

**Bonus Green Times**

No Bonus Greens are defined For Scenario 4

**Scenario 5: '2033 AM'** (FG5: '2033 AM', Plan 1: 'Base Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 5

**Scenario 6: '2033 PM'** (FG6: '2033 PM', Plan 1: 'Base Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 6

**Scenario 7: '2033 wDev AM'** (FG7: '2033 w Dev AM', Plan 1: 'Base Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 7

**Scenario 8: '2033 wDev PM'** (FG8: '2033 w Dev PM', Plan 1: 'Base Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 8

**Scenario 9: '2040 AM'** (FG9: '2040 AM', Plan 1: 'Base Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 9

**Scenario 10: '2040 PM'** (FG10: '2040 PM', Plan 1: 'Base Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 10

**Scenario 11: '2040 wDev no School AM'** (FG11: '2040 w Dev no School AM', Plan 1: 'Base Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 11

**Scenario 12: '2040 wDev no School PM' (FG12: '2040 wDev no School PM', Plan 1: 'Base Network Control Plan 1')**  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 12

**Scenario 13: '2040 wDev w School AM'** (FG13: '2040 w Dev with School AM', Plan 1: 'Base Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 13

**Scenario 14: '2040 wDev w School PM'** (FG14: '2040 wDev with School PM', Plan 1: 'Base Network Control Plan 1')  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 14

**Traffic Flow Groups**

| Flow Group                      | Start Time | End Time | Duration | Formula |
|---------------------------------|------------|----------|----------|---------|
| 1: '2022 AM'                    | 08:00      | 09:00    | 01:00    |         |
| 2: '2022 PM'                    | 17:00      | 18:00    | 01:00    |         |
| 3: '2028 AM'                    | 08:00      | 09:00    | 01:00    |         |
| 4: '2028 PM'                    | 17:00      | 18:00    | 01:00    |         |
| 5: '2033 AM'                    | 08:00      | 09:00    | 01:00    |         |
| 6: '2033 PM'                    | 17:00      | 18:00    | 01:00    |         |
| 7: '2033 w Dev AM'              | 08:00      | 09:00    | 01:00    |         |
| 8: '2033 w Dev PM'              | 17:00      | 18:00    | 01:00    |         |
| 9: '2040 AM'                    | 08:00      | 09:00    | 01:00    |         |
| 10: '2040 PM'                   | 17:00      | 18:00    | 01:00    |         |
| 11: '2040 w Dev no School AM'   | 08:00      | 09:00    | 01:00    |         |
| 12: '2040 wDev no School PM'    | 17:00      | 18:00    | 01:00    |         |
| 13: '2040 w Dev with School AM' | 08:00      | 09:00    | 01:00    |         |
| 14: '2040 wDev with School PM'  | 17:00      | 18:00    | 01:00    |         |

**Traffic Flows, Desired****FG1: '2022 AM'****Desired Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 199  | 2    | 200  | 403  |
|        | B           | 105 | 59   | 978  | 431  | 1573 |
|        | C           | 1   | 938  | 1    | 731  | 1671 |
|        | D           | 116 | 314  | 636  | 22   | 1088 |
|        | Tot.        | 224 | 1510 | 1617 | 1384 | 4735 |

## Detailed Input Data And Results

### FG2: '2022 PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 116  | 0    | 150  | 266  |
|        | B           | 153 | 100  | 1070 | 454  | 1777 |
|        | C           | 2   | 1252 | 0    | 733  | 1987 |
|        | D           | 143 | 149  | 633  | 4    | 929  |
|        | Tot.        | 298 | 1617 | 1703 | 1341 | 4959 |

### FG3: '2028 AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 209  | 2    | 210  | 423  |
|        | B           | 110 | 62   | 1025 | 452  | 1649 |
|        | C           | 1   | 983  | 1    | 767  | 1752 |
|        | D           | 122 | 329  | 667  | 23   | 1141 |
|        | Tot.        | 235 | 1583 | 1695 | 1452 | 4965 |

### FG4: '2028 PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 122  | 0    | 157  | 279  |
|        | B           | 160 | 105  | 1120 | 475  | 1860 |
|        | C           | 2   | 1311 | 0    | 767  | 2080 |
|        | D           | 150 | 156  | 663  | 4    | 973  |
|        | Tot.        | 312 | 1694 | 1783 | 1403 | 5192 |

### FG5: '2033 AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 213  | 2    | 214  | 431  |
|        | B           | 113 | 63   | 1048 | 462  | 1686 |
|        | C           | 1   | 1005 | 1    | 783  | 1790 |
|        | D           | 124 | 336  | 682  | 24   | 1166 |
|        | Tot.        | 240 | 1617 | 1733 | 1483 | 5073 |

## Detailed Input Data And Results

### FG6: '2033 PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 124  | 0    | 161  | 285  |
|        | B           | 164 | 107  | 1144 | 486  | 1901 |
|        | C           | 2   | 1340 | 0    | 784  | 2126 |
|        | D           | 153 | 159  | 677  | 4    | 993  |
|        | Tot.        | 319 | 1730 | 1821 | 1435 | 5305 |

### FG7: '2033 w Dev AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 213  | 2    | 214  | 431  |
|        | B           | 113 | 63   | 1092 | 462  | 1730 |
|        | C           | 1   | 1052 | 1    | 783  | 1837 |
|        | D           | 124 | 336  | 682  | 24   | 1166 |
|        | Tot.        | 240 | 1664 | 1777 | 1483 | 5164 |

### FG8: '2033 w Dev PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 124  | 0    | 161  | 285  |
|        | B           | 164 | 107  | 1182 | 486  | 1939 |
|        | C           | 2   | 1381 | 0    | 784  | 2167 |
|        | D           | 153 | 159  | 677  | 4    | 993  |
|        | Tot.        | 319 | 1771 | 1859 | 1435 | 5384 |

### FG9: '2040 AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 207  | 416  |
|        | B           | 108 | 61   | 1010 | 445  | 1624 |
|        | C           | 1   | 968  | 1    | 755  | 1725 |
|        | D           | 120 | 324  | 657  | 23   | 1124 |
|        | Tot.        | 231 | 1558 | 1670 | 1430 | 4889 |

## Detailed Input Data And Results

### FG10: '2040 PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 158 | 103  | 1101 | 467  | 1829 |
|        | C           | 2   | 1289 | 0    | 755  | 2046 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 307 | 1664 | 1752 | 1380 | 5103 |

### FG11: '2040 w Dev no School AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 207  | 416  |
|        | B           | 108 | 61   | 1142 | 445  | 1756 |
|        | C           | 1   | 1102 | 1    | 755  | 1859 |
|        | D           | 120 | 324  | 657  | 23   | 1124 |
|        | Tot.        | 231 | 1692 | 1802 | 1430 | 5155 |

### FG12: '2040 wDev no School PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 158 | 103  | 1173 | 467  | 1901 |
|        | C           | 2   | 1398 | 0    | 755  | 2155 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 307 | 1773 | 1824 | 1380 | 5284 |

### FG13: '2040 w Dev with School AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 203  | 2    | 205  | 412  |
|        | B           | 107 | 61   | 1124 | 441  | 1733 |
|        | C           | 1   | 1111 | 1    | 755  | 1868 |
|        | D           | 120 | 320  | 657  | 23   | 1120 |
|        | Tot.        | 230 | 1695 | 1784 | 1424 | 5133 |

## Detailed Input Data And Results

### FG14: '2040 wDev with School PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 157 | 103  | 1192 | 467  | 1919 |
|        | C           | 2   | 1387 | 0    | 755  | 2144 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 306 | 1762 | 1843 | 1380 | 5291 |

### Scenario 1: '2022 AM' (FG1: '2022 AM', Plan 1: 'Base Network Control Plan 1')

#### Traffic Flows, Actual

##### Actual Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 199  | 2    | 200  | 403  |
|        | B           | 105 | 59   | 978  | 431  | 1573 |
|        | C           | 1   | 938  | 1    | 731  | 1671 |
|        | D           | 116 | 314  | 636  | 22   | 1088 |
|        | Tot.        | 224 | 1510 | 1617 | 1384 | 4735 |

#### Traffic Flows, Difference

##### Difference :

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

### Scenario 2: '2022 PM' (FG2: '2022 PM', Plan 1: 'Base Network Control Plan 1')

#### Traffic Flows, Actual

##### Actual Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 116  | 0    | 150  | 266  |
|        | B           | 153 | 100  | 1070 | 454  | 1777 |
|        | C           | 2   | 1252 | 0    | 733  | 1987 |
|        | D           | 143 | 149  | 633  | 4    | 929  |
|        | Tot.        | 298 | 1617 | 1703 | 1341 | 4959 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 3: '2028 AM'** (FG3: '2028 AM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 209  | 2    | 210  | 423  |
|        | B           | 110 | 62   | 1025 | 452  | 1649 |
|        | C           | 1   | 983  | 1    | 767  | 1752 |
|        | D           | 122 | 329  | 667  | 23   | 1141 |
|        | Tot.        | 235 | 1583 | 1695 | 1452 | 4965 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 4: '2028 PM'** (FG4: '2028 PM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 122  | 0    | 157  | 279  |
|        | B           | 160 | 105  | 1120 | 475  | 1860 |
|        | C           | 2   | 1311 | 0    | 767  | 2080 |
|        | D           | 150 | 156  | 663  | 4    | 973  |
|        | Tot.        | 312 | 1694 | 1783 | 1403 | 5192 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 5: '2033 AM'** (FG5: '2033 AM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 213  | 2    | 214  | 431  |
|        | B           | 113 | 63   | 1048 | 462  | 1686 |
|        | C           | 1   | 1005 | 1    | 783  | 1790 |
|        | D           | 124 | 336  | 682  | 24   | 1166 |
|        | Tot.        | 240 | 1617 | 1733 | 1483 | 5073 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 6: '2033 PM'** (FG6: '2033 PM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 124  | 0    | 161  | 285  |
|        | B           | 164 | 107  | 1144 | 486  | 1901 |
|        | C           | 2   | 1340 | 0    | 784  | 2126 |
|        | D           | 153 | 159  | 677  | 4    | 993  |
|        | Tot.        | 319 | 1730 | 1821 | 1435 | 5305 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 7: '2033 wDev AM'** (FG7: '2033 w Dev AM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 213  | 2    | 214  | 431  |
|        | B           | 113 | 63   | 1092 | 462  | 1730 |
|        | C           | 1   | 1052 | 1    | 783  | 1837 |
|        | D           | 124 | 336  | 682  | 24   | 1166 |
|        | Tot.        | 240 | 1664 | 1777 | 1483 | 5164 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 8: '2033 wDev PM'** (FG8: '2033 w Dev PM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 124  | 0    | 161  | 285  |
|        | B           | 164 | 107  | 1182 | 486  | 1939 |
|        | C           | 2   | 1381 | 0    | 784  | 2167 |
|        | D           | 153 | 159  | 677  | 4    | 993  |
|        | Tot.        | 319 | 1771 | 1859 | 1435 | 5384 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 9: '2040 AM'** (FG9: '2040 AM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 207  | 416  |
|        | B           | 108 | 61   | 1010 | 445  | 1624 |
|        | C           | 1   | 968  | 1    | 755  | 1725 |
|        | D           | 120 | 324  | 657  | 23   | 1124 |
|        | Tot.        | 231 | 1558 | 1670 | 1430 | 4889 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 10: '2040 PM'** (FG10: '2040 PM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 158 | 103  | 1101 | 467  | 1829 |
|        | C           | 2   | 1289 | 0    | 755  | 2046 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 307 | 1664 | 1752 | 1380 | 5103 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 11: '2040 wDev no School AM'** (FG11: '2040 w Dev no School AM', Plan 1: 'Base Network Control Plan 1')

**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 207  | 416  |
|        | B           | 108 | 61   | 1142 | 445  | 1756 |
|        | C           | 1   | 1102 | 1    | 755  | 1859 |
|        | D           | 120 | 324  | 657  | 23   | 1124 |
|        | Tot.        | 231 | 1692 | 1802 | 1430 | 5155 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 12: '2040 wDev no School PM'** (FG12: '2040 wDev no School PM', Plan 1: 'Base Network Control Plan 1')

**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 158 | 103  | 1173 | 467  | 1901 |
|        | C           | 2   | 1398 | 0    | 755  | 2155 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 307 | 1773 | 1824 | 1380 | 5284 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 13: '2040 wDev w School AM'** (FG13: '2040 w Dev with School AM', Plan 1: 'Base Network Control Plan 1')

**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 203  | 2    | 205  | 412  |
|        | B           | 107 | 61   | 1124 | 441  | 1733 |
|        | C           | 1   | 1111 | 1    | 755  | 1868 |
|        | D           | 120 | 320  | 657  | 23   | 1120 |
|        | Tot.        | 230 | 1695 | 1784 | 1424 | 5133 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 14: '2040 wDev w School PM'** (FG14: '2040 wDev with School PM', Plan 1: 'Base Network Control Plan 1')

**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 157 | 103  | 1192 | 467  | 1919 |
|        | C           | 2   | 1387 | 0    | 755  | 2144 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 306 | 1762 | 1843 | 1380 | 5291 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
| Origin |             | A | B | C | D | Tot. |
|        | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Traffic Lane Flows**

| Lane                             | Scenario 1:<br>2022 AM | Scenario 2:<br>2022 PM | Scenario 3:<br>2028 AM | Scenario 4:<br>2028 PM | Scenario 5:<br>2033 AM | Scenario 6:<br>2033 PM |
|----------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| <b>Junction: Junction9 A1(M)</b> |                        |                        |                        |                        |                        |                        |
| 1/1                              | 199                    | 116                    | 209                    | 122                    | 213                    | 124                    |
| 1/2                              | 204                    | 150                    | 214                    | 157                    | 218                    | 161                    |
| 2/1                              | 978                    | 1070                   | 1025                   | 1120                   | 1048                   | 1144                   |
| 2/2                              | 595                    | 707                    | 624                    | 740                    | 638                    | 757                    |
| 3/1                              | 731                    | 733                    | 767                    | 767                    | 783                    | 784                    |
| 3/2                              | 940                    | 1254                   | 985                    | 1313                   | 1007                   | 1342                   |
| 4/1<br>(short)                   | 116                    | 143                    | 122                    | 150                    | 124                    | 153                    |
| 4/2<br>(with short)              | 1088(In)<br>972(Out)   | 929(In)<br>786(Out)    | 1141(In)<br>1019(Out)  | 973(In)<br>823(Out)    | 1166(In)<br>1042(Out)  | 993(In)<br>840(Out)    |
| 5/1                              | 653                    | 608                    | 685                    | 636                    | 700                    | 651                    |
| 5/2                              | 166                    | 253                    | 174                    | 265                    | 178                    | 271                    |
| 6/1                              | 1106                   | 1507                   | 1159                   | 1578                   | 1185                   | 1613                   |
| 7/1                              | 1970                   | 2138                   | 2065                   | 2239                   | 2111                   | 2287                   |
| 8/1                              | 863                    | 787                    | 905                    | 824                    | 925                    | 842                    |
| 9/1                              | 1617                   | 1703                   | 1695                   | 1783                   | 1733                   | 1821                   |
| 10/1                             | 1384                   | 1341                   | 1452                   | 1403                   | 1483                   | 1435                   |
| 11/1                             | 224                    | 298                    | 235                    | 312                    | 240                    | 319                    |
| 12/1                             | 1510                   | 1617                   | 1583                   | 1694                   | 1617                   | 1730                   |

# Detailed Input Data And Results

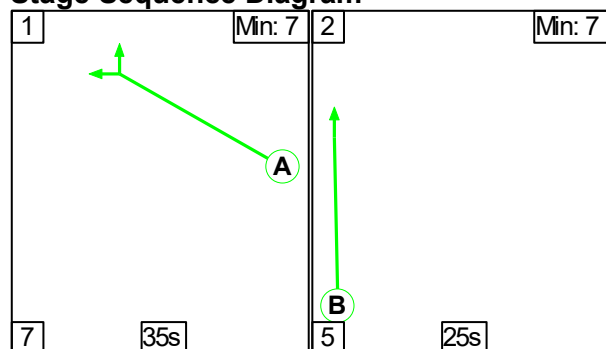
| Lane                             | Scenario 7:<br>2033 wDev<br>AM | Scenario 8:<br>2033 wDev<br>PM | Scenario 9:<br>2040 AM | Scenario<br>10:<br>2040 PM | Scenario<br>11:<br>2040 wDev<br>no School<br>AM | Scenario<br>12:<br>2040 wDev<br>no School<br>PM |
|----------------------------------|--------------------------------|--------------------------------|------------------------|----------------------------|-------------------------------------------------|-------------------------------------------------|
| <b>Junction: Junction9 A1(M)</b> |                                |                                |                        |                            |                                                 |                                                 |
| 1/1                              | 213                            | 124                            | 205                    | 119                        | 205                                             | 119                                             |
| 1/2                              | 218                            | 161                            | 211                    | 154                        | 211                                             | 154                                             |
| 2/1                              | 1092                           | 1182                           | 1010                   | 1101                       | 1142                                            | 1173                                            |
| 2/2                              | 638                            | 757                            | 614                    | 728                        | 614                                             | 728                                             |
| 3/1                              | 783                            | 784                            | 755                    | 755                        | 755                                             | 755                                             |
| 3/2                              | 1054                           | 1383                           | 970                    | 1291                       | 1104                                            | 1400                                            |
| 4/1<br>(short)                   | 124                            | 153                            | 120                    | 147                        | 120                                             | 147                                             |
| 4/2<br>(with short)              | 1166(In)<br>1042(Out)          | 993(In)<br>840(Out)            | 1124(In)<br>1004(Out)  | 955(In)<br>808(Out)        | 1124(In)<br>1004(Out)                           | 955(In)<br>808(Out)                             |
| 5/1                              | 700                            | 651                            | 675                    | 625                        | 675                                             | 625                                             |
| 5/2                              | 178                            | 271                            | 171                    | 261                        | 171                                             | 261                                             |
| 6/1                              | 1232                           | 1654                           | 1141                   | 1552                       | 1275                                            | 1661                                            |
| 7/1                              | 2158                           | 2328                           | 2034                   | 2200                       | 2168                                            | 2309                                            |
| 8/1                              | 925                            | 842                            | 892                    | 809                        | 892                                             | 809                                             |
| 9/1                              | 1777                           | 1859                           | 1670                   | 1752                       | 1802                                            | 1824                                            |
| 10/1                             | 1483                           | 1435                           | 1430                   | 1380                       | 1430                                            | 1380                                            |
| 11/1                             | 240                            | 319                            | 231                    | 307                        | 231                                             | 307                                             |
| 12/1                             | 1664                           | 1771                           | 1558                   | 1664                       | 1692                                            | 1773                                            |

## Detailed Input Data And Results

| Lane                      | Scenario 13:<br>2040 wDev<br>w School<br>AM | Scenario 14:<br>2040 wDev<br>w School<br>PM |
|---------------------------|---------------------------------------------|---------------------------------------------|
| Junction: Junction9 A1(M) |                                             |                                             |
| 1/1                       | 203                                         | 119                                         |
| 1/2                       | 209                                         | 154                                         |
| 2/1                       | 1124                                        | 1192                                        |
| 2/2                       | 609                                         | 727                                         |
| 3/1                       | 755                                         | 755                                         |
| 3/2                       | 1113                                        | 1389                                        |
| 4/1<br>(short)            | 120                                         | 147                                         |
| 4/2<br>(with short)       | 1120(In)<br>1000(Out)                       | 955(In)<br>808(Out)                         |
| 5/1                       | 669                                         | 625                                         |
| 5/2                       | 170                                         | 260                                         |
| 6/1                       | 1283                                        | 1649                                        |
| 7/1                       | 2173                                        | 2298                                        |
| 8/1                       | 890                                         | 809                                         |
| 9/1                       | 1784                                        | 1843                                        |
| 10/1                      | 1424                                        | 1380                                        |
| 11/1                      | 230                                         | 306                                         |
| 12/1                      | 1695                                        | 1762                                        |

Scenario 1: '2022 AM' (FG1: '2022 AM', Plan 1: 'Base Network Control Plan 1')

### Stage Sequence Diagram

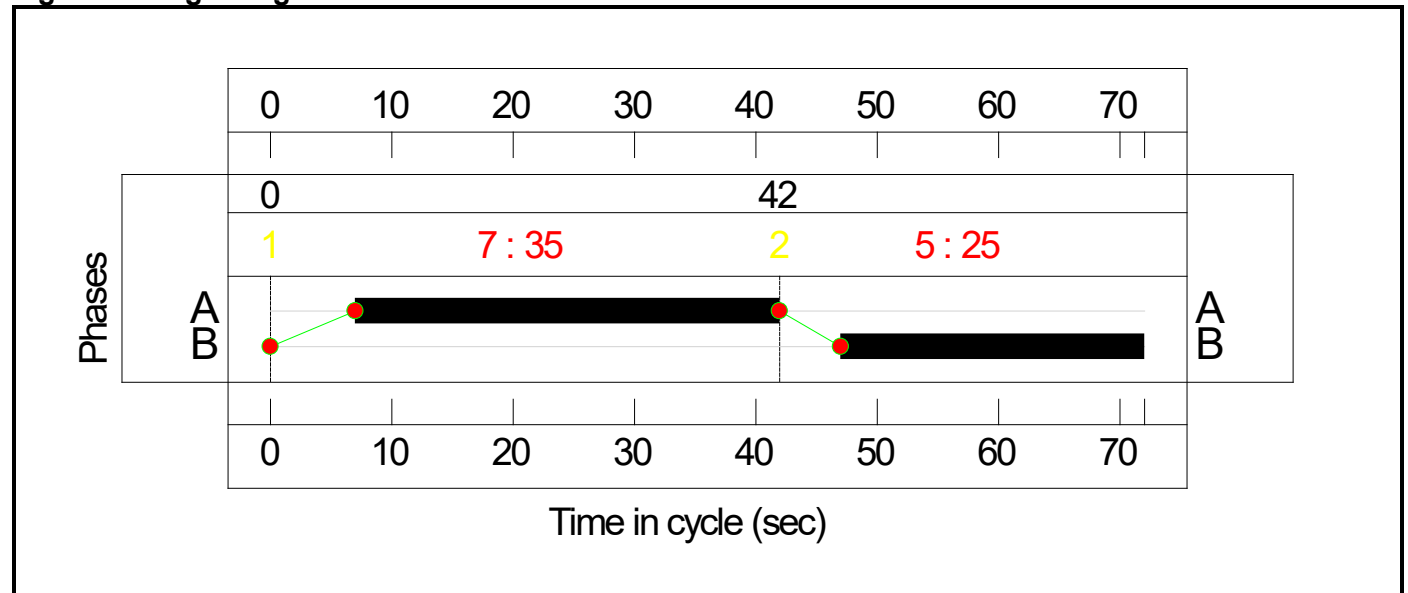


### Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 35 | 25 |
| Change Point | 0  | 42 |

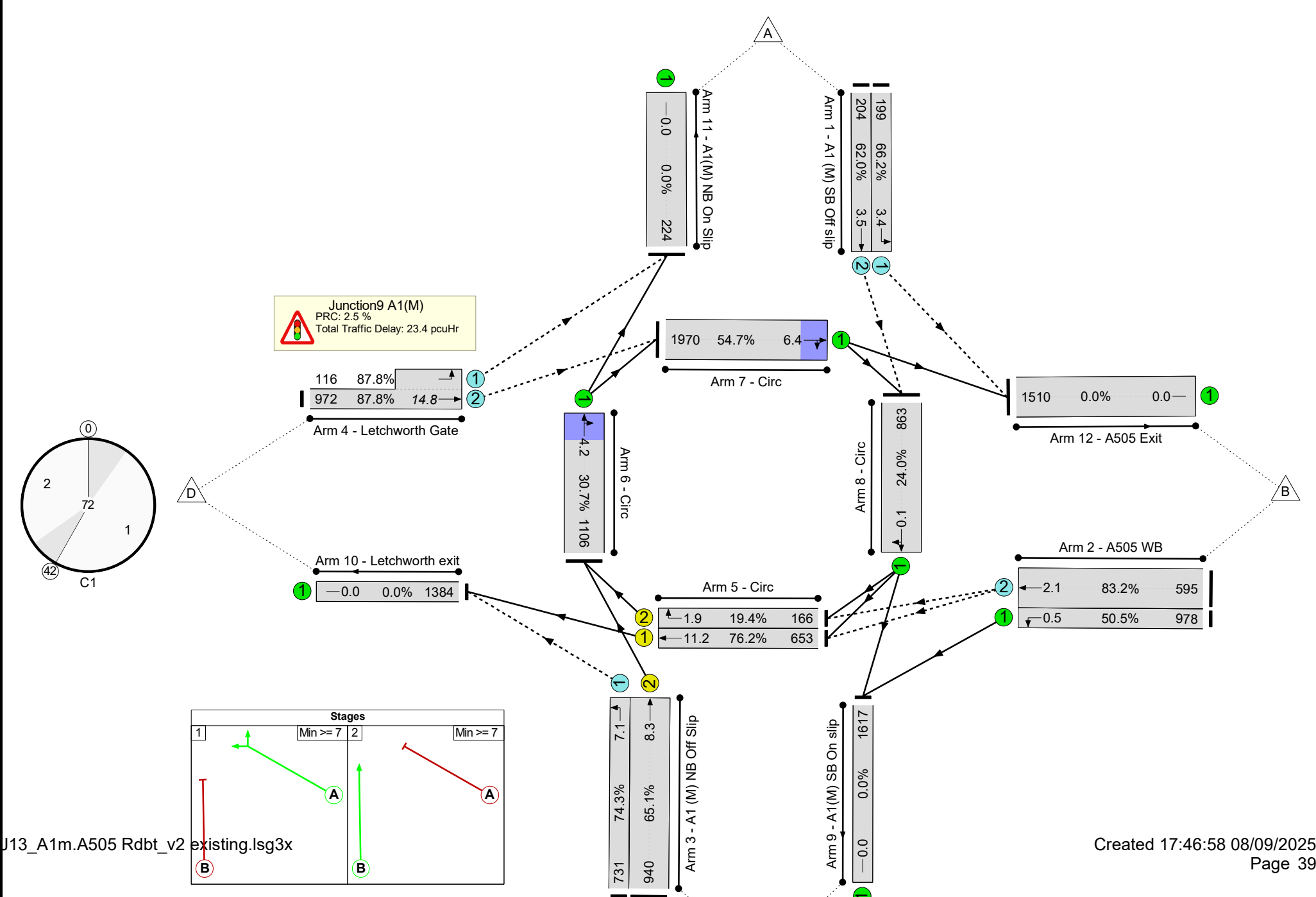
**Phase Timings**

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 35             | 7          | 42       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 25             | 47         | 0        |

**Signal Timings Diagram****Lane Green Times**

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 47          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 42        |
| 5/2                       | Circ Right               | U    | A      | 7           | 42        |







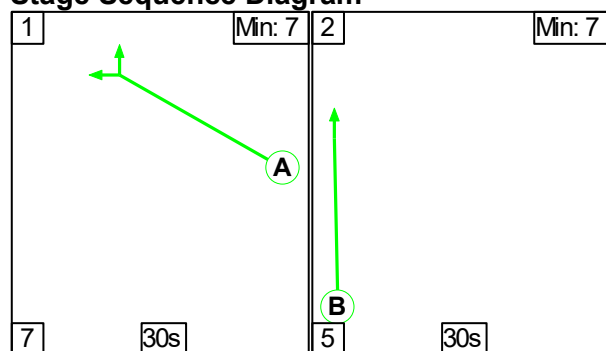
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 87.8%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 87.8%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 199               | 1961              | 301            | 66.2%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 204               | 2080              | 329            | 62.0%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 978               | 1936              | 1936           | 50.5%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 595               | 4178              | 715            | 83.2%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 731               | 1936              | 984            | 74.3%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 25              | -               | -               | 940               | 4000              | 1444           | 65.1%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1088              | 1894:1834         | 1107+132       | 87.8 : 87.8% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 35              | -               | -               | 653               | 1714              | 857            | 76.2%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 35              | -               | -               | 166               | 1714              | 857            | 19.4%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1106              | 3600              | 3600           | 30.7%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1970              | 3600              | 3600           | 54.7%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 863               | 3600              | 3600           | 24.0%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1617              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1384              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

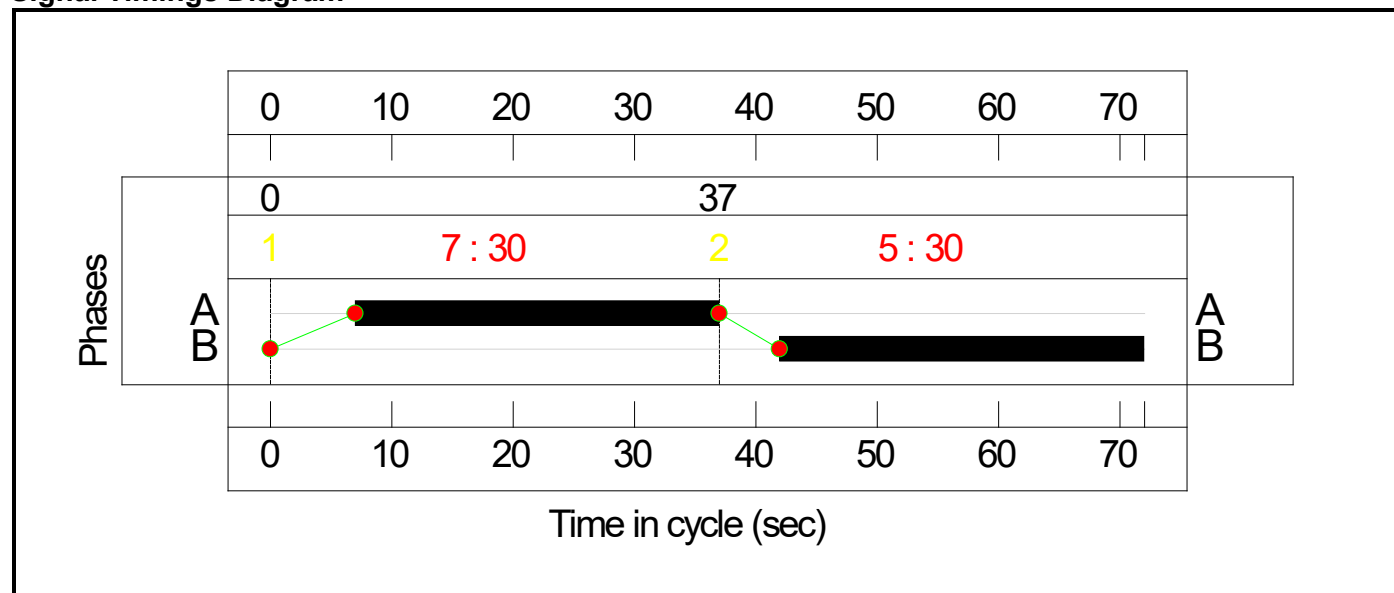
| 11/1                                                                                                                                                                                                                                                       | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 224                              | Inf                        | Inf                  | 0.0% |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                       | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1510                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                       | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                          | -                | -             | 3540                  | 366                          | 0                           | 10.2                  | 13.1                         | 0.0                                | 23.4                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                     | -                | -             | 3540                  | 366                          | 0                           | 10.2                  | 13.1                         | 0.0                                | 23.4                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                        | 199              | 199           | 199                   | 0                            | 0                           | 0.4                   | 1.0                          | -                                  | 1.3                 | 24.3                      | 2.5                              | 1.0                        | 3.4                  |      |
| 1/2                                                                                                                                                                                                                                                        | 204              | 204           | 204                   | 0                            | 0                           | 0.5                   | 0.8                          | -                                  | 1.3                 | 22.5                      | 2.7                              | 0.8                        | 3.5                  |      |
| 2/1                                                                                                                                                                                                                                                        | 978              | 978           | -                     | -                            | -                           | 0.0                   | 0.5                          | -                                  | 0.5                 | 1.9                       | 0.0                              | 0.5                        | 0.5                  |      |
| 2/2                                                                                                                                                                                                                                                        | 595              | 595           | 595                   | 0                            | 0                           | 0.0                   | 2.4                          | -                                  | 2.4                 | 14.5                      | 0.9                              | 1.2                        | 2.1                  |      |
| 3/1                                                                                                                                                                                                                                                        | 731              | 731           | 366                   | 366                          | 0                           | 0.1                   | 1.4                          | -                                  | 1.5                 | 7.6                       | 5.7                              | 1.4                        | 7.1                  |      |
| 3/2                                                                                                                                                                                                                                                        | 940              | 940           | -                     | -                            | -                           | 5.0                   | 0.9                          | -                                  | 5.9                 | 22.8                      | 7.8                              | 0.5                        | 8.3                  |      |
| 4/2+4/1                                                                                                                                                                                                                                                    | 1088             | 1088          | 2176                  | 0                            | 0                           | 0.7                   | 3.5                          | -                                  | 4.1                 | 13.6                      | 11.3                             | 3.5                        | 14.8                 |      |
| 5/1                                                                                                                                                                                                                                                        | 653              | 653           | -                     | -                            | -                           | 2.9                   | 1.6                          | -                                  | 4.5                 | 24.5                      | 9.6                              | 1.6                        | 11.2                 |      |
| 5/2                                                                                                                                                                                                                                                        | 166              | 166           | -                     | -                            | -                           | 0.5                   | 0.1                          | -                                  | 0.6                 | 12.6                      | 1.8                              | 0.1                        | 1.9                  |      |
| 6/1                                                                                                                                                                                                                                                        | 1106             | 1106          | -                     | -                            | -                           | 0.1                   | 0.2                          | -                                  | 0.3                 | 0.9                       | 4.1                              | 0.1                        | 4.2                  |      |
| 7/1                                                                                                                                                                                                                                                        | 1970             | 1970          | -                     | -                            | -                           | 0.2                   | 0.6                          | -                                  | 0.8                 | 1.4                       | 6.1                              | 0.3                        | 6.4                  |      |
| 8/1                                                                                                                                                                                                                                                        | 863              | 863           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                        | 1617             | 1617          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                       | 1384             | 1384          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                       | 224              | 224           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                       | 1510             | 1510          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div>PRC for Signalled Lanes (%): 18.1</div> <div>PRC Over All Lanes (%): 2.5</div> <div>Total Delay for Signalled Lanes (pcuHr): 10.98</div> <div>Total Delay Over All Lanes(pcuHr): 23.36</div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 30 | 30 |
| Change Point | 0  | 37 |

**Phase Timings**

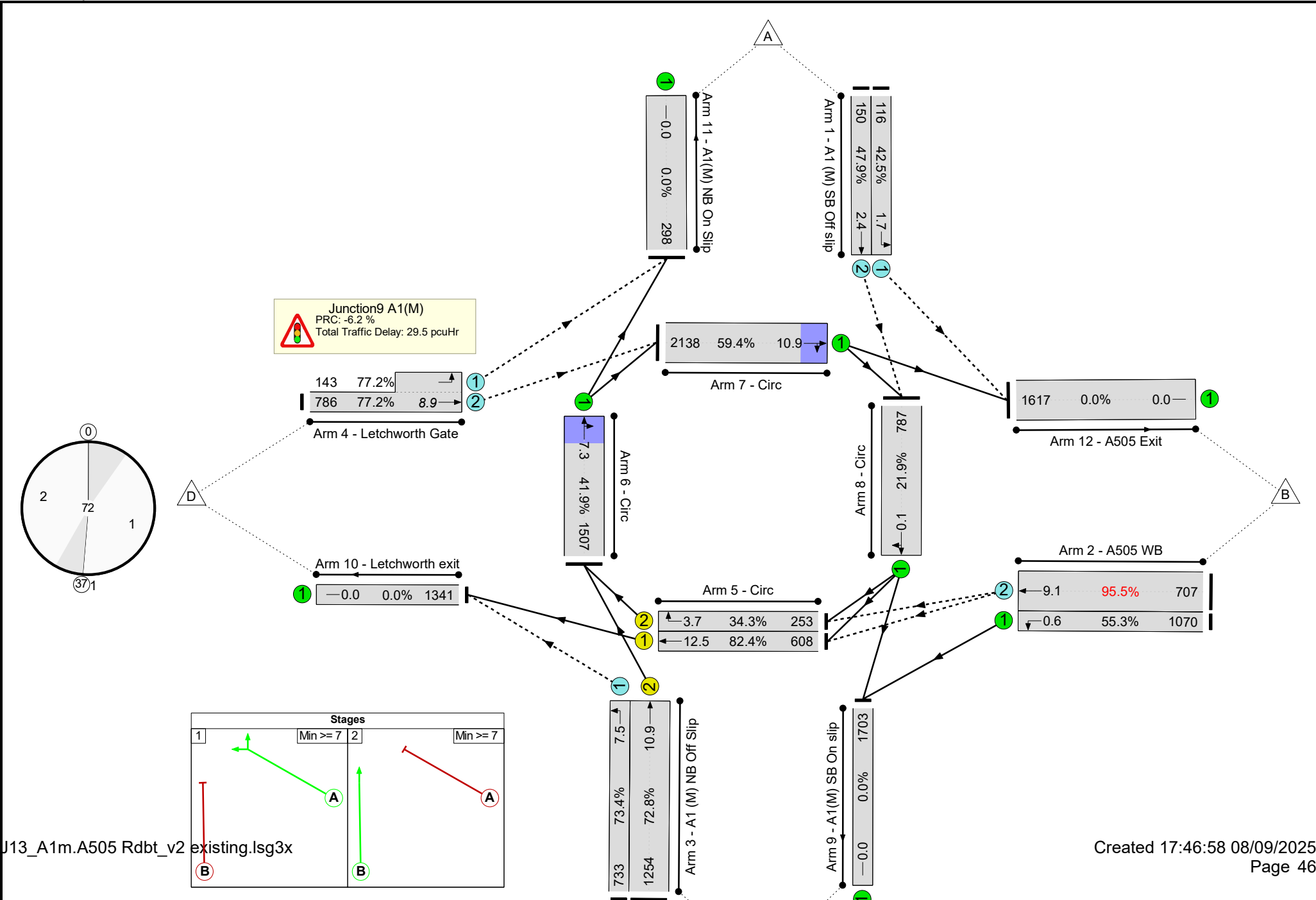
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 30             | 7          | 37       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 30             | 42         | 0        |

**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 42          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 37        |
| 5/2                       | Circ Right               | U    | A      | 7           | 37        |







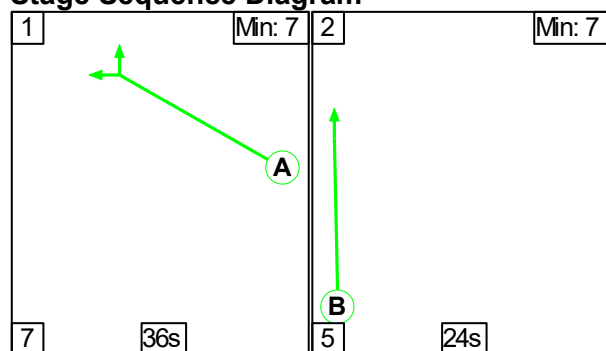
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 95.5%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 95.5%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 116               | 1961              | 273            | 42.5%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 150               | 2080              | 313            | 47.9%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1070              | 1936              | 1936           | 55.3%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 707               | 4178              | 740            | 95.5%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 733               | 1936              | 999            | 73.4%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 30              | -               | -               | 1254              | 4000              | 1722           | 72.8%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 929               | 1894:1834         | 1018+185       | 77.2 : 77.2% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 608               | 1714              | 738            | 82.4%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 253               | 1714              | 738            | 34.3%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1507              | 3600              | 3600           | 41.9%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2138              | 3600              | 3600           | 59.4%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 787               | 3600              | 3600           | 21.9%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1703              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1341              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

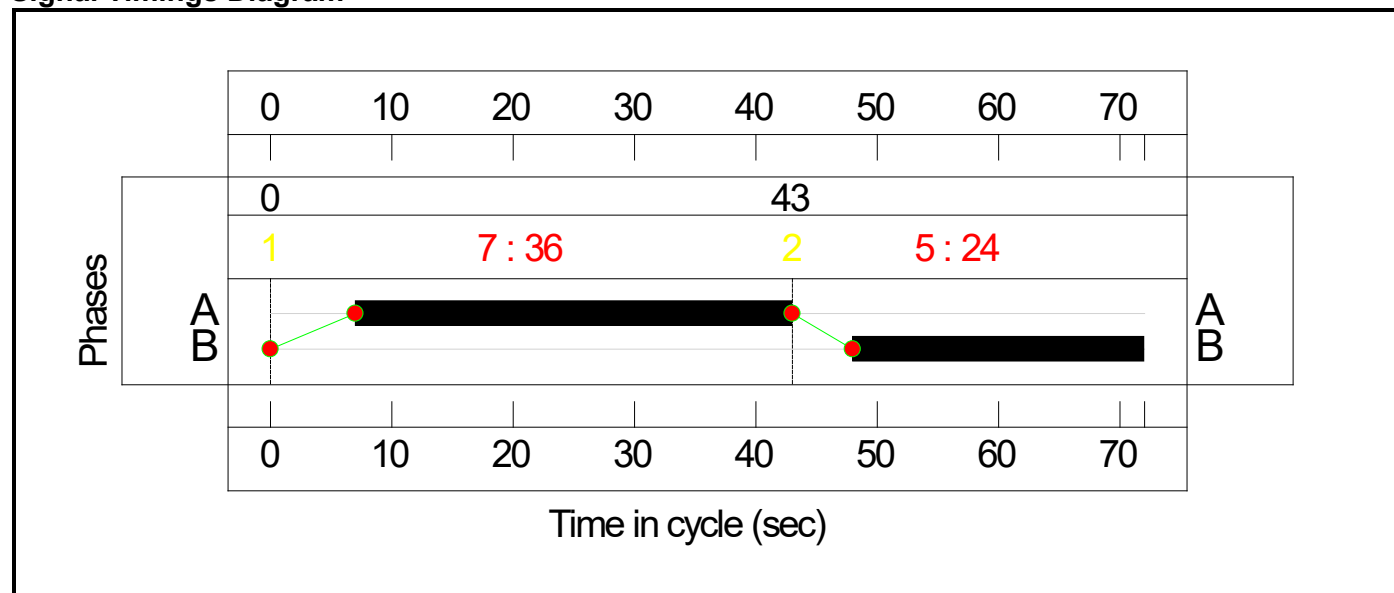
| 11/1                                                                                                                                                                                                                                                                                 | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 298                              | Inf                        | Inf                  | 0.0% |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                 | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1617                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                 | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                    | -                | -             | 3147                  | 417                          | 0                           | 12.5                  | 17.0                         | 0.0                                | 29.5                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                               | -                | -             | 3147                  | 417                          | 0                           | 12.5                  | 17.0                         | 0.0                                | 29.5                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                  | 116              | 116           | 116                   | 0                            | 0                           | 0.3                   | 0.4                          | -                                  | 0.6                 | 19.7                      | 1.3                              | 0.4                        | 1.7                  |      |
| 1/2                                                                                                                                                                                                                                                                                  | 150              | 150           | 150                   | 0                            | 0                           | 0.4                   | 0.5                          | -                                  | 0.9                 | 21.4                      | 1.9                              | 0.5                        | 2.4                  |      |
| 2/1                                                                                                                                                                                                                                                                                  | 1070             | 1070          | -                     | -                            | -                           | 0.0                   | 0.6                          | -                                  | 0.6                 | 2.1                       | 0.0                              | 0.6                        | 0.6                  |      |
| 2/2                                                                                                                                                                                                                                                                                  | 707              | 707           | 707                   | 0                            | 0                           | 0.2                   | 7.4                          | -                                  | 7.6                 | 38.8                      | 5.4                              | 3.7                        | 9.1                  |      |
| 3/1                                                                                                                                                                                                                                                                                  | 733              | 733           | 316                   | 417                          | 0                           | 0.1                   | 1.4                          | -                                  | 1.5                 | 7.3                       | 6.1                              | 1.4                        | 7.5                  |      |
| 3/2                                                                                                                                                                                                                                                                                  | 1254             | 1254          | -                     | -                            | -                           | 5.9                   | 1.3                          | -                                  | 7.3                 | 20.8                      | 10.3                             | 0.7                        | 10.9                 |      |
| 4/2+4/1                                                                                                                                                                                                                                                                              | 929              | 929           | 1858                  | 0                            | 0                           | 0.6                   | 1.7                          | -                                  | 2.3                 | 8.9                       | 7.2                              | 1.7                        | 8.9                  |      |
| 5/1                                                                                                                                                                                                                                                                                  | 608              | 608           | -                     | -                            | -                           | 3.4                   | 2.3                          | -                                  | 5.7                 | 33.7                      | 10.2                             | 2.3                        | 12.5                 |      |
| 5/2                                                                                                                                                                                                                                                                                  | 253              | 253           | -                     | -                            | -                           | 0.9                   | 0.3                          | -                                  | 1.2                 | 17.2                      | 3.5                              | 0.3                        | 3.7                  |      |
| 6/1                                                                                                                                                                                                                                                                                  | 1507             | 1507          | -                     | -                            | -                           | 0.2                   | 0.4                          | -                                  | 0.5                 | 1.2                       | 7.1                              | 0.2                        | 7.3                  |      |
| 7/1                                                                                                                                                                                                                                                                                  | 2138             | 2138          | -                     | -                            | -                           | 0.4                   | 0.7                          | -                                  | 1.1                 | 1.9                       | 10.6                             | 0.4                        | 10.9                 |      |
| 8/1                                                                                                                                                                                                                                                                                  | 787              | 787           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 0.6                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                  | 1703             | 1703          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                 | 1341             | 1341          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                 | 298              | 298           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                 | 1617             | 1617          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 9.2</div> <div>PRC Over All Lanes (%): -6.2</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 14.15</div> <div>Total Delay Over All Lanes(pcuHr): 29.49</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 36 | 24 |
| Change Point | 0  | 43 |

**Phase Timings**

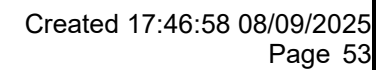
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 36             | 7          | 43       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 24             | 48         | 0        |

**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 48          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 43        |
| 5/2                       | Circ Right               | U    | A      | 7           | 43        |







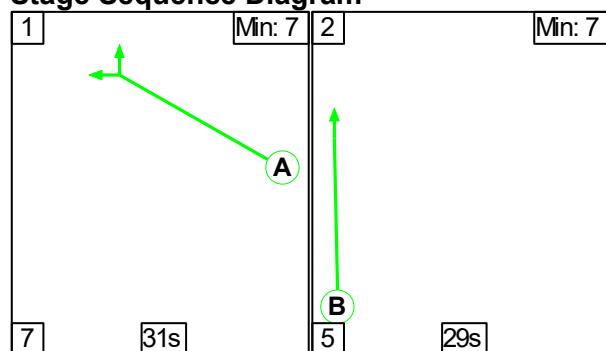
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 93.1%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 93.1%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 209               | 1961              | 282            | 74.1%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 214               | 2080              | 305            | 70.1%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1025              | 1936              | 1936           | 52.9%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 624               | 4178              | 701            | 89.0%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 767               | 1936              | 974            | 78.8%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 24              | -               | -               | 985               | 4000              | 1389           | 70.9%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1141              | 1894:1834         | 1095+131       | 93.1 : 93.1% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 685               | 1714              | 881            | 77.8%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 174               | 1714              | 881            | 19.8%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1159              | 3600              | 3600           | 32.2%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2065              | 3600              | 3600           | 57.4%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 905               | 3600              | 3600           | 25.1%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1695              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1452              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

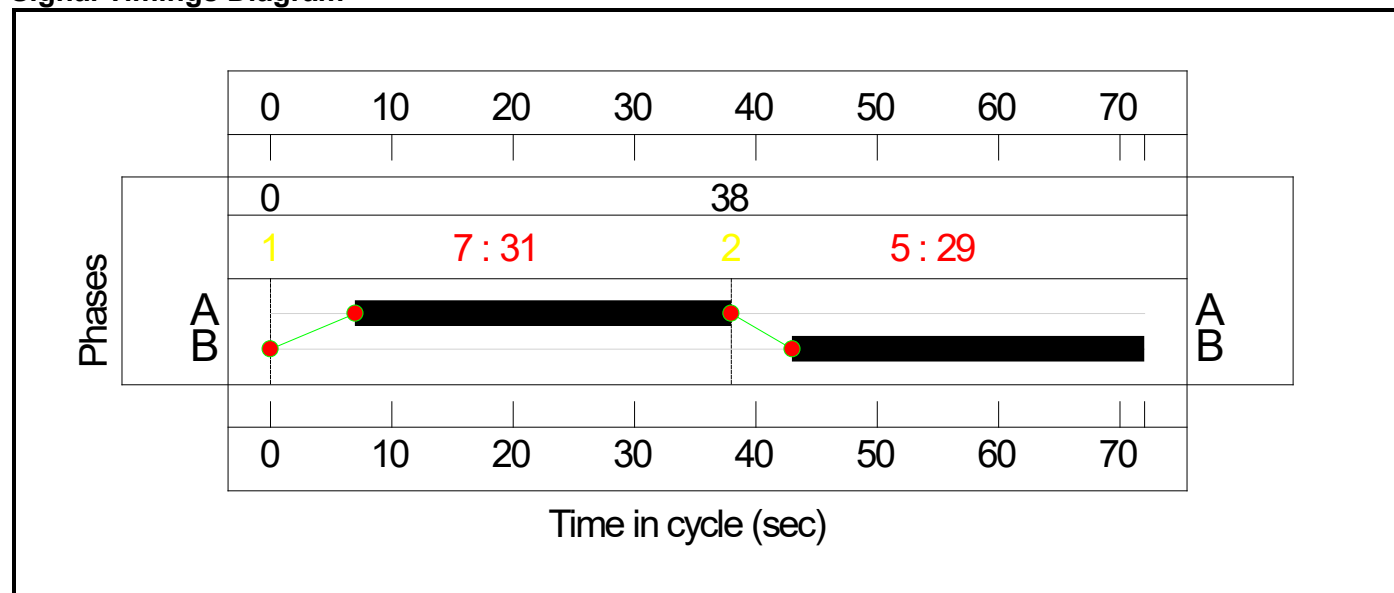
| 11/1                                                                                                                                                                                                                                                                                  | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 235                              | Inf                        | Inf                  | 0.0% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1583                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                     | -                | -             | 3720                  | 376                          | 0                           | 11.6                  | 18.6                         | 0.0                                | 30.2                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                | -                | -             | 3720                  | 376                          | 0                           | 11.6                  | 18.6                         | 0.0                                | 30.2                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                   | 209              | 209           | 209                   | 0                            | 0                           | 0.5                   | 1.4                          | -                                  | 1.8                 | 31.8                      | 2.8                              | 1.4                        | 4.2                  |      |
| 1/2                                                                                                                                                                                                                                                                                   | 214              | 214           | 214                   | 0                            | 0                           | 0.5                   | 1.1                          | -                                  | 1.7                 | 28.2                      | 3.0                              | 1.1                        | 4.2                  |      |
| 2/1                                                                                                                                                                                                                                                                                   | 1025             | 1025          | -                     | -                            | -                           | 0.0                   | 0.6                          | -                                  | 0.6                 | 2.0                       | 0.0                              | 0.6                        | 0.6                  |      |
| 2/2                                                                                                                                                                                                                                                                                   | 624              | 624           | 624                   | 0                            | 0                           | 0.1                   | 3.7                          | -                                  | 3.8                 | 21.7                      | 3.4                              | 1.8                        | 5.2                  |      |
| 3/1                                                                                                                                                                                                                                                                                   | 767              | 767           | 391                   | 376                          | 0                           | 0.2                   | 1.8                          | -                                  | 2.0                 | 9.5                       | 7.9                              | 1.8                        | 9.7                  |      |
| 3/2                                                                                                                                                                                                                                                                                   | 985              | 985           | -                     | -                            | -                           | 5.6                   | 1.2                          | -                                  | 6.8                 | 24.8                      | 8.5                              | 0.6                        | 9.1                  |      |
| 4/2+4/1                                                                                                                                                                                                                                                                               | 1141             | 1141          | 2282                  | 0                            | 0                           | 1.0                   | 5.9                          | -                                  | 6.9                 | 21.7                      | 14.7                             | 5.9                        | 20.6                 |      |
| 5/1                                                                                                                                                                                                                                                                                   | 685              | 685           | -                     | -                            | -                           | 3.0                   | 1.7                          | -                                  | 4.7                 | 24.8                      | 10.2                             | 1.7                        | 11.9                 |      |
| 5/2                                                                                                                                                                                                                                                                                   | 174              | 174           | -                     | -                            | -                           | 0.5                   | 0.1                          | -                                  | 0.6                 | 11.9                      | 1.9                              | 0.1                        | 2.0                  |      |
| 6/1                                                                                                                                                                                                                                                                                   | 1159             | 1159          | -                     | -                            | -                           | 0.1                   | 0.2                          | -                                  | 0.3                 | 1.0                       | 5.0                              | 0.1                        | 5.1                  |      |
| 7/1                                                                                                                                                                                                                                                                                   | 2065             | 2065          | -                     | -                            | -                           | 0.2                   | 0.7                          | -                                  | 0.9                 | 1.6                       | 7.1                              | 0.3                        | 7.5                  |      |
| 8/1                                                                                                                                                                                                                                                                                   | 905              | 905           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                   | 1695             | 1695          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                  | 1452             | 1452          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                  | 235              | 235           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                  | 1583             | 1583          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 15.7</div> <div>PRC Over All Lanes (%): -3.4</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 12.07</div> <div>Total Delay Over All Lanes(pcuHr): 30.21</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 31 | 29 |
| Change Point | 0  | 38 |

**Phase Timings**

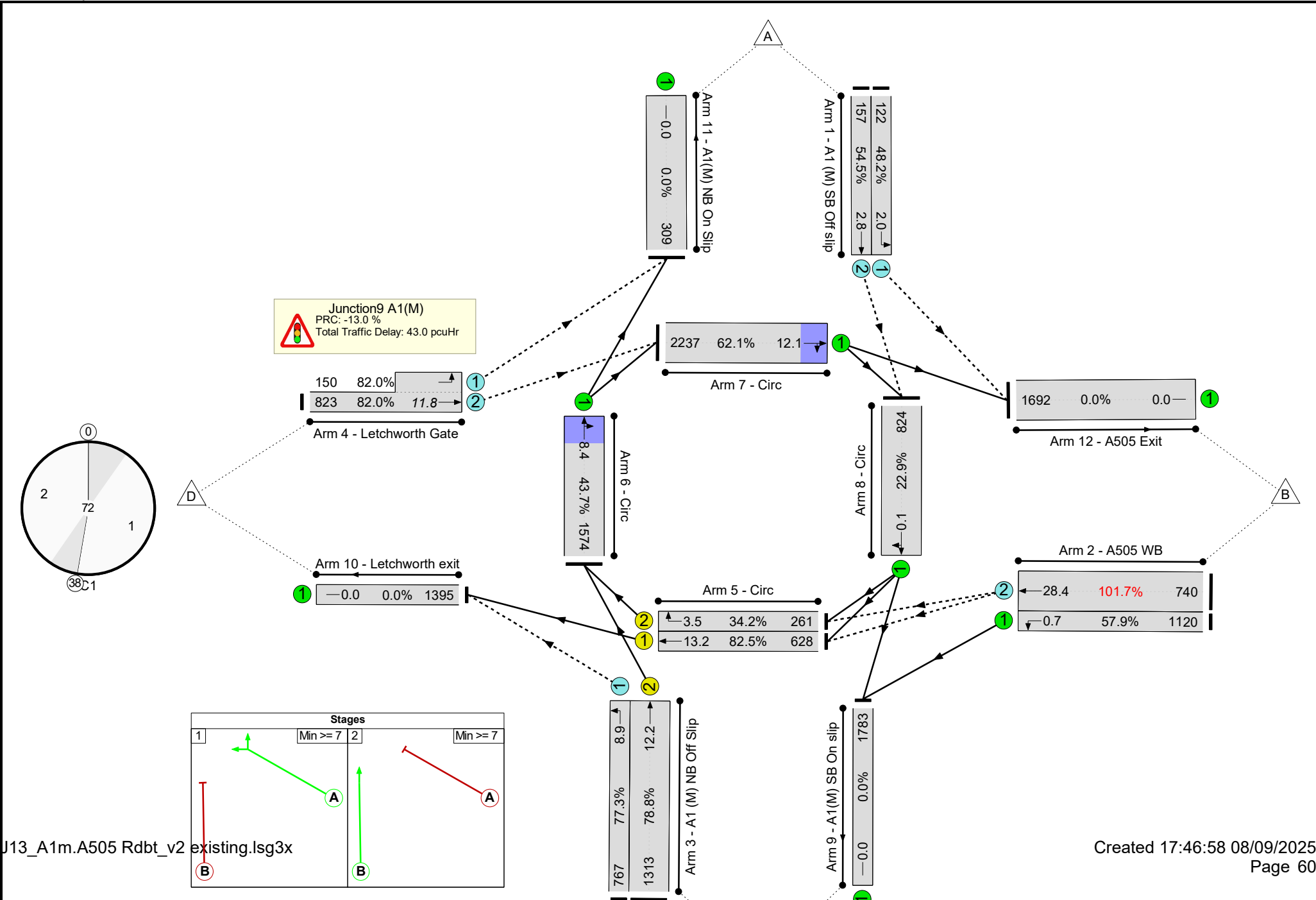
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 31             | 7          | 38       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 29             | 43         | 0        |

**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 43          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 38        |
| 5/2                       | Circ Right               | U    | A      | 7           | 38        |







