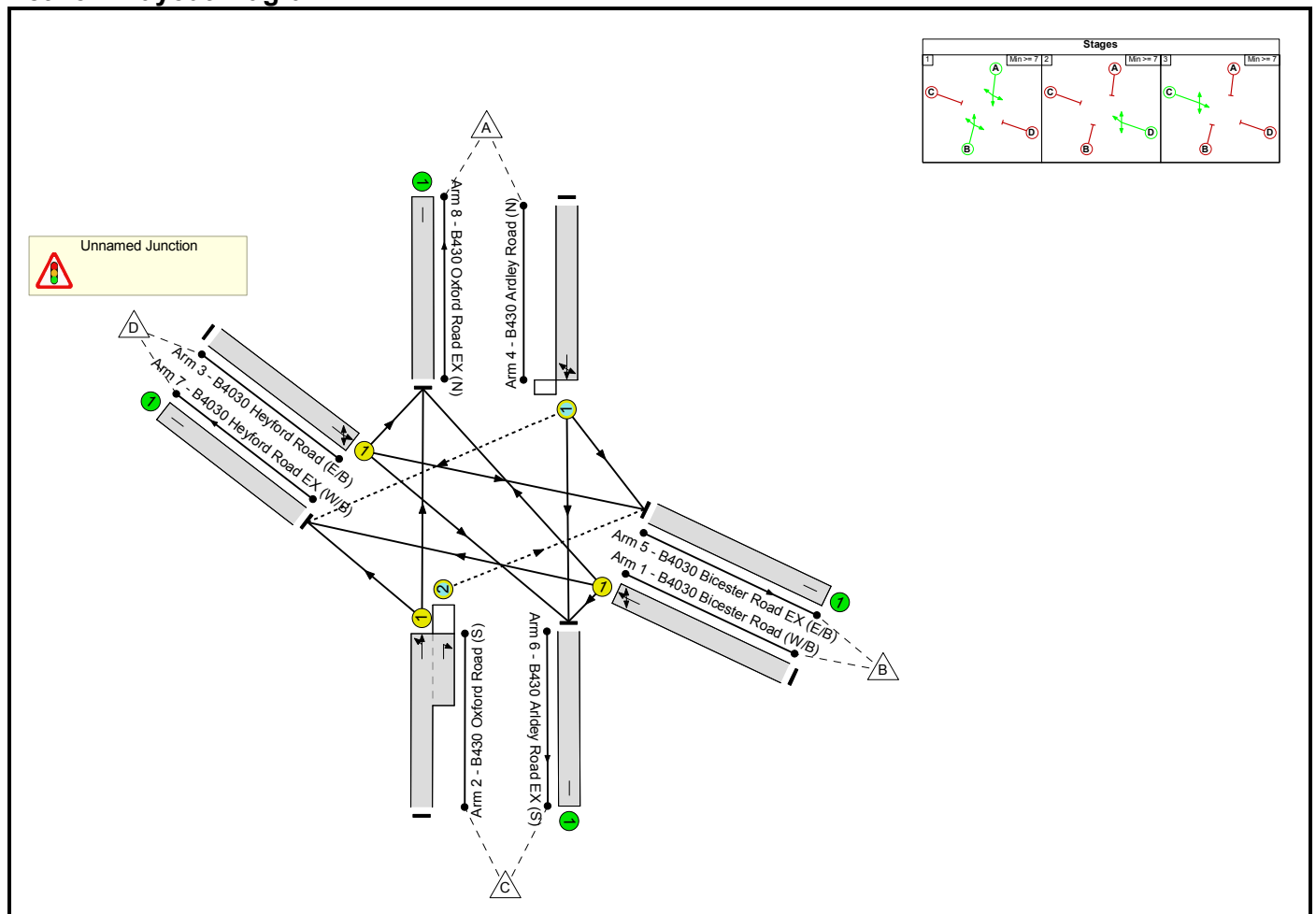


Full Input Data And Results
Full Input Data And Results

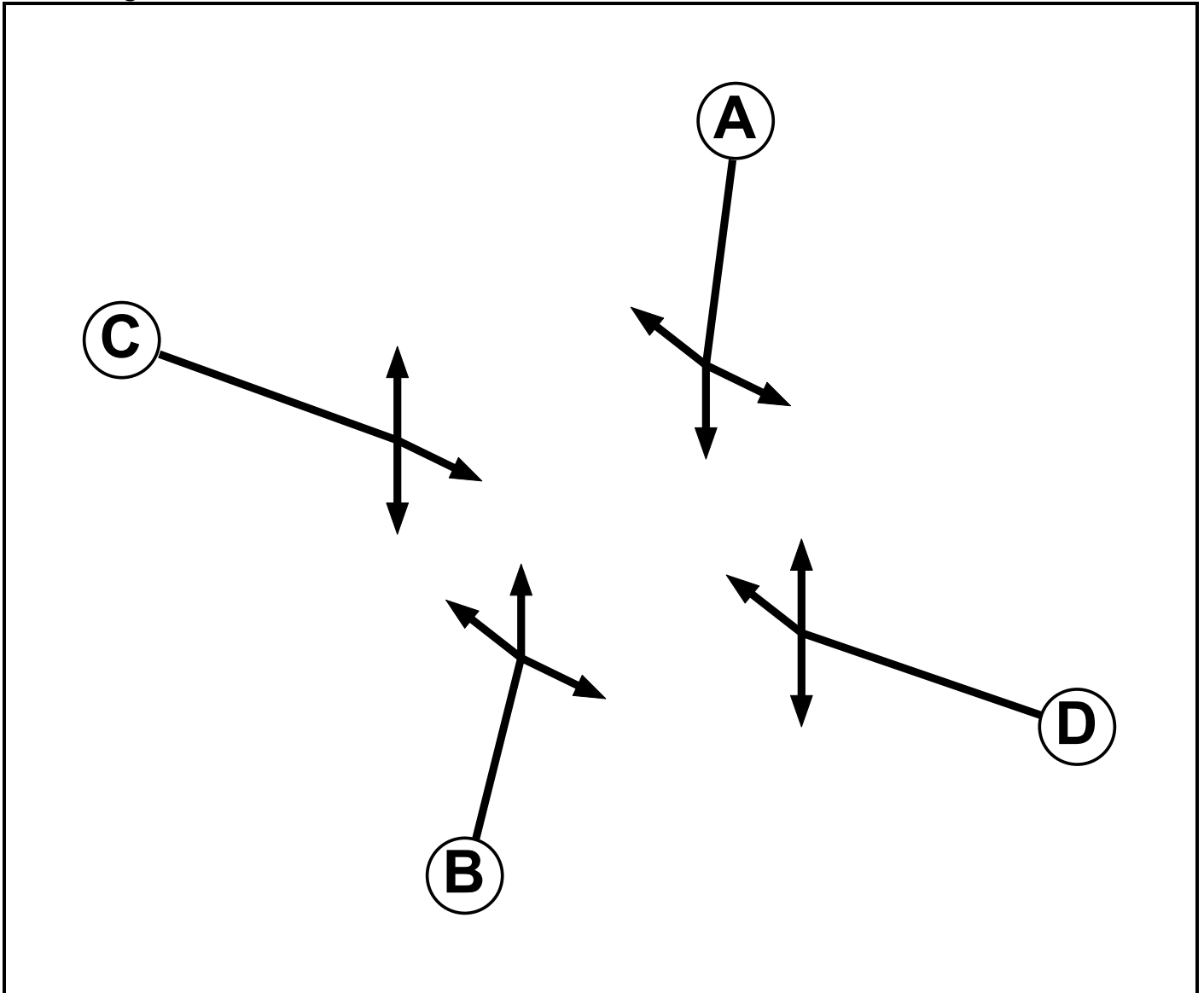
User and Project Details

| | |
|---------------------------|---|
| Project: | Heyford Park |
| Title: | Middleton Stoney Junction |
| Location: | |
| Additional detail: | Existing Layout |
| File name: | Middleton Stoney Signalised Junction_Consented V3.lsg3x |
| Author: | ekeen |
| Company: | Peter Brett Associates |
| Address: | 10 Queen Square |

Network Layout Diagram



Phase Diagram



Phase Input Data

| Phase Name | Phase Type | Assoc. Phase | Street Min | Cont Min |
|------------|------------|--------------|------------|----------|
| A | Traffic | | 7 | 7 |
| B | Traffic | | 7 | 7 |
| C | Traffic | | 7 | 7 |
| D | Traffic | | 7 | 7 |

Full Input Data And Results

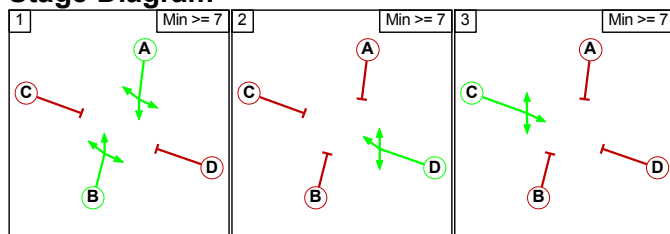
Phase Intergrens Matrix

| | | Starting Phase | | | |
|-------------------|---|----------------|---|---|---|
| | | A | B | C | D |
| Terminating Phase | A | - | 5 | 8 | |
| | B | - | 8 | 5 | |
| | C | 5 | 7 | - | 8 |
| | D | 7 | 5 | 8 | - |

Phases in Stage

| Stage No. | Phases in Stage |
|-----------|-----------------|
| 1 | A B |
| 2 | D |
