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| --- |
| **Junctions 9** |
| **ARCADY 9 - Roundabout Module** |
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| For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777     [software@trl.co.uk](mailto:software@trl.co.uk)     [www.trlsoftware.co.uk](https://www.trlsoftware.co.uk) |
| **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** |

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segment](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:117)»[**2035 Ref, PM**](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Section:2035 Ref, PM)[Data Errors and Warnings](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:124)**»**[**Junction Network**](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Section:4:Junction Network)[Junctions](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:125)[Junction Network Options](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:126)**»**[**Traffic Demand**](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Section:4:Traffic Demand)[Demand Set Details](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:127)[Demand overview (Traffic)](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:128)**»**[**Origin-Destination Data**](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Section:4:Origin-Destination Data)**»**[**Vehicle Mix**](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Section:4:Vehicle Mix)**»**[**Results**](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Section:4:Results)[Results Summary for whole modelled period](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:131)[Main Results for each time segment](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:132)[Queue Variation Results for each time segment](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:139)**»**[**Lane Results**](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Section:4:Lane Results)[Lanes: Main Results for each time segment](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:146)[Lanes: Queue Variation Results for each time segment](file:///\\cbh-vfil-001\cbh\Projects\49550%20-%20A27%20Stockbridge%20Analysis,%20Chichester\Working%20Documents\Junction%20Analysis\ARCADY\49550_5501_J004_Junctions%209%20Report\49550_5501_J004_Junctions%209%20Report_MAIN_UseBitmaps.htm#Table:153)

Summary of junction performance

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **AM** | | | | | | | | **PM** | | | | | | | |
|  | **Set ID** | **Queue (PCU)** | **95% Queue (PCU)** | **Delay (s)** | **RFC** | **LOS** | **Junction Delay (s)** | **Network Residual Capacity** | **Set ID** | **Queue (PCU)** | **95% Queue (PCU)** | **Delay (s)** | **RFC** | **LOS** | **Junction Delay (s)** | **Network Residual Capacity** |
|  | **[Lane Simulation] - 2014** | | | | | | | | | | | | | | | |
| **Arm 1** | D1 | 32.7 | 79.1 | 58.25 |  | F | 248.96 | %  [ ] | D2 | 283.6 | 361.0 | 574.80 |  | F | 265.21 | %  [ ] |
| **Arm 2** | 2.5 | 7.5 | 21.32 |  | C | 23.7 | 56.0 | 141.72 |  | F |
| **Arm 3** | 147.8 | 236.5 | 199.58 |  | F | 15.0 | 39.0 | 25.80 |  | D |
| **Arm 4** | 173.3 | 233.1 | 881.86 |  | F | 37.0 | 82.0 | 112.39 |  | F |
|  | **[Lane Simulation] - 2035 Ref** | | | | | | | | | | | | | | | |
| **Arm 1** | D3 | 167.6 | 244.5 | 315.19 |  | F | 708.86 | %  [ ] | D4 | 411.8 | 524.5 | 754.01 |  | F | 671.48 | %  [ ] |
| **Arm 2** | 1.9 | 4.9 | 14.28 |  | B | 169.6 | 238.3 | 777.43 |  | F |
| **Arm 3** | 419.3 | 554.3 | 560.42 |  | F | 95.4 | 182.0 | 104.75 |  | F |
| **Arm 4** | 638.0 | 735.0 | 1932.39 |  | F | 494.4 | 593.0 | 1631.20 |  | F |

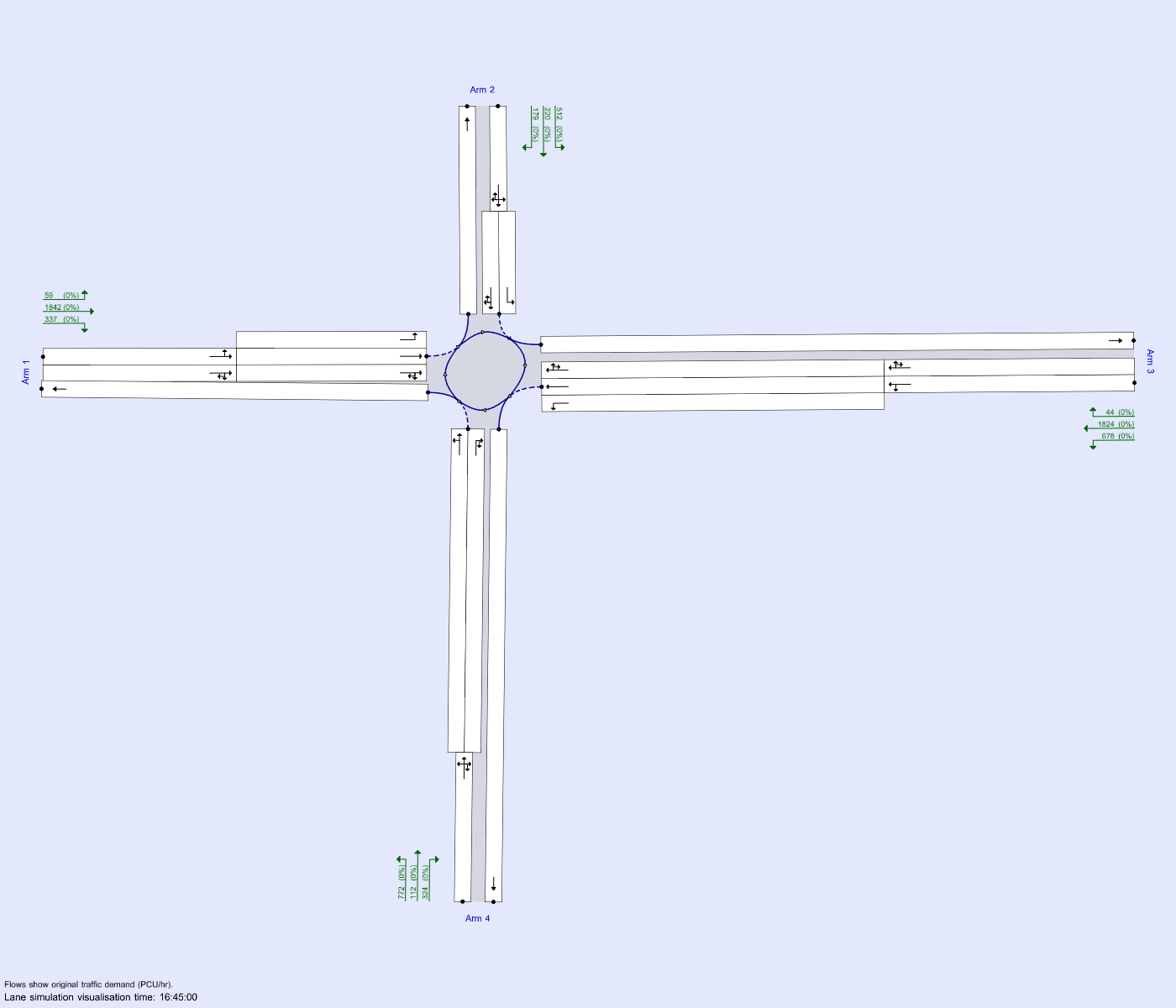
*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.  
  
Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay. 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   |  |  | | --- | --- | | **Title** | Stockbridge Roundabout | | **Location** | Chichester | | **Site number** | 1 | | **Date** | 04/09/2020 | | **Version** |  | | **Status** | (new file) | | **Identifier** |  | | **Client** |  | | **Jobnumber** | 49550 | | **Enumerator** | CORP\alovegrove | | **Description** |  | |

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 | PCU | PCU | perHour | s | -Min | perMin |



*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 | 20.00 |

Lane Simulation options

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Criteria type** | **Stop criteria (%)** | **Stop criteria time (s)** | **Stop criteria number of trials** | **Random seed** | **Results refresh speed (s)** | **Individual vehicle animation number of trials** | **Average animation capture interval (s)** | **Use quick response** | **Do flow sampling** | **Suppress automatic lane creation** | **Last run random seed** | **Last run number of trials** | **Last run time taken (s)** |
| Delay | 1.00 | 100000 | 100000 | -1 | 3 | 1 | 60 |  |  |  | 1739538519 | 159 | 73.26 |

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** | 2014 | AM | ONE HOUR | 07:45 | 09:15 | 15 |  |
| **D2** | 2014 | PM | ONE HOUR | 16:45 | 18:15 | 15 |  |
| **D3** | 2035 Ref | AM | ONE HOUR | 07:45 | 09:15 | 15 |  |
| **D4** | 2035 Ref | PM | ONE HOUR | 16:45 | 18:15 | 15 |  |

Analysis Set Details

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Use Lane Simulation** | **Include in report** | **Network flow scaling factor (%)** | **Network capacity scaling factor (%)** |
| **A1** |  |  | 100.000 | 100.000 |

2014, AM

Data Errors and Warnings

|  |  |  |  |
| --- | --- | --- | --- |
| **Severity** | **Area** | **Item** | **Description** |
| Warning | Lane Simulation | A1 - [Lane Simulation] | This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results. |
| Last Run | Lane Simulation | Arm 3 - Lane Simulation | Arm 3: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Last Run | Lane Simulation | Arm 4 - Lane Simulation | Arm 4: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Warning | Geometry | Arm 1 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 2 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 3 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 4 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Vehicle Mix |  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| 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** | Stockbridge Roundabout | Standard Roundabout |  | 1, 2, 3, 4 | 248.96 | F |

Junction Network Options

|  |  |
| --- | --- |
| **Driving side** | **Lighting** |
| Left | Normal/unknown |

Arms

Arms

|  |  |  |
| --- | --- | --- |
| **Arm** | **Name** | **Description** |
| **1** | A27 West |  |
| **2** | Stockbridge Road North |  |
| **3** | A27 East |  |
| **4** | Stockbridge Road South |  |

Roundabout Geometry

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **V - Approach road half-width (m)** | **E - Entry width (m)** | **l' - Effective flare length (m)** | **R - Entry radius (m)** | **D - Inscribed circle diameter (m)** | **PHI - Conflict (entry) angle (deg)** | **Exit only** |
| **1** | 7.30 | 9.70 | 81.0 | 52.5 | 82.5 | 37.0 |  |
| **2** | 4.10 | 6.70 | 38.4 | 27.6 | 82.5 | 35.0 |  |
| **3** | 7.30 | 11.00 | 121.3 | 40.4 | 82.5 | 29.0 |  |
| **4** | 3.20 | 7.80 | 97.1 | 30.5 | 82.5 | 42.0 |  |

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

|  |  |  |
| --- | --- | --- |
| **Arm** | **Final slope** | **Final intercept (PCU/hr)** |
| **1** | 0.642 | 2893 |
| **2** | 0.493 | 1882 |
| **3** | 0.709 | 3324 |
| **4** | 0.523 | 2126 |

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

Lane Simulation: Arm options

|  |  |  |
| --- | --- | --- |
| **Arm** | **Lane capacity source** | **Traffic considering secondary lanes (%)** |
| **1** | Evenly split | 10.00 |
| **2** | Evenly split | 10.00 |
| **3** | Evenly split | 10.00 |
| **4** | Evenly split | 10.00 |

Lanes

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Has limited storage** | **Storage (PCU)** | **Has bottleneck** | **Minimum capacity (PCU/hr)** | **Maximum capacity (PCU/hr)** | **Signalised** |
| **1** | **Entry** | **1** | **1** | 2 |  | 10.00 |  | 0 | 99999 |  |
| **2** | 3 |  | 10.00 |  | 0 | 99999 |  |
| **3** | 1, 3, 4 |  | 10.00 |  | 0 | 99999 |  |
| **2** | **1** | (3, 2) |  | Infinity |  |  |  |  |
| **2** | (3, 4, 1) |  | Infinity |  |  |  |  |
| **Exit** | **1** | **1** |  |  | Infinity |  |  |  |  |
| **2** | **Entry** | **1** | **1** | 3 |  | 5.40 |  | 0 | 99999 |  |
| **2** | 1, 2, 4 |  | 5.40 |  | 0 | 99999 |  |
| **2** | **1** | (3, 4, 1, 2) |  | Infinity |  |  |  |  |
| **Exit** | **1** | **1** |  |  | Infinity |  |  |  |  |
| **3** | **Entry** | **1** | **1** | 4 |  | 18.00 |  | 0 | 99999 |  |
| **2** | 1 |  | 18.00 |  | 0 | 99999 |  |
| **3** | 1, 3, 2 |  | 18.00 |  | 0 | 99999 |  |
| **2** | **1** | (4, 1) |  | Infinity |  |  |  |  |
| **2** | (3, 1, 2) |  | Infinity |  |  |  |  |
| **Exit** | **1** | **1** |  |  | Infinity |  |  |  |  |
| **4** | **Entry** | **1** | **1** | 1, 2 |  | 17.00 |  | 0 | 99999 |  |
| **2** | 3, 4 |  | 17.00 |  | 0 | 99999 |  |
| **2** | **1** | (3, 4, 1, 2) |  | Infinity |  |  |  |  |
| **Exit** | **1** | **1** |  |  | Infinity |  |  |  |  |

Entry Lane slope and intercept

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Final slope** | | **Final intercept (PCU/hr)** |
| **1** | **Entry** | **1** | **1** | 0.214 | | 964 |
| **2** | 0.214 | | 964 |
| **3** | 0.214 | | 964 |
| **2** | **Entry** | **1** | **1** | 0.246 | | 941 |
| **2** | 0.246 | | 941 |
| **3** | **Entry** | **1** | **1** | 0.236 | | 1108 |
| **2** | 0.236 | | 1108 |
| **3** | 0.236 | | 1108 |
| **4** | **Entry** | **1** | **1** | 0.262 | | 1063 |
| **2** | 0.262 | | 1063 |
| Summary of Entry Lane allowed movements   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Arm** | **Lane Level** | **Lane** | **Destination arm** | | | | | **3** | **4** | **1** | **2** | | **3** | **1** | **1** |  |  |  |  | | **2** |  |  |  |  | | **3** |  |  |  |  | | **2** | **1** |  |  |  |  | | **2** |  |  |  |  | | **4** | **1** | **1** |  |  |  |  | | **2** |  |  |  |  | | **2** | **1** |  |  |  |  | | **1** | **1** | **1** |  |  |  |  | | **2** |  |  |  |  | | **3** |  |  |  |  | | **2** | **1** |  |  |  |  | | **2** |  |  |  |  | | **2** | **1** | **1** |  |  |  |  | | **2** |  |  |  |  | | **2** | **1** |  |  |  |  | | | | | | |  | | |

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** | 2014 | 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 (PCU/hr)** | **Scaling Factor (%)** |
| **1** |  | ONE HOUR |  | 1684 | 100.000 |
| **2** |  | ONE HOUR |  | 367 | 100.000 |
| **3** |  | ONE HOUR |  | 2280 | 100.000 |
| **4** |  | ONE HOUR |  | 816 | 100.000 |

Origin-Destination Data

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Demand (PCU/hr)   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **To** | | | | | | **From** |  | **1** | **2** | **3** | **4** | | **1** | 0 | 87 | 1422 | 175 | | **2** | 13 | 0 | 64 | 290 | | **3** | 1888 | 135 | 0 | 257 | | **4** | 483 | 211 | 122 | 0 | |  |

Vehicle Mix

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Heavy Vehicle Percentages   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **To** | | | | | | **From** |  | **1** | **2** | **3** | **4** | | **1** | 0 | 0 | 0 | 0 | | **2** | 0 | 0 | 0 | 0 | | **3** | 0 | 0 | 0 | 0 | | **4** | 0 | 0 | 0 | 0 | |  |

Results

Results Summary for whole modelled period

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Max Delay (s)** | **Max Queue (PCU)** | **Max 95th percentile Queue (PCU)** | **Max LOS** | **Average Demand (PCU/hr)** | **Total Junction Arrivals (PCU)** |
| **1** | 58.25 | 32.7 | 79.1 | F | 1543 | 2314 |
| **2** | 21.32 | 2.5 | 7.5 | C | 336 | 504 |
| **3** | 199.58 | 147.8 | 236.5 | F | 2084 | 3126 |
| **4** | 881.86 | 173.3 | 233.1 | F | 748 | 1123 |

Main Results for each time segment

07:45 - 08:00

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1262 | 316 | 354 | 1260 | 1260 | 1794 | 0.0 | 2.9 | 7.983 | A |
| **2** | 270 | 67 | 1289 | 271 | 272 | 325 | 0.0 | 0.7 | 8.804 | A |
| **3** | 1706 | 427 | 356 | 1710 | 1705 | 1204 | 0.0 | 4.0 | 7.933 | A |
| **4** | 626 | 157 | 1532 | 615 | 603 | 534 | 0.0 | 4.7 | 21.443 | C |