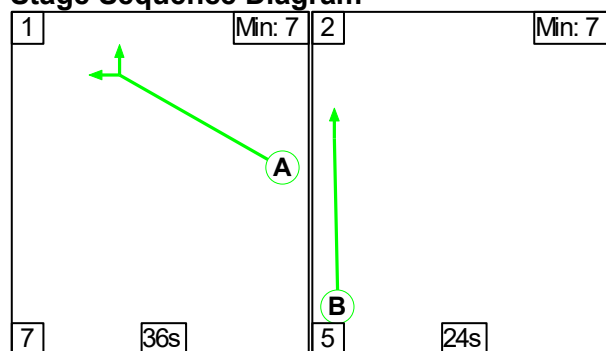
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 101.7%       |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 101.7%       |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 122               | 1961              | 253            | 48.2%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 157               | 2080              | 288            | 54.5%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1120              | 1936              | 1936           | 57.9%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 740               | 4178              | 728            | 101.7%       |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 767               | 1936              | 993            | 77.3%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 29              | -               | -               | 1313              | 4000              | 1667           | 78.8%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 973               | 1894:1834         | 1004+183       | 82.0 : 82.0% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 31              | -               | -               | 636               | 1714              | 762            | 82.5%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 31              | -               | -               | 265               | 1714              | 762            | 34.2%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1578              | 3600              | 3600           | 43.7%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2239              | 3600              | 3600           | 62.1%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 824               | 3600              | 3600           | 22.9%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1783              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1403              | Inf               | Inf            | 0.0%         |
| 11/1                              | A1(M) NB On Slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 312               | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

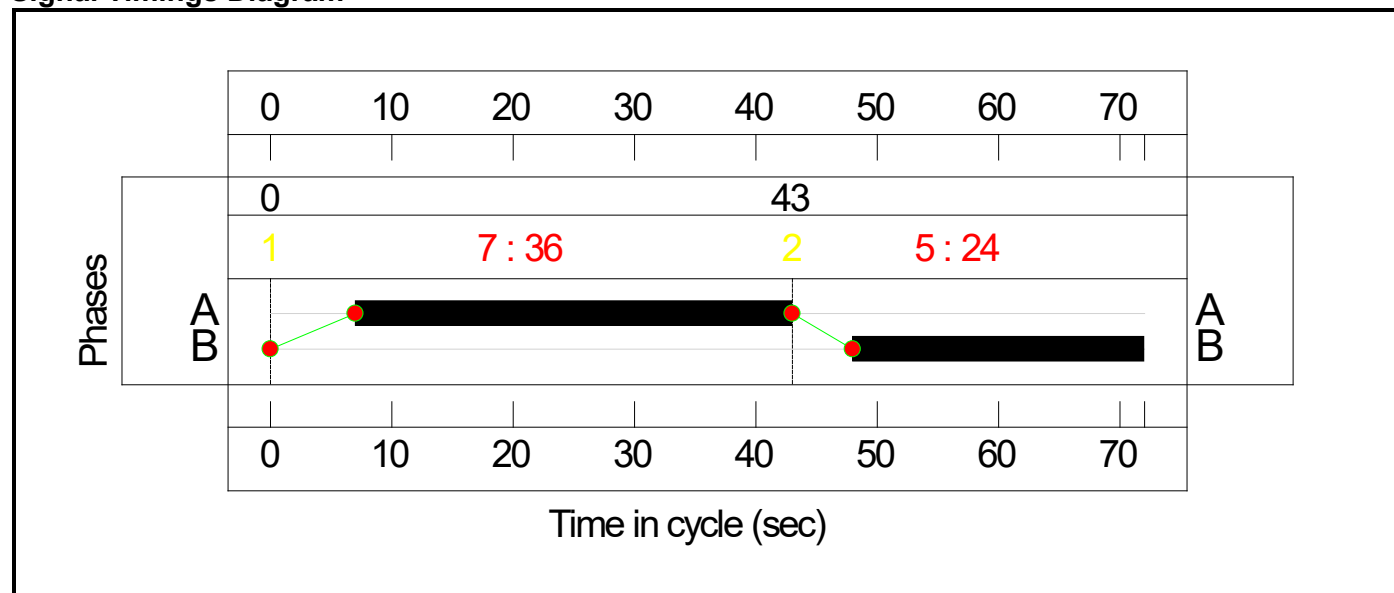
| 12/1                       | A505 Exit      | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1694                             | Inf                        | Inf                  | 0.0% |
|----------------------------|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| Item                       | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 | -              | -             | 3279                  | 441                          | 0                           | 14.6                  | 28.4                         | 0.0                                | 43.0                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)            | -              | -             | 3279                  | 441                          | 0                           | 14.6                  | 28.4                         | 0.0                                | 43.0                | -                         | -                                | -                          | -                    |      |
| 1/1                        | 122            | 122           | 122                   | 0                            | 0                           | 0.3                   | 0.5                          | -                                  | 0.8                 | 23.4                      | 1.5                              | 0.5                        | 2.0                  |      |
| 1/2                        | 157            | 157           | 157                   | 0                            | 0                           | 0.5                   | 0.6                          | -                                  | 1.1                 | 25.7                      | 2.2                              | 0.6                        | 2.8                  |      |
| 2/1                        | 1120           | 1120          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.2                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                        | 740            | 728           | 728                   | 0                            | 0                           | 1.1                   | 17.0                         | -                                  | 18.1                | 88.0                      | 19.9                             | 8.5                        | 28.4                 |      |
| 3/1                        | 767            | 767           | 326                   | 441                          | 0                           | 0.2                   | 1.7                          | -                                  | 1.9                 | 8.9                       | 7.2                              | 1.7                        | 8.9                  |      |
| 3/2                        | 1313           | 1313          | -                     | -                            | -                           | 6.7                   | 1.8                          | -                                  | 8.5                 | 23.3                      | 11.3                             | 0.9                        | 12.2                 |      |
| 4/2+4/1                    | 973            | 973           | 1946                  | 0                            | 0                           | 0.8                   | 2.2                          | -                                  | 3.0                 | 11.2                      | 9.6                              | 2.2                        | 11.8                 |      |
| 5/1                        | 628            | 628           | -                     | -                            | -                           | 3.4                   | 2.3                          | -                                  | 5.7                 | 32.7                      | 11.0                             | 2.3                        | 13.2                 |      |
| 5/2                        | 261            | 261           | -                     | -                            | -                           | 0.8                   | 0.3                          | -                                  | 1.1                 | 15.3                      | 3.2                              | 0.3                        | 3.5                  |      |
| 6/1                        | 1574           | 1574          | -                     | -                            | -                           | 0.2                   | 0.4                          | -                                  | 0.6                 | 1.3                       | 8.2                              | 0.2                        | 8.4                  |      |
| 7/1                        | 2237           | 2237          | -                     | -                            | -                           | 0.5                   | 0.8                          | -                                  | 1.3                 | 2.2                       | 11.7                             | 0.4                        | 12.1                 |      |
| 8/1                        | 824            | 824           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 0.6                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                        | 1783           | 1783          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                       | 1395           | 1395          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                       | 309            | 309           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                       | 1692           | 1692          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| C1                         |                |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 36 | 24 |
| Change Point | 0  | 43 |

**Phase Timings**

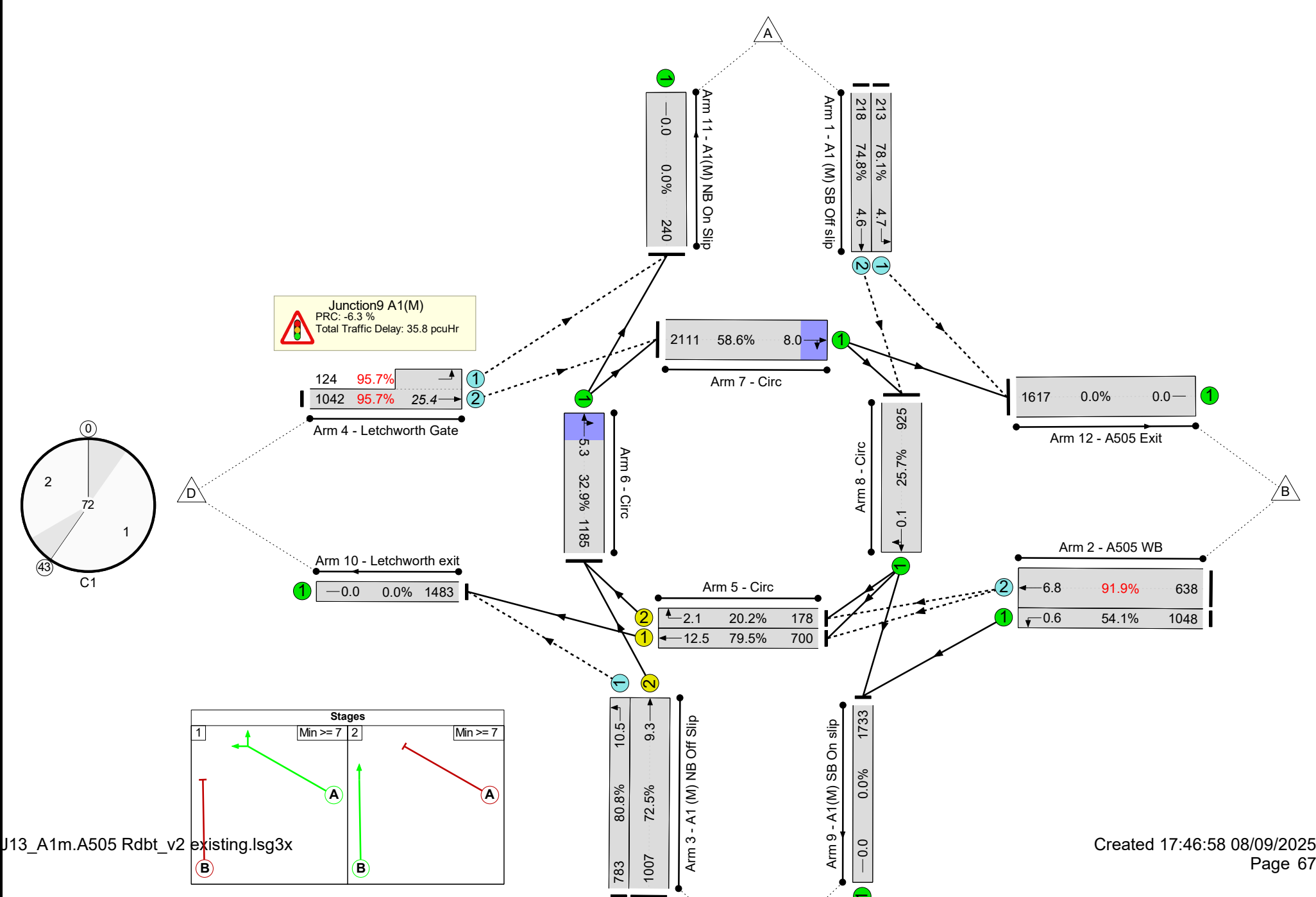
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 36             | 7          | 43       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 24             | 48         | 0        |

**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 48          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 43        |
| 5/2                       | Circ Right               | U    | A      | 7           | 43        |







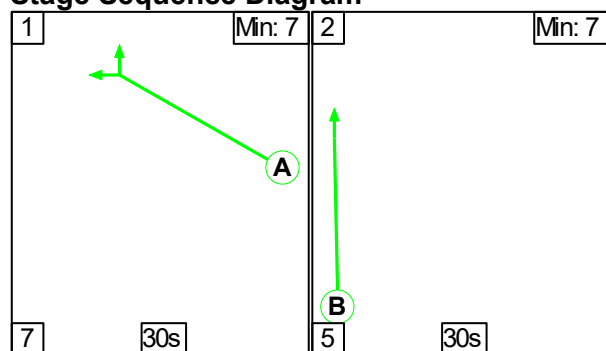
## Detailed Input Data And Results

### Network Results

| Item                                      | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network:<br/>A1(m)<br/>Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 95.7%        |
| <b>Junction9<br/>A1(M)</b>                | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 95.7%        |
| 1/1                                       | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 213               | 1961              | 273            | 78.1%        |
| 1/2                                       | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 218               | 2080              | 292            | 74.8%        |
| 2/1                                       | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1048              | 1936              | 1936           | 54.1%        |
| 2/2                                       | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 638               | 4178              | 694            | 91.9%        |
| 3/1                                       | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 783               | 1936              | 969            | 80.8%        |
| 3/2                                       | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 24              | -               | -               | 1007              | 4000              | 1389           | 72.5%        |
| 4/2+4/1                                   | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1166              | 1894:1834         | 1089+130       | 95.7 : 95.7% |
| 5/1                                       | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 700               | 1714              | 881            | 79.5%        |
| 5/2                                       | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 178               | 1714              | 881            | 20.2%        |
| 6/1                                       | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1185              | 3600              | 3600           | 32.9%        |
| 7/1                                       | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2111              | 3600              | 3600           | 58.6%        |
| 8/1                                       | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 925               | 3600              | 3600           | 25.7%        |
| 9/1                                       | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1733              | Inf               | Inf            | 0.0%         |
| 10/1                                      | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1483              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

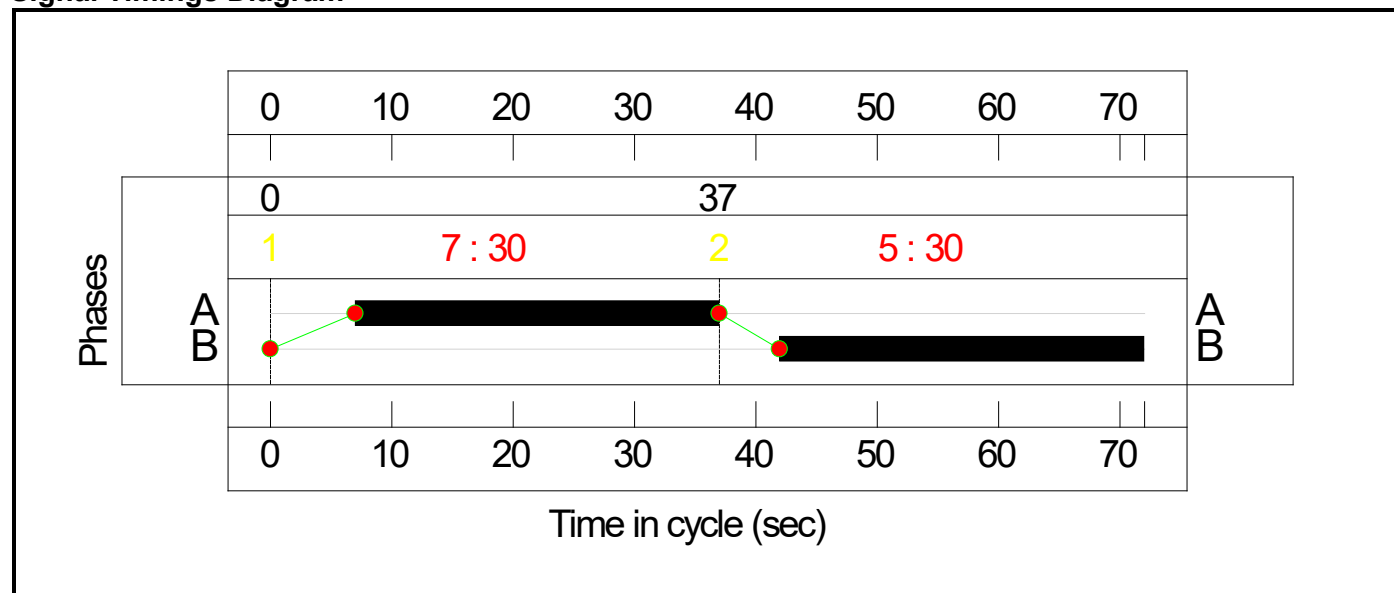
| 11/1                                                                                                                                                                                                                                                                                               | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 240                              | Inf                        | Inf                  | 0.0% |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                               | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1617                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                               | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                                  | -                | -             | 3787                  | 397                          | 0                           | 12.3                  | 23.4                         | 0.0                                | 35.8                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                             | -                | -             | 3787                  | 397                          | 0                           | 12.3                  | 23.4                         | 0.0                                | 35.8                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                                | 213              | 213           | 213                   | 0                            | 0                           | 0.5                   | 1.7                          | -                                  | 2.2                 | 37.2                      | 3.0                              | 1.7                        | 4.7                  |      |
| 1/2                                                                                                                                                                                                                                                                                                | 218              | 218           | 218                   | 0                            | 0                           | 0.6                   | 1.4                          | -                                  | 2.0                 | 33.1                      | 3.1                              | 1.4                        | 4.6                  |      |
| 2/1                                                                                                                                                                                                                                                                                                | 1048             | 1048          | -                     | -                            | -                           | 0.0                   | 0.6                          | -                                  | 0.6                 | 2.0                       | 0.0                              | 0.6                        | 0.6                  |      |
| 2/2                                                                                                                                                                                                                                                                                                | 638              | 638           | 638                   | 0                            | 0                           | 0.2                   | 4.8                          | -                                  | 5.0                 | 28.1                      | 4.3                              | 2.4                        | 6.8                  |      |
| 3/1                                                                                                                                                                                                                                                                                                | 783              | 783           | 386                   | 397                          | 0                           | 0.3                   | 2.1                          | -                                  | 2.3                 | 10.7                      | 8.5                              | 2.1                        | 10.5                 |      |
| 3/2                                                                                                                                                                                                                                                                                                | 1007             | 1007          | -                     | -                            | -                           | 5.7                   | 1.3                          | -                                  | 7.0                 | 25.2                      | 8.7                              | 0.7                        | 9.3                  |      |
| 4/2+4/1                                                                                                                                                                                                                                                                                            | 1166             | 1166          | 2332                  | 0                            | 0                           | 1.2                   | 8.4                          | -                                  | 9.6                 | 29.5                      | 17.1                             | 8.4                        | 25.4                 |      |
| 5/1                                                                                                                                                                                                                                                                                                | 700              | 700           | -                     | -                            | -                           | 3.1                   | 1.9                          | -                                  | 5.0                 | 25.7                      | 10.6                             | 1.9                        | 12.5                 |      |
| 5/2                                                                                                                                                                                                                                                                                                | 178              | 178           | -                     | -                            | -                           | 0.4                   | 0.1                          | -                                  | 0.6                 | 11.6                      | 1.9                              | 0.1                        | 2.1                  |      |
| 6/1                                                                                                                                                                                                                                                                                                | 1185             | 1185          | -                     | -                            | -                           | 0.1                   | 0.2                          | -                                  | 0.3                 | 1.0                       | 5.2                              | 0.1                        | 5.3                  |      |
| 7/1                                                                                                                                                                                                                                                                                                | 2111             | 2111          | -                     | -                            | -                           | 0.3                   | 0.7                          | -                                  | 1.0                 | 1.6                       | 7.6                              | 0.4                        | 8.0                  |      |
| 8/1                                                                                                                                                                                                                                                                                                | 925              | 925           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                                | 1733             | 1733          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                               | 1483             | 1483          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                               | 240              | 240           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                               | 1617             | 1617          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 13.2</div> <div>PRC Over All Lanes (%): -6.3</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 12.61</div> <div>Total Delay Over All Lanes(pcuHr): 35.75</div> </div> <div> <div>Cycle Time (s): 72</div> </div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 30 | 30 |
| Change Point | 0  | 37 |

**Phase Timings**

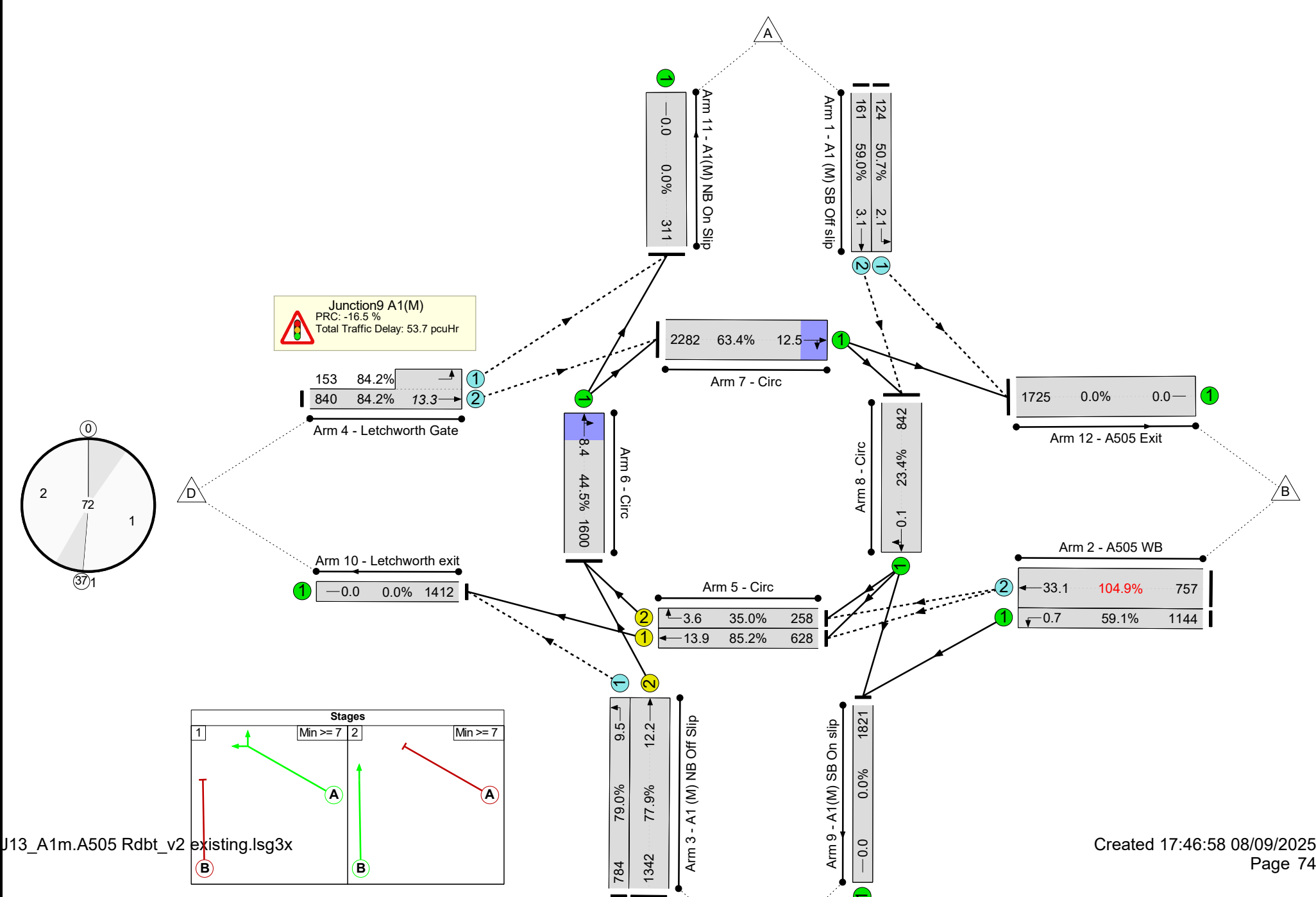
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 30             | 7          | 37       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 30             | 42         | 0        |

**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 42          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 37        |
| 5/2                       | Circ Right               | U    | A      | 7           | 37        |







## Detailed Input Data And Results

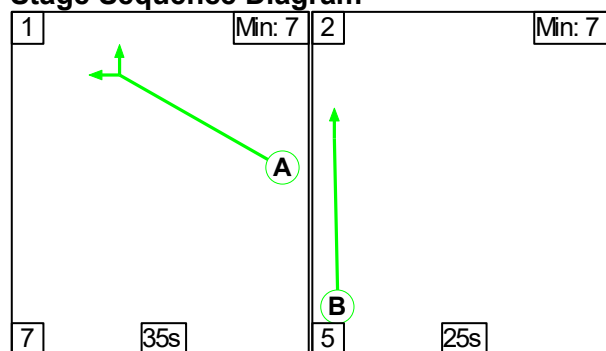
### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 104.9%       |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 104.9%       |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 124               | 1961              | 245            | 50.7%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 161               | 2080              | 273            | 59.0%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1144              | 1936              | 1936           | 59.1%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 757               | 4178              | 722            | 104.9%       |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 784               | 1936              | 993            | 79.0%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 30              | -               | -               | 1342              | 4000              | 1722           | 77.9%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 993               | 1894:1834         | 998+182        | 84.2 : 84.2% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 651               | 1714              | 738            | 85.2%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 271               | 1714              | 738            | 35.0%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1613              | 3600              | 3600           | 44.5%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2287              | 3600              | 3600           | 63.4%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 842               | 3600              | 3600           | 23.4%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1821              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1435              | Inf               | Inf            | 0.0%         |
| 11/1                              | A1(M) NB On Slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 319               | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

| 12/1                       | A505 Exit      | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1730                             | Inf                        | Inf                  | 0.0% |
|----------------------------|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| Item                       | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 | -              | -             | 3302                  | 475                          | 0                           | 16.0                  | 37.7                         | 0.0                                | 53.7                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)            | -              | -             | 3302                  | 475                          | 0                           | 16.0                  | 37.7                         | 0.0                                | 53.7                | -                         | -                                | -                          | -                    |      |
| 1/1                        | 124            | 124           | 124                   | 0                            | 0                           | 0.4                   | 0.5                          | -                                  | 0.9                 | 25.1                      | 1.6                              | 0.5                        | 2.1                  |      |
| 1/2                        | 161            | 161           | 161                   | 0                            | 0                           | 0.6                   | 0.7                          | -                                  | 1.3                 | 29.0                      | 2.4                              | 0.7                        | 3.1                  |      |
| 2/1                        | 1144           | 1144          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.3                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                        | 757            | 722           | 722                   | 0                            | 0                           | 2.1                   | 25.1                         | -                                  | 27.2                | 129.6                     | 20.5                             | 12.6                       | 33.1                 |      |
| 3/1                        | 784            | 784           | 309                   | 475                          | 0                           | 0.3                   | 1.8                          | -                                  | 2.1                 | 9.7                       | 7.6                              | 1.8                        | 9.5                  |      |
| 3/2                        | 1342           | 1342          | -                     | -                            | -                           | 6.5                   | 1.7                          | -                                  | 8.3                 | 22.3                      | 11.4                             | 0.9                        | 12.2                 |      |
| 4/2+4/1                    | 993            | 993           | 1986                  | 0                            | 0                           | 0.9                   | 2.6                          | -                                  | 3.5                 | 12.7                      | 10.7                             | 2.6                        | 13.3                 |      |
| 5/1                        | 628            | 628           | -                     | -                            | -                           | 3.6                   | 2.7                          | -                                  | 6.4                 | 36.4                      | 11.2                             | 2.7                        | 13.9                 |      |
| 5/2                        | 258            | 258           | -                     | -                            | -                           | 0.9                   | 0.3                          | -                                  | 1.1                 | 15.8                      | 3.3                              | 0.3                        | 3.6                  |      |
| 6/1                        | 1600           | 1600          | -                     | -                            | -                           | 0.2                   | 0.4                          | -                                  | 0.6                 | 1.4                       | 8.2                              | 0.2                        | 8.4                  |      |
| 7/1                        | 2282           | 2282          | -                     | -                            | -                           | 0.6                   | 0.9                          | -                                  | 1.4                 | 2.2                       | 12.1                             | 0.4                        | 12.5                 |      |
| 8/1                        | 842            | 842           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                        | 1821           | 1821          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                       | 1412           | 1412          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                       | 311            | 311           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                       | 1725           | 1725          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| C1                         |                |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

## Stage Sequence Diagram



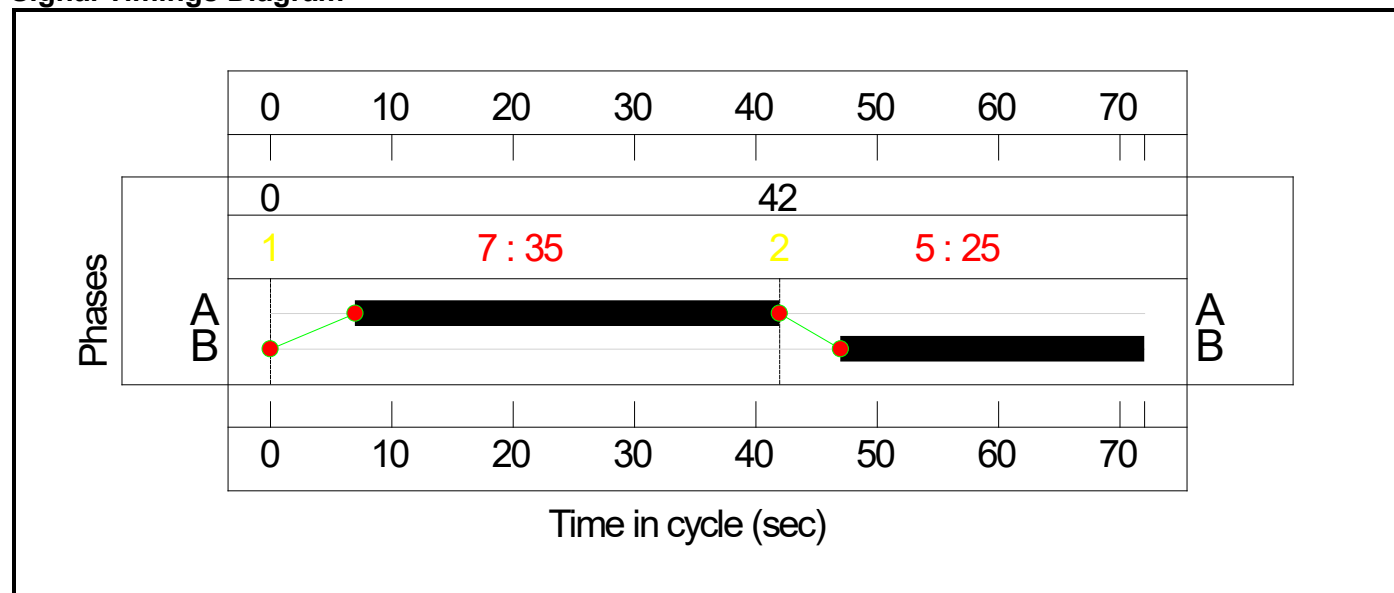
## Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 35 | 25 |
| Change Point | 0  | 42 |

## Phase Timings

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 35             | 7          | 42       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 25             | 47         | 0        |

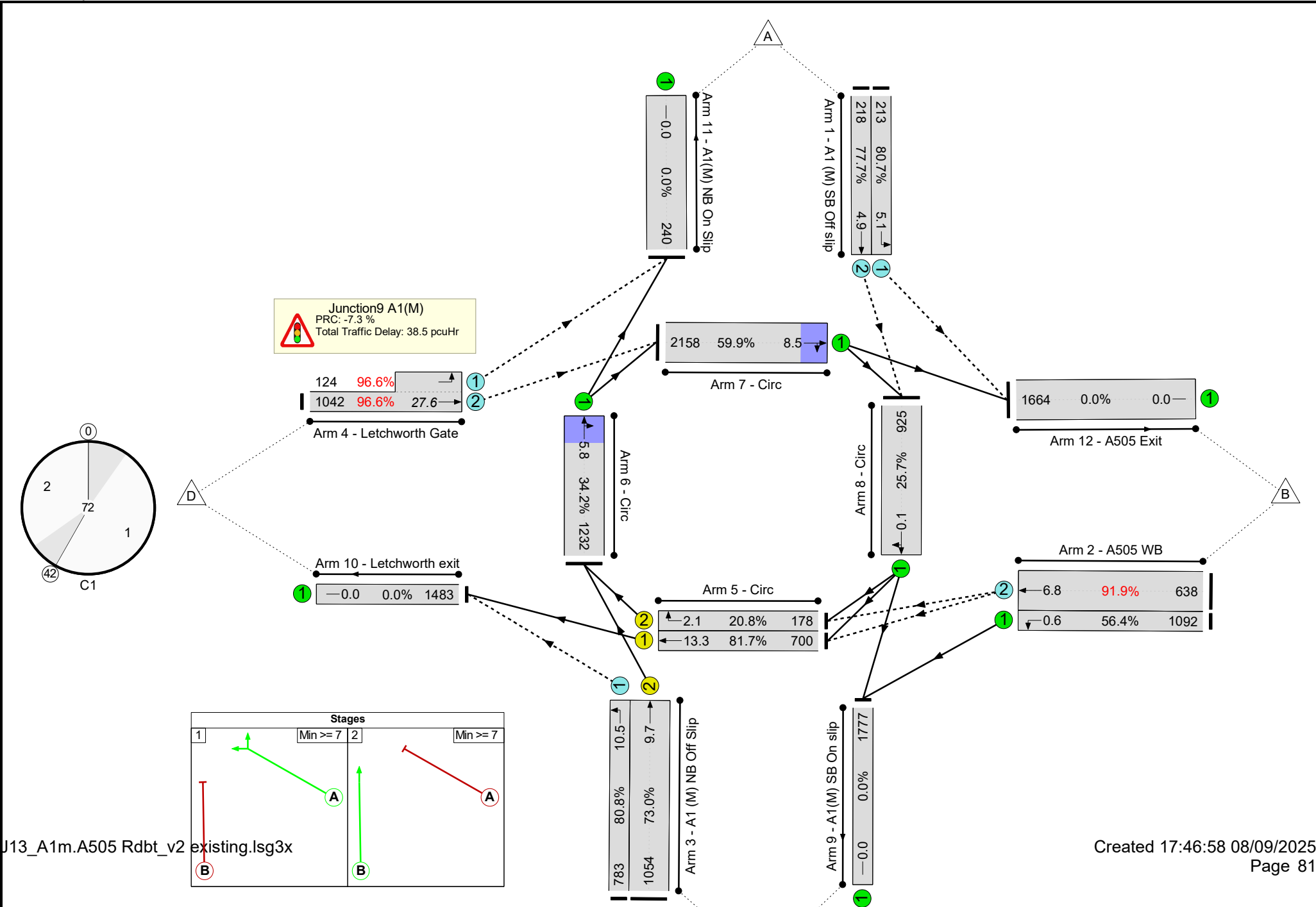
## Signal Timings Diagram



### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 47          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 42        |
| 5/2                       | Circ Right               | U    | A      | 7           | 42        |







## Detailed Input Data And Results

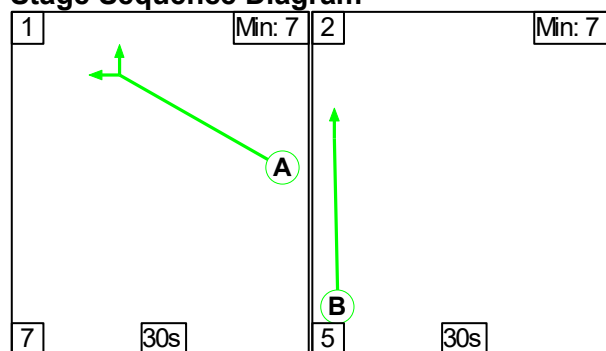
### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 96.6%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 96.6%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 213               | 1961              | 264            | 80.7%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 218               | 2080              | 281            | 77.7%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1092              | 1936              | 1936           | 56.4%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 638               | 4178              | 694            | 91.9%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 783               | 1936              | 969            | 80.8%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 25              | -               | -               | 1054              | 4000              | 1444           | 73.0%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1166              | 1894:1834         | 1079+128       | 96.6 : 96.6% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 35              | -               | -               | 700               | 1714              | 857            | 81.7%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 35              | -               | -               | 178               | 1714              | 857            | 20.8%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1232              | 3600              | 3600           | 34.2%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2158              | 3600              | 3600           | 59.9%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 925               | 3600              | 3600           | 25.7%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1777              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1483              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

| 11/1                                                                                                                                                                                                                                                                                  | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 240                              | Inf                        | Inf                  | 0.0% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1664                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                     | -                | -             | 3770                  | 414                          | 0                           | 13.0                  | 25.6                         | 0.0                                | 38.5                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                | -                | -             | 3770                  | 414                          | 0                           | 13.0                  | 25.6                         | 0.0                                | 38.5                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                   | 213              | 213           | 213                   | 0                            | 0                           | 0.6                   | 1.9                          | -                                  | 2.5                 | 42.4                      | 3.2                              | 1.9                        | 5.1                  |      |
| 1/2                                                                                                                                                                                                                                                                                   | 218              | 218           | 218                   | 0                            | 0                           | 0.6                   | 1.7                          | -                                  | 2.3                 | 37.6                      | 3.3                              | 1.7                        | 4.9                  |      |
| 2/1                                                                                                                                                                                                                                                                                   | 1092             | 1092          | -                     | -                            | -                           | 0.0                   | 0.6                          | -                                  | 0.6                 | 2.1                       | 0.0                              | 0.6                        | 0.6                  |      |
| 2/2                                                                                                                                                                                                                                                                                   | 638              | 638           | 638                   | 0                            | 0                           | 0.2                   | 4.8                          | -                                  | 5.0                 | 28.1                      | 4.3                              | 2.4                        | 6.8                  |      |
| 3/1                                                                                                                                                                                                                                                                                   | 783              | 783           | 369                   | 414                          | 0                           | 0.3                   | 2.1                          | -                                  | 2.4                 | 10.8                      | 8.5                              | 2.1                        | 10.5                 |      |
| 3/2                                                                                                                                                                                                                                                                                   | 1054             | 1054          | -                     | -                            | -                           | 5.8                   | 1.3                          | -                                  | 7.2                 | 24.5                      | 9.1                              | 0.7                        | 9.7                  |      |
| 4/2+4/1                                                                                                                                                                                                                                                                               | 1166             | 1166          | 2332                  | 0                            | 0                           | 1.3                   | 9.6                          | -                                  | 10.9                | 33.8                      | 17.9                             | 9.6                        | 27.6                 |      |
| 5/1                                                                                                                                                                                                                                                                                   | 700              | 700           | -                     | -                            | -                           | 3.3                   | 2.2                          | -                                  | 5.5                 | 28.2                      | 11.1                             | 2.2                        | 13.3                 |      |
| 5/2                                                                                                                                                                                                                                                                                   | 178              | 178           | -                     | -                            | -                           | 0.5                   | 0.1                          | -                                  | 0.6                 | 12.1                      | 2.0                              | 0.1                        | 2.1                  |      |
| 6/1                                                                                                                                                                                                                                                                                   | 1232             | 1232          | -                     | -                            | -                           | 0.1                   | 0.3                          | -                                  | 0.4                 | 1.1                       | 5.6                              | 0.1                        | 5.8                  |      |
| 7/1                                                                                                                                                                                                                                                                                   | 2158             | 2158          | -                     | -                            | -                           | 0.3                   | 0.7                          | -                                  | 1.0                 | 1.7                       | 8.2                              | 0.4                        | 8.5                  |      |
| 8/1                                                                                                                                                                                                                                                                                   | 925              | 925           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                   | 1777             | 1777          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                  | 1483             | 1483          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                  | 240              | 240           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                  | 1664             | 1664          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 10.2</div> <div>PRC Over All Lanes (%): -7.3</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 13.27</div> <div>Total Delay Over All Lanes(pcuHr): 38.54</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

## Stage Sequence Diagram



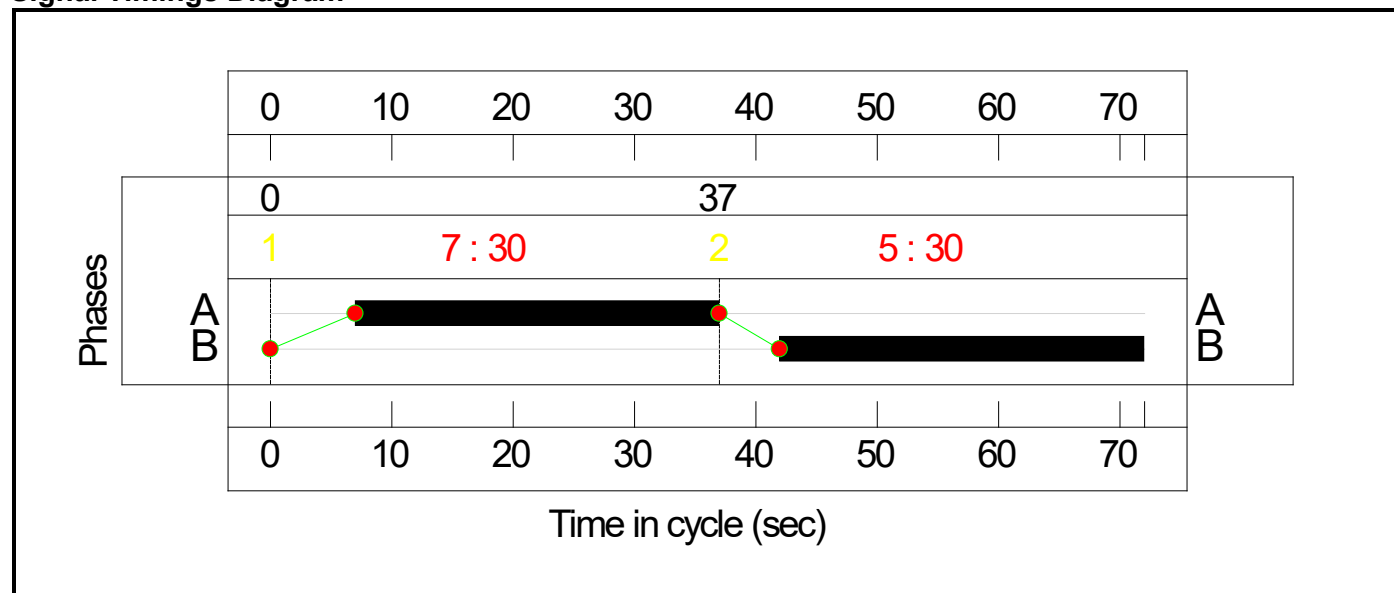
## Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 30 | 30 |
| Change Point | 0  | 37 |

## Phase Timings

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 30             | 7          | 37       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 30             | 42         | 0        |

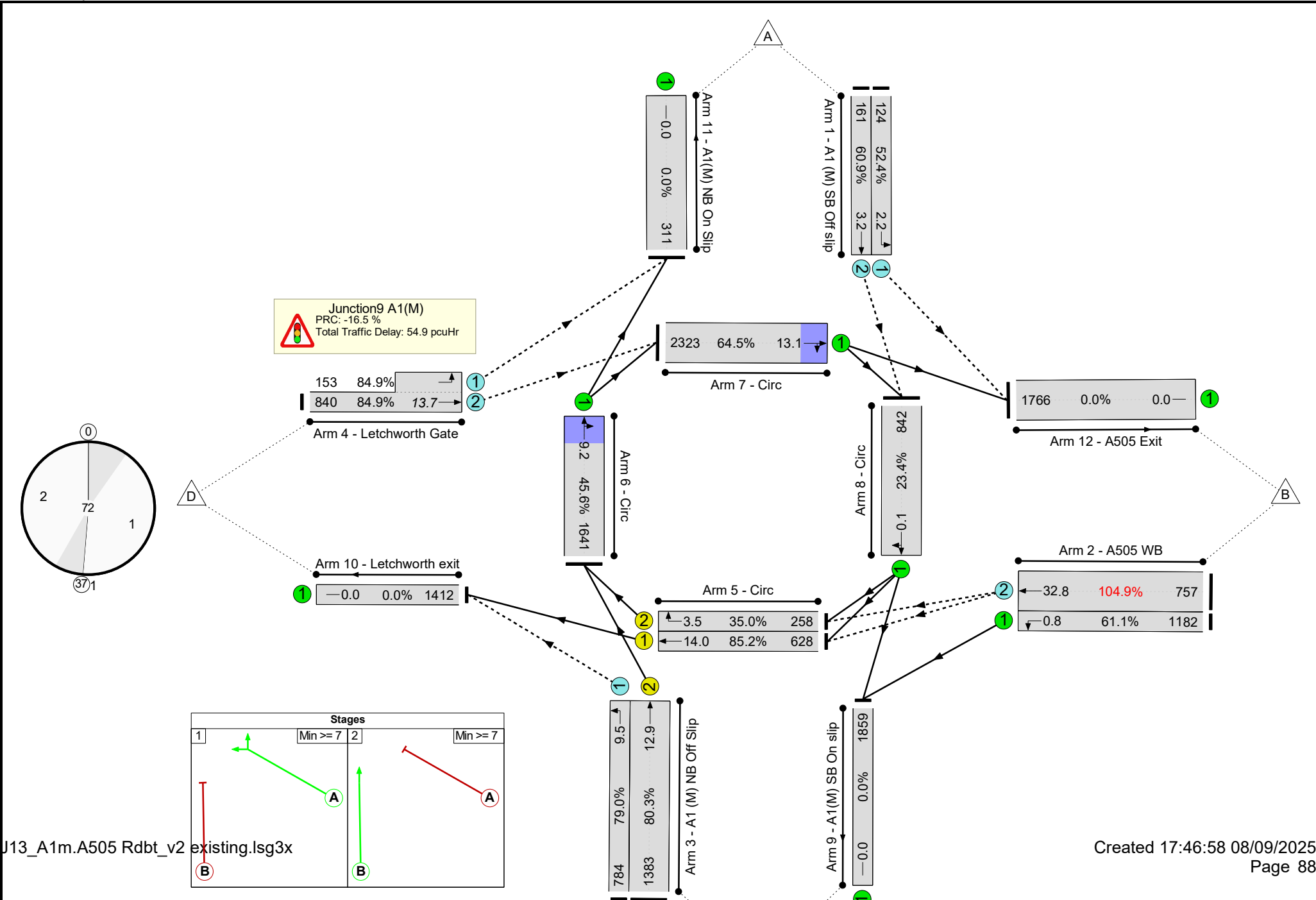
## Signal Timings Diagram



### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 42          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 37        |
| 5/2                       | Circ Right               | U    | A      | 7           | 37        |







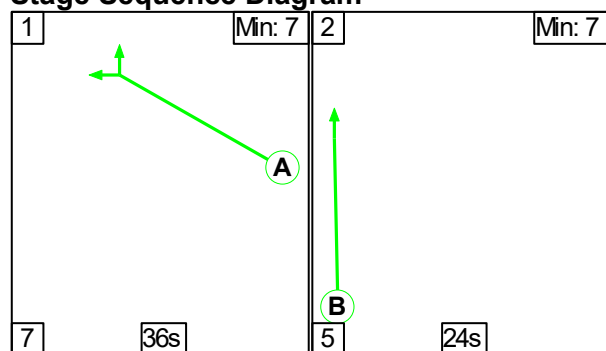
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 104.9%       |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 104.9%       |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 124               | 1961              | 237            | 52.4%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 161               | 2080              | 264            | 60.9%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1182              | 1936              | 1936           | 61.1%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 757               | 4178              | 722            | 104.9%       |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 784               | 1936              | 993            | 79.0%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 30              | -               | -               | 1383              | 4000              | 1722           | 80.3%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 993               | 1894:1834         | 989+180        | 84.9 : 84.9% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 651               | 1714              | 738            | 85.2%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 271               | 1714              | 738            | 35.0%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1654              | 3600              | 3600           | 45.6%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2328              | 3600              | 3600           | 64.5%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 842               | 3600              | 3600           | 23.4%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1859              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1435              | Inf               | Inf            | 0.0%         |
| 11/1                              | A1(M) NB On Slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 319               | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

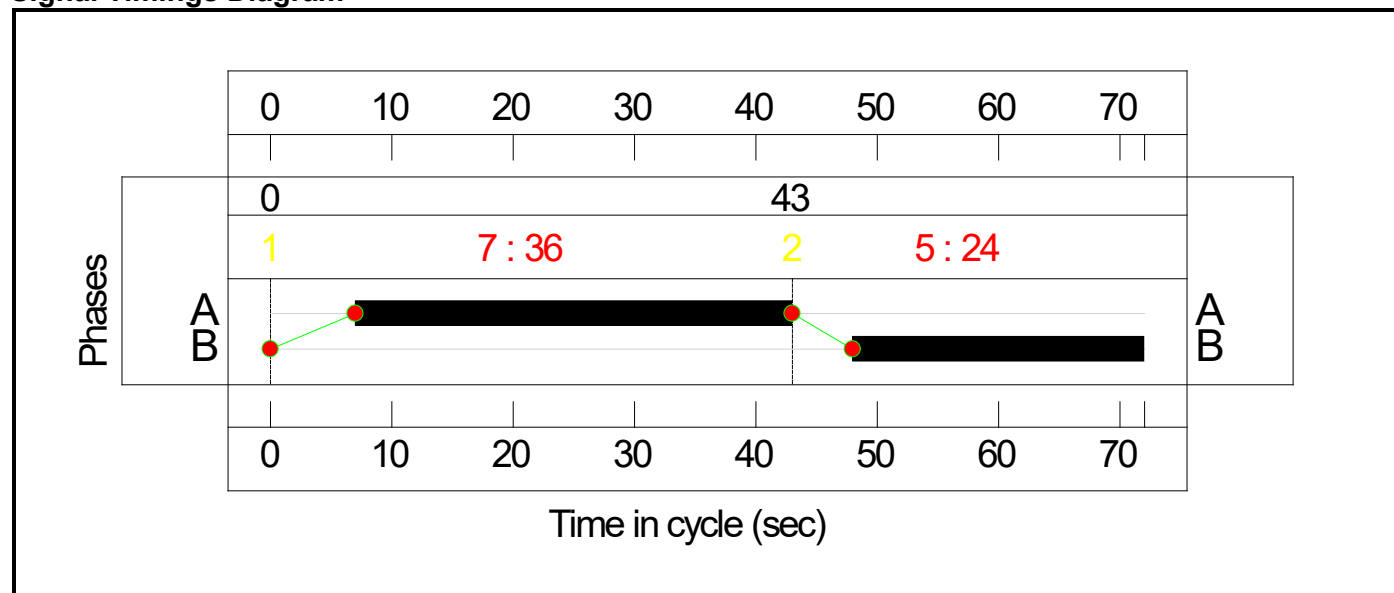
| 12/1                       | A505 Exit      | U             | N/A                   | N/A                          | -                            |                       | -                                        | -                                  | -                   | -                         | 1771                             | Inf                        | Inf                  | 0.0% |
|----------------------------|----------------|---------------|-----------------------|------------------------------|------------------------------|-----------------------|------------------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| Item                       | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 | -              | -             | 3302                  | 475                          | 0                            | 16.6                  | 38.3                                     | 0.0                                | 54.9                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)            | -              | -             | 3302                  | 475                          | 0                            | 16.6                  | 38.3                                     | 0.0                                | 54.9                | -                         | -                                | -                          | -                    |      |
| 1/1                        | 124            | 124           | 124                   | 0                            | 0                            | 0.4                   | 0.5                                      | -                                  | 0.9                 | 26.9                      | 1.7                              | 0.5                        | 2.2                  |      |
| 1/2                        | 161            | 161           | 161                   | 0                            | 0                            | 0.6                   | 0.8                                      | -                                  | 1.4                 | 31.0                      | 2.4                              | 0.8                        | 3.2                  |      |
| 2/1                        | 1182           | 1182          | -                     | -                            | -                            | 0.0                   | 0.8                                      | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                        | 757            | 722           | 722                   | 0                            | 0                            | 2.2                   | 25.1                                     | -                                  | 27.3                | 129.6                     | 20.3                             | 12.6                       | 32.8                 |      |
| 3/1                        | 784            | 784           | 309                   | 475                          | 0                            | 0.3                   | 1.8                                      | -                                  | 2.1                 | 9.7                       | 7.6                              | 1.8                        | 9.5                  |      |
| 3/2                        | 1383           | 1383          | -                     | -                            | -                            | 6.9                   | 2.0                                      | -                                  | 8.9                 | 23.1                      | 11.9                             | 1.0                        | 12.9                 |      |
| 4/2+4/1                    | 993            | 993           | 1986                  | 0                            | 0                            | 1.0                   | 2.7                                      | -                                  | 3.7                 | 13.4                      | 11.0                             | 2.7                        | 13.7                 |      |
| 5/1                        | 628            | 628           | -                     | -                            | -                            | 3.6                   | 2.7                                      | -                                  | 6.4                 | 36.5                      | 11.2                             | 2.7                        | 14.0                 |      |
| 5/2                        | 258            | 258           | -                     | -                            | -                            | 0.9                   | 0.3                                      | -                                  | 1.1                 | 15.6                      | 3.2                              | 0.3                        | 3.5                  |      |
| 6/1                        | 1641           | 1641          | -                     | -                            | -                            | 0.2                   | 0.4                                      | -                                  | 0.7                 | 1.4                       | 9.0                              | 0.2                        | 9.2                  |      |
| 7/1                        | 2323           | 2323          | -                     | -                            | -                            | 0.6                   | 0.9                                      | -                                  | 1.5                 | 2.4                       | 12.7                             | 0.5                        | 13.1                 |      |
| 8/1                        | 842            | 842           | -                     | -                            | -                            | 0.0                   | 0.2                                      | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                        | 1859           | 1859          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                       | 1412           | 1412          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                       | 311            | 311           | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                       | 1766           | 1766          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| C1                         |                |               |                       |                              | PRC for Signalled Lanes (%): | 5.7                   | Total Delay for Signalled Lanes (pcuHr): |                                    |                     | 16.37                     | Cycle Time (s):                  |                            | 72                   |      |
|                            |                |               |                       |                              | PRC Over All Lanes (%):      | -16.5                 | Total Delay Over All Lanes(pcuHr):       |                                    |                     | 54.86                     |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 36 | 24 |
| Change Point | 0  | 43 |

**Phase Timings**

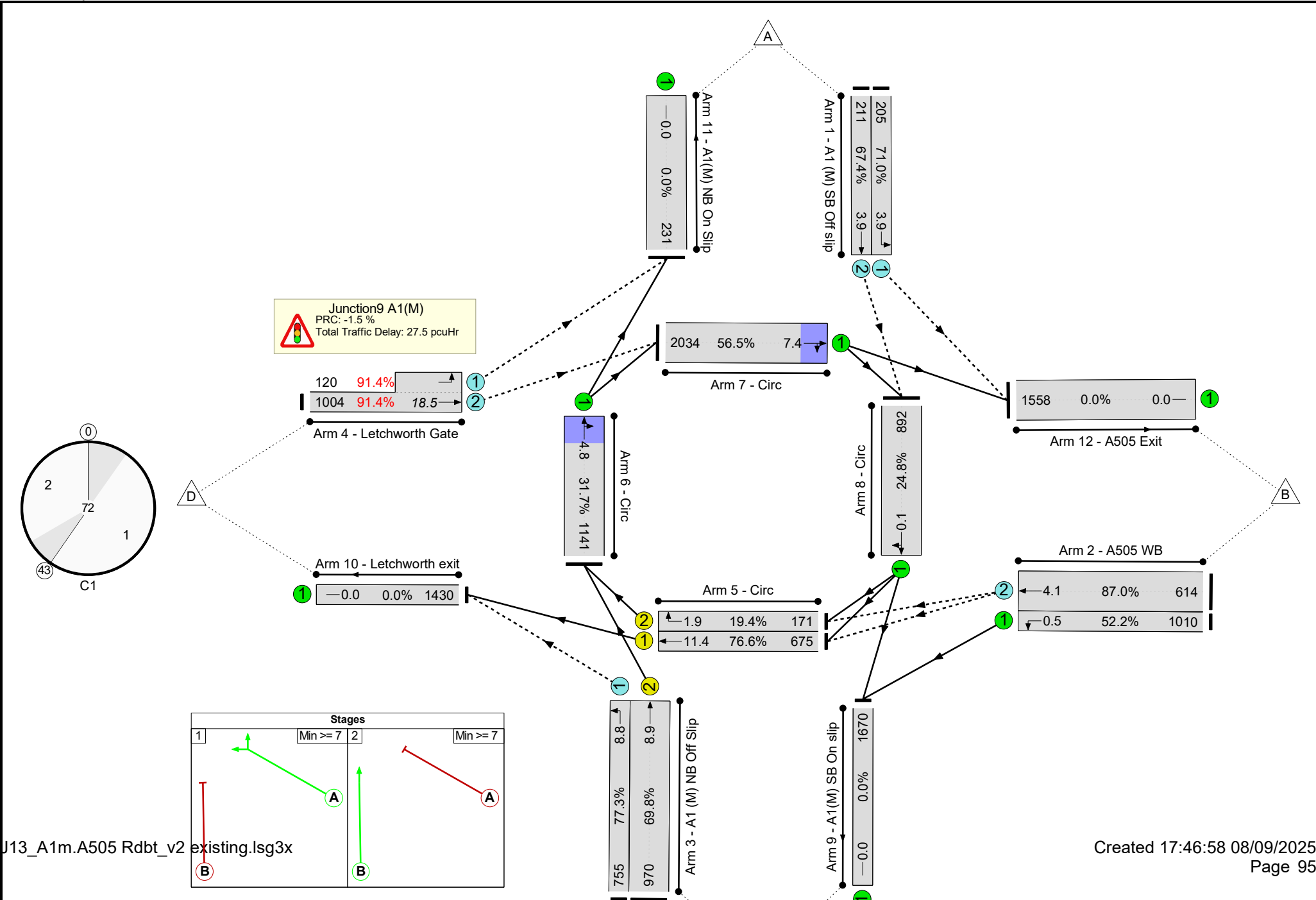
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 36             | 7          | 43       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 24             | 48         | 0        |

**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 48          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 43        |
| 5/2                       | Circ Right               | U    | A      | 7           | 43        |







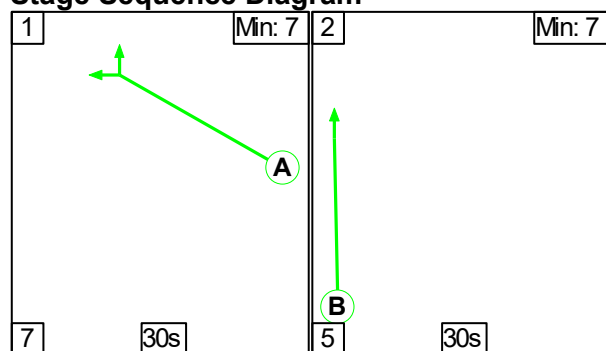
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 91.4%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 91.4%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 205               | 1961              | 289            | 71.0%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 211               | 2080              | 313            | 67.4%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1010              | 1936              | 1936           | 52.2%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 614               | 4178              | 705            | 87.0%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 977            | 77.3%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 24              | -               | -               | 970               | 4000              | 1389           | 69.8%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1124              | 1894:1834         | 1099+131       | 91.4 : 91.4% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 675               | 1714              | 881            | 76.6%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 171               | 1714              | 881            | 19.4%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1141              | 3600              | 3600           | 31.7%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2034              | 3600              | 3600           | 56.5%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 892               | 3600              | 3600           | 24.8%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1670              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1430              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