| 3 | C |

Stage Diagram



Phase Delays

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

Prohibited Stage Change

| | | To Stage | | |
|------------|---|----------|---|---|
| | | 1 | 2 | 3 |
| From Stage | 1 | - | 8 | 8 |
| | 2 | 7 | - | 8 |
| | 3 | 7 | 8 | - |

Full Input Data And Results

Give-Way Lane Input Data

| Junction: Unnamed Junction | | | | | | | | | | | |
|-------------------------------|-------------|-----------------------------------|-----------------------------------|---------------|------------------|------------------------------|--------------------------|----------------------------|------|------------------------|-------------------------------|
| Lane | Movement | Max Flow when Giving Way (PCU/Hr) | Min Flow when Giving Way (PCU/Hr) | Opposing Lane | Opp. Lane Coeff. | Opp. Mvmnts. | Right Turn Storage (PCU) | Non-Blocking Storage (PCU) | RTF | Right Turn Move up (s) | Max Turns in Intergreen (PCU) |
| 2/2 (B430 Oxford Road (S)) | 5/1 (Right) | 1439 | 0 | 4/1 | 1.09 | To 5/1 (Left) To 6/1 (Ahead) | 2.00 | - | 0.50 | 2 | 2.00 |
| 4/1 (B430 Ardley Road (N)) | 7/1 (Right) | 1439 | 0 | 2/1 | 1.09 | To 7/1 (Left) To 8/1 (Ahead) | 1.00 | 1.00 | 0.50 | 1 | 1.00 |