08:00 - 08:15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1538 | 384 | 393 | 1534 | 1506 | 2095 | 2.9 | 5.5 | 12.320 | B |
| **2** | 339 | 85 | 1553 | 337 | 330 | 374 | 0.7 | 1.2 | 11.490 | B |
| **3** | 2042 | 510 | 438 | 2029 | 2010 | 1453 | 4.0 | 10.8 | 15.567 | C |
| **4** | 731 | 183 | 1808 | 681 | 679 | 659 | 4.7 | 19.1 | 66.571 | F |

08:15 - 08:30

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1845 | 461 | 386 | 1802 | 1778 | 2245 | 5.5 | 22.2 | 33.714 | D |
| **2** | 400 | 100 | 1805 | 391 | 394 | 383 | 1.2 | 2.5 | 17.471 | C |
| **3** | 2503 | 626 | 506 | 2251 | 2239 | 1690 | 10.8 | 77.6 | 75.022 | F |
| **4** | 891 | 223 | 1994 | 636 | 646 | 763 | 19.1 | 80.8 | 283.714 | F |

08:30 - 08:45

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1828 | 457 | 383 | 1819 | 1824 | 2210 | 22.2 | 32.7 | 58.250 | F |
| **2** | 403 | 101 | 1818 | 406 | 408 | 385 | 2.5 | 2.2 | 21.323 | C |
| **3** | 2505 | 626 | 520 | 2200 | 2220 | 1704 | 77.6 | 147.8 | 183.534 | F |
| **4** | 895 | 224 | 1964 | 629 | 627 | 756 | 80.8 | 148.7 | 660.668 | F |

08:45 - 09:00

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1518 | 380 | 390 | 1563 | 1619 | 2232 | 32.7 | 6.9 | 32.084 | D |
| **2** | 332 | 83 | 1574 | 332 | 333 | 379 | 2.2 | 1.1 | 14.169 | B |
| **3** | 2045 | 511 | 439 | 2241 | 2240 | 1467 | 147.8 | 100.6 | 199.581 | F |
| **4** | 732 | 183 | 1996 | 626 | 637 | 685 | 148.7 | 173.3 | 881.862 | F |

09:00 - 09:15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1265 | 316 | 409 | 1274 | 1278 | 2018 | 6.9 | 2.8 | 9.397 | A |
| **2** | 274 | 68 | 1324 | 274 | 278 | 359 | 1.1 | 0.6 | 9.081 | A |
| **3** | 1705 | 426 | 360 | 1915 | 2053 | 1238 | 100.6 | 15.8 | 79.146 | F |
| **4** | 615 | 154 | 1716 | 712 | 678 | 559 | 173.3 | 158.2 | 716.953 | F |

Queue Variation Results for each time segment

07:45 - 08:00

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 2.91 | 0.00 | 1.82 | 6.35 | 7.58 |
| **2** | 0.67 | 0.00 | 0.00 | 1.61 | 2.29 |
| **3** | 4.01 | 0.00 | 2.45 | 8.42 | 10.53 |
| **4** | 4.74 | 0.00 | 2.59 | 10.70 | 14.35 |

08:00 - 08:15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 5.55 | 0.05 | 3.41 | 11.55 | 15.03 |
| **2** | 1.23 | 0.00 | 0.26 | 2.77 | 3.58 |
| **3** | 10.84 | 0.23 | 6.73 | 21.55 | 31.53 |
| **4** | 19.13 | 1.74 | 15.50 | 39.28 | 47.03 |

08:15 - 08:30

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 22.19 | 1.14 | 18.25 | 45.10 | 59.10 |
| **2** | 2.47 | 0.00 | 1.31 | 5.30 | 7.53 |
| **3** | 77.57 | 20.48 | 75.38 | 128.83 | 137.25 |
| **4** | 80.77 | 37.95 | 81.25 | 107.10 | 115.15 |

08:30 - 08:45

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 32.72 | 2.42 | 28.50 | 63.55 | 79.05 |
| **2** | 2.19 | 0.00 | 0.92 | 5.37 | 7.41 |
| **3** | 147.81 | 60.85 | 141.30 | 215.70 | 236.53 |
| **4** | 148.69 | 88.95 | 147.50 | 192.55 | 200.15 |

08:45 - 09:00

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 6.92 | 0.00 | 3.61 | 13.55 | 20.05 |
| **2** | 1.14 | 0.00 | 0.15 | 2.65 | 3.68 |
| **3** | 100.64 | 10.95 | 95.50 | 178.10 | 197.10 |
| **4** | 173.34 | 102.55 | 173.50 | 222.05 | 227.76 |

09:00 - 09:15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 2.81 | 0.00 | 1.86 | 5.35 | 7.01 |
| **2** | 0.58 | 0.00 | 0.00 | 1.44 | 1.94 |
| **3** | 15.84 | 0.00 | 3.54 | 48.10 | 65.10 |
| **4** | 158.18 | 85.75 | 159.60 | 214.20 | 233.05 |

Lane Results

*Lane Level notation: Lane Level 1 is always closest to the junction.*

Lanes: Main Results for each time segment

07:45 - 08:00

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 64 | 889 | 0.072 | 64 | 64 | 0.0 | 0.1 | 4.392 | A |
| **2** | 3 | 586 | 889 | 0.660 | 585 | 579 | 0.0 | 1.4 | 7.905 | A |
| **3** | 1, 3, 4 | 612 | 889 | 0.689 | 612 | 617 | 0.0 | 1.4 | 8.427 | A |
| **2** | **1** | (3, 2) | 598 |  |  | 598 | 602 | 0.0 | 0.0 | 0.001 | A |
| **2** | (3, 4, 1) | 665 |  |  | 665 | 670 | 0.0 | 0.0 | 0.002 | A |
| **Exit** | **1** | **1** |  | 1794 |  |  | 1794 | 1778 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 46 | 624 | 0.075 | 46 | 46 | 0.0 | 0.1 | 6.296 | A |
| **2** | 1, 2, 4 | 223 | 624 | 0.358 | 225 | 226 | 0.0 | 0.6 | 9.242 | A |
| **2** | **1** | (3, 4, 1, 2) | 270 |  |  | 270 | 275 | 0.0 | 0.0 | 0.059 | A |
| **Exit** | **1** | **1** |  | 325 |  |  | 325 | 319 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 188 | 1024 | 0.183 | 187 | 191 | 0.0 | 0.2 | 4.414 | A |
| **2** | 1 | 752 | 1024 | 0.735 | 755 | 750 | 0.0 | 1.8 | 8.167 | A |
| **3** | 1, 3, 2 | 766 | 1024 | 0.748 | 768 | 763 | 0.0 | 2.0 | 8.581 | A |
| **2** | **1** | (4, 1) | 901 |  |  | 901 | 904 | 0.0 | 0.0 | 0.000 | A |
| **2** | (3, 1, 2) | 805 |  |  | 805 | 816 | 0.0 | 0.0 | 0.000 | A |
| **Exit** | **1** | **1** |  | 1204 |  |  | 1204 | 1204 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 534 | 662 | 0.806 | 523 | 509 | 0.0 | 4.5 | 23.796 | C |
| **2** | 3, 4 | 93 | 662 | 0.140 | 93 | 94 | 0.0 | 0.2 | 6.506 | A |
| **2** | **1** | (3, 4, 1, 2) | 626 |  |  | 627 | 622 | 0.0 | 0.1 | 0.258 | A |
| **Exit** | **1** | **1** |  | 534 |  |  | 534 | 539 | 0.0 | 0.0 | 0.000 | A |

08:00 - 08:15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 79 | 880 | 0.090 | 79 | 80 | 0.1 | 0.1 | 4.508 | A |
| **2** | 3 | 716 | 880 | 0.814 | 717 | 701 | 1.4 | 2.5 | 12.305 | B |
| **3** | 1, 3, 4 | 741 | 880 | 0.842 | 739 | 725 | 1.4 | 2.8 | 12.866 | B |
| **2** | **1** | (3, 2) | 732 |  |  | 732 | 722 | 0.0 | 0.0 | 0.146 | A |
| **2** | (3, 4, 1) | 805 |  |  | 805 | 795 | 0.0 | 0.1 | 0.159 | A |
| **Exit** | **1** | **1** |  | 2095 |  |  | 2095 | 2073 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 58 | 559 | 0.104 | 58 | 58 | 0.1 | 0.1 | 7.300 | A |
| **2** | 1, 2, 4 | 280 | 559 | 0.502 | 279 | 273 | 0.6 | 1.0 | 12.004 | B |
| **2** | **1** | (3, 4, 1, 2) | 339 |  |  | 338 | 332 | 0.0 | 0.1 | 0.288 | A |
| **Exit** | **1** | **1** |  | 374 |  |  | 374 | 372 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 233 | 1005 | 0.232 | 234 | 230 | 0.2 | 0.2 | 4.667 | A |
| **2** | 1 | 894 | 1005 | 0.890 | 888 | 881 | 1.8 | 5.1 | 16.683 | C |
| **3** | 1, 3, 2 | 911 | 1005 | 0.907 | 907 | 899 | 2.0 | 5.1 | 16.870 | C |
| **2** | **1** | (4, 1) | 1075 |  |  | 1074 | 1070 | 0.0 | 0.2 | 0.119 | A |
| **2** | (3, 1, 2) | 966 |  |  | 965 | 965 | 0.0 | 0.2 | 0.138 | A |
| **Exit** | **1** | **1** |  | 1453 |  |  | 1453 | 1432 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 590 | 590 | 1.001 | 583 | 573 | 4.5 | 12.3 | 59.779 | F |
| **2** | 3, 4 | 97 | 590 | 0.165 | 98 | 106 | 0.2 | 0.2 | 7.493 | A |
| **2** | **1** | (3, 4, 1, 2) | 731 |  |  | 688 | 710 | 0.1 | 6.6 | 13.323 | B |
| **Exit** | **1** | **1** |  | 659 |  |  | 659 | 648 | 0.0 | 0.0 | 0.000 | A |

08:15 - 08:30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 92 | 882 | 0.104 | 92 | 94 | 0.1 | 0.1 | 4.676 | A |
| **2** | 3 | 852 | 882 | 0.966 | 847 | 836 | 2.5 | 7.1 | 26.149 | D |
| **3** | 1, 3, 4 | 868 | 882 | 0.984 | 864 | 848 | 2.8 | 7.2 | 26.642 | D |
| **2** | **1** | (3, 2) | 984 |  |  | 969 | 932 | 0.0 | 3.6 | 7.396 | A |
| **2** | (3, 4, 1) | 862 |  |  | 842 | 882 | 0.1 | 4.2 | 9.079 | A |
| **Exit** | **1** | **1** |  | 2245 |  |  | 2245 | 2238 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 73 | 497 | 0.146 | 72 | 71 | 0.1 | 0.2 | 8.117 | A |
| **2** | 1, 2, 4 | 326 | 497 | 0.656 | 319 | 323 | 1.0 | 1.9 | 17.162 | C |
| **2** | **1** | (3, 4, 1, 2) | 400 |  |  | 398 | 398 | 0.1 | 0.4 | 1.886 | A |
| **Exit** | **1** | **1** |  | 383 |  |  | 383 | 387 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 270 | 988 | 0.273 | 270 | 271 | 0.2 | 0.4 | 5.216 | A |
| **2** | 1 | 1002 | 988 | 1.013 | 989 | 986 | 5.1 | 17.2 | 50.009 | F |
| **3** | 1, 3, 2 | 1002 | 988 | 1.014 | 992 | 982 | 5.1 | 17.2 | 50.465 | F |
| **2** | **1** | (4, 1) | 1421 |  |  | 1307 | 1299 | 0.2 | 21.2 | 25.334 | D |
| **2** | (3, 1, 2) | 1082 |  |  | 967 | 1037 | 0.2 | 21.6 | 33.403 | D |
| **Exit** | **1** | **1** |  | 1690 |  |  | 1690 | 1668 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 543 | 541 | 1.004 | 542 | 550 | 12.3 | 17.0 | 105.144 | F |
| **2** | 3, 4 | 95 | 541 | 0.176 | 94 | 97 | 0.2 | 0.3 | 8.825 | A |
| **2** | **1** | (3, 4, 1, 2) | 891 |  |  | 638 | 665 | 6.6 | 63.5 | 190.323 | F |
| **Exit** | **1** | **1** |  | 763 |  |  | 763 | 765 | 0.0 | 0.0 | 0.000 | A |

08:30 - 08:45

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 96 | 883 | 0.108 | 96 | 96 | 0.1 | 0.1 | 4.629 | A |
| **2** | 3 | 860 | 883 | 0.974 | 859 | 860 | 7.1 | 8.1 | 32.673 | D |
| **3** | 1, 3, 4 | 867 | 883 | 0.982 | 865 | 867 | 7.2 | 8.2 | 32.888 | D |
| **2** | **1** | (3, 2) | 1051 |  |  | 1051 | 1026 | 3.6 | 7.7 | 22.807 | C |
| **2** | (3, 4, 1) | 777 |  |  | 771 | 806 | 4.2 | 8.5 | 31.799 | D |
| **Exit** | **1** | **1** |  | 2210 |  |  | 2210 | 2224 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 67 | 494 | 0.135 | 67 | 69 | 0.2 | 0.2 | 8.522 | A |
| **2** | 1, 2, 4 | 337 | 494 | 0.683 | 339 | 338 | 1.9 | 1.7 | 19.757 | C |
| **2** | **1** | (3, 4, 1, 2) | 403 |  |  | 404 | 407 | 0.4 | 0.3 | 3.495 | A |
| **Exit** | **1** | **1** |  | 385 |  |  | 385 | 388 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 250 | 985 | 0.253 | 250 | 253 | 0.4 | 0.4 | 5.566 | A |
| **2** | 1 | 963 | 985 | 0.978 | 961 | 975 | 17.2 | 17.9 | 64.601 | F |
| **3** | 1, 3, 2 | 991 | 985 | 1.006 | 989 | 992 | 17.2 | 17.9 | 63.615 | F |
| **2** | **1** | (4, 1) | 1426 |  |  | 1274 | 1284 | 21.2 | 55.7 | 108.413 | F |
| **2** | (3, 1, 2) | 1079 |  |  | 930 | 941 | 21.6 | 56.0 | 149.062 | F |
| **Exit** | **1** | **1** |  | 1704 |  |  | 1704 | 1705 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 535 | 549 | 0.974 | 534 | 534 | 17.0 | 17.0 | 114.234 | F |
| **2** | 3, 4 | 94 | 549 | 0.171 | 94 | 93 | 0.3 | 0.2 | 8.875 | A |
| **2** | **1** | (3, 4, 1, 2) | 895 |  |  | 629 | 627 | 63.5 | 131.5 | 562.950 | F |
| **Exit** | **1** | **1** |  | 756 |  |  | 756 | 761 | 0.0 | 0.0 | 0.000 | A |

08:45 - 09:00

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 81 | 881 | 0.092 | 81 | 81 | 0.1 | 0.1 | 4.492 | A |
| **2** | 3 | 718 | 881 | 0.815 | 729 | 756 | 8.1 | 2.9 | 22.333 | C |
| **3** | 1, 3, 4 | 738 | 881 | 0.838 | 753 | 782 | 8.2 | 2.9 | 22.273 | C |
| **2** | **1** | (3, 2) | 749 |  |  | 759 | 810 | 7.7 | 0.5 | 10.772 | B |
| **2** | (3, 4, 1) | 769 |  |  | 779 | 767 | 8.5 | 0.5 | 12.147 | B |
| **Exit** | **1** | **1** |  | 2232 |  |  | 2232 | 2243 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 56 | 554 | 0.101 | 55 | 56 | 0.2 | 0.1 | 7.891 | A |
| **2** | 1, 2, 4 | 276 | 554 | 0.498 | 277 | 277 | 1.7 | 1.0 | 14.373 | B |
| **2** | **1** | (3, 4, 1, 2) | 332 |  |  | 332 | 330 | 0.3 | 0.1 | 0.939 | A |
| **Exit** | **1** | **1** |  | 379 |  |  | 379 | 379 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 256 | 1004 | 0.254 | 257 | 251 | 0.4 | 0.3 | 5.332 | A |
| **2** | 1 | 979 | 1004 | 0.975 | 988 | 991 | 17.9 | 16.7 | 63.200 | F |
| **3** | 1, 3, 2 | 987 | 1004 | 0.983 | 996 | 998 | 17.9 | 16.7 | 62.905 | F |
| **2** | **1** | (4, 1) | 1197 |  |  | 1284 | 1293 | 55.7 | 33.2 | 122.852 | F |
| **2** | (3, 1, 2) | 848 |  |  | 937 | 937 | 56.0 | 33.7 | 172.465 | F |
| **Exit** | **1** | **1** |  | 1467 |  |  | 1467 | 1519 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 534 | 541 | 0.988 | 534 | 541 | 17.0 | 17.0 | 113.091 | F |
| **2** | 3, 4 | 94 | 541 | 0.174 | 92 | 96 | 0.2 | 0.4 | 9.470 | A |
| **2** | **1** | (3, 4, 1, 2) | 732 |  |  | 628 | 637 | 131.5 | 156.0 | 796.382 | F |
| **Exit** | **1** | **1** |  | 685 |  |  | 685 | 688 | 0.0 | 0.0 | 0.000 | A |

