  24)=  10    132            7      7
  25)=  10    146            7      7      7

                              NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126            6      6
  27)=  11    127            5      5
  28)=  11    128            6      6
  29)=  11    129            5      5
  30)=  11    130            6      6
  31)=  11    131            5      5
  32)=  11    132            5      6
  33)=  11    146            7      8      8

                              NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE   Sgl/Dbl  S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.   Cycled
  34)=  12    126      1      3     36
  35)=  12    127      1     31     61
  36)=  12    128      1     32     19
  37)=  12    129      1     16     38
  38)=  12    130      1     16      3
```

```
 39)=  12    131      1      0     31
 40)=  12    132      1     33     20
 41)=  12    146      1     18     49      3

                                        LINK CARDS:  GIVEWAY DATA
                    PRIORITY LINKS   LINK1 GIVEWAY COEFFS.
CARD   CARD   LINK    LINK1   LINK2    ONLY     A1      A2                              LINK    STOP    MAX   DELAY  DISPSN
NO.    TYPE    NO.     NO.     NO.  % FLOW    X100    X100                          LENGTH WT.X100   FLOW  WT.X100    X100
 42)=  30   1462    1465       0      0      50      0      0      0      0      0     130      0    1000       0       0
 43)=  30   1466    1462       0      0      22      0      0      0      0      0      31      0     715       0       0

                                        LINK  CARDS:  FIXED  DATA
                                FIRST   GREEN                  SECOND  GREEN
CARD   CARD   LINK     EXIT       START          END            START          END      LINK    STOP    SAT   DELAY   DISPSN
 NO.   TYPE    NO.     NODE     STAGE    LAG    STAGE    LAG    STAGE    LAG   STAGE    LAG  LENGTH  WT.X100  FLOW  WT.X100    X100
 44)=  31     29       0        0      0        0      0        0      0        0      0     200       0    4000       0       0
 45)=  31     31     128        1      6        2      0        0      0        0      0      95       0    5591       0       0
 46)=  31     32     128        2      6        1      0        0      0        0      0      10       0   10000       0       0
 47)=  31     33       0        0      0        0      0        0      0        0      0     200       0    6000       0       0
 48)=  31     34     129        2      5        1      0        0      0        0      0      53       0    1806       0       0
 49)=  31     36     129        2      5        1      0        0      0        0      0      53       0    2047       0       0
 50)=  31     37       0        0      0        0      0        0      0        0      0      53       0       0       0       0
 51)=  31     38     129        2      5        1      0        0      0        0      0      53       0    2028       0       0
 52)=  31     39       0        0      0        0      0        0      0        0      0      53       0       0       0       0
 53)=  31     40     129        2      5        1      0        0      0        0      0      53       0    1867       0       0
 54)=  31     41       0        0      0        0      0        0      0        0      0      53       0       0       0       0
 55)=  31     42     132        1      5        2      0        0      0        0      0      58       0    2028       0       0
 56)=  31     43     132        2      6        1      0        0      0        0      0      10       0   10000       0       0
 57)=  31     44     129        1      5        2      0        0      0        0      0      45       0    1612       0       0
 58)=  31     45     129        1      5        2      0        0      0        0      0      45       0    1613       0       0
 59)=  31     46     130        1      6        2      0        0      0        0      0     200       0    4839       0       0
 60)=  31     47     130        2      6        1      0        0      0        0      0      10       0   10000       0       0
 61)=  31     48     131        2      5        1      0        0      0        0      0      63       0    1806       0       0
 62)=  31     50     131        2      5        1      0        0      0        0      0      63       0    1922       0       0
 63)=  31     52     131        2      5        1      0        0      0        0      0      63       0    1886       0       0
 64)=  31     53       0        0      0        0      0        0      0        0      0      63       0       0       0       0
 65)=  31     54       0        0      0        0      0        0      0        0      0     200       0    6000       0       0
 66)=  31     55     131        1      5        2      0        0      0        0      0      40       0    1855       0       0
 67)=  31     56       0        0      0        0      0        0      0        0      0     200       0       0       0       0
 68)=  31     57     131        1      5        2      0        0      0        0      0      40       0    1800       0       0
 69)=  31     58       0        0      0        0      0        0      0        0      0      95       0       0       0       0
 70)=  31     59     128        2      6        1      0        0      0        0      0      10       0   10000       0       0
 71)=  31     60     132        2      6        1      0        0      0        0      0      10       0   10000       0       0
 72)=  31     61     130        2      6        1      0        0      0        0      0      10       0   10000       0       0
 73)=  31     62       0        0      0        0      0        0      0        0      0      58       0       0       0       0
 74)=  31     63       0        0      0        0      0        0      0        0      0      10       0    3600       0       0
 75)=  31     64     129        1      5        2      0        0      0        0      0      45       0    1613       0       0
 76)=  31     65     129        1      5        2      0        0      0        0      0      45       0    1613       0       0
 77)=  31     66     131        1      5        2      0        0      0        0      0      40       0    1969       0       0
 78)=  31     67     131        1      5        2      0        0      0        0      0      40       0    1875       0       0
 79)=  31     68       0        0      0        0      0        0      0        0      0     200       0    3600       0       0
 80)=  31   1261       0        0      0        0      0        0      0        0      0      55       0       0       0       0
 81)=  31   1262     126        1      6        2      1        0      0        0      0      55       0    1905       0       0
 82)=  31   1263       0        0      0        0      0        0      0        0      0      55       0       0       0       0
 83)=  31   1264     126        1      6        2      1        0      0        0      0      55       0    2038       0       0
 84)=  31   1266       0        0      0        0      0        0      0        0      0      55       0       0       0       0
 85)=  31   1267     126        1      6        2      1        0      0        0      0      55       0    2019       0       0
 86)=  31   1269     126        1      6        2      1        0      0        0      0      55       0    1824       0       0
 87)=  31   1271       0        0      0        0      0        0      0        0      0      67       0       0       0       0
 88)=  31   1272     127        2      5        1      0        0      0        0      0      67       0    1876       0       0
 89)=  31   1273       0        0      0        0      0        0      0        0      0      67       0       0       0       0
 90)=  31   1274     127        2      5        1      0        0      0        0      0      67       0    2046       0       0
 91)=  31   1275       0        0      0        0      0        0      0        0      0      67       0       0       0       0
 92)=  31   1276     127        2      5        1      0        0      0        0      0      67       0    1973       0       0
 93)=  31   1278     127        2      5        1      0        0      0        0      0      67       0    1770       0       0
 94)=  31   1461     146        2      1        3      0        0      0        0      0     200       0    1860       0       0
 95)=  31   1462     146        1      0        3      0        0      0        0      0     130       0    1774       0       0
 96)=  31   1463     146        1      0        3      6        0      0        0      0     130       0    1833       0       0
 97)=  31   1464     146        3      8        1      0        0      0        0      0     200       0    1833       0       0
 98)=  31   1465     146        1      0        2      1        0      0        0      0     200       0    1926       0       0
 99)=  31   1467       0        0      0        0      0        0      0        0      0     200       0    2000       0       0
100)=  31   1468       0        0      0        0      0        0      0        0      0     200       0    2000       0       0
101)=  31   1469       0        0      0        0      0        0      0        0      0     200       0    2000       0       0
102)=  31  12601       0        0      0        0      0        0      0        0      0     156       0    1800       0       0
103)=  31  12602       0        0      0        0      0        0      0        0      0     200       0       0       0       0
104)=  31  12603     126        1      6        2      0        0      0        0      0      10       0   10000       0       0
105)=  31  12604     126        1      6        2      0        0      0        0      0      10       0   10000       0       0
106)=  31  12605     126        2      6        1      0        0      0        0      0      20       0    1522       0       0
107)=  31  12606     126        2      6        1      0        0      0        0      0      20       0    1640       0       0
108)=  31  12607     126        2      6        1      0        0      0        0      0      20       0    1757       0       0
109)=  31  12701     127        1      5        2      0        0      0        0      0      23       0    1802       0       0
110)=  31  12702     127        1      5        2      0        0      0        0      0      23       0    1775       0       0
111)=  31  12703       0        0      0        0      0        0      0        0      0     200       0    3600       0       0
112)=  31  12704     127        1      5        2      0        0      0        0      0      23       0    1907       0       0

                                        LINK CARDS:  FLOW DATA
                                ENTRY 1 .....  ENTRY 2 .....  ENTRY 3 .....  ENTRY 4 .....
CARD   CARD   LINK   TOTAL  UNIFORM  LINK        CRUISE   LINK        CRUISE   LINK        CRUISE   LINK        CRUISE
 NO.   TYPE    NO.    FLOW    FLOW     NO.    FLOW    TIME    NO.    FLOW    TIME    NO.    FLOW    TIME    NO.    FLOW    TIME
113)=  32     29   1947       0    1262    597      18    1264    535      18    1267    478      18   12607    337      18
114)=  32     31    539       0    1272    146       9    1274    130       9    1275    136       9    1276    127       9
115)=  32     32     10       0       0      0       4       0      0       0       0      0       0       0      0       0
116)=  32     33   1240       0      31    539      18      58    701      18       0      0       0       0      0       0
117)=  32     34    140       0   12702    140       5       0      0       0       0      0       0       0      0       0
118)=  32     36    492       0   12701     17       5   12702    475       5       0      0       0       0      0       0
119)=  32     37     45       0    1278     45       7       0      0       0       0      0       0       0      0       0
120)=  32     38    515       0   12701    515       5       0      0       0       0      0       0       0      0       0
121)=  32     39     41       0    1276     10       7    1278     31       7       0      0       0       0      0       0
122)=  32     40    309       0   12701     83       5   12704    226       5       0      0       0       0      0       0
123)=  32     41     47       0    1276     47       7       0      0       0       0      0       0       0      0       0
124)=  32     42    681       0      50    264       5      52    199       5      55    218       5       0      0       0
125)=  32     43     10       0       0      0       4       0      0       0       0      0       0       0      0       0
126)=  32     44    300       0      63    300       4       0      0       0       0      0       0       0      0       0
127)=  32     45    290       0      63    290       4       0      0       0       0      0       0       0      0       0
128)=  32     46    996       0       0      0      18       0      0       0       0      0       0       0      0       0
129)=  32     47     10       0       0      0       4       0      0       0       0      0       0       0      0       0
130)=  32     48    132       0      65    132       6       0      0       0       0      0       0       0      0       0
131)=  32     50    274       0      64    274       6       0      0       0       0      0       0       0      0       0
132)=  32     52    199       0      45    199       6       0      0       0       0      0       0       0      0       0
133)=  32     53    140       0      34    140       8       0      0       0       0      0       0       0      0       0
134)=  32     54   1616       0      36    492      18      38    515      18      40    309      18      44    300      18
135)=  32     55    560       0      68    560       4       0      0       0       0      0       0       0      0       0
136)=  32     56    224       0      37     45      18      39     41      18      41     47      18      45     91      18
137)=  32     57    560       0      68    560       4       0      0       0       0      0       0       0      0       0
138)=  32     58    701       0    1271    140       9    1273    137       9   12704    424      11       0      0       0
139)=  32     59     10       0       0      0       4       0      0       0       0      0       0       0      0       0
140)=  32     60     10       0       0      0       4       0      0       0       0      0       0       0      0       0
141)=  32     61     10       0       0      0       4       0      0       0       0      0       0       0      0       0
142)=  32     62    140       0      53    140       5       0      0       0       0      0       0       0      0       0
143)=  32     63    996       0      46    996       1       0      0       0       0      0       0       0      0       0
144)=  32     64    274       0      63    274       4       0      0       0       0      0       0       0      0       0
145)=  32     65    132       0      63    132       4       0      0       0       0      0       0       0      0       0
146)=  32     66    560       0      68    560       4       0      0       0       0      0       0       0      0       0
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147)=  32     67    561      0     68    561      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2241      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     10      0     50     10      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    597      0     55    342      5     57    255      5      0      0      0      0      0      0
151)=  32   1263     60      0     48     60      7      0      0      0      0      0      0      0      0      0
152)=  32   1264    535      0     57    305      5     66    230      5      0      0      0      0      0      0
153)=  32   1266     72      0     48     72      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    478      0     66    330      5     67    148      5      0      0      0      0      0      0
155)=  32   1269    413      0     67    413      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    140      0   1269    140      8      0      0      0      0      0      0      0      0      0
157)=  32   1272    146      0  12607    146      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    137      0   1269    137      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    130      0  12605    130      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    136      0   1269    136      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    184      0  12605    184      6      0      0      0      0      0      0      0      0      0
162)=  32   1278     76      0  12606     76      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     44      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     72      0     42     72     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    749      0     42    609     13     62    140     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    858      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     33      0   1465     33      2      0      0      0      0      0      0      0      0      0
169)=  32   1467    105      0   1462     72     18   1466     33     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    738      0   1463    739     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601    873      0   1461     44     14   1464     10     17   1465    825     18      0      0      0
173)=  32  12602    142      0   1261     10     18   1263     60     18   1266     72     18      0      0      0
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    314      0  12601    314      2      0      0      0      0      0      0      0      0      0
177)=  32  12606     76      0  12601     76      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    483      0  12601    483      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    615      0  12703    615      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    615      0  12703    615      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   1880      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    650      0  12703    650      2      0      0      0      0      0      0      0      0      0

*****END OF SUBROUTINE TINPUT*****
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    65 SECOND CYCLE  65 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2      3      36
  127      2     31      61
  128      2     32      19
  129      2     16      38
  130      2     16       3
  131      2      0      31
  132      2     33      20
  146      3     18      49       3

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
         LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
       (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)    (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

   29    1947   4000S    52  18.5   2.4    0.5 +  0.5  ( 14.3)     28  ( 11.6)      25              25.9
   31     539   5591S    31   9.5   3.1    0.3 +  0.1  (  5.6)     19  (  2.0)       6              7.6   128     38  19
   32      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0              1.1   128     25  32
   33    1239   6000     21  18.5   0.9    0.0 +  0.1  (  1.8)      1  (  0.2)       0              2.0
   34     141   1806     13   5.5   2.6    0.0 +  0.1  (  1.1)      7  (  0.2)       0              1.3   129     43  16
   36     493   2047S    44   5.5   3.4    0.0 +  0.4  (  5.6)     13  (  1.3)       2              6.9   129     43  16
   37      45    36L     44   7.5   4.9    0.0 +  0.0  (  0.8)     11  (  0.1)       2              0.8   129     43  16
   38     517   2028S    46   5.5   3.6    0.0 +  0.4  (  6.2)     15  (  1.5)       3              7.8   129     43  16
   39      41    38L     46   7.5   5.3    0.0 +  0.0  (  0.8)     13  (  0.1)       3              0.8   129     43  16
   40     309   1867S    32   5.5   3.1    0.0 +  0.2  (  3.1)     10  (  0.6)       1              3.7   129     43  16
   41      47    40L     32   7.5   6.0    0.0 +  0.0  (  1.0)     17  (  0.1)       1              1.1   129     43  16
   42     683   2028S    55   5.5   7.5    0.8 +  0.5  ( 18.8)     62  (  9.9)      12    +        28.7   132     38  20
   43      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0              1.1   132     26  33
   44     301   1612     67   4.5  30.5    1.5 +  1.0  ( 35.6)     75  (  5.0)       4              40.7   129     21  38
   45     291   1613     65   4.5  29.7    1.4 +  0.9  ( 33.5)     73  (  4.7)       4              38.2   129     21  38
   46     996   4839     28  18.5   4.4    0.9 +  0.2  ( 15.2)     30  (  6.3)       6              21.4   130     22   3
   47      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0              1.1   130      9  16
   48     131   1806     16   6.5   8.5    0.2 +  0.1  (  4.1)     70  (  1.8)       2              5.9   131     36   0
   50     275   1922     31   6.5  10.0    0.5 +  0.2  ( 10.3)     84  (  4.4)       5              14.7   131     36   0
   52     200   1886S    39   6.5  10.4    0.4 +  0.2  (  7.8)     83  (  3.1)       4              10.9   131     36   0
   53     141    52L     39   8.5  12.3    0.3 +  0.1  (  6.6)     32  (  0.5)       4              7.1   131     36   0
   54    1620   6000S    31  18.5   0.9    0.0 +  0.2  (  2.8)      1  (  0.2)       0              3.0
   55     560   1855     73   4.5  24.9    2.5 +  1.3  ( 53.9)     89  (  8.5)      10    +        62.4   131      5  31
   56     225    54L     31  18.5   0.9    0.0 +  0.0  (  0.4)      1  (  0.0)       0              0.4
   57     560   1800     75   4.5  26.1    2.5 +  1.5  ( 56.5)     92  (  8.8)      10    +        65.3   131      5  31
   58     700    31L     31  10.7   2.9    0.3 +  0.1  (  6.5)     21  (  2.8)       6              9.3   128     38  19
   59      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0              1.1   128     25  32
   60      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0              1.1   132     26  33
   61      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0              1.1   130      9  16
   62     141    42L     55   5.5   3.8    0.0 +  0.1  (  1.8)     23  (  0.7)      12    +        2.6   132     38  20
   63     996   3600     28   1.5   1.4    0.0 +  0.2  (  3.4)      8  (  1.4)       6    +        4.8
   64     275   1613     62   4.5  28.5    1.3 +  0.8  ( 30.4)     71  (  4.4)       4              34.7   129     21  38
   65     131   1613     29   4.5  23.1    0.6 +  0.2  ( 11.7)     63  (  1.8)       2              13.5   129     21  38
   66     560   1969     68   4.5  23.0    2.4 +  1.1  ( 49.6)     85  (  8.1)       9    +        57.8   131      5  31
   67     560   1875     72   4.5  24.5    2.5 +  1.3  ( 53.0)     88  (  8.5)      10    +        61.5   131      5  31
   68    2241   3600     62  18.5   1.8    0.0 +  0.8  ( 11.7)      2  (  1.0)       1              12.7
 1261      10   1262L    71   7.5  33.2    0.1 +  0.0  (  1.3)    110  (  0.1)       5              1.4   126      9  37
 1262     597   1905S    71   5.5   8.1    0.1 +  1.2  ( 18.0)     14  (  1.7)       5              19.7   126      9  37
 1263      60   1264L    65   7.5  34.2    0.5 +  0.1  (  8.0)    108  (  0.7)       4              8.7   126      9  37
 1264     534   2038S    65   5.5   6.6    0.1 +  0.8  ( 12.9)     15  (  1.7)       4              14.6   126      9  37
.

    65 SECOND CYCLE  65 STEPS

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
         LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
       (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)    (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

 1266      72   1267L    61   7.5  34.0    0.6 +  0.1  (  9.5)    107  (  0.8)       4              10.4   126      9  37
 1267     478   2019S    61   5.5   6.1    0.1 +  0.7  ( 10.6)     17  (  1.7)       4              12.3   126      9  37
 1269     412   1824     51   5.5   5.2    0.0 +  0.5  (  7.7)      7  (  0.7)       1              8.3   126      9  37
 1271     139   1272L    32   8.5  12.3    0.3 +  0.1  (  6.5)     34  (  0.6)       3              7.1   127      1  31
 1272     146   1876S    32   6.5  13.8    0.4 +  0.1  (  7.7)     85  (  2.8)       3              10.4   127      1  31
 1273     137   1274L    27   8.5  11.8    0.3 +  0.1  (  6.1)     34  (  0.6)       3              6.7   127      1  31
 1274     130   2046S    27   6.5  13.2    0.4 +  0.1  (  6.5)     81  (  2.4)       3              8.9   127      1  31
 1275     136   1276L    34   8.5  12.2    0.3 +  0.1  (  6.3)     35  (  0.6)       4              6.9   127      1  31
 1276     184   1973S    34   6.5  14.5    0.6 +  0.1  ( 10.1)     87  (  3.6)       4              13.7   127      1  31
 1278      77   1770      9   6.5  11.9    0.2 +  0.0  (  3.5)     75  (  1.3)       1              4.7   127      1  31
```

1461	44	1860	8	18.5	20.8	0.2 +	0.0	(3.5)	73	(0.7)	1		4.2	146	50	3		
1462	72	1774	13	13.5	7.8	0.1 +	0.1	(2.1)	32	(0.4)	0		2.5	146	18	3		
1463	751	1833	47	13.5	3.0	0.1 +	0.4	(7.5)	10	(1.2)	2		8.7	146	18	9		
1464	20	1833	9	18.5	34.7	0.1 +	0.0	(2.7)	96	(0.4)	0		3.1	146	11	18		
1465	858	1926	88	18.5	28.9	3.4 +	3.4	(96.2)	101	(18.3)	17		114.5	146	18	50		
1466	33	715	5	2.5	3.2	0.0 +	0.0	(0.3)	0	(0.0)	0		0.3					
1467	105	2000	5	18.5	1.4	0.0 +	0.0	(0.4)	1	(0.0)	0		0.4					
1468	21	2000	1	18.5	1.4	0.0 +	0.0	(0.1)	1	(0.0)	0		0.1					
1469	740	2000	37	18.5	1.9	0.0 +	0.3	(4.2)	2	(0.3)	0		4.5					
12601	872	1800	48	18.3	2.4	0.0 +	0.5	(6.7)	3	(0.6)	0		7.3					
12602	141	29L	52	18.5	1.7	0.0 +	0.0	(0.7)	10	(0.3)	25		1.0					
12603	10	10000	0	4.5	11.7	0.0 +	0.0	(0.4)	57	(0.0)	0		0.4	126	9	36		
12604	10	10000	0	4.5	11.7	0.0 +	0.0	(0.4)	57	(0.0)	0		0.4	126	9	36		
12605	314	1522	50	2.5	10.3	0.4 +	0.5	(12.2)	34	(1.8)	2		14.0	126	42	3		
12606	77	1640	11	2.5	7.2	0.1 +	0.1	(2.0)	23	(0.3)	0		2.3	126	42	3		
12607	483	1757	66	2.5	12.3	0.6 +	1.0	(22.5)	42	(3.5)	5	+	26.0	126	42	3		
12701	617	1802	86	2.5	34.7	3.0 +	2.8	(83.2)	108	(15.5)	13	+	98.7	127	36	61		
12702	617	1775	87	2.5	36.5	3.1 +	3.1	(87.6)	111	(15.9)	13	+	103.5	127	36	61		
12703	1880	3600	52	18.5	1.5	0.0 +	0.5	(7.8)	2	(0.6)	1		8.4					
12704	650	1907	85	2.5	33.6	3.2 +	2.8	(84.8)	106	(16.1)	13	+	100.9	127	36	61		

TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+ OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY ($/H)	TOTAL COST OF STOPS ($/H)	PENALTY FOR EXCESS QUEUES ($/H)	TOTAL PERFORMANCE INDEX ($/H)	
3343.3	156.5	21.4	37.9	32.6	(1000.0) +	(194.9) +	(0.0) =	1194.9	TOTALS

ROUTE

****

	CRUISE LITRES PER HOUR		DELAY LITRES PER HOUR		STOPS LITRES PER HOUR		TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	186.3	+	81.0	+	88.8	=	356.1

NO. OF ENTRIES TO SUBPT = 1
NO. OF LINKS RECALCULATED= 70

PROGRAM TRANSYT FINISHED

<Enter Report 1 Title Here>

PRT File
PM Base B14+Com

```
1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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           ____________________________________________________


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                program advice and maintenance, contact:

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 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
 IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION
 ------------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_PM_MC_2.DAT"  at 18:42  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                 =    8
  NUMBER OF LINKS                 =   70
  NUMBER OF OPTIMISED NODES        =    8
  MAXIMUM NUMBER OF GRAPHIC PLOTS   =    8
  NUMBER OF STEPS IN CYCLE         =   66
  MAXIMUM NUMBER OF SHARED STOPLINES =    2
  MAXIMUM NUMBER OF TIMING POINTS   =    3
  MAXIMUM LINKS AT ANY NODE        =   12


  CORE REQUESTED =  14914 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     66     66     60      2      3      0      1    100    100      0      1      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                       LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                              NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE            S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126             7      7
  19)=  10    127             7      7
  20)=  10    128             7      7
  21)=  10    129             7      7
  22)=  10    130             7      7
  23)=  10    131             7      7
  24)=  10    132             7      7
  25)=  10    146             7      7      7

                              NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE            S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126             6      6
  27)=  11    127             5      5
  28)=  11    128             6      6
  29)=  11    129             5      5
  30)=  11    130             6      6
  31)=  11    131             5      5
  32)=  11    132             5      6
  33)=  11    146             7      8      8

                              NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE   Sgl/Dbl   S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.   Cycled
  34)=  12    126       1     30      8
  35)=  12    127       1     34      6
  36)=  12    128       1     53     40
  37)=  12    129       1     10     35
  38)=  12    130       1      8     61
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 39)=  12    131      1     36      5
 40)=  12    132      1     54     41
 41)=  12    146      1     48     11     33
```

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS LINK1 NO.	LINK2 % FLOW	GIVEWAY COEFFS. ONLY X100	A1 X100	A2				LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
42)=	30	1462	1465	0	0	50	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	22	0	0	0	0	0	31	0	715	0	0

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START STAGE	LAG	END STAGE	LAG	SECOND GREEN START STAGE	LAG	END STAGE	LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
44)=	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0
45)=	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0
46)=	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
48)=	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0
49)=	31	36	129	2	5	1	0	0	0	0	0	53	0	2047	0	0
50)=	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0
51)=	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0
52)=	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0
53)=	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0
54)=	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0
55)=	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0
56)=	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
57)=	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0
58)=	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
59)=	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0
60)=	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
61)=	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0
62)=	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0
63)=	31	52	131	2	5	1	0	0	0	0	0	63	0	1886	0	0
64)=	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0
65)=	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
66)=	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0
67)=	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0
68)=	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0
69)=	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0
70)=	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
71)=	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
72)=	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
73)=	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0
74)=	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0
75)=	31	64	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
76)=	31	65	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
77)=	31	66	131	1	5	2	0	0	0	0	0	40	0	1969	0	0
78)=	31	67	131	1	5	2	0	0	0	0	0	40	0	1875	0	0
79)=	31	68	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
80)=	31	1261	0	0	0	0	0	0	0	0	0	55	0	0	0	0
81)=	31	1262	126	1	6	2	1	0	0	0	0	55	0	1905	0	0
82)=	31	1263	0	0	0	0	0	0	0	0	0	55	0	0	0	0
83)=	31	1264	126	1	6	2	1	0	0	0	0	55	0	2038	0	0
84)=	31	1266	0	0	0	0	0	0	0	0	0	55	0	0	0	0
85)=	31	1267	126	1	6	2	1	0	0	0	0	55	0	2019	0	0
86)=	31	1269	126	1	6	2	1	0	0	0	0	55	0	1824	0	0
87)=	31	1271	0	0	0	0	0	0	0	0	0	67	0	0	0	0
88)=	31	1272	127	2	5	1	0	0	0	0	0	67	0	1876	0	0
89)=	31	1273	0	0	0	0	0	0	0	0	0	67	0	0	0	0
90)=	31	1274	127	2	5	1	0	0	0	0	0	67	0	2046	0	0
91)=	31	1275	0	0	0	0	0	0	0	0	0	67	0	0	0	0
92)=	31	1276	127	2	5	1	0	0	0	0	0	67	0	1973	0	0
93)=	31	1278	127	2	5	1	0	0	0	0	0	67	0	1770	0	0
94)=	31	1461	146	2	0	3	0	0	0	0	0	200	0	1860	0	0
95)=	31	1462	146	1	0	3	2	0	0	0	0	130	0	1774	0	0
96)=	31	1463	146	1	0	3	8	0	0	0	0	130	0	1833	0	0
97)=	31	1464	146	3	8	1	0	0	0	0	0	200	0	1833	0	0
98)=	31	1465	146	1	0	2	3	0	0	0	0	200	0	1926	0	0
99)=	31	1467	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
100)=	31	1468	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
101)=	31	1469	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
102)=	31	12601	0	0	0	0	0	0	0	0	0	156	0	1800	0	0
103)=	31	12602	0	0	0	0	0	0	0	0	0	200	0	0	0	0
104)=	31	12603	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
105)=	31	12604	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
106)=	31	12605	126	2	6	1	0	0	0	0	0	20	0	1522	0	0
107)=	31	12606	126	2	6	1	0	0	0	0	0	20	0	1640	0	0
108)=	31	12607	126	2	6	1	0	0	0	0	0	20	0	1757	0	0
109)=	31	12701	127	1	5	2	0	0	0	0	0	23	0	1802	0	0
110)=	31	12702	127	1	5	2	0	0	0	0	0	23	0	1775	0	0
111)=	31	12703	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
112)=	31	12704	127	1	5	2	0	0	0	0	0	23	0	1907	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 2 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 3 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 4 ..... LINK NO.	CRUISE FLOW	CRUISE TIME
113)=	32	29	2097	0	1262	647	18	1264	640	18	1267	810	18	0	0	0
114)=	32	31	407	0	1272	44	9	1274	162	9	1275	169	9	1276	32	9
115)=	32	32	10	0	0	0	4	0	0	0	0	0	0	0	0	0
116)=	32	33	1284	0	31	407	18	58	877	18	0	0	0	0	0	0
117)=	32	34	265	0	12702	265	5	0	0	0	0	0	0	0	0	0
118)=	32	36	266	0	12702	266	5	0	0	0	0	0	0	0	0	0
119)=	32	37	111	0	1278	111	7	0	0	0	0	0	0	0	0	0
120)=	32	38	552	0	12701	552	5	0	0	0	0	0	0	0	0	0
121)=	32	39	89	0	1276	39	7	1278	50	7	0	0	0	0	0	0
122)=	32	40	538	0	12701	248	5	12704	290	5	0	0	0	0	0	0
123)=	32	41	99	0	1276	99	7	0	0	0	0	0	0	0	0	0
124)=	32	42	713	0	50	369	5	52	150	5	55	194	5	0	0	0
125)=	32	43	10	0	0	0	4	0	0	0	0	0	0	0	0	0
126)=	32	44	397	0	63	397	4	0	0	0	0	0	0	0	0	0
127)=	32	45	160	0	63	160	4	0	0	0	0	0	0	0	0	0
128)=	32	46	1278	0	0	0	18	0	0	0	0	0	0	0	0	0
129)=	32	47	10	0	0	0	4	0	0	0	0	0	0	0	0	0
130)=	32	48	332	0	65	332	6	0	0	0	0	0	0	0	0	0
131)=	32	50	389	0	64	389	6	0	0	0	0	0	0	0	0	0
132)=	32	52	150	0	45	150	6	0	0	0	0	0	0	0	0	0
133)=	32	53	265	0	34	265	8	0	0	0	0	0	0	0	0	0
134)=	32	54	1753	0	36	266	18	38	552	18	40	538	18	44	397	18
135)=	32	55	750	0	68	750	4	0	0	0	0	0	0	0	0	0
136)=	32	56	309	0	37	111	18	39	89	18	41	99	18	45	10	18
137)=	32	57	731	0	68	731	4	0	0	0	0	0	0	0	0	0
138)=	32	58	877	0	1271	174	9	1273	169	9	12704	534	11	0	0	0
139)=	32	59	10	0	0	0	4	0	0	0	0	0	0	0	0	0
140)=	32	60	10	0	0	0	4	0	0	0	0	0	0	0	0	0
141)=	32	61	10	0	0	0	4	0	0	0	0	0	0	0	0	0
142)=	32	62	265	0	53	265	5	0	0	0	0	0	0	0	0	0
143)=	32	63	1278	0	46	1278	1	0	0	0	0	0	0	0	0	0
144)=	32	64	389	0	63	389	4	0	0	0	0	0	0	0	0	0
145)=	32	65	332	0	63	332	4	0	0	0	0	0	0	0	0	0
146)=	32	66	810	0	68	810	4	0	0	0	0	0	0	0	0	0

```
147)=  32     67    512      0     68    512      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2803      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     10      0     50     10      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    647      0     55    556      5     57     91      5      0      0      0      0      0      0
151)=  32   1263    212      0     48    202      7     50     10      7      0      0      0      0      0      0
152)=  32   1264    640      0     57    640      5      0      0      0      0      0      0      0      0      0
153)=  32   1266    130      0     48    130      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    810      0     66    810      5      0      0      0      0      0      0      0      0      0
155)=  32   1269    512      0     67    512      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    174      0   1269    174      8      0      0      0      0      0      0      0      0      0
157)=  32   1272     44      0  12607     44      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    169      0   1269    169      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    162      0  12605    162      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    169      0   1269    169      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    170      0  12605    170      6      0      0      0      0      0      0      0      0      0
162)=  32   1278    161      0  12606    161      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     95      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     23      0     42     23     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    955      0     42    690     13     62    265     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    813      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     10      0   1465     10      2      0      0      0      0      0      0      0      0      0
169)=  32   1467     33      0   1462     23     18   1466     10     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    947      0   1463    937     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601    893      0   1461     95     17   1464     10     17   1465    806     15      0      0      0
173)=  32  12602    708      0   1261     10     18   1263    212     18   1266    130     18  12607    356     18
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    332      0  12601    332      2      0      0      0      0      0      0      0      0      0
177)=  32  12606    161      0  12601    161      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    400      0  12601    400      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    800      0  12703    800      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    531      0  12703    531      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   2155      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    824      0  12703    824      2      0      0      0      0      0      0      0      0      0

                                    GRAPH  PLOT  CARDS
CARD   CARD   LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO.   TYPE    NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.
183)=  35   1271     42      52      53      0       0       0       0       0       0       0       0       0       0

                                        USER-DEFINED ROUTES

CARD   CARD  ROUTE     ROUTE
 NO.   TYPE  NUMBER  DESCRIPTION

184)=  41      1    <Route Name>
185)=  41      2    <Route Name>
186)=  41      3    <Route Name>
187)=  41      4    <Route Name>

CARD   CARD  ROUTE    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO    TYPE  NUMBER    NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.

188)=  42      1      57    1264      29
189)=  42      2      34      53      62
190)=  42      3      45      52      42
191)=  42      4      50      42

*****END OF SUBROUTINE TINPUT*****
.

    66 SECOND CYCLE  66 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2      30       8
  127      2      34       6
  128      2      53      40
  129      2      10      35
  130      2       8      61
  131      2      36       5
  132      2      54      41
  146      3      48      11     33

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.      NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)    (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

   29    2093   4000S    70  18.5   3.6    0.9 +  0.9  ( 25.8)     41  ( 18.1)     33             43.9
   31     406   5591S    32   9.5   2.8    0.2 +  0.1  (  3.7)     11  (  0.9)      4             4.6   128    59  40
   32      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   128    46  53
   33    1282   6000     21  18.5   0.9    0.0 +  0.1  (  1.9)      1  (  0.2)      0             2.1
   34     265   1806     26   5.5   3.5    0.0 +  0.2  (  3.1)      6  (  0.3)      0             3.4   129    40  10
   36     265   2047S    33   5.5   3.4    0.0 +  0.2  (  3.1)      6  (  0.3)      2             3.4   129    40  10
   37     111     36L    33   7.5  12.9    0.3 +  0.1  (  5.4)     91  (  1.0)      2             6.4   129    40  10
   38     553   2028S    56   5.5   4.7    0.1 +  0.6  (  9.2)      8  (  0.8)      2            10.1   129    40  10
   39      89     38L    56   7.5  13.2    0.2 +  0.1  (  4.4)     88  (  0.8)      2             5.2   129    40  10
   40     538   1867S    61   5.5   5.5    0.1 +  0.7  ( 10.6)      9  (  1.0)      3            11.5   129    40  10
   41      99     40L    61   7.5  13.1    0.2 +  0.1  (  4.9)     86  (  0.9)      3             5.8   129    40  10
   42     713   2028S    65   5.5   5.4    0.3 +  0.7  ( 13.8)     21  (  3.4)      3            17.2   132    59  41
   43      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   132    47  54
   44     396   1612     77   4.5  32.2    1.8 +  1.7  ( 49.5)     91  (  8.1)      8     +       57.6   129    15  35
   45     161   1613     31   4.5  20.3    0.7 +  0.2  ( 12.6)     56  (  2.0)      2            14.5   129    15  35
   46    1278   4839     36  18.5   4.6    1.2 +  0.3  ( 20.9)     32  (  8.6)      9            29.5   130    14  61
   47      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   130     1   8
   48     332   1806     45   6.5   8.7    0.4 +  0.4  ( 10.8)     17  (  1.1)      1            11.9   131    10  36
   50     388   1922     49   6.5   9.2    0.5 +  0.5  ( 13.4)     18  (  1.3)      1            14.7   131    10  36
   52     151   1886S    54   6.5   9.3    0.2 +  0.2  (  5.2)     18  (  0.5)      6             5.7   131    10  36
   53     265     52L    54   8.5  23.0    1.3 +  0.4  ( 23.5)    102  (  3.0)      6            26.5   131    10  36
   54    1753   6000S    34  18.5   1.0    0.0 +  0.2  (  3.2)      1  (  0.3)      0             3.4
   55     751   1855     86   4.5  30.4    3.3 +  3.0  ( 88.5)    101  ( 13.0)     15     +      101.5   131    41   5
   56     309     54L    34  18.5   1.0    0.0 +  0.0  (  0.6)      1  (  0.0)      0             0.6
   57     729   1800     86   4.5  30.8    3.2 +  3.0  ( 87.0)    102  ( 12.7)     15     +       99.7   131    41   5
   58     875     31L    32  10.7   2.2    0.3 +  0.2  (  6.0)     16  (  2.7)      4             8.7   128    59  40
   59      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   128    46  53
   60      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   132    47  54
   61      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   130     1   8
   62     265     42L    65   5.5   3.9    0.0 +  0.3  (  3.6)      5  (  0.3)      3             3.9   132    59  41
   63    1278   3600     36   1.5   1.6    0.1 +  0.3  (  5.6)     13  (  2.8)      9     +       8.3
   64     389   1613     76   4.5  31.1    1.8 +  1.5  ( 47.0)     88  (  7.7)      8     +      54.6   129    15  35
   65     332   1613     65   4.5  26.2    1.5 +  0.9  ( 33.6)     72  (  5.3)      5            38.9   129    15  35
   66     807   1969     87   4.5  30.7    3.5 +  3.3  ( 96.3)    102  ( 14.1)     16     +      110.4   131    41   5
   67     510   1875     58   4.5  18.1    1.8 +  0.7  ( 35.4)     73  (  6.4)      7     +       41.8   131    41   5
   68    2803   3600     78  18.5   2.7    0.0 +  1.8  ( 24.9)      3  (  2.0)      2            26.9
 1261      10   1262L    57   7.5   7.9    0.0 +  0.0  (  0.3)     44  (  0.0)      1             0.3   126    36   9
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 1262    648  1905S    57  5.5  4.7   0.1 +  0.7  ( 10.6)     8  (  1.0)      1            11.7   126    36   9
 1263    212  1264L    69  7.5 11.0   0.3 +  0.3  (  8.7)    75  (  1.7)      5            10.5   126    36   9
 1264    638  2038S    69  5.5  5.7   0.1 +  0.8  ( 13.1)     9  (  1.2)      5            14.3   126    36   9
.

    66 SECOND CYCLE  66 STEPS

 LINK   FLOW  SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER  INTO  FLOW   OF    PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK         SAT    CRUISE             OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                           DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS        EXCESS  OF ( ) VALUES        1ST    2ND
     (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)    (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

 1266    130  1267L    77  7.5 11.7   0.2 +  0.2  (  5.7)    66  (  0.9)      4             6.7   126    36   9
 1267    807  2019S    77  5.5  7.3   0.1 +  1.4  ( 21.5)    11  (  2.0)      4            23.5   126    36   9
 1269    510  1824     46  5.5  4.1   0.1 +  0.4  (  7.2)     8  (  0.8)      3             8.0   126    36   9
 1271    173  1272L    32  8.5 20.3   0.8 +  0.2  ( 13.5)    98  (  2.1)      3            15.6   127    11  34
 1272     44  1876S    32  6.5  8.1   0.0 +  0.0  (  1.3)    15  (  0.1)      3             1.5   127    11  34
 1273    168  1274L    44  8.5 20.7   0.7 +  0.2  ( 13.4)    98  (  2.1)      4            15.5   127    11  34
 1274    162  2046S    44  6.5  8.2   0.2 +  0.2  (  4.9)    15  (  0.5)      4             5.5   127    11  34
 1275    168  1276L    47  8.5 21.2   0.7 +  0.2  ( 13.7)    99  (  2.1)      4            15.8   127    11  34
 1276    170  1973S    47  6.5  8.6   0.2 +  0.2  (  5.5)    15  (  0.6)      4             6.0   127    11  34
 1278    161  1770     25  6.5  6.7   0.1 +  0.2  (  3.9)    12  (  0.4)      0             4.3   127    11  34
 1461     95  1860     15 18.5 18.5   0.4 +  0.1  (  6.8)    69  (  1.4)      1             8.1   146    11  33
 1462     23  1774      3 13.5 12.0   0.1 +  0.0  (  1.0)    67  (  0.3)      0             1.3   146    48  35
 1463    955  1833     57 13.5  5.1   0.5 +  0.7  ( 17.2)    32  (  5.2)      7            22.4   146    48  41
 1464     20  1833      9 18.5 35.3   0.1 +  0.0  (  2.7)    97  (  0.4)      0             3.2   146    41  48
 1465    813  1926     84 18.5 26.4   3.2 +  2.6  ( 83.0)    95  ( 16.3)     15            99.3   146    48  14
 1466     10   715      1  2.5  3.0   0.0 +  0.0  (  0.1)     0  (  0.0)      0             0.1
 1467     33  2000      2 18.5  1.4   0.0 +  0.0  (  0.1)     1  (  0.0)      0             0.1
 1468     19  2000      1 18.5  1.4   0.0 +  0.0  (  0.1)     1  (  0.0)      0             0.1
 1469    948  2000     47 18.5  2.2   0.0 +  0.5  (  6.4)     3  (  0.5)      0             6.9
12601    893  1800     50 15.7  2.5   0.0 +  0.5  (  7.1)     4  (  0.6)      4             7.7
12602    708    29L    70 18.5  2.0   0.0 +  0.3  (  4.3)     4  (  0.5)     33             4.9
12603     10 10000      0  4.5  6.5   0.0 +  0.0  (  0.2)    41  (  0.0)      0             0.2   126    36   8
12604     10 10000      0  4.5  6.5   0.0 +  0.0  (  0.2)    41  (  0.0)      0             0.2   126    36   8
12605    332  1522     85  2.5 40.8   1.2 +  2.6  ( 52.8)   117  (  6.6)      8    +        59.4   126    14  30
12606    161  1640     38  2.5 17.3   0.4 +  0.3  ( 10.7)    68  (  1.9)      2             12.5   126    14  30
12607    400  1757     88  2.5 43.7   1.4 +  3.4  ( 68.2)   121  (  8.3)     10    +        76.5   126    14  30
12701    802  1802     86  2.5 28.0   3.1 +  3.0  ( 87.1)    98  ( 18.4)     16    +       105.5   127    39   6
12702    530  1775     58  2.5 16.2   1.6 +  0.7  ( 32.9)    69  (  8.6)      7    +        41.5   127    39   6
12703   2155  3600     60 18.5  1.7   0.0 +  0.7  ( 10.6)     2  (  0.9)      1             11.4
12704    823  1907     84  2.5 25.1   3.1 +  2.5  ( 79.9)    92  ( 17.9)     15    +        97.8   127    39   6

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  3965.6        190.0      20.9        43.1     45.2   (1254.7) + (  223.0)  + (   0.0)   =    1477.7     TOTALS

*************************************************************************************************************************************************

                             CRUISE             DELAY             STOPS            TOTALS
                          LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR

FUEL CONSUMPTION PREDICTIONS      222.1        +    101.6        +    101.6        =    425.3

NO. OF ENTRIES TO SUBPT  =    1
NO. OF LINKS RECALCULATED=   70
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-    9
 - (SECONDS)

  126      2     30      8
  127      2     34      6
  128      2     53     40
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  3965.6        190.0      20.9        43.1     45.2   (1254.7) + (  223.0)  + (   0.0)   =    1477.7     TOTALS

NO. OF ENTRIES TO SUBPT  =   17
NO. OF LINKS RECALCULATED=  466
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-    9  26
 - (SECONDS)

  126      2     30      8
  127      2     34      6
  128      2     53     40
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  3965.6        190.0      20.9        43.1     45.2   (1254.7) + (  223.0)  + (   0.0)   =    1477.7     TOTALS

NO. OF ENTRIES TO SUBPT  =   17
NO. OF LINKS RECALCULATED=  458
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-    9  26   9
 - (SECONDS)

  126      2     30      8
  127      2     34      6
  128      2     53     40
  129      2     10     35
```

```
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                          DELAY    DELAY       STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  3965.6       190.0      20.9        43.1     45.2   (1254.7) + (  223.0)  + (   0.0)   =    1477.7     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  552
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26
 - (SECONDS)

  126      2     30      8
  127      2     34      6
  128      2     53     40
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                          DELAY    DELAY       STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  3965.6       190.0      20.9        43.1     45.2   (1254.7) + (  223.0)  + (   0.0)   =    1477.7     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  533
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9
 - (SECONDS)

  126      2     30      8
  127      2     34      6
  128      2     53     40
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                          DELAY    DELAY       STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  3965.6       190.0      20.9        43.1     45.2   (1254.7) + (  223.0)  + (   0.0)   =    1477.7     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  572
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9   1
 - (SECONDS)

  126      2     30      8
  127      2     34      6
  128      2     53     40
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                          DELAY    DELAY       STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  3965.6       190.0      20.9        43.1     45.2   (1254.7) + (  223.0)  + (   0.0)   =    1477.7     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  573
.

     66 SECOND CYCLE  66 STEPS

FINAL SETTINGS OBTAINED WITH INCREMENTS :-   9  26   9  26   9   1   1
 - (SECONDS)

   NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
    NO   OF STAGES   1       2       3       4       5      6       7       8       9      10

  126      2     30      8
  127      2     34      6
  128      2     53     40
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.      NODE   START  START
        LINK         SAT    CRUISE            OVERSAT  OF    STOPS    OF    MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