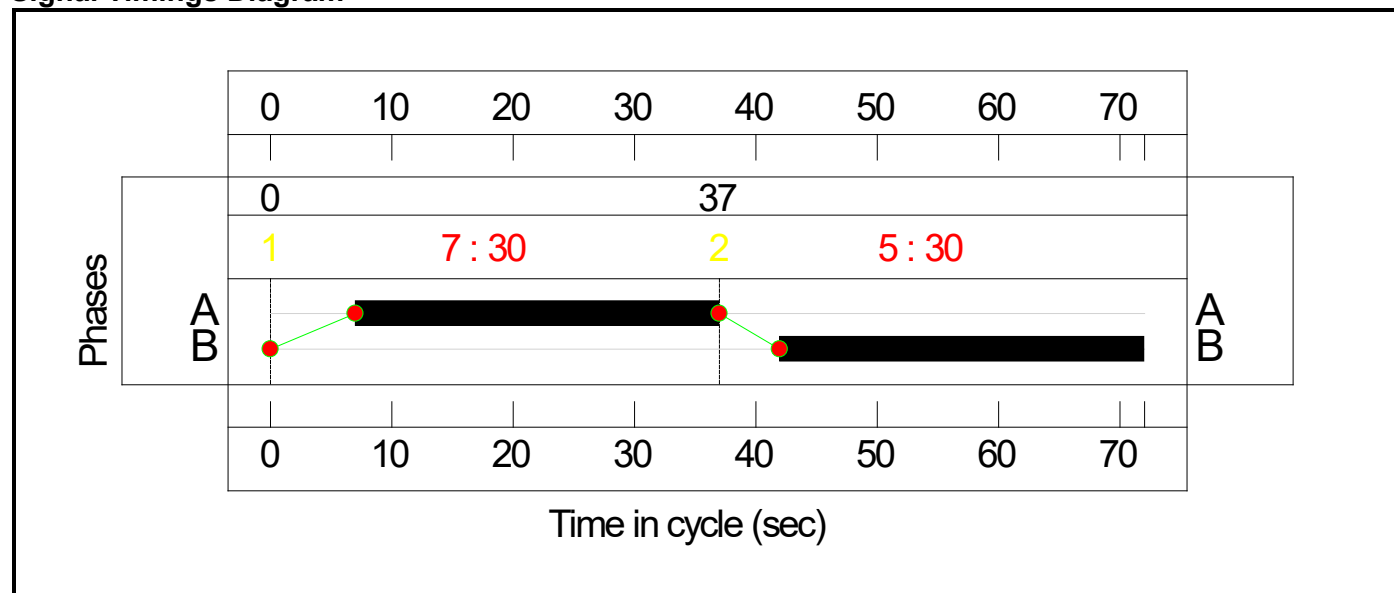
| 11/1                                                                                                                                                                                                                                                                                  | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 231                              | Inf                        | Inf                  | 0.0% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1558                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                     | -                | -             | 3666                  | 367                          | 0                           | 11.1                  | 16.3                         | 0.0                                | 27.5                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                | -                | -             | 3666                  | 367                          | 0                           | 11.1                  | 16.3                         | 0.0                                | 27.5                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                   | 205              | 205           | 205                   | 0                            | 0                           | 0.4                   | 1.2                          | -                                  | 1.6                 | 28.5                      | 2.7                              | 1.2                        | 3.9                  |      |
| 1/2                                                                                                                                                                                                                                                                                   | 211              | 211           | 211                   | 0                            | 0                           | 0.5                   | 1.0                          | -                                  | 1.5                 | 26.1                      | 2.9                              | 1.0                        | 3.9                  |      |
| 2/1                                                                                                                                                                                                                                                                                   | 1010             | 1010          | -                     | -                            | -                           | 0.0                   | 0.5                          | -                                  | 0.5                 | 1.9                       | 0.0                              | 0.5                        | 0.5                  |      |
| 2/2                                                                                                                                                                                                                                                                                   | 614              | 614           | 614                   | 0                            | 0                           | 0.0                   | 3.1                          | -                                  | 3.2                 | 18.6                      | 2.6                              | 1.6                        | 4.1                  |      |
| 3/1                                                                                                                                                                                                                                                                                   | 755              | 755           | 388                   | 367                          | 0                           | 0.2                   | 1.7                          | -                                  | 1.8                 | 8.8                       | 7.1                              | 1.7                        | 8.8                  |      |
| 3/2                                                                                                                                                                                                                                                                                   | 970              | 970           | -                     | -                            | -                           | 5.5                   | 1.2                          | -                                  | 6.6                 | 24.5                      | 8.4                              | 0.6                        | 8.9                  |      |
| 4/2+4/1                                                                                                                                                                                                                                                                               | 1124             | 1124          | 2248                  | 0                            | 0                           | 0.9                   | 4.8                          | -                                  | 5.7                 | 18.3                      | 13.7                             | 4.8                        | 18.5                 |      |
| 5/1                                                                                                                                                                                                                                                                                   | 675              | 675           | -                     | -                            | -                           | 2.9                   | 1.6                          | -                                  | 4.5                 | 24.2                      | 9.8                              | 1.6                        | 11.4                 |      |
| 5/2                                                                                                                                                                                                                                                                                   | 171              | 171           | -                     | -                            | -                           | 0.4                   | 0.1                          | -                                  | 0.6                 | 12.0                      | 1.8                              | 0.1                        | 1.9                  |      |
| 6/1                                                                                                                                                                                                                                                                                   | 1141             | 1141          | -                     | -                            | -                           | 0.1                   | 0.2                          | -                                  | 0.3                 | 1.0                       | 4.7                              | 0.1                        | 4.8                  |      |
| 7/1                                                                                                                                                                                                                                                                                   | 2034             | 2034          | -                     | -                            | -                           | 0.2                   | 0.6                          | -                                  | 0.9                 | 1.5                       | 7.0                              | 0.3                        | 7.4                  |      |
| 8/1                                                                                                                                                                                                                                                                                   | 892              | 892           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                   | 1670             | 1670          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                  | 1430             | 1430          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                  | 231              | 231           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                  | 1558             | 1558          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 17.4</div> <div>PRC Over All Lanes (%): -1.5</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 11.71</div> <div>Total Delay Over All Lanes(pcuHr): 27.47</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 30 | 30 |
| Change Point | 0  | 37 |

**Phase Timings**

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 30             | 7          | 37       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 30             | 42         | 0        |

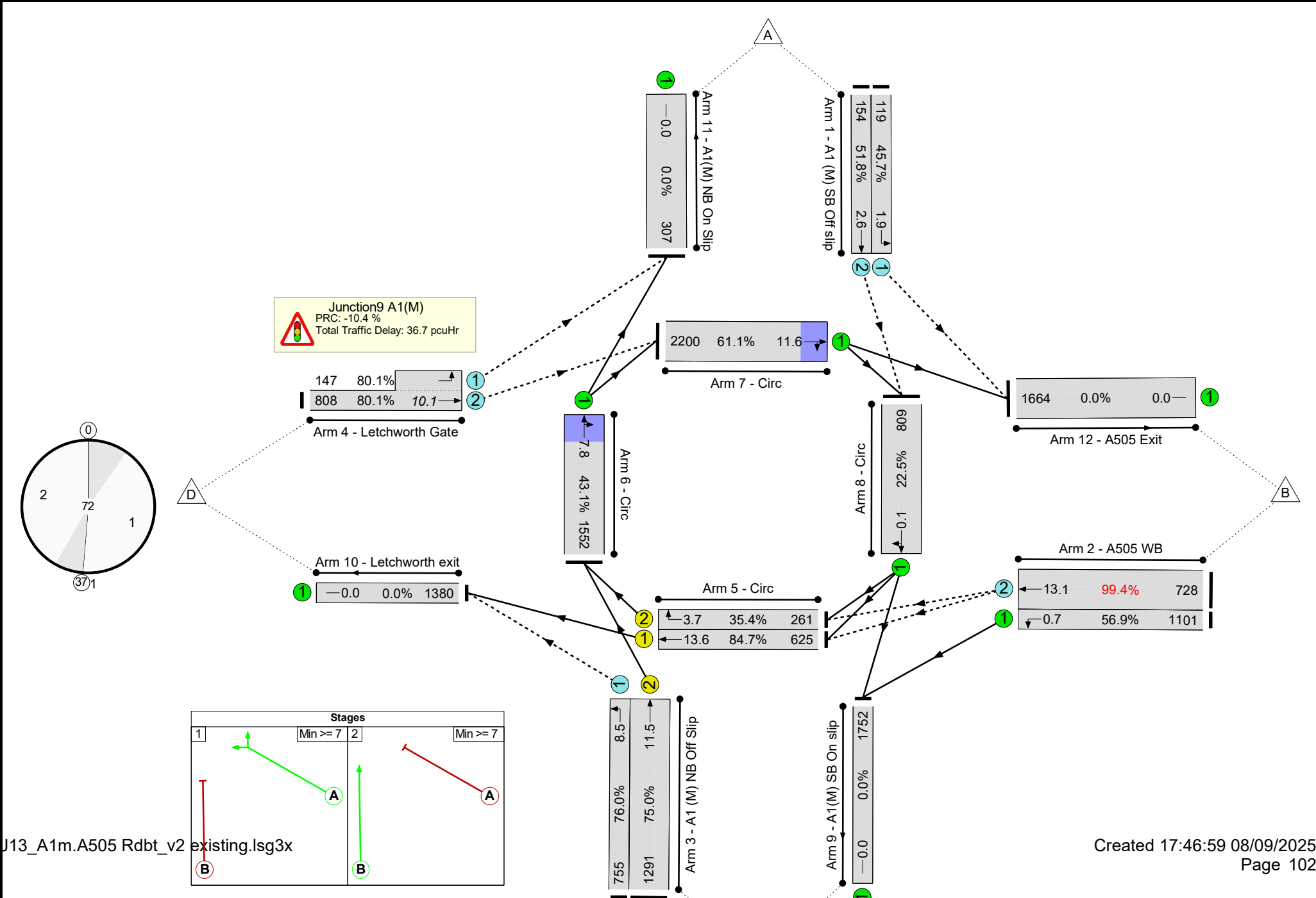
**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 42          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 37        |
| 5/2                       | Circ Right               | U    | A      | 7           | 37        |

Detailed Input Data And Results

**Network Layout Diagram**





## Detailed Input Data And Results

### Network Results

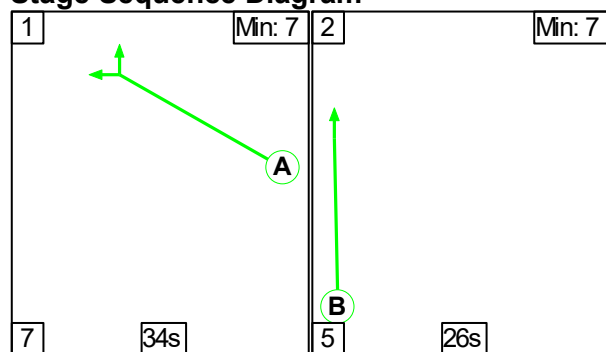
| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.4%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.4%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 260            | 45.7%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 154               | 2080              | 297            | 51.8%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1101              | 1936              | 1936           | 56.9%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 728               | 4178              | 733            | 99.4%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 994            | 76.0%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 30              | -               | -               | 1291              | 4000              | 1722           | 75.0%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 955               | 1894:1834         | 1009+183       | 80.1 : 80.1% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 625               | 1714              | 738            | 84.7%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 261               | 1714              | 738            | 35.4%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1552              | 3600              | 3600           | 43.1%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2200              | 3600              | 3600           | 61.1%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 809               | 3600              | 3600           | 22.5%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1752              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1380              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

| 11/1                                                                                                                                                                                                                                                                                  | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 307                              | Inf                        | Inf                  | 0.0% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1664                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                     | -                | -             | 3221                  | 445                          | 0                           | 13.5                  | 23.2                         | 0.0                                | 36.7                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                | -                | -             | 3221                  | 445                          | 0                           | 13.5                  | 23.2                         | 0.0                                | 36.7                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                   | 119              | 119           | 119                   | 0                            | 0                           | 0.3                   | 0.4                          | -                                  | 0.7                 | 21.8                      | 1.5                              | 0.4                        | 1.9                  |      |
| 1/2                                                                                                                                                                                                                                                                                   | 154              | 154           | 154                   | 0                            | 0                           | 0.5                   | 0.5                          | -                                  | 1.0                 | 23.9                      | 2.1                              | 0.5                        | 2.6                  |      |
| 2/1                                                                                                                                                                                                                                                                                   | 1101             | 1101          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.2                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                                                                                                                                                                                                                                                                                   | 728              | 728           | 728                   | 0                            | 0                           | 0.5                   | 12.4                         | -                                  | 12.8                | 63.5                      | 6.9                              | 6.2                        | 13.1                 |      |
| 3/1                                                                                                                                                                                                                                                                                   | 755              | 755           | 310                   | 445                          | 0                           | 0.2                   | 1.6                          | -                                  | 1.7                 | 8.3                       | 6.9                              | 1.6                        | 8.5                  |      |
| 3/2                                                                                                                                                                                                                                                                                   | 1291             | 1291          | -                     | -                            | -                           | 6.2                   | 1.5                          | -                                  | 7.7                 | 21.4                      | 10.8                             | 0.7                        | 11.5                 |      |
| 4/2+4/1                                                                                                                                                                                                                                                                               | 955              | 955           | 1910                  | 0                            | 0                           | 0.7                   | 2.0                          | -                                  | 2.7                 | 10.2                      | 8.1                              | 2.0                        | 10.1                 |      |
| 5/1                                                                                                                                                                                                                                                                                   | 625              | 625           | -                     | -                            | -                           | 3.6                   | 2.6                          | -                                  | 6.2                 | 35.7                      | 11.0                             | 2.6                        | 13.6                 |      |
| 5/2                                                                                                                                                                                                                                                                                   | 261              | 261           | -                     | -                            | -                           | 0.9                   | 0.3                          | -                                  | 1.2                 | 16.5                      | 3.5                              | 0.3                        | 3.7                  |      |
| 6/1                                                                                                                                                                                                                                                                                   | 1552             | 1552          | -                     | -                            | -                           | 0.2                   | 0.4                          | -                                  | 0.6                 | 1.3                       | 7.6                              | 0.2                        | 7.8                  |      |
| 7/1                                                                                                                                                                                                                                                                                   | 2200             | 2200          | -                     | -                            | -                           | 0.5                   | 0.8                          | -                                  | 1.3                 | 2.0                       | 11.2                             | 0.4                        | 11.6                 |      |
| 8/1                                                                                                                                                                                                                                                                                   | 809              | 809           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 0.6                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                   | 1752             | 1752          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                  | 1380             | 1380          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                  | 307              | 307           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                  | 1664             | 1664          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 6.3</div> <div>PRC Over All Lanes (%): -10.4</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 15.06</div> <div>Total Delay Over All Lanes(pcuHr): 36.70</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Scenario 11: '2040 wDev no School AM'** (FG11: '2040 w Dev no School AM', Plan 1: 'Base Network Control Plan 1')

### Stage Sequence Diagram



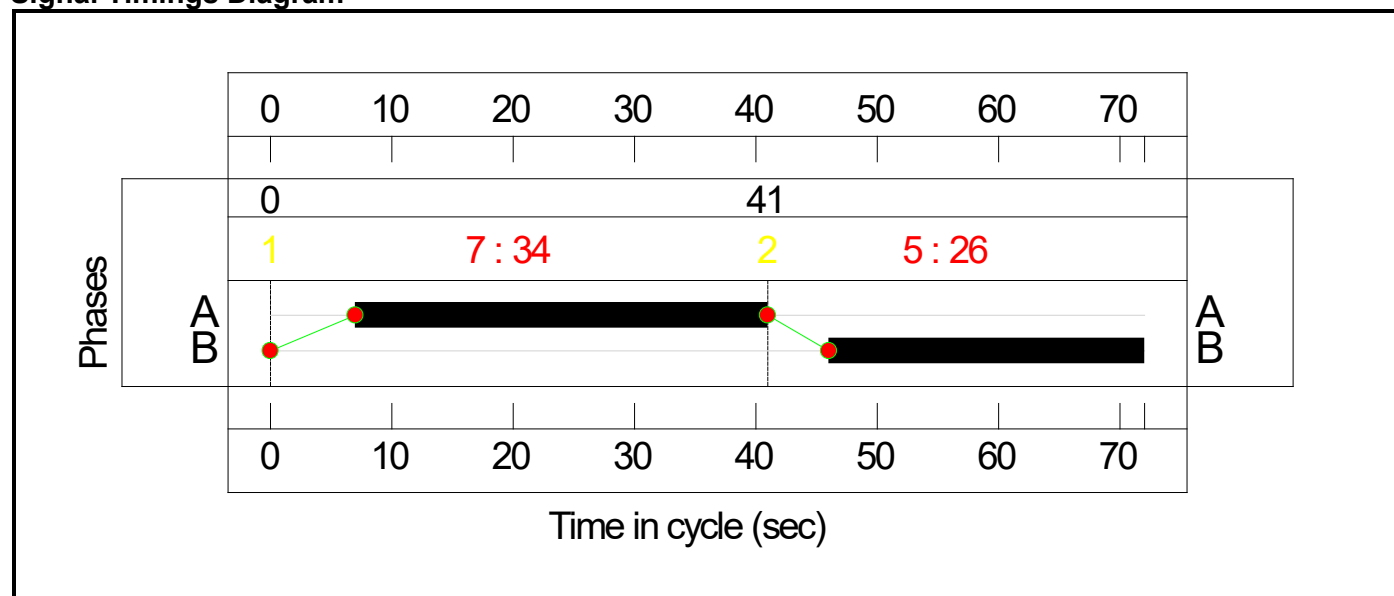
### Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 34 | 26 |
| Change Point | 0  | 41 |

### Phase Timings

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 34             | 7          | 41       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 26             | 46         | 0        |

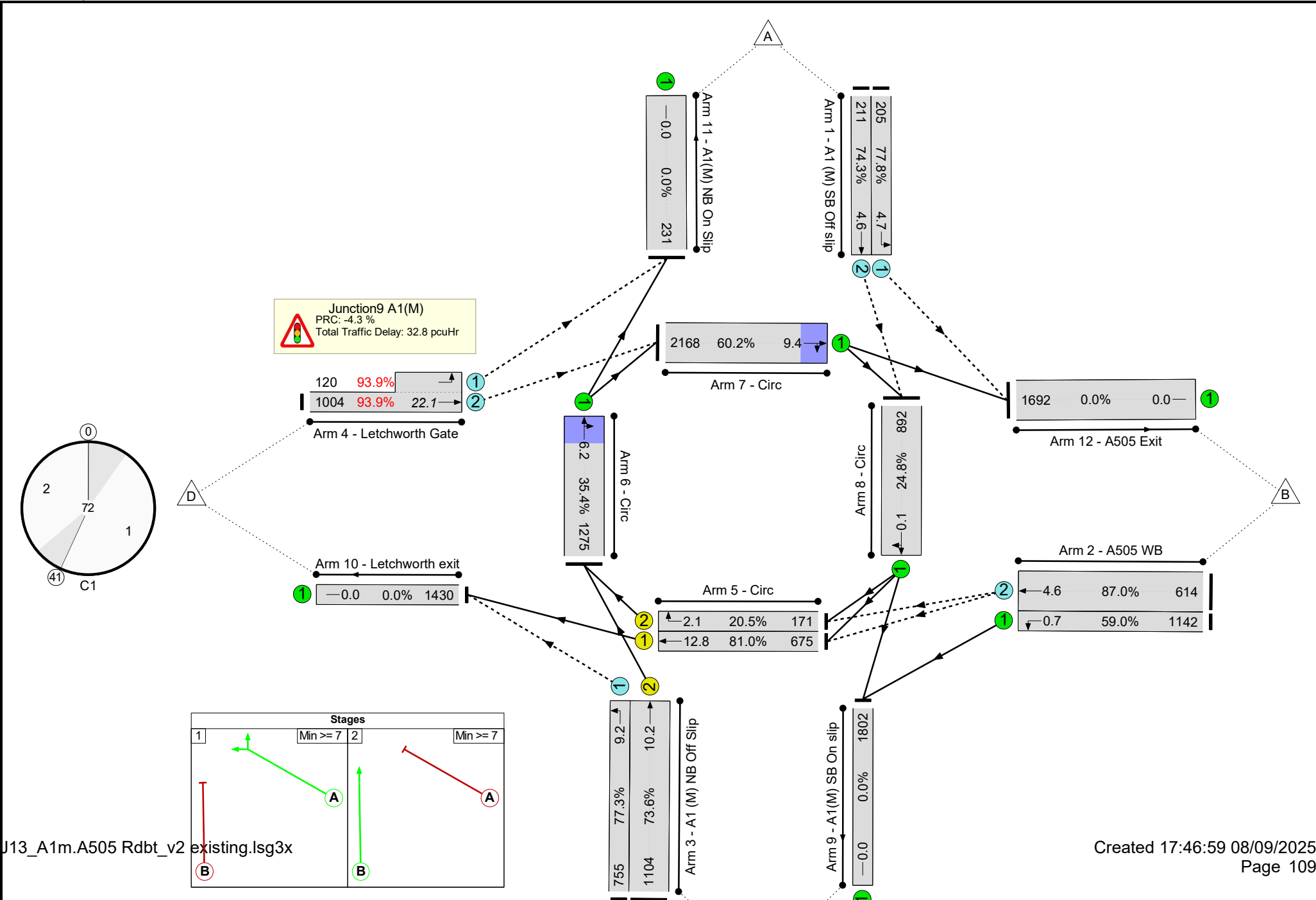
### Signal Timings Diagram



### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 46          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 41        |
| 5/2                       | Circ Right               | U    | A      | 7           | 41        |







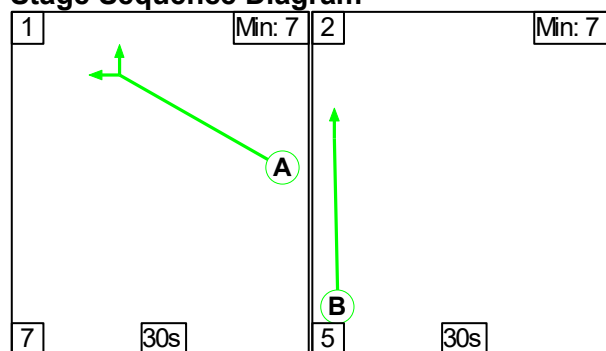
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 93.9%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 93.9%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 205               | 1961              | 263            | 77.8%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 211               | 2080              | 284            | 74.3%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1142              | 1936              | 1936           | 59.0%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 614               | 4178              | 705            | 87.0%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 977            | 77.3%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 26              | -               | -               | 1104              | 4000              | 1500           | 73.6%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1124              | 1894:1834         | 1069+128       | 93.9 : 93.9% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 34              | -               | -               | 675               | 1714              | 833            | 81.0%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 34              | -               | -               | 171               | 1714              | 833            | 20.5%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1275              | 3600              | 3600           | 35.4%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2168              | 3600              | 3600           | 60.2%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 892               | 3600              | 3600           | 24.8%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1802              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1430              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

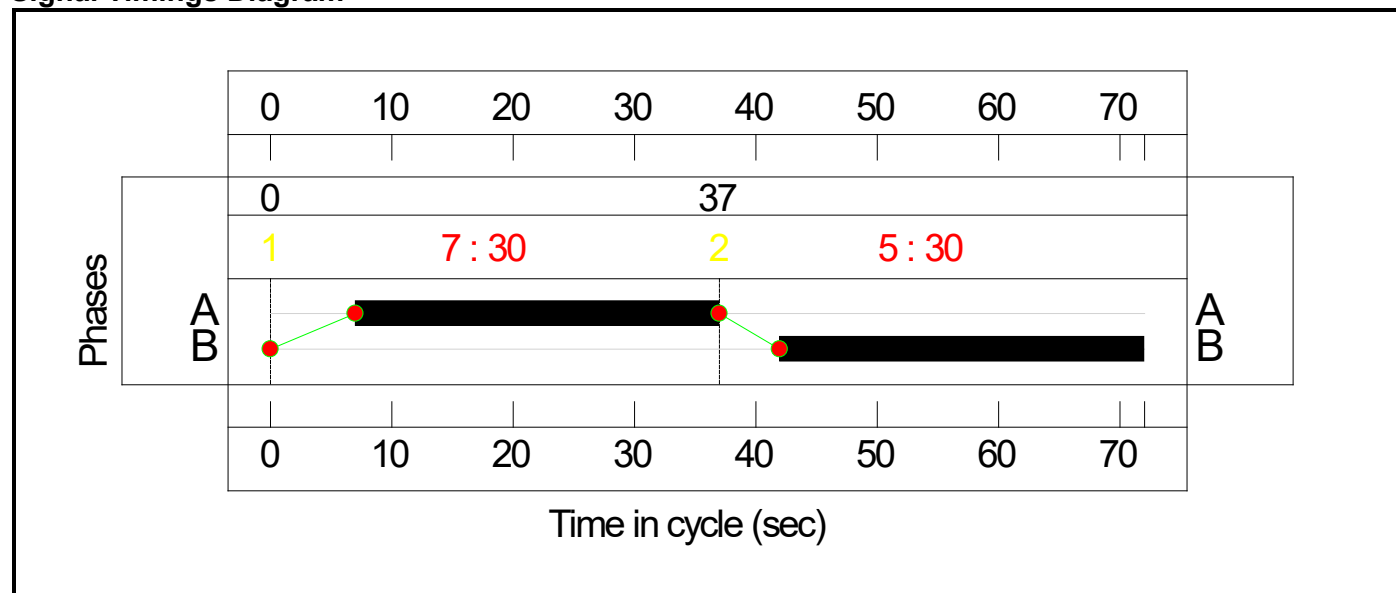
| 11/1                                                                                                                                                                                                                                                                                  | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 231                              | Inf                        | Inf                  | 0.0% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1692                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                     | -                | -             | 3639                  | 394                          | 0                           | 12.9                  | 19.9                         | 0.0                                | 32.8                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                | -                | -             | 3639                  | 394                          | 0                           | 12.9                  | 19.9                         | 0.0                                | 32.8                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                   | 205              | 205           | 205                   | 0                            | 0                           | 0.6                   | 1.7                          | -                                  | 2.2                 | 39.1                      | 3.1                              | 1.7                        | 4.7                  |      |
| 1/2                                                                                                                                                                                                                                                                                   | 211              | 211           | 211                   | 0                            | 0                           | 0.6                   | 1.4                          | -                                  | 2.0                 | 34.7                      | 3.2                              | 1.4                        | 4.6                  |      |
| 2/1                                                                                                                                                                                                                                                                                   | 1142             | 1142          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.3                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                                                                                                                                                                                                                                                                                   | 614              | 614           | 614                   | 0                            | 0                           | 0.0                   | 3.1                          | -                                  | 3.2                 | 18.7                      | 3.1                              | 1.6                        | 4.6                  |      |
| 3/1                                                                                                                                                                                                                                                                                   | 755              | 755           | 361                   | 394                          | 0                           | 0.2                   | 1.7                          | -                                  | 1.9                 | 8.9                       | 7.5                              | 1.7                        | 9.2                  |      |
| 3/2                                                                                                                                                                                                                                                                                   | 1104             | 1104          | -                     | -                            | -                           | 6.0                   | 1.4                          | -                                  | 7.3                 | 23.9                      | 9.5                              | 0.7                        | 10.2                 |      |
| 4/2+4/1                                                                                                                                                                                                                                                                               | 1124             | 1124          | 2248                  | 0                            | 0                           | 1.2                   | 6.5                          | -                                  | 7.7                 | 24.6                      | 15.6                             | 6.5                        | 22.1                 |      |
| 5/1                                                                                                                                                                                                                                                                                   | 675              | 675           | -                     | -                            | -                           | 3.4                   | 2.1                          | -                                  | 5.5                 | 29.2                      | 10.7                             | 2.1                        | 12.8                 |      |
| 5/2                                                                                                                                                                                                                                                                                   | 171              | 171           | -                     | -                            | -                           | 0.5                   | 0.1                          | -                                  | 0.6                 | 13.1                      | 2.0                              | 0.1                        | 2.1                  |      |
| 6/1                                                                                                                                                                                                                                                                                   | 1275             | 1275          | -                     | -                            | -                           | 0.1                   | 0.3                          | -                                  | 0.4                 | 1.1                       | 6.1                              | 0.1                        | 6.2                  |      |
| 7/1                                                                                                                                                                                                                                                                                   | 2168             | 2168          | -                     | -                            | -                           | 0.3                   | 0.8                          | -                                  | 1.1                 | 1.8                       | 9.0                              | 0.4                        | 9.4                  |      |
| 8/1                                                                                                                                                                                                                                                                                   | 892              | 892           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                   | 1802             | 1802          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                  | 1430             | 1430          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                  | 231              | 231           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                  | 1692             | 1692          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 11.1</div> <div>PRC Over All Lanes (%): -4.3</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 13.43</div> <div>Total Delay Over All Lanes(pcuHr): 32.78</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 30 | 30 |
| Change Point | 0  | 37 |

**Phase Timings**

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 30             | 7          | 37       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 30             | 42         | 0        |

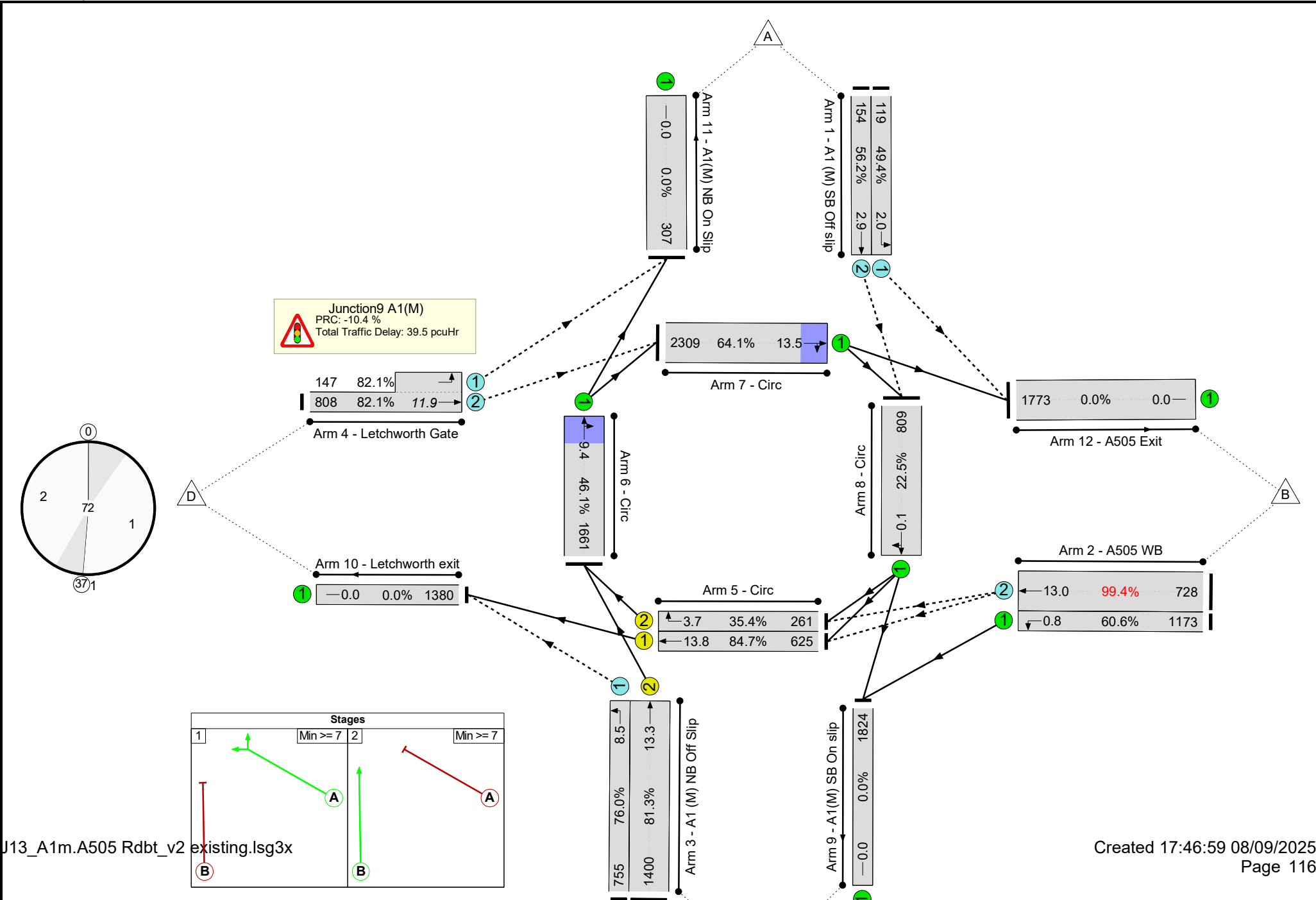
**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 42          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 37        |
| 5/2                       | Circ Right               | U    | A      | 7           | 37        |

Detailed Input Data And Results

**Network Layout Diagram**





## Detailed Input Data And Results

### Network Results

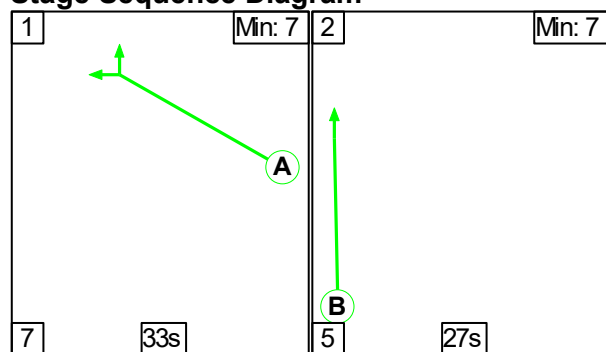
| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.4%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.4%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 241            | 49.4%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 154               | 2080              | 274            | 56.2%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1173              | 1936              | 1936           | 60.6%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 728               | 4178              | 733            | 99.4%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 994            | 76.0%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 30              | -               | -               | 1400              | 4000              | 1722           | 81.3%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 955               | 1894:1834         | 985+179        | 82.1 : 82.1% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 625               | 1714              | 738            | 84.7%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 261               | 1714              | 738            | 35.4%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1661              | 3600              | 3600           | 46.1%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2309              | 3600              | 3600           | 64.1%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 809               | 3600              | 3600           | 22.5%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1824              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1380              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

| 11/1                                                                                                                                                                                                                                                                                  | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 307                              | Inf                        | Inf                  | 0.0% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1773                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                     | -                | -             | 3221                  | 445                          | 0                           | 14.9                  | 24.6                         | 0.0                                | 39.5                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                | -                | -             | 3221                  | 445                          | 0                           | 14.9                  | 24.6                         | 0.0                                | 39.5                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                   | 119              | 119           | 119                   | 0                            | 0                           | 0.4                   | 0.5                          | -                                  | 0.8                 | 25.7                      | 1.6                              | 0.5                        | 2.0                  |      |
| 1/2                                                                                                                                                                                                                                                                                   | 154              | 154           | 154                   | 0                            | 0                           | 0.6                   | 0.6                          | -                                  | 1.2                 | 28.3                      | 2.2                              | 0.6                        | 2.9                  |      |
| 2/1                                                                                                                                                                                                                                                                                   | 1173             | 1173          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                                                                                                                                                                                                                                                                                   | 728              | 728           | 728                   | 0                            | 0                           | 0.6                   | 12.4                         | -                                  | 12.9                | 63.8                      | 6.8                              | 6.2                        | 13.0                 |      |
| 3/1                                                                                                                                                                                                                                                                                   | 755              | 755           | 310                   | 445                          | 0                           | 0.2                   | 1.6                          | -                                  | 1.8                 | 8.3                       | 6.9                              | 1.6                        | 8.5                  |      |
| 3/2                                                                                                                                                                                                                                                                                   | 1400             | 1400          | -                     | -                            | -                           | 7.0                   | 2.1                          | -                                  | 9.1                 | 23.5                      | 12.3                             | 1.1                        | 13.3                 |      |
| 4/2+4/1                                                                                                                                                                                                                                                                               | 955              | 955           | 1910                  | 0                            | 0                           | 0.8                   | 2.2                          | -                                  | 3.1                 | 11.6                      | 9.7                              | 2.2                        | 11.9                 |      |
| 5/1                                                                                                                                                                                                                                                                                   | 625              | 625           | -                     | -                            | -                           | 3.6                   | 2.6                          | -                                  | 6.3                 | 36.2                      | 11.2                             | 2.6                        | 13.8                 |      |
| 5/2                                                                                                                                                                                                                                                                                   | 261              | 261           | -                     | -                            | -                           | 0.9                   | 0.3                          | -                                  | 1.2                 | 15.9                      | 3.4                              | 0.3                        | 3.7                  |      |
| 6/1                                                                                                                                                                                                                                                                                   | 1661             | 1661          | -                     | -                            | -                           | 0.2                   | 0.4                          | -                                  | 0.7                 | 1.5                       | 9.2                              | 0.2                        | 9.4                  |      |
| 7/1                                                                                                                                                                                                                                                                                   | 2309             | 2309          | -                     | -                            | -                           | 0.6                   | 0.9                          | -                                  | 1.5                 | 2.4                       | 13.0                             | 0.4                        | 13.5                 |      |
| 8/1                                                                                                                                                                                                                                                                                   | 809              | 809           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 0.6                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                   | 1824             | 1824          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                  | 1380             | 1380          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                  | 307              | 307           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                  | 1773             | 1773          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 6.3</div> <div>PRC Over All Lanes (%): -10.4</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 16.57</div> <div>Total Delay Over All Lanes(pcuHr): 39.49</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Scenario 13: '2040 wDev w School AM'** (FG13: '2040 w Dev with School AM', Plan 1: 'Base Network Control Plan 1')

### Stage Sequence Diagram



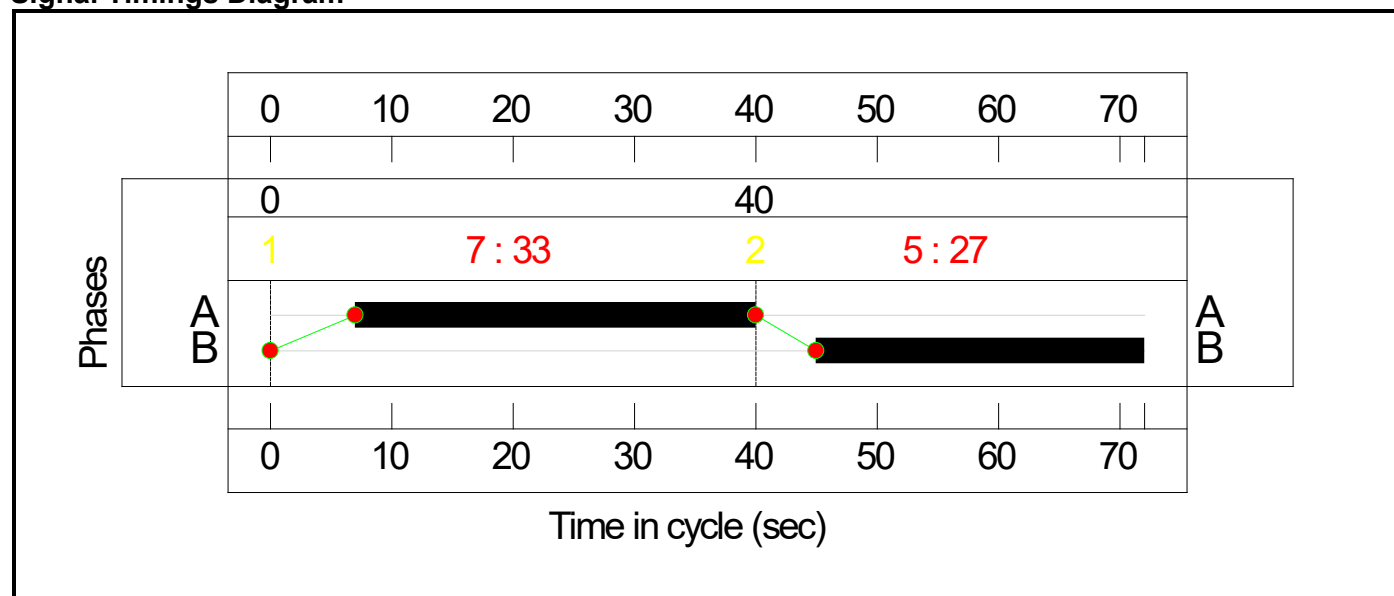
### Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 33 | 27 |
| Change Point | 0  | 40 |

### Phase Timings

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 33             | 7          | 40       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 27             | 45         | 0        |

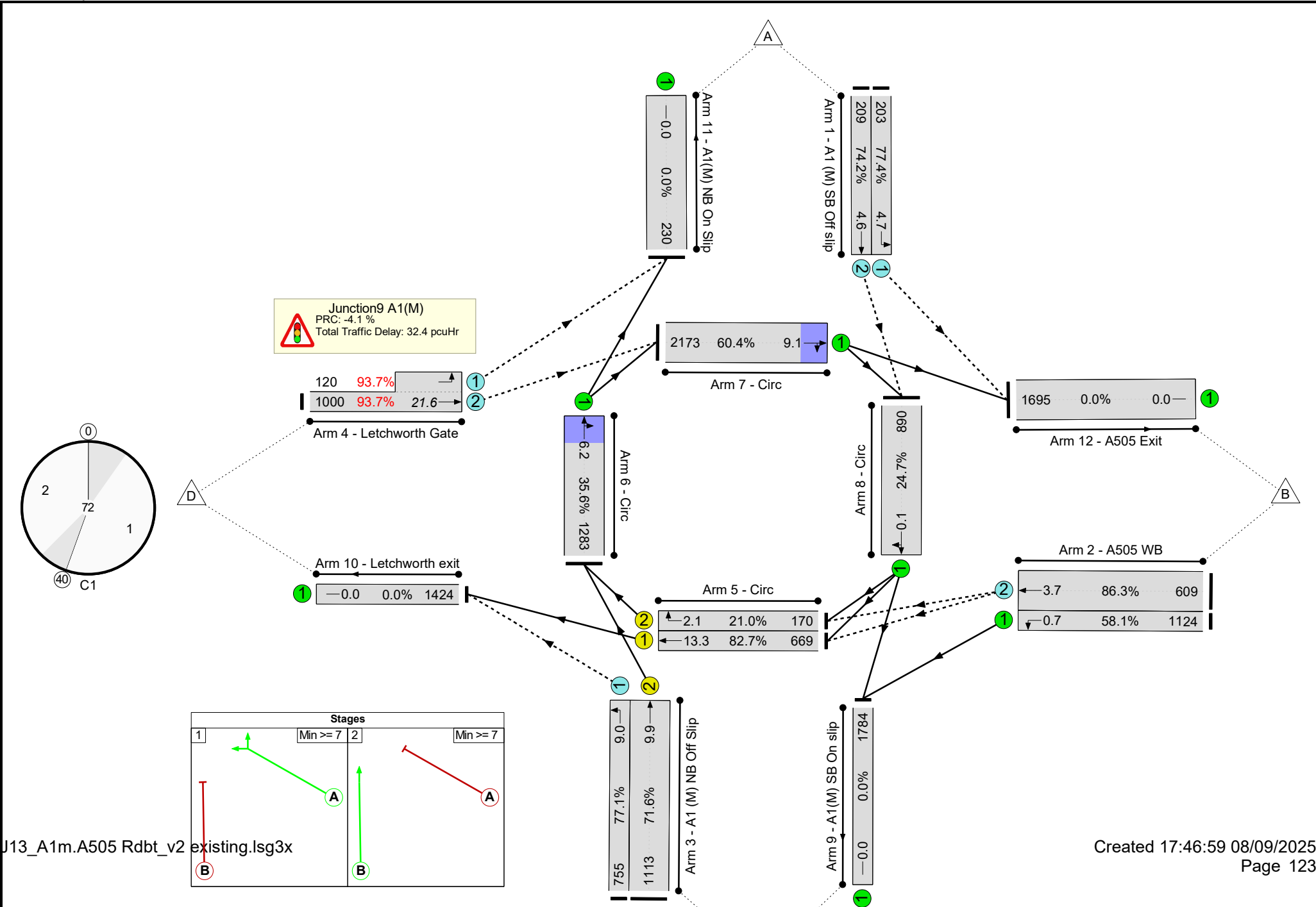
### Signal Timings Diagram



### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 45          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 40        |
| 5/2                       | Circ Right               | U    | A      | 7           | 40        |

Detailed Input Data And Results  
**Network Layout Diagram**





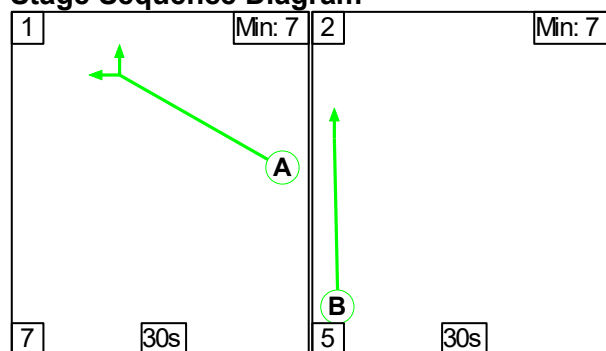
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 93.7%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 93.7%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 203               | 1961              | 262            | 77.4%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 209               | 2080              | 282            | 74.2%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1124              | 1936              | 1936           | 58.1%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 609               | 4178              | 706            | 86.3%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 979            | 77.1%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 27              | -               | -               | 1113              | 4000              | 1556           | 71.6%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1120              | 1894:1834         | 1068+128       | 93.7 : 93.7% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 33              | -               | -               | 669               | 1714              | 809            | 82.7%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 33              | -               | -               | 170               | 1714              | 809            | 21.0%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1283              | 3600              | 3600           | 35.6%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2173              | 3600              | 3600           | 60.4%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 890               | 3600              | 3600           | 24.7%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1784              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1424              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

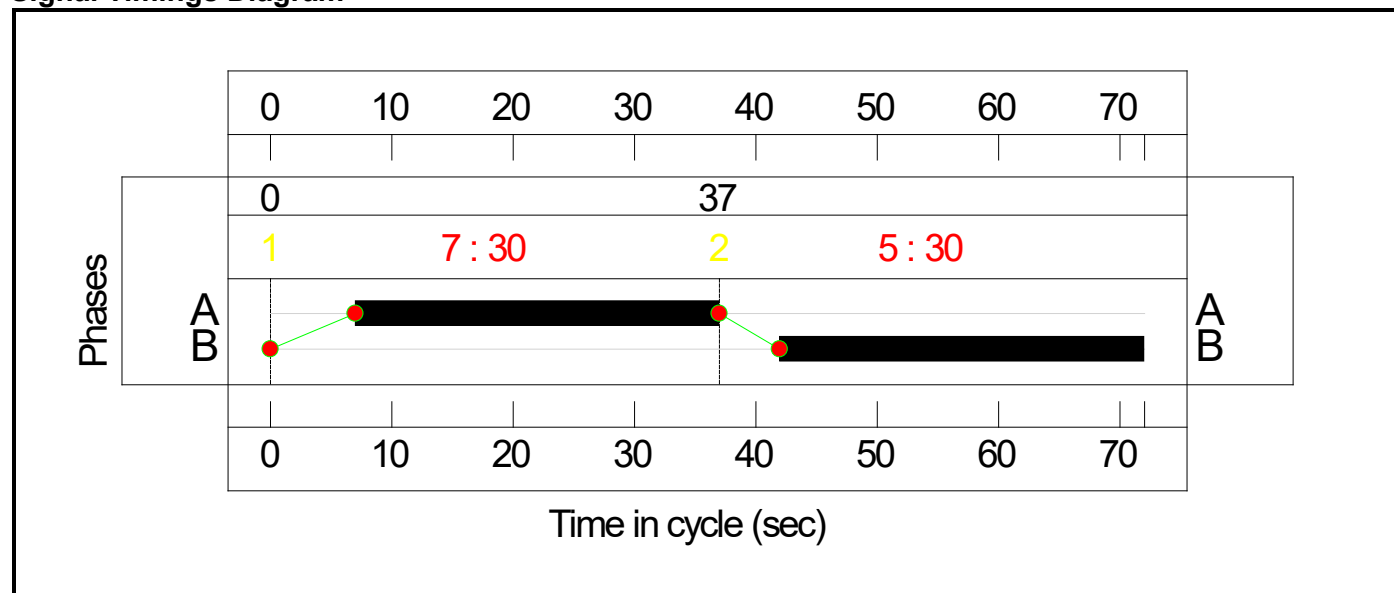
| 11/1                                                                                                                                                                                                                                                                                 | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 230                              | Inf                        | Inf                  | 0.0% |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                 | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1695                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                 | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                    | -                | -             | <b>3607</b>           | <b>409</b>                   | <b>0</b>                    | <b>12.8</b>           | <b>19.5</b>                  | <b>0.0</b>                         | <b>32.4</b>         | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                               | -                | -             | <b>3607</b>           | <b>409</b>                   | <b>0</b>                    | <b>12.8</b>           | <b>19.5</b>                  | <b>0.0</b>                         | <b>32.4</b>         | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                  | 203              | 203           | 203                   | 0                            | 0                           | 0.6                   | 1.6                          | -                                  | 2.2                 | 38.8                      | 3.0                              | 1.6                        | 4.7                  |      |
| 1/2                                                                                                                                                                                                                                                                                  | 209              | 209           | 209                   | 0                            | 0                           | 0.6                   | 1.4                          | -                                  | 2.0                 | 35.0                      | 3.3                              | 1.4                        | 4.6                  |      |
| 2/1                                                                                                                                                                                                                                                                                  | 1124             | 1124          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.2                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                                                                                                                                                                                                                                                                                  | 609              | 609           | 609                   | 0                            | 0                           | 0.0                   | 3.0                          | -                                  | 3.0                 | 17.7                      | 2.2                              | 1.5                        | 3.7                  |      |
| 3/1                                                                                                                                                                                                                                                                                  | 755              | 755           | 346                   | 409                          | 0                           | 0.2                   | 1.7                          | -                                  | 1.9                 | 8.9                       | 7.3                              | 1.7                        | 9.0                  |      |
| 3/2                                                                                                                                                                                                                                                                                  | 1113             | 1113          | -                     | -                            | -                           | 5.8                   | 1.3                          | -                                  | 7.0                 | 22.7                      | 9.3                              | 0.6                        | 9.9                  |      |
| 4/2+4/1                                                                                                                                                                                                                                                                              | 1120             | 1120          | 2240                  | 0                            | 0                           | 1.2                   | 6.3                          | -                                  | 7.5                 | 24.1                      | 15.3                             | 6.3                        | 21.6                 |      |
| 5/1                                                                                                                                                                                                                                                                                  | 669              | 669           | -                     | -                            | -                           | 3.5                   | 2.3                          | -                                  | 5.8                 | 31.4                      | 11.0                             | 2.3                        | 13.3                 |      |
| 5/2                                                                                                                                                                                                                                                                                  | 170              | 170           | -                     | -                            | -                           | 0.5                   | 0.1                          | -                                  | 0.7                 | 13.9                      | 2.0                              | 0.1                        | 2.1                  |      |
| 6/1                                                                                                                                                                                                                                                                                  | 1283             | 1283          | -                     | -                            | -                           | 0.1                   | 0.3                          | -                                  | 0.4                 | 1.1                       | 6.0                              | 0.1                        | 6.2                  |      |
| 7/1                                                                                                                                                                                                                                                                                  | 2173             | 2173          | -                     | -                            | -                           | 0.3                   | 0.8                          | -                                  | 1.1                 | 1.8                       | 8.7                              | 0.4                        | 9.1                  |      |
| 8/1                                                                                                                                                                                                                                                                                  | 890              | 890           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                  | 1784             | 1784          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                 | 1424             | 1424          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                 | 230              | 230           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                 | 1695             | 1695          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 8.9</div> <div>PRC Over All Lanes (%): -4.1</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 13.49</div> <div>Total Delay Over All Lanes(pcuHr): 32.37</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 30 | 30 |
| Change Point | 0  | 37 |

**Phase Timings**

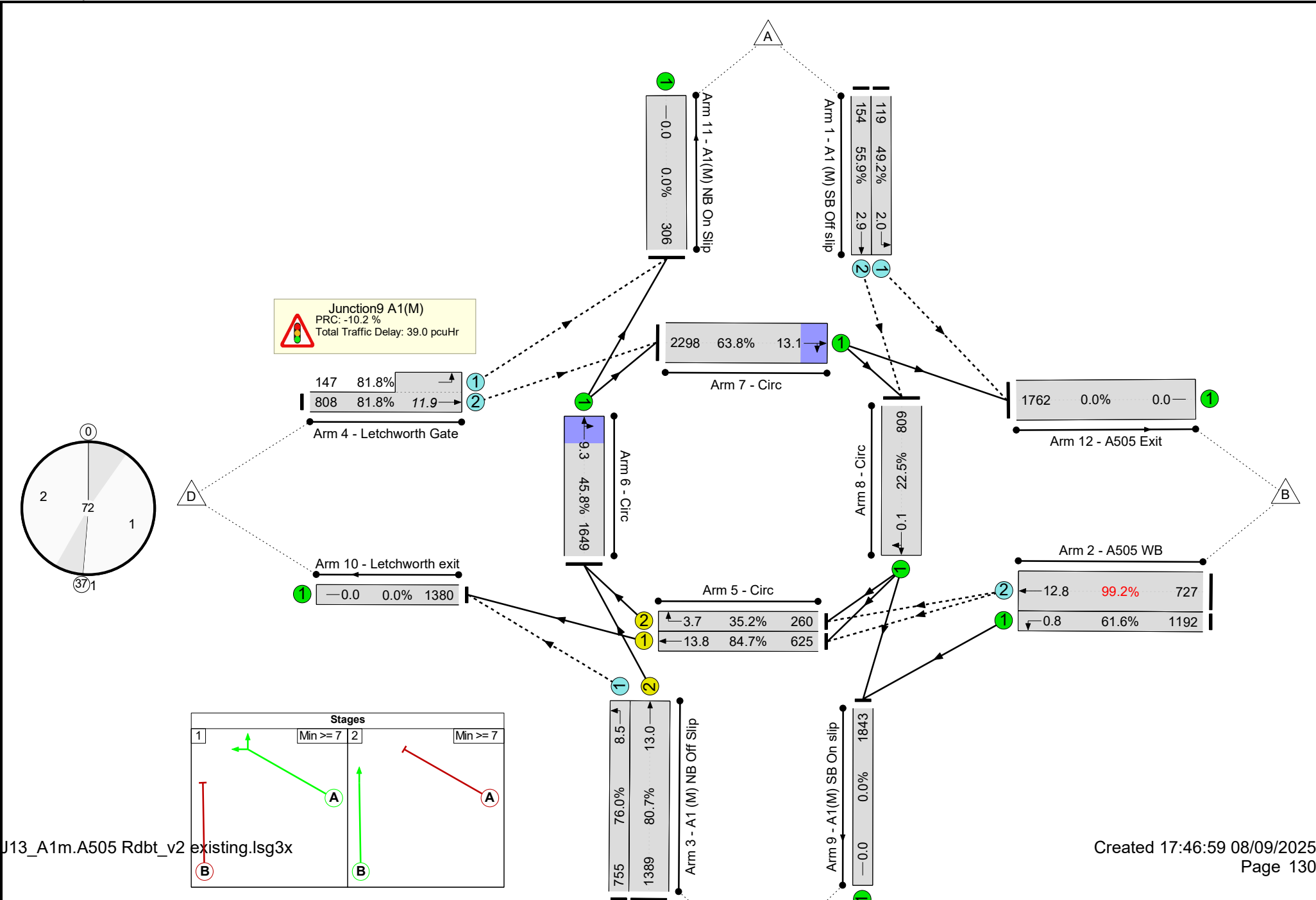
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 30             | 7          | 37       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 30             | 42         | 0        |

**Signal Timings Diagram**

**Lane Green Times**

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 42          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 37        |
| 5/2                       | Circ Right               | U    | A      | 7           | 37        |

Detailed Input Data And Results  
**Network Layout Diagram**





## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.2%        |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.2%        |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 242            | 49.2%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 154               | 2080              | 276            | 55.9%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1192              | 1936              | 1936           | 61.6%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 727               | 4178              | 733            | 99.2%        |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 994            | 76.0%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 30              | -               | -               | 1389              | 4000              | 1722           | 80.7%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 955               | 1894:1834         | 987+180        | 81.8 : 81.8% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 625               | 1714              | 738            | 84.7%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 260               | 1714              | 738            | 35.2%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1649              | 3600              | 3600           | 45.8%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2298              | 3600              | 3600           | 63.8%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 809               | 3600              | 3600           | 22.5%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1843              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1380              | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