Full Input Data And Results

Lane Input Data

| Junction: Unnamed Junction | | | | | | | | | | | | |
|---------------------------------------|-----------|--------|-------------|-----------|-----------------------|---------------|-----------------------------------|----------------|----------|---------------|-------------|--------------------|
| Lane | Lane Type | Phases | Start Disp. | End Disp. | Physical Length (PCU) | Sat Flow Type | Def User Saturation Flow (PCU/Hr) | Lane Width (m) | Gradient | Nearside Lane | Turns | Turning Radius (m) |
| 1/1 (B4030 Bicester Road (W/B)) | U | D | 2 | 3 | 60.0 | Geom | - | 3.00 | 0.00 | Y | Arm 6 Left | 13.00 |
| | | | | | | | | | | | Arm 7 Ahead | 30.00 |
| | | | | | | | | | | | Arm 8 Right | 30.00 |
| 2/1 (B430 Oxford Road (S)) | U | B | 2 | 3 | 60.0 | Geom | - | 3.00 | 0.00 | Y | Arm 7 Left | 30.00 |
| | | | | | | | | | | | Arm 8 Ahead | Inf |
| 2/2 (B430 Oxford Road (S)) | O | B | 2 | 3 | 5.0 | Geom | - | 3.00 | 0.00 | N | Arm 5 Right | 10.00 |
| 3/1 (B4030 Heyford Road (E/B)) | U | C | 2 | 3 | 60.0 | Geom | - | 3.00 | 0.00 | Y | Arm 5 Ahead | 30.00 |
| | | | | | | | | | | | Arm 6 Right | 30.00 |
| | | | | | | | | | | | Arm 8 Left | 7.00 |
| 4/1 (B430 Ardley Road (N)) | O | A | 2 | 3 | 60.0 | Geom | - | 3.32 | 0.00 | Y | Arm 5 Left | 12.00 |
| | | | | | | | | | | | Arm 6 Ahead | Inf |
| | | | | | | | | | | | Arm 7 Right | 8.00 |
| 5/1 (B4030 Bicester Road EX (E/B)) | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 6/1 (B430 Ardley Road EX (S)) | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 7/1 (B4030 Heyford Road EX (W/B)) | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 8/1 (B430 Oxford Road EX (N)) | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |

Traffic Flow Groups

| Flow Group | Start Time | End Time | Duration | Formula |
|---------------------------|------------|----------|----------|---------|
| 17: '2022 Test (Sens) AM' | 07:45 | 08:45 | 01:00 | |
| 18: '2022 Test (Sens) PM' | 17:00 | 18:00 | 01:00 | |

Full Input Data And Results

Scenario 17: '2022 Test (Sens) Case AM' (FG17: '2022 Test (Sens) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

| | Destination | | | | | |
|--------|-------------|-----|-----|-----|-----|------|
| | | A | B | C | D | Tot. |
| Origin | A | 0 | 120 | 431 | 12 | 563 |
| | B | 85 | 0 | 52 | 295 | 432 |
| | C | 196 | 20 | 0 | 73 | 289 |
| | D | 11 | 338 | 133 | 0 | 482 |
| | Tot. | 292 | 478 | 616 | 380 | 1766 |

Traffic Lane Flows

| Lane | Scenario 17: 2022 Test (Sens) Case AM |
|-----------------------------------|--|
| Junction: Unnamed Junction | |
| 1/1 | 432 |
| 2/1 (with short) | 289(In) 269(Out) |
| 2/2 (short) | 20 |
| 3/1 | 482 |
| 4/1 | 563 |
| 5/1 | 478 |
| 6/1 | 616 |
| 7/1 | 380 |
| 8/1 | 292 |

Lane Saturation Flows

| Junction: Unnamed Junction | | | | | | | | |
|--|----------------|----------|---------------|--------------------------|--------------------|---------------|-------------------|--------------------------|
| 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 (B4030 Bicester Road (W/B)) | 3.00 | 0.00 | Y | Arm 6 Left | 13.00 | 12.0 % | 1810 | 1810 |
| | | | | Arm 7 Ahead | 30.00 | 68.3 % | | |
| | | | | Arm 8 Right | 30.00 | 19.7 % | | |
| 2/1 (B430 Oxford Road (S)) | 3.00 | 0.00 | Y | Arm 7 Left | 30.00 | 27.1 % | 1889 | 1889 |
| | | | | Arm 8 Ahead | Inf | 72.9 % | | |
| 2/2 (B430 Oxford Road (S)) | 3.00 | 0.00 | N | Arm 5 Right | 10.00 | 100.0 % | 1787 | 1787 |
| 3/1 (B4030 Heyford Road (E/B)) | 3.00 | 0.00 | Y | Arm 5 Ahead | 30.00 | 70.1 % | 1817 | 1817 |
| | | | | Arm 6 Right | 30.00 | 27.6 % | | |
| | | | | Arm 8 Left | 7.00 | 2.3 % | | |
| 4/1 (B430 Ardley Road (N)) | 3.32 | 0.00 | Y | Arm 5 Left | 12.00 | 21.3 % | 1889 | 1889 |
| | | | | Arm 6 Ahead | Inf | 76.6 % | | |
| 5/1 (B4030 Bicester Road EX (E/B) Lane 1) | | | | Arm 7 Right | 8.00 | 2.1 % | Inf | Inf |
| | | | | Infinite Saturation Flow | | | | |
| 6/1 (B430 Ardey Road EX (S) Lane 1) | | | | Infinite Saturation Flow | | | Inf | Inf |
| 7/1 (B4030 Heyford Road EX (W/B) Lane 1) | | | | Infinite Saturation Flow | | | Inf | Inf |
| 8/1 (B430 Oxford Road EX (N) Lane 1) | | | | Infinite Saturation Flow | | | Inf | Inf |