   29    2093  4000S    70  18.5   3.6    0.9 +  0.9  ( 25.8)     41  ( 18.1)     33             43.9
   31     406  5591S    32   9.5   2.8    0.2 +  0.1  (  3.7)     11  (  0.9)      4             4.6   128     59  40
   32      10 10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   128     46  53
   33    1282  6000     21  18.5   0.9    0.0 +  0.1  (  1.9)      1  (  0.2)      0             2.1
   34     265  1806     26   5.5   3.5    0.0 +  0.2  (  3.1)      6  (  0.3)      0             3.4   129     40  10
```

36	265	2047S	33	5.5	3.4	0.0 + 0.2	(3.1)	6	(0.3)	2		3.4	129	40	10				
37	111	36L	33	7.5	12.9	0.3 + 0.1	(5.4)	91	(1.0)	2		6.4	129	40	10				
38	553	2028S	56	5.5	4.7	0.1 + 0.6	(9.2)	8	(0.8)	2		10.1	129	40	10				
39	89	38L	56	7.5	13.2	0.2 + 0.1	(4.4)	88	(0.8)	2		5.2	129	40	10				
40	538	1867S	61	5.5	5.5	0.1 + 0.7	(10.6)	9	(1.0)	3		11.5	129	40	10				
41	99	40L	61	7.5	13.1	0.2 + 0.1	(4.9)	86	(0.9)	3		5.8	129	40	10				
42	713	2028S	65	5.5	5.4	0.3 + 0.7	(13.8)	21	(3.4)	3		17.2	132	59	41				
43	10	10000	1	4.5	27.9	0.1 + 0.0	(1.1)	89	(0.0)	0		1.1	132	47	54				
44	396	1612	77	4.5	32.2	1.8 + 1.7	(49.5)	91	(8.1)	8	+	57.6	129	15	35				
45	161	1613	31	4.5	20.3	0.7 + 0.2	(12.6)	56	(2.0)	2		14.5	129	15	35				
46	1278	4839	36	18.5	4.6	1.2 + 0.3	(20.9)	32	(8.6)	9		29.5	130	14	61				
47	10	10000	1	4.5	27.9	0.1 + 0.0	(1.1)	89	(0.0)	0		1.1	130	1	8				
48	332	1806	45	6.5	8.7	0.4 + 0.4	(10.8)	17	(1.1)	1		11.9	131	10	36				
50	388	1922	49	6.5	9.2	0.5 + 0.5	(13.4)	18	(1.3)	1		14.7	131	10	36				
52	151	1886S	54	6.5	9.3	0.2 + 0.2	(5.2)	18	(0.5)	6		5.7	131	10	36				
53	265	52L	54	8.5	23.0	1.3 + 0.4	(23.5)	102	(3.0)	6		26.5	131	10	36				
54	1753	6000S	34	18.5	1.0	0.0 + 0.2	(3.2)	1	(0.3)	0		3.4							
55	751	1855	86	4.5	30.4	3.3 + 3.0	(88.5)	101	(13.0)	15	+	101.5	131	41	5				
56	309	54L	34	18.5	1.0	0.0 + 0.0	(0.6)	1	(0.0)	0		0.6							
57	729	1800	86	4.5	30.8	3.2 + 3.0	(87.0)	102	(12.7)	15	+	99.7	131	41	5				
58	875	31L	32	10.7	2.2	0.3 + 0.2	(6.0)	16	(2.7)	4		8.7	128	59	40				
59	10	10000	1	4.5	27.9	0.1 + 0.0	(1.1)	89	(0.0)	0		1.1	128	46	53				
60	10	10000	1	4.5	27.9	0.1 + 0.0	(1.1)	89	(0.0)	0		1.1	132	47	54				
61	10	10000	1	4.5	27.9	0.1 + 0.0	(1.1)	89	(0.0)	0		1.1	130	1	8				
62	265	42L	65	5.5	3.9	0.0 + 0.3	(3.6)	5	(0.3)	3		3.9	132	59	41				
63	1278	3600	36	1.5	1.6	0.1 + 0.3	(5.6)	13	(2.8)	9	+	8.3							
64	389	1613	76	4.5	31.1	1.8 + 1.5	(47.0)	88	(7.7)	8	+	54.6	129	15	35				
65	332	1613	65	4.5	26.2	1.5 + 0.9	(33.6)	72	(5.3)	5		38.9	129	15	35				
66	807	1969	87	4.5	30.7	3.5 + 3.3	(96.3)	102	(14.1)	16	+	110.4	131	41	5				
67	510	1875	58	4.5	18.1	1.8 + 0.7	(35.4)	73	(6.4)	7	+	41.8	131	41	5				
68	2803	3600	78	18.5	2.7	0.0 + 1.8	(24.9)	3	(2.0)	2		26.9							
1261	10	1262L	57	7.5	7.9	0.0 + 0.0	(0.3)	44	(0.0)	1		0.3	126	36	9				
1262	648	1905S	57	5.5	4.7	0.1 + 0.7	(10.6)	8	(1.0)	1		11.7	126	36	9				
1263	212	1264L	69	7.5	11.0	0.3 + 0.3	(8.7)	75	(1.7)	5		10.5	126	36	9				
1264	638	2038S	69	5.5	5.7	0.1 + 0.8	(13.1)	9	(1.2)	5		14.3	126	36	9				

66 SECOND CYCLE 66 STEPS

LINK NUMBER	FLOW INTO LINK (PCU/H)	SAT FLOW (PCU/H)	DEGREE OF SAT (%)	MEAN TIMES PER PCU CRUISE (SEC)	DELAY (SEC)	UNIFORM RANDOM+ OVERSAT (U+R+O=MEAN Q) DELAY (PCU-H/H)	COST DELAY ($/H)	STOPS MEAN STOPS (%)	COST OF STOPS ($/H)	MAX. QUEUE (PCU)	MEAN QUEUE (PCU)	PERFORMANCE INDEX. AVERAGE WEIGHTED SUM OF EXCESS OF ( ) VALUES ($/H)	EXIT NODE	GREEN TIMES START END 1ST (SECONDS)	GREEN TIMES START END 2ND (SECONDS)
1266	130	1267L	77	7.5	11.7	0.2 + 0.2 (5.7)	66	(0.9)	4			6.7	126	36	9
1267	807	2019S	77	5.5	7.3	0.1 + 1.4 (21.5)	11	(2.0)	4			23.5	126	36	9
1269	510	1824	46	5.5	4.1	0.1 + 0.4 (7.2)	8	(0.8)	3			8.0	126	36	9
1271	173	1272L	32	8.5	20.3	0.8 + 0.2 (13.5)	98	(2.1)	3			15.6	127	11	34
1272	44	1876S	32	6.5	8.1	0.0 + 0.0 (1.3)	15	(0.1)	3			1.5	127	11	34
1273	168	1274L	44	8.5	20.7	0.7 + 0.2 (13.4)	98	(2.1)	4			15.5	127	11	34
1274	162	2046S	44	6.5	8.2	0.2 + 0.2 (4.9)	15	(0.5)	4			5.5	127	11	34
1275	168	1276L	47	8.5	21.2	0.7 + 0.2 (13.7)	99	(2.1)	4			15.8	127	11	34
1276	170	1973S	47	6.5	8.6	0.2 + 0.2 (5.5)	15	(0.6)	4			6.0	127	11	34
1278	161	1770	25	6.5	6.7	0.1 + 0.2 (3.9)	12	(0.4)	0			4.3	127	11	34
1461	95	1860	15	18.5	18.5	0.4 + 0.1 (6.8)	69	(1.4)	1			8.1	146	11	33
1462	23	1774	3	13.5	12.0	0.1 + 0.0 (1.0)	67	(0.3)	0			1.3	146	48	35
1463	955	1833	57	13.5	5.1	0.5 + 0.7 (17.2)	32	(5.2)	7			22.4	146	48	41
1464	20	1833	9	18.5	35.3	0.1 + 0.0 (2.7)	97	(0.4)	0			3.2	146	41	48
1465	813	1926	84	18.5	26.4	3.2 + 2.6 (83.0)	95	(16.3)	15			99.3	146	48	14
1466	10	715	1	2.5	3.0	0.0 + 0.0 (0.1)	0	(0.0)	0			0.1			
1467	33	2000	2	18.5	1.4	0.0 + 0.0 (0.1)	1	(0.0)	0			0.1			
1468	19	2000	1	18.5	1.4	0.0 + 0.0 (0.1)	1	(0.0)	0			0.1			
1469	948	2000	47	18.5	2.2	0.0 + 0.5 (6.4)	3	(0.5)	0			6.9			
12601	893	1800	50	15.7	2.5	0.0 + 0.5 (7.1)	4	(0.6)	4			7.7			
12602	708	29L	70	18.5	2.0	0.0 + 0.3 (4.3)	4	(0.5)	33			4.9			
12603	10	10000	0	4.5	6.5	0.0 + 0.0 (0.2)	41	(0.0)	0			0.2	126	36	8
12604	10	10000	0	4.5	6.5	0.0 + 0.0 (0.2)	41	(0.0)	0			0.2	126	36	8
12605	332	1522	85	2.5	40.8	1.2 + 2.6 (52.8)	117	(6.6)	8	+		59.4	126	14	30
12606	161	1640	38	2.5	17.3	0.4 + 0.3 (10.7)	68	(1.9)	2			12.5	126	14	30
12607	400	1757	88	2.5	43.7	1.4 + 3.4 (68.2)	121	(8.3)	10	+		76.5	126	14	30
12701	802	1802	86	2.5	28.0	3.1 + 3.0 (87.1)	98	(18.4)	16	+		105.5	127	39	6
12702	530	1775	58	2.5	16.2	1.6 + 0.7 (32.9)	69	(8.6)	7	+		41.5	127	39	6
12703	2155	3600	60	18.5	1.7	0.0 + 0.7 (10.6)	2	(0.9)	1			11.4			
12704	823	1907	84	2.5	25.1	3.1 + 2.5 (79.9)	92	(17.9)	15	+		97.8	127	39	6

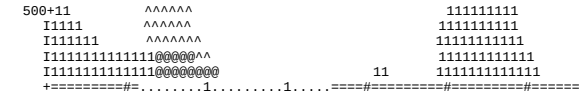
TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+ OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY ($/H)	TOTAL COST OF STOPS ($/H)	PENALTY FOR EXCESS QUEUES ($/H)	TOTAL PERFORMANCE INDEX ($/H)		
3965.6	190.0	20.9	43.1	45.2	(1254.7) + (223.0)	+ (0.0)	=	1477.7	TOTALS	
									ROUTE	
483.8	21.1	23.0	4.2	4.7	(125.9) + (32.0)	+ (0.0)	=	157.9	1	
46.1	3.5	13.4	1.3	0.8	(30.2) + (3.6)	+ (0.0)	=	33.8	2	
58.0	3.6	15.9	1.1	1.1	(31.6) + (5.9)	+ (0.0)	=	37.5	3	
65.9	3.6	18.5	0.8	1.2	(27.2) + (4.8)	+ (0.0)	=	32.0	4	

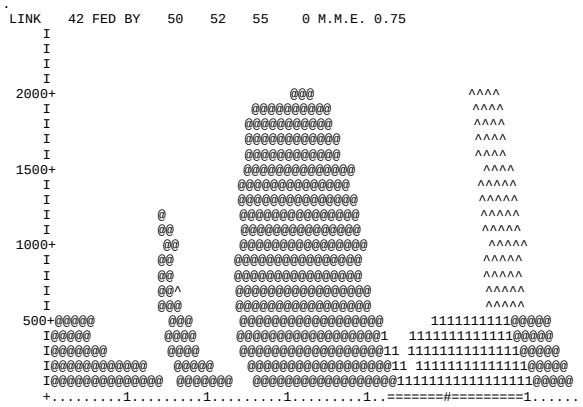
	CRUISE LITRES PER HOUR	DELAY LITRES PER HOUR	STOPS LITRES PER HOUR	TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	222.1	+ 101.6	+ 101.6	= 425.3

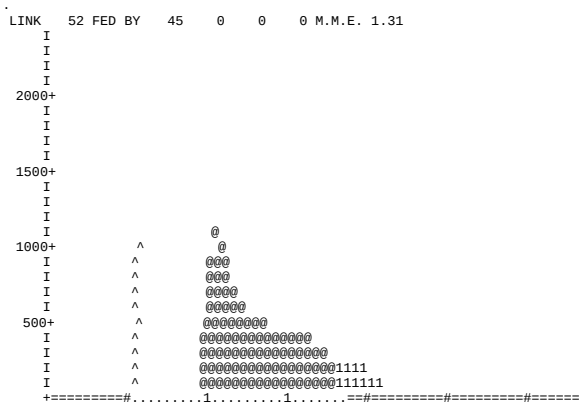
NO. OF ENTRIES TO SUBPT = 17
NO. OF LINKS RECALCULATED= 573

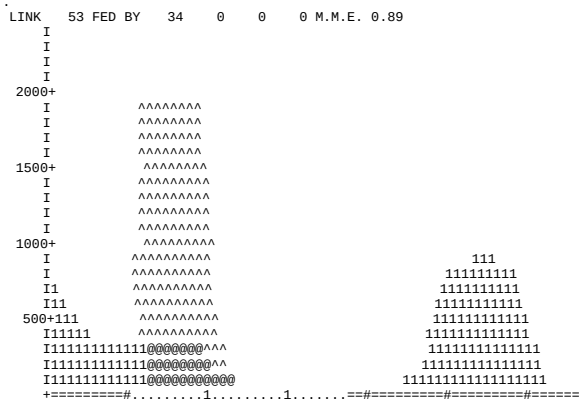
CYCLIC FLOW PROFILE GRAPHS

LINK 1271 FED BY 1269 0 0 0 M.M.E. 0.97









ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd AM.vai"
(drive-on-the-left) at 10:08:08 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

I ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
I ARM A I	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
I ARM B I	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
I ARM C I	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
I ARM D I	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
I ARM E I	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2014

T15

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	12.54	18.81	12.54
ARM B	15.00	45.00	75.00	5.69	8.53	5.69
ARM C	15.00	45.00	75.00	11.80	17.70	11.80
ARM D	15.00	45.00	75.00	0.47	0.71	0.47
ARM E	15.00	45.00	75.00	0.55	0.83	0.55

DEMAND SET TITLE: Base+Com 2014

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
07.30 - 09.00	ARM A	0.002	0.142	0.799	0.026	0.032
		2.0	142.0	801.0	26.0	32.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.147	0.000	0.796	0.022	0.035
		67.0	0.0	362.0	10.0	16.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.592	0.245	0.002	0.067	0.094
		559.0	231.0	2.0	63.0	89.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.079	0.184	0.632	0.000	0.105
		3.0	7.0	24.0	0.0	4.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.295	0.227	0.409	0.045	0.023
		13.0	10.0	18.0	2.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.30-07.45									
ARM A	12.59	29.78	0.423	- - -	0.0	0.7	10.6	-	0.058
ARM B	5.71	13.53	0.422	- - -	0.0	0.7	10.3	-	0.126
ARM C	11.84	24.17	0.490	- - -	0.0	1.0	13.8	-	0.080
ARM D	0.48	10.74	0.044	- - -	0.0	0.0	0.7	-	0.097
ARM E	0.55	18.61	0.030	- - -	0.0	0.0	0.4	-	0.055
07.45-08.00									
ARM A	15.03	29.27	0.513	- - -	0.7	1.0	15.3	-	0.070
ARM B	6.82	12.34	0.552	- - -	0.7	1.2	17.1	-	0.179
ARM C	14.14	23.97	0.590	- - -	1.0	1.4	20.5	-	0.101
ARM D	0.57	9.71	0.059	- - -	0.0	0.1	0.9	-	0.109
ARM E	0.66	17.27	0.038	- - -	0.0	0.0	0.6	-	0.060
08.00-08.15									
ARM A	18.41	28.57	0.644	- - -	1.0	1.8	25.6	-	0.097
ARM B	8.35	10.73	0.778	- - -	1.2	3.2	41.3	-	0.380
ARM C	17.32	23.70	0.731	- - -	1.4	2.6	36.7	-	0.153
ARM D	0.70	8.32	0.084	- - -	0.1	0.1	1.3	-	0.131
ARM E	0.81	15.47	0.052	- - -	0.0	0.1	0.8	-	0.068
08.15-08.30									
ARM A	18.41	28.56	0.644	- - -	1.8	1.8	26.8	-	0.098
ARM B	8.35	10.71	0.780	- - -	3.2	3.3	48.9	-	0.418
ARM C	17.32	23.69	0.731	- - -	2.6	2.7	39.7	-	0.157
ARM D	0.70	8.28	0.084	- - -	0.1	0.1	1.4	-	0.132
ARM E	0.81	15.42	0.052	- - -	0.1	0.1	0.8	-	0.068
08.30-08.45									
ARM A	15.03	29.25	0.514	- - -	1.8	1.1	16.5	-	0.071
ARM B	6.82	12.31	0.554	- - -	3.3	1.3	20.8	-	0.191
ARM C	14.14	23.95	0.591	- - -	2.7	1.5	23.0	-	0.104
ARM D	0.57	9.65	0.059	- - -	0.1	0.1	1.0	-	0.110
ARM E	0.66	17.19	0.038	- - -	0.1	0.0	0.6	-	0.061
08.45-09.00									
ARM A	12.59	29.76	0.423	- - -	1.1	0.7	11.3	-	0.058
ARM B	5.71	13.50	0.423	- - -	1.3	0.7	11.6	-	0.130
ARM C	11.84	24.16	0.490	- - -	1.5	1.0	15.0	-	0.082
ARM D	0.48	10.70	0.045	- - -	0.1	0.0	0.7	-	0.098
ARM E	0.55	18.55	0.030	- - -	0.0	0.0	0.5	-	0.056

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.0	*
08.15	1.8	**
08.30	1.8	**
08.45	1.1	*
09.00	0.7	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.2	*
08.15	3.2	***
08.30	3.3	***
08.45	1.3	*
09.00	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.0	*
08.00	1.4	*
08.15	2.6	***
08.30	2.7	***
08.45	1.5	*
09.00	1.0	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.0

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1380.6	920.4	106.1	0.08	106.1	0.08
B	626.3	417.5	150.0	0.24	150.1	0.24
C	1299.3	866.2	148.8	0.11	148.8	0.11
D	52.3	34.9	6.0	0.11	6.0	0.11
E	60.6	40.4	3.7	0.06	3.7	0.06
ALL	3419.0	2279.4	414.6	0.12	414.7	0.12

* 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 10:09:39 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd PM.vai"
(drive-on-the-left) at 10:09:57 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
ARM B	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
ARM C	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
ARM D	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
ARM E	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(16.15)AND ENDS(17.45)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2014

T15

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	9.07	13.61	9.07
ARM B	15.00	45.00	75.00	5.78	8.66	5.78
ARM C	15.00	45.00	75.00	11.48	17.21	11.48
ARM D	15.00	45.00	75.00	1.25	1.88	1.25
ARM E	15.00	45.00	75.00	1.15	1.72	1.15

DEMAND SET TITLE: Base+Com 2014

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
16.15 - 17.45	ARM A	0.004	0.139	0.833	0.006	0.018
		3.0	101.0	605.0	4.0	13.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.240	0.002	0.695	0.022	0.041
		111.0	1.0	321.0	10.0	19.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.643	0.269	0.002	0.026	0.060
		590.0	247.0	2.0	24.0	55.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.210	0.110	0.660	0.000	0.020
		21.0	11.0	66.0	0.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.239	0.228	0.489	0.022	0.022
		22.0	21.0	45.0	2.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
ARM A	9.11	28.88	0.315	- - -	0.0	0.5	6.7	-	0.050
ARM B	5.80	14.63	0.396	- - -	0.0	0.6	9.3	-	0.112
ARM C	11.52	24.11	0.478	- - -	0.0	0.9	13.1	-	0.079
ARM D	1.25	10.51	0.119	- - -	0.0	0.1	2.0	-	0.108
ARM E	1.15	17.42	0.066	- - -	0.0	0.1	1.0	-	0.061
16.30-16.45									
ARM A	10.88	28.19	0.386	- - -	0.5	0.6	9.2	-	0.058
ARM B	6.92	13.66	0.507	- - -	0.6	1.0	14.5	-	0.147
ARM C	13.75	23.90	0.576	- - -	0.9	1.3	19.4	-	0.098
ARM D	1.50	9.43	0.159	- - -	0.1	0.2	2.7	-	0.126
ARM E	1.38	15.84	0.087	- - -	0.1	0.1	1.4	-	0.069
16.45-17.00									
ARM A	13.32	27.25	0.489	- - -	0.6	0.9	13.9	-	0.072
ARM B	8.48	12.34	0.687	- - -	1.0	2.1	28.8	-	0.250
ARM C	16.85	23.61	0.713	- - -	1.3	2.4	34.0	-	0.144
ARM D	1.84	7.98	0.230	- - -	0.2	0.3	4.3	-	0.162
ARM E	1.69	13.71	0.123	- - -	0.1	0.1	2.1	-	0.083
17.00-17.15									
ARM A	13.32	27.23	0.489	- - -	0.9	1.0	14.3	-	0.072
ARM B	8.48	12.33	0.688	- - -	2.1	2.1	31.8	-	0.259
ARM C	16.85	23.60	0.714	- - -	2.4	2.5	36.5	-	0.148
ARM D	1.84	7.94	0.231	- - -	0.3	0.3	4.5	-	0.164
ARM E	1.69	13.66	0.124	- - -	0.1	0.1	2.1	-	0.084
17.15-17.30									
ARM A	10.88	28.16	0.386	- - -	1.0	0.6	9.7	-	0.058
ARM B	6.92	13.64	0.507	- - -	2.1	1.1	16.6	-	0.152
ARM C	13.75	23.88	0.576	- - -	2.5	1.4	21.6	-	0.100
ARM D	1.50	9.38	0.160	- - -	0.3	0.2	3.0	-	0.127
ARM E	1.38	15.76	0.087	- - -	0.1	0.1	1.5	-	0.070
17.30-17.45									
ARM A	9.11	28.86	0.316	- - -	0.6	0.5	7.1	-	0.051
ARM B	5.80	14.61	0.397	- - -	1.1	0.7	10.3	-	0.114
ARM C	11.52	24.10	0.478	- - -	1.4	0.9	14.3	-	0.080
ARM D	1.25	10.46	0.120	- - -	0.2	0.1	2.1	-	0.109
ARM E	1.15	17.35	0.067	- - -	0.1	0.1	1.1	-	0.062

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.5	
16.45	0.6	*
17.00	0.9	*
17.15	1.0	*
17.30	0.6	*
17.45	0.5	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.6	*
16.45	1.0	*
17.00	2.1	**
17.15	2.1	**
17.30	1.1	*
17.45	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.9	*
16.45	1.3	*
17.00	2.4	**
17.15	2.5	**
17.30	1.4	*
17.45	0.9	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.30	0.1
16.45	0.2
17.00	0.3
17.15	0.3
17.30	0.2
17.45	0.1

QUEUE AT ARM E

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	999.3	666.2	60.8	0.06	60.8	0.06
B	635.9	423.9	111.4	0.18	111.4	0.18
C	1263.6	842.4	138.8	0.11	138.9	0.11
D	137.6	91.8	18.5	0.13	18.5	0.13
E	126.6	84.4	9.2	0.07	9.2	0.07
ALL	3163.0	2108.7	338.7	0.11	338.7	0.11

T75

* 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 10:10:28 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd AM.vai"
(drive-on-the-left) at 10:54:32 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2014

T15

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	14.34	21.51	14.34
ARM B	15.00	45.00	75.00	7.39	11.08	7.39
ARM C	15.00	45.00	75.00	0.30	0.45	0.30
ARM D	15.00	45.00	75.00	8.63	12.94	8.63
ARM E	15.00	45.00	75.00	4.54	6.81	4.54

DEMAND SET TITLE: Base+Com 2014

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
07.45 - 09.15	ARM A	0.003	0.232	0.078	0.554	0.133
		3.0	266.0	90.0	635.0	153.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.743	0.002	0.005	0.173	0.078
		439.0	1.0	3.0	102.0	46.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.458	0.042	0.000	0.500	0.000
		11.0	1.0	0.0	12.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.704	0.136	0.106	0.004	0.049
		486.0	94.0	73.0	3.0	34.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.612	0.245	0.006	0.135	0.003
		222.0	89.0	2.0	49.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.39	29.68	0.485	- - -	0.0	0.9	13.6	-	0.065
ARM B	7.42	21.28	0.349	- - -	0.0	0.5	7.7	-	0.072
ARM C	0.30	15.51	0.019	- - -	0.0	0.0	0.3	-	0.066
ARM D	8.66	19.47	0.445	- - -	0.0	0.8	11.4	-	0.092
ARM E	4.55	13.82	0.330	- - -	0.0	0.5	7.0	-	0.107

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									
ARM A	17.19	29.28	0.587	- - -	0.9	1.4	20.4	-	0.082
ARM B	8.85	20.12	0.440	- - -	0.5	0.8	11.4	-	0.088
ARM C	0.36	13.56	0.027	- - -	0.0	0.0	0.4	-	0.076
ARM D	10.34	18.79	0.550	- - -	0.8	1.2	17.4	-	0.118
ARM E	5.44	12.45	0.437	- - -	0.5	0.8	11.0	-	0.142

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									
ARM A	21.05	28.74	0.732	- - -	1.4	2.7	37.5	-	0.127
ARM B	10.85	18.55	0.584	- - -	0.8	1.4	19.8	-	0.128
ARM C	0.44	10.93	0.040	- - -	0.0	0.0	0.6	-	0.095
ARM D	12.66	17.87	0.709	- - -	1.2	2.3	32.6	-	0.187
ARM E	6.66	10.63	0.627	- - -	0.8	1.6	22.4	-	0.246

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									
ARM A	21.05	28.72	0.733	- - -	2.7	2.7	40.2	-	0.130
ARM B	10.85	18.52	0.586	- - -	1.4	1.4	20.9	-	0.130
ARM C	0.44	10.87	0.041	- - -	0.0	0.0	0.6	-	0.096
ARM D	12.66	17.85	0.709	- - -	2.3	2.4	35.5	-	0.192
ARM E	6.66	10.58	0.630	- - -	1.6	1.7	24.6	-	0.255

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									
ARM A	17.19	29.25	0.588	- - -	2.7	1.4	22.5	-	0.084
ARM B	8.85	20.06	0.441	- - -	1.4	0.8	12.4	-	0.090
ARM C	0.36	13.47	0.027	- - -	0.0	0.0	0.4	-	0.076
ARM D	10.34	18.76	0.551	- - -	2.4	1.2	19.6	-	0.121
ARM E	5.44	12.38	0.439	- - -	1.7	0.8	12.6	-	0.146

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									
ARM A	14.39	29.66	0.485	- - -	1.4	1.0	14.6	-	0.066
ARM B	7.42	21.23	0.349	- - -	0.8	0.5	8.3	-	0.073
ARM C	0.30	15.44	0.020	- - -	0.0	0.0	0.3	-	0.066
ARM D	8.66	19.44	0.445	- - -	1.2	0.8	12.6	-	0.093
ARM E	4.55	13.76	0.331	- - -	0.8	0.5	7.7	-	0.109

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.4	*
08.30	2.7	***
08.45	2.7	***
09.00	1.4	*
09.15	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.4	*
08.45	1.4	*
09.00	0.8	*
09.15	0.5	*

QUEUE AT ARM 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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.2	*
08.30	2.3	**
08.45	2.4	**
09.00	1.2	*
09.15	0.8	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.8	*
08.30	1.6	**
08.45	1.7	**
09.00	0.8	*
09.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1578.8	1052.5	148.8	0.09	148.8	0.09
B	813.5	542.3	80.4	0.10	80.4	0.10
C	33.0	22.0	2.7	0.08	2.7	0.08
D	949.7	633.2	129.1	0.14	129.1	0.14
E	499.6	333.1	85.3	0.17	85.3	0.17
ALL	3874.6	2583.1	446.3	0.12	446.4	0.12

T75

* 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 10:55:01 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd PM.vai"
(drive-on-the-left) at 10:55:12 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(17.00)AND ENDS(18.30)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2014

T15

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	14.05	21.08	14.05
ARM B	15.00	45.00	75.00	7.20	10.80	7.20
ARM C	15.00	45.00	75.00	2.01	3.02	2.01
ARM D	15.00	45.00	75.00	8.60	12.90	8.60
ARM E	15.00	45.00	75.00	3.15	4.73	3.15

DEMAND SET TITLE: Base+Com 2014

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
17.00 - 18.30	ARM A	0.002	0.259	0.006	0.580	0.153
		2.0	291.0	7.0	652.0	172.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.646	0.002	0.002	0.236	0.115
		372.0	1.0	1.0	136.0	66.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.335	0.006	0.000	0.652	0.006
		54.0	1.0	0.0	105.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.740	0.145	0.016	0.004	0.094
		509.0	100.0	11.0	3.0	65.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.480	0.171	0.000	0.345	0.004
		121.0	43.0	0.0	87.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.10	30.11	0.468	- - -	0.0	0.9	12.7	-	0.062
ARM B	7.23	21.71	0.333	- - -	0.0	0.5	7.2	-	0.069
ARM C	2.02	15.09	0.134	- - -	0.0	0.2	2.2	-	0.076
ARM D	8.63	19.39	0.445	- - -	0.0	0.8	11.5	-	0.092
ARM E	3.16	14.18	0.223	- - -	0.0	0.3	4.1	-	0.090
17.15-17.30									
ARM A	16.84	29.79	0.565	- - -	0.9	1.3	18.7	-	0.077
ARM B	8.63	20.63	0.418	- - -	0.5	0.7	10.4	-	0.083
ARM C	2.41	13.06	0.185	- - -	0.2	0.2	3.3	-	0.094
ARM D	10.31	18.69	0.552	- - -	0.8	1.2	17.5	-	0.119
ARM E	3.78	12.88	0.293	- - -	0.3	0.4	6.0	-	0.110
17.30-17.45									
ARM A	20.63	29.36	0.702	- - -	1.3	2.3	32.8	-	0.113
ARM B	10.57	19.18	0.551	- - -	0.7	1.2	17.4	-	0.115
ARM C	2.95	10.31	0.287	- - -	0.2	0.4	5.8	-	0.136
ARM D	12.63	17.75	0.711	- - -	1.2	2.4	32.9	-	0.189
ARM E	4.62	11.15	0.415	- - -	0.4	0.7	10.0	-	0.152
17.45-18.00									
ARM A	20.63	29.35	0.703	- - -	2.3	2.3	34.8	-	0.115
ARM B	10.57	19.15	0.552	- - -	1.2	1.2	18.2	-	0.117
ARM C	2.95	10.26	0.288	- - -	0.4	0.4	6.0	-	0.137
ARM D	12.63	17.73	0.712	- - -	2.4	2.4	35.9	-	0.196
ARM E	4.62	11.11	0.416	- - -	0.7	0.7	10.5	-	0.154
18.00-18.15									
ARM A	16.84	29.78	0.566	- - -	2.3	1.3	20.5	-	0.078
ARM B	8.63	20.59	0.419	- - -	1.2	0.7	11.3	-	0.084
ARM C	2.41	12.99	0.186	- - -	0.4	0.2	3.5	-	0.095
ARM D	10.31	18.67	0.552	- - -	2.4	1.3	19.7	-	0.122
ARM E	3.78	12.82	0.295	- - -	0.7	0.4	6.5	-	0.111
18.15-18.30									
ARM A	14.10	30.10	0.469	- - -	1.3	0.9	13.7	-	0.063
ARM B	7.23	21.67	0.334	- - -	0.7	0.5	7.7	-	0.069
ARM C	2.02	15.02	0.134	- - -	0.2	0.2	2.4	-	0.077
ARM D	8.63	19.36	0.446	- - -	1.3	0.8	12.6	-	0.094
ARM E	3.16	14.12	0.224	- - -	0.4	0.3	4.5	-	0.091

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.9	*
17.30	1.3	*
17.45	2.3	**
18.00	2.3	**
18.15	1.3	*
18.30	0.9	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.5	
17.30	0.7	*
17.45	1.2	*
18.00	1.2	*
18.15	0.7	*
18.30	0.5	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.2	
17.45	0.4	
18.00	0.4	
18.15	0.2	
18.30	0.2	

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.8	*
17.30	1.2	*
17.45	2.4	**
18.00	2.4	**
18.15	1.3	*
18.30	0.8	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.4	
17.45	0.7	*
18.00	0.7	*
18.15	0.4	
18.30	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	1547.1	1031.4	133.2	0.09	133.2	0.09	
B	792.8	528.5	72.3	0.09	72.3	0.09	
C	221.6	147.7	23.2	0.10	23.2	0.10	
D	947.0	631.3	130.1	0.14	130.1	0.14	
E	346.9	231.2	41.7	0.12	41.7	0.12	
ALL	3855.4	2570.2	400.6	0.10	400.6	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 10:55:39 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd AM_Int.vai"
(drive-on-the-left) at 13:11:25 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	28.234*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	20.216*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	11.000
ARM B	5.000

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2014

T15

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	9.94	14.91	9.94
ARM B	15.00	45.00	75.00	5.70	8.55	5.70
ARM C	15.00	45.00	75.00	7.63	11.44	7.63

DEMAND SET TITLE: Base+Com 2014

T33

TIME	FROM/T	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.30 - 09.00	ARM A	0.001	0.294	0.704
		1.0	234.0	560.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.458	0.000	0.542
		209.0	0.0	247.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.687	0.313	0.000
		419.0	191.0	0.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
in the s 90.0y as vehicular demand on the link. (= times per hour)
ARM B: Frequency of use is distributed throughout the period
in the s 30.0y as vehicular demand on the link. (= times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.30-07.45											
ARM A		9.98	23.51	0.424	- -	1.2	0.0	0.7	10.6	-	0.073
ARM B		5.72	16.09	0.356	- -	0.4	0.0	0.5	7.9	-	0.096
ARM C		7.65	19.93	0.384	- -	-	0.0	0.6	9.0	-	0.081
07.45-08.00											
ARM A		11.91	22.73	0.524	- -	1.5	0.7	1.1	15.8	-	0.092
ARM B		6.83	15.27	0.447	- -	0.5	0.5	0.8	11.6	-	0.118
ARM C		9.14	19.61	0.466	- -	-	0.6	0.9	12.6	-	0.095
08.00-08.15											
ARM A		14.59	21.72	0.672	- -	1.8	1.1	2.0	28.2	-	0.138
ARM B		8.37	14.18	0.590	- -	0.6	0.8	1.4	19.9	-	0.170
ARM C		11.19	19.12	0.585	- -	-	0.9	1.4	19.9	-	0.125
08.15-08.30											
ARM A		14.59	21.72	0.672	- -	1.8	2.0	2.0	30.1	-	0.140
ARM B		8.37	14.15	0.591	- -	0.6	1.4	1.4	21.3	-	0.173
ARM C		11.19	19.11	0.586	- -	-	1.4	1.4	20.9	-	0.126
08.30-08.45											
ARM A		11.91	22.73	0.524	- -	1.5	2.0	1.1	17.4	-	0.093
ARM B		6.83	15.24	0.448	- -	0.5	1.4	0.8	12.9	-	0.120
ARM C		9.14	19.59	0.466	- -	-	1.4	0.9	13.7	-	0.096
08.45-09.00											
ARM A		9.98	23.50	0.425	- -	1.2	1.1	0.7	11.5	-	0.074
ARM B		5.72	16.06	0.356	- -	0.4	0.8	0.6	8.6	-	0.097
ARM C		7.65	19.91	0.384	- -	-	0.9	0.6	9.7	-	0.082

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.1	*
08.15	2.0	**
08.30	2.0	**
08.45	1.1	*
09.00	0.7	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.5	*
08.00	0.8	*
08.15	1.4	*
08.30	1.4	*
08.45	0.8	*
09.00	0.6	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.6	*
08.00	0.9	*
08.15	1.4	*
08.30	1.4	*
08.45	0.9	*
09.00	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1094.3	729.5	113.6	0.10	113.6	0.10
B	627.7	418.4	82.2	0.13	82.2	0.13
C	839.6	559.7	85.8	0.10	85.8	0.10
ALL	2561.5	1707.7	281.6	0.11	281.6	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 13:12:33 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd PM_Int.vai"
(drive-on-the-left) at 13:13:09 on Sunday, 5 August 2012

FILE PROPERTIES
****

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA
****
ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	31.934*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	24.016*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	14.700
ARM B	8.800

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2014

T15

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	10.63	15.94	10.63
ARM B	15.00	45.00	75.00	6.34	9.51	6.34
ARM C	15.00	45.00	75.00	8.06	12.09	8.06

DEMAND SET TITLE: Base+Com 2014

T33

TIME	FROM/T	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.299	0.701
		0.0	254.0	596.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.564	0.000	0.436
		286.0	0.0	221.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.735	0.264	0.002
		474.0	170.0	1.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
       in the s 90.0y as vehicular demand on the link. (=   times per hour)
ARM B: Frequency of use is distributed throughout the period
       in the s 30.0y as vehicular demand on the link. (=   times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00											
ARM A		10.67	26.42	0.404	- -	1.2	0.0	0.7	9.8	-	0.063
ARM B		6.36	19.62	0.324	- -	0.4	0.0	0.5	6.9	-	0.075
ARM C		8.09	19.38	0.418	- -	-	0.0	0.7	10.3	-	0.088
17.00-17.15											
ARM A		12.74	25.54	0.499	- -	1.5	0.7	1.0	14.4	-	0.078
ARM B		7.60	18.76	0.405	- -	0.5	0.5	0.7	9.9	-	0.089
ARM C		9.66	18.91	0.511	- -	-	0.7	1.0	15.0	-	0.108
17.15-17.30											
ARM A		15.60	24.39	0.640	- -	1.8	1.0	1.7	24.9	-	0.113
ARM B		9.30	17.58	0.529	- -	0.6	0.7	1.1	15.9	-	0.120
ARM C		11.84	18.12	0.653	- -	-	1.0	1.8	25.9	-	0.156
17.30-17.45											
ARM A		15.60	24.38	0.640	- -	1.8	1.7	1.8	26.3	-	0.114
ARM B		9.30	17.56	0.530	- -	0.6	1.1	1.1	16.7	-	0.121
ARM C		11.84	18.10	0.654	- -	-	1.8	1.9	27.7	-	0.159
17.45-18.00											
ARM A		12.74	25.53	0.499	- -	1.5	1.8	1.0	15.6	-	0.079
ARM B		7.60	18.73	0.406	- -	0.5	1.1	0.7	10.7	-	0.090
ARM C		9.66	18.89	0.512	- -	-	1.9	1.1	16.6	-	0.110
18.00-18.15											
ARM A		10.67	26.41	0.404	- -	1.2	1.0	0.7	10.5	-	0.064
ARM B		6.36	19.59	0.325	- -	0.4	0.7	0.5	7.4	-	0.076
ARM C		8.09	19.36	0.418	- -	-	1.1	0.7	11.2	-	0.089

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.0	*
17.30	1.7	**
17.45	1.8	**
18.00	1.0	*
18.15	0.7	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.1	*
17.45	1.1	*
18.00	0.7	*
18.15	0.5	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.0	*
17.30	1.8	**
17.45	1.9	**
18.00	1.1	*
18.15	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1170.0	780.0	101.4	0.09	101.4	0.09
B	697.8	465.2	67.5	0.10	67.5	0.10
C	887.8	591.9	106.7	0.12	106.7	0.12
ALL	2755.6	1837.1	275.6	0.10	275.7	0.10

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END OF JOB

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

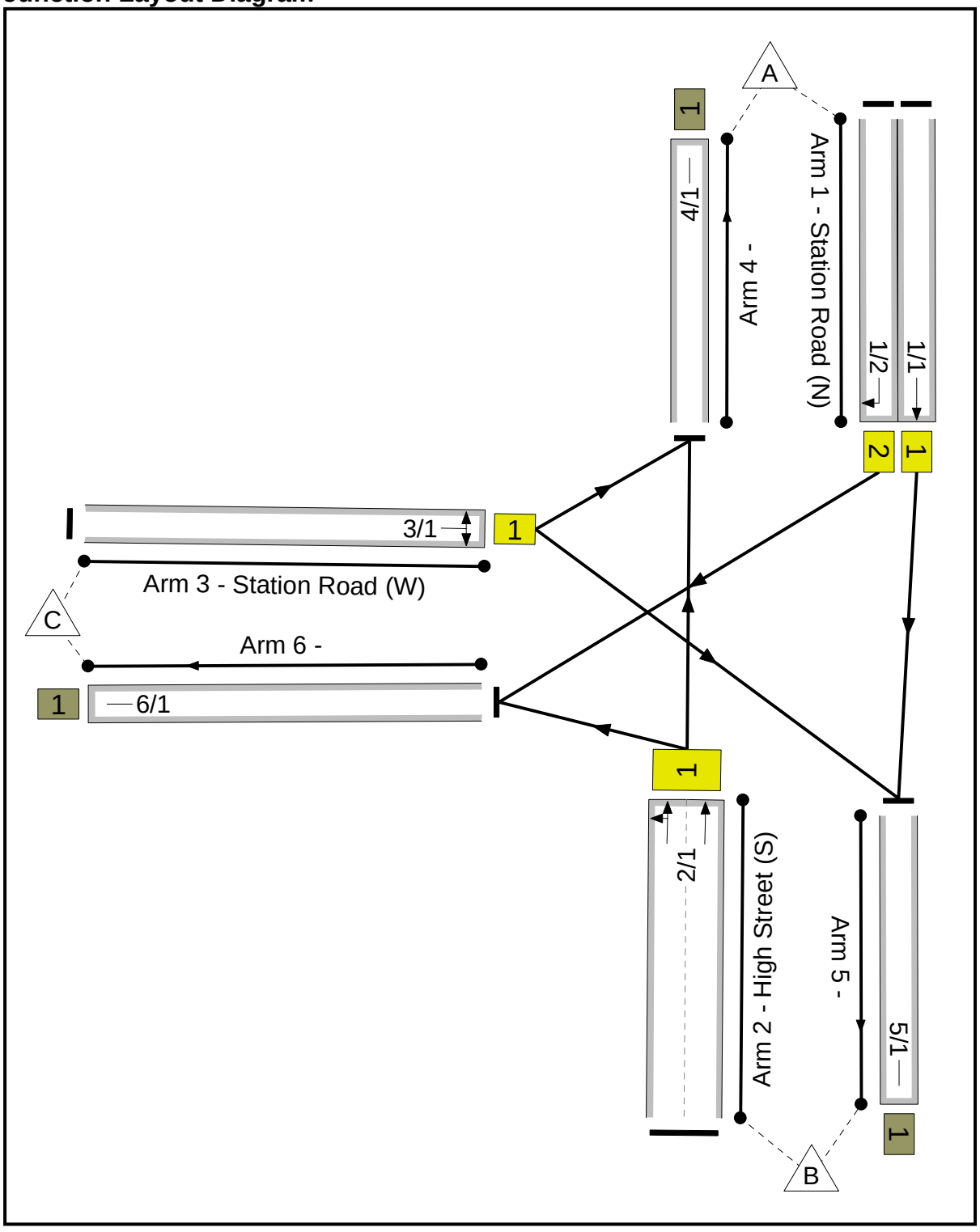
Printed at 13:15:45 on 05/08/2012]

Full Input Data And Results

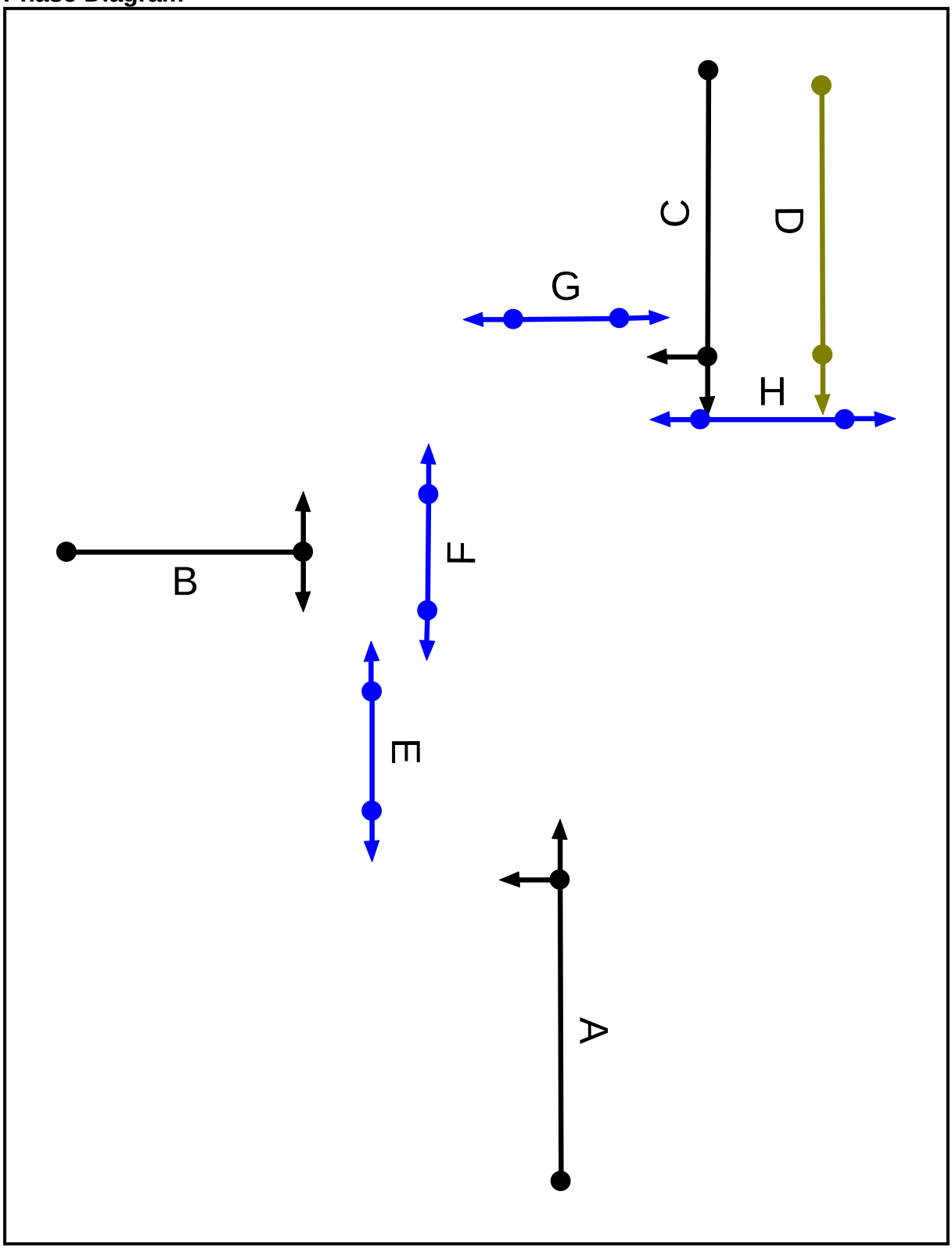
User and Project Details

Project:	
Title:	
Location:	
File name:	Station Rd_High Street.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Filter	C	4	0
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5

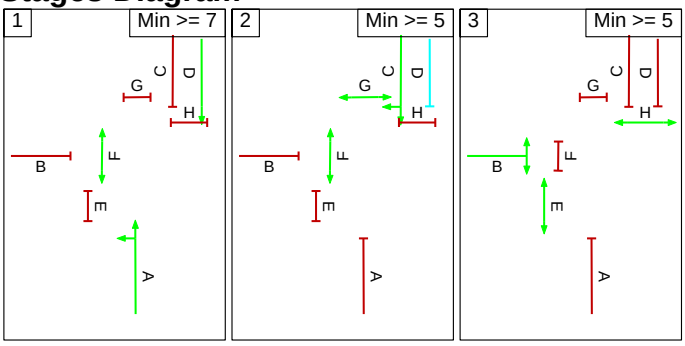
Phase Intergreens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		5	5	-	7	-	8	-
	B	5		5	5	-	5	8	-
	C	8	5		-	10	-	-	5
	D	-	5	-		-	-	-	5
	E	8	-	8	-		-	-	-
	F	-	8	-	-	-		-	-
	G	8	8	-	-	-	-		-
	H	-	-	8	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A D F
2	C F G
3	B E H

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	3	3
3	1	B	Losing	3	3

Prohibited Stage Changes

From Stage \ To Stage	1	2	3
1		8	X
2	8		13
3	8	8	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Road (N) Ahead	U	1	C D	2	3
1/2	Station Road (N) Right	U	1	C	2	3
2/1	High Street (S) Ahead Left	U	2	A	2	3
3/1	Station Road (W) Left Right	U	1	B	2	3
4/1		U	1		2	3
5/1		U	1		2	3
6/1		U	1		2	3

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Road (N) Lane 1)	Link 1 (Station Road (N) Ahead)	Inf	Inf	User	1766	3.25	0.00	Y	Arm 5 Ahead	Inf
1/2 (Station Road (N) Lane 2)	Link 2 (Station Road (N) Right)	Inf	Inf	User	1929	3.25	0.00	Y	Arm 6 Right	Inf
2/1 (High Street (S) Lane 1)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1763	3.25	0.00	Y	Arm 4 Ahead Arm 6 Left	Inf Inf
2/2 (High Street (S) Lane 2)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1877	3.25	0.00	Y	Arm 4 Ahead	Inf
3/1 (Station Road (W) Lane 1)	Link 1 (Station Road (W) Left Right)	Inf	Inf	User	1691	3.25	0.00	Y	Arm 4 Left Arm 5 Right	Inf Inf
4/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: 'Base + Com 2014 AM'	08:00	09:00	01:00	
4: 'Base + Com 2014 PM'	17:00	18:00	01:00	

Scenario 3: 'Base + Com 2014 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 3: 'Base + Com 2014 AM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	574	237	811
	B	358	0	179	537
	C	220	259	0	479
	Tot.	578	833	416	1827

Link Traffic Flows

Arm/Link	Flow Group 3: Base + Com 2014 AM
1/1	574
1/2	237
2/1	537
3/1	479
4/1	578
5/1	833
6/1	416

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 4: 'Base + Com 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 4: 'Base + Com 2014 PM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	400	220	620
	B	411	0	285	696
	C	180	250	0	430
	Tot.	591	650	505	1746

Link Traffic Flows

Arm/Link	Flow Group 4: Base + Com 2014 PM
1/1	400
1/2	220
2/1	696
3/1	430
4/1	591
5/1	650
6/1	505

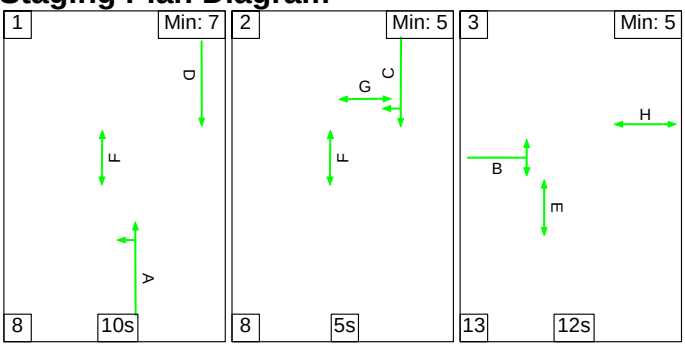
Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 3: 'Base + Com 2014 AM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 3: 'Base + Com 2014 AM'

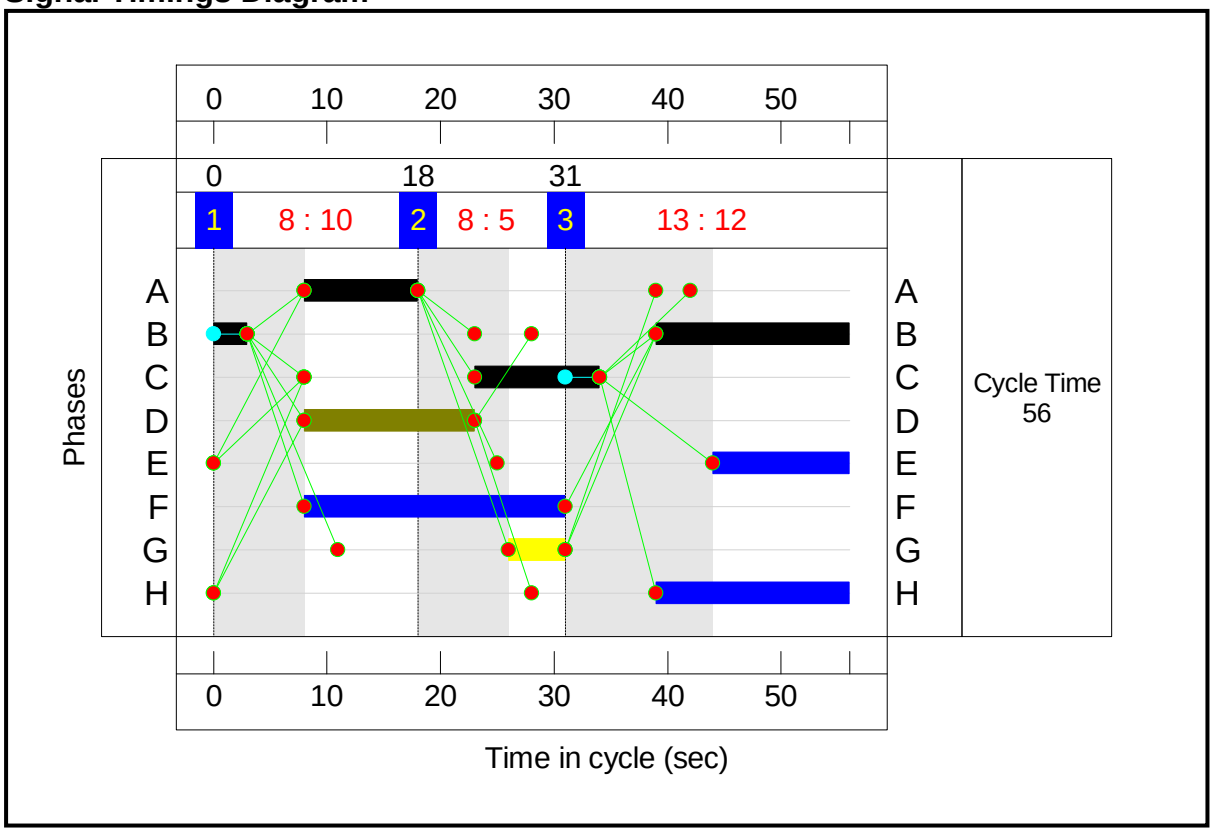
Staging Plan Diagram



Stage Timings

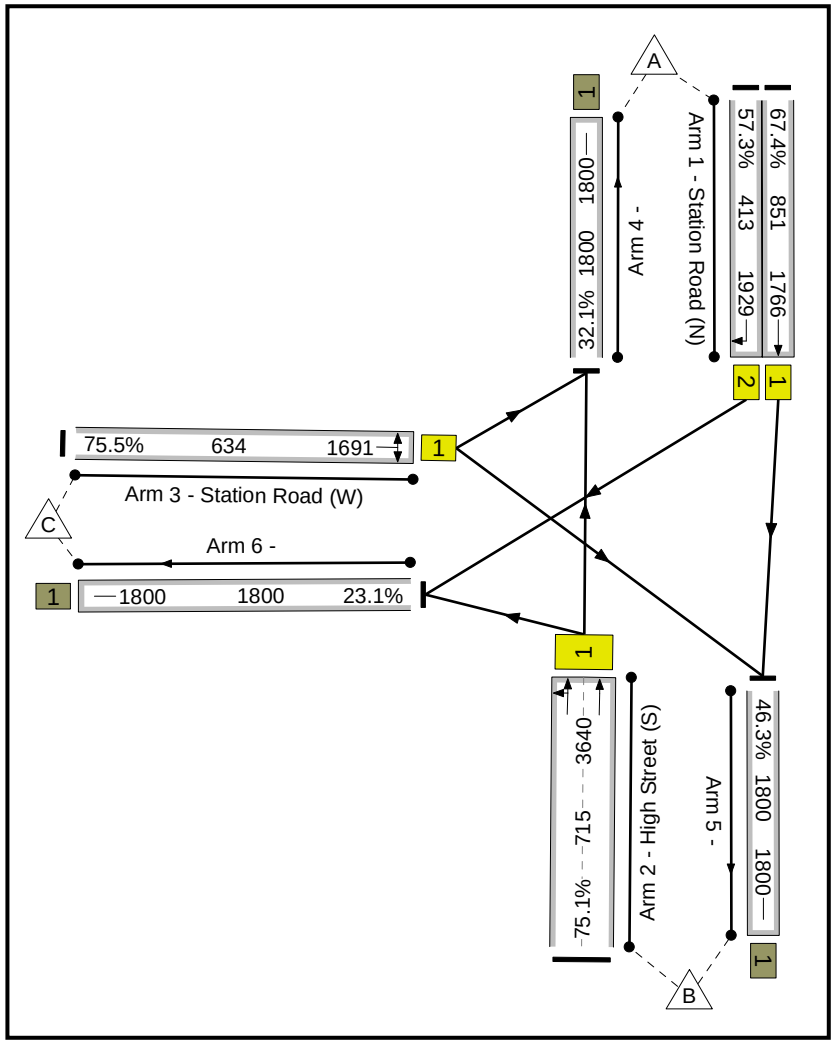
Stage	1	2	3
Duration	10	5	12
Change Point	0	18	31

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Full Input Data And Results

Link Results

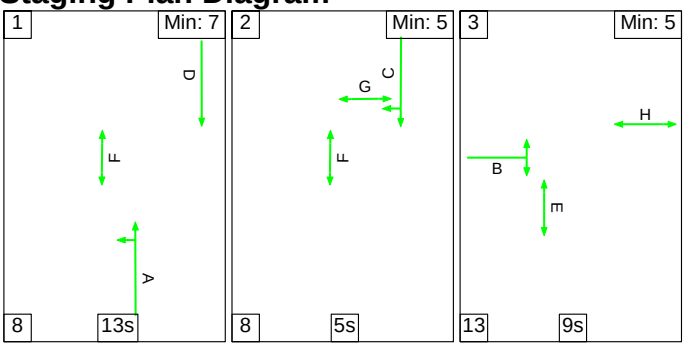
Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	26	15	574	1766	1766	851	67.4
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	237	1929	1929	413	57.3
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	10	-	537	3640	3640	715	75.1
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	20	-	479	1691	1691	634	75.5
4/1		U	N/A	N/A	-		-	-	-	578	1800	1800	1800	32.1
5/1		U	N/A	N/A	-		-	-	-	833	1800	1800	1800	46.3
6/1		U	N/A	N/A	-		-	-	-	416	1800	1800	1800	23.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	574	574	-	-	-	1.8	1.0	-	2.8	17.6	6.7	1.0	7.7	
1/2	237	237	-	-	-	1.3	0.7	-	2.0	29.8	3.3	0.7	4.0	
2/1	537	537	-	-	-	3.2	1.5	-	4.6	31.2	7.8	1.5	9.2	
3/1	479	479	-	-	-	2.0	1.5	-	3.5	26.6	6.4	1.5	7.9	
4/1	578	578	-	-	-	0.0	0.2	-	0.3	1.6	3.1	0.2	3.3	
5/1	833	833	-	-	-	0.0	0.4	-	0.4	1.9	0.0	0.4	0.4	
6/1	416	416	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2	

PRC for Signalled Links (%): 19.1 Total Delay for Signalled Links (pcuHr): 12.96
PRC Over All Links (%): 19.1 Total Delay Over All Links(pcuHr): 13.79 Cycle Time (s): 56

Scenario 4: 'Base + Com 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 4: 'Base + Com 2014 PM'

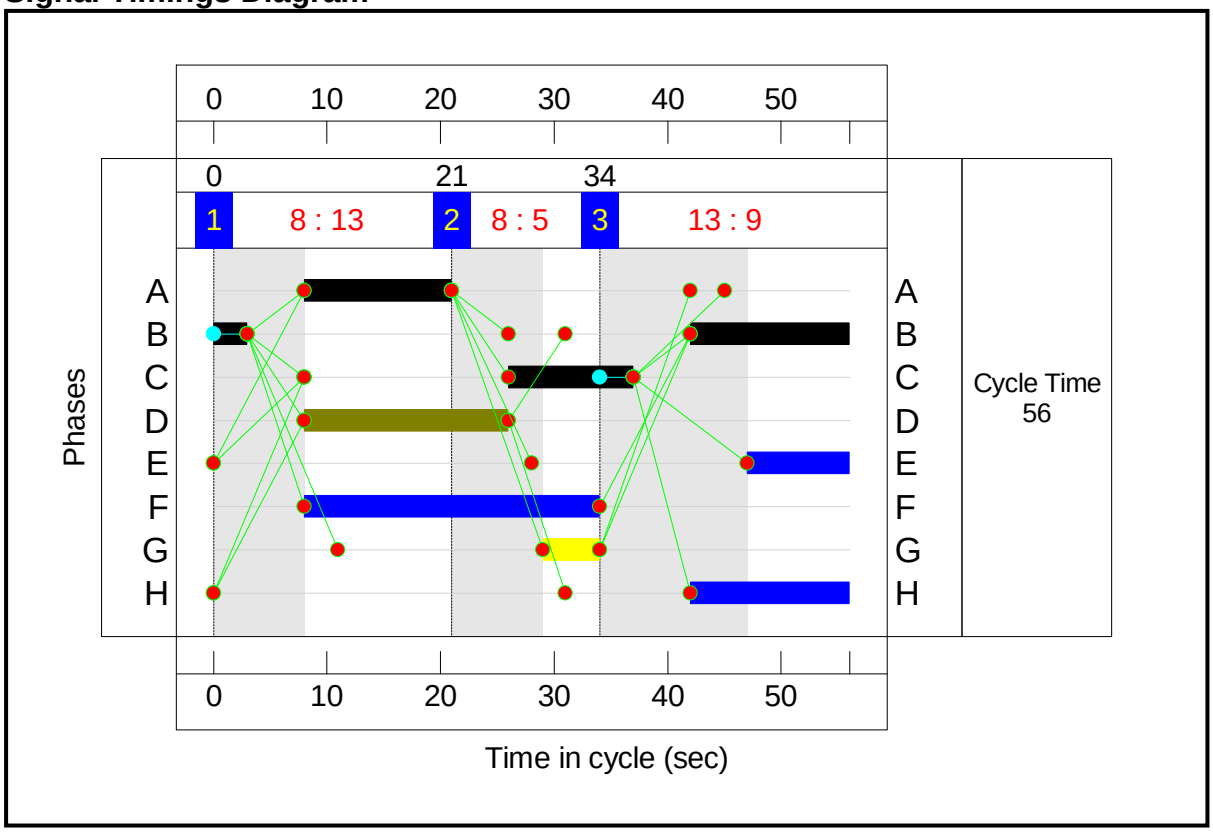
Staging Plan Diagram



Stage Timings

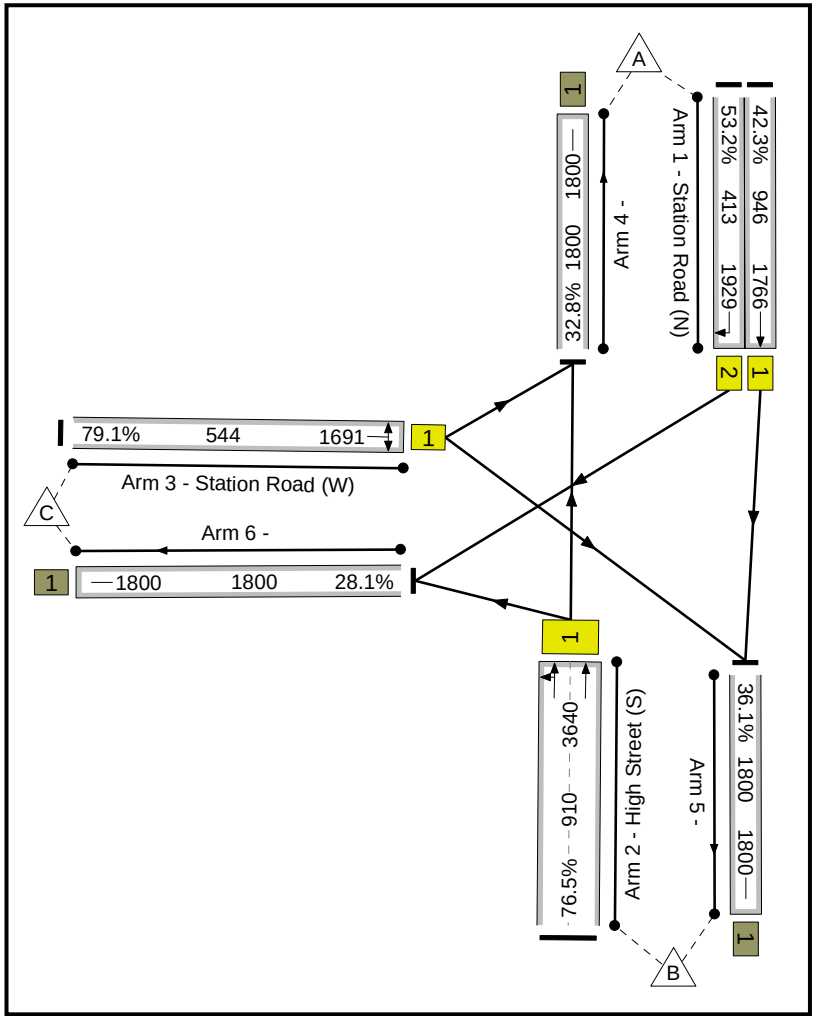
Stage	1	2	3
Duration	13	5	9
Change Point	0	21	34

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	29	18	400	1766	1766	946	42.3
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	220	1929	1929	413	53.2
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	13	-	696	3640	3640	910	76.5
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	17	-	430	1691	1691	544	79.1
4/1		U	N/A	N/A	-		-	-	-	591	1800	1800	1800	32.8
5/1		U	N/A	N/A	-		-	-	-	650	1800	1800	1800	36.1
6/1		U	N/A	N/A	-		-	-	-	505	1800	1800	1800	28.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	400	400	-	-	-	0.9	0.4	-	1.2	11.1	3.7	0.4	4.0	
1/2	220	220	-	-	-	1.2	0.6	-	1.8	28.8	3.0	0.6	3.6	
2/1	696	696	-	-	-	3.8	1.6	-	5.4	27.8	9.9	1.6	11.5	
3/1	430	430	-	-	-	2.1	1.8	-	3.9	32.6	6.0	1.8	7.8	
4/1	591	591	-	-	-	0.0	0.2	-	0.3	1.6	3.5	0.2	3.7	
5/1	650	650	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
6/1	505	505	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): 13.8 Total Delay for Signalled Links (pcuHr): 12.26
PRC Over All Links (%): 13.8 Total Delay Over All Links(pcuHr): 12.99 Cycle Time (s): 56

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

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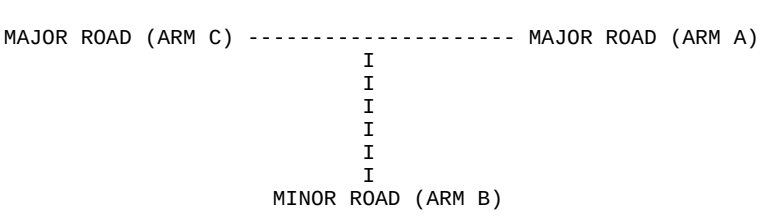
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd AM.vpi"
(drive-on-the-left) at 11:40:13 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 2
LOCATION	: North Hyde Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde 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) 7.64 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)119.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 23.0 M.
- VISIBILITY TO RIGHT	(VB-A) 19.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 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
635.90	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
494.40	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
642.88	0.23	0.23

(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: Base+Com 2014

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	7.25	10.88	7.25
ARM B	15.00	45.00	75.00	0.09	0.13	0.09
ARM C	15.00	45.00	75.00	5.64	8.46	5.64

Demand set: Base+Com 2014

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.071	0.929
		0.0	41.0	539.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.571	0.000	0.429
		4.0	0.0	3.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.989	0.011	0.000
		446.0	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 DEMAND SET Base+Com 2014
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	0.09	7.00	0.013		0.00	0.01	0.2		0.14
C-A	5.60								
C-B	0.06	9.03	0.007		0.00	0.01	0.1		0.11
A-B	0.51								
A-C	6.76								

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	0.10	6.58	0.016		0.01	0.02	0.2		0.15
C-A	6.68								
C-B	0.07	8.70	0.009		0.01	0.01	0.1		0.12
A-B	0.61								
A-C	8.08								

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)
08.15-08.30									
B-AC	0.13	5.99	0.021		0.02	0.02	0.3		0.17
C-A	8.18								
C-B	0.09	8.25	0.011		0.01	0.01	0.2		0.12
A-B	0.75								
A-C	9.89								

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	0.13	5.99	0.021		0.02	0.02	0.3		0.17
C-A	8.18								
C-B	0.09	8.25	0.011		0.01	0.01	0.2		0.12
A-B	0.75								
A-C	9.89								

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	0.10	6.58	0.016		0.02	0.02	0.3		0.15
C-A	6.68								
C-B	0.07	8.70	0.009		0.01	0.01	0.1		0.12
A-B	0.61								
A-C	8.08								

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)
09.00-09.15									
B-AC	0.09	7.00	0.013		0.02	0.01	0.2		0.14
C-A	5.60								
C-B	0.06	9.03	0.007		0.01	0.01	0.1		0.11
A-B	0.51								
A-C	6.76								

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-B

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	9.6	6.4	1.5	0.16	1.5	0.16
C-A	613.9	409.3				
C-B	6.9	4.6	0.8	0.12	0.8	0.12
A-B	56.4	37.6				
A-C	741.9	494.6				
ALL	1428.7	952.5	2.3	0.00	2.3	0.00

* 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 RUN*******

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

Printed at 11:41:10 on 05/08/2012]

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

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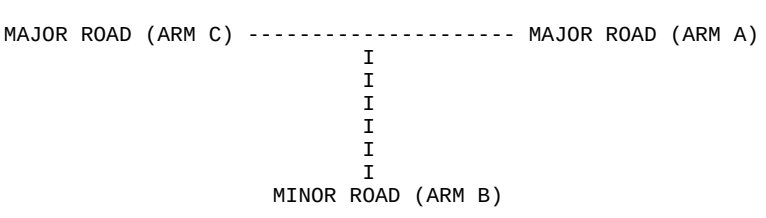
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 10:31:58 on Friday, 10 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 2
LOCATION	: North Hyde Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde 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) 7.64 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)119.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 23.0 M.
- VISIBILITY TO RIGHT	(VB-A) 19.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 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
635.90	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
494.40	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
642.88	0.23	0.23

(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: Base+Com 2014

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

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

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	6.26	9.39	6.26
ARM B	15.00	45.00	75.00	0.60	0.90	0.60
ARM C	15.00	45.00	75.00	5.45	8.17	5.45

Demand set: Base+Com 2014

TIME	FROM/TO	ARM A	ARM B	ARM C
17.00 - 18.30				
	ARM A	0.000	0.014	0.986
		0.0	7.0	494.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.438	0.000	0.563
		21.0	0.0	27.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.989	0.011	0.000
		431.0	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 DEMAND SET Base+Com 2014
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)
17.00-17.15									
B-AC	0.60	7.57	0.080		0.00	0.09	1.2		0.14
C-A	5.41								
C-B	0.06	9.26	0.007		0.00	0.01	0.1		0.11
A-B	0.09								
A-C	6.20								
17.15-17.30									
B-AC	0.72	7.20	0.100		0.09	0.11	1.6		0.15
C-A	6.46								
C-B	0.07	8.98	0.008		0.01	0.01	0.1		0.11
A-B	0.10								
A-C	7.40								
17.30-17.45									
B-AC	0.88	6.68	0.132		0.11	0.15	2.2		0.17
C-A	7.91								
C-B	0.09	8.59	0.011		0.01	0.01	0.2		0.12
A-B	0.13								
A-C	9.07								
17.45-18.00									
B-AC	0.88	6.68	0.132		0.15	0.15	2.3		0.17
C-A	7.91								
C-B	0.09	8.59	0.011		0.01	0.01	0.2		0.12
A-B	0.13								
A-C	9.07								

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	0.72	7.20	0.100		0.15	0.11	1.7		0.15
C-A	6.46								
C-B	0.07	8.98	0.008		0.01	0.01	0.1		0.11
A-B	0.10								
A-C	7.40								

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)
18.15-18.30									
B-AC	0.60	7.57	0.080		0.11	0.09	1.3		0.14
C-A	5.41								
C-B	0.06	9.26	0.007		0.01	0.01	0.1		0.11
A-B	0.09								
A-C	6.20								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.2
18.15	0.1
18.30	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	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	66.1	44.0	10.4	0.16	10.4	0.16
C-A	593.2	395.5				
C-B	6.9	4.6	0.8	0.11	0.8	0.11
A-B	9.6	6.4				
A-C	680.0	453.3				
ALL	1355.8	903.9	11.1	0.01	11.1	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 RUN*******

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

Printed at 10:33:23 on 10/08/2012]

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

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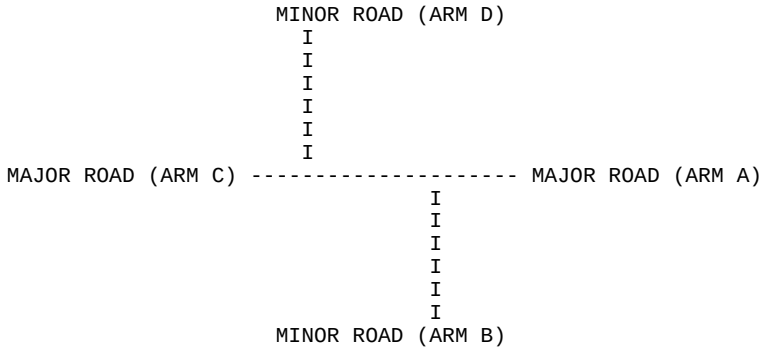
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd AM.vpi"
(drive-on-the-left) at 12:31:12 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 4
LOCATION	: Station Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

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) 8.25 M.	(W) 8.25 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) 60.00 M.	(VA-D) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (2)	YES (2)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 31.0 M.
- VISIBILITY TO RIGHT	(VB-A) 41.0 M.	(VD-C) 26.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.	(WD-A) 3.52 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B	Slope For Opposing
0.16	0.36	0.36	

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D	Slope For Opposing
0.14	0.31	0.31	

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing
620.29	0.21	0.21	0.25	

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing
620.29	0.22	0.22	0.22	

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com 2014

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	6.13	9.19	6.13
ARM B	15.00	45.00	75.00	0.49	0.73	0.49
ARM C	15.00	45.00	75.00	9.13	13.69	9.13
ARM D	15.00	45.00	75.00	1.24	1.86	1.24

Demand set: Base+Com 2014

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15					
	ARM A	0.000	0.147	0.810	0.043
		0.0	72.0	397.0	21.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.462	0.000	0.538	0.000
		18.0	0.0	21.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.786	0.079	0.000	0.134
		574.0	58.0	0.0	98.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.091	0.000	0.909	0.000
		9.0	0.0	90.0	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-ACD	0.49	9.08	0.054		0.00	0.06	0.8		0.12
A-B	0.90								
A-C	4.98								
A-D	0.26								
AB-CD	(0.26)	8.35	0.032		0.00	0.03	0.5		0.12
AB-C	(5.24)								
D-ABC	1.24	6.32	0.196		0.00	0.24	3.4		0.20
C-D	1.23								
C-A	7.20								
C-B	0.73								
CD-AB	(0.73)	8.84	0.082		0.00	0.08	1.2		0.12
CD-A	(7.31)								

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)
08.00-08.15									
B-ACD	0.58	8.58	0.068		0.06	0.07	1.1		0.13
A-B	1.08								
A-C	5.95								
A-D	0.31								
AB-CD	(0.31)	7.97	0.039		0.03	0.04	0.6		0.13
AB-C	(6.26)								
D-ABC	1.48	5.81	0.255		0.24	0.34	4.9		0.23
C-D	1.47								
C-A	8.60								
C-B	0.87								
CD-AB	(0.87)	8.58	0.101		0.08	0.10	1.5		0.13
CD-A	(8.73)								

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)
08.15-08.30									
B-ACD	0.72	7.87	0.091		0.07	0.10	1.5		0.14
A-B	1.32								
A-C	7.29								
A-D	0.39								
AB-CD	(0.39)	7.43	0.052		0.04	0.05	0.8		0.14
AB-C	(7.67)								
D-ABC	1.82	5.10	0.356		0.34	0.54	7.6		0.30
C-D	1.80								
C-A	10.53								
C-B	1.06								
CD-AB	(1.06)	8.23	0.129		0.10	0.13	1.9		0.14
CD-A	(10.70)								

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)
08.30-08.45									
B-ACD	0.72	7.87	0.091		0.10	0.10	1.5		0.14
A-B	1.32								
A-C	7.29								
A-D	0.39								
AB-CD	(0.39)	7.43	0.052		0.05	0.05	0.8		0.14
AB-C	(7.67)								
D-ABC	1.82	5.10	0.356		0.54	0.55	8.1		0.30
C-D	1.80								
C-A	10.53								
C-B	1.06								
CD-AB	(1.06)	8.23	0.129		0.13	0.13	1.9		0.14
CD-A	(10.70)								

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)
08.45-09.00									
B-ACD	0.58	8.58	0.068		0.10	0.07	1.1		0.13
A-B	1.08								
A-C	5.95								
A-D	0.31								
AB-CD	(0.31)	7.97	0.039		0.05	0.04	0.6		0.13
AB-C	(6.26)								
D-ABC	1.48	5.81	0.255		0.55	0.35	5.5		0.23
C-D	1.47								
C-A	8.60								
C-B	0.87								
CD-AB	(0.87)	8.58	0.101		0.13	0.10	1.5		0.13
CD-A	(8.74)								

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-ACD	0.49	9.08	0.054		0.07	0.06	0.9		0.12
A-B	0.90								
A-C	4.98								
A-D	0.26								
AB-CD	(0.26)	8.35	0.032		0.04	0.03	0.5		0.12
AB-C	(5.25)								
D-ABC	1.24	6.32	0.196		0.35	0.25	3.9		0.20
C-D	1.23								
C-A	7.20								
C-B	0.73								
CD-AB	(0.73)	8.84	0.082		0.10	0.08	1.2		0.12
CD-A	(7.32)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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 AB-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 D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM CD-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		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	53.7	35.8	6.8	0.13	6.8	0.13
A-B	99.1	66.1				
A-C	546.4	364.3				
A-D	28.9	19.3				
AB-CD	(28.9)	(19.3)	3.7	0.13	3.7	0.13
AB-C	(575.3)	(383.5)				
D-ABC	136.3	90.8	33.4	0.25	33.4	0.25
C-D	134.9	89.9				
C-A	790.1	526.7				
C-B	79.8	53.2				
CD-AB	(79.8)	(53.2)	9.4	0.12	9.4	0.12
CD-A	(802.4)	(535.0)				
ALL	1869.2	1246.1	53.3	0.03	53.3	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 RUN*******

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

Printed at 12:32:17 on 05/08/2012]

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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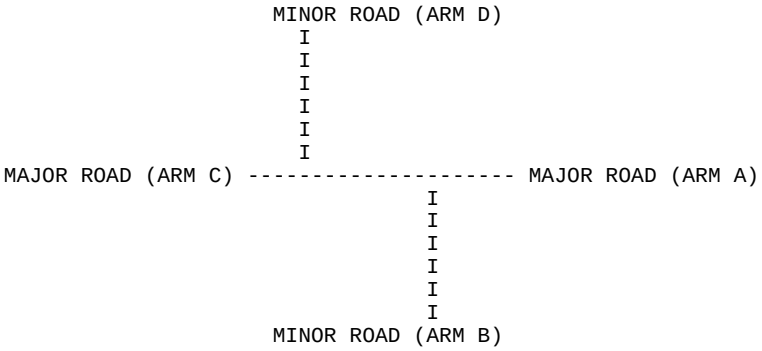
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 12:32:53 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 4
LOCATION	: Station Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

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) 8.25 M.	(W) 8.25 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) 60.00 M.	(VA-D) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (2)	YES (2)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 31.0 M.
- VISIBILITY TO RIGHT	(VB-A) 41.0 M.	(VD-C) 26.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.	(WD-A) 3.52 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B	Slope For Opposing
0.16	0.36	0.36	

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D	Slope For Opposing
0.14	0.31	0.31	

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing
620.29	0.21	0.21	0.25	

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing
620.29	0.22	0.22	0.22	

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com 2014

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.65	9.98	6.65
ARM B	15.00	45.00	75.00	1.16	1.74	1.16
ARM C	15.00	45.00	75.00	7.59	11.38	7.59
ARM D	15.00	45.00	75.00	0.63	0.94	0.63

Demand set: Base+Com 2014

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.030	0.932	0.038
		0.0	16.0	496.0	20.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.581	0.000	0.419	0.000
		54.0	0.0	39.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.827	0.025	0.000	0.148
		502.0	15.0	0.0	90.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.040	0.000	0.960	0.000
		2.0	0.0	48.0	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-ACD	1.17	8.64	0.135		0.00	0.15	2.2		0.13
A-B	0.20								
A-C	6.22								
A-D	0.25								
AB-CD	(0.25)	8.69	0.029		0.00	0.03	0.4		0.12
AB-C	(6.71)								
D-ABC	0.63	6.34	0.099		0.00	0.11	1.6		0.17
C-D	1.13								
C-A	6.30								
C-B	0.19								
CD-AB	(0.19)	8.72	0.022		0.00	0.02	0.3		0.12
CD-A	(6.32)								

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-ACD	1.39	8.13	0.171		0.15	0.20	3.0		0.15
A-B	0.24								
A-C	7.43								
A-D	0.30								
AB-CD	(0.30)	8.37	0.036		0.03	0.04	0.5		0.12
AB-C	(8.01)								
D-ABC	0.75	5.86	0.128		0.11	0.14	2.1		0.20
C-D	1.35								
C-A	7.52								
C-B	0.22								
CD-AB	(0.22)	8.45	0.027		0.02	0.03	0.4		0.12
CD-A	(7.55)								

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-ACD	1.71	7.42	0.230		0.20	0.29	4.3		0.17
A-B	0.29								
A-C	9.10								
A-D	0.37								
AB-CD	(0.37)	7.92	0.046		0.04	0.05	0.7		0.13
AB-C	(9.81)								
D-ABC	0.92	5.18	0.177		0.14	0.21	3.1		0.23
C-D	1.65								
C-A	9.21								
C-B	0.28								
CD-AB	(0.28)	8.07	0.034		0.03	0.03	0.5		0.13
CD-A	(9.25)								

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)
17.30-17.45									
B-ACD	1.71	7.42	0.230		0.29	0.30	4.4		0.17
A-B	0.29								
A-C	9.10								
A-D	0.37								
AB-CD	(0.37)	7.92	0.046		0.05	0.05	0.7		0.13
AB-C	(9.82)								
D-ABC	0.92	5.18	0.177		0.21	0.21	3.2		0.23
C-D	1.65								
C-A	9.21								
C-B	0.28								
CD-AB	(0.28)	8.07	0.034		0.03	0.03	0.5		0.13
CD-A	(9.25)								

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)
17.45-18.00									
B-ACD	1.39	8.13	0.171		0.30	0.21	3.2		0.15
A-B	0.24								
A-C	7.43								
A-D	0.30								
AB-CD	(0.30)	8.37	0.036		0.05	0.04	0.5		0.12
AB-C	(8.02)								
D-ABC	0.75	5.85	0.128		0.21	0.15	2.3		0.20
C-D	1.35								
C-A	7.52								
C-B	0.22								
CD-AB	(0.22)	8.45	0.027		0.03	0.03	0.4		0.12
CD-A	(7.55)								

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-ACD	1.17	8.64	0.135		0.21	0.16	2.4		0.13
A-B	0.20								
A-C	6.22								
A-D	0.25								
AB-CD	(0.25)	8.69	0.029		0.04	0.03	0.4		0.12
AB-C	(6.71)								
D-ABC	0.63	6.34	0.099		0.15	0.11	1.7		0.18
C-D	1.13								
C-A	6.30								
C-B	0.19								
CD-AB	(0.19)	8.72	0.022		0.03	0.02	0.3		0.12
CD-A	(6.32)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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

QUEUE FOR STREAM AB-CD

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-ABC

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

QUEUE FOR STREAM CD-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-ACD	128.0	85.3	19.6	0.15	19.6	0.15
A-B	22.0	14.7				
A-C	682.7	455.1				
A-D	27.5	18.4				
AB-CD	(27.5)	(18.4)	3.3	0.12	3.3	0.12
AB-C	(736.3)	(490.9)				
D-ABC	68.8	45.9	13.9	0.20	13.9	0.20
C-D	123.9	82.6				
C-A	691.0	460.6				
C-B	20.6	13.8				
CD-AB	(20.6)	(13.8)	2.5	0.12	2.5	0.12
CD-A	(693.7)	(462.5)				
ALL	1764.6	1176.4	39.3	0.02	39.3	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 RUN*******

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

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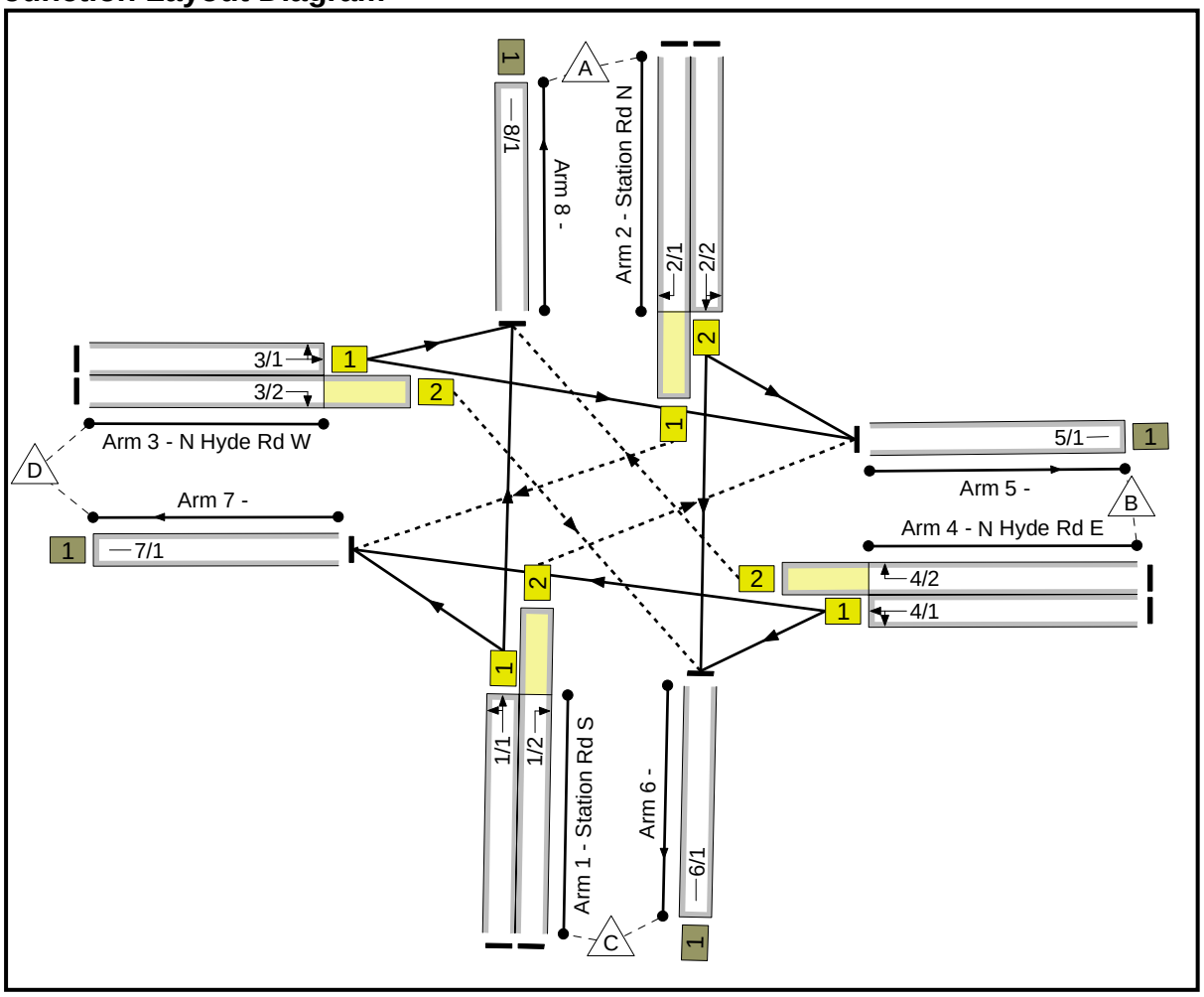
Full Input Data And Results

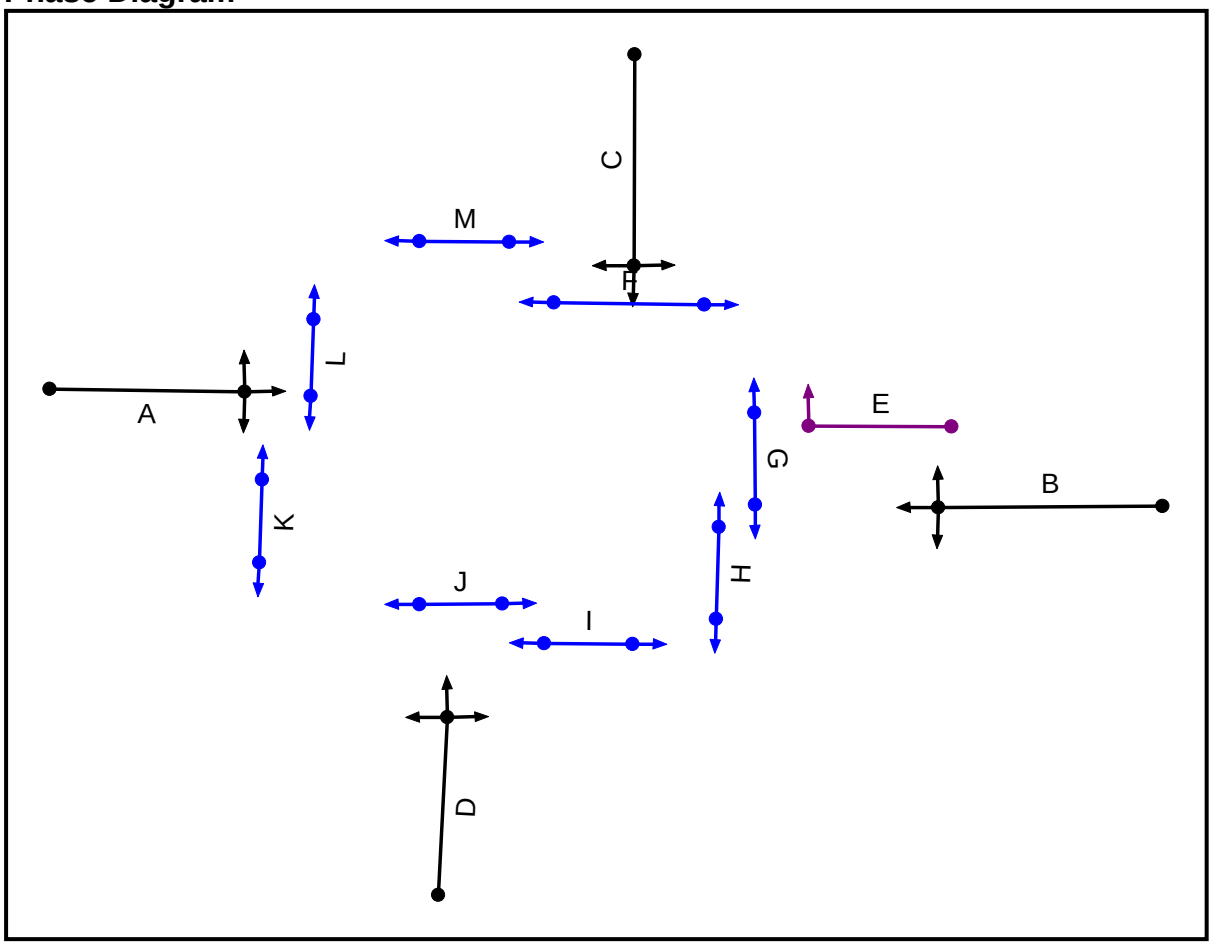
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10AM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		1	1
G	Pedestrian		1	1
H	Pedestrian		1	1
I	Pedestrian		4	4
J	Pedestrian		1	1
K	Pedestrian		4	4
L	Pedestrian		1	1
M	Pedestrian		4	4

Full Input Data And Results

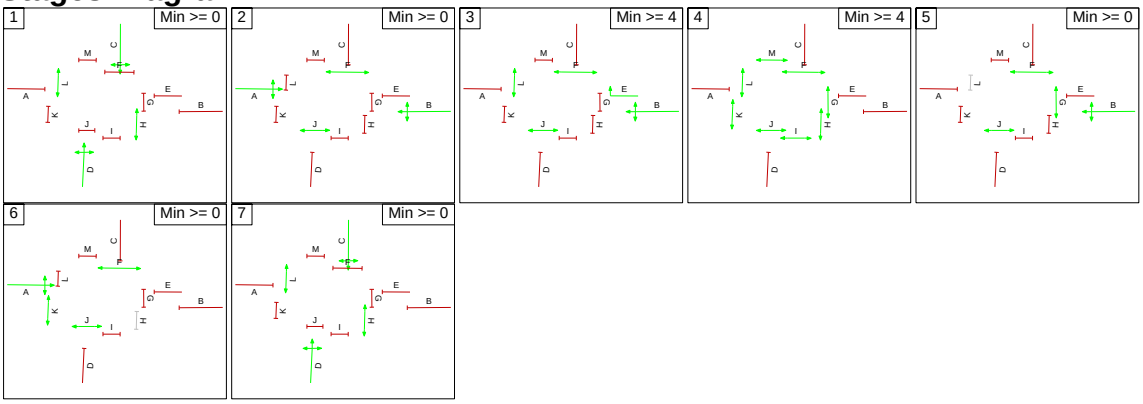
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	6	5	-	9	-	10	-	-	5	10
	B	-		6	6	-	-	-	5	10	-	10	-	10
	C	7	7		-	5	5	10	-	9	-	10	-	-
	D	7	7	-		5	-	10	-	-	5	10	-	10
	E	7	-	6	6		-	5	5	-	-	-	-	10
	F	-	-	9	-	-		-	-	-	-	-	-	-
	G	8	-	8	8	8	-		-	-	-	-	-	-
	H	-	10	-	-	10	-	-		-	-	-	-	-
	I	9	9	9	-	-	-	-	-		-	-	-	-
	J	-	-	-	9	-	-	-	-	-		-	-	-
	K	-	8	8	8	-	-	-	-	-	-		-	-
	L	9	-	-	-	-	-	-	-	-	-	-		-
	M	8	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	C D H L
2	A B F J
3	B E F J L
4	F G H I J K L M
5	B F G J
6	A F J K
7	C D H L

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

From Stage \ To Stage	1	2	3	4	5	6	7
1		10	10	10	10	10	0
2	9		5	10	9	10	9
3	9	9		10	5	10	9
4	9	10	10		10	9	9
5	9	8	8	10		10	9
6	9	8	X	10	9		9
7	0	10	10	10	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: 'Base + Com 2014 AM'	08:00	09:00	01:00	

Scenario 2: 'Base + Com 2014 AM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 3: 'Base + Com 2014 AM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	134	372	131	637
	B	120	0	289	384	793
	C	263	142	0	102	507
	D	98	226	69	0	393
	Tot.	481	502	730	617	2330

Link Traffic Flows

Arm/Link	Flow Group 3: Base + Com 2014 AM
1/1	365
1/2	142
2/1	131
2/2	506
3/1	324
3/2	69
4/1	673
4/2	120
5/1	502
6/1	730
7/1	617
8/1	481

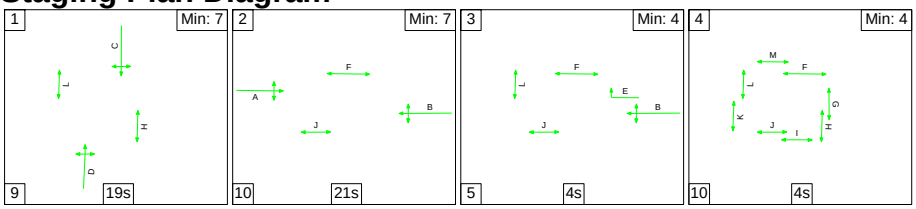
Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 2: 'Base + Com 2014 AM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 3: 'Base + Com 2014 AM'

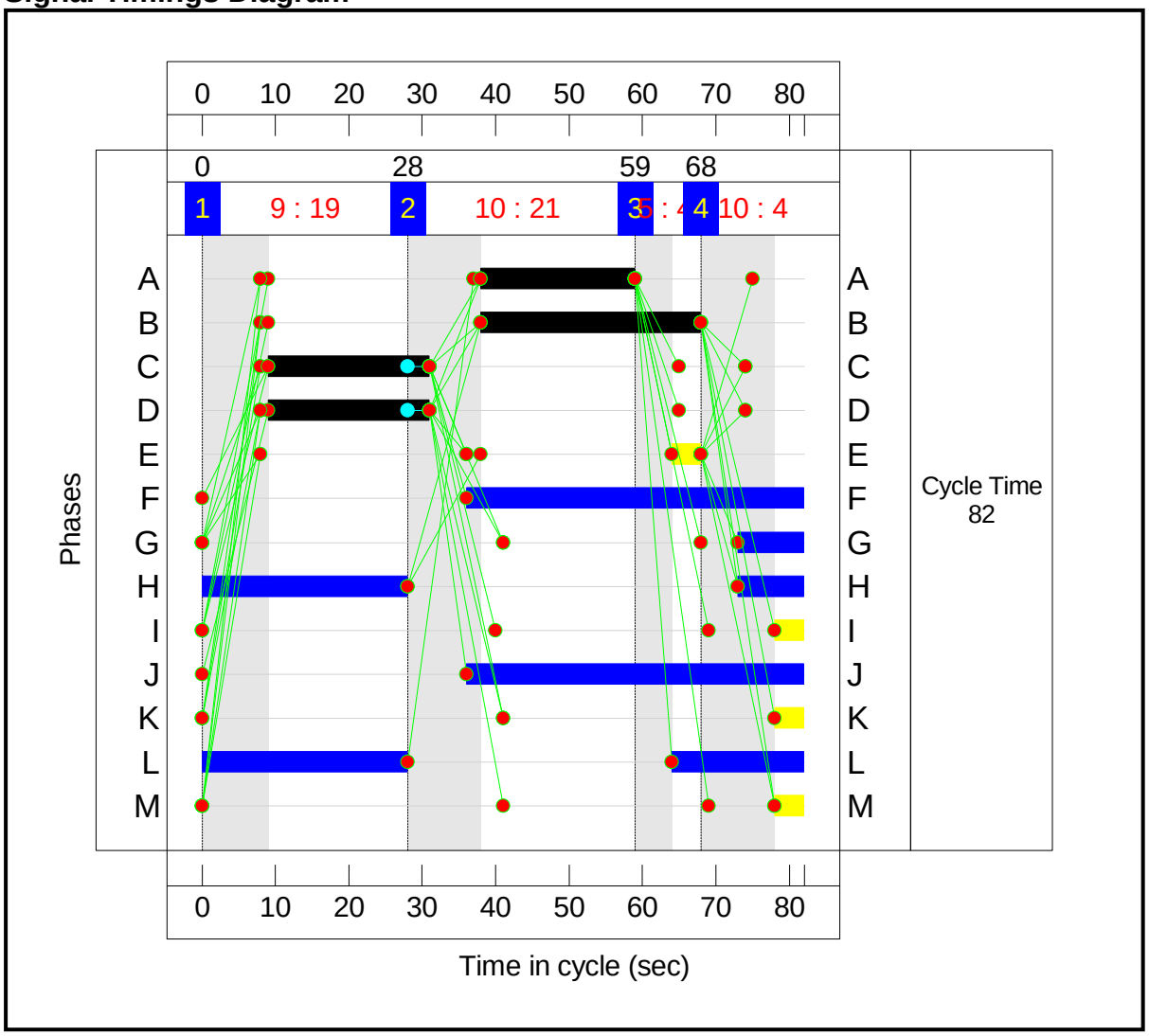
Staging Plan Diagram



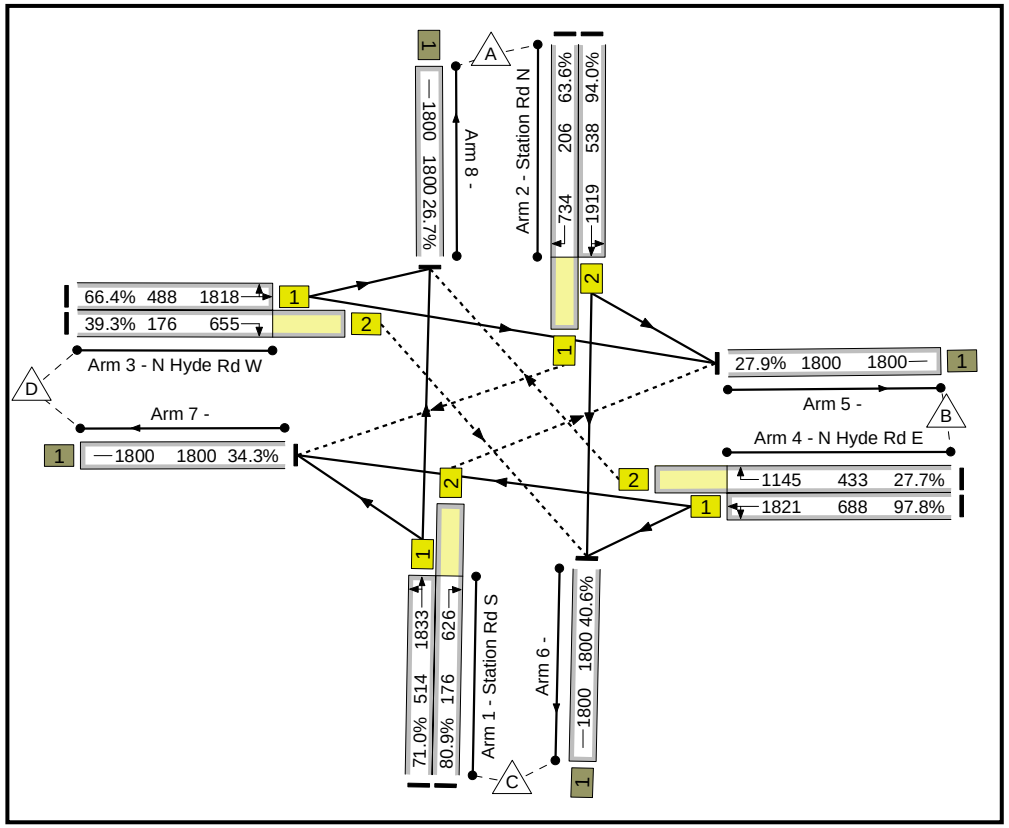
Stage Timings

Stage	1	2	3	4
Duration	19	21	4	4
Change Point	0	28	59	68

Signal Timings Diagram



Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	22	-	365	1833	1833	514	71.0
1/2	Station Rd S Right	O	N/A	N/A	D		1	22	-	142	1741	626	176	80.9
2/1	Station Rd N Right	O	N/A	N/A	C		1	22	-	131	1730	734	206	63.6
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	22	-	506	1919	1919	538	94.0
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	21	-	324	1818	1818	488	66.4
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	21	-	69	1760	655	176	39.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	30	-	673	1821	1821	688	97.8
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	30	4	120	1815	1145	433	27.7
5/1		U	N/A	N/A	-		-	-	-	502	1800	1800	1800	27.9
6/1		U	N/A	N/A	-		-	-	-	730	1800	1800	1800	40.6
7/1		U	N/A	N/A	-		-	-	-	617	1800	1800	1800	34.3
8/1		U	N/A	N/A	-		-	-	-	481	1800	1800	1800	26.7

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	365	365	-	-	-	2.7	1.2	-	3.9	38.4	7.4	1.2	8.6	
1/2	142	142	19	0	123	0.9	1.9	0.7	3.5	89.5	2.5	1.9	4.4	
2/1	131	131	102	0	29	0.8	0.9	0.5	2.2	59.5	2.3	0.9	3.1	
2/2	506	506	-	-	-	4.1	5.8	-	9.8	69.9	11.2	5.8	17.0	
3/1	324	324	-	-	-	2.4	1.0	-	3.4	37.6	6.6	1.0	7.5	
3/2	69	69	9	0	60	0.4	0.3	0.5	1.3	66.0	1.2	0.3	1.5	
4/1	673	673	-	-	-	4.7	9.7	-	14.4	76.9	15.0	9.7	24.6	
4/2	120	120	104	10	6	0.6	0.2	0.3	1.1	32.1	1.8	0.2	2.0	
5/1	502	502	-	-	-	0.0	0.2	-	0.2	1.4	2.0	0.2	2.2	
6/1	730	730	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3	
7/1	617	617	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	
8/1	481	481	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): -8.6 Total Delay for Signalled Links (pcuHr): 39.51

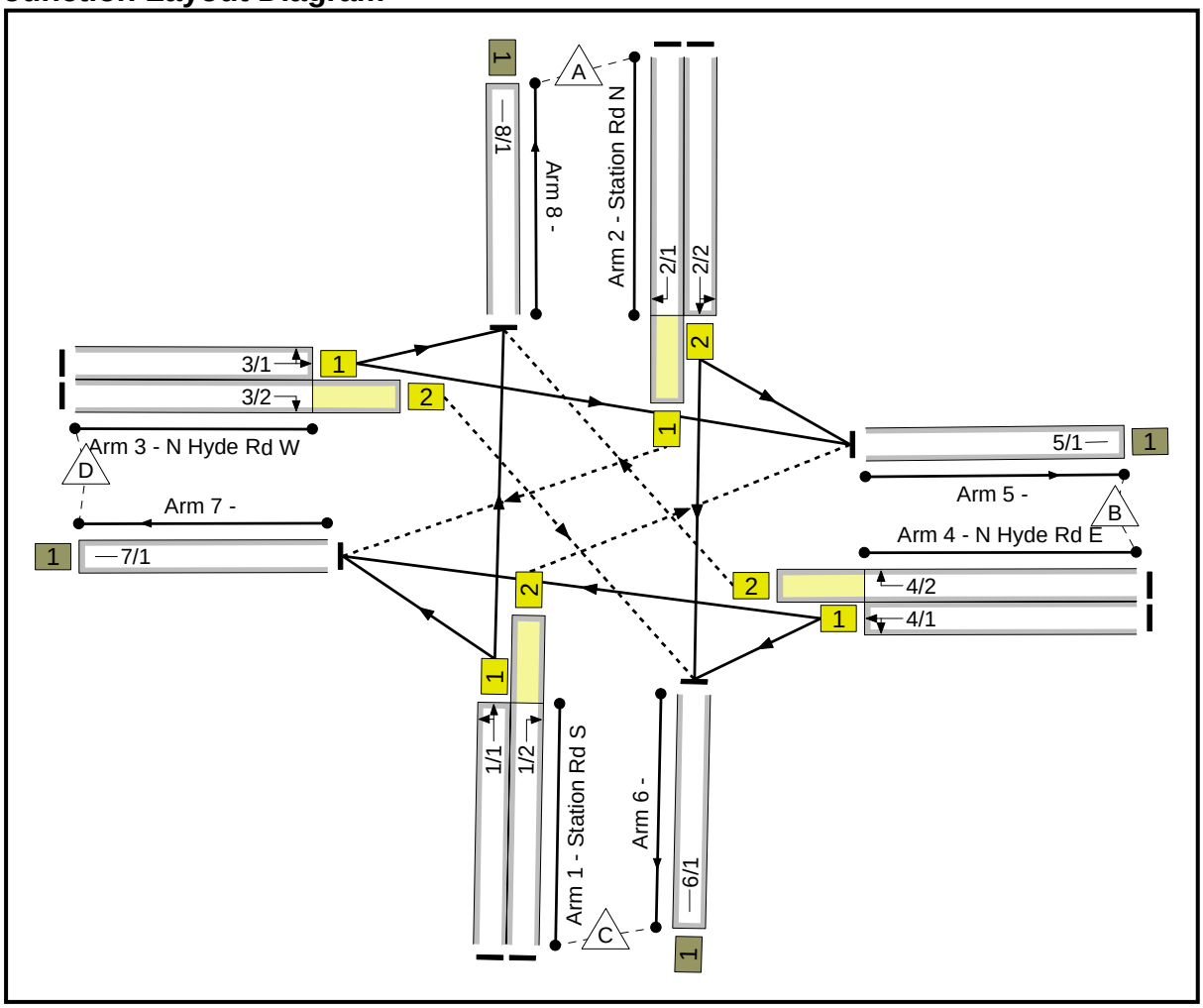
PRC Over All Links (%): -8.6 Total Delay Over All Links(pcuHr): 40.49 Cycle Time (s): 82

Full Input Data And Results

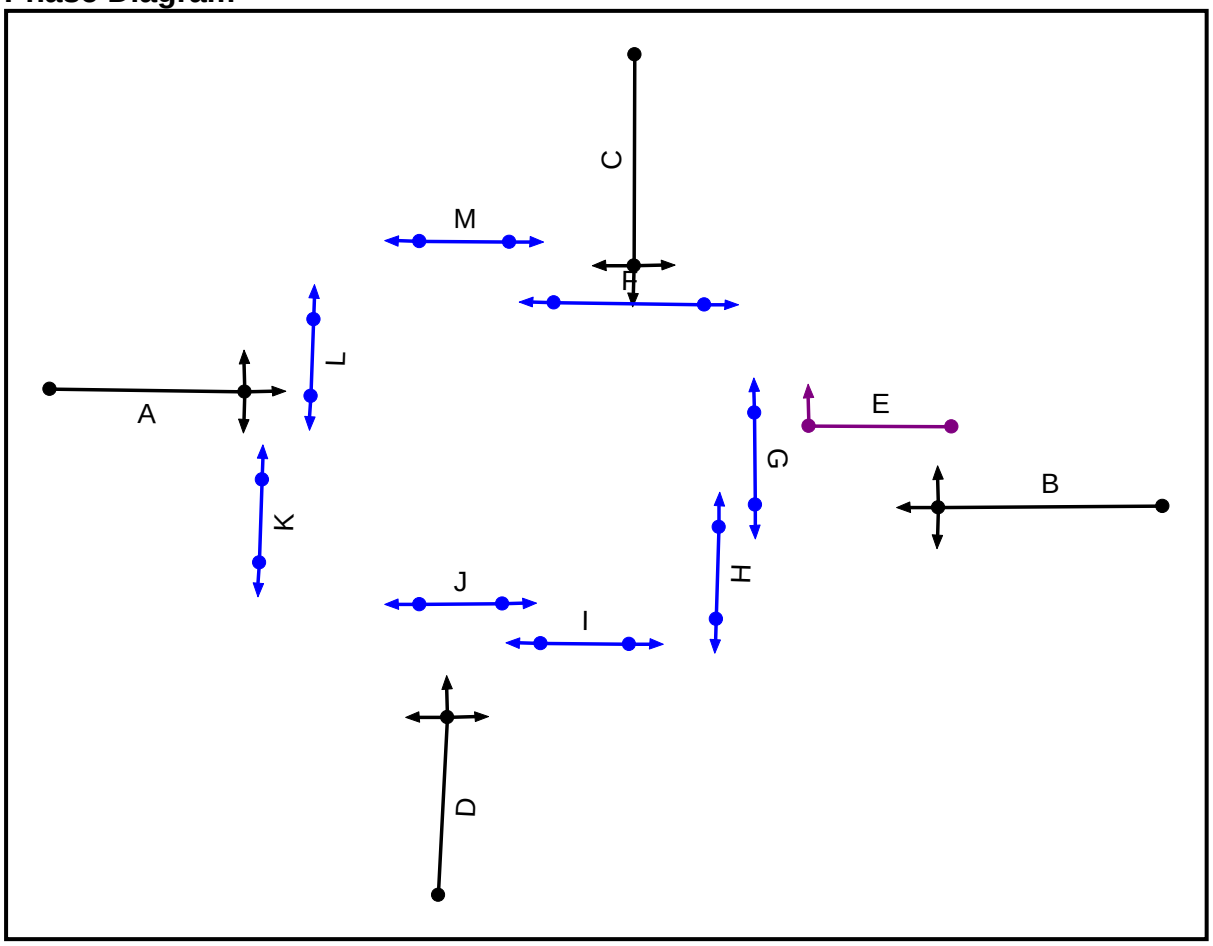
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10PM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5

Full Input Data And Results

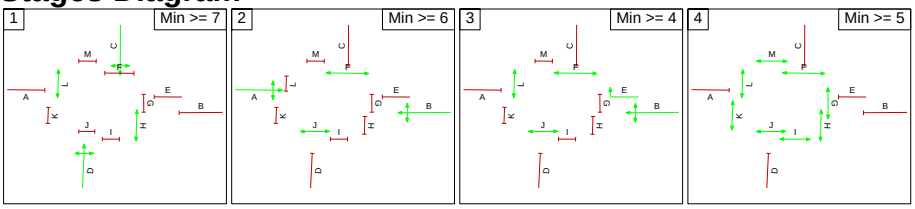
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	6	5	-	9	-	10	-	-	5	10
	B	-		6	6	-	-	-	5	10	-	10	-	10
	C	7	7		-	5	5	10	-	9	-	10	-	-
	D	7	7	-		5	-	10	-	-	5	10	-	10
	E	7	-	6	6		-	5	5	-	-	-	-	10
	F	-	-	9	-	-		-	-	-	-	-	-	-
	G	8	-	8	8	8	-		-	-	-	-	-	-
	H	-	10	-	-	10	-	-		-	-	-	-	-
	I	9	9	9	-	-	-	-	-		-	-	-	-
	J	-	-	-	9	-	-	-	-	-		-	-	-
	K	-	8	8	8	-	-	-	-	-	-		-	-
	L	9	-	-	-	-	-	-	-	-	-	-		-
	M	8	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	C D H L
2	A B F J
3	B E F J L
4	F G H I J K L M

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

		To Stage			
		1	2	3	4
From Stage	1		10	10	10
	2	9		5	10
	3	9	9		10
	4	9	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: 'Base + Com 2014 PM'	17:30	18:30	01:00	

Scenario 2: 'Base + Com 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 4: 'Base + Com 2014 PM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	162	320	117	599
	B	203	0	238	333	774
	C	280	225	0	79	584
	D	109	253	48	0	410
	Tot.	592	640	606	529	2367

Link Traffic Flows

Arm/Link	Flow Group 4: Base + Com 2014 PM
1/1	359
1/2	225
2/1	117
2/2	482
3/1	362
3/2	48
4/1	571
4/2	203
5/1	640
6/1	606
7/1	529
8/1	592

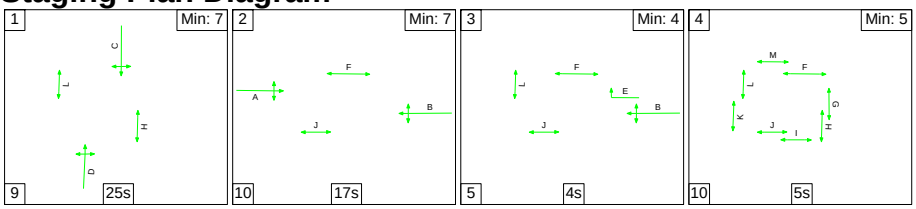
Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 2: 'Base + Com 2014 PM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 4: 'Base + Com 2014 PM'

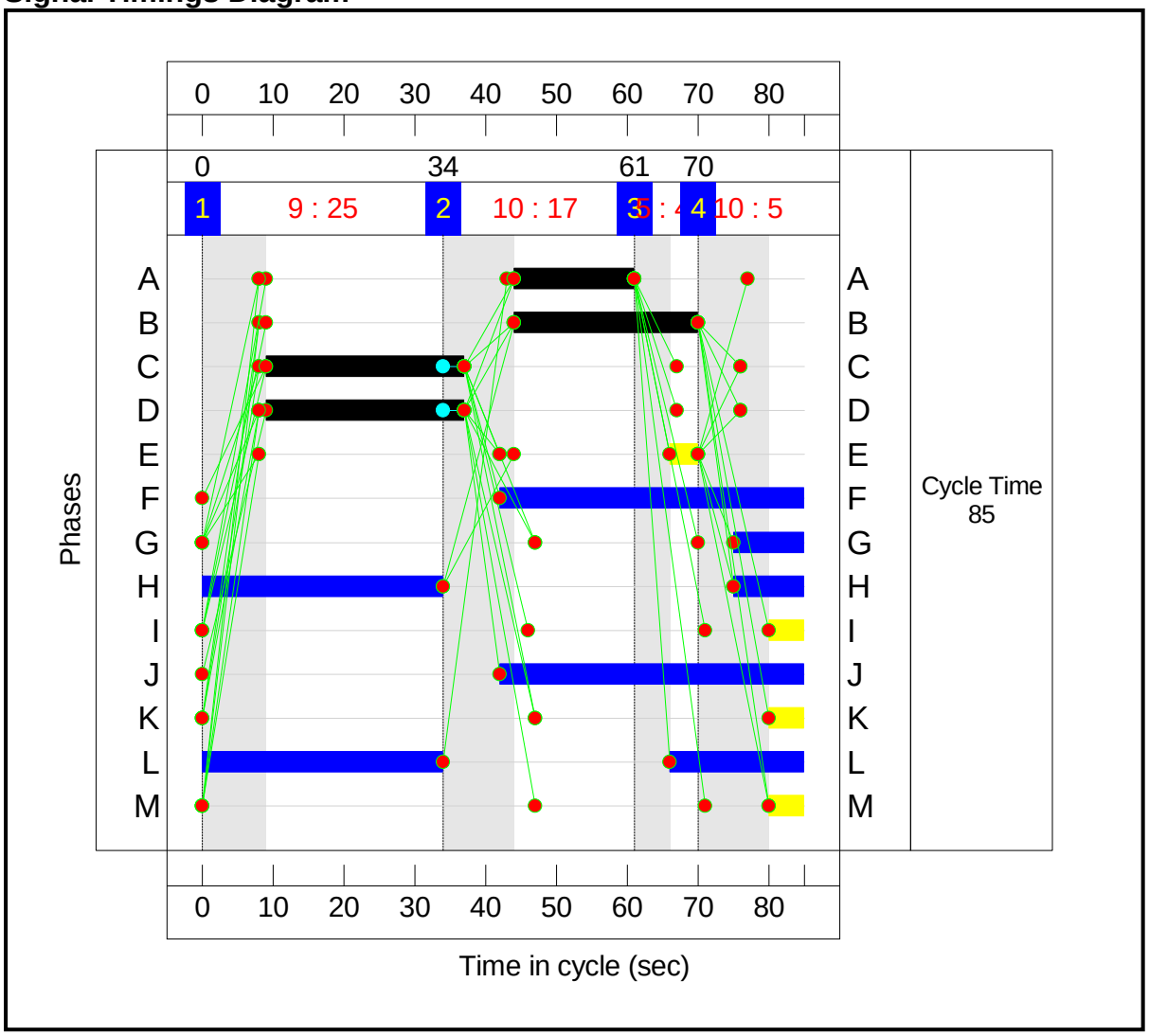
Staging Plan Diagram



Stage Timings

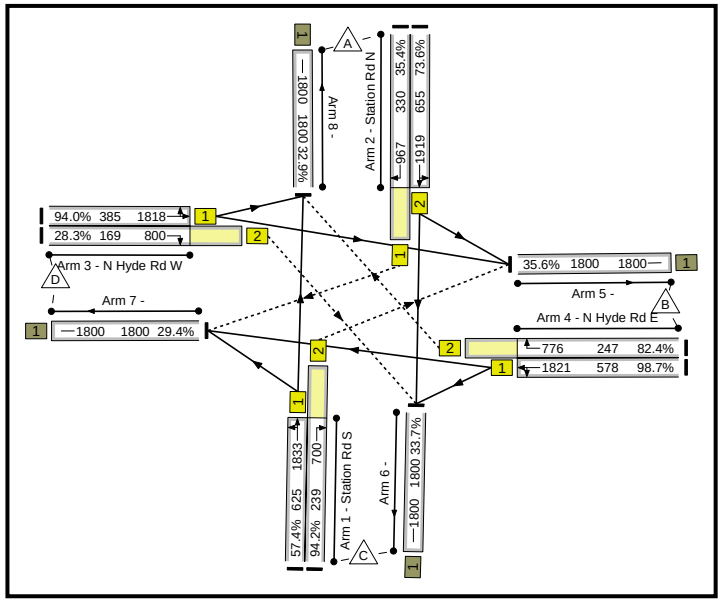
Stage	1	2	3	4
Duration	25	17	4	5
Change Point	0	34	61	70

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	28	-	359	1833	1833	625	57.4
1/2	Station Rd S Right	O	N/A	N/A	D		1	28	-	225	1741	700	239	94.2
2/1	Station Rd N Right	O	N/A	N/A	C		1	28	-	117	1730	967	330	35.4
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	28	-	482	1919	1919	655	73.6
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	17	-	362	1818	1818	385	94.0
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	17	-	48	1760	800	169	28.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	26	-	571	1821	1821	578	98.7
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	26	4	203	1815	776	247	82.4
5/1		U	N/A	N/A	-		-	-	-	640	1800	1800	1800	35.6
6/1		U	N/A	N/A	-		-	-	-	606	1800	1800	1800	33.7
7/1		U	N/A	N/A	-		-	-	-	529	1800	1800	1800	29.4
8/1		U	N/A	N/A	-		-	-	-	592	1800	1800	1800	32.9

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	359	359	-	-	-	2.3	0.7	-	3.0	29.7	6.9	0.7	7.6	
1/2	225	225	108	0	117	1.5	4.8	1.0	7.3	116.4	5.3	4.8	10.0	
2/1	117	117	114	0	3	0.6	0.3	0.4	1.3	39.0	2.0	0.3	2.2	
2/2	482	482	-	-	-	3.3	1.4	-	4.7	34.9	9.9	1.4	11.3	
3/1	362	362	-	-	-	3.3	5.4	-	8.7	86.4	8.3	5.4	13.7	
3/2	48	48	2	0	46	0.4	0.2	0.3	0.9	65.4	0.9	0.2	1.1	
4/1	571	571	-	-	-	4.6	10.2	-	14.8	93.3	13.3	10.2	23.6	
4/2	203	203	12	149	41	1.3	2.1	0.7	4.1	73.4	3.7	2.1	5.8	
5/1	640	640	-	-	-	0.0	0.3	-	0.3	1.6	2.5	0.3	2.8	
6/1	606	606	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	
7/1	529	529	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	
8/1	592	592	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2	

PRC for Signalled Links (%): -9.7 Total Delay for Signalled Links (pcuHr): 44.67

PRC Over All Links (%): -9.7 Total Delay Over All Links(pcuHr): 45.66 Cycle Time (s): 85

APPENDIX M

Drawing title: AM Peak Base 2024 + Committed Pcus	Client: –	SKM COLIN BUCHANAN	Scale: NTS	Full extension:
	Job Title: Hyde Park Hayes		Designed by: LL	Drg no: Figure
			Drawn by: LL	
			Ckd/Appd: JSB	
			1st Issued: APR	

Drawing title: AM Peak Base 2024 + Committed Pcus	Client: –	SKM COLIN BUCHANAN	Scale: NTS	Full extension:
	Job Title: Hyde Park Hayes		Designed by: LL	Drg no: Figure
			Drawn by: LL	
			Ckd/Appd: JSB	
			1st Issued: APR	

<Enter Report 1 Title Here>

PRT File
AM Base B24+Com

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1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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            RG45 6AU, UK.        Web:   www.trlsoftware.co.uk

 ------------------------------------------------------------------------
 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
 IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION
 ------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_AM_MC_4.DAT"  at 18:36  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                =   8
  NUMBER OF LINKS                =  70
  NUMBER OF OPTIMISED NODES      =   8
  MAXIMUM NUMBER OF GRAPHIC PLOTS   =   0
  NUMBER OF STEPS IN CYCLE       =  65
  MAXIMUM NUMBER OF SHARED STOPLINES =   2
  MAXIMUM NUMBER OF TIMING POINTS   =   3
  MAXIMUM LINKS AT ANY NODE      =  12


  CORE REQUESTED =  14800 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     65     65     60      2      3      0      1    100    100      0      0      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                       LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                             NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126            7      7
  19)=  10    127            7      7
  20)=  10    128            7      7
  21)=  10    129            7      7
  22)=  10    130            7      7
  23)=  10    131            7      7
  24)=  10    132            7      7
  25)=  10    146            7      7      7

                             NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126            6      6
  27)=  11    127            5      5
  28)=  11    128            6      6
  29)=  11    129            5      5
  30)=  11    130            6      6
  31)=  11    131            5      5
  32)=  11    132            5      6
  33)=  11    146            7      8      8

                             NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE   Sgl/Dbl  S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.   Cycled
  34)=  12    126      1      0     33
  35)=  12    127      1      0     34
  36)=  12    128      1     20      7
  37)=  12    129      1     39     59
  38)=  12    130      1     37     24
```

```
 39)=  12    131      1     64     34
 40)=  12    132      1     31     18
 41)=  12    146      1      5     40     55
```