09:00 - 09:15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 58 | 877 | 0.067 | 59 | 63 | 0.1 | 0.1 | 4.484 | A |
| **2** | 3 | 587 | 877 | 0.669 | 590 | 591 | 2.9 | 1.3 | 8.846 | A |
| **3** | 1, 3, 4 | 621 | 877 | 0.709 | 625 | 624 | 2.9 | 1.5 | 9.282 | A |
| **2** | **1** | (3, 2) | 601 |  |  | 602 | 603 | 0.5 | 0.0 | 0.668 | A |
| **2** | (3, 4, 1) | 664 |  |  | 665 | 663 | 0.5 | 0.0 | 0.631 | A |
| **Exit** | **1** | **1** |  | 2018 |  |  | 2018 | 2112 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 48 | 615 | 0.077 | 47 | 49 | 0.1 | 0.1 | 6.029 | A |
| **2** | 1, 2, 4 | 226 | 615 | 0.368 | 226 | 229 | 1.0 | 0.5 | 9.651 | A |
| **2** | **1** | (3, 4, 1, 2) | 274 |  |  | 274 | 276 | 0.1 | 0.0 | 0.100 | A |
| **Exit** | **1** | **1** |  | 359 |  |  | 359 | 366 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 209 | 1023 | 0.204 | 210 | 221 | 0.3 | 0.2 | 4.502 | A |
| **2** | 1 | 811 | 1023 | 0.793 | 849 | 909 | 16.7 | 5.1 | 42.825 | E |
| **3** | 1, 3, 2 | 817 | 1023 | 0.799 | 857 | 923 | 16.7 | 5.2 | 42.394 | E |
| **2** | **1** | (4, 1) | 936 |  |  | 1001 | 1093 | 33.2 | 2.6 | 40.442 | E |
| **2** | (3, 1, 2) | 769 |  |  | 837 | 867 | 33.7 | 2.7 | 48.397 | E |
| **Exit** | **1** | **1** |  | 1238 |  |  | 1238 | 1235 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 603 | 614 | 0.983 | 603 | 574 | 17.0 | 17.0 | 105.966 | F |
| **2** | 3, 4 | 107 | 614 | 0.174 | 108 | 104 | 0.4 | 0.2 | 8.541 | A |
| **2** | **1** | (3, 4, 1, 2) | 615 |  |  | 710 | 678 | 156.0 | 141.0 | 667.309 | F |
| **Exit** | **1** | **1** |  | 559 |  |  | 559 | 574 | 0.0 | 0.0 | 0.000 | A |

Lanes: Queue Variation Results for each time segment

07:45 - 08:00

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.08 | 0.00 | 0.00 | 0.00 | 1.00 |
| **2** | 1.39 | 0.00 | 0.63 | 2.71 | 3.72 |
| **3** | 1.43 | 0.00 | 0.62 | 2.94 | 3.78 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.10 | 0.00 | 0.00 | 0.00 | 0.41 |
| **2** | 0.57 | 0.00 | 0.00 | 1.43 | 2.13 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.21 | 0.00 | 0.00 | 0.53 | 0.87 |
| **2** | 1.79 | 0.00 | 0.83 | 3.55 | 5.03 |
| **3** | 2.01 | 0.00 | 0.96 | 4.41 | 5.51 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 4.53 | 0.00 | 2.50 | 10.55 | 14.35 |
| **2** | 0.15 | 0.00 | 0.00 | 0.28 | 0.73 |
| **2** | **1** | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

08:00 - 08:15

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.12 | 0.00 | 0.00 | 0.12 | 0.59 |
| **2** | 2.54 | 0.00 | 1.47 | 5.68 | 7.05 |
| **3** | 2.81 | 0.00 | 1.69 | 5.71 | 7.41 |
| **2** | **1** | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.13 | 0.00 | 0.00 | 0.18 | 0.65 |
| **2** | 1.04 | 0.00 | 0.02 | 2.59 | 3.44 |
| **2** | **1** | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.23 | 0.00 | 0.00 | 0.57 | 0.92 |
| **2** | 5.08 | 0.00 | 2.93 | 10.55 | 15.05 |
| **3** | 5.11 | 0.00 | 3.19 | 11.55 | 16.26 |
| **2** | **1** | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 12.28 | 1.59 | 15.25 | 17.00 | 17.00 |
| **2** | 0.25 | 0.00 | 0.00 | 0.61 | 1.01 |
| **2** | **1** | 6.60 | 0.00 | 0.00 | 22.28 | 29.05 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

08:15 - 08:30

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.12 | 0.00 | 0.00 | 0.01 | 0.58 |
| **2** | 7.13 | 0.00 | 8.81 | 10.00 | 10.00 |
| **3** | 7.16 | 0.11 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 3.58 | 0.00 | 0.00 | 10.10 | 18.53 |
| **2** | 4.19 | 0.00 | 0.00 | 13.55 | 21.03 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.16 | 0.00 | 0.00 | 0.36 | 0.75 |
| **2** | 1.94 | 0.00 | 1.09 | 5.00 | 5.00 |
| **2** | **1** | 0.36 | 0.00 | 0.00 | 0.18 | 2.53 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.44 | 0.00 | 0.00 | 0.97 | 1.78 |
| **2** | 17.17 | 9.95 | 18.00 | 18.00 | 18.00 |
| **3** | 17.17 | 8.97 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 21.23 | 0.00 | 18.92 | 46.03 | 51.05 |
| **2** | 21.56 | 0.00 | 19.58 | 45.70 | 50.05 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.97 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.29 | 0.00 | 0.00 | 0.79 | 1.41 |
| **2** | **1** | 63.51 | 19.95 | 63.88 | 90.70 | 98.15 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

08:30 - 08:45

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.12 | 0.00 | 0.00 | 0.07 | 0.60 |
| **2** | 8.08 | 0.85 | 10.00 | 10.00 | 10.00 |
| **3** | 8.25 | 0.71 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 7.74 | 0.00 | 3.50 | 20.10 | 29.35 |
| **2** | 8.55 | 0.00 | 4.42 | 22.55 | 29.05 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.16 | 0.00 | 0.00 | 0.34 | 0.78 |
| **2** | 1.70 | 0.00 | 0.74 | 5.00 | 5.00 |
| **2** | **1** | 0.33 | 0.00 | 0.00 | 0.03 | 2.21 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.40 | 0.00 | 0.00 | 0.90 | 1.84 |
| **2** | 17.86 | 18.00 | 18.00 | 18.00 | 18.00 |
| **3** | 17.87 | 18.00 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 55.70 | 11.90 | 52.50 | 89.30 | 100.05 |
| **2** | 55.98 | 12.95 | 52.30 | 90.20 | 100.15 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.99 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.23 | 0.00 | 0.00 | 0.57 | 1.15 |
| **2** | **1** | 131.47 | 71.95 | 130.50 | 175.10 | 183.15 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

08:45 - 09:00

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.13 | 0.00 | 0.00 | 0.01 | 0.67 |
| **2** | 2.86 | 0.00 | 1.65 | 6.22 | 10.00 |
| **3** | 2.93 | 0.00 | 1.72 | 7.01 | 10.00 |
| **2** | **1** | 0.45 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.55 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.11 | 0.00 | 0.00 | 0.01 | 0.54 |
| **2** | 0.97 | 0.00 | 0.00 | 2.51 | 3.61 |
| **2** | **1** | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.26 | 0.00 | 0.00 | 0.70 | 2.00 |
| **2** | 16.74 | 5.48 | 18.00 | 18.00 | 18.00 |
| **3** | 16.74 | 4.95 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 33.20 | 0.00 | 28.63 | 69.70 | 81.05 |
| **2** | 33.69 | 0.00 | 29.75 | 71.10 | 81.05 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.98 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.35 | 0.00 | 0.00 | 1.01 | 1.62 |
| **2** | **1** | 156.01 | 85.55 | 156.67 | 204.55 | 210.51 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

09:00 - 09:15

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.08 | 0.00 | 0.00 | 0.00 | 0.37 |
| **2** | 1.26 | 0.00 | 0.52 | 2.54 | 3.26 |
| **3** | 1.47 | 0.00 | 0.77 | 2.77 | 3.41 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.09 | 0.00 | 0.00 | 0.00 | 0.47 |
| **2** | 0.49 | 0.00 | 0.00 | 1.11 | 1.91 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.17 | 0.00 | 0.00 | 0.32 | 0.74 |
| **2** | 5.14 | 0.00 | 1.72 | 18.00 | 18.00 |
| **3** | 5.24 | 0.00 | 1.57 | 18.00 | 18.00 |
| **2** | **1** | 2.61 | 0.00 | 0.00 | 6.10 | 14.58 |
| **2** | 2.68 | 0.00 | 0.00 | 6.37 | 14.05 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.19 | 0.00 | 0.00 | 0.48 | 0.86 |
| **2** | **1** | 140.98 | 68.75 | 142.43 | 197.20 | 213.15 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

2014, PM

Data Errors and Warnings

|  |  |  |  |
| --- | --- | --- | --- |
| **Severity** | **Area** | **Item** | **Description** |
| Warning | Lane Simulation | A1 - [Lane Simulation] | This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results. |
| Last Run | Lane Simulation | Arm 1 - Lane Simulation | Arm 1: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Warning | Geometry | Arm 1 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 2 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 3 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 4 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Vehicle Mix |  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| 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** | Stockbridge Roundabout | Standard Roundabout |  | 1, 2, 3, 4 | 265.21 | F |

Junction Network Options

|  |  |
| --- | --- |
| **Driving side** | **Lighting** |
| Left | Normal/unknown |

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** |
| **D2** | 2014 | PM | ONE HOUR | 16:45 | 18:15 | 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 (PCU/hr)** | **Scaling Factor (%)** |
| **1** |  | ONE HOUR |  | 1985 | 100.000 |
| **2** |  | ONE HOUR |  | 504 | 100.000 |
| **3** |  | ONE HOUR |  | 1711 | 100.000 |
| **4** |  | ONE HOUR |  | 937 | 100.000 |

Origin-Destination Data

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Demand (PCU/hr)   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **To** | | | | | | **From** |  | **1** | **2** | **3** | **4** | | **1** | 0 | 78 | 1506 | 401 | | **2** | 32 | 0 | 97 | 375 | | **3** | 1543 | 35 | 0 | 133 | | **4** | 321 | 253 | 363 | 0 | |  |

Vehicle Mix

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Heavy Vehicle Percentages   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **To** | | | | | | **From** |  | **1** | **2** | **3** | **4** | | **1** | 0 | 0 | 0 | 0 | | **2** | 0 | 0 | 0 | 0 | | **3** | 0 | 0 | 0 | 0 | | **4** | 0 | 0 | 0 | 0 | |  |

Results

Results Summary for whole modelled period

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Max Delay (s)** | **Max Queue (PCU)** | **Max 95th percentile Queue (PCU)** | **Max LOS** | **Average Demand (PCU/hr)** | **Total Junction Arrivals (PCU)** |
| **1** | 574.80 | 283.6 | 361.0 | F | 1823 | 2735 |
| **2** | 141.72 | 23.7 | 56.0 | F | 466 | 699 |
| **3** | 25.80 | 15.0 | 39.0 | D | 1572 | 2357 |
| **4** | 112.39 | 37.0 | 82.0 | F | 855 | 1283 |

Main Results for each time segment

16:45 - 17:00

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1486 | 372 | 490 | 1483 | 1463 | 1416 | 0.0 | 5.9 | 13.296 | B |
| **2** | 386 | 97 | 1701 | 383 | 374 | 272 | 0.0 | 1.7 | 14.506 | B |
| **3** | 1273 | 318 | 610 | 1276 | 1270 | 1474 | 0.0 | 2.3 | 6.157 | A |
| **4** | 705 | 176 | 1203 | 703 | 699 | 683 | 0.0 | 2.0 | 9.832 | A |

17:00 - 17:15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1772 | 443 | 586 | 1717 | 1698 | 1709 | 5.9 | 27.5 | 42.002 | E |
| **2** | 454 | 114 | 1973 | 448 | 444 | 329 | 1.7 | 4.8 | 32.148 | D |
| **3** | 1543 | 386 | 691 | 1546 | 1528 | 1730 | 2.3 | 3.7 | 8.490 | A |
| **4** | 839 | 210 | 1457 | 838 | 827 | 781 | 2.0 | 3.9 | 15.371 | C |

17:15 - 17:30

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 2209 | 552 | 668 | 1717 | 1717 | 2040 | 27.5 | 146.9 | 189.877 | F |
| **2** | 561 | 140 | 2018 | 520 | 511 | 367 | 4.8 | 17.2 | 84.134 | F |
| **3** | 1891 | 473 | 726 | 1866 | 1846 | 1811 | 3.7 | 12.2 | 19.267 | C |
| **4** | 1028 | 257 | 1750 | 958 | 961 | 843 | 3.9 | 21.2 | 49.822 | E |

17:30 - 17:45

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 2173 | 543 | 686 | 1709 | 1703 | 2042 | 146.9 | 265.3 | 453.875 | F |
| **2** | 549 | 137 | 2025 | 519 | 527 | 371 | 17.2 | 23.7 | 141.724 | F |
| **3** | 1891 | 473 | 722 | 1868 | 1869 | 1822 | 12.2 | 15.0 | 25.799 | D |
| **4** | 1027 | 257 | 1757 | 971 | 967 | 833 | 21.2 | 37.0 | 112.394 | F |

17:45 - 18:00

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1791 | 448 | 620 | 1714 | 1718 | 1743 | 265.3 | 283.6 | 574.802 | F |
| **2** | 449 | 112 | 1990 | 488 | 502 | 344 | 23.7 | 12.1 | 120.249 | F |
| **3** | 1533 | 383 | 690 | 1542 | 1582 | 1788 | 15.0 | 3.7 | 12.412 | B |
| **4** | 844 | 211 | 1457 | 906 | 943 | 775 | 37.0 | 11.2 | 81.238 | F |

18:00 - 18:15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1508 | 377 | 483 | 1793 | 1774 | 1441 | 283.6 | 215.5 | 433.384 | F |
| **2** | 395 | 99 | 1992 | 399 | 412 | 284 | 12.1 | 3.9 | 45.848 | E |
| **3** | 1299 | 325 | 667 | 1304 | 1300 | 1724 | 3.7 | 2.4 | 6.775 | A |
| **4** | 689 | 172 | 1230 | 694 | 734 | 740 | 11.2 | 1.8 | 16.859 | C |

Queue Variation Results for each time segment

16:45 - 17:00

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 5.85 | 0.00 | 4.06 | 12.67 | 15.80 |
| **2** | 1.66 | 0.00 | 0.52 | 3.60 | 5.67 |
| **3** | 2.32 | 0.00 | 1.29 | 4.40 | 7.20 |
| **4** | 2.03 | 0.00 | 0.98 | 4.22 | 5.40 |

17:00 - 17:15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 27.52 | 2.00 | 23.57 | 53.00 | 62.00 |
| **2** | 4.82 | 0.00 | 2.20 | 11.50 | 16.00 |
| **3** | 3.73 | 0.00 | 2.32 | 8.00 | 10.33 |
| **4** | 3.85 | 0.00 | 2.52 | 7.57 | 10.33 |

17:15 - 17:30

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 146.88 | 91.00 | 147.00 | 189.50 | 204.00 |
| **2** | 17.24 | 0.57 | 14.67 | 37.33 | 43.33 |
| **3** | 12.22 | 0.56 | 8.57 | 25.67 | 34.00 |
| **4** | 21.24 | 2.00 | 16.75 | 42.33 | 49.00 |