Scenario 18: '2022 Test (Sens) Case PM' (FG18: '2022 Test (Sens) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

| Origin | Destination | | | | | |
|--------|-------------|-----|-----|-----|------|--|
| | A | B | C | D | Tot. | |
| A | 0 | 69 | 169 | 11 | 249 | |
| B | 58 | 0 | 22 | 313 | 393 | |
| C | 419 | 61 | 0 | 122 | 602 | |
| D | 5 | 254 | 82 | 0 | 341 | |
| Tot. | 482 | 384 | 273 | 446 | 1585 | |

Full Input Data And Results

Traffic Lane Flows

| Lane | Scenario 18: 2022 Test (Sens) Case PM |
|-----------------------------------|--|
| Junction: Unnamed Junction | |
| 1/1 | 393 |
| 2/1 (with short) | 602(In) 541(Out) |
| 2/2 (short) | 61 |
| 3/1 | 341 |
| 4/1 | 249 |
| 5/1 | 384 |
| 6/1 | 273 |
| 7/1 | 446 |
| 8/1 | 482 |

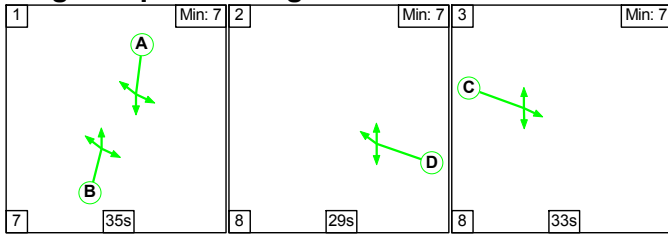
Lane Saturation Flows

| Junction: Unnamed Junction | | | | | | | | |
|--|----------------|----------|---------------|--------------------------|--------------------|---------------|-------------------|--------------------------|
| 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 (B4030 Bicester Road (W/B)) | 3.00 | 0.00 | Y | Arm 6 Left | 13.00 | 5.6 % | 1817 | 1817 |
| | | | | Arm 7 Ahead | 30.00 | 79.6 % | | |
| | | | | Arm 8 Right | 30.00 | 14.8 % | | |
| 2/1 (B430 Oxford Road (S)) | 3.00 | 0.00 | Y | Arm 7 Left | 30.00 | 22.6 % | 1894 | 1894 |
| | | | | Arm 8 Ahead | Inf | 77.4 % | | |
| 2/2 (B430 Oxford Road (S)) | 3.00 | 0.00 | N | Arm 5 Right | 10.00 | 100.0 % | 1787 | 1787 |
| 3/1 (B4030 Heyford Road (E/B)) | 3.00 | 0.00 | Y | Arm 5 Ahead | 30.00 | 74.5 % | 1820 | 1820 |
| | | | | Arm 6 Right | 30.00 | 24.0 % | | |
| | | | | Arm 8 Left | 7.00 | 1.5 % | | |
| | | | | Arm 5 Left | 12.00 | 27.7 % | | |
| 4/1 (B430 Ardley Road (N)) | 3.32 | 0.00 | Y | Arm 6 Ahead | Inf | 67.9 % | 1867 | 1867 |
| | | | | Arm 7 Right | 8.00 | 4.4 % | | |
| 5/1 (B4030 Bicester Road EX (E/B) Lane 1) | | | | Infinite Saturation Flow | | | Inf | Inf |
| 6/1 (B430 Ardley Road EX (S) Lane 1) | | | | Infinite Saturation Flow | | | Inf | Inf |
| 7/1 (B4030 Heyford Road EX (W/B) Lane 1) | | | | Infinite Saturation Flow | | | Inf | Inf |
| 8/1 (B430 Oxford Road EX (N) Lane 1) | | | | Infinite Saturation Flow | | | Inf | Inf |

Full Input Data And Results

Scenario 17: '2022 Test (Sens) Case AM' (FG17: '2022 Test (Sens) AM', Plan 1: 'Network Control Plan 1')