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS LINK1 NO.	LINK2 % FLOW	GIVEWAY COEFFS. ONLY X100	A1 X100	A2 X100				LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
42)=	30	1462	1465	0	0	50	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	22	0	0	0	0	0	31	0	715	0	0

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START STAGE	LAG	END STAGE	LAG	SECOND GREEN START STAGE	LAG	END STAGE	LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
44)=	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0
45)=	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0
46)=	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
48)=	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0
49)=	31	36	129	2	5	1	0	0	0	0	0	53	0	2047	0	0
50)=	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0
51)=	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0
52)=	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0
53)=	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0
54)=	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0
55)=	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0
56)=	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
57)=	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0
58)=	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
59)=	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0
60)=	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
61)=	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0
62)=	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0
63)=	31	52	131	2	5	1	0	0	0	0	0	63	0	1886	0	0
64)=	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0
65)=	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
66)=	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0
67)=	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0
68)=	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0
69)=	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0
70)=	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
71)=	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
72)=	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
73)=	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0
74)=	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0
75)=	31	64	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
76)=	31	65	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
77)=	31	66	131	1	5	2	0	0	0	0	0	40	0	1969	0	0
78)=	31	67	131	1	5	2	0	0	0	0	0	40	0	1875	0	0
79)=	31	68	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
80)=	31	1261	0	0	0	0	0	0	0	0	0	55	0	0	0	0
81)=	31	1262	126	1	6	2	1	0	0	0	0	55	0	1905	0	0
82)=	31	1263	0	0	0	0	0	0	0	0	0	55	0	0	0	0
83)=	31	1264	126	1	6	2	1	0	0	0	0	55	0	2038	0	0
84)=	31	1266	0	0	0	0	0	0	0	0	0	55	0	0	0	0
85)=	31	1267	126	1	6	2	1	0	0	0	0	55	0	2019	0	0
86)=	31	1269	126	1	6	2	1	0	0	0	0	55	0	1824	0	0
87)=	31	1271	0	0	0	0	0	0	0	0	0	67	0	0	0	0
88)=	31	1272	127	2	5	1	0	0	0	0	0	67	0	1876	0	0
89)=	31	1273	0	0	0	0	0	0	0	0	0	67	0	0	0	0
90)=	31	1274	127	2	5	1	0	0	0	0	0	67	0	2046	0	0
91)=	31	1275	0	0	0	0	0	0	0	0	0	67	0	0	0	0
92)=	31	1276	127	2	5	1	0	0	0	0	0	67	0	1973	0	0
93)=	31	1278	127	2	5	1	0	0	0	0	0	67	0	1770	0	0
94)=	31	1461	146	2	1	3	0	0	0	0	0	200	0	1860	0	0
95)=	31	1462	146	1	0	3	0	0	0	0	0	130	0	1774	0	0
96)=	31	1463	146	1	0	3	6	0	0	0	0	130	0	1833	0	0
97)=	31	1464	146	3	8	1	0	0	0	0	0	200	0	1833	0	0
98)=	31	1465	146	1	0	2	1	0	0	0	0	200	0	1926	0	0
99)=	31	1467	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
100)=	31	1468	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
101)=	31	1469	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
102)=	31	12601	0	0	0	0	0	0	0	0	0	156	0	1800	0	0
103)=	31	12602	0	0	0	0	0	0	0	0	0	200	0	0	0	0
104)=	31	12603	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
105)=	31	12604	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
106)=	31	12605	126	2	6	1	0	0	0	0	0	20	0	1522	0	0
107)=	31	12606	126	2	6	1	0	0	0	0	0	20	0	1640	0	0
108)=	31	12607	126	2	6	1	0	0	0	0	0	20	0	1757	0	0
109)=	31	12701	127	1	5	2	0	0	0	0	0	23	0	1802	0	0
110)=	31	12702	127	1	5	2	0	0	0	0	0	23	0	1775	0	0
111)=	31	12703	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
112)=	31	12704	127	1	5	2	0	0	0	0	0	23	0	1907	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 2 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 3 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 4 ..... LINK NO.	CRUISE FLOW	CRUISE TIME
113)=	32	29	2249	0	1262	683	18	1264	707	18	1267	470	18	12607	389	18
114)=	32	31	616	0	1272	164	9	1274	130	9	1275	157	9	1276	165	9
115)=	32	32	10	0	0	0	4	0	0	0	0	0	0	0	0	0
116)=	32	33	1425	0	31	616	18	58	809	18	0	0	0	0	0	0
117)=	32	34	163	0	12702	163	5	0	0	0	0	0	0	0	0	0
118)=	32	36	562	0	12701	10	5	12702	552	5	0	0	0	0	0	0
119)=	32	37	40	0	1278	40	7	0	0	0	0	0	0	0	0	0
120)=	32	38	550	0	12701	550	5	0	0	0	0	0	0	0	0	0
121)=	32	39	57	0	1276	10	7	1278	47	7	0	0	0	0	0	0
122)=	32	40	409	0	12701	125	5	12704	284	5	0	0	0	0	0	0
123)=	32	41	55	0	1276	55	7	0	0	0	0	0	0	0	0	0
124)=	32	42	784	0	50	330	5	52	200	5	55	254	5	0	0	0
125)=	32	43	10	0	0	0	4	0	0	0	0	0	0	0	0	0
126)=	32	44	310	0	63	310	4	0	0	0	0	0	0	0	0	0
127)=	32	45	342	0	63	342	4	0	0	0	0	0	0	0	0	0
128)=	32	46	1146	0	0	0	18	0	0	0	0	0	0	0	0	0
129)=	32	47	10	0	0	0	4	0	0	0	0	0	0	0	0	0
130)=	32	48	154	0	65	154	6	0	0	0	0	0	0	0	0	0
131)=	32	50	340	0	64	340	6	0	0	0	0	0	0	0	0	0
132)=	32	52	200	0	45	200	6	0	0	0	0	0	0	0	0	0
133)=	32	53	163	0	34	163	8	0	0	0	0	0	0	0	0	0
134)=	32	54	1821	0	36	562	18	38	550	18	40	409	18	44	310	18
135)=	32	55	647	0	68	647	4	0	0	0	0	0	0	0	0	0
136)=	32	56	304	0	37	40	18	39	57	18	41	55	18	45	142	18
137)=	32	57	647	0	68	647	4	0	0	0	0	0	0	0	0	0
138)=	32	58	809	0	1271	160	9	1273	160	9	12704	489	11	0	0	0
139)=	32	59	10	0	0	0	4	0	0	0	0	0	0	0	0	0
140)=	32	60	10	0	0	0	4	0	0	0	0	0	0	0	0	0
141)=	32	61	10	0	0	0	4	0	0	0	0	0	0	0	0	0
142)=	32	62	163	0	53	163	5	0	0	0	0	0	0	0	0	0
143)=	32	63	1146	0	46	1146	1	0	0	0	0	0	0	0	0	0
144)=	32	64	340	0	63	340	4	0	0	0	0	0	0	0	0	0
145)=	32	65	154	0	63	154	4	0	0	0	0	0	0	0	0	0
146)=	32	66	647	0	68	647	4	0	0	0	0	0	0	0	0	0

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147)=  32     67    650      0     68    650      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2591      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     10      0     50     10      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    683      0     55    393      5     57    290      5      0      0      0      0      0      0
151)=  32   1263     38      0     48     38      7      0      0      0      0      0      0      0      0      0
152)=  32   1264    707      0     57    357      5     66    350      5      0      0      0      0      0      0
153)=  32   1266    116      0     48    116      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    470      0     66    297      5     67    173      5      0      0      0      0      0      0
155)=  32   1269    477      0     67    477      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    160      0   1269    160      8      0      0      0      0      0      0      0      0      0
157)=  32   1272    164      0  12607    164      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    160      0   1269    160      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    130      0  12605    130      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    157      0   1269    157      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    230      0  12605    230      6      0      0      0      0      0      0      0      0      0
162)=  32   1278     87      0  12606     87      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     51      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     83      0     42     83     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    864      0     42    701     13     62    163     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    984      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     38      0   1465     38      2      0      0      0      0      0      0      0      0      0
169)=  32   1467    121      0   1462     83     18   1466     38     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    864      0   1463    854     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601   1000      0   1461     51     14   1464     10     17   1465    946     18      0      0      0
173)=  32  12602    164      0   1261     10     18   1263     38     18   1266    116     18      0      0      0
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    360      0  12601    360      2      0      0      0      0      0      0      0      0      0
177)=  32  12606     87      0  12601     87      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    553      0  12601    553      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    685      0  12703    685      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    715      0  12703    715      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   2173      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    773      0  12703    773      2      0      0      0      0      0      0      0      0      0

*****END OF SUBROUTINE TINPUT*****
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    65 SECOND CYCLE  65 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2       0      33
  127      2       0      34
  128      2      20       7
  129      2      39      59
  130      2      37      24
  131      2      64      34
  132      2      31      18
  146      3       5      40     55

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                             DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)   ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

   29    2252   4000S    60  18.5   3.2    0.9 +  0.7  ( 23.5)     37  ( 17.6)     31             41.1
   31     616   5591S    35   9.5   2.0    0.1 +  0.1  (  3.6)      6  (  0.7)      4             4.3   128     26   7
   32      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   128     13  20
   33    1424   6000     24  18.5   0.9    0.0 +  0.2  (  2.2)      1  (  0.2)      0             2.4
   34     163   1806     14   5.5   2.7    0.0 +  0.1  (  1.4)      4  (  0.1)      0             1.5   129     64  39
   36     563   2047S    47   5.5   3.4    0.0 +  0.4  (  6.5)      5  (  0.6)      1             7.1   129     64  39
   37      40    36L     47   7.5  10.4    0.1 +  0.0  (  1.6)     71  (  0.3)      1             1.8   129     64  39
   38     551   2028S    48   5.5   3.5    0.0 +  0.4  (  6.5)      5  (  0.6)      1             7.0   129     64  39
   39      58    38L     48   7.5  10.1    0.1 +  0.0  (  2.2)     71  (  0.4)      1             2.6   129     64  39
   40     410   1867S    39   5.5   3.3    0.0 +  0.3  (  4.6)      5  (  0.4)      1             5.0   129     64  39
   41      55    40L     39   7.5   8.7    0.1 +  0.0  (  1.8)     64  (  0.4)      1             2.1   129     64  39
   42     782   2028S    63   5.5   6.2    0.5 +  0.7  ( 17.6)     35  (  6.4)      7             24.0   132    36  18
   43      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   132     24  31
   44     309   1612     78   4.5  39.9    1.7 +  1.7  ( 48.0)     97  (  6.7)      6             54.6   129     44  59
   45     342   1613     86   4.5  49.9    1.9 +  2.8  ( 66.6)    116  (  8.8)      8     +       75.5   129     44  59
   46    1146   4839     33  18.5   4.5    1.0 +  0.2  ( 18.2)     31  (  7.5)      8             25.8   130     43  24
   47      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   130     30  37
   48     154   1806     21   6.5   5.2    0.1 +  0.1  (  2.8)      9  (  0.3)      0             3.1   131     39  64
   50     339   1922     44   6.5   6.8    0.2 +  0.4  (  8.4)     12  (  0.8)      1             9.1   131     39  64
   52     199   1886S    48   6.5   7.2    0.1 +  0.3  (  5.3)     13  (  0.5)      3             5.7   131     39  64
   53     164    52L     48   8.5  16.1    0.5 +  0.2  ( 10.1)     90  (  1.6)      3            11.7   131     39  64
   54    1822   6000S    35  18.5   1.0    0.0 +  0.2  (  3.3)      1  (  0.3)      0             3.6
   55     648   1855     73   4.5  21.7    2.5 +  1.4  ( 54.1)     84  (  9.3)     11     +       63.4   131      4  34
   56     305    54L     35  18.5   1.0    0.0 +  0.0  (  0.6)      1  (  0.0)      0             0.6
   57     648   1800     75   4.5  22.8    2.5 +  1.5  ( 57.0)     86  (  9.6)     11     +       66.6   131      4  34
   58     809    31L     35  10.7   2.6    0.3 +  0.2  (  6.6)     20  (  3.0)      4             9.6   128     26   7
   59      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   128     13  20
   60      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   132     24  31
   61      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   130     30  37
   62     164    42L     63   5.5   3.7    0.0 +  0.1  (  2.1)      5  (  0.2)      7             2.3   132     36  18
   63    1146   3600     32   1.5   1.5    0.1 +  0.2  (  4.5)     11  (  2.1)      7     +       6.5
   64     339   1613     85   4.5  49.0    1.9 +  2.7  ( 64.8)    114  (  8.7)      8     +       73.5   129     44  59
   65     154   1613     39   4.5  25.8    0.8 +  0.3  ( 15.4)     65  (  2.2)      2             17.6   129     44  59
   66     648   1969     69   4.5  19.9    2.4 +  1.1  ( 49.5)     80  (  8.8)     10     +       58.4   131      4  34
   67     648   1875     72   4.5  21.3    2.4 +  1.3  ( 53.2)     83  (  9.2)     10     +       62.4   131      4  34
   68    2591   3600     72  18.5   2.3    0.0 +  1.3  ( 18.2)      3  (  1.5)      1             19.7
 1261      10   1262L    82   7.5  21.3    0.0 +  0.0  (  0.8)    100  (  0.1)      5             0.9   126      6  34
 1262     684   1905S    82   5.5  14.6    0.5 +  2.1  ( 38.1)     26  (  3.8)      5             41.9   126      6  34
 1263      38   1264L    82   7.5  21.9    0.1 +  0.1  (  3.2)    103  (  0.4)      5             3.6   126      6  34
 1264     707   2038S    82   5.5  14.1    0.6 +  2.1  ( 37.8)     26  (  3.8)      5             41.7   126      6  34
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    65 SECOND CYCLE  65 STEPS

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                             DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)   ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

 1266     116   1267L    65   7.5  17.6    0.4 +  0.2  (  7.8)    100  (  1.3)      6             9.1   126      6  34
 1267     470   2019S    65   5.5   9.3    0.4 +  0.7  ( 16.2)     25  (  2.5)      6             18.7   126     6  34
 1269     475   1824     58   5.5   8.6    0.4 +  0.7  ( 15.2)     16  (  1.6)      1             16.9   126     6  34
 1271     160   1272L    42   8.5  19.7    0.7 +  0.2  ( 12.1)    100  (  2.0)      4             14.1   127    39   0
 1272     164   1876S    42   6.5   7.5    0.1 +  0.2  (  4.5)     15  (  0.5)      4             5.1   127    39   0
 1273     160   1274L    34   8.5  18.6    0.7 +  0.1  ( 11.4)     98  (  2.0)      3             13.4   127    39   0
 1274     130   2046S    34   6.5   6.5    0.1 +  0.1  (  3.1)     13  (  0.4)      3             3.5   127    39   0
 1275     157   1276L    47   8.5  19.8    0.7 +  0.2  ( 12.0)    100  (  2.0)      4             14.0   127    39   0
 1276     230   1973S    47   6.5   7.4    0.2 +  0.3  (  6.3)     14  (  0.7)      4             7.0   127    39   0
 1278      88   1770     12   6.5   6.0    0.1 +  0.1  (  1.9)     12  (  0.2)      0             2.2   127    39   0
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1461	51	1860	12	18.5	25.1	0.3 +	0.1	(4.9)	81	(0.9)	1		5.8	146	41	55
1462	83	1774	18	13.5	21.8	0.4 +	0.1	(7.0)	88	(1.3)	1		8.2	146	5	55
1463	863	1833	54	13.5	5.3	0.6 +	0.6	(16.4)	45	(6.6)	10		23.0	146	5	61
1464	20	1833	9	18.5	34.7	0.1 +	0.0	(2.7)	96	(0.4)	0		3.1	146	63	5
1465	984	1926	90	18.5	27.8	3.4 +	4.1	(105.8)	100	(20.8)	20		126.6	146	5	41
1466	37	715	5	2.5	3.3	0.0 +	0.0	(0.4)	0	(0.0)	0		0.4			
1467	120	2000	6	18.5	1.5	0.0 +	0.0	(0.5)	1	(0.0)	0		0.5			
1468	20	2000	1	18.5	1.4	0.0 +	0.0	(0.1)	1	(0.0)	0		0.1			
1469	863	2000	43	18.5	2.1	0.0 +	0.4	(5.4)	2	(0.4)	0		5.8			
12601	999	1800	56	18.3	2.8	0.0 +	0.6	(8.9)	4	(0.9)	2		9.7			
12602	164	29L	60	18.5	2.1	0.0 +	0.1	(1.0)	15	(0.5)	31		1.6			
12603	10	10000	0	4.5	11.7	0.0 +	0.0	(0.4)	57	(0.0)	0		0.4	126	6	33
12604	10	10000	0	4.5	11.7	0.0 +	0.0	(0.4)	57	(0.0)	0		0.4	126	6	33
12605	360	1522	57	2.5	13.0	0.6 +	0.7	(17.7)	64	(3.9)	5	+	21.6	126	39	0
12606	88	1640	13	2.5	7.7	0.1 +	0.1	(2.5)	40	(0.6)	1		3.1	126	39	0
12607	554	1757	76	2.5	18.0	1.1 +	1.5	(38.2)	85	(8.0)	10	+	46.2	126	39	0
12701	687	1802	83	2.5	27.7	2.9 +	2.3	(73.8)	97	(15.5)	13	+	89.4	127	5	34
12702	717	1775	88	2.5	32.9	3.1 +	3.3	(91.5)	106	(17.8)	15	+	109.3	127	5	34
12703	2173	3600	60	18.5	1.8	0.0 +	0.8	(10.8)	2	(0.9)	1		11.7			
12704	774	1907	88	2.5	32.2	3.4 +	3.4	(96.8)	105	(19.1)	16	+	115.9	127	5	34

TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+ OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY ($/H)	TOTAL COST OF STOPS ($/H)	PENALTY FOR EXCESS QUEUES ($/H)	TOTAL PERFORMANCE INDEX ($/H)	
3856.4	185.4	20.8	41.8	44.3	(1222.4) +	(227.6) +	(0.0) =	1450.0	TOTALS

ROUTE

****

	CRUISE LITRES PER HOUR		DELAY LITRES PER HOUR		STOPS LITRES PER HOUR		TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	214.9	+	99.0	+	103.7	=	417.6

NO. OF ENTRIES TO SUBPT = 1
NO. OF LINKS RECALCULATED= 70

PROGRAM TRANSYT FINISHED

<Enter Report 1 Title Here>

PRT File
PM Base B24+Com

```
1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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          _____________________________________________________


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               program advice and maintenance, contact:

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          Old Wokingham road    Fax:   +44 (0) 1344 770864
          Crowthorne, Berks.    Email:  softwarebureau@trl.co.uk
          RG45 6AU, UK.        Web:   www.trlsoftware.co.uk

 ------------------------------------------------------------------------
 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
 IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION
 ------------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_PM_MC_2.DAT"  at 18:42  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                 =    8
  NUMBER OF LINKS                 =   70
  NUMBER OF OPTIMISED NODES       =    8
  MAXIMUM NUMBER OF GRAPHIC PLOTS =    8
  NUMBER OF STEPS IN CYCLE        =   66
  MAXIMUM NUMBER OF SHARED STOPLINES =   2
  MAXIMUM NUMBER OF TIMING POINTS =    3
  MAXIMUM LINKS AT ANY NODE       =   12


  CORE REQUESTED =  14914 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     66     66     60      2      3      0      1    100    100      0      1      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                       LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                              NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE            S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126             7      7
  19)=  10    127             7      7
  20)=  10    128             7      7
  21)=  10    129             7      7
  22)=  10    130             7      7
  23)=  10    131             7      7
  24)=  10    132             7      7
  25)=  10    146             7      7      7

                              NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE            S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126             6      6
  27)=  11    127             5      5
  28)=  11    128             6      6
  29)=  11    129             5      5
  30)=  11    130             6      6
  31)=  11    131             5      5
  32)=  11    132             5      6
  33)=  11    146             7      8      8

                              NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE   Sgl/Dbl  S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.   Cycled
  34)=  12    126       1     30      7
  35)=  12    127       1     34      5
  36)=  12    128       1     53     40
  37)=  12    129       1      9     35
  38)=  12    130       1      3     56
```

```
 39)=  12    131      1     34      4
 40)=  12    132      1     56     43
 41)=  12    146      1     53     23     38
```

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS LINK1 NO.	LINK2 % FLOW	ONLY X100	GIVEWAY COEFFS. A1 X100	A2 X100					LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
42)=	30	1462	1465	0	0	50	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	22	0	0	0	0	0	31	0	715	0	0

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START STAGE	LAG	END STAGE	LAG	SECOND GREEN START STAGE	LAG	END STAGE	LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
44)=	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0
45)=	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0
46)=	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
48)=	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0
49)=	31	36	129	2	5	1	0	0	0	0	0	53	0	2047	0	0
50)=	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0
51)=	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0
52)=	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0
53)=	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0
54)=	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0
55)=	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0
56)=	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
57)=	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0
58)=	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
59)=	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0
60)=	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
61)=	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0
62)=	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0
63)=	31	52	131	2	5	1	0	0	0	0	0	63	0	1886	0	0
64)=	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0
65)=	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
66)=	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0
67)=	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0
68)=	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0
69)=	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0
70)=	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
71)=	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
72)=	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
73)=	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0
74)=	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0
75)=	31	64	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
76)=	31	65	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
77)=	31	66	131	1	5	2	0	0	0	0	0	40	0	1969	0	0
78)=	31	67	131	1	5	2	0	0	0	0	0	40	0	1875	0	0
79)=	31	68	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
80)=	31	1261	0	0	0	0	0	0	0	0	0	55	0	0	0	0
81)=	31	1262	126	1	6	2	1	0	0	0	0	55	0	1905	0	0
82)=	31	1263	0	0	0	0	0	0	0	0	0	55	0	0	0	0
83)=	31	1264	126	1	6	2	1	0	0	0	0	55	0	2038	0	0
84)=	31	1266	0	0	0	0	0	0	0	0	0	55	0	0	0	0
85)=	31	1267	126	1	6	2	1	0	0	0	0	55	0	2019	0	0
86)=	31	1269	126	1	6	2	1	0	0	0	0	55	0	1824	0	0
87)=	31	1271	0	0	0	0	0	0	0	0	0	67	0	0	0	0
88)=	31	1272	127	2	5	1	0	0	0	0	0	67	0	1876	0	0
89)=	31	1273	0	0	0	0	0	0	0	0	0	67	0	0	0	0
90)=	31	1274	127	2	5	1	0	0	0	0	0	67	0	2046	0	0
91)=	31	1275	0	0	0	0	0	0	0	0	0	67	0	0	0	0
92)=	31	1276	127	2	5	1	0	0	0	0	0	67	0	1973	0	0
93)=	31	1278	127	2	5	1	0	0	0	0	0	67	0	1770	0	0
94)=	31	1461	146	2	0	3	0	0	0	0	0	200	0	1860	0	0
95)=	31	1462	146	1	0	3	2	0	0	0	0	130	0	1774	0	0
96)=	31	1463	146	1	0	3	8	0	0	0	0	130	0	1833	0	0
97)=	31	1464	146	3	8	1	0	0	0	0	0	200	0	1833	0	0
98)=	31	1465	146	1	0	2	3	0	0	0	0	200	0	1926	0	0
99)=	31	1467	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
100)=	31	1468	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
101)=	31	1469	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
102)=	31	12601	0	0	0	0	0	0	0	0	0	156	0	1800	0	0
103)=	31	12602	0	0	0	0	0	0	0	0	0	200	0	0	0	0
104)=	31	12603	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
105)=	31	12604	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
106)=	31	12605	126	2	6	1	0	0	0	0	0	20	0	1522	0	0
107)=	31	12606	126	2	6	1	0	0	0	0	0	20	0	1640	0	0
108)=	31	12607	126	2	6	1	0	0	0	0	0	20	0	1757	0	0
109)=	31	12701	127	1	5	2	0	0	0	0	0	23	0	1802	0	0
110)=	31	12702	127	1	5	2	0	0	0	0	0	23	0	1775	0	0
111)=	31	12703	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
112)=	31	12704	127	1	5	2	0	0	0	0	0	23	0	1907	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 2 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 3 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 4 ..... LINK NO.	CRUISE FLOW	CRUISE TIME
113)=	32	29	2440	0	1262	688	18	1264	850	18	1267	902	18	0	0	0
114)=	32	31	465	0	1272	67	9	1274	190	9	1275	198	9	1276	10	9
115)=	32	32	10	0	0	0	4	0	0	0	0	0	0	0	0	0
116)=	32	33	1484	0	31	465	18	58	1019	18	0	0	0	0	0	0
117)=	32	34	306	0	12702	306	5	0	0	0	0	0	0	0	0	0
118)=	32	36	525	0	12702	525	5	0	0	0	0	0	0	0	0	0
119)=	32	37	118	0	1278	118	7	0	0	0	0	0	0	0	0	0
120)=	32	38	602	0	12701	602	5	0	0	0	0	0	0	0	0	0
121)=	32	39	131	0	1276	81	7	1278	50	7	0	0	0	0	0	0
122)=	32	40	451	0	12701	218	5	12704	233	5	0	0	0	0	0	0
123)=	32	41	99	0	1276	99	7	0	0	0	0	0	0	0	0	0
124)=	32	42	818	0	50	203	5	52	390	5	55	225	5	0	0	0
125)=	32	43	10	0	0	0	4	0	0	0	0	0	0	0	0	0
126)=	32	44	463	0	63	463	4	0	0	0	0	0	0	0	0	0
127)=	32	45	400	0	63	400	4	0	0	0	0	0	0	0	0	0
128)=	32	46	1476	0	0	0	18	0	0	0	0	0	0	0	0	0
129)=	32	47	10	0	0	0	4	0	0	0	0	0	0	0	0	0
130)=	32	48	279	0	65	279	6	0	0	0	0	0	0	0	0	0
131)=	32	50	334	0	64	334	6	0	0	0	0	0	0	0	0	0
132)=	32	52	390	0	45	390	6	0	0	0	0	0	0	0	0	0
133)=	32	53	306	0	34	306	8	0	0	0	0	0	0	0	0	0
134)=	32	54	2041	0	36	525	18	38	602	18	40	451	18	44	463	18
135)=	32	55	893	0	68	893	4	0	0	0	0	0	0	0	0	0
136)=	32	56	358	0	37	118	18	39	131	18	41	99	18	45	10	18
137)=	32	57	870	0	68	870	4	0	0	0	0	0	0	0	0	0
138)=	32	58	1019	0	1271	200	9	1273	198	9	12704	621	11	0	0	0
139)=	32	59	10	0	0	0	4	0	0	0	0	0	0	0	0	0
140)=	32	60	10	0	0	0	4	0	0	0	0	0	0	0	0	0
141)=	32	61	10	0	0	0	4	0	0	0	0	0	0	0	0	0
142)=	32	62	306	0	53	306	5	0	0	0	0	0	0	0	0	0
143)=	32	63	1476	0	46	1476	1	0	0	0	0	0	0	0	0	0
144)=	32	64	334	0	63	334	4	0	0	0	0	0	0	0	0	0
145)=	32	65	279	0	63	279	4	0	0	0	0	0	0	0	0	0
146)=	32	66	902	0	68	902	4	0	0	0	0	0	0	0	0	0

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147)=  32     67    596      0     68    596      4      0      0      0      0      0      0      0      0      0
148)=  32     68   3261      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     72      0     50     72      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    688      0     55    668      5     57     20      5      0      0      0      0      0      0
151)=  32   1263    193      0     48    134      7     50     59      7      0      0      0      0      0      0
152)=  32   1264    850      0     57    850      5      0      0      0      0      0      0      0      0      0
153)=  32   1266    145      0     48    145      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    902      0     66    902      5      0      0      0      0      0      0      0      0      0
155)=  32   1269    596      0     67    596      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    200      0   1269    200      8      0      0      0      0      0      0      0      0      0
157)=  32   1272     67      0  12607     67      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    198      0   1269    198      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    190      0  12605    190      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    198      0   1269    198      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    190      0  12605    190      6      0      0      0      0      0      0      0      0      0
162)=  32   1278    168      0  12606    168      6      0      0      0      0      0      0      0      0      0
163)=  32   1461    110      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     27      0     42     27     13      0      0      0      0      0      0      0      0      0
165)=  32   1463   1097      0     42    791     13     62    306     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    936      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     10      0   1465     10      2      0      0      0      0      0      0      0      0      0
169)=  32   1467     37      0   1462     27     18   1466     10     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469   1097      0   1463   1087     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601   1030      0   1461    110     17   1464     10     17   1465    928     15      0      0      0
173)=  32  12602    825      0   1261     72     18   1263    193     18   1266    145     18  12607    415     18
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    380      0  12601    380      2      0      0      0      0      0      0      0      0      0
177)=  32  12606    168      0  12601    168      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    482      0  12601    482      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    820      0  12703    820      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    831      0  12703    831      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   2505      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    854      0  12703    854      2      0      0      0      0      0      0      0      0      0

                                    GRAPH  PLOT  CARDS
CARD   CARD   LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO.   TYPE    NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.
183)=  35   1271     42      52      53       0       0       0       0       0       0       0       0       0       0

                                      USER-DEFINED ROUTES

CARD   CARD  ROUTE     ROUTE
 NO.   TYPE  NUMBER  DESCRIPTION

184)=  41      1    <Route Name>
185)=  41      2    <Route Name>
186)=  41      3    <Route Name>
187)=  41      4    <Route Name>

CARD   CARD  ROUTE    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO    TYPE  NUMBER   NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.

188)=  42      1      57    1264      29
189)=  42      2      34      53      62
190)=  42      3      45      52      42
191)=  42      4      50      42

*****END OF SUBROUTINE TINPUT*****
.

    66 SECOND CYCLE  66 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER  STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2     30       7
  127      2     34       5
  128      2     53      40
  129      2      9      35
  130      2      3      56
  131      2     34       4
  132      2     56      43
  146      3     53      23     38

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.      NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

   29    2436   4000S    81  18.5   5.6    1.8 +  1.6  ( 48.7)    53  ( 27.6)     46             76.3
   31     463   5591S    36   9.5   2.9    0.2 +  0.1  (  4.4)    12  (  1.0)      5             5.4    128    59  40
   32      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    128    46  53
   33    1480   6000     25  18.5   0.9    0.0 +  0.2  (  2.3)     1  (  0.2)      0             2.5
   34     306   1806     31   5.5   3.8    0.1 +  0.2  (  4.0)     6  (  0.4)      0             4.4    129    40   9
   36     526   2047S    58   5.5   5.0    0.1 +  0.6  (  9.3)     9  (  0.9)      3            10.3    129    40   9
   37     119    36L     58   7.5  15.1    0.4 +  0.1  (  6.9)    95  (  1.1)      3             8.0    129    40   9
   38     603   2028S    66   5.5   6.0    0.1 +  0.8  ( 13.1)    11  (  1.3)      4            14.4    129    40   9
   39     131    38L     66   7.5  15.2    0.4 +  0.2  (  7.6)    93  (  1.2)      4             8.8    129    40   9
   40     450   1867S    54   5.5   5.0    0.1 +  0.5  (  7.9)     8  (  0.7)      2             8.7    129    40   9
   41      99    40L     54   7.5  12.9    0.2 +  0.1  (  4.9)    85  (  0.9)      2             5.7    129    40   9
   42     820   2028S    75   5.5   8.1    0.6 +  1.1  ( 24.4)    53  ( 10.2)     12     +       34.6    132    61  43
   43      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    132    49  56
   44     463   1612     86   4.5  39.7    2.1 +  2.9  ( 71.6)   111  ( 11.5)     11     +       83.1    129    14  35
   45     401   1613     75   4.5  29.0    1.7 +  1.4  ( 45.1)    92  (  8.2)      8     +       53.3    129    14  35
   46    1476   4839     42  18.5   4.9    1.4 +  0.4  ( 25.7)    33  ( 10.4)     11             36.1    130     9  56
   47      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    130    62   3
   48     280   1806     39   6.5   9.5    0.4 +  0.3  (  9.9)    19  (  1.0)      1            10.9    131     9  34
   50     334   1922     44   6.5   9.7    0.5 +  0.4  ( 12.1)    20  (  1.3)      1            13.3    131     9  34
   52     392   1886S    94   6.5  38.3    0.7 +  3.4  ( 58.5)    72  (  5.3)     16     +       63.8    131     9  34
   53     306    52L     94   8.5  47.4    1.3 +  2.7  ( 56.6)   137  (  4.6)     16     +       61.1    131     9  34
   54    2043   6000S    40  18.5   1.0    0.0 +  0.3  (  4.0)     1  (  0.3)      0             4.4
   55     894   1855     99   4.5  71.9    4.2 + 13.5  (251.9)   158  ( 24.0)     30     +      276.0    131    39   4
   56     359    54L     40  18.5   1.0    0.0 +  0.0  (  0.7)     1  (  0.1)      0             0.8
   57     867   1800     99   4.5  73.3    4.1 + 13.5  (249.0)   158  ( 23.5)     29     +      272.5    131    39   4
   58    1017    31L     36  10.7   2.3    0.3 +  0.2  (  7.3)    17  (  3.3)      5            10.6    128    59  40
   59      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    128    46  53
   60      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    132    49  56
   61      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    130    62   3
   62     306    42L     75   5.5   5.3    0.0 +  0.4  (  5.8)    12  (  0.9)     12     +       6.7    132    61  43
   63    1476   3600     41   1.5   1.8    0.2 +  0.3  (  7.7)    16  (  4.1)     12     +      11.8
   64     334   1613     62   4.5  23.7    1.3 +  0.8  ( 30.6)    75  (  5.6)      6            36.2    129    14  35
   65     280   1613     52   4.5  21.4    1.1 +  0.5  ( 23.1)    66  (  4.1)      4            27.2    129    14  35
   66     900   1969     94   4.5  43.1    4.0 +  6.6  (151.4)   122  ( 18.8)     22     +      170.2    131    39   4
   67     594   1875     65   4.5  19.0    2.1 +  0.9  ( 43.3)    76  (  7.8)      9     +       51.0    131    39   4
   68    3261   3600     91  18.5   5.7    0.0 +  4.7  ( 66.5)     8  (  5.3)      5             71.8
 1261      72   1262L    67   7.5  11.5    0.1 +  0.1  (  3.1)    70  (  0.5)      3             3.7    126    36   8
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 1262    687  1905S    67  5.5  6.4   0.2 +  0.9  ( 16.1)    11  (  1.6)      3            17.7   126    36  8
 1263    193  1264L    86  7.5 19.4   0.4 +  0.6  ( 14.4)    96  (  2.0)      7            16.4   126    36  8
 1264    848  2038S    86  5.5 12.2   0.2 +  2.5  ( 39.2)    20  (  3.5)      7            42.7   126    36  8
.

    66 SECOND CYCLE  66 STEPS

 LINK   FLOW  SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER  INTO  FLOW   OF    PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN          INDEX.     NODE   START  START
       LINK         SAT    CRUISE            OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                          DELAY  (U+R+O=MEAN Q) DELAY   /PCU  STOPS          EXCESS  OF ( ) VALUES        1ST    2ND
     (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)   ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

 1266    146  1267L    88  7.5 19.5   0.3 +  0.5  ( 10.9)    92  (  1.5)      6            12.4   126    36  8
 1267    900  2019S    88  5.5 12.8   0.2 +  2.9  ( 43.8)    19  (  3.7)      6            47.5   126    36  8
 1269    594  1824     55  5.5  4.8   0.1 +  0.6  ( 10.1)     9  (  1.2)      4           11.3   126    36  8
 1271    199  1272L    38  8.5 21.0   0.9 +  0.2  ( 16.1)   100  (  2.5)      4            18.6   127    10  34
 1272     67  1876S    38  6.5 10.6   0.1 +  0.1  (  2.7)    21  (  0.3)      4            3.0   127    10  34
 1273    197  1274L    50  8.5 21.4   0.9 +  0.3  ( 16.2)   100  (  2.5)      4            18.7   127    10  34
 1274    189  2046S    50  6.5  8.9   0.2 +  0.2  (  6.2)    16  (  0.7)      4            6.9   127    10  34
 1275    197  1276L    52  8.5 21.9   0.9 +  0.3  ( 16.6)   101  (  2.5)      4            19.1   127    10  34
 1276    189  1973S    52  6.5  9.2   0.2 +  0.3  (  6.5)    17  (  0.7)      4            7.2   127    10  34
 1278    169  1770     25  6.5  6.5   0.1 +  0.2  (  4.0)    11  (  0.4)      0            4.4   127    10  34
 1461    110  1860     24 18.5 25.9   0.6 +  0.2  ( 11.0)    83  (  1.9)      2            13.0   146    23  38
 1462     28  1774      5 13.5 13.4   0.1 +  0.0  (  1.4)    69  (  0.3)      0            1.7   146    53  40
 1463   1098  1833     66 13.5  5.6   0.6 +  1.0  ( 21.9)    31  (  5.8)      7            27.7   146    53  46
 1464     20  1833      9 18.5 35.3   0.1 +  0.0  (  2.7)    97  (  0.4)      0            3.2   146    46  53
 1465    936  1926     80 18.5 18.1   2.6 +  2.0  ( 65.0)    78  ( 15.5)     15            80.6   146    53  26
 1466      9   715      1  2.5  3.2   0.0 +  0.0  (  0.1)     0  (  0.0)      0           0.1
 1467     37  2000      2 18.5  1.4   0.0 +  0.0  (  0.1)     1  (  0.0)      0            0.1
 1468     20  2000      1 18.5  1.4   0.0 +  0.0  (  0.1)     1  (  0.0)      0            0.1
 1469   1097  2000     55 18.5  2.5   0.0 +  0.6  (  8.6)     3  (  0.7)      1            9.3
12601   1030  1800     57 15.7  2.9   0.0 +  0.7  (  9.6)     5  (  0.8)      5           10.4
12602    823    29L    81 18.5  3.3   0.1 +  0.6  (  9.0)    12  (  2.2)     46           11.2
12603     10 10000      0  4.5  7.0   0.0 +  0.0  (  0.3)    42  (  0.0)      0            0.3   126    36  7
12604     10 10000      0  4.5  7.0   0.0 +  0.0  (  0.3)    42  (  0.0)      0            0.3   126    36  7
12605    379  1522     91  2.5 58.3   1.8 +  4.2  ( 86.4)   133  (  8.6)     11    +       95.1   126    13  30
12606    169  1640     38  2.5 21.4   0.7 +  0.3  ( 14.0)    67  (  1.9)      2            15.9   126    13  30
12607    482  1757    101  2.5 106.1   2.5 + 11.7  (200.8)   183  ( 15.0)     20    +      215.8   126    13  30
12701    822  1802     91  2.5 36.0   3.5 +  4.6  (115.0)   112  ( 21.4)     18    +      136.4   127    39  5
12702    832  1775     94  2.5 42.5   3.6 +  6.1  (137.7)   121  ( 23.6)     20    +      161.3   127    39  5
12703   2505  3600     70 18.5  2.1   0.0 +  1.1  ( 16.2)     2  (  1.3)      1           17.5
12704    852  1907     89  2.5 31.8   3.5 +  3.9  (105.3)   105  ( 20.9)     18    +      126.2   127    39  5

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4597.3       277.8      16.5        54.5    105.5   (2272.1) + (  330.0)  + (   0.0)  =   2602.1     TOTALS

*****************************************************************************************************************************************************
                              CRUISE             DELAY             STOPS            TOTALS
                          LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR

FUEL CONSUMPTION PREDICTIONS      257.5        +    184.0        +    150.4        =    591.8

NO. OF ENTRIES TO SUBPT  =    1
NO. OF LINKS RECALCULATED=   70
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9
 - (SECONDS)

  126      2     30      7
  127      2     34      5
  128      2     53     40
  129      2      9     35
  130      2      3     56
  131      2     34      4
  132      2     56     43
  146      3     53     23     38

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4597.3       277.8      16.5        54.5    105.5   (2272.1) + (  330.0)  + (   0.0)  =   2602.1     TOTALS

NO. OF ENTRIES TO SUBPT  =   17
NO. OF LINKS RECALCULATED=  471
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26
 - (SECONDS)

  126      2     30      7
  127      2     34      5
  128      2     53     40
  129      2      9     35
  130      2      3     56
  131      2     34      4
  132      2     56     43
  146      3     53     23     38

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4597.3       277.8      16.5        54.5    105.5   (2272.1) + (  330.0)  + (   0.0)  =   2602.1     TOTALS

NO. OF ENTRIES TO SUBPT  =   17
NO. OF LINKS RECALCULATED=  462
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9
 - (SECONDS)

  126      2     30      7
  127      2     34      5
  128      2     53     40
  129      2      9     35
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  130      2      3     56
  131      2     34      4
  132      2     56     43
  146      3     53     23     38

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4597.3       277.8      16.5       54.5    105.5    (2272.1) + (  330.0)  + (   0.0)   =    2602.1     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  537
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26
 - (SECONDS)

  126      2     30      7
  127      2     34      5
  128      2     53     40
  129      2      9     35
  130      2      3     56
  131      2     34      4
  132      2     56     43
  146      3     53     23     38

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4597.3       277.8      16.5       54.5    105.5    (2272.1) + (  330.0)  + (   0.0)   =    2602.1     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  528
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9
 - (SECONDS)

  126      2     30      7
  127      2     34      5
  128      2     53     40
  129      2      9     35
  130      2      3     56
  131      2     34      4
  132      2     56     43
  146      3     53     23     38

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4597.3       277.8      16.5       54.5    105.5    (2272.1) + (  330.0)  + (   0.0)   =    2602.1     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  564
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9   1
 - (SECONDS)

  126      2     30      7
  127      2     34      5
  128      2     53     40
  129      2      9     35
  130      2      3     56
  131      2     34      4
  132      2     56     43
  146      3     53     23     38

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4597.3       277.8      16.5       54.5    105.5    (2272.1) + (  330.0)  + (   0.0)   =    2602.1     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  562
.

     66 SECOND CYCLE  66 STEPS

FINAL SETTINGS OBTAINED WITH INCREMENTS :-   9  26   9  26   9   1   1
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES   1       2       3       4       5      6       7       8       9      10

  126      2     30      7
  127      2     34      5
  128      2     53     40
  129      2      9     35
  130      2      3     56
  131      2     34      4
  132      2     56     43
  146      3     53     23     38

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.      NODE   START  START
        LINK          SAT    CRUISE            OVERSAT  OF    STOPS    OF    MAX.  AVERAGE  WEIGHTED SUM          END    END
                                DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

   29    2436  4000S    81  18.5   5.6    1.8 +  1.6  ( 48.7)     53  ( 27.6)     46             76.3
   31     463  5591S    36   9.5   2.9    0.2 +  0.1  (  4.4)     12  (  1.0)      5             5.4   128     59  40
   32      10 10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   128     46  53
   33    1480  6000     25  18.5   0.9    0.0 +  0.2  (  2.3)      1  (  0.2)      0             2.5
   34     306  1806     31   5.5   3.8    0.1 +  0.2  (  4.0)      6  (  0.4)      0             4.4   129     40   9
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  36    526   2047S    58   5.5   5.0    0.1 +  0.6  (  9.3)     9  (  0.9)      3            10.3   129    40   9
  37    119     36L    58   7.5  15.1    0.4 +  0.1  (  6.9)    95  (  1.1)      3             8.0   129    40   9
  38    603   2028S    66   5.5   6.0    0.1 +  0.8  ( 13.1)    11  (  1.3)      4            14.4   129    40   9
  39    131     38L    66   7.5  15.2    0.4 +  0.2  (  7.6)    93  (  1.2)      4             8.8   129    40   9
  40    450   1867S    54   5.5   5.0    0.1 +  0.5  (  7.9)     8  (  0.7)      2             8.7   129    40   9
  41     99     40L    54   7.5  12.9    0.2 +  0.1  (  4.9)    85  (  0.9)      2             5.7   129    40   9
  42    820   2028S    75   5.5   8.1    0.6 +  1.1  ( 24.4)    53  ( 10.2)     12    +       34.6   132    61  43
  43     10  10000     1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    49  56
  44    463   1612    86   4.5  39.7    2.1 +  2.9  ( 71.6)   111  ( 11.5)     11    +       83.1   129    14  35
  45    401   1613    75   4.5  29.0    1.7 +  1.4  ( 45.1)    92  (  8.2)      8    +       53.3   129    14  35
  46   1476   4839    42  18.5   4.9    1.4 +  0.4  ( 25.7)    33  ( 10.4)     11             36.1   130     9  56
  47     10  10000     1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130    62   3
  48    280   1806    39   6.5   9.5    0.4 +  0.3  (  9.9)    19  (  1.0)      1            10.9   131     9  34
  50    334   1922    44   6.5   9.7    0.5 +  0.4  ( 12.1)    20  (  1.3)      1            13.3   131     9  34
  52    392   1886S   94   6.5  38.3    0.7 +  3.4  ( 58.5)    72  (  5.3)     16    +       63.8   131     9  34
  53    306     52L   94   8.5  47.4    1.3 +  2.7  ( 56.6)   137  (  4.6)     16    +       61.1   131     9  34
  54   2043   6000S    40  18.5   1.0    0.0 +  0.3  (  4.0)     1  (  0.3)      0             4.4
  55    894   1855    99   4.5  71.9    4.2 + 13.5  (251.9)   158  ( 24.0)     30    +      276.0   131    39   4
  56    359     54L   40  18.5   1.0    0.0 +  0.0  (  0.7)     1  (  0.1)      0             0.8
  57    867   1800    99   4.5  73.3    4.1 + 13.5  (249.0)   158  ( 23.5)     29    +      272.5   131    39   4
  58   1017     31L   36  10.7   2.3    0.3 +  0.2  (  7.3)    17  (  3.3)      5            10.6   128    59  40
  59     10  10000     1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128    46  53
  60     10  10000     1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    49  56
  61     10  10000     1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130    62   3
  62    306     42L   75   5.5   5.3    0.0 +  0.4  (  5.8)    12  (  0.9)     12    +        6.7   132    61  43
  63   1476   3600    41   1.5   1.8    0.2 +  0.3  (  7.7)    16  (  4.1)     12    +       11.8
  64    334   1613    62   4.5  23.7    1.3 +  0.8  ( 30.6)    75  (  5.6)      6            36.2   129    14  35
  65    280   1613    52   4.5  21.4    1.1 +  0.5  ( 23.1)    66  (  4.1)      4            27.2   129    14  35
  66    900   1969    94   4.5  43.1    4.0 +  6.6  (151.4)   122  ( 18.8)     22    +      170.2   131    39   4
  67    594   1875    65   4.5  19.0    2.1 +  0.9  ( 43.3)    76  (  7.8)      9    +       51.0   131    39   4
  68   3261   3600    91  18.5   5.7    0.0 +  4.7  ( 66.5)     8  (  5.3)      5            71.8
1261     72   1262L   67   7.5  11.5    0.1 +  0.1  (  3.1)    70  (  0.5)      3             3.7   126    36   8
1262    687   1905S   67   5.5   6.4    0.2 +  0.9  ( 16.1)    11  (  1.6)      3            17.7   126    36   8
1263    193   1264L   86   7.5  19.4    0.4 +  0.6  ( 14.4)    96  (  2.0)      7            16.4   126    36   8
1264    848   2038S   86   5.5  12.2    0.2 +  2.5  ( 39.2)    20  (  3.5)      7            42.7   126    36   8
.

    66 SECOND CYCLE  66 STEPS

 LINK   FLOW  SAT   DEGREE  MEAN TIMES  -------DELAY--------  ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER  INTO  FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN          INDEX.     NODE   START  START
       LINK         SAT    CRUISE           OVERSAT  OF    STOPS    OF    MAX.  AVERAGE  WEIGHTED SUM          END    END
                           DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
     (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

1266    146   1267L   88   7.5  19.5    0.3 +  0.5  ( 10.9)    92  (  1.5)      6             12.4   126    36   8
1267    900   2019S   88   5.5  12.8    0.2 +  2.9  ( 43.8)    19  (  3.7)      6             47.5   126    36   8
1269    594   1824    55   5.5   4.8    0.1 +  0.6  ( 10.1)     9  (  1.2)      4            11.3   126    36   8
1271    199   1272L   38   8.5  21.0    0.9 +  0.2  ( 16.1)   100  (  2.5)      4             18.6   127    10  34
1272     67   1876S   38   6.5  10.6    0.1 +  0.1  (  2.7)    21  (  0.3)      4             3.0   127    10  34
1273    197   1274L   50   8.5  21.4    0.9 +  0.3  ( 16.2)   100  (  2.5)      4             18.7   127    10  34
1274    189   2046S   50   6.5   8.9    0.2 +  0.2  (  6.2)    16  (  0.7)      4             6.9   127    10  34
1275    197   1276L   52   8.5  21.9    0.9 +  0.3  ( 16.6)   101  (  2.5)      4             19.1   127    10  34
1276    189   1973S   52   6.5   9.2    0.2 +  0.3  (  6.5)    17  (  0.7)      4             7.2   127    10  34
1278    169   1770    25   6.5   6.5    0.1 +  0.2  (  4.0)    11  (  0.4)      0             4.4   127    10  34
1461    110   1860    24  18.5  25.9    0.6 +  0.2  ( 11.0)    83  (  1.9)      2            13.0   146    23  38
1462     28   1774     5  13.5  13.4    0.1 +  0.0  (  1.4)    69  (  0.3)      0             1.7   146    53  40
1463   1098   1833    66  13.5   5.6    0.6 +  1.0  ( 21.9)    31  (  5.8)      7            27.7   146    53  46
1464     20   1833     9  18.5  35.3    0.1 +  0.0  (  2.7)    97  (  0.4)      0             3.2   146    46  53
1465    936   1926    80  18.5  18.1    2.6 +  2.0  ( 65.0)    78  ( 15.5)     15            80.6   146    53  26
1466      9    715     1   2.5   3.2    0.0 +  0.0  (  0.1)     0  (  0.0)      0            0.1
1467     37   2000     2  18.5   1.4    0.0 +  0.0  (  0.1)     1  (  0.0)      0            0.1
1468     20   2000     1  18.5   1.4    0.0 +  0.0  (  0.1)     1  (  0.0)      0            0.1
1469   1097   2000    55  18.5   2.5    0.0 +  0.6  (  8.6)     3  (  0.7)      1            9.3
12601  1030   1800    57  15.7   2.9    0.0 +  0.7  (  9.6)     5  (  0.8)      5            10.4
12602   823     29L   81  18.5   3.3    0.1 +  0.6  (  9.0)    12  (  2.2)     46            11.2
12603    10  10000     0   4.5   7.0    0.0 +  0.0  (  0.3)    42  (  0.0)      0             0.3   126    36   7
12604    10  10000     0   4.5   7.0    0.0 +  0.0  (  0.3)    42  (  0.0)      0             0.3   126    36   7
12605   379   1522    91   2.5  58.3    1.8 +  4.2  ( 86.4)   133  (  8.6)     11    +       95.1   126    13  30
12606   169   1640    38   2.5  21.4    0.7 +  0.3  ( 14.0)    67  (  1.9)      2             15.9   126    13  30
12607   482   1757   101   2.5 106.1    2.5 + 11.7  (200.8)   183  ( 15.0)     20    +      215.8   126    13  30
12701   822   1802    91   2.5  36.0    3.5 +  4.6  (115.0)   112  ( 21.4)     18    +      136.4   127    39   5
12702   832   1775    94   2.5  42.5    3.6 +  6.1  (137.7)   121  ( 23.6)     20    +      161.3   127    39   5
12703  2505   3600    70  18.5   2.1    0.0 +  1.1  ( 16.2)     2  (  1.3)      1            17.5
12704   852   1907    89   2.5  31.8    3.5 +  3.9  (105.3)   105  ( 20.9)     18    +      126.2   127    39   5

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL       TOTAL       PENALTY      TOTAL
 DISTANCE        TIME     JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT      SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                                   DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)   ($/H)      ($/H)       ($/H)       ($/H)

  4597.3        277.8       16.5        54.5    105.5    (2272.1) + (  330.0)  + (   0.0)  =    2602.1     TOTALS
-------------------------------------------------------------------------------------------------------------------
                                                                                                    ROUTE
   569.5         38.1       15.0         6.1     17.6    ( 336.9) + (   54.6)  + (   0.0)  =     391.5       1
    53.2          6.2        8.6         1.4      3.3    (  66.4) + (    5.8)  + (   0.0)  =      72.3       2
    90.0         11.2        8.0         3.1      5.9    ( 128.0) + (   23.7)  + (   0.0)  =     151.7       3
    68.5          4.3       16.1         1.1      1.5    (  36.5) + (   11.5)  + (   0.0)  =      48.0       4


**************************************************************************************************************************************************************
                              CRUISE             DELAY             STOPS             TOTALS
                          LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR

FUEL CONSUMPTION PREDICTIONS      257.5       +    184.0       +    150.4       =    591.8

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  562

CYCLIC FLOW PROFILE GRAPHS

.
LINK  1271 FED BY  1269    0    0    0 M.M.E. 0.94
    I
    I
    I
    I
 2000+
    I           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
 1500+           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
    I          ^^^^^^^
    I          ^^^^^^^
 1000+          ^^^^^^^
    I          ^^^^^^^
    I          ^^^^^^^
    I          ^^^^^^^
    I11        ^^^^^^^^                          11111111
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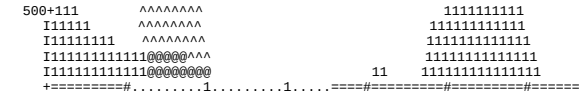

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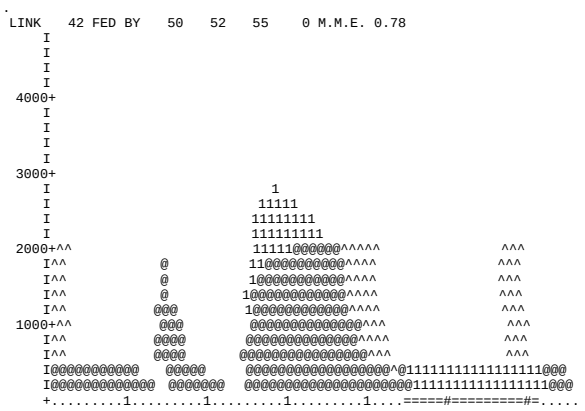

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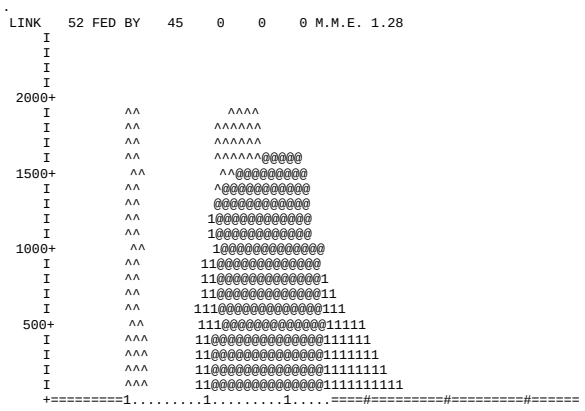

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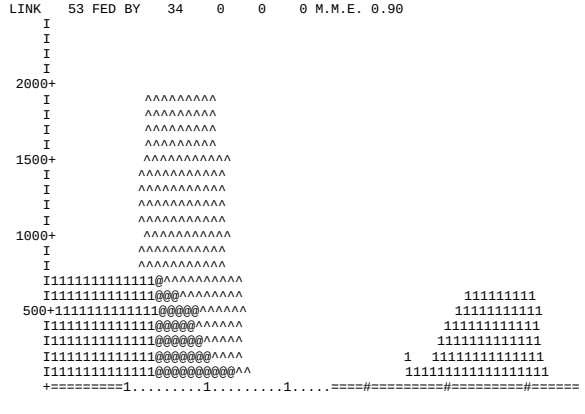

PROGRAM TRANSYT FINISHED

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd AM.vai"
(drive-on-the-left) at 10:11:47 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
ARM B	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
ARM C	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
ARM D	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
ARM E	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2024

T15

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	14.46	21.69	14.46
ARM B	15.00	45.00	75.00	6.57	9.86	6.57
ARM C	15.00	45.00	75.00	13.63	20.44	13.63
ARM D	15.00	45.00	75.00	0.55	0.83	0.55
ARM E	15.00	45.00	75.00	0.64	0.96	0.64

DEMAND SET TITLE: Base+Com 2024

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
07.30 - 09.00	ARM A	0.002	0.143	0.797	0.026	0.032
		2.0	166.0	922.0	30.0	37.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.146	0.000	0.795	0.023	0.036
		77.0	0.0	418.0	12.0	19.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.593	0.251	0.002	0.066	0.088
		646.0	274.0	2.0	72.0	96.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.068	0.182	0.636	0.000	0.114
		3.0	8.0	28.0	0.0	5.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.294	0.235	0.412	0.039	0.020
		15.0	12.0	21.0	2.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.30-07.45									
ARM A	14.52	29.32	0.495	- - -	0.0	1.0	14.1	-	0.067
ARM B	6.60	12.63	0.523	- - -	0.0	1.1	15.1	-	0.162
ARM C	13.68	24.01	0.570	- - -	0.0	1.3	18.7	-	0.095
ARM D	0.55	9.94	0.056	- - -	0.0	0.1	0.9	-	0.106
ARM E	0.64	17.52	0.037	- - -	0.0	0.0	0.6	-	0.059

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									
ARM A	17.34	28.71	0.604	- - -	1.0	1.5	21.8	-	0.087
ARM B	7.88	11.26	0.700	- - -	1.1	2.2	30.1	-	0.284
ARM C	16.33	23.78	0.687	- - -	1.3	2.1	30.4	-	0.132
ARM D	0.66	8.75	0.075	- - -	0.1	0.1	1.2	-	0.124
ARM E	0.76	15.96	0.048	- - -	0.0	0.1	0.7	-	0.066

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									
ARM A	21.23	27.91	0.761	- - -	1.5	3.1	42.7	-	0.145
ARM B	9.65	9.42	1.025	- - -	2.2	13.7	134.6	-	1.194
ARM C	20.00	23.54	0.850	- - -	2.1	5.1	67.0	-	0.255
ARM D	0.81	7.23	0.112	- - -	0.1	0.1	1.8	-	0.156
ARM E	0.94	13.96	0.067	- - -	0.1	0.1	1.1	-	0.077

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									
ARM A	21.23	27.87	0.762	- - -	3.1	3.1	46.5	-	0.150
ARM B	9.65	9.37	1.030	- - -	13.7	21.1	262.7	-	2.131
ARM C	20.00	23.51	0.851	- - -	5.1	5.4	78.8	-	0.280
ARM D	0.81	7.13	0.113	- - -	0.1	0.1	1.9	-	0.158
ARM E	0.94	13.85	0.068	- - -	0.1	0.1	1.1	-	0.077

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									
ARM A	17.34	28.66	0.605	- - -	3.1	1.6	24.3	-	0.090
ARM B	7.88	11.19	0.704	- - -	21.1	2.6	101.8	-	0.705
ARM C	16.33	23.64	0.691	- - -	5.4	2.3	37.4	-	0.145
ARM D	0.66	8.54	0.077	- - -	0.1	0.1	1.3	-	0.127
ARM E	0.76	15.71	0.049	- - -	0.1	0.1	0.8	-	0.067

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									
ARM A	14.52	29.29	0.496	- - -	1.6	1.0	15.3	-	0.068
ARM B	6.60	12.58	0.525	- - -	2.6	1.1	18.1	-	0.173
ARM C	13.68	23.99	0.570	- - -	2.3	1.3	21.0	-	0.098
ARM D	0.55	9.86	0.056	- - -	0.1	0.1	0.9	-	0.107
ARM E	0.64	17.42	0.037	- - -	0.1	0.0	0.6	-	0.060

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.0	*
08.00	1.5	**
08.15	3.1	***
08.30	3.1	***
08.45	1.6	**
09.00	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.1	*
08.00	2.2	**
08.15	13.7	**************
08.30	21.1	**********************
08.45	2.6	***
09.00	1.1	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.3	*
08.00	2.1	**
08.15	5.1	*****
08.30	5.4	*****
08.45	2.3	**
09.00	1.3	*

QUEUE AT ARM D

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

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1592.5	1061.7	164.7	0.10	164.7	0.10
B	724.0	482.7	562.4	0.78	562.4	0.78
C	1500.3	1000.2	253.2	0.17	253.3	0.17
D	60.6	40.4	8.0	0.13	8.0	0.13
E	70.2	46.8	4.8	0.07	4.8	0.07
ALL	3947.6	2631.7	993.1	0.25	993.2	0.25

T75

* 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 10:12:35 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd PM.vai"
(drive-on-the-left) at 10:12:46 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
ARM B	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
ARM C	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
ARM D	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
ARM E	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(16.15)AND ENDS(17.45)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2024

T15

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	10.48	15.71	10.48
ARM B	15.00	45.00	75.00	6.79	10.18	6.79
ARM C	15.00	45.00	75.00	13.25	19.88	13.25
ARM D	15.00	45.00	75.00	1.45	2.18	1.45
ARM E	15.00	45.00	75.00	1.35	2.03	1.35

DEMAND SET TITLE: Base+Com 2024

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
16.15 - 17.45	ARM A	0.005	0.140	0.832	0.006	0.018
		4.0	117.0	697.0	5.0	15.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.239	0.002	0.696	0.022	0.041
		130.0	1.0	378.0	12.0	22.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.647	0.268	0.002	0.026	0.057
		686.0	284.0	2.0	28.0	60.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.216	0.112	0.655	0.000	0.017
		25.0	13.0	76.0	0.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.241	0.231	0.491	0.019	0.019
		26.0	25.0	53.0	2.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
ARM A	10.51	28.35	0.371	- - -	0.0	0.6	8.6	-	0.056
ARM B	6.81	13.88	0.491	- - -	0.0	0.9	13.5	-	0.139
ARM C	13.30	23.93	0.556	- - -	0.0	1.2	17.7	-	0.093
ARM D	1.46	9.66	0.151	- - -	0.0	0.2	2.5	-	0.122
ARM E	1.36	16.15	0.084	- - -	0.0	0.1	1.3	-	0.068
16.30-16.45									
ARM A	12.56	27.55	0.456	- - -	0.6	0.8	12.2	-	0.067
ARM B	8.14	12.76	0.638	- - -	0.9	1.7	23.8	-	0.212
ARM C	15.88	23.68	0.671	- - -	1.2	2.0	28.4	-	0.127
ARM D	1.74	8.42	0.206	- - -	0.2	0.3	3.7	-	0.149
ARM E	1.62	14.31	0.113	- - -	0.1	0.1	1.9	-	0.079
16.45-17.00									
ARM A	15.38	26.48	0.581	- - -	0.8	1.4	19.8	-	0.090
ARM B	9.96	11.24	0.887	- - -	1.7	5.8	69.9	-	0.568
ARM C	19.45	23.38	0.832	- - -	2.0	4.5	60.6	-	0.235
ARM D	2.13	6.79	0.313	- - -	0.3	0.4	6.4	-	0.213
ARM E	1.98	11.92	0.166	- - -	0.1	0.2	2.9	-	0.100
17.00-17.15									
ARM A	15.38	26.45	0.581	- - -	1.4	1.4	20.6	-	0.090
ARM B	9.96	11.22	0.888	- - -	5.8	6.6	94.2	-	0.709
ARM C	19.45	23.34	0.833	- - -	4.5	4.8	70.1	-	0.253
ARM D	2.13	6.70	0.318	- - -	0.4	0.5	6.8	-	0.218
ARM E	1.98	11.79	0.168	- - -	0.2	0.2	3.0	-	0.102
17.15-17.30									
ARM A	12.56	27.49	0.457	- - -	1.4	0.8	13.1	-	0.067
ARM B	8.14	12.72	0.639	- - -	6.6	1.8	33.2	-	0.250
ARM C	15.88	23.62	0.672	- - -	4.8	2.1	33.9	-	0.135
ARM D	1.74	8.28	0.210	- - -	0.5	0.3	4.2	-	0.154
ARM E	1.62	14.12	0.115	- - -	0.2	0.1	2.0	-	0.080
17.30-17.45									
ARM A	10.51	28.31	0.371	- - -	0.8	0.6	9.1	-	0.056
ARM B	6.81	13.84	0.492	- - -	1.8	1.0	15.5	-	0.144
ARM C	13.30	23.91	0.556	- - -	2.1	1.3	19.8	-	0.095
ARM D	1.46	9.59	0.152	- - -	0.3	0.2	2.8	-	0.123
ARM E	1.36	16.04	0.084	- - -	0.1	0.1	1.4	-	0.068

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.6	*
16.45	0.8	*
17.00	1.4	*
17.15	1.4	*
17.30	0.8	*
17.45	0.6	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.9	*
16.45	1.7	**
17.00	5.8	******
17.15	6.6	*******
17.30	1.8	**
17.45	1.0	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	1.2	*
16.45	2.0	**
17.00	4.5	*****
17.15	4.8	*****
17.30	2.1	**
17.45	1.3	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.30	0.2
16.45	0.3
17.00	0.4
17.15	0.5
17.30	0.3
17.45	0.2

QUEUE AT ARM E

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1153.4	769.0	83.3	0.07	83.3	0.07
B	747.4	498.3	250.0	0.33	250.1	0.33
C	1459.0	972.7	230.4	0.16	230.5	0.16
D	159.7	106.4	26.5	0.17	26.5	0.17
E	148.7	99.1	12.5	0.08	12.5	0.08
ALL	3668.2	2445.5	602.8	0.16	602.8	0.16

T75

* 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 10:13:19 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd AM.vai"
(drive-on-the-left) at 10:46:47 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2024

T15

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	16.54	24.81	16.54
ARM B	15.00	45.00	75.00	8.36	12.54	8.36
ARM C	15.00	45.00	75.00	0.35	0.52	0.35
ARM D	15.00	45.00	75.00	10.02	15.04	10.02
ARM E	15.00	45.00	75.00	5.21	7.82	5.21

DEMAND SET TITLE: Base+Com 2024

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
07.45 - 09.15	ARM A	0.002	0.231	0.079	0.555	0.134
		3.0	305.0	104.0	734.0	177.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.747	0.001	0.004	0.169	0.078
		500.0	1.0	3.0	113.0	52.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.464	0.036	0.000	0.500	0.000
		13.0	1.0	0.0	14.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.709	0.132	0.105	0.004	0.050
		569.0	106.0	84.0	3.0	40.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.614	0.242	0.005	0.137	0.002
		256.0	101.0	2.0	57.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	16.60	29.40	0.565	- - -	0.0	1.3	18.5	-	0.077
ARM B	8.39	20.37	0.412	- - -	0.0	0.7	10.1	-	0.083
ARM C	0.35	14.07	0.025	- - -	0.0	0.0	0.4	-	0.073
ARM D	10.06	18.98	0.530	- - -	0.0	1.1	15.9	-	0.110
ARM E	5.23	12.78	0.410	- - -	0.0	0.7	9.8	-	0.131
08.00-08.15									
ARM A	19.82	28.94	0.685	- - -	1.3	2.1	30.4	-	0.108
ARM B	10.02	19.04	0.527	- - -	0.7	1.1	15.9	-	0.110
ARM C	0.42	11.84	0.035	- - -	0.0	0.0	0.5	-	0.087
ARM D	12.02	18.20	0.660	- - -	1.1	1.9	26.7	-	0.159
ARM E	6.25	11.21	0.557	- - -	0.7	1.2	17.3	-	0.199
08.15-08.30									
ARM A	24.28	28.37	0.856	- - -	2.1	5.4	71.2	-	0.222
ARM B	12.28	17.28	0.710	- - -	1.1	2.3	32.6	-	0.193
ARM C	0.51	8.89	0.058	- - -	0.0	0.1	0.9	-	0.119
ARM D	14.72	17.17	0.857	- - -	1.9	5.2	66.0	-	0.349
ARM E	7.65	9.17	0.835	- - -	1.2	4.1	51.3	-	0.534
08.30-08.45									
ARM A	24.28	28.31	0.858	- - -	5.4	5.7	83.6	-	0.245
ARM B	12.28	17.19	0.714	- - -	2.3	2.4	36.0	-	0.202
ARM C	0.51	8.76	0.059	- - -	0.1	0.1	0.9	-	0.121
ARM D	14.72	17.13	0.859	- - -	5.2	5.6	81.1	-	0.400
ARM E	7.65	9.05	0.846	- - -	4.1	4.7	67.5	-	0.661
08.45-09.00									
ARM A	19.82	28.85	0.687	- - -	5.7	2.2	36.4	-	0.116
ARM B	10.02	18.90	0.530	- - -	2.4	1.1	18.1	-	0.115
ARM C	0.42	11.65	0.036	- - -	0.1	0.0	0.6	-	0.089
ARM D	12.02	18.15	0.662	- - -	5.6	2.0	33.7	-	0.176
ARM E	6.25	11.03	0.566	- - -	4.7	1.3	23.3	-	0.229
09.00-09.15									
ARM A	16.60	29.37	0.565	- - -	2.2	1.3	20.4	-	0.079
ARM B	8.39	20.31	0.413	- - -	1.1	0.7	11.0	-	0.084
ARM C	0.35	13.97	0.025	- - -	0.0	0.0	0.4	-	0.073
ARM D	10.06	18.94	0.531	- - -	2.0	1.2	18.0	-	0.114
ARM E	5.23	12.69	0.412	- - -	1.3	0.7	11.2	-	0.135

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.3	*
08.15	2.1	**
08.30	5.4	*****
08.45	5.7	******
09.00	2.2	**
09.15	1.3	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.3	**
08.45	2.4	**
09.00	1.1	*
09.15	0.7	*

QUEUE AT ARM 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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.9	**
08.30	5.2	*****
08.45	5.6	******
09.00	2.0	**
09.15	1.2	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.2	*
08.30	4.1	****
08.45	4.7	*****
09.00	1.3	*
09.15	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1821.0	1214.0	260.5	0.14	260.6	0.14
B	920.8	613.9	123.6	0.13	123.6	0.13
C	38.5	25.7	3.7	0.10	3.7	0.10
D	1103.9	735.9	241.5	0.22	241.5	0.22
E	574.0	382.6	180.4	0.31	180.4	0.31
ALL	4458.2	2972.2	809.7	0.18	809.8	0.18

T75

* 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 10:47:57 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd PM.vai"
(drive-on-the-left) at 10:48:04 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(17.00)AND ENDS(18.30)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2024

T15

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	16.27	24.41	16.27
ARM B	15.00	45.00	75.00	8.25	12.38	8.25
ARM C	15.00	45.00	75.00	2.33	3.49	2.33
ARM D	15.00	45.00	75.00	9.93	14.89	9.93
ARM E	15.00	45.00	75.00	3.65	5.48	3.65

DEMAND SET TITLE: Base+Com 2024

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
17.00 - 18.30	ARM A	0.002	0.254	0.006	0.584	0.154
		2.0	331.0	8.0	760.0	201.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.648	0.002	0.002	0.235	0.114
		428.0	1.0	1.0	155.0	75.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.333	0.005	0.000	0.656	0.005
		62.0	1.0	0.0	122.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.743	0.141	0.016	0.005	0.094
		590.0	112.0	13.0	4.0	75.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.483	0.168	0.000	0.346	0.003
		141.0	49.0	0.0	101.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	16.34	29.89	0.547	- - -	0.0	1.2	17.2	-	0.073
ARM B	8.28	20.81	0.398	- - -	0.0	0.7	9.5	-	0.079
ARM C	2.33	13.47	0.173	- - -	0.0	0.2	3.0	-	0.090
ARM D	9.96	18.85	0.528	- - -	0.0	1.1	15.8	-	0.111
ARM E	3.66	13.19	0.278	- - -	0.0	0.4	5.5	-	0.104
17.15-17.30									
ARM A	19.51	29.52	0.661	- - -	1.2	1.9	27.5	-	0.099
ARM B	9.89	19.56	0.506	- - -	0.7	1.0	14.6	-	0.103
ARM C	2.79	11.12	0.251	- - -	0.2	0.3	4.8	-	0.120
ARM D	11.90	18.05	0.659	- - -	1.1	1.9	26.6	-	0.160
ARM E	4.38	11.71	0.374	- - -	0.4	0.6	8.5	-	0.136
17.30-17.45									
ARM A	23.89	29.04	0.823	- - -	1.9	4.3	59.0	-	0.183
ARM B	12.11	17.89	0.677	- - -	1.0	2.0	28.5	-	0.169
ARM C	3.41	7.98	0.428	- - -	0.3	0.7	10.3	-	0.216
ARM D	14.57	16.98	0.858	- - -	1.9	5.2	66.2	-	0.354
ARM E	5.36	9.78	0.548	- - -	0.6	1.2	16.5	-	0.222
17.45-18.00									
ARM A	23.89	29.02	0.823	- - -	4.3	4.5	66.6	-	0.193
ARM B	12.11	17.83	0.679	- - -	2.0	2.1	30.9	-	0.174
ARM C	3.41	7.88	0.433	- - -	0.7	0.8	11.2	-	0.223
ARM D	14.57	16.95	0.860	- - -	5.2	5.6	81.5	-	0.406
ARM E	5.36	9.66	0.555	- - -	1.2	1.2	18.1	-	0.232
18.00-18.15									
ARM A	19.51	29.48	0.662	- - -	4.5	2.0	31.7	-	0.104
ARM B	9.89	19.47	0.508	- - -	2.1	1.0	16.4	-	0.106
ARM C	2.79	10.97	0.254	- - -	0.8	0.3	5.4	-	0.123
ARM D	11.90	18.00	0.661	- - -	5.6	2.0	33.6	-	0.177
ARM E	4.38	11.54	0.379	- - -	1.2	0.6	9.7	-	0.141
18.15-18.30									
ARM A	16.34	29.86	0.547	- - -	2.0	1.2	18.9	-	0.074
ARM B	8.28	20.75	0.399	- - -	1.0	0.7	10.3	-	0.080
ARM C	2.33	13.37	0.175	- - -	0.3	0.2	3.3	-	0.091
ARM D	9.96	18.82	0.529	- - -	2.0	1.1	17.9	-	0.114
ARM E	3.66	13.11	0.280	- - -	0.6	0.4	6.1	-	0.106

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	1.2	*
17.30	1.9	**
17.45	4.3	****
18.00	4.5	****
18.15	2.0	**
18.30	1.2	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.7	*
17.30	1.0	*
17.45	2.0	**
18.00	2.1	**
18.15	1.0	*
18.30	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.3	
17.45	0.7	*
18.00	0.8	*
18.15	0.3	
18.30	0.2	

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	1.1	*
17.30	1.9	**
17.45	5.2	*****
18.00	5.6	******
18.15	2.0	**
18.30	1.1	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.4	
17.30	0.6	*
17.45	1.2	*
18.00	1.2	*
18.15	0.6	*
18.30	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1792.1	1194.7	220.9	0.12	220.9	0.12
B	908.4	605.6	110.2	0.12	110.2	0.12
C	256.0	170.7	38.0	0.15	38.0	0.15
D	1092.9	728.6	241.5	0.22	241.6	0.22
E	401.9	267.9	64.4	0.16	64.4	0.16
ALL	4451.4	2967.6	675.0	0.15	675.1	0.15

T75

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
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END OF JOB

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

Printed at 10:48:46 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd AM_Int.vai"
(drive-on-the-left) at 13:16:46 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	28.234*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	20.216*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	11.000
ARM B	5.000

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2024

T15

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	11.41	17.12	11.41
ARM B	15.00	45.00	75.00	6.57	9.86	6.57
ARM C	15.00	45.00	75.00	8.86	13.29	8.86

DEMAND SET TITLE: Base+Com 2024

T33

TIME	FROM/T	ARM A	ARM B	ARM C
07.30 - 09.00	ARM A	0.001	0.296	0.703
		1.0	270.0	642.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.458	0.000	0.542
		241.0	0.0	285.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.690	0.310	0.000
		489.0	220.0	0.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
       in the s 90.0y as vehicular demand on the link. (=   times per hour)
ARM B: Frequency of use is distributed throughout the period
       in the s 30.0y as vehicular demand on the link. (=   times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.30-07.45											
ARM A		11.46	23.31	0.491	- -	1.2	0.0	1.0	13.8	-	0.083
ARM B		6.60	15.49	0.426	- -	0.4	0.0	0.7	10.5	-	0.111
ARM C		8.90	19.69	0.452	- -	-	0.0	0.8	11.8	-	0.092
07.45-08.00											
ARM A		13.68	22.49	0.608	- -	1.5	1.0	1.5	21.9	-	0.113
ARM B		7.88	14.56	0.541	- -	0.5	0.7	1.2	16.6	-	0.148
ARM C		10.62	19.29	0.551	- -	-	0.8	1.2	17.4	-	0.115
08.00-08.15											
ARM A		16.75	21.41	0.783	- -	1.8	1.5	3.4	46.3	-	0.204
ARM B		9.65	13.32	0.725	- -	0.6	1.2	2.5	33.9	-	0.261
ARM C		13.01	18.63	0.698	- -	-	1.2	2.2	31.3	-	0.173
08.15-08.30											
ARM A		16.75	21.39	0.783	- -	1.8	3.4	3.5	51.8	-	0.214
ARM B		9.65	13.27	0.727	- -	0.6	2.5	2.6	38.1	-	0.275
ARM C		13.01	18.60	0.700	- -	-	2.2	2.3	33.9	-	0.179
08.30-08.45											
ARM A		13.68	22.48	0.609	- -	1.5	3.5	1.6	25.2	-	0.117
ARM B		7.88	14.49	0.544	- -	0.5	2.6	1.2	19.4	-	0.156
ARM C		10.62	19.25	0.552	- -	-	2.3	1.3	19.7	-	0.118
08.45-09.00											
ARM A		11.46	23.30	0.492	- -	1.2	1.6	1.0	15.1	-	0.085
ARM B		6.60	15.45	0.427	- -	0.4	1.2	0.8	11.8	-	0.114
ARM C		8.90	19.67	0.452	- -	-	1.3	0.8	12.9	-	0.093

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.0	*
08.00	1.5	**
08.15	3.4	***
08.30	3.5	***
08.45	1.6	**
09.00	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.2	*
08.15	2.5	**
08.30	2.6	***
08.45	1.2	*
09.00	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.8	*
08.00	1.2	*
08.15	2.2	**
08.30	2.3	**
08.45	1.3	*
09.00	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	1256.7	837.8	174.1	0.14	174.2	0.14	
B	724.0	482.7	130.3	0.18	130.3	0.18	
C	975.9	650.6	127.0	0.13	127.0	0.13	
ALL	2956.6	1971.0	431.4	0.15	431.5	0.15	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
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* 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 13:17:32 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd PM_Int.vai"
(drive-on-the-left) at 13:17:44 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	31.934*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	24.016*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	14.700
ARM B	8.800

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com 2024

T15

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	12.36	18.54	12.36
ARM B	15.00	45.00	75.00	7.36	11.04	7.36
ARM C	15.00	45.00	75.00	9.29	13.93	9.29

DEMAND SET TITLE: Base+Com 2024

T33

TIME	FROM/T	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.299	0.701
		0.0	296.0	693.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.564	0.000	0.436
		332.0	0.0	257.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.734	0.265	0.001
		545.0	197.0	1.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
       in the s 90.0y as vehicular demand on the link. (=   times per hour)
ARM B: Frequency of use is distributed throughout the period
       in the s 30.0y as vehicular demand on the link. (=   times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00											
ARM A		12.41	26.24	0.473	- -	1.2	0.0	0.9	12.9	-	0.072
ARM B		7.39	18.91	0.391	- -	0.4	0.0	0.6	9.2	-	0.086
ARM C		9.32	19.01	0.490	- -	-	0.0	0.9	13.6	-	0.102
17.00-17.15											
ARM A		14.82	25.31	0.586	- -	1.5	0.9	1.4	20.2	-	0.095
ARM B		8.82	17.90	0.493	- -	0.5	0.6	1.0	13.9	-	0.110
ARM C		11.13	18.39	0.605	- -	-	0.9	1.5	21.5	-	0.136
17.15-17.30											
ARM A		18.15	24.09	0.753	- -	1.8	1.4	2.9	40.7	-	0.163
ARM B		10.81	16.56	0.653	- -	0.6	1.0	1.8	25.7	-	0.171
ARM C		13.63	17.25	0.790	- -	-	1.5	3.5	46.9	-	0.258
17.30-17.45											
ARM A		18.15	24.07	0.754	- -	1.8	2.9	3.0	44.6	-	0.168
ARM B		10.81	16.52	0.654	- -	0.6	1.8	1.9	27.7	-	0.175
ARM C		13.63	17.20	0.793	- -	-	3.5	3.7	53.9	-	0.278
17.45-18.00											
ARM A		14.82	25.28	0.586	- -	1.5	3.0	1.4	22.6	-	0.097
ARM B		8.82	17.85	0.494	- -	0.5	1.9	1.0	15.5	-	0.112
ARM C		11.13	18.35	0.607	- -	-	3.7	1.6	25.3	-	0.144
18.00-18.15											
ARM A		12.41	26.22	0.473	- -	1.2	1.4	0.9	14.0	-	0.073
ARM B		7.39	18.87	0.392	- -	0.4	1.0	0.6	10.0	-	0.088
ARM C		9.32	18.99	0.491	- -	-	1.6	1.0	15.2	-	0.104

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.4	*
17.30	2.9	***
17.45	3.0	***
18.00	1.4	*
18.15	0.9	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	1.0	*
17.30	1.8	**
17.45	1.9	**
18.00	1.0	*
18.15	0.6	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.5	*
17.30	3.5	***
17.45	3.7	****
18.00	1.6	**
18.15	1.0	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	1361.3	907.5	154.9	0.11	154.9	0.11	
B	810.7	540.5	102.0	0.13	102.0	0.13	
C	1022.7	681.8	176.5	0.17	176.5	0.17	
ALL	3194.7	2129.8	433.4	0.14	433.4	0.14	