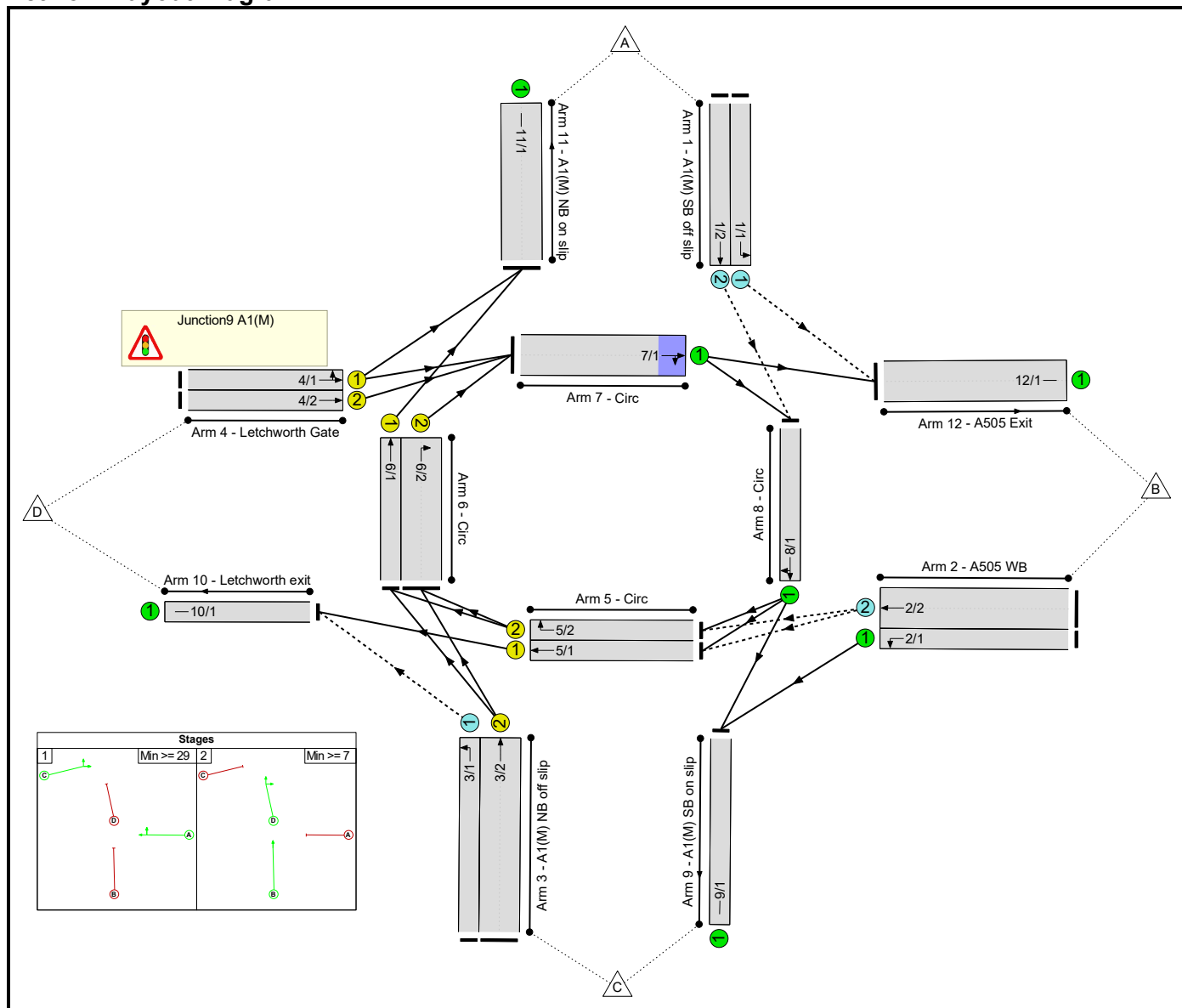
| 11/1                                                                                                                                                                                                                                                                                  | A1(M) NB On Slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 306                              | Inf                        | Inf                  | 0.0% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1762                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10</b>                                                                                                                                                                                                                                                     | -                | -             | 3220                  | 445                          | 0                           | 14.8                  | 24.2                         | 0.0                                | 39.0                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                | -                | -             | 3220                  | 445                          | 0                           | 14.8                  | 24.2                         | 0.0                                | 39.0                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                   | 119              | 119           | 119                   | 0                            | 0                           | 0.4                   | 0.5                          | -                                  | 0.8                 | 25.5                      | 1.6                              | 0.5                        | 2.0                  |      |
| 1/2                                                                                                                                                                                                                                                                                   | 154              | 154           | 154                   | 0                            | 0                           | 0.6                   | 0.6                          | -                                  | 1.2                 | 28.0                      | 2.2                              | 0.6                        | 2.9                  |      |
| 2/1                                                                                                                                                                                                                                                                                   | 1192             | 1192          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                                                                                                                                                                                                                                                                                   | 727              | 727           | 727                   | 0                            | 0                           | 0.5                   | 12.1                         | -                                  | 12.7                | 62.7                      | 6.8                              | 6.1                        | 12.8                 |      |
| 3/1                                                                                                                                                                                                                                                                                   | 755              | 755           | 310                   | 445                          | 0                           | 0.2                   | 1.6                          | -                                  | 1.8                 | 8.3                       | 6.9                              | 1.6                        | 8.5                  |      |
| 3/2                                                                                                                                                                                                                                                                                   | 1389             | 1389          | -                     | -                            | -                           | 6.9                   | 2.1                          | -                                  | 9.0                 | 23.2                      | 12.0                             | 1.0                        | 13.0                 |      |
| 4/2+4/1                                                                                                                                                                                                                                                                               | 955              | 955           | 1910                  | 0                            | 0                           | 0.8                   | 2.2                          | -                                  | 3.0                 | 11.4                      | 9.7                              | 2.2                        | 11.9                 |      |
| 5/1                                                                                                                                                                                                                                                                                   | 625              | 625           | -                     | -                            | -                           | 3.6                   | 2.6                          | -                                  | 6.3                 | 36.2                      | 11.2                             | 2.6                        | 13.8                 |      |
| 5/2                                                                                                                                                                                                                                                                                   | 260              | 260           | -                     | -                            | -                           | 0.9                   | 0.3                          | -                                  | 1.2                 | 16.0                      | 3.4                              | 0.3                        | 3.7                  |      |
| 6/1                                                                                                                                                                                                                                                                                   | 1649             | 1649          | -                     | -                            | -                           | 0.2                   | 0.4                          | -                                  | 0.7                 | 1.4                       | 9.1                              | 0.2                        | 9.3                  |      |
| 7/1                                                                                                                                                                                                                                                                                   | 2298             | 2298          | -                     | -                            | -                           | 0.6                   | 0.9                          | -                                  | 1.5                 | 2.4                       | 12.7                             | 0.4                        | 13.1                 |      |
| 8/1                                                                                                                                                                                                                                                                                   | 809              | 809           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 0.6                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                                                                                                                                                                                                                                                                                   | 1843             | 1843          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                  | 1380             | 1380          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                  | 306              | 306           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                  | 1762             | 1762          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 6.3</div> <div>PRC Over All Lanes (%): -10.2</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 16.40</div> <div>Total Delay Over All Lanes(pcuHr): 38.99</div> </div> <div>Cycle Time (s): 72</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

Detailed Input Data And Results  
**Detailed Input Data And Results**

**User and Project Details**

|                           |                                        |
|---------------------------|----------------------------------------|
| <b>Project:</b>           | <b>Growing Baldock</b>                 |
| <b>Title:</b>             | <b>A1(m) Junction 10 - PROPOSED</b>    |
| <b>Location:</b>          | Baldock, SG6 2EA                       |
| <b>Client:</b>            | Urban & Civic                          |
| <b>Site Ref(s):</b>       | J13                                    |
| <b>Design Layout Ref:</b> | -                                      |
| <b>Date Started:</b>      | 05.08.2025                             |
| <b>Date Completed:</b>    | -                                      |
| <b>Checked By:</b>        | NL/ZT                                  |
| <b>Additional detail:</b> |                                        |
| <b>File name:</b>         | J13_A1m.A505 Rdbt_v2 PROPOSED_zt.lsg3x |
| <b>Author:</b>            | Jay James                              |
| <b>Company:</b>           | ITP by Haskoning                       |
| <b>Address:</b>           |                                        |
| <b>Linsig Version:</b>    | 3, 3, 0, 6                             |

## Network Layout Diagram

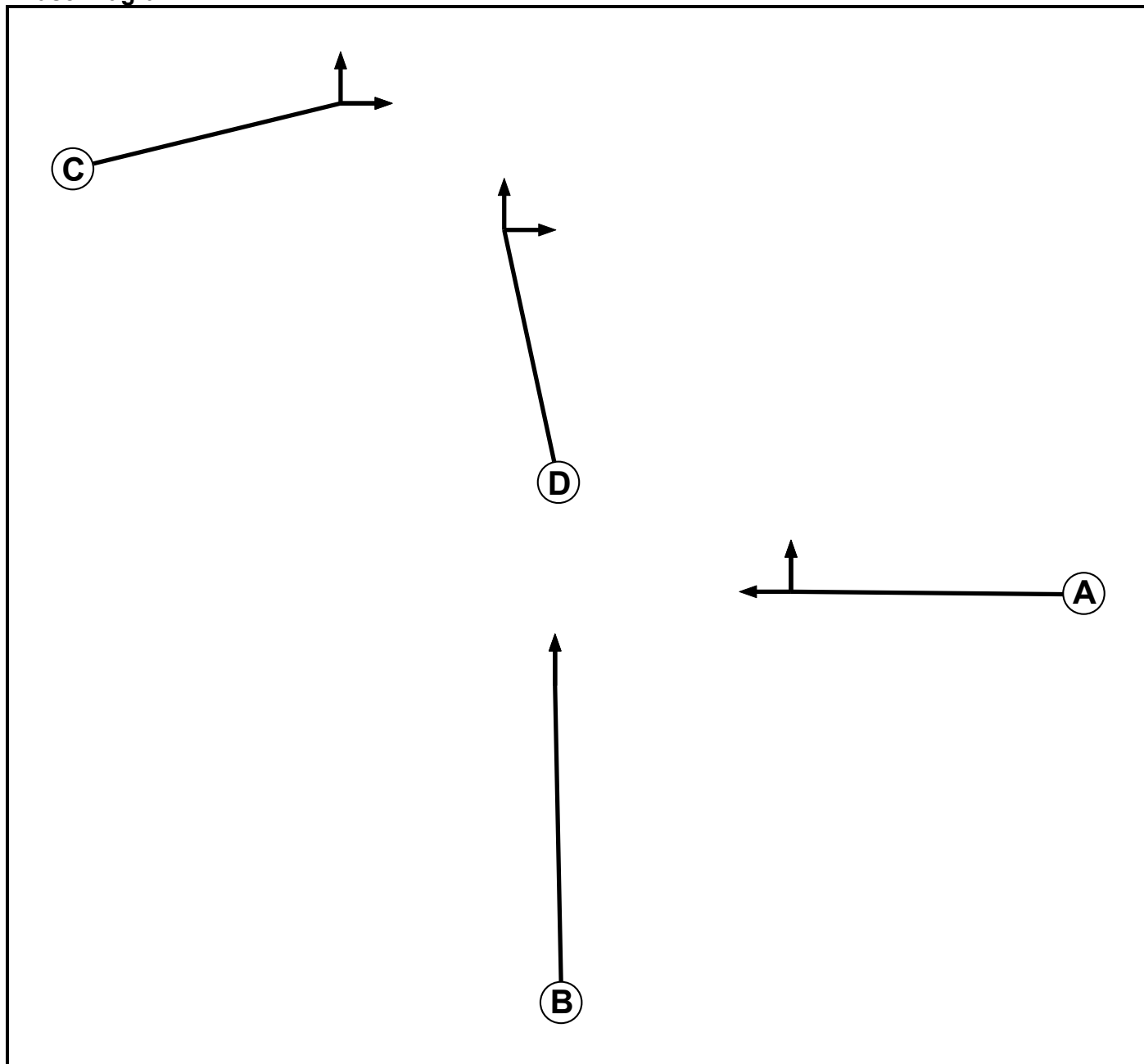


## Scenarios

| Number | Scenario Name          | Flow Group                | Network Control Plan   | Time          | Cycle Time (s) | PRC (%) | Delay (pcuHr) |
|--------|------------------------|---------------------------|------------------------|---------------|----------------|---------|---------------|
| 1      | 2033 wDev AM           | 2033 w Dev AM             | Network Control Plan 1 | 08:00 - 09:00 | 80             | -2.1    | 43.71         |
| 2      | 2033 wDev PM           | 2033 w Dev PM             | Network Control Plan 1 | 17:00 - 18:00 | 80             | -16.5   | 76.59         |
| 3      | 2040 wDev no School AM | 2040 w Dev no School AM   | Network Control Plan 1 | 08:00 - 09:00 | 80             | -0.0    | 40.83         |
| 4      | 2040 wDev no School PM | 2040 wDev no School PM    | Network Control Plan 1 | 17:00 - 18:00 | 80             | -10.4   | 62.34         |
| 5      | 2040 wDev w School AM  | 2040 w Dev with School AM | Network Control Plan 1 | 08:00 - 09:00 | 80             | 0.2     | 40.50         |
| 6      | 2040 wDev w School PM  | 2040 wDev with School PM  | Network Control Plan 1 | 17:00 - 18:00 | 80             | -10.2   | 60.89         |

**Controller Summary**

| Controller | Type | SCN | Stage Stream   | Num Phases | Num Stages | Controls Junctions | Controller Notes |
|------------|------|-----|----------------|------------|------------|--------------------|------------------|
| C1         | Gen  |     | Stage Stream 1 | 4          | 2          | Junction9 A1(M)    |                  |

**Phase Diagram****Phase Input Data**

| Phase Name | Phase Type | Assoc. Phase | Street Min (s) | Cont Min (s) |
|------------|------------|--------------|----------------|--------------|
| A          | Traffic    |              | -9999          | 29           |
| B          | Traffic    |              | -9999          | 7            |
| C          | Traffic    |              | -9999          | 7            |
| D          | Traffic    |              | -9999          | 7            |

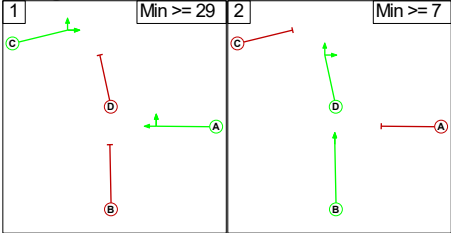
Phase Intergreens Matrix

| Terminating Phase | Starting Phase |   |   |   |   |
|-------------------|----------------|---|---|---|---|
|                   |                | A | B | C | D |
|                   | A              |   | 7 | - | - |
|                   | B              | 5 |   | - | - |
|                   | C              | - | - |   | 5 |
|                   | D              | - | - | 5 |   |

Phases in Stage

| Stage No. | Phases in Stage |
|-----------|-----------------|
| 1         | A C             |
| 2         | B D             |

Stage Diagram



Phase Delays

| Term. Stage | Start Stage | Phase | Type   | Value | Cont value |
|-------------|-------------|-------|--------|-------|------------|
| 1           | 2           | C     | Losing | 7     | 7          |
| 2           | 1           | B     | Losing | 5     | 5          |

Prohibited Stage Change

| From Stage | To Stage |    |
|------------|----------|----|
|            | 1        | 2  |
|            | 12       | 10 |

**Lane Input Data**

| Junction: Junction9 A1(M)  |           |        |                 |               |                       |               |                                   |                |              |               |              |                    |
|----------------------------|-----------|--------|-----------------|---------------|-----------------------|---------------|-----------------------------------|----------------|--------------|---------------|--------------|--------------------|
| Lane                       | Lane Type | Phases | Start Disp. (s) | End Disp. (s) | Physical Length (PCU) | Sat Flow Type | Def User Saturation Flow (PCU/Hr) | Lane Width (m) | Gradient (%) | Nearside Lane | Turns        | Turning Radius (m) |
| 1/1<br>(A1(M) SB off slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.46           | 0.00         | Y             | Arm 12 Left  | Inf                |
| 1/2<br>(A1(M) SB off slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.25           | 0.00         | N             | Arm 8 Ahead  | Inf                |
| 2/1<br>(A505 WB)           | U         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 9 Left   | 100.00             |
| 2/2<br>(A505 WB)           | O         |        | 2               | 3             | 60.0                  | User          | 4178                              | -              | -            | -             | -            | -                  |
| 3/1<br>(A1(M) NB off slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 10 Left  | 100.00             |
| 3/2<br>(A1(M) NB off slip) | U         | B      | 2               | 3             | 60.0                  | User          | 4000                              | -              | -            | -             | -            | -                  |
| 4/1<br>(Letchworth Gate)   | U         | C      | 2               | 3             | 60.0                  | Geom          | -                                 | 3.20           | 0.00         | Y             | Arm 7 Ahead  | Inf                |
|                            |           |        |                 |               |                       |               |                                   |                |              |               | Arm 11 Left  | 26.00              |
| 4/2<br>(Letchworth Gate)   | U         | C      | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | N             | Arm 7 Ahead  | 40.00              |
| 5/1<br>(Circ)              | U         | A      | 2               | 3             | 20.5                  | User          | 1714                              | -              | -            | -             | -            | -                  |
| 5/2<br>(Circ)              | U         | A      | 2               | 3             | 20.5                  | User          | 1714                              | -              | -            | -             | -            | -                  |
| 6/1<br>(Circ)              | U         | D      | 2               | 3             | 14.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 11 Ahead | 133.00             |
| 6/2<br>(Circ)              | U         | D      | 2               | 3             | 14.0                  | User          | 4178                              | -              | -            | -             | -            | -                  |
| 7/1<br>(Circ)              | U         |        | 2               | 3             | 16.7                  | User          | 3600                              | -              | -            | -             | -            | -                  |
| 8/1<br>(Circ)              | U         |        | 2               | 3             | 14.3                  | Geom          | -                                 | 3.80           | 0.00         | Y             | Arm 5 Right  | 62.00              |
|                            |           |        |                 |               |                       |               |                                   |                |              |               | Arm 9 Ahead  | 62.00              |
| 9/1<br>(A1(M) SB on slip)  | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -            | -                  |
| 10/1<br>(Letchworth exit)  | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -            | -                  |
| 11/1<br>(A1(M) NB on slip) | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -            | -                  |

Detailed Input Data And Results

|                     |   |  |   |   |      |     |   |   |   |   |   |   |
|---------------------|---|--|---|---|------|-----|---|---|---|---|---|---|
| 12/1<br>(A505 Exit) | U |  | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
|---------------------|---|--|---|---|------|-----|---|---|---|---|---|---|

## Detailed Input Data And Results

**Give-Way Lane Input Data**

| Junction: Junction9 A1(M)  |             |                                            |                                            |                  |                     |                 |                             |                                  |     |                           |                                     |
|----------------------------|-------------|--------------------------------------------|--------------------------------------------|------------------|---------------------|-----------------|-----------------------------|----------------------------------|-----|---------------------------|-------------------------------------|
| Lane                       | Movement    | Max Flow<br>when<br>Giving Way<br>(PCU/Hr) | Min Flow<br>when<br>Giving Way<br>(PCU/Hr) | Opposing<br>Lane | Opp. Lane<br>Coeff. | Opp.<br>Mvmnts. | Right Turn<br>Storage (PCU) | Non-Blocking<br>Storage<br>(PCU) | RTF | Right Turn<br>Move up (s) | Max Turns<br>in Intergreen<br>(PCU) |
| 1/1<br>(A1(M) SB off slip) | 12/1 (Left) | 715                                        | 0                                          | 7/1              | 0.22                | All             | -                           | -                                | -   | -                         | -                                   |
| 1/2<br>(A1(M) SB off slip) | 8/1 (Ahead) | 1000                                       | 0                                          | 7/1              | 0.40                | All             | -                           | -                                | -   | -                         | -                                   |
| 2/2<br>(A505 WB)           | 5/1 (Ahead) | 1000                                       | 0                                          | 8/1              | 0.33                | All             | -                           | -                                | -   | -                         | -                                   |
|                            | 5/2 (Ahead) | 1000                                       | 0                                          | 8/1              | 0.33                | All             |                             |                                  |     |                           |                                     |
| 3/1<br>(A1(M) NB off slip) | 10/1 (Left) | 1200                                       | 0                                          | 5/1              | 0.33                | All             | -                           | -                                | -   | -                         | -                                   |

## Detailed Input Data And Results

**Lane Connector Input Data**

| <b>Junction: Junction9 A1(M)</b> |                  |                 |                                      |                           |
|----------------------------------|------------------|-----------------|--------------------------------------|---------------------------|
| <b>Org Lane</b>                  | <b>Dest Lane</b> | <b>Junction</b> | <b>Modelled Mean Cruise Time (s)</b> | <b>Platoon Dispersion</b> |
| 1/1                              | 12/1             | Internal        | 5                                    | 35                        |
| 1/2                              | 8/1              | Internal        | 5                                    | 35                        |
| 2/1                              | 9/1              | Internal        | 26                                   | 35                        |
| 2/2                              | 5/1              | Internal        | 9                                    | 35                        |
| 2/2                              | 5/2              | Internal        | 9                                    | 35                        |
| 3/1                              | 10/1             | Internal        | 26                                   | 35                        |
| 3/2                              | 6/1              | Internal        | 6                                    | 35                        |
| 3/2                              | 6/2              | Internal        | 6                                    | 35                        |
| 4/1                              | 7/1              | Internal        | 7                                    | 35                        |
| 4/1                              | 11/1             | Internal        | 26                                   | 35                        |
| 4/2                              | 7/1              | Internal        | 7                                    | 35                        |
| 5/1                              | 10/1             | Internal        | 26                                   | 35                        |
| 5/2                              | 6/1              | Internal        | 6                                    | 35                        |
| 5/2                              | 6/2              | Internal        | 6                                    | 35                        |
| 6/1                              | 11/1             | Internal        | 26                                   | 35                        |
| 6/2                              | 7/1              | Internal        | 7                                    | 35                        |
| 7/1                              | 8/1              | Internal        | 6                                    | 35                        |
| 7/1                              | 12/1             | Internal        | 26                                   | 35                        |
| 8/1                              | 5/1              | Internal        | 9                                    | 35                        |
| 8/1                              | 5/2              | Internal        | 9                                    | 35                        |
| 8/1                              | 9/1              | Internal        | 19                                   | 35                        |

**Scenario 1: '2033 wDev AM'** (FG7: '2033 w Dev AM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 77.8 %        | 1911              | 1911                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 22.2 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 25.9 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 74.1 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 1

**Scenario 2: '2033 wDev PM'** (FG8: '2033 w Dev PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 67.7 %        | 1900              | 1900                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 32.3 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 19.6 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 80.4 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 2

**Scenario 3: '2040 wDev no School AM' (FG11: '2040 w Dev no School AM', Plan 1: 'Network Control Plan 1')**  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 77.7 %        | 1910              | 1910                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 22.3 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 26.0 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 74.0 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 3

**Scenario 4: '2040 wDev no School PM' (FG12: '2040 wDev no School PM', Plan 1: 'Network Control Plan 1')**  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 67.7 %        | 1900              | 1900                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 32.3 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 19.5 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 80.5 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 4

**Scenario 5: '2040 wDev w School AM'** (FG13: '2040 w Dev with School AM', Plan 1: 'Network Control Plan 1')  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 77.6 %        | 1910              | 1910                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 22.4 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 25.8 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 74.2 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 5

**Scenario 6: '2040 wDev w School PM'** (FG14: '2040 wDev with School PM', Plan 1: 'Network Control Plan 1')  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 67.7 %        | 1900              | 1900                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 32.3 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 19.5 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 80.5 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 6

**Traffic Flow Groups**

| Flow Group                      | Start Time | End Time | Duration | Formula |
|---------------------------------|------------|----------|----------|---------|
| 1: '2022 AM'                    | 08:00      | 09:00    | 01:00    |         |
| 2: '2022 PM'                    | 17:00      | 18:00    | 01:00    |         |
| 3: '2028 AM'                    | 08:00      | 09:00    | 01:00    |         |
| 4: '2028 PM'                    | 17:00      | 18:00    | 01:00    |         |
| 5: '2033 AM'                    | 08:00      | 09:00    | 01:00    |         |
| 6: '2033 PM'                    | 17:00      | 18:00    | 01:00    |         |
| 7: '2033 w Dev AM'              | 08:00      | 09:00    | 01:00    |         |
| 8: '2033 w Dev PM'              | 17:00      | 18:00    | 01:00    |         |
| 9: '2040 AM'                    | 08:00      | 09:00    | 01:00    |         |
| 10: '2040 PM'                   | 17:00      | 18:00    | 01:00    |         |
| 11: '2040 w Dev no School AM'   | 08:00      | 09:00    | 01:00    |         |
| 12: '2040 wDev no School PM'    | 17:00      | 18:00    | 01:00    |         |
| 13: '2040 w Dev with School AM' | 08:00      | 09:00    | 01:00    |         |
| 14: '2040 wDev with School PM'  | 17:00      | 18:00    | 01:00    |         |

**Traffic Flows, Desired****FG1: '2022 AM'****Desired Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 199  | 2    | 200  | 403  |
|        | B           | 105 | 59   | 978  | 431  | 1573 |
|        | C           | 1   | 938  | 1    | 731  | 1671 |
|        | D           | 116 | 314  | 636  | 22   | 1088 |
|        | Tot.        | 224 | 1510 | 1617 | 1384 | 4735 |

## Detailed Input Data And Results

### FG2: '2022 PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 116  | 0    | 150  | 266  |
|        | B           | 153 | 100  | 1070 | 454  | 1777 |
|        | C           | 2   | 1252 | 0    | 733  | 1987 |
|        | D           | 143 | 149  | 633  | 4    | 929  |
|        | Tot.        | 298 | 1617 | 1703 | 1341 | 4959 |

### FG3: '2028 AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 209  | 2    | 210  | 423  |
|        | B           | 110 | 62   | 1025 | 452  | 1649 |
|        | C           | 1   | 983  | 1    | 767  | 1752 |
|        | D           | 122 | 329  | 667  | 23   | 1141 |
|        | Tot.        | 235 | 1583 | 1695 | 1452 | 4965 |

### FG4: '2028 PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 122  | 0    | 157  | 279  |
|        | B           | 160 | 105  | 1120 | 475  | 1860 |
|        | C           | 2   | 1311 | 0    | 767  | 2080 |
|        | D           | 150 | 156  | 663  | 4    | 973  |
|        | Tot.        | 312 | 1694 | 1783 | 1403 | 5192 |

### FG5: '2033 AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 213  | 2    | 214  | 431  |
|        | B           | 113 | 63   | 1048 | 462  | 1686 |
|        | C           | 1   | 1005 | 1    | 783  | 1790 |
|        | D           | 124 | 336  | 682  | 24   | 1166 |
|        | Tot.        | 240 | 1617 | 1733 | 1483 | 5073 |

## Detailed Input Data And Results

### FG6: '2033 PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 124  | 0    | 161  | 285  |
|        | B           | 164 | 107  | 1144 | 486  | 1901 |
|        | C           | 2   | 1340 | 0    | 784  | 2126 |
|        | D           | 153 | 159  | 677  | 4    | 993  |
|        | Tot.        | 319 | 1730 | 1821 | 1435 | 5305 |

### FG7: '2033 w Dev AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 213  | 2    | 214  | 431  |
|        | B           | 113 | 63   | 1092 | 462  | 1730 |
|        | C           | 1   | 1052 | 1    | 783  | 1837 |
|        | D           | 124 | 336  | 682  | 24   | 1166 |
|        | Tot.        | 240 | 1664 | 1777 | 1483 | 5164 |

### FG8: '2033 w Dev PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 124  | 0    | 161  | 285  |
|        | B           | 164 | 107  | 1182 | 486  | 1939 |
|        | C           | 2   | 1381 | 0    | 784  | 2167 |
|        | D           | 153 | 159  | 677  | 4    | 993  |
|        | Tot.        | 319 | 1771 | 1859 | 1435 | 5384 |

### FG9: '2040 AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 207  | 416  |
|        | B           | 108 | 61   | 1010 | 445  | 1624 |
|        | C           | 1   | 968  | 1    | 755  | 1725 |
|        | D           | 120 | 324  | 657  | 23   | 1124 |
|        | Tot.        | 231 | 1558 | 1670 | 1430 | 4889 |

## Detailed Input Data And Results

### FG10: '2040 PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 158 | 103  | 1101 | 467  | 1829 |
|        | C           | 2   | 1289 | 0    | 755  | 2046 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 307 | 1664 | 1752 | 1380 | 5103 |

### FG11: '2040 w Dev no School AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 207  | 416  |
|        | B           | 108 | 61   | 1142 | 445  | 1756 |
|        | C           | 1   | 1102 | 1    | 755  | 1859 |
|        | D           | 120 | 324  | 657  | 23   | 1124 |
|        | Tot.        | 231 | 1692 | 1802 | 1430 | 5155 |

### FG12: '2040 wDev no School PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 158 | 103  | 1173 | 467  | 1901 |
|        | C           | 2   | 1398 | 0    | 755  | 2155 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 307 | 1773 | 1824 | 1380 | 5284 |

### FG13: '2040 w Dev with School AM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 203  | 2    | 205  | 412  |
|        | B           | 107 | 61   | 1124 | 441  | 1733 |
|        | C           | 1   | 1111 | 1    | 755  | 1868 |
|        | D           | 120 | 320  | 657  | 23   | 1120 |
|        | Tot.        | 230 | 1695 | 1784 | 1424 | 5133 |

## Detailed Input Data And Results

### FG14: '2040 wDev with School PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 157 | 103  | 1192 | 467  | 1919 |
|        | C           | 2   | 1387 | 0    | 755  | 2144 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 306 | 1762 | 1843 | 1380 | 5291 |

### Scenario 1: '2033 wDev AM' (FG7: '2033 w Dev AM', Plan 1: 'Network Control Plan 1')

#### Traffic Flows, Actual

##### Actual Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 213  | 2    | 214  | 431  |
|        | B           | 113 | 63   | 1092 | 462  | 1730 |
|        | C           | 1   | 1052 | 1    | 783  | 1837 |
|        | D           | 124 | 336  | 682  | 24   | 1166 |
|        | Tot.        | 240 | 1664 | 1777 | 1483 | 5164 |

#### Traffic Flows, Difference

##### Difference :

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

### Scenario 2: '2033 wDev PM' (FG8: '2033 w Dev PM', Plan 1: 'Network Control Plan 1')

#### Traffic Flows, Actual

##### Actual Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 124  | 0    | 161  | 285  |
|        | B           | 164 | 107  | 1182 | 486  | 1939 |
|        | C           | 2   | 1381 | 0    | 784  | 2167 |
|        | D           | 153 | 159  | 677  | 4    | 993  |
|        | Tot.        | 319 | 1771 | 1859 | 1435 | 5384 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 3: '2040 wDev no School AM' (FG11: '2040 w Dev no School AM', Plan 1: 'Network Control Plan 1')****Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 207  | 416  |
|        | B           | 108 | 61   | 1142 | 445  | 1756 |
|        | C           | 1   | 1102 | 1    | 755  | 1859 |
|        | D           | 120 | 324  | 657  | 23   | 1124 |
|        | Tot.        | 231 | 1692 | 1802 | 1430 | 5155 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 4: '2040 wDev no School PM' (FG12: '2040 wDev no School PM', Plan 1: 'Network Control Plan 1')****Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 158 | 103  | 1173 | 467  | 1901 |
|        | C           | 2   | 1398 | 0    | 755  | 2155 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 307 | 1773 | 1824 | 1380 | 5284 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 5: '2040 wDev w School AM'** (FG13: '2040 w Dev with School AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 203  | 2    | 205  | 412  |
|        | B           | 107 | 61   | 1124 | 441  | 1733 |
|        | C           | 1   | 1111 | 1    | 755  | 1868 |
|        | D           | 120 | 320  | 657  | 23   | 1120 |
|        | Tot.        | 230 | 1695 | 1784 | 1424 | 5133 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 6: '2040 wDev w School PM'** (FG14: '2040 wDev with School PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 154  | 273  |
|        | B           | 157 | 103  | 1192 | 467  | 1919 |
|        | C           | 2   | 1387 | 0    | 755  | 2144 |
|        | D           | 147 | 153  | 651  | 4    | 955  |
|        | Tot.        | 306 | 1762 | 1843 | 1380 | 5291 |

## Detailed Input Data And Results

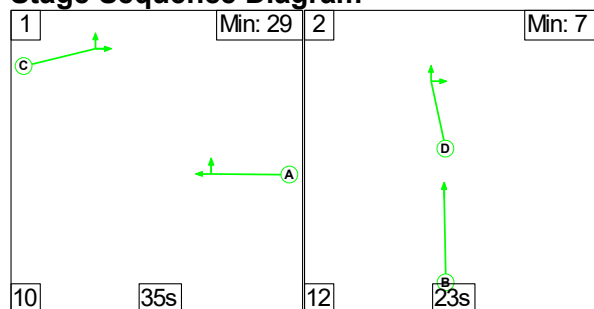
### Traffic Flows, Difference

Difference :

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

### Traffic Lane Flows

| Lane                             | Scenario 1:<br>2033 wDev<br>AM | Scenario 2:<br>2033 wDev<br>PM | Scenario 3:<br>2040 wDev<br>no School<br>AM | Scenario 4:<br>2040 wDev<br>no School<br>PM | Scenario 5:<br>2040 wDev<br>w School<br>AM | Scenario 6:<br>2040 wDev<br>w School<br>PM |
|----------------------------------|--------------------------------|--------------------------------|---------------------------------------------|---------------------------------------------|--------------------------------------------|--------------------------------------------|
| <b>Junction: Junction9 A1(M)</b> |                                |                                |                                             |                                             |                                            |                                            |
| 1/1                              | 213                            | 124                            | 205                                         | 119                                         | 203                                        | 119                                        |
| 1/2                              | 218                            | 161                            | 211                                         | 154                                         | 209                                        | 154                                        |
| 2/1                              | 1092                           | 1182                           | 1142                                        | 1173                                        | 1124                                       | 1192                                       |
| 2/2                              | 638                            | 757                            | 614                                         | 728                                         | 609                                        | 727                                        |
| 3/1                              | 783                            | 784                            | 755                                         | 755                                         | 755                                        | 755                                        |
| 3/2                              | 1054                           | 1383                           | 1104                                        | 1400                                        | 1113                                       | 1389                                       |
| 4/1                              | 558                            | 473                            | 537                                         | 455                                         | 536                                        | 455                                        |
| 4/2                              | 608                            | 520                            | 587                                         | 500                                         | 584                                        | 500                                        |
| 5/1                              | 700                            | 651                            | 675                                         | 625                                         | 669                                        | 625                                        |
| 5/2                              | 178                            | 271                            | 171                                         | 261                                         | 170                                        | 260                                        |
| 6/1                              | 116                            | 166                            | 111                                         | 160                                         | 110                                        | 159                                        |
| 6/2                              | 1116                           | 1488                           | 1164                                        | 1501                                        | 1173                                       | 1490                                       |
| 7/1                              | 2158                           | 2328                           | 2168                                        | 2309                                        | 2173                                       | 2298                                       |
| 8/1                              | 925                            | 842                            | 892                                         | 809                                         | 890                                        | 809                                        |
| 9/1                              | 1777                           | 1859                           | 1802                                        | 1824                                        | 1784                                       | 1843                                       |
| 10/1                             | 1483                           | 1435                           | 1430                                        | 1380                                        | 1424                                       | 1380                                       |
| 11/1                             | 240                            | 319                            | 231                                         | 307                                         | 230                                        | 306                                        |
| 12/1                             | 1664                           | 1771                           | 1692                                        | 1773                                        | 1695                                       | 1762                                       |

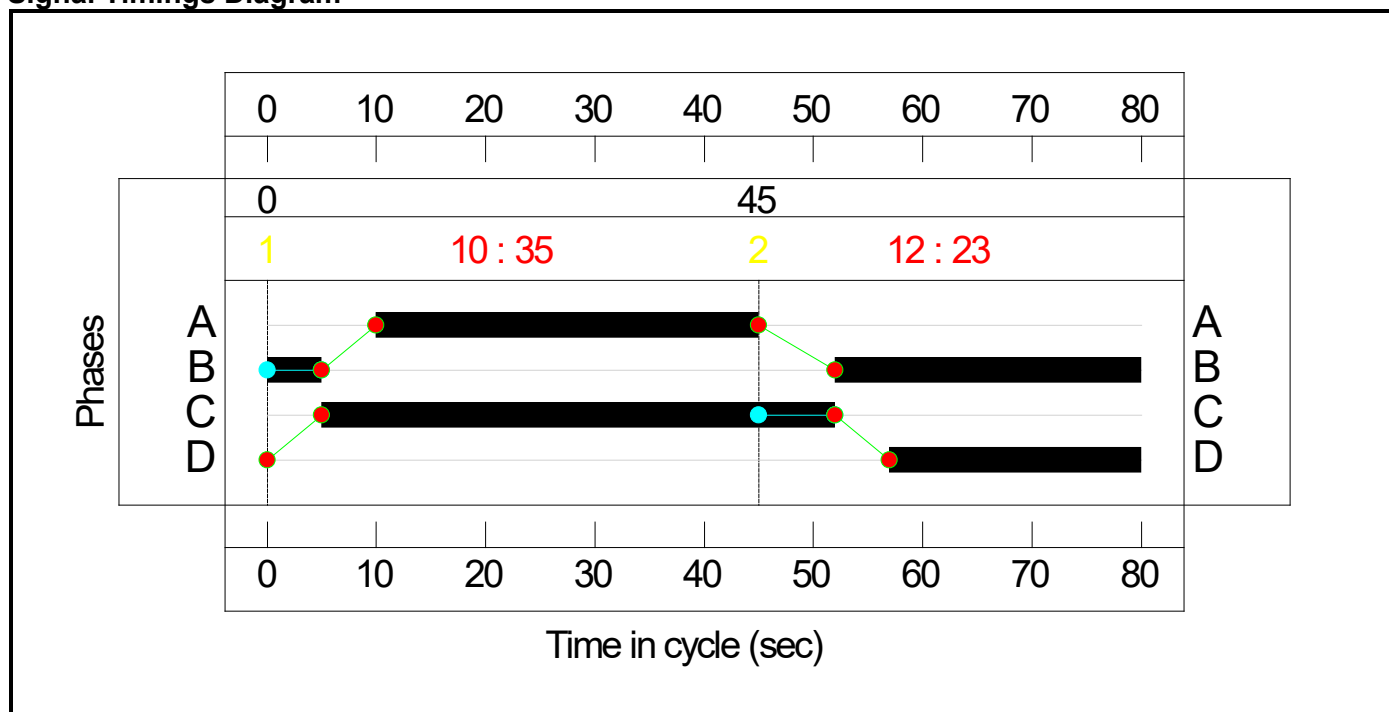
**Scenario 1: '2033 wDev AM'** (FG7: '2033 w Dev AM', Plan 1: 'Network Control Plan 1')**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 35 | 23 |
| Change Point | 0  | 45 |

**Phase Timings**

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 35             | 10         | 45       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 33             | 52         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 47             | 5          | 52       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 23             | 57         | 0        |

## Signal Timings Diagram

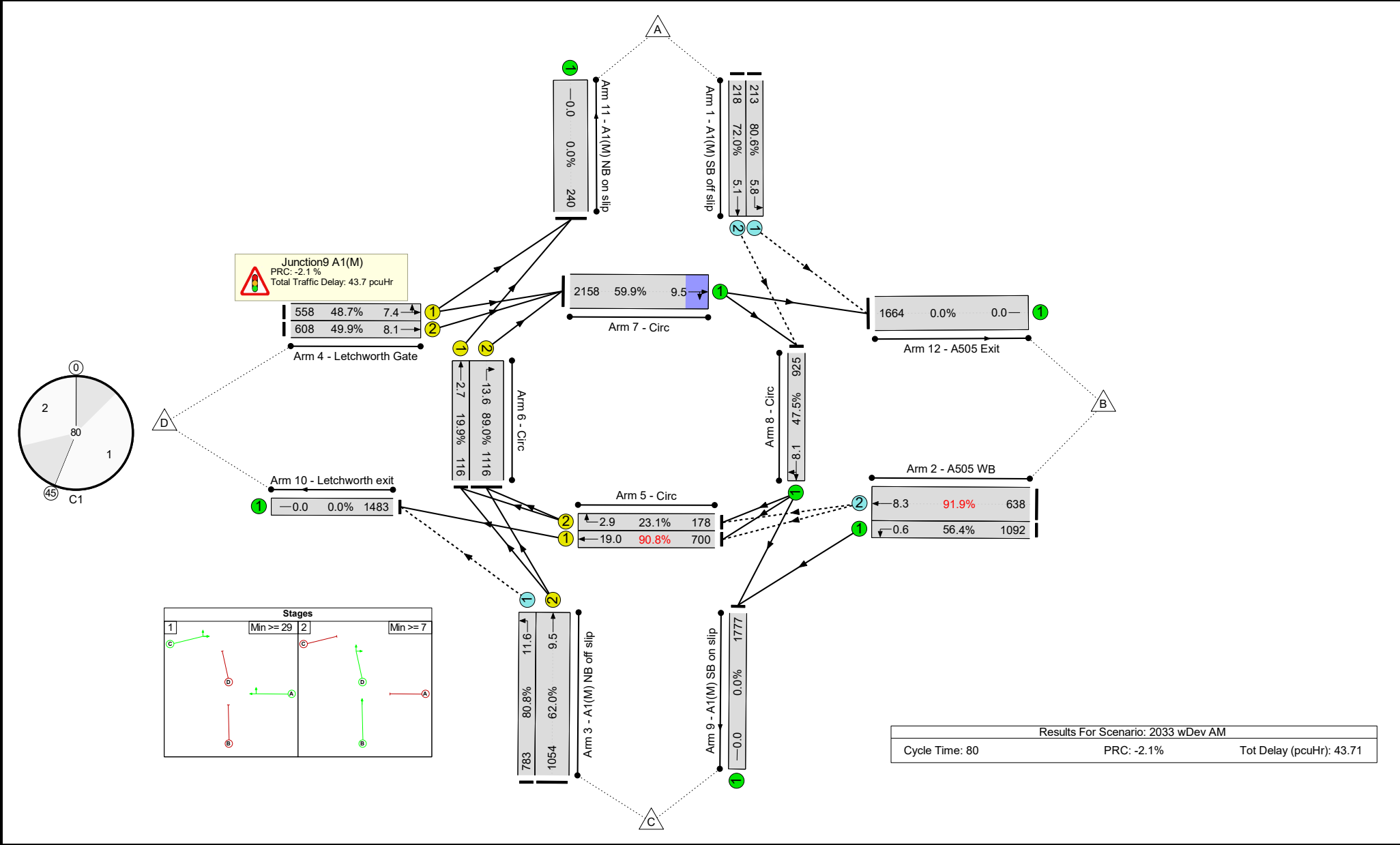


## Lane Green Times

| Junction: Junction9 A1(M) |                            |      |        |             |           |
|---------------------------|----------------------------|------|--------|-------------|-----------|
| Lane                      | Description                | Type | Phases | Start Green | End Green |
| 3/2                       | A1(M) NB off slip Ahead    | U    | B      | 52          | 5         |
| 4/1                       | Letchworth Gate Ahead Left | U    | C      | 5           | 52        |
| 4/2                       | Letchworth Gate Ahead      | U    | C      | 5           | 52        |
| 5/1                       | Circ Ahead                 | U    | A      | 10          | 45        |
| 5/2                       | Circ Right                 | U    | A      | 10          | 45        |
| 6/1                       | Circ Ahead                 | U    | D      | 57          | 0         |
| 6/2                       | Circ Right                 | U    | D      | 57          | 0         |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

### Network Results

| Item                                             | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|--------------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m)<br/>Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 91.9%       |
| <b>Junction9 A1(M)</b>                           | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 91.9%       |
| 1/1                                              | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 213               | 1961              | 264            | 80.6%       |
| 1/2                                              | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 218               | 2080              | 303            | 72.0%       |
| 2/1                                              | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1092              | 1936              | 1936           | 56.4%       |
| 2/2                                              | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 638               | 4178              | 694            | 91.9%       |
| 3/1                                              | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 783               | 1936              | 969            | 80.8%       |
| 3/2                                              | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 33              | -               | -               | 1054              | 4000              | 1700           | 62.0%       |
| 4/1                                              | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 47              | -               | -               | 558               | 1911              | 1147           | 48.7%       |
| 4/2                                              | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 47              | -               | -               | 608               | 2029              | 1217           | 49.9%       |
| 5/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 35              | -               | -               | 700               | 1714              | 771            | 90.8%       |
| 5/2                                              | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 35              | -               | -               | 178               | 1714              | 771            | 23.1%       |
| 6/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 23              | -               | -               | 116               | 1943              | 583            | 19.9%       |
| 6/2                                              | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 23              | -               | -               | 1116              | 4178              | 1253           | 89.0%       |
| 7/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2158              | 3600              | 3600           | 59.9%       |
| 8/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 925               | 1948              | 1948           | 47.5%       |
| 9/1                                              | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1777              | Inf               | Inf            | 0.0%        |

# Detailed Input Data And Results

| 10/1                                         | Letchworth exit  | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1483                             | Inf                        | Inf                  | 0.0% |
|----------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 11/1                                         | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 240                              | Inf                        | Inf                  | 0.0% |
| 12/1                                         | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1664                             | Inf                        | Inf                  | 0.0% |
| Item                                         | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10 - PROPOSED</b> | -                | -             | <b>1378</b>           | <b>474</b>                   | <b>0</b>                    | <b>21.5</b>           | <b>22.2</b>                  | <b>0.0</b>                         | <b>43.7</b>         | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                       | -                | -             | <b>1378</b>           | <b>474</b>                   | <b>0</b>                    | <b>21.5</b>           | <b>22.2</b>                  | <b>0.0</b>                         | <b>43.7</b>         | -                         | -                                | -                          | -                    |      |
| 1/1                                          | 213              | 213           | 213                   | 0                            | 0                           | 0.8                   | 1.9                          | -                                  | 2.7                 | 45.7                      | 3.9                              | 1.9                        | 5.8                  |      |
| 1/2                                          | 218              | 218           | 218                   | 0                            | 0                           | 0.8                   | 1.3                          | -                                  | 2.1                 | 34.2                      | 3.8                              | 1.3                        | 5.1                  |      |
| 2/1                                          | 1092             | 1092          | -                     | -                            | -                           | 0.0                   | 0.6                          | -                                  | 0.6                 | 2.1                       | 0.0                              | 0.6                        | 0.6                  |      |
| 2/2                                          | 638              | 638           | 638                   | 0                            | 0                           | 0.9                   | 4.8                          | -                                  | 5.7                 | 32.2                      | 5.8                              | 2.4                        | 8.3                  |      |
| 3/1                                          | 783              | 783           | 309                   | 474                          | 0                           | 0.4                   | 2.1                          | -                                  | 2.4                 | 11.2                      | 9.6                              | 2.1                        | 11.6                 |      |
| 3/2                                          | 1054             | 1054          | -                     | -                            | -                           | 5.3                   | 0.8                          | -                                  | 6.1                 | 20.7                      | 9.1                              | 0.4                        | 9.5                  |      |
| 4/1                                          | 558              | 558           | -                     | -                            | -                           | 1.4                   | 0.5                          | -                                  | 1.9                 | 12.1                      | 7.0                              | 0.5                        | 7.4                  |      |
| 4/2                                          | 608              | 608           | -                     | -                            | -                           | 1.5                   | 0.5                          | -                                  | 2.0                 | 12.1                      | 7.6                              | 0.5                        | 8.1                  |      |
| 5/1                                          | 700              | 700           | -                     | -                            | -                           | 5.0                   | 4.4                          | -                                  | 9.4                 | 48.1                      | 14.6                             | 4.4                        | 19.0                 |      |
| 5/2                                          | 178              | 178           | -                     | -                            | -                           | 0.7                   | 0.1                          | -                                  | 0.8                 | 16.4                      | 2.7                              | 0.1                        | 2.9                  |      |
| 6/1                                          | 116              | 116           | -                     | -                            | -                           | 1.1                   | 0.1                          | -                                  | 1.2                 | 38.6                      | 2.6                              | 0.1                        | 2.7                  |      |
| 6/2                                          | 1116             | 1116          | -                     | -                            | -                           | 3.4                   | 3.8                          | -                                  | 7.2                 | 23.3                      | 11.7                             | 1.9                        | 13.6                 |      |
| 7/1                                          | 2158             | 2158          | -                     | -                            | -                           | 0.3                   | 0.7                          | -                                  | 1.0                 | 1.7                       | 9.2                              | 0.4                        | 9.5                  |      |
| 8/1                                          | 925              | 925           | -                     | -                            | -                           | 0.1                   | 0.5                          | -                                  | 0.5                 | 2.0                       | 7.6                              | 0.5                        | 8.1                  |      |
| 9/1                                          | 1777             | 1777          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                         | 1483             | 1483          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                         | 240              | 240           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                         | 1664             | 1664          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |

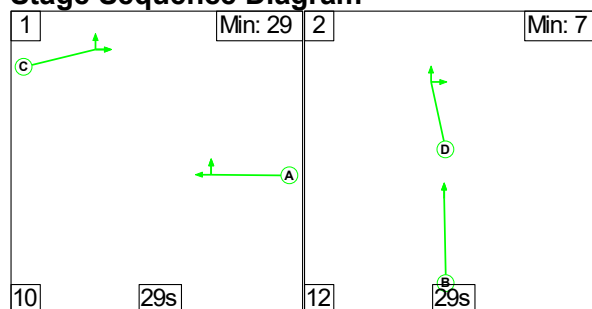
Detailed Input Data And Results

|    |                              |      |                                          |       |                 |    |
|----|------------------------------|------|------------------------------------------|-------|-----------------|----|
| C1 | PRC for Signalled Lanes (%): | -0.8 | Total Delay for Signalled Lanes (pcuHr): | 28.62 | Cycle Time (s): | 80 |
|    | PRC Over All Lanes (%):      | -2.1 | Total Delay Over All Lanes(pcuHr):       | 43.71 |                 |    |

## Detailed Input Data And Results

**Scenario 2: '2033 wDev PM'** (FG8: '2033 w Dev PM', Plan 1: 'Network Control Plan 1')

### Stage Sequence Diagram



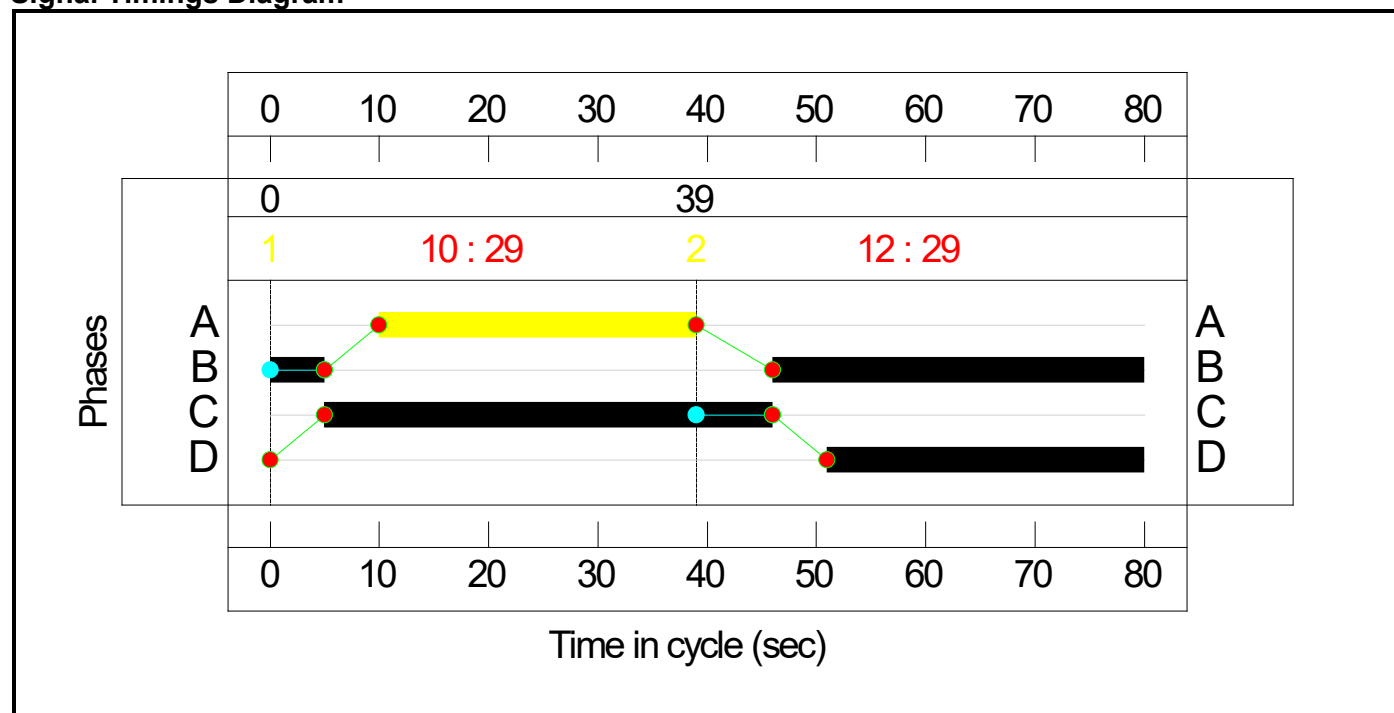
### Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 29 | 29 |
| Change Point | 0  | 39 |

### Phase Timings

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 29             | 10         | 39       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 39             | 46         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 41             | 5          | 46       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 29             | 51         | 0        |

### Signal Timings Diagram

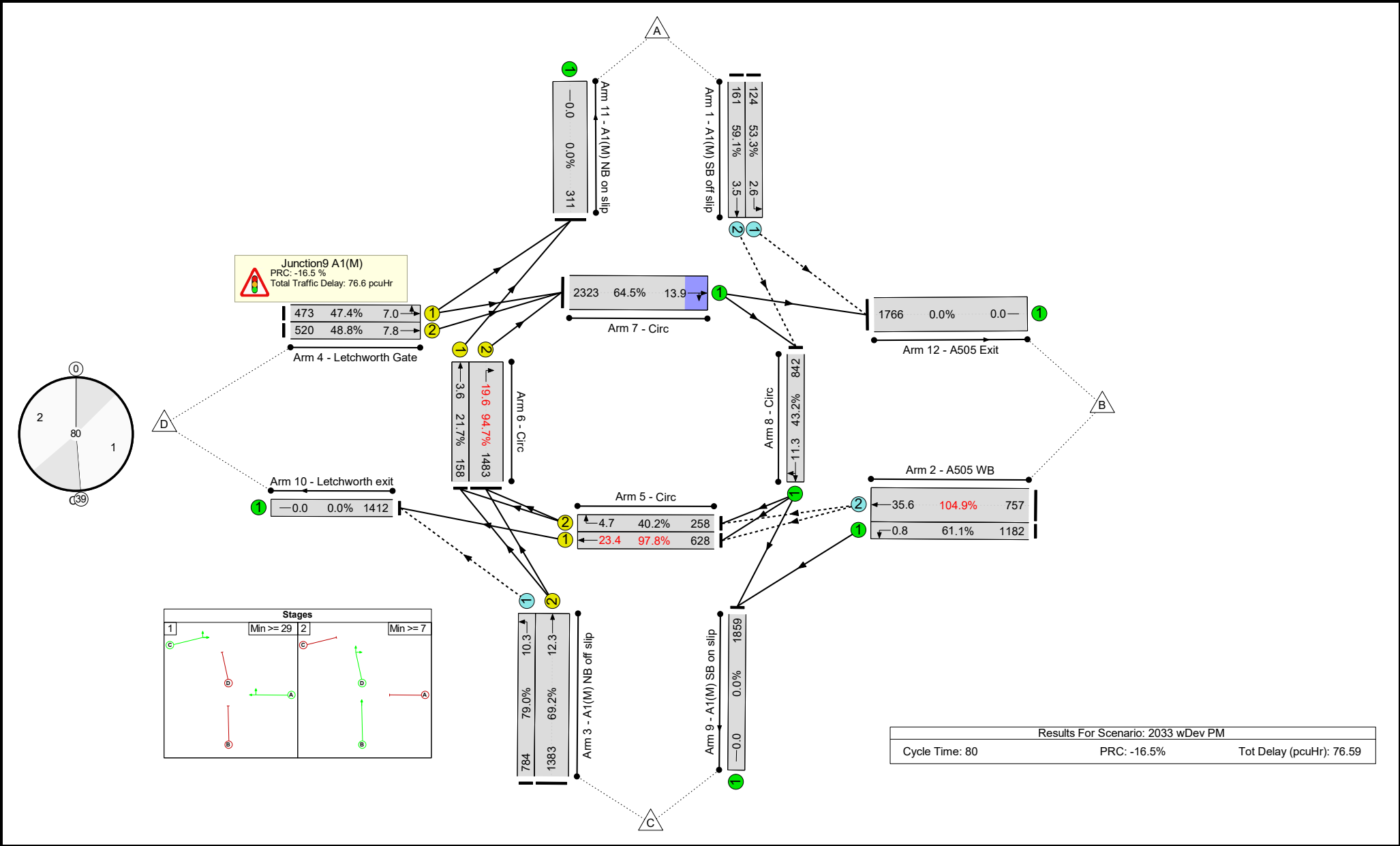


**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 46                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 46               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 46               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 39               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 39               |
| 6/1                              | Circ Ahead                 | U           | D             | 51                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 51                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

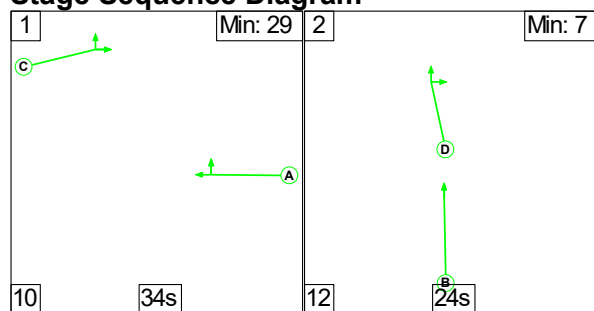
### Network Results

| Item                                         | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)   |
|----------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|---------------|
| <b>Network: A1(m) Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | <b>104.9%</b> |
| <b>Junction9 A1(M)</b>                       | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | <b>104.9%</b> |
| 1/1                                          | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 124               | 1961              | 233            | 53.3%         |
| 1/2                                          | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 161               | 2080              | 272            | 59.1%         |
| 2/1                                          | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1182              | 1936              | 1936           | 61.1%         |
| 2/2                                          | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 757               | 4178              | 722            | 104.9%        |
| 3/1                                          | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 784               | 1936              | 993            | 79.0%         |
| 3/2                                          | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 39              | -               | -               | 1383              | 4000              | 2000           | 69.2%         |
| 4/1                                          | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 41              | -               | -               | 473               | 1900              | 997            | 47.4%         |
| 4/2                                          | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 41              | -               | -               | 520               | 2029              | 1065           | 48.8%         |
| 5/1                                          | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 29              | -               | -               | 651               | 1714              | 643            | 97.8%         |
| 5/2                                          | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 29              | -               | -               | 271               | 1714              | 643            | 40.2%         |
| 6/1                                          | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 29              | -               | -               | 166               | 1943              | 729            | 21.7%         |
| 6/2                                          | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 29              | -               | -               | 1488              | 4178              | 1567           | 94.7%         |
| 7/1                                          | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2328              | 3600              | 3600           | 64.5%         |
| 8/1                                          | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 842               | 1948              | 1948           | 43.2%         |
| 9/1                                          | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1859              | Inf               | Inf            | 0.0%          |
| 10/1                                         | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1435              | Inf               | Inf            | 0.0%          |