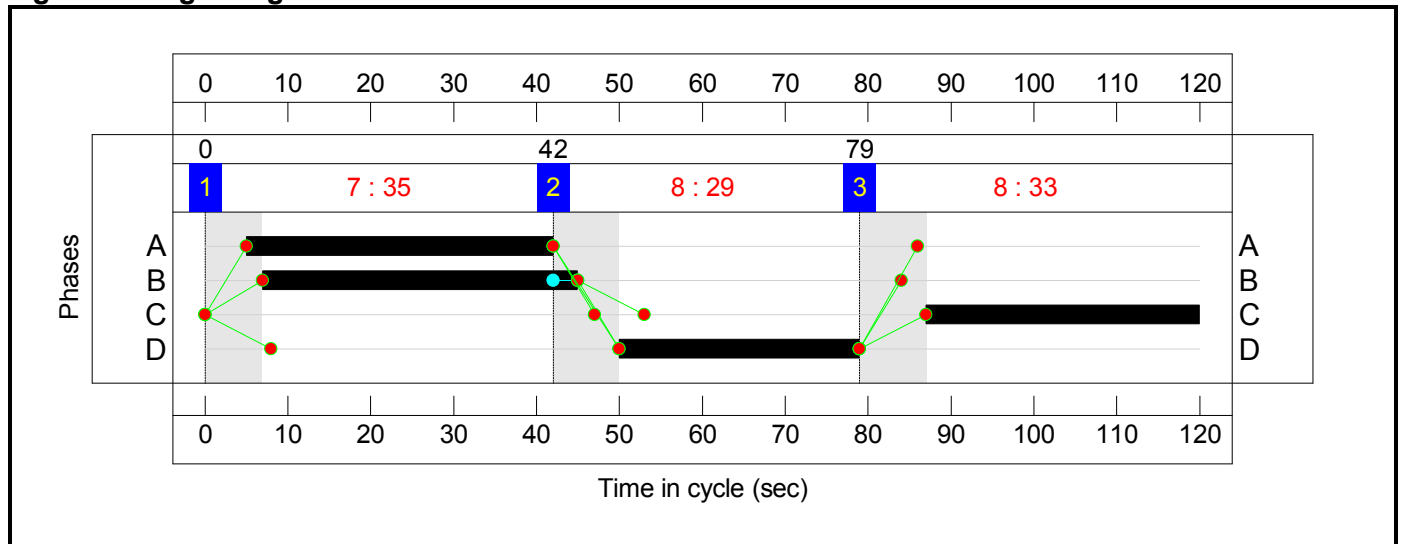
Stage Sequence Diagram



Stage Timings


| Stage | 1 | 2 | 3 |
|--------------|----|----|----|
| Duration | 35 | 29 | 33 |
| Change Point | 0 | 42 | 79 |

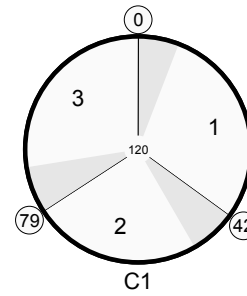
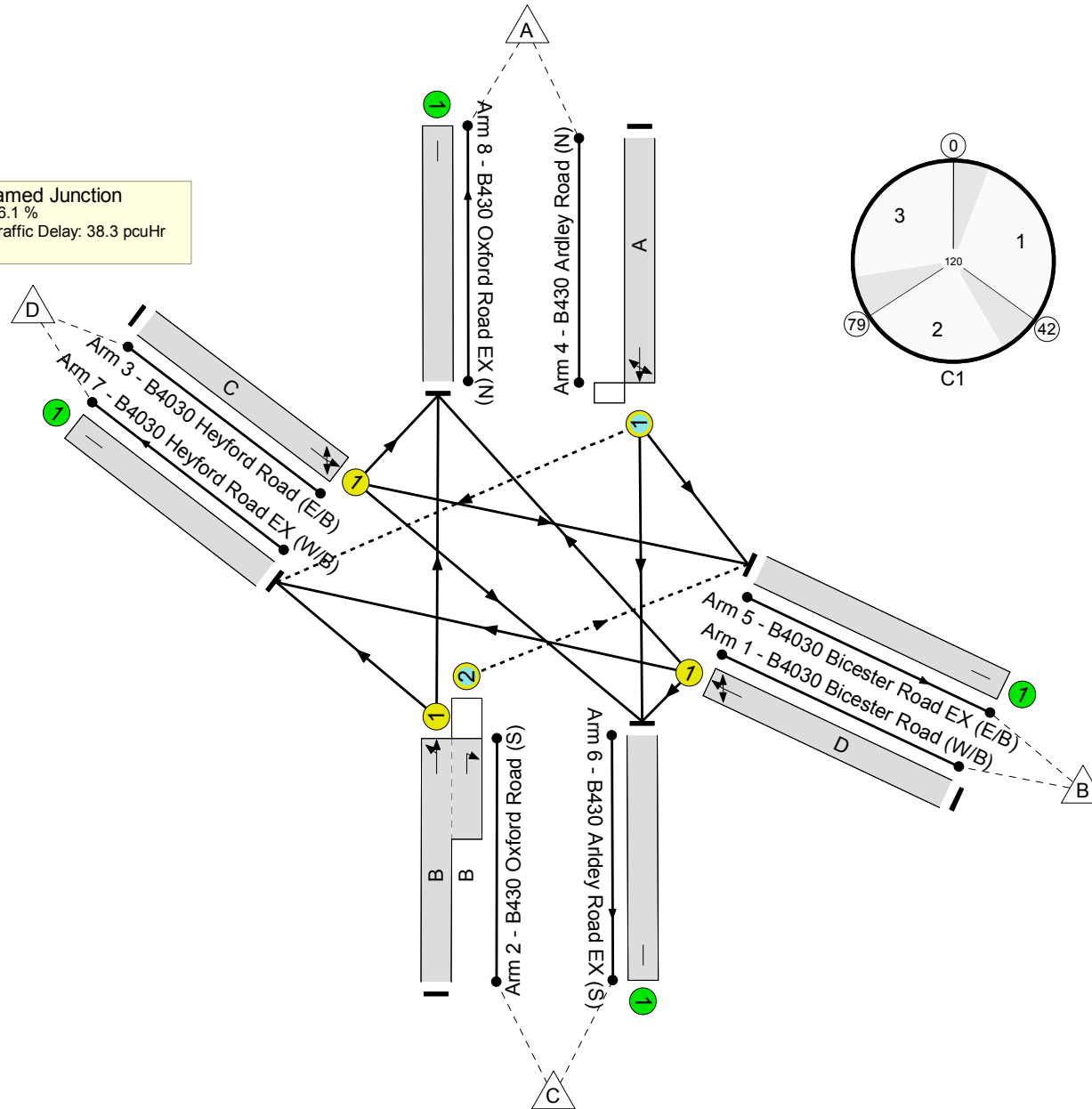
Signal Timings Diagram