* 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 ==========

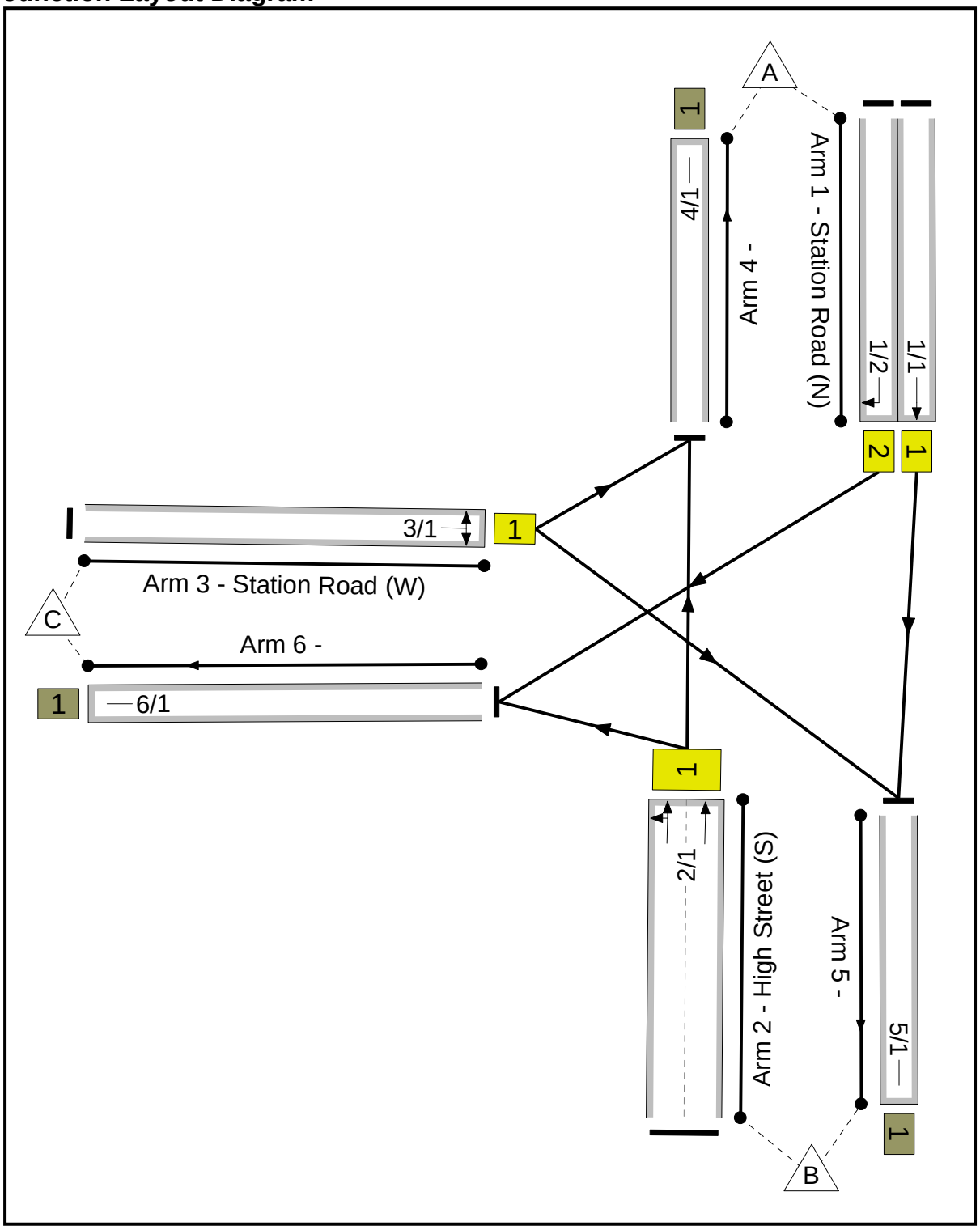
Printed at 13:18:22 on 05/08/2012]

Full Input Data And Results

User and Project Details

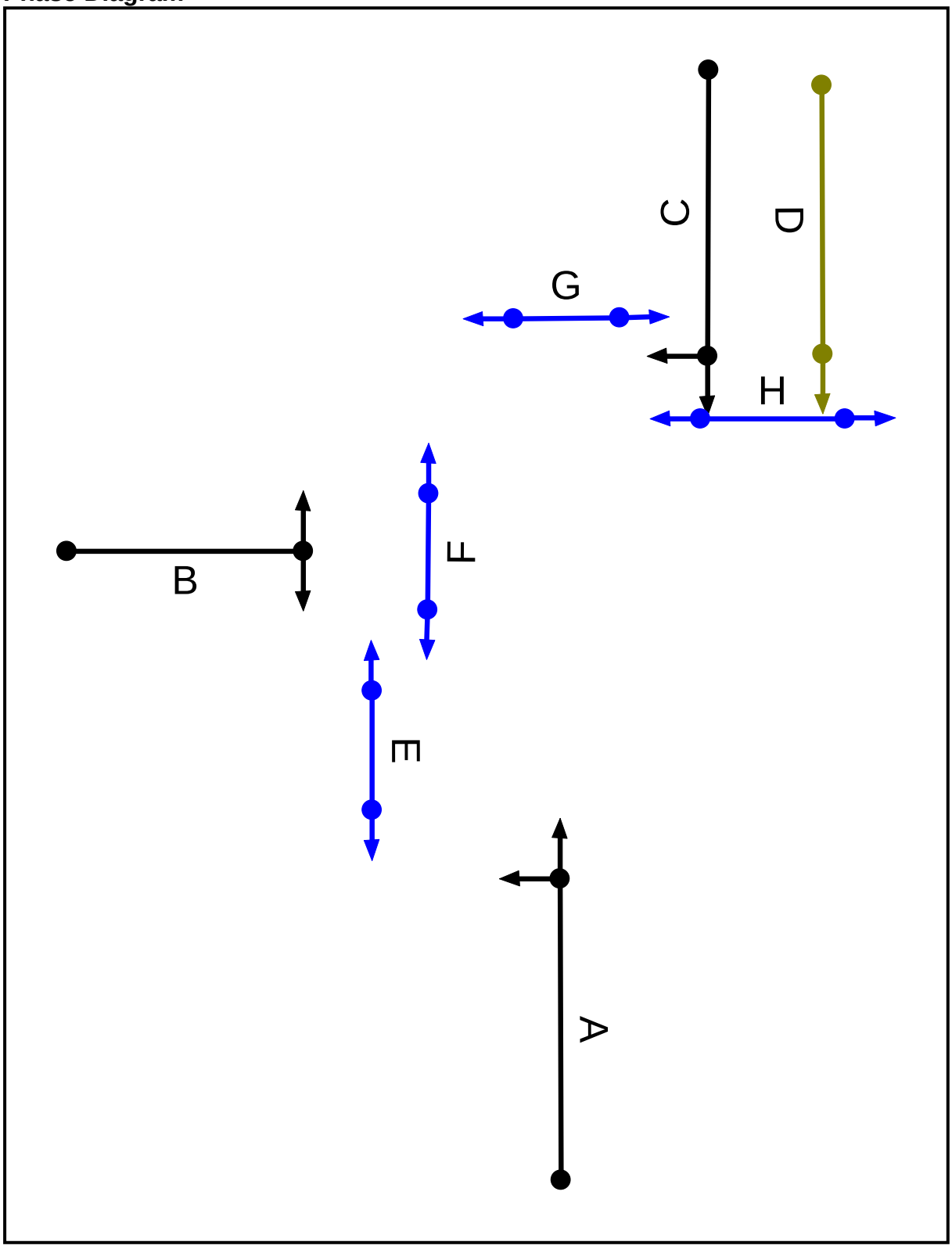
Project:	
Title:	
Location:	
File name:	Station Rd_High Street.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Filter	C	4	0
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5

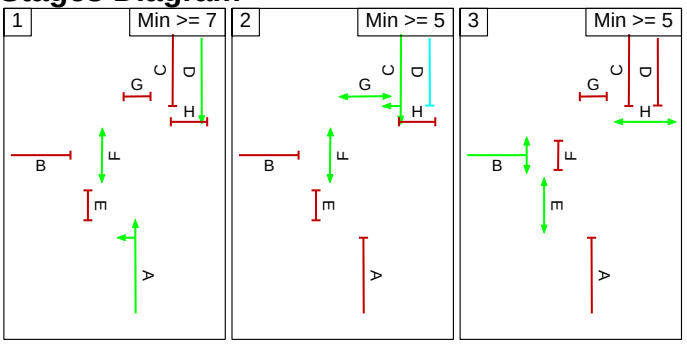
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H
A		5	5	-	7	-	8	-
B	5		5	5	-	5	8	-
C	8	5		-	10	-	-	5
D	-	5	-		-	-	-	5
E	8	-	8	-		-	-	-
F	-	8	-	-	-		-	-
G	8	8	-	-	-	-		-
H	-	-	8	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A D F
2	C F G
3	B E H

Stages Diagram



Full Input Data And Results

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	3	3
3	1	B	Losing	3	3

Prohibited Stage Changes

		To Stage		
		1	2	3
From Stage	1		8	X
	2	8		13
	3	8	8	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Road (N) Ahead	U	1	C D	2	3
1/2	Station Road (N) Right	U	1	C	2	3
2/1	High Street (S) Ahead Left	U	2	A	2	3
3/1	Station Road (W) Left Right	U	1	B	2	3
4/1		U	1		2	3
5/1		U	1		2	3
6/1		U	1		2	3

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Road (N) Lane 1)	Link 1 (Station Road (N) Ahead)	Inf	Inf	User	1766	3.25	0.00	Y	Arm 5 Ahead	Inf
1/2 (Station Road (N) Lane 2)	Link 2 (Station Road (N) Right)	Inf	Inf	User	1929	3.25	0.00	Y	Arm 6 Right	Inf
2/1 (High Street (S) Lane 1)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1763	3.25	0.00	Y	Arm 4 Ahead Arm 6 Left	Inf Inf
2/2 (High Street (S) Lane 2)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1877	3.25	0.00	Y	Arm 4 Ahead	Inf
3/1 (Station Road (W) Lane 1)	Link 1 (Station Road (W) Left Right)	Inf	Inf	User	1691	3.25	0.00	Y	Arm 4 Left Arm 5 Right	Inf Inf
4/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
11: 'Base + Com 2024 AM'	08:00	09:00	01:00	
12: 'Base + Com 2024 PM'	17:00	18:00	01:00	

Scenario 11: 'Base + Com 2024 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 11: 'Base + Com 2024 AM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	658	273	931
	B	413	0	206	619
	C	254	300	0	554
	Tot.	667	958	479	2104

Link Traffic Flows

Arm/Link	Flow Group 11: Base + Com 2024 AM
1/1	658
1/2	273
2/1	619
3/1	554
4/1	667
5/1	958
6/1	479

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 12: 'Base + Com 2024 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 12: 'Base + Com 2024 PM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	463	255	718
	B	474	0	331	805
	C	208	291	0	499
	Tot.	682	754	586	2022

Link Traffic Flows

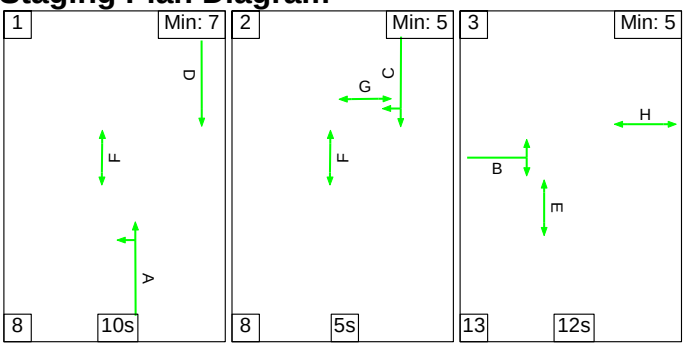
Arm/Link	Flow Group 12: Base + Com 2024 PM
1/1	463
1/2	255
2/1	805
3/1	499
4/1	682
5/1	754
6/1	586

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 11: 'Base + Com 2024 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 11: 'Base + Com 2024 AM'

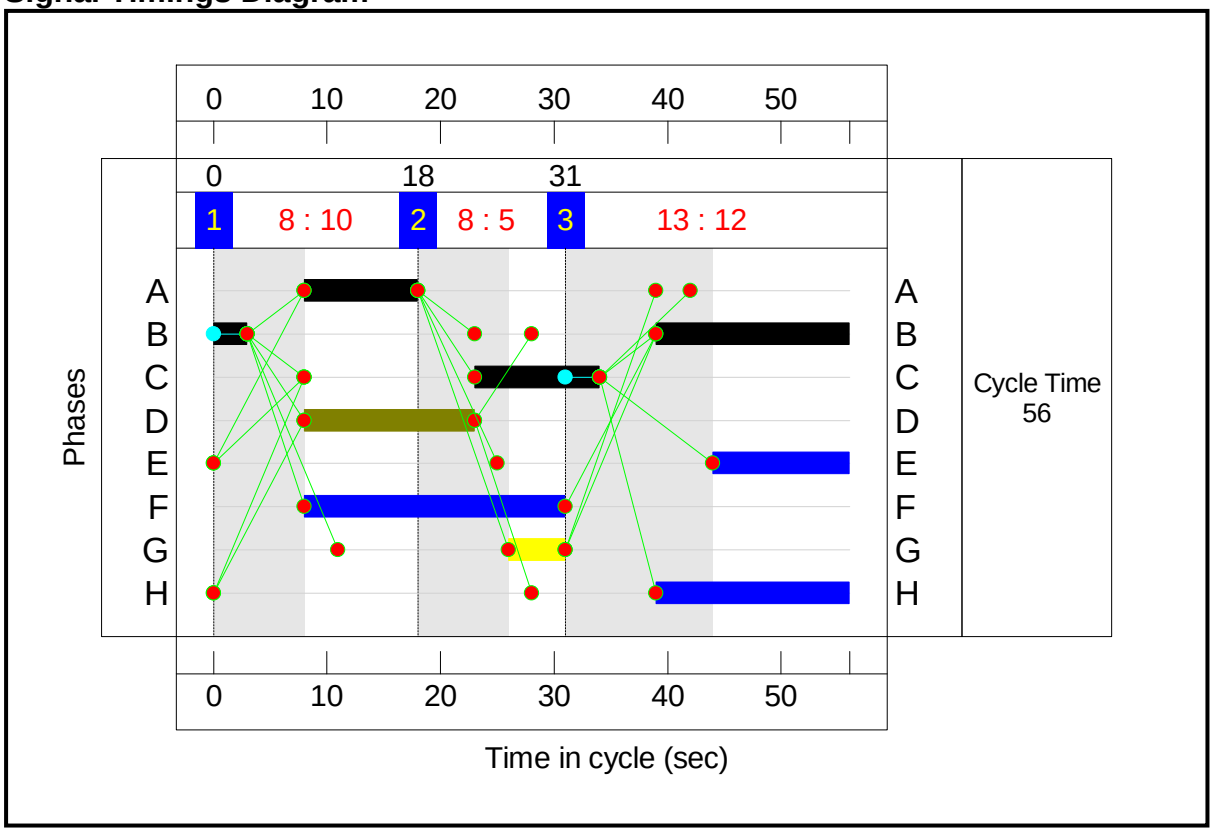
Staging Plan Diagram



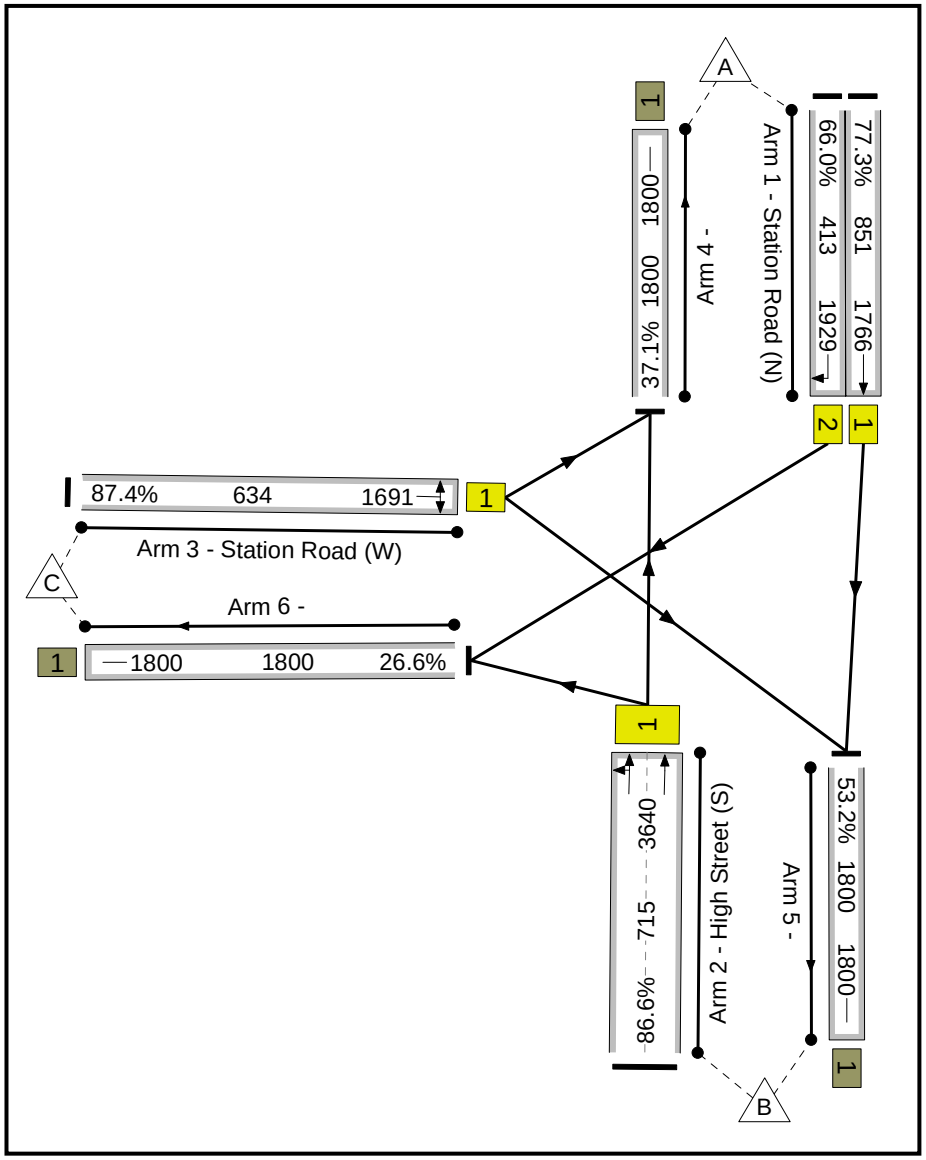
Stage Timings

Stage	1	2	3
Duration	10	5	12
Change Point	0	18	31

Signal Timings Diagram



Junction Layout Diagram



Link Results

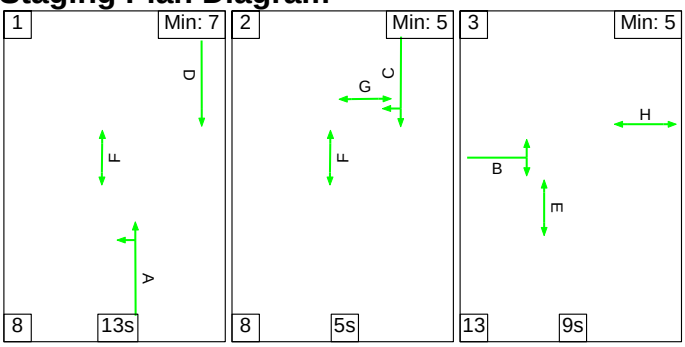
Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	26	15	658	1766	1766	851	77.3
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	273	1929	1929	413	66.0
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	10	-	619	3640	3640	715	86.6
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	20	-	554	1691	1691	634	87.4
4/1		U	N/A	N/A	-		-	-	-	667	1800	1800	1800	37.1
5/1		U	N/A	N/A	-		-	-	-	958	1800	1800	1800	53.2
6/1		U	N/A	N/A	-		-	-	-	479	1800	1800	1800	26.6

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	658	658	-	-	-	2.2	1.7	-	3.9	21.1	8.4	1.7	10.1	
1/2	273	273	-	-	-	1.5	1.0	-	2.5	32.8	3.9	1.0	4.8	
2/1	619	619	-	-	-	3.7	3.0	-	6.8	39.4	9.3	3.0	12.3	
3/1	554	554	-	-	-	2.5	3.2	-	5.7	37.1	8.0	3.2	11.2	
4/1	667	667	-	-	-	0.0	0.3	-	0.3	1.8	4.2	0.3	4.5	
5/1	958	958	-	-	-	0.0	0.6	-	0.6	2.1	0.0	0.6	0.6	
6/1	479	479	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): 3.0 Total Delay for Signalled Links (pcuHr): 18.83
PRC Over All Links (%): 3.0 Total Delay Over All Links(pcuHr): 19.91 Cycle Time (s): 56

Scenario 12: 'Base + Com 2024 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 12: 'Base + Com 2024 PM'

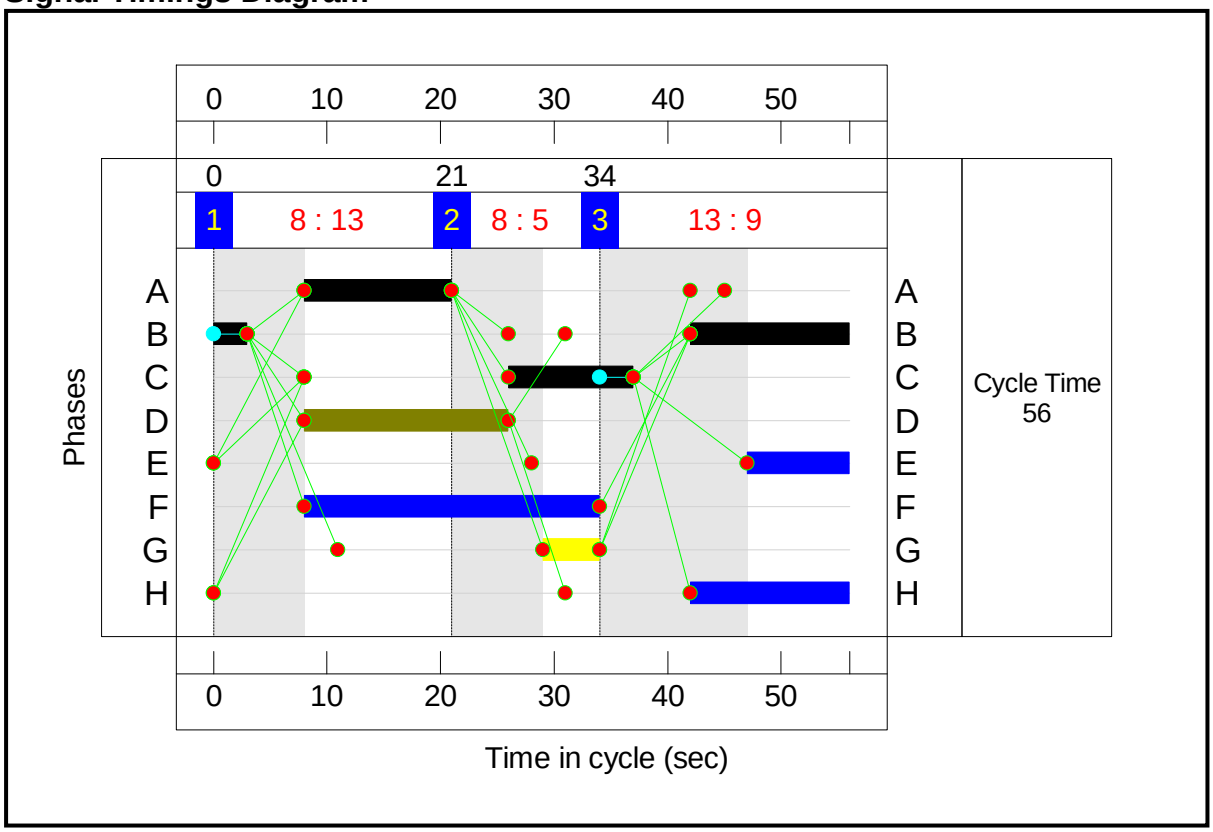
Staging Plan Diagram



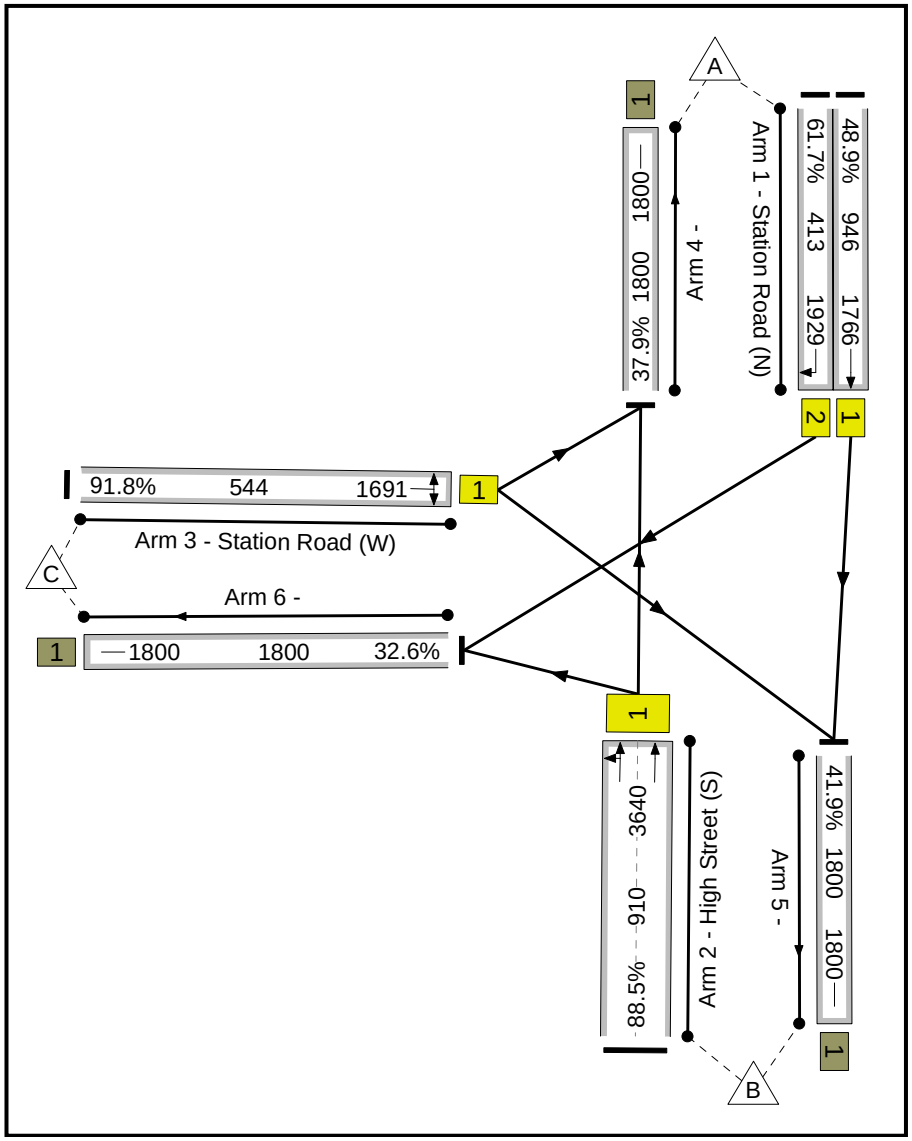
Stage Timings

Stage	1	2	3
Duration	13	5	9
Change Point	0	21	34

Signal Timings Diagram



Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	29	18	463	1766	1766	946	48.9
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	255	1929	1929	413	61.7
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	13	-	805	3640	3640	910	88.5
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	17	-	499	1691	1691	544	91.8
4/1		U	N/A	N/A	-		-	-	-	682	1800	1800	1800	37.9
5/1		U	N/A	N/A	-		-	-	-	754	1800	1800	1800	41.9
6/1		U	N/A	N/A	-		-	-	-	586	1800	1800	1800	32.6

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	463	463	-	-	-	1.1	0.5	-	1.5	11.9	4.5	0.5	5.0	
1/2	255	255	-	-	-	1.4	0.8	-	2.2	31.2	3.5	0.8	4.3	
2/1	805	805	-	-	-	4.5	3.6	-	8.1	36.3	11.9	3.6	15.4	
3/1	499	499	-	-	-	2.5	4.6	-	7.2	51.7	7.3	4.6	12.0	
4/1	682	682	-	-	-	0.0	0.3	-	0.3	1.8	4.7	0.3	5.0	
5/1	754	754	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4	
6/1	586	586	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2	

PRC for Signalled Links (%): -2.0 Total Delay for Signalled Links (pcuHr): 19.02
PRC Over All Links (%): -2.0 Total Delay Over All Links(pcuHr): 19.96 Cycle Time (s): 56

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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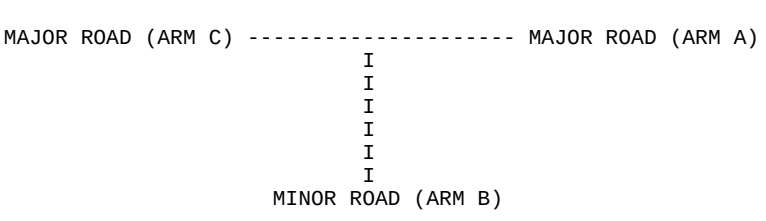
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd AM.vpi"
(drive-on-the-left) at 11:42:09 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 2
LOCATION	: North Hyde Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde 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) 7.64 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)119.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 23.0 M.
- VISIBILITY TO RIGHT	(VB-A) 19.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 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
635.90	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
494.40	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
642.88	0.23	0.23

(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: Base+Com 2024

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	8.29	12.43	8.29
ARM B	15.00	45.00	75.00	0.10	0.15	0.10
ARM C	15.00	45.00	75.00	6.44	9.66	6.44

Demand set: Base+Com 2024

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.072	0.928
		0.0	48.0	615.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.625	0.000	0.375
		5.0	0.0	3.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.988	0.012	0.000
		509.0	6.0	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 DEMAND SET Base+Com 2024
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	0.10	6.55	0.015		0.00	0.02	0.2		0.15
C-A	6.39								
C-B	0.08	8.79	0.009		0.00	0.01	0.1		0.11
A-B	0.60								
A-C	7.72								

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)
08.00-08.15									
B-AC	0.12	6.06	0.020		0.02	0.02	0.3		0.17
C-A	7.63								
C-B	0.09	8.42	0.011		0.01	0.01	0.2		0.12
A-B	0.72								
A-C	9.21								

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)
08.15-08.30									
B-AC	0.15	5.38	0.027		0.02	0.03	0.4		0.19
C-A	9.34								
C-B	0.11	7.90	0.014		0.01	0.01	0.2		0.13
A-B	0.88								
A-C	11.29								

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	0.15	5.38	0.027		0.03	0.03	0.4		0.19
C-A	9.34								
C-B	0.11	7.90	0.014		0.01	0.01	0.2		0.13
A-B	0.88								
A-C	11.29								

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	0.12	6.06	0.020		0.03	0.02	0.3		0.17
C-A	7.63								
C-B	0.09	8.42	0.011		0.01	0.01	0.2		0.12
A-B	0.72								
A-C	9.21								

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)
09.00-09.15									
B-AC	0.10	6.55	0.015		0.02	0.02	0.2		0.16
C-A	6.39								
C-B	0.08	8.79	0.009		0.01	0.01	0.1		0.11
A-B	0.60								
A-C	7.72								

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-B

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	11.0	7.3	1.9	0.17	1.9	0.17
C-A	700.6	467.1				
C-B	8.3	5.5	1.0	0.12	1.0	0.12
A-B	66.1	44.0				
A-C	846.5	564.3				
ALL	1632.4	1088.3	2.9	0.00	2.9	0.00

* 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 RUN*******

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

Printed at 11:46:37 on 05/08/2012]

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

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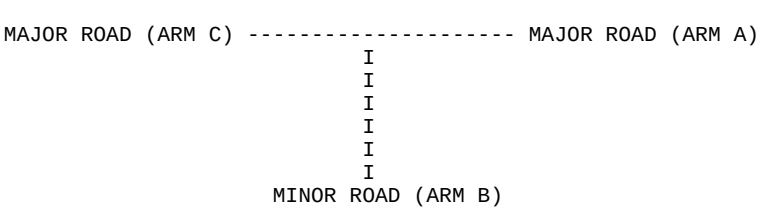
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 12:28:31 on Friday, 10 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 2
LOCATION	: North Hyde Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde 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) 7.64 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)119.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 23.0 M.
- VISIBILITY TO RIGHT	(VB-A) 19.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 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
635.90	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
494.40	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
642.88	0.23	0.23

(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: Base+Com 2024

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

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

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	7.24	10.86	7.24
ARM B	15.00	45.00	75.00	0.71	1.07	0.71
ARM C	15.00	45.00	75.00	6.19	9.28	6.19

Demand set: Base+Com 2024

TIME	FROM/TO	ARM A	ARM B	ARM C
17.00 - 18.30				
	ARM A	0.000	0.014	0.986
		0.0	8.0	571.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.439	0.000	0.561
		25.0	0.0	32.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.988	0.012	0.000
		489.0	6.0	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 DEMAND SET Base+Com 2024
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)
17.00-17.15									
B-AC	0.72	7.28	0.098		0.00	0.11	1.6		0.15
C-A	6.14								
C-B	0.08	9.03	0.008		0.00	0.01	0.1		0.11
A-B	0.10								
A-C	7.16								
17.15-17.30									
B-AC	0.85	6.85	0.125		0.11	0.14	2.1		0.17
C-A	7.33								
C-B	0.09	8.71	0.010		0.01	0.01	0.2		0.12
A-B	0.12								
A-C	8.56								
17.30-17.45									
B-AC	1.05	6.24	0.168		0.14	0.20	2.9		0.19
C-A	8.97								
C-B	0.11	8.26	0.013		0.01	0.01	0.2		0.12
A-B	0.15								
A-C	10.48								
17.45-18.00									
B-AC	1.05	6.24	0.168		0.20	0.20	3.0		0.19
C-A	8.97								
C-B	0.11	8.26	0.013		0.01	0.01	0.2		0.12
A-B	0.15								
A-C	10.48								

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-AC	0.85	6.85	0.125		0.20	0.14	2.2		0.17
C-A	7.33								
C-B	0.09	8.71	0.010		0.01	0.01	0.2		0.12
A-B	0.12								
A-C	8.56								

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)
18.15-18.30									
B-AC	0.72	7.28	0.098		0.14	0.11	1.7		0.15
C-A	6.14								
C-B	0.08	9.03	0.008		0.01	0.01	0.1		0.11
A-B	0.10								
A-C	7.16								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.2
18.00	0.2
18.15	0.1
18.30	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	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	78.5	52.3	13.4	0.17	13.4	0.17
C-A	673.1	448.7				
C-B	8.3	5.5	1.0	0.12	1.0	0.12
A-B	11.0	7.3				
A-C	785.9	524.0				
ALL	1556.7	1037.8	14.4	0.01	14.4	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 RUN*******

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

Printed at 12:29:22 on 10/08/2012]

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

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RELEASE 5.0 (JUNE 2010)

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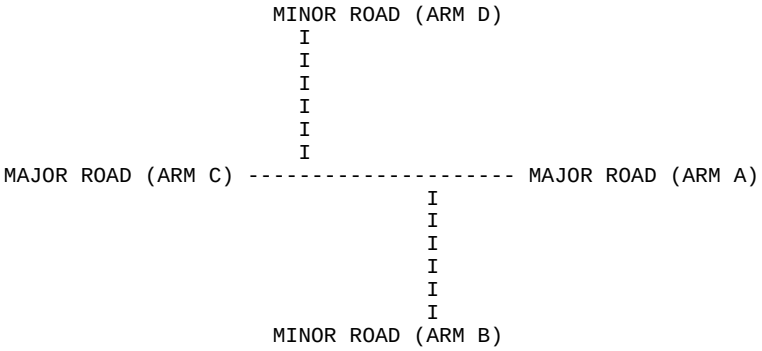
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd AM.vpi"
(drive-on-the-left) at 12:34:29 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 4
LOCATION	: Station Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

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) 8.25 M.	(W) 8.25 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) 60.00 M.	(VA-D) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (2)	YES (2)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 31.0 M.
- VISIBILITY TO RIGHT	(VB-A) 41.0 M.	(VD-C) 26.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.	(WD-A) 3.52 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B	Slope For Opposing
0.16	0.36	0.36	

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D	Slope For Opposing
0.14	0.31	0.31	

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing
620.29	0.21	0.21	0.25	

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing
620.29	0.22	0.22	0.22	

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com 2024

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	6.96	10.44	6.96
ARM B	15.00	45.00	75.00	0.49	0.73	0.49
ARM C	15.00	45.00	75.00	10.45	15.67	10.45
ARM D	15.00	45.00	75.00	1.42	2.14	1.42

Demand set: Base+Com 2024

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.129	0.828	0.043
		0.0	72.0	461.0	24.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.462	0.000	0.538	0.000
		18.0	0.0	21.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.795	0.069	0.000	0.135
		665.0	58.0	0.0	113.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.088	0.000	0.912	0.000
		10.0	0.0	104.0	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-ACD	0.49	8.72	0.056		0.00	0.06	0.9		0.12
A-B	0.90								
A-C	5.78								
A-D	0.30								
AB-CD	(0.30)	8.06	0.037		0.00	0.04	0.6		0.13
AB-C	(6.05)								
D-ABC	1.43	5.93	0.241		0.00	0.31	4.4		0.22
C-D	1.42								
C-A	8.34								
C-B	0.73								
CD-AB	(0.73)	8.66	0.084		0.00	0.08	1.2		0.13
CD-A	(8.47)								

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-ACD	0.58	8.13	0.072		0.06	0.08	1.1		0.13
A-B	1.08								
A-C	6.91								
A-D	0.36								
AB-CD	(0.36)	7.62	0.047		0.04	0.05	0.7		0.14
AB-C	(7.22)								
D-ABC	1.71	5.34	0.320		0.31	0.46	6.6		0.27
C-D	1.69								
C-A	9.96								
C-B	0.87								
CD-AB	(0.87)	8.37	0.104		0.08	0.10	1.6		0.13
CD-A	(10.11)								

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)
08.15-08.30									
B-ACD	0.72	7.30	0.098		0.08	0.11	1.6		0.15
A-B	1.32								
A-C	8.46								
A-D	0.44								
AB-CD	(0.44)	7.01	0.063		0.05	0.06	0.9		0.15
AB-C	(8.84)								
D-ABC	2.09	4.52	0.463		0.46	0.82	11.4		0.40
C-D	2.07								
C-A	12.20								
C-B	1.06								
CD-AB	(1.06)	7.97	0.134		0.10	0.13	2.0		0.14
CD-A	(12.38)								

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)
08.30-08.45									
B-ACD	0.72	7.30	0.098		0.11	0.11	1.6		0.15
A-B	1.32								
A-C	8.46								
A-D	0.44								
AB-CD	(0.44)	7.01	0.063		0.06	0.06	0.9		0.15
AB-C	(8.84)								
D-ABC	2.09	4.52	0.463		0.82	0.84	12.5		0.41
C-D	2.07								
C-A	12.20								
C-B	1.06								
CD-AB	(1.06)	7.97	0.134		0.13	0.13	2.0		0.14
CD-A	(12.39)								

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)
08.45-09.00									
B-ACD	0.58	8.13	0.072		0.11	0.08	1.2		0.13
A-B	1.08								
A-C	6.91								
A-D	0.36								
AB-CD	(0.36)	7.62	0.047		0.06	0.05	0.7		0.14
AB-C	(7.22)								
D-ABC	1.71	5.34	0.320		0.84	0.48	7.7		0.28
C-D	1.69								
C-A	9.96								
C-B	0.87								
CD-AB	(0.87)	8.37	0.104		0.13	0.10	1.6		0.13
CD-A	(10.12)								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-ACD	0.49	8.71	0.056		0.08	0.06	0.9		0.12
A-B	0.90								
A-C	5.78								
A-D	0.30								
AB-CD	(0.30)	8.06	0.037		0.05	0.04	0.6		0.13
AB-C	(6.05)								
D-ABC	1.43	5.93	0.241		0.48	0.32	5.1		0.22
C-D	1.42								
C-A	8.34								
C-B	0.73								
CD-AB	(0.73)	8.66	0.084		0.10	0.08	1.3		0.13
CD-A	(8.47)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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 AB-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 D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	
08.30	0.8	*
08.45	0.8	*
09.00	0.5	
09.15	0.3	

QUEUE FOR STREAM CD-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-ACD	53.7	35.8	7.3	0.14	7.3	0.14
A-B	99.1	66.1				
A-C	634.5	423.0				
A-D	33.0	22.0				
AB-CD	(33.0)	(22.0)	4.4	0.13	4.4	0.13
AB-C	(663.4)	(442.3)				
D-ABC	156.9	104.6	47.7	0.30	47.7	0.30
C-D	155.5	103.7				
C-A	915.3	610.2				
C-B	79.8	53.2				
CD-AB	(79.8)	(53.2)	9.6	0.12	9.6	0.12
CD-A	(929.1)	(619.4)				
ALL	2128.0	1418.6	69.0	0.03	69.0	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 RUN*******

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

Printed at 12:35:10 on 05/08/2012]

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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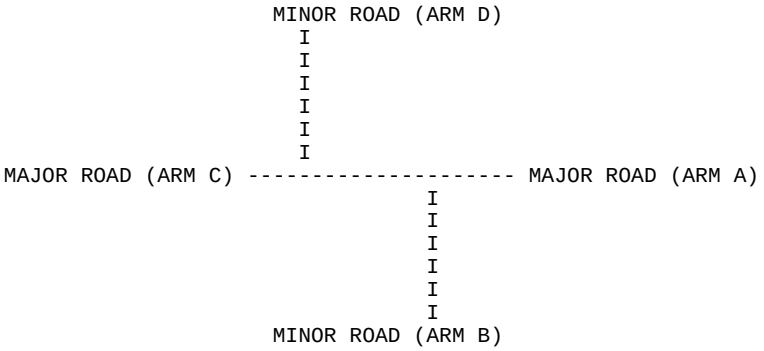
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 12:35:19 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 4
LOCATION	: Station Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

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) 8.25 M.	(W) 8.25 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) 60.00 M.	(VA-D) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (2)	YES (2)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 31.0 M.
- VISIBILITY TO RIGHT	(VB-A) 41.0 M.	(VD-C) 26.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.	(WD-A) 3.52 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B	Slope For Opposing
0.16	0.36	0.36	

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D	Slope For Opposing
0.14	0.31	0.31	

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing
620.29	0.21	0.21	0.25	

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing
620.29	0.22	0.22	0.22	

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com 2024

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	7.72	11.59	7.72
ARM B	15.00	45.00	75.00	1.16	1.74	1.16
ARM C	15.00	45.00	75.00	8.79	13.18	8.79
ARM D	15.00	45.00	75.00	0.73	1.09	0.73

Demand set: Base+Com 2024

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.026	0.937	0.037
		0.0	16.0	579.0	23.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.581	0.000	0.419	0.000
		54.0	0.0	39.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.831	0.021	0.000	0.148
		584.0	15.0	0.0	104.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.034	0.000	0.966	0.000
		2.0	0.0	56.0	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-ACD	1.17	8.22	0.142		0.00	0.16	2.4		0.14
A-B	0.20								
A-C	7.27								
A-D	0.29								
AB-CD	(0.29)	8.43	0.034		0.00	0.03	0.5		0.12
AB-C	(7.75)								
D-ABC	0.73	5.94	0.123		0.00	0.14	2.0		0.19
C-D	1.30								
C-A	7.33								
C-B	0.19								
CD-AB	(0.19)	8.50	0.022		0.00	0.02	0.3		0.12
CD-A	(7.35)								

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-ACD	1.39	7.63	0.183		0.16	0.22	3.2		0.16
A-B	0.24								
A-C	8.68								
A-D	0.34								
AB-CD	(0.34)	8.05	0.043		0.03	0.04	0.6		0.13
AB-C	(9.26)								
D-ABC	0.87	5.37	0.162		0.14	0.19	2.8		0.22
C-D	1.56								
C-A	8.75								
C-B	0.22								
CD-AB	(0.22)	8.18	0.027		0.02	0.03	0.4		0.13
CD-A	(8.78)								

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-ACD	1.71	6.78	0.252		0.22	0.33	4.8		0.20
A-B	0.29								
A-C	10.62								
A-D	0.42								
AB-CD	(0.42)	7.54	0.056		0.04	0.06	0.8		0.14
AB-C	(11.34)								
D-ABC	1.06	4.59	0.232		0.19	0.30	4.2		0.28
C-D	1.91								
C-A	10.72								
C-B	0.28								
CD-AB	(0.28)	7.73	0.036		0.03	0.04	0.5		0.13
CD-A	(10.75)								

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-ACD	1.71	6.78	0.252		0.33	0.33	5.0		0.20
A-B	0.29								
A-C	10.62								
A-D	0.42								
AB-CD	(0.42)	7.54	0.056		0.06	0.06	0.8		0.14
AB-C	(11.34)								
D-ABC	1.06	4.59	0.232		0.30	0.30	4.5		0.28
C-D	1.91								
C-A	10.72								
C-B	0.28								
CD-AB	(0.28)	7.73	0.036		0.04	0.04	0.5		0.13
CD-A	(10.75)								

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-ACD	1.39	7.62	0.183		0.33	0.23	3.5		0.16
A-B	0.24								
A-C	8.68								
A-D	0.34								
AB-CD	(0.34)	8.05	0.043		0.06	0.04	0.6		0.13
AB-C	(9.26)								
D-ABC	0.87	5.37	0.162		0.30	0.20	3.1		0.22
C-D	1.56								
C-A	8.75								
C-B	0.22								
CD-AB	(0.22)	8.18	0.027		0.04	0.03	0.4		0.13
CD-A	(8.78)								

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-ACD	1.17	8.22	0.142		0.23	0.17	2.6		0.14
A-B	0.20								
A-C	7.27								
A-D	0.29								
AB-CD	(0.29)	8.43	0.034		0.04	0.03	0.5		0.12
AB-C	(7.76)								
D-ABC	0.73	5.94	0.123		0.20	0.14	2.2		0.19
C-D	1.30								
C-A	7.33								
C-B	0.19								
CD-AB	(0.19)	8.50	0.022		0.03	0.02	0.3		0.12
CD-A	(7.35)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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

QUEUE FOR STREAM AB-CD

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

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

QUEUE FOR STREAM CD-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-ACD	128.0	85.3	21.4	0.17	21.4	0.17
A-B	22.0	14.7				
A-C	797.0	531.3				
A-D	31.7	21.1				
AB-CD	(31.7)	(21.1)	4.0	0.13	4.0	0.13
AB-C	(850.6)	(567.0)				
D-ABC	79.8	53.2	18.7	0.23	18.7	0.23
C-D	143.1	95.4				
C-A	803.8	535.9				
C-B	20.6	13.8				
CD-AB	(20.6)	(13.8)	2.6	0.12	2.6	0.12
CD-A	(806.6)	(537.7)				
ALL	2026.1	1350.7	46.6	0.02	46.6	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 RUN*******

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

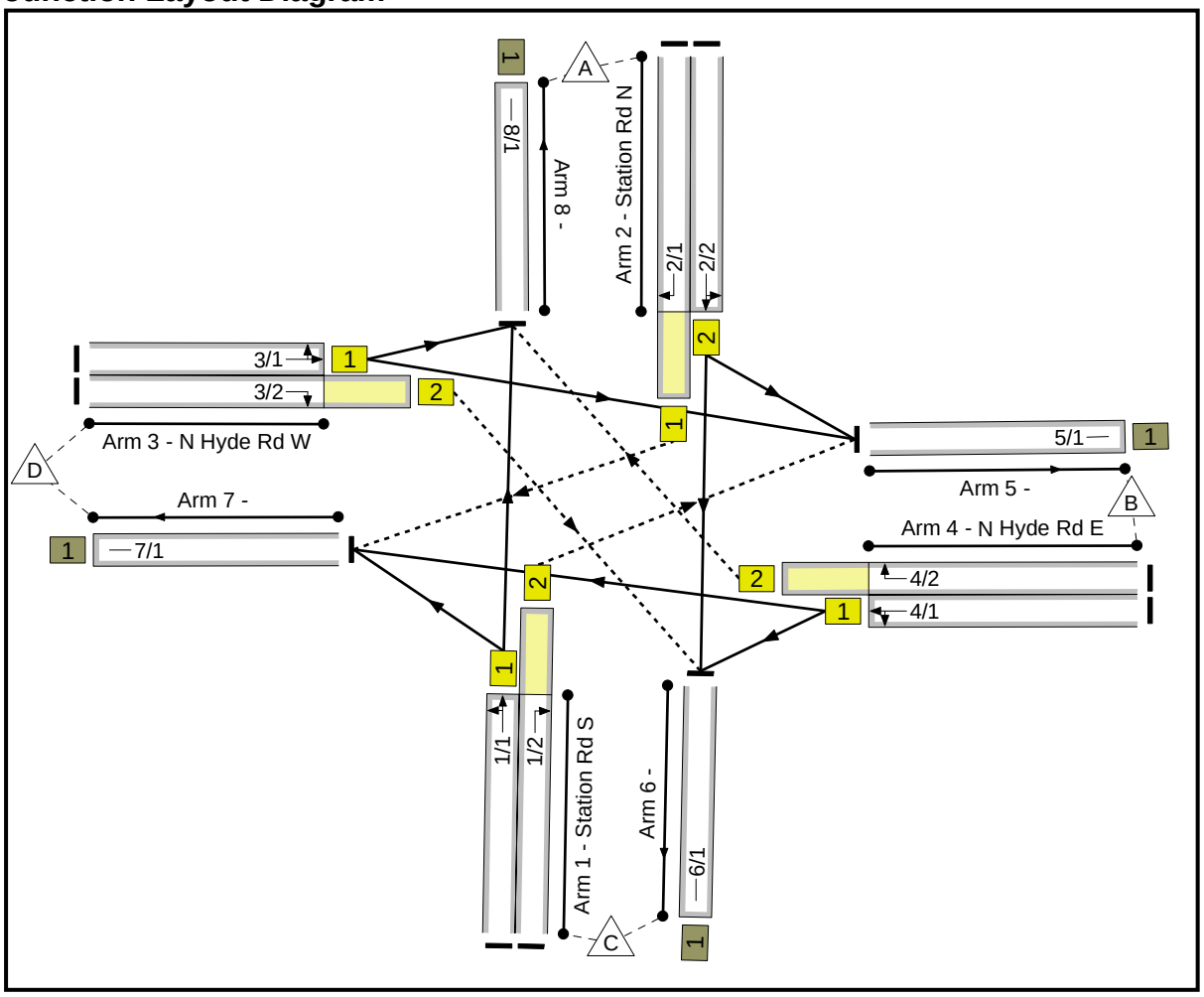
Printed at 12:35:52 on 05/08/2012]

Full Input Data And Results

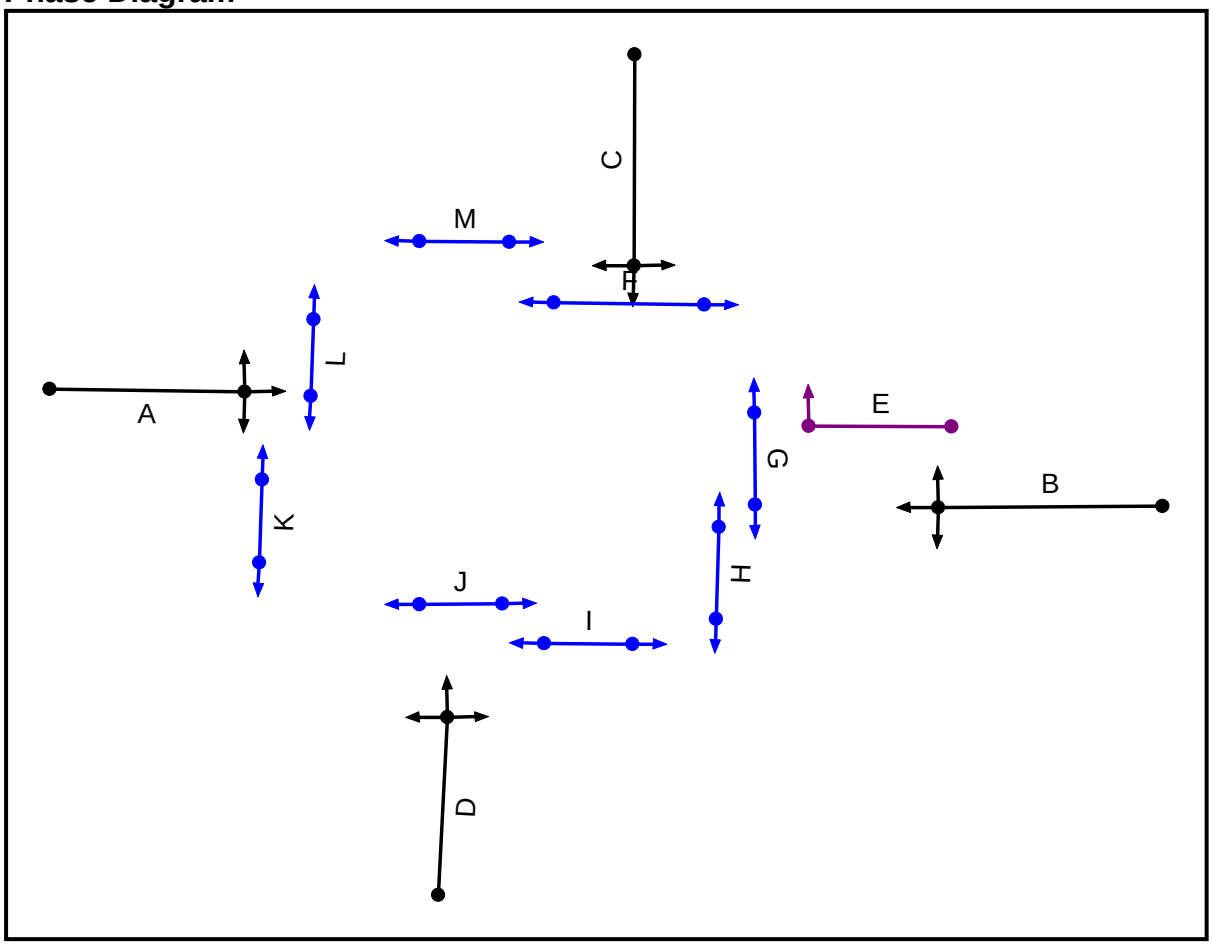
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10AM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		1	1
G	Pedestrian		1	1
H	Pedestrian		1	1
I	Pedestrian		4	4
J	Pedestrian		1	1
K	Pedestrian		4	4
L	Pedestrian		1	1
M	Pedestrian		4	4

Full Input Data And Results

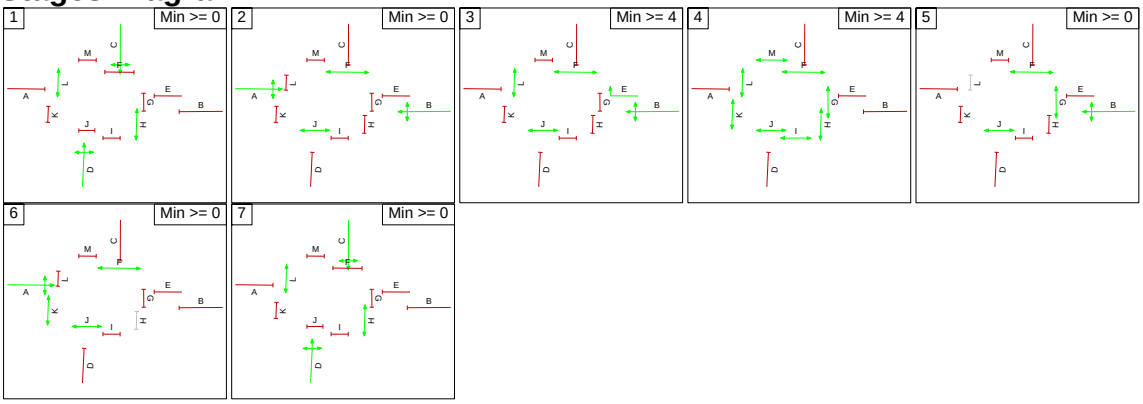
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	6	5	-	9	-	10	-	-	5	10
	B	-		6	6	-	-	-	5	10	-	10	-	10
	C	7	7		-	5	5	10	-	9	-	10	-	-
	D	7	7	-		5	-	10	-	-	5	10	-	10
	E	7	-	6	6		-	5	5	-	-	-	-	10
	F	-	-	9	-	-		-	-	-	-	-	-	-
	G	8	-	8	8	8	-		-	-	-	-	-	-
	H	-	10	-	-	10	-	-		-	-	-	-	-
	I	9	9	9	-	-	-	-	-		-	-	-	-
	J	-	-	-	9	-	-	-	-	-		-	-	-
	K	-	8	8	8	-	-	-	-	-	-		-	-
	L	9	-	-	-	-	-	-	-	-	-	-		-
	M	8	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	C D H L
2	A B F J
3	B E F J L
4	F G H I J K L M
5	B F G J
6	A F J K
7	C D H L

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

From Stage \ To Stage	1	2	3	4	5	6	7
1		10	10	10	10	10	0
2	9		5	10	9	10	9
3	9	9		10	5	10	9
4	9	10	10		10	9	9
5	9	8	8	10		10	9
6	9	8	X	10	9		9
7	0	10	10	10	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
11: 'Base + Com 2024 AM'	08:00	09:00	01:00	

Scenario 9: 'Base + Com 2024 AM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 11: 'Base + Com 2024 AM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	151	426	143	720
	B	145	0	331	439	915
	C	305	163	0	118	586
	D	109	258	79	0	446
	Tot.	559	572	836	700	2667

Link Traffic Flows

Arm/Link	Flow Group 11: Base + Com 2024 AM
1/1	423
1/2	163
2/1	143
2/2	577
3/1	367
3/2	79
4/1	770
4/2	145
5/1	572
6/1	836
7/1	700
8/1	559

Lane Saturation Flows

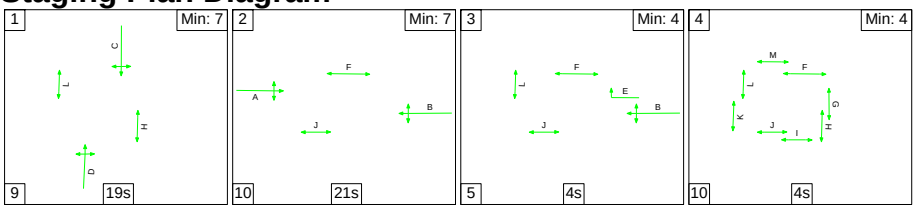
Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 9: 'Base + Com 2024 AM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 11: 'Base + Com 2024 AM'

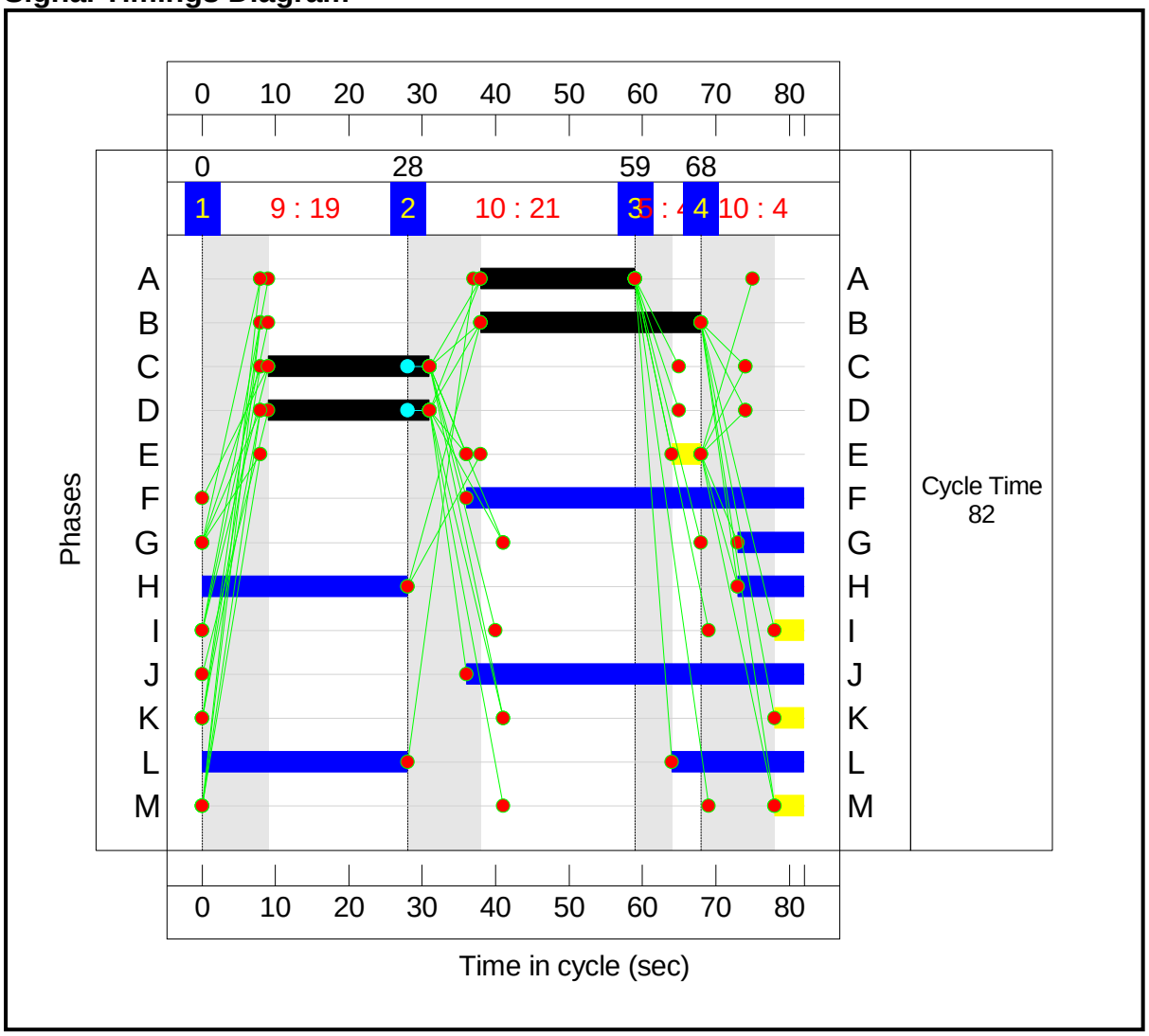
Staging Plan Diagram



Stage Timings

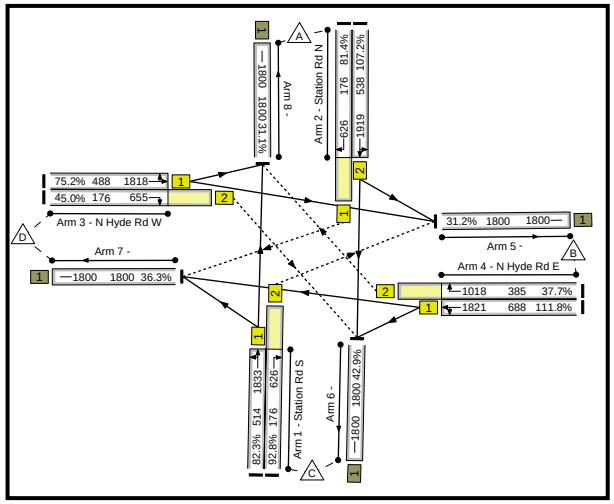
Stage	1	2	3	4
Duration	19	21	4	4
Change Point	0	28	59	68

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	22	-	423	1833	1833	514	82.3
1/2	Station Rd S Right	O	N/A	N/A	D		1	22	-	163	1741	626	176	92.8
2/1	Station Rd N Right	O	N/A	N/A	C		1	22	-	143	1730	626	176	81.4
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	22	-	577	1919	1919	538	107.2
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	21	-	367	1818	1818	488	75.2
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	21	-	79	1760	655	176	45.0
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	30	-	770	1821	1821	688	111.8
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	30	4	145	1815	1018	385	37.7
5/1		U	N/A	N/A	-		-	-	-	572	1800	1800	1800	31.2
6/1		U	N/A	N/A	-		-	-	-	836	1800	1800	1800	42.9
7/1		U	N/A	N/A	-		-	-	-	700	1800	1800	1800	36.3
8/1		U	N/A	N/A	-		-	-	-	559	1800	1800	1800	31.1

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	423	423	-	-	-	3.2	2.2	-	5.5	46.4	8.9	2.2	11.1	
1/2	163	163	0	0	163	1.1	4.0	0.9	5.9	130.5	2.9	4.0	6.9	
2/1	143	143	60	0	83	1.0	2.0	0.7	3.6	91.4	2.7	2.0	4.6	
2/2	577	538	-	-	-	6.3	25.1	-	31.4	195.7	14.0	25.1	39.1	
3/1	367	367	-	-	-	2.8	1.5	-	4.3	42.1	7.6	1.5	9.1	
3/2	79	79	0	0	79	0.5	0.4	0.6	1.5	68.3	1.4	0.4	1.8	
4/1	770	688	-	-	-	7.9	45.1	-	53.0	247.7	19.4	45.1	64.5	
4/2	145	145	85	53	7	0.7	0.3	0.5	1.5	36.5	2.2	0.3	2.5	
5/1	562	562	-	-	-	0.0	0.2	-	0.3	1.7	5.1	0.2	5.3	
6/1	772	772	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4	
7/1	653	653	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	
8/1	559	559	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): -24.3 Total Delay for Signalled Links (pcuHr): 106.61

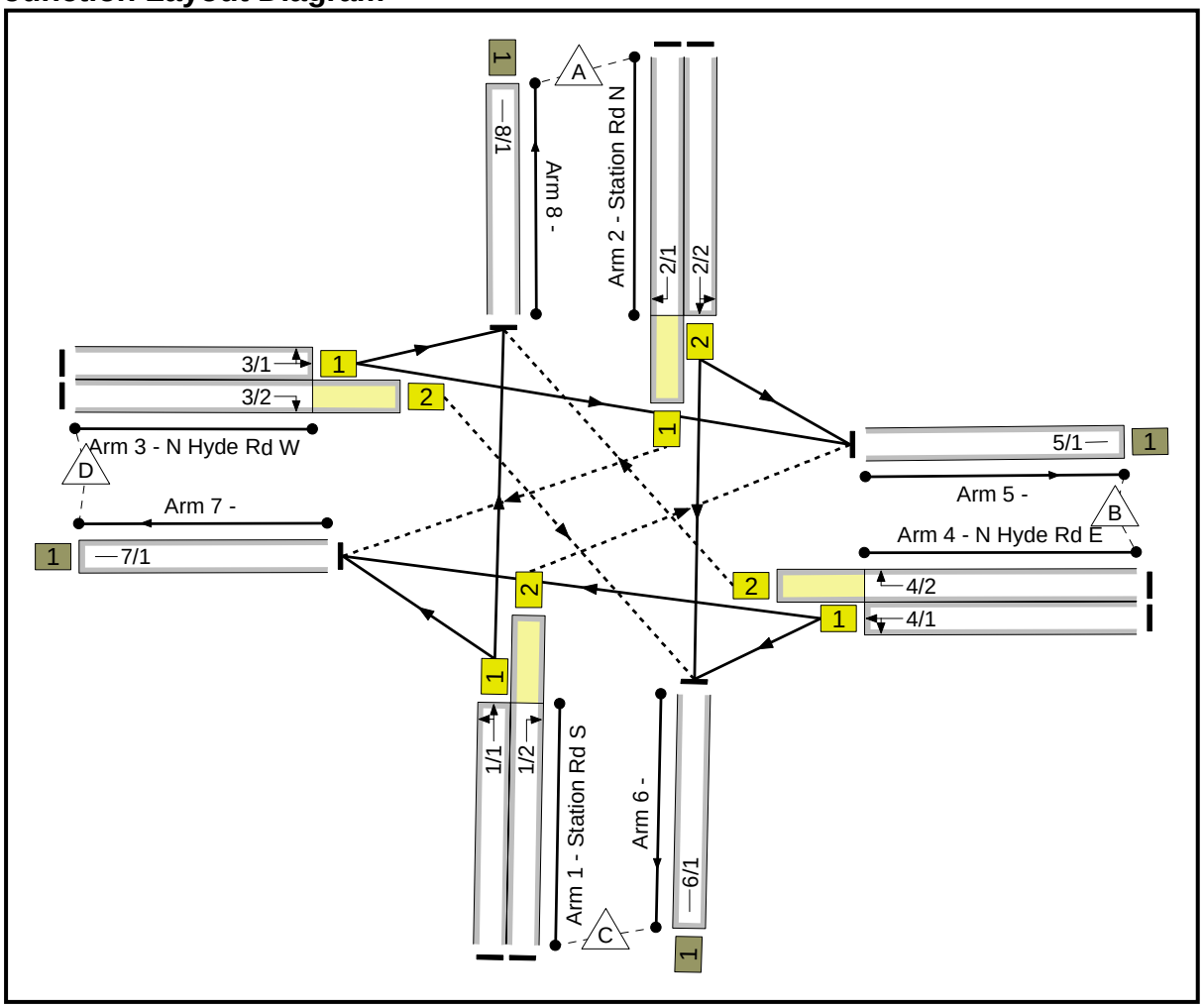
PRC Over All Links (%): -24.3 Total Delay Over All Links(pcuHr): 107.76 Cycle Time (s): 82

Full Input Data And Results

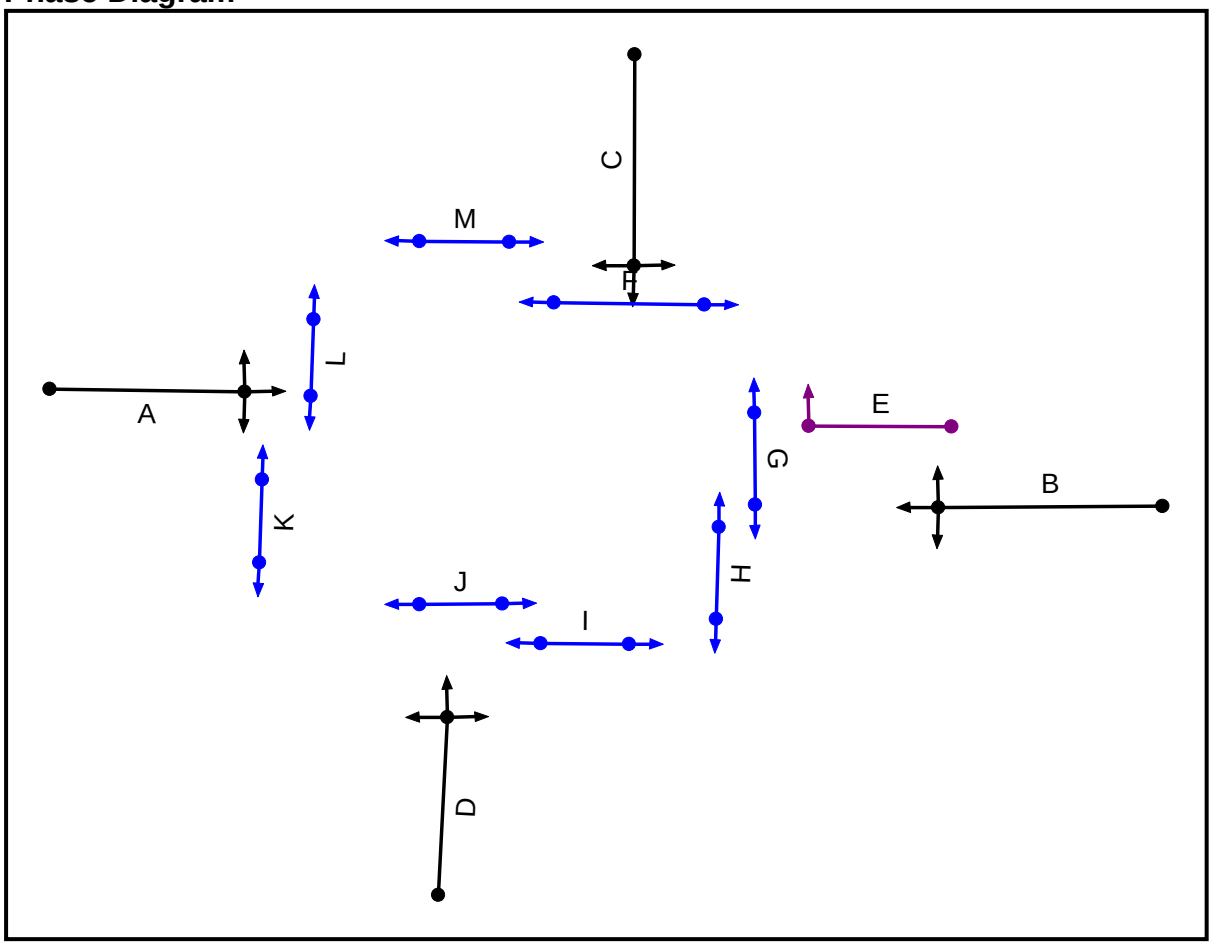
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10PM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5

Full Input Data And Results

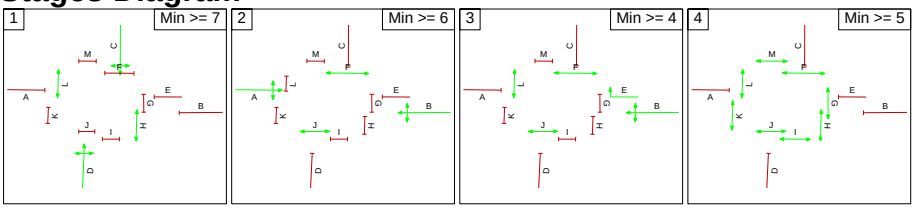
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	6	5	-	9	-	10	-	-	5	10
	B	-		6	6	-	-	-	5	10	-	10	-	10
	C	7	7		-	5	5	10	-	9	-	10	-	-
	D	7	7	-		5	-	10	-	-	5	10	-	10
	E	7	-	6	6		-	5	5	-	-	-	-	10
	F	-	-	9	-	-		-	-	-	-	-	-	-
	G	8	-	8	8	8	-		-	-	-	-	-	-
	H	-	10	-	-	10	-	-		-	-	-	-	-
	I	9	9	9	-	-	-	-	-		-	-	-	-
	J	-	-	-	9	-	-	-	-	-		-	-	-
	K	-	8	8	8	-	-	-	-	-	-		-	-
	L	9	-	-	-	-	-	-	-	-	-	-		-
	M	8	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	C D H L
2	A B F J
3	B E F J L
4	F G H I J K L M

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

		To Stage			
		1	2	3	4
From Stage	1		10	10	10
	2	9		5	10
	3	9	9		10
	4	9	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

8/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
12: 'Base + Com 2024 PM'	17:30	18:30	01:00	

Scenario 9: 'Base + Com 2024 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 12: 'Base + Com 2024 PM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	187	372	131	690
	B	229	0	275	383	887
	C	323	259	0	92	674
	D	118	290	56	0	464
	Tot.	670	736	703	606	2715

Link Traffic Flows

Arm/Link	Flow Group 12: Base + Com 2024 PM
1/1	415
1/2	259
2/1	131
2/2	559
3/1	408
3/2	56
4/1	658
4/2	229
5/1	736
6/1	703
7/1	606
8/1	670

Lane Saturation Flows

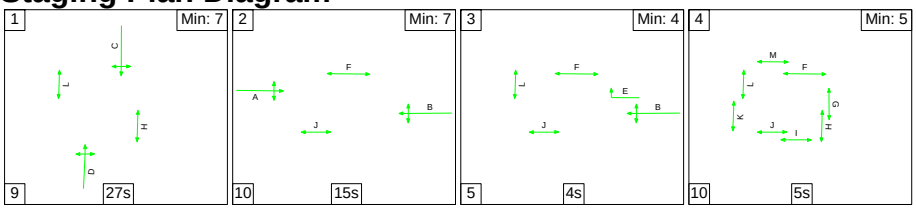
Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 9: 'Base + Com 2024 PM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 12: 'Base + Com 2024 PM'

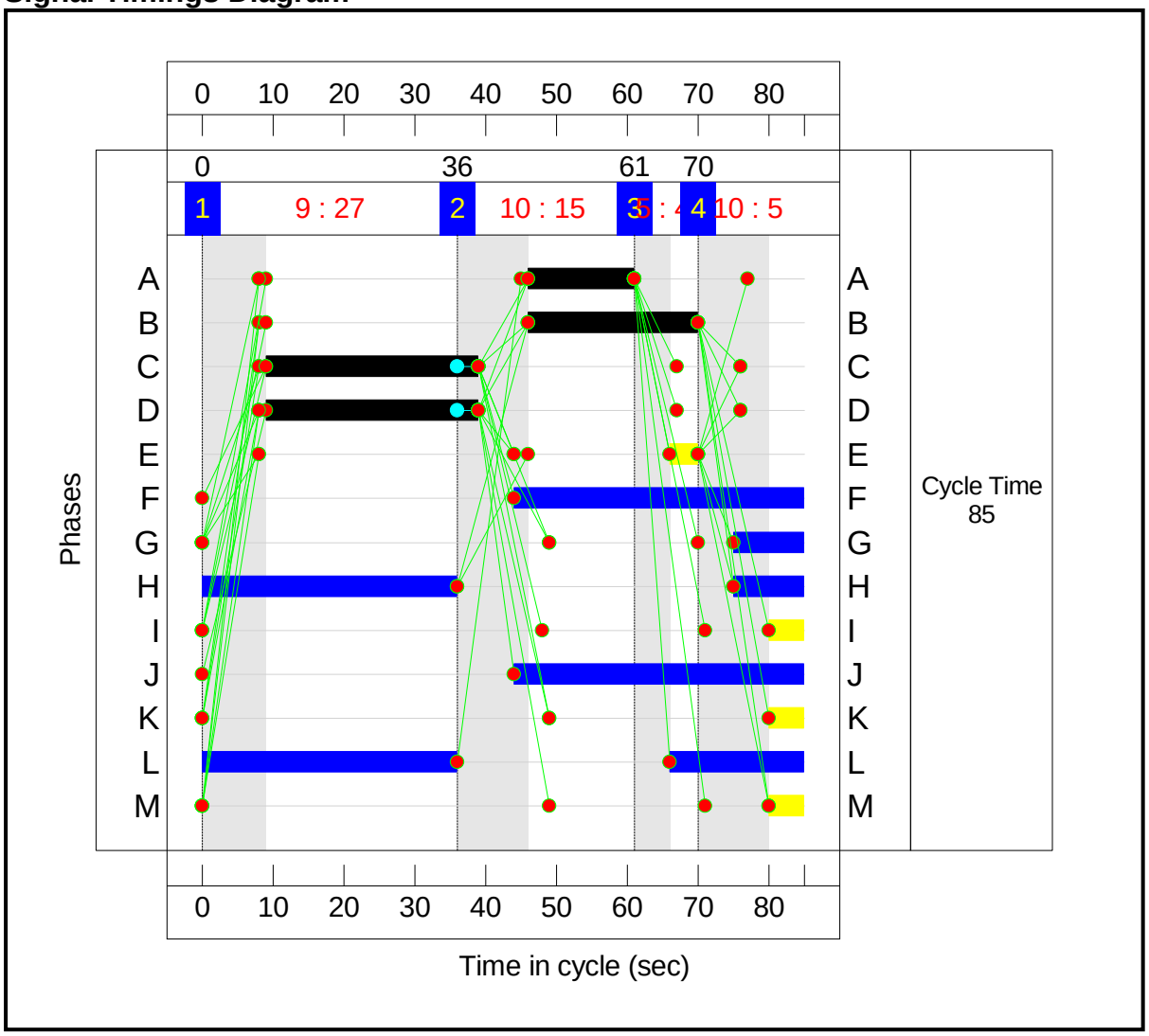
Staging Plan Diagram



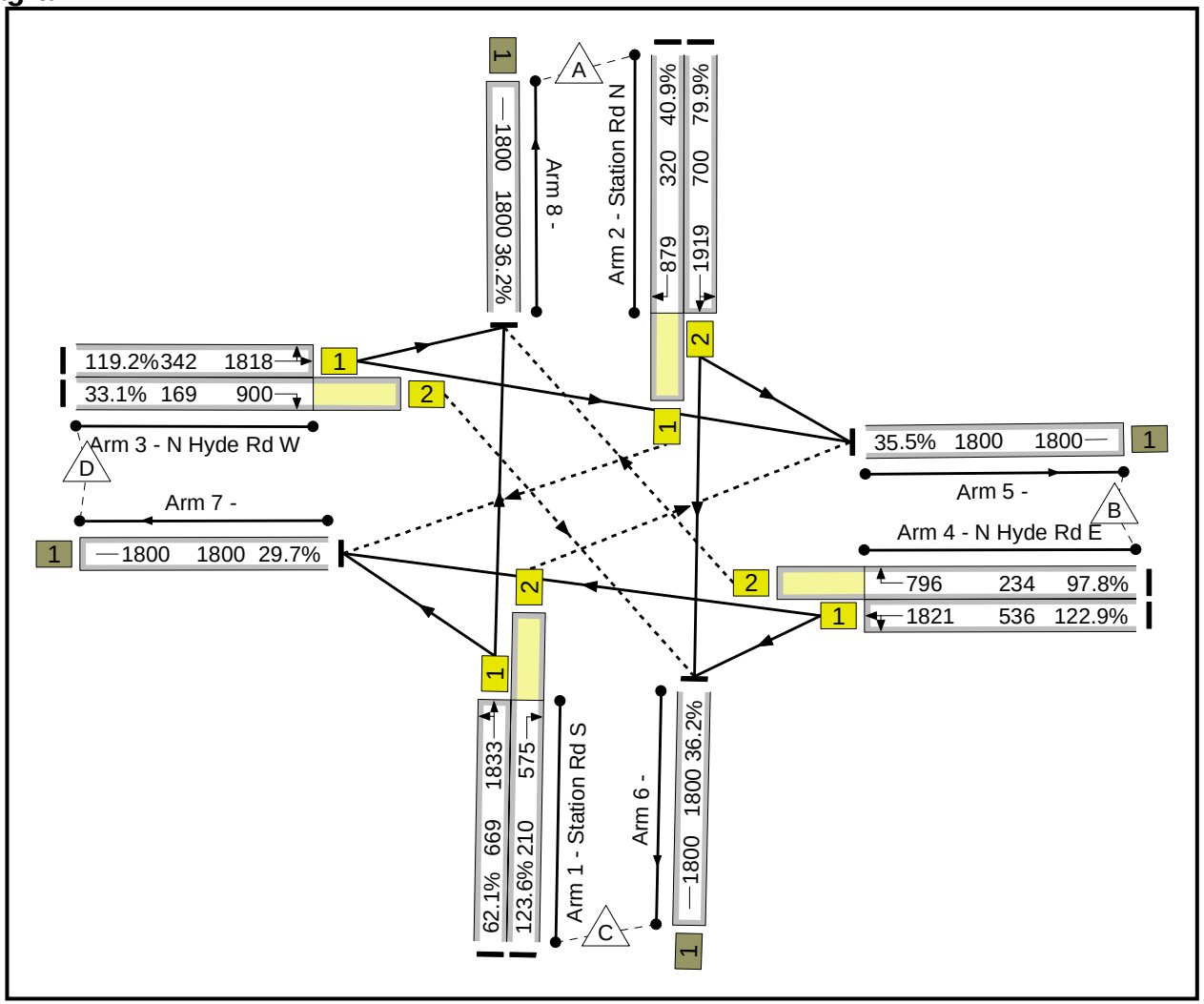
Stage Timings

Stage	1	2	3	4
Duration	27	15	4	5
Change Point	0	36	61	70

Signal Timings Diagram



Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	30	-	415	1833	1833	669	62.1
1/2	Station Rd S Right	O	N/A	N/A	D		1	30	-	259	1741	575	210	123.6
2/1	Station Rd N Right	O	N/A	N/A	C		1	30	-	131	1730	879	320	40.9
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	30	-	559	1919	1919	700	79.9
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	15	-	408	1818	1818	342	119.2
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	15	-	56	1760	900	169	33.1
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	24	-	658	1821	1821	536	122.9
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	24	4	229	1815	796	234	97.8
5/1		U	N/A	N/A	-		-	-	-	736	1800	1800	1800	35.5
6/1		U	N/A	N/A	-		-	-	-	703	1800	1800	1800	36.2
7/1		U	N/A	N/A	-		-	-	-	606	1800	1800	1800	29.7
8/1		U	N/A	N/A	-		-	-	-	670	1800	1800	1800	36.2