## Detailed Input Data And Results

| 11/1                                                                                                                                                                                                                                                                                   | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 319                              | Inf                        | Inf                  | 0.0% |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                   | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1771                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                   | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10 - PROPOSED</b>                                                                                                                                                                                                                                           | -                | -             | <b>1249</b>           | <b>541</b>                   | <b>0</b>                    | <b>26.8</b>           | <b>49.8</b>                  | <b>0.0</b>                         | <b>76.6</b>         | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                 | -                | -             | <b>1249</b>           | <b>541</b>                   | <b>0</b>                    | <b>26.8</b>           | <b>49.8</b>                  | <b>0.0</b>                         | <b>76.6</b>         | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                    | 124              | 124           | 124                   | 0                            | 0                           | 0.5                   | 0.6                          | -                                  | 1.1                 | 30.9                      | 2.0                              | 0.6                        | 2.6                  |      |
| 1/2                                                                                                                                                                                                                                                                                    | 161              | 161           | 161                   | 0                            | 0                           | 0.8                   | 0.7                          | -                                  | 1.5                 | 33.8                      | 2.8                              | 0.7                        | 3.5                  |      |
| 2/1                                                                                                                                                                                                                                                                                    | 1182             | 1182          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                                                                                                                                                                                                                                                                                    | 757              | 722           | 722                   | 0                            | 0                           | 3.3                   | 25.1                         | -                                  | 28.4                | 135.1                     | 23.0                             | 12.6                       | 35.6                 |      |
| 3/1                                                                                                                                                                                                                                                                                    | 784              | 784           | 243                   | 541                          | 0                           | 0.3                   | 1.8                          | -                                  | 2.2                 | 9.9                       | 8.5                              | 1.8                        | 10.3                 |      |
| 3/2                                                                                                                                                                                                                                                                                    | 1383             | 1383          | -                     | -                            | -                           | 5.9                   | 1.1                          | -                                  | 7.0                 | 18.2                      | 11.7                             | 0.6                        | 12.3                 |      |
| 4/1                                                                                                                                                                                                                                                                                    | 473              | 473           | -                     | -                            | -                           | 1.6                   | 0.5                          | -                                  | 2.0                 | 15.4                      | 6.6                              | 0.5                        | 7.0                  |      |
| 4/2                                                                                                                                                                                                                                                                                    | 520              | 520           | -                     | -                            | -                           | 1.8                   | 0.5                          | -                                  | 2.2                 | 15.4                      | 7.4                              | 0.5                        | 7.8                  |      |
| 5/1                                                                                                                                                                                                                                                                                    | 628              | 628           | -                     | -                            | -                           | 5.0                   | 9.5                          | -                                  | 14.4                | 82.5                      | 13.9                             | 9.5                        | 23.4                 |      |
| 5/2                                                                                                                                                                                                                                                                                    | 258              | 258           | -                     | -                            | -                           | 1.1                   | 0.3                          | -                                  | 1.4                 | 19.5                      | 4.3                              | 0.3                        | 4.7                  |      |
| 6/1                                                                                                                                                                                                                                                                                    | 158              | 158           | -                     | -                            | -                           | 1.3                   | 0.1                          | -                                  | 1.4                 | 32.7                      | 3.5                              | 0.1                        | 3.6                  |      |
| 6/2                                                                                                                                                                                                                                                                                    | 1483             | 1483          | -                     | -                            | -                           | 4.6                   | 7.5                          | -                                  | 12.1                | 29.4                      | 15.9                             | 3.8                        | 19.6                 |      |
| 7/1                                                                                                                                                                                                                                                                                    | 2323             | 2323          | -                     | -                            | -                           | 0.6                   | 0.9                          | -                                  | 1.5                 | 2.3                       | 13.4                             | 0.5                        | 13.9                 |      |
| 8/1                                                                                                                                                                                                                                                                                    | 842              | 842           | -                     | -                            | -                           | 0.2                   | 0.4                          | -                                  | 0.5                 | 2.3                       | 10.9                             | 0.4                        | 11.3                 |      |
| 9/1                                                                                                                                                                                                                                                                                    | 1859             | 1859          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                   | 1412             | 1412          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                   | 311              | 311           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                   | 1766             | 1766          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): -8.6</div> <div>PRC Over All Lanes (%): -16.5</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 40.61</div> <div>Total Delay Over All Lanes(pcuHr): 76.59</div> </div> <div>Cycle Time (s): 80</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

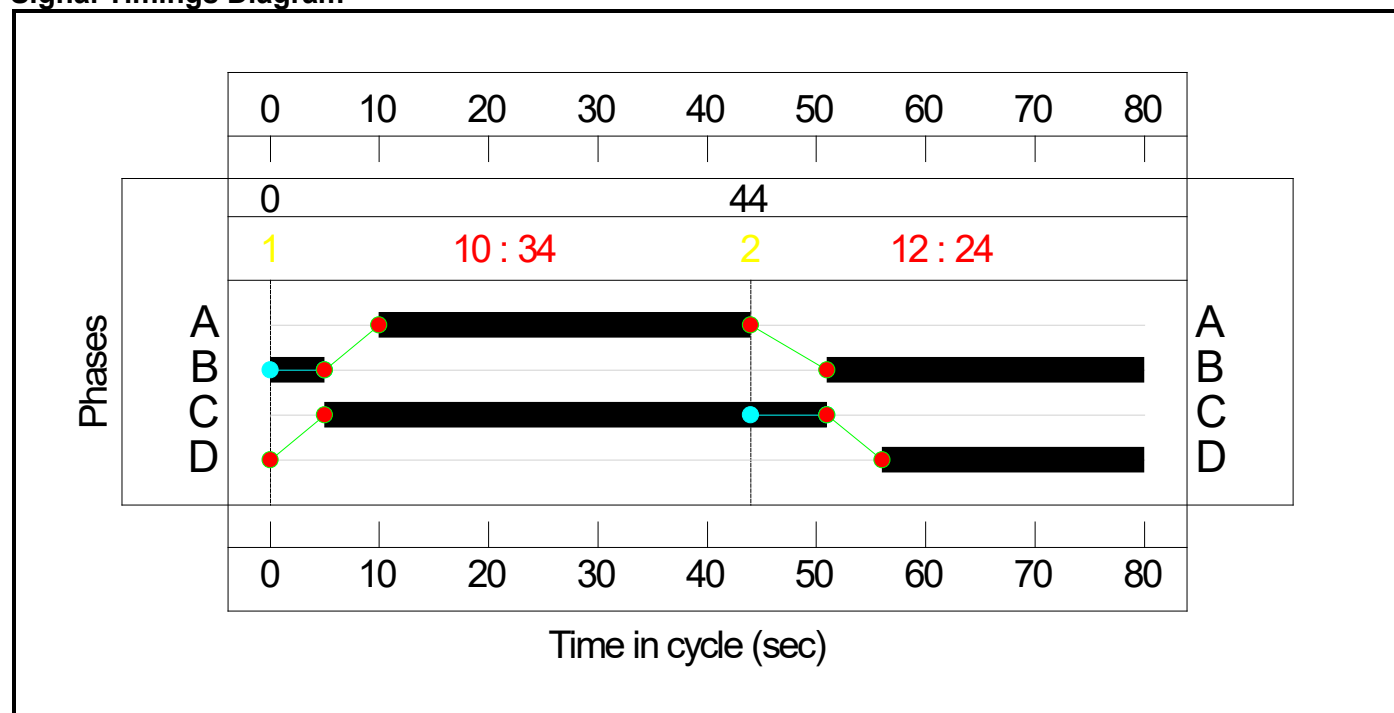


**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 34 | 24 |
| Change Point | 0  | 44 |

**Phase Timings**

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 34             | 10         | 44       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 34             | 51         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 46             | 5          | 51       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 24             | 56         | 0        |

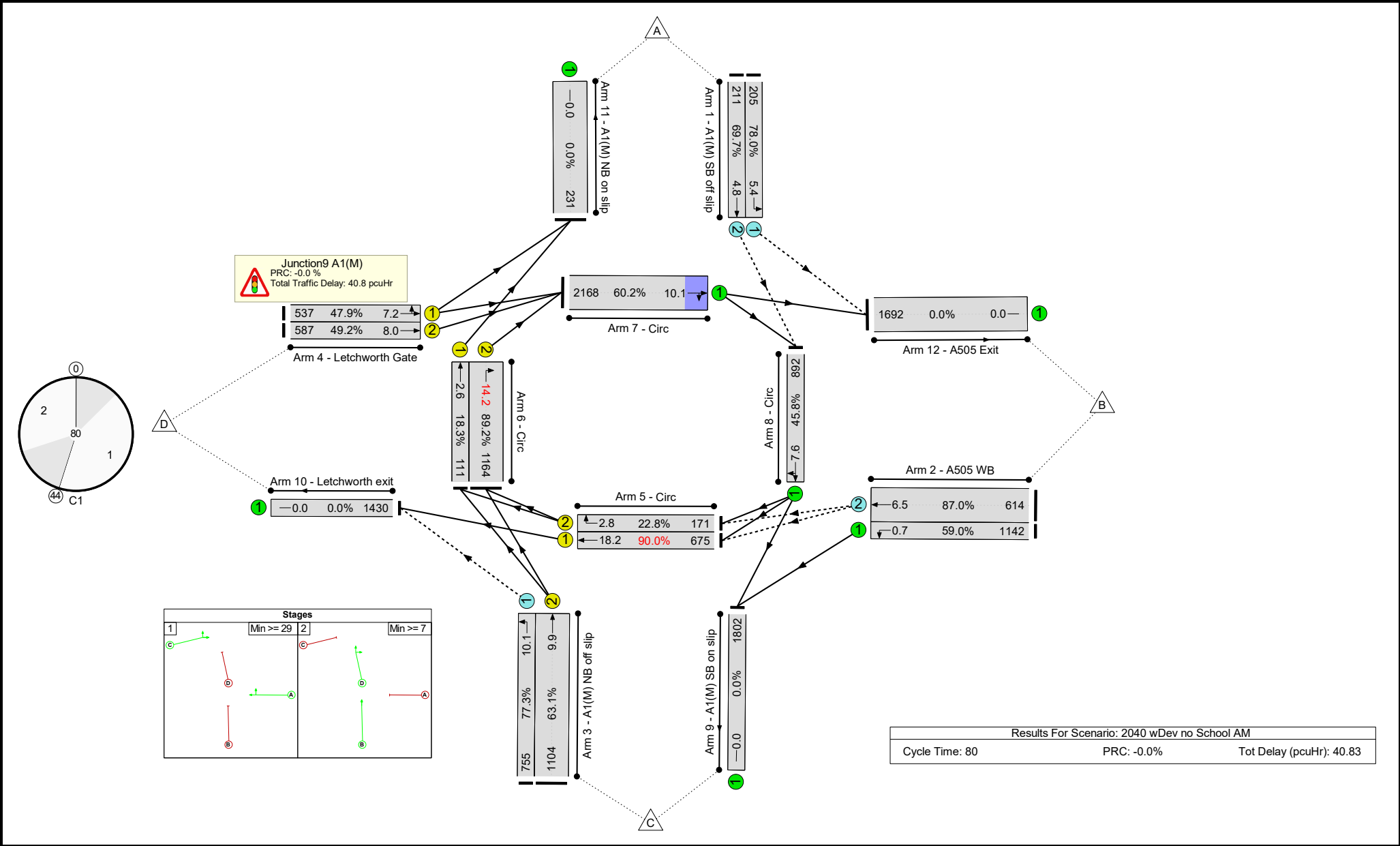
**Signal Timings Diagram**

**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 51                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 51               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 51               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 44               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 44               |
| 6/1                              | Circ Ahead                 | U           | D             | 56                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 56                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

### Network Results

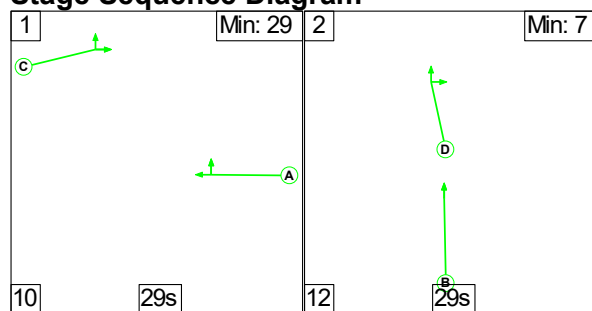
| Item                                             | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|--------------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m)<br/>Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 90.0%       |
| <b>Junction9 A1(M)</b>                           | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 90.0%       |
| 1/1                                              | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 205               | 1961              | 263            | 78.0%       |
| 1/2                                              | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 211               | 2080              | 303            | 69.7%       |
| 2/1                                              | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1142              | 1936              | 1936           | 59.0%       |
| 2/2                                              | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 614               | 4178              | 705            | 87.0%       |
| 3/1                                              | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 977            | 77.3%       |
| 3/2                                              | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 34              | -               | -               | 1104              | 4000              | 1750           | 63.1%       |
| 4/1                                              | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 46              | -               | -               | 537               | 1910              | 1122           | 47.9%       |
| 4/2                                              | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 46              | -               | -               | 587               | 2029              | 1192           | 49.2%       |
| 5/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 34              | -               | -               | 675               | 1714              | 750            | 90.0%       |
| 5/2                                              | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 34              | -               | -               | 171               | 1714              | 750            | 22.8%       |
| 6/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 24              | -               | -               | 111               | 1943              | 607            | 18.3%       |
| 6/2                                              | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 24              | -               | -               | 1164              | 4178              | 1306           | 89.2%       |
| 7/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2168              | 3600              | 3600           | 60.2%       |
| 8/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 892               | 1948              | 1948           | 45.8%       |
| 9/1                                              | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1802              | Inf               | Inf            | 0.0%        |

## Detailed Input Data And Results

| 10/1                                  | Letchworth exit  | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1430                             | Inf                        | Inf                  | 0.0% |
|---------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 11/1                                  | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 231                              | Inf                        | Inf                  | 0.0% |
| 12/1                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1692                             | Inf                        | Inf                  | 0.0% |
| Item                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 - PROPOSED | -                | -             | 1332                  | 453                          | 0                           | 21.3                  | 19.5                         | 0.0                                | 40.8                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)                       | -                | -             | 1332                  | 453                          | 0                           | 21.3                  | 19.5                         | 0.0                                | 40.8                | -                         | -                                | -                          | -                    |      |
| 1/1                                   | 205              | 205           | 205                   | 0                            | 0                           | 0.7                   | 1.7                          | -                                  | 2.4                 | 42.5                      | 3.7                              | 1.7                        | 5.4                  |      |
| 1/2                                   | 211              | 211           | 211                   | 0                            | 0                           | 0.8                   | 1.1                          | -                                  | 1.9                 | 32.9                      | 3.6                              | 1.1                        | 4.8                  |      |
| 2/1                                   | 1142             | 1142          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.3                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                                   | 614              | 614           | 614                   | 0                            | 0                           | 0.7                   | 3.1                          | -                                  | 3.8                 | 22.3                      | 4.9                              | 1.6                        | 6.5                  |      |
| 3/1                                   | 755              | 755           | 302                   | 453                          | 0                           | 0.3                   | 1.7                          | -                                  | 1.9                 | 9.2                       | 8.4                              | 1.7                        | 10.1                 |      |
| 3/2                                   | 1104             | 1104          | -                     | -                            | -                           | 5.4                   | 0.9                          | -                                  | 6.2                 | 20.3                      | 9.5                              | 0.4                        | 9.9                  |      |
| 4/1                                   | 537              | 537           | -                     | -                            | -                           | 1.4                   | 0.5                          | -                                  | 1.9                 | 12.5                      | 6.7                              | 0.5                        | 7.2                  |      |
| 4/2                                   | 587              | 587           | -                     | -                            | -                           | 1.6                   | 0.5                          | -                                  | 2.0                 | 12.6                      | 7.5                              | 0.5                        | 8.0                  |      |
| 5/1                                   | 675              | 675           | -                     | -                            | -                           | 5.0                   | 4.1                          | -                                  | 9.0                 | 48.2                      | 14.1                             | 4.1                        | 18.2                 |      |
| 5/2                                   | 171              | 171           | -                     | -                            | -                           | 0.7                   | 0.1                          | -                                  | 0.8                 | 17.7                      | 2.7                              | 0.1                        | 2.8                  |      |
| 6/1                                   | 111              | 111           | -                     | -                            | -                           | 1.0                   | 0.1                          | -                                  | 1.2                 | 37.5                      | 2.4                              | 0.1                        | 2.6                  |      |
| 6/2                                   | 1164             | 1164          | -                     | -                            | -                           | 3.4                   | 3.9                          | -                                  | 7.3                 | 22.7                      | 12.2                             | 1.9                        | 14.2                 |      |
| 7/1                                   | 2168             | 2168          | -                     | -                            | -                           | 0.3                   | 0.8                          | -                                  | 1.1                 | 1.8                       | 9.7                              | 0.4                        | 10.1                 |      |
| 8/1                                   | 892              | 892           | -                     | -                            | -                           | 0.0                   | 0.4                          | -                                  | 0.5                 | 1.9                       | 7.2                              | 0.4                        | 7.6                  |      |
| 9/1                                   | 1802             | 1802          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                  | 1430             | 1430          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                  | 231              | 231           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                  | 1692             | 1692          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |

Detailed Input Data And Results

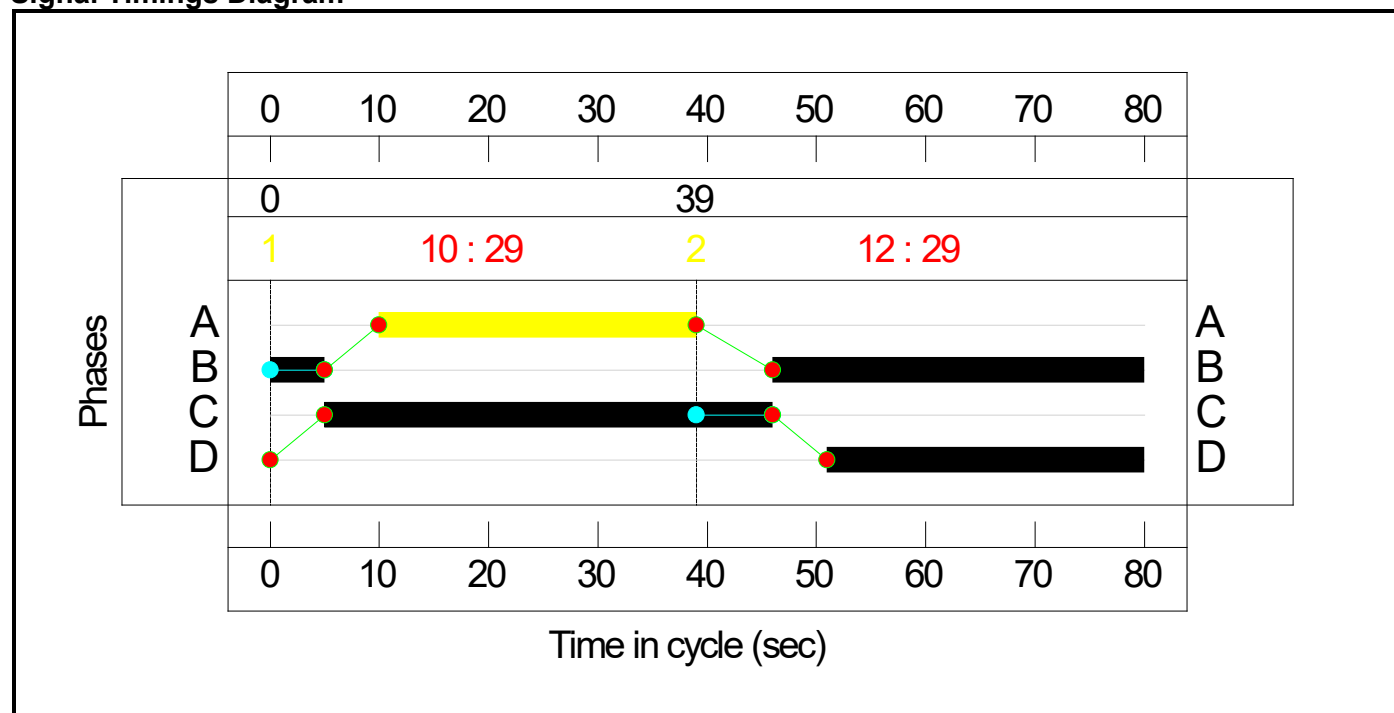
|    |                              |      |                                          |       |                 |    |
|----|------------------------------|------|------------------------------------------|-------|-----------------|----|
| C1 | PRC for Signalled Lanes (%): | -0.0 | Total Delay for Signalled Lanes (pcuHr): | 28.50 | Cycle Time (s): | 80 |
|    | PRC Over All Lanes (%):      | -0.0 | Total Delay Over All Lanes(pcuHr):       | 40.83 |                 |    |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 29 | 29 |
| Change Point | 0  | 39 |

**Phase Timings**

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 29             | 10         | 39       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 39             | 46         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 41             | 5          | 46       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 29             | 51         | 0        |

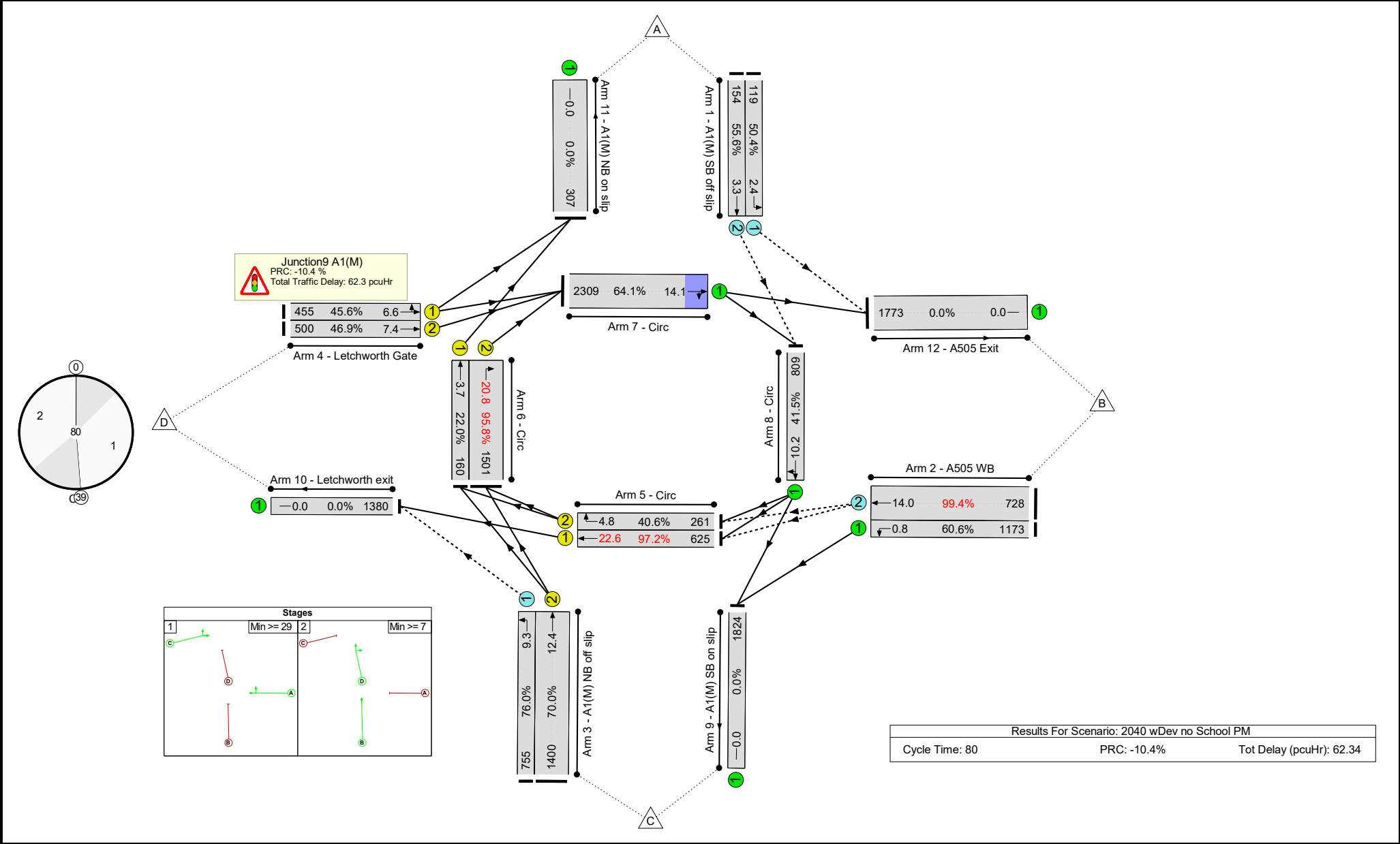
**Signal Timings Diagram**

**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 46                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 46               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 46               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 39               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 39               |
| 6/1                              | Circ Ahead                 | U           | D             | 51                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 51                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

### Network Results

| Item                                             | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|--------------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m)<br/>Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.4%       |
| <b>Junction9 A1(M)</b>                           | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.4%       |
| 1/1                                              | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 236            | 50.4%       |
| 1/2                                              | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 154               | 2080              | 277            | 55.6%       |
| 2/1                                              | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1173              | 1936              | 1936           | 60.6%       |
| 2/2                                              | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 728               | 4178              | 733            | 99.4%       |
| 3/1                                              | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 994            | 76.0%       |
| 3/2                                              | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 39              | -               | -               | 1400              | 4000              | 2000           | 70.0%       |
| 4/1                                              | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 41              | -               | -               | 455               | 1900              | 997            | 45.6%       |
| 4/2                                              | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 41              | -               | -               | 500               | 2029              | 1065           | 46.9%       |
| 5/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 29              | -               | -               | 625               | 1714              | 643            | 97.2%       |
| 5/2                                              | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 29              | -               | -               | 261               | 1714              | 643            | 40.6%       |
| 6/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 29              | -               | -               | 160               | 1943              | 729            | 22.0%       |
| 6/2                                              | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 29              | -               | -               | 1501              | 4178              | 1567           | 95.8%       |
| 7/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2309              | 3600              | 3600           | 64.1%       |
| 8/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 809               | 1948              | 1948           | 41.5%       |
| 9/1                                              | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1824              | Inf               | Inf            | 0.0%        |

## Detailed Input Data And Results

| 10/1                                         | Letchworth exit  | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1380                             | Inf                        | Inf                  | 0.0% |
|----------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 11/1                                         | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 307                              | Inf                        | Inf                  | 0.0% |
| 12/1                                         | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1773                             | Inf                        | Inf                  | 0.0% |
| Item                                         | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10 - PROPOSED</b> | -                | -             | <b>1245</b>           | <b>511</b>                   | <b>0</b>                    | <b>25.0</b>           | <b>37.4</b>                  | <b>0.0</b>                         | <b>62.3</b>         | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                       | -                | -             | <b>1245</b>           | <b>511</b>                   | <b>0</b>                    | <b>25.0</b>           | <b>37.4</b>                  | <b>0.0</b>                         | <b>62.3</b>         | -                         | -                                | -                          | -                    |      |
| 1/1                                          | 119              | 119           | 119                   | 0                            | 0                           | 0.5                   | 0.5                          | -                                  | 1.0                 | 29.8                      | 1.9                              | 0.5                        | 2.4                  |      |
| 1/2                                          | 154              | 154           | 154                   | 0                            | 0                           | 0.8                   | 0.6                          | -                                  | 1.4                 | 32.5                      | 2.7                              | 0.6                        | 3.3                  |      |
| 2/1                                          | 1173             | 1173          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                                          | 728              | 728           | 728                   | 0                            | 0                           | 1.5                   | 12.4                         | -                                  | 13.8                | 68.3                      | 7.8                              | 6.2                        | 14.0                 |      |
| 3/1                                          | 755              | 755           | 244                   | 511                          | 0                           | 0.2                   | 1.6                          | -                                  | 1.8                 | 8.5                       | 7.8                              | 1.6                        | 9.3                  |      |
| 3/2                                          | 1400             | 1400          | -                     | -                            | -                           | 6.0                   | 1.2                          | -                                  | 7.1                 | 18.4                      | 11.9                             | 0.6                        | 12.4                 |      |
| 4/1                                          | 455              | 455           | -                     | -                            | -                           | 1.5                   | 0.4                          | -                                  | 1.9                 | 15.2                      | 6.2                              | 0.4                        | 6.6                  |      |
| 4/2                                          | 500              | 500           | -                     | -                            | -                           | 1.7                   | 0.4                          | -                                  | 2.1                 | 15.2                      | 6.9                              | 0.4                        | 7.4                  |      |
| 5/1                                          | 625              | 625           | -                     | -                            | -                           | 5.0                   | 8.8                          | -                                  | 13.9                | 79.8                      | 13.8                             | 8.8                        | 22.6                 |      |
| 5/2                                          | 261              | 261           | -                     | -                            | -                           | 1.1                   | 0.3                          | -                                  | 1.4                 | 19.9                      | 4.4                              | 0.3                        | 4.8                  |      |
| 6/1                                          | 160              | 160           | -                     | -                            | -                           | 1.3                   | 0.1                          | -                                  | 1.5                 | 32.8                      | 3.5                              | 0.1                        | 3.7                  |      |
| 6/2                                          | 1501             | 1501          | -                     | -                            | -                           | 4.7                   | 9.0                          | -                                  | 13.7                | 32.8                      | 16.3                             | 4.5                        | 20.8                 |      |
| 7/1                                          | 2309             | 2309          | -                     | -                            | -                           | 0.6                   | 0.9                          | -                                  | 1.5                 | 2.4                       | 13.7                             | 0.4                        | 14.1                 |      |
| 8/1                                          | 809              | 809           | -                     | -                            | -                           | 0.1                   | 0.4                          | -                                  | 0.5                 | 2.2                       | 9.8                              | 0.4                        | 10.2                 |      |
| 9/1                                          | 1824             | 1824          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                         | 1380             | 1380          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                         | 307              | 307           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                         | 1773             | 1773          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |

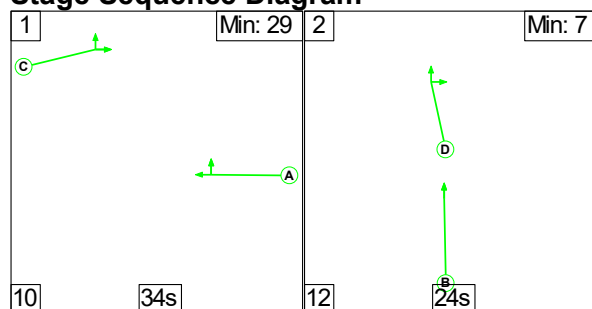
Detailed Input Data And Results

|    |                              |       |                                          |       |                 |    |
|----|------------------------------|-------|------------------------------------------|-------|-----------------|----|
| C1 | PRC for Signalled Lanes (%): | -8.0  | Total Delay for Signalled Lanes (pcuHr): | 41.59 | Cycle Time (s): | 80 |
|    | PRC Over All Lanes (%):      | -10.4 | Total Delay Over All Lanes(pcuHr):       | 62.34 |                 |    |

## Detailed Input Data And Results

**Scenario 5: '2040 wDev w School AM'** (FG13: '2040 w Dev with School AM', Plan 1: 'Network Control Plan 1')

### Stage Sequence Diagram



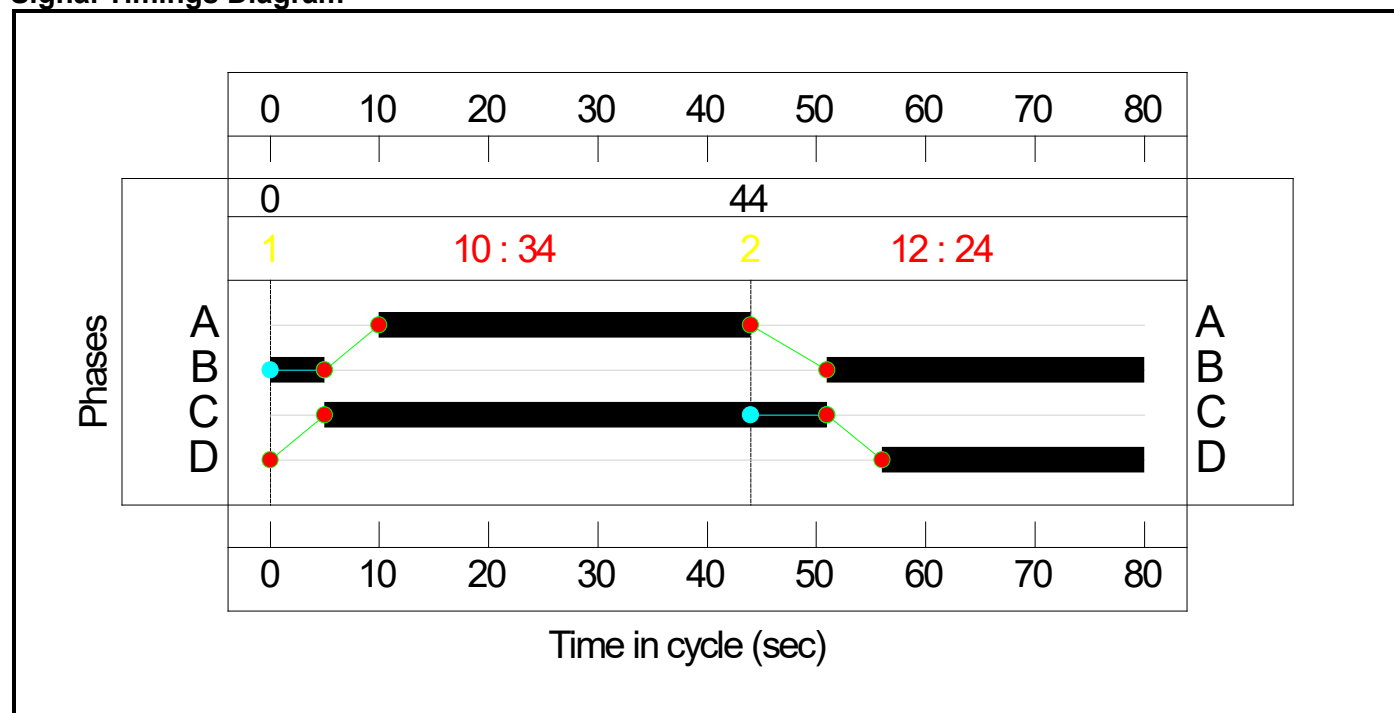
### Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 34 | 24 |
| Change Point | 0  | 44 |

### Phase Timings

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 34             | 10         | 44       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 34             | 51         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 46             | 5          | 51       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 24             | 56         | 0        |

### Signal Timings Diagram

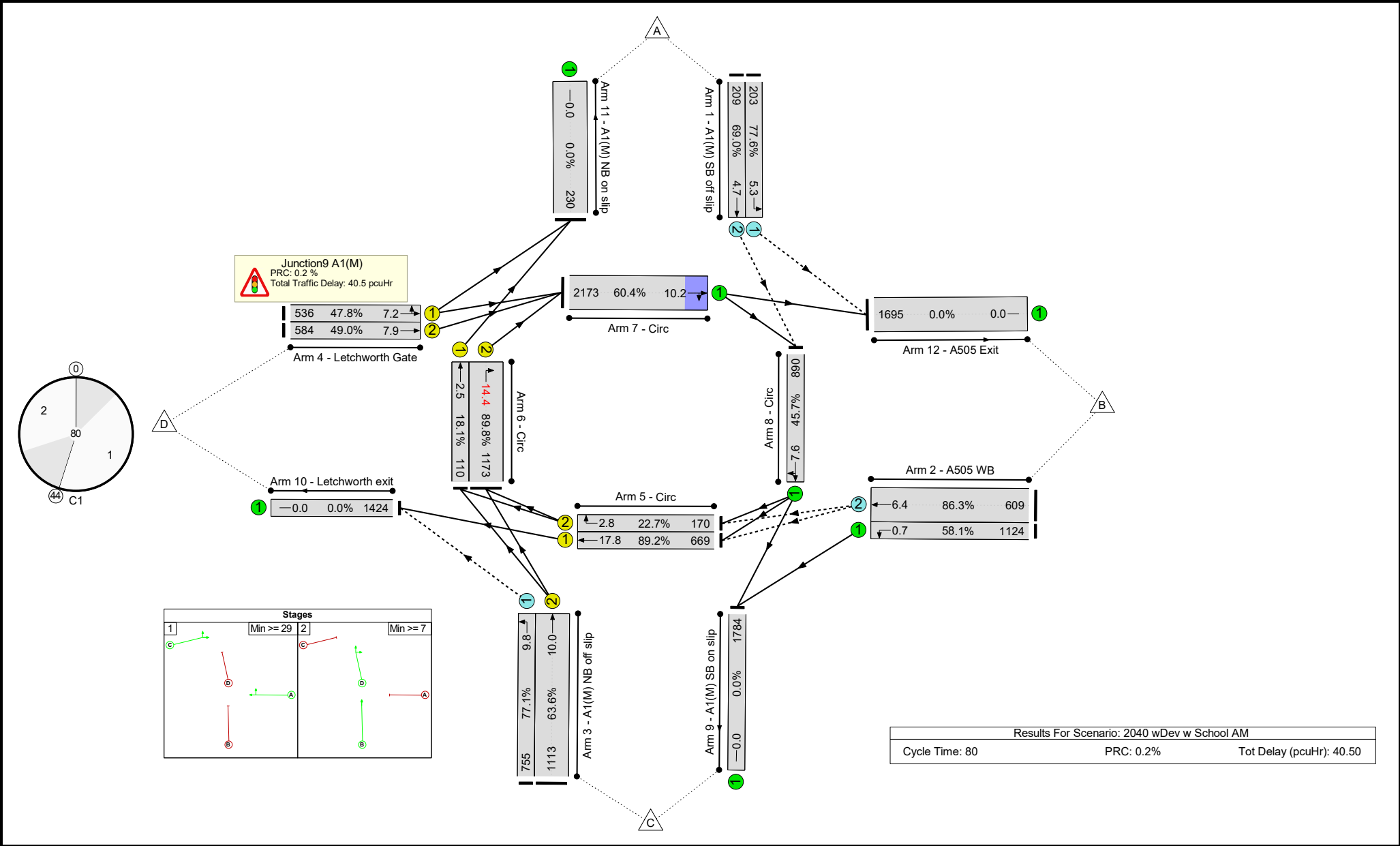


**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 51                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 51               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 51               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 44               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 44               |
| 6/1                              | Circ Ahead                 | U           | D             | 56                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 56                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

### Network Results

| Item                                             | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|--------------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m)<br/>Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 89.8%       |
| <b>Junction9 A1(M)</b>                           | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 89.8%       |
| 1/1                                              | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 203               | 1961              | 262            | 77.6%       |
| 1/2                                              | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 209               | 2080              | 303            | 69.0%       |
| 2/1                                              | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1124              | 1936              | 1936           | 58.1%       |
| 2/2                                              | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 609               | 4178              | 706            | 86.3%       |
| 3/1                                              | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 979            | 77.1%       |
| 3/2                                              | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 34              | -               | -               | 1113              | 4000              | 1750           | 63.6%       |
| 4/1                                              | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 46              | -               | -               | 536               | 1910              | 1122           | 47.8%       |
| 4/2                                              | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 46              | -               | -               | 584               | 2029              | 1192           | 49.0%       |
| 5/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 34              | -               | -               | 669               | 1714              | 750            | 89.2%       |
| 5/2                                              | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 34              | -               | -               | 170               | 1714              | 750            | 22.7%       |
| 6/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 24              | -               | -               | 110               | 1943              | 607            | 18.1%       |
| 6/2                                              | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 24              | -               | -               | 1173              | 4178              | 1306           | 89.8%       |
| 7/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2173              | 3600              | 3600           | 60.4%       |
| 8/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 890               | 1948              | 1948           | 45.7%       |
| 9/1                                              | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1784              | Inf               | Inf            | 0.0%        |

# Detailed Input Data And Results

| 10/1                                  | Letchworth exit  | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1424                             | Inf                        | Inf                  | 0.0% |
|---------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 11/1                                  | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 230                              | Inf                        | Inf                  | 0.0% |
| 12/1                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1695                             | Inf                        | Inf                  | 0.0% |
| Item                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 - PROPOSED | -                | -             | 1325                  | 451                          | 0                           | 21.3                  | 19.2                         | 0.0                                | 40.5                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)                       | -                | -             | 1325                  | 451                          | 0                           | 21.3                  | 19.2                         | 0.0                                | 40.5                | -                         | -                                | -                          | -                    |      |
| 1/1                                   | 203              | 203           | 203                   | 0                            | 0                           | 0.7                   | 1.6                          | -                                  | 2.4                 | 42.3                      | 3.7                              | 1.6                        | 5.3                  |      |
| 1/2                                   | 209              | 209           | 209                   | 0                            | 0                           | 0.8                   | 1.1                          | -                                  | 1.9                 | 32.4                      | 3.6                              | 1.1                        | 4.7                  |      |
| 2/1                                   | 1124             | 1124          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.2                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                                   | 609              | 609           | 609                   | 0                            | 0                           | 0.6                   | 3.0                          | -                                  | 3.6                 | 21.2                      | 4.9                              | 1.5                        | 6.4                  |      |
| 3/1                                   | 755              | 755           | 304                   | 451                          | 0                           | 0.3                   | 1.7                          | -                                  | 1.9                 | 9.1                       | 8.2                              | 1.7                        | 9.8                  |      |
| 3/2                                   | 1113             | 1113          | -                     | -                            | -                           | 5.4                   | 0.9                          | -                                  | 6.3                 | 20.4                      | 9.6                              | 0.4                        | 10.0                 |      |
| 4/1                                   | 536              | 536           | -                     | -                            | -                           | 1.4                   | 0.5                          | -                                  | 1.9                 | 12.5                      | 6.7                              | 0.5                        | 7.2                  |      |
| 4/2                                   | 584              | 584           | -                     | -                            | -                           | 1.6                   | 0.5                          | -                                  | 2.0                 | 12.5                      | 7.5                              | 0.5                        | 7.9                  |      |
| 5/1                                   | 669              | 669           | -                     | -                            | -                           | 4.9                   | 3.8                          | -                                  | 8.7                 | 46.8                      | 14.0                             | 3.8                        | 17.8                 |      |
| 5/2                                   | 170              | 170           | -                     | -                            | -                           | 0.7                   | 0.1                          | -                                  | 0.8                 | 17.7                      | 2.6                              | 0.1                        | 2.8                  |      |
| 6/1                                   | 110              | 110           | -                     | -                            | -                           | 1.0                   | 0.1                          | -                                  | 1.1                 | 37.5                      | 2.4                              | 0.1                        | 2.5                  |      |
| 6/2                                   | 1173             | 1173          | -                     | -                            | -                           | 3.5                   | 4.2                          | -                                  | 7.6                 | 23.4                      | 12.3                             | 2.1                        | 14.4                 |      |
| 7/1                                   | 2173             | 2173          | -                     | -                            | -                           | 0.3                   | 0.8                          | -                                  | 1.1                 | 1.8                       | 9.8                              | 0.4                        | 10.2                 |      |
| 8/1                                   | 890              | 890           | -                     | -                            | -                           | 0.0                   | 0.4                          | -                                  | 0.5                 | 1.9                       | 7.2                              | 0.4                        | 7.6                  |      |
| 9/1                                   | 1784             | 1784          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                  | 1424             | 1424          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                  | 230              | 230           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                  | 1695             | 1695          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |

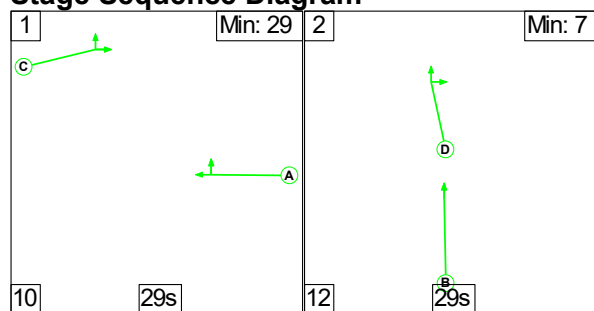
## Detailed Input Data And Results

|    |                              |     |                                          |       |                 |    |
|----|------------------------------|-----|------------------------------------------|-------|-----------------|----|
| C1 | PRC for Signalled Lanes (%): | 0.2 | Total Delay for Signalled Lanes (pcuHr): | 28.51 | Cycle Time (s): | 80 |
|    | PRC Over All Lanes (%):      | 0.2 | Total Delay Over All Lanes(pcuHr):       | 40.50 |                 |    |

# Detailed Input Data And Results

**Scenario 6: '2040 wDev w School PM'** (FG14: '2040 wDev with School PM', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram



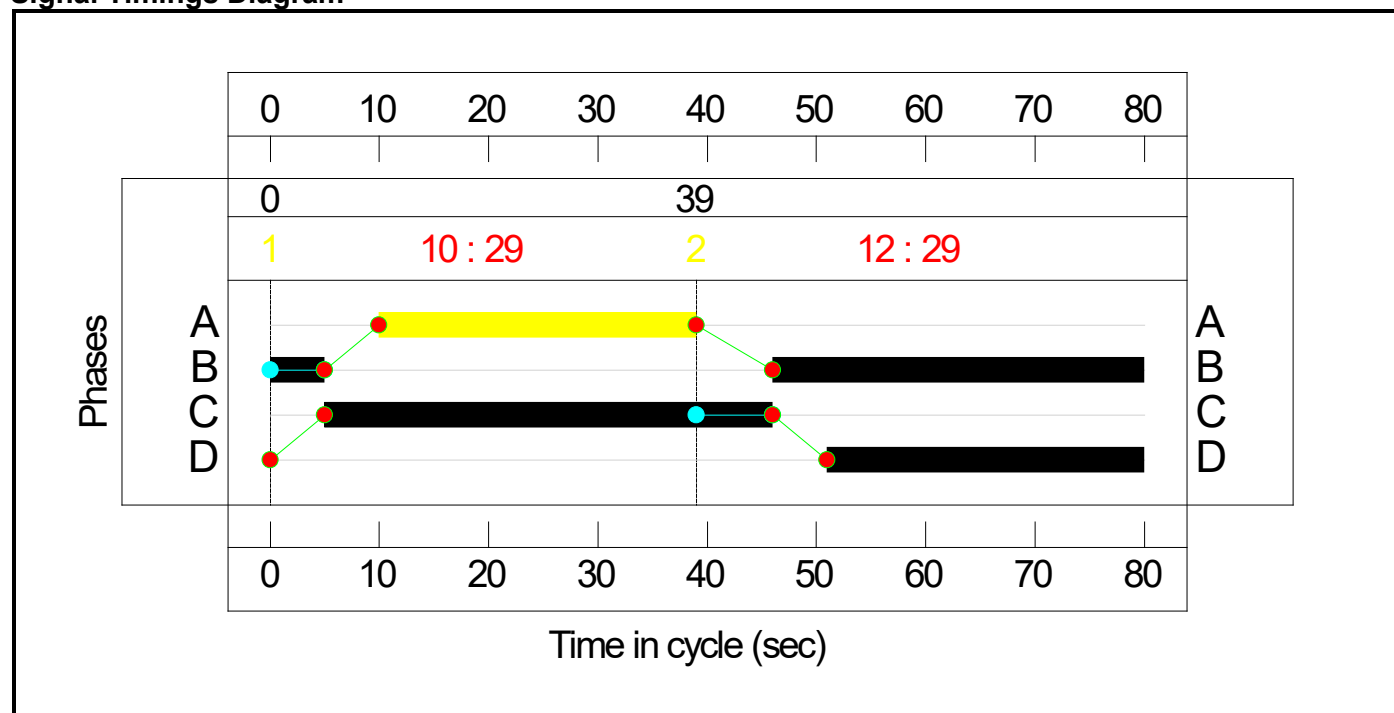
## Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 29 | 29 |
| Change Point | 0  | 39 |

## Phase Timings

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 29             | 10         | 39       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 39             | 46         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 41             | 5          | 46       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 29             | 51         | 0        |

## Signal Timings Diagram

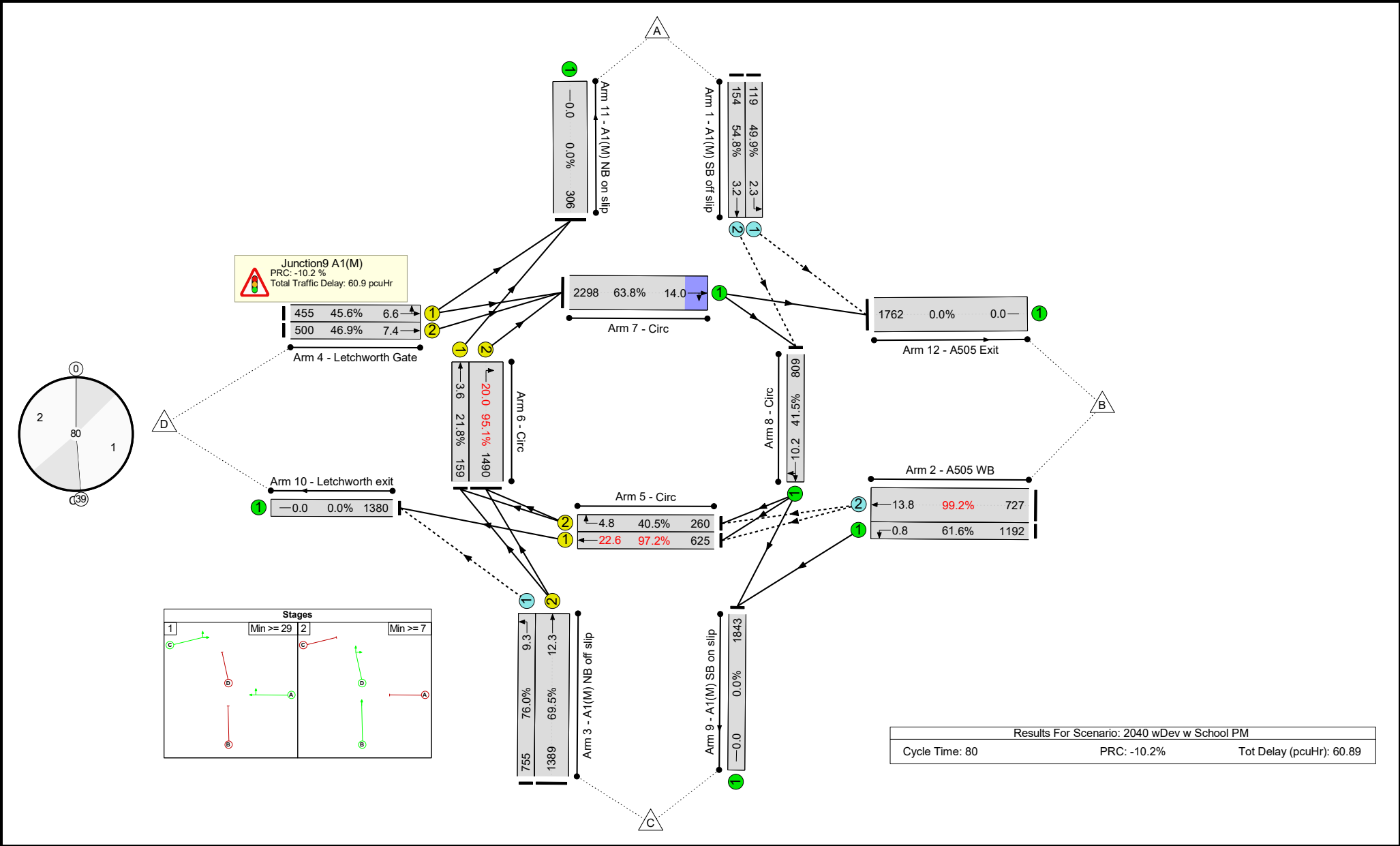


**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 46                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 46               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 46               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 39               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 39               |
| 6/1                              | Circ Ahead                 | U           | D             | 51                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 51                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

### Network Results

| Item                                             | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|--------------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m)<br/>Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.2%       |
| <b>Junction9 A1(M)</b>                           | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 99.2%       |
| 1/1                                              | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 239            | 49.9%       |
| 1/2                                              | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 154               | 2080              | 281            | 54.8%       |
| 2/1                                              | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1192              | 1936              | 1936           | 61.6%       |
| 2/2                                              | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 727               | 4178              | 733            | 99.2%       |
| 3/1                                              | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 994            | 76.0%       |
| 3/2                                              | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 39              | -               | -               | 1389              | 4000              | 2000           | 69.5%       |
| 4/1                                              | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 41              | -               | -               | 455               | 1900              | 997            | 45.6%       |
| 4/2                                              | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 41              | -               | -               | 500               | 2029              | 1065           | 46.9%       |
| 5/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 29              | -               | -               | 625               | 1714              | 643            | 97.2%       |
| 5/2                                              | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 29              | -               | -               | 260               | 1714              | 643            | 40.5%       |
| 6/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 29              | -               | -               | 159               | 1943              | 729            | 21.8%       |
| 6/2                                              | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 29              | -               | -               | 1490              | 4178              | 1567           | 95.1%       |
| 7/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2298              | 3600              | 3600           | 63.8%       |
| 8/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 809               | 1948              | 1948           | 41.5%       |
| 9/1                                              | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1843              | Inf               | Inf            | 0.0%        |

# Detailed Input Data And Results

| 10/1                                  | Letchworth exit  | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1380                             | Inf                        | Inf                  | 0.0% |
|---------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 11/1                                  | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 306                              | Inf                        | Inf                  | 0.0% |
| 12/1                                  | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1762                             | Inf                        | Inf                  | 0.0% |
| Item                                  | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 - PROPOSED | -                | -             | 1244                  | 511                          | 0                           | 24.8                  | 36.1                         | 0.0                                | 60.9                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)                       | -                | -             | 1244                  | 511                          | 0                           | 24.8                  | 36.1                         | 0.0                                | 60.9                | -                         | -                                | -                          | -                    |      |
| 1/1                                   | 119              | 119           | 119                   | 0                            | 0                           | 0.5                   | 0.5                          | -                                  | 1.0                 | 29.0                      | 1.9                              | 0.5                        | 2.3                  |      |
| 1/2                                   | 154              | 154           | 154                   | 0                            | 0                           | 0.7                   | 0.6                          | -                                  | 1.3                 | 31.4                      | 2.6                              | 0.6                        | 3.2                  |      |
| 2/1                                   | 1192             | 1192          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                                   | 727              | 727           | 727                   | 0                            | 0                           | 1.5                   | 12.1                         | -                                  | 13.6                | 67.2                      | 7.8                              | 6.1                        | 13.8                 |      |
| 3/1                                   | 755              | 755           | 244                   | 511                          | 0                           | 0.2                   | 1.6                          | -                                  | 1.8                 | 8.5                       | 7.8                              | 1.6                        | 9.3                  |      |
| 3/2                                   | 1389             | 1389          | -                     | -                            | -                           | 5.9                   | 1.1                          | -                                  | 7.0                 | 18.3                      | 11.8                             | 0.6                        | 12.3                 |      |
| 4/1                                   | 455              | 455           | -                     | -                            | -                           | 1.5                   | 0.4                          | -                                  | 1.9                 | 15.2                      | 6.2                              | 0.4                        | 6.6                  |      |
| 4/2                                   | 500              | 500           | -                     | -                            | -                           | 1.7                   | 0.4                          | -                                  | 2.1                 | 15.2                      | 6.9                              | 0.4                        | 7.4                  |      |
| 5/1                                   | 625              | 625           | -                     | -                            | -                           | 5.0                   | 8.8                          | -                                  | 13.8                | 79.6                      | 13.8                             | 8.8                        | 22.6                 |      |
| 5/2                                   | 260              | 260           | -                     | -                            | -                           | 1.1                   | 0.3                          | -                                  | 1.4                 | 20.0                      | 4.4                              | 0.3                        | 4.8                  |      |
| 6/1                                   | 159              | 159           | -                     | -                            | -                           | 1.3                   | 0.1                          | -                                  | 1.4                 | 32.8                      | 3.5                              | 0.1                        | 3.6                  |      |
| 6/2                                   | 1490             | 1490          | -                     | -                            | -                           | 4.7                   | 8.0                          | -                                  | 12.7                | 30.6                      | 15.9                             | 4.0                        | 20.0                 |      |
| 7/1                                   | 2298             | 2298          | -                     | -                            | -                           | 0.6                   | 0.9                          | -                                  | 1.5                 | 2.3                       | 13.5                             | 0.4                        | 14.0                 |      |
| 8/1                                   | 809              | 809           | -                     | -                            | -                           | 0.1                   | 0.4                          | -                                  | 0.5                 | 2.2                       | 9.9                              | 0.4                        | 10.2                 |      |
| 9/1                                   | 1843             | 1843          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                  | 1380             | 1380          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                  | 306              | 306           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                  | 1762             | 1762          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |

## Detailed Input Data And Results

|    |                              |       |                                          |       |                 |    |
|----|------------------------------|-------|------------------------------------------|-------|-----------------|----|
| C1 | PRC for Signalled Lanes (%): | -8.0  | Total Delay for Signalled Lanes (pcuHr): | 40.45 | Cycle Time (s): | 80 |
|    | PRC Over All Lanes (%):      | -10.2 | Total Delay Over All Lanes(pcuHr):       | 60.89 |                 |    |