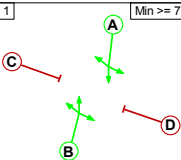
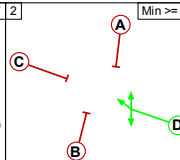
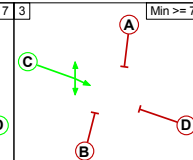


Full Input Data And Results
Network Layout Diagram

Full Input Data And Results


Unnamed Junction
 PRC: -6.1 %
 Total Traffic Delay: 38.3 pcuHr



| Stages | | | | | |
|---|----------|---|---|---|---|
| 1 | Min >= 7 | 2 | Min >= 7 | 3 | Min >= 7 |
|  | | |  | |  |

Full 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) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|---|--|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|-------------|
| Network: Middleton Stoney Junction | - | - | N/A | - | - | | - | - | - | - | - | - | 95.5% |
| Unnamed Junction | - | - | N/A | - | - | | - | - | - | - | - | - | 95.5% |
| 1/1 | B4030 Bicester Road (W/B) Left Ahead Right | U | N/A | N/A | D | | 1 | 29 | - | 432 | 1810 | 453 | 95.5% |
| 2/1+2/2 | B430 Oxford Road (S) Right Left Ahead | U+O | N/A | N/A | B | | 1 | 38 | - | 289 | 1889:1787 | 616 | 46.9% |
| 3/1 | B4030 Heyford Road (E/B) Ahead Right Left | U | N/A | N/A | C | | 1 | 33 | - | 482 | 1817 | 515 | 93.6% |
| 4/1 | B430 Ardley Road (N) Left Ahead Right | O | N/A | N/A | A | | 1 | 37 | - | 563 | 1889 | 598 | 94.1% |
| 5/1 | B4030 Bicester Road EX (E/B) | U | N/A | N/A | - | | - | - | - | 478 | Inf | Inf | 0.0% |
| 6/1 | B430 Arldey Road EX (S) | U | N/A | N/A | - | | - | - | - | 616 | Inf | Inf | 0.0% |
| 7/1 | B4030 Heyford Road EX (W/B) | U | N/A | N/A | - | | - | - | - | 380 | Inf | Inf | 0.0% |
| 8/1 | B430 Oxford Road EX (N) | U | N/A | N/A | - | | - | - | - | 292 | Inf | Inf | 0.0% |

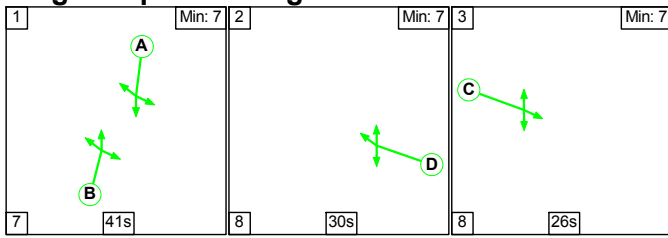
Full Input Data And Results

| 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: Middleton Stoney Junction | - | - | 31 | 1 | 0 | 19.7 | 18.4 | 0.2 | 38.3 | - | - | - | - |
| Unnamed Junction | - | - | 31 | 1 | 0 | 19.7 | 18.4 | 0.2 | 38.3 | - | - | - | - |
| 1/1 | 432 | 432 | - | - | - | 5.3 | 6.5 | - | 11.8 | 98.2 | 14.2 | 6.5 | 20.6 |
| 2/1+2/2 | 289 | 289 | 20 | 0 | 0 | 2.6 | 0.4 | 0.1 | 3.1 | 39.2 | 7.3 | 0.4 | 7.7 |
| 3/1 | 482 | 482 | - | - | - | 5.6 | 5.5 | - | 11.1 | 83.0 | 15.7 | 5.5 | 21.2 |
| 4/1 | 563 | 563 | 12 | 0 | 0 | 6.2 | 6.0 | 0.0 | 12.2 | 78.2 | 18.1 | 6.0 | 24.1 |
| 5/1 | 478 | 478 | - | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6/1 | 616 | 616 | - | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7/1 | 380 | 380 | - | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 292 | 292 | - | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| <p>C1 PRC for Signalled Lanes (%): -6.1 Total Delay for Signalled Lanes (pcuHr): 38.26 Cycle Time (s): 120 PRC Over All Lanes (%): -6.1 Total Delay Over All Lanes(pcuHr): 38.26</p> | | | | | | | | | | | | | |