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	415	415	-	-	-	2.6	0.8	-	3.4	29.2	8.0	0.8	8.8	
1/2	259	210	85	0	125	3.5	27.1	1.2	31.8	441.9	7.3	27.1	34.4	
2/1	131	131	128	0	3	0.7	0.3	0.5	1.5	40.8	2.1	0.3	2.5	
2/2	559	559	-	-	-	3.8	1.9	-	5.7	36.6	11.8	1.9	13.7	
3/1	408	342	-	-	-	6.0	35.7	-	41.7	368.4	11.2	35.7	46.9	
3/2	56	56	0	0	56	0.5	0.2	0.3	1.0	66.7	1.1	0.2	1.4	
4/1	658	536	-	-	-	9.9	63.8	-	73.7	403.3	19.1	63.8	82.9	
4/2	229	229	0	149	80	1.7	6.4	0.7	8.7	137.2	5.3	6.4	11.7	
5/1	640	640	-	-	-	0.0	0.3	-	0.3	1.4	3.5	0.3	3.8	
6/1	652	652	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	
7/1	535	535	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2	
8/1	651	651	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	

PRC for Signalled Links (%): -37.3 Total Delay for Signalled Links (pcuHr): 167.56

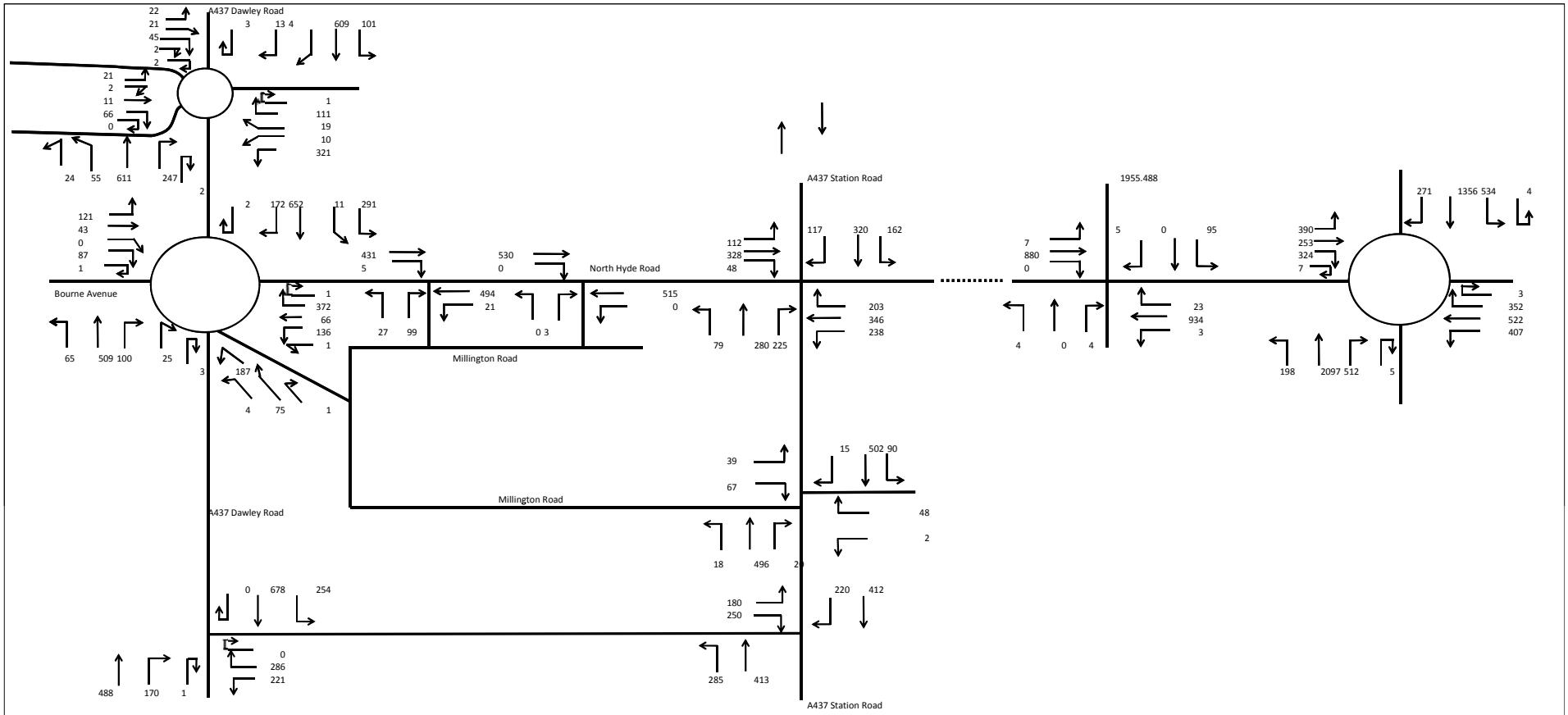
PRC Over All Links (%): -37.3 Total Delay Over All Links(pcuHr): 168.62 Cycle Time (s): 85

APPENDIX N

Drawing title: AM Peak Base 2014 + Committed + HPH5 PCUs	Client: –		Scale: NTS
	Job Title: Hyde Park Hayes	SKM COLIN BUCHANAN	Designed by: LL
			Drawn by: LL
			Ckd/Appd: JSB
			1st Issued: APR
			Full extension:
			Drg no: Figure

Drawing title: **PM Peak Base 2014 + Committed + HPH 5 Pcus**	Client: –	SKM COLIN BUCHANAN	Scale: NTS
	Job Title: **Hyde Park Hayes**		Designed by: LL
			Drawn by: LL
			Ckd/Appd: JSB
			1st Issued: APR
			Full extension:
			Drg no: **Figure**

Drawing title: **AM Peak Base 2014 + Committed + HPH4&5 PCUs**	Client: –	SKM COLIN BUCHANAN	Scale: NTS
	Job Title: **Hyde Park Hayes**		Designed by: LL
			Drawn by: LL
			Ckd/Appd: JSB
			1st Issued: APR
			Full extension:
			Drg no: **Figure**



Drawing title: **PM Peak Base 2014 + Committed + HPH 4&5 Pcus**	Client: –	SKM COLIN BUCHANAN	Scale: NTS
	Job Title: **Hyde Park Hayes**		Designed by: LL
			Drawn by: LL
			Ckd/Appd: JSB
			1st Issued: APR
			Full extension:
			Drg no: **Figure**

<Enter Report 1 Title Here>

PRT File
AM Base B14+Com+H5

```
1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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          ____________________________________________________


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 ------------------------------------------------------------------------
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 ------------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_AM_MC_4.DAT"  at 18:36  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                =   8
  NUMBER OF LINKS                =  70
  NUMBER OF OPTIMISED NODES      =   8
  MAXIMUM NUMBER OF GRAPHIC PLOTS   =   0
  NUMBER OF STEPS IN CYCLE       =  65
  MAXIMUM NUMBER OF SHARED STOPLINES =   2
  MAXIMUM NUMBER OF TIMING POINTS   =   3
  MAXIMUM LINKS AT ANY NODE      =  12


  CORE REQUESTED =  14800 WORDS
  CORE AVAILABLE =  72000 WORDS
.

        DATA INPUT :-
         ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     65     65     60      2      3      0      1    100    100      0      0      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                      LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                             NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126            7      7
  19)=  10    127            7      7
  20)=  10    128            7      7
  21)=  10    129            7      7
  22)=  10    130            7      7
  23)=  10    131            7      7
  24)=  10    132            7      7
  25)=  10    146            7      7      7

                             NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126            6      6
  27)=  11    127            5      5
  28)=  11    128            6      6
  29)=  11    129            5      5
  30)=  11    130            6      6
  31)=  11    131            5      5
  32)=  11    132            5      6
  33)=  11    146            7      8      8

                             NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE  Sgl/Dbl  S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.  Cycled
  34)=  12    126      1      3     36
  35)=  12    127      1     31     61
  36)=  12    128      1     32     19
  37)=  12    129      1     16     38
  38)=  12    130      1     16      3
```

```
 39)=  12    131      1      0     31
 40)=  12    132      1     33     20
 41)=  12    146      1     18     49      3

                                        LINK CARDS:  GIVEWAY DATA
                  PRIORITY LINKS   LINK1 GIVEWAY COEFFS.
CARD   CARD   LINK    LINK1   LINK2    ONLY     A1      A2                              LINK    STOP    MAX   DELAY  DISPSN
NO.    TYPE    NO.     NO.     NO.  % FLOW    X100    X100                          LENGTH WT.X100   FLOW  WT.X100    X100
 42)=  30   1462    1465       0      0      50      0      0      0      0      0     130      0    1000      0       0
 43)=  30   1466    1462       0      0      22      0      0      0      0      0      31      0     715      0       0

                                        LINK  CARDS:  FIXED  DATA
                              FIRST   GREEN                  SECOND  GREEN
CARD   CARD   LINK    EXIT       START          END          START          END      LINK    STOP    SAT   DELAY   DISPSN
 NO.   TYPE    NO.    NODE    STAGE    LAG   STAGE    LAG   STAGE    LAG   STAGE    LAG  LENGTH  WT.X100  FLOW  WT.X100    X100
 44)=  31     29       0       0      0       0      0       0      0       0      0     200       0    4000       0       0
 45)=  31     31     128       1      6       2      0       0      0       0      0      95       0    5591       0       0
 46)=  31     32     128       2      6       1      0       0      0       0      0      10       0   10000       0       0
 47)=  31     33       0       0      0       0      0       0      0       0      0     200       0    6000       0       0
 48)=  31     34     129       2      5       1      0       0      0       0      0      53       0    1806       0       0
 49)=  31     36     129       2      5       1      0       0      0       0      0      53       0    2047       0       0
 50)=  31     37       0       0      0       0      0       0      0       0      0      53       0       0       0       0
 51)=  31     38     129       2      5       1      0       0      0       0      0      53       0    2028       0       0
 52)=  31     39       0       0      0       0      0       0      0       0      0      53       0       0       0       0
 53)=  31     40     129       2      5       1      0       0      0       0      0      53       0    1867       0       0
 54)=  31     41       0       0      0       0      0       0      0       0      0      53       0       0       0       0
 55)=  31     42     132       1      5       2      0       0      0       0      0      58       0    2028       0       0
 56)=  31     43     132       2      6       1      0       0      0       0      0      10       0   10000       0       0
 57)=  31     44     129       1      5       2      0       0      0       0      0      45       0    1612       0       0
 58)=  31     45     129       1      5       2      0       0      0       0      0      45       0    1613       0       0
 59)=  31     46     130       1      6       2      0       0      0       0      0     200       0    4839       0       0
 60)=  31     47     130       2      6       1      0       0      0       0      0      10       0   10000       0       0
 61)=  31     48     131       2      5       1      0       0      0       0      0      63       0    1806       0       0
 62)=  31     50     131       2      5       1      0       0      0       0      0      63       0    1922       0       0
 63)=  31     52     131       2      5       1      0       0      0       0      0      63       0    1886       0       0
 64)=  31     53       0       0      0       0      0       0      0       0      0      63       0       0       0       0
 65)=  31     54       0       0      0       0      0       0      0       0      0     200       0    6000       0       0
 66)=  31     55     131       1      5       2      0       0      0       0      0      40       0    1855       0       0
 67)=  31     56       0       0      0       0      0       0      0       0      0     200       0       0       0       0
 68)=  31     57     131       1      5       2      0       0      0       0      0      40       0    1800       0       0
 69)=  31     58       0       0      0       0      0       0      0       0      0      95       0       0       0       0
 70)=  31     59     128       2      6       1      0       0      0       0      0      10       0   10000       0       0
 71)=  31     60     132       2      6       1      0       0      0       0      0      10       0   10000       0       0
 72)=  31     61     130       2      6       1      0       0      0       0      0      10       0   10000       0       0
 73)=  31     62       0       0      0       0      0       0      0       0      0      58       0       0       0       0
 74)=  31     63       0       0      0       0      0       0      0       0      0      10       0    3600       0       0
 75)=  31     64     129       1      5       2      0       0      0       0      0      45       0    1613       0       0
 76)=  31     65     129       1      5       2      0       0      0       0      0      45       0    1613       0       0
 77)=  31     66     131       1      5       2      0       0      0       0      0      40       0    1969       0       0
 78)=  31     67     131       1      5       2      0       0      0       0      0      40       0    1875       0       0
 79)=  31     68       0       0      0       0      0       0      0       0      0     200       0    3600       0       0
 80)=  31   1261       0       0      0       0      0       0      0       0      0      55       0       0       0       0
 81)=  31   1262     126       1      6       2      1       0      0       0      0      55       0    1905       0       0
 82)=  31   1263       0       0      0       0      0       0      0       0      0      55       0       0       0       0
 83)=  31   1264     126       1      6       2      1       0      0       0      0      55       0    2038       0       0
 84)=  31   1266       0       0      0       0      0       0      0       0      0      55       0       0       0       0
 85)=  31   1267     126       1      6       2      1       0      0       0      0      55       0    2019       0       0
 86)=  31   1269     126       1      6       2      1       0      0       0      0      55       0    1824       0       0
 87)=  31   1271       0       0      0       0      0       0      0       0      0      67       0       0       0       0
 88)=  31   1272     127       2      5       1      0       0      0       0      0      67       0    1876       0       0
 89)=  31   1273       0       0      0       0      0       0      0       0      0      67       0       0       0       0
 90)=  31   1274     127       2      5       1      0       0      0       0      0      67       0    2046       0       0
 91)=  31   1275       0       0      0       0      0       0      0       0      0      67       0       0       0       0
 92)=  31   1276     127       2      5       1      0       0      0       0      0      67       0    1973       0       0
 93)=  31   1278     127       2      5       1      0       0      0       0      0      67       0    1770       0       0
 94)=  31   1461     146       2      1       3      0       0      0       0      0     200       0    1860       0       0
 95)=  31   1462     146       1      0       3      0       0      0       0      0     130       0    1774       0       0
 96)=  31   1463     146       1      0       3      6       0      0       0      0     130       0    1833       0       0
 97)=  31   1464     146       3      8       1      0       0      0       0      0     200       0    1833       0       0
 98)=  31   1465     146       1      0       2      1       0      0       0      0     200       0    1926       0       0
 99)=  31   1467       0       0      0       0      0       0      0       0      0     200       0    2000       0       0
100)=  31   1468       0       0      0       0      0       0      0       0      0     200       0    2000       0       0
101)=  31   1469       0       0      0       0      0       0      0       0      0     200       0    2000       0       0
102)=  31  12601       0       0      0       0      0       0      0       0      0     156       0    1800       0       0
103)=  31  12602       0       0      0       0      0       0      0       0      0     200       0       0       0       0
104)=  31  12603     126       1      6       2      0       0      0       0      0      10       0   10000       0       0
105)=  31  12604     126       1      6       2      0       0      0       0      0      10       0   10000       0       0
106)=  31  12605     126       2      6       1      0       0      0       0      0      20       0    1522       0       0
107)=  31  12606     126       2      6       1      0       0      0       0      0      20       0    1640       0       0
108)=  31  12607     126       2      6       1      0       0      0       0      0      20       0    1757       0       0
109)=  31  12701     127       1      5       2      0       0      0       0      0      23       0    1802       0       0
110)=  31  12702     127       1      5       2      0       0      0       0      0      23       0    1775       0       0
111)=  31  12703       0       0      0       0      0       0      0       0      0     200       0    3600       0       0
112)=  31  12704     127       1      5       2      0       0      0       0      0      23       0    1907       0       0

                                        LINK CARDS:  FLOW DATA
                              ENTRY 1 .....  ENTRY 2 .....  ENTRY 3 .....  ENTRY 4 .....
CARD   CARD   LINK   TOTAL  UNIFORM  LINK        CRUISE   LINK        CRUISE   LINK        CRUISE   LINK        CRUISE
 NO.   TYPE    NO.   FLOW    FLOW     NO.   FLOW   TIME    NO.   FLOW   TIME    NO.   FLOW   TIME    NO.   FLOW   TIME
113)=  32     29   1950       0    1262    597     18    1264    535     18    1267    478     18   12607    340     18
114)=  32     31    540       0    1272    143      9    1274    136      9    1275    136      9    1276    125      9
115)=  32     32     10       0       0      0      4       0      0      0       0      0      0       0      0      0
116)=  32     33   1241       0      31    540     18      58    701     18       0      0      0       0      0      0
117)=  32     34    161       0   12702    161      5       0      0      0       0      0      0       0      0      0
118)=  32     36    481       0   12701     17      5   12702    464      5       0      0      0       0      0      0
119)=  32     37     45       0    1278     45      7       0      0      0       0      0      0       0      0      0
120)=  32     38    515       0   12701    515      5       0      0      0       0      0      0       0      0      0
121)=  32     39     41       0    1276     10      7    1278     31      7       0      0      0       0      0      0
122)=  32     40    320       0   12701     83      5   12704    237      5       0      0      0       0      0      0
123)=  32     41     49       0    1276     49      7       0      0      0       0      0      0       0      0      0
124)=  32     42    708       0      50    269      5      52    204      5      55    235      5       0      0      0
125)=  32     43     10       0       0      0      4       0      0      0       0      0      0       0      0      0
126)=  32     44    300       0      63    300      4       0      0      0       0      0      0       0      0      0
127)=  32     45    295       0      63    295      4       0      0      0       0      0      0       0      0      0
128)=  32     46   1006       0       0      0     18       0      0      0       0      0      0       0      0      0
129)=  32     47     10       0       0      0      4       0      0      0       0      0      0       0      0      0
130)=  32     48    132       0      65    132      6       0      0      0       0      0      0       0      0      0
131)=  32     50    279       0      64    279      6       0      0      0       0      0      0       0      0      0
132)=  32     52    204       0      45    204      6       0      0      0       0      0      0       0      0      0
133)=  32     53    161       0      34    161      8       0      0      0       0      0      0       0      0      0
134)=  32     54   1616       0      36    481     18      38    515     18      40    320     18      44    300     18
135)=  32     55    577       0      68    577      4       0      0      0       0      0      0       0      0      0
136)=  32     56    226       0      37     45     18      39     41     18      41     49     18      45     91     18
137)=  32     57    560       0      68    560      4       0      0      0       0      0      0       0      0      0
138)=  32     58    701       0    1271    140      9    1273    137      9   12704    424     11       0      0      0
139)=  32     59     10       0       0      0      4       0      0      0       0      0      0       0      0      0
140)=  32     60     10       0       0      0      4       0      0      0       0      0      0       0      0      0
141)=  32     61     10       0       0      0      4       0      0      0       0      0      0       0      0      0
142)=  32     62    161       0      53    161      5       0      0      0       0      0      0       0      0      0
143)=  32     63   1006       0      46   1006      1       0      0      0       0      0      0       0      0      0
144)=  32     64    279       0      63    279      4       0      0      0       0      0      0       0      0      0
145)=  32     65    132       0      63    132      4       0      0      0       0      0      0       0      0      0
146)=  32     66    560       0      68    560      4       0      0      0       0      0      0       0      0      0
```

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147)=  32     67    561      0     68    561      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2258      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     10      0     50     10      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    597      0     55    342      5     57    255      5      0      0      0      0      0      0
151)=  32   1263     60      0     48     60      7      0      0      0      0      0      0      0      0      0
152)=  32   1264    535      0     57    305      5     66    230      5      0      0      0      0      0      0
153)=  32   1266     72      0     48     72      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    478      0     66    330      5     67    148      5      0      0      0      0      0      0
155)=  32   1269    413      0     67    413      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    140      0   1269    140      8      0      0      0      0      0      0      0      0      0
157)=  32   1272    143      0  12607    143      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    137      0   1269    137      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    136      0  12605    136      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    136      0   1269    136      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    184      0  12605    184      6      0      0      0      0      0      0      0      0      0
162)=  32   1278     76      0  12606     76      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     44      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     72      0     42     72     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    797      0     42    636     13     62    161     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    864      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     33      0   1465     33      2      0      0      0      0      0      0      0      0      0
169)=  32   1467    105      0   1462     72     18   1466     33     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    797      0   1463    787     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601    879      0   1461     44     14   1464     10     17   1465    831     18      0      0      0
173)=  32  12602    142      0   1261     10     18   1263     60     18   1266     72     18      0      0      0
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    320      0  12601    320      2      0      0      0      0      0      0      0      0      0
177)=  32  12606     76      0  12601     76      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    483      0  12601    483      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    615      0  12703    615      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    625      0  12703    625      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   1901      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    661      0  12703    661      2      0      0      0      0      0      0      0      0      0

*****END OF SUBROUTINE TINPUT*****
.

    65 SECOND CYCLE  65 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2      3      36
  127      2     31      61
  128      2     32      19
  129      2     16      38
  130      2     16       3
  131      2      0      31
  132      2     33      20
  146      3     18      49       3

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
         LINK          SAT    CRUISE            OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
       (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)    (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

   29    1951   4000S    52  18.5   2.4    0.5 +  0.5  ( 14.3)     28  ( 11.6)      25             26.0
   31     541   5591S    31   9.5   3.1    0.3 +  0.1  (  5.6)     19  (  2.0)       6             7.6   128     38  19
   32      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0             1.1   128     25  32
   33    1242   6000     21  18.5   0.9    0.0 +  0.1  (  1.9)      1  (  0.2)       0             2.0
   34     161   1806     15   5.5   2.6    0.0 +  0.1  (  1.3)      7  (  0.2)       0             1.6   129     43  16
   36     480   2047S    43   5.5   3.3    0.0 +  0.3  (  5.3)     12  (  1.2)       2             6.5   129     43  16
   37      45    36L    43   7.5   4.7    0.0 +  0.0  (  0.8)     11  (  0.1)       2             0.8   129     43  16
   38     516   2028S    46   5.5   3.6    0.0 +  0.4  (  6.2)     15  (  1.5)       3             7.7   129     43  16
   39      41    38L    46   7.5   5.3    0.0 +  0.0  (  0.8)     13  (  0.1)       3             0.8   129     43  16
   40     319   1867S    33   5.5   3.1    0.0 +  0.2  (  3.3)     10  (  0.6)       1             3.9   129     43  16
   41      49    40L    33   7.5   6.1    0.0 +  0.0  (  1.1)     17  (  0.1)       1             1.2   129     43  16
   42     710   2028S    58   5.5   8.1    0.9 +  0.6  ( 21.4)     66  ( 10.9)      13    +       32.3   132     38  20
   43      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0             1.1   132     26  33
   44     300   1612     67   4.5  30.4    1.5 +  1.0  ( 35.4)     75  (  5.0)       4             40.4   129     21  38
   45     296   1613     66   4.5  30.1    1.5 +  1.0  ( 34.5)     74  (  4.9)       4             39.4   129     21  38
   46    1006   4839     29  18.5   4.4    0.9 +  0.2  ( 15.4)     30  (  6.3)       6             21.7   130     22   3
   47      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0             1.1   130      9  16
   48     133   1806     16   6.5   8.5    0.2 +  0.1  (  4.2)     71  (  1.8)       2             6.0   131     36   0
   50     280   1922     32   6.5  10.0    0.5 +  0.2  ( 10.5)     85  (  4.5)       5             15.0   131     36   0
   52     205   1886S    42   6.5  10.8    0.4 +  0.2  (  8.3)     85  (  3.3)       5             11.7   131     36   0
   53     161    52L    42   8.5  12.8    0.4 +  0.2  (  7.8)     33  (  0.6)       5             8.4   131     36   0
   54    1615   6000S    31  18.5   0.9    0.0 +  0.2  (  2.8)      1  (  0.2)       0             3.0
   55     578   1855     75   4.5  25.9    2.6 +  1.5  ( 57.8)     91  (  9.0)      10    +       66.8   131      5  31
   56     226    54L    31  18.5   0.9    0.0 +  0.0  (  0.4)      1  (  0.0)       0             0.4
   57     560   1800     75   4.5  26.1    2.5 +  1.5  ( 56.5)     92  (  8.8)      10    +       65.2   131      5  31
   58     701    31L    31  10.7   2.9    0.3 +  0.1  (  6.5)     21  (  2.8)       6             9.3   128     38  19
   59      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0             1.1   128     25  32
   60      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0             1.1   132     26  33
   61      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)     89  (  0.0)       0             1.1   130      9  16
   62     161    42L    58   5.5   4.3    0.0 +  0.1  (  2.4)     29  (  1.1)      13    +        3.5   132     38  20
   63    1006   3600     28   1.5   1.4    0.1 +  0.2  (  3.5)      8  (  1.4)       6    +        4.9
   64     280   1613     63   4.5  28.8    1.4 +  0.8  ( 31.3)     72  (  4.5)       4             35.7   129     21  38
   65     133   1613     30   4.5  23.0    0.6 +  0.2  ( 11.8)     63  (  1.9)       2             13.7   129     21  38
   66     560   1969     68   4.5  22.9    2.4 +  1.1  ( 49.6)     85  (  8.1)       9    +       57.7   131      5  31
   67     560   1875     72   4.5  24.5    2.5 +  1.3  ( 52.9)     88  (  8.4)      10    +       61.4   131      5  31
   68    2258   3600     63  18.5   1.8    0.0 +  0.8  ( 11.9)      2  (  1.0)       1             12.9
 1261      10   1262L    71   7.5  33.7    0.1 +  0.0  (  1.3)    112  (  0.1)       2             1.4   126      9  37
 1262     598   1905S    71   5.5   8.1    0.0 +  1.2  ( 18.0)     12  (  1.5)       2             19.5   126      9  37
 1263      60   1264L    65   7.5  34.6    0.5 +  0.1  (  8.1)    109  (  0.7)       4             8.8   126      9  37
 1264     534   2038S    65   5.5   6.6    0.1 +  0.8  ( 12.9)     16  (  1.8)       4             14.6   126      9  37
.

    65 SECOND CYCLE  65 STEPS

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
         LINK          SAT    CRUISE            OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
       (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)    (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

 1266      73   1267L    61   7.5  33.9    0.6 +  0.1  (  9.6)    108  (  0.9)       5             10.5   126      9  37
 1267     478   2019S    61   5.5   6.1    0.1 +  0.7  ( 10.6)     17  (  1.7)       5             12.3   126      9  37
 1269     412   1824     51   5.5   5.2    0.0 +  0.5  (  7.7)      7  (  0.7)       1             8.3   126      9  37
 1271     139   1272L    32   8.5  12.3    0.3 +  0.1  (  6.5)     34  (  0.6)       3             7.1   127      1  31
 1272     143   1876S    32   6.5  13.7    0.4 +  0.1  (  7.5)     84  (  2.7)       3             10.1   127      1  31
 1273     137   1274L    28   8.5  11.8    0.3 +  0.1  (  6.1)     34  (  0.6)       3             6.7   127      1  31
 1274     136   2046S    28   6.5  13.3    0.4 +  0.1  (  6.9)     82  (  2.5)       3             9.4   127      1  31
 1275     136   1276L    34   8.5  12.2    0.3 +  0.1  (  6.3)     35  (  0.6)       4             6.9   127      1  31
 1276     184   1973S    34   6.5  14.4    0.6 +  0.1  ( 10.1)     87  (  3.6)       4             13.7   127      1  31
 1278      76   1770     9   6.5  11.9    0.2 +  0.0  (  3.4)     74  (  1.2)       1             4.7   127      1  31
```

1461	44	1860	8	18.5	20.8	0.2	+	0.0	(3.5)	73	(0.7)	1		4.2	146	50	3
1462	72	1774	13	13.5	8.7	0.1	+	0.1	(2.3)	35	(0.4)	0		2.8	146	18	3
1463	799	1833	50	13.5	3.2	0.1	+	0.5	(8.6)	11	(1.4)	2		10.0	146	18	9
1464	20	1833	9	18.5	34.7	0.1	+	0.0	(2.7)	96	(0.4)	0		3.1	146	11	18
1465	864	1926	88	18.5	29.7	3.4	+	3.6	(99.4)	102	(18.6)	17		118.0	146	18	50
1466	33	715	5	2.5	3.2	0.0	+	0.0	(0.3)	0	(0.0)	0		0.3			
1467	105	2000	5	18.5	1.5	0.0	+	0.0	(0.4)	1	(0.0)	0		0.4			
1468	20	2000	1	18.5	1.4	0.0	+	0.0	(0.1)	1	(0.0)	0		0.1			
1469	799	2000	40	18.5	2.0	0.0	+	0.3	(4.7)	2	(0.4)	0		5.1			
12601	880	1800	49	18.3	2.5	0.0	+	0.5	(6.8)	3	(0.6)	1		7.4			
12602	143	29L	52	18.5	1.7	0.0	+	0.0	(0.7)	10	(0.3)	25		1.0			
12603	10	10000	0	4.5	11.7	0.0	+	0.0	(0.4)	57	(0.0)	0		0.4	126	9	36
12604	10	10000	0	4.5	11.7	0.0	+	0.0	(0.4)	57	(0.0)	0		0.4	126	9	36
12605	320	1522	51	2.5	10.5	0.4	+	0.5	(12.6)	34	(1.9)	2		14.4	126	42	3
12606	76	1640	11	2.5	7.2	0.1	+	0.1	(2.0)	23	(0.3)	0		2.3	126	42	3
12607	484	1757	66	2.5	12.3	0.6	+	1.0	(22.6)	42	(3.5)	5	+	26.1	126	42	3
12701	616	1802	85	2.5	34.6	3.0	+	2.8	(82.8)	107	(15.5)	13	+	98.2	127	36	61
12702	624	1775	88	2.5	37.8	3.1	+	3.3	(91.9)	112	(16.4)	14	+	108.3	127	36	61
12703	1901	3600	53	18.5	1.6	0.0	+	0.6	(7.9)	2	(0.7)	1		8.6			
12704	662	1907	87	2.5	35.2	3.3	+	3.1	(90.5)	109	(16.8)	14	+	107.3	127	36	61

TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+ OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY ($/H)	TOTAL COST OF STOPS ($/H)	PENALTY FOR EXCESS QUEUES ($/H)	TOTAL PERFORMANCE INDEX ($/H)	
3382.3	159.5	21.2	38.5	33.8	(1027.3) +	(199.1) +	(0.0) =	1226.5	TOTALS

ROUTE

****

	CRUISE LITRES PER HOUR		DELAY LITRES PER HOUR		STOPS LITRES PER HOUR		TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	188.5	+	83.2	+	90.7	=	362.5

NO. OF ENTRIES TO SUBPT = 1
NO. OF LINKS RECALCULATED= 70

PROGRAM TRANSYT FINISHED

<Enter Report 1 Title Here>

PRT File
PM Base B14+Com +H5

```
1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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          _____________________________________________________


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 ------------------------------------------------------------------------
 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
 IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION
 ------------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_PM_MC_2.DAT"  at 18:42  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                =    8
  NUMBER OF LINKS                =   70
  NUMBER OF OPTIMISED NODES      =    8
  MAXIMUM NUMBER OF GRAPHIC PLOTS   =   8
  NUMBER OF STEPS IN CYCLE       =   66
  MAXIMUM NUMBER OF SHARED STOPLINES =   2
  MAXIMUM NUMBER OF TIMING POINTS   =   3
  MAXIMUM LINKS AT ANY NODE      =   12


  CORE REQUESTED =  14914 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     66     66     60      2      3      0      1    100    100      0      1      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                      LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                             NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126            7      7
  19)=  10    127            7      7
  20)=  10    128            7      7
  21)=  10    129            7      7
  22)=  10    130            7      7
  23)=  10    131            7      7
  24)=  10    132            7      7
  25)=  10    146            7      7      7

                             NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126            6      6
  27)=  11    127            5      5
  28)=  11    128            6      6
  29)=  11    129            5      5
  30)=  11    130            6      6
  31)=  11    131            5      5
  32)=  11    132            5      6
  33)=  11    146            7      8      8

                             NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE   Sgl/Dbl   S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.   Cycled
  34)=  12    126       1     30      8
  35)=  12    127       1     35      7
  36)=  12    128       1     55     42
  37)=  12    129       1     10     35
  38)=  12    130       1      8     61
```

```
 39)=  12    131      1     36      5
 40)=  12    132      1     54     41
 41)=  12    146      1     48     11     33
```

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS LINK1 NO.	LINK2	ONLY % FLOW	GIVEWAY COEFFS. A1 X100	A2 X100					LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
42)=	30	1462	1465	0	0	50	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	22	0	0	0	0	0	31	0	715	0	0

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START STAGE	LAG	END STAGE	LAG	SECOND GREEN START STAGE	LAG	END STAGE	LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
44)=	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0
45)=	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0
46)=	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
48)=	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0
49)=	31	36	129	2	5	1	0	0	0	0	0	53	0	2047	0	0
50)=	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0
51)=	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0
52)=	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0
53)=	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0
54)=	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0
55)=	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0
56)=	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
57)=	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0
58)=	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
59)=	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0
60)=	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
61)=	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0
62)=	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0
63)=	31	52	131	2	5	1	0	0	0	0	0	63	0	1886	0	0
64)=	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0
65)=	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
66)=	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0
67)=	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0
68)=	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0
69)=	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0
70)=	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
71)=	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
72)=	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
73)=	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0
74)=	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0
75)=	31	64	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
76)=	31	65	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
77)=	31	66	131	1	5	2	0	0	0	0	0	40	0	1969	0	0
78)=	31	67	131	1	5	2	0	0	0	0	0	40	0	1875	0	0
79)=	31	68	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
80)=	31	1261	0	0	0	0	0	0	0	0	0	55	0	0	0	0
81)=	31	1262	126	1	6	2	1	0	0	0	0	55	0	1905	0	0
82)=	31	1263	0	0	0	0	0	0	0	0	0	55	0	0	0	0
83)=	31	1264	126	1	6	2	1	0	0	0	0	55	0	2038	0	0
84)=	31	1266	0	0	0	0	0	0	0	0	0	55	0	0	0	0
85)=	31	1267	126	1	6	2	1	0	0	0	0	55	0	2019	0	0
86)=	31	1269	126	1	6	2	1	0	0	0	0	55	0	1824	0	0
87)=	31	1271	0	0	0	0	0	0	0	0	0	67	0	0	0	0
88)=	31	1272	127	2	5	1	0	0	0	0	0	67	0	1876	0	0
89)=	31	1273	0	0	0	0	0	0	0	0	0	67	0	0	0	0
90)=	31	1274	127	2	5	1	0	0	0	0	0	67	0	2046	0	0
91)=	31	1275	0	0	0	0	0	0	0	0	0	67	0	0	0	0
92)=	31	1276	127	2	5	1	0	0	0	0	0	67	0	1973	0	0
93)=	31	1278	127	2	5	1	0	0	0	0	0	67	0	1770	0	0
94)=	31	1461	146	2	0	3	0	0	0	0	0	200	0	1860	0	0
95)=	31	1462	146	1	0	3	2	0	0	0	0	130	0	1774	0	0
96)=	31	1463	146	1	0	3	8	0	0	0	0	130	0	1833	0	0
97)=	31	1464	146	3	8	1	0	0	0	0	0	200	0	1833	0	0
98)=	31	1465	146	1	0	2	3	0	0	0	0	200	0	1926	0	0
99)=	31	1467	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
100)=	31	1468	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
101)=	31	1469	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
102)=	31	12601	0	0	0	0	0	0	0	0	0	156	0	1800	0	0
103)=	31	12602	0	0	0	0	0	0	0	0	0	200	0	0	0	0
104)=	31	12603	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
105)=	31	12604	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
106)=	31	12605	126	2	6	1	0	0	0	0	0	20	0	1522	0	0
107)=	31	12606	126	2	6	1	0	0	0	0	0	20	0	1640	0	0
108)=	31	12607	126	2	6	1	0	0	0	0	0	20	0	1757	0	0
109)=	31	12701	127	1	5	2	0	0	0	0	0	23	0	1802	0	0
110)=	31	12702	127	1	5	2	0	0	0	0	0	23	0	1775	0	0
111)=	31	12703	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
112)=	31	12704	127	1	5	2	0	0	0	0	0	23	0	1907	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 2 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 3 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 4 ..... LINK NO.	CRUISE FLOW	CRUISE TIME
113)=	32	29	2097	0	1262	647	18	1264	640	18	1267	810	18	0	0	0
114)=	32	31	417	0	1272	22	9	1274	189	9	1275	169	9	1276	37	9
115)=	32	32	10	0	0	0	4	0	0	0	0	0	0	0	0	0
116)=	32	33	1294	0	31	417	18	58	877	18	0	0	0	0	0	0
117)=	32	34	269	0	12702	269	5	0	0	0	0	0	0	0	0	0
118)=	32	36	266	0	12702	266	5	0	0	0	0	0	0	0	0	0
119)=	32	37	111	0	1278	111	7	0	0	0	0	0	0	0	0	0
120)=	32	38	552	0	12701	552	5	0	0	0	0	0	0	0	0	0
121)=	32	39	89	0	1276	39	7	1278	50	7	0	0	0	0	0	0
122)=	32	40	538	0	12701	248	5	12704	290	5	0	0	0	0	0	0
123)=	32	41	115	0	1276	115	7	0	0	0	0	0	0	0	0	0
124)=	32	42	718	0	50	371	5	52	150	5	55	197	5	0	0	0
125)=	32	43	10	0	0	0	4	0	0	0	0	0	0	0	0	0
126)=	32	44	397	0	63	397	4	0	0	0	0	0	0	0	0	0
127)=	32	45	160	0	63	160	4	0	0	0	0	0	0	0	0	0
128)=	32	46	1280	0	0	0	18	0	0	0	0	0	0	0	0	0
129)=	32	47	10	0	0	0	4	0	0	0	0	0	0	0	0	0
130)=	32	48	332	0	65	332	6	0	0	0	0	0	0	0	0	0
131)=	32	50	391	0	64	391	6	0	0	0	0	0	0	0	0	0
132)=	32	52	150	0	45	150	6	0	0	0	0	0	0	0	0	0
133)=	32	53	269	0	34	269	8	0	0	0	0	0	0	0	0	0
134)=	32	54	1753	0	36	266	18	38	552	18	40	538	18	44	397	18
135)=	32	55	753	0	68	753	4	0	0	0	0	0	0	0	0	0
136)=	32	56	325	0	37	111	18	39	89	18	41	115	18	45	10	18
137)=	32	57	731	0	68	731	4	0	0	0	0	0	0	0	0	0
138)=	32	58	877	0	1271	174	9	1273	169	9	12704	534	11	0	0	0
139)=	32	59	10	0	0	0	4	0	0	0	0	0	0	0	0	0
140)=	32	60	10	0	0	0	4	0	0	0	0	0	0	0	0	0
141)=	32	61	10	0	0	0	4	0	0	0	0	0	0	0	0	0
142)=	32	62	269	0	53	269	5	0	0	0	0	0	0	0	0	0
143)=	32	63	1280	0	46	1280	1	0	0	0	0	0	0	0	0	0
144)=	32	64	391	0	63	391	4	0	0	0	0	0	0	0	0	0
145)=	32	65	332	0	63	332	4	0	0	0	0	0	0	0	0	0
146)=	32	66	810	0	68	810	4	0	0	0	0	0	0	0	0	0

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147)=  32     67    512      0     68    512      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2806      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     10      0     50     10      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    647      0     55    556      5     57     91      5      0      0      0      0      0      0
151)=  32   1263    212      0     48    202      7     50     10      7      0      0      0      0      0      0
152)=  32   1264    640      0     57    640      5      0      0      0      0      0      0      0      0      0
153)=  32   1266    130      0     48    130      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    810      0     66    810      5      0      0      0      0      0      0      0      0      0
155)=  32   1269    512      0     67    512      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    174      0   1269    174      8      0      0      0      0      0      0      0      0      0
157)=  32   1272     22      0  12607     22      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    169      0   1269    169      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    189      0  12605    189      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    169      0   1269    169      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    191      0  12605    191      6      0      0      0      0      0      0      0      0      0
162)=  32   1278    161      0  12606    161      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     95      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     23      0     42     23     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    964      0     42    695     13     62    269     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    862      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     10      0   1465     10      2      0      0      0      0      0      0      0      0      0
169)=  32   1467     33      0   1462     23     18   1466     10     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    964      0   1463    954     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601    941      0   1461     95     17   1464     10     17   1465    855     15      0      0      0
173)=  32  12602    730      0   1261     10     18   1263    212     18   1266    130     18  12607    378     18
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    380      0  12601    380      2      0      0      0      0      0      0      0      0      0
177)=  32  12606    161      0  12601    161      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    400      0  12601    400      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    800      0  12703    800      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    535      0  12703    535      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   2159      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    824      0  12703    824      2      0      0      0      0      0      0      0      0      0

                                    GRAPH  PLOT  CARDS
CARD   CARD   LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO.   TYPE    NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.
183)=  35   1271     42      52      53      0       0       0       0       0       0       0       0       0       0

                                    USER-DEFINED ROUTES

CARD   CARD  ROUTE     ROUTE
 NO.   TYPE  NUMBER  DESCRIPTION

184)=  41      1    <Route Name>
185)=  41      2    <Route Name>
186)=  41      3    <Route Name>
187)=  41      4    <Route Name>

CARD   CARD  ROUTE    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO    TYPE  NUMBER    NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.

188)=  42      1      57    1264      29
189)=  42      2      34      53      62
190)=  42      3      45      52      42
191)=  42      4      50      42

*****END OF SUBROUTINE TINPUT*****
.

    66 SECOND CYCLE  66 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2      30       8
  127      2      35       7
  128      2      55      42
  129      2      10      35
  130      2       8      61
  131      2      36       5
  132      2      54      41
  146      3      48      11     33

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.      NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                                 DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)    (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

   29    2093   4000S    71  18.5   3.6    0.9 +  0.9  ( 26.0)    41  ( 18.0)     34             44.0
   31     417   5591S    32   9.5   2.4    0.1 +  0.1  (  3.2)     9  (  0.7)      5             3.9    128    61  42
   32      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    128    48  55
   33    1294   6000     22  18.5   0.9    0.0 +  0.1  (  2.0)     1  (  0.2)      0             2.1
   34     269   1806     27   5.5   3.9    0.1 +  0.2  (  3.6)     7  (  0.4)      0             4.0    129    40  10
   36     267   2047S    33   5.5   3.8    0.1 +  0.2  (  3.5)     7  (  0.4)      2             3.9    129    40  10
   37     112    36L     33   7.5  12.3    0.3 +  0.1  (  5.2)    89  (  1.0)      2             6.2    129    40  10
   38     551   2028S    56   5.5   5.1    0.2 +  0.6  ( 10.1)     9  (  1.0)      3            11.1    129    40  10
   39      89    38L     56   7.5  12.7    0.2 +  0.1  (  4.3)    86  (  0.8)      3             5.1    129    40  10
   40     538   1867S    62   5.5   6.1    0.2 +  0.7  ( 11.8)    10  (  1.1)      3            12.9    129    40  10
   41     115    40L     62   7.5  13.0    0.3 +  0.1  (  5.7)    85  (  1.0)      3             6.7    129    40  10
   42     720   2028S    66   5.5   5.5    0.3 +  0.7  ( 14.2)    21  (  3.5)      3            17.7    132    59  41
   43      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    132    47  54
   44     397   1612     77   4.5  32.3    1.8 +  1.7  ( 49.7)    91  (  8.1)      8    +        57.8    129    15  35
   45     161   1613     31   4.5  20.3    0.7 +  0.2  ( 12.6)    56  (  2.0)      2             14.6    129    15  35
   46    1280   4839     36  18.5   4.6    1.2 +  0.3  ( 20.9)    32  (  8.6)      9             29.5    130    14  61
   47      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    130     1   8
   48     333   1806     45   6.5   8.7    0.4 +  0.4  ( 10.8)    17  (  1.1)      1            11.9    131    10  36
   50     392   1922     50   6.5   9.3    0.5 +  0.5  ( 13.6)    18  (  1.4)      1            15.0    131    10  36
   52     151   1886S    54   6.5   9.3    0.2 +  0.2  (  5.3)    18  (  0.5)      6             5.8    131    10  36
   53     269    52L     54   8.5  22.6    1.3 +  0.4  ( 23.5)   102  (  3.0)      6            26.5    131    10  36
   54    1753   6000S    35  18.5   1.0    0.0 +  0.2  (  3.2)     1  (  0.3)      0             3.4
   55     752   1855     86   4.5  30.5    3.3 +  3.0  ( 88.9)   101  ( 13.0)     15    +       101.9    131    41   5
   56     326    54L     35  18.5   1.0    0.0 +  0.0  (  0.6)     1  (  0.0)      0             0.6
   57     730   1800     86   4.5  30.9    3.2 +  3.0  ( 87.4)   102  ( 12.7)     15    +       100.1    131    41   5
   58     877    31L     32  10.7   2.5    0.3 +  0.2  (  6.8)    18  (  3.1)      5             9.8    128    61  42
   59      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    128    48  55
   60      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    132    47  54
   61      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1    130     1   8
   62     269    42L     66   5.5   4.0    0.0 +  0.3  (  3.7)     5  (  0.3)      3             4.0    132    59  41
   63    1280   3600     36   1.5   1.6    0.1 +  0.3  (  5.6)    13  (  2.8)      9    +        8.4
   64     392   1613     76   4.5  31.5    1.8 +  1.6  ( 48.0)    90  (  7.8)      8    +       55.8    129    15  35
   65     333   1613     65   4.5  26.2    1.5 +  0.9  ( 33.7)    72  (  5.3)      5            39.0    129    15  35
   66     808   1969     87   4.5  30.9    3.5 +  3.3  ( 96.7)   102  ( 14.1)     17    +      110.9    131    41   5
   67     511   1875     58   4.5  18.1    1.8 +  0.7  ( 35.5)    73  (  6.4)      7    +       41.8    131    41   5
   68    2806   3600     78  18.5   2.8    0.0 +  1.8  ( 25.0)     3  (  2.0)      2            27.0
 1261      10   1262L    57   7.5   8.0    0.0 +  0.0  (  0.3)    45  (  0.0)      1             0.3    126    36   9
```

```
 1262    645  1905S    57  5.5  4.6   0.1 +  0.6  ( 10.5)     8  (  1.0)      1            11.6   126    36   9
 1263    213  1264L    69  7.5 10.9   0.3 +  0.3  (  8.8)    75  (  1.7)      5            10.5   126    36   9
 1264    639  2038S    69  5.5  5.7   0.1 +  0.8  ( 13.1)     9  (  1.2)      5            14.4   126    36   9
.

     66 SECOND CYCLE  66 STEPS

 LINK   FLOW  SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER  INTO  FLOW   OF    PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK         SAT    CRUISE            OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                           DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS        EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)   ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

 1266    130  1267L    77  7.5 11.7   0.2 +  0.2  (  5.8)    66  (  0.9)      4             6.7   126    36   9
 1267    808  2019S    77  5.5  7.3   0.1 +  1.4  ( 21.6)    11  (  2.0)      4            23.6   126    36   9
 1269    511  1824     46  5.5  4.1   0.1 +  0.4  (  7.2)     8  (  0.8)      3             8.0   126    36   9
 1271    174  1272L    29  8.5 20.9   0.8 +  0.2  ( 14.0)    99  (  2.2)      3            16.2   127    12  35
 1272     22  1876S    29  6.5  6.7   0.0 +  0.0  (  0.5)    12  (  0.1)      3             0.6   127    12  35
 1273    169  1274L    48  8.5 22.0   0.8 +  0.2  ( 14.3)   100  (  2.1)      4            16.4   127    12  35
 1274    189  2046S    48  6.5  8.6   0.2 +  0.2  (  6.1)    16  (  0.7)      4             6.7   127    12  35
 1275    169  1276L    50  8.5 22.4   0.8 +  0.2  ( 14.6)   101  (  2.1)      4            16.8   127    12  35
 1276    191  1973S    50  6.5  9.0   0.2 +  0.3  (  6.4)    16  (  0.7)      4             7.1   127    12  35
 1278    162  1770     25  6.5  5.9   0.1 +  0.2  (  3.5)    10  (  0.4)      0             3.8   127    12  35
 1461     95  1860     15 18.5 18.5   0.4 +  0.1  (  6.8)    69  (  1.4)      1             8.1   146    11  33
 1462     23  1774      4 13.5 12.4   0.1 +  0.0  (  1.1)    71  (  0.3)      0             1.4   146    48  35
 1463    965  1833     58 13.5  5.1   0.5 +  0.7  ( 17.6)    32  (  5.3)      7            22.8   146    48  41
 1464     20  1833      9 18.5 35.3   0.1 +  0.0  (  2.7)    97  (  0.4)      0             3.2   146    41  48
 1465    862  1926     90 18.5 32.0   3.6 +  4.0  (107.0)   105  ( 19.2)     18           126.2   146    48  14
 1466     10   715      1  2.5  3.2   0.0 +  0.0  (  0.1)     0  (  0.0)      0             0.1
 1467     33  2000      2 18.5  1.4   0.0 +  0.0  (  0.1)     1  (  0.0)      0             0.1
 1468     20  2000      1 18.5  1.4   0.0 +  0.0  (  0.1)     1  (  0.0)      0             0.1
 1469    966  2000     48 18.5  2.2   0.0 +  0.5  (  6.6)     3  (  0.5)      0             7.2
12601    941  1800     52 15.7  2.6   0.0 +  0.5  (  8.0)     5  (  0.8)      6             8.8
12602    732    29L    71 18.5  2.1   0.0 +  0.3  (  4.5)     4  (  0.6)     34             5.1
12603     10 10000      0  4.5  6.5   0.0 +  0.0  (  0.2)    41  (  0.0)      0             0.2   126    36   8
12604     10 10000      0  4.5  6.5   0.0 +  0.0  (  0.2)    41  (  0.0)      0             0.2   126    36   8
12605    380  1522     97  2.5 81.9   1.4 +  7.2  (122.0)   164  ( 10.6)     14    +      132.6   126    14  30
12606    162  1640     38  2.5 17.1   0.4 +  0.3  ( 10.6)    66  (  1.8)      2             12.4   126    14  30
12607    401  1757     89  2.5 43.6   1.4 +  3.4  ( 68.2)   120  (  8.2)     10    +       76.4   126    14  30
12701    799  1802     86  2.5 27.7   3.1 +  3.0  ( 85.8)    97  ( 18.2)     16    +      104.0   127    40   7
12702    535  1775     59  2.5 16.4   1.7 +  0.7  ( 33.5)    69  (  8.7)      7    +       42.2   127    40   7
12703   2159  3600     60 18.5  1.7   0.0 +  0.7  ( 10.6)     2  (  0.9)      1            11.5
12704    825  1907     84  2.5 25.2   3.1 +  2.5  ( 80.5)    93  ( 17.9)     15    +       98.4   127    40   7

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4004.8        198.5       20.2        44.1     51.7   (1360.3) + (  231.5)  + (   0.0)   =    1591.9     TOTALS

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                              CRUISE             DELAY             STOPS            TOTALS
                          LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR

FUEL CONSUMPTION PREDICTIONS      224.3        +    110.2        +    105.5        =    440.0

NO. OF ENTRIES TO SUBPT  =   1
NO. OF LINKS RECALCULATED=  70
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9
 - (SECONDS)

  126      2     30      8
  127      2     35      7
  128      2     55     42
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4004.8        198.5       20.2        44.1     51.7   (1360.3) + (  231.5)  + (   0.0)   =    1591.9     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  464
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26
 - (SECONDS)

  126      2     30      8
  127      2     35      7
  128      2     55     42
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4004.8        198.5       20.2        44.1     51.7   (1360.3) + (  231.5)  + (   0.0)   =    1591.9     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  456
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9
 - (SECONDS)

  126      2     30      8
  127      2     35      7
  128      2     55     42
  129      2     10     35
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  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4004.8       198.5      20.2        44.1     51.7    (1360.3) + (  231.5)  + (   0.0)   =    1591.9     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  530
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26
 - (SECONDS)

  126      2     30      8
  127      2     35      7
  128      2     55     42
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4004.8       198.5      20.2        44.1     51.7    (1360.3) + (  231.5)  + (   0.0)   =    1591.9     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  521
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9
 - (SECONDS)

  126      2     30      8
  127      2     35      7
  128      2     55     42
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4004.8       198.5      20.2        44.1     51.7    (1360.3) + (  231.5)  + (   0.0)   =    1591.9     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  563
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9   1
 - (SECONDS)

  126      2     30      8
  127      2     35      7
  128      2     55     42
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4004.8       198.5      20.2        44.1     51.7    (1360.3) + (  231.5)  + (   0.0)   =    1591.9     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  555
.

     66 SECOND CYCLE  66 STEPS

FINAL SETTINGS OBTAINED WITH INCREMENTS :-   9  26   9  26   9   1   1
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES   1       2       3       4       5      6       7       8       9      10

  126      2     30      8
  127      2     35      7
  128      2     55     42
  129      2     10     35
  130      2      8     61
  131      2     36      5
  132      2     54     41
  146      3     48     11     33

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK          SAT    CRUISE            OVERSAT  OF    STOPS    OF    MAX.  AVERAGE  WEIGHTED SUM          END    END
                                DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

   29    2093   4000S    71  18.5   3.6    0.9 +  0.9  ( 26.0)     41  ( 18.0)     34             44.0
   31     417   5591S    32   9.5   2.4    0.1 +  0.1  (  3.2)      9  (  0.7)      5             3.9   128    61  42
   32      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0             1.1   128    48  55
   33    1294   6000     22  18.5   0.9    0.0 +  0.1  (  2.0)      1  (  0.2)      0             2.1
   34     269   1806     27   5.5   3.9    0.1 +  0.2  (  3.6)      7  (  0.4)      0             4.0   129    40  10
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  36    267   2047S    33   5.5  3.8    0.1 +  0.2  (  3.5)     7  (  0.4)      2             3.9   129    40  10
  37    112     36L    33   7.5 12.3    0.3 +  0.1  (  5.2)    89  (  1.0)      2             6.2   129    40  10
  38    551   2028S    56   5.5  5.1    0.2 +  0.6  ( 10.1)     9  (  1.0)      3            11.1   129    40  10
  39     89     38L    56   7.5 12.7    0.2 +  0.1  (  4.3)    86  (  0.8)      3             5.1   129    40  10
  40    538   1867S    62   5.5  6.1    0.2 +  0.7  ( 11.8)    10  (  1.1)      3            12.9   129    40  10
  41    115     40L    62   7.5 13.0    0.3 +  0.1  (  5.7)    85  (  1.0)      3             6.7   129    40  10
  42    720   2028S    66   5.5  5.5    0.3 +  0.7  ( 14.2)    21  (  3.5)      3            17.7   132    59  41
  43     10  10000     1   4.5 27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    47  54
  44    397   1612     77   4.5 32.3    1.8 +  1.7  ( 49.7)    91  (  8.1)      8    +       57.8   129    15  35
  45    161   1613     31   4.5 20.3    0.7 +  0.2  ( 12.6)    56  (  2.0)      2            14.6   129    15  35
  46   1280   4839     36  18.5  4.6    1.2 +  0.3  ( 20.9)    32  (  8.6)      9            29.5   130    14  61
  47     10  10000     1   4.5 27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130     1   8
  48    333   1806     45   6.5  8.7    0.4 +  0.4  ( 10.8)    17  (  1.1)      1            11.9   131    10  36
  50    392   1922     50   6.5  9.3    0.5 +  0.5  ( 13.6)    18  (  1.4)      1            15.0   131    10  36
  52    151   1886S    54   6.5  9.3    0.2 +  0.2  (  5.3)    18  (  0.5)      6             5.8   131    10  36
  53    269     52L    54   8.5 22.6    1.3 +  0.4  ( 23.5)   102  (  3.0)      6            26.5   131    10  36
  54   1753   6000S     35  18.5  1.0    0.0 +  0.2  (  3.2)     1  (  0.3)      0             3.4
  55    752   1855     86   4.5 30.5    3.3 +  3.0  ( 88.9)   101  ( 13.0)     15    +      101.9   131    41   5
  56    326     54L    35  18.5  1.0    0.0 +  0.0  (  0.6)     1  (  0.0)      0             0.6
  57    730   1800     86   4.5 30.9    3.2 +  3.0  ( 87.4)   102  ( 12.7)     15    +      100.1   131    41   5
  58    877     31L    32  10.7  2.5    0.3 +  0.2  (  6.8)    18  (  3.1)      5             9.8   128    61  42
  59     10  10000     1   4.5 27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128    48  55
  60     10  10000     1   4.5 27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    47  54
  61     10  10000     1   4.5 27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130     1   8
  62    269     42L    66   5.5  4.0    0.0 +  0.3  (  3.7)     5  (  0.3)      3             4.0   132    59  41
  63   1280   3600     36   1.5  1.6    0.1 +  0.3  (  5.6)    13  (  2.8)      9    +        8.4
  64    392   1613     76   4.5 31.5    1.8 +  1.6  ( 48.0)    90  (  7.8)      8    +       55.8   129    15  35
  65    333   1613     65   4.5 26.2    1.5 +  0.9  ( 33.7)    72  (  5.3)      5            39.0   129    15  35
  66    808   1969     87   4.5 30.9    3.5 +  3.3  ( 96.7)   102  ( 14.1)     17    +      110.9   131    41   5
  67    511   1875     58   4.5 18.1    1.8 +  0.7  ( 35.5)    73  (  6.4)      7    +       41.8   131    41   5
  68   2806   3600     78  18.5  2.8    0.0 +  1.8  ( 25.0)     3  (  2.0)      2            27.0
1261     10   1262L    57   7.5  8.0    0.0 +  0.0  (  0.3)    45  (  0.0)      1             0.3   126    36   9
1262    645   1905S    57   5.5  4.6    0.1 +  0.6  ( 10.5)     8  (  1.0)      1            11.6   126    36   9
1263    213   1264L    69   7.5 10.9    0.3 +  0.3  (  8.8)    75  (  1.7)      5            10.5   126    36   9
1264    639   2038S    69   5.5  5.7    0.1 +  0.8  ( 13.1)     9  (  1.2)      5            14.4   126    36   9
.

    66 SECOND CYCLE  66 STEPS

 LINK   FLOW  SAT  DEGREE  MEAN TIMES  -------DELAY--------  ----STOPS----  ----QUEUE----  PERFORMANCE  EXIT  GREEN TIMES
NUMBER  INTO  FLOW   OF     PER PCU    UNIFORM RANDOM+ COST   MEAN   COST   MEAN          INDEX.     NODE  START  START
       LINK        SAT   CRUISE           OVERSAT  OF    STOPS   OF    MAX.  AVERAGE  WEIGHTED SUM          END    END
                          DELAY  (U+R+O=MEAN Q) DELAY   /PCU  STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
     (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)   ($/H)   (PCU)  (PCU)    ($/H)            (SECONDS)

1266    130   1267L    77   7.5 11.7    0.2 +  0.2  (  5.8)    66  (  0.9)      4             6.7   126    36   9
1267    808   2019S    77   5.5  7.3    0.1 +  1.4  ( 21.6)    11  (  2.0)      4            23.6   126    36   9
1269    511   1824     46   5.5  4.1    0.1 +  0.4  (  7.2)     8  (  0.8)      3             8.0   126    36   9
1271    174   1272L    29   8.5 20.9    0.8 +  0.2  ( 14.0)    99  (  2.2)      3            16.2   127    12  35
1272     22   1876S    29   6.5  6.7    0.0 +  0.0  (  0.5)    12  (  0.1)      3             0.6   127    12  35
1273    169   1274L    48   8.5 22.0    0.8 +  0.2  ( 14.3)   100  (  2.1)      4            16.4   127    12  35
1274    189   2046S    48   6.5  8.6    0.2 +  0.2  (  6.1)    16  (  0.7)      4             6.7   127    12  35
1275    169   1276L    50   8.5 22.4    0.8 +  0.2  ( 14.6)   101  (  2.1)      4            16.8   127    12  35
1276    191   1973S    50   6.5  9.0    0.2 +  0.3  (  6.4)    16  (  0.7)      4             7.1   127    12  35
1278    162   1770     25   6.5  5.9    0.1 +  0.2  (  3.5)    10  (  0.4)      0             3.8   127    12  35
1461     95   1860     15  18.5 18.5    0.4 +  0.1  (  6.8)    69  (  1.4)      1             8.1   146    11  33
1462     23   1774      4  13.5 12.4    0.1 +  0.0  (  1.1)    71  (  0.3)      0             1.4   146    48  35
1463    965   1833     58  13.5  5.1    0.5 +  0.7  ( 17.6)    32  (  5.3)      7            22.8   146    48  41
1464     20   1833      9  18.5 35.3    0.1 +  0.0  (  2.7)    97  (  0.4)      0             3.2   146    41  48
1465    862   1926     90  18.5 32.0    3.6 +  4.0  (107.0)   105  ( 19.2)     18           126.2   146    48  14
1466     10    715      1   2.5  3.2    0.0 +  0.0  (  0.1)     0  (  0.0)      0            0.1
1467     33   2000      2  18.5  1.4    0.0 +  0.0  (  0.1)     1  (  0.0)      0            0.1
1468     20   2000      1  18.5  1.4    0.0 +  0.0  (  0.1)     1  (  0.0)      0            0.1
1469    966   2000     48  18.5  2.2    0.0 +  0.5  (  6.6)     3  (  0.5)      0            7.2
12601   941   1800     52  15.7  2.6    0.0 +  0.5  (  8.0)     5  (  0.8)      6            8.8
12602   732     29L    71  18.5  2.1    0.0 +  0.3  (  4.5)     4  (  0.6)     34            5.1
12603    10  10000      0   4.5  6.5    0.0 +  0.0  (  0.2)    41  (  0.0)      0            0.2   126    36   8
12604    10  10000      0   4.5  6.5    0.0 +  0.0  (  0.2)    41  (  0.0)      0            0.2   126    36   8
12605   380   1522     97   2.5 81.9    1.4 +  7.2 (122.0)   164  ( 10.6)     14    +      132.6   126    14  30
12606   162   1640     38   2.5 17.1    0.4 +  0.3  ( 10.6)    66  (  1.8)      2            12.4   126    14  30
12607   401   1757     89   2.5 43.6    1.4 +  3.4  ( 68.2)   120  (  8.2)     10    +       76.4   126    14  30
12701   799   1802     86   2.5 27.7    3.1 +  3.0  ( 85.8)    97  ( 18.2)     16    +      104.0   127    40   7
12702   535   1775     59   2.5 16.4    1.7 +  0.7  ( 33.5)    69  (  8.7)      7    +       42.2   127    40   7
12703  2159   3600     60  18.5  1.7    0.0 +  0.7  ( 10.6)     2  (  0.9)      1            11.5
12704   825   1907     84   2.5 25.2    3.1 +  2.5  ( 80.5)    93  ( 17.9)     15    +       98.4   127    40   7

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL       TOTAL       PENALTY      TOTAL
 DISTANCE        TIME     JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT      SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                                   DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)   ($/H)      ($/H)       ($/H)       ($/H)

  4004.8        198.5       20.2        44.1     51.7    (1360.3) + (  231.5)  + (   0.0)   =    1591.9     TOTALS
-------------------------------------------------------------------------------------------------------------------
                                                                                                    ROUTE
   483.8         21.1       22.9         4.2      4.7    ( 126.5) + (   32.0)  + (   0.0)   =     158.5        1
    46.8          3.5       13.3         1.3      0.8    (  30.8) + (    3.7)  + (   0.0)   =      34.5        2
    58.3          3.7       15.8         1.1      1.1    (  32.0) + (    6.0)  + (   0.0)   =      38.1        3
    66.3          3.6       18.4         0.8      1.2    (  27.8) + (    4.9)  + (   0.0)   =      32.7        4

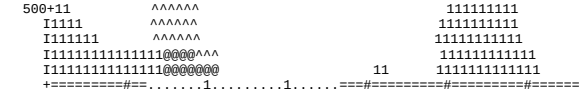

*************************************************************************************************************************************************
                             CRUISE              DELAY              STOPS              TOTALS
                          LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR

FUEL CONSUMPTION PREDICTIONS      224.3       +    110.2       +    105.5       =    440.0

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  555

CYCLIC FLOW PROFILE GRAPHS

.
LINK  1271 FED BY  1269    0    0    0 M.M.E. 0.97
    I
    I
    I
    I
 2000+
    I            ^^^^^
    I           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
 1500+           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
 1000+           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
    I           ^^^^^^
    I1          ^^^^^^                              111111
```



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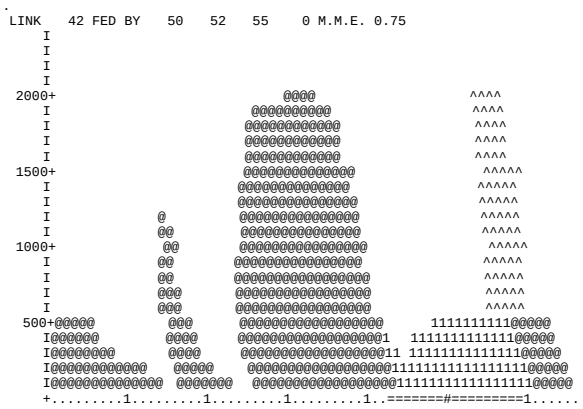

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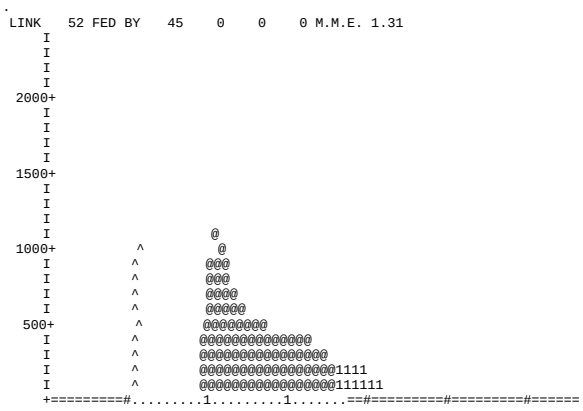

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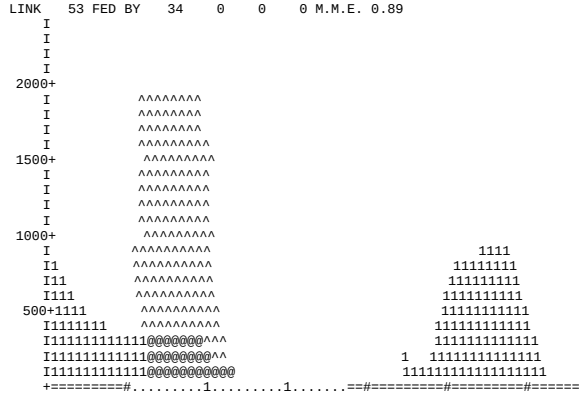

PROGRAM TRANSYT FINISHED

<Enter Report 1 Title Here>

PRT File
AM Base B14+Com+H4&5

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1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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 ------------------------------------------------------------------------
 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
 IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION
 ------------------------------------------------------------------------------

Run with file:- "BULLS BRIDGE RABOUT_AM_MC_4.DAT"  at 18:36  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                 =   8
  NUMBER OF LINKS                 =  70
  NUMBER OF OPTIMISED NODES       =   8
  MAXIMUM NUMBER OF GRAPHIC PLOTS =   0
  NUMBER OF STEPS IN CYCLE        =  65
  MAXIMUM NUMBER OF SHARED STOPLINES =  2
  MAXIMUM NUMBER OF TIMING POINTS =   3
  MAXIMUM LINKS AT ANY NODE       =  12


  CORE REQUESTED =  14800 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     65     65     60      2      3      0      1    100    100      0      0      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                       LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                             NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126            7      7
  19)=  10    127            7      7
  20)=  10    128            7      7
  21)=  10    129            7      7
  22)=  10    130            7      7
  23)=  10    131            7      7
  24)=  10    132            7      7
  25)=  10    146            7      7      7

                             NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126            6      6
  27)=  11    127            5      5
  28)=  11    128            6      6
  29)=  11    129            5      5
  30)=  11    130            6      6
  31)=  11    131            5      5
  32)=  11    132            5      6
  33)=  11    146            7      8      8

                             NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE  Sgl/Dbl  S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.  Cycled
  34)=  12    126      1      3     36
  35)=  12    127      1     35      0
  36)=  12    128      1     35     22
  37)=  12    129      1     19     41
  38)=  12    130      1     19      6
```

```
 39)=  12    131      1      0     31
 40)=  12    132      1     33     20
 41)=  12    146      1     18     49      3
```

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS LINK1 NO.	LINK2 % FLOW	LINK1 GIVEWAY COEFFS. ONLY X100	A1 X100	A2 X100				LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
42)=	30	1462	1465	0	0	50	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	22	0	0	0	0	0	31	0	715	0	0

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START STAGE	LAG	END STAGE	LAG	SECOND GREEN START STAGE	LAG	END STAGE	LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
44)=	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0
45)=	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0
46)=	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
48)=	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0
49)=	31	36	129	2	5	1	0	0	0	0	0	53	0	2047	0	0
50)=	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0
51)=	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0
52)=	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0
53)=	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0
54)=	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0
55)=	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0
56)=	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
57)=	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0
58)=	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
59)=	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0
60)=	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
61)=	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0
62)=	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0
63)=	31	52	131	2	5	1	0	0	0	0	0	63	0	1886	0	0
64)=	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0
65)=	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
66)=	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0
67)=	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0
68)=	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0
69)=	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0
70)=	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
71)=	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
72)=	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
73)=	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0
74)=	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0
75)=	31	64	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
76)=	31	65	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
77)=	31	66	131	1	5	2	0	0	0	0	0	40	0	1969	0	0
78)=	31	67	131	1	5	2	0	0	0	0	0	40	0	1875	0	0
79)=	31	68	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
80)=	31	1261	0	0	0	0	0	0	0	0	0	55	0	0	0	0
81)=	31	1262	126	1	6	2	1	0	0	0	0	55	0	1905	0	0
82)=	31	1263	0	0	0	0	0	0	0	0	0	55	0	0	0	0
83)=	31	1264	126	1	6	2	1	0	0	0	0	55	0	2038	0	0
84)=	31	1266	0	0	0	0	0	0	0	0	0	55	0	0	0	0
85)=	31	1267	126	1	6	2	1	0	0	0	0	55	0	2019	0	0
86)=	31	1269	126	1	6	2	1	0	0	0	0	55	0	1824	0	0
87)=	31	1271	0	0	0	0	0	0	0	0	0	67	0	0	0	0
88)=	31	1272	127	2	5	1	0	0	0	0	0	67	0	1876	0	0
89)=	31	1273	0	0	0	0	0	0	0	0	0	67	0	0	0	0
90)=	31	1274	127	2	5	1	0	0	0	0	0	67	0	2046	0	0
91)=	31	1275	0	0	0	0	0	0	0	0	0	67	0	0	0	0
92)=	31	1276	127	2	5	1	0	0	0	0	0	67	0	1973	0	0
93)=	31	1278	127	2	5	1	0	0	0	0	0	67	0	1770	0	0
94)=	31	1461	146	2	1	3	0	0	0	0	0	200	0	1860	0	0
95)=	31	1462	146	1	0	3	0	0	0	0	0	130	0	1774	0	0
96)=	31	1463	146	1	0	3	6	0	0	0	0	130	0	1833	0	0
97)=	31	1464	146	3	8	1	0	0	0	0	0	200	0	1833	0	0
98)=	31	1465	146	1	0	2	1	0	0	0	0	200	0	1926	0	0
99)=	31	1467	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
100)=	31	1468	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
101)=	31	1469	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
102)=	31	12601	0	0	0	0	0	0	0	0	0	156	0	1800	0	0
103)=	31	12602	0	0	0	0	0	0	0	0	0	200	0	0	0	0
104)=	31	12603	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
105)=	31	12604	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
106)=	31	12605	126	2	6	1	0	0	0	0	0	20	0	1522	0	0
107)=	31	12606	126	2	6	1	0	0	0	0	0	20	0	1640	0	0
108)=	31	12607	126	2	6	1	0	0	0	0	0	20	0	1757	0	0
109)=	31	12701	127	1	5	2	0	0	0	0	0	23	0	1802	0	0
110)=	31	12702	127	1	5	2	0	0	0	0	0	23	0	1775	0	0
111)=	31	12703	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
112)=	31	12704	127	1	5	2	0	0	0	0	0	23	0	1907	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 2 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 3 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 4 ..... LINK NO.	CRUISE FLOW	CRUISE TIME
113)=	32	29	1951	0	1262	603	18	1264	546	18	1267	461	18	12607	341	18
114)=	32	31	543	0	1272	144	9	1274	130	9	1275	138	9	1276	131	9
115)=	32	32	10	0	0	0	4	0	0	0	0	0	0	0	0	0
116)=	32	33	1242	0	31	543	18	58	699	18	0	0	0	0	0	0
117)=	32	34	173	0	12702	173	5	0	0	0	0	0	0	0	0	0
118)=	32	36	492	0	12701	50	5	12702	442	5	0	0	0	0	0	0
119)=	32	37	40	0	1278	40	7	0	0	0	0	0	0	0	0	0
120)=	32	38	515	0	12701	515	5	0	0	0	0	0	0	0	0	0
121)=	32	39	49	0	1276	10	7	1278	39	7	0	0	0	0	0	0
122)=	32	40	309	0	12701	65	5	12704	244	5	0	0	0	0	0	0
123)=	32	41	47	0	1276	47	7	0	0	0	0	0	0	0	0	0
124)=	32	42	721	0	50	279	5	52	199	5	55	243	5	0	0	0
125)=	32	43	10	0	0	0	4	0	0	0	0	0	0	0	0	0
126)=	32	44	300	0	63	300	4	0	0	0	0	0	0	0	0	0
127)=	32	45	290	0	63	290	4	0	0	0	0	0	0	0	0	0
128)=	32	46	1011	0	0	0	18	0	0	0	0	0	0	0	0	0
129)=	32	47	10	0	0	0	4	0	0	0	0	0	0	0	0	0
130)=	32	48	132	0	65	132	6	0	0	0	0	0	0	0	0	0
131)=	32	50	289	0	64	289	6	0	0	0	0	0	0	0	0	0
132)=	32	52	199	0	45	199	6	0	0	0	0	0	0	0	0	0
133)=	32	53	173	0	34	173	8	0	0	0	0	0	0	0	0	0
134)=	32	54	1616	0	36	492	18	38	515	18	40	309	18	44	300	18
135)=	32	55	566	0	68	566	4	0	0	0	0	0	0	0	0	0
136)=	32	56	227	0	37	40	18	39	49	18	41	47	18	45	91	18
137)=	32	57	566	0	68	566	4	0	0	0	0	0	0	0	0	0
138)=	32	58	699	0	1271	137	9	1273	138	9	12704	424	11	0	0	0
139)=	32	59	10	0	0	0	4	0	0	0	0	0	0	0	0	0
140)=	32	60	10	0	0	0	4	0	0	0	0	0	0	0	0	0
141)=	32	61	10	0	0	0	4	0	0	0	0	0	0	0	0	0
142)=	32	62	173	0	53	173	5	0	0	0	0	0	0	0	0	0
143)=	32	63	1011	0	46	1011	1	0	0	0	0	0	0	0	0	0
144)=	32	64	289	0	63	289	4	0	0	0	0	0	0	0	0	0
145)=	32	65	132	0	63	132	4	0	0	0	0	0	0	0	0	0
146)=	32	66	566	0	68	566	4	0	0	0	0	0	0	0	0	0

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147)=  32     67    568      0     68    568      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2266      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     10      0     50     10      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    603      0     55    323      5     57    280      5      0      0      0      0      0      0
151)=  32   1263     60      0     48     60      7      0      0      0      0      0      0      0      0      0
152)=  32   1264    546      0     57    286      5     66    260      5      0      0      0      0      0      0
153)=  32   1266     72      0     48     72      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    461      0     66    306      5     67    155      5      0      0      0      0      0      0
155)=  32   1269    413      0     67    413      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    137      0   1269    137      8      0      0      0      0      0      0      0      0      0
157)=  32   1272    144      0  12607    144      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    138      0   1269    138      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    130      0  12605    130      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    138      0   1269    138      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    188      0  12605    188      6      0      0      0      0      0      0      0      0      0
162)=  32   1278     79      0  12606     79      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     44      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     72      0     42     72     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    822      0     42    649     13     62    173     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    868      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     33      0   1465     33      2      0      0      0      0      0      0      0      0      0
169)=  32   1467    104      0   1462     72     18   1466     33     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    822      0   1463    812     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601    882      0   1461     44     14   1464     10     17   1465    835     18      0      0      0
173)=  32  12602    142      0   1261     10     18   1263     60     18   1266     72     18      0      0      0
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    318      0  12601    318      2      0      0      0      0      0      0      0      0      0
177)=  32  12606     79      0  12601     79      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    485      0  12601    485      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    630      0  12703    630      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    615      0  12703    615      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   1913      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    668      0  12703    668      2      0      0      0      0      0      0      0      0      0

*****END OF SUBROUTINE TINPUT*****
.

    65 SECOND CYCLE  65 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2       3      36
  127      2      35       0
  128      2      35      22
  129      2      19      41
  130      2      19       6
  131      2       0      31
  132      2      33      20
  146      3      18      49       3

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
         LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
       (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

   29    1952   4000S    52  18.5   2.3    0.5 +  0.5  ( 14.0)    27  ( 11.2)     24             25.2
   31     542   5591S    31   9.5   3.6    0.4 +  0.1  (  6.7)    23  (  2.4)      7             9.1   128     41  22
   32      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128     28  35
   33    1241   6000     21  18.5   0.9    0.0 +  0.1  (  1.9)     1  (  0.2)      0             2.0
   34     174   1806     16   5.5   2.5    0.0 +  0.1  (  1.4)     5  (  0.2)      0             1.6   129     46  19
   36     493   2047S    43   5.5   3.2    0.0 +  0.4  (  5.2)     7  (  0.7)      1             5.9   129     46  19
   37      40    36L    43   7.5   4.5    0.0 +  0.0  (  0.6)    10  (  0.0)      1             0.7   129     46  19
   38     516   2028S    46   5.5   3.4    0.0 +  0.4  (  5.8)     8  (  0.8)      2             6.6   129     46  19
   39      49    38L    46   7.5   5.1    0.0 +  0.0  (  0.9)    12  (  0.1)      2             0.9   129     46  19
   40     311   1867S    32   5.5   2.9    0.0 +  0.2  (  3.0)     6  (  0.4)      1             3.4   129     46  19
   41      47    40L    32   7.5   6.3    0.0 +  0.0  (  1.1)    18  (  0.1)      1             1.2   129     46  19
   42     721   2028S    60   5.5   8.5    1.0 +  0.6  ( 22.7)    66  ( 11.2)     13    +       33.9   132     38  20
   43      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132     26  33
   44     299   1612     67   4.5  30.4    1.5 +  1.0  ( 35.3)    74  (  5.0)      4            40.3   129     24  41
   45     289   1613     65   4.5  29.6    1.4 +  0.9  ( 33.1)    73  (  4.7)      4            37.8   129     24  41
   46    1011   4839     29  18.5   4.4    0.9 +  0.2  ( 15.5)    30  (  6.4)      6            21.8   130     25   6
   47      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130     12  19
   48     131   1806     16   6.5   6.1    0.1 +  0.1  (  2.9)    51  (  1.3)      2             4.2   131     36   0
   50     289   1922     33   6.5   7.3    0.3 +  0.2  (  7.7)    67  (  3.7)      5            11.4   131     36   0
   52     198   1886S    43   6.5   9.1    0.3 +  0.2  (  6.7)    73  (  2.8)      5             9.5   131     36   0
   53     174    52L    43   8.5  17.7    0.7 +  0.2  ( 11.8)    50  (  0.9)      5            12.7   131     36   0
   54    1619   6000S    31  18.5   0.9    0.0 +  0.2  (  2.8)     1  (  0.2)      0             3.0
   55     567   1855     74   4.5  25.2    2.5 +  1.4  ( 55.2)    90  (  8.7)     10    +       63.9   131      5  31
   56     227    54L    31  18.5   0.9    0.0 +  0.0  (  0.4)     1  (  0.0)      0             0.4
   57     567   1800     76   4.5  26.5    2.6 +  1.5  ( 58.1)    93  (  9.0)     10    +       67.0   131      5  31
   58     699    31L    31  10.7   3.7    0.5 +  0.1  (  8.8)    27  (  3.6)      7            12.4   128     41  22
   59      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128     28  35
   60      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132     26  33
   61      10  10000      1   4.5  27.4    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130     12  19
   62     174    42L    60   5.5   4.6    0.1 +  0.1  (  2.8)    32  (  1.3)     13    +        4.1   132     38  20
   63    1011   3600     28   1.5   1.4    0.1 +  0.2  (  3.5)     8  (  1.5)      6    +        5.0
   64     289   1613     65   4.5  29.6    1.4 +  0.9  ( 33.1)    73  (  4.7)      4            37.8   129     24  41
   65     131   1613     29   4.5  23.0    0.6 +  0.2  ( 11.6)    63  (  1.8)      2            13.5   129     24  41
   66     567   1969     69   4.5  23.2    2.5 +  1.1  ( 50.7)    86  (  8.3)      9    +       59.0   131      5  31
   67     567   1875     73   4.5  24.8    2.5 +  1.3  ( 54.3)    89  (  8.6)     10    +       62.9   131      5  31
   68    2266   3600     63  18.5   1.8    0.0 +  0.8  ( 12.0)     2  (  1.0)      1            13.0
 1261      10   1262L    72   7.5  32.8    0.1 +  0.0  (  1.3)   109  (  0.1)      5             1.4   126      9  37
 1262     603   1905S    72   5.5   8.3    0.1 +  1.3  ( 18.6)    14  (  1.7)      5            20.3   126      9  37
 1263      60   1264L    67   7.5  33.8    0.5 +  0.1  (  7.9)   108  (  0.7)      5             8.6   126      9  37
 1264     547   2038S    67   5.5   6.9    0.1 +  0.9  ( 13.7)    16  (  1.9)      5            15.6   126      9  37
.

    65 SECOND CYCLE  65 STEPS

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
         LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
       (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

 1266      72   1267L    59   7.5  33.1    0.6 +  0.1  (  9.2)   107  (  0.8)      4            10.1   126      9  37
 1267     460   2019S    59   5.5   5.8    0.1 +  0.6  (  9.6)    15  (  1.5)      4            11.1   126      9  37
 1269     412   1824     51   5.5   5.2    0.0 +  0.5  (  7.7)     7  (  0.7)      1             8.4   126      9  37
 1271     137   1272L    31   8.5   8.5    0.2 +  0.1  (  4.3)    21  (  0.4)      3             4.7   127      5  35
 1272     144   1876S    31   6.5  16.8    0.5 +  0.1  (  9.3)    94  (  3.0)      3            12.3   127      5  35
 1273     138   1274L    27   8.5   8.1    0.2 +  0.1  (  4.1)    21  (  0.4)      3             4.5   127      5  35
 1274     129   2046S    27   6.5  16.5    0.5 +  0.1  (  8.1)    91  (  2.7)      3            10.8   127      5  35
 1275     138   1276L    35   8.5   8.5    0.2 +  0.1  (  4.3)    21  (  0.4)      4             4.7   127      5  35
 1276     188   1973S    35   6.5  17.8    0.8 +  0.2  ( 12.8)    96  (  4.0)      4            16.9   127      5  35
 1278      79   1770     9   6.5  15.5    0.3 +  0.1  (  4.7)    87  (  1.5)      1             6.2   127      5  35
```

1461	44	1860	8	18.5	20.8	0.2 +	0.0	(3.5)	73	(0.7)	1		4.2	146	50	3
1462	72	1774	13	13.5	10.3	0.1 +	0.1	(2.8)	39	(0.5)	1		3.3	146	18	3
1463	823	1833	51	13.5	3.3	0.1 +	0.5	(9.1)	11	(1.5)	2		10.7	146	18	9
1464	20	1833	9	18.5	34.7	0.1 +	0.0	(2.7)	96	(0.4)	0		3.1	146	11	18
1465	868	1926	89	18.5	30.2	3.5 +	3.7	(101.7)	103	(18.9)	18		120.6	146	18	50
1466	33	715	5	2.5	3.2	0.0 +	0.0	(0.4)	0	(0.0)	0		0.4			
1467	104	2000	5	18.5	1.4	0.0 +	0.0	(0.4)	1	(0.0)	0		0.4			
1468	20	2000	1	18.5	1.4	0.0 +	0.0	(0.1)	1	(0.0)	0		0.1			
1469	823	2000	41	18.5	2.0	0.0 +	0.3	(5.0)	2	(0.4)	0		5.4			
12601	882	1800	49	18.3	2.5	0.0 +	0.5	(6.8)	3	(0.6)	0		7.4			
12602	141	29L	52	18.5	1.7	0.0 +	0.0	(0.7)	10	(0.3)	24		1.0			
12603	10	10000	0	4.5	11.7	0.0 +	0.0	(0.4)	57	(0.0)	0		0.4	126	9	36
12604	10	10000	0	4.5	11.7	0.0 +	0.0	(0.4)	57	(0.0)	0		0.4	126	9	36
12605	317	1522	50	2.5	10.4	0.4 +	0.5	(12.4)	34	(1.8)	2		14.3	126	42	3
12606	79	1640	12	2.5	7.3	0.1 +	0.1	(2.1)	23	(0.3)	0		2.4	126	42	3
12607	485	1757	66	2.5	12.4	0.6 +	1.0	(22.7)	42	(3.5)	5	+	26.2	126	42	3
12701	631	1802	88	2.5	37.3	3.2 +	3.3	(91.5)	112	(16.5)	14	+	108.0	127	40	0
12702	616	1775	87	2.5	36.4	3.1 +	3.1	(87.2)	110	(15.9)	13	+	103.1	127	40	0
12703	1913	3600	53	18.5	1.6	0.0 +	0.6	(8.0)	2	(0.7)	1		8.7			
12704	670	1907	88	2.5	36.5	3.4 +	3.3	(95.2)	111	(17.3)	15	+	112.5	127	40	0

TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+ OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY ($/H)	TOTAL COST OF STOPS ($/H)	PENALTY FOR EXCESS QUEUES ($/H)	TOTAL PERFORMANCE INDEX ($/H)	
3401.6	161.2	21.1	38.9	34.7	(1044.7) +	(199.9) +	(0.0) =	1244.7	TOTALS

ROUTE

****

	CRUISE LITRES PER HOUR		DELAY LITRES PER HOUR		STOPS LITRES PER HOUR		TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	189.6	+	84.6	+	91.1	=	365.3

NO. OF ENTRIES TO SUBPT = 1
NO. OF LINKS RECALCULATED= 70

PROGRAM TRANSYT FINISHED

<Enter Report 1 Title Here>

PRT File
PM Base B14+Com+H4&5

```
1          _________________ T R A N S Y T 12 _________________

                      Traffic Network Study Tool

                 Analysis Program Release 3 (March 2004)
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           _____________________________________________________


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 ------------------------------------------------------------------------
 THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
 IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION
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Run with file:- "BULLS BRIDGE RABOUT_PM_MC_2.DAT"  at 18:42  on 06/08/12

TRANSYT 12.0



  PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

  NUMBER OF NODES                 =    8
  NUMBER OF LINKS                 =   70
  NUMBER OF OPTIMISED NODES       =    8
  MAXIMUM NUMBER OF GRAPHIC PLOTS =    8
  NUMBER OF STEPS IN CYCLE        =   66
  MAXIMUM NUMBER OF SHARED STOPLINES =   2
  MAXIMUM NUMBER OF TIMING POINTS =    3
  MAXIMUM LINKS AT ANY NODE       =   12


  CORE REQUESTED =  14914 WORDS
  CORE AVAILABLE =  72000 WORDS
.

         DATA INPUT :-
          ~~~~ ~~~~~
 CARD   CARD
  NO.   TYPE
 (  1)= TITLE:-
 CARD   CARD   CYCLE  NO. OF   TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW   CRUISE-SPEEDS   OPTIMISE  EXTRA  HILL-   DELAY   STOP
  NO.   TYPE   TIME    STEPS  PERIOD DISPLACEMENTS  SETTINGS  CYCLE   SCALE   SCALE  CARD32   0=NONE   COPIES  CLIMB   VALUE   VALUE
                      PER   1-1200  START    END     0=NO  1=EQUAL  10-200  50-200 0=TIMES  1=O/SET   FINAL  OUTPUT  P PER   P PER
               (SEC)  CYCLE   MINS.  (SEC)   (SEC)    1=YES  CYCLE     %      %   1=SPEEDS 2=FULL   OUTPUT  1=FULL  PCU-H   100
   2)=  1     66     66     60      2      3      0      1    100    100      0      1      0      0   1420    260
 CARD   CARD                                  LIST  OF  NODES  TO  BE  OPTIMISED
  NO.   TYPE
   3)=  2    146    126    127    128    129    130    131    132      0      0      0      0      0      0      0

                                       LINKS HAVING SHARED STOPLINES
 CARD   CARD     FIRST SET.........................     SECOND SET.......................      THIRD SET.........................
  NO.   TYPE
   4)=  7     29   12602      0      0      0      0      0      0      0      0      0      0      0      0      0
   5)=  7     31      58      0      0      0      0      0      0      0      0      0      0      0      0      0
   6)=  7     36      37      0      0      0      0      0      0      0      0      0      0      0      0      0
   7)=  7     38      39      0      0      0      0      0      0      0      0      0      0      0      0      0
   8)=  7     40      41      0      0      0      0      0      0      0      0      0      0      0      0      0
   9)=  7     42      62      0      0      0      0      0      0      0      0      0      0      0      0      0
  10)=  7     52      53      0      0      0      0      0      0      0      0      0      0      0      0      0
  11)=  7     54      56      0      0      0      0      0      0      0      0      0      0      0      0      0
  12)=  7   1262    1261      0      0      0      0      0      0      0      0      0      0      0      0      0
  13)=  7   1264    1263      0      0      0      0      0      0      0      0      0      0      0      0      0
  14)=  7   1267    1266      0      0      0      0      0      0      0      0      0      0      0      0      0
  15)=  7   1272    1271      0      0      0      0      0      0      0      0      0      0      0      0      0
  16)=  7   1274    1273      0      0      0      0      0      0      0      0      0      0      0      0      0
  17)=  7   1276    1275      0      0      0      0      0      0      0      0      0      0      0      0      0

                              NODE CARDS:  MINIMUM STAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  18)=  10    126            7      7
  19)=  10    127            7      7
  20)=  10    128            7      7
  21)=  10    129            7      7
  22)=  10    130            7      7
  23)=  10    131            7      7
  24)=  10    132            7      7
  25)=  10    146            7      7      7

                              NODE CARDS:  PRECEDING INTERSTAGE TIMES (WORKING)
 CARD   CARD   NODE           S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.
  26)=  11    126            6      6
  27)=  11    127            5      5
  28)=  11    128            6      6
  29)=  11    129            5      5
  30)=  11    130            6      6
  31)=  11    131            5      5
  32)=  11    132            5      6
  33)=  11    146            7      8      8

                              NODE CARDS:  STAGE CHANGE TIMES (WORKING)
 CARD   CARD   NODE   Sgl/Dbl  S1     S2     S3     S4     S5     S6     S7     S8     S9    S10
  NO.   TYPE    NO.   Cycled
  34)=  12    126      1     29      6
  35)=  12    127      1     33      5
  36)=  12    128      1     53     40
  37)=  12    129      1      8     33
  38)=  12    130      1      6     59
```

```
 39)=  12    131      1     34      3
 40)=  12    132      1     52     39
 41)=  12    146      1     51     17     36
```

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS LINK1 NO.	LINK2 % FLOW	LINK1 GIVEWAY COEFFS. ONLY X100	A1 X100	A2 X100				LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
42)=	30	1462	1465	0	0	50	0	0	0	0	0	130	0	1000	0	0
43)=	30	1466	1462	0	0	22	0	0	0	0	0	31	0	715	0	0

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START STAGE	FIRST GREEN START LAG	FIRST GREEN END STAGE	FIRST GREEN END LAG	SECOND GREEN START STAGE	SECOND GREEN START LAG	SECOND GREEN END STAGE	SECOND GREEN END LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
44)=	31	29	0	0	0	0	0	0	0	0	0	200	0	4000	0	0
45)=	31	31	128	1	6	2	0	0	0	0	0	95	0	5591	0	0
46)=	31	32	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	33	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
48)=	31	34	129	2	5	1	0	0	0	0	0	53	0	1806	0	0
49)=	31	36	129	2	5	1	0	0	0	0	0	53	0	2047	0	0
50)=	31	37	0	0	0	0	0	0	0	0	0	53	0	0	0	0
51)=	31	38	129	2	5	1	0	0	0	0	0	53	0	2028	0	0
52)=	31	39	0	0	0	0	0	0	0	0	0	53	0	0	0	0
53)=	31	40	129	2	5	1	0	0	0	0	0	53	0	1867	0	0
54)=	31	41	0	0	0	0	0	0	0	0	0	53	0	0	0	0
55)=	31	42	132	1	5	2	0	0	0	0	0	58	0	2028	0	0
56)=	31	43	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
57)=	31	44	129	1	5	2	0	0	0	0	0	45	0	1612	0	0
58)=	31	45	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
59)=	31	46	130	1	6	2	0	0	0	0	0	200	0	4839	0	0
60)=	31	47	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
61)=	31	48	131	2	5	1	0	0	0	0	0	63	0	1806	0	0
62)=	31	50	131	2	5	1	0	0	0	0	0	63	0	1922	0	0
63)=	31	52	131	2	5	1	0	0	0	0	0	63	0	1886	0	0
64)=	31	53	0	0	0	0	0	0	0	0	0	63	0	0	0	0
65)=	31	54	0	0	0	0	0	0	0	0	0	200	0	6000	0	0
66)=	31	55	131	1	5	2	0	0	0	0	0	40	0	1855	0	0
67)=	31	56	0	0	0	0	0	0	0	0	0	200	0	0	0	0
68)=	31	57	131	1	5	2	0	0	0	0	0	40	0	1800	0	0
69)=	31	58	0	0	0	0	0	0	0	0	0	95	0	0	0	0
70)=	31	59	128	2	6	1	0	0	0	0	0	10	0	10000	0	0
71)=	31	60	132	2	6	1	0	0	0	0	0	10	0	10000	0	0
72)=	31	61	130	2	6	1	0	0	0	0	0	10	0	10000	0	0
73)=	31	62	0	0	0	0	0	0	0	0	0	58	0	0	0	0
74)=	31	63	0	0	0	0	0	0	0	0	0	10	0	3600	0	0
75)=	31	64	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
76)=	31	65	129	1	5	2	0	0	0	0	0	45	0	1613	0	0
77)=	31	66	131	1	5	2	0	0	0	0	0	40	0	1969	0	0
78)=	31	67	131	1	5	2	0	0	0	0	0	40	0	1875	0	0
79)=	31	68	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
80)=	31	1261	0	0	0	0	0	0	0	0	0	55	0	0	0	0
81)=	31	1262	126	1	6	2	1	0	0	0	0	55	0	1905	0	0
82)=	31	1263	0	0	0	0	0	0	0	0	0	55	0	0	0	0
83)=	31	1264	126	1	6	2	1	0	0	0	0	55	0	2038	0	0
84)=	31	1266	0	0	0	0	0	0	0	0	0	55	0	0	0	0
85)=	31	1267	126	1	6	2	1	0	0	0	0	55	0	2019	0	0
86)=	31	1269	126	1	6	2	1	0	0	0	0	55	0	1824	0	0
87)=	31	1271	0	0	0	0	0	0	0	0	0	67	0	0	0	0
88)=	31	1272	127	2	5	1	0	0	0	0	0	67	0	1876	0	0
89)=	31	1273	0	0	0	0	0	0	0	0	0	67	0	0	0	0
90)=	31	1274	127	2	5	1	0	0	0	0	0	67	0	2046	0	0
91)=	31	1275	0	0	0	0	0	0	0	0	0	67	0	0	0	0
92)=	31	1276	127	2	5	1	0	0	0	0	0	67	0	1973	0	0
93)=	31	1278	127	2	5	1	0	0	0	0	0	67	0	1770	0	0
94)=	31	1461	146	2	0	3	0	0	0	0	0	200	0	1860	0	0
95)=	31	1462	146	1	0	3	2	0	0	0	0	130	0	1774	0	0
96)=	31	1463	146	1	0	3	8	0	0	0	0	130	0	1833	0	0
97)=	31	1464	146	3	8	1	0	0	0	0	0	200	0	1833	0	0
98)=	31	1465	146	1	0	2	3	0	0	0	0	200	0	1926	0	0
99)=	31	1467	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
100)=	31	1468	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
101)=	31	1469	0	0	0	0	0	0	0	0	0	200	0	2000	0	0
102)=	31	12601	0	0	0	0	0	0	0	0	0	156	0	1800	0	0
103)=	31	12602	0	0	0	0	0	0	0	0	0	200	0	0	0	0
104)=	31	12603	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
105)=	31	12604	126	1	6	2	0	0	0	0	0	10	0	10000	0	0
106)=	31	12605	126	2	6	1	0	0	0	0	0	20	0	1522	0	0
107)=	31	12606	126	2	6	1	0	0	0	0	0	20	0	1640	0	0
108)=	31	12607	126	2	6	1	0	0	0	0	0	20	0	1757	0	0
109)=	31	12701	127	1	5	2	0	0	0	0	0	23	0	1802	0	0
110)=	31	12702	127	1	5	2	0	0	0	0	0	23	0	1775	0	0
111)=	31	12703	0	0	0	0	0	0	0	0	0	200	0	3600	0	0
112)=	31	12704	127	1	5	2	0	0	0	0	0	23	0	1907	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 2 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 3 ..... LINK NO.	CRUISE FLOW	CRUISE TIME	ENTRY 4 ..... LINK NO.	CRUISE FLOW	CRUISE TIME
113)=	32	29	2097	0	1262	658	18	1264	640	18	1267	799	18	0	0	0
114)=	32	31	423	0	1272	44	9	1274	170	9	1275	170	9	1276	39	9
115)=	32	32	10	0	0	0	4	0	0	0	0	0	0	0	0	0
116)=	32	33	1299	0	31	423	18	58	876	18	0	0	0	0	0	0
117)=	32	34	271	0	12702	271	5	0	0	0	0	0	0	0	0	0
118)=	32	36	248	0	12702	248	5	0	0	0	0	0	0	0	0	0
119)=	32	37	110	0	1278	110	7	0	0	0	0	0	0	0	0	0
120)=	32	38	552	0	12701	552	5	0	0	0	0	0	0	0	0	0
121)=	32	39	123	0	1276	59	7	1278	64	7	0	0	0	0	0	0
122)=	32	40	556	0	12701	256	5	12704	300	5	0	0	0	0	0	0
123)=	32	41	91	0	1276	91	7	0	0	0	0	0	0	0	0	0
124)=	32	42	720	0	50	372	5	52	150	5	55	198	5	0	0	0
125)=	32	43	10	0	0	0	4	0	0	0	0	0	0	0	0	0
126)=	32	44	397	0	63	397	4	0	0	0	0	0	0	0	0	0
127)=	32	45	160	0	63	160	4	0	0	0	0	0	0	0	0	0
128)=	32	46	1281	0	0	0	18	0	0	0	0	0	0	0	0	0
129)=	32	47	10	0	0	0	4	0	0	0	0	0	0	0	0	0
130)=	32	48	332	0	65	332	6	0	0	0	0	0	0	0	0	0
131)=	32	50	392	0	64	392	6	0	0	0	0	0	0	0	0	0
132)=	32	52	150	0	45	150	6	0	0	0	0	0	0	0	0	0
133)=	32	53	271	0	34	271	8	0	0	0	0	0	0	0	0	0
134)=	32	54	1753	0	36	248	18	38	552	18	40	556	18	44	397	18
135)=	32	55	766	0	68	766	4	0	0	0	0	0	0	0	0	0
136)=	32	56	334	0	37	110	18	39	123	18	41	91	18	45	10	18
137)=	32	57	730	0	68	730	4	0	0	0	0	0	0	0	0	0
138)=	32	58	876	0	1271	171	9	1273	171	9	12704	534	11	0	0	0
139)=	32	59	10	0	0	0	4	0	0	0	0	0	0	0	0	0
140)=	32	60	10	0	0	0	4	0	0	0	0	0	0	0	0	0
141)=	32	61	10	0	0	0	4	0	0	0	0	0	0	0	0	0
142)=	32	62	271	0	53	271	5	0	0	0	0	0	0	0	0	0
143)=	32	63	1281	0	46	1281	1	0	0	0	0	0	0	0	0	0
144)=	32	64	392	0	63	392	4	0	0	0	0	0	0	0	0	0
145)=	32	65	332	0	63	332	4	0	0	0	0	0	0	0	0	0
146)=	32	66	799	0	68	799	4	0	0	0	0	0	0	0	0	0

```
147)=  32     67    512      0     68    512      4      0      0      0      0      0      0      0      0      0
148)=  32     68   2807      0      0      0     18      0      0      0      0      0      0      0      0      0
149)=  32   1261     10      0     50     10      7      0      0      0      0      0      0      0      0      0
150)=  32   1262    658      0     55    568      5     57     90      5      0      0      0      0      0      0
151)=  32   1263    180      0     48    170      7     50     10      7      0      0      0      0      0      0
152)=  32   1264    640      0     57    640      5      0      0      0      0      0      0      0      0      0
153)=  32   1266    162      0     48    162      7      0      0      0      0      0      0      0      0      0
154)=  32   1267    799      0     66    799      5      0      0      0      0      0      0      0      0      0
155)=  32   1269    512      0     67    512      5      0      0      0      0      0      0      0      0      0
156)=  32   1271    171      0   1269    171      8      0      0      0      0      0      0      0      0      0
157)=  32   1272     44      0  12607     44      6      0      0      0      0      0      0      0      0      0
158)=  32   1273    171      0   1269    171      8      0      0      0      0      0      0      0      0      0
159)=  32   1274    192      0  12605    170      6      0      0      0      0      0      0      0      0      0
160)=  32   1275    170      0   1269    170      8      0      0      0      0      0      0      0      0      0
161)=  32   1276    189      0  12605    189      6      0      0      0      0      0      0      0      0      0
162)=  32   1278    174      0  12606    174      6      0      0      0      0      0      0      0      0      0
163)=  32   1461     95      0      0      0     18      0      0      0      0      0      0      0      0      0
164)=  32   1462     23      0     42     23     13      0      0      0      0      0      0      0      0      0
165)=  32   1463    968      0     42    697     13     62    271     13      0      0      0      0      0      0
166)=  32   1464     20      0      0      0     18      0      0      0      0      0      0      0      0      0
167)=  32   1465    887      0      0      0     18      0      0      0      0      0      0      0      0      0
168)=  32   1466     10      0   1465     10      2      0      0      0      0      0      0      0      0      0
169)=  32   1467     33      0   1462     23     18   1466     10     18      0      0      0      0      0      0
170)=  32   1468     20      0   1463     10     18   1465     10     18      0      0      0      0      0      0
171)=  32   1469    968      0   1463    958     18   1464     10     18      0      0      0      0      0      0
172)=  32  12601    967      0   1461     95     17   1464     10     17   1465    880     15      0      0      0
173)=  32  12602    742      0   1261     10     18   1263    180     18   1266    162     18  12607    390     18
174)=  32  12603     10      0      0      0      4      0      0      0      0      0      0      0      0      0
175)=  32  12604     10      0      0      0      4      0      0      0      0      0      0      0      0      0
176)=  32  12605    359      0  12601    359      2      0      0      0      0      0      0      0      0      0
177)=  32  12606    174      0  12601    174      2      0      0      0      0      0      0      0      0      0
178)=  32  12607    434      0  12601    434      2      0      0      0      0      0      0      0      0      0
179)=  32  12701    808      0  12703    808      2      0      0      0      0      0      0      0      0      0
180)=  32  12702    519      0  12703    519      2      0      0      0      0      0      0      0      0      0
181)=  32  12703   2161      0      0      0     18      0      0      0      0      0      0      0      0      0
182)=  32  12704    834      0  12703    834      2      0      0      0      0      0      0      0      0      0

                                    GRAPH  PLOT  CARDS
CARD   CARD   LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO.   TYPE    NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.
183)=  35   1271     42      52      53      0       0       0       0       0      0      0      0      0      0

                                    USER-DEFINED ROUTES

CARD   CARD  ROUTE     ROUTE
 NO.   TYPE  NUMBER  DESCRIPTION

184)=  41      1    <Route Name>
185)=  41      2    <Route Name>
186)=  41      3    <Route Name>
187)=  41      4    <Route Name>

CARD   CARD  ROUTE    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK    LINK
 NO    TYPE  NUMBER   NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.     NO.

188)=  42      1      57    1264     29
189)=  42      2      34      53     62
190)=  42      3      45      52     42
191)=  42      4      50      42

*****END OF SUBROUTINE TINPUT*****
.

    66 SECOND CYCLE  66 STEPS

INITIAL SETTINGS
 - (SECONDS)

  NODE   NUMBER  STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
   NO   OF STAGES  1       2       3       4       5      6       7       8       9      10

  126      2     29       6
  127      2     33       5
  128      2     53      40
  129      2      8      33
  130      2      6      59
  131      2     34       3
  132      2     52      39
  146      3     51      17     36

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.      NODE   START  START
        LINK          SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)            (SECONDS)

   29    2094   4000S    71  18.5   3.7    1.0 +  0.9  ( 26.7)    42  ( 18.5)     34             45.2
   31     423   5591S    32   9.5   2.3    0.1 +  0.1  (  3.0)     8  (  0.7)      5             3.7   128    59  40
   32      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128    46  53
   33    1298   6000     22  18.5   0.9    0.0 +  0.1  (  2.0)     1  (  0.2)      0             2.1
   34     271   1806     27   5.5   3.9    0.1 +  0.2  (  3.7)     7  (  0.4)      0             4.1   129    38   8
   36     248   2047S    31   5.5   3.8    0.1 +  0.2  (  3.2)     7  (  0.4)      2             3.6   129    38   8
   37     110    36L     31   7.5  12.3    0.3 +  0.1  (  5.1)    88  (  1.0)      2             6.1   129    38   8
   38     553   2028S    59   5.5   5.4    0.2 +  0.6  ( 10.7)    10  (  1.1)      3             11.8  129    38   8
   39     123    38L     59   7.5  13.6    0.3 +  0.1  (  6.3)    89  (  1.1)      3             7.5   129    38   8
   40     556   1867S    62   5.5   6.0    0.2 +  0.7  ( 12.1)    10  (  1.2)      3             13.2  129    38   8
   41      91    40L     62   7.5  12.8    0.2 +  0.1  (  4.4)    84  (  0.8)      3             5.2   129    38   8
   42     718   2028S    66   5.5   5.5    0.3 +  0.7  ( 14.1)    21  (  3.5)      3             17.6  132    57  39
   43      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    45  52
   44     397   1612     77   4.5  32.3    1.8 +  1.7  ( 49.8)    92  (  8.1)      8    +        58.0   129    13  33
   45     159   1613     31   4.5  20.2    0.6 +  0.2  ( 12.4)    55  (  2.0)      2             14.3   129    13  33
   46    1281   4839     36  18.5   4.6    1.2 +  0.3  ( 21.0)    32  (  8.6)      9             29.6   130    12  59
   47      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130    65   6
   48     333   1806     45   6.5   8.8    0.4 +  0.4  ( 10.8)    17  (  1.1)      1             11.9   131     8  34
   50     392   1922     50   6.5   9.3    0.5 +  0.5  ( 13.7)    18  (  1.4)      1             15.0   131     8  34
   52     149   1886S    54   6.5   9.3    0.2 +  0.2  (  5.2)    18  (  0.5)      6             5.7   131     8  34
   53     271    52L     54   8.5  22.8    1.3 +  0.4  ( 23.8)   102  (  3.0)      6             26.9   131     8  34
   54    1754   6000S    35  18.5   1.0    0.0 +  0.2  (  3.2)     1  (  0.3)      0             3.4
   55     764   1855     88   4.5  32.0    3.3 +  3.3  ( 94.9)   104  ( 13.6)     16    +        108.5   131    39   3
   56     334    54L     35  18.5   1.0    0.0 +  0.0  (  0.6)     1  (  0.0)      0             0.7
   57     730   1800     86   4.5  30.9    3.2 +  3.0  ( 87.5)   102  ( 12.7)     15    +        100.3   131    39   3
   58     875    31L     32  10.7   2.4    0.3 +  0.2  (  6.6)    18  (  3.0)      5             9.7   128    59  40
   59      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   128    46  53
   60      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   132    45  52
   61      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)    89  (  0.0)      0             1.1   130    65   6
   62     271    42L     66   5.5   4.0    0.0 +  0.3  (  3.7)     5  (  0.3)      3             4.1   132    57  39
   63    1281   3600     36   1.5   1.6    0.1 +  0.3  (  5.6)    13  (  2.8)      9    +        8.4
   64     392   1613     76   4.5  31.6    1.8 +  1.6  ( 48.1)    90  (  7.8)      8    +        55.9   129    13  33
   65     333   1613     65   4.5  26.2    1.5 +  0.9  ( 33.8)    72  (  5.3)      5             39.1   129    13  33
   66     797   1969     86   4.5  29.6    3.5 +  3.0  ( 91.4)   100  ( 13.6)     16    +        105.0   131    39   3
   67     511   1875     58   4.5  18.1    1.8 +  0.7  ( 35.5)    73  (  6.4)      7    +        41.9   131    39   3
   68    2807   3600     78  18.5   2.8    0.0 +  1.8  ( 25.0)     3  (  2.0)      2             27.0
 1261      10   1262L    59   7.5   8.9    0.0 +  0.0  (  0.3)    50  (  0.1)      1             0.4   126    35   7
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 1262    657  1905S    59  5.5  5.0   0.1 +  0.7 ( 11.6)     8 (  1.1)      1            12.7   126    35   7
 1263    181  1264L    68  7.5 11.4   0.3 +  0.2 (  7.8)    77 (  1.5)      4             9.3   126    35   7
 1264    639  2038S    68  5.5  5.7   0.1 +  0.8 ( 13.2)     9 (  1.2)      4            14.4   126    35   7
.

    66 SECOND CYCLE  66 STEPS

 LINK   FLOW  SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----  ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER  INTO  FLOW   OF    PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.     NODE   START  START
        LINK         SAT    CRUISE           OVERSAT  OF    STOPS    OF     MAX.  AVERAGE  WEIGHTED SUM          END    END
                          DELAY  (U+R+O=MEAN Q) DELAY   /PCU   STOPS        EXCESS  OF ( ) VALUES        1ST    2ND
     (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)   ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

 1266    163  1267L    80  7.5 14.2   0.3 +  0.3 (  8.8)    80 (  1.4)      5            10.2   126    35   7
 1267    797  2019S    80  5.5  8.6   0.1 +  1.7 ( 25.6)    13 (  2.3)      5            27.9   126    35   7
 1269    511  1824     47  5.5  4.2   0.1 +  0.4 (  7.5)     8 (  0.9)      3             8.4   126    35   7
 1271    171  1272L    31  8.5 21.0   0.8 +  0.2 ( 13.9)    99 (  2.1)      3            16.0   127    10  33
 1272     44  1876S    31  6.5  8.1   0.0 +  0.0 (  1.3)    15 (  0.1)      3             1.5   127    10  33
 1273    171  1274L    49  8.5 22.0   0.8 +  0.2 ( 14.5)   100 (  2.2)      4            16.7   127    10  33
 1274    192  2046S    49  6.5  8.5   0.2 +  0.3 (  6.1)    15 (  0.7)      4             6.7   127    10  33
 1275    170  1276L    50  8.5 22.4   0.8 +  0.2 ( 14.7)   101 (  2.2)      4            16.8   127    10  33
 1276    189  1973S    50  6.5  8.8   0.2 +  0.3 (  6.2)    16 (  0.7)      4             6.9   127    10  33
 1278    174  1770     27  6.5  6.9   0.1 +  0.2 (  4.4)    12 (  0.5)      0             4.9   127    10  33
 1461     95  1860     17 18.5 21.3   0.4 +  0.1 (  7.8)    74 (  1.5)      1             9.3   146    17  36
 1462     23  1774      4 13.5 11.8   0.1 +  0.0 (  1.0)    66 (  0.3)      0             1.3   146    51  38
 1463    965  1833     58 13.5  4.2   0.3 +  0.7 ( 14.2)    21 (  3.4)      4            17.6   146    51  44
 1464     20  1833      9 18.5 35.3   0.1 +  0.0 (  2.7)    97 (  0.4)      0             3.2   146    44  51
 1465    887  1926     84 18.5 23.8   3.1 +  2.6 ( 81.5)    91 ( 17.0)     16            98.6   146    51  20
 1466     11   715      1  2.5  3.0   0.0 +  0.0 (  0.1)     0 (  0.0)      0             0.1
 1467     34  2000      2 18.5  1.4   0.0 +  0.0 (  0.1)     1 (  0.0)      0             0.1
 1468     20  2000      1 18.5  1.4   0.0 +  0.0 (  0.1)     1 (  0.0)      0             0.1
 1469    966  2000     48 18.5  2.2   0.0 +  0.5 (  6.6)     3 (  0.5)      0             7.2
12601    967  1800     54 15.7  2.7   0.0 +  0.6 (  8.4)     5 (  0.8)      5             9.2
12602    742    29L    71 18.5  2.1   0.0 +  0.3 (  4.7)     4 (  0.6)     34             5.3
12603     10 10000      0  4.5  7.0   0.0 +  0.0 (  0.3)    42 (  0.0)      0             0.3   126    35   6
12604     10 10000      0  4.5  7.0   0.0 +  0.0 (  0.3)    42 (  0.0)      0             0.3   126    35   6
12605    360  1522     87  2.5 45.0   1.5 +  2.9 ( 63.2)   116 (  7.1)      9    +       70.3   126    12  29
12606    174  1640     39  2.5 19.8   0.6 +  0.3 ( 13.2)    63 (  1.9)      2            15.1   126    12  29
12607    433  1757     90  2.5 49.3   1.9 +  4.0 ( 83.4)   123 (  9.1)     11    +       92.5   126    12  29
12701    808  1802     87  2.5 28.8   3.2 +  3.2 ( 90.2)    99 ( 18.8)     16    +      109.0   127    38   5
12702    519  1775     57  2.5 16.0   1.6 +  0.7 ( 31.7)    68 (  8.3)      7    +       40.0   127    38   5
12703   2161  3600     60 18.5  1.7   0.0 +  0.8 ( 10.7)     2 (  0.9)      1            11.5
12704    834  1907     85  2.5 26.0   3.2 +  2.7 ( 83.9)    94 ( 18.4)     16    +      102.4   127    38   5

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4025.7       195.5      20.6        44.5     47.8   (1310.4) + (  227.2)  + (   0.0)   =    1537.6     TOTALS

*****************************************************************************************************************************************************

                             CRUISE             DELAY             STOPS            TOTALS
                         LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR    LITRES PER HOUR

FUEL CONSUMPTION PREDICTIONS      225.5        +    106.1        +    103.5        =    435.2

NO. OF ENTRIES TO SUBPT  =   1
NO. OF LINKS RECALCULATED=  70
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9
 - (SECONDS)

  126      2     29      6
  127      2     33      5
  128      2     53     40
  129      2      8     33
  130      2      6     59
  131      2     34      3
  132      2     52     39
  146      3     51     17     36

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4025.7       195.5      20.6        44.5     47.8   (1310.4) + (  227.2)  + (   0.0)   =    1537.6     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  464
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26
 - (SECONDS)

  126      2     29      6
  127      2     33      5
  128      2     53     40
  129      2      8     33
  130      2      6     59
  131      2     34      3
  132      2     52     39
  146      3     51     17     36

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR      PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS      INDEX
                                               DELAY    DELAY      STOPS       QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)       ($/H)       ($/H)

  4025.7       195.5      20.6        44.5     47.8   (1310.4) + (  227.2)  + (   0.0)   =    1537.6     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  457
.

    66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9
 - (SECONDS)

  126      2     29      6
  127      2     33      5
  128      2     53     40
  129      2      8     33
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  130      2      6     59
  131      2     34      3
  132      2     52     39
  146      3     51     17     36

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR       PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS       INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4025.7       195.5      20.6       44.5    47.8   (1310.4) + (  227.2)  + (  0.0)  =   1537.6     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  544
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26
 - (SECONDS)

  126      2     29      6
  127      2     33      5
  128      2     53     40
  129      2      8     33
  130      2      6     59
  131      2     34      3
  132      2     52     39
  146      3     51     17     36

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR       PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS       INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4025.7       195.5      20.6       44.5    47.8   (1310.4) + (  227.2)  + (  0.0)  =   1537.6     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  538
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9
 - (SECONDS)

  126      2     29      6
  127      2     33      5
  128      2     53     40
  129      2      8     33
  130      2      6     59
  131      2     34      3
  132      2     52     39
  146      3     51     17     36

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR       PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS       INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4025.7       195.5      20.6       44.5    47.8   (1310.4) + (  227.2)  + (  0.0)  =   1537.6     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  572
.

     66 SECOND CYCLE  66 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :-   9  26   9  26   9   1
 - (SECONDS)

  126      2     29      6
  127      2     33      5
  128      2     53     40
  129      2      8     33
  130      2      6     59
  131      2     34      3
  132      2     52     39
  146      3     51     17     36

  TOTAL         TOTAL      MEAN        TOTAL    TOTAL    TOTAL      TOTAL       PENALTY      TOTAL
 DISTANCE        TIME    JOURNEY      UNIFORM   RANDOM+    COST       COST         FOR       PERFORMANCE
TRAVELLED       SPENT     SPEED        DELAY   OVERSAT     OF         OF         EXCESS       INDEX
                                              DELAY    DELAY      STOPS        QUEUES
(PCU-KM/H)    (PCU-H/H)    (KM/H)    (PCU-H/H)(PCU-H/H)  ($/H)      ($/H)        ($/H)       ($/H)

  4025.7       195.5      20.6       44.5    47.8   (1310.4) + (  227.2)  + (  0.0)  =   1537.6     TOTALS

NO. OF ENTRIES TO SUBPT  =  17
NO. OF LINKS RECALCULATED=  561
.

     66 SECOND CYCLE  66 STEPS

FINAL SETTINGS OBTAINED WITH INCREMENTS :-   9  26   9  26   9   1   1
 - (SECONDS)

   NODE   NUMBER   STAGE   STAGE   STAGE   STAGE   STAGE  STAGE   STAGE   STAGE   STAGE   STAGE
    NO    OF STAGES   1       2       3       4       5      6       7       8       9      10

  126      2     29      6
  127      2     33      5
  128      2     53     40
  129      2      8     33
  130      2      6     59
  131      2     34      3
  132      2     52     39
  146      3     51     17     36

 LINK    FLOW   SAT   DEGREE  MEAN TIMES  -------DELAY--------   ----STOPS----   ----QUEUE----  PERFORMANCE   EXIT   GREEN TIMES
NUMBER   INTO   FLOW    OF     PER PCU    UNIFORM RANDOM+ COST    MEAN   COST    MEAN           INDEX.      NODE   START  START
        LINK         SAT    CRUISE            OVERSAT  OF    STOPS    OF    MAX.  AVERAGE  WEIGHTED SUM          END    END
                              DELAY  (U+R+O=MEAN Q) DELAY    /PCU   STOPS         EXCESS  OF ( ) VALUES        1ST    2ND
      (PCU/H) (PCU/H)  (%)  (SEC) (SEC)    (PCU-H/H)    ($/H)   (%)    ($/H)    (PCU)  (PCU)    ($/H)             (SECONDS)

   29    2094   4000S    71  18.5   3.7    1.0 +  0.9  ( 26.7)     42  ( 18.5)     34            45.2
   31     423   5591S    32   9.5   2.3    0.1 +  0.1  (  3.0)      8  (  0.7)      5            3.7   128    59  40
   32      10  10000      1   4.5  27.9    0.1 +  0.0  (  1.1)     89  (  0.0)      0            1.1   128    46  53
   33    1298   6000     22  18.5   0.9    0.0 +  0.1  (  2.0)      1  (  0.2)      0            2.1
   34     271   1806     27   5.5   3.9    0.1 +  0.2  (  3.7)      7  (  0.4)      0            4.1   129    38   8
```

36	248	2047S	31	5.5	3.8	0.1 +	0.2	(3.2)	7	(0.4)	2		3.6	129	38	8
37	110	36L	31	7.5	12.3	0.3 +	0.1	(5.1)	88	(1.0)	2		6.1	129	38	8
38	553	2028S	59	5.5	5.4	0.2 +	0.6	(10.7)	10	(1.1)	3		11.8	129	38	8
39	123	38L	59	7.5	13.6	0.3 +	0.1	(6.3)	89	(1.1)	3		7.5	129	38	8
40	556	1867S	62	5.5	6.0	0.2 +	0.7	(12.1)	10	(1.2)	3		13.2	129	38	8
41	91	40L	62	7.5	12.8	0.2 +	0.1	(4.4)	84	(0.8)	3		5.2	129	38	8
42	718	2028S	66	5.5	5.5	0.3 +	0.7	(14.1)	21	(3.5)	3		17.6	132	57	39
43	10	10000	1	4.5	27.9	0.1 +	0.0	(1.1)	89	(0.0)	0		1.1	132	45	52
44	397	1612	77	4.5	32.3	1.8 +	1.7	(49.8)	92	(8.1)	8	+	58.0	129	13	33
45	159	1613	31	4.5	20.2	0.6 +	0.2	(12.4)	55	(2.0)	2		14.3	129	13	33
46	1281	4839	36	18.5	4.6	1.2 +	0.3	(21.0)	32	(8.6)	9		29.6	130	12	59
47	10	10000	1	4.5	27.9	0.1 +	0.0	(1.1)	89	(0.0)	0		1.1	130	65	6
48	333	1806	45	6.5	8.8	0.4 +	0.4	(10.8)	17	(1.1)	1		11.9	131	8	34
50	392	1922	50	6.5	9.3	0.5 +	0.5	(13.7)	18	(1.4)	1		15.0	131	8	34
52	149	1886S	54	6.5	9.3	0.2 +	0.2	(5.2)	18	(0.5)	6		5.7	131	8	34
53	271	52L	54	8.5	22.8	1.3 +	0.4	(23.8)	102	(3.0)	6		26.9	131	8	34
54	1754	6000S	35	18.5	1.0	0.0 +	0.2	(3.2)	1	(0.3)	0		3.4			
55	764	1855	88	4.5	32.0	3.3 +	3.3	(94.9)	104	(13.6)	16	+	108.5	131	39	3
56	334	54L	35	18.5	1.0	0.0 +	0.0	(0.6)	1	(0.0)	0		0.7			
57	730	1800	86	4.5	30.9	3.2 +	3.0	(87.5)	102	(12.7)	15	+	100.3	131	39	3
58	875	31L	32	10.7	2.4	0.3 +	0.2	(6.6)	18	(3.0)	5		9.7	128	59	40
59	10	10000	1	4.5	27.9	0.1 +	0.0	(1.1)	89	(0.0)	0		1.1	128	46	53
60	10	10000	1	4.5	27.9	0.1 +	0.0	(1.1)	89	(0.0)	0		1.1	132	45	52
61	10	10000	1	4.5	27.9	0.1 +	0.0	(1.1)	89	(0.0)	0		1.1	130	65	6
62	271	42L	66	5.5	4.0	0.0 +	0.3	(3.7)	5	(0.3)	3		4.1	132	57	39
63	1281	3600	36	1.5	1.6	0.1 +	0.3	(5.6)	13	(2.8)	9	+	8.4			
64	392	1613	76	4.5	31.6	1.8 +	1.6	(48.1)	90	(7.8)	8	+	55.9	129	13	33
65	333	1613	65	4.5	26.2	1.5 +	0.9	(33.8)	72	(5.3)	5		39.1	129	13	33
66	797	1969	86	4.5	29.6	3.5 +	3.0	(91.4)	100	(13.6)	16	+	105.0	131	39	3
67	511	1875	58	4.5	18.1	1.8 +	0.7	(35.5)	73	(6.4)	7	+	41.9	131	39	3
68	2807	3600	78	18.5	2.8	0.0 +	1.8	(25.0)	3	(2.0)	2		27.0			
1261	10	1262L	59	7.5	8.9	0.0 +	0.0	(0.3)	50	(0.1)	1		0.4	126	35	7
1262	657	1905S	59	5.5	5.0	0.1 +	0.7	(11.6)	8	(1.1)	1		12.7	126	35	7
1263	181	1264L	68	7.5	11.4	0.3 +	0.2	(7.8)	77	(1.5)	4		9.3	126	35	7
1264	639	2038S	68	5.5	5.7	0.1 +	0.8	(13.2)	9	(1.2)	4		14.4	126	35	7

66 SECOND CYCLE 66 STEPS

LINK NUMBER	FLOW INTO LINK (PCU/H)	SAT FLOW (PCU/H)	DEGREE OF SAT (%)	MEAN CRUISE (SEC)	TIMES PER PCU DELAY (SEC)	-------DELAY-------- UNIFORM	RANDOM+ OVERSAT (U+R+O=MEAN Q) (PCU-H/H)	COST OF DELAY ($/H)	----STOPS---- MEAN STOPS /PCU (%)	COST OF STOPS ($/H)	----QUEUE---- MAX. MEAN (PCU)	AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES ($/H)	EXIT NODE	GREEN TIMES START END 1ST	START END 2ND (SECONDS)
1266	163	1267L	80	7.5	14.2	0.3 +	0.3	(8.8)	80	(1.4)	5		10.2	126	35	7
1267	797	2019S	80	5.5	8.6	0.1 +	1.7	(25.6)	13	(2.3)	5		27.9	126	35	7
1269	511	1824	47	5.5	4.2	0.1 +	0.4	(7.5)	8	(0.9)	3		8.4	126	35	7
1271	171	1272L	31	8.5	21.0	0.8 +	0.2	(13.9)	99	(2.1)	3		16.0	127	10	33
1272	44	1876S	31	6.5	8.1	0.0 +	0.0	(1.3)	15	(0.1)	3		1.5	127	10	33
1273	171	1274L	49	8.5	22.0	0.8 +	0.2	(14.5)	100	(2.2)	4		16.7	127	10	33
1274	192	2046S	49	6.5	8.5	0.2 +	0.3	(6.1)	15	(0.7)	4		6.7	127	10	33
1275	170	1276L	50	8.5	22.4	0.8 +	0.2	(14.7)	101	(2.2)	4		16.8	127	10	33
1276	189	1973S	50	6.5	8.8	0.2 +	0.3	(6.2)	16	(0.7)	4		6.9	127	10	33
1278	174	1770	27	6.5	6.9	0.1 +	0.2	(4.4)	12	(0.5)	0		4.9	127	10	33
1461	95	1860	17	18.5	21.3	0.4 +	0.1	(7.8)	74	(1.5)	1		9.3	146	17	36
1462	23	1774	4	13.5	11.8	0.1 +	0.0	(1.0)	66	(0.3)	0		1.3	146	51	38
1463	965	1833	58	13.5	4.2	0.3 +	0.7	(14.2)	21	(3.4)	4		17.6	146	51	44
1464	20	1833	9	18.5	35.3	0.1 +	0.0	(2.7)	97	(0.4)	0		3.2	146	44	51
1465	887	1926	84	18.5	23.8	3.1 +	2.6	(81.5)	91	(17.0)	16		98.6	146	51	20
1466	11	715	1	2.5	3.0	0.0 +	0.0	(0.1)	0	(0.0)	0		0.1			
1467	34	2000	2	18.5	1.4	0.0 +	0.0	(0.1)	1	(0.0)	0		0.1			
1468	20	2000	1	18.5	1.4	0.0 +	0.0	(0.1)	1	(0.0)	0		0.1			
1469	966	2000	48	18.5	2.2	0.0 +	0.5	(6.6)	3	(0.5)	0		7.2			
12601	967	1800	54	15.7	2.7	0.0 +	0.6	(8.4)	5	(0.8)	5		9.2			
12602	742	29L	71	18.5	2.1	0.0 +	0.3	(4.7)	4	(0.6)	34		5.3			
12603	10	10000	0	4.5	7.0	0.0 +	0.0	(0.3)	42	(0.0)	0		0.3	126	35	6
12604	10	10000	0	4.5	7.0	0.0 +	0.0	(0.3)	42	(0.0)	0		0.3	126	35	6
12605	360	1522	87	2.5	45.0	1.5 +	2.9	(63.2)	116	(7.1)	9	+	70.3	126	12	29
12606	174	1640	39	2.5	19.8	0.6 +	0.3	(13.2)	63	(1.9)	2		15.1	126	12	29
12607	433	1757	90	2.5	49.3	1.9 +	4.0	(83.4)	123	(9.1)	11	+	92.5	126	12	29
12701	808	1802	87	2.5	28.8	3.2 +	3.2	(90.2)	99	(18.8)	16	+	109.0	127	38	5
12702	519	1775	57	2.5	16.0	1.6 +	0.7	(31.7)	68	(8.3)	7	+	40.0	127	38	5
12703	2161	3600	60	18.5	1.7	0.0 +	0.8	(10.7)	2	(0.9)	1		11.5			
12704	834	1907	85	2.5	26.0	3.2 +	2.7	(83.9)	94	(18.4)	16	+	102.4	127	38	5

TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+ OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY ($/H)	TOTAL COST OF STOPS ($/H)	PENALTY FOR EXCESS QUEUES ($/H)	TOTAL PERFORMANCE INDEX ($/H)	
4025.7	195.5	20.6	44.5	47.8	(1310.4) +	(227.2) +	(0.0) =	1537.6	TOTALS
									ROUTE
483.8	21.2	22.9	4.2	4.7	(127.4) +	(32.5) +	(0.0) =	159.8	1
47.2	3.6	13.3	1.4	0.8	(31.2) +	(3.8) +	(0.0) =	35.0	2
58.4	3.7	16.0	1.1	1.1	(31.6) +	(5.9) +	(0.0) =	37.6	3
66.5	3.6	18.4	0.8	1.2	(27.7) +	(4.9) +	(0.0) =	32.6	4

****

	CRUISE LITRES PER HOUR		DELAY LITRES PER HOUR		STOPS LITRES PER HOUR		TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	225.5	+	106.1	+	103.5	=	435.2

NO. OF ENTRIES TO SUBPT = 17
NO. OF LINKS RECALCULATED= 561

CYCLIC FLOW PROFILE GRAPHS

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LINK 1271 FED BY 1269    0    0    0 M.M.E. 0.97
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    I
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 2000+
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 1500+         ^^^^^^
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 1000+         ^^^^^^
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    I         ^^^^^^                         1111111
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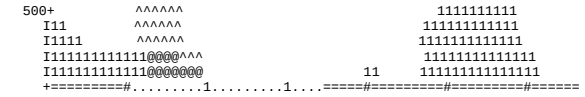

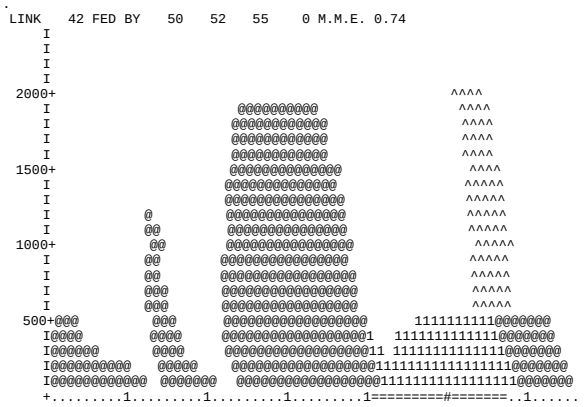

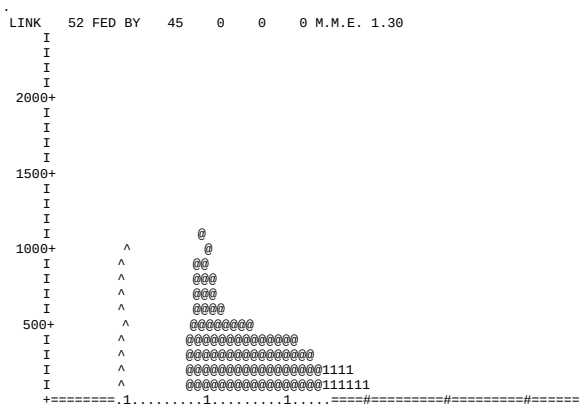

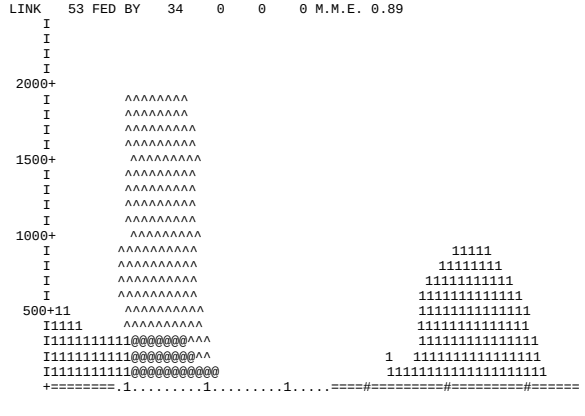

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  500+          ^^^^^^                                  1111111111
     I11        ^^^^^^                                 111111111111
     I1111      ^^^^^^                                1111111111111
     I1111111111110000^^^                              11111111111111
     I1111111111110000000                        11    111111111111111
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 LINK   42 FED BY   50   52   55    0 M.M.E. 0.74
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 2000+                                                  ^^^^
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     I                      @@@@@@@@@@@@                 ^^^^
 1500+                      @@@@@@@@@@@@@@                ^^^^
     I                     @@@@@@@@@@@@@@                ^^^^^
     I                     @@@@@@@@@@@@@@@               ^^^^^
     I           @         @@@@@@@@@@@@@@@               ^^^^^
     I           @@        @@@@@@@@@@@@@@@               ^^^^^
 1000+           @@       @@@@@@@@@@@@@@@@               ^^^^^
     I           @@       @@@@@@@@@@@@@@@@               ^^^^^
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     I           @@       @@@@@@@@@@@@@@@@               ^^^^^
     I           @@       @@@@@@@@@@@@@@@@               ^^^^^
  500+@@@         @@@     @@@@@@@@@@@@@@@@@@      1111111111@@@@@@@
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     I@@@@@@      @@@@    @@@@@@@@@@@@@@@@@@11 111111111111111@@@@@@@
     I@@@@@@@@@@   @@@@@   @@@@@@@@@@@@@@@@@@1111111111111111@@@@@@@
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.
 LINK   52 FED BY   45    0    0    0 M.M.E. 1.30
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 1000+        ^         @
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  500+        ^       @@@@@@@@
     I        ^       @@@@@@@@@@@@@@
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     I        ^       @@@@@@@@@@@@@@@@@@1111
     I        ^       @@@@@@@@@@@@@@@@@@111111
     +========.1.........1.........1.....====#=========#=========#======
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.
 LINK   53 FED BY   34    0    0    0 M.M.E. 0.89
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 2000+
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 1500+         ^^^^^^^^^
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     I         ^^^^^^^^^
     I         ^^^^^^^^^
     I         ^^^^^^^^^
 1000+         ^^^^^^^^^
     I        ^^^^^^^^^^                                 11111
     I        ^^^^^^^^^^                                11111111
     I        ^^^^^^^^^^                               11111111111
     I        ^^^^^^^^^^                              1111111111111
  500+11      ^^^^^^^^^^                              1111111111111
     I1111     ^^^^^^^^^^                             1111111111111
     I1111111111@@@@@@@^^^                             111111111111111
     I1111111111@@@@@@@@^^                         1  1111111111111111
     I1111111111@@@@@@@@@@                         1111111111111111111
     +========.1.........1.........1.....====#=========#=========#======
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PROGRAM TRANSYT FINISHED

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd AM.vai"
(drive-on-the-left) at 10:18:52 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
ARM B	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
ARM C	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
ARM D	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
ARM E	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2014

T15

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	12.80	19.20	12.80
ARM B	15.00	45.00	75.00	5.69	8.53	5.69
ARM C	15.00	45.00	75.00	11.84	17.76	11.84
ARM D	15.00	45.00	75.00	0.47	0.71	0.47
ARM E	15.00	45.00	75.00	0.55	0.83	0.55

DEMAND SET TITLE: Base+Com+H4&5 2014

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
07.30 - 09.00		TURNING PROPORTIONS				
	ARM A	0.002	0.139	0.803	0.025	0.031
		2.0	142.0	822.0	26.0	32.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.147	0.000	0.796	0.022	0.035
		67.0	0.0	362.0	10.0	16.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.593	0.244	0.002	0.067	0.094
		562.0	231.0	2.0	63.0	89.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.079	0.184	0.632	0.000	0.105
		3.0	7.0	24.0	0.0	4.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.295	0.227	0.409	0.045	0.023
		13.0	10.0	18.0	2.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

TURNING COUNTS (PERCENTAGE OF H.V.S)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.30-07.45									
ARM A	12.85	29.78	0.431	- - -	0.0	0.8	11.0	-	0.059
ARM B	5.71	13.39	0.426	- - -	0.0	0.7	10.5	-	0.129
ARM C	11.88	24.17	0.492	- - -	0.0	1.0	13.8	-	0.081
ARM D	0.48	10.72	0.044	- - -	0.0	0.0	0.7	-	0.098
ARM E	0.55	18.59	0.030	- - -	0.0	0.0	0.4	-	0.055

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									
ARM A	15.34	29.27	0.524	- - -	0.8	1.1	16.0	-	0.072
ARM B	6.82	12.18	0.560	- - -	0.7	1.2	17.6	-	0.184
ARM C	14.19	23.97	0.592	- - -	1.0	1.4	20.7	-	0.102
ARM D	0.57	9.69	0.059	- - -	0.0	0.1	0.9	-	0.110
ARM E	0.66	17.24	0.038	- - -	0.0	0.0	0.6	-	0.060

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									
ARM A	18.79	28.57	0.658	- - -	1.1	1.9	27.1	-	0.101
ARM B	8.35	10.53	0.793	- - -	1.2	3.4	43.9	-	0.407
ARM C	17.38	23.71	0.733	- - -	1.4	2.6	37.1	-	0.154
ARM D	0.70	8.30	0.084	- - -	0.1	0.1	1.3	-	0.132
ARM E	0.81	15.43	0.052	- - -	0.0	0.1	0.8	-	0.068

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									
ARM A	18.79	28.56	0.658	- - -	1.9	1.9	28.4	-	0.102
ARM B	8.35	10.50	0.795	- - -	3.4	3.6	52.8	-	0.454
ARM C	17.38	23.69	0.734	- - -	2.6	2.7	40.2	-	0.158
ARM D	0.70	8.26	0.084	- - -	0.1	0.1	1.4	-	0.132
ARM E	0.81	15.38	0.052	- - -	0.1	0.1	0.8	-	0.069

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									
ARM A	15.34	29.25	0.525	- - -	1.9	1.1	17.2	-	0.073
ARM B	6.82	12.14	0.562	- - -	3.6	1.3	21.7	-	0.199
ARM C	14.19	23.94	0.593	- - -	2.7	1.5	23.2	-	0.104
ARM D	0.57	9.63	0.059	- - -	0.1	0.1	1.0	-	0.110
ARM E	0.66	17.16	0.038	- - -	0.1	0.0	0.6	-	0.061

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									
ARM A	12.85	29.76	0.432	- - -	1.1	0.8	11.7	-	0.059
ARM B	5.71	13.36	0.427	- - -	1.3	0.8	11.8	-	0.132
ARM C	11.88	24.16	0.492	- - -	1.5	1.0	15.1	-	0.082
ARM D	0.48	10.68	0.045	- - -	0.1	0.0	0.7	-	0.098
ARM E	0.55	18.53	0.030	- - -	0.0	0.0	0.5	-	0.056

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.8	*
08.00	1.1	*
08.15	1.9	**
08.30	1.9	**
08.45	1.1	*
09.00	0.8	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.2	*
08.15	3.4	***
08.30	3.6	****
08.45	1.3	*
09.00	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.0	*
08.00	1.4	*
08.15	2.6	***
08.30	2.7	***
08.45	1.5	*
09.00	1.0	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.0

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.0
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1409.5	939.6	111.4	0.08	111.4	0.08
B	626.3	417.5	158.4	0.25	158.4	0.25
C	1303.5	869.0	150.1	0.12	150.1	0.12
D	52.3	34.9	6.0	0.11	6.0	0.11
E	60.6	40.4	3.8	0.06	3.8	0.06
ALL	3452.1	2301.4	429.7	0.12	429.7	0.12

T75

* 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 10:19:36 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd PM.vai"
(drive-on-the-left) at 10:19:46 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
ARM B	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
ARM C	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
ARM D	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
ARM E	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(16.15)AND ENDS(17.45)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2014

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	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
	TO RISE					
ARM A	15.00	45.00	75.00	9.13	13.69	9.13
ARM B	15.00	45.00	75.00	5.78	8.66	5.78
ARM C	15.00	45.00	75.00	11.74	17.61	11.74
ARM D	15.00	45.00	75.00	1.25	1.88	1.25
ARM E	15.00	45.00	75.00	1.15	1.72	1.15

DEMAND SET TITLE: Base+Com+H4&5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
16.15 - 17.45	ARM A	0.004	0.138	0.834	0.005	0.018
		3.0	101.0	609.0	4.0	13.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.240	0.002	0.695	0.022	0.041
		111.0	1.0	321.0	10.0	19.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.651	0.263	0.002	0.026	0.059
		611.0	247.0	2.0	24.0	55.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.210	0.110	0.660	0.000	0.020
		21.0	11.0	66.0	0.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.239	0.228	0.489	0.022	0.022
		22.0	21.0	45.0	2.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
ARM A	9.16	28.88	0.317	- - -	0.0	0.5	6.8	-	0.051
ARM B	5.80	14.61	0.397	- - -	0.0	0.6	9.4	-	0.112
ARM C	11.78	24.11	0.489	- - -	0.0	0.9	13.7	-	0.080
ARM D	1.25	10.40	0.121	- - -	0.0	0.1	2.0	-	0.109
ARM E	1.15	17.26	0.067	- - -	0.0	0.1	1.0	-	0.062
16.30-16.45									
ARM A	10.94	28.19	0.388	- - -	0.5	0.6	9.3	-	0.058
ARM B	6.92	13.63	0.508	- - -	0.6	1.0	14.6	-	0.148
ARM C	14.07	23.90	0.589	- - -	0.9	1.4	20.4	-	0.101
ARM D	1.50	9.30	0.161	- - -	0.1	0.2	2.8	-	0.128
ARM E	1.38	15.65	0.088	- - -	0.1	0.1	1.4	-	0.070
16.45-17.00									
ARM A	13.40	27.25	0.492	- - -	0.6	1.0	14.0	-	0.072
ARM B	8.48	12.30	0.689	- - -	1.0	2.1	29.0	-	0.252
ARM C	17.23	23.61	0.730	- - -	1.4	2.6	36.5	-	0.153
ARM D	1.84	7.82	0.235	- - -	0.2	0.3	4.4	-	0.167
ARM E	1.69	13.48	0.125	- - -	0.1	0.1	2.1	-	0.085
17.00-17.15									
ARM A	13.40	27.23	0.492	- - -	1.0	1.0	14.4	-	0.072
ARM B	8.48	12.29	0.690	- - -	2.1	2.2	32.1	-	0.261
ARM C	17.23	23.60	0.730	- - -	2.6	2.7	39.5	-	0.157
ARM D	1.84	7.78	0.236	- - -	0.3	0.3	4.6	-	0.168
ARM E	1.69	13.43	0.126	- - -	0.1	0.1	2.1	-	0.085
17.15-17.30									
ARM A	10.94	28.16	0.388	- - -	1.0	0.6	9.8	-	0.058
ARM B	6.92	13.61	0.509	- - -	2.2	1.1	16.7	-	0.153
ARM C	14.07	23.88	0.589	- - -	2.7	1.5	22.8	-	0.104
ARM D	1.50	9.24	0.162	- - -	0.3	0.2	3.0	-	0.129
ARM E	1.38	15.56	0.089	- - -	0.1	0.1	1.5	-	0.071
17.30-17.45									
ARM A	9.16	28.86	0.317	- - -	0.6	0.5	7.1	-	0.051
ARM B	5.80	14.58	0.398	- - -	1.1	0.7	10.4	-	0.115
ARM C	11.78	24.10	0.489	- - -	1.5	1.0	14.9	-	0.082
ARM D	1.25	10.35	0.121	- - -	0.2	0.1	2.1	-	0.110
ARM E	1.15	17.19	0.067	- - -	0.1	0.1	1.1	-	0.062

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.5	
16.45	0.6	*
17.00	1.0	*
17.15	1.0	*
17.30	0.6	*
17.45	0.5	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.6	*
16.45	1.0	*
17.00	2.1	**
17.15	2.2	**
17.30	1.1	*
17.45	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.9	*
16.45	1.4	*
17.00	2.6	***
17.15	2.7	***
17.30	1.5	*
17.45	1.0	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.30	0.1
16.45	0.2
17.00	0.3
17.15	0.3
17.30	0.2
17.45	0.1

QUEUE AT ARM E

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1004.8	669.9	61.4	0.06	61.4	0.06
B	635.9	423.9	112.1	0.18	112.2	0.18
C	1292.5	861.6	147.9	0.11	147.9	0.11
D	137.6	91.8	18.9	0.14	18.9	0.14
E	126.6	84.4	9.3	0.07	9.3	0.07
ALL	3197.4	2131.6	349.6	0.11	349.7	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 10:20:15 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd AM.vai"
(drive-on-the-left) at 14:29:12 on Friday, 10 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H5 2014

T15

ARM	NUMBER OF MINUTES FROM START TO RISE	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	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		14.51	21.77	14.51
ARM B	15.00	45.00	75.00		7.39	11.08	7.39
ARM C	15.00	45.00	75.00		0.41	0.62	0.41
ARM D	15.00	45.00	75.00		9.29	13.93	9.29
ARM E	15.00	45.00	75.00		4.56	6.84	4.56

DEMAND SET TITLE: Base+Com+H5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
07.45 - 09.15	ARM A	0.003	0.229	0.090	0.547	0.132
		3.0	266.0	104.0	635.0	153.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.743	0.002	0.005	0.173	0.078
		439.0	1.0	3.0	102.0	46.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.394	0.030	0.000	0.576	0.000
		13.0	1.0	0.0	19.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.654	0.127	0.170	0.004	0.046
		486.0	94.0	126.0	3.0	34.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.608	0.244	0.011	0.134	0.003
		222.0	89.0	4.0	49.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.57	29.32	0.497	- - -	0.0	1.0	14.2	-	0.067
ARM B	7.42	20.88	0.355	- - -	0.0	0.5	8.0	-	0.074
ARM C	0.41	15.51	0.027	- - -	0.0	0.0	0.4	-	0.066
ARM D	9.32	19.46	0.479	- - -	0.0	0.9	13.1	-	0.097
ARM E	4.58	13.48	0.340	- - -	0.0	0.5	7.3	-	0.112

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									
ARM A	17.40	28.84	0.603	- - -	1.0	1.5	21.7	-	0.087
ARM B	8.85	19.64	0.451	- - -	0.5	0.8	11.8	-	0.092
ARM C	0.49	13.56	0.036	- - -	0.0	0.0	0.6	-	0.076
ARM D	11.13	18.77	0.593	- - -	0.9	1.4	20.5	-	0.130
ARM E	5.47	12.05	0.454	- - -	0.5	0.8	11.8	-	0.151

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									
ARM A	21.30	28.22	0.755	- - -	1.5	3.0	41.6	-	0.141
ARM B	10.85	17.98	0.603	- - -	0.8	1.5	21.2	-	0.138
ARM C	0.61	10.94	0.055	- - -	0.0	0.1	0.9	-	0.097
ARM D	13.63	17.85	0.764	- - -	1.4	3.0	41.5	-	0.226
ARM E	6.70	10.14	0.660	- - -	0.8	1.8	25.3	-	0.279

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									
ARM A	21.30	28.19	0.756	- - -	3.0	3.0	45.2	-	0.145
ARM B	10.85	17.93	0.605	- - -	1.5	1.5	22.5	-	0.141
ARM C	0.61	10.87	0.056	- - -	0.1	0.1	0.9	-	0.098
ARM D	13.63	17.83	0.765	- - -	3.0	3.1	46.5	-	0.237
ARM E	6.70	10.08	0.665	- - -	1.8	1.9	28.4	-	0.294

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									
ARM A	17.40	28.80	0.604	- - -	3.0	1.5	24.2	-	0.089
ARM B	8.85	19.57	0.452	- - -	1.5	0.8	13.0	-	0.094
ARM C	0.49	13.47	0.037	- - -	0.1	0.0	0.6	-	0.077
ARM D	11.13	18.74	0.594	- - -	3.1	1.5	23.7	-	0.135
ARM E	5.47	11.95	0.457	- - -	1.9	0.9	13.6	-	0.157

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									
ARM A	14.57	29.30	0.497	- - -	1.5	1.0	15.4	-	0.068
ARM B	7.42	20.83	0.356	- - -	0.8	0.6	8.6	-	0.075
ARM C	0.41	15.43	0.027	- - -	0.0	0.0	0.4	-	0.067
ARM D	9.32	19.43	0.480	- - -	1.5	0.9	14.5	-	0.100
ARM E	4.58	13.41	0.342	- - -	0.9	0.5	8.1	-	0.114

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.5	*
08.30	3.0	***
08.45	3.0	***
09.00	1.5	**
09.15	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.5	*
08.45	1.5	**
09.00	0.8	*
09.15	0.6	*

QUEUE AT ARM 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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.4	*
08.30	3.0	***
08.45	3.1	***
09.00	1.5	*
09.15	0.9	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.8	**
08.45	1.9	**
09.00	0.9	*
09.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1598.0	1065.4	162.3	0.10	162.3	0.10
B	813.5	542.3	85.1	0.10	85.1	0.10
C	45.4	30.3	3.7	0.08	3.7	0.08
D	1022.7	681.8	159.9	0.16	159.9	0.16
E	502.4	334.9	94.6	0.19	94.6	0.19
ALL	3982.0	2654.7	505.5	0.13	505.6	0.13

T75

* 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 14:30:52 on 10/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_BlythRd PM.vai"
(drive-on-the-left) at 10:18:15 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Site 4 Base Model
LOCATION: Hayes and Harlington
DATE: 17/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Blyth Road (E)
ARM C - Dawley Road (S)
ARM D - Kestral Way (SW)
ARM E - Betam Road (NW)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.90	7.86	19.00	13.60	34.70	17.0	0.708	32.392
ARM B	3.29	5.65	3.60	7.00	35.00	16.5	0.531	19.562
ARM C	4.97	9.46	13.00	3.00	34.70	36.0	0.522	25.183
ARM D	3.90	4.66	3.20	3.00	34.00	28.0	0.419	15.966
ARM E	3.60	7.70	8.00	8.20	35.00	16.5	0.609	25.411

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(16.15)AND ENDS(17.45)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H5 2014

T15

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	9.11	13.67	9.11
ARM B	15.00	45.00	75.00	5.78	8.66	5.78
ARM C	15.00	45.00	75.00	11.65	17.47	11.65
ARM D	15.00	45.00	75.00	1.25	1.88	1.25
ARM E	15.00	45.00	75.00	1.15	1.72	1.15

DEMAND SET TITLE: Base+Com+H5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
16.15 - 17.45	ARM A	0.004	0.139	0.834	0.005	0.018
		3.0	101.0	608.0	4.0	13.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.240	0.002	0.695	0.022	0.041
		111.0	1.0	321.0	10.0	19.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.648	0.265	0.002	0.026	0.059
		604.0	247.0	2.0	24.0	55.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.210	0.110	0.660	0.000	0.020
		21.0	11.0	66.0	0.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.239	0.228	0.489	0.022	0.022
		22.0	21.0	45.0	2.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.15-16.30									
ARM A	9.15	28.88	0.317	- - -	0.0	0.5	6.8	-	0.051
ARM B	5.80	14.61	0.397	- - -	0.0	0.6	9.3	-	0.112
ARM C	11.69	24.11	0.485	- - -	0.0	0.9	13.5	-	0.080
ARM D	1.25	10.44	0.120	- - -	0.0	0.1	2.0	-	0.109
ARM E	1.15	17.31	0.067	- - -	0.0	0.1	1.0	-	0.062
16.30-16.45									
ARM A	10.92	28.19	0.387	- - -	0.5	0.6	9.3	-	0.058
ARM B	6.92	13.64	0.508	- - -	0.6	1.0	14.5	-	0.148
ARM C	13.96	23.90	0.584	- - -	0.9	1.4	20.0	-	0.100
ARM D	1.50	9.34	0.160	- - -	0.1	0.2	2.8	-	0.127
ARM E	1.38	15.71	0.088	- - -	0.1	0.1	1.4	-	0.070
16.45-17.00									
ARM A	13.38	27.25	0.491	- - -	0.6	1.0	14.0	-	0.072
ARM B	8.48	12.31	0.689	- - -	1.0	2.1	28.9	-	0.252
ARM C	17.10	23.61	0.724	- - -	1.4	2.5	35.7	-	0.150
ARM D	1.84	7.88	0.233	- - -	0.2	0.3	4.3	-	0.165
ARM E	1.69	13.56	0.124	- - -	0.1	0.1	2.1	-	0.084
17.00-17.15									
ARM A	13.38	27.23	0.491	- - -	1.0	1.0	14.4	-	0.072
ARM B	8.48	12.30	0.689	- - -	2.1	2.2	32.0	-	0.260
ARM C	17.10	23.60	0.725	- - -	2.5	2.6	38.5	-	0.154
ARM D	1.84	7.84	0.234	- - -	0.3	0.3	4.5	-	0.166
ARM E	1.69	13.50	0.125	- - -	0.1	0.1	2.1	-	0.085
17.15-17.30									
ARM A	10.92	28.16	0.388	- - -	1.0	0.6	9.8	-	0.058
ARM B	6.92	13.62	0.508	- - -	2.2	1.1	16.7	-	0.153
ARM C	13.96	23.88	0.585	- - -	2.6	1.4	22.4	-	0.102
ARM D	1.50	9.29	0.161	- - -	0.3	0.2	3.0	-	0.129
ARM E	1.38	15.63	0.088	- - -	0.1	0.1	1.5	-	0.070
17.30-17.45									
ARM A	9.15	28.86	0.317	- - -	0.6	0.5	7.1	-	0.051
ARM B	5.80	14.59	0.397	- - -	1.1	0.7	10.4	-	0.114
ARM C	11.69	24.10	0.485	- - -	1.4	1.0	14.7	-	0.081
ARM D	1.25	10.39	0.121	- - -	0.2	0.1	2.1	-	0.110
ARM E	1.15	17.24	0.067	- - -	0.1	0.1	1.1	-	0.062

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.5	
16.45	0.6	*
17.00	1.0	*
17.15	1.0	*
17.30	0.6	*
17.45	0.5	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.6	*
16.45	1.0	*
17.00	2.1	**
17.15	2.2	**
17.30	1.1	*
17.45	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.9	*
16.45	1.4	*
17.00	2.5	***
17.15	2.6	***
17.30	1.4	*
17.45	1.0	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.30	0.1
16.45	0.2
17.00	0.3
17.15	0.3
17.30	0.2
17.45	0.1

QUEUE AT ARM E

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1003.4	668.9	61.3	0.06	61.3	0.06
B	635.9	423.9	111.9	0.18	112.0	0.18
C	1282.8	855.2	144.8	0.11	144.8	0.11
D	137.6	91.8	18.7	0.14	18.7	0.14
E	126.6	84.4	9.2	0.07	9.3	0.07
ALL	3186.4	2124.3	346.0	0.11	346.0	0.11

T75

* 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 10:18:44 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd AM.vai"
(drive-on-the-left) at 14:34:41 on Friday, 10 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2014

T15

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	14.60	21.90	14.60
ARM B	15.00	45.00	75.00	7.39	11.08	7.39
ARM C	15.00	45.00	75.00	0.47	0.71	0.47
ARM D	15.00	45.00	75.00	9.64	14.46	9.64
ARM E	15.00	45.00	75.00	4.57	6.86	4.57

DEMAND SET TITLE: Base+Com+H4&5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
07.45 - 09.15	ARM A	0.003	0.228	0.095	0.544	0.131
		3.0	266.0	111.0	635.0	153.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.743	0.002	0.005	0.173	0.078
		439.0	1.0	3.0	102.0	46.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.368	0.026	0.000	0.605	0.000
		14.0	1.0	0.0	23.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.630	0.122	0.200	0.004	0.044
		486.0	94.0	154.0	3.0	34.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.607	0.243	0.014	0.134	0.003
		222.0	89.0	5.0	49.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.66	29.13	0.503	- - -	0.0	1.0	14.6	-	0.068
ARM B	7.42	20.67	0.359	- - -	0.0	0.6	8.1	-	0.075
ARM C	0.48	15.51	0.031	- - -	0.0	0.0	0.5	-	0.067
ARM D	9.67	19.45	0.497	- - -	0.0	1.0	14.0	-	0.101
ARM E	4.59	13.30	0.345	- - -	0.0	0.5	7.5	-	0.114

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									
ARM A	17.50	28.62	0.612	- - -	1.0	1.6	22.5	-	0.089
ARM B	8.85	19.39	0.457	- - -	0.6	0.8	12.1	-	0.095
ARM C	0.57	13.56	0.042	- - -	0.0	0.0	0.6	-	0.077
ARM D	11.55	18.77	0.616	- - -	1.0	1.6	22.4	-	0.137
ARM E	5.48	11.83	0.463	- - -	0.5	0.8	12.2	-	0.156

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									
ARM A	21.43	27.94	0.767	- - -	1.6	3.2	44.0	-	0.149
ARM B	10.85	17.68	0.614	- - -	0.8	1.6	22.1	-	0.144
ARM C	0.70	10.94	0.064	- - -	0.0	0.1	1.0	-	0.098
ARM D	14.15	17.85	0.793	- - -	1.6	3.5	47.6	-	0.253
ARM E	6.72	9.89	0.679	- - -	0.8	2.0	27.1	-	0.300

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									
ARM A	21.43	27.91	0.768	- - -	3.2	3.2	48.1	-	0.154
ARM B	10.85	17.62	0.615	- - -	1.6	1.6	23.5	-	0.147
ARM C	0.70	10.87	0.064	- - -	0.1	0.1	1.0	-	0.098
ARM D	14.15	17.83	0.794	- - -	3.5	3.7	54.5	-	0.269
ARM E	6.72	9.82	0.684	- - -	2.0	2.1	30.8	-	0.320

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									
ARM A	17.50	28.57	0.613	- - -	3.2	1.6	25.2	-	0.092
ARM B	8.85	19.31	0.459	- - -	1.6	0.9	13.3	-	0.097
ARM C	0.57	13.46	0.042	- - -	0.1	0.0	0.7	-	0.078
ARM D	11.55	18.74	0.617	- - -	3.7	1.6	26.4	-	0.145
ARM E	5.48	11.73	0.468	- - -	2.1	0.9	14.3	-	0.164

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									
ARM A	14.66	29.10	0.504	- - -	1.6	1.0	15.8	-	0.070
ARM B	7.42	20.61	0.360	- - -	0.9	0.6	8.7	-	0.076
ARM C	0.48	15.43	0.031	- - -	0.0	0.0	0.5	-	0.067
ARM D	9.67	19.43	0.498	- - -	1.6	1.0	15.7	-	0.103
ARM E	4.59	13.23	0.347	- - -	0.9	0.5	8.4	-	0.116

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.6	**
08.30	3.2	***
08.45	3.2	***
09.00	1.6	**
09.15	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.8	*
08.30	1.6	**
08.45	1.6	**
09.00	0.9	*
09.15	0.6	*

QUEUE AT ARM 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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.6	**
08.30	3.5	****
08.45	3.7	****
09.00	1.6	**
09.15	1.0	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	2.0	**
08.45	2.1	**
09.00	0.9	*
09.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1607.7	1071.8	170.1	0.11	170.1	0.11
B	813.5	542.3	87.8	0.11	87.8	0.11
C	52.3	34.9	4.3	0.08	4.3	0.08
D	1061.2	707.5	180.6	0.17	180.6	0.17
E	503.8	335.8	100.3	0.20	100.3	0.20
ALL	4038.4	2692.3	543.0	0.13	543.1	0.13

* 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 14:35:49 on 10/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd PM.vai"
(drive-on-the-left) at 11:04:49 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(17.00)AND ENDS(18.30)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2014

T15

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	14.10	21.15	14.10
ARM B	15.00	45.00	75.00	7.20	10.80	7.20
ARM C	15.00	45.00	75.00	3.34	5.01	3.34
ARM D	15.00	45.00	75.00	8.77	13.16	8.77
ARM E	15.00	45.00	75.00	3.15	4.73	3.15

DEMAND SET TITLE: Base+Com+H4&5 2014

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
17.00 - 18.30	ARM A	0.002	0.258	0.010	0.578	0.152
		2.0	291.0	11.0	652.0	172.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.646	0.002	0.002	0.236	0.115
		372.0	1.0	1.0	136.0	66.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.281	0.004	0.000	0.700	0.015
		75.0	1.0	0.0	187.0	4.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.725	0.142	0.036	0.004	0.093
		509.0	100.0	25.0	3.0	65.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.480	0.171	0.000	0.345	0.004
		121.0	43.0	0.0	87.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.15	30.02	0.471	- - -	0.0	0.9	12.9	-	0.063
ARM B	7.23	21.60	0.335	- - -	0.0	0.5	7.3	-	0.069
ARM C	3.35	15.09	0.222	- - -	0.0	0.3	4.1	-	0.085
ARM D	8.81	19.26	0.457	- - -	0.0	0.8	12.0	-	0.095
ARM E	3.16	13.96	0.227	- - -	0.0	0.3	4.2	-	0.092
17.15-17.30									
ARM A	16.90	29.68	0.569	- - -	0.9	1.3	19.0	-	0.078
ARM B	8.63	20.51	0.421	- - -	0.5	0.7	10.5	-	0.084
ARM C	4.00	13.06	0.306	- - -	0.3	0.4	6.4	-	0.110
ARM D	10.52	18.54	0.567	- - -	0.8	1.3	18.6	-	0.124
ARM E	3.78	12.62	0.299	- - -	0.3	0.4	6.2	-	0.113
17.30-17.45									
ARM A	20.70	29.23	0.708	- - -	1.3	2.4	33.6	-	0.115
ARM B	10.57	19.03	0.556	- - -	0.7	1.2	17.7	-	0.117
ARM C	4.90	10.31	0.475	- - -	0.4	0.9	12.6	-	0.183
ARM D	12.88	17.57	0.733	- - -	1.3	2.6	36.2	-	0.206
ARM E	4.62	10.84	0.427	- - -	0.4	0.7	10.5	-	0.160
17.45-18.00									
ARM A	20.70	29.22	0.708	- - -	2.4	2.4	35.8	-	0.117
ARM B	10.57	19.00	0.556	- - -	1.2	1.2	18.6	-	0.118
ARM C	4.90	10.26	0.477	- - -	0.9	0.9	13.4	-	0.186
ARM D	12.88	17.55	0.734	- - -	2.6	2.7	39.9	-	0.213
ARM E	4.62	10.79	0.429	- - -	0.7	0.7	11.1	-	0.162
18.00-18.15									
ARM A	16.90	29.66	0.570	- - -	2.4	1.3	20.8	-	0.079
ARM B	8.63	20.46	0.422	- - -	1.2	0.7	11.4	-	0.085
ARM C	4.00	12.99	0.308	- - -	0.9	0.4	7.0	-	0.112
ARM D	10.52	18.51	0.568	- - -	2.7	1.3	21.2	-	0.128
ARM E	3.78	12.55	0.301	- - -	0.7	0.4	6.7	-	0.114
18.15-18.30									
ARM A	14.15	30.01	0.472	- - -	1.3	0.9	13.8	-	0.063
ARM B	7.23	21.56	0.335	- - -	0.7	0.5	7.8	-	0.070
ARM C	3.35	15.02	0.223	- - -	0.4	0.3	4.4	-	0.086
ARM D	8.81	19.24	0.458	- - -	1.3	0.9	13.2	-	0.096
ARM E	3.16	13.90	0.227	- - -	0.4	0.3	4.6	-	0.093

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.9	*
17.30	1.3	*
17.45	2.4	**
18.00	2.4	**
18.15	1.3	*
18.30	0.9	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.5	
17.30	0.7	*
17.45	1.2	*
18.00	1.2	*
18.15	0.7	*
18.30	0.5	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.4	
17.45	0.9	*
18.00	0.9	*
18.15	0.4	
18.30	0.3	

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.8	*
17.30	1.3	*
17.45	2.6	***
18.00	2.7	***
18.15	1.3	*
18.30	0.9	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.4	
17.45	0.7	*
18.00	0.7	*
18.15	0.4	
18.30	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1552.6	1035.1	136.0	0.09	136.0	0.09
B	792.8	528.5	73.2	0.09	73.2	0.09
C	367.5	245.0	48.0	0.13	48.0	0.13
D	966.3	644.2	141.1	0.15	141.1	0.15
E	346.9	231.2	43.3	0.12	43.3	0.12
ALL	4026.0	2684.0	441.6	0.11	441.6	0.11

T75

* 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 11:05:30 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd AM.vai"
(drive-on-the-left) at 10:58:18 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H5 2014

T15

ARM	NUMBER OF MINUTES FROM START TO RISE	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	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	14.51	21.77	14.51
ARM B	15.00	45.00	75.00	7.39	11.08	7.39
ARM C	15.00	45.00	75.00	0.41	0.62	0.41
ARM D	15.00	45.00	75.00	9.29	13.93	9.29
ARM E	15.00	45.00	75.00	4.54	6.81	4.54

DEMAND SET TITLE: Base+Com+H5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	ARM E
07.45 - 09.15	ARM A	0.003	0.229	0.090	0.547	0.132
		3.0	266.0	104.0	635.0	153.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.743	0.002	0.005	0.173	0.078
		439.0	1.0	3.0	102.0	46.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.394	0.030	0.000	0.576	0.000
		13.0	1.0	0.0	19.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.654	0.127	0.170	0.004	0.046
		486.0	94.0	126.0	3.0	34.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.612	0.245	0.006	0.135	0.003
		222.0	89.0	2.0	49.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.57	29.34	0.497	- - -	0.0	1.0	14.2	-	0.067
ARM B	7.42	20.89	0.355	- - -	0.0	0.5	8.0	-	0.074
ARM C	0.41	15.51	0.027	- - -	0.0	0.0	0.4	-	0.066
ARM D	9.32	19.46	0.479	- - -	0.0	0.9	13.1	-	0.097
ARM E	4.55	13.48	0.338	- - -	0.0	0.5	7.3	-	0.111

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									
ARM A	17.40	28.86	0.603	- - -	1.0	1.5	21.7	-	0.087
ARM B	8.85	19.65	0.451	- - -	0.5	0.8	11.8	-	0.092
ARM C	0.49	13.56	0.036	- - -	0.0	0.0	0.6	-	0.076
ARM D	11.13	18.77	0.593	- - -	0.9	1.4	20.5	-	0.130
ARM E	5.44	12.05	0.451	- - -	0.5	0.8	11.7	-	0.150

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									
ARM A	21.30	28.23	0.755	- - -	1.5	3.0	41.5	-	0.141
ARM B	10.85	17.99	0.603	- - -	0.8	1.5	21.2	-	0.138
ARM C	0.61	10.94	0.055	- - -	0.0	0.1	0.9	-	0.097
ARM D	13.63	17.85	0.764	- - -	1.4	3.0	41.5	-	0.226
ARM E	6.66	10.14	0.657	- - -	0.8	1.8	25.0	-	0.277

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									
ARM A	21.30	28.21	0.755	- - -	3.0	3.0	45.0	-	0.144
ARM B	10.85	17.95	0.604	- - -	1.5	1.5	22.5	-	0.141
ARM C	0.61	10.87	0.056	- - -	0.1	0.1	0.9	-	0.098
ARM D	13.63	17.83	0.765	- - -	3.0	3.1	46.5	-	0.237
ARM E	6.66	10.08	0.661	- - -	1.8	1.9	27.9	-	0.291

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									
ARM A	17.40	28.82	0.604	- - -	3.0	1.5	24.2	-	0.089
ARM B	8.85	19.58	0.452	- - -	1.5	0.8	13.0	-	0.094
ARM C	0.49	13.47	0.037	- - -	0.1	0.0	0.6	-	0.077
ARM D	11.13	18.74	0.594	- - -	3.1	1.5	23.7	-	0.135
ARM E	5.44	11.95	0.455	- - -	1.9	0.9	13.5	-	0.157

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									
ARM A	14.57	29.31	0.497	- - -	1.5	1.0	15.4	-	0.068
ARM B	7.42	20.84	0.356	- - -	0.8	0.6	8.6	-	0.075
ARM C	0.41	15.43	0.027	- - -	0.0	0.0	0.4	-	0.067
ARM D	9.32	19.43	0.480	- - -	1.5	0.9	14.5	-	0.100
ARM E	4.55	13.41	0.340	- - -	0.9	0.5	8.1	-	0.114

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.5	*
08.30	3.0	***
08.45	3.0	***
09.00	1.5	**
09.15	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.5	*
08.45	1.5	**
09.00	0.8	*
09.15	0.6	*