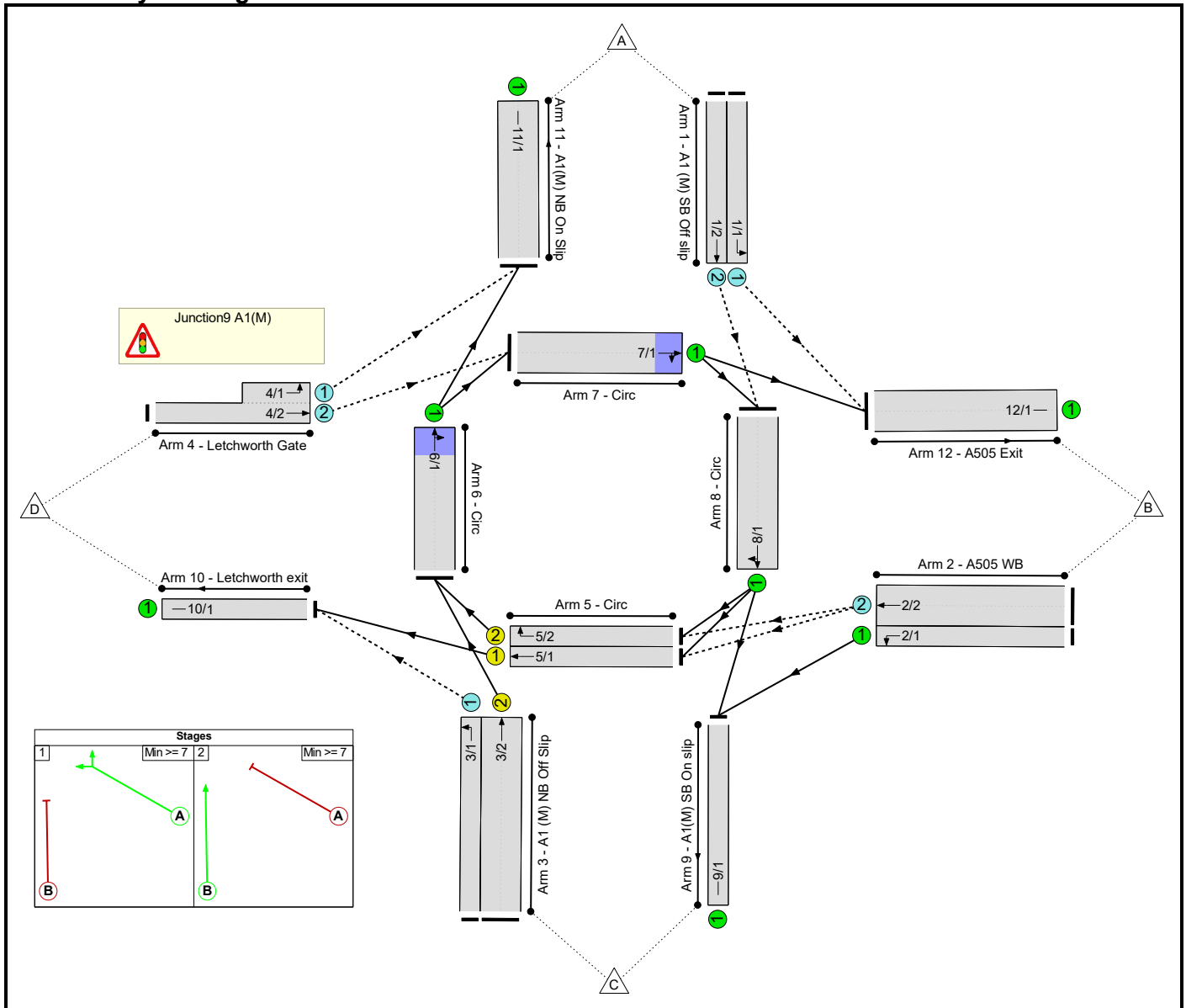
## **A1 Junction 9 Reassignment Assumptions**

Detailed Input Data And Results  
**Detailed Input Data And Results**

**User and Project Details**

|                           |                                                  |
|---------------------------|--------------------------------------------------|
| <b>Project:</b>           | <b>Growing Baldock</b>                           |
| <b>Title:</b>             | <b>A1(m) Junction 10</b>                         |
| <b>Location:</b>          | Baldock, SG6 2EA                                 |
| <b>Client:</b>            | Urban & Civic                                    |
| <b>Site Ref(s):</b>       | J13                                              |
| <b>Design Layout Ref:</b> | -                                                |
| <b>Date Started:</b>      | 01.08.2025                                       |
| <b>Date Completed:</b>    | -                                                |
| <b>Checked By:</b>        | NL/ZT                                            |
| <b>Additional detail:</b> |                                                  |
| <b>File name:</b>         | J13_A1m.A505 Rdbt_existing_SensitivityTest.lsg3x |
| <b>Author:</b>            | Jay James                                        |
| <b>Company:</b>           | ITP by Haskoning                                 |
| <b>Address:</b>           |                                                  |
| <b>Linsig Version:</b>    | 3, 3, 0, 6                                       |

## Network Layout Diagram

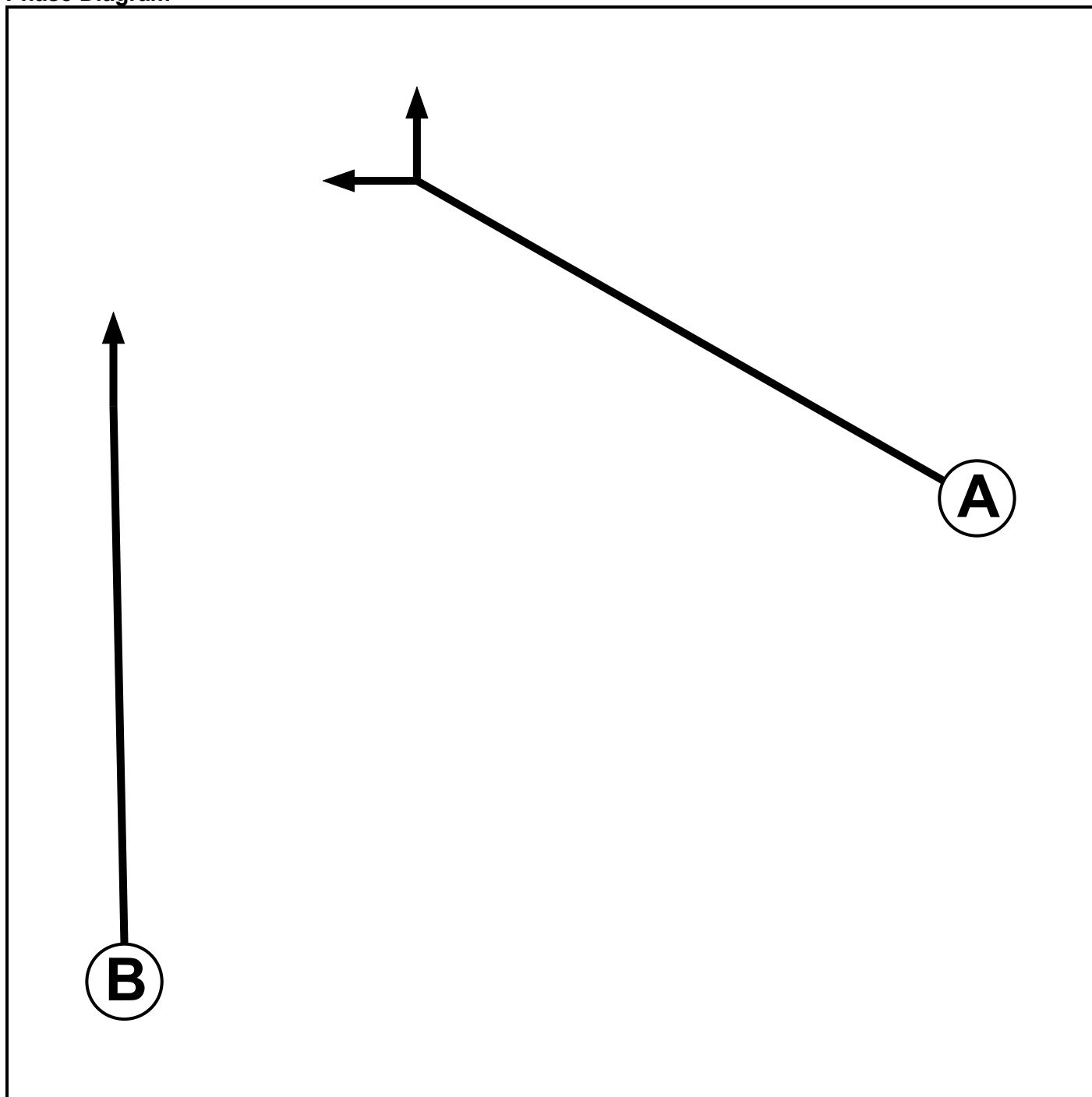


## Scenarios

| Number | Scenario Name          | Flow Group                | Network Control Plan        | Time          | Cycle Time (s) | PRC (%) | Delay (pcuHr) |
|--------|------------------------|---------------------------|-----------------------------|---------------|----------------|---------|---------------|
| 1      | 2040 wDev no School AM | 2040 w Dev no School AM   | Base Network Control Plan 1 | 08:00 - 09:00 | 72             | -11.8   | 57.51         |
| 2      | 2040 wDev no School PM | 2040 wDev no School PM    | Base Network Control Plan 1 | 17:00 - 18:00 | 72             | -19.3   | 67.29         |
| 3      | 2040 wDev w School AM  | 2040 w Dev with School AM | Base Network Control Plan 1 | 08:00 - 09:00 | 72             | -11.5   | 70.29         |
| 4      | 2040 wDev w School PM  | 2040 wDev with School PM  | Base Network Control Plan 1 | 17:00 - 18:00 | 72             | -19.0   | 65.93         |

## Controller Summary

| Controller | Type | SCN | Stage Stream   | Num Phases | Num Stages | Controls Junctions | Controller Notes |
|------------|------|-----|----------------|------------|------------|--------------------|------------------|
| C1         | Gen  |     | Stage Stream 1 | 2          | 2          | Junction9 A1(M)    |                  |

**Phase Diagram****Phase Input Data**

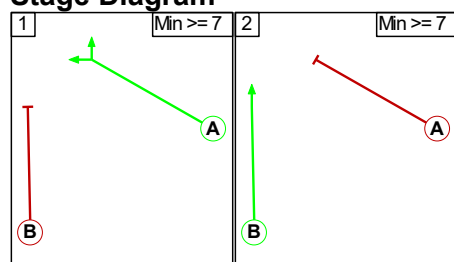
| Phase Name | Phase Type | Assoc. Phase | Street Min (s) | Cont Min (s) |
|------------|------------|--------------|----------------|--------------|
| A          | Traffic    |              | 7              | 7            |
| B          | Traffic    |              | 7              | 7            |

**Phase Intergreens Matrix**

| Terminating Phase | Starting Phase |   |   |
|-------------------|----------------|---|---|
|                   |                | A | B |
|                   | A              |   | 5 |
|                   | B              | 7 |   |

**Phases in Stage**

| Stage No. | Phases in Stage |
|-----------|-----------------|
| 1         | A               |
| 2         | B               |

**Stage Diagram****Phase Delays**

| Term. Stage                       | Start Stage | Phase | Type | Value | Cont value |
|-----------------------------------|-------------|-------|------|-------|------------|
| There are no Phase Delays defined |             |       |      |       |            |

**Prohibited Stage Change**

| From Stage | To Stage |   |   |
|------------|----------|---|---|
|            |          | 1 | 2 |
|            | 1        |   | 5 |
|            | 2        | 7 |   |

**Lane Input Data**

| Junction: Junction9 A1(M)   |           |        |                 |               |                       |               |                                   |                |              |               |             |                    |
|-----------------------------|-----------|--------|-----------------|---------------|-----------------------|---------------|-----------------------------------|----------------|--------------|---------------|-------------|--------------------|
| Lane                        | Lane Type | Phases | Start Disp. (s) | End Disp. (s) | Physical Length (PCU) | Sat Flow Type | Def User Saturation Flow (PCU/Hr) | Lane Width (m) | Gradient (%) | Nearside Lane | Turns       | Turning Radius (m) |
| 1/1<br>(A1 (M) SB Off slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.46           | 0.00         | Y             | Arm 12 Left | Inf                |
| 1/2<br>(A1 (M) SB Off slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.25           | 0.00         | N             | Arm 8 Ahead | Inf                |
| 2/1<br>(A505 WB)            | U         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 9 Left  | 100.00             |
| 2/2<br>(A505 WB)            | O         |        | 2               | 3             | 60.0                  | User          | 4178                              | -              | -            | -             | -           | -                  |
| 3/1<br>(A1 (M) NB Off Slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 10 Left | 100.00             |
| 3/2<br>(A1 (M) NB Off Slip) | U         | B      | 2               | 3             | 60.0                  | User          | 4000                              | -              | -            | -             | -           | -                  |
| 4/1<br>(Letchworth Gate)    | O         |        | 2               | 3             | 5.0                   | Geom          | -                                 | 3.25           | 0.00         | Y             | Arm 11 Left | 26.00              |
| 4/2<br>(Letchworth Gate)    | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 7 Ahead | 40.00              |
| 5/1<br>(Circ)               | U         | A      | 2               | 3             | 20.5                  | User          | 1714                              | -              | -            | -             | -           | -                  |
| 5/2<br>(Circ)               | U         | A      | 2               | 3             | 20.5                  | User          | 1714                              | -              | -            | -             | -           | -                  |
| 6/1<br>(Circ)               | U         |        | 2               | 3             | 14.3                  | User          | 3600                              | -              | -            | -             | -           | -                  |
| 7/1<br>(Circ)               | U         |        | 2               | 3             | 16.7                  | User          | 3600                              | -              | -            | -             | -           | -                  |
| 8/1<br>(Circ)               | U         |        | 2               | 3             | 14.3                  | User          | 3600                              | -              | -            | -             | -           | -                  |
| 9/1<br>(A1(M) SB On slip)   | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -           | -                  |
| 10/1<br>(Letchworth exit)   | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -           | -                  |
| 11/1<br>(A1(M) NB On Slip)  | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -           | -                  |
| 12/1<br>(A505 Exit)         | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -           | -                  |

**Give-Way Lane Input Data**

| Junction: Junction9 A1(M)   |             |                                            |                                            |                  |                     |                 |                             |                                  |     |                           |                                     |
|-----------------------------|-------------|--------------------------------------------|--------------------------------------------|------------------|---------------------|-----------------|-----------------------------|----------------------------------|-----|---------------------------|-------------------------------------|
| Lane                        | Movement    | Max Flow<br>when<br>Giving Way<br>(PCU/Hr) | Min Flow<br>when<br>Giving Way<br>(PCU/Hr) | Opposing<br>Lane | Opp. Lane<br>Coeff. | Opp.<br>Mvmnts. | Right Turn<br>Storage (PCU) | Non-Blocking<br>Storage<br>(PCU) | RTF | Right Turn<br>Move up (s) | Max Turns<br>in Intergreen<br>(PCU) |
| 1/1<br>(A1 (M) SB Off slip) | 12/1 (Left) | 715                                        | 0                                          | 7/1              | 0.22                | All             | -                           | -                                | -   | -                         | -                                   |
| 1/2<br>(A1 (M) SB Off slip) | 8/1 (Ahead) | 1000                                       | 0                                          | 7/1              | 0.40                | All             | -                           | -                                | -   | -                         | -                                   |
| 2/2<br>(A505 WB)            | 5/1 (Ahead) | 1000                                       | 0                                          | 8/1              | 0.33                | All             | -                           | -                                | -   | -                         | -                                   |
|                             | 5/2 (Ahead) | 1000                                       | 0                                          | 8/1              | 0.33                | All             |                             |                                  |     |                           |                                     |
| 3/1<br>(A1 (M) NB Off Slip) | 10/1 (Left) | 1200                                       | 0                                          | 5/1              | 0.33                | All             | -                           | -                                | -   | -                         | -                                   |
| 4/1<br>(Letchworth Gate)    | 11/1 (Left) | 1439                                       | 0                                          | 6/1              | 1.09                | All             | -                           | -                                | -   | -                         | -                                   |
| 4/2<br>(Letchworth Gate)    | 7/1 (Ahead) | 1350                                       | 0                                          | 6/1              | 0.22                | All             | -                           | -                                | -   | -                         | -                                   |

## Detailed Input Data And Results

**Lane Connector Input Data**

| <b>Junction: Junction9 A1(M)</b> |                  |                 |                                      |                           |
|----------------------------------|------------------|-----------------|--------------------------------------|---------------------------|
| <b>Org Lane</b>                  | <b>Dest Lane</b> | <b>Junction</b> | <b>Modelled Mean Cruise Time (s)</b> | <b>Platoon Dispersion</b> |
| 1/1                              | 12/1             | Internal        | 5                                    | 35                        |
| 1/2                              | 8/1              | Internal        | 5                                    | 35                        |
| 2/1                              | 9/1              | Internal        | 26                                   | 35                        |
| 2/2                              | 5/1              | Internal        | 9                                    | 35                        |
| 2/2                              | 5/2              | Internal        | 9                                    | 35                        |
| 3/1                              | 10/1             | Internal        | 26                                   | 35                        |
| 3/2                              | 6/1              | Internal        | 6                                    | 35                        |
| 4/1                              | 11/1             | Internal        | 5                                    | 35                        |
| 4/2                              | 7/1              | Internal        | 7                                    | 35                        |
| 5/1                              | 10/1             | Internal        | 26                                   | 35                        |
| 5/2                              | 6/1              | Internal        | 6                                    | 35                        |
| 6/1                              | 7/1              | Internal        | 7                                    | 35                        |
| 6/1                              | 11/1             | Internal        | 26                                   | 35                        |
| 7/1                              | 8/1              | Internal        | 6                                    | 35                        |
| 7/1                              | 12/1             | Internal        | 26                                   | 35                        |
| 8/1                              | 5/1              | Internal        | 9                                    | 35                        |
| 8/1                              | 5/2              | Internal        | 9                                    | 35                        |
| 8/1                              | 9/1              | Internal        | 26                                   | 35                        |

**Scenario 1: '2040 wDev no School AM'** (FG1: '2040 w Dev no School AM', Plan 1: 'Base Network Control Plan 1')

**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 1

**Scenario 2: '2040 wDev no School PM' (FG2: '2040 wDev no School PM', Plan 1: 'Base Network Control Plan 1')**  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 2

**Scenario 3: '2040 wDev w School AM'** (FG3: '2040 w Dev with School AM', Plan 1: 'Base Network Control Plan 1')  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 3

**Scenario 4: '2040 wDev w School PM'** (FG4: '2040 wDev with School PM', Plan 1: 'Base Network Control Plan 1')  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)          |                                                   |              |               |               |                    |               |                   |                          |
|------------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                               | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1 (M) SB Off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1 (M) SB Off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                   | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)            | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1 (M) NB Off Slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1 (M) NB Off Slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)           | 3.25                                              | 0.00         | Y             | Arm 11 Left   | 26.00              | 100.0 %       | 1834              | 1834                     |
| 4/2<br>(Letchworth Gate)           | 3.50                                              | 0.00         | Y             | Arm 7 Ahead   | 40.00              | 100.0 %       | 1894              | 1894                     |
| 5/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 7/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ Lane 1)               | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 9/1<br>(A1(M) SB On slip Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)   | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB On Slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)         | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 4

**Traffic Flow Groups**

| Flow Group                     | Start Time | End Time | Duration | Formula |
|--------------------------------|------------|----------|----------|---------|
| 1: '2040 w Dev no School AM'   | 08:00      | 09:00    | 01:00    |         |
| 2: '2040 wDev no School PM'    | 17:00      | 18:00    | 01:00    |         |
| 3: '2040 w Dev with School AM' | 08:00      | 09:00    | 01:00    |         |
| 4: '2040 wDev with School PM'  | 17:00      | 18:00    | 01:00    |         |

**Traffic Flows, Desired****FG1: '2040 w Dev no School AM'****Desired Flow :**

| Origin | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
|        | A           | 2   | 205  | 2    | 244  | 453  |
|        | B           | 108 | 61   | 1142 | 492  | 1803 |
|        | C           | 1   | 1102 | 1    | 755  | 1859 |
|        | D           | 169 | 396  | 657  | 23   | 1245 |
|        | Tot.        | 280 | 1764 | 1802 | 1514 | 5360 |

**FG2: '2040 wDev no School PM'****Desired Flow :**

| Origin | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
|        | A           | 0   | 119  | 0    | 196  | 315  |
|        | B           | 158 | 103  | 1173 | 511  | 1945 |
|        | C           | 2   | 1398 | 0    | 755  | 2155 |
|        | D           | 230 | 214  | 651  | 4    | 1099 |
|        | Tot.        | 390 | 1834 | 1824 | 1466 | 5514 |

**FG3: '2040 w Dev with School AM'****Desired Flow :**

| Origin | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
|        | A           | 2   | 203  | 2    | 244  | 451  |
|        | B           | 107 | 61   | 1124 | 487  | 1779 |
|        | C           | 1   | 1111 | 1    | 755  | 1868 |
|        | D           | 169 | 392  | 657  | 23   | 1241 |
|        | Tot.        | 279 | 1767 | 1784 | 1509 | 5339 |

**FG4: '2040 wDev with School PM'****Desired Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 196  | 315  |
|        | B           | 157 | 103  | 1192 | 510  | 1962 |
|        | C           | 2   | 1387 | 0    | 755  | 2144 |
|        | D           | 230 | 214  | 651  | 4    | 1099 |
|        | Tot.        | 389 | 1823 | 1843 | 1465 | 5520 |

**Scenario 1: '2040 wDev no School AM'** (FG1: '2040 w Dev no School AM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 244  | 453  |
|        | B           | 108 | 61   | 1142 | 492  | 1803 |
|        | C           | 1   | 1102 | 1    | 755  | 1859 |
|        | D           | 169 | 396  | 657  | 23   | 1245 |
|        | Tot.        | 280 | 1764 | 1802 | 1514 | 5360 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 2: '2040 wDev no School PM'** (FG2: '2040 wDev no School PM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 196  | 315  |
|        | B           | 158 | 103  | 1173 | 511  | 1945 |
|        | C           | 2   | 1398 | 0    | 755  | 2155 |
|        | D           | 230 | 214  | 651  | 4    | 1099 |
|        | Tot.        | 390 | 1834 | 1824 | 1466 | 5514 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 3: '2040 wDev w School AM'** (FG3: '2040 w Dev with School AM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 203  | 2    | 244  | 451  |
|        | B           | 107 | 61   | 1124 | 487  | 1779 |
|        | C           | 1   | 1111 | 1    | 755  | 1868 |
|        | D           | 169 | 392  | 657  | 23   | 1241 |
|        | Tot.        | 279 | 1767 | 1784 | 1509 | 5339 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 4: '2040 wDev w School PM'** (FG4: '2040 wDev with School PM', Plan 1: 'Base Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 196  | 315  |
|        | B           | 157 | 103  | 1192 | 510  | 1962 |
|        | C           | 2   | 1387 | 0    | 755  | 2144 |
|        | D           | 230 | 214  | 651  | 4    | 1099 |
|        | Tot.        | 389 | 1823 | 1843 | 1465 | 5520 |

**Traffic Flows, Difference****Difference :**

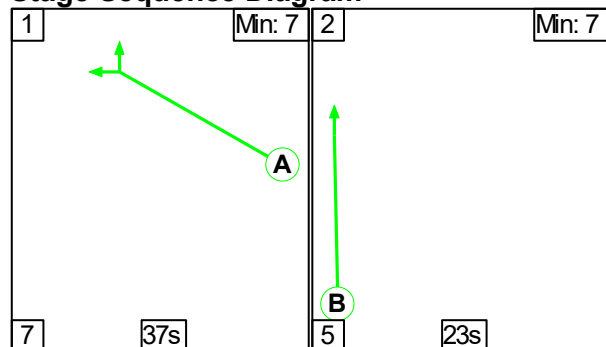
|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
| Origin |             | A | B | C | D | Tot. |
|        | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Traffic Lane Flows**

| Lane                             | Scenario 1:<br>2040 wDev<br>no School<br>AM | Scenario 2:<br>2040 wDev<br>no School<br>PM | Scenario 3:<br>2040 wDev<br>w School<br>AM | Scenario 4:<br>2040 wDev<br>w School<br>PM |
|----------------------------------|---------------------------------------------|---------------------------------------------|--------------------------------------------|--------------------------------------------|
| <b>Junction: Junction9 A1(M)</b> |                                             |                                             |                                            |                                            |
| 1/1                              | 205                                         | 119                                         | 203                                        | 119                                        |
| 1/2                              | 248                                         | 196                                         | 248                                        | 196                                        |
| 2/1                              | 1142                                        | 1173                                        | 1124                                       | 1192                                       |
| 2/2                              | 661                                         | 772                                         | 655                                        | 770                                        |
| 3/1                              | 755                                         | 755                                         | 755                                        | 755                                        |
| 3/2                              | 1104                                        | 1400                                        | 1113                                       | 1389                                       |
| 4/1<br>(short)                   | 169                                         | 230                                         | 169                                        | 230                                        |
| 4/2<br>(with short)              | 1245(In)<br>1076(Out)                       | 1099(In)<br>869(Out)                        | 1241(In)<br>1072(Out)                      | 1099(In)<br>869(Out)                       |
| 5/1                              | 759                                         | 711                                         | 754                                        | 710                                        |
| 5/2                              | 171                                         | 261                                         | 170                                        | 260                                        |
| 6/1                              | 1275                                        | 1661                                        | 1283                                       | 1649                                       |
| 7/1                              | 2240                                        | 2370                                        | 2245                                       | 2359                                       |
| 8/1                              | 929                                         | 851                                         | 929                                        | 851                                        |
| 9/1                              | 1802                                        | 1824                                        | 1784                                       | 1843                                       |
| 10/1                             | 1514                                        | 1466                                        | 1509                                       | 1465                                       |
| 11/1                             | 280                                         | 390                                         | 279                                        | 389                                        |
| 12/1                             | 1764                                        | 1834                                        | 1767                                       | 1823                                       |

**Scenario 1: '2040 wDev no School AM'** (FG1: '2040 w Dev no School AM', Plan 1: 'Base Network Control Plan 1')

### Stage Sequence Diagram



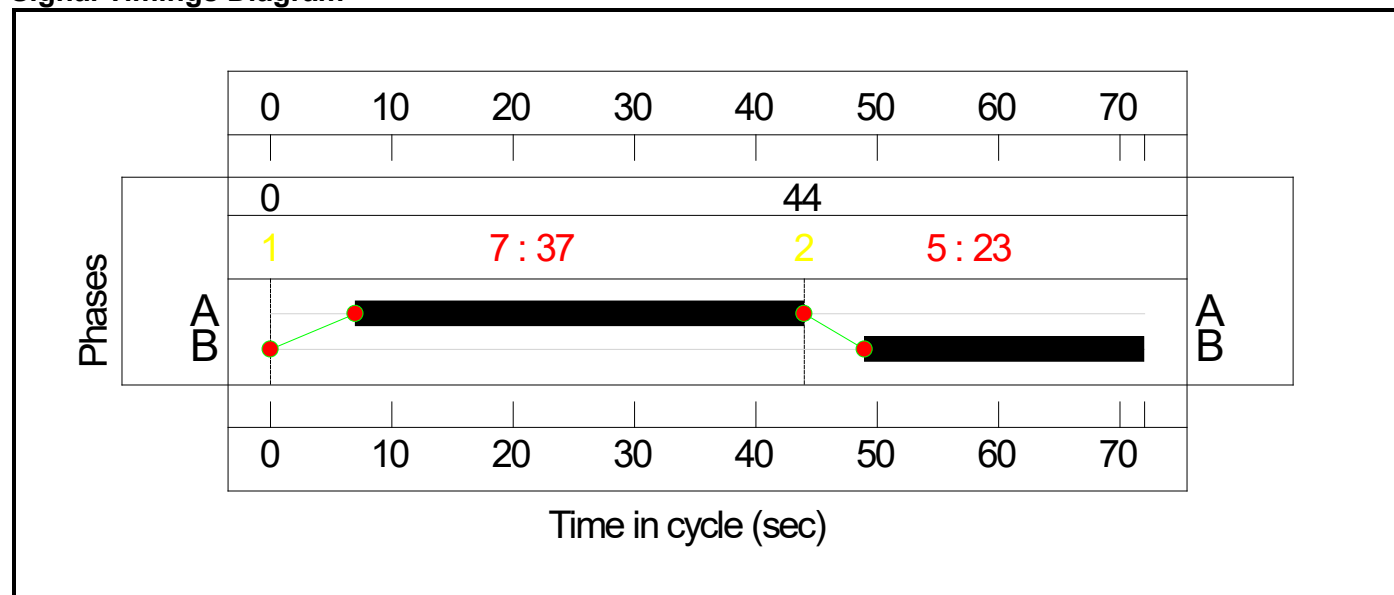
### Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 37 | 23 |
| Change Point | 0  | 44 |

### Phase Timings

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 37             | 7          | 44       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 23             | 49         | 0        |

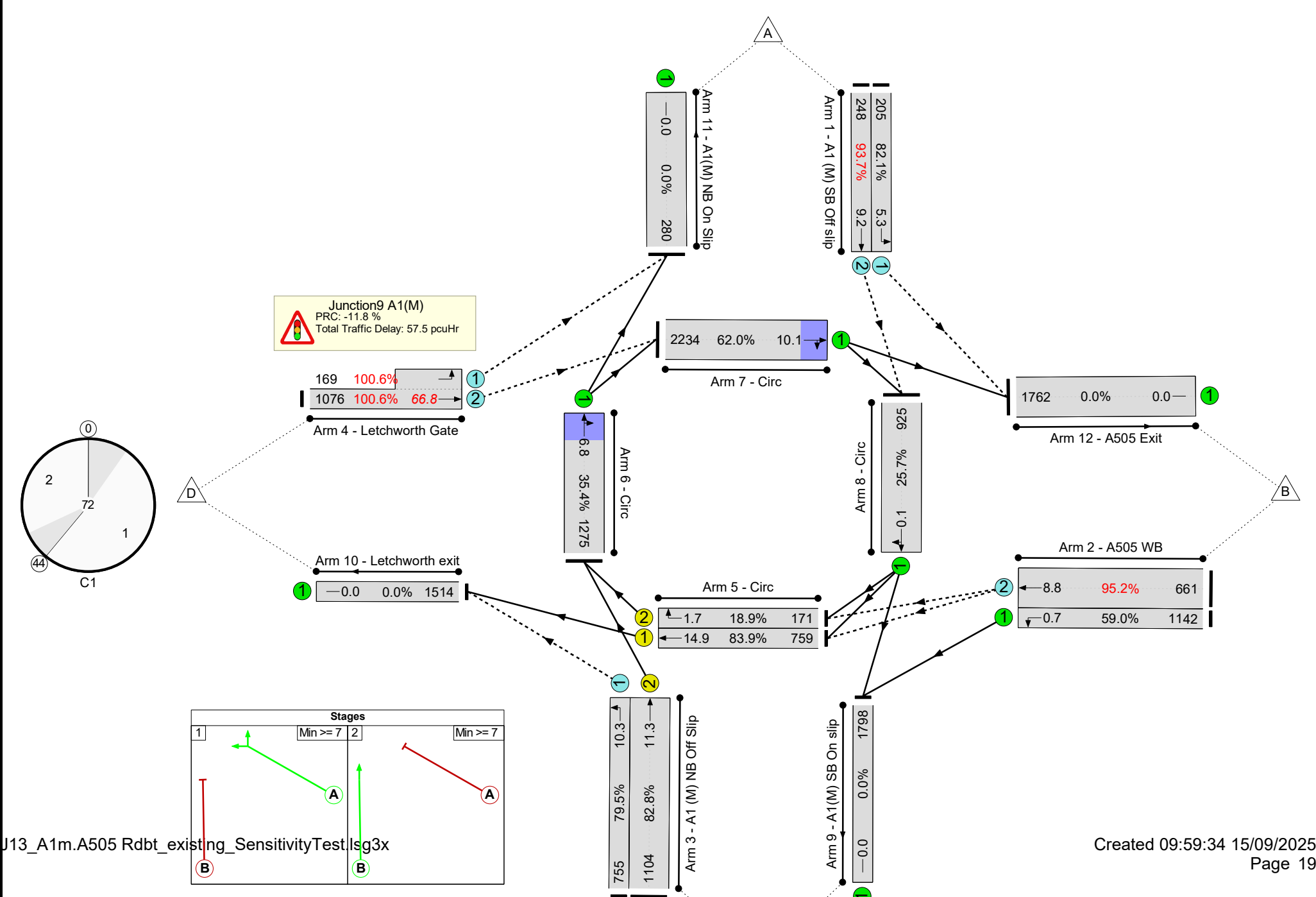
### Signal Timings Diagram



### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 49          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 44        |
| 5/2                       | Circ Right               | U    | A      | 7           | 44        |







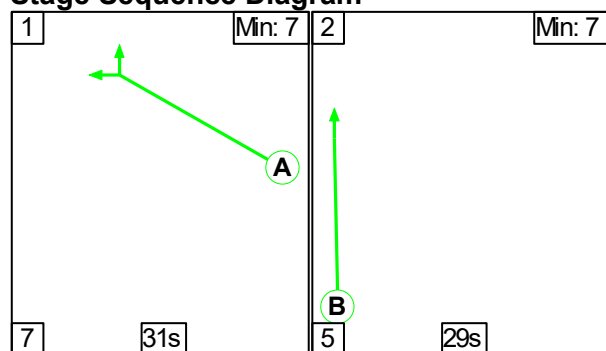
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)    |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|----------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 100.6%         |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 100.6%         |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 205               | 1961              | 250            | 82.1%          |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 248               | 2080              | 265            | 93.7%          |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1142              | 1936              | 1936           | 59.0%          |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 661               | 4178              | 695            | 95.2%          |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 950            | 79.5%          |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 23              | -               | -               | 1104              | 4000              | 1333           | 82.8%          |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1245              | 1894:1834         | 1069+168       | 100.6 : 100.6% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 37              | -               | -               | 759               | 1714              | 905            | 83.9%          |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 37              | -               | -               | 171               | 1714              | 905            | 18.9%          |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1275              | 3600              | 3600           | 35.4%          |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2240              | 3600              | 3600           | 62.0%          |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 929               | 3600              | 3600           | 25.7%          |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1802              | Inf               | Inf            | 0.0%           |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1514              | Inf               | Inf            | 0.0%           |
| 11/1                              | A1(M) NB On Slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 280               | Inf               | Inf            | 0.0%           |

## Detailed Input Data And Results

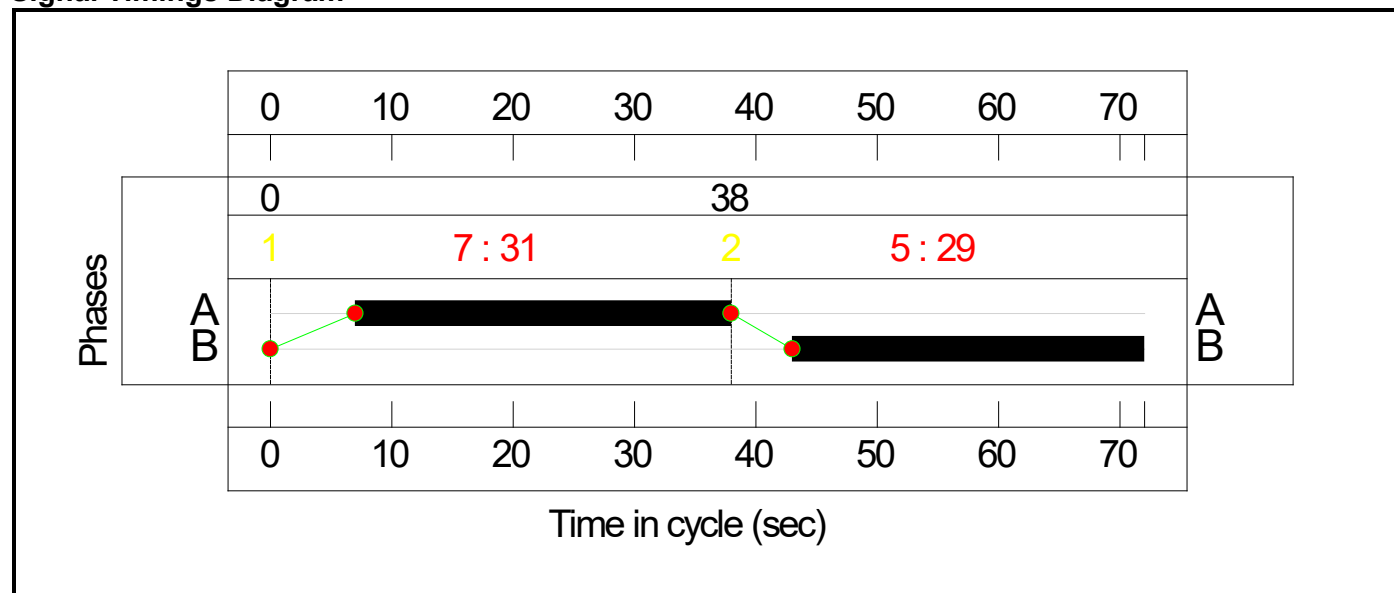
| 12/1                       | A505 Exit      | U             | N/A                   | N/A                          | -                            |                       | -                                        | -                                  | -                   | -                         | 1764                             | Inf                        | Inf                  | 0.0% |
|----------------------------|----------------|---------------|-----------------------|------------------------------|------------------------------|-----------------------|------------------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| Item                       | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 | -              | -             | 3974                  | 372                          | 0                            | 15.2                  | 42.3                                     | 0.0                                | 57.5                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)            | -              | -             | 3974                  | 372                          | 0                            | 15.2                  | 42.3                                     | 0.0                                | 57.5                | -                         | -                                | -                          | -                    |      |
| 1/1                        | 205            | 205           | 205                   | 0                            | 0                            | 0.6                   | 2.1                                      | -                                  | 2.7                 | 47.3                      | 3.2                              | 2.1                        | 5.3                  |      |
| 1/2                        | 248            | 248           | 248                   | 0                            | 0                            | 0.9                   | 4.7                                      | -                                  | 5.7                 | 82.1                      | 4.5                              | 4.7                        | 9.2                  |      |
| 2/1                        | 1142           | 1142          | -                     | -                            | -                            | 0.0                   | 0.7                                      | -                                  | 0.7                 | 2.3                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                        | 661            | 661           | 661                   | 0                            | 0                            | 0.3                   | 7.0                                      | -                                  | 7.3                 | 39.6                      | 5.3                              | 3.5                        | 8.8                  |      |
| 3/1                        | 755            | 755           | 383                   | 372                          | 0                            | 0.3                   | 1.9                                      | -                                  | 2.2                 | 10.3                      | 8.4                              | 1.9                        | 10.3                 |      |
| 3/2                        | 1104           | 1104          | -                     | -                            | -                            | 6.8                   | 2.4                                      | -                                  | 9.1                 | 29.8                      | 10.1                             | 1.2                        | 11.3                 |      |
| 4/2+4/1                    | 1245           | 1238          | 2477                  | 0                            | 0                            | 2.0                   | 19.6                                     | -                                  | 21.6                | 62.5                      | 47.2                             | 19.6                       | 66.8                 |      |
| 5/1                        | 759            | 759           | -                     | -                            | -                            | 3.5                   | 2.5                                      | -                                  | 6.0                 | 28.4                      | 12.4                             | 2.5                        | 14.9                 |      |
| 5/2                        | 171            | 171           | -                     | -                            | -                            | 0.4                   | 0.1                                      | -                                  | 0.5                 | 10.4                      | 1.6                              | 0.1                        | 1.7                  |      |
| 6/1                        | 1275           | 1275          | -                     | -                            | -                            | 0.1                   | 0.3                                      | -                                  | 0.4                 | 1.2                       | 6.7                              | 0.1                        | 6.8                  |      |
| 7/1                        | 2234           | 2234          | -                     | -                            | -                            | 0.4                   | 0.8                                      | -                                  | 1.2                 | 1.9                       | 9.7                              | 0.4                        | 10.1                 |      |
| 8/1                        | 925            | 925           | -                     | -                            | -                            | 0.0                   | 0.2                                      | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                        | 1798           | 1798          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                       | 1514           | 1514          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                       | 280            | 280           | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                       | 1762           | 1762          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| C1                         |                |               |                       |                              | PRC for Signalled Lanes (%): | 7.3                   | Total Delay for Signalled Lanes (pcuHr): |                                    |                     | 15.61                     | Cycle Time (s): 72               |                            |                      |      |
|                            |                |               |                       |                              | PRC Over All Lanes (%):      | -11.8                 | Total Delay Over All Lanes(pcuHr):       |                                    |                     | 57.51                     |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 31 | 29 |
| Change Point | 0  | 38 |

**Phase Timings**

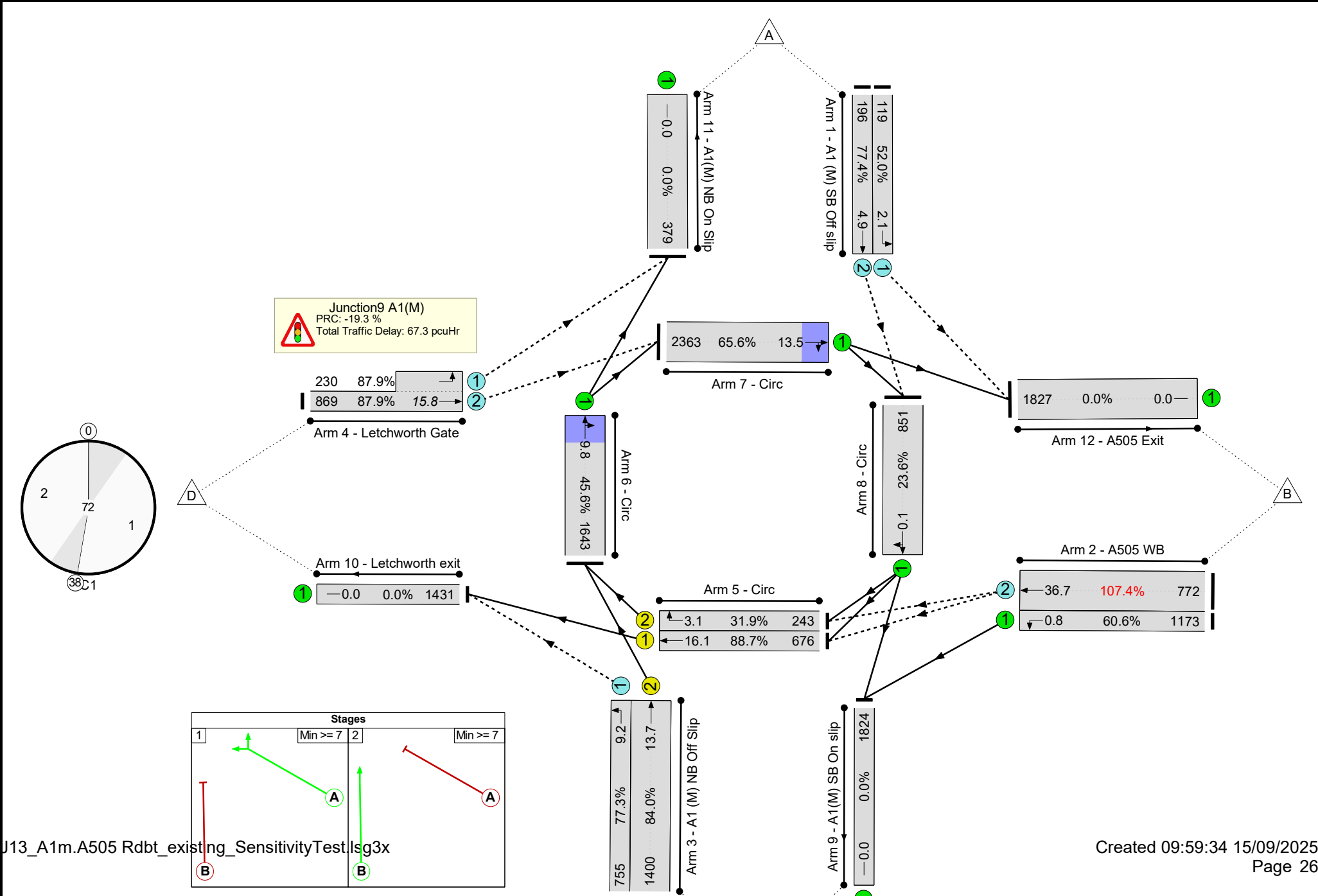
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 31             | 7          | 38       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 29             | 43         | 0        |

**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 43          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 38        |
| 5/2                       | Circ Right               | U    | A      | 7           | 38        |







## Detailed Input Data And Results

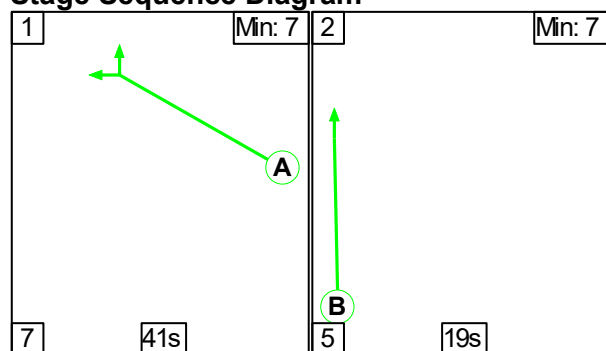
### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 107.4%       |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 107.4%       |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 229            | 52.0%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 196               | 2080              | 253            | 77.4%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1173              | 1936              | 1936           | 60.6%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 772               | 4178              | 719            | 107.4%       |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 977            | 77.3%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 29              | -               | -               | 1400              | 4000              | 1667           | 84.0%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1099              | 1894:1834         | 989+262        | 87.9 : 87.9% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 31              | -               | -               | 711               | 1714              | 762            | 88.7%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 31              | -               | -               | 261               | 1714              | 762            | 31.9%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1661              | 3600              | 3600           | 45.6%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2370              | 3600              | 3600           | 65.6%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 851               | 3600              | 3600           | 23.6%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1824              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1466              | Inf               | Inf            | 0.0%         |
| 11/1                              | A1(M) NB On Slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 390               | Inf               | Inf            | 0.0%         |

## Detailed Input Data And Results

| 12/1                       | A505 Exit      | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1834                             | Inf                        | Inf                  | 0.0% |
|----------------------------|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| Item                       | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 | -              | -             | 3542                  | 445                          | 0                           | 18.8                  | 48.5                         | 0.0                                | 67.3                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)            | -              | -             | 3542                  | 445                          | 0                           | 18.8                  | 48.5                         | 0.0                                | 67.3                | -                         | -                                | -                          | -                    |      |
| 1/1                        | 119            | 119           | 119                   | 0                            | 0                           | 0.4                   | 0.5                          | -                                  | 0.9                 | 27.4                      | 1.6                              | 0.5                        | 2.1                  |      |
| 1/2                        | 196            | 196           | 196                   | 0                            | 0                           | 0.9                   | 1.6                          | -                                  | 2.5                 | 45.6                      | 3.3                              | 1.6                        | 4.9                  |      |
| 2/1                        | 1173           | 1173          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                        | 772            | 719           | 719                   | 0                            | 0                           | 3.0                   | 32.5                         | -                                  | 35.4                | 165.3                     | 20.5                             | 16.2                       | 36.7                 |      |
| 3/1                        | 755            | 755           | 310                   | 445                          | 0                           | 0.2                   | 1.7                          | -                                  | 1.9                 | 9.1                       | 7.5                              | 1.7                        | 9.2                  |      |
| 3/2                        | 1400           | 1400          | -                     | -                            | -                           | 7.3                   | 2.6                          | -                                  | 9.9                 | 25.5                      | 12.4                             | 1.3                        | 13.7                 |      |
| 4/2+4/1                    | 1099           | 1099          | 2198                  | 0                            | 0                           | 1.4                   | 3.5                          | -                                  | 4.9                 | 15.9                      | 12.3                             | 3.5                        | 15.8                 |      |
| 5/1                        | 676            | 676           | -                     | -                            | -                           | 4.0                   | 3.6                          | -                                  | 7.6                 | 40.5                      | 12.4                             | 3.6                        | 16.1                 |      |
| 5/2                        | 243            | 243           | -                     | -                            | -                           | 0.7                   | 0.2                          | -                                  | 1.0                 | 14.3                      | 2.9                              | 0.2                        | 3.1                  |      |
| 6/1                        | 1643           | 1643          | -                     | -                            | -                           | 0.3                   | 0.4                          | -                                  | 0.7                 | 1.5                       | 9.6                              | 0.2                        | 9.8                  |      |
| 7/1                        | 2363           | 2363          | -                     | -                            | -                           | 0.7                   | 1.0                          | -                                  | 1.6                 | 2.5                       | 13.0                             | 0.5                        | 13.5                 |      |
| 8/1                        | 851            | 851           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                        | 1824           | 1824          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                       | 1431           | 1431          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                       | 379            | 379           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                       | 1827           | 1827          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| C1                         |                |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

## Stage Sequence Diagram



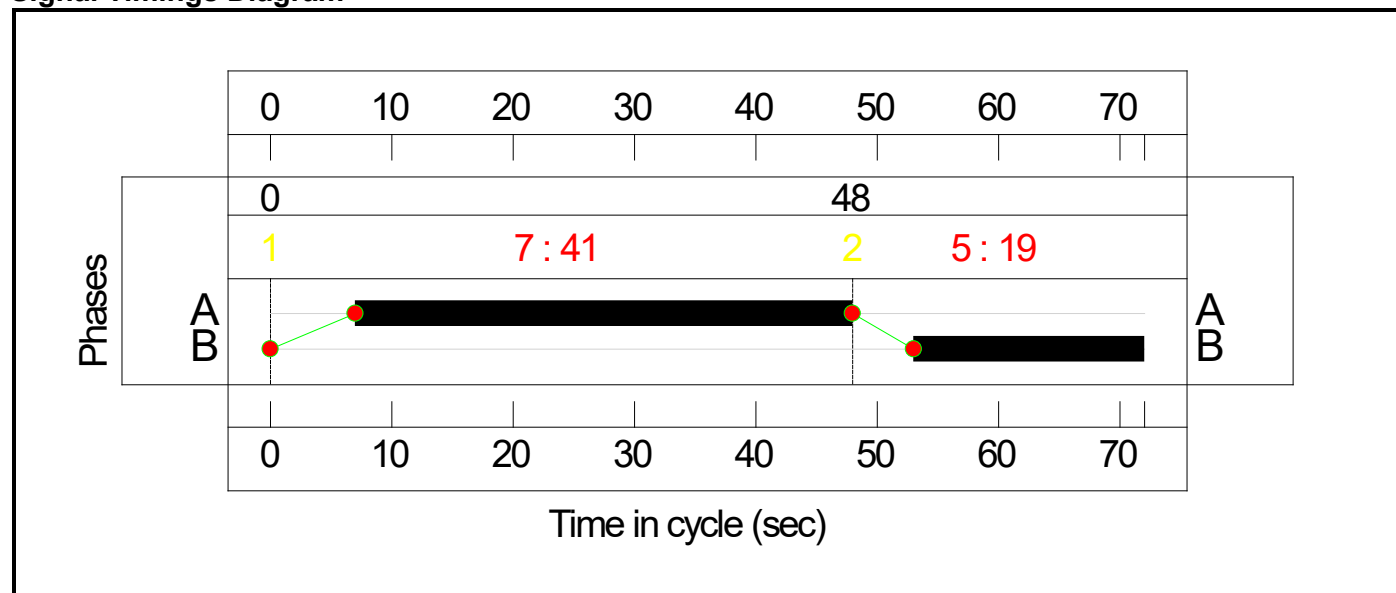
## Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 41 | 19 |
| Change Point | 0  | 48 |

## Phase Timings

| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 41             | 7          | 48       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 19             | 53         | 0        |

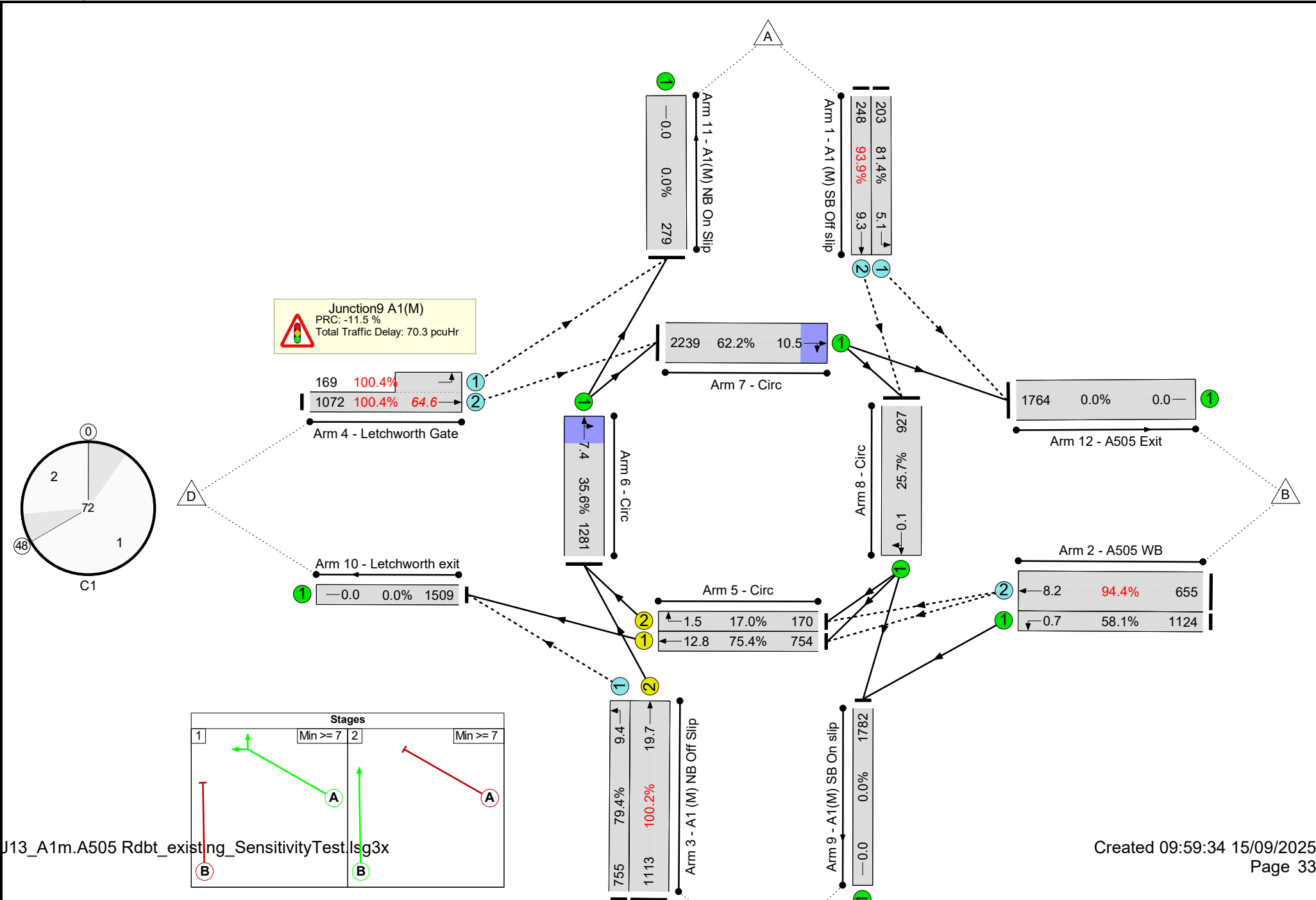
## Signal Timings Diagram



### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 53          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 48        |
| 5/2                       | Circ Right               | U    | A      | 7           | 48        |







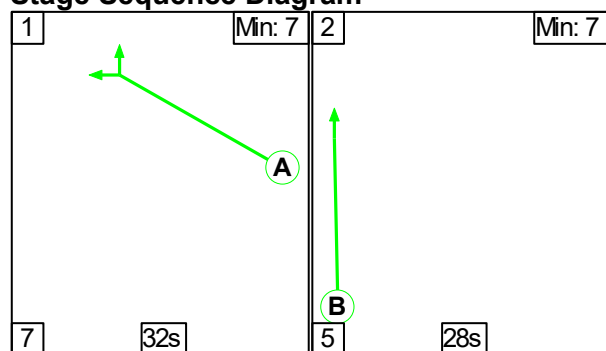
## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)    |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|----------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 100.4%         |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 100.4%         |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 203               | 1961              | 249            | 81.4%          |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 248               | 2080              | 264            | 93.9%          |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1124              | 1936              | 1936           | 58.1%          |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 655               | 4178              | 694            | 94.4%          |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 951            | 79.4%          |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 19              | -               | -               | 1113              | 4000              | 1111           | 100.2%         |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1241              | 1894:1834         | 1068+168       | 100.4 : 100.4% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 41              | -               | -               | 754               | 1714              | 1000           | 75.4%          |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 41              | -               | -               | 170               | 1714              | 1000           | 17.0%          |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1283              | 3600              | 3600           | 35.6%          |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2245              | 3600              | 3600           | 62.2%          |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 929               | 3600              | 3600           | 25.7%          |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1784              | Inf               | Inf            | 0.0%           |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1509              | Inf               | Inf            | 0.0%           |
| 11/1                              | A1(M) NB On Slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 279               | Inf               | Inf            | 0.0%           |