Full Input Data And Results

Scenario 18: '2022 Test (Sens) Case PM' (FG18: '2022 Test (Sens) PM', Plan 1: 'Network Control Plan 1')

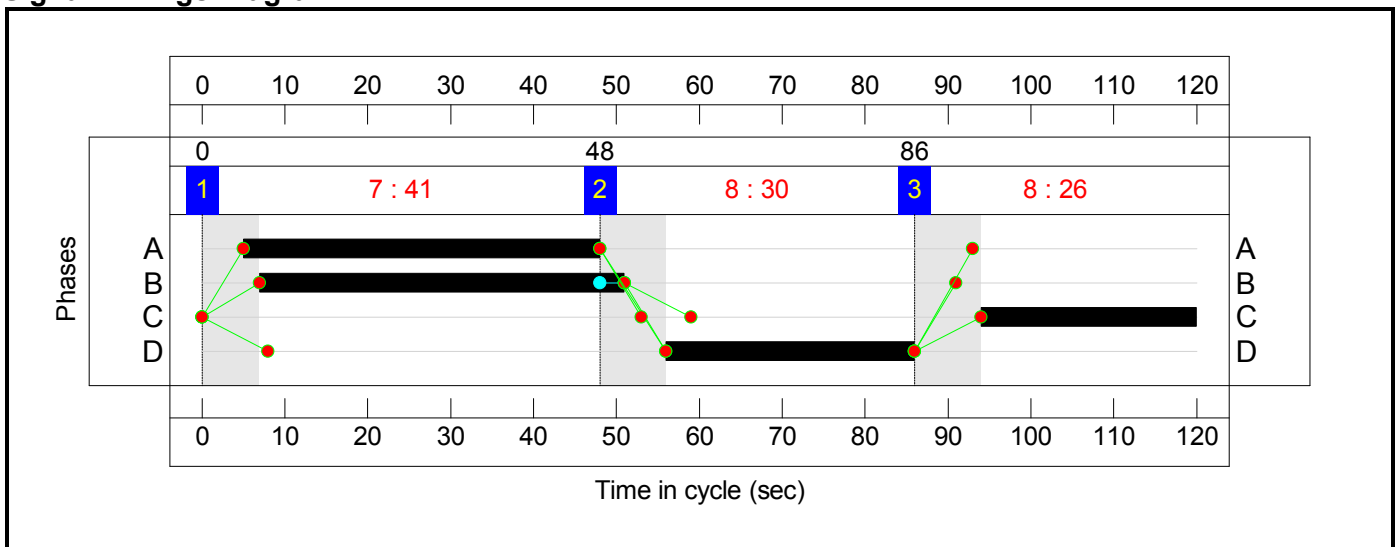
Stage Sequence Diagram



Stage Timings


| Stage | 1 | 2 | 3 |
|--------------|----|----|----|
| Duration | 41 | 30 | 26 |
| Change Point | 0 | 48 | 86 |

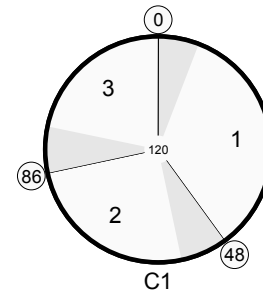
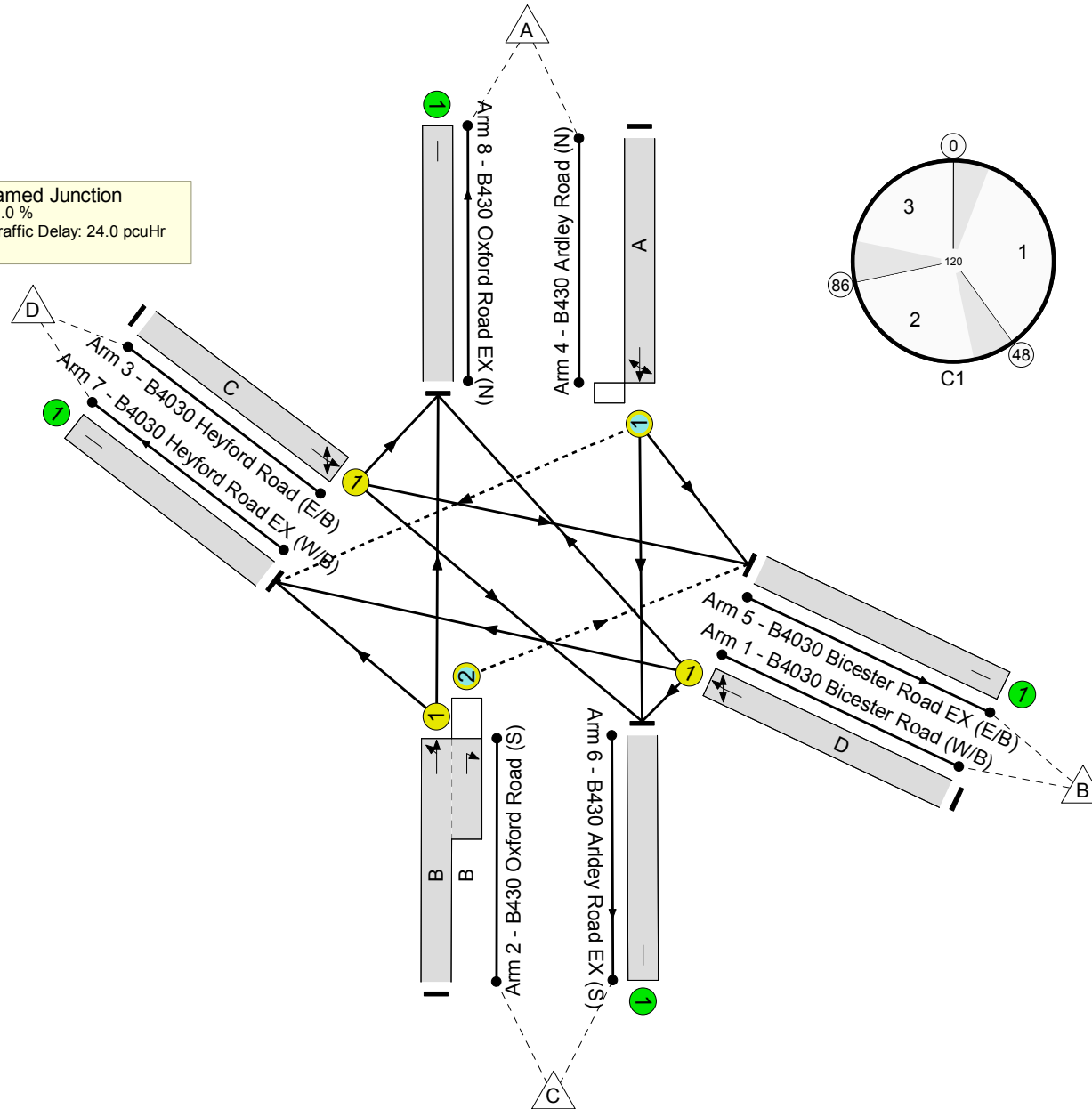
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results