QUEUE AT ARM 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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.4	*
08.30	3.0	***
08.45	3.1	***
09.00	1.5	*
09.15	0.9	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.8	**
08.45	1.9	**
09.00	0.9	*
09.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1598.0	1065.4	162.0	0.10	162.0	0.10
B	813.5	542.3	85.0	0.10	85.0	0.10
C	45.4	30.3	3.7	0.08	3.7	0.08
D	1022.7	681.8	159.9	0.16	159.9	0.16
E	499.6	333.1	93.4	0.19	93.4	0.19
ALL	3979.2	2652.8	503.9	0.13	503.9	0.13

T75

* 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 10:59:00 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_NorthHydeRd PM.vai"
(drive-on-the-left) at 10:59:10 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Base Model - Roundabout 1
LOCATION: North Hyde Road/Dawley Road
DATE: 23/04/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - North Hyde Road
ARM C - Millington Road
ARM D - Daweley Road (S)
ARM E - Bourne Avenue

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	9.50	13.00	22.00	75.00	20.0	0.526	31.736
ARM B	3.50	8.00	16.00	10.00	72.00	40.0	0.467	27.158
ARM C	4.00	6.00	8.00	22.00	54.00	36.0	0.553	25.388
ARM D	3.50	5.50	12.00	20.00	76.00	46.0	0.422	22.915
ARM E	3.65	4.50	3.00	32.00	56.00	35.0	0.497	20.704

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(17.00)AND ENDS(18.30)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H5 2014

T15

ARM	NUMBER OF MINUTES FROM START TO RISE	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO TOP OF PEAK	NUMBER OF MINUTES FROM START WHEN FLOW 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		14.09	21.13	14.09
ARM B	15.00	45.00	75.00		7.20	10.80	7.20
ARM C	15.00	45.00	75.00		2.89	4.33	2.89
ARM D	15.00	45.00	75.00		8.73	13.09	8.73
ARM E	15.00	45.00	75.00		3.15	4.73	3.15

DEMAND SET TITLE: Base+Com+H5 2014

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D	ARM E
17.00 - 18.30	ARM A	0.002	0.258	0.009	0.579	0.153
		2.0	291.0	10.0	652.0	172.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.646	0.002	0.002	0.236	0.115
		372.0	1.0	1.0	136.0	66.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.294	0.004	0.000	0.688	0.013
		68.0	1.0	0.0	159.0	3.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.729	0.143	0.030	0.004	0.093
		509.0	100.0	21.0	3.0	65.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM E	0.480	0.171	0.000	0.345	0.004
		121.0	43.0	0.0	87.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.14	30.05	0.471	- - -	0.0	0.9	12.8	-	0.062
ARM B	7.23	21.63	0.334	- - -	0.0	0.5	7.3	-	0.069
ARM C	2.90	15.09	0.192	- - -	0.0	0.2	3.4	-	0.082
ARM D	8.76	19.30	0.454	- - -	0.0	0.8	11.8	-	0.094
ARM E	3.16	14.03	0.225	- - -	0.0	0.3	4.2	-	0.092
17.15-17.30									
ARM A	16.89	29.71	0.568	- - -	0.9	1.3	19.0	-	0.078
ARM B	8.63	20.54	0.420	- - -	0.5	0.7	10.5	-	0.084
ARM C	3.46	13.06	0.265	- - -	0.2	0.4	5.2	-	0.104
ARM D	10.46	18.59	0.563	- - -	0.8	1.3	18.2	-	0.122
ARM E	3.78	12.71	0.297	- - -	0.3	0.4	6.1	-	0.112
17.30-17.45									
ARM A	20.68	29.27	0.707	- - -	1.3	2.3	33.4	-	0.115
ARM B	10.57	19.07	0.554	- - -	0.7	1.2	17.6	-	0.117
ARM C	4.24	10.31	0.411	- - -	0.4	0.7	9.8	-	0.164
ARM D	12.81	17.63	0.727	- - -	1.3	2.5	35.1	-	0.201
ARM E	4.62	10.94	0.423	- - -	0.4	0.7	10.4	-	0.157
17.45-18.00									
ARM A	20.68	29.26	0.707	- - -	2.3	2.4	35.5	-	0.116
ARM B	10.57	19.04	0.555	- - -	1.2	1.2	18.5	-	0.118
ARM C	4.24	10.26	0.413	- - -	0.7	0.7	10.4	-	0.166
ARM D	12.81	17.61	0.727	- - -	2.5	2.6	38.7	-	0.207
ARM E	4.62	10.89	0.425	- - -	0.7	0.7	10.9	-	0.160
18.00-18.15									
ARM A	16.89	29.70	0.569	- - -	2.4	1.3	20.7	-	0.079
ARM B	8.63	20.50	0.421	- - -	1.2	0.7	11.3	-	0.085
ARM C	3.46	12.99	0.267	- - -	0.7	0.4	5.7	-	0.106
ARM D	10.46	18.56	0.563	- - -	2.6	1.3	20.7	-	0.126
ARM E	3.78	12.63	0.299	- - -	0.7	0.4	6.7	-	0.113
18.15-18.30									
ARM A	14.14	30.03	0.471	- - -	1.3	0.9	13.8	-	0.063
ARM B	7.23	21.59	0.335	- - -	0.7	0.5	7.8	-	0.070
ARM C	2.90	15.02	0.193	- - -	0.4	0.2	3.7	-	0.083
ARM D	8.76	19.28	0.454	- - -	1.3	0.8	13.0	-	0.096
ARM E	3.16	13.97	0.226	- - -	0.4	0.3	4.5	-	0.093

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.9	*
17.30	1.3	*
17.45	2.3	**
18.00	2.4	**
18.15	1.3	*
18.30	0.9	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.5	
17.30	0.7	*
17.45	1.2	*
18.00	1.2	*
18.15	0.7	*
18.30	0.5	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.4	
17.45	0.7	*
18.00	0.7	*
18.15	0.4	
18.30	0.2	

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.8	*
17.30	1.3	*
17.45	2.5	***
18.00	2.6	***
18.15	1.3	*
18.30	0.8	*

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.4	
17.45	0.7	*
18.00	0.7	*
18.15	0.4	
18.30	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	1551.2	1034.2	135.2	0.09	135.3	0.09	
B	792.8	528.5	73.0	0.09	73.0	0.09	
C	318.0	212.0	38.3	0.12	38.3	0.12	
D	960.7	640.5	137.6	0.14	137.6	0.14	
E	346.9	231.2	42.8	0.12	42.8	0.12	
ALL	3969.6	2646.4	426.9	0.11	426.9	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 10:59:55 on 05/08/2012]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd AM_Int.vai"
(drive-on-the-left) at 13:23:27 on Sunday, 5 August 2012

FILE PROPERTIES

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA

ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	28.234*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	20.216*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	11.000
ARM B	5.000

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2014

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TO TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
	TO RISE	IS REACHED	FALLING			
ARM A	15.00	45.00	75.00	10.06	15.09	10.06
ARM B	15.00	45.00	75.00	5.70	8.55	5.70
ARM C	15.00	45.00	75.00	8.64	12.96	8.64

DEMAND SET TITLE: Base+Com+H4&5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.30 - 09.00	ARM A	0.001	0.291	0.708
		1.0	234.0	570.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.458	0.000	0.542
		209.0	0.0	247.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.724	0.276	0.000
		500.0	191.0	0.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
in the s 90.0y as vehicular demand on the link. (= times per hour)
ARM B: Frequency of use is distributed throughout the period
in the s 30.0y as vehicular demand on the link. (= times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.30-07.45											
ARM A		10.10	23.51	0.430	- -	1.2	0.0	0.7	10.9	-	0.074
ARM B		5.72	16.02	0.357	- -	0.4	0.0	0.6	8.0	-	0.096
ARM C		8.67	19.91	0.436	- -	-	0.0	0.8	11.0	-	0.088
07.45-08.00											
ARM A		12.06	22.73	0.531	- -	1.5	0.7	1.1	16.2	-	0.093
ARM B		6.83	15.19	0.450	- -	0.5	0.6	0.8	11.7	-	0.119
ARM C		10.35	19.56	0.529	- -	-	0.8	1.1	16.1	-	0.108
08.00-08.15											
ARM A		14.77	21.73	0.680	- -	1.8	1.1	2.1	29.2	-	0.141
ARM B		8.37	14.07	0.595	- -	0.6	0.8	1.4	20.3	-	0.173
ARM C		12.68	18.98	0.668	- -	-	1.1	2.0	27.6	-	0.156
08.15-08.30											
ARM A		14.77	21.72	0.680	- -	1.8	2.1	2.1	31.3	-	0.144
ARM B		8.37	14.04	0.596	- -	0.6	1.4	1.5	21.6	-	0.176
ARM C		12.68	18.96	0.669	- -	-	2.0	2.0	29.6	-	0.159
08.30-08.45											
ARM A		12.06	22.72	0.531	- -	1.5	2.1	1.1	17.9	-	0.095
ARM B		6.83	15.15	0.451	- -	0.5	1.5	0.8	13.0	-	0.122
ARM C		10.35	19.54	0.530	- -	-	2.0	1.1	17.9	-	0.110
08.45-09.00											
ARM A		10.10	23.50	0.430	- -	1.2	1.1	0.8	11.7	-	0.075
ARM B		5.72	15.98	0.358	- -	0.4	0.8	0.6	8.7	-	0.098
ARM C		8.67	19.89	0.436	- -	-	1.1	0.8	12.1	-	0.089

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.1	*
08.15	2.1	**
08.30	2.1	**
08.45	1.1	*
09.00	0.8	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.6	*
08.00	0.8	*
08.15	1.4	*
08.30	1.5	*
08.45	0.8	*
09.00	0.6	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.8	*
08.00	1.1	*
08.15	2.0	**
08.30	2.0	**
08.45	1.1	*
09.00	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1108.0	738.7	117.1	0.11	117.2	0.11
B	627.7	418.4	83.3	0.13	83.3	0.13
C	951.1	634.1	114.3	0.12	114.3	0.12
ALL	2686.8	1791.2	314.7	0.12	314.8	0.12

T75

* 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 13:24:02 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd PM_Int.vai"
(drive-on-the-left) at 13:24:14 on Sunday, 5 August 2012

FILE PROPERTIES
****

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA
****
ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	31.934*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	24.016*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	14.700
ARM B	8.800

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H4&5 2014

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK	NUMBER OF MINUTES FROM START WHEN FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
	TO RISE	IS REACHED	FALLING			
ARM A	15.00	45.00	75.00	11.65	17.47	11.65
ARM B	15.00	45.00	75.00	6.34	9.51	6.34
ARM C	15.00	45.00	75.00	8.24	12.36	8.24

DEMAND SET TITLE: Base+Com+H4&5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS (PERCENTAGE OF H.V.S) TURNING COUNTS	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A		0.000	0.273	0.727
			0.0	254.0	678.0
			(0.0)	(0.0)	(0.0)
	ARM B		0.564	0.000	0.436
			286.0	0.0	221.0
			(0.0)	(0.0)	(0.0)
	ARM C		0.741	0.258	0.002
			488.0	170.0	1.0
			(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
       in the s 90.0y as vehicular demand on the link. (=   times per hour)
ARM B: Frequency of use is distributed throughout the period
       in the s 30.0y as vehicular demand on the link. (=   times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00											
ARM A		11.69	26.42	0.443	- -	1.2	0.0	0.8	11.5	-	0.067
ARM B		6.36	19.02	0.334	- -	0.4	0.0	0.5	7.3	-	0.079
ARM C		8.27	19.37	0.427	- -	-	0.0	0.7	10.7	-	0.089
17.00-17.15											
ARM A		13.96	25.54	0.547	- -	1.5	0.8	1.2	17.3	-	0.086
ARM B		7.60	18.03	0.421	- -	0.5	0.5	0.7	10.5	-	0.096
ARM C		9.87	18.89	0.523	- -	-	0.7	1.1	15.6	-	0.110
17.15-17.30											
ARM A		17.10	24.39	0.701	- -	1.8	1.2	2.3	32.2	-	0.134
ARM B		9.30	16.71	0.557	- -	0.6	0.7	1.2	17.7	-	0.134
ARM C		12.09	18.08	0.669	- -	-	1.1	2.0	27.6	-	0.164
17.30-17.45											
ARM A		17.10	24.38	0.702	- -	1.8	2.3	2.3	34.5	-	0.138
ARM B		9.30	16.68	0.558	- -	0.6	1.2	1.2	18.6	-	0.135
ARM C		12.09	18.06	0.670	- -	-	2.0	2.0	29.7	-	0.168
17.45-18.00											
ARM A		13.96	25.53	0.547	- -	1.5	2.3	1.2	19.1	-	0.088
ARM B		7.60	17.99	0.422	- -	0.5	1.2	0.7	11.5	-	0.097
ARM C		9.87	18.87	0.523	- -	-	2.0	1.1	17.4	-	0.113
18.00-18.15											
ARM A		11.69	26.41	0.443	- -	1.2	1.2	0.8	12.3	-	0.068
ARM B		6.36	18.98	0.335	- -	0.4	0.7	0.5	7.8	-	0.079
ARM C		8.27	19.36	0.427	- -	-	1.1	0.8	11.6	-	0.091

QUEUE AT ARM A

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

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.2	*
17.45	1.2	*
18.00	0.7	*
18.15	0.5	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.1	*
17.30	2.0	**
17.45	2.0	**
18.00	1.1	*
18.15	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1282.8	855.2	126.9	0.10	127.0	0.10
B	697.8	465.2	73.3	0.11	73.4	0.11
C	907.1	604.7	112.7	0.12	112.7	0.12
ALL	2887.7	1925.2	312.9	0.11	313.0	0.11

T75

* 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 13:24:56 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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RG40 3GA,UK

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd AM_Int.vai"
(drive-on-the-left) at 13:21:01 on Sunday, 5 August 2012

FILE PROPERTIES
****

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA
****
ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	28.234*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	20.216*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	11.000
ARM B	5.000

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

TIME PERIOD BEGINS(07.30)AND ENDS(09.00)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H5 2014

T15

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	10.02	15.04	10.02
ARM B	15.00	45.00	75.00	5.70	8.55	5.70
ARM C	15.00	45.00	75.00	8.29	12.43	8.29

DEMAND SET TITLE: Base+Com+H5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.30 - 09.00	ARM A	0.001	0.292	0.707
		1.0	234.0	567.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.458	0.000	0.542
		209.0	0.0	247.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.712	0.288	0.000
		472.0	191.0	0.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
in the s 90.0y as vehicular demand on the link. (= times per hour)
ARM B: Frequency of use is distributed throughout the period
in the s 30.0y as vehicular demand on the link. (= times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.30-07.45											
ARM A		10.06	23.51	0.428	- -	1.2	0.0	0.7	10.8	-	0.074
ARM B		5.72	16.04	0.357	- -	0.4	0.0	0.5	7.9	-	0.096
ARM C		8.32	19.92	0.418	- -	-	0.0	0.7	10.3	-	0.086
07.45-08.00											
ARM A		12.02	22.73	0.529	- -	1.5	0.7	1.1	16.1	-	0.093
ARM B		6.83	15.21	0.449	- -	0.5	0.5	0.8	11.7	-	0.119
ARM C		9.93	19.58	0.507	- -	-	0.7	1.0	14.8	-	0.103
08.00-08.15											
ARM A		14.72	21.72	0.677	- -	1.8	1.1	2.0	28.9	-	0.140
ARM B		8.37	14.10	0.593	- -	0.6	0.8	1.4	20.2	-	0.172
ARM C		12.17	19.04	0.639	- -	-	1.0	1.7	24.6	-	0.143
08.15-08.30											
ARM A		14.72	21.72	0.678	- -	1.8	2.0	2.1	30.9	-	0.143
ARM B		8.37	14.08	0.594	- -	0.6	1.4	1.4	21.5	-	0.175
ARM C		12.17	19.02	0.640	- -	-	1.7	1.8	26.1	-	0.146
08.30-08.45											
ARM A		12.02	22.72	0.529	- -	1.5	2.1	1.1	17.7	-	0.095
ARM B		6.83	15.18	0.450	- -	0.5	1.4	0.8	13.0	-	0.121
ARM C		9.93	19.56	0.508	- -	-	1.8	1.0	16.3	-	0.105
08.45-09.00											
ARM A		10.06	23.50	0.428	- -	1.2	1.1	0.8	11.6	-	0.075
ARM B		5.72	16.01	0.357	- -	0.4	0.8	0.6	8.7	-	0.097
ARM C		8.32	19.90	0.418	- -	-	1.0	0.7	11.2	-	0.087

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.1	*
08.15	2.0	**
08.30	2.1	**
08.45	1.1	*
09.00	0.8	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.5	*
08.00	0.8	*
08.15	1.4	*
08.30	1.4	*
08.45	0.8	*
09.00	0.6	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	0.7	*
08.00	1.0	*
08.15	1.7	**
08.30	1.8	**
08.45	1.0	*
09.00	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	1103.9	735.9	116.1	0.11	116.1	0.11	
B	627.7	418.4	82.9	0.13	83.0	0.13	
C	912.6	608.4	103.3	0.11	103.3	0.11	
ALL	2644.1	1762.7	302.3	0.11	302.3	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 13:21:30 on 05/08/2012]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

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Run with file:-
"i:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\DawleyRd_StationRd PM_Int.vai"
(drive-on-the-left) at 13:21:43 on Sunday, 5 August 2012

FILE PROPERTIES
****

RUN TITLE: Dawley Road Station Road Site 2 Base Model
LOCATION: Dawley Road/Station Road
DATE: 16/07/12
CLIENT:
ENUMERATOR: rhussain [IE-D00135]
JOB NUMBER: VN50026
STATUS: Draft 1
DESCRIPTION:

INPUT DATA
****
ARM A - Dawley Road (N)
ARM B - Station Road (E)
ARM C - Shepiston Lane (S)

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM *HAS A CENTRAL ISLAND

ARM * HAS A ZEBRA CROSSING
ARM * HAS A ZEBRA CROSSING

T5

ARM	V (M)	E (M)	Lm(M)	Vm(M)	A (M)	K (M)	G (%)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.75	6.10	6.00	3.75	11.00	7.00	0.00	0.595	31.934*
ARM B	3.85	5.50	5.50	3.85	11.70	5.90	0.00	0.589	24.016*
ARM C	4.69	6.50	31.00	4.69	16.00	11.00	0.00	0.539	21.366

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM A	14.700
ARM B	8.800

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

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

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 THE TURNING COUNT DATA

DEMAND SET TITLE: Base+Com+H5 2014

T15

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	11.30	16.95	11.30
ARM B	15.00	45.00	75.00	6.34	9.51	6.34
ARM C	15.00	45.00	75.00	8.18	12.26	8.18

DEMAND SET TITLE: Base+Com+H5 2014

T33

TIME	FROM/T	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.281	0.719
		0.0	254.0	650.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.564	0.000	0.436
		286.0	0.0	221.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.739	0.260	0.002
		483.0	170.0	1.0
		(0.0)	(0.0)	(0.0)

PEDESTRIAN CROSSING DATA
PEDESTRIAN CROSSING USE:
ARM A: Frequency of use is distributed throughout the period
in the s 90.0y as vehicular demand on the link. (= times per hour)
ARM B: Frequency of use is distributed throughout the period
in the s 30.0y as vehicular demand on the link. (= times per hour)
ZEBRA CROSSINGS

T40

ARM	LENGTH OF CROSSING (M) (ENTRY)	(EXIT)	QUEUEING SPACE BETWEEN CROSSING AND JUNCTION ENTRY (VEHS)	QUEUEING SPACE WITHOUT BLOCKING BACK INTO JUNCTION (VEHS)
A	4.50	4.30	0.0	3.5
B	3.70	4.00	3.8	2.0

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00											
ARM A		11.34	26.42	0.429	- -	1.2	0.0	0.7	10.9	-	0.066
ARM B		6.36	19.23	0.331	- -	0.4	0.0	0.5	7.1	-	0.077
ARM C		8.21	19.38	0.424	- -	-	0.0	0.7	10.5	-	0.089
17.00-17.15											
ARM A		13.54	25.54	0.530	- -	1.5	0.7	1.1	16.3	-	0.083
ARM B		7.60	18.28	0.416	- -	0.5	0.5	0.7	10.3	-	0.093
ARM C		9.80	18.90	0.518	- -	-	0.7	1.1	15.4	-	0.109
17.15-17.30											
ARM A		16.59	24.39	0.680	- -	1.8	1.1	2.1	29.5	-	0.126
ARM B		9.30	17.01	0.547	- -	0.6	0.7	1.2	17.1	-	0.129
ARM C		12.00	18.09	0.663	- -	-	1.1	1.9	27.0	-	0.161
17.30-17.45											
ARM A		16.59	24.38	0.680	- -	1.8	2.1	2.1	31.4	-	0.128
ARM B		9.30	16.98	0.548	- -	0.6	1.2	1.2	17.9	-	0.130
ARM C		12.00	18.07	0.664	- -	-	1.9	1.9	29.0	-	0.164
17.45-18.00											
ARM A		13.54	25.53	0.531	- -	1.5	2.1	1.1	17.8	-	0.084
ARM B		7.60	18.24	0.416	- -	0.5	1.2	0.7	11.2	-	0.094
ARM C		9.80	18.88	0.519	- -	-	1.9	1.1	17.1	-	0.111
18.00-18.15											
ARM A		11.34	26.41	0.429	- -	1.2	1.1	0.8	11.7	-	0.067
ARM B		6.36	19.19	0.331	- -	0.4	0.7	0.5	7.7	-	0.078
ARM C		8.21	19.36	0.424	- -	-	1.1	0.7	11.5	-	0.090

QUEUE AT ARM A

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	1.1	*
18.15	0.8	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.2	*
17.45	1.2	*
18.00	0.7	*
18.15	0.5	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.1	*
17.30	1.9	**
17.45	1.9	**
18.00	1.1	*
18.15	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1244.3	829.5	117.4	0.09	117.4	0.09
B	697.8	465.2	71.2	0.10	71.2	0.10
C	900.2	600.1	110.5	0.12	110.5	0.12
ALL	2842.3	1894.9	299.1	0.11	299.2	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 ==========

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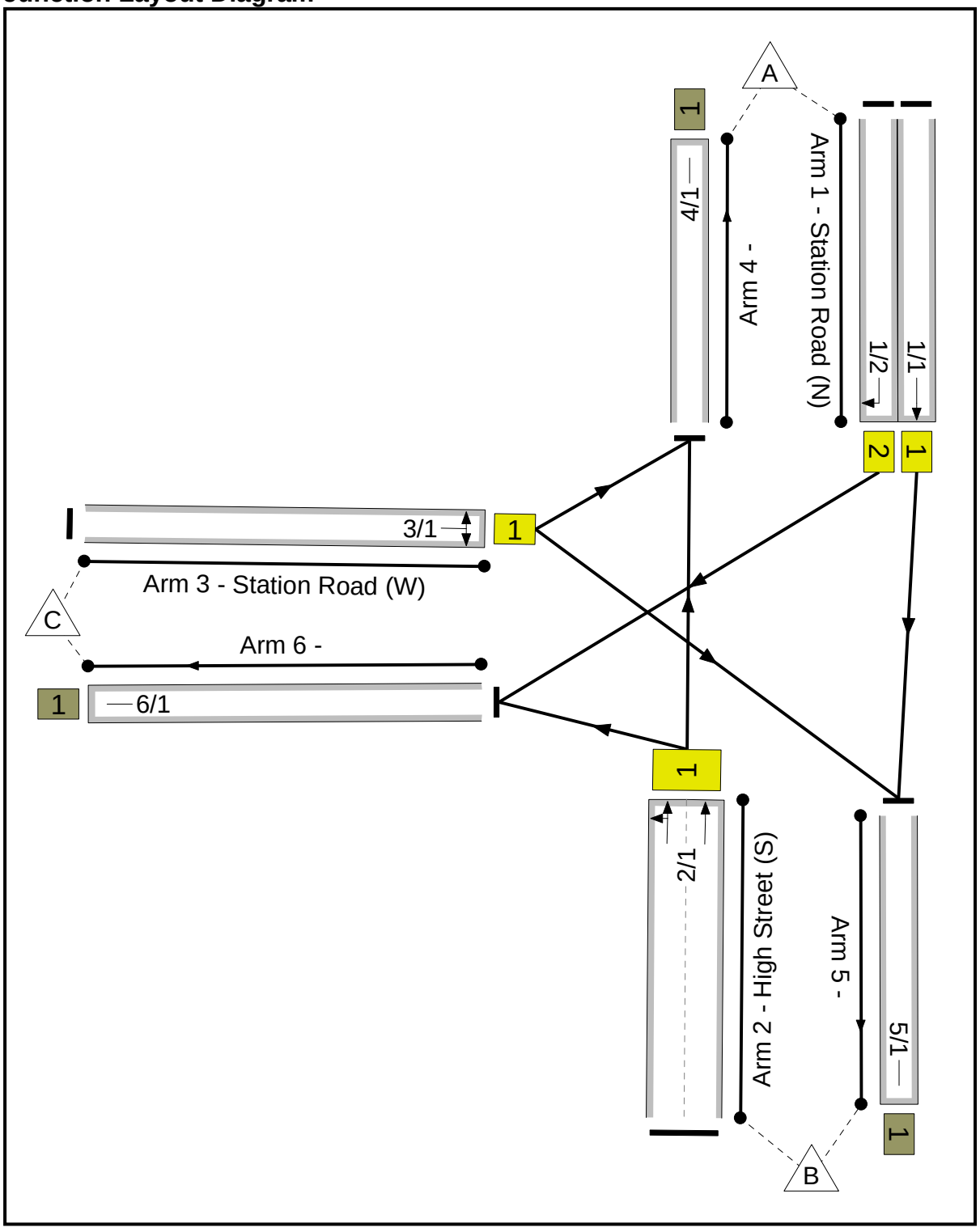
Full Input Data And Results

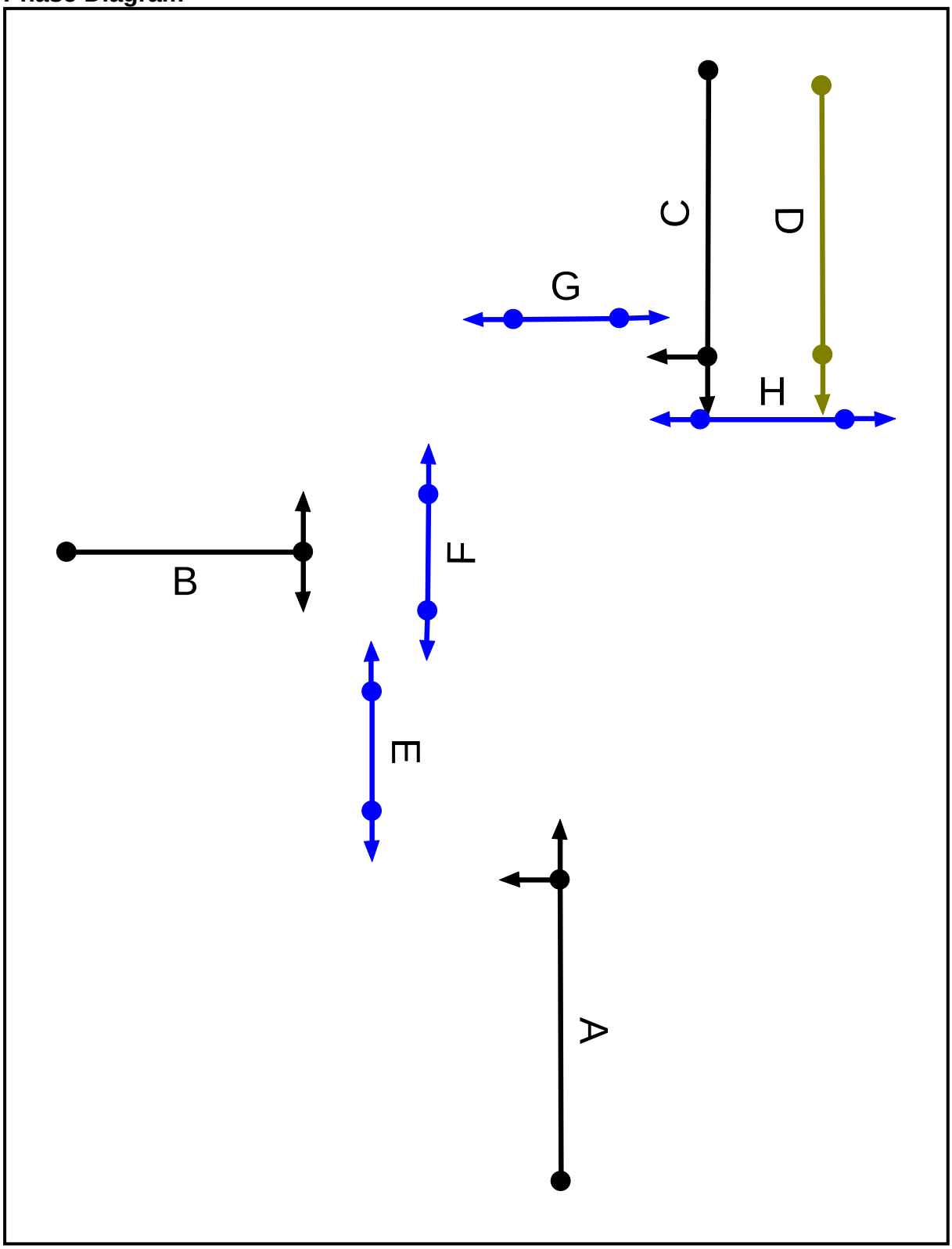
User and Project Details

Project:	
Title:	
Location:	
File name:	Station Rd_High Street.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Filter	C	4	0
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5

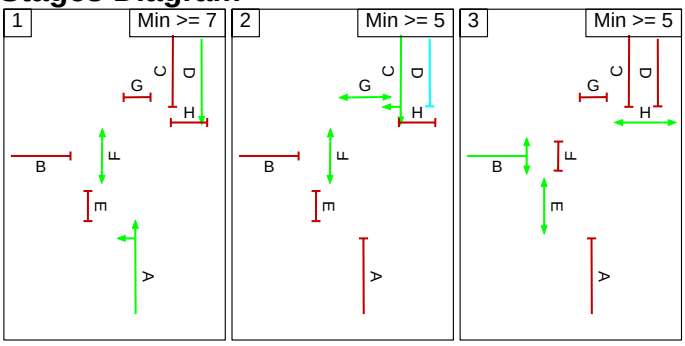
Phase Intergreens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		5	5	-	7	-	8	-
	B	5		5	5	-	5	8	-
	C	8	5		-	10	-	-	5
	D	-	5	-		-	-	-	5
	E	8	-	8	-		-	-	-
	F	-	8	-	-	-		-	-
	G	8	8	-	-	-	-		-
	H	-	-	8	8	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A D F
2	C F G
3	B E H

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	3	3
3	1	B	Losing	3	3

Prohibited Stage Changes

From Stage \ To Stage	1	2	3
1		8	X
2	8		13
3	8	8	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Road (N) Ahead	U	1	C D	2	3
1/2	Station Road (N) Right	U	1	C	2	3
2/1	High Street (S) Ahead Left	U	2	A	2	3
3/1	Station Road (W) Left Right	U	1	B	2	3
4/1		U	1		2	3
5/1		U	1		2	3
6/1		U	1		2	3

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Road (N) Lane 1)	Link 1 (Station Road (N) Ahead)	Inf	Inf	User	1766	3.25	0.00	Y	Arm 5 Ahead	Inf
1/2 (Station Road (N) Lane 2)	Link 2 (Station Road (N) Right)	Inf	Inf	User	1929	3.25	0.00	Y	Arm 6 Right	Inf
2/1 (High Street (S) Lane 1)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1763	3.25	0.00	Y	Arm 4 Ahead Arm 6 Left	Inf Inf
2/2 (High Street (S) Lane 2)	Link 1 (High Street (S) Ahead Left)	Inf	Inf	User	1877	3.25	0.00	Y	Arm 4 Ahead	Inf
3/1 (Station Road (W) Lane 1)	Link 1 (Station Road (W) Left Right)	Inf	Inf	User	1691	3.25	0.00	Y	Arm 4 Left Arm 5 Right	Inf Inf
4/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
5: 'Base + Com + H4 2014 AM'	08:00	09:00	01:00	
6: 'Base + Com + H4 2014 PM'	17:00	18:00	01:00	
7: 'Base + Com + H5 2014 AM'	08:00	09:00	01:00	
8: 'Base + Com + H5 2014 PM'	17:00	18:00	01:00	
9: 'Base + Com + H4 5 2014 AM'	08:00	09:00	01:00	
10: 'Base + Com + H4 5 2014 PM'	17:00	18:00	01:00	

Scenario 5: 'Base + Com + H4 2014 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 5: 'Base + Com + H4 2014 AM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	575	237	812
	B	362	0	179	541
	C	220	259	0	479
	Tot.	582	834	416	1832

Link Traffic Flows

Arm/Link	Flow Group 5: Base + Com + H4 2014 AM
1/1	575
1/2	237
2/1	541
3/1	479
4/1	582
5/1	834
6/1	416

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 6: 'Base + Com + H4 2014 PM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 6: 'Base + Com + H4 2014 PM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	404	220	624
	B	412	0	285	697
	C	180	250	0	430
	Tot.	592	654	505	1751

Link Traffic Flows

Arm/Link	Flow Group 6: Base + Com + H4 2014 PM
1/1	404
1/2	220
2/1	697
3/1	430
4/1	592
5/1	654
6/1	505

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 7: 'Base + Com + H5 2014 AM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 7: 'Base + Com + H5 2014 AM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	575	237	812
	B	366	0	179	545
	C	220	259	0	479
	Tot.	586	834	416	1836

Link Traffic Flows

Arm/Link	Flow Group 7: Base + Com + H5 2014 AM
1/1	575
1/2	237
2/1	545
3/1	479
4/1	586
5/1	834
6/1	416

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 8: 'Base + Com + H5 2014 PM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 8: 'Base + Com + H5 2014 PM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	408	220	628
	B	413	0	285	698
	C	180	250	0	430
	Tot.	593	658	505	1756

Link Traffic Flows

Arm/Link	Flow Group 8: Base + Com + H5 2014 PM
1/1	408
1/2	220
2/1	698
3/1	430
4/1	593
5/1	658
6/1	505

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 9: 'Base + Com + H4 5 2014 AM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 9: 'Base + Com + H4 5 2014 AM'

Traffic Flow Matrix

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	576	237	813
	B	371	0	179	550
	C	220	259	0	479
	Tot.	591	835	416	1842

Link Traffic Flows

Arm/Link	Flow Group 9: Base + Com + H4 5 2014 AM
1/1	576
1/2	237
2/1	550
3/1	479
4/1	591
5/1	835
6/1	416

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Road (N) Lane 1)	This lane uses a directly entered Saturation Flow						1766
1/2 (Station Road (N) Lane 2)	This lane uses a directly entered Saturation Flow						1929
2/1 (High Street (S) Lane 1)	This lane uses a directly entered Saturation Flow						1763
2/2 (High Street (S) Lane 2)	This lane uses a directly entered Saturation Flow						1877
3/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1691
4/1	This lane uses a directly entered Saturation Flow						1800
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800

Scenario 10: 'Base + Com + H4 5 2014 PM'

Staging Plan 1: 'Staging Plan No. 1'
Flow Group 10: 'Base + Com + H4 5 2014 PM'

Traffic Flow Matrix

Desired Flow :

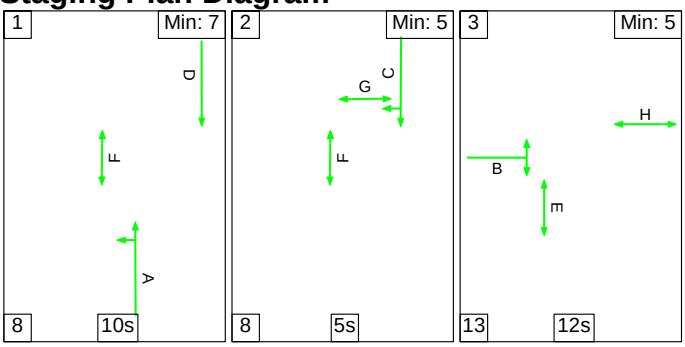
		Destination			
		A	B	C	Tot.
Origin	A	0	412	220	632
	B	413	0	285	698
	C	180	250	0	430
	Tot.	593	662	505	1760

Link Traffic Flows

Arm/Link	Flow Group 10: Base + Com + H4 5 2014 PM
1/1	412
1/2	220
2/1	698
3/1	430
4/1	593
5/1	662
6/1	505

Scenario 7: 'Base + Com + H5 2014 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 7: 'Base + Com + H5 2014 AM'

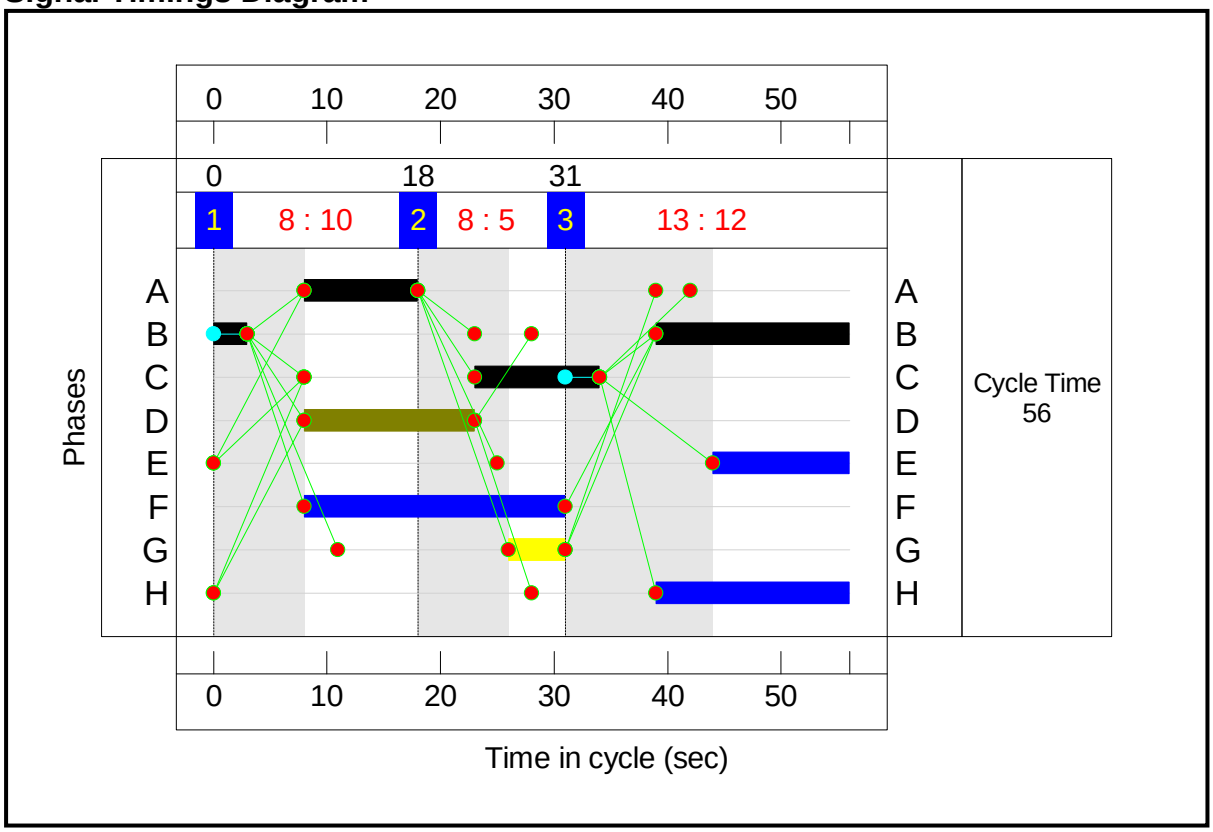
Staging Plan Diagram



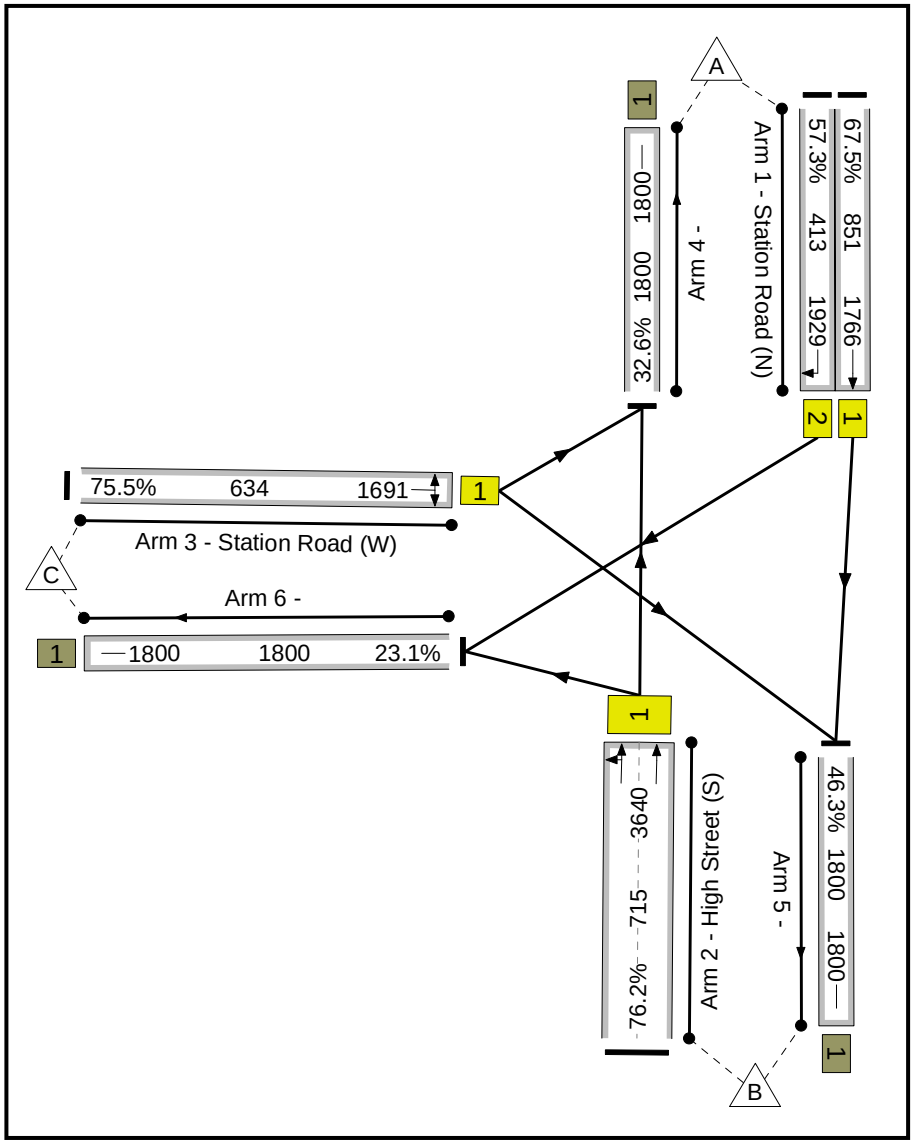
Stage Timings

Stage	1	2	3
Duration	10	5	12
Change Point	0	18	31

Signal Timings Diagram



Junction Layout Diagram



Link Results

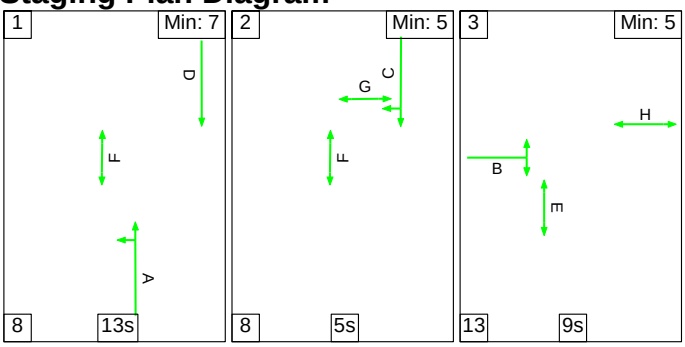
Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	26	15	575	1766	1766	851	67.5
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	237	1929	1929	413	57.3
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	10	-	545	3640	3640	715	76.2
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	20	-	479	1691	1691	634	75.5
4/1		U	N/A	N/A	-		-	-	-	586	1800	1800	1800	32.6
5/1		U	N/A	N/A	-		-	-	-	834	1800	1800	1800	46.3
6/1		U	N/A	N/A	-		-	-	-	416	1800	1800	1800	23.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	575	575	-	-	-	1.8	1.0	-	2.8	17.6	6.9	1.0	7.9	
1/2	237	237	-	-	-	1.3	0.7	-	2.0	29.8	3.3	0.7	4.0	
2/1	545	545	-	-	-	3.2	1.6	-	4.8	31.7	7.9	1.6	9.4	
3/1	479	479	-	-	-	2.0	1.5	-	3.5	26.6	6.4	1.5	7.9	
4/1	586	586	-	-	-	0.0	0.2	-	0.3	1.6	3.2	0.2	3.4	
5/1	834	834	-	-	-	0.0	0.4	-	0.4	1.9	0.0	0.4	0.4	
6/1	416	416	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2	

PRC for Signalled Links (%): 18.1 Total Delay for Signalled Links (pcuHr): 13.11
PRC Over All Links (%): 18.1 Total Delay Over All Links(pcuHr): 13.96 Cycle Time (s): 56

Scenario 8: 'Base + Com + H5 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 8: 'Base + Com + H5 2014 PM'

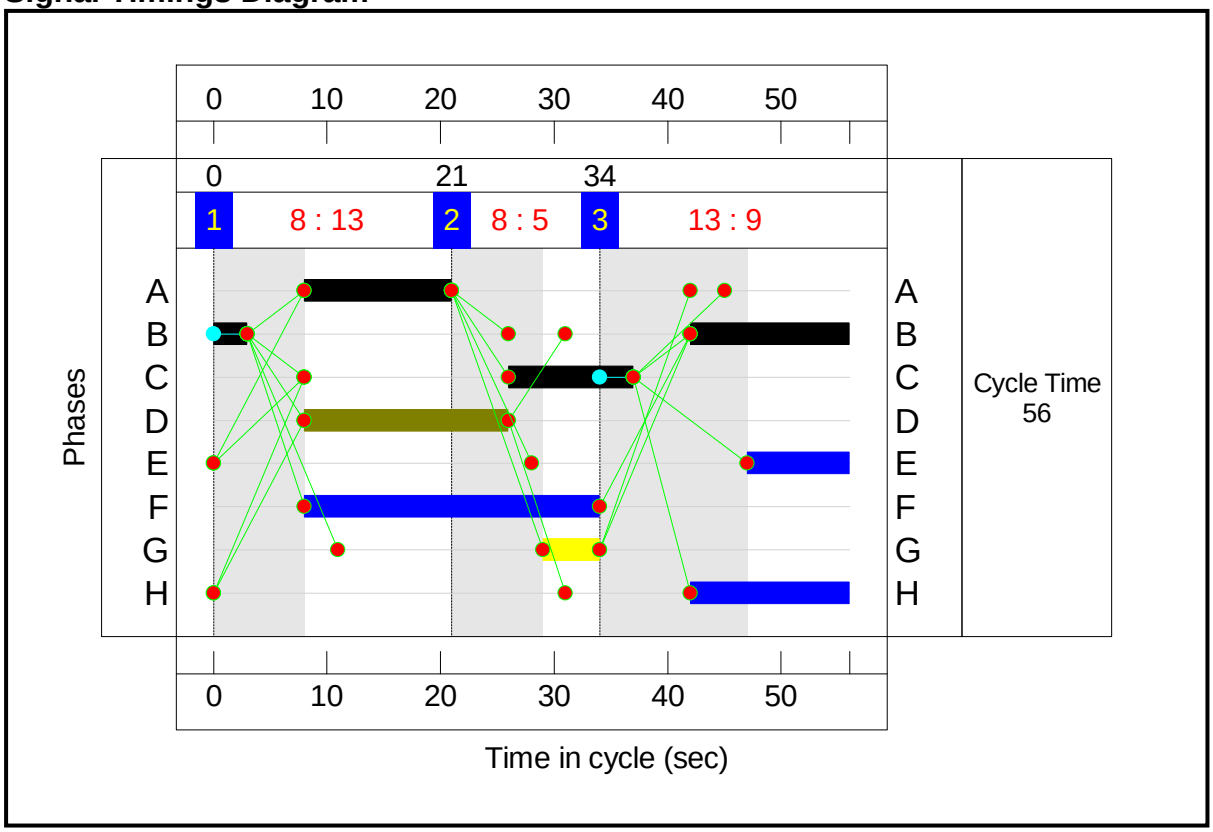
Staging Plan Diagram



Stage Timings

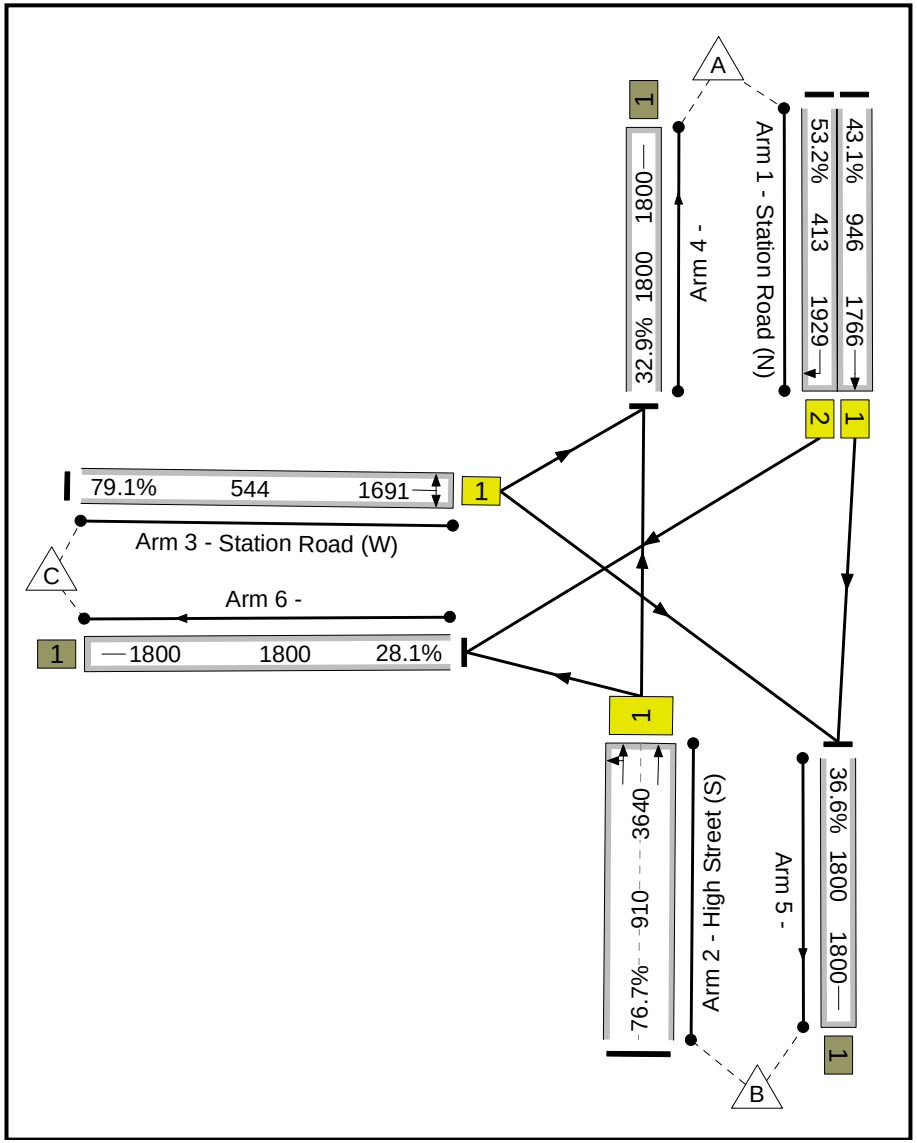
Stage	1	2	3
Duration	13	5	9
Change Point	0	21	34

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Full Input Data And Results

Link Results

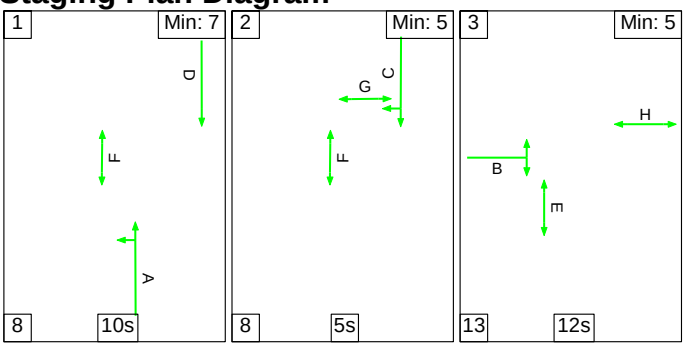
Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	29	18	408	1766	1766	946	43.1
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	220	1929	1929	413	53.2
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	13	-	698	3640	3640	910	76.7
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	17	-	430	1691	1691	544	79.1
4/1		U	N/A	N/A	-		-	-	-	593	1800	1800	1800	32.9
5/1		U	N/A	N/A	-		-	-	-	658	1800	1800	1800	36.6
6/1		U	N/A	N/A	-		-	-	-	505	1800	1800	1800	28.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	408	408	-	-	-	0.9	0.4	-	1.3	11.2	3.7	0.4	4.1	
1/2	220	220	-	-	-	1.2	0.6	-	1.8	28.8	3.0	0.6	3.6	
2/1	698	698	-	-	-	3.8	1.6	-	5.4	27.9	9.9	1.6	11.5	
3/1	430	430	-	-	-	2.1	1.8	-	3.9	32.6	6.0	1.8	7.8	
4/1	593	593	-	-	-	0.0	0.2	-	0.3	1.6	3.5	0.2	3.8	
5/1	658	658	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
6/1	505	505	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): 13.8 Total Delay for Signalled Links (pcuHr): 12.33
PRC Over All Links (%): 13.8 Total Delay Over All Links(pcuHr): 13.07 Cycle Time (s): 56

Scenario 9: 'Base + Com + H4 5 2014 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 9: 'Base + Com + H4 5 2014 AM'

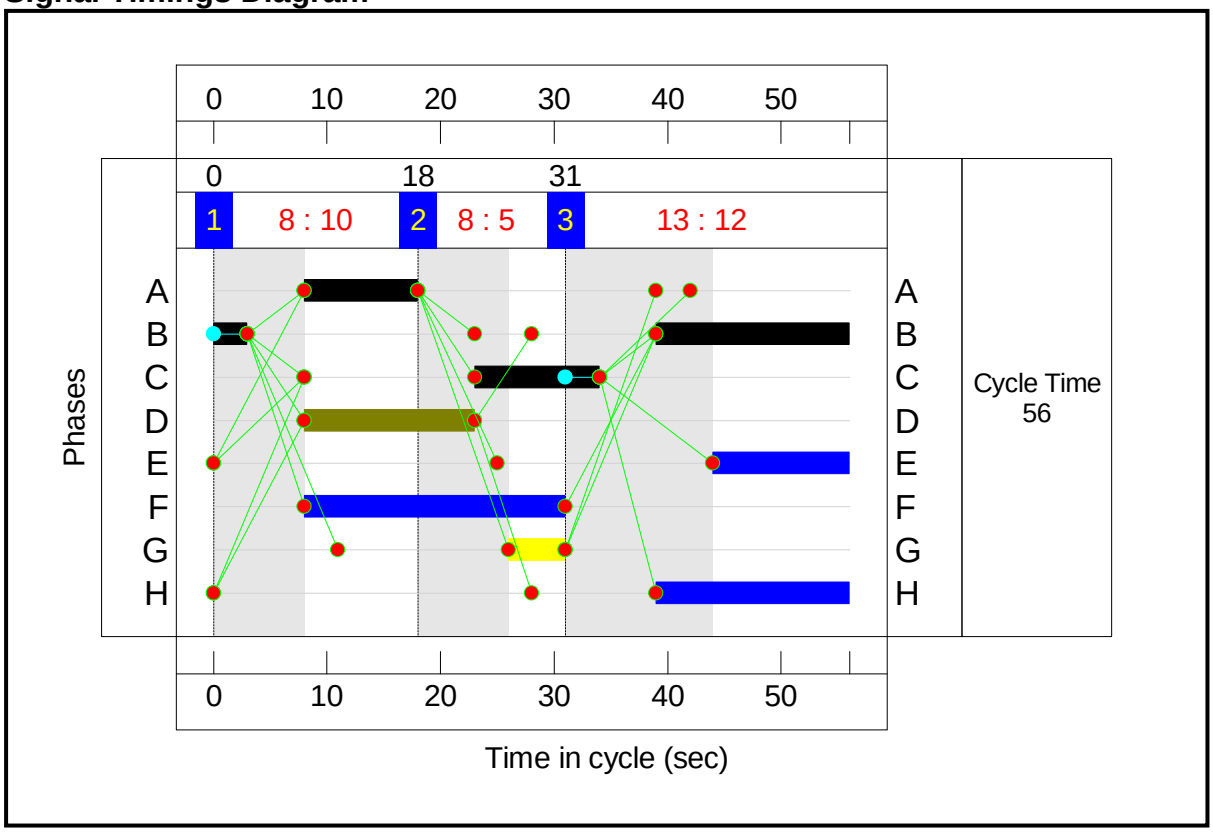
Staging Plan Diagram



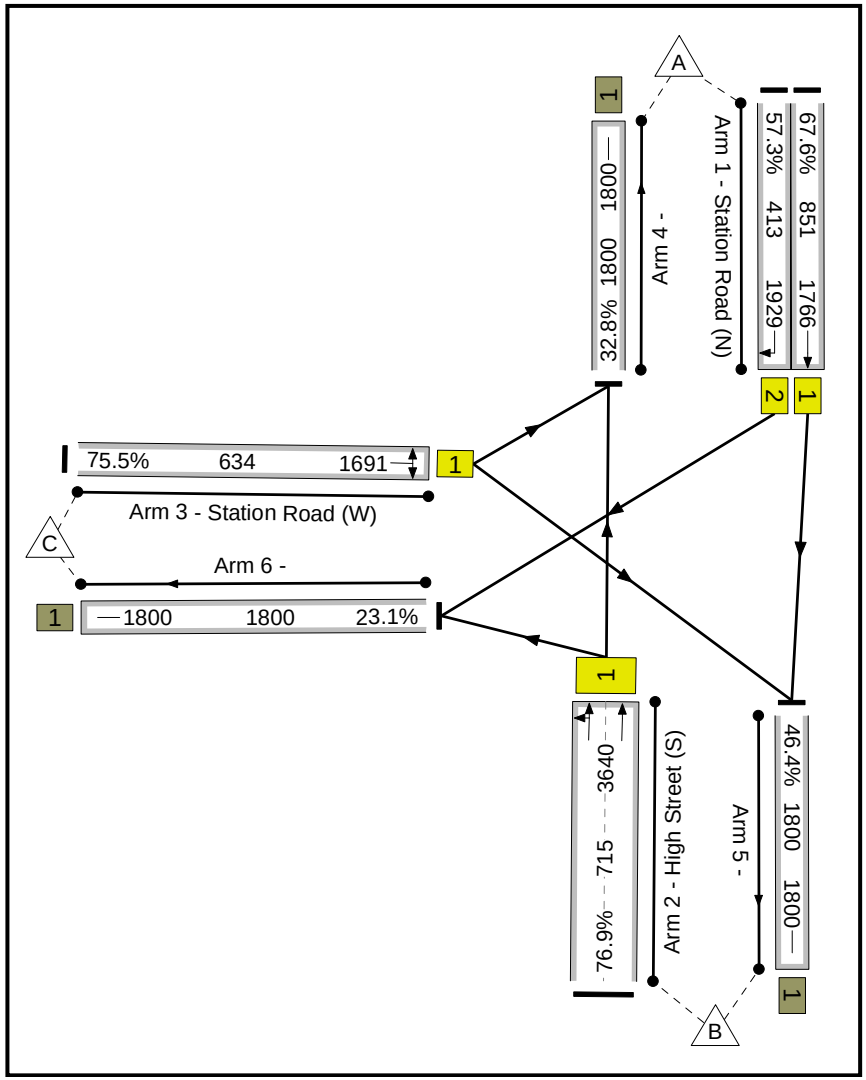
Stage Timings

Stage	1	2	3
Duration	10	5	12
Change Point	0	18	31

Signal Timings Diagram



Junction Layout Diagram



Link Results

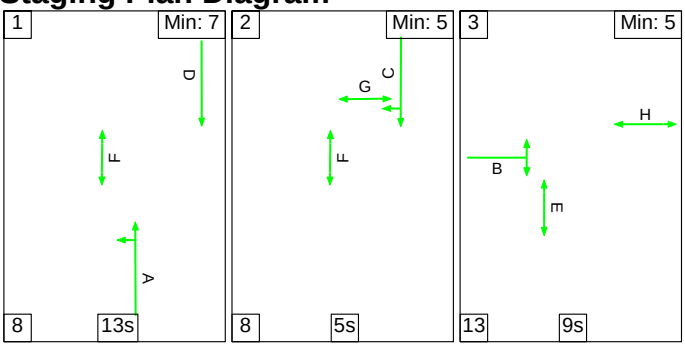
Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	26	15	576	1766	1766	851	67.6
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	237	1929	1929	413	57.3
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	10	-	550	3640	3640	715	76.9
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	20	-	479	1691	1691	634	75.5
4/1		U	N/A	N/A	-		-	-	-	591	1800	1800	1800	32.8
5/1		U	N/A	N/A	-		-	-	-	835	1800	1800	1800	46.4
6/1		U	N/A	N/A	-		-	-	-	416	1800	1800	1800	23.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	576	576	-	-	-	1.8	1.0	-	2.8	17.6	6.9	1.0	7.9	
1/2	237	237	-	-	-	1.3	0.7	-	2.0	29.8	3.3	0.7	4.0	
2/1	550	550	-	-	-	3.3	1.6	-	4.9	32.0	8.1	1.6	9.7	
3/1	479	479	-	-	-	2.0	1.5	-	3.5	26.6	6.4	1.5	7.9	
4/1	591	591	-	-	-	0.0	0.2	-	0.3	1.6	3.5	0.2	3.8	
5/1	835	835	-	-	-	0.0	0.4	-	0.4	1.9	0.0	0.4	0.4	
6/1	416	416	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2	

PRC for Signalled Links (%): 17.0 Total Delay for Signalled Links (pcuHr): 13.22
PRC Over All Links (%): 17.0 Total Delay Over All Links(pcuHr): 14.07 Cycle Time (s): 56

Scenario 10: 'Base + Com + H4 5 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 10: 'Base + Com + H4 5 2014 PM'

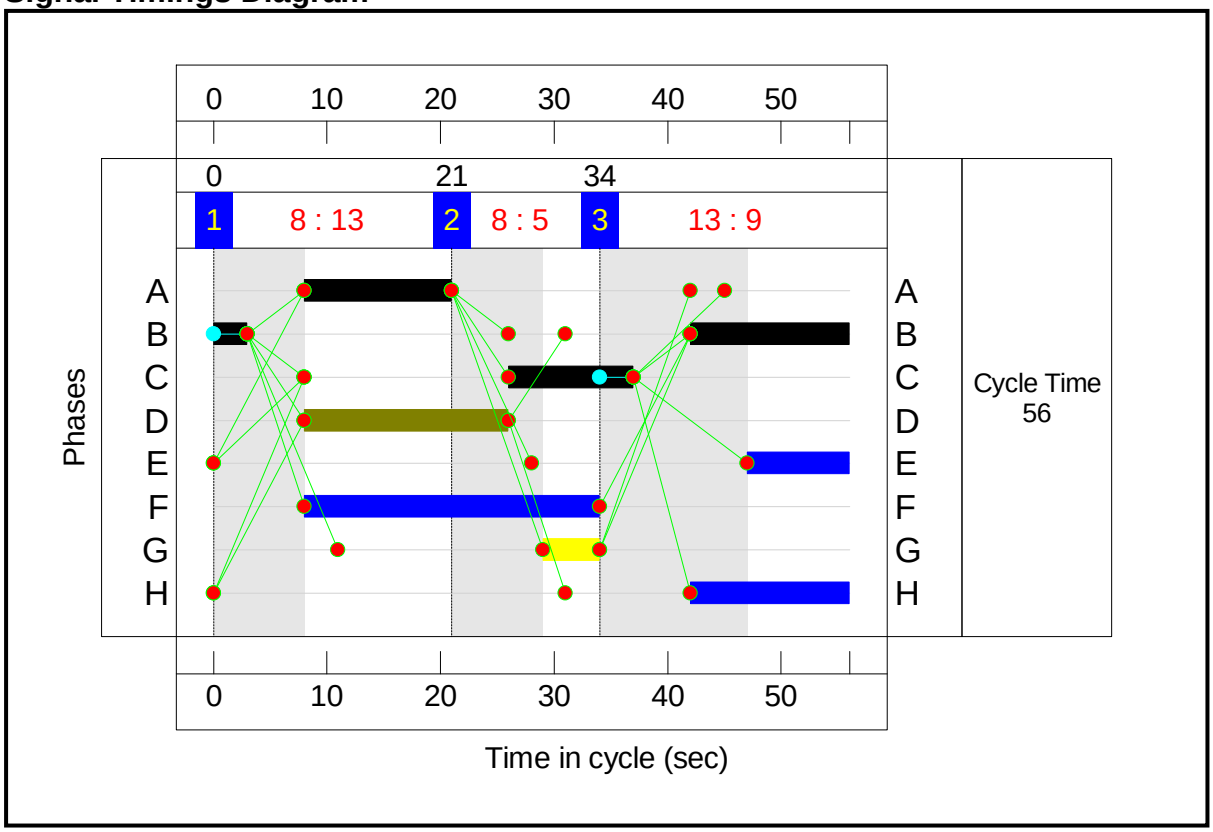
Staging Plan Diagram



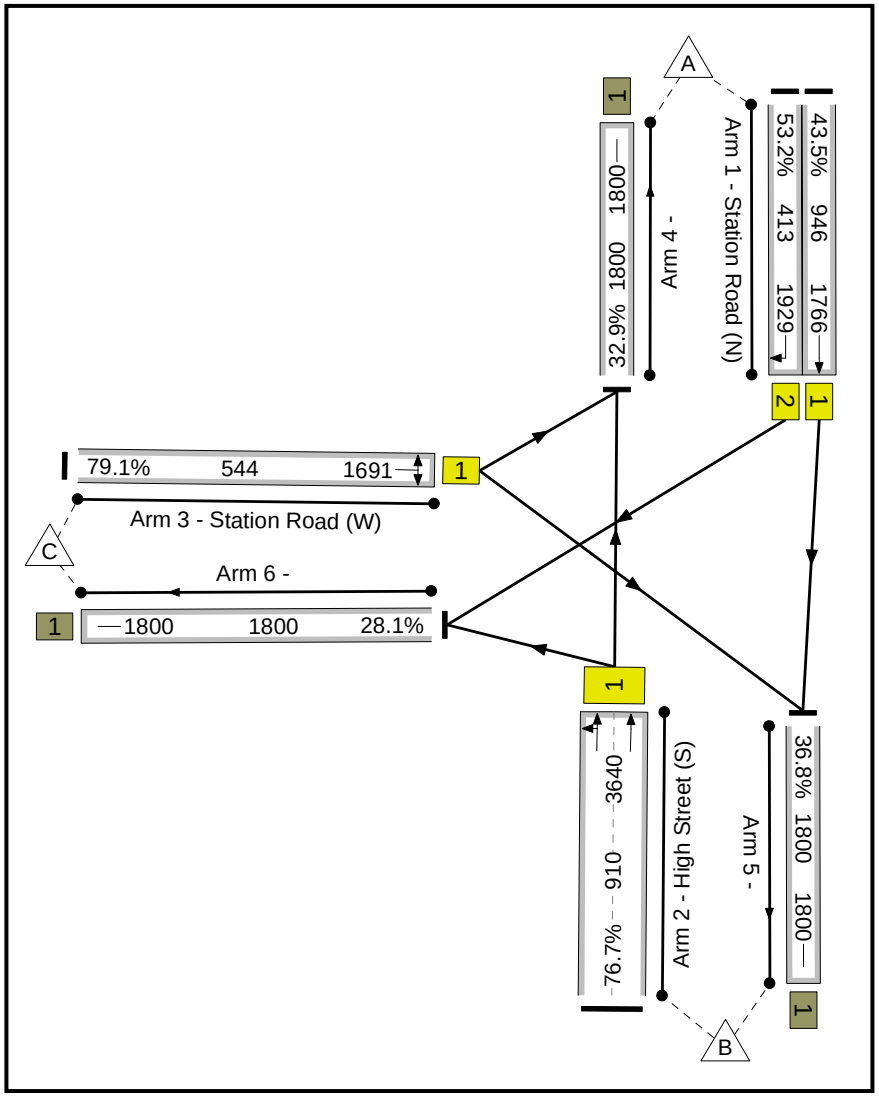
Stage Timings

Stage	1	2	3
Duration	13	5	9
Change Point	0	21	34

Signal Timings Diagram



Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Road (N) Ahead	U	N/A	N/A	C	D	1	29	18	412	1766	1766	946	43.5
1/2	Station Road (N) Right	U	N/A	N/A	C		1	11	-	220	1929	1929	413	53.2
2/1	High Street (S) Ahead Left	U	N/A	N/A	A		1	13	-	698	3640	3640	910	76.7
3/1	Station Road (W) Left Right	U	N/A	N/A	B		1	17	-	430	1691	1691	544	79.1
4/1		U	N/A	N/A	-		-	-	-	593	1800	1800	1800	32.9
5/1		U	N/A	N/A	-		-	-	-	662	1800	1800	1800	36.8
6/1		U	N/A	N/A	-		-	-	-	505	1800	1800	1800	28.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	412	412	-	-	-	0.9	0.4	-	1.3	11.2	3.8	0.4	4.2	
1/2	220	220	-	-	-	1.2	0.6	-	1.8	28.8	3.0	0.6	3.6	
2/1	698	698	-	-	-	3.8	1.6	-	5.4	27.9	9.9	1.6	11.5	
3/1	430	430	-	-	-	2.1	1.8	-	3.9	32.6	6.0	1.8	7.8	
4/1	593	593	-	-	-	0.0	0.2	-	0.3	1.6	3.5	0.2	3.8	
5/1	662	662	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
6/1	505	505	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): 13.8 Total Delay for Signalled Links (pcuHr): 12.34

PRC Over All Links (%): 13.8 Total Delay Over All Links(pcuHr): 13.09 Cycle Time (s): 56

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

PICADY 5.1 ANALYSIS PROGRAM
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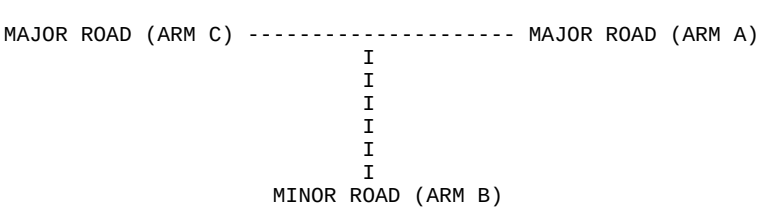
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 15:26:59 on Friday, 10 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 2
LOCATION	: North Hyde Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde 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) 7.64 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)119.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 23.0 M.
- VISIBILITY TO RIGHT	(VB-A) 19.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 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
635.90	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
494.40	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
642.88	0.23	0.23

(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: Base+Com+H4&5 2014

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

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

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	6.44	9.66	6.44
ARM B	15.00	45.00	75.00	1.58	2.36	1.58
ARM C	15.00	45.00	75.00	5.45	8.17	5.45

Demand set: Base+Com+H4&5 2014

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
17.00 - 18.30	ARM A	0.000	0.041	0.959
		0.0	21.0	494.0
		(0.0)%	(0.0)%	(0.0)%
	ARM B	0.786	0.000	0.214
		99.0	0.0	27.0
		(0.0)%	(0.0)%	(0.0)%
	ARM C	0.989	0.011	0.000
		431.0	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 DEMAND SET Base+Com+H4&5 2014
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)
17.00-17.15									
B-AC	1.58	6.63	0.238		0.00	0.31	4.4		0.20
C-A	5.41								
C-B	0.06	9.22	0.007		0.00	0.01	0.1		0.11
A-B	0.26								
A-C	6.20								
17.15-17.30									
B-AC	1.89	6.24	0.303		0.31	0.43	6.1		0.23
C-A	6.46								
C-B	0.07	8.93	0.008		0.01	0.01	0.1		0.11
A-B	0.31								
A-C	7.40								
17.30-17.45									
B-AC	2.31	5.68	0.407		0.43	0.67	9.4		0.29
C-A	7.91								
C-B	0.09	8.53	0.011		0.01	0.01	0.2		0.12
A-B	0.39								
A-C	9.07								
17.45-18.00									
B-AC	2.31	5.68	0.407		0.67	0.68	10.1		0.30
C-A	7.91								
C-B	0.09	8.53	0.011		0.01	0.01	0.2		0.12
A-B	0.39								
A-C	9.07								

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	1.89	6.24	0.303		0.68	0.44	7.0		0.23
C-A	6.46								
C-B	0.07	8.93	0.008		0.01	0.01	0.1		0.11
A-B	0.31								
A-C	7.40								

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)
18.15-18.30									
B-AC	1.58	6.63	0.238		0.44	0.32	5.0		0.20
C-A	5.41								
C-B	0.06	9.22	0.007		0.01	0.01	0.1		0.11
A-B	0.26								
A-C	6.20								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.4	
17.45	0.7	*
18.00	0.7	*
18.15	0.4	
18.30	0.3	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	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	173.4	115.6	41.9	0.24	41.9	0.24
C-A	593.2	395.5				
C-B	6.9	4.6	0.8	0.11	0.8	0.11
A-B	28.9	19.3				
A-C	680.0	453.3				
ALL	1482.4	988.3	42.7	0.03	42.7	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 RUN*******

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

Printed at 15:28:44 on 10/08/2012]

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

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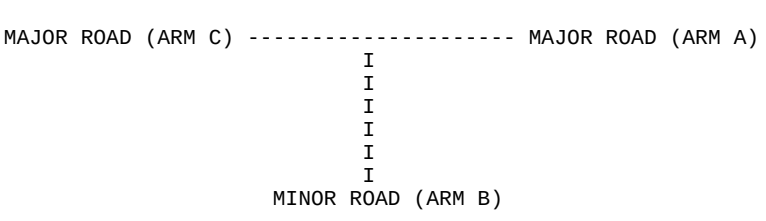
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\NorthHydeRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 15:20:52 on Friday, 10 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 2
LOCATION	: North Hyde Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS North Hyde Road (E)
ARM B IS Millington Road
ARM C IS North Hyde 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) 7.64 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)119.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 23.0 M.
- VISIBILITY TO RIGHT	(VB-A) 19.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 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
635.90	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
494.40	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
642.88	0.23	0.23

(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: Base+Com+H5 2014

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

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

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	6.38	9.56	6.38
ARM B	15.00	45.00	75.00	1.25	1.88	1.25
ARM C	15.00	45.00	75.00	5.45	8.17	5.45

Demand set: Base+Com+H5 2014

TIME	FROM/TO	ARM A	ARM B	ARM C
17.00 - 18.30				
	ARM A	0.000	0.031	0.969
		0.0	16.0	494.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.730	0.000	0.270
		73.0	0.0	27.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.989	0.011	0.000
		431.0	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 DEMAND SET Base+Com+H5 2014
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)
17.00-17.15									
B-AC	1.25	6.77	0.185		0.00	0.22	3.2		0.18
C-A	5.41								
C-B	0.06	9.23	0.007		0.00	0.01	0.1		0.11
A-B	0.20								
A-C	6.20								

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	1.50	6.38	0.235		0.22	0.30	4.4		0.20
C-A	6.46								
C-B	0.07	8.95	0.008		0.01	0.01	0.1		0.11
A-B	0.24								
A-C	7.40								

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	1.84	5.83	0.315		0.30	0.45	6.4		0.25
C-A	7.91								
C-B	0.09	8.55	0.011		0.01	0.01	0.2		0.12
A-B	0.29								
A-C	9.07								

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	1.84	5.83	0.315		0.45	0.45	6.8		0.25
C-A	7.91								
C-B	0.09	8.55	0.011		0.01	0.01	0.2		0.12
A-B	0.29								
A-C	9.07								

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	1.50	6.38	0.235		0.45	0.31	4.9		0.21
C-A	6.46								
C-B	0.07	8.95	0.008		0.01	0.01	0.1		0.11
A-B	0.24								
A-C	7.40								

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)
18.15-18.30									
B-AC	1.25	6.77	0.185		0.31	0.23	3.6		0.18
C-A	5.41								
C-B	0.06	9.23	0.007		0.01	0.01	0.1		0.11
A-B	0.20								
A-C	6.20								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.4
18.00	0.5
18.15	0.3
18.30	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	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	137.6 91.8	29.3	0.21	29.3	0.21
C-A	593.2 395.5				
C-B	6.9 4.6	0.8	0.11	0.8	0.11
A-B	22.0 14.7				
A-C	680.0 453.3				
ALL	1439.7 959.8	30.0	0.02	30.0	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 RUN*******

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

Printed at 15:26:19 on 10/08/2012]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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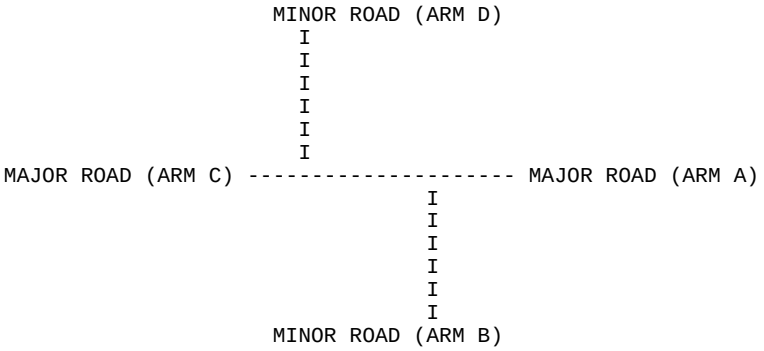
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd AM.vpi"
(drive-on-the-left) at 12:40:09 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 4
LOCATION	: Station Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

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) 8.25 M.	(W) 8.25 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) 60.00 M.	(VA-D) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (2)	YES (2)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 31.0 M.
- VISIBILITY TO RIGHT	(VB-A) 41.0 M.	(VD-C) 26.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.	(WD-A) 3.52 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B	Slope For Opposing
0.16	0.36	0.36	

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D	Slope For Opposing
0.14	0.31	0.31	

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing
620.29	0.21	0.21	0.25	

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing
620.29	0.22	0.22	0.22	

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com+H4 2014

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	6.18	9.26	6.18
ARM B	15.00	45.00	75.00	0.50	0.75	0.50
ARM C	15.00	45.00	75.00	9.13	13.69	9.13
ARM D	15.00	45.00	75.00	1.24	1.86	1.24

Demand set: Base+Com+H4 2014

TIME	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.154	0.804	0.043
		0.0	76.0	397.0	21.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.475	0.000	0.525	0.000
		19.0	0.0	21.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.786	0.079	0.000	0.134
		574.0	58.0	0.0	98.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.091	0.000	0.909	0.000
		9.0	0.0	90.0	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 DEMAND SET Base+Com+H4 2014
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-ACD	0.50	9.02	0.056		0.00	0.06	0.8		0.12
A-B	0.95								
A-C	4.98								
A-D	0.26								
AB-CD	(0.26)	8.35	0.032		0.00	0.03	0.5		0.12
AB-C	(5.24)								
D-ABC	1.24	6.32	0.196		0.00	0.24	3.4		0.20
C-D	1.23								
C-A	7.20								
C-B	0.73								
CD-AB	(0.73)	8.83	0.082		0.00	0.08	1.2		0.12
CD-A	(7.31)								

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)
08.00-08.15									
B-ACD	0.60	8.51	0.070		0.06	0.08	1.1		0.13
A-B	1.14								
A-C	5.95								
A-D	0.31								
AB-CD	(0.31)	7.97	0.039		0.03	0.04	0.6		0.13
AB-C	(6.26)								
D-ABC	1.48	5.81	0.255		0.24	0.34	4.9		0.23
C-D	1.47								
C-A	8.60								
C-B	0.87								
CD-AB	(0.87)	8.57	0.101		0.08	0.10	1.5		0.13
CD-A	(8.73)								

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)
08.15-08.30									
B-ACD	0.73	7.80	0.094		0.08	0.10	1.5		0.14
A-B	1.39								
A-C	7.29								
A-D	0.39								
AB-CD	(0.39)	7.43	0.052		0.04	0.05	0.8		0.14
AB-C	(7.67)								
D-ABC	1.82	5.10	0.356		0.34	0.54	7.6		0.30
C-D	1.80								
C-A	10.53								
C-B	1.06								
CD-AB	(1.06)	8.22	0.130		0.10	0.13	1.9		0.14
CD-A	(10.70)								

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)
08.30-08.45									
B-ACD	0.73	7.80	0.094		0.10	0.10	1.5		0.14
A-B	1.39								
A-C	7.29								
A-D	0.39								
AB-CD	(0.39)	7.43	0.052		0.05	0.05	0.8		0.14
AB-C	(7.67)								
D-ABC	1.82	5.10	0.356		0.54	0.55	8.1		0.30
C-D	1.80								
C-A	10.53								
C-B	1.06								
CD-AB	(1.06)	8.22	0.130		0.13	0.13	1.9		0.14
CD-A	(10.70)								

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)
08.45-09.00									
B-ACD	0.60	8.51	0.070		0.10	0.08	1.2		0.13
A-B	1.14								
A-C	5.95								
A-D	0.31								
AB-CD	(0.31)	7.97	0.039		0.05	0.04	0.6		0.13
AB-C	(6.26)								
D-ABC	1.48	5.81	0.255		0.55	0.35	5.5		0.23
C-D	1.47								
C-A	8.60								
C-B	0.87								
CD-AB	(0.87)	8.57	0.101		0.13	0.10	1.5		0.13
CD-A	(8.74)								

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-ACD	0.50	9.02	0.056		0.08	0.06	0.9		0.12
A-B	0.95								
A-C	4.98								
A-D	0.26								
AB-CD	(0.26)	8.35	0.032		0.04	0.03	0.5		0.12
AB-C	(5.25)								
D-ABC	1.24	6.32	0.196		0.35	0.25	3.9		0.20
C-D	1.23								
C-A	7.20								
C-B	0.73								
CD-AB	(0.73)	8.83	0.082		0.10	0.08	1.2		0.12
CD-A	(7.32)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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 AB-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 D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM CD-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-ACD	55.1	36.7	7.1	0.13	7.1	0.13
A-B	104.6	69.7				
A-C	546.4	364.3				
A-D	28.9	19.3				
AB-CD	(28.9)	(19.3)	3.7	0.13	3.7	0.13
AB-C	(575.3)	(383.5)				
D-ABC	136.3	90.8	33.4	0.25	33.4	0.25
C-D	134.9	89.9				
C-A	790.1	526.7				
C-B	79.8	53.2				
CD-AB	(79.8)	(53.2)	9.4	0.12	9.4	0.12
CD-A	(802.4)	(535.0)				
ALL	1876.1	1250.7	53.6	0.03	53.6	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 RUN*******

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B
0.16	0.36	0.36

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D
0.14	0.31	0.31

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D
620.29	0.21	0.21	0.25

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
620.29	0.22	0.22	0.22

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com+H5 2014

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	6.22	9.34	6.22
ARM B	15.00	45.00	75.00	0.50	0.75	0.50
ARM C	15.00	45.00	75.00	9.13	13.69	9.13
ARM D	15.00	45.00	75.00	1.24	1.86	1.24

Demand set: Base+Com+H5 2014

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.161	0.797	0.042
		0.0	80.0	397.0	21.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.475	0.000	0.525	0.000
		19.0	0.0	21.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.786	0.079	0.000	0.134
		574.0	58.0	0.0	98.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.091	0.000	0.909	0.000
		9.0	0.0	90.0	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 DEMAND SET Base+Com+H5 2014
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-ACD	0.50	9.01	0.056		0.00	0.06	0.8		0.12
A-B	1.00								
A-C	4.98								
A-D	0.26								
AB-CD	(0.26)	8.35	0.032		0.00	0.03	0.5		0.12
AB-C	(5.24)								
D-ABC	1.24	6.32	0.196		0.00	0.24	3.4		0.20
C-D	1.23								
C-A	7.20								
C-B	0.73								
CD-AB	(0.73)	8.82	0.083		0.00	0.08	1.2		0.12
CD-A	(7.31)								