17:30 - 17:45

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 265.27 | 189.00 | 270.50 | 320.00 | 337.00 |
| **2** | 23.67 | 1.60 | 19.67 | 48.50 | 56.00 |
| **3** | 15.02 | 0.67 | 10.86 | 32.00 | 39.00 |
| **4** | 36.96 | 3.33 | 29.67 | 72.33 | 82.00 |

17:45 - 18:00

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 283.64 | 203.00 | 284.00 | 347.00 | 361.00 |
| **2** | 12.07 | 0.00 | 6.67 | 32.00 | 42.00 |
| **3** | 3.73 | 0.00 | 2.39 | 7.86 | 10.25 |
| **4** | 11.17 | 0.00 | 3.94 | 30.00 | 49.00 |

18:00 - 18:15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 215.46 | 116.00 | 215.50 | 280.25 | 295.00 |
| **2** | 3.91 | 0.00 | 1.84 | 7.40 | 10.00 |
| **3** | 2.42 | 0.00 | 1.42 | 5.11 | 6.20 |
| **4** | 1.78 | 0.00 | 0.74 | 3.85 | 5.00 |

Lane Results

*Lane Level notation: Lane Level 1 is always closest to the junction.*

Lanes: Main Results for each time segment

16:45 - 17:00

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 57 | 860 | 0.067 | 57 | 59 | 0.0 | 0.1 | 4.537 | A |
| **2** | 3 | 691 | 860 | 0.804 | 687 | 675 | 0.0 | 2.7 | 12.654 | B |
| **3** | 1, 3, 4 | 738 | 860 | 0.859 | 738 | 729 | 0.0 | 3.0 | 14.151 | B |
| **2** | **1** | (3, 2) | 641 |  |  | 641 | 629 | 0.0 | 0.0 | 0.173 | A |
| **2** | (3, 4, 1) | 845 |  |  | 845 | 856 | 0.0 | 0.1 | 0.239 | A |
| **Exit** | **1** | **1** |  | 1416 |  |  | 1416 | 1405 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 72 | 522 | 0.139 | 73 | 73 | 0.0 | 0.1 | 7.967 | A |
| **2** | 1, 2, 4 | 313 | 522 | 0.599 | 311 | 301 | 0.0 | 1.3 | 14.779 | B |
| **2** | **1** | (3, 4, 1, 2) | 386 |  |  | 385 | 380 | 0.0 | 0.2 | 1.010 | A |
| **Exit** | **1** | **1** |  | 272 |  |  | 272 | 275 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 99 | 964 | 0.102 | 98 | 99 | 0.0 | 0.1 | 4.079 | A |
| **2** | 1 | 579 | 964 | 0.601 | 580 | 578 | 0.0 | 1.1 | 6.355 | A |
| **3** | 1, 3, 2 | 595 | 964 | 0.618 | 597 | 594 | 0.0 | 1.1 | 6.309 | A |
| **2** | **1** | (4, 1) | 669 |  |  | 669 | 675 | 0.0 | 0.0 | 0.000 | A |
| **2** | (3, 1, 2) | 604 |  |  | 604 | 604 | 0.0 | 0.0 | 0.000 | A |
| **Exit** | **1** | **1** |  | 1474 |  |  | 1474 | 1453 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 428 | 748 | 0.572 | 427 | 427 | 0.0 | 1.4 | 11.279 | B |
| **2** | 3, 4 | 277 | 748 | 0.371 | 276 | 272 | 0.0 | 0.6 | 7.552 | A |
| **2** | **1** | (3, 4, 1, 2) | 705 |  |  | 705 | 707 | 0.0 | 0.0 | 0.000 | A |
| **Exit** | **1** | **1** |  | 683 |  |  | 683 | 672 | 0.0 | 0.0 | 0.000 | A |

17:00 - 17:15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 70 | 839 | 0.084 | 71 | 70 | 0.1 | 0.1 | 4.818 | A |
| **2** | 3 | 821 | 839 | 0.978 | 816 | 803 | 2.7 | 7.7 | 29.607 | D |
| **3** | 1, 3, 4 | 835 | 839 | 0.995 | 830 | 825 | 3.0 | 8.1 | 30.489 | D |
| **2** | **1** | (3, 2) | 987 |  |  | 969 | 894 | 0.0 | 4.8 | 9.770 | A |
| **2** | (3, 4, 1) | 785 |  |  | 756 | 845 | 0.1 | 6.8 | 15.592 | C |
| **Exit** | **1** | **1** |  | 1709 |  |  | 1709 | 1685 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 90 | 455 | 0.197 | 89 | 87 | 0.1 | 0.2 | 10.199 | B |
| **2** | 1, 2, 4 | 358 | 455 | 0.785 | 359 | 357 | 1.3 | 2.6 | 24.612 | C |
| **2** | **1** | (3, 4, 1, 2) | 454 |  |  | 447 | 450 | 0.2 | 1.9 | 10.103 | B |
| **Exit** | **1** | **1** |  | 329 |  |  | 329 | 324 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 119 | 945 | 0.126 | 119 | 122 | 0.1 | 0.1 | 4.261 | A |
| **2** | 1 | 707 | 945 | 0.748 | 708 | 701 | 1.1 | 1.8 | 8.777 | A |
| **3** | 1, 3, 2 | 718 | 945 | 0.759 | 719 | 705 | 1.1 | 1.8 | 8.932 | A |
| **2** | **1** | (4, 1) | 810 |  |  | 810 | 811 | 0.0 | 0.0 | 0.000 | A |
| **2** | (3, 1, 2) | 733 |  |  | 733 | 723 | 0.0 | 0.0 | 0.000 | A |
| **Exit** | **1** | **1** |  | 1730 |  |  | 1730 | 1708 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 513 | 682 | 0.752 | 510 | 504 | 1.4 | 2.9 | 19.025 | C |
| **2** | 3, 4 | 326 | 682 | 0.478 | 327 | 323 | 0.6 | 0.9 | 9.405 | A |
| **2** | **1** | (3, 4, 1, 2) | 839 |  |  | 839 | 834 | 0.0 | 0.0 | 0.073 | A |
| **Exit** | **1** | **1** |  | 781 |  |  | 781 | 781 | 0.0 | 0.0 | 0.000 | A |

17:15 - 17:30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 73 | 822 | 0.089 | 74 | 73 | 0.1 | 0.1 | 4.966 | A |
| **2** | 3 | 822 | 822 | 1.000 | 822 | 825 | 7.7 | 10.0 | 42.495 | E |
| **3** | 1, 3, 4 | 822 | 822 | 1.000 | 822 | 819 | 8.1 | 10.0 | 43.107 | E |
| **2** | **1** | (3, 2) | 1456 |  |  | 1210 | 1183 | 4.8 | 62.0 | 98.750 | F |
| **2** | (3, 4, 1) | 753 |  |  | 506 | 551 | 6.8 | 64.8 | 237.446 | F |
| **Exit** | **1** | **1** |  | 2040 |  |  | 2040 | 2012 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 98 | 444 | 0.220 | 98 | 98 | 0.2 | 0.4 | 11.454 | B |
| **2** | 1, 2, 4 | 422 | 444 | 0.950 | 422 | 412 | 2.6 | 4.4 | 34.912 | D |
| **2** | **1** | (3, 4, 1, 2) | 561 |  |  | 520 | 518 | 1.9 | 12.5 | 53.400 | F |
| **Exit** | **1** | **1** |  | 367 |  |  | 367 | 365 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 149 | 937 | 0.160 | 149 | 149 | 0.1 | 0.2 | 4.595 | A |
| **2** | 1 | 870 | 937 | 0.929 | 858 | 848 | 1.8 | 5.9 | 20.311 | C |
| **3** | 1, 3, 2 | 869 | 937 | 0.928 | 859 | 849 | 1.8 | 5.8 | 20.434 | C |
| **2** | **1** | (4, 1) | 988 |  |  | 987 | 990 | 0.0 | 0.1 | 0.117 | A |
| **2** | (3, 1, 2) | 903 |  |  | 902 | 889 | 0.0 | 0.1 | 0.133 | A |
| **Exit** | **1** | **1** |  | 1811 |  |  | 1811 | 1823 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 599 | 605 | 0.989 | 584 | 575 | 2.9 | 11.7 | 54.081 | F |
| **2** | 3, 4 | 379 | 605 | 0.627 | 374 | 385 | 0.9 | 2.1 | 15.652 | C |
| **2** | **1** | (3, 4, 1, 2) | 1028 |  |  | 978 | 1001 | 0.0 | 7.4 | 9.839 | A |
| **Exit** | **1** | **1** |  | 843 |  |  | 843 | 834 | 0.0 | 0.0 | 0.000 | A |

17:30 - 17:45

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 72 | 818 | 0.088 | 71 | 72 | 0.1 | 0.1 | 4.908 | A |
| **2** | 3 | 823 | 818 | 1.007 | 824 | 816 | 10.0 | 10.0 | 44.147 | E |
| **3** | 1, 3, 4 | 814 | 818 | 0.996 | 814 | 816 | 10.0 | 10.0 | 44.078 | E |
| **2** | **1** | (3, 2) | 1427 |  |  | 1193 | 1197 | 62.0 | 121.3 | 276.394 | F |
| **2** | (3, 4, 1) | 746 |  |  | 517 | 507 | 64.8 | 123.8 | 672.647 | F |
| **Exit** | **1** | **1** |  | 2042 |  |  | 2042 | 2046 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 95 | 443 | 0.216 | 96 | 101 | 0.4 | 0.3 | 11.174 | B |
| **2** | 1, 2, 4 | 425 | 443 | 0.959 | 423 | 426 | 4.4 | 4.6 | 37.465 | E |
| **2** | **1** | (3, 4, 1, 2) | 549 |  |  | 520 | 528 | 12.5 | 18.8 | 109.007 | F |
| **Exit** | **1** | **1** |  | 371 |  |  | 371 | 369 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 143 | 937 | 0.152 | 143 | 146 | 0.2 | 0.2 | 4.542 | A |
| **2** | 1 | 869 | 937 | 0.927 | 858 | 861 | 5.9 | 6.9 | 26.078 | D |
| **3** | 1, 3, 2 | 877 | 937 | 0.935 | 867 | 862 | 5.8 | 7.0 | 26.260 | D |
| **2** | **1** | (4, 1) | 995 |  |  | 993 | 989 | 0.1 | 0.5 | 1.156 | A |
| **2** | (3, 1, 2) | 896 |  |  | 895 | 889 | 0.1 | 0.5 | 1.302 | A |
| **Exit** | **1** | **1** |  | 1822 |  |  | 1822 | 1812 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 592 | 603 | 0.981 | 584 | 588 | 11.7 | 13.9 | 78.553 | F |
| **2** | 3, 4 | 383 | 603 | 0.634 | 387 | 380 | 2.1 | 1.9 | 19.866 | C |
| **2** | **1** | (3, 4, 1, 2) | 1027 |  |  | 974 | 976 | 7.4 | 21.1 | 56.010 | F |
| **Exit** | **1** | **1** |  | 833 |  |  | 833 | 839 | 0.0 | 0.0 | 0.000 | A |

17:45 - 18:00

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 67 | 832 | 0.081 | 68 | 71 | 0.1 | 0.0 | 4.973 | A |
| **2** | 3 | 816 | 832 | 0.981 | 816 | 817 | 10.0 | 10.0 | 43.998 | E |
| **3** | 1, 3, 4 | 830 | 832 | 0.998 | 830 | 829 | 10.0 | 10.0 | 43.413 | E |
| **2** | **1** | (3, 2) | 1239 |  |  | 1196 | 1206 | 121.3 | 129.8 | 372.702 | F |
| **2** | (3, 4, 1) | 551 |  |  | 517 | 512 | 123.8 | 133.8 | 898.863 | F |
| **Exit** | **1** | **1** |  | 1743 |  |  | 1743 | 1791 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 95 | 451 | 0.211 | 97 | 97 | 0.3 | 0.2 | 11.681 | B |
| **2** | 1, 2, 4 | 387 | 451 | 0.857 | 391 | 405 | 4.6 | 3.5 | 35.498 | E |
| **2** | **1** | (3, 4, 1, 2) | 449 |  |  | 482 | 498 | 18.8 | 8.4 | 89.928 | F |
| **Exit** | **1** | **1** |  | 344 |  |  | 344 | 363 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 116 | 945 | 0.122 | 116 | 120 | 0.2 | 0.2 | 4.232 | A |
| **2** | 1 | 706 | 945 | 0.747 | 710 | 729 | 6.9 | 1.7 | 12.815 | B |
| **3** | 1, 3, 2 | 712 | 945 | 0.753 | 715 | 734 | 7.0 | 1.9 | 12.843 | B |
| **2** | **1** | (4, 1) | 805 |  |  | 805 | 815 | 0.5 | 0.0 | 0.391 | A |
| **2** | (3, 1, 2) | 728 |  |  | 728 | 725 | 0.5 | 0.0 | 0.424 | A |
| **Exit** | **1** | **1** |  | 1788 |  |  | 1788 | 1794 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 546 | 682 | 0.801 | 563 | 589 | 13.9 | 6.2 | 59.868 | F |
| **2** | 3, 4 | 340 | 682 | 0.498 | 344 | 355 | 1.9 | 1.0 | 14.960 | B |
| **2** | **1** | (3, 4, 1, 2) | 844 |  |  | 886 | 909 | 21.1 | 4.0 | 40.961 | E |
| **Exit** | **1** | **1** |  | 775 |  |  | 775 | 796 | 0.0 | 0.0 | 0.000 | A |

18:00 - 18:15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 68 | 861 | 0.079 | 68 | 68 | 0.0 | 0.1 | 4.717 | A |
| **2** | 3 | 868 | 861 | 1.008 | 868 | 853 | 10.0 | 10.0 | 41.956 | E |
| **3** | 1, 3, 4 | 857 | 861 | 0.995 | 857 | 853 | 10.0 | 10.0 | 42.070 | E |
| **2** | **1** | (3, 2) | 1132 |  |  | 1274 | 1262 | 129.8 | 92.0 | 322.715 | F |
| **2** | (3, 4, 1) | 376 |  |  | 519 | 512 | 133.8 | 103.3 | 764.634 | F |
| **Exit** | **1** | **1** |  | 1441 |  |  | 1441 | 1456 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 79 | 451 | 0.175 | 79 | 79 | 0.2 | 0.2 | 9.551 | A |
| **2** | 1, 2, 4 | 323 | 451 | 0.717 | 320 | 332 | 3.5 | 2.4 | 26.066 | D |
| **2** | **1** | (3, 4, 1, 2) | 395 |  |  | 402 | 407 | 8.4 | 1.3 | 23.955 | C |
| **Exit** | **1** | **1** |  | 284 |  |  | 284 | 295 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 100 | 951 | 0.105 | 100 | 100 | 0.2 | 0.1 | 4.214 | A |
| **2** | 1 | 597 | 951 | 0.628 | 599 | 598 | 1.7 | 1.1 | 6.933 | A |
| **3** | 1, 3, 2 | 602 | 951 | 0.633 | 604 | 602 | 1.9 | 1.2 | 7.048 | A |
| **2** | **1** | (4, 1) | 687 |  |  | 687 | 684 | 0.0 | 0.0 | 0.000 | A |
| **2** | (3, 1, 2) | 612 |  |  | 612 | 611 | 0.0 | 0.0 | 0.000 | A |
| **Exit** | **1** | **1** |  | 1724 |  |  | 1724 | 1726 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 422 | 741 | 0.569 | 427 | 456 | 6.2 | 1.3 | 19.101 | C |
| **2** | 3, 4 | 267 | 741 | 0.361 | 267 | 278 | 1.0 | 0.5 | 8.364 | A |
| **2** | **1** | (3, 4, 1, 2) | 689 |  |  | 689 | 712 | 4.0 | 0.0 | 2.968 | A |
| **Exit** | **1** | **1** |  | 740 |  |  | 740 | 744 | 0.0 | 0.0 | 0.000 | A |