## Detailed Input Data And Results

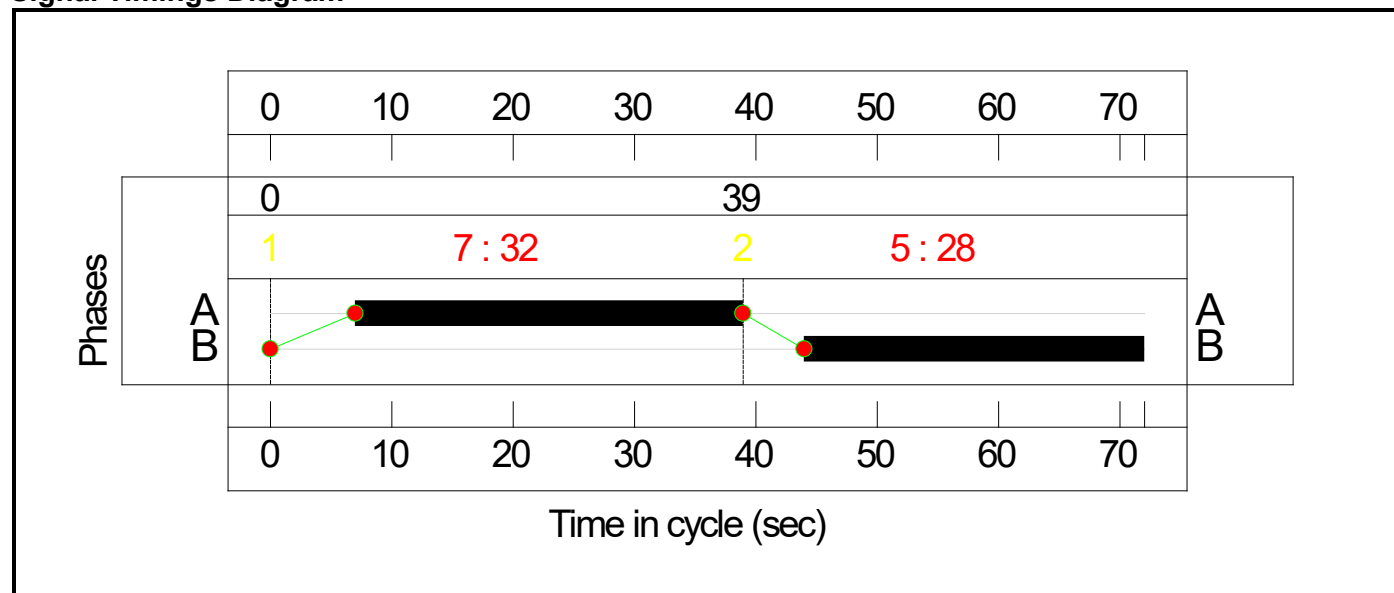
| 12/1                       | A505 Exit      | U             | N/A                   | N/A                          | -                            |                       | -                                        | -                                  | -                   | -                         | 1767                             | Inf                        | Inf                  | 0.0% |
|----------------------------|----------------|---------------|-----------------------|------------------------------|------------------------------|-----------------------|------------------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| Item                       | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 | -              | -             | 4021                  | 315                          | 0                            | 15.7                  | 54.6                                     | 0.0                                | 70.3                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)            | -              | -             | 4021                  | 315                          | 0                            | 15.7                  | 54.6                                     | 0.0                                | 70.3                | -                         | -                                | -                          | -                    |      |
| 1/1                        | 203            | 203           | 203                   | 0                            | 0                            | 0.6                   | 2.0                                      | -                                  | 2.6                 | 46.2                      | 3.1                              | 2.0                        | 5.1                  |      |
| 1/2                        | 248            | 248           | 248                   | 0                            | 0                            | 0.9                   | 4.8                                      | -                                  | 5.8                 | 83.5                      | 4.5                              | 4.8                        | 9.3                  |      |
| 2/1                        | 1124           | 1124          | -                     | -                            | -                            | 0.0                   | 0.7                                      | -                                  | 0.7                 | 2.2                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                        | 655            | 655           | 655                   | 0                            | 0                            | 0.3                   | 6.3                                      | -                                  | 6.6                 | 36.5                      | 5.0                              | 3.2                        | 8.2                  |      |
| 3/1                        | 755            | 755           | 440                   | 315                          | 0                            | 0.2                   | 1.9                                      | -                                  | 2.1                 | 9.9                       | 7.5                              | 1.9                        | 9.4                  |      |
| 3/2                        | 1113           | 1111          | -                     | -                            | -                            | 8.1                   | 17.2                                     | -                                  | 25.3                | 81.8                      | 11.1                             | 8.6                        | 19.7                 |      |
| 4/2+4/1                    | 1241           | 1237          | 2474                  | 0                            | 0                            | 1.9                   | 18.8                                     | -                                  | 20.7                | 60.0                      | 45.9                             | 18.8                       | 64.6                 |      |
| 5/1                        | 754            | 754           | -                     | -                            | -                            | 2.8                   | 1.5                                      | -                                  | 4.3                 | 20.6                      | 11.3                             | 1.5                        | 12.8                 |      |
| 5/2                        | 170            | 170           | -                     | -                            | -                            | 0.3                   | 0.1                                      | -                                  | 0.4                 | 8.3                       | 1.4                              | 0.1                        | 1.5                  |      |
| 6/1                        | 1281           | 1281          | -                     | -                            | -                            | 0.2                   | 0.3                                      | -                                  | 0.4                 | 1.3                       | 7.3                              | 0.1                        | 7.4                  |      |
| 7/1                        | 2239           | 2239          | -                     | -                            | -                            | 0.4                   | 0.8                                      | -                                  | 1.2                 | 2.0                       | 10.1                             | 0.4                        | 10.5                 |      |
| 8/1                        | 927            | 927           | -                     | -                            | -                            | 0.0                   | 0.2                                      | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                        | 1782           | 1782          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                       | 1509           | 1509          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                       | 279            | 279           | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                       | 1764           | 1764          | -                     | -                            | -                            | 0.0                   | 0.0                                      | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| C1                         |                |               |                       |                              | PRC for Signalled Lanes (%): | -11.3                 | Total Delay for Signalled Lanes (pcuHr): |                                    |                     | 29.98                     | Cycle Time (s): 72               |                            |                      |      |
|                            |                |               |                       |                              | PRC Over All Lanes (%):      | -11.5                 | Total Delay Over All Lanes(pcuHr):       |                                    |                     | 70.29                     |                                  |                            |                      |      |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 32 | 28 |
| Change Point | 0  | 39 |

**Phase Timings**

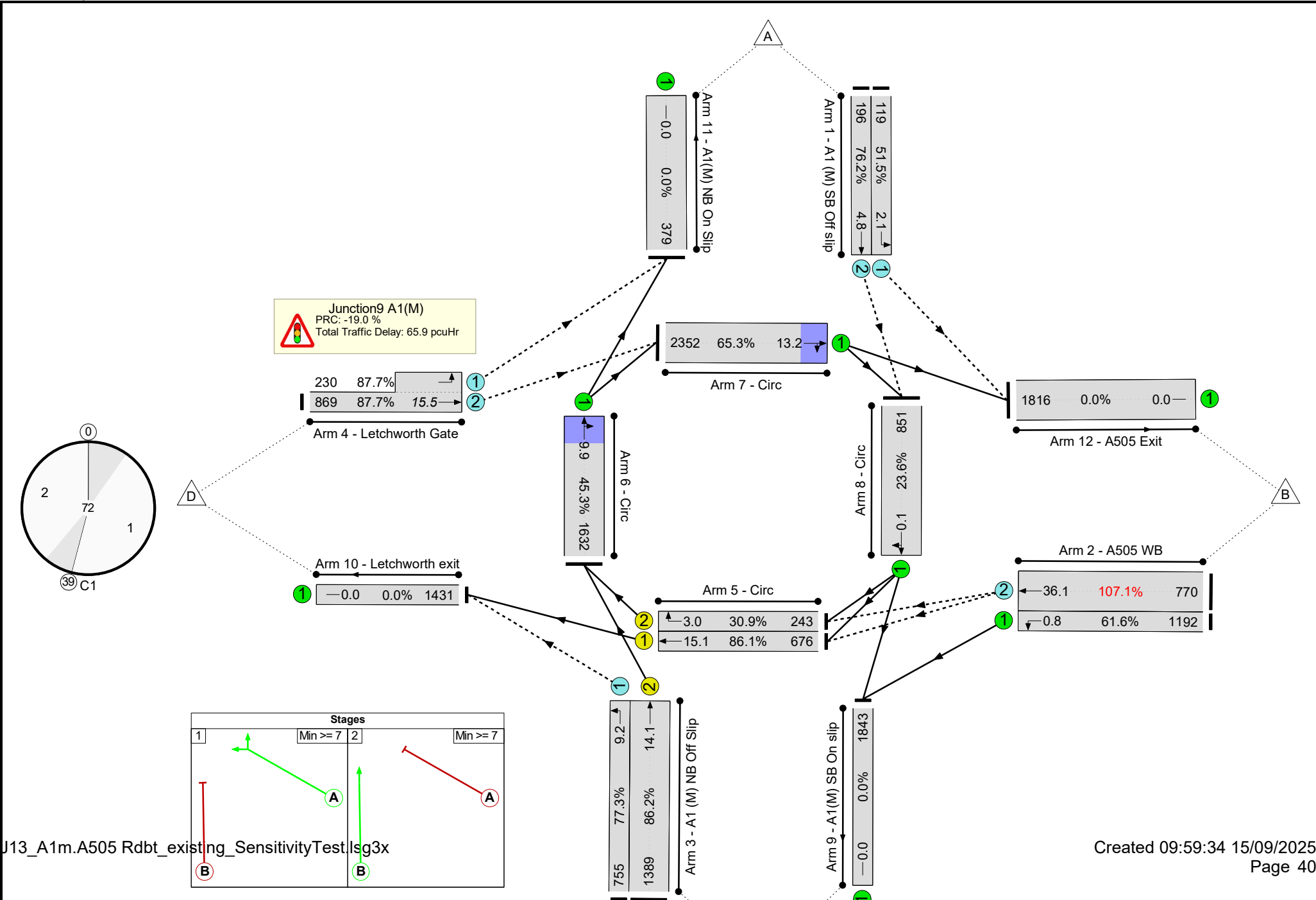
| Phase Name | Description                                | Phase   | Green Period 1 |            |          |
|------------|--------------------------------------------|---------|----------------|------------|----------|
|            |                                            |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory               | Traffic | 32             | 7          | 39       |
| B          | A1 (M) NB Off Slip Ahead<br>A1(M) Off Slip | Traffic | 28             | 44         | 0        |

**Signal Timings Diagram**

### Lane Green Times

| Junction: Junction9 A1(M) |                          |      |        |             |           |
|---------------------------|--------------------------|------|--------|-------------|-----------|
| Lane                      | Description              | Type | Phases | Start Green | End Green |
| 3/2                       | A1 (M) NB Off Slip Ahead | U    | B      | 44          | 0         |
| 5/1                       | Circ Ahead               | U    | A      | 7           | 39        |
| 5/2                       | Circ Right               | U    | A      | 7           | 39        |







## Detailed Input Data And Results

### Network Results

| Item                              | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|-----------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network: A1(m) Junction 10</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 107.1%       |
| <b>Junction9 A1(M)</b>            | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 107.1%       |
| 1/1                               | A1 (M) SB Off slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 231            | 51.5%        |
| 1/2                               | A1 (M) SB Off slip Ahead   | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 196               | 2080              | 257            | 76.2%        |
| 2/1                               | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1192              | 1936              | 1936           | 61.6%        |
| 2/2                               | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 770               | 4178              | 719            | 107.1%       |
| 3/1                               | A1 (M) NB Off Slip Left    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 977            | 77.3%        |
| 3/2                               | A1 (M) NB Off Slip Ahead   | U         | N/A               | N/A                        | B          |             | 1          | 28              | -               | -               | 1389              | 4000              | 1611           | 86.2%        |
| 4/2+4/1                           | Letchworth Gate Ahead Left | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1099              | 1894:1834         | 991+262        | 87.7 : 87.7% |
| 5/1                               | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 32              | -               | -               | 710               | 1714              | 786            | 86.1%        |
| 5/2                               | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 32              | -               | -               | 260               | 1714              | 786            | 30.9%        |
| 6/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1649              | 3600              | 3600           | 45.3%        |
| 7/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2359              | 3600              | 3600           | 65.3%        |
| 8/1                               | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 851               | 3600              | 3600           | 23.6%        |
| 9/1                               | A1(M) SB On slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1843              | Inf               | Inf            | 0.0%         |
| 10/1                              | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1465              | Inf               | Inf            | 0.0%         |
| 11/1                              | A1(M) NB On Slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 389               | Inf               | Inf            | 0.0%         |

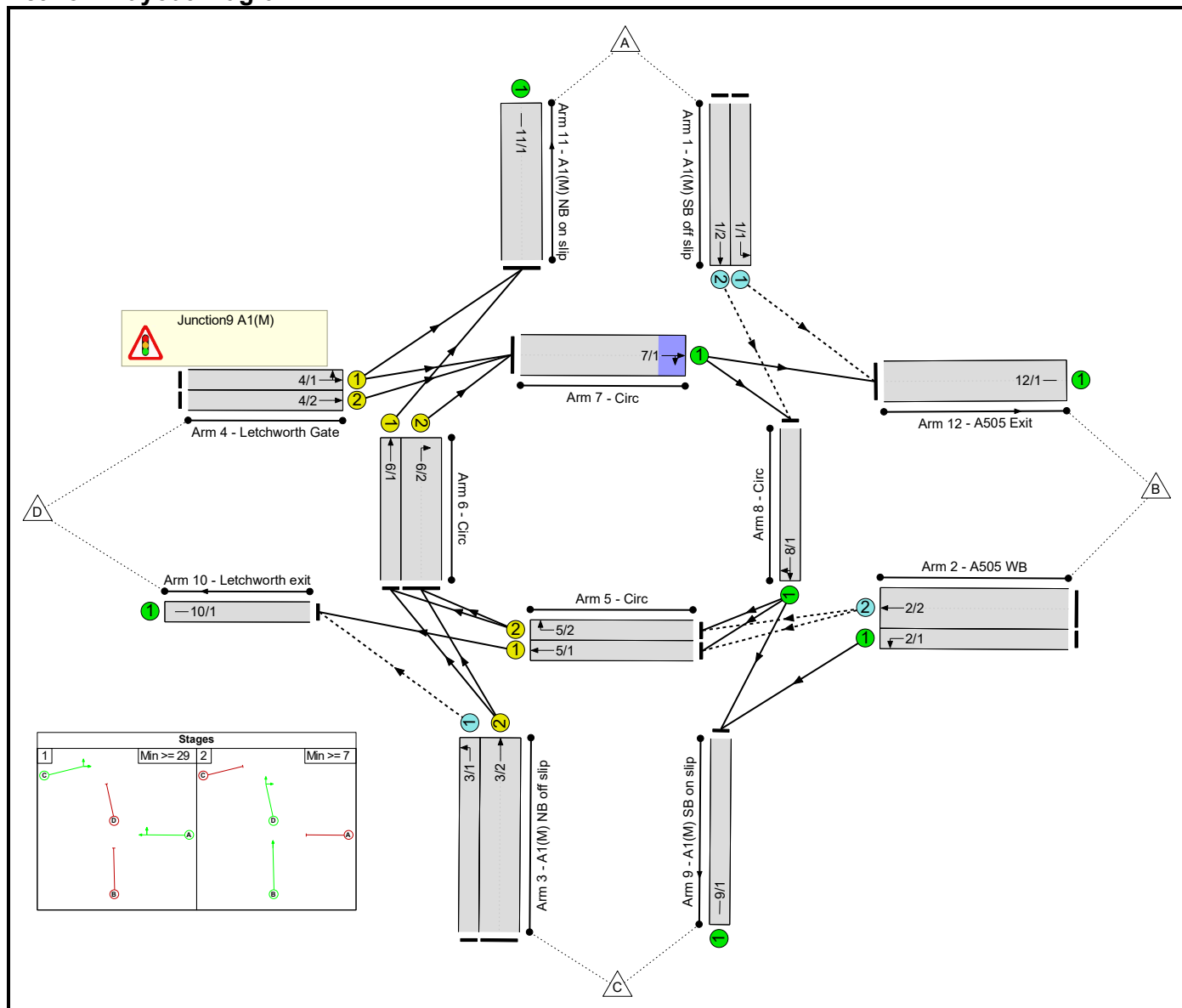
## Detailed Input Data And Results

| 12/1                       | A505 Exit      | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1823                             | Inf                        | Inf                  | 0.0% |
|----------------------------|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| Item                       | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| Network: A1(m) Junction 10 | -              | -             | 3559                  | 428                          | 0                           | 18.6                  | 47.3                         | 0.0                                | 65.9                | -                         | -                                | -                          | -                    |      |
| Junction9 A1(M)            | -              | -             | 3559                  | 428                          | 0                           | 18.6                  | 47.3                         | 0.0                                | 65.9                | -                         | -                                | -                          | -                    |      |
| 1/1                        | 119            | 119           | 119                   | 0                            | 0                           | 0.4                   | 0.5                          | -                                  | 0.9                 | 26.9                      | 1.6                              | 0.5                        | 2.1                  |      |
| 1/2                        | 196            | 196           | 196                   | 0                            | 0                           | 0.8                   | 1.5                          | -                                  | 2.4                 | 43.5                      | 3.3                              | 1.5                        | 4.8                  |      |
| 2/1                        | 1192           | 1192          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                        | 770            | 719           | 719                   | 0                            | 0                           | 2.9                   | 31.6                         | -                                  | 34.5                | 161.3                     | 20.3                             | 15.8                       | 36.1                 |      |
| 3/1                        | 755            | 755           | 327                   | 428                          | 0                           | 0.2                   | 1.7                          | -                                  | 1.9                 | 9.1                       | 7.5                              | 1.7                        | 9.2                  |      |
| 3/2                        | 1389           | 1389          | -                     | -                            | -                           | 7.6                   | 3.0                          | -                                  | 10.6                | 27.6                      | 12.5                             | 1.5                        | 14.1                 |      |
| 4/2+4/1                    | 1099           | 1099          | 2198                  | 0                            | 0                           | 1.3                   | 3.4                          | -                                  | 4.8                 | 15.6                      | 12.1                             | 3.4                        | 15.5                 |      |
| 5/1                        | 676            | 676           | -                     | -                            | -                           | 3.8                   | 2.9                          | -                                  | 6.7                 | 35.8                      | 12.1                             | 2.9                        | 15.1                 |      |
| 5/2                        | 243            | 243           | -                     | -                            | -                           | 0.7                   | 0.2                          | -                                  | 0.9                 | 13.6                      | 2.7                              | 0.2                        | 3.0                  |      |
| 6/1                        | 1632           | 1632          | -                     | -                            | -                           | 0.3                   | 0.4                          | -                                  | 0.7                 | 1.5                       | 9.7                              | 0.2                        | 9.9                  |      |
| 7/1                        | 2352           | 2352          | -                     | -                            | -                           | 0.7                   | 0.9                          | -                                  | 1.6                 | 2.5                       | 12.8                             | 0.5                        | 13.2                 |      |
| 8/1                        | 851            | 851           | -                     | -                            | -                           | 0.0                   | 0.2                          | -                                  | 0.2                 | 0.7                       | 0.0                              | 0.1                        | 0.1                  |      |
| 9/1                        | 1843           | 1843          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                       | 1431           | 1431          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                       | 379            | 379           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                       | 1816           | 1816          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| C1                         |                |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

**Detailed Input Data And Results****User and Project Details**

|                           |                                                  |
|---------------------------|--------------------------------------------------|
| <b>Project:</b>           | <b>Growing Baldock</b>                           |
| <b>Title:</b>             | <b>A1(m) Junction 10 - PROPOSED</b>              |
| <b>Location:</b>          | Baldock, SG6 2EA                                 |
| <b>Client:</b>            | Urban & Civic                                    |
| <b>Site Ref(s):</b>       | J13                                              |
| <b>Design Layout Ref:</b> | -                                                |
| <b>Date Started:</b>      | 05.08.2025                                       |
| <b>Date Completed:</b>    | -                                                |
| <b>Checked By:</b>        | NL/ZT                                            |
| <b>Additional detail:</b> |                                                  |
| <b>File name:</b>         | J13_A1m.A505 Rdbt_proposed_SensitivityTest.lsg3x |
| <b>Author:</b>            | Jay James                                        |
| <b>Company:</b>           | ITP by Haskoning                                 |
| <b>Address:</b>           |                                                  |
| <b>Linsig Version:</b>    | 3, 3, 0, 6                                       |

## Network Layout Diagram

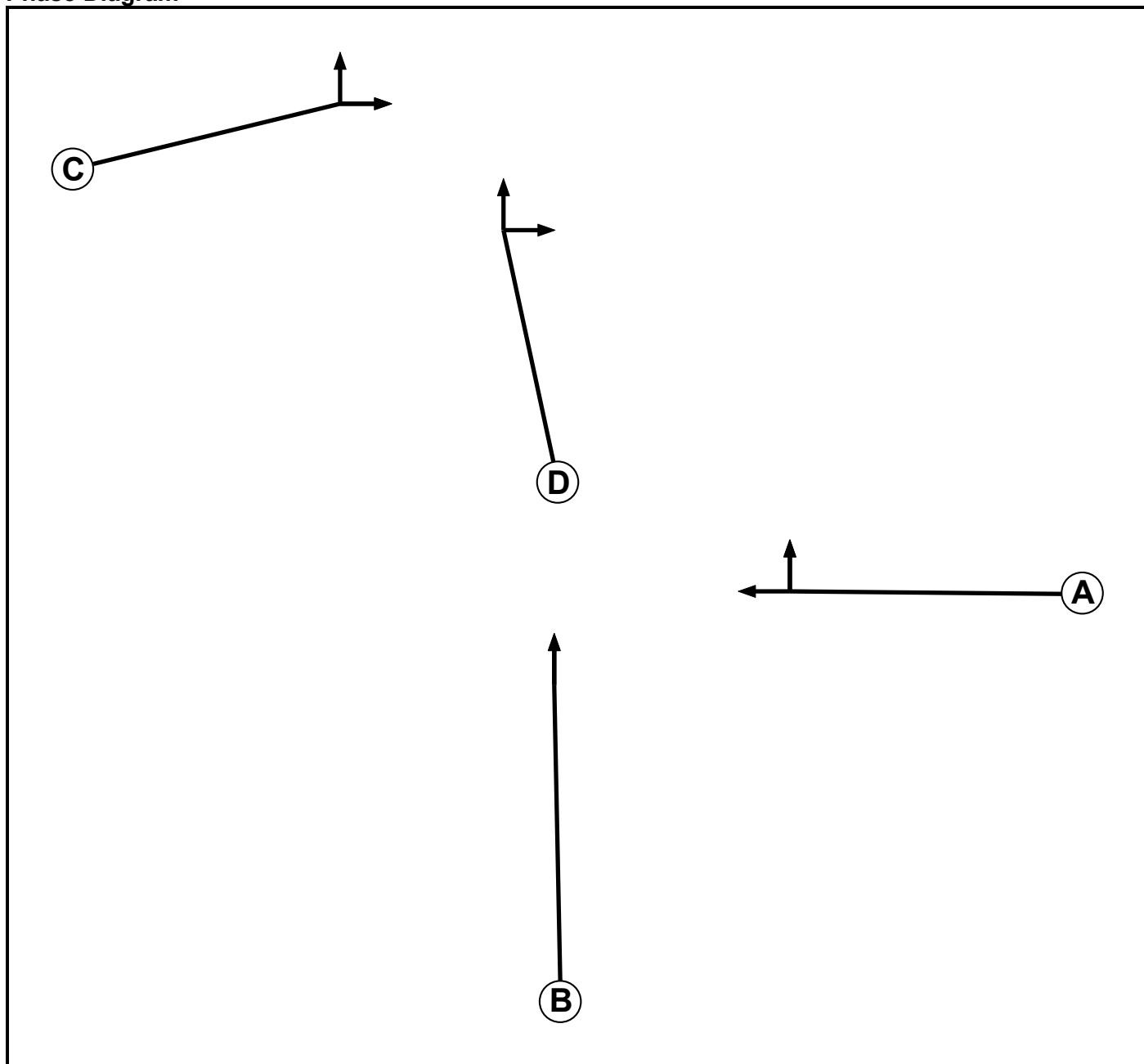


## Scenarios

| Number | Scenario Name          | Flow Group                | Network Control Plan   | Time          | Cycle Time (s) | PRC (%) | Delay (pcuHr) |
|--------|------------------------|---------------------------|------------------------|---------------|----------------|---------|---------------|
| 1      | 2040 wDev no School AM | 2040 w Dev no School AM   | Network Control Plan 1 | 08:00 - 09:00 | 80             | -7.7    | 60.78         |
| 2      | 2040 wDev no School PM | 2040 wDev no School PM    | Network Control Plan 1 | 17:00 - 18:00 | 80             | -19.3   | 101.73        |
| 3      | 2040 wDev w School AM  | 2040 w Dev with School AM | Network Control Plan 1 | 08:00 - 09:00 | 80             | -8.5    | 60.63         |
| 4      | 2040 wDev w School PM  | 2040 wDev with School PM  | Network Control Plan 1 | 17:00 - 18:00 | 80             | -19.0   | 98.77         |

## Controller Summary

| Controller | Type | SCN | Stage Stream   | Num Phases | Num Stages | Controls Junctions | Controller Notes |
|------------|------|-----|----------------|------------|------------|--------------------|------------------|
| C1         | Gen  |     | Stage Stream 1 | 4          | 2          | Junction9 A1(M)    |                  |

**Phase Diagram****Phase Input Data**

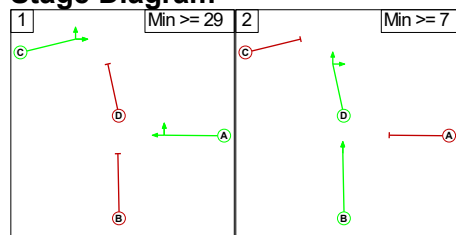
| Phase Name | Phase Type | Assoc. Phase | Street Min (s) | Cont Min (s) |
|------------|------------|--------------|----------------|--------------|
| A          | Traffic    |              | -9999          | 29           |
| B          | Traffic    |              | -9999          | 7            |
| C          | Traffic    |              | -9999          | 7            |
| D          | Traffic    |              | -9999          | 7            |

**Phase Intergreens Matrix**

| Terminating Phase | Starting Phase |   |   |   |   |
|-------------------|----------------|---|---|---|---|
|                   |                | A | B | C | D |
|                   | A              |   | 7 | - | - |
|                   | B              | 5 |   | - | - |
|                   | C              | - | - |   | 5 |
|                   | D              | - | - | 5 |   |

**Phases in Stage**

| Stage No. | Phases in Stage |
|-----------|-----------------|
| 1         | A C             |
| 2         | B D             |

**Stage Diagram****Phase Delays**

| Term. Stage | Start Stage | Phase | Type   | Value | Cont value |
|-------------|-------------|-------|--------|-------|------------|
| 1           | 2           | C     | Losing | 7     | 7          |
| 2           | 1           | B     | Losing | 5     | 5          |

**Prohibited Stage Change**

| From Stage | To Stage |    |
|------------|----------|----|
|            | 1        | 2  |
|            | 12       | 10 |

**Lane Input Data**

| Junction: Junction9 A1(M)  |           |        |                 |               |                       |               |                                   |                |              |               |              |                    |
|----------------------------|-----------|--------|-----------------|---------------|-----------------------|---------------|-----------------------------------|----------------|--------------|---------------|--------------|--------------------|
| Lane                       | Lane Type | Phases | Start Disp. (s) | End Disp. (s) | Physical Length (PCU) | Sat Flow Type | Def User Saturation Flow (PCU/Hr) | Lane Width (m) | Gradient (%) | Nearside Lane | Turns        | Turning Radius (m) |
| 1/1<br>(A1(M) SB off slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.46           | 0.00         | Y             | Arm 12 Left  | Inf                |
| 1/2<br>(A1(M) SB off slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.25           | 0.00         | N             | Arm 8 Ahead  | Inf                |
| 2/1<br>(A505 WB)           | U         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 9 Left   | 100.00             |
| 2/2<br>(A505 WB)           | O         |        | 2               | 3             | 60.0                  | User          | 4178                              | -              | -            | -             | -            | -                  |
| 3/1<br>(A1(M) NB off slip) | O         |        | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 10 Left  | 100.00             |
| 3/2<br>(A1(M) NB off slip) | U         | B      | 2               | 3             | 60.0                  | User          | 4000                              | -              | -            | -             | -            | -                  |
| 4/1<br>(Letchworth Gate)   | U         | C      | 2               | 3             | 60.0                  | Geom          | -                                 | 3.20           | 0.00         | Y             | Arm 7 Ahead  | Inf                |
|                            |           |        |                 |               |                       |               |                                   |                |              |               | Arm 11 Left  | 26.00              |
| 4/2<br>(Letchworth Gate)   | U         | C      | 2               | 3             | 60.0                  | Geom          | -                                 | 3.50           | 0.00         | N             | Arm 7 Ahead  | 40.00              |
| 5/1<br>(Circ)              | U         | A      | 2               | 3             | 20.5                  | User          | 1714                              | -              | -            | -             | -            | -                  |
| 5/2<br>(Circ)              | U         | A      | 2               | 3             | 20.5                  | User          | 1714                              | -              | -            | -             | -            | -                  |
| 6/1<br>(Circ)              | U         | D      | 2               | 3             | 14.0                  | Geom          | -                                 | 3.50           | 0.00         | Y             | Arm 11 Ahead | 133.00             |
| 6/2<br>(Circ)              | U         | D      | 2               | 3             | 14.0                  | User          | 4178                              | -              | -            | -             | -            | -                  |
| 7/1<br>(Circ)              | U         |        | 2               | 3             | 16.7                  | User          | 3600                              | -              | -            | -             | -            | -                  |
| 8/1<br>(Circ)              | U         |        | 2               | 3             | 14.3                  | Geom          | -                                 | 3.80           | 0.00         | Y             | Arm 5 Right  | 62.00              |
|                            |           |        |                 |               |                       |               |                                   |                |              |               | Arm 9 Ahead  | 62.00              |
| 9/1<br>(A1(M) SB on slip)  | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -            | -                  |
| 10/1<br>(Letchworth exit)  | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -            | -                  |
| 11/1<br>(A1(M) NB on slip) | U         |        | 2               | 3             | 60.0                  | Inf           | -                                 | -              | -            | -             | -            | -                  |

Detailed Input Data And Results

|                     |   |  |   |   |      |     |   |   |   |   |   |   |
|---------------------|---|--|---|---|------|-----|---|---|---|---|---|---|
| 12/1<br>(A505 Exit) | U |  | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
|---------------------|---|--|---|---|------|-----|---|---|---|---|---|---|

**Give-Way Lane Input Data**

| Junction: Junction9 A1(M)  |             |                                            |                                            |                  |                     |                 |                             |                                  |     |                           |                                     |
|----------------------------|-------------|--------------------------------------------|--------------------------------------------|------------------|---------------------|-----------------|-----------------------------|----------------------------------|-----|---------------------------|-------------------------------------|
| Lane                       | Movement    | Max Flow<br>when<br>Giving Way<br>(PCU/Hr) | Min Flow<br>when<br>Giving Way<br>(PCU/Hr) | Opposing<br>Lane | Opp. Lane<br>Coeff. | Opp.<br>Mvmnts. | Right Turn<br>Storage (PCU) | Non-Blocking<br>Storage<br>(PCU) | RTF | Right Turn<br>Move up (s) | Max Turns<br>in Intergreen<br>(PCU) |
| 1/1<br>(A1(M) SB off slip) | 12/1 (Left) | 715                                        | 0                                          | 7/1              | 0.22                | All             | -                           | -                                | -   | -                         | -                                   |
| 1/2<br>(A1(M) SB off slip) | 8/1 (Ahead) | 1000                                       | 0                                          | 7/1              | 0.40                | All             | -                           | -                                | -   | -                         | -                                   |
| 2/2<br>(A505 WB)           | 5/1 (Ahead) | 1000                                       | 0                                          | 8/1              | 0.33                | All             | -                           | -                                | -   | -                         | -                                   |
|                            | 5/2 (Ahead) | 1000                                       | 0                                          | 8/1              | 0.33                | All             |                             |                                  |     |                           |                                     |
| 3/1<br>(A1(M) NB off slip) | 10/1 (Left) | 1200                                       | 0                                          | 5/1              | 0.33                | All             | -                           | -                                | -   | -                         | -                                   |

Detailed Input Data And Results

**Lane Connector Input Data**

| Junction: Junction9 A1(M) |           |          |                               |                    |
|---------------------------|-----------|----------|-------------------------------|--------------------|
| Org Lane                  | Dest Lane | Junction | Modelled Mean Cruise Time (s) | Platoon Dispersion |
| 1/1                       | 12/1      | Internal | 5                             | 35                 |
| 1/2                       | 8/1       | Internal | 5                             | 35                 |
| 2/1                       | 9/1       | Internal | 26                            | 35                 |
| 2/2                       | 5/1       | Internal | 9                             | 35                 |
| 2/2                       | 5/2       | Internal | 9                             | 35                 |
| 3/1                       | 10/1      | Internal | 26                            | 35                 |
| 3/2                       | 6/1       | Internal | 6                             | 35                 |
| 3/2                       | 6/2       | Internal | 6                             | 35                 |
| 4/1                       | 7/1       | Internal | 7                             | 35                 |
| 4/1                       | 11/1      | Internal | 26                            | 35                 |
| 4/2                       | 7/1       | Internal | 7                             | 35                 |
| 5/1                       | 10/1      | Internal | 26                            | 35                 |
| 5/2                       | 6/1       | Internal | 6                             | 35                 |
| 5/2                       | 6/2       | Internal | 6                             | 35                 |
| 6/1                       | 11/1      | Internal | 26                            | 35                 |
| 6/2                       | 7/1       | Internal | 7                             | 35                 |
| 7/1                       | 8/1       | Internal | 6                             | 35                 |
| 7/1                       | 12/1      | Internal | 26                            | 35                 |
| 8/1                       | 5/1       | Internal | 9                             | 35                 |
| 8/1                       | 5/2       | Internal | 9                             | 35                 |
| 8/1                       | 9/1       | Internal | 19                            | 35                 |

**Scenario 1: '2040 wDev no School AM'** (FG1: '2040 w Dev no School AM', Plan 1: 'Network Control Plan 1')

**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 71.5 %        | 1904              | 1904                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 28.5 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 29.0 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 71.0 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 1

**Scenario 2: '2040 wDev no School PM'** (FG2: '2040 wDev no School PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 55.9 %        | 1887              | 1887                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 44.1 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 23.5 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 76.5 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 2

**Scenario 3: '2040 wDev w School AM'** (FG3: '2040 w Dev with School AM', Plan 1: 'Network Control Plan 1')  
**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 71.5 %        | 1904              | 1904                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 28.5 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 29.0 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 71.0 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 3

**Scenario 4: '2040 wDev w School PM'** (FG4: '2040 wDev with School PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

| Junction: Junction9 A1(M)         |                                                   |              |               |               |                    |               |                   |                          |
|-----------------------------------|---------------------------------------------------|--------------|---------------|---------------|--------------------|---------------|-------------------|--------------------------|
| Lane                              | Lane Width (m)                                    | Gradient (%) | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| 1/1<br>(A1(M) SB off slip)        | 3.46                                              | 0.00         | Y             | Arm 12 Left   | Inf                | 100.0 %       | 1961              | 1961                     |
| 1/2<br>(A1(M) SB off slip)        | 3.25                                              | 0.00         | N             | Arm 8 Ahead   | Inf                | 100.0 %       | 2080              | 2080                     |
| 2/1<br>(A505 WB)                  | 3.50                                              | 0.00         | Y             | Arm 9 Left    | 100.00             | 100.0 %       | 1936              | 1936                     |
| 2/2<br>(A505 WB Lane 2)           | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 3/1<br>(A1(M) NB off slip)        | 3.50                                              | 0.00         | Y             | Arm 10 Left   | 100.00             | 100.0 %       | 1936              | 1936                     |
| 3/2<br>(A1(M) NB off slip Lane 2) | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4000              | 4000                     |
| 4/1<br>(Letchworth Gate)          | 3.20                                              | 0.00         | Y             | Arm 7 Ahead   | Inf                | 55.9 %        | 1887              | 1887                     |
|                                   |                                                   |              |               | Arm 11 Left   | 26.00              | 44.1 %        |                   |                          |
| 4/2<br>(Letchworth Gate)          | 3.50                                              | 0.00         | N             | Arm 7 Ahead   | 40.00              | 100.0 %       | 2029              | 2029                     |
| 5/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 5/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 1714              | 1714                     |
| 6/1<br>(Circ)                     | 3.50                                              | 0.00         | Y             | Arm 11 Ahead  | 133.00             | 100.0 %       | 1943              | 1943                     |
| 6/2<br>(Circ Lane 2)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 4178              | 4178                     |
| 7/1<br>(Circ Lane 1)              | This lane uses a directly entered Saturation Flow |              |               |               |                    |               | 3600              | 3600                     |
| 8/1<br>(Circ)                     | 3.80                                              | 0.00         | Y             | Arm 5 Right   | 62.00              | 23.5 %        | 1948              | 1948                     |
|                                   |                                                   |              |               | Arm 9 Ahead   | 62.00              | 76.5 %        |                   |                          |
| 9/1<br>(A1(M) SB on slip Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 10/1<br>(Letchworth exit Lane 1)  | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 11/1<br>(A1(M) NB on slip Lane 1) | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |
| 12/1<br>(A505 Exit Lane 1)        | Infinite Saturation Flow                          |              |               |               |                    |               | Inf               | Inf                      |

**Bonus Green Times**

No Bonus Greens are defined For Scenario 4

**Traffic Flow Groups**

| Flow Group                     | Start Time | End Time | Duration | Formula |
|--------------------------------|------------|----------|----------|---------|
| 1: '2040 w Dev no School AM'   | 08:00      | 09:00    | 01:00    |         |
| 2: '2040 wDev no School PM'    | 17:00      | 18:00    | 01:00    |         |
| 3: '2040 w Dev with School AM' | 08:00      | 09:00    | 01:00    |         |
| 4: '2040 wDev with School PM'  | 17:00      | 18:00    | 01:00    |         |

**Traffic Flows, Desired****FG1: '2040 w Dev no School AM'****Desired Flow :**

| Origin | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
|        | A           | 2   | 205  | 2    | 244  | 453  |
|        | B           | 108 | 61   | 1142 | 492  | 1803 |
|        | C           | 1   | 1102 | 1    | 755  | 1859 |
|        | D           | 169 | 396  | 657  | 23   | 1245 |
|        | Tot.        | 280 | 1764 | 1802 | 1514 | 5360 |

**FG2: '2040 wDev no School PM'****Desired Flow :**

| Origin | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
|        | A           | 0   | 119  | 0    | 196  | 315  |
|        | B           | 158 | 103  | 1173 | 511  | 1945 |
|        | C           | 2   | 1398 | 0    | 755  | 2155 |
|        | D           | 230 | 214  | 651  | 4    | 1099 |
|        | Tot.        | 390 | 1834 | 1824 | 1466 | 5514 |

**FG3: '2040 w Dev with School AM'****Desired Flow :**

| Origin | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
|        | A           | 2   | 203  | 2    | 244  | 451  |
|        | B           | 107 | 61   | 1124 | 487  | 1779 |
|        | C           | 1   | 1111 | 1    | 755  | 1868 |
|        | D           | 169 | 392  | 657  | 23   | 1241 |
|        | Tot.        | 279 | 1767 | 1784 | 1509 | 5339 |

## Detailed Input Data And Results

### FG4: '2040 wDev with School PM'

#### Desired Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 196  | 315  |
|        | B           | 157 | 103  | 1192 | 510  | 1962 |
|        | C           | 2   | 1387 | 0    | 755  | 2144 |
|        | D           | 230 | 214  | 651  | 4    | 1099 |
|        | Tot.        | 389 | 1823 | 1843 | 1465 | 5520 |

### Scenario 1: '2040 wDev no School AM' (FG1: '2040 w Dev no School AM', Plan 1: 'Network Control Plan 1')

#### Traffic Flows, Actual

##### Actual Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 205  | 2    | 244  | 453  |
|        | B           | 108 | 61   | 1142 | 492  | 1803 |
|        | C           | 1   | 1102 | 1    | 755  | 1859 |
|        | D           | 169 | 396  | 657  | 23   | 1245 |
|        | Tot.        | 280 | 1764 | 1802 | 1514 | 5360 |

#### Traffic Flows, Difference

##### Difference :

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

### Scenario 2: '2040 wDev no School PM' (FG2: '2040 wDev no School PM', Plan 1: 'Network Control Plan 1')

#### Traffic Flows, Actual

##### Actual Flow :

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 196  | 315  |
|        | B           | 158 | 103  | 1173 | 511  | 1945 |
|        | C           | 2   | 1398 | 0    | 755  | 2155 |
|        | D           | 230 | 214  | 651  | 4    | 1099 |
|        | Tot.        | 390 | 1834 | 1824 | 1466 | 5514 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 3: '2040 wDev w School AM'** (FG3: '2040 w Dev with School AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 2   | 203  | 2    | 244  | 451  |
|        | B           | 107 | 61   | 1124 | 487  | 1779 |
|        | C           | 1   | 1111 | 1    | 755  | 1868 |
|        | D           | 169 | 392  | 657  | 23   | 1241 |
|        | Tot.        | 279 | 1767 | 1784 | 1509 | 5339 |

**Traffic Flows, Difference****Difference :**

|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Scenario 4: '2040 wDev w School PM'** (FG4: '2040 wDev with School PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

|        | Destination |     |      |      |      |      |
|--------|-------------|-----|------|------|------|------|
|        |             | A   | B    | C    | D    | Tot. |
| Origin | A           | 0   | 119  | 0    | 196  | 315  |
|        | B           | 157 | 103  | 1192 | 510  | 1962 |
|        | C           | 2   | 1387 | 0    | 755  | 2144 |
|        | D           | 230 | 214  | 651  | 4    | 1099 |
|        | Tot.        | 389 | 1823 | 1843 | 1465 | 5520 |

**Traffic Flows, Difference****Difference :**

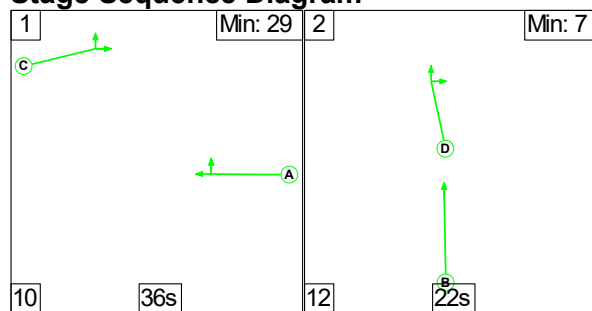
|        | Destination |   |   |   |   |      |
|--------|-------------|---|---|---|---|------|
|        |             | A | B | C | D | Tot. |
| Origin | A           | 0 | 0 | 0 | 0 | 0    |
|        | B           | 0 | 0 | 0 | 0 | 0    |
|        | C           | 0 | 0 | 0 | 0 | 0    |
|        | D           | 0 | 0 | 0 | 0 | 0    |
|        | Tot.        | 0 | 0 | 0 | 0 | 0    |

**Traffic Lane Flows**

| Lane                             | Scenario 1:<br>2040 wDev<br>no School<br>AM | Scenario 2:<br>2040 wDev<br>no School<br>PM | Scenario 3:<br>2040 wDev<br>w School<br>AM | Scenario 4:<br>2040 wDev<br>w School<br>PM |
|----------------------------------|---------------------------------------------|---------------------------------------------|--------------------------------------------|--------------------------------------------|
| <b>Junction: Junction9 A1(M)</b> |                                             |                                             |                                            |                                            |
| 1/1                              | 205                                         | 119                                         | 203                                        | 119                                        |
| 1/2                              | 248                                         | 196                                         | 248                                        | 196                                        |
| 2/1                              | 1142                                        | 1173                                        | 1124                                       | 1192                                       |
| 2/2                              | 661                                         | 772                                         | 655                                        | 770                                        |
| 3/1                              | 755                                         | 755                                         | 755                                        | 755                                        |
| 3/2                              | 1104                                        | 1400                                        | 1113                                       | 1389                                       |
| 4/1                              | 594                                         | 522                                         | 593                                        | 522                                        |
| 4/2                              | 651                                         | 577                                         | 648                                        | 577                                        |
| 5/1                              | 759                                         | 711                                         | 754                                        | 710                                        |
| 5/2                              | 171                                         | 261                                         | 170                                        | 260                                        |
| 6/1                              | 111                                         | 160                                         | 110                                        | 159                                        |
| 6/2                              | 1164                                        | 1501                                        | 1173                                       | 1490                                       |
| 7/1                              | 2240                                        | 2370                                        | 2245                                       | 2359                                       |
| 8/1                              | 929                                         | 851                                         | 929                                        | 851                                        |
| 9/1                              | 1802                                        | 1824                                        | 1784                                       | 1843                                       |
| 10/1                             | 1514                                        | 1466                                        | 1509                                       | 1465                                       |
| 11/1                             | 280                                         | 390                                         | 279                                        | 389                                        |
| 12/1                             | 1764                                        | 1834                                        | 1767                                       | 1823                                       |

**Scenario 1: '2040 wDev no School AM'** (FG1: '2040 w Dev no School AM', Plan 1: 'Network Control Plan 1')

### Stage Sequence Diagram



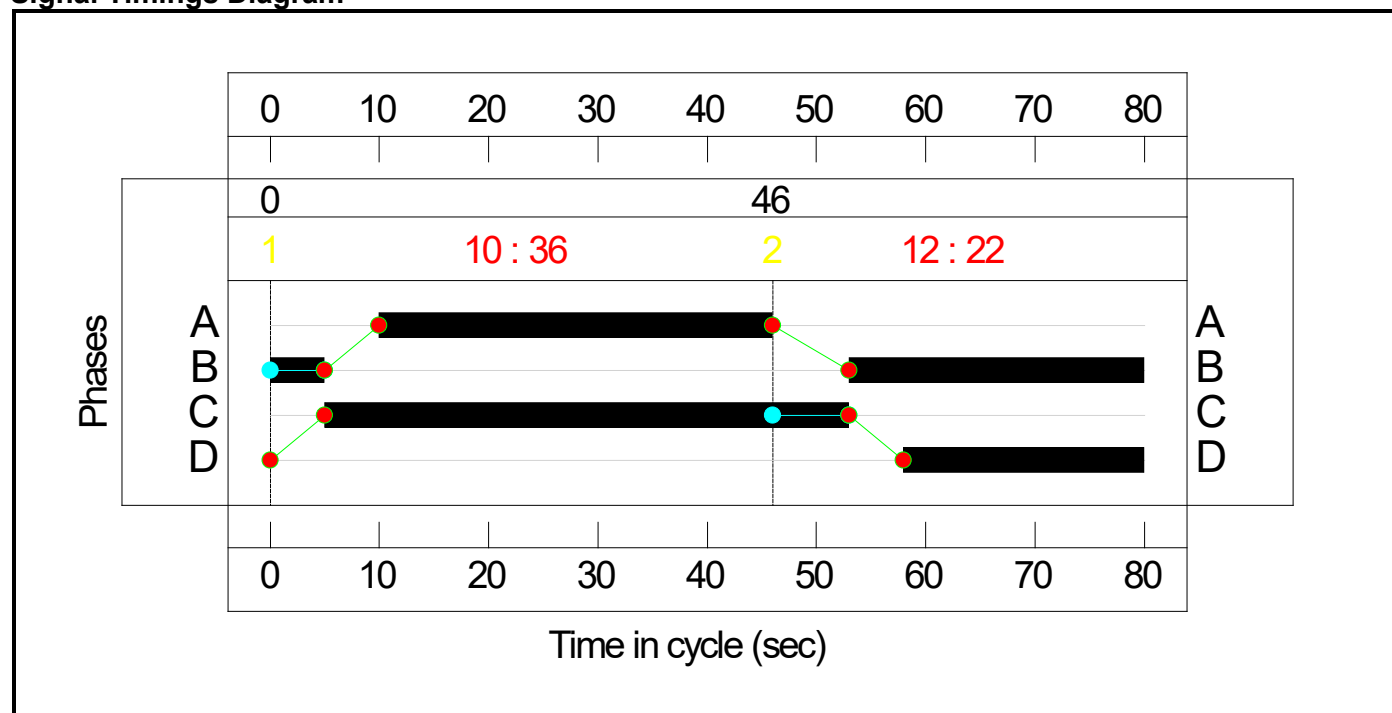
### Stage Timings

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 36 | 22 |
| Change Point | 0  | 46 |

### Phase Timings

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 36             | 10         | 46       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 32             | 53         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 48             | 5          | 53       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 22             | 58         | 0        |

### Signal Timings Diagram

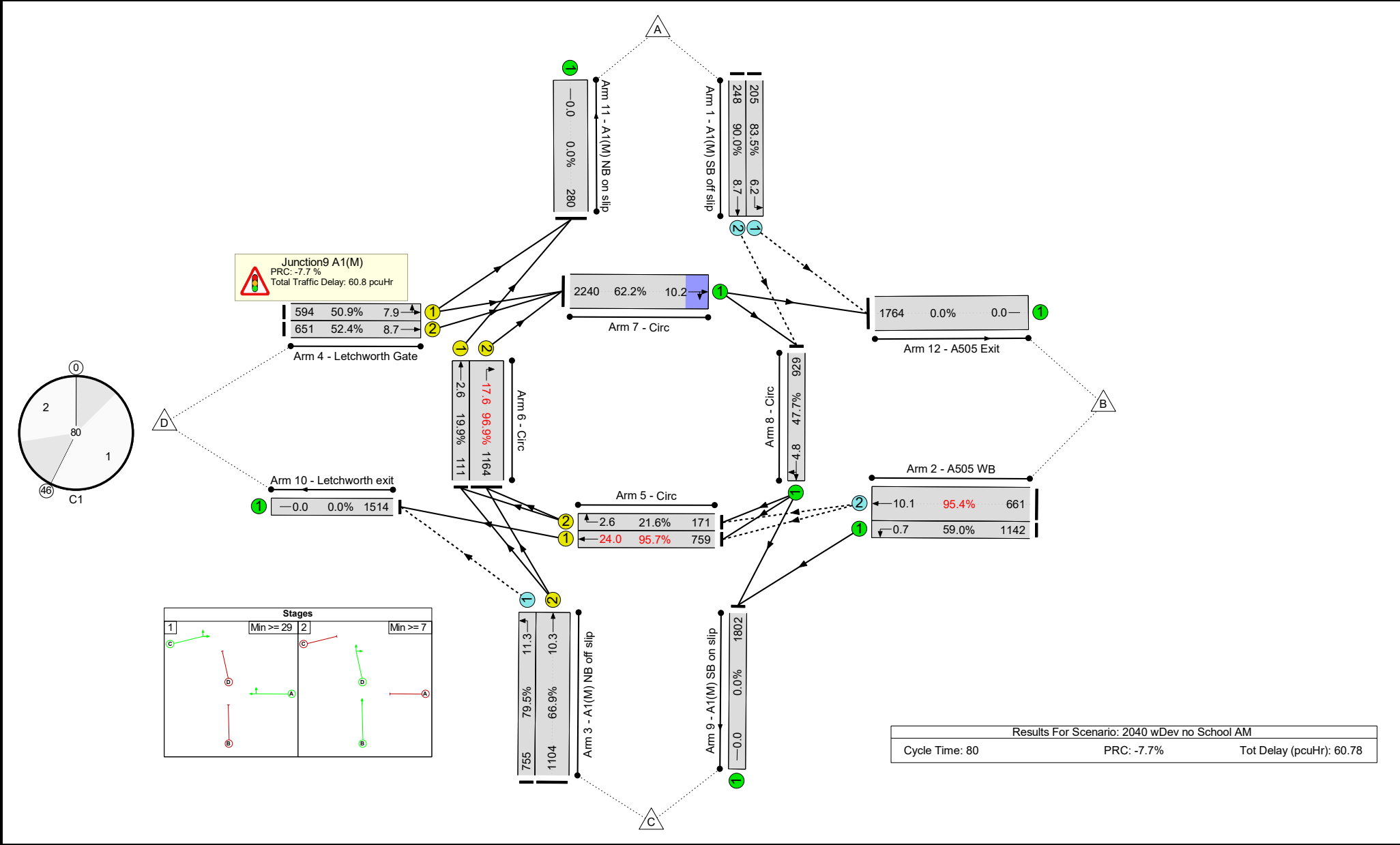


**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 53                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 53               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 53               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 46               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 46               |
| 6/1                              | Circ Ahead                 | U           | D             | 58                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 58                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

### Network Results

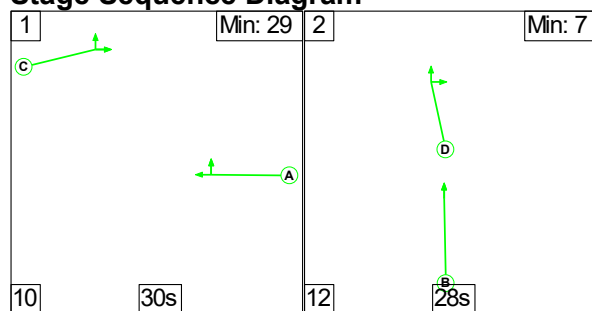
| Item                                             | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|--------------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m)<br/>Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 96.9%       |
| <b>Junction9 A1(M)</b>                           | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 96.9%       |
| 1/1                                              | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 205               | 1961              | 245            | 83.5%       |
| 1/2                                              | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 248               | 2080              | 276            | 90.0%       |
| 2/1                                              | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1142              | 1936              | 1936           | 59.0%       |
| 2/2                                              | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 661               | 4178              | 693            | 95.4%       |
| 3/1                                              | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 949            | 79.5%       |
| 3/2                                              | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 32              | -               | -               | 1104              | 4000              | 1650           | 66.9%       |
| 4/1                                              | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 48              | -               | -               | 594               | 1904              | 1166           | 50.9%       |
| 4/2                                              | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 48              | -               | -               | 651               | 2029              | 1243           | 52.4%       |
| 5/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 759               | 1714              | 793            | 95.7%       |
| 5/2                                              | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 171               | 1714              | 793            | 21.6%       |
| 6/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 22              | -               | -               | 111               | 1943              | 559            | 19.9%       |
| 6/2                                              | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 22              | -               | -               | 1164              | 4178              | 1201           | 96.9%       |
| 7/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2240              | 3600              | 3600           | 62.2%       |
| 8/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 929               | 1948              | 1948           | 47.7%       |
| 9/1                                              | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1802              | Inf               | Inf            | 0.0%        |

# Detailed Input Data And Results

| 10/1                                         | Letchworth exit  | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1514                             | Inf                        | Inf                  | 0.0% |
|----------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 11/1                                         | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 280                              | Inf                        | Inf                  | 0.0% |
| 12/1                                         | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1764                             | Inf                        | Inf                  | 0.0% |
| Item                                         | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10 - PROPOSED</b> | -                | -             | <b>1418</b>           | <b>451</b>                   | <b>0</b>                    | <b>23.7</b>           | <b>37.1</b>                  | <b>0.0</b>                         | <b>60.8</b>         | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                       | -                | -             | <b>1418</b>           | <b>451</b>                   | <b>0</b>                    | <b>23.7</b>           | <b>37.1</b>                  | <b>0.0</b>                         | <b>60.8</b>         | -                         | -                                | -                          | -                    |      |
| 1/1                                          | 205              | 205           | 205                   | 0                            | 0                           | 0.9                   | 2.3                          | -                                  | 3.2                 | 55.9                      | 3.9                              | 2.3                        | 6.2                  |      |
| 1/2                                          | 248              | 248           | 248                   | 0                            | 0                           | 1.3                   | 3.6                          | -                                  | 4.9                 | 71.4                      | 5.2                              | 3.6                        | 8.7                  |      |
| 2/1                                          | 1142             | 1142          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.3                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                                          | 661              | 661           | 661                   | 0                            | 0                           | 1.0                   | 7.1                          | -                                  | 8.1                 | 44.2                      | 6.5                              | 3.6                        | 10.1                 |      |
| 3/1                                          | 755              | 755           | 304                   | 451                          | 0                           | 0.3                   | 1.9                          | -                                  | 2.2                 | 10.7                      | 9.4                              | 1.9                        | 11.3                 |      |
| 3/2                                          | 1104             | 1104          | -                     | -                            | -                           | 5.8                   | 1.0                          | -                                  | 6.9                 | 22.4                      | 9.8                              | 0.5                        | 10.3                 |      |
| 4/1                                          | 594              | 594           | -                     | -                            | -                           | 1.4                   | 0.5                          | -                                  | 2.0                 | 11.9                      | 7.4                              | 0.5                        | 7.9                  |      |
| 4/2                                          | 651              | 651           | -                     | -                            | -                           | 1.6                   | 0.5                          | -                                  | 2.1                 | 11.9                      | 8.1                              | 0.5                        | 8.7                  |      |
| 5/1                                          | 759              | 759           | -                     | -                            | -                           | 5.6                   | 7.7                          | -                                  | 13.3                | 63.2                      | 16.3                             | 7.7                        | 24.0                 |      |
| 5/2                                          | 171              | 171           | -                     | -                            | -                           | 0.6                   | 0.1                          | -                                  | 0.7                 | 14.9                      | 2.4                              | 0.1                        | 2.6                  |      |
| 6/1                                          | 111              | 111           | -                     | -                            | -                           | 1.1                   | 0.1                          | -                                  | 1.2                 | 39.2                      | 2.4                              | 0.1                        | 2.6                  |      |
| 6/2                                          | 1164             | 1164          | -                     | -                            | -                           | 3.7                   | 10.1                         | -                                  | 13.8                | 42.7                      | 12.5                             | 5.1                        | 17.6                 |      |
| 7/1                                          | 2240             | 2240          | -                     | -                            | -                           | 0.3                   | 0.8                          | -                                  | 1.1                 | 1.8                       | 9.8                              | 0.4                        | 10.2                 |      |
| 8/1                                          | 929              | 929           | -                     | -                            | -                           | 0.0                   | 0.5                          | -                                  | 0.5                 | 1.8                       | 4.4                              | 0.5                        | 4.8                  |      |
| 9/1                                          | 1802             | 1802          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                         | 1514             | 1514          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                         | 280              | 280           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                         | 1764             | 1764          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |

Detailed Input Data And Results

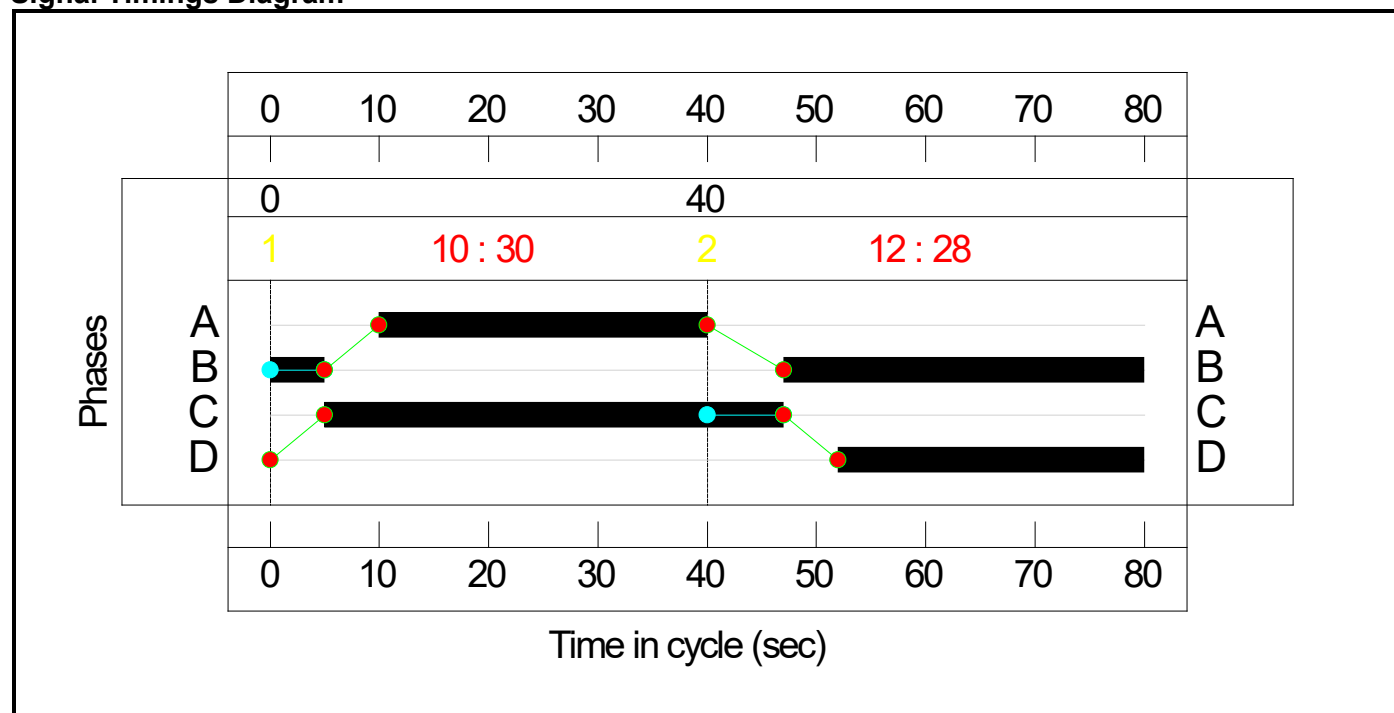
|    |                              |      |                                          |       |                 |    |
|----|------------------------------|------|------------------------------------------|-------|-----------------|----|
| C1 | PRC for Signalled Lanes (%): | -7.7 | Total Delay for Signalled Lanes (pcuHr): | 40.01 | Cycle Time (s): | 80 |
|    | PRC Over All Lanes (%):      | -7.7 | Total Delay Over All Lanes(pcuHr):       | 60.78 |                 |    |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 30 | 28 |
| Change Point | 0  | 40 |

**Phase Timings**

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 30             | 10         | 40       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 38             | 47         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 42             | 5          | 47       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 28             | 52         | 0        |

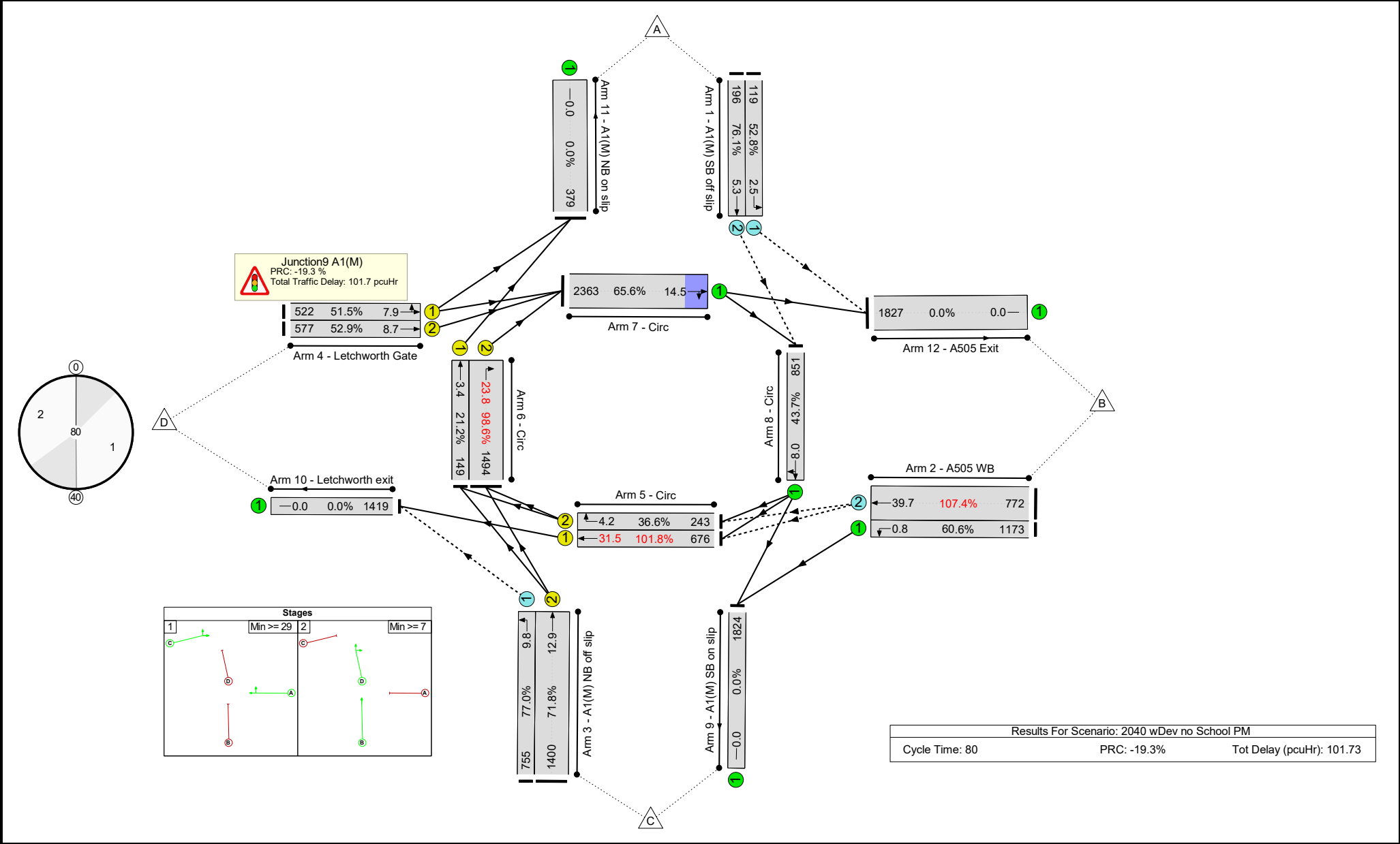
**Signal Timings Diagram**

**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 47                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 47               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 47               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 40               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 40               |
| 6/1                              | Circ Ahead                 | U           | D             | 52                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 52                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

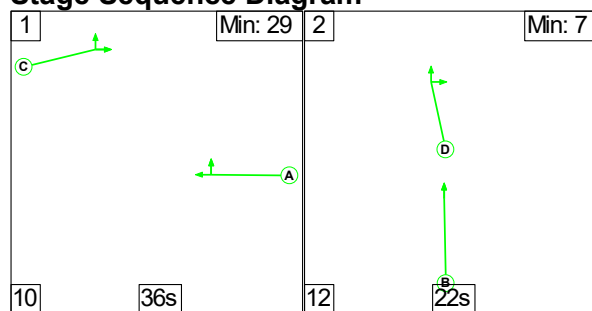
### Network Results

| Item                                         | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|----------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m) Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 107.4%      |
| <b>Junction9 A1(M)</b>                       | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 107.4%      |
| 1/1                                          | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 225            | 52.8%       |
| 1/2                                          | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 196               | 2080              | 257            | 76.1%       |
| 2/1                                          | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1173              | 1936              | 1936           | 60.6%       |
| 2/2                                          | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 772               | 4178              | 719            | 107.4%      |
| 3/1                                          | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 981            | 77.0%       |
| 3/2                                          | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 38              | -               | -               | 1400              | 4000              | 1950           | 71.8%       |
| 4/1                                          | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 42              | -               | -               | 522               | 1887              | 1014           | 51.5%       |
| 4/2                                          | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 42              | -               | -               | 577               | 2029              | 1091           | 52.9%       |
| 5/1                                          | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 711               | 1714              | 664            | 101.8%      |
| 5/2                                          | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 261               | 1714              | 664            | 36.6%       |
| 6/1                                          | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 28              | -               | -               | 160               | 1943              | 704            | 21.2%       |
| 6/2                                          | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 28              | -               | -               | 1501              | 4178              | 1515           | 98.6%       |
| 7/1                                          | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2370              | 3600              | 3600           | 65.6%       |
| 8/1                                          | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 851               | 1948              | 1948           | 43.7%       |
| 9/1                                          | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1824              | Inf               | Inf            | 0.0%        |
| 10/1                                         | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1466              | Inf               | Inf            | 0.0%        |

# Detailed Input Data And Results

| 11/1                                                                                                                                                                                                                                                                                     | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 390                              | Inf                        | Inf                  | 0.0% |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                     | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1834                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                     | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10 - PROPOSED</b>                                                                                                                                                                                                                                             | -                | -             | 1280                  | 509                          | 0                           | 29.5                  | 72.2                         | 0.0                                | 101.7               | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                   | -                | -             | 1280                  | 509                          | 0                           | 29.5                  | 72.2                         | 0.0                                | 101.7               | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                      | 119              | 119           | 119                   | 0                            | 0                           | 0.5                   | 0.6                          | -                                  | 1.1                 | 32.2                      | 1.9                              | 0.6                        | 2.5                  |      |
| 1/2                                                                                                                                                                                                                                                                                      | 196              | 196           | 196                   | 0                            | 0                           | 1.2                   | 1.5                          | -                                  | 2.7                 | 49.3                      | 3.8                              | 1.5                        | 5.3                  |      |
| 2/1                                                                                                                                                                                                                                                                                      | 1173             | 1173          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                                                                                                                                                                                                                                                                                      | 772              | 719           | 719                   | 0                            | 0                           | 4.1                   | 32.5                         | -                                  | 36.6                | 170.8                     | 23.5                             | 16.2                       | 39.7                 |      |
| 3/1                                                                                                                                                                                                                                                                                      | 755              | 755           | 246                   | 509                          | 0                           | 0.3                   | 1.6                          | -                                  | 1.9                 | 9.1                       | 8.2                              | 1.6                        | 9.8                  |      |
| 3/2                                                                                                                                                                                                                                                                                      | 1400             | 1400          | -                     | -                            | -                           | 6.3                   | 1.3                          | -                                  | 7.6                 | 19.4                      | 12.3                             | 0.6                        | 12.9                 |      |
| 4/1                                                                                                                                                                                                                                                                                      | 522              | 522           | -                     | -                            | -                           | 1.7                   | 0.5                          | -                                  | 2.2                 | 15.5                      | 7.4                              | 0.5                        | 7.9                  |      |
| 4/2                                                                                                                                                                                                                                                                                      | 577              | 577           | -                     | -                            | -                           | 1.9                   | 0.6                          | -                                  | 2.5                 | 15.5                      | 8.2                              | 0.6                        | 8.7                  |      |
| 5/1                                                                                                                                                                                                                                                                                      | 676              | 664           | -                     | -                            | -                           | 6.0                   | 16.2                         | -                                  | 22.2                | 118.2                     | 15.3                             | 16.2                       | 31.5                 |      |
| 5/2                                                                                                                                                                                                                                                                                      | 243              | 243           | -                     | -                            | -                           | 1.0                   | 0.3                          | -                                  | 1.2                 | 18.4                      | 3.9                              | 0.3                        | 4.2                  |      |
| 6/1                                                                                                                                                                                                                                                                                      | 149              | 149           | -                     | -                            | -                           | 1.3                   | 0.1                          | -                                  | 1.4                 | 33.5                      | 3.3                              | 0.1                        | 3.4                  |      |
| 6/2                                                                                                                                                                                                                                                                                      | 1494             | 1494          | -                     | -                            | -                           | 4.7                   | 14.8                         | -                                  | 19.6                | 47.2                      | 16.4                             | 7.4                        | 23.8                 |      |
| 7/1                                                                                                                                                                                                                                                                                      | 2363             | 2363          | -                     | -                            | -                           | 0.6                   | 1.0                          | -                                  | 1.6                 | 2.4                       | 14.0                             | 0.5                        | 14.5                 |      |
| 8/1                                                                                                                                                                                                                                                                                      | 851              | 851           | -                     | -                            | -                           | 0.1                   | 0.4                          | -                                  | 0.4                 | 1.9                       | 7.6                              | 0.4                        | 8.0                  |      |
| 9/1                                                                                                                                                                                                                                                                                      | 1824             | 1824          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                     | 1419             | 1419          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                     | 379              | 379           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                     | 1827             | 1827          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): -13.1</div> <div>PRC Over All Lanes (%): -19.3</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 56.67</div> <div>Total Delay Over All Lanes(pcuHr): 101.73</div> </div> <div>Cycle Time (s): 80</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |

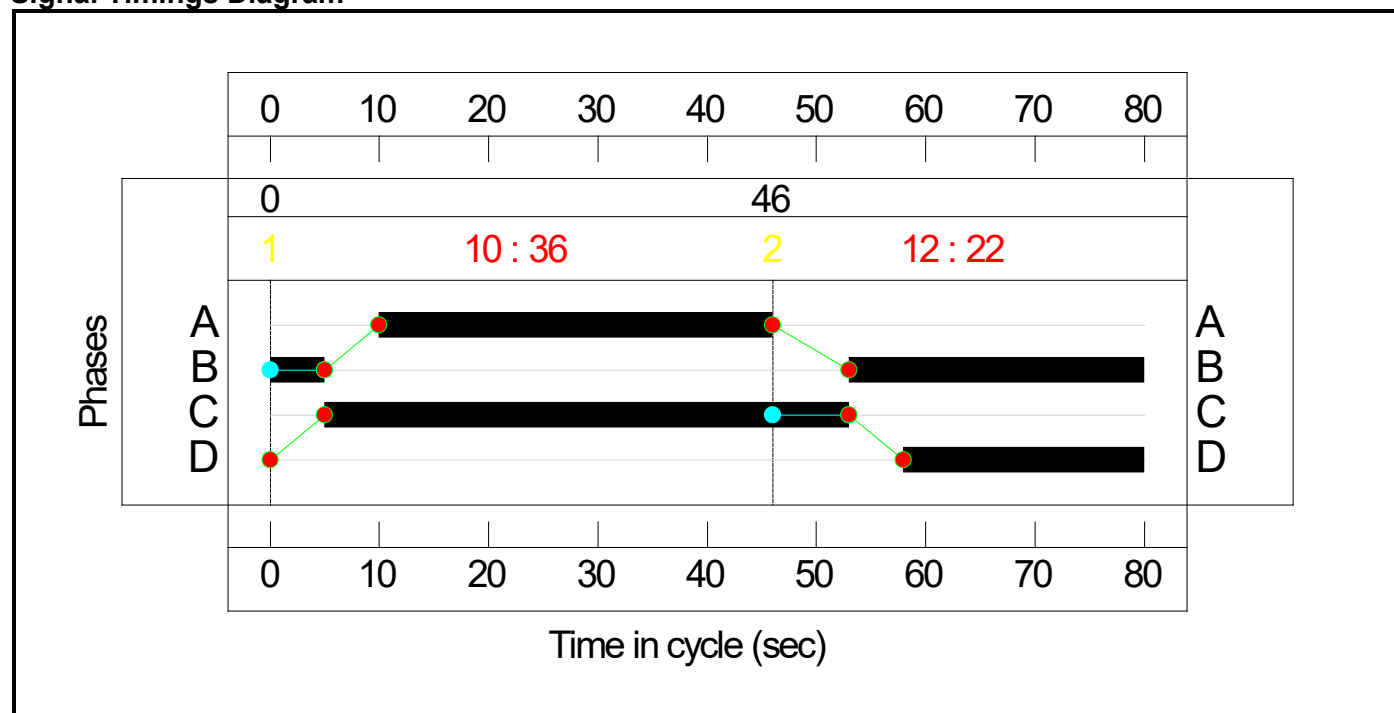


**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 36 | 22 |
| Change Point | 0  | 46 |

**Phase Timings**

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 36             | 10         | 46       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 32             | 53         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 48             | 5          | 53       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 22             | 58         | 0        |

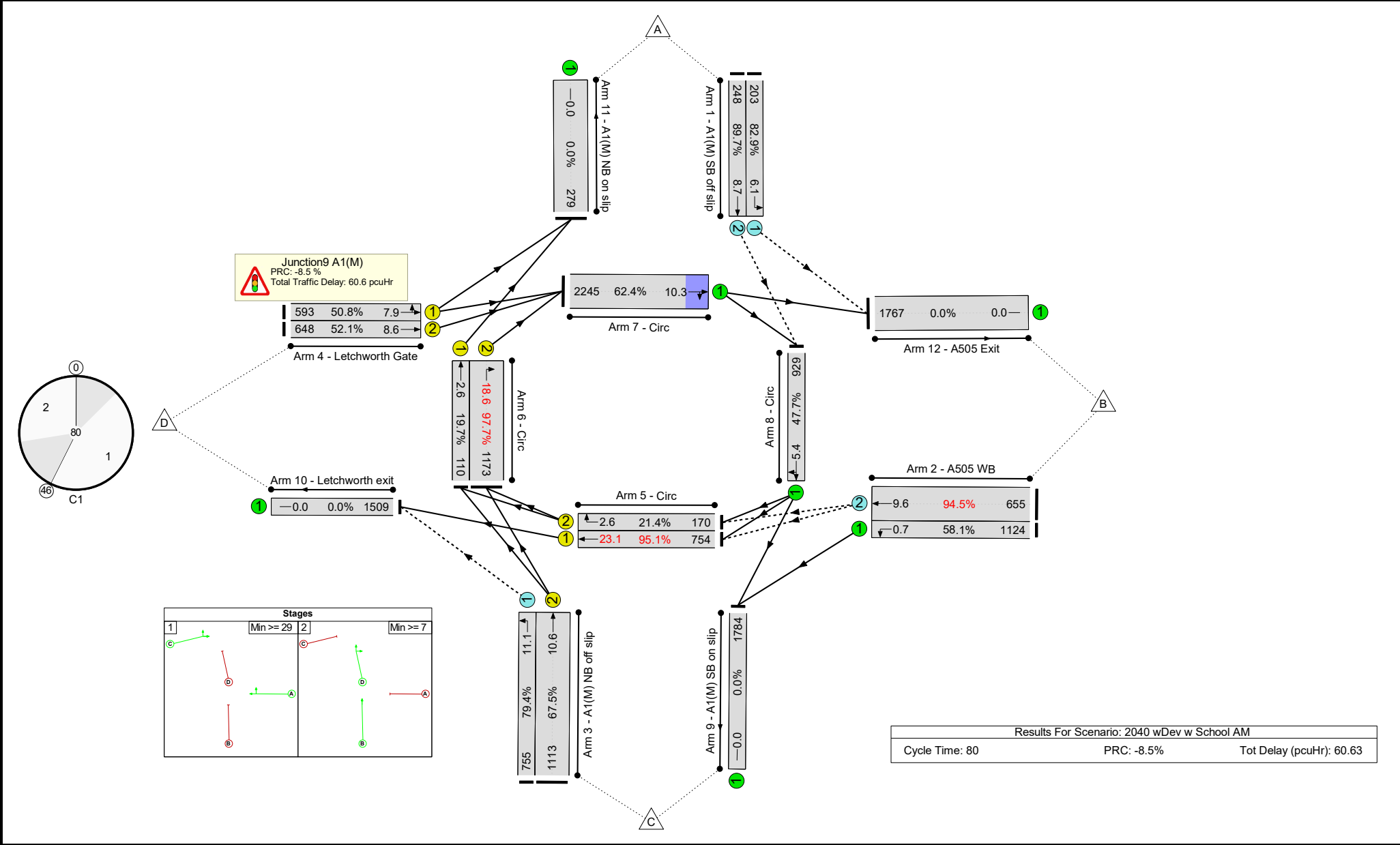
**Signal Timings Diagram**

**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 53                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 53               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 53               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 46               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 46               |
| 6/1                              | Circ Ahead                 | U           | D             | 58                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 58                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

### Network Results

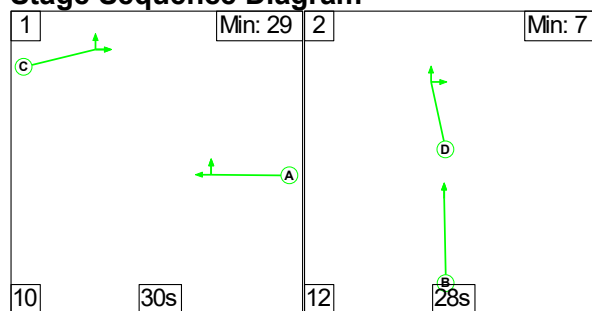
| Item                                             | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|--------------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m)<br/>Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 97.7%       |
| <b>Junction9 A1(M)</b>                           | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 97.7%       |
| 1/1                                              | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 203               | 1961              | 245            | 82.9%       |
| 1/2                                              | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 248               | 2080              | 277            | 89.7%       |
| 2/1                                              | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1124              | 1936              | 1936           | 58.1%       |
| 2/2                                              | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 655               | 4178              | 693            | 94.5%       |
| 3/1                                              | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 951            | 79.4%       |
| 3/2                                              | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 32              | -               | -               | 1113              | 4000              | 1650           | 67.5%       |
| 4/1                                              | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 48              | -               | -               | 593               | 1904              | 1166           | 50.8%       |
| 4/2                                              | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 48              | -               | -               | 648               | 2029              | 1243           | 52.1%       |
| 5/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 754               | 1714              | 793            | 95.1%       |
| 5/2                                              | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 36              | -               | -               | 170               | 1714              | 793            | 21.4%       |
| 6/1                                              | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 22              | -               | -               | 110               | 1943              | 559            | 19.7%       |
| 6/2                                              | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 22              | -               | -               | 1173              | 4178              | 1201           | 97.7%       |
| 7/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2245              | 3600              | 3600           | 62.4%       |
| 8/1                                              | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 929               | 1948              | 1948           | 47.7%       |
| 9/1                                              | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1784              | Inf               | Inf            | 0.0%        |

## Detailed Input Data And Results

| 10/1                                         | Letchworth exit  | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1509                             | Inf                        | Inf                  | 0.0% |
|----------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 11/1                                         | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 279                              | Inf                        | Inf                  | 0.0% |
| 12/1                                         | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1767                             | Inf                        | Inf                  | 0.0% |
| Item                                         | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10 - PROPOSED</b> | -                | -             | <b>1412</b>           | <b>449</b>                   | <b>0</b>                    | <b>23.7</b>           | <b>36.9</b>                  | <b>0.0</b>                         | <b>60.6</b>         | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                       | -                | -             | <b>1412</b>           | <b>449</b>                   | <b>0</b>                    | <b>23.7</b>           | <b>36.9</b>                  | <b>0.0</b>                         | <b>60.6</b>         | -                         | -                                | -                          | -                    |      |
| 1/1                                          | 203              | 203           | 203                   | 0                            | 0                           | 0.9                   | 2.2                          | -                                  | 3.1                 | 54.9                      | 3.9                              | 2.2                        | 6.1                  |      |
| 1/2                                          | 248              | 248           | 248                   | 0                            | 0                           | 1.3                   | 3.5                          | -                                  | 4.8                 | 70.1                      | 5.2                              | 3.5                        | 8.7                  |      |
| 2/1                                          | 1124             | 1124          | -                     | -                            | -                           | 0.0                   | 0.7                          | -                                  | 0.7                 | 2.2                       | 0.0                              | 0.7                        | 0.7                  |      |
| 2/2                                          | 655              | 655           | 655                   | 0                            | 0                           | 0.9                   | 6.4                          | -                                  | 7.4                 | 40.5                      | 6.4                              | 3.2                        | 9.6                  |      |
| 3/1                                          | 755              | 755           | 306                   | 449                          | 0                           | 0.3                   | 1.9                          | -                                  | 2.2                 | 10.6                      | 9.2                              | 1.9                        | 11.1                 |      |
| 3/2                                          | 1113             | 1113          | -                     | -                            | -                           | 5.9                   | 1.0                          | -                                  | 6.9                 | 22.5                      | 10.0                             | 0.5                        | 10.6                 |      |
| 4/1                                          | 593              | 593           | -                     | -                            | -                           | 1.4                   | 0.5                          | -                                  | 2.0                 | 11.9                      | 7.4                              | 0.5                        | 7.9                  |      |
| 4/2                                          | 648              | 648           | -                     | -                            | -                           | 1.6                   | 0.5                          | -                                  | 2.1                 | 11.8                      | 8.1                              | 0.5                        | 8.6                  |      |
| 5/1                                          | 754              | 754           | -                     | -                            | -                           | 5.6                   | 7.1                          | -                                  | 12.7                | 60.6                      | 16.0                             | 7.1                        | 23.1                 |      |
| 5/2                                          | 170              | 170           | -                     | -                            | -                           | 0.6                   | 0.1                          | -                                  | 0.7                 | 15.1                      | 2.4                              | 0.1                        | 2.6                  |      |
| 6/1                                          | 110              | 110           | -                     | -                            | -                           | 1.1                   | 0.1                          | -                                  | 1.2                 | 39.2                      | 2.4                              | 0.1                        | 2.6                  |      |
| 6/2                                          | 1173             | 1173          | -                     | -                            | -                           | 3.7                   | 11.5                         | -                                  | 15.2                | 46.6                      | 12.8                             | 5.7                        | 18.6                 |      |
| 7/1                                          | 2245             | 2245          | -                     | -                            | -                           | 0.3                   | 0.8                          | -                                  | 1.2                 | 1.9                       | 9.9                              | 0.4                        | 10.3                 |      |
| 8/1                                          | 929              | 929           | -                     | -                            | -                           | 0.0                   | 0.5                          | -                                  | 0.5                 | 1.8                       | 4.9                              | 0.5                        | 5.4                  |      |
| 9/1                                          | 1784             | 1784          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                         | 1509             | 1509          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                         | 279              | 279           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                         | 1767             | 1767          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |

Detailed Input Data And Results

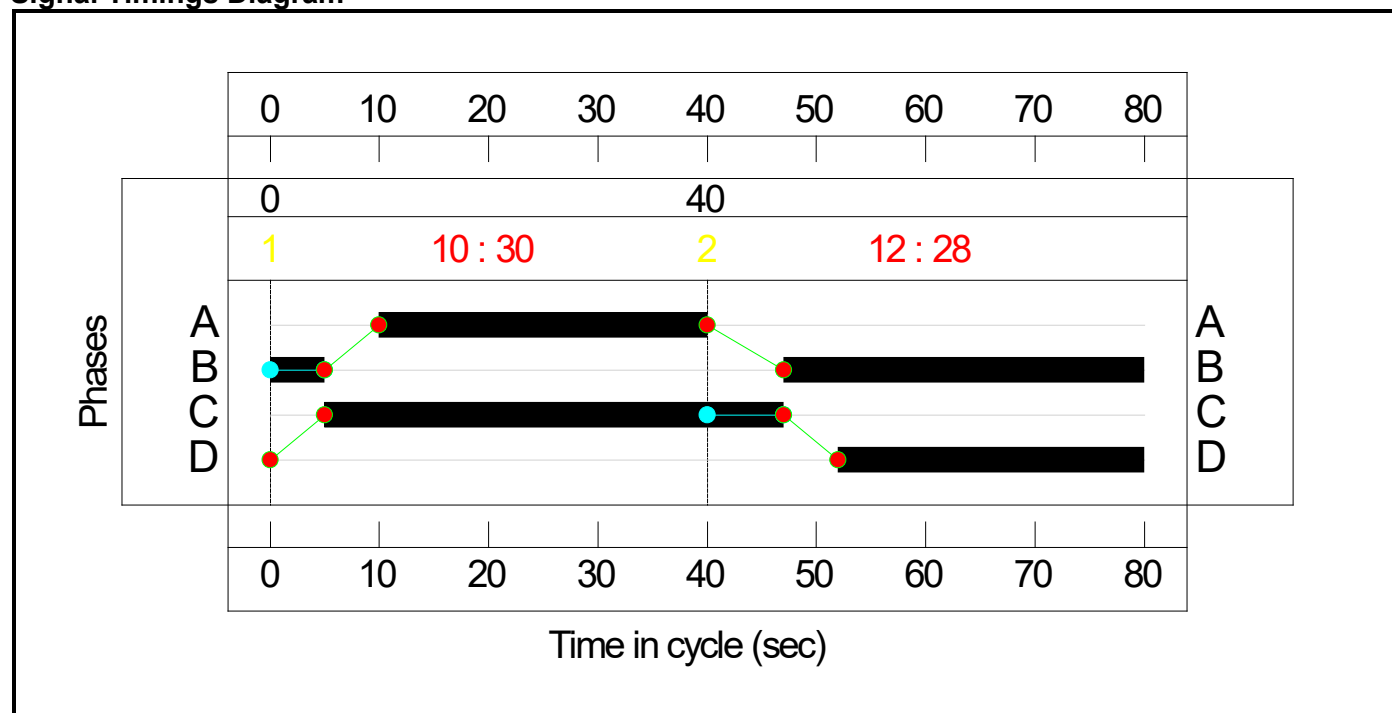
|    |                              |      |                                          |       |                 |    |
|----|------------------------------|------|------------------------------------------|-------|-----------------|----|
| C1 | PRC for Signalled Lanes (%): | -8.5 | Total Delay for Signalled Lanes (pcuHr): | 40.82 | Cycle Time (s): | 80 |
|    | PRC Over All Lanes (%):      | -8.5 | Total Delay Over All Lanes(pcuHr):       | 60.63 |                 |    |

**Stage Sequence Diagram****Stage Timings**

| Stage        | 1  | 2  |
|--------------|----|----|
| Duration     | 30 | 28 |
| Change Point | 0  | 40 |

**Phase Timings**

| Phase Name | Description                                   | Phase   | Green Period 1 |            |          |
|------------|-----------------------------------------------|---------|----------------|------------|----------|
|            |                                               |         | Total Green    | Start Time | End Time |
| A          | Circ Right Ahead Circulatory                  | Traffic | 30             | 10         | 40       |
| B          | A1(M) NB off slip Ahead<br>A1(m) NB           | Traffic | 38             | 47         | 5        |
| C          | Letchworth Gate Ahead Left<br>Letchworth Gate | Traffic | 42             | 5          | 47       |
| D          | Circ Right Ahead Circulatory                  | Traffic | 28             | 52         | 0        |

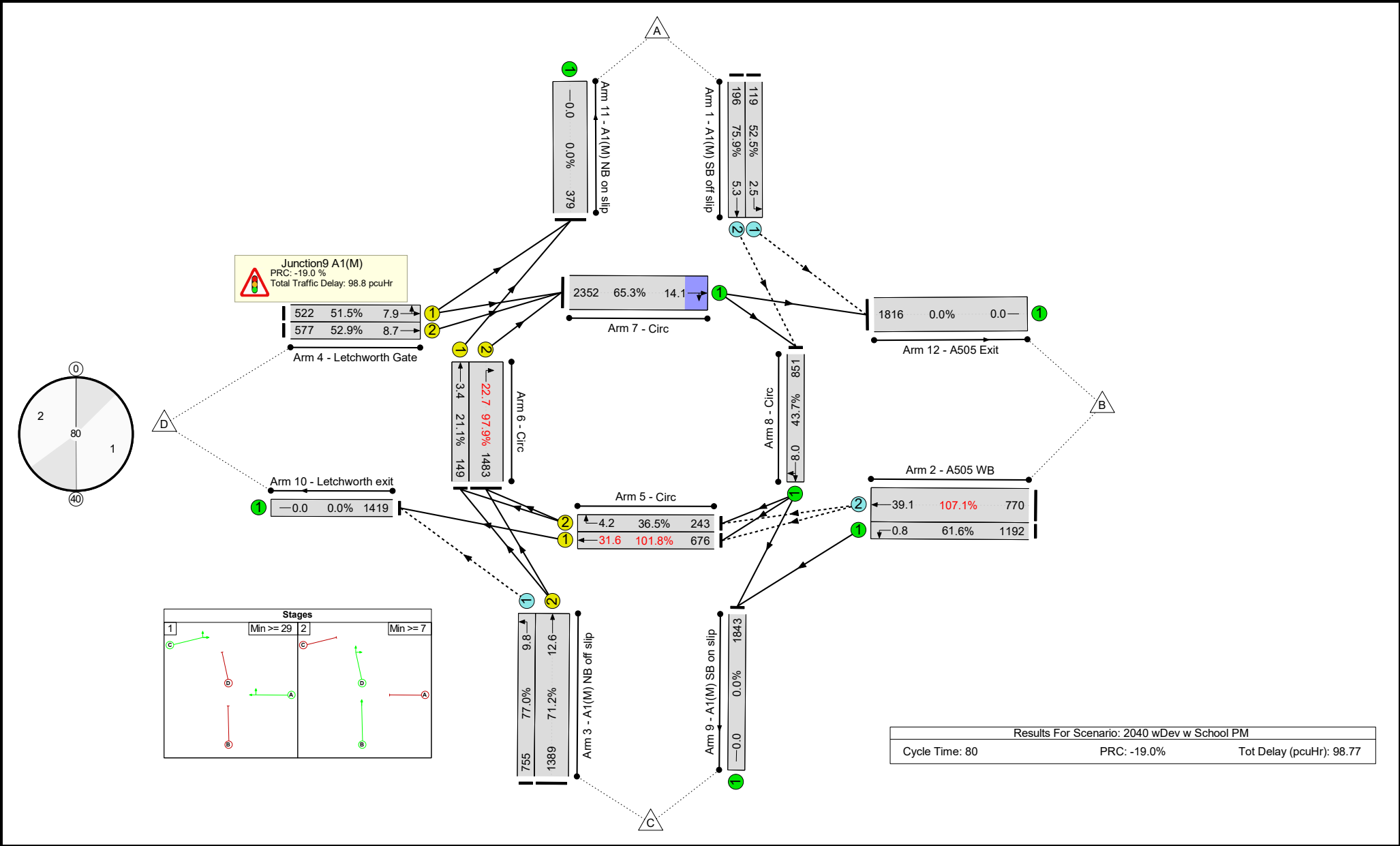
**Signal Timings Diagram**

**Lane Green Times**

| <b>Junction: Junction9 A1(M)</b> |                            |             |               |                    |                  |
|----------------------------------|----------------------------|-------------|---------------|--------------------|------------------|
| <b>Lane</b>                      | <b>Description</b>         | <b>Type</b> | <b>Phases</b> | <b>Start Green</b> | <b>End Green</b> |
| 3/2                              | A1(M) NB off slip Ahead    | U           | B             | 47                 | 5                |
| 4/1                              | Letchworth Gate Ahead Left | U           | C             | 5                  | 47               |
| 4/2                              | Letchworth Gate Ahead      | U           | C             | 5                  | 47               |
| 5/1                              | Circ Ahead                 | U           | A             | 10                 | 40               |
| 5/2                              | Circ Right                 | U           | A             | 10                 | 40               |
| 6/1                              | Circ Ahead                 | U           | D             | 52                 | 0                |
| 6/2                              | Circ Right                 | U           | D             | 52                 | 0                |

Detailed Input Data And Results

Network Layout Diagram





## Detailed Input Data And Results

### Network Results

| Item                                         | Lane Description           | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Bonus Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|----------------------------------------------|----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| <b>Network: A1(m) Junction 10 - PROPOSED</b> | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 107.1%      |
| <b>Junction9 A1(M)</b>                       | -                          | -         | N/A               | -                          | -          |             | -          | -               | -               | -               | -                 | -                 | -              | 107.1%      |
| 1/1                                          | A1(M) SB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 119               | 1961              | 227            | 52.5%       |
| 1/2                                          | A1(M) SB off slip Ahead    | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 196               | 2080              | 258            | 75.9%       |
| 2/1                                          | A505 WB Left               | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1192              | 1936              | 1936           | 61.6%       |
| 2/2                                          | A505 WB Ahead              | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 770               | 4178              | 719            | 107.1%      |
| 3/1                                          | A1(M) NB off slip Left     | O         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 755               | 1936              | 981            | 77.0%       |
| 3/2                                          | A1(M) NB off slip Ahead    | U         | N/A               | N/A                        | B          |             | 1          | 38              | -               | -               | 1389              | 4000              | 1950           | 71.2%       |
| 4/1                                          | Letchworth Gate Ahead Left | U         | N/A               | N/A                        | C          |             | 1          | 42              | -               | -               | 522               | 1887              | 1014           | 51.5%       |
| 4/2                                          | Letchworth Gate Ahead      | U         | N/A               | N/A                        | C          |             | 1          | 42              | -               | -               | 577               | 2029              | 1091           | 52.9%       |
| 5/1                                          | Circ Ahead                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 710               | 1714              | 664            | 101.8%      |
| 5/2                                          | Circ Right                 | U         | N/A               | N/A                        | A          |             | 1          | 30              | -               | -               | 260               | 1714              | 664            | 36.5%       |
| 6/1                                          | Circ Ahead                 | U         | N/A               | N/A                        | D          |             | 1          | 28              | -               | -               | 159               | 1943              | 704            | 21.1%       |
| 6/2                                          | Circ Right                 | U         | N/A               | N/A                        | D          |             | 1          | 28              | -               | -               | 1490              | 4178              | 1515           | 97.9%       |
| 7/1                                          | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 2359              | 3600              | 3600           | 65.3%       |
| 8/1                                          | Circ Right Ahead           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 851               | 1948              | 1948           | 43.7%       |
| 9/1                                          | A1(M) SB on slip           | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1843              | Inf               | Inf            | 0.0%        |
| 10/1                                         | Letchworth exit            | U         | N/A               | N/A                        | -          |             | -          | -               | -               | -               | 1465              | Inf               | Inf            | 0.0%        |

## Detailed Input Data And Results

| 11/1                                                                                                                                                                                                                                                                                    | A1(M) NB on slip | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 389                              | Inf                        | Inf                  | 0.0% |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|------|
| 12/1                                                                                                                                                                                                                                                                                    | A505 Exit        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | -                         | 1823                             | Inf                        | Inf                  | 0.0% |
| Item                                                                                                                                                                                                                                                                                    | Arriving (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 PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |      |
| <b>Network: A1(m) Junction 10 - PROPOSED</b>                                                                                                                                                                                                                                            | -                | -             | 1280                  | 509                          | 0                           | 29.3                  | 69.5                         | 0.0                                | 98.8                | -                         | -                                | -                          | -                    |      |
| <b>Junction9 A1(M)</b>                                                                                                                                                                                                                                                                  | -                | -             | 1280                  | 509                          | 0                           | 29.3                  | 69.5                         | 0.0                                | 98.8                | -                         | -                                | -                          | -                    |      |
| 1/1                                                                                                                                                                                                                                                                                     | 119              | 119           | 119                   | 0                            | 0                           | 0.5                   | 0.5                          | -                                  | 1.0                 | 31.7                      | 1.9                              | 0.5                        | 2.5                  |      |
| 1/2                                                                                                                                                                                                                                                                                     | 196              | 196           | 196                   | 0                            | 0                           | 1.2                   | 1.5                          | -                                  | 2.7                 | 48.9                      | 3.8                              | 1.5                        | 5.3                  |      |
| 2/1                                                                                                                                                                                                                                                                                     | 1192             | 1192          | -                     | -                            | -                           | 0.0                   | 0.8                          | -                                  | 0.8                 | 2.4                       | 0.0                              | 0.8                        | 0.8                  |      |
| 2/2                                                                                                                                                                                                                                                                                     | 770              | 719           | 719                   | 0                            | 0                           | 4.0                   | 31.6                         | -                                  | 35.7                | 166.7                     | 23.3                             | 15.8                       | 39.1                 |      |
| 3/1                                                                                                                                                                                                                                                                                     | 755              | 755           | 246                   | 509                          | 0                           | 0.3                   | 1.6                          | -                                  | 1.9                 | 9.1                       | 8.2                              | 1.6                        | 9.8                  |      |
| 3/2                                                                                                                                                                                                                                                                                     | 1389             | 1389          | -                     | -                            | -                           | 6.2                   | 1.2                          | -                                  | 7.4                 | 19.3                      | 12.0                             | 0.6                        | 12.6                 |      |
| 4/1                                                                                                                                                                                                                                                                                     | 522              | 522           | -                     | -                            | -                           | 1.7                   | 0.5                          | -                                  | 2.2                 | 15.5                      | 7.4                              | 0.5                        | 7.9                  |      |
| 4/2                                                                                                                                                                                                                                                                                     | 577              | 577           | -                     | -                            | -                           | 1.9                   | 0.6                          | -                                  | 2.5                 | 15.5                      | 8.2                              | 0.6                        | 8.7                  |      |
| 5/1                                                                                                                                                                                                                                                                                     | 676              | 664           | -                     | -                            | -                           | 6.0                   | 16.3                         | -                                  | 22.3                | 118.7                     | 15.3                             | 16.3                       | 31.6                 |      |
| 5/2                                                                                                                                                                                                                                                                                     | 243              | 243           | -                     | -                            | -                           | 1.0                   | 0.3                          | -                                  | 1.2                 | 18.4                      | 3.9                              | 0.3                        | 4.2                  |      |
| 6/1                                                                                                                                                                                                                                                                                     | 149              | 149           | -                     | -                            | -                           | 1.2                   | 0.1                          | -                                  | 1.4                 | 33.5                      | 3.3                              | 0.1                        | 3.4                  |      |
| 6/2                                                                                                                                                                                                                                                                                     | 1483             | 1483          | -                     | -                            | -                           | 4.7                   | 13.0                         | -                                  | 17.6                | 42.8                      | 16.3                             | 6.5                        | 22.7                 |      |
| 7/1                                                                                                                                                                                                                                                                                     | 2352             | 2352          | -                     | -                            | -                           | 0.6                   | 0.9                          | -                                  | 1.6                 | 2.4                       | 13.6                             | 0.5                        | 14.1                 |      |
| 8/1                                                                                                                                                                                                                                                                                     | 851              | 851           | -                     | -                            | -                           | 0.1                   | 0.4                          | -                                  | 0.4                 | 1.9                       | 7.6                              | 0.4                        | 8.0                  |      |
| 9/1                                                                                                                                                                                                                                                                                     | 1843             | 1843          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 10/1                                                                                                                                                                                                                                                                                    | 1419             | 1419          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 11/1                                                                                                                                                                                                                                                                                    | 379              | 379           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| 12/1                                                                                                                                                                                                                                                                                    | 1816             | 1816          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |      |
| <div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): -13.1</div> <div>PRC Over All Lanes (%): -19.0</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 54.71</div> <div>Total Delay Over All Lanes(pcuHr): 98.77</div> </div> <div>Cycle Time (s): 80</div> </div> |                  |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |      |



## **A1 (M) Junction 10**

| <b>Junctions 9</b>                                                                                                                                                      |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>ARCADY 9 - Roundabout Module</b>                                                                                                                                     |  |
| Version: 9.5.1.7462<br>© Copyright TRL Limited, 2019                                                                                                                    |  |
| For sales and distribution information, program advice and maintenance, contact TRL:<br>+44 (0)1344 379777   software@trl.co.uk   www.trlsoftware.co.uk                 |  |
| <b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b> |  |

**Filename:** Import of J1\_A1(M)\_J10.j9

**Path:** C:\Users\923595\Royal HaskoningDHV\IP-PC7029-Baldock-OPA - Team\WIP\02 Calculations\Junction Modelling\Models

**Report generation date:** 08/09/2025 16:49:45

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»2022, AM  
 »2022, PM  
 »2028, AM  
 »2028, PM  
 »2033, AM  
 »2033, PM  
 »2033 + Dev, AM  
 »2033 + Dev, PM  
 »2040, AM  
 »2040, PM  
 »2040 + Dev, AM  
 »2040 + Dev, PM  
 »2040 + Dev + School, AM  
 »2040 + Dev + School, PM

## Summary of junction performance

|             | AM                  |             |                 |           |      |     |                           | PM     |             |                 |           |      |     |                           |
|-------------|---------------------|-------------|-----------------|-----------|------|-----|---------------------------|--------|-------------|-----------------|-----------|------|-----|---------------------------|
|             | Set ID              | Queue (Veh) | 95% Queue (Veh) | Delay (s) | RFC  | LOS | Network Residual Capacity | Set ID | Queue (Veh) | 95% Queue (Veh) | Delay (s) | RFC  | LOS | Network Residual Capacity |
|             | 2022                |             |                 |           |      |     |                           |        |             |                 |           |      |     |                           |
| 1 - A507 E  | D1                  | 0.7         | 2.9             | 4.15      | 0.41 | A   | 39 %<br>[3 - A507 W]      | D2     | 1.0         | 1.5             | 4.14      | 0.51 | A   | 29 %<br>[2 - A1(M) S]     |
| 2 - A1(M) S |                     | 0.4         | 1.5             | 3.70      | 0.29 | A   |                           |        | 1.6         | 1.9             | 6.89      | 0.62 | A   |                           |
| 3 - A507 W  |                     | 1.9         | 3.5             | 5.28      | 0.66 | A   |                           |        | 1.7         | 2.7             | 5.10      | 0.63 | A   |                           |
| 4 - A1(M) N |                     | 1.0         | 1.9             | 5.34      | 0.51 | A   |                           |        | 0.7         | 2.8             | 3.89      | 0.40 | A   |                           |
|             | 2028                |             |                 |           |      |     |                           |        |             |                 |           |      |     |                           |
| 1 - A507 E  | D3                  | 0.8         | 2.8             | 4.49      | 0.44 | A   | 32 %<br>[3 - A507 W]      | D4     | 1.2         | 1.5             | 4.47      | 0.54 | A   | 23 %<br>[2 - A1(M) S]     |
| 2 - A1(M) S |                     | 0.5         | 1.9             | 3.89      | 0.32 | A   |                           |        | 2.0         | 2.6             | 7.94      | 0.66 | A   |                           |
| 3 - A507 W  |                     | 2.3         | 4.5             | 5.99      | 0.70 | A   |                           |        | 2.0         | 3.5             | 5.69      | 0.67 | A   |                           |
| 4 - A1(M) N |                     | 1.2         | 1.5             | 5.96      | 0.55 | A   |                           |        | 0.7         | 2.8             | 4.11      | 0.42 | A   |                           |
|             | 2033                |             |                 |           |      |     |                           |        |             |                 |           |      |     |                           |
| 1 - A507 E  | D5                  | 0.8         | 2.7             | 4.66      | 0.46 | A   | 29 %<br>[3 - A507 W]      | D6     | 1.3         | 1.5             | 4.65      | 0.56 | A   | 20 %<br>[2 - A1(M) S]     |
| 2 - A1(M) S |                     | 0.5         | 2.0             | 3.99      | 0.33 | A   |                           |        | 2.2         | 4.1             | 8.60      | 0.69 | A   |                           |
| 3 - A507 W  |                     | 2.5         | 4.9             | 6.39      | 0.72 | A   |                           |        | 2.2         | 3.9             | 6.02      | 0.69 | A   |                           |
| 4 - A1(M) N |                     | 1.3         | 1.5             | 6.31      | 0.57 | A   |                           |        | 0.8         | 2.7             | 4.23      | 0.43 | A   |                           |
|             | 2033 + Dev          |             |                 |           |      |     |                           |        |             |                 |           |      |     |                           |
| 1 - A507 E  | D7                  | 0.8         | 2.9             | 4.43      | 0.43 | A   | 32 %<br>[3 - A507 W]      | D8     | 1.1         | 1.5             | 4.33      | 0.53 | A   | 24 %<br>[2 - A1(M) S]     |
| 2 - A1(M) S |                     | 0.4         | 1.8             | 3.86      | 0.31 | A   |                           |        | 1.9         | 2.4             | 7.66      | 0.65 | A   |                           |
| 3 - A507 W  |                     | 2.3         | 4.4             | 5.96      | 0.70 | A   |                           |        | 1.9         | 3.2             | 5.54      | 0.66 | A   |                           |
| 4 - A1(M) N |                     | 1.5         | 1.6             | 6.40      | 0.59 | A   |                           |        | 0.9         | 2.2             | 4.34      | 0.46 | A   |                           |
|             | 2040                |             |                 |           |      |     |                           |        |             |                 |           |      |     |                           |
| 1 - A507 E  | D9                  | 0.8         | 2.8             | 4.39      | 0.44 | A   | 34 %<br>[3 - A507 W]      | D10    | 1.1         | 1.5             | 4.34      | 0.53 | A   | 25 %<br>[2 - A1(M) S]     |
| 2 - A1(M) S |                     | 0.4         | 1.8             | 3.84      | 0.31 | A   |                           |        | 1.8         | 2.3             | 7.49      | 0.65 | A   |                           |
| 3 - A507 W  |                     | 2.2         | 4.1             | 5.76      | 0.69 | A   |                           |        | 1.9         | 3.1             | 5.44      | 0.65 | A   |                           |
| 4 - A1(M) N |                     | 1.2         | 1.6             | 5.80      | 0.54 | A   |                           |        | 0.7         | 2.8             | 4.02      | 0.41 | A   |                           |
|             | 2040 + Dev          |             |                 |           |      |     |                           |        |             |                 |           |      |     |                           |
| 1 - A507 E  | D11                 | 1.6         | 1.9             | 6.43      | 0.62 | A   | 17 %<br>[4 - A1(M) N]     | D12    | 1.7         | 2.5             | 5.49      | 0.63 | A   | 18 %<br>[2 - A1(M) S]     |
| 2 - A1(M) S |                     | 0.5         | 2.4             | 4.50      | 0.34 | A   |                           |        | 2.2         | 4.9             | 9.19      | 0.69 | A   |                           |
| 3 - A507 W  |                     | 2.9         | 7.2             | 7.77      | 0.75 | A   |                           |        | 2.2         | 3.8             | 6.39      | 0.69 | A   |                           |
| 4 - A1(M) N |                     | 2.8         | 9.5             | 10.14     | 0.74 | B   |                           |        | 1.4         | 1.6             | 5.67      | 0.59 | A   |                           |
|             | 2040 + Dev + School |             |                 |           |      |     |                           |        |             |                 |           |      |     |                           |
| 1 - A507 E  | D13                 | 1.5         | 1.7             | 6.02      | 0.60 | A   | 15 %<br>[4 - A1(M) N]     | D14    | 1.8         | 2.8             | 5.77      | 0.65 | A   | 17 %<br>[2 - A1(M) S]     |
| 2 - A1(M) S |                     | 0.5         | 2.3             | 4.40      | 0.34 | A   |                           |        | 2.3         | 5.8             | 9.58      | 0.70 | A   |                           |
| 3 - A507 W  |                     | 2.8         | 6.0             | 7.42      | 0.74 | A   |                           |        | 2.3         | 3.9             | 6.59      | 0.70 | A   |                           |
| 4 - A1(M) N |                     | 3.1         | 11.8            | 10.85     | 0.76 | B   |                           |        | 1.3         | 1.5             | 5.44      | 0.57 | A   |                           |

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

## File summary

### File Description

|                    |                                               |
|--------------------|-----------------------------------------------|
| <b>Title</b>       | A1(m) Junction10                              |
| <b>Location</b>    | Baldock, SG7 5TR                              |
| <b>Site number</b> | J1                                            |
| <b>Date</b>        | 23/07/2025                                    |
| <b>Version</b>     | 1                                             |
| <b>Status</b>      | Draft                                         |
| <b>Identifier</b>  |                                               |
| <b>Client</b>      | Urban & Civic                                 |
| <b>Jobnumber</b>   | PC7029                                        |
| <b>Enumerator</b>  | CORPORATEROOT\926654                          |
| <b>Description</b> | Junction 1 - Existing A1(m) Junction10 layout |

## Units

| Distance units | Speed units | Traffic units input | Traffic units results | Flow units | Average delay units | Total delay units | Rate of delay units |
|----------------|-------------|---------------------|-----------------------|------------|---------------------|-------------------|---------------------|
| m              | kph         | Veh                 | Veh                   | perHour    | s                   | -Min              | perMin              |



Flows show original traffic demand (Veh/hr).

The junction diagram reflects the last run of Junctions.

## Analysis Options

| Vehicle length (m) | Calculate Queue Percentiles | Calculate detailed queueing delay | Calculate residual capacity | Residual capacity criteria type | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) |
|--------------------|-----------------------------|-----------------------------------|-----------------------------|---------------------------------|---------------|-----------------------------|-----------------------|
| 5.75               | ✓                           |                                   | ✓                           | Delay                           | 0.85          | 36.00                       | 50.00                 |

## Demand Set Summary

| ID  | Scenario name       | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|-----|---------------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D1  | 2022                | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |
| D2  | 2022                | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D3  | 2028                | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |
| D4  | 2028                | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D5  | 2033                | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |
| D6  | 2033                | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D7  | 2033 + Dev          | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |
| D8  | 2033 + Dev          | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D9  | 2040                | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |
| D10 | 2040                | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D11 | 2040 + Dev          | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |
| D12 | 2040 + Dev          | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |
| D13 | 2040 + Dev + School | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |
| D14 | 2040 + Dev + School | PM               | ONE HOUR             | 16:45              | 18:15               | 15                        | ✓                 |

## Analysis Set Details

| ID | Include in report | Network flow scaling factor (%) | Network capacity scaling factor (%) |
|----|-------------------|---------------------------------|-------------------------------------|
| A1 | ✓                 | 100.000                         | 100.000                             |

# 2022, AM

## Data Errors and Warnings

| Severity | Area             | Item                             | Description                                                                                                      |
|----------|------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------|
| Warning  | Geometry         | 3 - A507 W - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning  | Queue variations | Analysis Options                 | Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.              |

## Junction Network

### Junctions

| Junction | Name              | Junction type       | Use circulating lanes | Arm order  | Junction Delay (s) | Junction LOS |
|----------|-------------------|---------------------|-----------------------|------------|--------------------|--------------|
| 1        | A1(M) Junction 10 | Standard Roundabout |                       | 1, 2, 3, 4 | 4.84               | A            |

### Junction Network Options

| Driving side | Lighting       | Network residual capacity (%) | First arm reaching threshold |
|--------------|----------------|-------------------------------|------------------------------|
| Left         | Normal/unknown | 39                            | 3 - A507 W                   |

## Arms

### Arms

| Arm | Name    | Description |
|-----|---------|-------------|
| 1   | A507 E  |             |
| 2   | A1(M) S |             |
| 3   | A507 W  |             |
| 4   | A1(M) N |             |

### Capacity Options

| Arm         | Minimum capacity (PCU/hr) | Maximum capacity (PCU/hr) | Assume flat start profile | Initial queue (PCU) |
|-------------|---------------------------|---------------------------|---------------------------|---------------------|
| 1 - A507 E  | 0                         | 99999                     |                           | 0.00                |
| 2 - A1(M) S | 0                         | 99999                     |                           | 0.00                |
| 3 - A507 W  | 0                         | 99999                     |                           | 0.00                |
| 4 - A1(M) N | 0                         | 99999                     |                           | 10.00               |

### Roundabout Geometry

| Arm         | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit only |
|-------------|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1 - A507 E  | 7.28                             | 9.11                | 3.8                             | 24.9                 | 128.0                             | 47.0                               |           |
| 2 - A1(M) S | 6.25                             | 8.15                | 1.2                             | 34.4                 | 128.0                             | 24.0                               |           |
| 3 - A507 W  | 5.08                             | 7.28                | 34.7                            | 25.6                 | 127.0                             | 4.0                                |           |
| 4 - A1(M) N | 6.05                             | 7.33                | 2.7                             | 41.6                 | 128.0                             | 28.0                               |           |

### Slope / Intercept / Capacity

#### Arm Intercept Adjustments

| Arm         | Type       | Reason | Percentage intercept adjustment (%) |
|-------------|------------|--------|-------------------------------------|
| 1 - A507 E  | None       |        |                                     |
| 2 - A1(M) S | None       |        |                                     |
| 3 - A507 W  | None       |        |                                     |
| 4 - A1(M) N | Percentage |        | 100.00                              |

### Roundabout Slope and Intercept used in model

| Arm         | Final slope | Final intercept (PCU/hr) |
|-------------|-------------|--------------------------|
| 1 - A507 E  | 0.519       | 2303                     |
| 2 - A1(M) S | 0.506       | 2067                     |
| 3 - A507 W  | 0.551       | 2305                     |
| 4 - A1(M) N | 0.502       | 2052                     |

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D1 | 2022          | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |

| Vehicle mix varies over turn | Vehicle mix varies over entry | Vehicle mix source | PCU Factor for a HV (PCU) |
|------------------------------|-------------------------------|--------------------|---------------------------|
| ✓                            | ✓                             | HV Percentages     | 2.00                      |

### Demand overview (Traffic)

| Arm         | Linked arm | Profile type | Use O-D data | Average Demand (Veh/hr) | Scaling Factor (%) |
|-------------|------------|--------------|--------------|-------------------------|--------------------|
| 1 - A507 E  |            | ONE HOUR     | ✓            | 556                     | 100.000            |
| 2 - A1(M) S |            | ONE HOUR     | ✓            | 369                     | 100.000            |
| 3 - A507 W  |            | ONE HOUR     | ✓            | 1208                    | 100.000            |
| 4 - A1(M) N |            | ONE HOUR     | ✓            | 642                     | 100.000            |

## Origin-Destination Data

### Demand (Veh/hr)

|      | To          |            |             |            |             |
|------|-------------|------------|-------------|------------|-------------|
|      |             | 1 - A507 E | 2 - A1(M) S | 3 - A507 W | 4 - A1(M) N |
| From | 1 - A507 E  | 0          | 102         | 223        | 231         |
|      | 2 - A1(M) S | 95         | 0           | 274        | 0           |
|      | 3 - A507 W  | 207        | 696         | 5          | 300         |
|      | 4 - A1(M) N | 192        | 0           | 450        | 0           |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To          |            |             |            |             |
|------|-------------|------------|-------------|------------|-------------|
|      |             | 1 - A507 E | 2 - A1(M) S | 3 - A507 W | 4 - A1(M) N |
| From | 1 - A507 E  | 0          | 22          | 4          | 11          |
|      | 2 - A1(M) S | 21         | 0           | 8          | 0           |
|      | 3 - A507 W  | 7          | 2           | 0          | 4           |
|      | 4 - A1(M) N | 15         | 0           | 3          | 22          |

## Results

### Results Summary for whole modelled period

| Arm         | Max RFC | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Junction Arrivals (Veh) |
|-------------|---------|---------------|-----------------|---------------------------------|---------|-------------------------|-------------------------------|
| 1 - A507 E  | 0.41    | 4.15          | 0.7             | 2.9                             | A       | 510                     | 765                           |
| 2 - A1(M) S | 0.29    | 3.70          | 0.4             | 1.5                             | A       | 339                     | 508                           |
| 3 - A507 W  | 0.66    | 5.28          | 1.9             | 3.5                             | A       | 1108                    | 1663                          |
| 4 - A1(M) N | 0.51    | 5.34          | 1.0             | 1.9                             | A       | 589                     | 884                           |