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)
08.00-08.15									
B-ACD	0.60	8.51	0.070		0.06	0.08	1.1		0.13
A-B	1.20								
A-C	5.95								
A-D	0.31								
AB-CD	(0.31)	7.97	0.039		0.03	0.04	0.6		0.13
AB-C	(6.26)								
D-ABC	1.48	5.81	0.255		0.24	0.34	4.9		0.23
C-D	1.47								
C-A	8.60								
C-B	0.87								
CD-AB	(0.87)	8.56	0.102		0.08	0.10	1.5		0.13
CD-A	(8.73)								

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)
08.15-08.30									
B-ACD	0.73	7.79	0.094		0.08	0.10	1.5		0.14
A-B	1.47								
A-C	7.29								
A-D	0.39								
AB-CD	(0.39)	7.43	0.052		0.04	0.05	0.8		0.14
AB-C	(7.67)								
D-ABC	1.82	5.10	0.356		0.34	0.54	7.6		0.30
C-D	1.80								
C-A	10.53								
C-B	1.06								
CD-AB	(1.06)	8.20	0.130		0.10	0.13	1.9		0.14
CD-A	(10.70)								

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)
08.30-08.45									
B-ACD	0.73	7.79	0.094		0.10	0.10	1.5		0.14
A-B	1.47								
A-C	7.29								
A-D	0.39								
AB-CD	(0.39)	7.43	0.052		0.05	0.05	0.8		0.14
AB-C	(7.67)								
D-ABC	1.82	5.10	0.356		0.54	0.55	8.1		0.30
C-D	1.80								
C-A	10.53								
C-B	1.06								
CD-AB	(1.06)	8.20	0.130		0.13	0.13	1.9		0.14
CD-A	(10.70)								

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)
08.45-09.00									
B-ACD	0.60	8.51	0.070		0.10	0.08	1.2		0.13
A-B	1.20								
A-C	5.95								
A-D	0.31								
AB-CD	(0.31)	7.97	0.039		0.05	0.04	0.6		0.13
AB-C	(6.26)								
D-ABC	1.48	5.81	0.255		0.55	0.35	5.5		0.23
C-D	1.47								
C-A	8.60								
C-B	0.87								
CD-AB	(0.87)	8.56	0.102		0.13	0.10	1.5		0.13
CD-A	(8.74)								

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-ACD	0.50	9.01	0.056		0.08	0.06	0.9		0.12
A-B	1.00								
A-C	4.98								
A-D	0.26								
AB-CD	(0.26)	8.35	0.032		0.04	0.03	0.5		0.12
AB-C	(5.25)								
D-ABC	1.24	6.32	0.196		0.35	0.25	3.9		0.20
C-D	1.23								
C-A	7.20								
C-B	0.73								
CD-AB	(0.73)	8.82	0.083		0.10	0.08	1.2		0.12
CD-A	(7.32)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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 AB-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 D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM CD-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-ACD	55.1	36.7	7.1	0.13	7.1	0.13
A-B	110.1	73.4				
A-C	546.4	364.3				
A-D	28.9	19.3				
AB-CD	(28.9)	(19.3)	3.7	0.13	3.7	0.13
AB-C	(575.3)	(383.5)				
D-ABC	136.3	90.8	33.4	0.25	33.4	0.25
C-D	134.9	89.9				
C-A	790.1	526.7				
C-B	79.8	53.2				
CD-AB	(79.8)	(53.2)	9.4	0.12	9.4	0.12
CD-A	(802.4)	(535.0)				
ALL	1881.6	1254.4	53.6	0.03	53.6	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 RUN*******

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B
0.16	0.36	0.36

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D
0.14	0.31	0.31

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D
620.29	0.21	0.21	0.25

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
620.29	0.22	0.22	0.22

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com+H4&5 2014

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	6.28	9.41	6.28
ARM B	15.00	45.00	75.00	0.51	0.77	0.51
ARM C	15.00	45.00	75.00	9.13	13.69	9.13
ARM D	15.00	45.00	75.00	1.24	1.86	1.24

Demand set: Base+Com+H4&5 2014

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.167	0.791	0.042
		0.0	84.0	397.0	21.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.488	0.000	0.512	0.000
		20.0	0.0	21.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.786	0.079	0.000	0.134
		574.0	58.0	0.0	98.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.091	0.000	0.909	0.000
		9.0	0.0	90.0	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 DEMAND SET Base+Com+H4&5 2014
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-ACD	0.51	8.96	0.057		0.00	0.06	0.9		0.12
A-B	1.05								
A-C	4.98								
A-D	0.26								
AB-CD	(0.26)	8.35	0.032		0.00	0.03	0.5		0.12
AB-C	(5.24)								
D-ABC	1.24	6.32	0.196		0.00	0.24	3.4		0.20
C-D	1.23								
C-A	7.20								
C-B	0.73								
CD-AB	(0.73)	8.81	0.083		0.00	0.08	1.2		0.12
CD-A	(7.31)								

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)
08.00-08.15									
B-ACD	0.61	8.45	0.073		0.06	0.08	1.1		0.13
A-B	1.26								
A-C	5.95								
A-D	0.31								
AB-CD	(0.31)	7.97	0.039		0.03	0.04	0.6		0.13
AB-C	(6.26)								
D-ABC	1.48	5.81	0.255		0.24	0.34	4.9		0.23
C-D	1.47								
C-A	8.60								
C-B	0.87								
CD-AB	(0.87)	8.54	0.102		0.08	0.10	1.5		0.13
CD-A	(8.73)								

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)
08.15-08.30									
B-ACD	0.75	7.72	0.097		0.08	0.11	1.6		0.14
A-B	1.54								
A-C	7.29								
A-D	0.39								
AB-CD	(0.39)	7.43	0.052		0.04	0.05	0.8		0.14
AB-C	(7.67)								
D-ABC	1.82	5.10	0.356		0.34	0.54	7.6		0.30
C-D	1.80								
C-A	10.53								
C-B	1.06								
CD-AB	(1.06)	8.19	0.130		0.10	0.13	1.9		0.14
CD-A	(10.70)								

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)
08.30-08.45									
B-ACD	0.75	7.72	0.097		0.11	0.11	1.6		0.14
A-B	1.54								
A-C	7.29								
A-D	0.39								
AB-CD	(0.39)	7.43	0.052		0.05	0.05	0.8		0.14
AB-C	(7.67)								
D-ABC	1.82	5.10	0.356		0.54	0.55	8.1		0.30
C-D	1.80								
C-A	10.53								
C-B	1.06								
CD-AB	(1.06)	8.19	0.130		0.13	0.13	2.0		0.14
CD-A	(10.70)								

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)
08.45-09.00									
B-ACD	0.61	8.45	0.073		0.11	0.08	1.2		0.13
A-B	1.26								
A-C	5.95								
A-D	0.31								
AB-CD	(0.31)	7.97	0.039		0.05	0.04	0.6		0.13
AB-C	(6.26)								
D-ABC	1.48	5.81	0.255		0.55	0.35	5.5		0.23
C-D	1.47								
C-A	8.60								
C-B	0.87								
CD-AB	(0.87)	8.54	0.102		0.13	0.10	1.5		0.13
CD-A	(8.74)								

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-ACD	0.51	8.95	0.057		0.08	0.06	0.9		0.12
A-B	1.05								
A-C	4.98								
A-D	0.26								
AB-CD	(0.26)	8.35	0.032		0.04	0.03	0.5		0.12
AB-C	(5.25)								
D-ABC	1.24	6.32	0.196		0.35	0.25	3.9		0.20
C-D	1.23								
C-A	7.20								
C-B	0.73								
CD-AB	(0.73)	8.81	0.083		0.10	0.08	1.2		0.12
CD-A	(7.32)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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 AB-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 D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM CD-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-ACD	56.4	37.6	7.3	0.13	7.3	0.13
A-B	115.6	77.1				
A-C	546.4	364.3				
A-D	28.9	19.3				
AB-CD	(28.9)	(19.3)	3.7	0.13	3.7	0.13
AB-C	(575.3)	(383.5)				
D-ABC	136.3	90.8	33.4	0.25	33.4	0.25
C-D	134.9	89.9				
C-A	790.1	526.7				
C-B	79.8	53.2				
CD-AB	(79.8)	(53.2)	9.4	0.12	9.4	0.12
CD-A	(802.4)	(535.0)				
ALL	1888.5	1259.0	53.8	0.03	53.8	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 RUN*******

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

Printed at 12:41:46 on 05/08/2012]

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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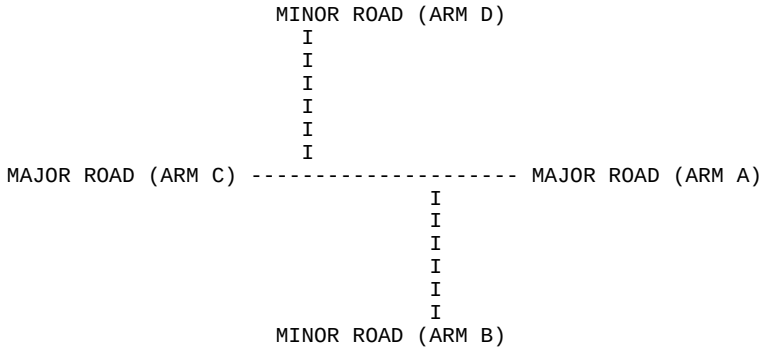
Run with file:-
"I:\VNIF\Projects\VN50026\Technical\Data\Modelling\Base\Validated models\StationRd_MillingtonRd PM.vpi"
(drive-on-the-left) at 12:41:55 on Sunday, 5 August 2012

RUN INFORMATION

RUN TITLE	: Base Model Junction 4
LOCATION	: Station Road/Millington Road
DATE	: 23/04/12
CLIENT	:
ENUMERATOR	: rhussain [IE-D00135]
JOB NUMBER	: VN50026
STATUS	: Draft 1
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Station Road (S)
ARM B IS Millington Road
ARM C IS Station Road (N)
ARM D IS Bedwell Gardens

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) 8.25 M.	(W) 8.25 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) 60.00 M.	(VA-D) 80.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (2)	YES (2)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 31.0 M.
- VISIBILITY TO RIGHT	(VB-A) 41.0 M.	(VD-C) 26.0 M.
- LANE 1 WIDTH	(WB-C) 5.00 M.	(WD-A) 3.52 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B	Slope For Opposing
0.16	0.36	0.36	

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D	Slope For Opposing
0.14	0.31	0.31	

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing
620.29	0.21	0.21	0.25	

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing
620.29	0.22	0.22	0.22	

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com+H4 2014

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.66	9.99	6.66
ARM B	15.00	45.00	75.00	1.21	1.82	1.21
ARM C	15.00	45.00	75.00	7.59	11.38	7.59
ARM D	15.00	45.00	75.00	0.63	0.94	0.63

Demand set: Base+Com+H4 2014

TIME	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.032	0.931	0.038
		0.0	17.0	496.0	20.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.598	0.000	0.402	0.000
		58.0	0.0	39.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.827	0.025	0.000	0.148
		502.0	15.0	0.0	90.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.040	0.000	0.960	0.000
		2.0	0.0	48.0	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 DEMAND SET Base+Com+H4 2014
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-ACD	1.22	8.58	0.142		0.00	0.16	2.4		0.14
A-B	0.21								
A-C	6.22								
A-D	0.25								
AB-CD	(0.25)	8.69	0.029		0.00	0.03	0.4		0.12
AB-C	(6.71)								
D-ABC	0.63	6.34	0.099		0.00	0.11	1.6		0.17
C-D	1.13								
C-A	6.30								
C-B	0.19								
CD-AB	(0.19)	8.72	0.022		0.00	0.02	0.3		0.12
CD-A	(6.32)								

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-ACD	1.45	8.07	0.180		0.16	0.22	3.2		0.15
A-B	0.25								
A-C	7.43								
A-D	0.30								
AB-CD	(0.30)	8.37	0.036		0.03	0.04	0.5		0.12
AB-C	(8.01)								
D-ABC	0.75	5.86	0.128		0.11	0.14	2.1		0.20
C-D	1.35								
C-A	7.52								
C-B	0.22								
CD-AB	(0.22)	8.45	0.027		0.02	0.03	0.4		0.12
CD-A	(7.55)								

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-ACD	1.78	7.36	0.242		0.22	0.31	4.6		0.18
A-B	0.31								
A-C	9.10								
A-D	0.37								
AB-CD	(0.37)	7.92	0.046		0.04	0.05	0.7		0.13
AB-C	(9.81)								
D-ABC	0.92	5.18	0.177		0.14	0.21	3.1		0.23
C-D	1.65								
C-A	9.21								
C-B	0.28								
CD-AB	(0.28)	8.06	0.034		0.03	0.03	0.5		0.13
CD-A	(9.25)								

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)
17.30-17.45									
B-ACD	1.78	7.35	0.242		0.31	0.32	4.7		0.18
A-B	0.31								
A-C	9.10								
A-D	0.37								
AB-CD	(0.37)	7.92	0.046		0.05	0.05	0.7		0.13
AB-C	(9.82)								
D-ABC	0.92	5.18	0.177		0.21	0.21	3.2		0.23
C-D	1.65								
C-A	9.21								
C-B	0.28								
CD-AB	(0.28)	8.06	0.034		0.03	0.03	0.5		0.13
CD-A	(9.25)								

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)
17.45-18.00									
B-ACD	1.45	8.07	0.180		0.32	0.22	3.4		0.15
A-B	0.25								
A-C	7.43								
A-D	0.30								
AB-CD	(0.30)	8.37	0.036		0.05	0.04	0.5		0.12
AB-C	(8.02)								
D-ABC	0.75	5.85	0.128		0.21	0.15	2.3		0.20
C-D	1.35								
C-A	7.52								
C-B	0.22								
CD-AB	(0.22)	8.45	0.027		0.03	0.03	0.4		0.12
CD-A	(7.55)								

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-ACD	1.22	8.58	0.142		0.22	0.17	2.6		0.14
A-B	0.21								
A-C	6.22								
A-D	0.25								
AB-CD	(0.25)	8.69	0.029		0.04	0.03	0.4		0.12
AB-C	(6.71)								
D-ABC	0.63	6.34	0.099		0.15	0.11	1.7		0.18
C-D	1.13								
C-A	6.30								
C-B	0.19								
CD-AB	(0.19)	8.72	0.022		0.03	0.02	0.3		0.12
CD-A	(6.32)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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

QUEUE FOR STREAM AB-CD

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-ABC

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

QUEUE FOR STREAM CD-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-ACD	133.5	89.0	20.8	0.16	20.8	0.16
A-B	23.4	15.6				
A-C	682.7	455.1				
A-D	27.5	18.4				
AB-CD	(27.5)	(18.4)	3.3	0.12	3.3	0.12
AB-C	(736.3)	(490.9)				
D-ABC	68.8	45.9	13.9	0.20	13.9	0.20
C-D	123.9	82.6				
C-A	691.0	460.6				
C-B	20.6	13.8				
CD-AB	(20.6)	(13.8)	2.5	0.12	2.5	0.12
CD-A	(693.7)	(462.5)				
ALL	1771.5	1181.0	40.6	0.02	40.6	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 RUN*******

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B
0.16	0.36	0.36

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D
0.14	0.31	0.31

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D
620.29	0.21	0.21	0.25

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
620.29	0.22	0.22	0.22

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com+H5 2014

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.66	9.99	6.66
ARM B	15.00	45.00	75.00	1.26	1.89	1.26
ARM C	15.00	45.00	75.00	7.59	11.38	7.59
ARM D	15.00	45.00	75.00	0.63	0.94	0.63

Demand set: Base+Com+H5 2014

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.032	0.931	0.038
		0.0	17.0	496.0	20.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.614	0.000	0.386	0.000
		62.0	0.0	39.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.827	0.025	0.000	0.148
		502.0	15.0	0.0	90.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.040	0.000	0.960	0.000
		2.0	0.0	48.0	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 DEMAND SET Base+Com+H5 2014
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-ACD	1.27	8.53	0.149		0.00	0.17	2.5		0.14
A-B	0.21								
A-C	6.22								
A-D	0.25								
AB-CD	(0.25)	8.69	0.029		0.00	0.03	0.4		0.12
AB-C	(6.71)								
D-ABC	0.63	6.34	0.099		0.00	0.11	1.6		0.17
C-D	1.13								
C-A	6.30								
C-B	0.19								
CD-AB	(0.19)	8.72	0.022		0.00	0.02	0.3		0.12
CD-A	(6.32)								

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-ACD	1.51	8.02	0.189		0.17	0.23	3.4		0.15
A-B	0.25								
A-C	7.43								
A-D	0.30								
AB-CD	(0.30)	8.37	0.036		0.03	0.04	0.5		0.12
AB-C	(8.01)								
D-ABC	0.75	5.86	0.128		0.11	0.14	2.1		0.20
C-D	1.35								
C-A	7.52								
C-B	0.22								
CD-AB	(0.22)	8.45	0.027		0.02	0.03	0.4		0.12
CD-A	(7.55)								

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-ACD	1.85	7.30	0.254		0.23	0.34	4.9		0.18
A-B	0.31								
A-C	9.10								
A-D	0.37								
AB-CD	(0.37)	7.92	0.046		0.04	0.05	0.7		0.13
AB-C	(9.81)								
D-ABC	0.92	5.18	0.177		0.14	0.21	3.1		0.23
C-D	1.65								
C-A	9.21								
C-B	0.28								
CD-AB	(0.28)	8.06	0.034		0.03	0.03	0.5		0.13
CD-A	(9.25)								

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)
17.30-17.45									
B-ACD	1.85	7.30	0.254		0.34	0.34	5.0		0.18
A-B	0.31								
A-C	9.10								
A-D	0.37								
AB-CD	(0.37)	7.92	0.046		0.05	0.05	0.7		0.13
AB-C	(9.82)								
D-ABC	0.92	5.18	0.177		0.21	0.21	3.2		0.23
C-D	1.65								
C-A	9.21								
C-B	0.28								
CD-AB	(0.28)	8.06	0.034		0.03	0.03	0.5		0.13
CD-A	(9.25)								

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)
17.45-18.00									
B-ACD	1.51	8.02	0.189		0.34	0.24	3.6		0.15
A-B	0.25								
A-C	7.43								
A-D	0.30								
AB-CD	(0.30)	8.37	0.036		0.05	0.04	0.5		0.12
AB-C	(8.02)								
D-ABC	0.75	5.85	0.128		0.21	0.15	2.3		0.20
C-D	1.35								
C-A	7.52								
C-B	0.22								
CD-AB	(0.22)	8.45	0.027		0.03	0.03	0.4		0.12
CD-A	(7.55)								

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-ACD	1.27	8.53	0.149		0.24	0.18	2.7		0.14
A-B	0.21								
A-C	6.22								
A-D	0.25								
AB-CD	(0.25)	8.69	0.029		0.04	0.03	0.4		0.12
AB-C	(6.71)								
D-ABC	0.63	6.34	0.099		0.15	0.11	1.7		0.18
C-D	1.13								
C-A	6.30								
C-B	0.19								
CD-AB	(0.19)	8.72	0.022		0.03	0.02	0.3		0.12
CD-A	(6.32)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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

QUEUE FOR STREAM AB-CD

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-ABC

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

QUEUE FOR STREAM CD-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-ACD	139.0	92.7	22.1	0.16	22.1	0.16
A-B	23.4	15.6				
A-C	682.7	455.1				
A-D	27.5	18.4				
AB-CD	(27.5)	(18.4)	3.3	0.12	3.3	0.12
AB-C	(736.3)	(490.9)				
D-ABC	68.8	45.9	13.9	0.20	13.9	0.20
C-D	123.9	82.6				
C-A	691.0	460.6				
C-B	20.6	13.8				
CD-AB	(20.6)	(13.8)	2.5	0.12	2.5	0.12
CD-A	(693.7)	(462.5)				
ALL	1777.0	1184.6	41.8	0.02	41.8	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 RUN*******

.SLOPES AND INTERCEPT

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

STREAM B-A

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A
608.68	0.25	0.25	0.10	0.16

Slope For Opposing STREAM D-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-B
0.16	0.36	0.36

STREAM D-C

Intercept For STREAM D-C	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C
526.46	0.22	0.22	0.09	0.14

Slope For Opposing STREAM B-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-D
0.14	0.31	0.31

STREAM CD-B

Intercept For STREAM CD-B	Slope For Opposing STREAM A-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D
620.29	0.21	0.21	0.25

STREAM AB-D

Intercept For STREAM AB-D	Slope For Opposing STREAM C-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
620.29	0.22	0.22	0.22

STREAM B-CD

Intercept For STREAM B-CD	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing
779.85	0.27	0.27	0.11	

STREAM D-AB

Intercept For STREAM D-AB	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing
673.64	0.24	0.24	0.09	

TRAFFIC DEMAND DATA

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

Demand set: Base+Com+H4&5 2014

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	6.68	10.01	6.68
ARM B	15.00	45.00	75.00	1.33	1.99	1.33
ARM C	15.00	45.00	75.00	7.59	11.38	7.59
ARM D	15.00	45.00	75.00	0.63	0.94	0.63

Demand set: Base+Com+H4&5 2014

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.034	0.929	0.037
		0.0	18.0	496.0	20.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.632	0.000	0.368	0.000
		67.0	0.0	39.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.827	0.025	0.000	0.148
		502.0	15.0	0.0	90.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.040	0.000	0.960	0.000
		2.0	0.0	48.0	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 DEMAND SET Base+Com+H4&5 2014
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-ACD	1.33	8.47	0.157		0.00	0.18	2.7		0.14
A-B	0.23								
A-C	6.22								
A-D	0.25								
AB-CD	(0.25)	8.69	0.029		0.00	0.03	0.4		0.12
AB-C	(6.71)								
D-ABC	0.63	6.34	0.099		0.00	0.11	1.6		0.17
C-D	1.13								
C-A	6.30								
C-B	0.19								
CD-AB	(0.19)	8.72	0.022		0.00	0.02	0.3		0.12
CD-A	(6.32)								

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-ACD	1.59	7.95	0.200		0.18	0.25	3.6		0.16
A-B	0.27								
A-C	7.43								
A-D	0.30								
AB-CD	(0.30)	8.37	0.036		0.03	0.04	0.5		0.12
AB-C	(8.01)								
D-ABC	0.75	5.86	0.128		0.11	0.14	2.1		0.20
C-D	1.35								
C-A	7.52								
C-B	0.22								
CD-AB	(0.22)	8.44	0.027		0.02	0.03	0.4		0.12
CD-A	(7.55)								

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-ACD	1.95	7.23	0.269		0.25	0.36	5.2		0.19
A-B	0.33								
A-C	9.10								
A-D	0.37								
AB-CD	(0.37)	7.92	0.046		0.04	0.05	0.7		0.13
AB-C	(9.81)								
D-ABC	0.92	5.18	0.177		0.14	0.21	3.1		0.23
C-D	1.65								
C-A	9.21								
C-B	0.28								
CD-AB	(0.28)	8.06	0.034		0.03	0.03	0.5		0.13
CD-A	(9.25)								

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)
17.30-17.45									
B-ACD	1.95	7.23	0.269		0.36	0.36	5.5		0.19
A-B	0.33								
A-C	9.10								
A-D	0.37								
AB-CD	(0.37)	7.92	0.046		0.05	0.05	0.7		0.13
AB-C	(9.82)								
D-ABC	0.92	5.18	0.177		0.21	0.21	3.2		0.23
C-D	1.65								
C-A	9.21								
C-B	0.28								
CD-AB	(0.28)	8.06	0.034		0.03	0.03	0.5		0.13
CD-A	(9.25)								

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)
17.45-18.00									
B-ACD	1.59	7.95	0.200		0.36	0.25	3.9		0.16
A-B	0.27								
A-C	7.43								
A-D	0.30								
AB-CD	(0.30)	8.37	0.036		0.05	0.04	0.5		0.12
AB-C	(8.02)								
D-ABC	0.75	5.85	0.128		0.21	0.15	2.3		0.20
C-D	1.35								
C-A	7.52								
C-B	0.22								
CD-AB	(0.22)	8.44	0.027		0.03	0.03	0.4		0.12
CD-A	(7.55)								

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-ACD	1.33	8.47	0.157		0.25	0.19	2.9		0.14
A-B	0.23								
A-C	6.22								
A-D	0.25								
AB-CD	(0.25)	8.69	0.029		0.04	0.03	0.4		0.12
AB-C	(6.71)								
D-ABC	0.63	6.34	0.099		0.15	0.11	1.7		0.18
C-D	1.13								
C-A	6.30								
C-B	0.19								
CD-AB	(0.19)	8.72	0.022		0.03	0.02	0.3		0.12
CD-A	(6.32)								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

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

QUEUE FOR STREAM AB-CD

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-ABC

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

QUEUE FOR STREAM CD-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-ACD	145.9	97.3	23.8	0.16	23.8	0.16
A-B	24.8	16.5				
A-C	682.7	455.1				
A-D	27.5	18.4				
AB-CD	(27.5)	(18.4)	3.3	0.12	3.3	0.12
AB-C	(736.3)	(490.9)				
D-ABC	68.8	45.9	13.9	0.20	13.9	0.20
C-D	123.9	82.6				
C-A	691.0	460.6				
C-B	20.6	13.8				
CD-AB	(20.6)	(13.8)	2.5	0.12	2.5	0.12
CD-A	(693.7)	(462.5)				
ALL	1785.2	1190.2	43.5	0.02	43.5	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 RUN*******

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

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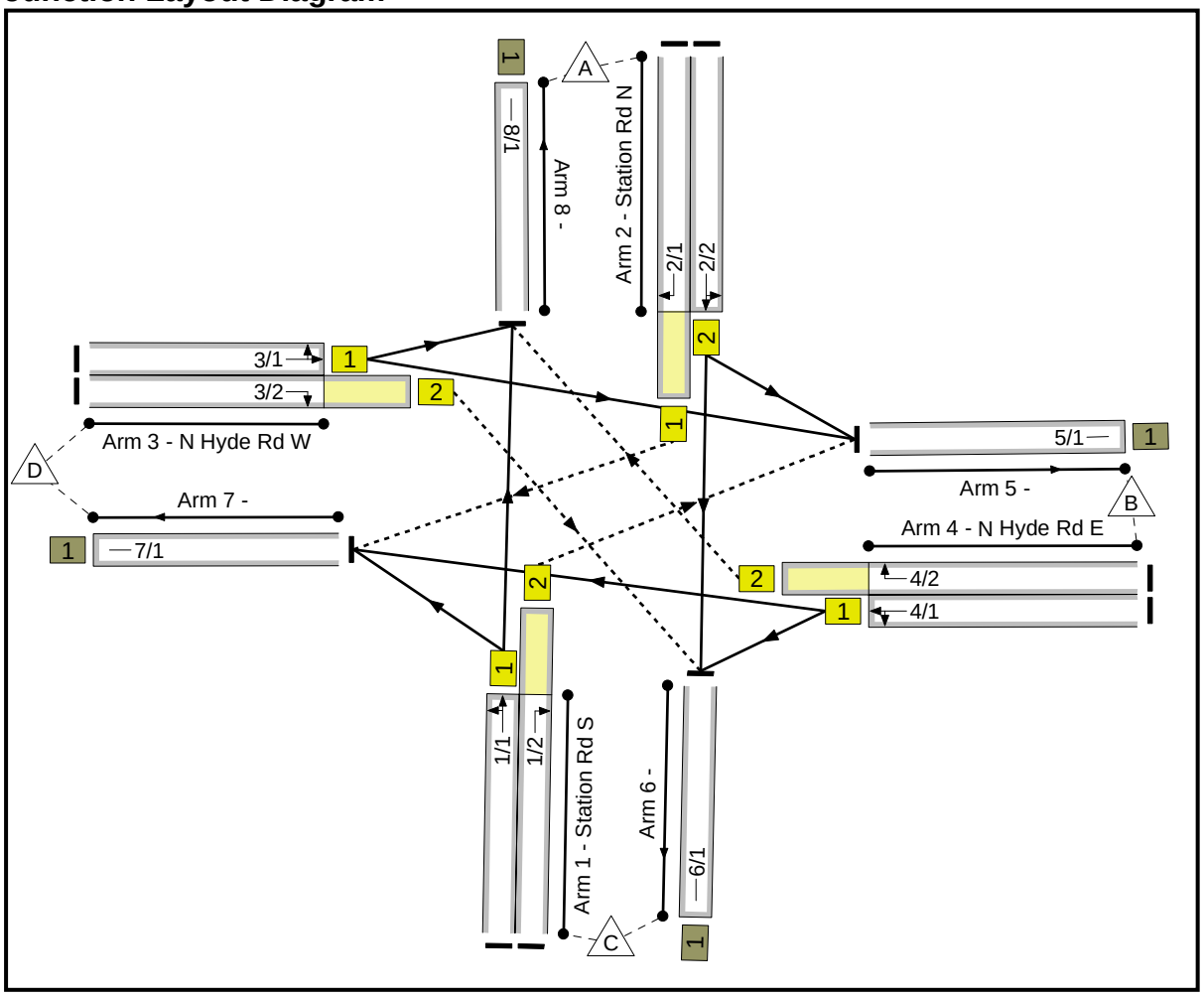
Full Input Data And Results

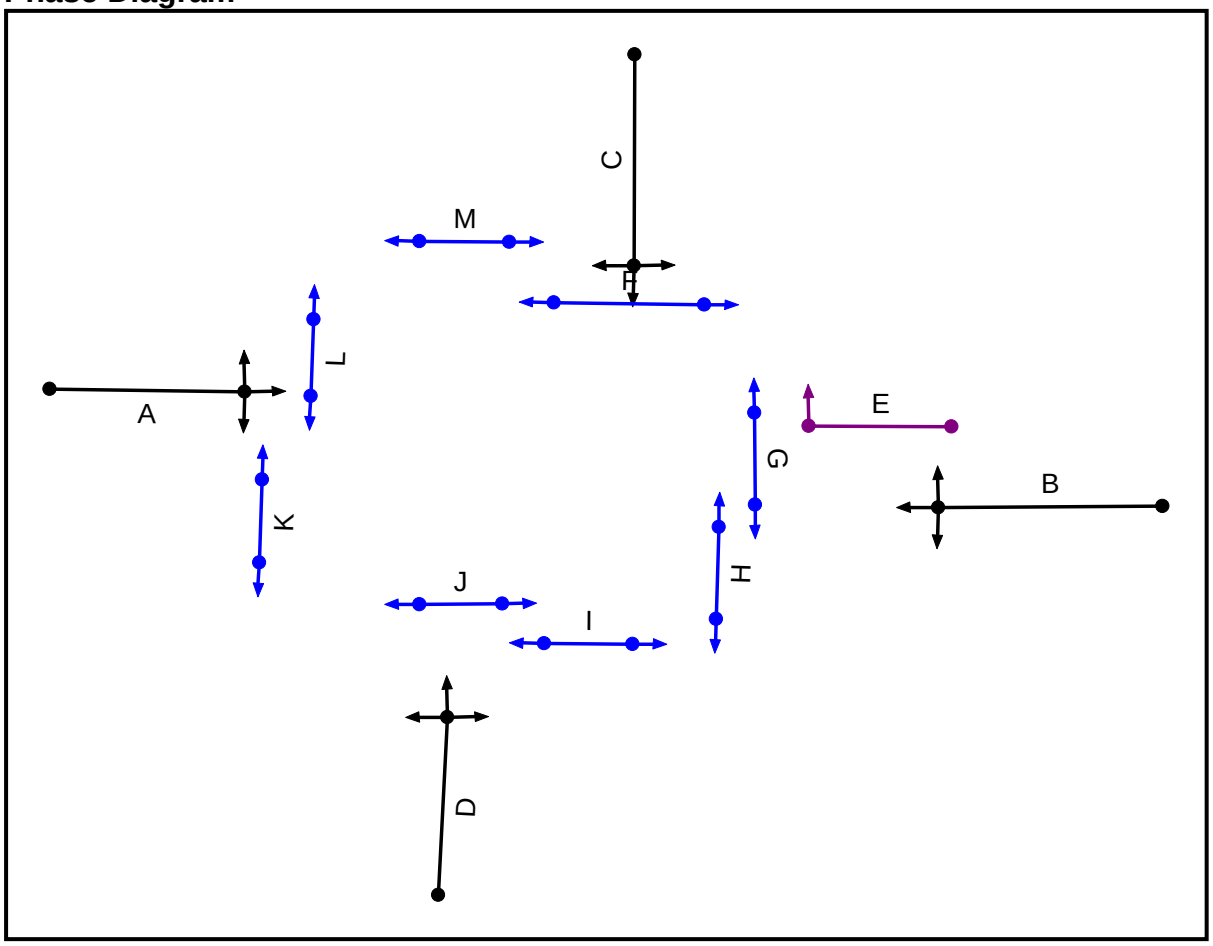
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10AM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		1	1
G	Pedestrian		1	1
H	Pedestrian		1	1
I	Pedestrian		4	4
J	Pedestrian		1	1
K	Pedestrian		4	4
L	Pedestrian		1	1
M	Pedestrian		4	4

Full Input Data And Results

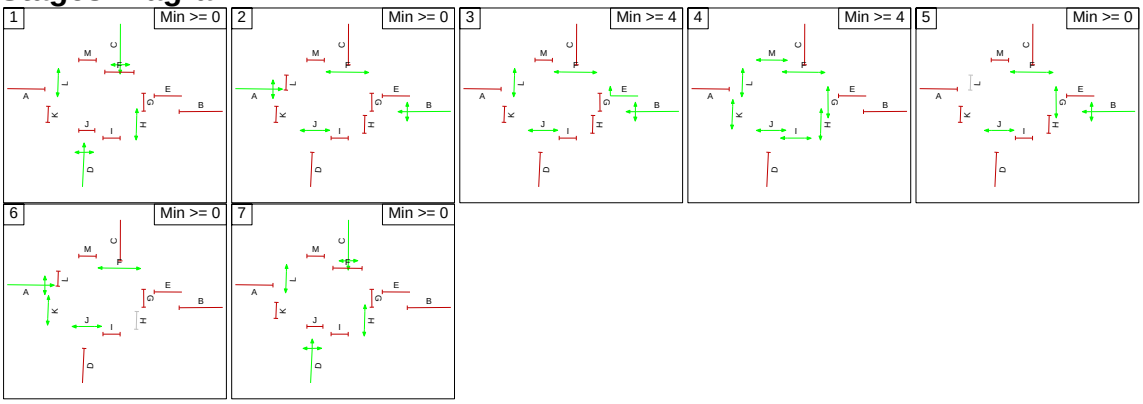
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	6	5	-	9	-	10	-	-	5	10
	B	-		6	6	-	-	-	5	10	-	10	-	10
	C	7	7		-	5	5	10	-	9	-	10	-	-
	D	7	7	-		5	-	10	-	-	5	10	-	10
	E	7	-	6	6		-	5	5	-	-	-	-	10
	F	-	-	9	-	-		-	-	-	-	-	-	-
	G	8	-	8	8	8	-		-	-	-	-	-	-
	H	-	10	-	-	10	-	-		-	-	-	-	-
	I	9	9	9	-	-	-	-	-		-	-	-	-
	J	-	-	-	9	-	-	-	-	-		-	-	-
	K	-	8	8	8	-	-	-	-	-	-		-	-
	L	9	-	-	-	-	-	-	-	-	-	-		-
	M	8	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	C D H L
2	A B F J
3	B E F J L
4	F G H I J K L M
5	B F G J
6	A F J K
7	C D H L

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

From Stage \ To Stage	1	2	3	4	5	6	7
1		10	10	10	10	10	0
2	9		5	10	9	10	9
3	9	9		10	5	10	9
4	9	10	10		10	9	9
5	9	8	8	10		10	9
6	9	8	X	10	9		9
7	0	10	10	10	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 5: 'Base + Com +H5 2014 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 7: 'Base + Com + H5 2014 AM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	134	372	133	639
	B	120	0	289	433	842
	C	263	142	0	102	507
	D	98	232	69	0	399
	Tot.	481	508	730	668	2387

Link Traffic Flows

Arm/Link	Flow Group 7: Base + Com + H5 2014 AM
1/1	365
1/2	142
2/1	133
2/2	506
3/1	330
3/2	69
4/1	722
4/2	120
5/1	508
6/1	730
7/1	668
8/1	481

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 7: 'Base + Com +H 4 5 2014 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 9: 'Base + Com + H4 5 2014 AM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	134	372	134	640
	B	120	0	289	458	867
	C	263	142	0	102	507
	D	98	235	69	0	402
	Tot.	481	511	730	694	2416

Link Traffic Flows

Arm/Link	Flow Group 9: Base + Com + H4 5 2014 AM
1/1	365
1/2	142
2/1	134
2/2	506
3/1	333
3/2	69
4/1	747
4/2	120
5/1	511
6/1	730
7/1	694
8/1	481

Lane Saturation Flows

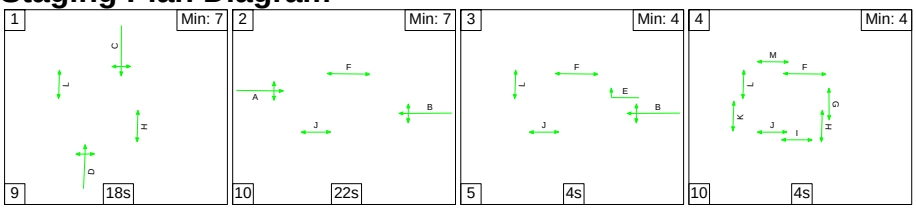
Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 3: 'Base + Com +H4 2014 AM'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 5: 'Base + Com + H4 2014 AM'

Staging Plan Diagram

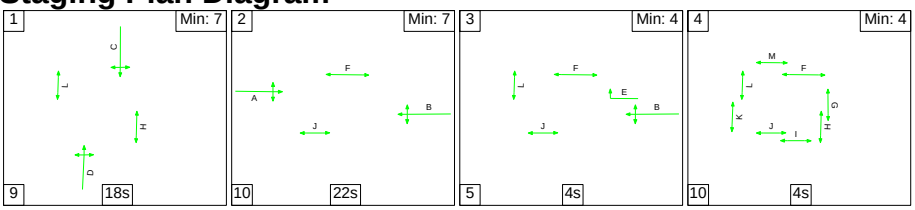


Stage Timings

Stage	1	2	3	4
Duration	18	22	4	4
Change Point	0	27	59	68

Scenario 5: 'Base + Com +H5 2014 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 7: 'Base + Com + H5 2014 AM'

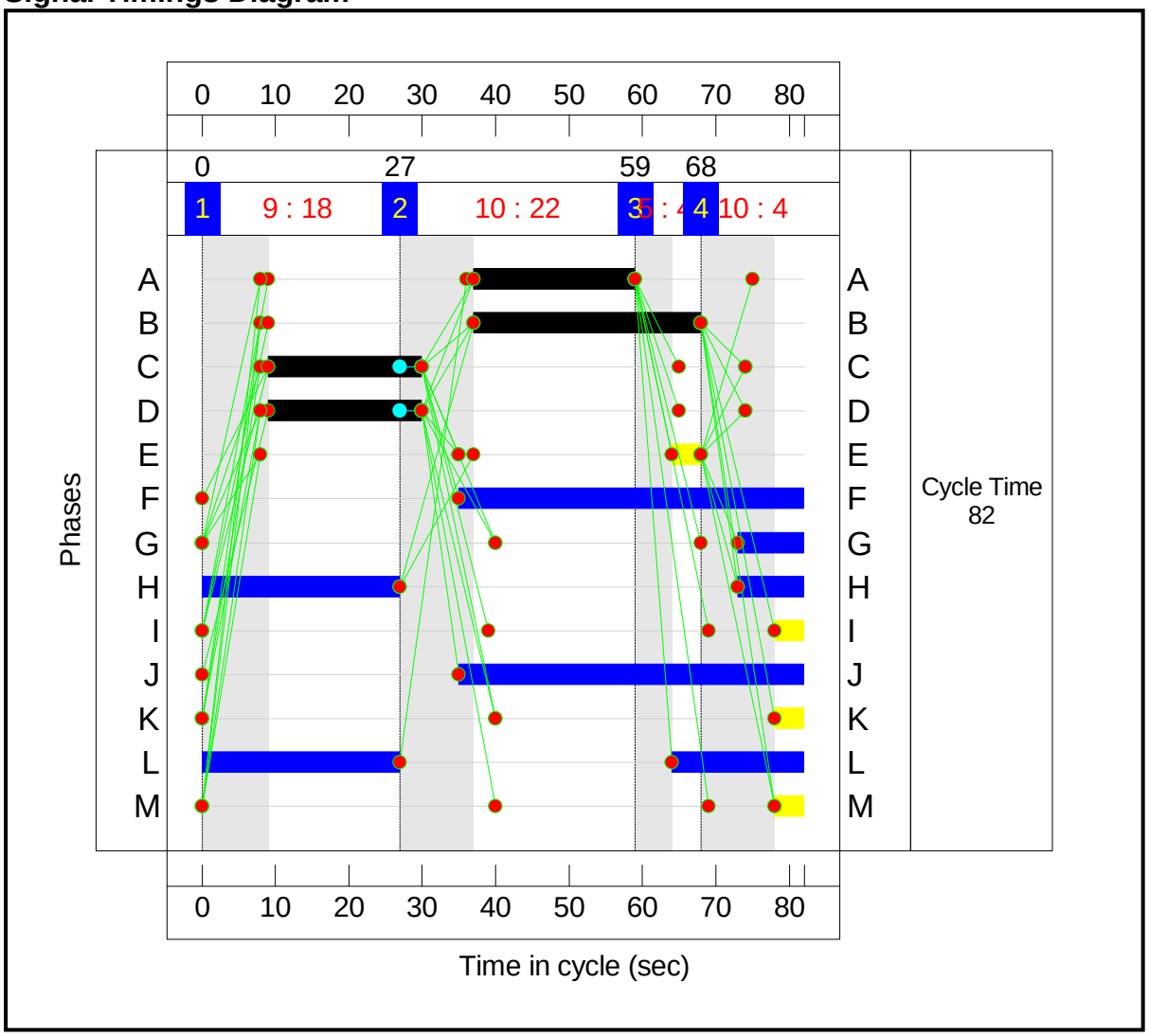
Staging Plan Diagram



Stage Timings

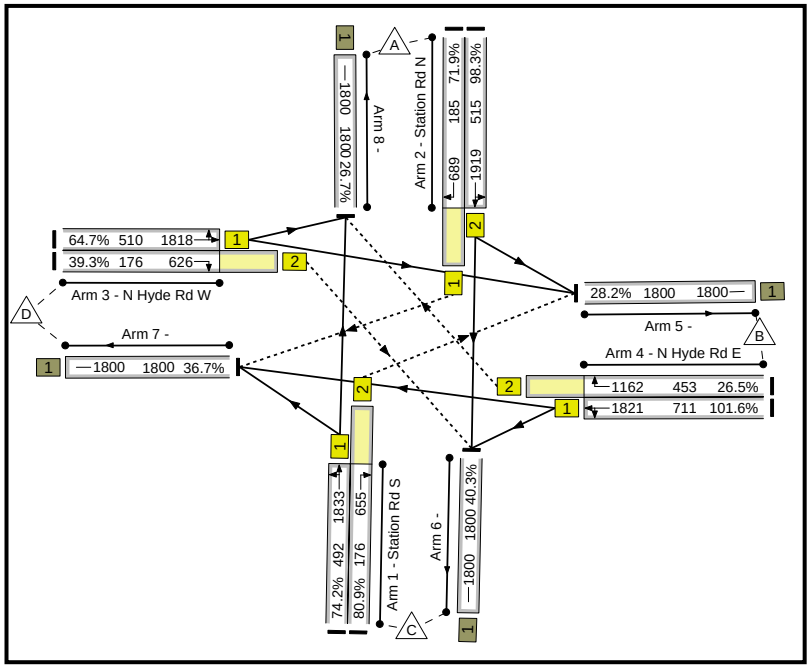
Stage	1	2	3	4
Duration	18	22	4	4
Change Point	0	27	59	68

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	21	-	365	1833	1833	492	74.2
1/2	Station Rd S Right	O	N/A	N/A	D		1	21	-	142	1741	655	176	80.9
2/1	Station Rd N Right	O	N/A	N/A	C		1	21	-	133	1730	689	185	71.9
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	21	-	506	1919	1919	515	98.3
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	22	-	330	1818	1818	510	64.7
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	22	-	69	1760	626	176	39.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	31	-	722	1821	1821	711	101.6
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	31	4	120	1815	1162	453	26.5
5/1		U	N/A	N/A	-		-	-	-	508	1800	1800	1800	28.2
6/1		U	N/A	N/A	-		-	-	-	730	1800	1800	1800	40.3
7/1		U	N/A	N/A	-		-	-	-	668	1800	1800	1800	36.7
8/1		U	N/A	N/A	-		-	-	-	481	1800	1800	1800	26.7

Full Input Data And Results

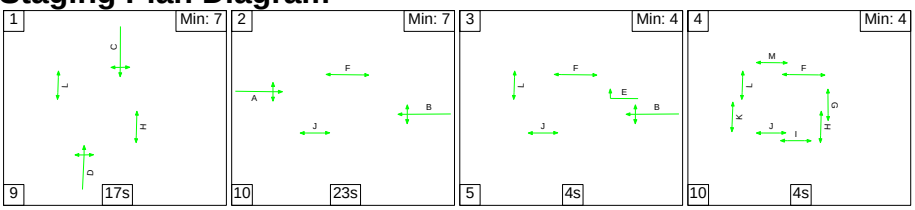
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	365	365	-	-	-	2.8	1.4	-	4.2	41.3	7.5	1.4	8.9	
1/2	142	142	2	0	140	0.9	1.9	0.7	3.6	90.4	2.6	1.9	4.5	
2/1	133	133	89	0	44	0.9	1.2	0.5	2.6	70.1	2.4	1.2	3.6	
2/2	506	506	-	-	-	4.2	9.2	-	13.4	95.6	11.4	9.2	20.6	
3/1	330	330	-	-	-	2.4	0.9	-	3.3	35.8	6.6	0.9	7.5	
3/2	69	69	0	0	69	0.4	0.3	0.5	1.3	66.4	1.2	0.3	1.5	
4/1	722	711	-	-	-	5.4	16.6	-	21.9	109.4	16.7	16.6	33.3	
4/2	120	120	104	10	6	0.5	0.2	0.3	1.0	31.0	1.8	0.2	1.9	
5/1	508	508	-	-	-	0.0	0.2	-	0.2	1.5	3.1	0.2	3.3	
6/1	725	725	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3	
7/1	661	661	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
8/1	481	481	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): -12.9 Total Delay for Signalled Links (pcuHr): 51.31

PRC Over All Links (%): -12.9 Total Delay Over All Links(pcuHr): 52.33 Cycle Time (s): 82

Scenario 7: 'Base + Com +H 4 5 2014 AM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 9: 'Base + Com + H4 5 2014 AM'

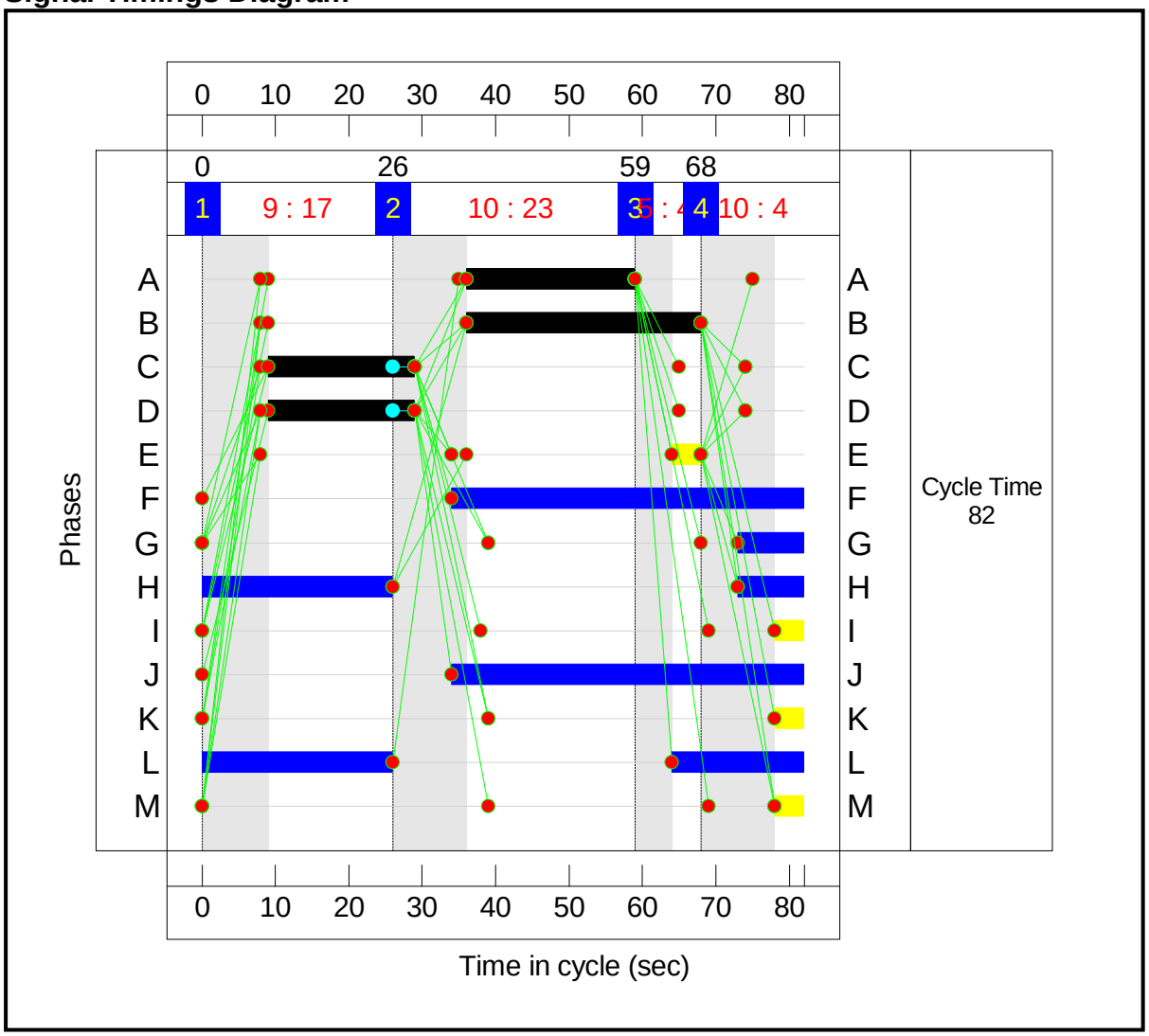
Staging Plan Diagram



Stage Timings

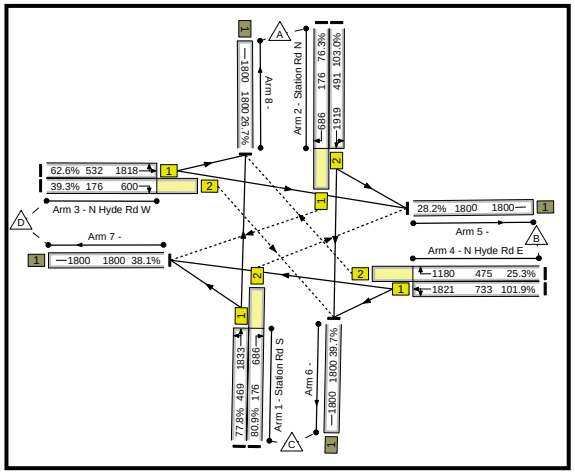
Stage	1	2	3	4
Duration	17	23	4	4
Change Point	0	26	59	68

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	20	-	365	1833	1833	469	77.8
1/2	Station Rd S Right	O	N/A	N/A	D		1	20	-	142	1741	686	176	80.9
2/1	Station Rd N Right	O	N/A	N/A	C		1	20	-	134	1730	686	176	76.3
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	20	-	506	1919	1919	491	103.0
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	23	-	333	1818	1818	532	62.6
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	23	-	69	1760	600	176	39.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	32	-	747	1821	1821	733	101.9
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	32	4	120	1815	1180	475	25.3
5/1		U	N/A	N/A	-		-	-	-	511	1800	1800	1800	28.2
6/1		U	N/A	N/A	-		-	-	-	730	1800	1800	1800	39.7
7/1		U	N/A	N/A	-		-	-	-	694	1800	1800	1800	38.1
8/1		U	N/A	N/A	-		-	-	-	481	1800	1800	1800	26.7

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	365	365	-	-	-	2.9	1.7	-	4.6	45.0	7.7	1.7	9.4	
1/2	142	142	0	0	142	1.0	1.9	0.7	3.6	90.5	2.6	1.9	4.5	
2/1	134	134	73	0	61	0.9	1.5	0.5	2.9	78.4	2.5	1.5	4.0	
2/2	506	491	-	-	-	4.9	15.5	-	20.3	144.6	11.9	15.5	27.3	
3/1	333	333	-	-	-	2.3	0.8	-	3.2	34.1	6.6	0.8	7.4	
3/2	69	69	0	0	69	0.4	0.3	0.5	1.3	66.4	1.2	0.3	1.5	
4/1	747	733	-	-	-	5.5	17.7	-	23.2	111.7	17.3	17.7	35.0	
4/2	120	120	104	10	6	0.5	0.2	0.3	1.0	29.8	1.7	0.2	1.9	
5/1	507	507	-	-	-	0.0	0.2	-	0.2	1.5	3.5	0.2	3.7	
6/1	714	714	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
7/1	685	685	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3	
8/1	481	481	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	

PRC for Signalled Links (%): -14.4 Total Delay for Signalled Links (pcuHr): 59.97

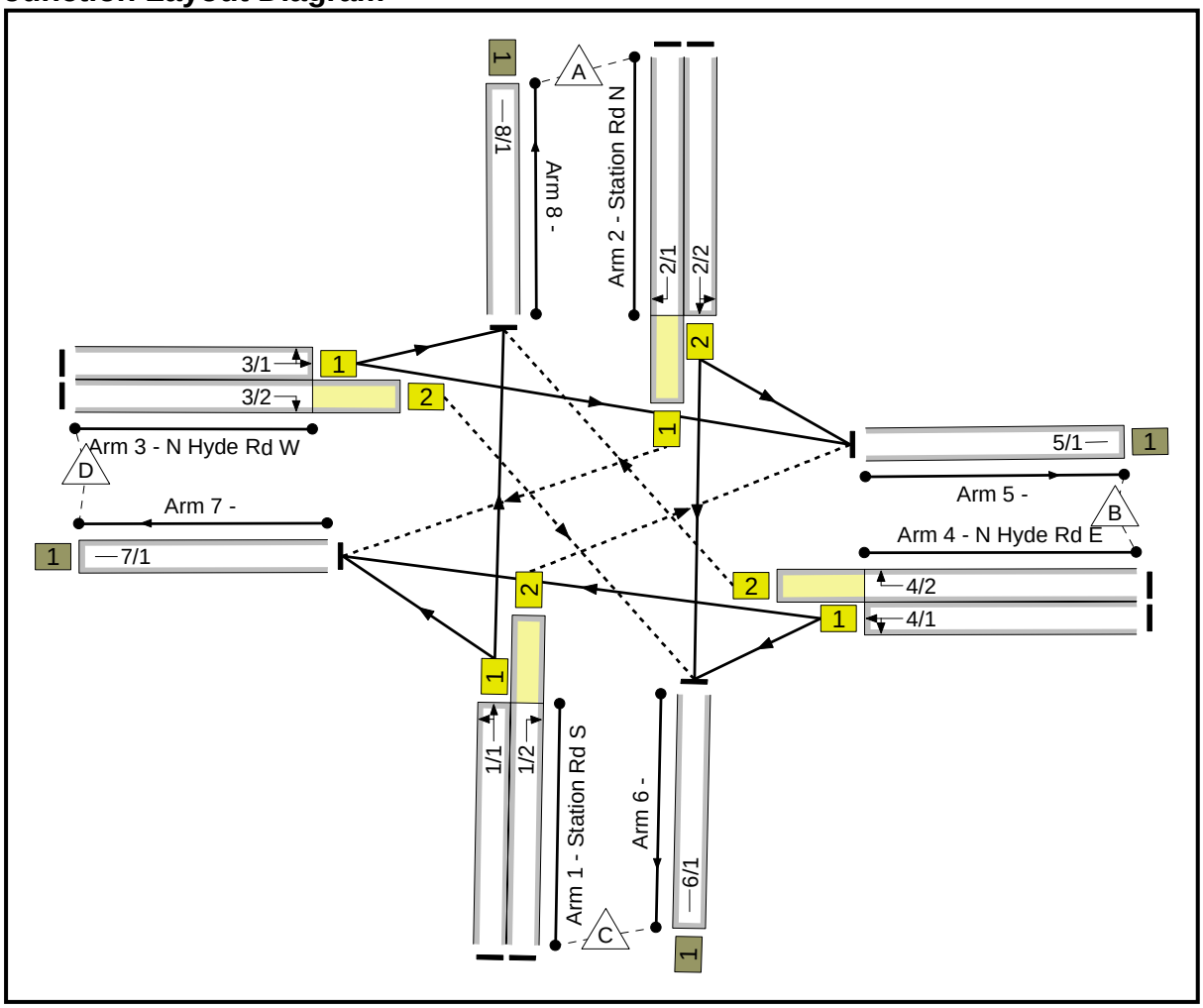
PRC Over All Links (%): -14.4 Total Delay Over All Links(pcuHr): 60.99 Cycle Time (s): 82

Full Input Data And Results

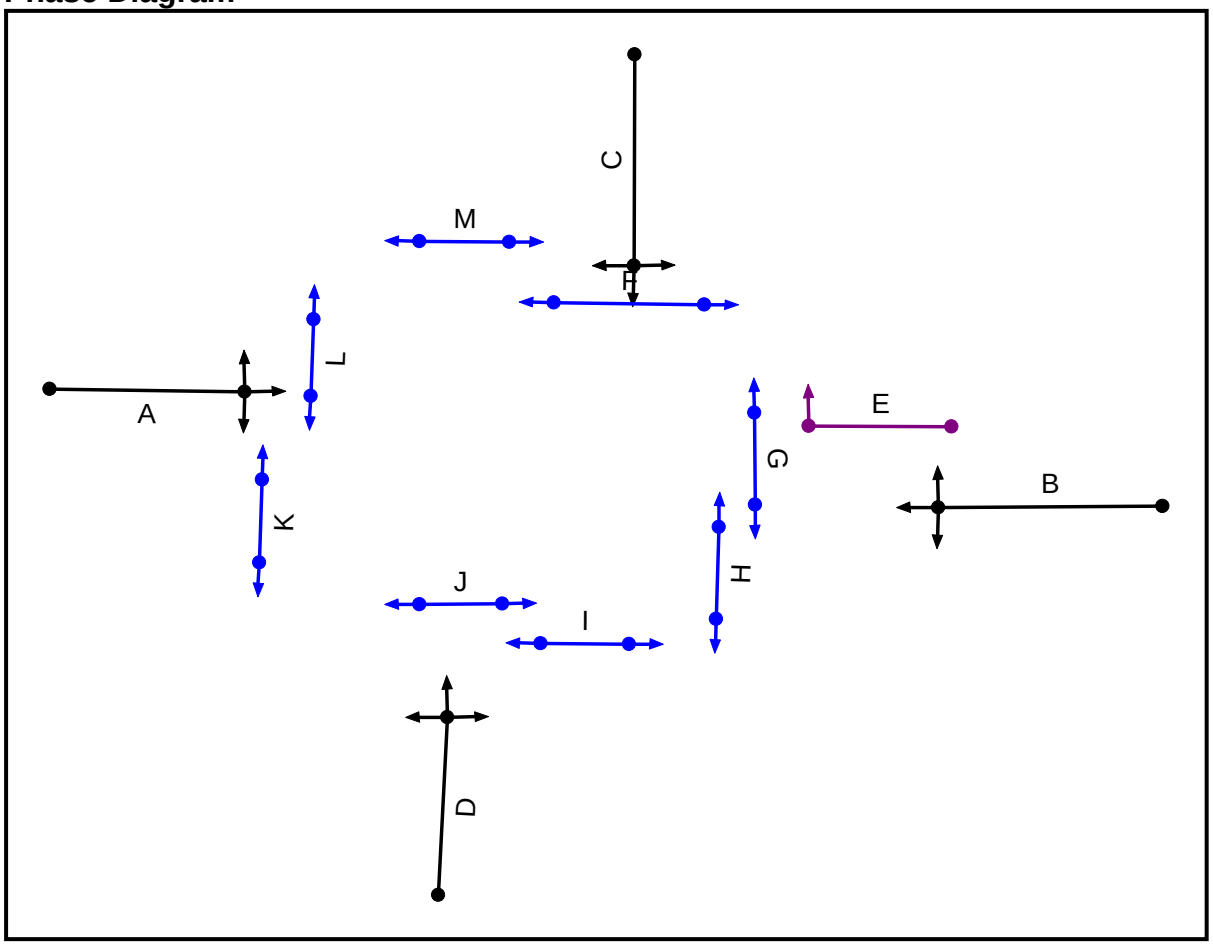
User and Project Details

Project:	
Title:	
Location:	
File name:	26_10PM_LL.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	4	4
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5

Full Input Data And Results

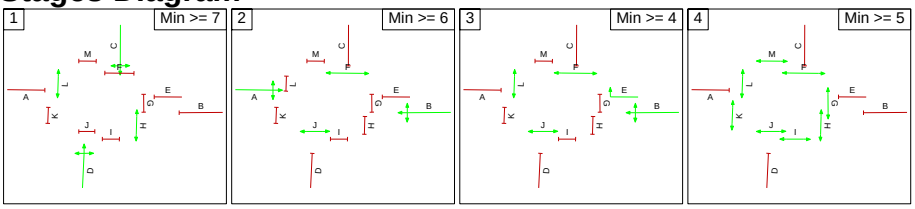
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	6	5	-	9	-	10	-	-	5	10
	B	-		6	6	-	-	-	5	10	-	10	-	10
	C	7	7		-	5	5	10	-	9	-	10	-	-
	D	7	7	-		5	-	10	-	-	5	10	-	10
	E	7	-	6	6		-	5	5	-	-	-	-	10
	F	-	-	9	-	-		-	-	-	-	-	-	-
	G	8	-	8	8	8	-		-	-	-	-	-	-
	H	-	10	-	-	10	-	-		-	-	-	-	-
	I	9	9	9	-	-	-	-	-		-	-	-	-
	J	-	-	-	9	-	-	-	-	-		-	-	-
	K	-	8	8	8	-	-	-	-	-	-		-	-
	L	9	-	-	-	-	-	-	-	-	-	-		-
	M	8	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	C D H L
2	A B F J
3	B E F J L
4	F G H I J K L M

Stages Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	C	Losing	3	3
1	2	D	Losing	3	3
2	1	A	Losing	3	3
2	1	B	Losing	3	3

Prohibited Stage Changes

		To Stage			
		1	2	3	4
From Stage	1		10	10	10
	2	9		5	10
	3	9	9		10
	4	9	10	10	

Link Input Data

Arm/ Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Station Rd S Left Ahead	U	1	D	2	3
1/2	Station Rd S Right	O	1	D	2	3
2/1	Station Rd N Right	O	1	C	2	3
2/2	Station Rd N Left Ahead	U	1	C	2	3
3/1	N Hyde Rd W Ahead Left	U	1	A	2	3
3/2	N Hyde Rd W Right	O	1	A	2	3
4/1	N Hyde Rd E Left Ahead	U	1	B	2	3
4/2	N Hyde Rd E Right	O	1	B E	2	3
5/1		U	1		2	3
6/1		U	1		2	3
7/1		U	1		2	3
8/1		U	1		2	3

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
1/2	Station Rd S Right	1/2 to 5/1	1440	2/2	1.09	2/2	4.00	0.50	4	4.00
2/1	Station Rd N Right	2/1 to 7/1	1440	1/1	1.09	1/1	4.00	0.50	4	2.00
3/2	N Hyde Rd W Right	3/2 to 6/1	1440	4/1	1.09	4/1	4.00	0.50	4	4.00
4/2	N Hyde Rd E Right	4/2 to 8/1	1440	3/1	1.09	3/1	4.00	0.50	4	4.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Station Rd S Lane 1)	Link 1 (Station Rd S Left Ahead)	Inf	Inf	User	1833	3.25	0.00	Y	Arm 7 Left Arm 8 Ahead	Inf Inf
1/2 (Station Rd S Lane 2)	Link 2 (Station Rd S Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 5 Right	15.00
2/1 (Station Rd N Lane 1)	Link 2 (Station Rd N Left Ahead)	Inf	Inf	User	1919	3.25	0.00	Y	Arm 5 Left Arm 6 Ahead	Inf Inf
2/2 (Station Rd N Lane 2)	Link 1 (Station Rd N Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 7 Right	14.00
3/1 (N Hyde Rd W Lane 1)	Link 1 (N Hyde Rd W Ahead Left)	Inf	Inf	User	1818	3.25	0.00	Y	Arm 5 Ahead Arm 8 Left	Inf Inf
3/2 (N Hyde Rd W Lane 2)	Link 2 (N Hyde Rd W Right)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 6 Right	17.00
4/1 (N Hyde Rd E Lane 1)	Link 1 (N Hyde Rd E Left Ahead)	Inf	Inf	User	1821	3.25	0.00	Y	Arm 6 Left Arm 7 Ahead	Inf Inf
4/2 (N Hyde Rd E Lane 2)	Link 2 (N Hyde Rd E Right)	Inf	Inf	Geom	1800	3.60	0.00	Y	Arm 8 Right	17.00
5/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
6/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		
7/1	Link 1	Inf	Inf	User	1800	3.25	0.00	Y		

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 5: 'Base + Com +H5 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 8: 'Base + Com + H5 2014 PM'

Traffic Flow Matrix

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	162	320	117	599
	B	203	0	238	341	782
	C	280	225	0	79	584
	D	111	302	48	0	461
	Tot.	594	689	606	537	2426

Link Traffic Flows

Arm/Link	Flow Group 8: Base + Com + H5 2014 PM
1/1	359
1/2	225
2/1	117
2/2	482
3/1	413
3/2	48
4/1	579
4/2	203
5/1	689
6/1	606
7/1	537
8/1	594

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Station Rd S Lane 1)	This lane uses a directly entered Saturation Flow						1833
1/2 (Station Rd S Lane 2)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741
2/1 (Station Rd N Lane 1)	This lane uses a directly entered Saturation Flow						1919
2/2 (Station Rd N Lane 2)	3.00	0.00	Y	Arm 7 Right	14.00	100.0 %	1730
3/1 (N Hyde Rd W Lane 1)	This lane uses a directly entered Saturation Flow						1818
3/2 (N Hyde Rd W Lane 2)	3.00	0.00	Y	Arm 6 Right	17.00	100.0 %	1760
4/1 (N Hyde Rd E Lane 1)	This lane uses a directly entered Saturation Flow						1821
4/2 (N Hyde Rd E Lane 2)	3.60	0.00	Y	Arm 8 Right	17.00	100.0 %	1815
5/1	This lane uses a directly entered Saturation Flow						1800
6/1	This lane uses a directly entered Saturation Flow						1800
7/1	This lane uses a directly entered Saturation Flow						1800
8/1	This lane uses a directly entered Saturation Flow						1800

Scenario 7: 'Base + Com +H 4 5 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 10: 'Base + Com + H4 5 2014 PM'

Traffic Flow Matrix

Desired Flow :

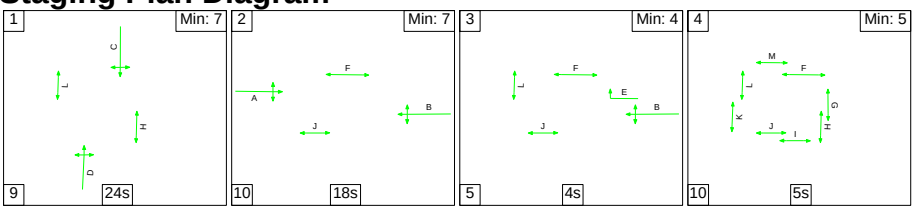
		Destination				
		A	B	C	D	Tot.
Origin	A	0	162	320	117	599
	B	203	0	238	346	787
	C	280	225	0	79	584
	D	112	328	48	0	488
	Tot.	595	715	606	542	2458

Link Traffic Flows

Arm/Link	Flow Group 10: Base + Com + H4 5 2014 PM
1/1	359
1/2	225
2/1	117
2/2	482
3/1	440
3/2	48
4/1	584
4/2	203
5/1	715
6/1	606
7/1	542
8/1	595

Scenario 5: 'Base + Com +H5 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 8: 'Base + Com + H5 2014 PM'

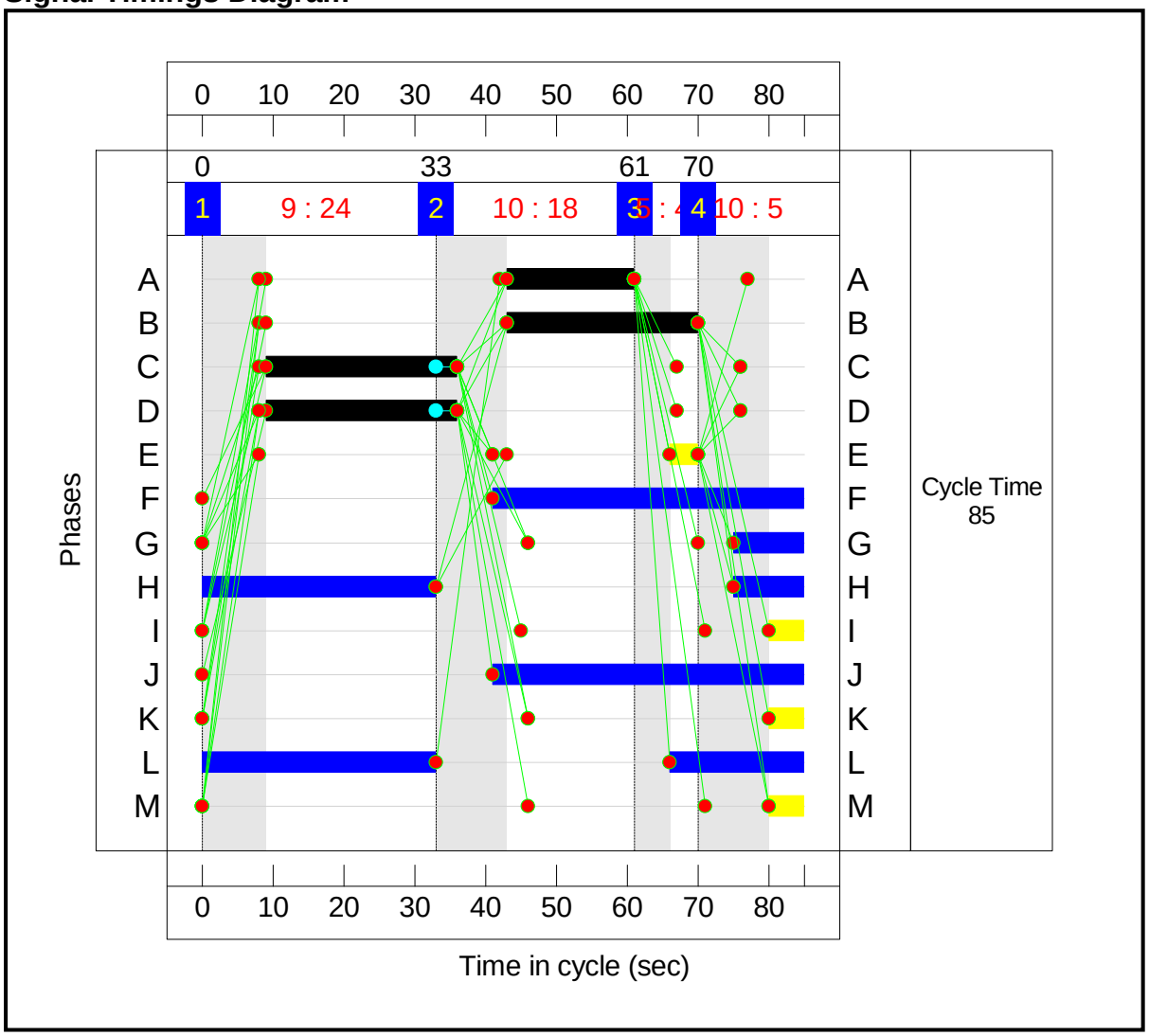
Staging Plan Diagram



Stage Timings

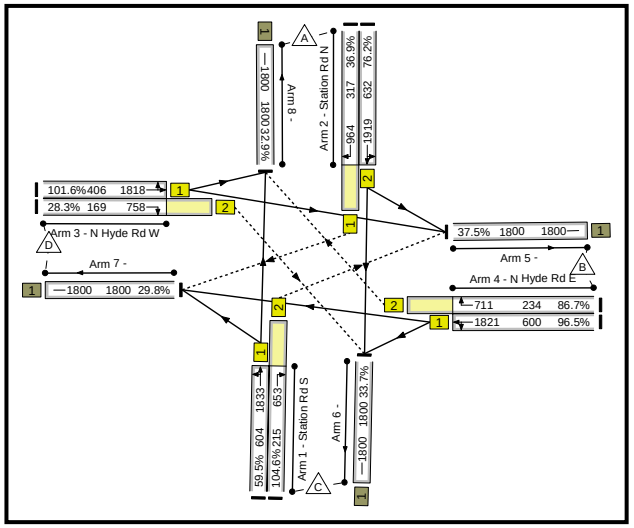
Stage	1	2	3	4
Duration	24	18	4	5
Change Point	0	33	61	70

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	27	-	359	1833	1833	604	59.5
1/2	Station Rd S Right	O	N/A	N/A	D		1	27	-	225	1741	653	215	104.6
2/1	Station Rd N Right	O	N/A	N/A	C		1	27	-	117	1730	964	317	36.9
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	27	-	482	1919	1919	632	76.2
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	18	-	413	1818	1818	406	101.6
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	18	-	48	1760	758	169	28.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	27	-	579	1821	1821	600	96.5
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	27	4	203	1815	711	234	86.7
5/1		U	N/A	N/A	-		-	-	-	689	1800	1800	1800	37.5
6/1		U	N/A	N/A	-		-	-	-	606	1800	1800	1800	33.7
7/1		U	N/A	N/A	-		-	-	-	537	1800	1800	1800	29.8
8/1		U	N/A	N/A	-		-	-	-	594	1800	1800	1800	32.9

Full Input Data And Results

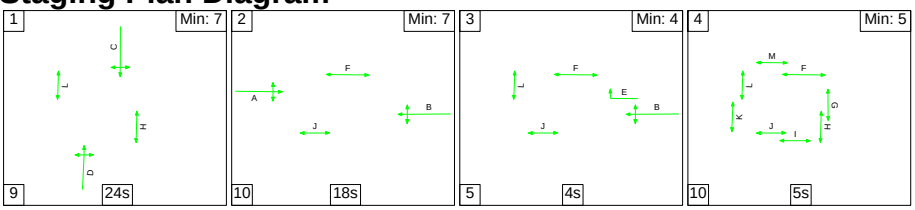
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	359	359	-	-	-	2.4	0.7	-	3.1	31.1	7.0	0.7	7.7	
1/2	225	215	95	0	120	1.9	10.4	1.0	13.3	212.6	5.5	10.4	15.9	
2/1	117	117	114	0	3	0.7	0.3	0.4	1.3	40.5	2.0	0.3	2.3	
2/2	482	482	-	-	-	3.4	1.6	-	5.0	37.3	10.2	1.6	11.7	
3/1	413	406	-	-	-	4.0	12.0	-	16.0	139.0	9.9	12.0	21.9	
3/2	48	48	10	0	38	0.4	0.2	0.3	0.9	64.9	0.9	0.2	1.1	
4/1	579	579	-	-	-	4.5	7.9	-	12.4	77.1	13.3	7.9	21.2	
4/2	203	203	0	149	54	1.3	2.8	0.8	4.8	85.3	3.6	2.8	6.4	
5/1	674	674	-	-	-	0.0	0.3	-	0.3	1.6	3.1	0.3	3.4	
6/1	606	606	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	
7/1	537	537	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	
8/1	592	592	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2	

PRC for Signalled Links (%): -16.3 Total Delay for Signalled Links (pcuHr): 56.72

PRC Over All Links (%): -16.3 Total Delay Over All Links(pcuHr): 57.74 Cycle Time (s): 85

Scenario 7: 'Base + Com +H 4 5 2014 PM'
Staging Plan 1: 'Staging Plan No. 1'
Flow Group 10: 'Base + Com + H4 5 2014 PM'

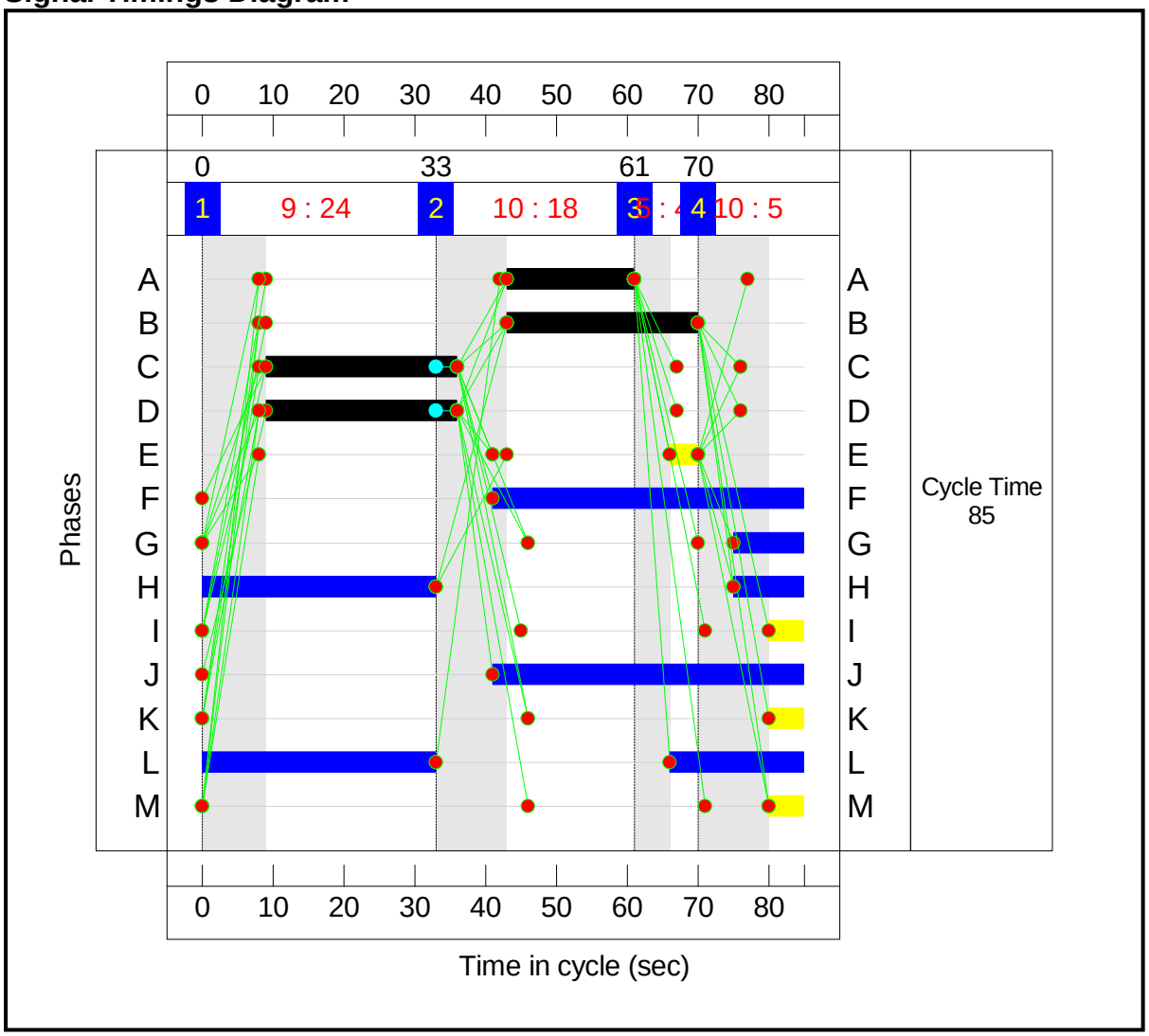
Staging Plan Diagram



Stage Timings

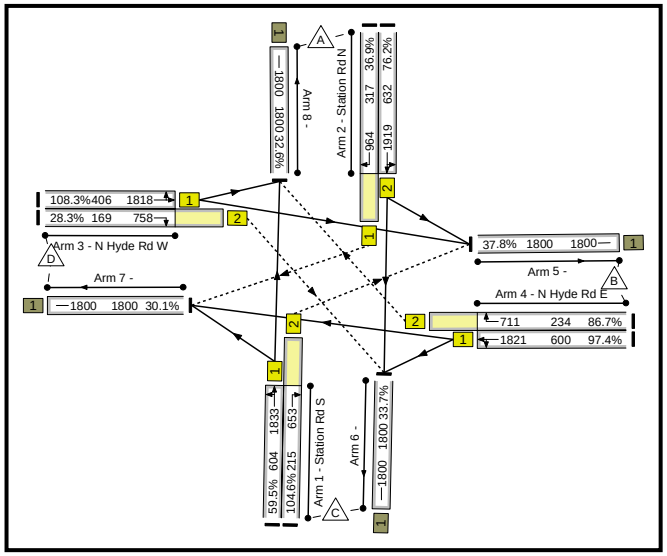
Stage	1	2	3	4
Duration	24	18	4	5
Change Point	0	33	61	70

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Station Rd S Left Ahead	U	N/A	N/A	D		1	27	-	359	1833	1833	604	59.5
1/2	Station Rd S Right	O	N/A	N/A	D		1	27	-	225	1741	653	215	104.6
2/1	Station Rd N Right	O	N/A	N/A	C		1	27	-	117	1730	964	317	36.9
2/2	Station Rd N Left Ahead	U	N/A	N/A	C		1	27	-	482	1919	1919	632	76.2
3/1	N Hyde Rd W Ahead Left	U	N/A	N/A	A		1	18	-	440	1818	1818	406	108.3
3/2	N Hyde Rd W Right	O	N/A	N/A	A		1	18	-	48	1760	758	169	28.3
4/1	N Hyde Rd E Left Ahead	U	N/A	N/A	B		1	27	-	584	1821	1821	600	97.4
4/2	N Hyde Rd E Right	O	N/A	N/A	B	E	1	27	4	203	1815	711	234	86.7
5/1		U	N/A	N/A	-		-	-	-	715	1800	1800	1800	37.8
6/1		U	N/A	N/A	-		-	-	-	606	1800	1800	1800	33.7
7/1		U	N/A	N/A	-		-	-	-	542	1800	1800	1800	30.1
8/1		U	N/A	N/A	-		-	-	-	595	1800	1800	1800	32.6

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
1/1	359	359	-	-	-	2.4	0.7	-	3.1	31.1	7.0	0.7	7.7	
1/2	225	215	95	0	120	1.9	10.4	1.0	13.3	212.6	5.5	10.4	15.9	
2/1	117	117	114	0	3	0.7	0.3	0.4	1.3	40.5	2.0	0.3	2.3	
2/2	482	482	-	-	-	3.4	1.6	-	5.0	37.3	10.2	1.6	11.7	
3/1	440	406	-	-	-	5.1	21.8	-	27.0	220.6	11.2	21.8	33.0	
3/2	48	48	9	0	39	0.4	0.2	0.3	0.9	65.0	0.9	0.2	1.1	
4/1	584	584	-	-	-	4.6	8.8	-	13.3	82.1	13.5	8.8	22.2	
4/2	203	203	0	149	54	1.3	2.8	0.8	4.8	85.3	3.6	2.8	6.4	
5/1	680	680	-	-	-	0.0	0.3	-	0.3	1.6	3.5	0.3	3.8	
6/1	606	606	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3	
7/1	542	542	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2	
8/1	586	586	-	-	-	0.0	0.2	-	0.2	1.5	0.0	0.2	0.2	

PRC for Signalled Links (%): -20.3 Total Delay for Signalled Links (pcuHr): 68.65

PRC Over All Links (%): -20.3 Total Delay Over All Links(pcuHr): 69.67 Cycle Time (s): 85