Lanes: Queue Variation Results for each time segment

16:45 - 17:00

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.08 | 0.00 | 0.00 | 0.00 | 0.38 |
| **2** | 2.69 | 0.00 | 1.54 | 6.00 | 7.67 |
| **3** | 2.99 | 0.00 | 1.86 | 5.88 | 8.00 |
| **2** | **1** | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.14 | 0.00 | 0.00 | 0.13 | 0.73 |
| **2** | 1.34 | 0.00 | 0.35 | 3.40 | 5.00 |
| **2** | **1** | 0.18 | 0.00 | 0.00 | 0.00 | 0.50 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.12 | 0.00 | 0.00 | 0.06 | 0.59 |
| **2** | 1.13 | 0.00 | 0.36 | 2.38 | 3.20 |
| **3** | 1.07 | 0.00 | 0.33 | 2.18 | 3.00 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 1.41 | 0.00 | 0.31 | 3.64 | 4.44 |
| **2** | 0.62 | 0.00 | 0.00 | 1.52 | 1.95 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

17:00 - 17:15

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.08 | 0.00 | 0.00 | 0.00 | 1.00 |
| **2** | 7.73 | 0.17 | 10.00 | 10.00 | 10.00 |
| **3** | 8.14 | 1.14 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 4.83 | 0.00 | 0.67 | 13.80 | 18.00 |
| **2** | 6.75 | 0.00 | 2.80 | 19.00 | 22.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.24 | 0.00 | 0.00 | 0.60 | 0.90 |
| **2** | 2.64 | 0.00 | 2.00 | 5.00 | 5.00 |
| **2** | **1** | 1.93 | 0.00 | 0.00 | 6.50 | 11.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.14 | 0.00 | 0.00 | 0.24 | 0.67 |
| **2** | 1.79 | 0.00 | 0.85 | 3.70 | 5.00 |
| **3** | 1.79 | 0.00 | 0.80 | 4.00 | 5.29 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 2.91 | 0.00 | 1.65 | 6.57 | 8.00 |
| **2** | 0.92 | 0.00 | 0.00 | 2.29 | 2.93 |
| **2** | **1** | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

17:15 - 17:30

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.06 | 0.00 | 0.00 | 0.00 | 1.00 |
| **2** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 62.01 | 33.33 | 62.20 | 83.50 | 91.00 |
| **2** | 64.82 | 37.00 | 65.00 | 85.50 | 93.33 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.36 | 0.00 | 0.00 | 0.82 | 1.50 |
| **2** | 4.37 | 0.25 | 5.00 | 5.00 | 5.00 |
| **2** | **1** | 12.52 | 0.00 | 9.00 | 32.33 | 37.67 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.22 | 0.00 | 0.00 | 0.58 | 0.96 |
| **2** | 5.90 | 0.00 | 3.86 | 12.38 | 16.00 |
| **3** | 5.82 | 0.00 | 4.00 | 13.00 | 16.00 |
| **2** | **1** | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 11.72 | 0.25 | 13.43 | 17.00 | 17.00 |
| **2** | 2.09 | 0.00 | 0.63 | 5.50 | 7.60 |
| **2** | **1** | 7.43 | 0.00 | 0.00 | 23.67 | 30.50 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

17:30 - 17:45

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.12 | 0.00 | 0.00 | 0.06 | 0.59 |
| **2** | 9.99 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 121.34 | 83.50 | 123.40 | 148.67 | 157.00 |
| **2** | 123.82 | 86.00 | 126.20 | 150.75 | 159.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.26 | 0.00 | 0.00 | 0.63 | 0.96 |
| **2** | 4.64 | 1.25 | 5.00 | 5.00 | 5.00 |
| **2** | **1** | 18.77 | 0.00 | 14.57 | 43.00 | 51.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.15 | 0.00 | 0.00 | 0.24 | 0.67 |
| **2** | 6.92 | 0.00 | 5.07 | 15.50 | 18.00 |
| **3** | 6.99 | 0.11 | 5.31 | 16.00 | 18.00 |
| **2** | **1** | 0.48 | 0.00 | 0.00 | 0.00 | 1.50 |
| **2** | 0.48 | 0.00 | 0.00 | 0.00 | 1.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 13.92 | 2.00 | 17.00 | 17.00 | 17.00 |
| **2** | 1.94 | 0.00 | 0.60 | 4.60 | 7.00 |
| **2** | **1** | 21.09 | 0.00 | 11.00 | 55.00 | 64.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

17:45 - 18:00

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 129.82 | 90.00 | 129.00 | 161.00 | 168.00 |
| **2** | 133.78 | 91.00 | 133.33 | 167.00 | 173.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.22 | 0.00 | 0.00 | 0.56 | 0.92 |
| **2** | 3.47 | 0.00 | 5.00 | 5.00 | 5.00 |
| **2** | **1** | 8.38 | 0.00 | 1.60 | 26.33 | 37.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.15 | 0.00 | 0.00 | 0.20 | 0.80 |
| **2** | 1.73 | 0.00 | 0.86 | 3.77 | 4.75 |
| **3** | 1.85 | 0.00 | 0.94 | 3.89 | 5.00 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 6.21 | 0.00 | 3.19 | 17.00 | 17.00 |
| **2** | 1.01 | 0.00 | 0.00 | 2.42 | 3.67 |
| **2** | **1** | 3.96 | 0.00 | 0.00 | 11.00 | 31.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

18:00 - 18:15

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.12 | 0.00 | 0.00 | 0.11 | 0.58 |
| **2** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 92.04 | 42.00 | 92.20 | 125.83 | 132.00 |
| **2** | 103.31 | 56.00 | 100.33 | 136.50 | 144.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.22 | 0.00 | 0.00 | 0.56 | 0.92 |
| **2** | 2.37 | 0.00 | 1.68 | 5.00 | 5.00 |
| **2** | **1** | 1.32 | 0.00 | 0.00 | 1.67 | 5.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.14 | 0.00 | 0.00 | 0.24 | 0.67 |
| **2** | 1.12 | 0.00 | 0.40 | 2.09 | 2.91 |
| **3** | 1.17 | 0.00 | 0.42 | 2.36 | 3.00 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 1.28 | 0.00 | 0.27 | 3.00 | 5.00 |
| **2** | 0.50 | 0.00 | 0.00 | 1.29 | 1.93 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

2035 Ref, AM

Data Errors and Warnings

|  |  |  |  |
| --- | --- | --- | --- |
| **Severity** | **Area** | **Item** | **Description** |
| Warning | Lane Simulation | A1 - [Lane Simulation] | This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results. |
| Last Run | Lane Simulation | Arm 1 - Lane Simulation | Arm 1: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Last Run | Lane Simulation | Arm 3 - Lane Simulation | Arm 3: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Last Run | Lane Simulation | Arm 4 - Lane Simulation | Arm 4: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Warning | Geometry | Arm 1 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 2 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 3 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 4 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Vehicle Mix |  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| 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** | Stockbridge Roundabout | Standard Roundabout |  | 1, 2, 3, 4 | 708.86 | F |

Junction Network Options

|  |  |
| --- | --- |
| **Driving side** | **Lighting** |
| Left | Normal/unknown |

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** |
| **D3** | 2035 Ref | 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 (PCU/hr)** | **Scaling Factor (%)** |
| **1** |  | ONE HOUR |  | 1921 | 100.000 |
| **2** |  | ONE HOUR |  | 388 | 100.000 |
| **3** |  | ONE HOUR |  | 3018 | 100.000 |
| **4** |  | ONE HOUR |  | 1220 | 100.000 |

Origin-Destination Data

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Demand (PCU/hr)   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **To** | | | | | | **From** |  | **1** | **2** | **3** | **4** | | **1** | 0 | 47 | 1694 | 180 | | **2** | 56 | 0 | 181 | 151 | | **3** | 2191 | 176 | 0 | 651 | | **4** | 806 | 130 | 284 | 0 | |  |

Vehicle Mix

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Heavy Vehicle Percentages   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **To** | | | | | | **From** |  | **1** | **2** | **3** | **4** | | **1** | 0 | 0 | 0 | 0 | | **2** | 0 | 0 | 0 | 0 | | **3** | 0 | 0 | 0 | 0 | | **4** | 0 | 0 | 0 | 0 | |  |

Results

Results Summary for whole modelled period

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Max Delay (s)** | **Max Queue (PCU)** | **Max 95th percentile Queue (PCU)** | **Max LOS** | **Average Demand (PCU/hr)** | **Total Junction Arrivals (PCU)** |
| **1** | 315.19 | 167.6 | 244.5 | F | 1771 | 2656 |
| **2** | 14.28 | 1.9 | 4.9 | B | 357 | 535 |
| **3** | 560.42 | 419.3 | 554.3 | F | 2784 | 4177 |
| **4** | 1932.39 | 638.0 | 735.0 | F | 1110 | 1665 |

Main Results for each time segment

07:45 - 08:00

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1450 | 362 | 407 | 1459 | 1432 | 2207 | 0.0 | 4.4 | 11.976 | B |
| **2** | 292 | 73 | 1605 | 291 | 291 | 261 | 0.0 | 0.7 | 8.786 | A |
| **3** | 2303 | 576 | 296 | 2301 | 2248 | 1599 | 0.0 | 8.0 | 11.469 | B |
| **4** | 921 | 230 | 1845 | 769 | 772 | 753 | 0.0 | 38.2 | 99.729 | F |

08:00 - 08:15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1731 | 433 | 370 | 1713 | 1683 | 2371 | 4.4 | 15.9 | 26.637 | D |
| **2** | 354 | 89 | 1825 | 350 | 346 | 258 | 0.7 | 1.2 | 10.733 | B |
| **3** | 2722 | 681 | 341 | 2587 | 2579 | 1833 | 8.0 | 45.2 | 39.381 | E |
| **4** | 1086 | 271 | 2077 | 664 | 690 | 852 | 38.2 | 138.4 | 462.674 | F |

08:15 - 08:30

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 2140 | 535 | 372 | 1809 | 1810 | 2414 | 15.9 | 93.2 | 110.396 | F |
| **2** | 435 | 109 | 1912 | 433 | 426 | 269 | 1.2 | 1.9 | 14.157 | B |
| **3** | 3335 | 834 | 392 | 2662 | 2634 | 1952 | 45.2 | 217.7 | 184.640 | F |
| **4** | 1331 | 333 | 2117 | 669 | 682 | 938 | 138.4 | 304.5 | 1193.217 | F |

08:30 - 08:45

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 2120 | 530 | 378 | 1821 | 1819 | 2371 | 93.2 | 167.6 | 261.530 | F |
| **2** | 426 | 107 | 1937 | 429 | 433 | 262 | 1.9 | 1.7 | 14.285 | B |
| **3** | 3334 | 834 | 402 | 2600 | 2596 | 1965 | 217.7 | 400.9 | 431.916 | F |
| **4** | 1321 | 330 | 2081 | 668 | 668 | 920 | 304.5 | 471.0 | 1932.393 | F |

08:45 - 09:00

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1729 | 432 | 378 | 1814 | 1814 | 2396 | 167.6 | 146.2 | 315.187 | F |
| **2** | 342 | 86 | 1929 | 344 | 346 | 263 | 1.7 | 1.2 | 12.523 | B |
| **3** | 2723 | 681 | 356 | 2617 | 2638 | 1917 | 400.9 | 419.3 | 560.421 | F |
| **4** | 1083 | 271 | 2110 | 664 | 661 | 863 | 471.0 | 578.5 | 1771.725 | F |

09:00 - 09:15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1454 | 364 | 380 | 1764 | 1776 | 2403 | 146.2 | 64.9 | 201.716 | F |
| **2** | 292 | 73 | 1877 | 292 | 291 | 267 | 1.2 | 0.9 | 11.040 | B |
| **3** | 2288 | 572 | 330 | 2628 | 2637 | 1839 | 419.3 | 330.3 | 497.545 | F |
| **4** | 920 | 230 | 2112 | 671 | 679 | 846 | 578.5 | 638.0 | 899.363 | F |

Queue Variation Results for each time segment

07:45 - 08:00

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 4.36 | 0.00 | 2.91 | 9.20 | 12.23 |
| **2** | 0.65 | 0.00 | 0.00 | 1.70 | 2.39 |
| **3** | 8.00 | 0.33 | 5.91 | 14.91 | 19.70 |
| **4** | 38.22 | 8.15 | 37.00 | 68.40 | 77.80 |

08:00 - 08:15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 15.87 | 0.70 | 11.00 | 34.47 | 41.10 |
| **2** | 1.19 | 0.00 | 0.40 | 2.54 | 3.28 |
| **3** | 45.20 | 4.60 | 41.50 | 80.40 | 104.70 |
| **4** | 138.44 | 79.90 | 140.00 | 175.40 | 184.05 |

08:15 - 08:30

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 93.21 | 29.50 | 91.00 | 141.80 | 157.70 |
| **2** | 1.87 | 0.00 | 1.09 | 3.88 | 4.90 |
| **3** | 217.73 | 136.60 | 209.50 | 290.70 | 305.10 |
| **4** | 304.48 | 240.90 | 302.50 | 354.60 | 360.80 |

08:30 - 08:45

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 167.63 | 93.30 | 167.00 | 222.20 | 242.80 |
| **2** | 1.65 | 0.00 | 0.77 | 3.68 | 4.62 |
| **3** | 400.94 | 288.30 | 394.33 | 511.20 | 523.40 |
| **4** | 470.98 | 394.60 | 467.67 | 525.40 | 548.40 |

08:45 - 09:00

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 146.21 | 53.70 | 141.00 | 220.60 | 244.50 |
| **2** | 1.21 | 0.00 | 0.35 | 2.58 | 3.43 |
| **3** | 419.33 | 278.70 | 408.00 | 527.60 | 554.30 |
| **4** | 578.52 | 489.30 | 578.00 | 640.40 | 654.20 |

09:00 - 09:15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 64.91 | 0.43 | 50.67 | 145.20 | 176.70 |
| **2** | 0.88 | 0.00 | 0.03 | 1.96 | 2.71 |
| **3** | 330.29 | 172.80 | 336.00 | 437.40 | 489.40 |
| **4** | 638.01 | 549.60 | 642.00 | 717.10 | 734.95 |

Lane Results

*Lane Level notation: Lane Level 1 is always closest to the junction.*

Lanes: Main Results for each time segment

07:45 - 08:00

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 35 | 877 | 0.039 | 34 | 35 | 0.0 | 0.0 | 4.351 | A |
| **2** | 3 | 704 | 877 | 0.802 | 707 | 691 | 0.0 | 2.1 | 11.710 | B |
| **3** | 1, 3, 4 | 712 | 877 | 0.811 | 717 | 706 | 0.0 | 2.2 | 12.438 | B |
| **2** | **1** | (3, 2) | 674 |  |  | 674 | 677 | 0.0 | 0.0 | 0.071 | A |
| **2** | (3, 4, 1) | 776 |  |  | 776 | 772 | 0.0 | 0.0 | 0.101 | A |
| **Exit** | **1** | **1** |  | 2207 |  |  | 2207 | 2170 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 139 | 546 | 0.255 | 139 | 136 | 0.0 | 0.3 | 8.874 | A |
| **2** | 1, 2, 4 | 153 | 546 | 0.281 | 153 | 155 | 0.0 | 0.4 | 8.696 | A |
| **2** | **1** | (3, 4, 1, 2) | 292 |  |  | 292 | 293 | 0.0 | 0.0 | 0.007 | A |
| **Exit** | **1** | **1** |  | 261 |  |  | 261 | 249 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 492 | 1038 | 0.474 | 493 | 487 | 0.0 | 0.9 | 6.856 | A |
| **2** | 1 | 902 | 1038 | 0.869 | 899 | 872 | 0.0 | 3.6 | 12.551 | B |
| **3** | 1, 3, 2 | 909 | 1038 | 0.876 | 909 | 889 | 0.0 | 3.5 | 12.900 | B |
| **2** | **1** | (4, 1) | 1322 |  |  | 1322 | 1310 | 0.0 | 0.0 | 0.006 | A |
| **2** | (3, 1, 2) | 981 |  |  | 981 | 970 | 0.0 | 0.0 | 0.005 | A |
| **Exit** | **1** | **1** |  | 1599 |  |  | 1599 | 1587 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 610 | 580 | 1.050 | 588 | 581 | 0.0 | 15.9 | 70.661 | F |
| **2** | 3, 4 | 178 | 580 | 0.307 | 180 | 192 | 0.0 | 0.4 | 9.508 | A |
| **2** | **1** | (3, 4, 1, 2) | 921 |  |  | 788 | 838 | 0.0 | 21.9 | 39.970 | E |
| **Exit** | **1** | **1** |  | 753 |  |  | 753 | 738 | 0.0 | 0.0 | 0.000 | A |