Unnamed Junction
 PRC: 7.0 %
 Total Traffic Delay: 24.0 pcuHr



| Stages | | | |
|--------|----------|---|----------|
| 1 | Min >= 7 | 2 | Min >= 7 |
| 3 | A | A | A |
| C | B | B | B |
| D | D | D | D |

Full 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) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) |
|---|--|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| Network: Middleton Stoney Junction | - | - | N/A | - | - | | - | - | - | - | - | - | 84.1% |
| Unnamed Junction | - | - | N/A | - | - | | - | - | - | - | - | - | 84.1% |
| 1/1 | B4030 Bicester Road (W/B) Left Ahead Right | U | N/A | N/A | D | | 1 | 30 | - | 393 | 1817 | 469 | 83.7% |
| 2/1+2/2 | B430 Oxford Road (S) Right Left Ahead | U+O | N/A | N/A | B | | 1 | 44 | - | 602 | 1894:1787 | 716 | 84.1% |
| 3/1 | B4030 Heyford Road (E/B) Ahead Right Left | U | N/A | N/A | C | | 1 | 26 | - | 341 | 1820 | 410 | 83.3% |
| 4/1 | B430 Ardley Road (N) Left Ahead Right | O | N/A | N/A | A | | 1 | 43 | - | 249 | 1867 | 679 | 36.7% |
| 5/1 | B4030 Bicester Road EX (E/B) | U | N/A | N/A | - | | - | - | - | 384 | Inf | Inf | 0.0% |
| 6/1 | B430 Arldey Road EX (S) | U | N/A | N/A | - | | - | - | - | 273 | Inf | Inf | 0.0% |
| 7/1 | B4030 Heyford Road EX (W/B) | U | N/A | N/A | - | | - | - | - | 446 | Inf | Inf | 0.0% |
| 8/1 | B430 Oxford Road EX (N) | U | N/A | N/A | - | | - | - | - | 482 | Inf | Inf | 0.0% |

Full Input Data And Results

| 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: Middleton Stoney Junction | - | - | 70 | 1 | 1 | 16.4 | 7.6 | 0.1 | 24.0 | - | - | - | - |
| Unnamed Junction | - | - | 70 | 1 | 1 | 16.4 | 7.6 | 0.1 | 24.0 | - | - | - | - |
| 1/1 | 393 | 393 | - | - | - | 4.6 | 2.4 | - | 7.0 | 64.3 | 12.3 | 2.4 | 14.8 |
| 2/1+2/2 | 602 | 602 | 59 | 1 | 1 | 5.6 | 2.5 | 0.0 | 8.2 | 49.2 | 17.7 | 2.5 | 20.2 |
| 3/1 | 341 | 341 | - | - | - | 4.2 | 2.3 | - | 6.5 | 69.0 | 10.8 | 2.3 | 13.1 |
| 4/1 | 249 | 249 | 10 | 1 | 0 | 1.9 | 0.3 | 0.0 | 2.3 | 32.7 | 6.0 | 0.3 | 6.3 |
| 5/1 | 384 | 384 | - | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6/1 | 273 | 273 | - | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7/1 | 446 | 446 | - | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 482 | 482 | - | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1 | | | PRC for Signalled Lanes (%): | | 7.0 | Total Delay for Signalled Lanes (pcuHr): | | 24.03 | Cycle Time (s): 120 | | | | |
| | | | PRC Over All Lanes (%): | | 7.0 | Total Delay Over All Lanes(pcuHr): | | 24.03 | | | | | |