08:00 - 08:15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 40 | 885 | 0.045 | 40 | 40 | 0.0 | 0.0 | 4.336 | A |
| **2** | 3 | 828 | 885 | 0.935 | 824 | 810 | 2.1 | 5.9 | 22.189 | C |
| **3** | 1, 3, 4 | 851 | 885 | 0.961 | 849 | 833 | 2.2 | 5.9 | 22.340 | C |
| **2** | **1** | (3, 2) | 871 |  |  | 865 | 838 | 0.0 | 1.8 | 4.342 | A |
| **2** | (3, 4, 1) | 860 |  |  | 854 | 875 | 0.0 | 2.2 | 4.880 | A |
| **Exit** | **1** | **1** |  | 2371 |  |  | 2371 | 2363 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 170 | 492 | 0.347 | 168 | 163 | 0.3 | 0.6 | 10.378 | B |
| **2** | 1, 2, 4 | 183 | 492 | 0.373 | 182 | 183 | 0.4 | 0.6 | 10.971 | B |
| **2** | **1** | (3, 4, 1, 2) | 354 |  |  | 354 | 348 | 0.0 | 0.0 | 0.034 | A |
| **Exit** | **1** | **1** |  | 258 |  |  | 258 | 257 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 558 | 1027 | 0.543 | 559 | 576 | 0.9 | 1.3 | 8.117 | A |
| **2** | 1 | 1033 | 1027 | 1.005 | 1020 | 1003 | 3.6 | 13.9 | 37.378 | E |
| **3** | 1, 3, 2 | 1021 | 1027 | 0.993 | 1008 | 1001 | 3.5 | 14.0 | 37.848 | E |
| **2** | **1** | (4, 1) | 1567 |  |  | 1512 | 1550 | 0.0 | 7.9 | 6.547 | A |
| **2** | (3, 1, 2) | 1156 |  |  | 1098 | 1113 | 0.0 | 8.1 | 9.289 | A |
| **Exit** | **1** | **1** |  | 1833 |  |  | 1833 | 1812 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 512 | 520 | 0.986 | 512 | 528 | 15.9 | 17.0 | 114.542 | F |
| **2** | 3, 4 | 152 | 520 | 0.293 | 152 | 161 | 0.4 | 0.5 | 11.349 | B |
| **2** | **1** | (3, 4, 1, 2) | 1086 |  |  | 664 | 694 | 21.9 | 121.0 | 371.313 | F |
| **Exit** | **1** | **1** |  | 852 |  |  | 852 | 866 | 0.0 | 0.0 | 0.000 | A |

08:15 - 08:30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 47 | 885 | 0.054 | 48 | 48 | 0.0 | 0.0 | 4.089 | A |
| **2** | 3 | 878 | 885 | 0.993 | 877 | 877 | 5.9 | 9.9 | 37.750 | E |
| **3** | 1, 3, 4 | 886 | 885 | 1.001 | 884 | 885 | 5.9 | 10.0 | 37.550 | E |
| **2** | **1** | (3, 2) | 1275 |  |  | 1111 | 1084 | 1.8 | 36.2 | 59.630 | F |
| **2** | (3, 4, 1) | 865 |  |  | 701 | 759 | 2.2 | 37.1 | 91.812 | F |
| **Exit** | **1** | **1** |  | 2414 |  |  | 2414 | 2403 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 203 | 470 | 0.431 | 203 | 199 | 0.6 | 0.8 | 13.190 | B |
| **2** | 1, 2, 4 | 232 | 470 | 0.493 | 230 | 227 | 0.6 | 1.0 | 14.352 | B |
| **2** | **1** | (3, 4, 1, 2) | 435 |  |  | 435 | 429 | 0.0 | 0.1 | 0.348 | A |
| **Exit** | **1** | **1** |  | 269 |  |  | 269 | 273 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 605 | 1015 | 0.596 | 609 | 595 | 1.3 | 1.6 | 10.576 | B |
| **2** | 1 | 1033 | 1015 | 1.017 | 1032 | 1027 | 13.9 | 17.9 | 60.878 | F |
| **3** | 1, 3, 2 | 1022 | 1015 | 1.006 | 1022 | 1012 | 14.0 | 18.0 | 62.158 | F |
| **2** | **1** | (4, 1) | 1876 |  |  | 1539 | 1540 | 7.9 | 90.3 | 115.143 | F |
| **2** | (3, 1, 2) | 1459 |  |  | 1121 | 1128 | 8.1 | 90.0 | 157.587 | F |
| **Exit** | **1** | **1** |  | 1952 |  |  | 1952 | 1953 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 517 | 509 | 1.016 | 518 | 527 | 17.0 | 17.0 | 116.708 | F |
| **2** | 3, 4 | 149 | 509 | 0.293 | 151 | 155 | 0.5 | 0.4 | 12.579 | B |
| **2** | **1** | (3, 4, 1, 2) | 1331 |  |  | 666 | 681 | 121.0 | 287.1 | 1098.277 | F |
| **Exit** | **1** | **1** |  | 938 |  |  | 938 | 923 | 0.0 | 0.0 | 0.000 | A |

08:30 - 08:45

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 44 | 884 | 0.049 | 43 | 46 | 0.0 | 0.1 | 4.338 | A |
| **2** | 3 | 892 | 884 | 1.009 | 892 | 885 | 9.9 | 10.0 | 40.602 | E |
| **3** | 1, 3, 4 | 887 | 884 | 1.004 | 887 | 888 | 10.0 | 10.0 | 40.488 | E |
| **2** | **1** | (3, 2) | 1278 |  |  | 1129 | 1135 | 36.2 | 73.4 | 174.148 | F |
| **2** | (3, 4, 1) | 841 |  |  | 693 | 684 | 37.1 | 74.2 | 295.001 | F |
| **Exit** | **1** | **1** |  | 2371 |  |  | 2371 | 2379 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 197 | 464 | 0.424 | 198 | 201 | 0.8 | 0.8 | 13.358 | B |
| **2** | 1, 2, 4 | 230 | 464 | 0.496 | 231 | 232 | 1.0 | 0.9 | 14.516 | B |
| **2** | **1** | (3, 4, 1, 2) | 426 |  |  | 427 | 432 | 0.1 | 0.0 | 0.313 | A |
| **Exit** | **1** | **1** |  | 262 |  |  | 262 | 263 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 575 | 1013 | 0.567 | 582 | 572 | 1.6 | 1.5 | 10.649 | B |
| **2** | 1 | 1017 | 1013 | 1.004 | 1017 | 1019 | 17.9 | 17.9 | 63.165 | F |
| **3** | 1, 3, 2 | 1002 | 1013 | 0.989 | 1001 | 1005 | 18.0 | 18.0 | 64.234 | F |
| **2** | **1** | (4, 1) | 1857 |  |  | 1486 | 1489 | 90.3 | 182.0 | 330.070 | F |
| **2** | (3, 1, 2) | 1477 |  |  | 1108 | 1106 | 90.0 | 181.6 | 443.008 | F |
| **Exit** | **1** | **1** |  | 1965 |  |  | 1965 | 1965 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 509 | 518 | 0.982 | 509 | 511 | 17.0 | 17.0 | 119.361 | F |
| **2** | 3, 4 | 160 | 518 | 0.309 | 159 | 158 | 0.4 | 0.6 | 13.120 | B |
| **2** | **1** | (3, 4, 1, 2) | 1321 |  |  | 669 | 669 | 287.1 | 453.4 | 1868.574 | F |
| **Exit** | **1** | **1** |  | 920 |  |  | 920 | 909 | 0.0 | 0.0 | 0.000 | A |

08:45 - 09:00

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 44 | 884 | 0.049 | 44 | 45 | 0.1 | 0.0 | 4.465 | A |
| **2** | 3 | 896 | 884 | 1.015 | 897 | 891 | 10.0 | 9.8 | 40.050 | E |
| **3** | 1, 3, 4 | 872 | 884 | 0.987 | 873 | 878 | 10.0 | 9.8 | 40.702 | E |
| **2** | **1** | (3, 2) | 1102 |  |  | 1143 | 1132 | 73.4 | 62.7 | 218.959 | F |
| **2** | (3, 4, 1) | 627 |  |  | 670 | 681 | 74.2 | 63.9 | 372.452 | F |
| **Exit** | **1** | **1** |  | 2396 |  |  | 2396 | 2396 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 160 | 466 | 0.343 | 160 | 159 | 0.8 | 0.6 | 12.169 | B |
| **2** | 1, 2, 4 | 182 | 466 | 0.391 | 184 | 187 | 0.9 | 0.6 | 12.623 | B |
| **2** | **1** | (3, 4, 1, 2) | 342 |  |  | 342 | 345 | 0.0 | 0.0 | 0.101 | A |
| **Exit** | **1** | **1** |  | 263 |  |  | 263 | 264 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 566 | 1024 | 0.552 | 559 | 585 | 1.5 | 1.9 | 10.261 | B |
| **2** | 1 | 1035 | 1024 | 1.011 | 1035 | 1027 | 17.9 | 17.9 | 62.827 | F |
| **3** | 1, 3, 2 | 1023 | 1024 | 0.999 | 1023 | 1027 | 18.0 | 17.9 | 62.933 | F |
| **2** | **1** | (4, 1) | 1554 |  |  | 1503 | 1512 | 182.0 | 190.9 | 443.984 | F |
| **2** | (3, 1, 2) | 1169 |  |  | 1121 | 1128 | 181.6 | 190.8 | 596.183 | F |
| **Exit** | **1** | **1** |  | 1917 |  |  | 1917 | 1916 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 505 | 511 | 0.989 | 505 | 508 | 17.0 | 17.0 | 120.487 | F |
| **2** | 3, 4 | 158 | 511 | 0.309 | 158 | 153 | 0.6 | 0.6 | 12.936 | B |
| **2** | **1** | (3, 4, 1, 2) | 1083 |  |  | 663 | 661 | 453.4 | 561.0 | 1760.615 | F |
| **Exit** | **1** | **1** |  | 863 |  |  | 863 | 884 | 0.0 | 0.0 | 0.000 | A |

09:00 - 09:15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 40 | 883 | 0.045 | 40 | 41 | 0.0 | 0.0 | 4.315 | A |
| **2** | 3 | 838 | 883 | 0.949 | 851 | 865 | 9.8 | 8.2 | 39.134 | E |
| **3** | 1, 3, 4 | 862 | 883 | 0.976 | 874 | 870 | 9.8 | 8.3 | 39.005 | E |
| **2** | **1** | (3, 2) | 906 |  |  | 1045 | 1082 | 62.7 | 23.8 | 135.881 | F |
| **2** | (3, 4, 1) | 548 |  |  | 694 | 682 | 63.9 | 24.6 | 212.954 | F |
| **Exit** | **1** | **1** |  | 2403 |  |  | 2403 | 2402 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 135 | 479 | 0.283 | 136 | 137 | 0.6 | 0.4 | 10.602 | B |
| **2** | 1, 2, 4 | 157 | 479 | 0.328 | 157 | 154 | 0.6 | 0.5 | 11.330 | B |
| **2** | **1** | (3, 4, 1, 2) | 292 |  |  | 292 | 289 | 0.0 | 0.0 | 0.061 | A |
| **Exit** | **1** | **1** |  | 267 |  |  | 267 | 266 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 562 | 1030 | 0.546 | 560 | 572 | 1.9 | 1.5 | 9.809 | A |
| **2** | 1 | 1028 | 1030 | 0.999 | 1028 | 1026 | 17.9 | 17.9 | 62.504 | F |
| **3** | 1, 3, 2 | 1040 | 1030 | 1.010 | 1040 | 1040 | 17.9 | 18.0 | 62.012 | F |
| **2** | **1** | (4, 1) | 1357 |  |  | 1527 | 1520 | 190.9 | 146.4 | 400.029 | F |
| **2** | (3, 1, 2) | 931 |  |  | 1104 | 1116 | 190.8 | 146.5 | 537.450 | F |
| **Exit** | **1** | **1** |  | 1839 |  |  | 1839 | 1857 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 519 | 510 | 1.016 | 518 | 518 | 17.0 | 17.0 | 116.910 | F |
| **2** | 3, 4 | 153 | 510 | 0.299 | 153 | 161 | 0.6 | 0.5 | 12.494 | B |
| **2** | **1** | (3, 4, 1, 2) | 920 |  |  | 672 | 679 | 561.0 | 620.5 | 899.363 | F |
| **Exit** | **1** | **1** |  | 846 |  |  | 846 | 858 | 0.0 | 0.0 | 0.000 | A |

Lanes: Queue Variation Results for each time segment

07:45 - 08:00

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 2.08 | 0.00 | 1.04 | 4.91 | 5.71 |
| **3** | 2.24 | 0.00 | 1.23 | 4.49 | 5.85 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.29 | 0.00 | 0.00 | 0.72 | 1.14 |
| **2** | 0.37 | 0.00 | 0.00 | 0.89 | 1.53 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 0.87 | 0.00 | 0.00 | 1.82 | 2.68 |
| **2** | 3.61 | 0.00 | 1.96 | 7.23 | 9.90 |
| **3** | 3.52 | 0.00 | 2.18 | 7.35 | 9.90 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 15.92 | 7.65 | 17.00 | 17.00 | 17.00 |
| **2** | 0.37 | 0.00 | 0.00 | 1.04 | 1.74 |
| **2** | **1** | 21.93 | 0.00 | 19.00 | 50.40 | 60.80 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

08:00 - 08:15

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 5.88 | 0.20 | 5.25 | 10.00 | 10.00 |
| **3** | 5.90 | 0.00 | 5.43 | 10.00 | 10.00 |
| **2** | **1** | 1.84 | 0.00 | 0.00 | 6.13 | 8.10 |
| **2** | 2.21 | 0.00 | 0.00 | 7.80 | 12.35 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.58 | 0.00 | 0.00 | 1.31 | 1.88 |
| **2** | 0.60 | 0.00 | 0.00 | 1.37 | 1.89 |
| **2** | **1** | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 1.33 | 0.00 | 0.28 | 3.35 | 4.85 |
| **2** | 13.86 | 0.86 | 18.00 | 18.00 | 18.00 |
| **3** | 14.02 | 2.15 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 7.90 | 0.00 | 1.50 | 20.80 | 34.85 |
| **2** | 8.10 | 0.00 | 1.80 | 20.60 | 32.70 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.97 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.46 | 0.00 | 0.00 | 0.98 | 1.71 |
| **2** | **1** | 121.01 | 62.90 | 122.50 | 157.80 | 167.05 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

08:15 - 08:30

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 9.94 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 9.95 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 36.22 | 3.30 | 35.33 | 60.40 | 67.47 |
| **2** | 37.08 | 5.60 | 35.00 | 61.70 | 68.55 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.83 | 0.00 | 0.00 | 1.91 | 2.78 |
| **2** | 0.98 | 0.00 | 0.00 | 2.38 | 3.35 |
| **2** | **1** | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 1.57 | 0.00 | 0.43 | 3.73 | 6.35 |
| **2** | 17.91 | 16.33 | 18.00 | 18.00 | 18.00 |
| **3** | 17.96 | 18.00 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 90.26 | 50.50 | 86.33 | 126.20 | 132.10 |
| **2** | 90.02 | 49.50 | 86.00 | 126.80 | 134.70 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.96 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.40 | 0.00 | 0.00 | 0.92 | 1.67 |
| **2** | **1** | 287.12 | 223.30 | 285.50 | 337.60 | 343.80 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

08:30 - 08:45

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.08 | 0.00 | 0.00 | 0.00 | 0.28 |
| **2** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 9.99 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 73.41 | 36.30 | 72.50 | 101.40 | 110.10 |
| **2** | 74.15 | 36.87 | 74.00 | 100.80 | 112.70 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.76 | 0.00 | 0.00 | 1.81 | 2.74 |
| **2** | 0.89 | 0.00 | 0.00 | 1.97 | 2.71 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 1.50 | 0.00 | 0.35 | 3.82 | 4.90 |
| **2** | 17.90 | 16.65 | 18.00 | 18.00 | 18.00 |
| **3** | 17.98 | 18.00 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 181.95 | 126.65 | 178.40 | 237.40 | 243.85 |
| **2** | 181.61 | 125.45 | 178.60 | 237.20 | 243.85 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.97 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.59 | 0.00 | 0.00 | 1.48 | 2.74 |
| **2** | **1** | 453.43 | 376.20 | 450.50 | 507.00 | 531.40 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

08:45 - 09:00

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 9.79 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 9.79 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 62.66 | 16.70 | 60.00 | 99.80 | 111.70 |
| **2** | 63.94 | 16.70 | 61.33 | 101.40 | 111.50 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.57 | 0.00 | 0.00 | 1.34 | 1.82 |
| **2** | 0.63 | 0.00 | 0.00 | 1.49 | 2.18 |
| **2** | **1** | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 1.88 | 0.00 | 0.34 | 4.55 | 6.70 |
| **2** | 17.88 | 16.47 | 18.00 | 18.00 | 18.00 |
| **3** | 17.94 | 18.00 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 190.88 | 120.50 | 187.00 | 245.40 | 258.10 |
| **2** | 190.75 | 120.20 | 186.00 | 246.80 | 258.10 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.97 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.60 | 0.00 | 0.00 | 1.60 | 2.54 |
| **2** | **1** | 560.95 | 472.30 | 561.50 | 622.80 | 637.20 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

09:00 - 09:15

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 8.21 | 0.00 | 10.00 | 10.00 | 10.00 |
| **3** | 8.28 | 0.05 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 23.78 | 0.00 | 15.00 | 62.40 | 77.35 |
| **2** | 24.62 | 0.00 | 15.75 | 62.20 | 77.70 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 0.38 | 0.00 | 0.00 | 0.86 | 1.54 |
| **2** | 0.49 | 0.00 | 0.00 | 1.04 | 1.74 |
| **2** | **1** | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 1.55 | 0.00 | 0.05 | 3.77 | 4.70 |
| **2** | 17.91 | 18.00 | 18.00 | 18.00 | 18.00 |
| **3** | 17.96 | 18.00 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 146.39 | 68.30 | 149.50 | 201.10 | 225.40 |
| **2** | 146.48 | 66.05 | 149.50 | 200.20 | 224.10 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.99 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.53 | 0.00 | 0.00 | 1.28 | 2.45 |
| **2** | **1** | 620.48 | 532.60 | 623.00 | 699.80 | 717.80 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

2035 Ref, PM

Data Errors and Warnings

|  |  |  |  |
| --- | --- | --- | --- |
| **Severity** | **Area** | **Item** | **Description** |
| Warning | Lane Simulation | A1 - [Lane Simulation] | This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results. |
| Last Run | Lane Simulation | Arm 1 - Lane Simulation | Arm 1: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Last Run | Lane Simulation | Arm 2 - Lane Simulation | Arm 2: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Last Run | Lane Simulation | Arm 4 - Lane Simulation | Arm 4: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated. |
| Warning | Geometry | Arm 1 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 2 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 3 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Geometry | Arm 4 - Roundabout Geometry | Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution. |
| Warning | Vehicle Mix |  | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |
| 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** | Stockbridge Roundabout | Standard Roundabout |  | 1, 2, 3, 4 | 671.48 | F |

Junction Network Options

|  |  |
| --- | --- |
| **Driving side** | **Lighting** |
| Left | Normal/unknown |

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** |
| **D4** | 2035 Ref | PM | ONE HOUR | 16:45 | 18:15 | 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 (PCU/hr)** | **Scaling Factor (%)** |
| **1** |  | ONE HOUR |  | 2238 | 100.000 |
| **2** |  | ONE HOUR |  | 911 | 100.000 |
| **3** |  | ONE HOUR |  | 2546 | 100.000 |
| **4** |  | ONE HOUR |  | 1208 | 100.000 |

Origin-Destination Data

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Demand (PCU/hr)   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **To** | | | | | | **From** |  | **1** | **2** | **3** | **4** | | **1** | 0 | 59 | 1842 | 337 | | **2** | 179 | 0 | 512 | 220 | | **3** | 1824 | 44 | 0 | 678 | | **4** | 772 | 112 | 324 | 0 | |  |

Vehicle Mix

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Heavy Vehicle Percentages   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **To** | | | | | | **From** |  | **1** | **2** | **3** | **4** | | **1** | 0 | 0 | 0 | 0 | | **2** | 0 | 0 | 0 | 0 | | **3** | 0 | 0 | 0 | 0 | | **4** | 0 | 0 | 0 | 0 | |  |

Results

Results Summary for whole modelled period

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Max Delay (s)** | **Max Queue (PCU)** | **Max 95th percentile Queue (PCU)** | **Max LOS** | **Average Demand (PCU/hr)** | **Total Junction Arrivals (PCU)** |
| **1** | 754.01 | 411.8 | 524.5 | F | 2053 | 3079 |
| **2** | 777.43 | 169.6 | 238.3 | F | 837 | 1255 |
| **3** | 104.75 | 95.4 | 182.0 | F | 2332 | 3498 |
| **4** | 1631.20 | 494.4 | 593.0 | F | 1108 | 1662 |

Main Results for each time segment

16:45 - 17:00

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1678 | 419 | 343 | 1671 | 1638 | 2061 | 0.0 | 11.0 | 20.235 | C |
| **2** | 688 | 172 | 1862 | 686 | 662 | 152 | 0.0 | 7.3 | 30.155 | D |
| **3** | 1919 | 480 | 550 | 1915 | 1902 | 1998 | 0.0 | 4.4 | 7.807 | A |
| **4** | 906 | 226 | 1546 | 858 | 842 | 919 | 0.0 | 15.6 | 42.796 | E |

17:00 - 17:15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 2021 | 505 | 340 | 1836 | 1818 | 2290 | 11.0 | 60.1 | 76.483 | F |
| **2** | 815 | 204 | 2014 | 731 | 729 | 163 | 7.3 | 28.7 | 93.101 | F |
| **3** | 2270 | 567 | 597 | 2263 | 2258 | 2148 | 4.4 | 9.2 | 13.186 | B |
| **4** | 1082 | 270 | 1802 | 829 | 830 | 1058 | 15.6 | 79.5 | 213.210 | F |

17:15 - 17:30

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 2462 | 615 | 301 | 1835 | 1838 | 2477 | 60.1 | 216.5 | 280.314 | F |
| **2** | 1005 | 251 | 1976 | 755 | 750 | 160 | 28.7 | 92.6 | 298.708 | F |
| **3** | 2804 | 701 | 577 | 2628 | 2626 | 2154 | 9.2 | 54.0 | 45.942 | E |
| **4** | 1333 | 333 | 2070 | 708 | 734 | 1135 | 79.5 | 228.1 | 775.556 | F |

17:30 - 17:45

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 2464 | 616 | 299 | 1846 | 1849 | 2492 | 216.5 | 371.0 | 592.332 | F |
| **2** | 1005 | 251 | 1981 | 752 | 752 | 163 | 92.6 | 154.5 | 594.607 | F |
| **3** | 2799 | 700 | 574 | 2659 | 2645 | 2160 | 54.0 | 95.4 | 104.746 | F |
| **4** | 1325 | 331 | 2094 | 697 | 703 | 1138 | 228.1 | 385.1 | 1508.075 | F |

17:45 - 18:00

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 2008 | 502 | 310 | 1852 | 1842 | 2386 | 371.0 | 411.8 | 754.015 | F |
| **2** | 816 | 204 | 1997 | 769 | 757 | 166 | 154.5 | 169.6 | 777.425 | F |
| **3** | 2294 | 574 | 585 | 2466 | 2530 | 2181 | 95.4 | 35.1 | 83.882 | F |
| **4** | 1092 | 273 | 1962 | 734 | 717 | 1089 | 385.1 | 477.2 | 1631.201 | F |

18:00 - 18:15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Total Demand (PCU/hr)** | **Junction Arrivals (PCU)** | **Circulating flow (PCU/hr)** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Throughput (exit side) (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | 1685 | 421 | 346 | 1824 | 1838 | 2092 | 411.8 | 373.7 | 615.382 | F |
| **2** | 691 | 173 | 2007 | 733 | 738 | 163 | 169.6 | 157.7 | 661.443 | F |
| **3** | 1906 | 477 | 575 | 1920 | 2032 | 2165 | 35.1 | 4.5 | 17.838 | C |
| **4** | 912 | 228 | 1560 | 878 | 842 | 935 | 477.2 | 494.4 | 899.927 | F |

Queue Variation Results for each time segment

16:45 - 17:00

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 10.95 | 0.18 | 7.84 | 24.67 | 30.50 |
| **2** | 7.28 | 0.00 | 4.21 | 18.00 | 23.33 |
| **3** | 4.42 | 0.00 | 2.97 | 8.89 | 11.00 |
| **4** | 15.57 | 0.57 | 10.88 | 35.25 | 42.00 |

17:00 - 17:15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 60.08 | 12.00 | 57.83 | 104.67 | 113.00 |
| **2** | 28.74 | 3.40 | 25.00 | 53.00 | 60.00 |
| **3** | 9.20 | 0.30 | 6.85 | 19.25 | 22.00 |
| **4** | 79.45 | 34.00 | 76.00 | 112.25 | 127.00 |

17:15 - 17:30

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 216.46 | 141.00 | 215.00 | 281.33 | 293.00 |
| **2** | 92.58 | 38.00 | 91.50 | 131.00 | 143.00 |
| **3** | 53.98 | 10.75 | 48.00 | 96.00 | 114.00 |
| **4** | 228.07 | 172.00 | 228.33 | 274.00 | 287.00 |

17:30 - 17:45

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 371.01 | 271.00 | 369.67 | 445.00 | 470.00 |
| **2** | 154.53 | 92.50 | 150.67 | 207.00 | 222.00 |
| **3** | 95.43 | 15.00 | 91.50 | 165.00 | 182.00 |
| **4** | 385.13 | 313.00 | 384.00 | 439.50 | 462.00 |

17:45 - 18:00

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 411.78 | 306.00 | 408.00 | 487.00 | 524.50 |
| **2** | 169.60 | 100.00 | 170.00 | 224.50 | 238.33 |
| **3** | 35.11 | 0.82 | 15.29 | 95.00 | 123.00 |
| **4** | 477.19 | 392.00 | 476.00 | 544.00 | 566.00 |

18:00 - 18:15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Arm** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | 373.67 | 266.00 | 368.00 | 464.75 | 484.00 |
| **2** | 157.74 | 73.00 | 160.00 | 218.67 | 238.00 |
| **3** | 4.52 | 0.00 | 3.13 | 8.22 | 10.75 |
| **4** | 494.41 | 398.00 | 495.00 | 564.00 | 593.00 |

Lane Results

*Lane Level notation: Lane Level 1 is always closest to the junction.*

Lanes: Main Results for each time segment

16:45 - 17:00

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 43 | 891 | 0.049 | 43 | 44 | 0.0 | 0.1 | 4.142 | A |
| **2** | 3 | 809 | 891 | 0.908 | 808 | 785 | 0.0 | 4.5 | 18.363 | C |
| **3** | 1, 3, 4 | 820 | 891 | 0.920 | 820 | 809 | 0.0 | 4.8 | 19.290 | C |
| **2** | **1** | (3, 2) | 782 |  |  | 779 | 767 | 0.0 | 0.7 | 1.566 | A |
| **2** | (3, 4, 1) | 896 |  |  | 893 | 909 | 0.0 | 0.8 | 1.834 | A |
| **Exit** | **1** | **1** |  | 2061 |  |  | 2061 | 2031 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 389 | 483 | 0.806 | 391 | 372 | 0.0 | 2.5 | 22.407 | C |
| **2** | 1, 2, 4 | 301 | 483 | 0.623 | 295 | 290 | 0.0 | 1.8 | 16.688 | C |
| **2** | **1** | (3, 4, 1, 2) | 688 |  |  | 690 | 679 | 0.0 | 3.0 | 10.093 | B |
| **Exit** | **1** | **1** |  | 152 |  |  | 152 | 153 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 503 | 978 | 0.514 | 502 | 501 | 0.0 | 1.1 | 7.636 | A |
| **2** | 1 | 703 | 978 | 0.719 | 703 | 694 | 0.0 | 1.7 | 7.887 | A |
| **3** | 1, 3, 2 | 712 | 978 | 0.728 | 710 | 707 | 0.0 | 1.7 | 7.850 | A |
| **2** | **1** | (4, 1) | 1193 |  |  | 1193 | 1198 | 0.0 | 0.0 | 0.000 | A |
| **2** | (3, 1, 2) | 725 |  |  | 725 | 721 | 0.0 | 0.0 | 0.000 | A |
| **Exit** | **1** | **1** |  | 1998 |  |  | 1998 | 1957 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 640 | 658 | 0.972 | 624 | 606 | 0.0 | 10.4 | 44.837 | E |
| **2** | 3, 4 | 232 | 658 | 0.352 | 234 | 235 | 0.0 | 0.5 | 8.757 | A |
| **2** | **1** | (3, 4, 1, 2) | 906 |  |  | 871 | 886 | 0.0 | 4.6 | 6.860 | A |
| **Exit** | **1** | **1** |  | 919 |  |  | 919 | 903 | 0.0 | 0.0 | 0.000 | A |

17:00 - 17:15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 48 | 892 | 0.054 | 48 | 49 | 0.1 | 0.1 | 4.310 | A |
| **2** | 3 | 898 | 892 | 1.007 | 894 | 884 | 4.5 | 9.6 | 34.707 | D |
| **3** | 1, 3, 4 | 896 | 892 | 1.005 | 894 | 885 | 4.8 | 9.6 | 35.331 | E |
| **2** | **1** | (3, 2) | 1252 |  |  | 1162 | 1094 | 0.7 | 19.6 | 32.299 | D |
| **2** | (3, 4, 1) | 769 |  |  | 681 | 763 | 0.8 | 21.2 | 55.120 | F |
| **Exit** | **1** | **1** |  | 2290 |  |  | 2290 | 2288 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 410 | 445 | 0.920 | 406 | 408 | 2.5 | 4.1 | 31.718 | D |
| **2** | 1, 2, 4 | 323 | 445 | 0.726 | 325 | 321 | 1.8 | 2.2 | 24.201 | C |
| **2** | **1** | (3, 4, 1, 2) | 815 |  |  | 733 | 737 | 3.0 | 22.5 | 64.275 | F |
| **Exit** | **1** | **1** |  | 163 |  |  | 163 | 164 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 604 | 967 | 0.624 | 605 | 601 | 1.1 | 1.6 | 9.611 | A |
| **2** | 1 | 838 | 967 | 0.866 | 834 | 827 | 1.7 | 3.7 | 14.289 | B |
| **3** | 1, 3, 2 | 828 | 967 | 0.856 | 824 | 830 | 1.7 | 3.7 | 14.343 | B |
| **2** | **1** | (4, 1) | 1414 |  |  | 1414 | 1420 | 0.0 | 0.1 | 0.087 | A |
| **2** | (3, 1, 2) | 856 |  |  | 856 | 857 | 0.0 | 0.1 | 0.135 | A |
| **Exit** | **1** | **1** |  | 2148 |  |  | 2148 | 2140 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 604 | 592 | 1.022 | 602 | 603 | 10.4 | 16.9 | 92.147 | F |
| **2** | 3, 4 | 227 | 592 | 0.383 | 226 | 227 | 0.5 | 0.8 | 12.109 | B |
| **2** | **1** | (3, 4, 1, 2) | 1082 |  |  | 831 | 857 | 4.6 | 61.7 | 139.448 | F |
| **Exit** | **1** | **1** |  | 1058 |  |  | 1058 | 1043 | 0.0 | 0.0 | 0.000 | A |

17:15 - 17:30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 49 | 900 | 0.055 | 49 | 51 | 0.1 | 0.1 | 4.209 | A |
| **2** | 3 | 894 | 900 | 0.993 | 894 | 897 | 9.6 | 10.0 | 39.987 | E |
| **3** | 1, 3, 4 | 892 | 900 | 0.991 | 892 | 889 | 9.6 | 10.0 | 40.322 | E |
| **2** | **1** | (3, 2) | 1545 |  |  | 1233 | 1228 | 19.6 | 97.5 | 172.381 | F |
| **2** | (3, 4, 1) | 916 |  |  | 602 | 613 | 21.2 | 98.9 | 355.682 | F |
| **Exit** | **1** | **1** |  | 2477 |  |  | 2477 | 2478 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 420 | 455 | 0.924 | 425 | 424 | 4.1 | 3.9 | 35.272 | E |
| **2** | 1, 2, 4 | 331 | 455 | 0.728 | 330 | 326 | 2.2 | 2.6 | 27.621 | D |
| **2** | **1** | (3, 4, 1, 2) | 1005 |  |  | 751 | 751 | 22.5 | 86.0 | 266.826 | F |
| **Exit** | **1** | **1** |  | 160 |  |  | 160 | 165 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 711 | 972 | 0.731 | 707 | 716 | 1.6 | 3.0 | 14.906 | B |
| **2** | 1 | 982 | 972 | 1.011 | 957 | 955 | 3.7 | 14.8 | 41.188 | E |
| **3** | 1, 3, 2 | 989 | 972 | 1.018 | 964 | 954 | 3.7 | 14.9 | 41.527 | E |
| **2** | **1** | (4, 1) | 1594 |  |  | 1532 | 1619 | 0.1 | 10.9 | 9.575 | A |
| **2** | (3, 1, 2) | 1210 |  |  | 1150 | 1101 | 0.1 | 10.4 | 13.195 | B |
| **Exit** | **1** | **1** |  | 2154 |  |  | 2154 | 2157 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 518 | 521 | 0.994 | 518 | 537 | 16.9 | 17.0 | 114.704 | F |
| **2** | 3, 4 | 189 | 521 | 0.362 | 190 | 197 | 0.8 | 0.7 | 13.584 | B |
| **2** | **1** | (3, 4, 1, 2) | 1333 |  |  | 707 | 733 | 61.7 | 210.4 | 685.153 | F |
| **Exit** | **1** | **1** |  | 1135 |  |  | 1135 | 1147 | 0.0 | 0.0 | 0.000 | A |

17:30 - 17:45

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 50 | 900 | 0.056 | 50 | 52 | 0.1 | 0.1 | 4.252 | A |
| **2** | 3 | 901 | 900 | 1.001 | 902 | 901 | 10.0 | 10.0 | 39.906 | E |
| **3** | 1, 3, 4 | 894 | 900 | 0.993 | 894 | 896 | 10.0 | 10.0 | 40.107 | E |
| **2** | **1** | (3, 2) | 1536 |  |  | 1228 | 1230 | 97.5 | 174.8 | 400.455 | F |
| **2** | (3, 4, 1) | 928 |  |  | 618 | 619 | 98.9 | 176.2 | 806.491 | F |
| **Exit** | **1** | **1** |  | 2492 |  |  | 2492 | 2488 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 423 | 453 | 0.932 | 422 | 423 | 3.9 | 4.2 | 35.407 | E |
| **2** | 1, 2, 4 | 331 | 453 | 0.729 | 329 | 329 | 2.6 | 2.7 | 27.528 | D |
| **2** | **1** | (3, 4, 1, 2) | 1005 |  |  | 753 | 753 | 86.0 | 147.7 | 562.659 | F |
| **Exit** | **1** | **1** |  | 163 |  |  | 163 | 165 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 712 | 973 | 0.732 | 711 | 707 | 3.0 | 3.4 | 17.042 | C |
| **2** | 1 | 976 | 973 | 1.004 | 976 | 969 | 14.8 | 16.6 | 58.958 | F |
| **3** | 1, 3, 2 | 974 | 973 | 1.001 | 973 | 969 | 14.9 | 16.7 | 59.018 | F |
| **2** | **1** | (4, 1) | 1509 |  |  | 1440 | 1460 | 10.9 | 29.7 | 52.502 | F |
| **2** | (3, 1, 2) | 1291 |  |  | 1222 | 1201 | 10.4 | 29.0 | 61.523 | F |
| **Exit** | **1** | **1** |  | 2160 |  |  | 2160 | 2157 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 511 | 515 | 0.992 | 511 | 517 | 17.0 | 17.0 | 118.442 | F |
| **2** | 3, 4 | 186 | 515 | 0.362 | 186 | 186 | 0.7 | 0.7 | 13.928 | B |
| **2** | **1** | (3, 4, 1, 2) | 1325 |  |  | 697 | 703 | 210.4 | 367.4 | 1430.967 | F |
| **Exit** | **1** | **1** |  | 1138 |  |  | 1138 | 1139 | 0.0 | 0.0 | 0.000 | A |

17:45 - 18:00

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 52 | 898 | 0.057 | 52 | 51 | 0.1 | 0.1 | 4.490 | A |
| **2** | 3 | 897 | 898 | 0.999 | 897 | 894 | 10.0 | 10.0 | 40.253 | E |
| **3** | 1, 3, 4 | 904 | 898 | 1.006 | 904 | 897 | 10.0 | 10.0 | 40.177 | E |
| **2** | **1** | (3, 2) | 1314 |  |  | 1235 | 1228 | 174.8 | 194.9 | 540.618 | F |
| **2** | (3, 4, 1) | 695 |  |  | 617 | 614 | 176.2 | 196.8 | 1066.752 | F |
| **Exit** | **1** | **1** |  | 2386 |  |  | 2386 | 2429 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 431 | 450 | 0.958 | 431 | 424 | 4.2 | 4.2 | 35.307 | E |
| **2** | 1, 2, 4 | 341 | 450 | 0.759 | 338 | 333 | 2.7 | 2.7 | 28.027 | D |
| **2** | **1** | (3, 4, 1, 2) | 816 |  |  | 772 | 757 | 147.7 | 162.7 | 746.591 | F |
| **Exit** | **1** | **1** |  | 166 |  |  | 166 | 164 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 651 | 970 | 0.671 | 652 | 662 | 3.4 | 2.3 | 14.336 | B |
| **2** | 1 | 875 | 970 | 0.902 | 902 | 932 | 16.6 | 9.1 | 48.953 | E |
| **3** | 1, 3, 2 | 886 | 970 | 0.913 | 913 | 935 | 16.7 | 9.2 | 48.842 | E |
| **2** | **1** | (4, 1) | 1346 |  |  | 1405 | 1393 | 29.7 | 7.4 | 40.571 | E |
| **2** | (3, 1, 2) | 948 |  |  | 1006 | 1073 | 29.0 | 7.1 | 51.590 | F |
| **Exit** | **1** | **1** |  | 2181 |  |  | 2181 | 2161 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 538 | 550 | 0.978 | 538 | 526 | 17.0 | 17.0 | 115.157 | F |
| **2** | 3, 4 | 194 | 550 | 0.354 | 196 | 192 | 0.7 | 0.8 | 14.235 | B |
| **2** | **1** | (3, 4, 1, 2) | 1092 |  |  | 732 | 718 | 367.4 | 459.5 | 1593.954 | F |
| **Exit** | **1** | **1** |  | 1089 |  |  | 1089 | 1093 | 0.0 | 0.0 | 0.000 | A |

18:00 - 18:15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Destination arms** | **Total Demand (PCU/hr)** | **Capacity (PCU/hr)** | **RFC** | **Throughput (PCU/hr)** | **Average throughput (PCU/hr)** | **Start queue (PCU)** | **End queue (PCU)** | **Delay (s)** | **Unsignalised level of service** |
| **1** | **Entry** | **1** | **1** | 2 | 48 | 891 | 0.054 | 47 | 50 | 0.1 | 0.1 | 4.310 | A |
| **2** | 3 | 890 | 891 | 1.000 | 890 | 897 | 10.0 | 10.0 | 39.982 | E |
| **3** | 1, 3, 4 | 887 | 891 | 0.996 | 887 | 891 | 10.0 | 10.0 | 40.234 | E |
| **2** | **1** | (3, 2) | 1155 |  |  | 1224 | 1237 | 194.9 | 175.5 | 526.834 | F |
| **2** | (3, 4, 1) | 530 |  |  | 601 | 601 | 196.8 | 178.1 | 859.209 | F |
| **Exit** | **1** | **1** |  | 2092 |  |  | 2092 | 2151 | 0.0 | 0.0 | 0.000 | A |
| **2** | **Entry** | **1** | **1** | 3 | 413 | 447 | 0.924 | 413 | 415 | 4.2 | 4.1 | 36.051 | E |
| **2** | 1, 2, 4 | 322 | 447 | 0.720 | 320 | 323 | 2.7 | 2.6 | 27.515 | D |
| **2** | **1** | (3, 4, 1, 2) | 691 |  |  | 735 | 738 | 162.7 | 151.0 | 639.432 | F |
| **Exit** | **1** | **1** |  | 163 |  |  | 163 | 163 | 0.0 | 0.0 | 0.000 | A |
| **3** | **Entry** | **1** | **1** | 4 | 506 | 972 | 0.521 | 504 | 529 | 2.3 | 1.2 | 9.039 | A |
| **2** | 1 | 695 | 972 | 0.715 | 702 | 746 | 9.1 | 1.6 | 17.108 | C |
| **3** | 1, 3, 2 | 709 | 972 | 0.729 | 714 | 757 | 9.2 | 1.7 | 17.147 | C |
| **2** | **1** | (4, 1) | 1194 |  |  | 1197 | 1211 | 7.4 | 0.0 | 3.314 | A |
| **2** | (3, 1, 2) | 712 |  |  | 714 | 757 | 7.1 | 0.0 | 5.037 | A |
| **Exit** | **1** | **1** |  | 2165 |  |  | 2165 | 2173 | 0.0 | 0.0 | 0.000 | A |
| **4** | **Entry** | **1** | **1** | 1, 2 | 647 | 655 | 0.988 | 648 | 617 | 17.0 | 16.9 | 98.079 | F |
| **2** | 3, 4 | 232 | 655 | 0.354 | 231 | 225 | 0.8 | 0.8 | 11.719 | B |
| **2** | **1** | (3, 4, 1, 2) | 912 |  |  | 879 | 841 | 459.5 | 476.7 | 899.927 | F |
| **Exit** | **1** | **1** |  | 935 |  |  | 935 | 963 | 0.0 | 0.0 | 0.000 | A |

Lanes: Queue Variation Results for each time segment

16:45 - 17:00

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.08 | 0.00 | 0.00 | 0.00 | 0.38 |
| **2** | 4.54 | 0.00 | 3.50 | 10.00 | 10.00 |
| **3** | 4.80 | 0.00 | 3.80 | 10.00 | 10.00 |
| **2** | **1** | 0.68 | 0.00 | 0.00 | 1.40 | 5.00 |
| **2** | 0.84 | 0.00 | 0.00 | 2.50 | 5.50 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 2.53 | 0.00 | 1.74 | 5.00 | 5.00 |
| **2** | 1.77 | 0.00 | 0.75 | 5.00 | 5.00 |
| **2** | **1** | 2.98 | 0.00 | 0.00 | 12.50 | 16.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 1.07 | 0.00 | 0.00 | 2.86 | 3.85 |
| **2** | 1.66 | 0.00 | 0.68 | 3.72 | 4.73 |
| **3** | 1.69 | 0.00 | 0.73 | 3.75 | 4.83 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 10.43 | 0.00 | 10.17 | 17.00 | 17.00 |
| **2** | 0.51 | 0.00 | 0.00 | 1.45 | 2.20 |
| **2** | **1** | 4.64 | 0.00 | 0.00 | 17.00 | 24.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

17:00 - 17:15

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.05 | 0.00 | 0.00 | 0.00 | 1.00 |
| **2** | 9.60 | 6.00 | 10.00 | 10.00 | 10.00 |
| **3** | 9.61 | 5.67 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 19.62 | 0.00 | 17.00 | 41.50 | 45.71 |
| **2** | 21.19 | 0.00 | 19.75 | 43.00 | 47.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 4.08 | 0.00 | 5.00 | 5.00 | 5.00 |
| **2** | 2.20 | 0.00 | 1.38 | 5.00 | 5.00 |
| **2** | **1** | 22.45 | 0.00 | 18.50 | 47.00 | 52.75 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 1.60 | 0.00 | 0.45 | 3.73 | 5.20 |
| **2** | 3.72 | 0.00 | 2.19 | 8.00 | 10.67 |
| **3** | 3.72 | 0.00 | 2.27 | 7.90 | 10.67 |
| **2** | **1** | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.93 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.83 | 0.00 | 0.00 | 1.97 | 3.10 |
| **2** | **1** | 61.70 | 17.00 | 58.50 | 95.00 | 109.50 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

17:15 - 17:30

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.07 | 0.00 | 0.00 | 0.00 | 0.25 |
| **2** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 97.49 | 60.00 | 96.00 | 130.25 | 136.00 |
| **2** | 98.90 | 61.00 | 98.00 | 130.80 | 137.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 3.93 | 0.00 | 5.00 | 5.00 | 5.00 |
| **2** | 2.63 | 0.00 | 2.05 | 5.00 | 5.00 |
| **2** | **1** | 86.03 | 30.00 | 85.25 | 124.00 | 136.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 3.01 | 0.00 | 1.33 | 7.00 | 10.00 |
| **2** | 14.78 | 4.00 | 18.00 | 18.00 | 18.00 |
| **3** | 14.86 | 3.67 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 10.90 | 0.00 | 5.40 | 30.00 | 39.33 |
| **2** | 10.43 | 0.00 | 4.29 | 29.20 | 37.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.97 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.66 | 0.00 | 0.00 | 1.65 | 2.45 |
| **2** | **1** | 210.44 | 151.50 | 210.50 | 257.00 | 270.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

17:30 - 17:45

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.05 | 0.00 | 0.00 | 0.00 | 1.00 |
| **2** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 174.80 | 124.00 | 174.50 | 211.50 | 224.00 |
| **2** | 176.16 | 125.00 | 176.00 | 213.00 | 226.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 4.16 | 0.00 | 5.00 | 5.00 | 5.00 |
| **2** | 2.67 | 0.00 | 2.33 | 5.00 | 5.00 |
| **2** | **1** | 147.70 | 84.50 | 143.75 | 200.50 | 213.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 3.38 | 0.00 | 1.49 | 8.33 | 11.67 |
| **2** | 16.60 | 5.60 | 18.00 | 18.00 | 18.00 |
| **3** | 16.67 | 5.75 | 18.00 | 18.00 | 18.00 |
| **2** | **1** | 29.75 | 0.00 | 26.50 | 63.00 | 73.00 |
| **2** | 29.05 | 0.00 | 25.75 | 62.00 | 73.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.98 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.70 | 0.00 | 0.00 | 1.85 | 2.90 |
| **2** | **1** | 367.44 | 295.00 | 366.50 | 422.00 | 444.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

17:45 - 18:00

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.07 | 0.00 | 0.00 | 0.00 | 0.25 |
| **2** | 9.99 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 194.89 | 140.33 | 193.33 | 233.00 | 253.00 |
| **2** | 196.83 | 144.00 | 194.60 | 234.00 | 254.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 4.22 | 0.00 | 5.00 | 5.00 | 5.00 |
| **2** | 2.68 | 0.00 | 2.35 | 5.00 | 5.00 |
| **2** | **1** | 162.70 | 94.00 | 162.00 | 218.00 | 231.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 2.29 | 0.00 | 0.94 | 5.29 | 8.00 |
| **2** | 9.12 | 0.00 | 6.75 | 18.00 | 18.00 |
| **3** | 9.20 | 0.00 | 6.54 | 18.00 | 18.00 |
| **2** | **1** | 7.39 | 0.00 | 0.00 | 28.00 | 45.00 |
| **2** | 7.11 | 0.00 | 0.00 | 27.50 | 42.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.97 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.77 | 0.00 | 0.00 | 2.00 | 3.17 |
| **2** | **1** | 459.45 | 375.00 | 457.25 | 527.00 | 546.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

18:00 - 18:15

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Arm** | **Side** | **Lane level** | **Lane** | **Mean (PCU)** | **Q05 (PCU)** | **Q50 (PCU)** | **Q90 (PCU)** | **Q95 (PCU)** |
| **1** | **Entry** | **1** | **1** | 0.08 | 0.00 | 0.00 | 0.00 | 1.00 |
| **2** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **3** | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| **2** | **1** | 175.47 | 119.00 | 172.67 | 220.00 | 231.00 |
| **2** | 178.11 | 124.00 | 175.00 | 223.33 | 232.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | **Entry** | **1** | **1** | 4.15 | 0.00 | 5.00 | 5.00 | 5.00 |
| **2** | 2.58 | 0.00 | 1.96 | 5.00 | 5.00 |
| **2** | **1** | 151.01 | 68.00 | 153.50 | 211.00 | 231.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **3** | **Entry** | **1** | **1** | 1.15 | 0.00 | 0.16 | 2.75 | 3.80 |
| **2** | 1.63 | 0.00 | 0.76 | 3.20 | 4.11 |
| **3** | 1.73 | 0.00 | 0.81 | 3.39 | 4.29 |
| **2** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **2** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **4** | **Entry** | **1** | **1** | 16.92 | 17.00 | 17.00 | 17.00 | 17.00 |
| **2** | 0.80 | 0.00 | 0.00 | 1.96 | 3.40 |
| **2** | **1** | 476.69 | 377.00 | 477.50 | 546.00 | 572.50 |
| **Exit** | **1** | **1** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |