HighgateTransportation

Pagham South

Proposed Residential Development and Community Hub
Pagham Road, Pagham

Strategic Highway Network and Surrounding Roads

Addendum Transport Assessment
(ATA/03/A)

March 2017

ARUN DISTRICT COUNCIL P/140/16/OUT

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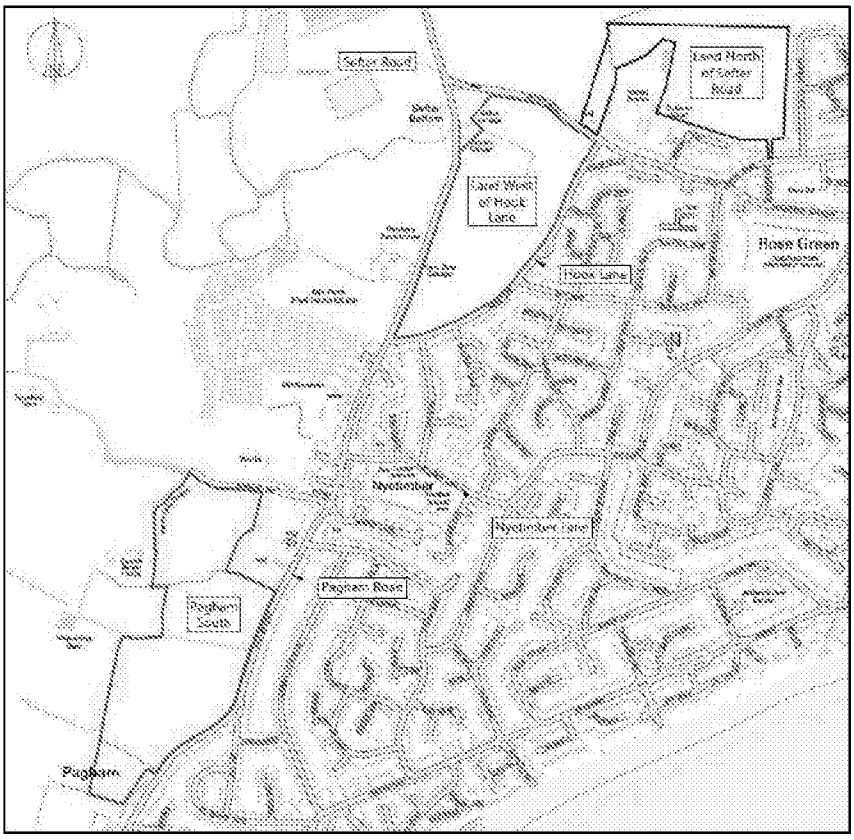
1.0 Introduction

1.1 Highgate Transportation Limited have been appointed by Hanbury PM Ltd to carry out the transport assessment work to support their planning application for residential development and creation of a community hub on land at Pagham South, which lies to the west of Pagham Road. The planning application (P/140/16/OUT) was submitted in outline with all matters reserved except for access.

1.2 The transport assessment work has been prepared as freestanding reports. Report TA/01 considers the development impact arising from the proposals at Pagham South. TA/01 is referred to as the Transport Assessment and sets out all the technical detail such as trip rates, trip distribution and assignment, background traffic flows and committed development for the local area. This has been updated following West Sussex County Council's (WSCC) highways consultation response (TA/01/A).

1.3 Report ATA/02 replaced report ATA/01 and is an addendum to the transport assessment that assesses the cumulative impact arising on the local highway network if the residential development proposed at the two other Pagham sites identified in the emerging Local Plan (Sefter Road, P/134/16, and Hook Lane P/6/17) come forward. The location of these sites is shown on **Figure 1.1** below. Therefore this report is also being updated (ATA/02/A) further to the highways consultation response from WSCC, and sets out the cumulative impact on the local highway network within Pagham.

Figure 1.1 – Pagham South, Hook Lane and Sefter Road site locations



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1.4 Addendum report (ATA/03) was provided to assess the impact of the Pagham South site and cumulative impact from the other sites on the strategic highway network managed by Highways England, and on the surrounding roads. Subsequently further assessment parameters have been discussed and agreed with officers at WSCC and Highways England, and these form the basis of this updated document, ATA/03/A.

1.5 The key changes have been as follows:

i. Availability of and subsequent agreement with WSCC and Highways England for the use of the SATURN flow data from the recently published Arun Transport Study 2016 Stage 3 Final Report (January 2017), for a forecast year of 2031 (end of the Local Plan period) testing the following scenarios:

- Enterprise Bognor Regis + Local Plan with Mitigation.
- Enterprise Bognor Regis + Local Plan without Mitigation.

ii. Assessment of the three development sites that are currently being brought forward in Pagham, as set out in **paragraphs 1.3** and **1.9** below, with no specific inclusion for other potential housing sites that may come forward in the future. The Arun SATURN flows account for a total of 1,200 dwellings in Pagham in any event.

iii. The inclusion of an additional junction, the Lower Bognor Road junction with Pagham Road and the B2166, previously included for in ATA/02 only.

iv. An agreed assessment year of 2031 only for the cumulative impact, thereby negating the requirement for a cumulative development joint phasing strategy.

1.6 The Arun SATURN traffic flow data takes into account the emerging Arun Local Plan aspirations for 1,200 new dwellings to be built in Pagham before the end of the Local Plan period in 2031 (reference their Table 6, sites 1 and 2). Hence this data includes the traffic forecast to arise from the three developments currently being promoted in Pagham, and a further 250 units within this Local Plan timeframe until 2031 (inclusive of current committed schemes off Pagham Road).

1.7 It has therefore been agreed that the assessment will involve modelling the two Arun scenarios set out above in **paragraph 1.5 (i)** as 'with development' scenarios and then discount the traffic movements associated with the three Pagham developments, as set out in the relevant Transport Assessments, to provide a 'without development' scenario for comparison.

1.8 The use of the SATURN data also provides a uniform approach for the cumulative assessment being carried out by the three developers, as agreed with officers at WSCC and Highways England. From this work the required level of mitigation can be assessed to offset the cumulative traffic impact, and hence the level of contribution required from each site can be calculated and agreed.

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1.9 In summary, each development site proposes the following:

i. Pagham South – up to 400 residential dwellings, a 2000sqm GFA local centre including a 500 sqm GFA convenience store, a 70 bed care home and a single form entry primary school. Vehicular access is via two new priority junctions onto Pagham Road.

ii. Hook Lane – up to 300 residential dwellings and an 80 bed care home. The proposal includes the option of accommodating a two form entry primary school instead of some of the housing. Vehicular access is from three new priority junctions – one onto Pagham Road and two onto Hook Lane.

iii. Sefter Road – 250 dwellings and a single form entry primary school. Vehicular access from a new priority junction onto Sefter Road.

1.10 For the purpose of this assessment, the school will be retained on the land at Pagham South, therefore the analysis has been carried out for 300 dwellings and an 80 bed care home on the Hallam site on land north of Hook Lane, and 250 dwellings on the Taylor Wimpey site on land north of Sefter Road.

1.11 The junctions included within the assessments carried out for Highways England have been agreed as the two A27 junctions north of Pagham Road; the A259 Bognor Road junction and the B2145 Whyke junction.

1.12 However, the scope of this assessment has been widened to include the local highway network to the south of the A27 inclusive of the Lower Bognor Road junction with Pagham Road and the B2166, due to the availability of the 2031 Arun Transport Study SATURN data. Therefore, the scope of the assessment can be summarised as the following five junctions as set out below:

i. A27 Whyke junction.
ii. A27 Bognor Road junction.
iii. B2166 roundabout junction with the B2145 (to the south of (i)).
iv. B2166 roundabout junction with Vinnetrow Road (to the south of (ii)).
v. Lower Bognor Road junction with Pagham Road and the B2166.

1.13 This report concludes that overall that the Pagham South development can generally be accommodated on the strategic highway network and surrounding roads and furthermore, that the three Pagham developments sites currently promoted can cumulatively be accommodated on the local highway network with the implementation of the proposed mitigation schemes at the following junctions:

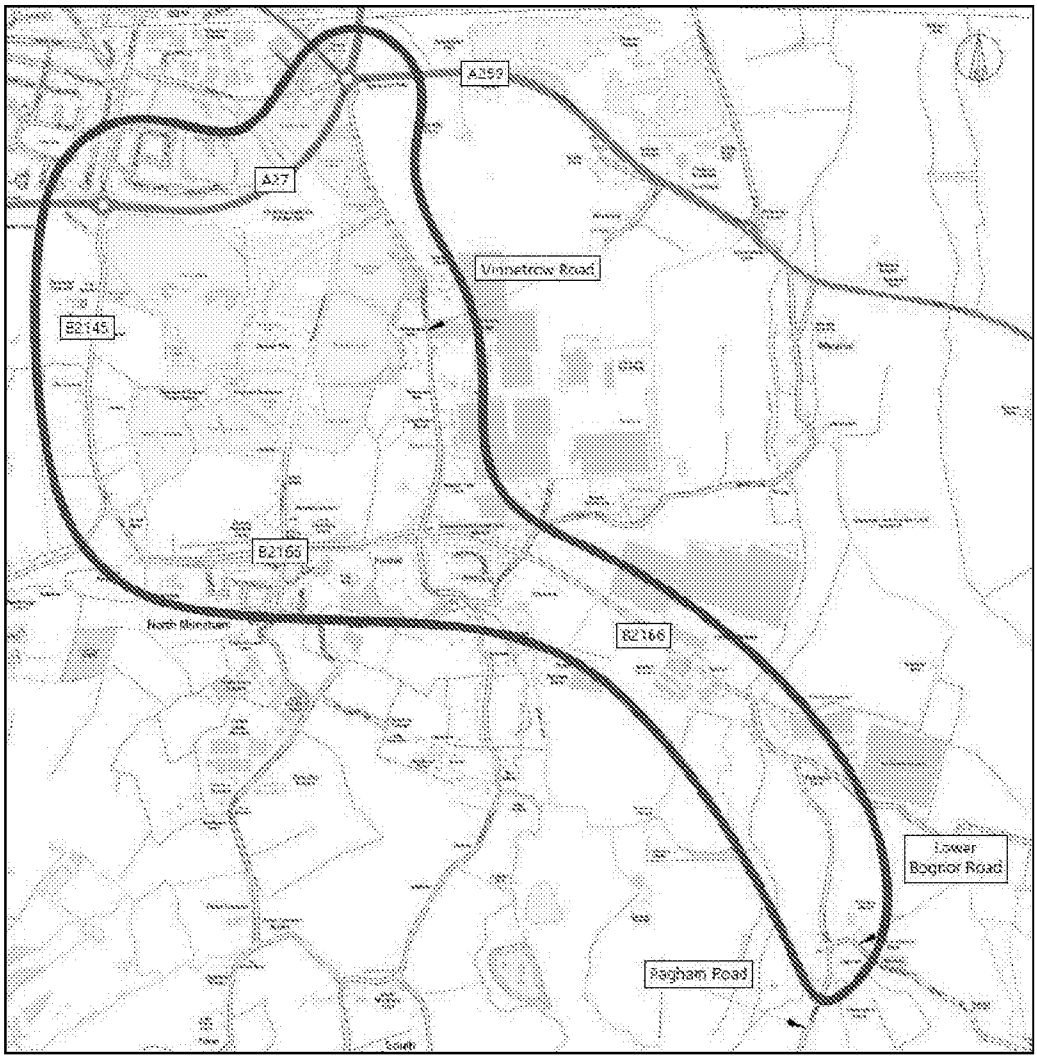
i. B2166 junction with Vinnetrow Road – widening on the B2166 west arm.
ii. B2145 junction with the B2166 – widening on the B2145 north arm to extend the two lane approach (full cumulative build out only).
iii. A27 Whyke junction – contribution towards the installation of MOVA.

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2.0 Study Area and Assessment Parameters

2.1 The study area is shown in **Figure 2.1** below.

Figure 2.1 - The study area



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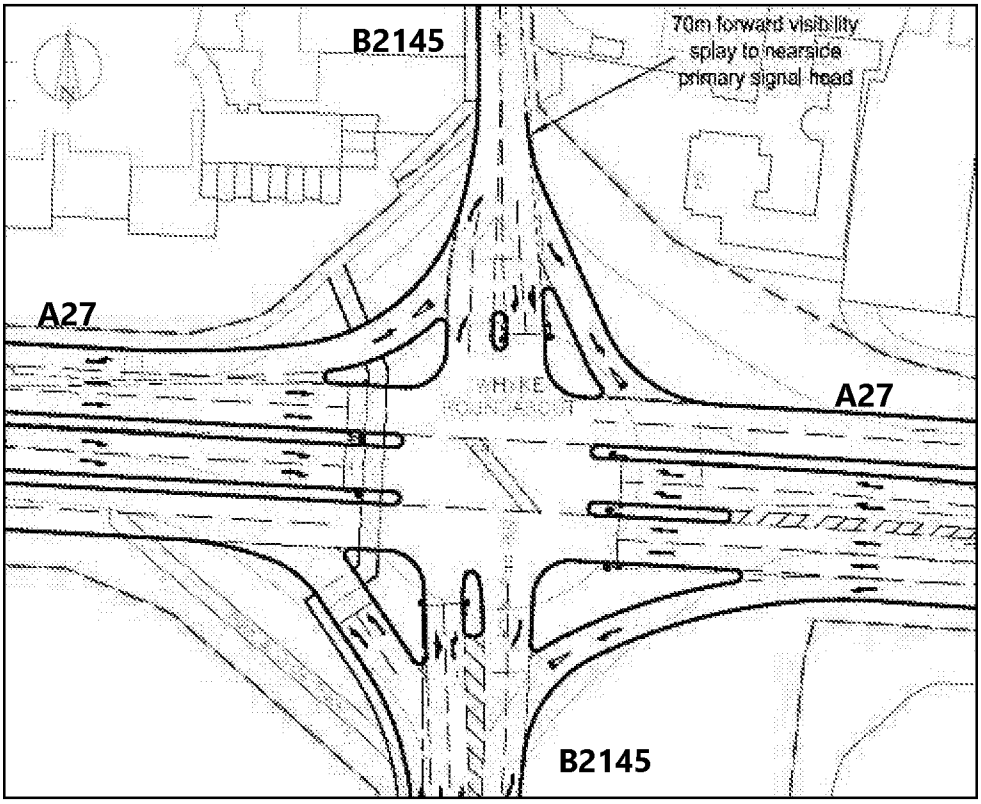
2.2 It has been agreed with Highways England that the two A27 junctions are to be modelled based on the improvement schemes identified in the Chichester Local Plan as set out below. The base models have been provided by Highways England and the flows updated based on the Arun Transport Study SATURN flow data. Highways England confirmed that the existing layouts for these junctions are not to be assessed.

A27 Whyke Roundabout

2.3 As part of the Chichester Free School application, proposals were put forward for alterations to the A27 Whyke Roundabout junction to create a four-armed signal control junction. A drawing of the proposed mitigation works is contained in **Appendix 1** and illustrated in **Figure 2.2** below.

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Figure 2.2 – Chichester Local Plan A27 Whyke junction proposals

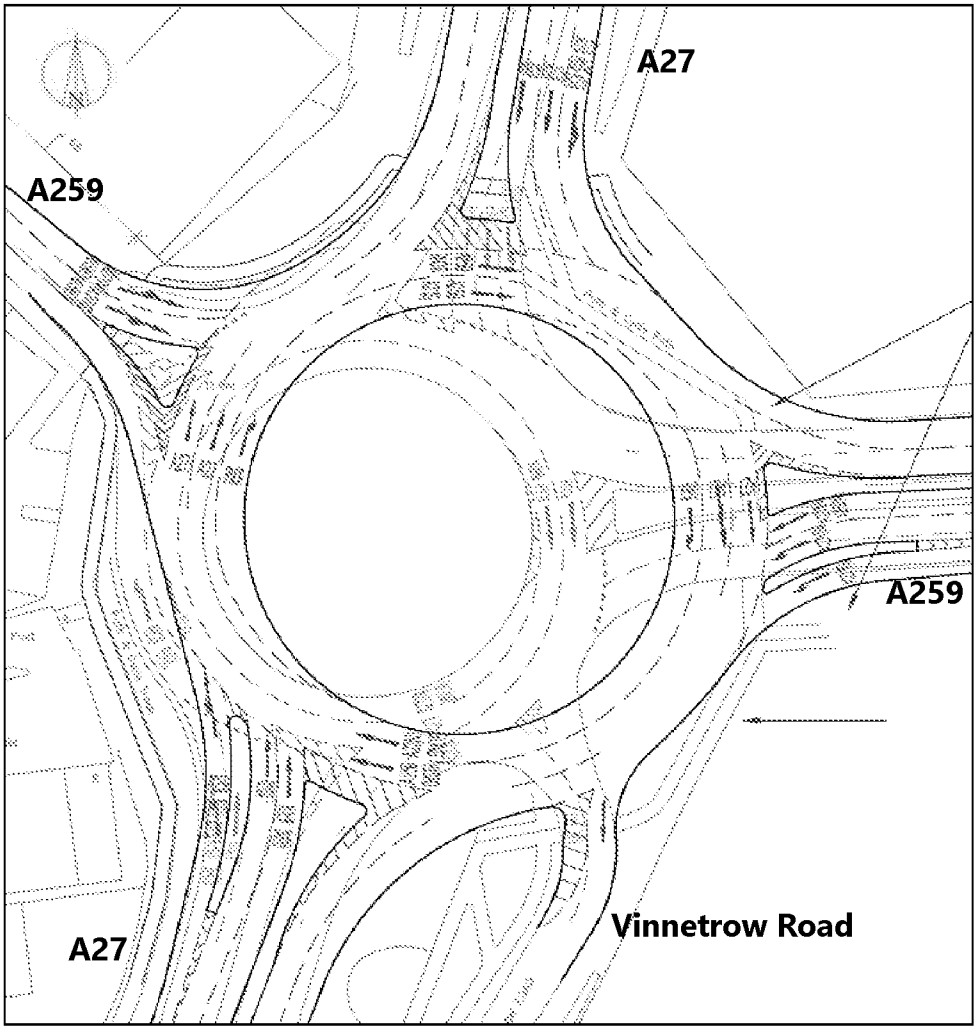


A27 Bognor Road Roundabout

2.4 The Chichester Local Plan contains alterations to the geometry of the Bognor Road Roundabout junction, which includes the modification of the Vinnetrow Road arm to an exit-only. A drawing of the proposed mitigation works is contained in **Appendix 1** and illustrated in **Figure 2.3** below. All existing northbound Vinnetrow Road traffic flows onto the A27 will be re-routed to the A259 Bognor Road southeast of the A27 junction. This change in flows is taken into account within the SATURN data.

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Figure 2.3 – Chichester Local Plan A27 Bognor Road junction proposals



2.5 The SATURN data from the Arun Transport Study was obtained from WSCC and is contained in **Appendix 2** for reference. This information has been converted to flow diagrams for the five junctions identified in **paragraph 1.12**, which are contained in **Appendix 3**.

2.6 Trip distributions within the study area are based on those contained within the Transport Assessments submitted in support of each of the three development sites. These flow diagrams are contained in **Appendix 4**, **5** and **6** for the Pagham South, Hallam and Taylor Wimpey developments respectively.

2.7 The impact appraisal is detailed in **Section 3.0** for the five junctions in the agreed future year of 2031 for both Local Plan scenario data sets in 'with' and 'without' development scenarios. Proposed mitigation measures are then discussed in **Section 4.0**.

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3.0 Impact Appraisal

3.1 The impact arising on the A27 and surrounding network is identified within this section of the report for the following two 2031 Arun Transport Study scenarios for both 'with' and 'without' development traffic flows:

i. Enterprise Bognor Regis + Local Plan with Mitigation.
ii. Enterprise Bognor Regis + Local Plan without Mitigation.

3.2 The Local Plan reference to mitigation ('Local Plan with Mitigation' scenarios) are future schemes identified within the Arun Transport Study (Table 10) and included for within the 'with Mitigation' SATURN flows. The mitigation schemes are at the following junctions:

i. A27/B2145 Whyke Roundabout – Chichester Free School mitigation measure.
ii. A27/A259 Bognor Road Roundabout – Chichester District Council Local Plan mitigation measure.
iii. A27/B2233 Nyton Road – Lengthening of acceleration/auxiliary lane for left turn from B2233 (NB).
iv. A27/A29 Fontwell Western Roundabout – Fontwell application (WA/22/15) mitigation measure.
v. A27/A29 Fontwell Eastern Roundabout – Widening and signalisation of A27 arms.
vi. A27/A284 Ford Road, Arundel – Widening of A27 (EB).
vii. A27/The Causeway (Arundel) – Road marking additions at A27 (EB and WB).
viii. A27/A280 Patching Northern Roundabout – Widening of southern approach.
ix. A29/A259 Rowan Way – Widening of EB, NB and SB arms.
x. A29/A259 Felpham Relief Road – Widening of WB, NB and SB arms.
xi. A259/B2132 Comet Corner – Safety improvements.
xii. A259/B2233 Oystercatcher – Safety improvements (roundabout).
xiii. A259/Church Lane (Climping) – Widening of WB arm.
xiv. A259/B2187 Littlehampton West (Tesco) – Widening of A259 (EB).

3.3 It should be noted that the West of Bursted Link Road is included in the 'Local Plan with Mitigation' 2031 scenarios, as well as A29 realignment measures.

3.4 Highways England have provided the base models to use for both the A27 junctions and confirmed that modelling is to be carried out for the proposed Chichester local Plan schemes at these junctions. The B2145/B2166, B2166/Vinnetrow Road and B2166/Lower Bognor Road junction models have been based on those submitted in our previous transport assessment work, updated to reflect the SATURN flow data.

3.5 As with ATA/03, the 'No EMP' (lane widening) model for the A27/Bognor Road junction has been disregarded at this time as it does not match the geometry set out in the CAD plan supplied by Highways England.

3.6 Junction modelling has been carried out in the ARCADY, PICADY (both Junctions 9) and LINSIG (version 3) modelling programmes for all scenarios in the AM and PM peak hours. The inputs and output values are in PCU's.

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3.7 The 2031 traffic flows for both Local Plan scenarios are set out on the turning movement diagrams contained in **Appendix 3**. These are the 'with development' scenarios.

3.8 It should be noted that the model supplied by Highways England for the A27/Bognor Road junction has Vinnetrow Road as an exit only arm from the roundabout. Therefore, in the 'without mitigation' Local Plan scenarios the traffic flows have been manually adjusted to enter the A259 Bognor Road southern arm and reassigned on this basis. These adjusted flow diagrams are also contained in **Appendix 3** for reference.

2031 'With Development' Scenario Assessments

3.9 The 'with development' (i.e. Pagham South, Sefter Road and Hook Lane) modelling results for all five junctions are summarised in **Table 3.1** and **Table 3.2** below, for the Local Plan with and without mitigation scenarios respectively. The full modelling reports are contained in **Appendix 7**.

Table 3.1 – 2031 'with development' Enterprise Bognor Regis + Local Plan with Mitigation

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
PICADY						
B2166 j/w Lower Bognor Road and Pagham Road	1.18	40	326	1.02	15	150
ARCADY						
B2166 j/w Vinnetrow Road	0.75	3	9	0.90	8	26
B2166 j/w B2145	0.94	13	39	1.07	62	144
A27 Bognor Road Junction	0.67	2	6	0.52	1	6
LINSIG						
A27 Whyke Junction	0.93	22	52	1.10	62	233

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Table 3.2 – 2031 'with development' Enterprise Bognor Regis + Local Plan without Mitigation

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
PICADY						
B2166 j/w Lower Bognor Road and Pagham Road	1.19	43	341	1.43	86	800
ARCADY						
B2166 j/w Vinnetrow Road	0.79	4	12	0.91	9	29
B2166 j/w B2145	1.06	56	121	0.95	14	43
A27 Bognor Road Junction	0.53	1	4	0.47	1	5
LINSIG						
A27 Whyke Junction	0.93	20	90	1.11	69	241

3.10 It can be seen from the above Tables that in the 2031 Local Plan scenarios the 'with development' cumulative modelling has shown the following:

i. The Lower Bognor Road junction is shown to be operating above theoretical design capacity in both scenarios, which is as expected given the modelling for this junction in the previous transport assessments. However, it can be seen from the full report in **Appendix 7** as well as the flow diagrams in **Appendix 3** that the high RFC, queuing and delay values are associated with the additional flows on the Lower Bognor Road arm. It has been discussed and agreed with the highway officer that there is no queuing on the main arm of this junction and that the drivers using the minor arm realistically have earlier opportunities to choose a different route. Therefore, there is an expectation that some of the traffic on this arm in the future will choose a different part of the network to get to their destinations. Furthermore, queue and delay results must be viewed with caution when the RFC rises above 100% (a value of 1.0).

ii. The Vinnetrow Road junction with the B2166 is shown to operate within theoretical capacity in both scenarios in the AM and PM peak hour for a future year of 2031. However, it is acknowledged that the junction reaches an RFC of around 90% in the PM peak hour. This is discussed further in **Section 4.0**.

iii. The B2166 junction with the B2145 will operate over capacity in the future year of 2031 under both scenarios (RFC values of 1.06-1.08), with drivers experiencing around two minutes delay depending on the arm they are travelling on. This is discussed further in **Section 4.0**.

iv. The A27 Bognor Road junction is shown to operate well within capacity in both 2031 scenarios.

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v. The signalised A27 Whyke junction is shown to be operating over capacity in the PM peak hour for both 2031 scenarios. This is addressed in more detailing **Section 4.0**.

2031 'Without Development' Scenario Assessments

3.11 The development flow diagrams contained in **Appendix 4**, **5** and **6** have been combined into cumulative flow diagrams for the AM and PM peak hours (contained in **Appendix 8**) to demonstrate the level of trips to be removed from the 2031 'with development' flow diagrams contained in **Appendix 2**. The resultant flow diagrams for the discounting of the cumulative vehicular trips from both the 2031 Local Plan scenarios (SATURN data) are contained in **Appendix 9** for reference. These are the 'without development' scenarios.

3.12 It should be noted that a small amount of rerouting of development trips had to occur around the A27 junctions to fit the SATURN flows; these are highlighted and explained on each of the flow diagrams as necessary.

3.13 The cumulative 'without development' modelling results for all five junctions are summarised in **Table 3.3** and **Table 3.4** below, for the Local Plan with and without mitigation scenarios respectively. The modelling reports are contained in **Appendix 10**.

Table 3.3 – 2031 'without development' Enterprise Bognor Regis + Local Plan with Mitigation

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
PICADY						
B2166 j/w Lower Bognor Road and Pagham Road	1.03	18	153	0.87	5	58
ARCADY						
B2166 j/w Vinnetrow Road	0.62	2	6	0.80	4	13
B2166 j/w B2145	0.83	5	16	0.98	21	60
A27 Bognor Road Junction	0.65	2	5	0.50	1	6
LINSIG						
A27 Whyke Junction	0.86	17	48	1.05	38	153

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Table 3.4 – 2031 'without development' Enterprise Bognor Regis + Local Plan without Mitigation

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
PICADY						
B2166 j/w Lower Bognor Road and Pagham Road	1.04	20	162	1.21	51	398
ARCADY						
B2166 j/w Vinnetrow Road	0.65	2	7	0.81	4	14
B2166 j/w B2145	0.95	15	41	0.86	6	20
A27 Bognor Road Junction	0.51	1	4	0.46	1	5
LINSIG						
A27 Whyke Junction	0.74	11	42	0.99	17	99

3.14 It can be seen from the above 'without development' summary results, in comparison to the 'with development' summary results in **Table 3.1** and **Table 3.2**, that:

i. The Lower Bognor Road is shown to be operating over capacity in 2031 in all scenarios tested apart from with mitigation in the PM peak hour. This is likely due to the mitigation schemes to the south east of this junction, such as the West Bursted bypass scheme.
ii. The Vinnetrow Road junction with the B2166 is shown to operate close to theoretical capacity in all scenarios tested. There is around a 10% increase in RFC values between the scenarios for with and without cumulative Pagham developments. This junction is discussed further in **Section 4.0**.
iii. The B2166 junction with the B2145 will operate within capacity in all scenarios tested with minimal queuing and delay, and the increase in RFC values between with and without development testing is around 10%. This junction is discussed further in **Section 4.0**.
iv. The A27 Bognor Road junction is shown to operate well within capacity in all the scenarios tested.
v. The signalised A27 Whyke junction is shown to be operating at capacity in the PM peak hour 2031 'without development' scenarios. It can be seen that the RFC values vary between the scenarios with up to 9% difference in the 'with mitigation' Local Plan scenario 'with' and 'without' the cumulative development impact, and up to a 19% increase from the without and with cumulative development traffic impact in the 'without mitigation' Local Plan scenarios. This junction is discussed further in **Section 4.0**.

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2031 'Without Development' Scenario Assessments – Plus Pagham South

3.15 The 'without development' modelling results for all five junctions, testing for the addition of the Pagham South development traffic flows only are set out in **Table 3.5** and **Table 3.6** below, for the Local Plan with and without mitigation scenarios respectively. The modelling reports are also contained in **Appendix 10**. The flow diagrams are contained in **Appendix 9**.

Table 3.5 – 2031 'without development' Enterprise Bognor Regis + Local Plan with Mitigation + Pagham South

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
PICADY						
B2166 j/w Lower Bognor Road and Pagham Road	1.09	26	211	0.92	8	83
ARCADY						
B2166 j/w Vinnetrow Road	0.67	2	7	0.84	5	17
B2166 j/w B2145	0.88	7	22	1.02	36	91
A27 Bognor Road Junction	0.66	2	5	0.50	1	6
LINSIG						
A27 Whyke Junction	0.88	17	50	1.07	46	192

Table 3.6 – 2031 'without development' Enterprise Bognor Regis + Local Plan without Mitigation + Pagham South

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
PICADY						
B2166 j/w Lower Bognor Road and Pagham Road	1.10	29	221	1.29	64	544
ARCADY						
B2166 j/w Vinnetrow Road	0.71	2	9	0.85	6	18
B2166 j/w B2145	0.99	26	65	0.90	9	27
A27 Bognor Road Junction	0.51	1	4	0.46	1	5
LINSIG						
A27 Whyke Junction	0.77	12	56	1.01	33	110

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3.16 It can be seen from the above, in comparison to **Tables 3.1** to **3.4**, that:

i. The Lower Bognor Road junction can be seen to experience more queuing and delay on the minor arm than in the without cumulative development scenario modelling. However, the increases in capacity shown for this junction with the addition of the Pagham South development in 2031 are within the 10% RFC increase of significance threshold in both peak hours. Although it can be seen that there is a significant increase in delay in the PM peak hour with the addition of the Pagham South traffic on the main arm of the junction in the Local Plan without mitigation scenario, of 146 seconds in a 2031 assessment year, as set out in **paragraph 3.10 (i)** it is considered that the drivers using the minor arm realistically have earlier opportunities to choose a different route and hence in reality traffic will be redistributed across the network. Furthermore, the 'without development' scenario also shows a high RFC of 121% for the PM peak hour with queuing time of 398 seconds, therefore demonstrating that any slight increase in traffic flows in the modelling on the main arm (through-route) of the junction can produce results that should be treated with caution.

ii. The Vinnetrow Road junction with the B2166 is shown to operate within capacity under all scenarios with and without the Pagham South development in 2031.

iii. The B2166 junction with the B2145 will operate at capacity in 2031 in the PM peak hour and AM peak hour for the Local Plan scenarios with and without mitigation respectively. However, it can be seen that this increase above the results set out in **Tables 3.1** to **3.4** is minimal (within a 5% increase in RFC values).

iv. The A27 Bognor Road junction is shown to operate well within capacity with the addition of the Pagham South development traffic in 2031.

v. The signalised A27 Whyke junction is shown to be operating within capacity in the AM peak periods, but just over capacity in the PM peak periods modelled. However, this is not a large increase on the 'without development' assessments carried out at around 2% growth in RFC only. It should be noted that any queue and delay figures for junctions showing over 100% RFC should be treated with caution.

3.17 Therefore, it can be seen that generally the addition of the Pagham South development traffic has minimal impact on the strategic highway network and surrounding junctions.

2031 'Without Development' Scenario Assessments – Plus Pagham South and Hallam

3.18 The 'without development' modelling results for all five junctions testing for the addition of both the Pagham South and Hallam developments are set out in **Table 3.7** and **Table 3.8** below, for the Local Plan with and without mitigation scenarios respectively. The modelling reports are also contained in **Appendix 10**. The flow diagrams are contained in **Appendix 9**.

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Table 3.7 – 2031 'without development' Enterprise Bognor Regis + Local Plan with Mitigation + Pagham South + Hallam

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
PICADY						
B2166 j/w Lower Bognor Road and Pagham Road	1.13	33.5	269	0.97	11	115
ARCADY						
B2166 j/w Vinnetrow Road	0.71	3	8	0.87	7	21
B2166 j/w B2145	0.92	10	30	1.05	49	118
A27 Bognor Road Junction	0.66	2	6	0.51	1	6
LINSIG						
A27 Whyke Junction	0.89	19	50	1.08	49	230

Table 3.8 – 2031 'without development' Enterprise Bognor Regis + Local Plan without Mitigation + Pagham South + Hallam

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
PICADY						
B2166 j/w Lower Bognor Road and Pagham Road	1.14	36	280	1.36	76	683
ARCADY						
B2166 j/w Vinnetrow Road	0.75	3	10	0.89	7	23
B2166 j/w B2145	1.03	42	94	0.93	11	34
A27 Bognor Road Junction	0.52	1	4	0.46	1	5
LINSIG						
A27 Whyke Junction	0.78	12	56	1.03	38	136

3.19 It can be seen from the above in comparison to the previous tables that:

i. The Lower Bognor Road operates at or over capacity in all peak hour scenarios. However, this has already been discussed in **paragraphs 3.10** and **3.16**.

ii. The Vinnetrow Road junction with the B2166 is shown to operate within capacity under all scenarios with the Pagham South and Hallam developments in 2031.

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iii. The B2166 junction with the B2145 will operate with only around a 2-4% increase in RFC values above that resulted from the '+ Pagham South' scenarios.
iv. The A27 Bognor Road junction is shown to operate within capacity with the addition both the Pagham South and Hallam sites in 2031.
v. The signalised A27 Whyke junction is shown to be operating within capacity in the AM peak periods, but just over capacity in the PM peak periods modelled with both the Hallam and Pagham South developments (at 1-2% increase in RFC above that shown with just the Pagham South site only).

3.20 Therefore, it can be seen that the Vinnetrow Road junction and the A27 Bognor Road junction operate within capacity with the Pagham South and Hallam developments and that there are minimal RFC increases with the addition of the Hallam development traffic.

Summary

3.21 The junction assessments can therefore be summarised as follows:

Lower Bognor Road junction

i. This junction was shown to generally operate over capacity in every 2031 scenario tested, including the 'without development' assessments. As previously set out, it is however considered that the drivers approaching this junction have realistic route choices prior to arriving at the junction and as such it is reasonable to expect that the traffic would be redistributed around the network in reality.

B2166 junction with Vinnetrow Road

ii. This junction operates within capacity in each scenario tested, although the results demonstrate RFC values of 90% and 91% in the full cumulative 'with development' PM peak hour scenarios shown in **Table 3.1** and **Table 3.2**.

B2166 junction with B2145

iii. This junction will operate within capacity without the addition of the cumulative development traffic flows. However, in each development scenario tested the junction approaches or slightly exceeds theoretical capacity.

A27 Bognor Road junction

iv. This junction operates well within capacity in each scenario tested.

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A27 Whyke junction

v. This junction is shown to operate over capacity with the three cumulative Pagham sites. This junction is also shown to operate at around theoretical capacity in the PM peak periods modelled in the 'without development' scenario. It should be noted that the overall delay forecast to be experienced by drivers in the busiest (PM) peak hour is not significantly worse than the 'without development' scenario.

3.22 It can therefore be concluded that the Pagham South development traffic will have minimal impact on the strategic highway network and surrounding junctions.

3.23 Potential mitigation measures are presented in **Section 4.0** for the A27 Whyke junction, the B2145/B2166 junction and the B2166/Vinnetrow Road junction.

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4.0 Proposed Mitigation

4.1 From the results set out in **Section 3.0** it can be seen that the following junctions require mitigation:

i. B2166 junction with Vinnetrow Road – in the full cumulative development assessments only ('with development' scenarios).
ii. B2145 junction with the B2166 – in all development scenarios tested.
iii. A27 Whyke junction – in all development scenarios tested.

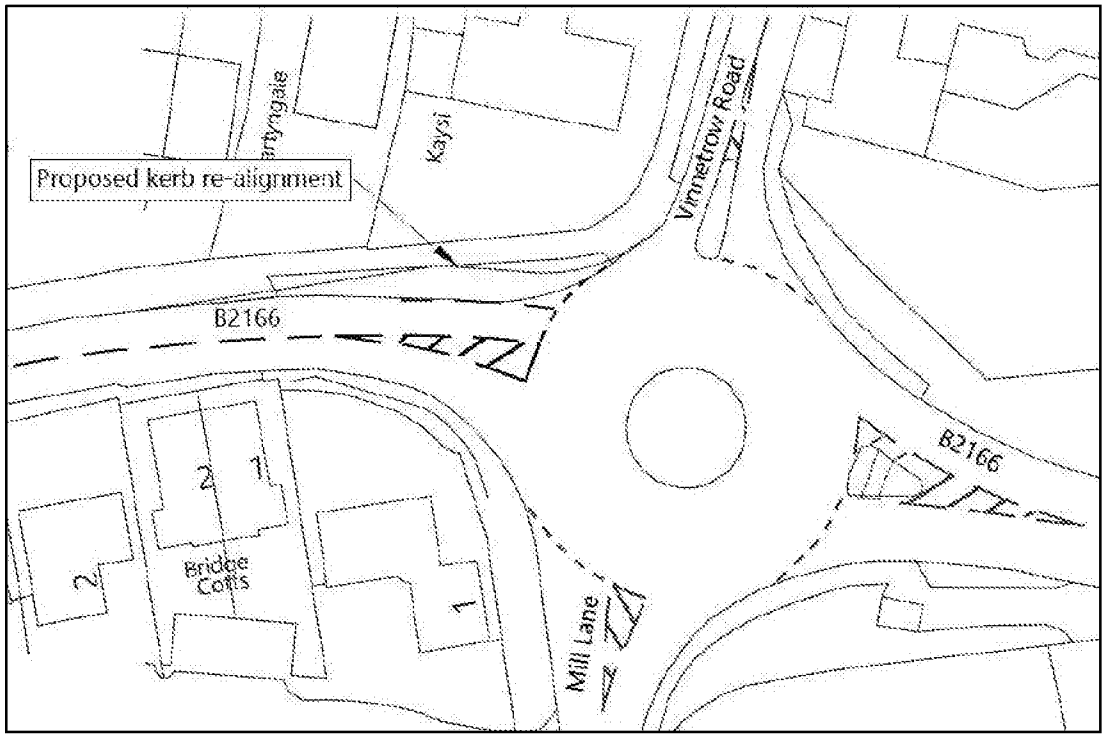
4.2 Arun District Council and Highways England would like the mitigation schemes agreed so that an appropriate level of contribution (i.e. cost per dwelling or cost per trip at the specific location, or each developer takes responsibility for specific location(s) and/or a mix of these) can be provided by developments coming forward via an agreed mechanism. Discussion between the developers and with officers is expected to be based on the results of the cumulative assessments.

4.3 The suggested mitigation measures for discussion arising from this report are:

i. B2166 junction with Vinnetrow Road – widening on the B2166 west arm.
ii. B2145 junction with the B2166 – widening on the B2145 north arm to extend the two lane approach.
iii. A27 Whyke junction – contribution towards the installation of MOVA.

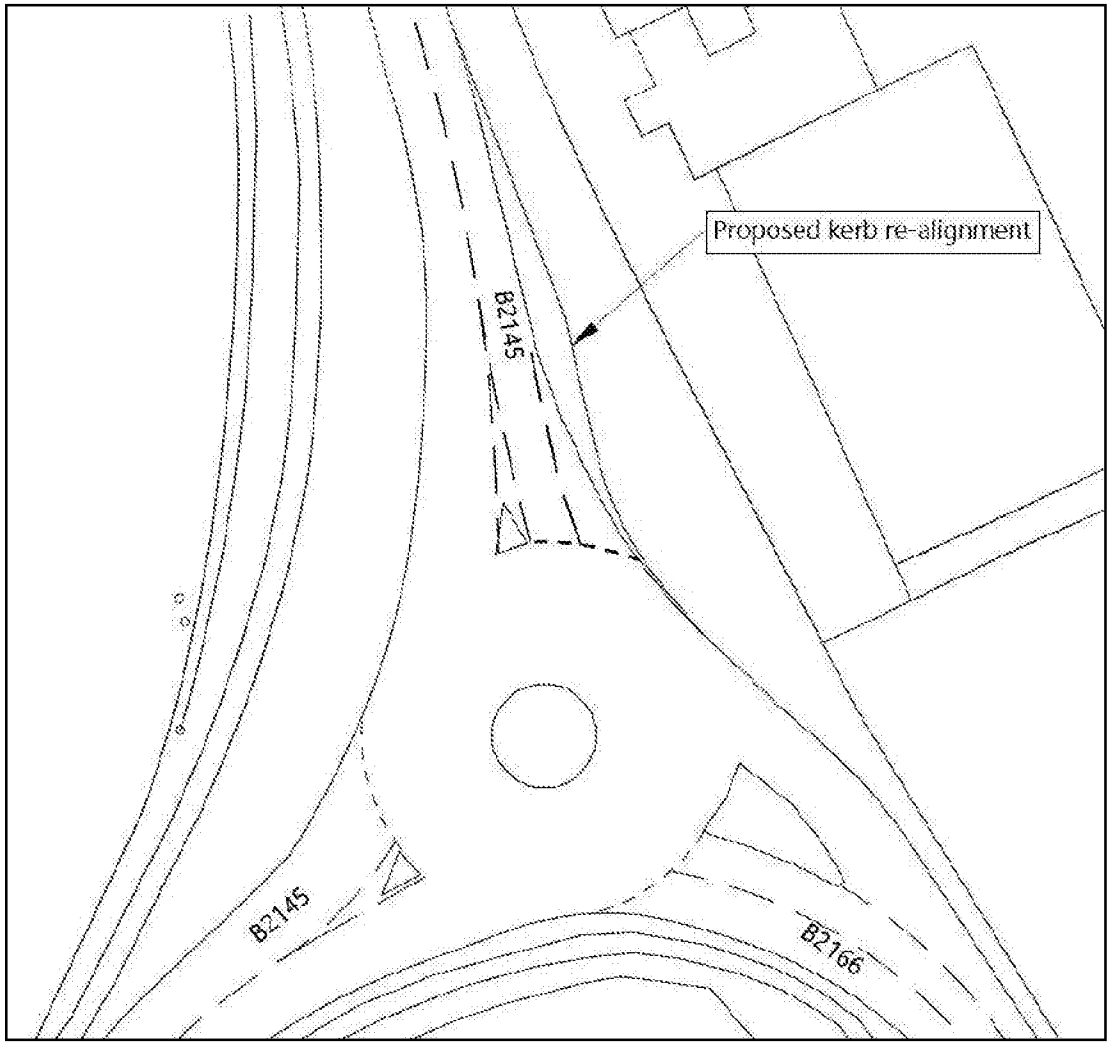
4.4 The proposed mitigation works are set out on the layouts contained in **Appendix 11**, and shown for reference in **Figures 4.1** and **4.2** below for the B2166/Vinnetrow Road and B2145/B2166 junctions. These schemes have been provided in collaboration with Hallam and Taylor Wimpey transport consultant (RPS and C&A respectively).

Figure 4.1 – Proposed mitigation at the B2166 junction with Vinnetrow Road



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Figure 4.2 - Proposed mitigation at the B2166 junction with the B2145



4.5 The proposed mitigation measures for the two B2166 junctions set out above have been modelled for the Local Plan 'with development' scenarios. The results are summarised in **Tables 4.1** and **4.2** and the modelling output files are contained in **Appendix 12**.

Table 4.1 – 2031 Vinnetrow Road junction with the B2166 with local widening

Scenario	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
LP Mitigation With Cumulative Developments	0.75	3	9	0.76	3	10
LP No mitigation With Cumulative Development	0.79	4	12	0.77	3	17

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Table 4.2 – 2031 B2145 junction with the B2166 with local widening

Scenario	AM Peak (0800-0900)			PM Peak (1700-1800)		
	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)
LP Mitigation With Cumulative Developments	0.94	13	38	0.93	11	31
LP No mitigation With Cumulative Development	1.06	55	119	0.83	5	14

4.6 It can be seen from **Table 4.1** that the proposed mitigation works to the kerb line on the western arm of the Vinnetrow Road roundabout provide an improvement to the operation of the roundabout in the PM peak hour under both scenarios tested, with a 14% reduction in RFC values.

4.7 It can be seen from **Table 4.2** that the proposed mitigation works to the kerb line on the northern arm of the B2145 junction with the B2166 has reduced the RFC, queue and delay values in the PM peak hour in both scenarios, when compared to the results in **Table 3.1** and **Table 3.2**.

4.8 In terms of direct impact of the developments on the B2145 junction with the B2166, cumulatively and that of Pagham South, it can be seen from the flow diagrams in **Appendix 4**, **Appendix 8** and **Appendix 9** that this is around 7% and 3% respectively across both peak hours.

4.9 The estimated cost of the mitigation works are summarised below, and Highway Infrastructure Costing spreadsheets for the kerbing works associated with the two roundabouts are contained in **Appendix 13** for reference:

i. B2166 junction with Vinnetrow Road – c£34,000.
ii. B2145 junction with the B2166 – c£23,000.
iii. A27 Whyke junction – c£120,000.

4.10 In summary it is considered that the proposed mitigation measures are appropriate and will require contributions apportioned from each of the developers.

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5.0 Summary and Conclusions

5.1 Highgate Transportation Limited have been appointed by Hanbury PM Ltd to carry out the transport assessment work to support their planning application for residential development and creation of a community hub on land at Pagham South, which lies to the west of Pagham Road. The planning application (P/140/16/OUT) was submitted in outline with all matters reserved except for access.

5.2 The transport assessment work has been prepared as freestanding reports.

5.3 This addendum report (ATA/03/A), has been provided to assess the cumulative impact of the Pagham sites on the strategic highway network and surrounding junctions, and to identify the likely mitigation required.

5.4 Agreement has been sought on methodology and parameters to be used with highway officers at WSCC and Highways England. The key changes are:

i. Availability of and subsequent agreement with WSCC and Highways England for the use of the SATURN flow data from the recently published Arun Transport Study 2016 Stage 3 Final Report (January 2017), for a forecast year of 2031 (end of the Local Plan period) testing the following scenarios:

- Enterprise Bognor Regis + Local Plan with Mitigation.
- Enterprise Bognor Regis + Local Plan without Mitigation.

ii. Assessment of the three development sites that are currently being brought forward in Pagham, as set out in **paragraphs 1.3** and **1.9**, with no specific inclusion for other potential housing sites that may come forward in the future. The Arun SATURN flows account for a total of 1,200 dwellings in Pagham in any event.

iii. The inclusion of an additional junction, the Lower Bognor Road junction with Pagham Road and the B2166, previously included for in ATA/02 only.

iv. An agreed assessment year of 2031 only for the cumulative impact, thereby negating the requirement for a cumulative development joint phasing strategy.

5.5 In summary, each development site proposes the following:

i. Pagham South – up to 400 residential dwellings, a 2000sqm GFA local centre including a 500 sqm GFA convenience store, a 70 bed care home and a single form entry primary school. Vehicular access is via two new priority junctions onto Pagham Road.

ii. Hook Lane – up to 300 residential dwellings and an 80 bed care home. The proposal includes the option of accommodating a two form entry primary school instead of some of the housing. Vehicular access is from three new priority junctions – one onto Pagham Road and two onto Hook Lane.

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iii. Sefter Road – up to 280 dwellings and a single form entry primary school. Vehicular access from a new priority junction onto Sefter Road.

5.6 The five junctions included within the assessments are:

i. A27 Whyke junction.
ii. A27 Bognor Road roundabout junction.
iii. B2166 roundabout junction with the B2145 (to the south of (i)).
iv. B2166 roundabout junction with Vinnetrow Road (to the south of (ii)).
v. Lower Bognor Road junction with Pagham Road and the B2166.

5.7 Highways England requested that the A27 junctions be tested based on the improvement schemes proposed in the revised Chichester Local Plan, not as the existing layouts, due to the future year of assessment being in 2031 and that the current junctions are congested. Therefore the scheme tested for the A27 Whyke Roundabout junction was the proposals for a four-armed signal controlled junction. Modifications are also proposed to the geometry of the A27 Bognor Road Roundabout junction, along with the alteration of Vinnetrow Road to an exit-only arm.

Conclusions

5.8 This cumulative impact assessment study concludes that with all the promoted sites in place the following mitigation will be required:

i. B2166 junction with Vinnetrow Road – widening on the B2166 west arm (c£34,000).
ii. B2145 junction with the B2166 – widening on the B2145 north arm to extend the two lane approach (full cumulative build out only), c£23,000.
iii. A27 Whyke junction – contribution towards the installation of MOVA (c£120,000).

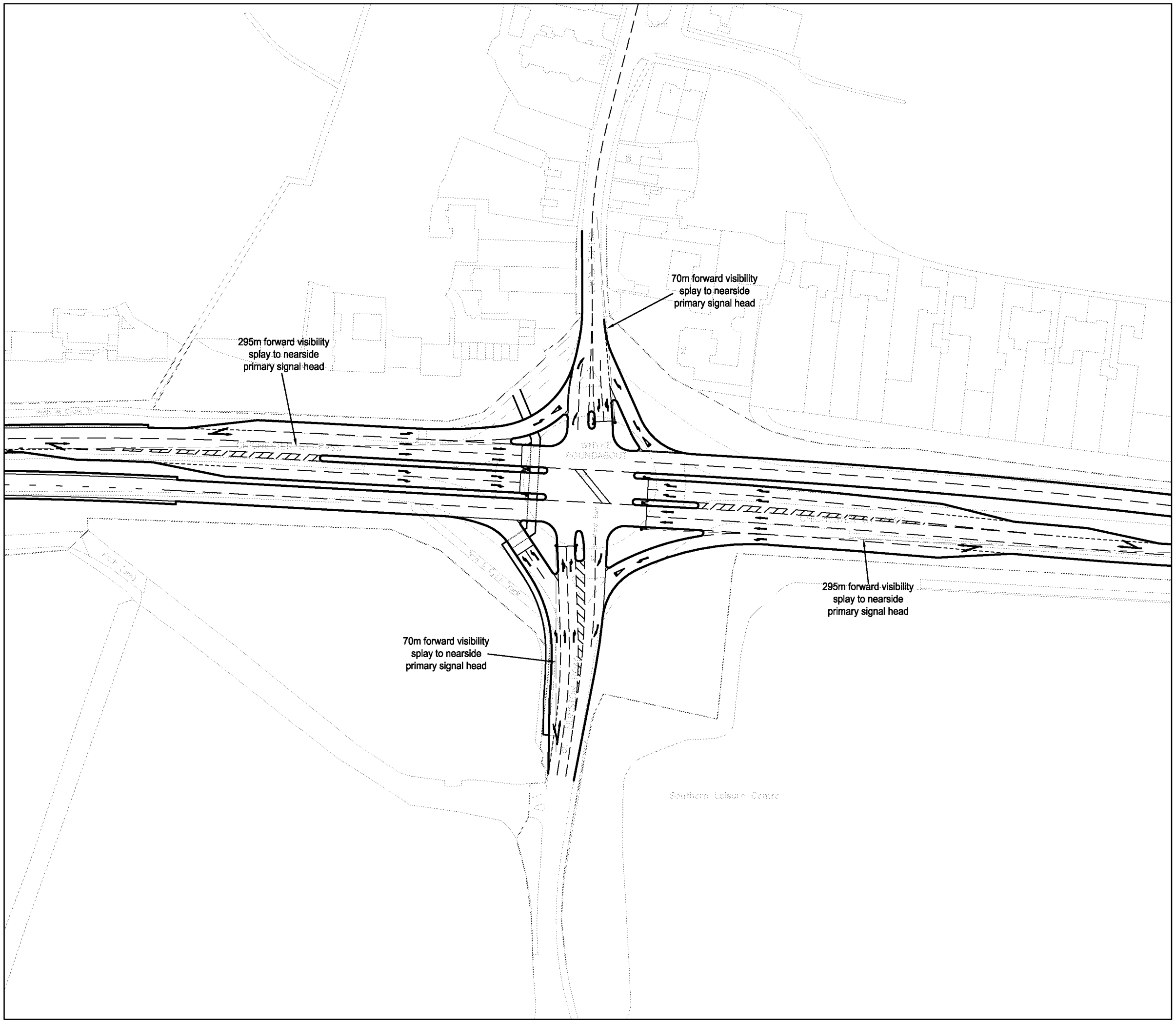
5.10 Therefore it is concluded overall that the Pagham South development can generally be accommodated on the strategic highway network and surrounding roads and furthermore, that the three Pagham developments sites currently promoted can cumulatively be accommodated on the local highway network with the implementation of the proposed mitigation schemes.

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Appendix 1

Chichester Local Plan A27 Schemes

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NOTES

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KEY

Highway Boundary

Rev	Description	Date	Initial	Checked

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London, EC2Y 5DN
T: +44(0)20 7280 3300 E: transport@rpsgroup.com

Client: Turner and Townsend

Project: Chichester Free School
Carmelite Convent

Title: Possible Highways Improvements at Whyke Roundabout

Status	Drawn By	Checked by
INFORMATION	CIL	SRD
Project No	Scale @ A3	Date Created
JNY8558	1:1000	22.07.16

Drawing Number: JNY8558–12

Rev:

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Drawing Ref: \\EUR-MPFS-02\TR_PROJECTS\JNY8558 - CHICHESTER FREE SCHOOL (PERMANENT SITE)\HIGHWAYS\DRAWINGS\JNY8558-12 POSSIBLE HIGHWAYS IMPROVEMENTS TO WHYKE ROUNDABOUT.DWG Plotted Date: 7/22/2016 4:22 PM

ARUN DISTRICT COUNCIL P/140/16/OUT

N

Existing cycle and pedestrian crossing at Bognor Road to be relocated

New cycle and pedestrian routes to tie-in with the existing routes

A27 BOGNOR RD ROUNDABOUT
PB - OPTION 5
Preliminary Layout Proposal - NTS
04/02/13

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Appendix 2

2031 SATURN Traffic Flow Data

ARUN DISTRICT COUNCIL P/140/16/OUT

Arun Transport Study LP SATURN 2031 Data

List of Output Screen Shots

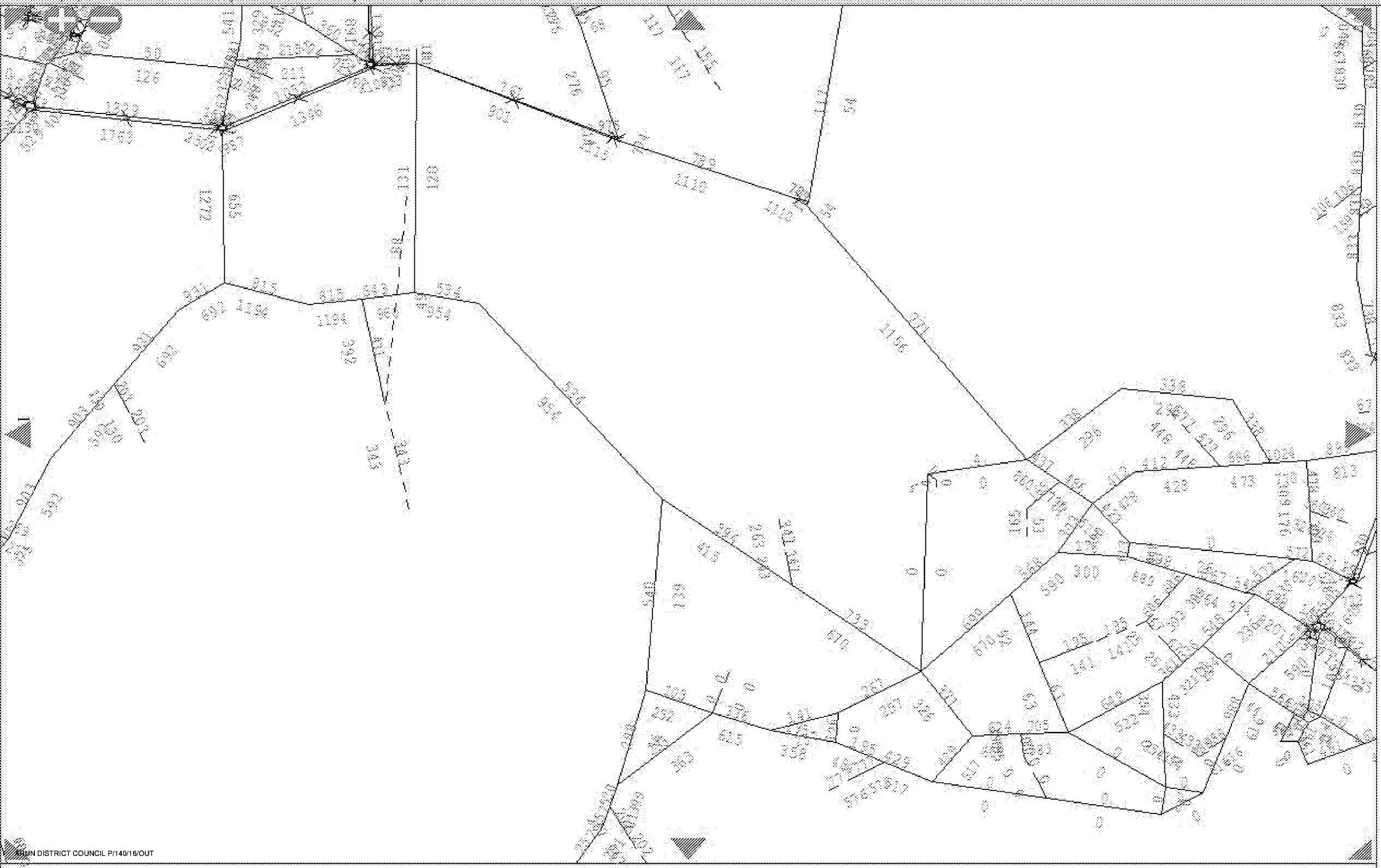
Page	Description
1.	AM Mitigation 2031 - Network
2.	PM Mitigation 2031 - Network
3.	AM No Mitigation 2031 - Network
4.	PM No Mitigation 2031 - Network
5.	A27 Whyke Node Map – LP Mitigation
6.	AM LP Mitigation Junction 1 (A27 Whyke) Node 1536
7.	AM LP Mitigation Junction 1 (A27 Whyke) Node 1542
8.	AM LP Mitigation Junction 1 (A27 Whyke) Node 1550
9.	AM LP Mitigation Junction 1 (A27 Whyke) Node 1552
10.	AM LP Mitigation Junction 1 (A27 Whyke) Node 1560
11.	AM LP Mitigation Junction 1 (A27 Whyke) Node 9312
12.	A27 Bognor Road Node Map – LP Mitigation
13.	AM LP Mitigation Junction 2 (A27 Bognor Road) Node 1628
14.	AM LP Mitigation Junction 2 (A27 Bognor Road) Node 1632
15.	AM LP Mitigation Junction 2 (A27 Bognor Road) Node 1636
16.	AM LP Mitigation Junction 2 (A27 Bognor Road) Node 1642
17.	AM LP Mitigation Junction 2 (A27 Bognor Road) Node 1644
18.	AM LP Mitigation Junction 2 (A27 Bognor Road) Node 1646
19.	AM LP Mitigation Junction 2 (A27 Bognor Road) Node 1648
20.	AM LP Mitigation Junction 3 (B2145/B2166)
21.	AM LP Mitigation Junction 4 (B2166/Vinnetrow Road)
22.	AM LP Mitigation Junction 5 (Lower Bognor Road/B2166)
23.	PM LP Mitigation Junction 1 (A27 Whyke) Node 1536
24.	PM LP Mitigation Junction 1 (A27 Whyke) Node 1542
25.	PM LP Mitigation Junction 1 (A27 Whyke) Node 1550
26.	PM LP Mitigation Junction 1 (A27 Whyke) Node 1552
27.	PM LP Mitigation Junction 1 (A27 Whyke) Node 1560
28.	PM LP Mitigation Junction 1 (A27 Whyke) Node 9312
29.	PM LP Mitigation Junction 2 (A27 Bognor Road) Node 1628
30.	PM LP Mitigation Junction 2 (A27 Bognor Road) Node 1632
31.	PM LP Mitigation Junction 2 (A27 Bognor Road) Node 1636
32.	PM LP Mitigation Junction 2 (A27 Bognor Road) Node 1642
33.	PM LP Mitigation Junction 2 (A27 Bognor Road) Node 1644
34.	PM LP Mitigation Junction 2 (A27 Bognor Road) Node 1646
35.	PM LP Mitigation Junction 2 (A27 Bognor Road) Node 1648
36.	PM LP Mitigation Junction 3 (B2145/B2166)
37.	PM LP Mitigation Junction 4 (B2166/Vinnetrow Road)
38.	PM LP Mitigation Junction 5 (Lower Bognor Road/B2166)

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39. A27 Whyke Node Map – LP No Mitigation
40. AM LP No Mitigation Junction 1 (A27 Whyke) Node 1536
41. AM LP No Mitigation Junction 2 (A27 Whyke) Node 1540
42. AM LP No Mitigation Junction 1 (A27 Whyke) Node 1542
43. AM LP No Mitigation Junction 2 (A27 Whyke) Node 1550
44. AM LP No Mitigation Junction 1 (A27 Whyke) Node 1552
45. AM LP No Mitigation Junction 2 (A27 Whyke) Node 1560
46. A27 Bognor Road Node Map – LP No Mitigation
47. AM LP No Mitigation Junction 2 (A27 Bognor Road) Node 1628
48. AM LP No Mitigation Junction 2 (A27 Bognor Road) Node 1632
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50. AM LP No Mitigation Junction 2 (A27 Bognor Road) Node 1642
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59. PM LP No Mitigation Junction 1 (A27 Whyke) Node 1542
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66. PM LP No Mitigation Junction 2 (A27 Bognor Road) Node 1642
67. PM LP No Mitigation Junction 2 (A27 Bognor Road) Node 1644
68. PM LP No Mitigation Junction 2 (A27 Bognor Road) Node 1646
69. PM LP No Mitigation Junction 2 (A27 Bognor Road) Node 1648
70. PM LP No Mitigation Junction 3 (B2145/B2166)
71. PM LP No Mitigation Junction 4 (B2166/Vinnetrow Road)
72. PM LP No Mitigation Junction 5 (Lower Bognor Road/B2166)

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File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



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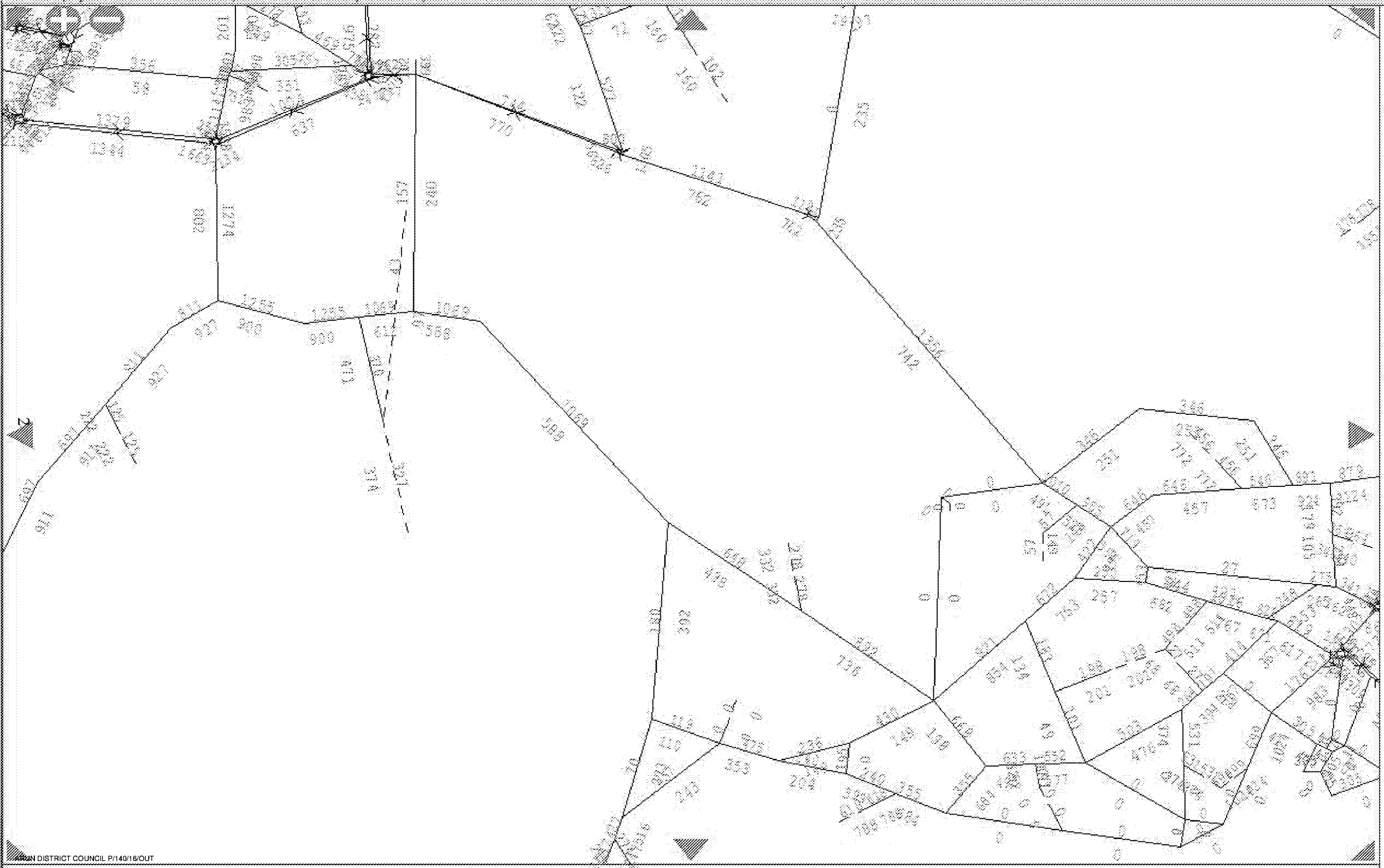
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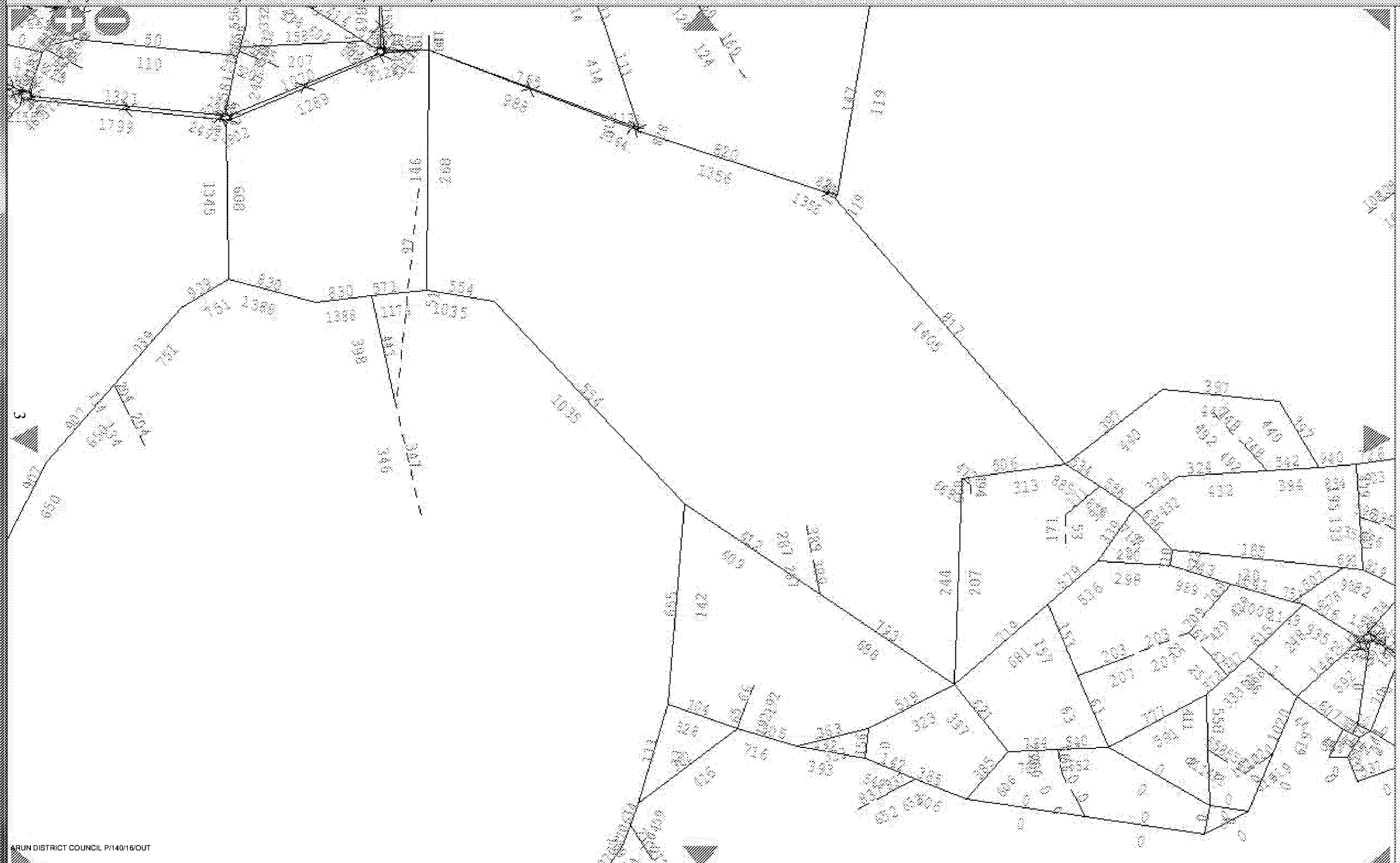
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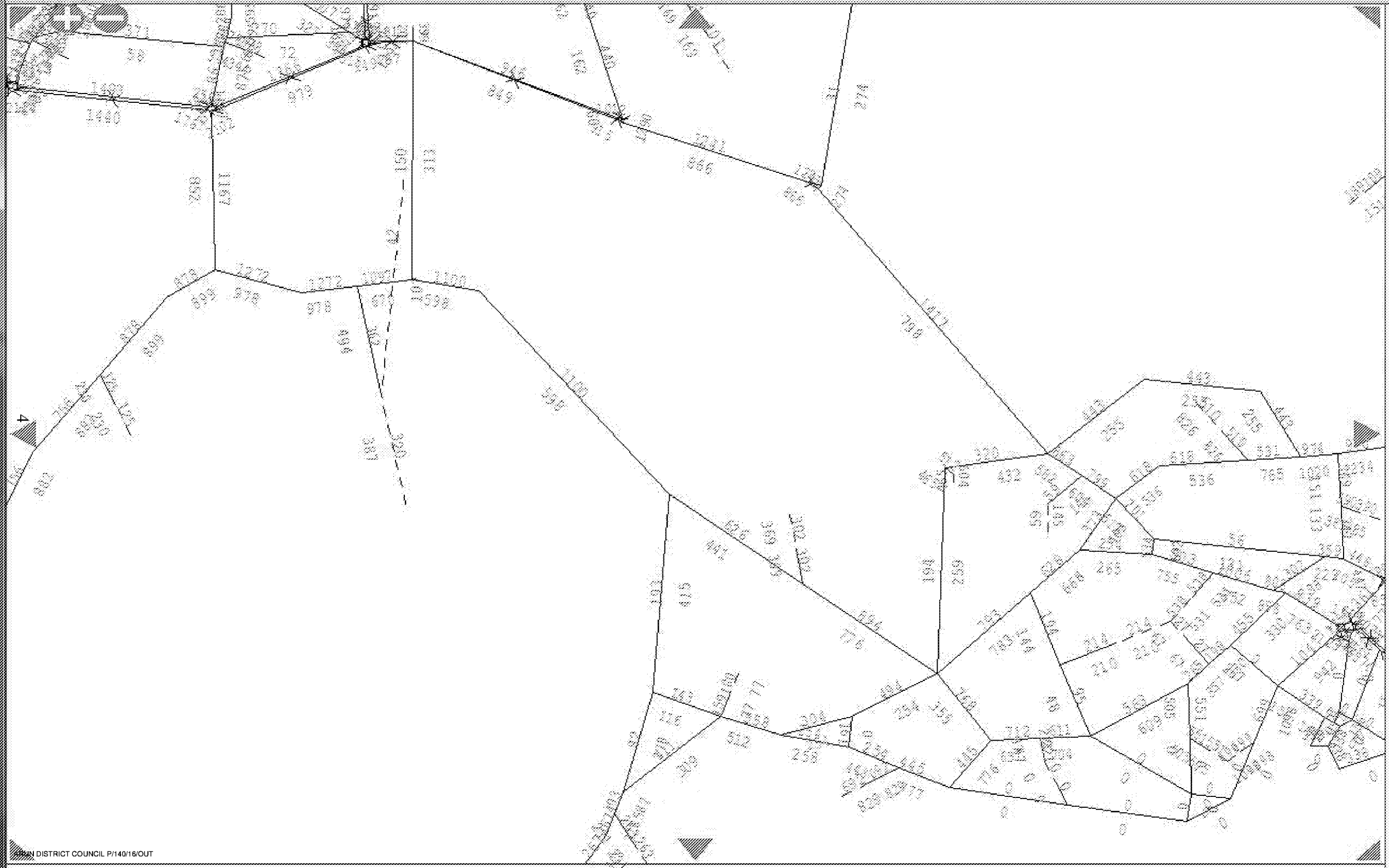
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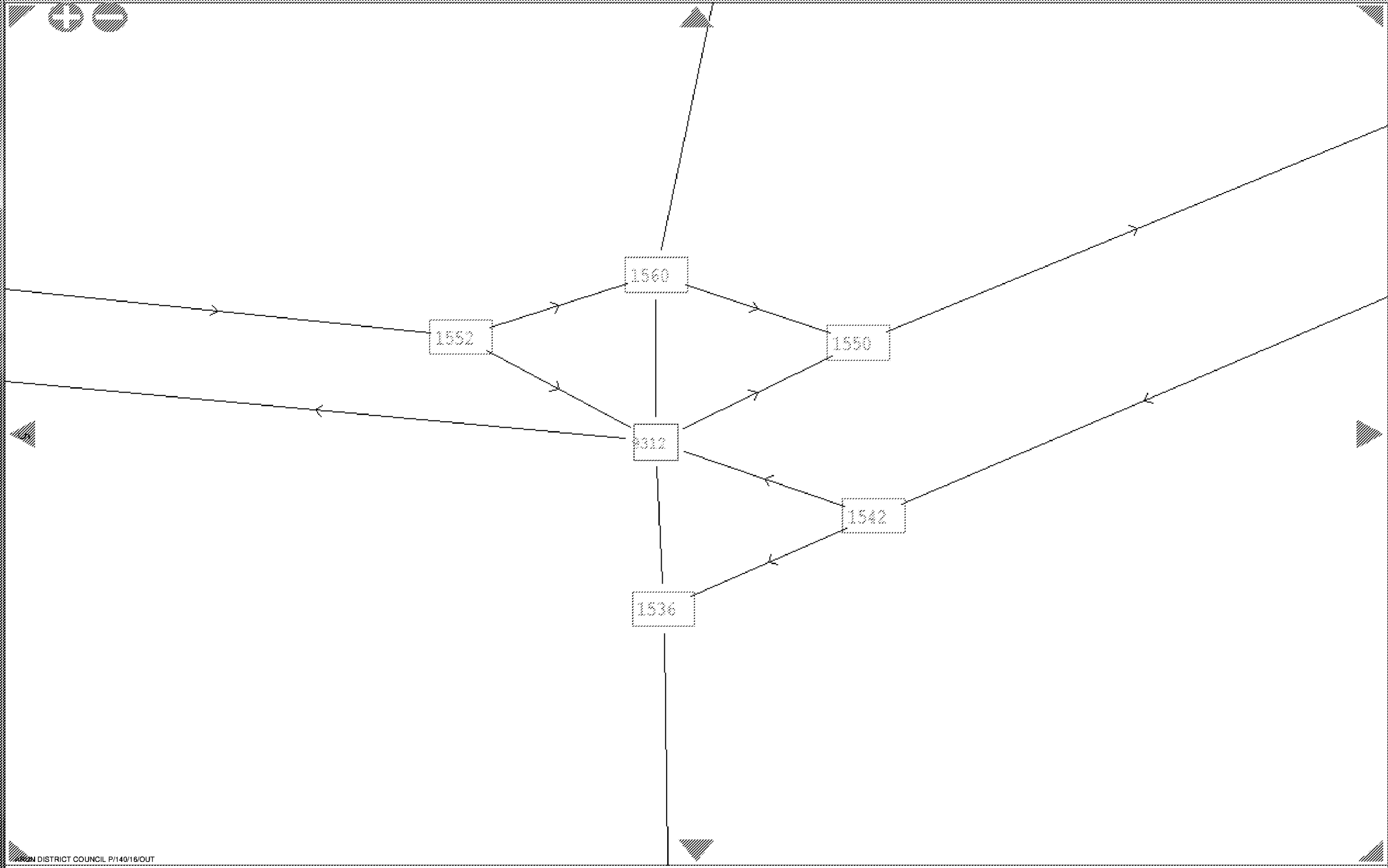
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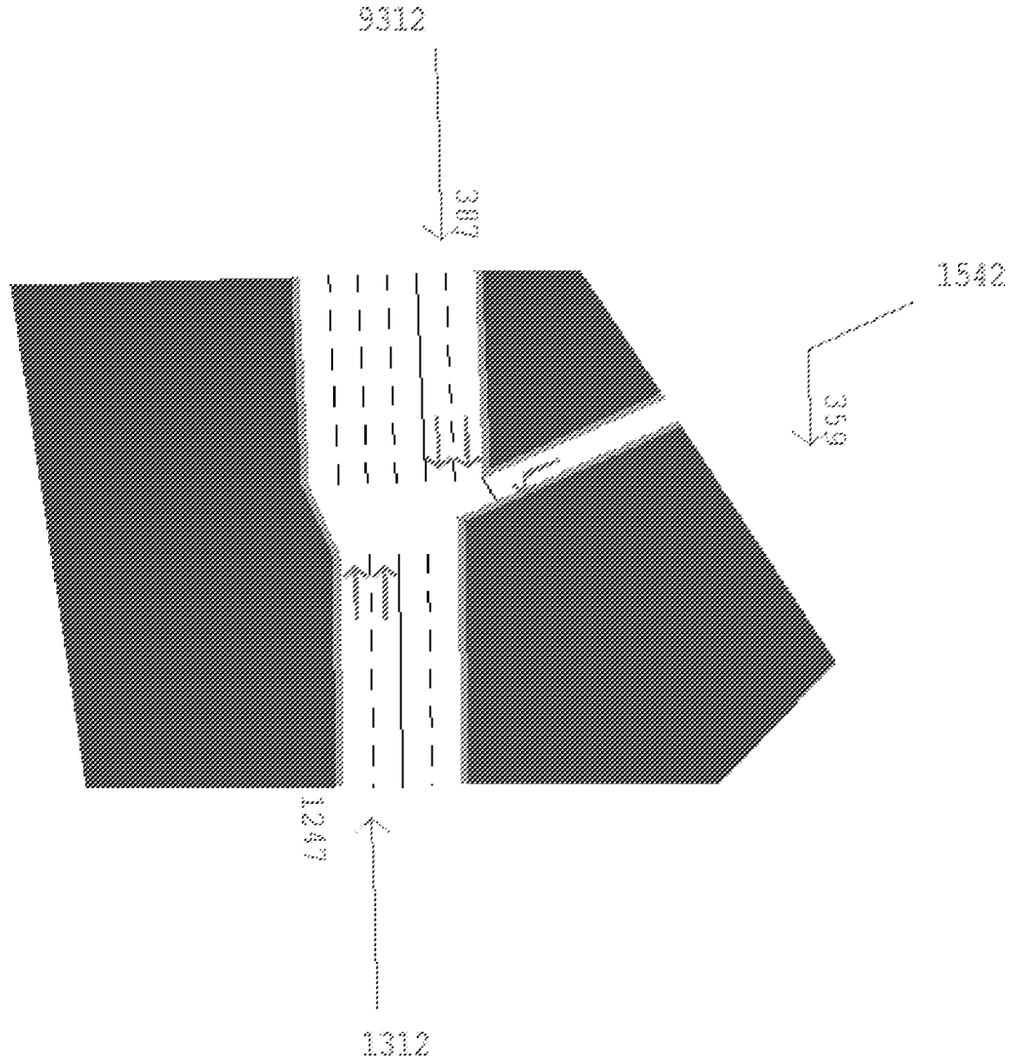
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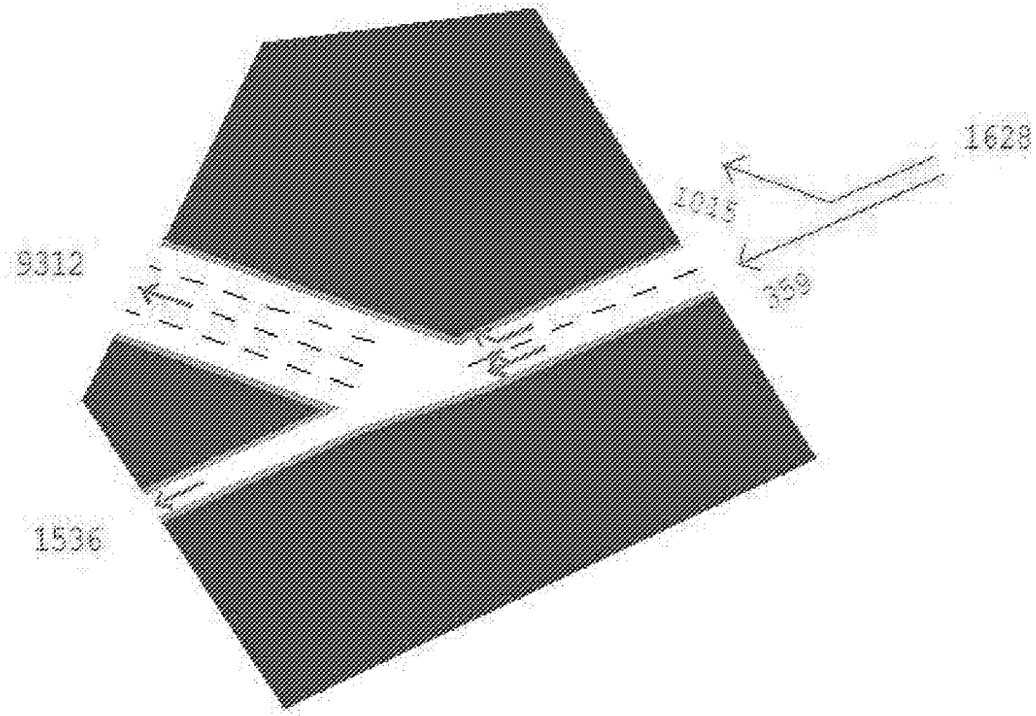
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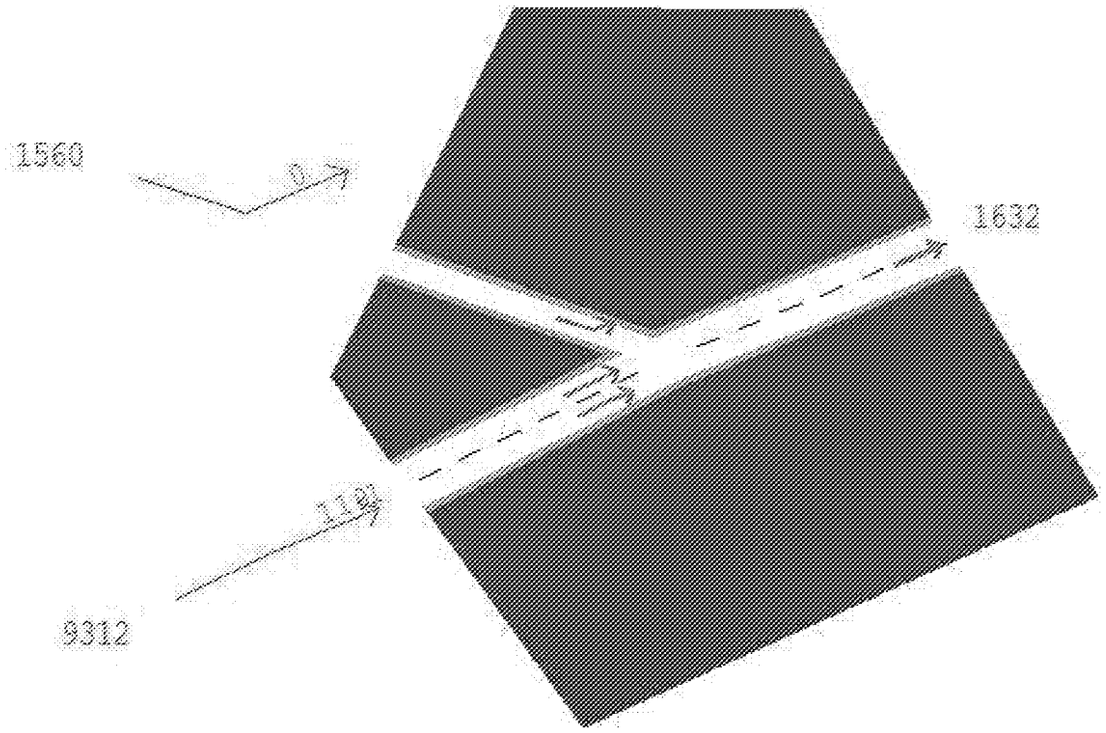
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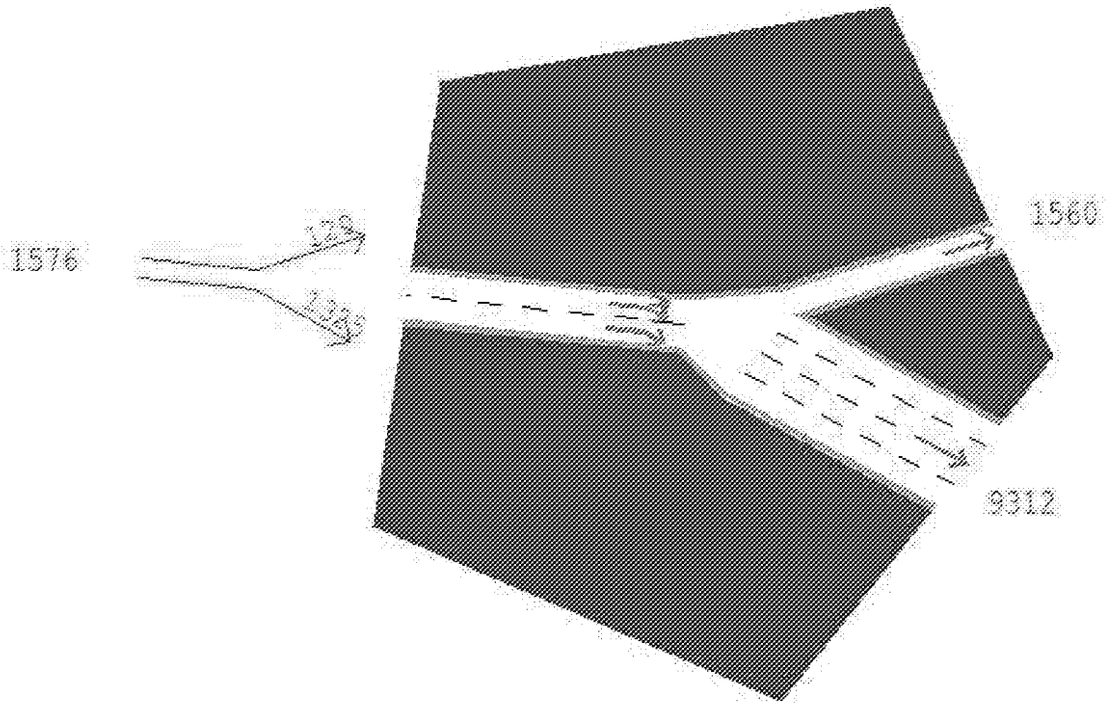
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CFP Convergence
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IN CFP 0.00

ARUN DISTRICT COUNCIL P/140/15/OUT

Node 1550

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1552

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

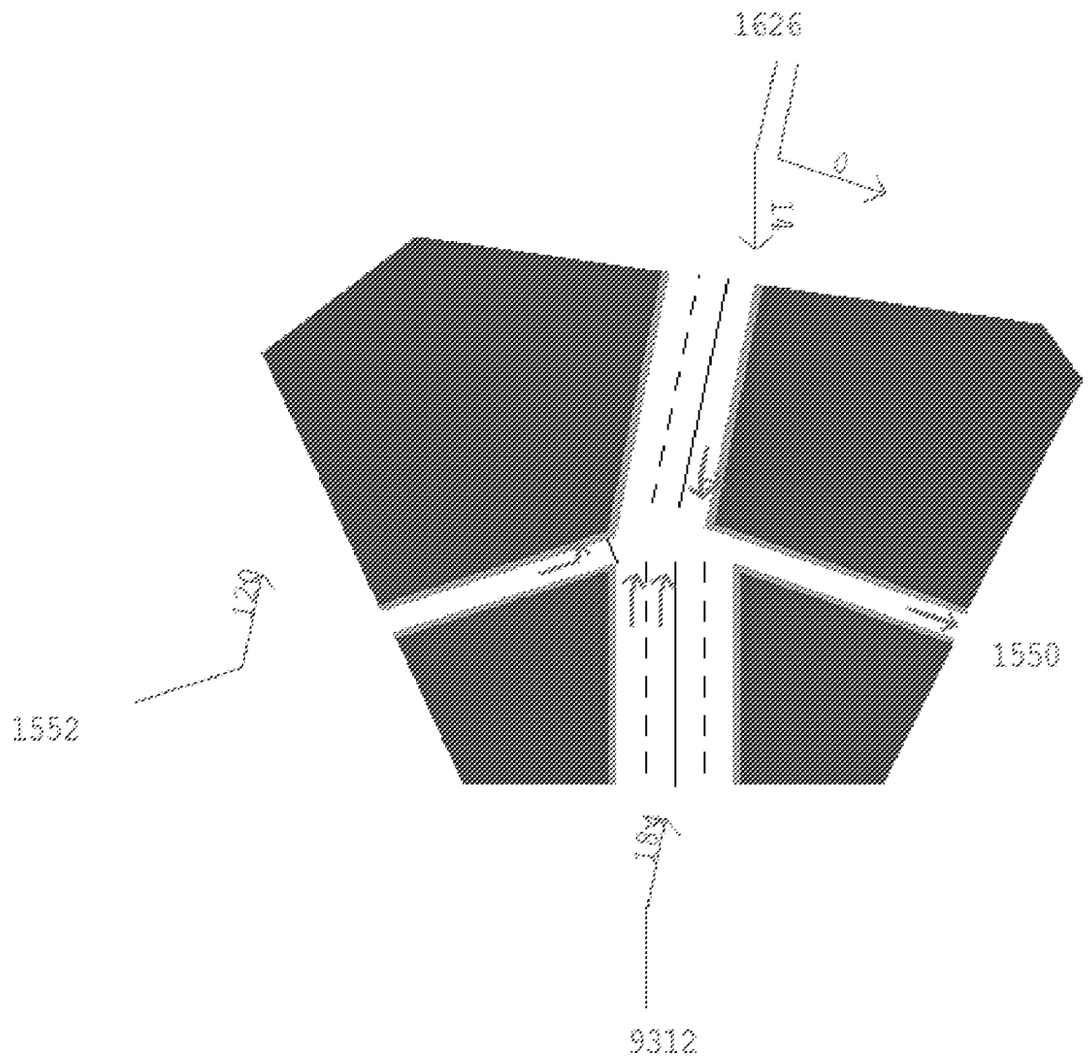
+ Menu bar!

CFP Convergence
OUT CFP 0.00
[illegible]
[illegible] = 90

ARUN DISTRICT COUNCIL, P:\HD\16/OUT

Node 1552

6



Node Graphic
Master Menu:

NODE 1560

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

eRror checks X
2 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

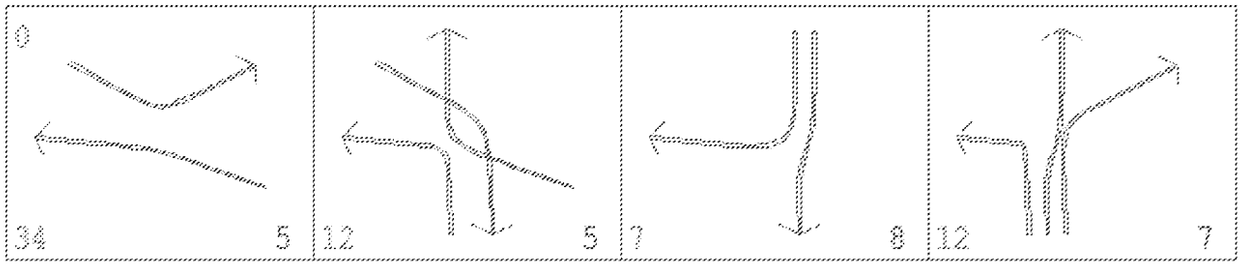
+ Menu bar!

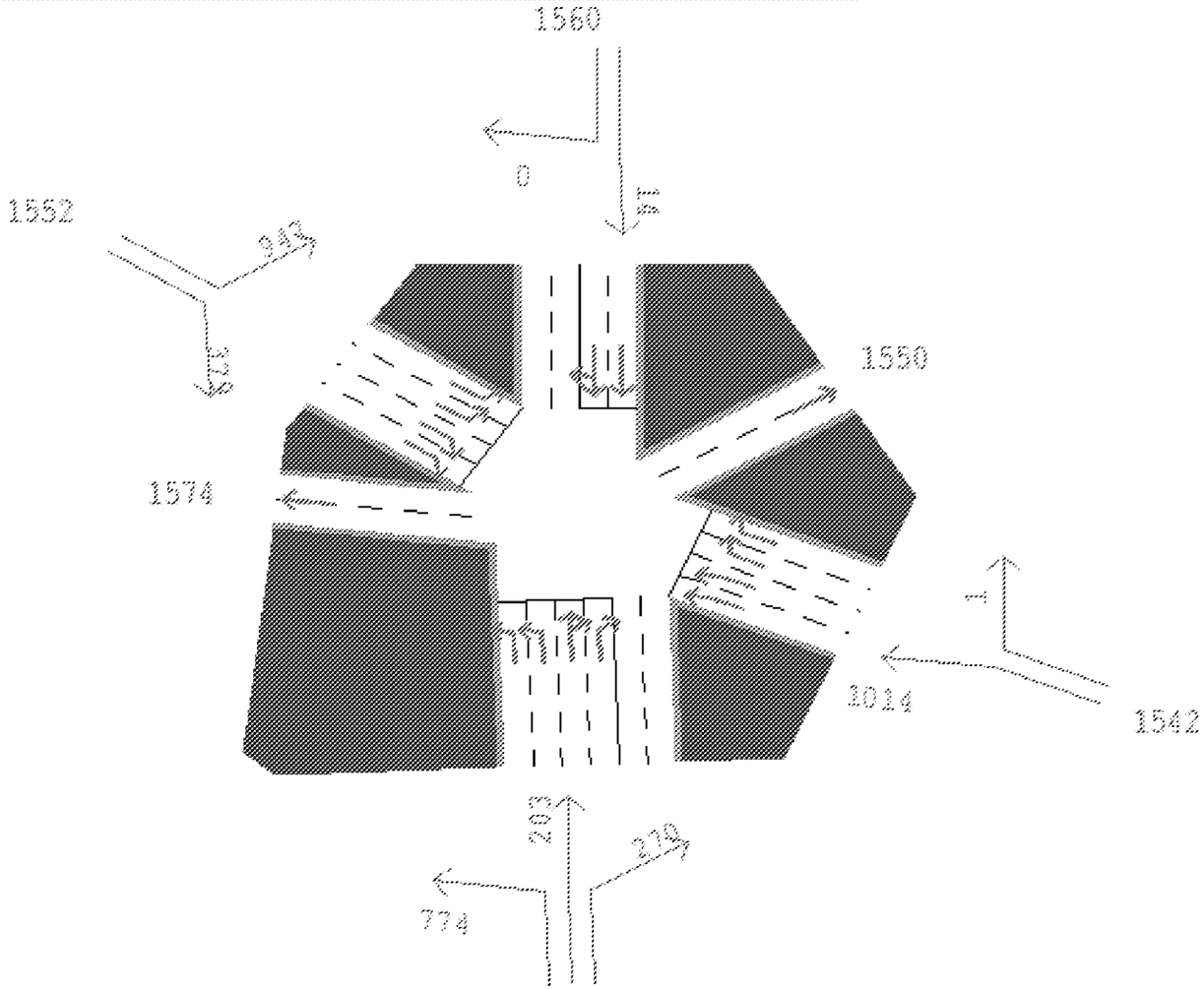
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 32 X 2
ICY = 90

Node 1560

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last





11

Node Graphic
Master Menu:

NODE 9312

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

eRror checks X
2 Warnings
3 Ser.Warns
1 Non-Fatal

Edit >

Change node:
dOwn(number) >

Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

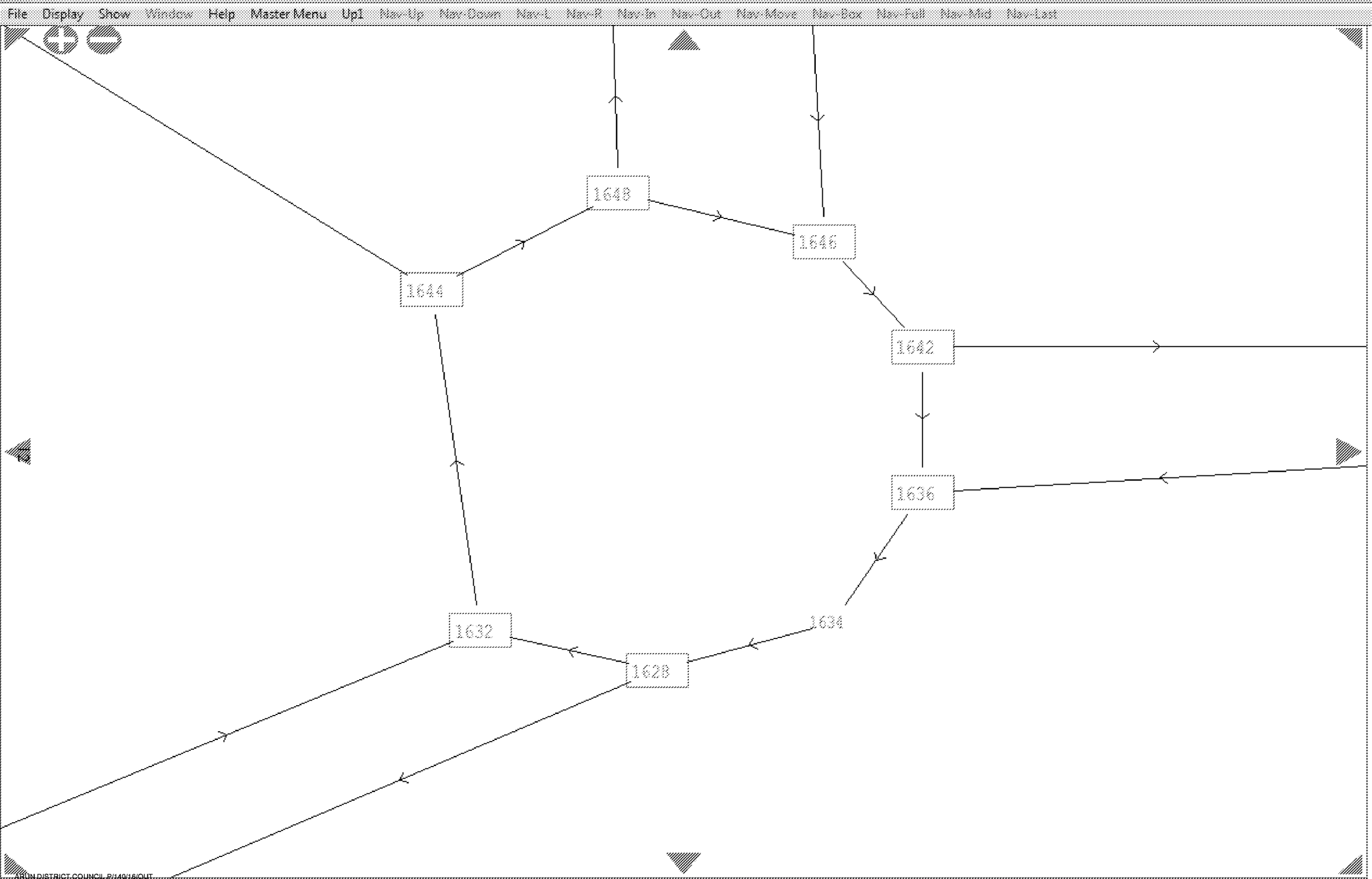
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
NFE 203 x 1
SWARN 158 x 2
SWARN 136 x 1
WARN 32 x 2
ICY = 30

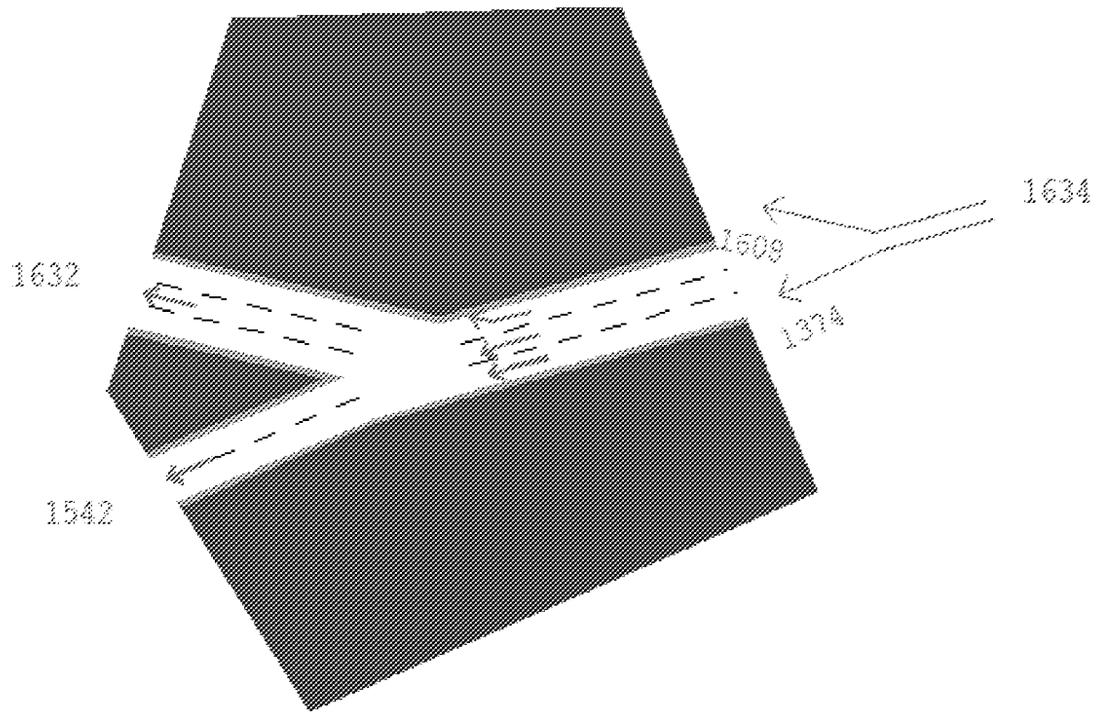
© ARUN DISTRICT COUNCIL P/140/18/OUT

Node 9312

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



ARUN DISTRICT COUNCIL P/140/16/OUT



Node Graphic
Master Menu:

NODE 1620

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

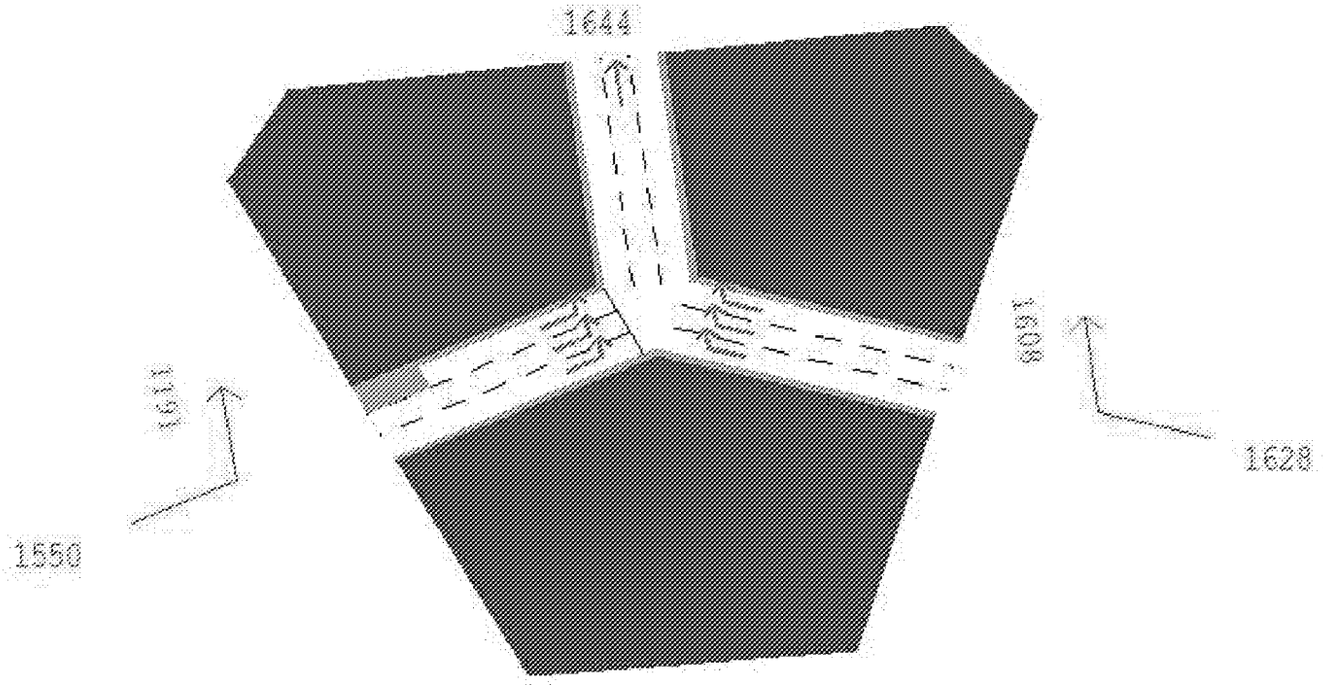
Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00

ARUN DISTRICT COUNCIL P/146/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1632

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

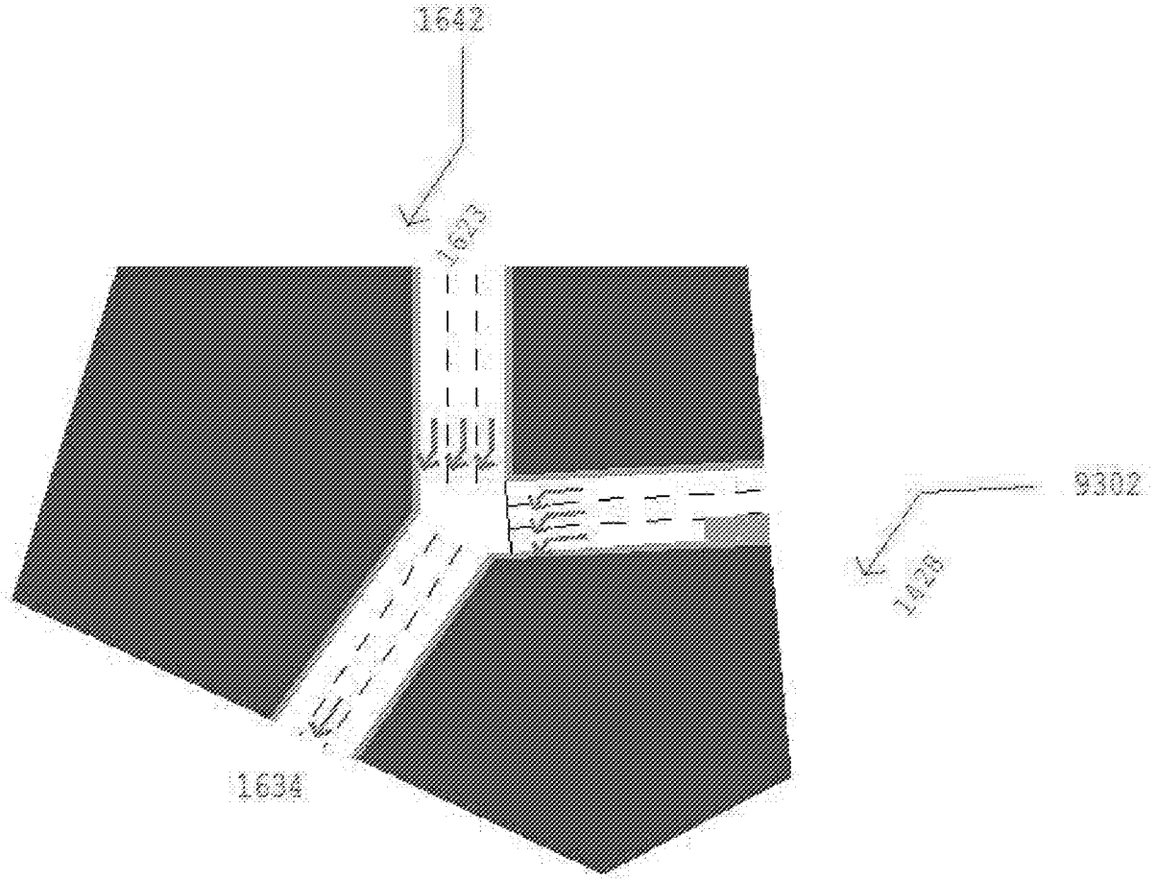
+ Menu Bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCV = 80

Node 1632

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1636

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

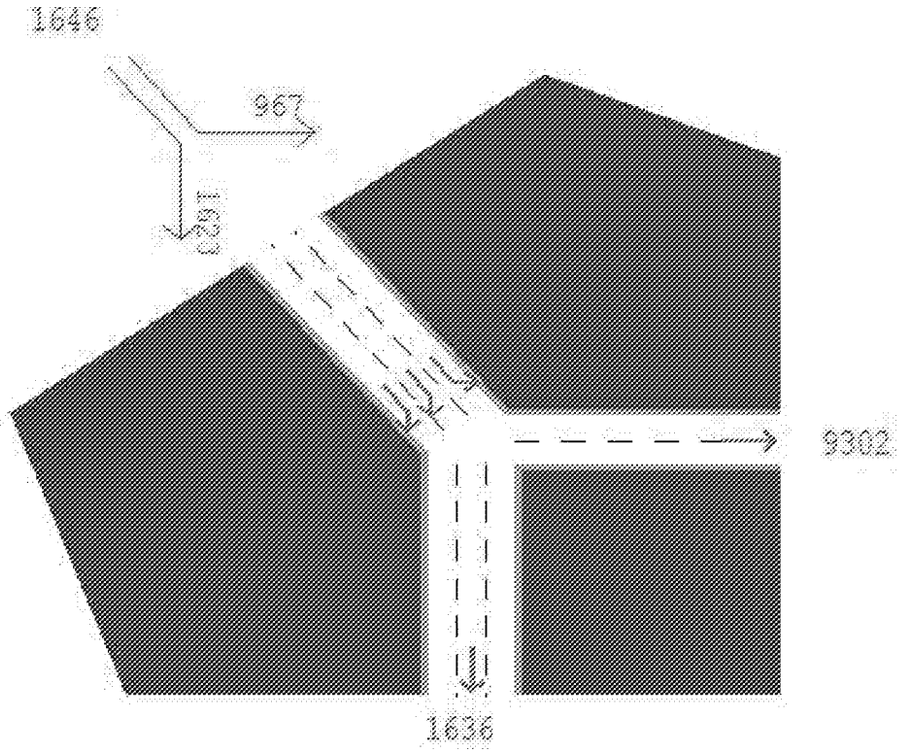
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICX = 80

Node 1636

JARLIN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1642

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

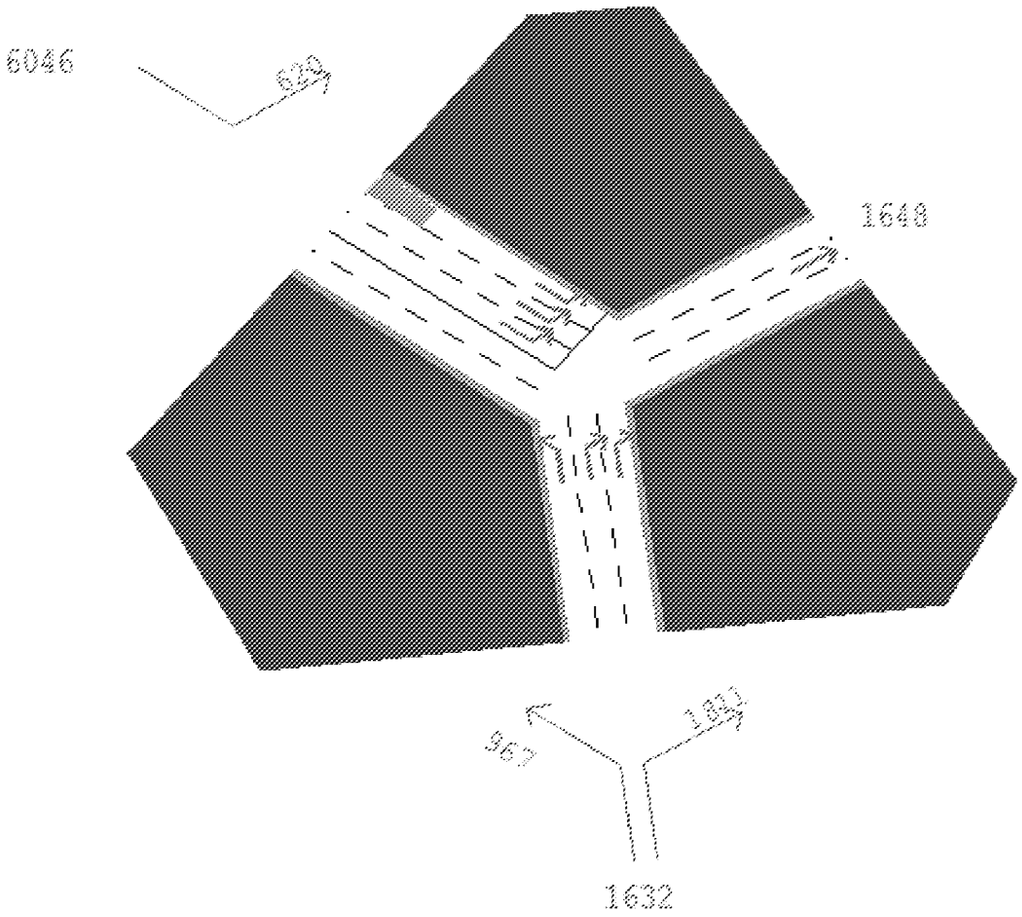
+ Menu bar!

CFP Convergence
OUT CFP 0.02
IN CFP 0.00
MARK 65 X 1
LCY = 90

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1642

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1644

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

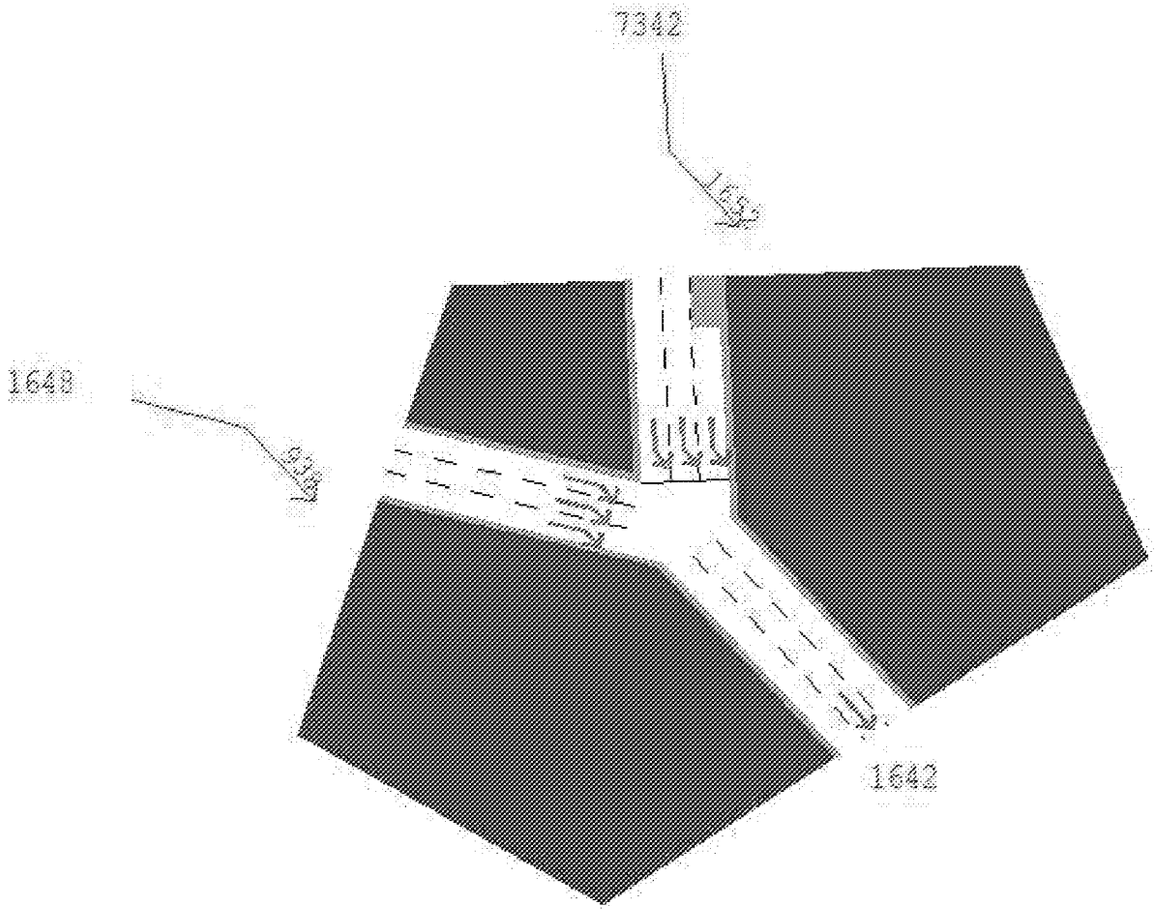
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
FCX = 00

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1644

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1646

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

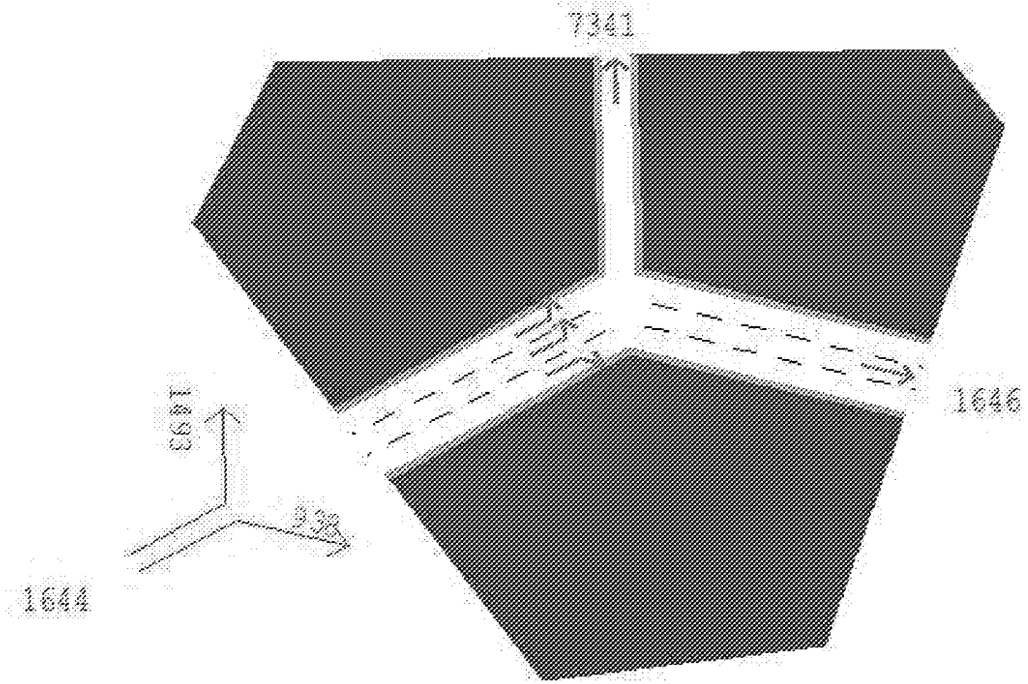
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCX = 90

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Node 1646

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1648

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

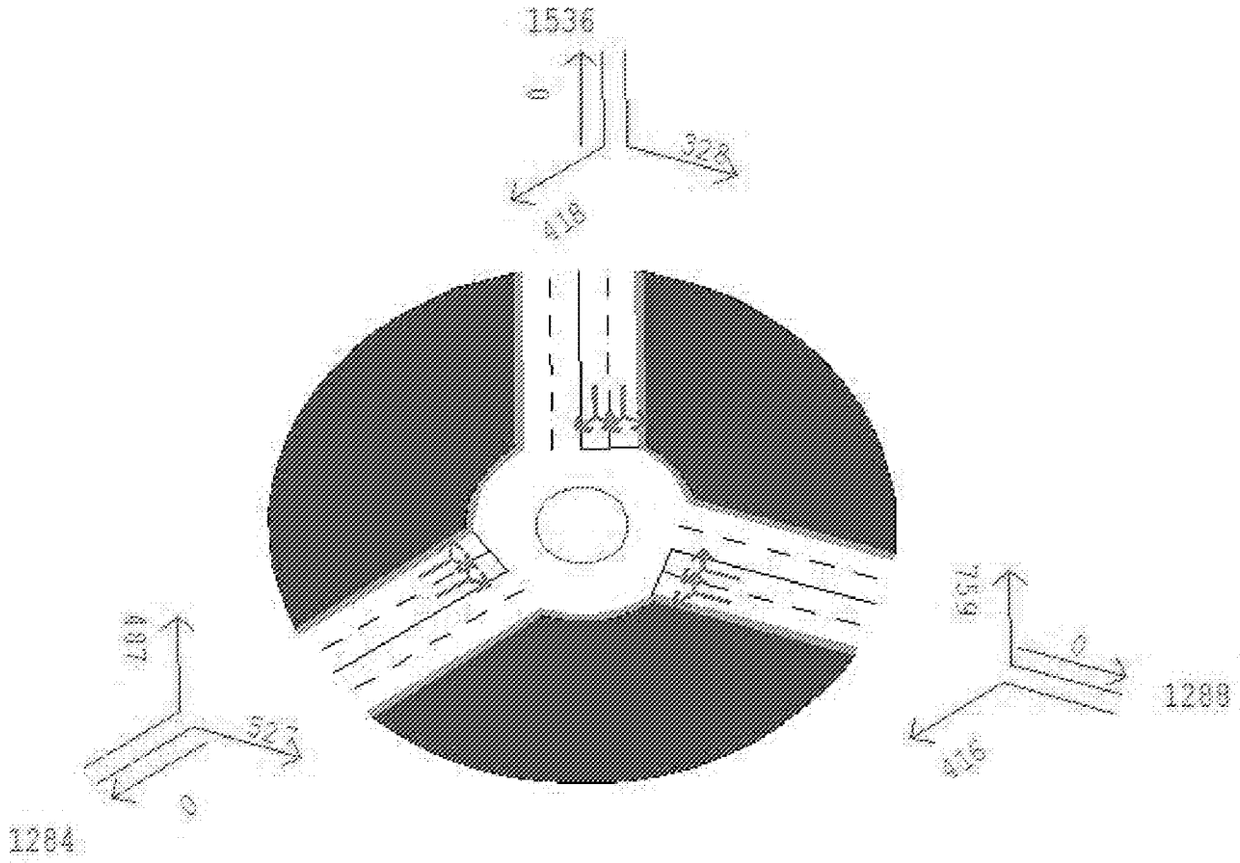
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
CX = 90

ARUN DISTRICT COUNCIL 8/10/16/OUT

Node 1648

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1312

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
text >
Window >
Table 2 x

eRror checks x
3 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

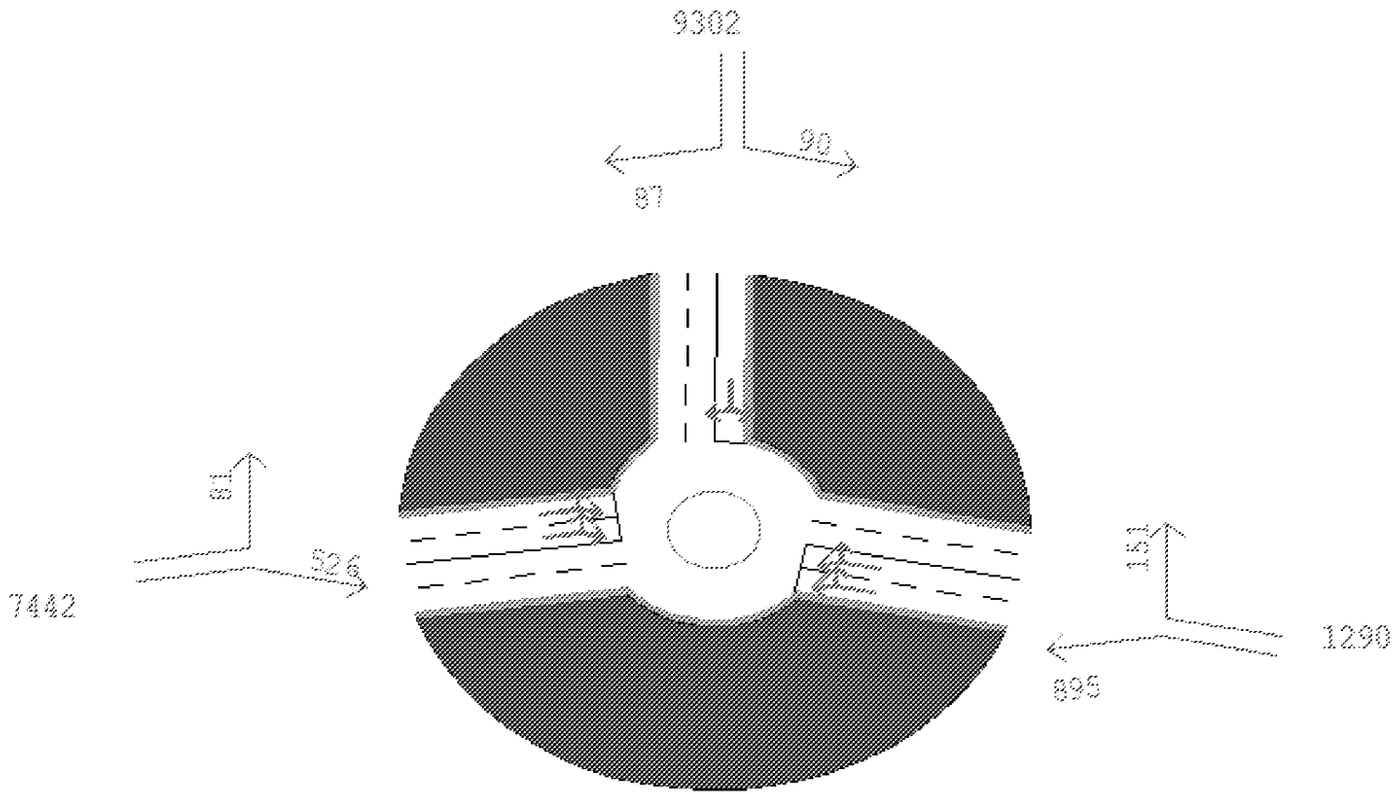
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
MAX 32 X 3
CY = 90

Node 1312

ARUN DISTRICT COUNCIL P/140/16/OUT

20



Node Graphic
Master Menu:

NODE 1302

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

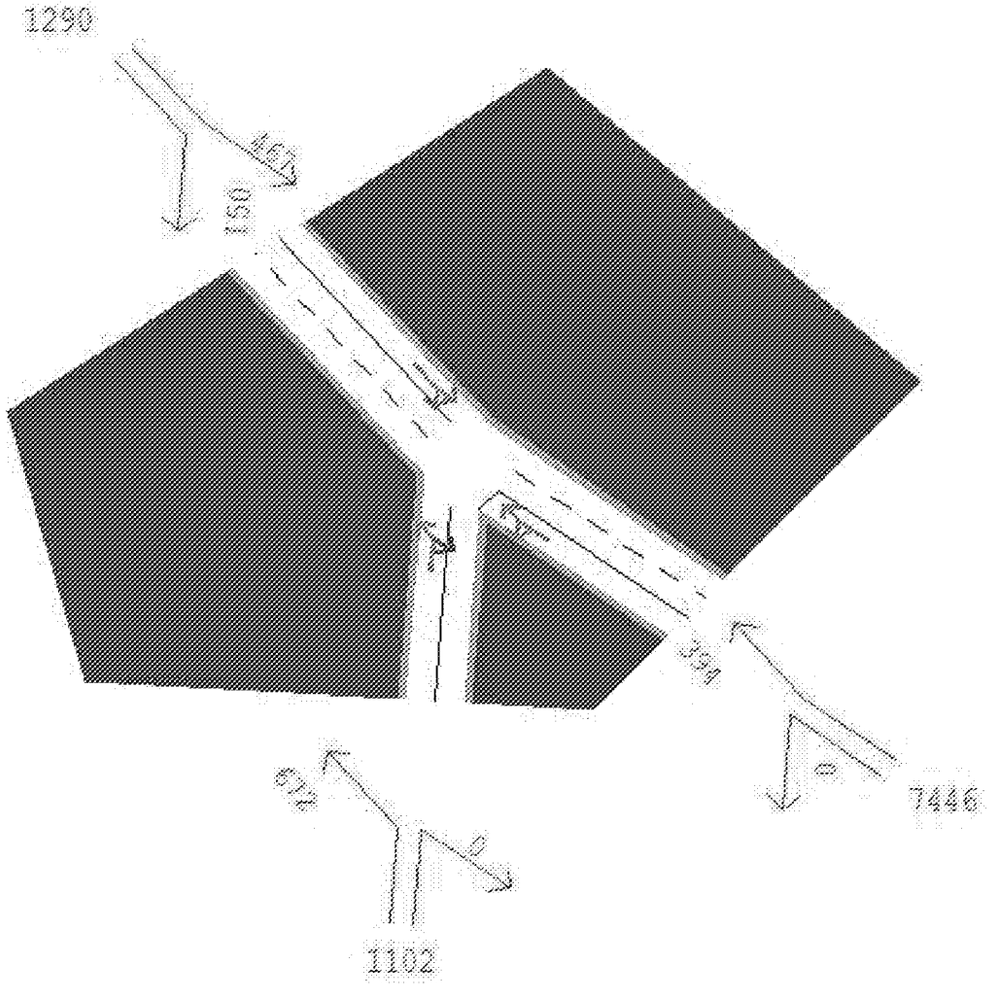
Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00

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File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1188

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror Checks x
5 Warnings
3 Ser.Warns

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

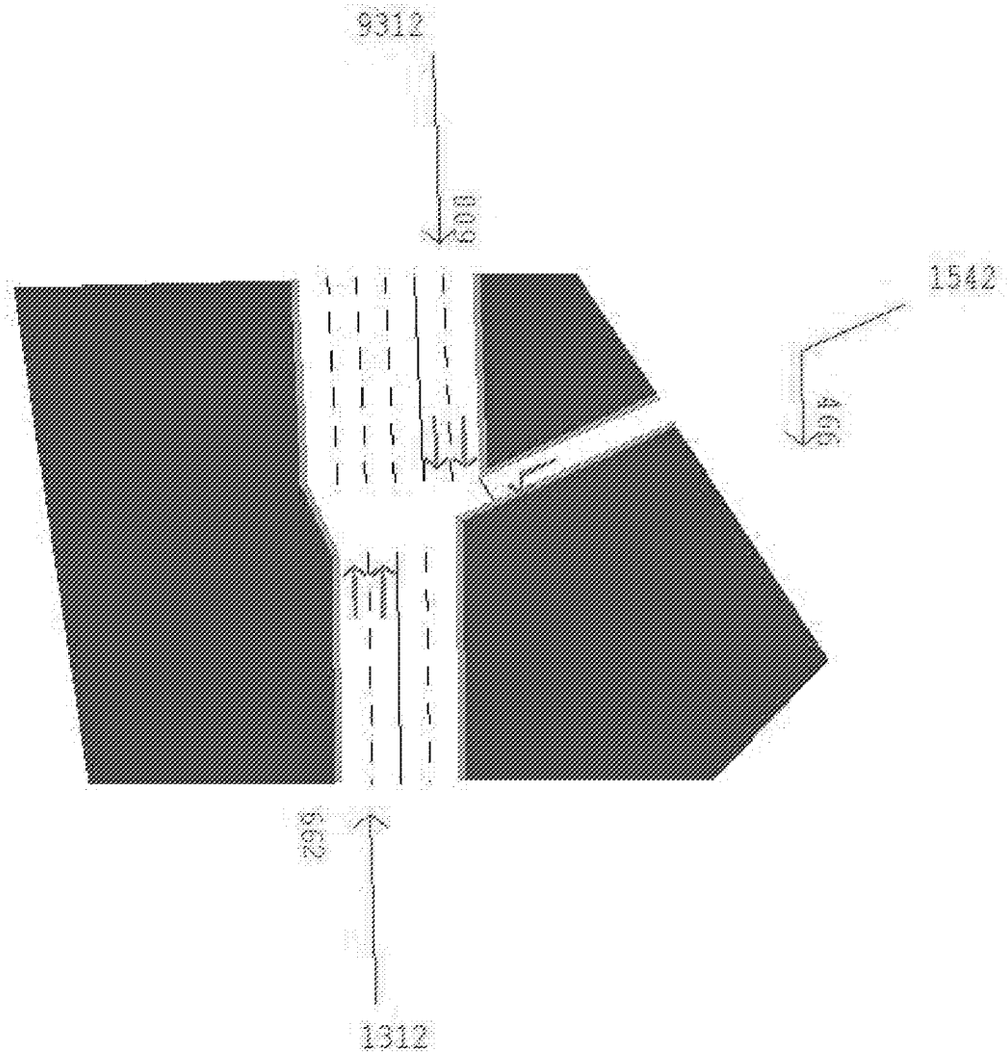
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
SWARN 137 x 2
SWARN 135 x 1
WARN 98 x 2
WARN 32 x 2
WARN 12 x 1
LCV = 80

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1188

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1536

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
2 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
number set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

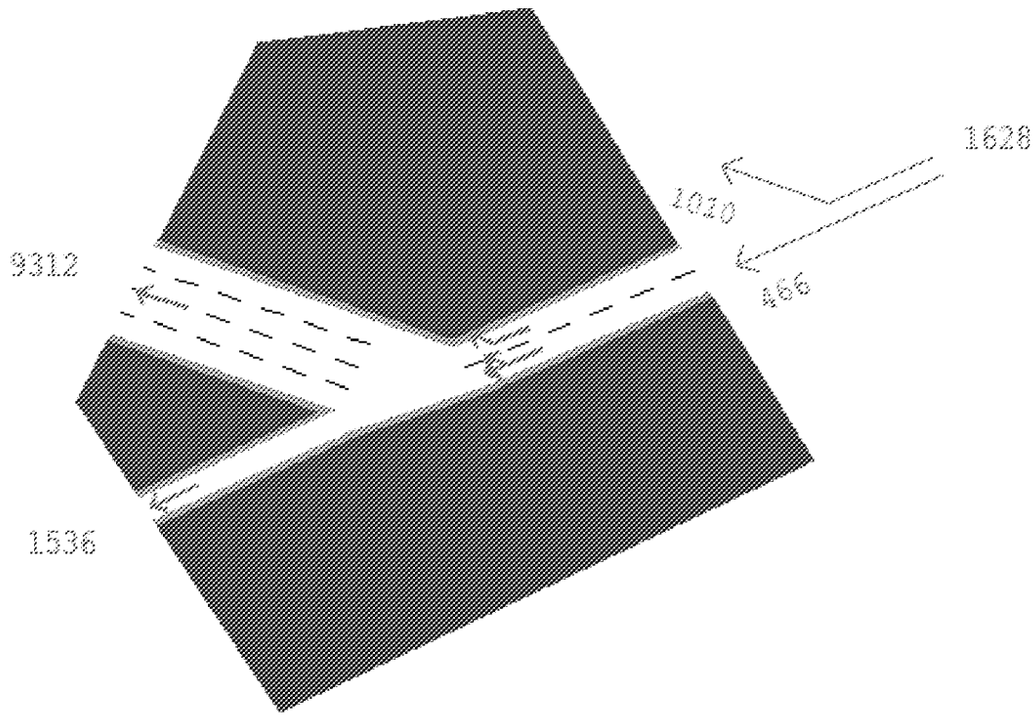
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
MARK 32 X 1
LOC = 80

Node 1536

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1542

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

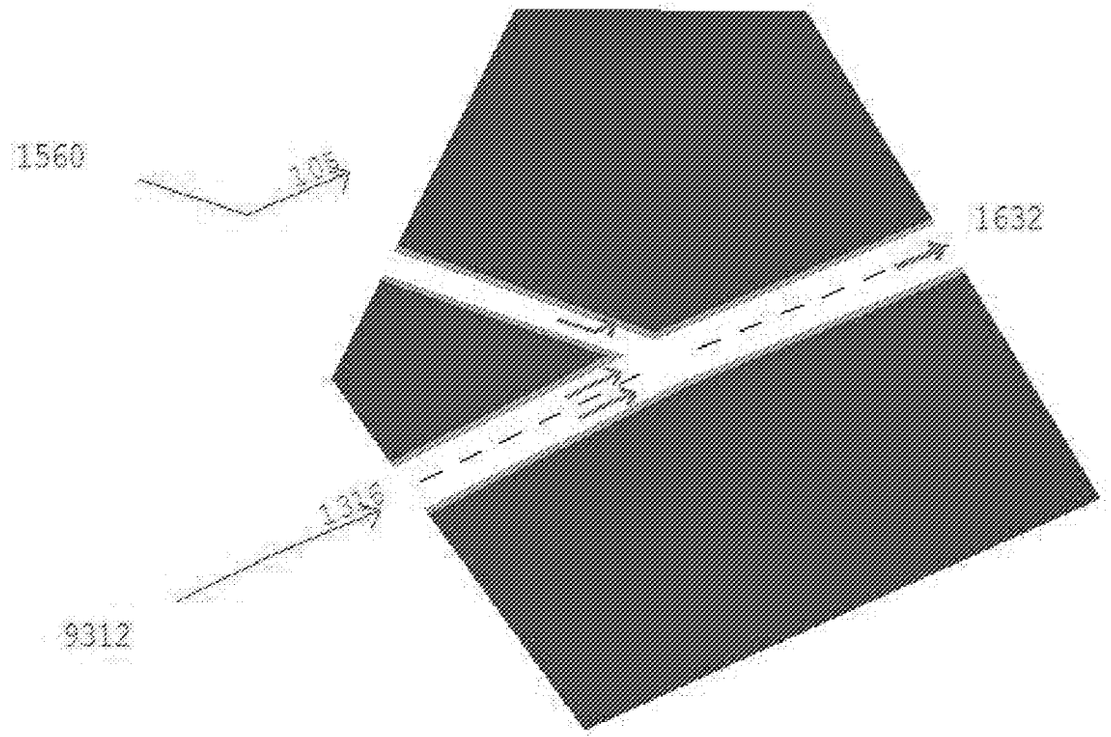
Q - Return

+ Menu bar!

CFP Convergence
CYC CFP 0.00
IN CFP 0.00

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1550

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
2 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.01
IN CFP 0.00

ARUN DISTRICT COUNCIL P/140/16/OUT

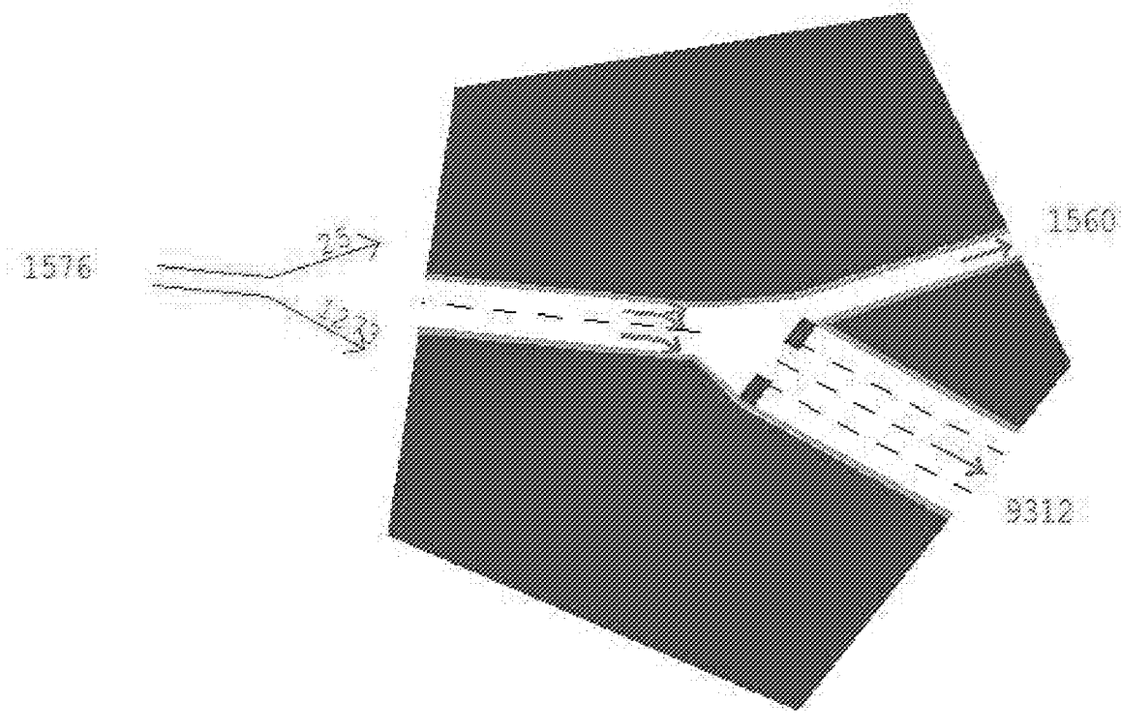
WARN 33 X 2
LCY = 80

Node 1550

25

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last

Blocks Back



Node Graphic
Master Menu:

NODE 1552

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

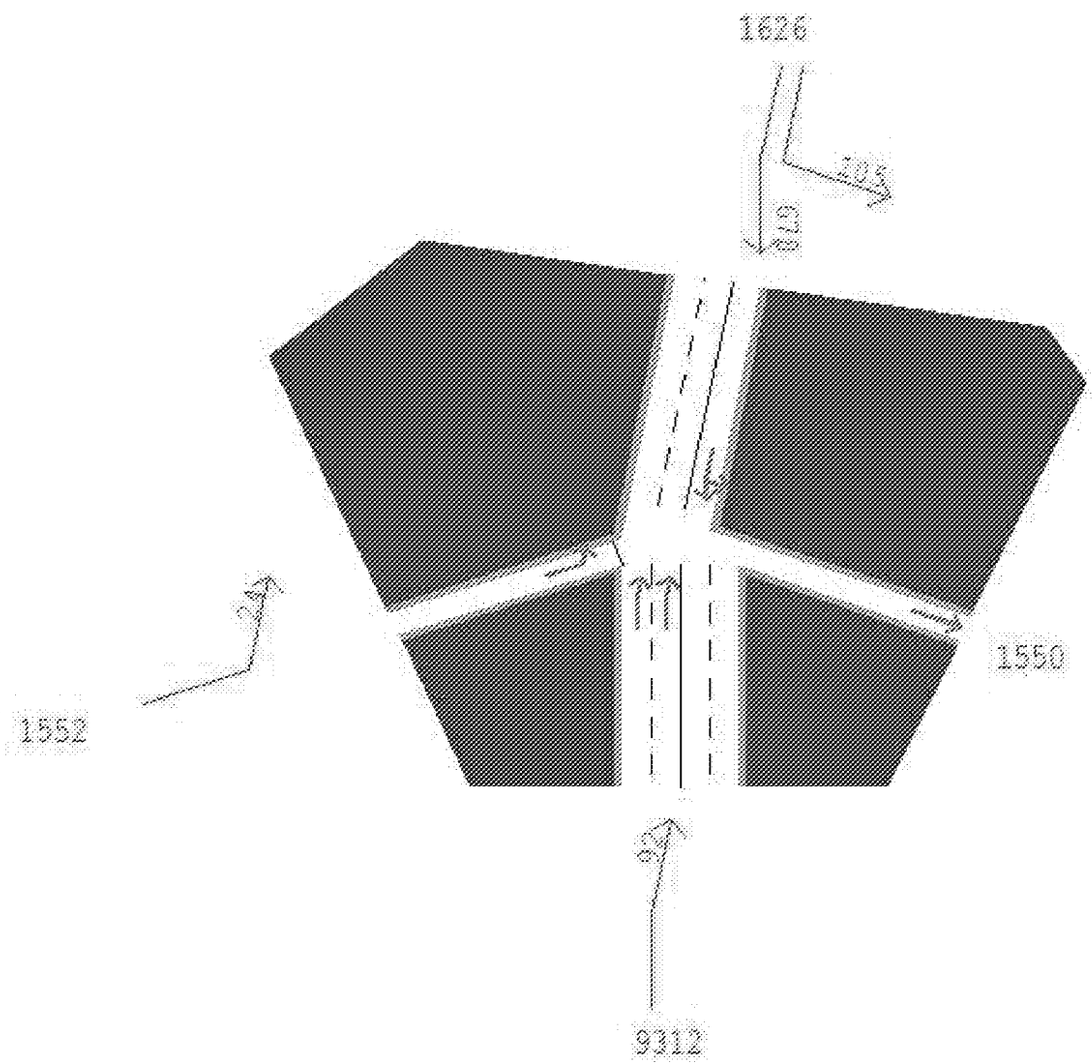
+ Menu bar!

CFF Convergence
OUT CFF 0.00
IN CFF 0.00
ICY = 90

Node 1552

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1560

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
2 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

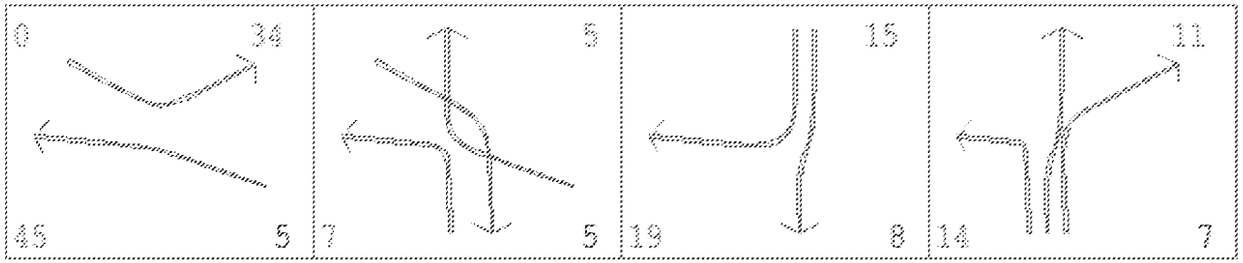
CFD Convergence
OUT CFD 0.00
IN CFD 0.00

ARUN DISTRICT COUNCIL P/140/18/OUT

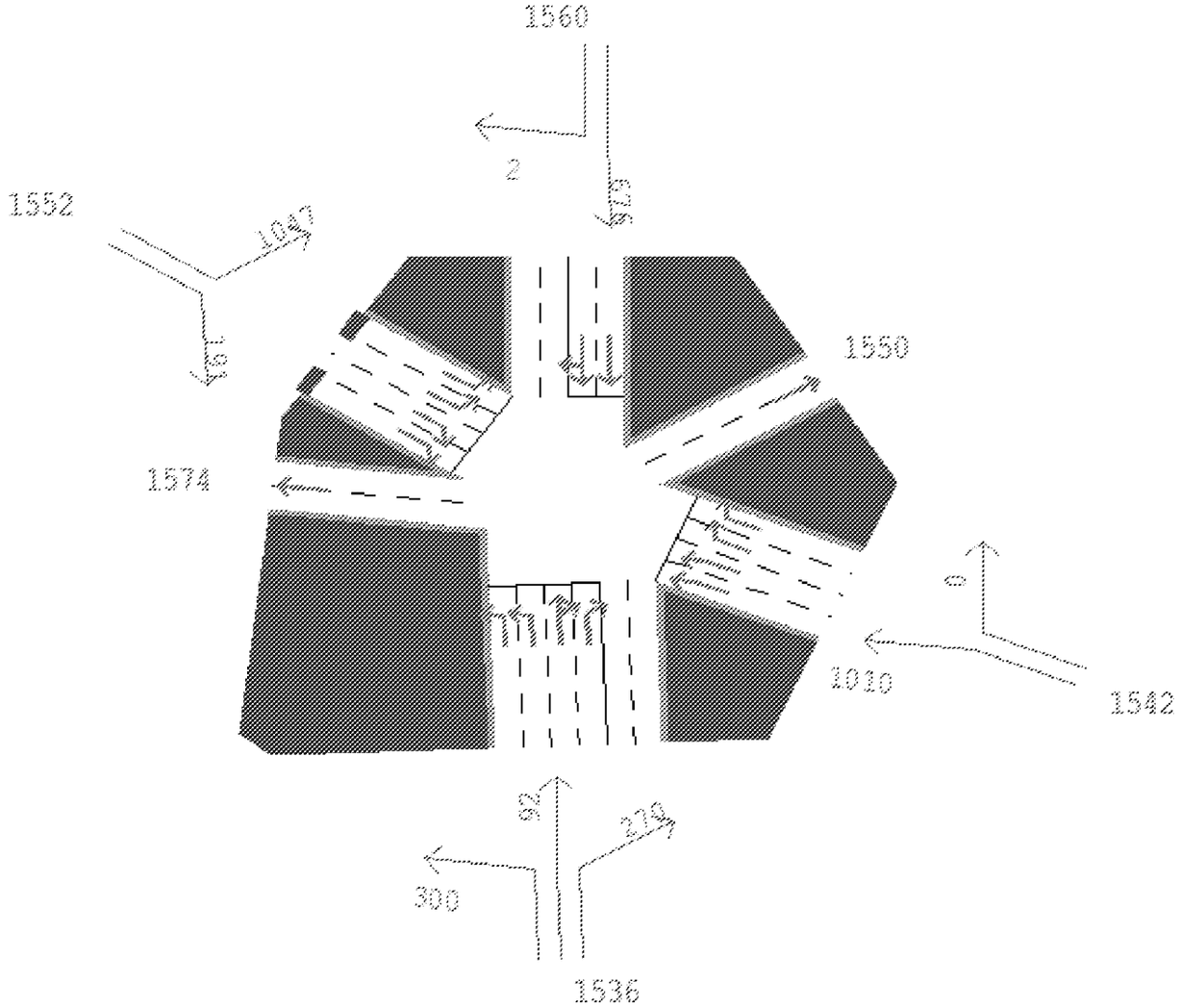
Node 1560

27

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Blocks Back



Node Graphic
Master Menu:

NODE 9312

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

eRror checks X
2 Warnings
3 Ser.Warns
1 Non-Fatal

Edit >

Change node:
dOwn(number) >

Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

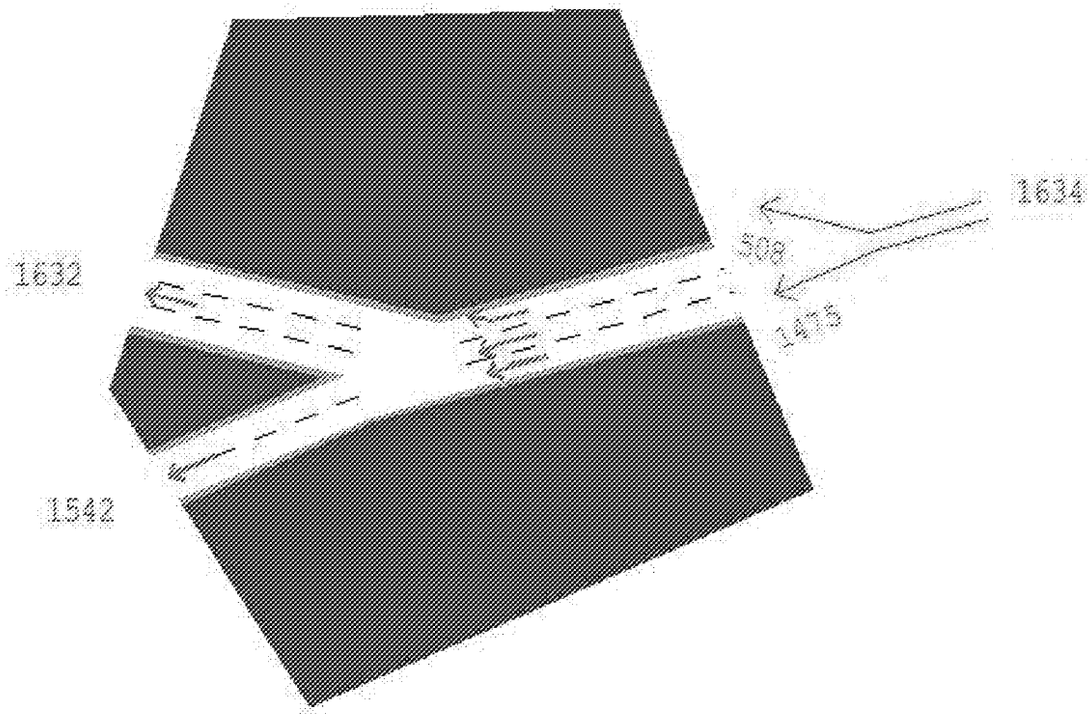
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
NFE 203 x 1
SWARN 158 x 2
SWARN 136 x 1
WARN 32 x 2
LCV = 80

Node 9312

28

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1628

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
number set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

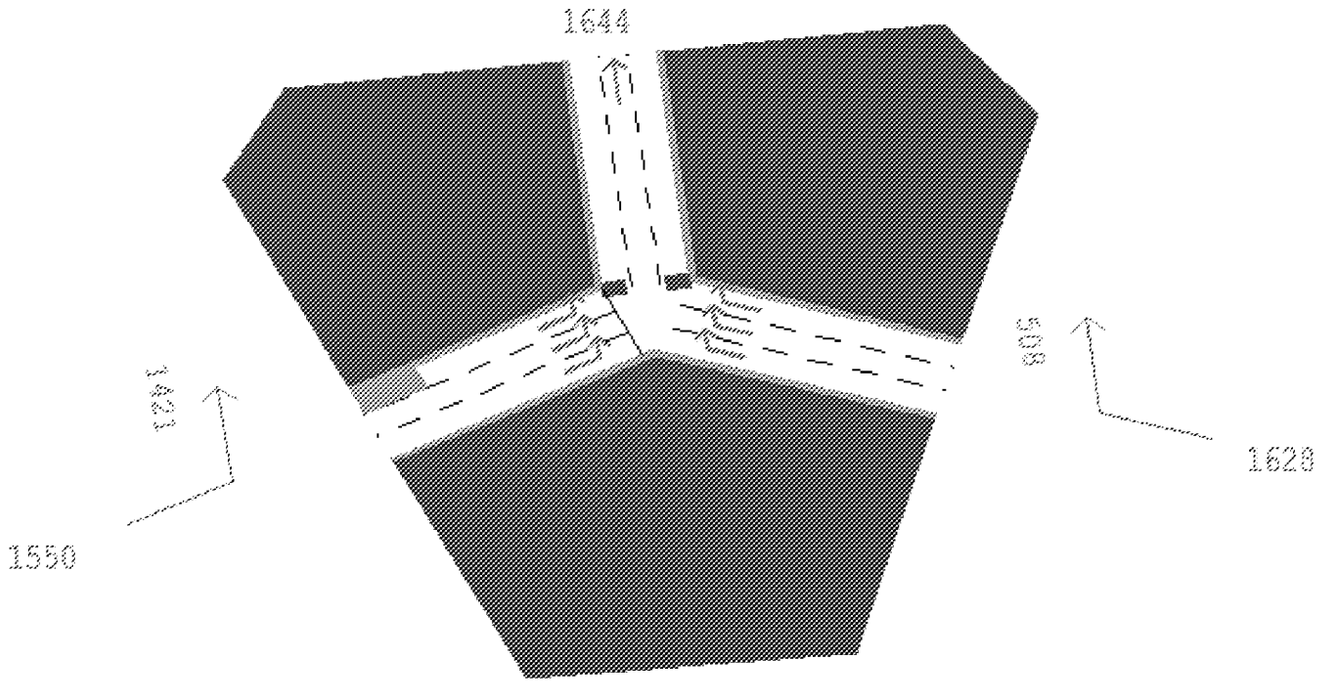
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ACX = 90

ARUN DISTRICT COUNCIL P/1401B/OUT

Node 1628

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last

Blocks Back



Node Graphic
Master Menu:

NODE 1632

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

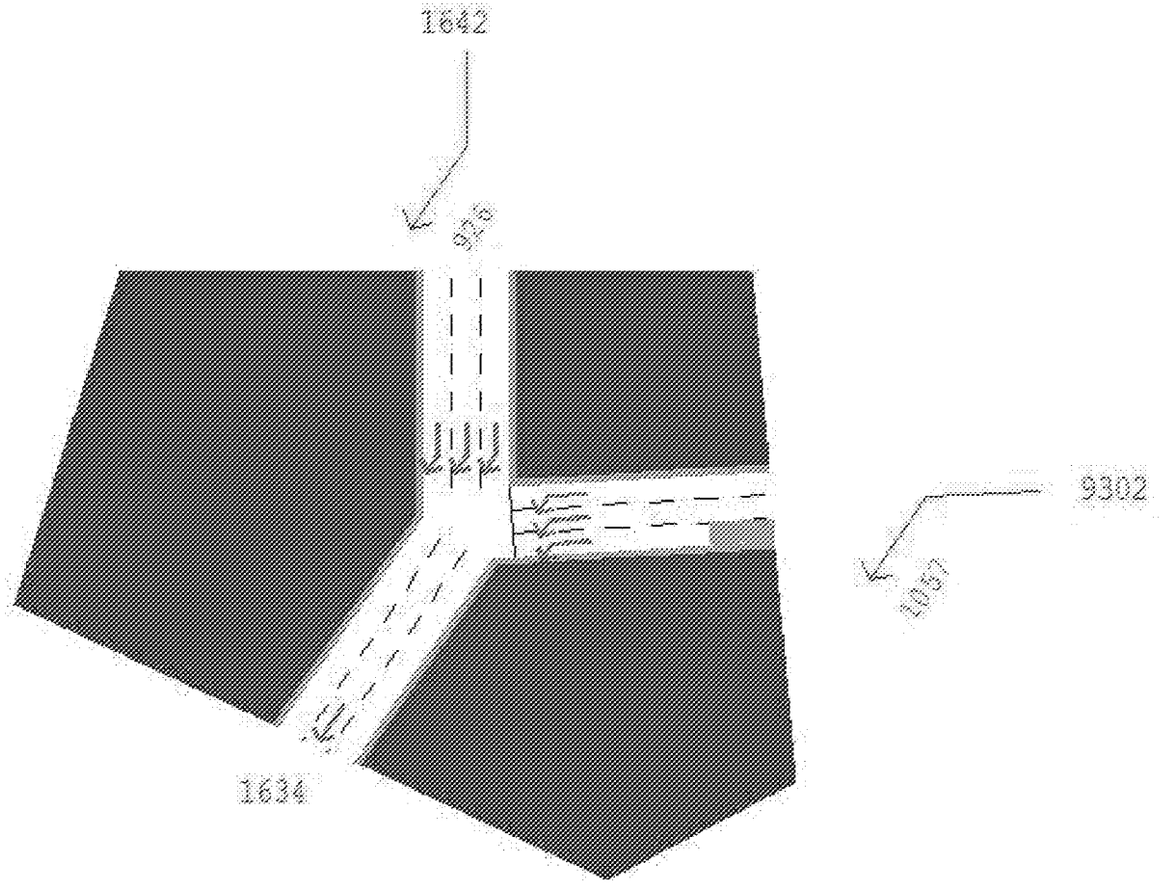
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCV = 90

Node 1632

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1636

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

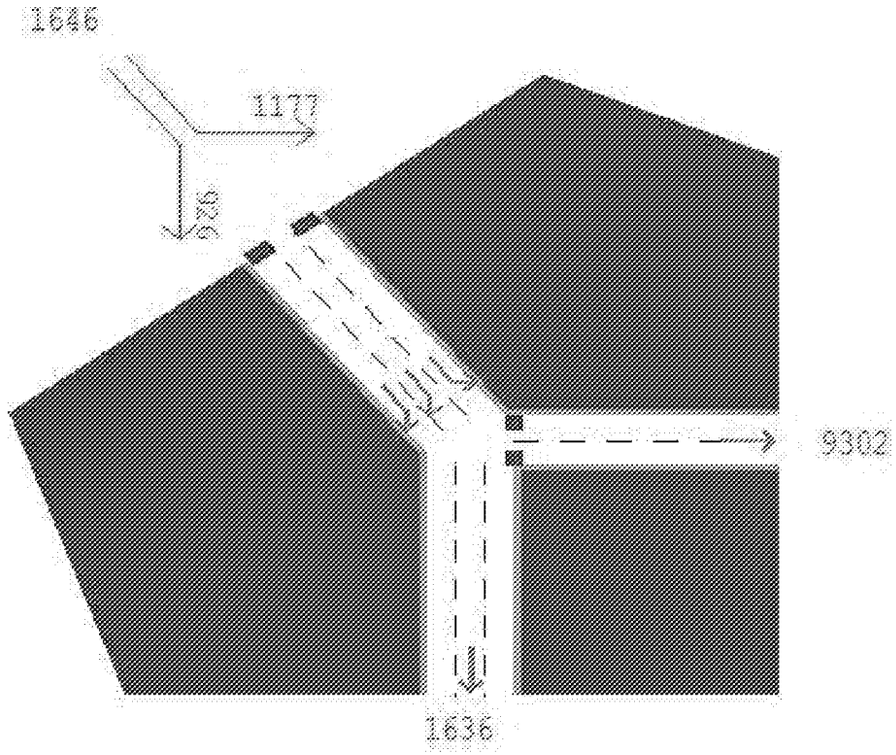
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
FCX = .00

ARUN DISTRICT COUNCIL P/1401/6/OUT

Node 1636

Blocks Back



Node Graphic
Master Menu:

NODE 1642

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

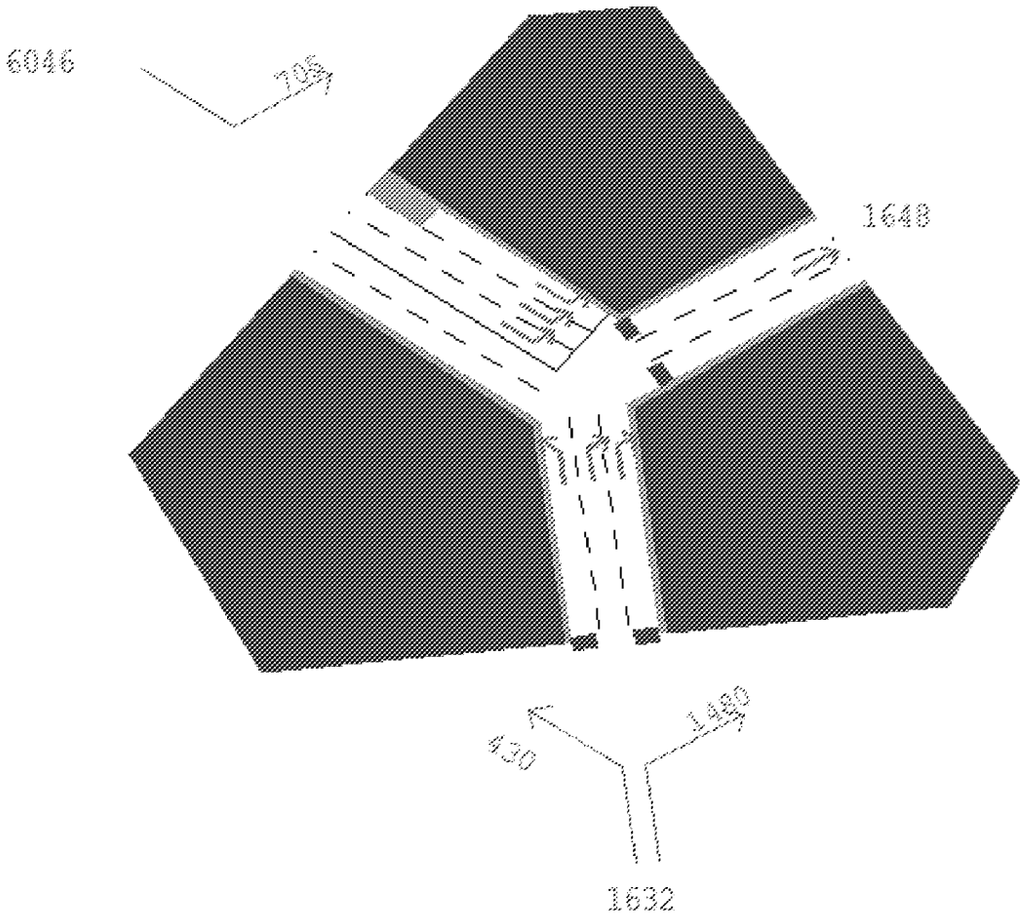
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 63 X 1
ICY = 80

Node 1642

ARUN DISTRICT COUNCIL P/140/16/OUT

Blocks Back



Node Graphic
Master Menu:

NODE 1644

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

lnFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

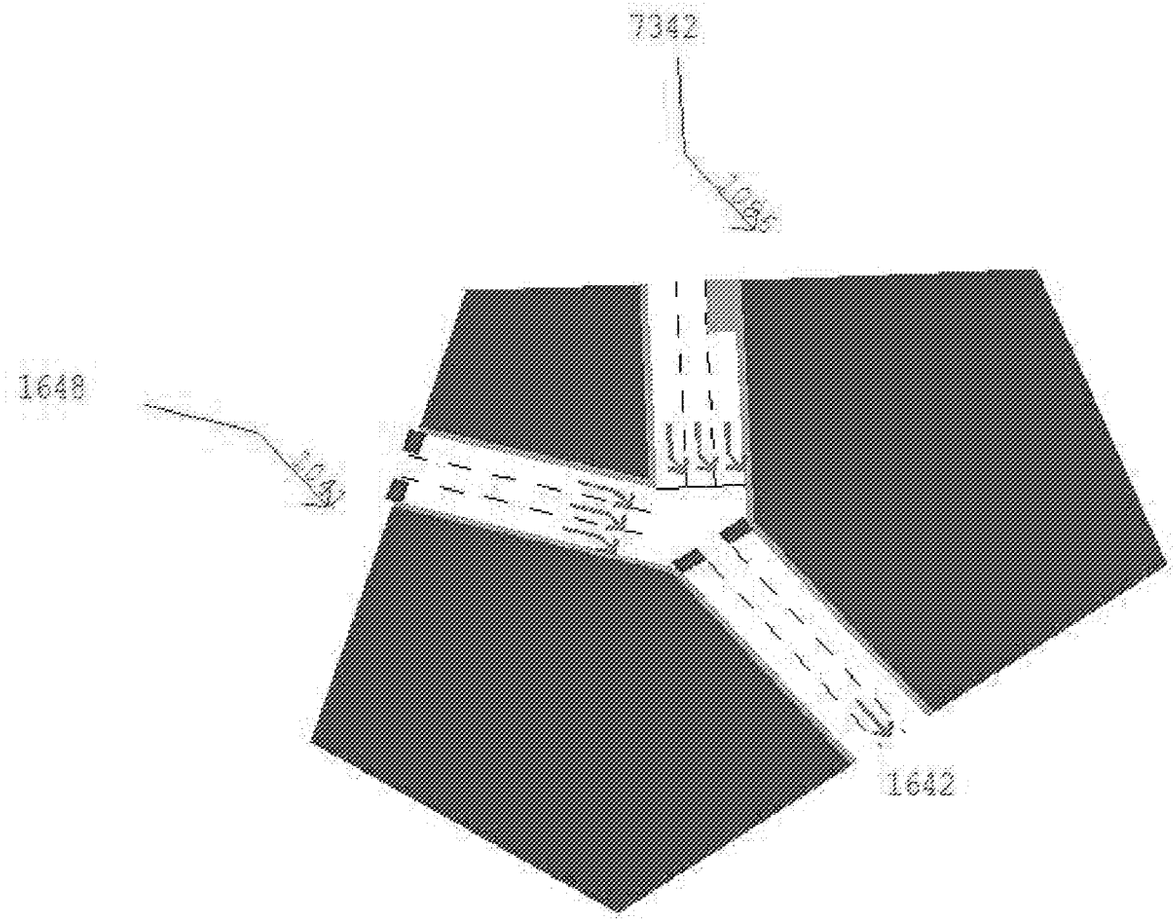
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICY = 90

Node 1644

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last

Blocks Back



Node Graphic
Master Menu:

Node 1646

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

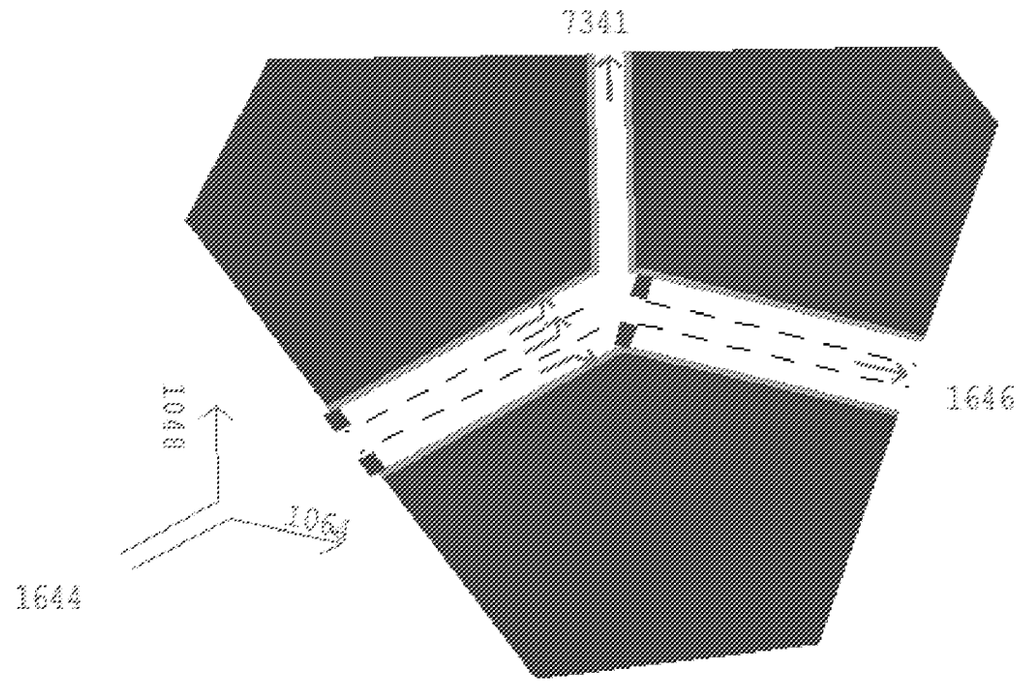
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCX = 80

Node 1646

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last

Blocks Back



Node Graphic
Master Menu:

NODE 1648

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

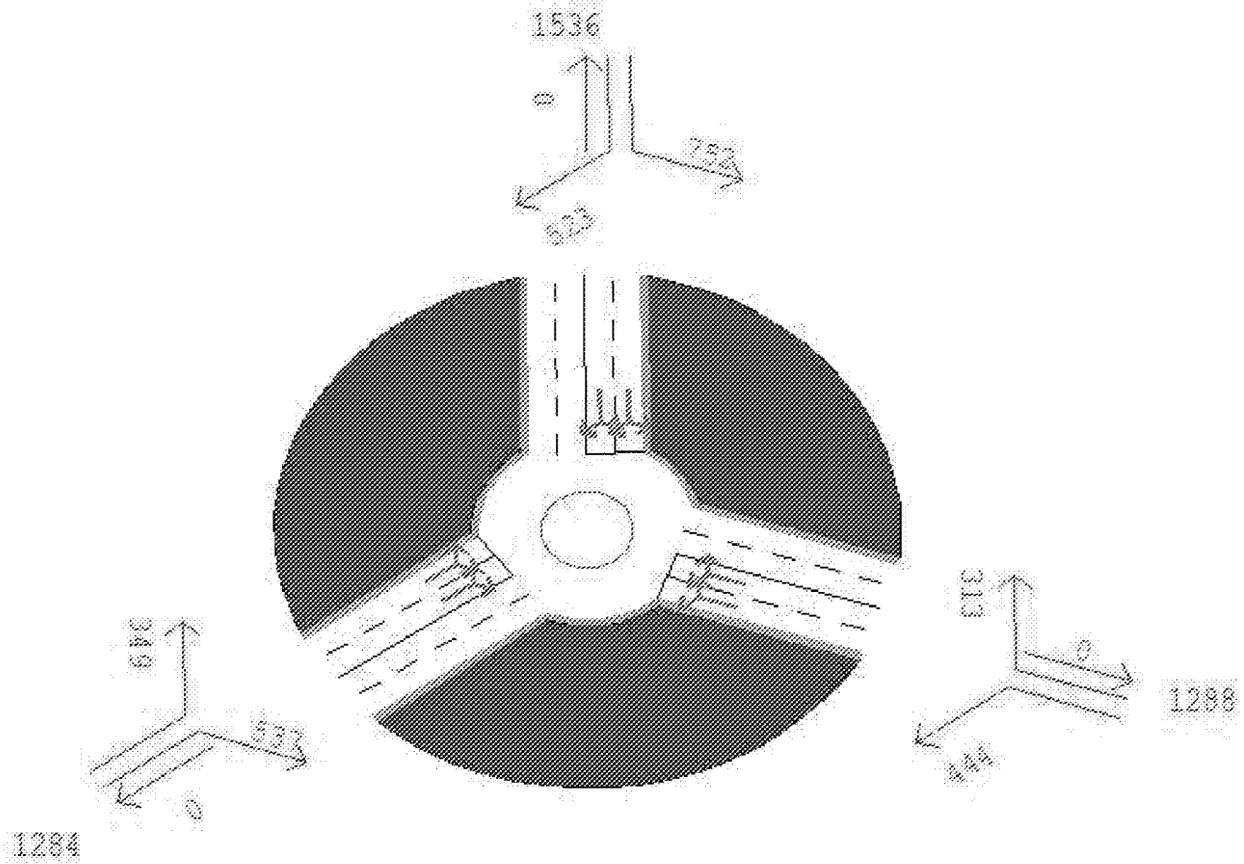
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
FCX = 60

Node 1648

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node-based
Data display
Choices:

Current data

Arrive flow

New choice:

Cancel (none x
nCode data ON
Link data >
Turn data >

Display mode s
Arrows

Arrow type: s
line+number

Banner >

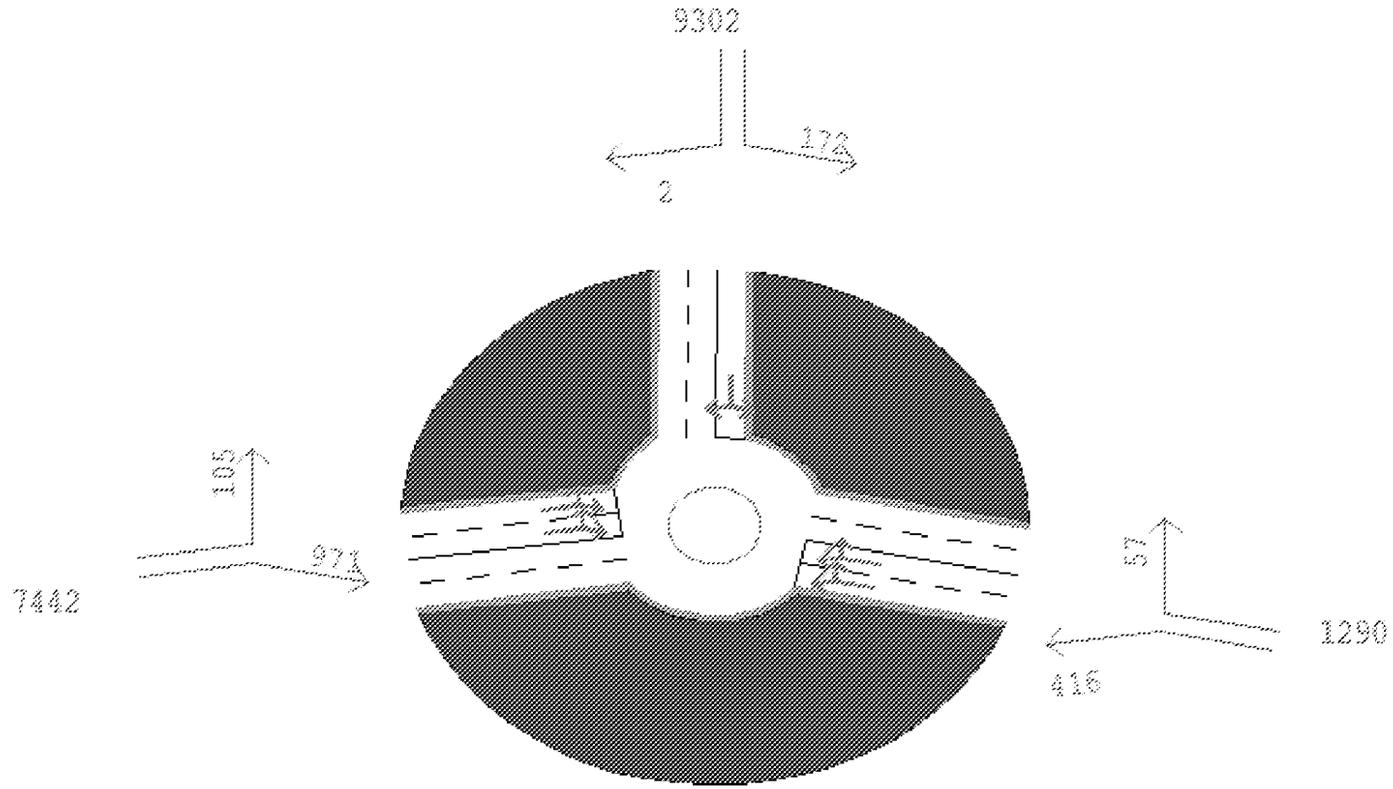
Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 32 X 3
LCX = 90

Node 1312

ARUN DISTRICT COUNCIL P/140/16/OUT



Node Graphic
Master Menu:

NODE 1302

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

eRror checks X
2 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

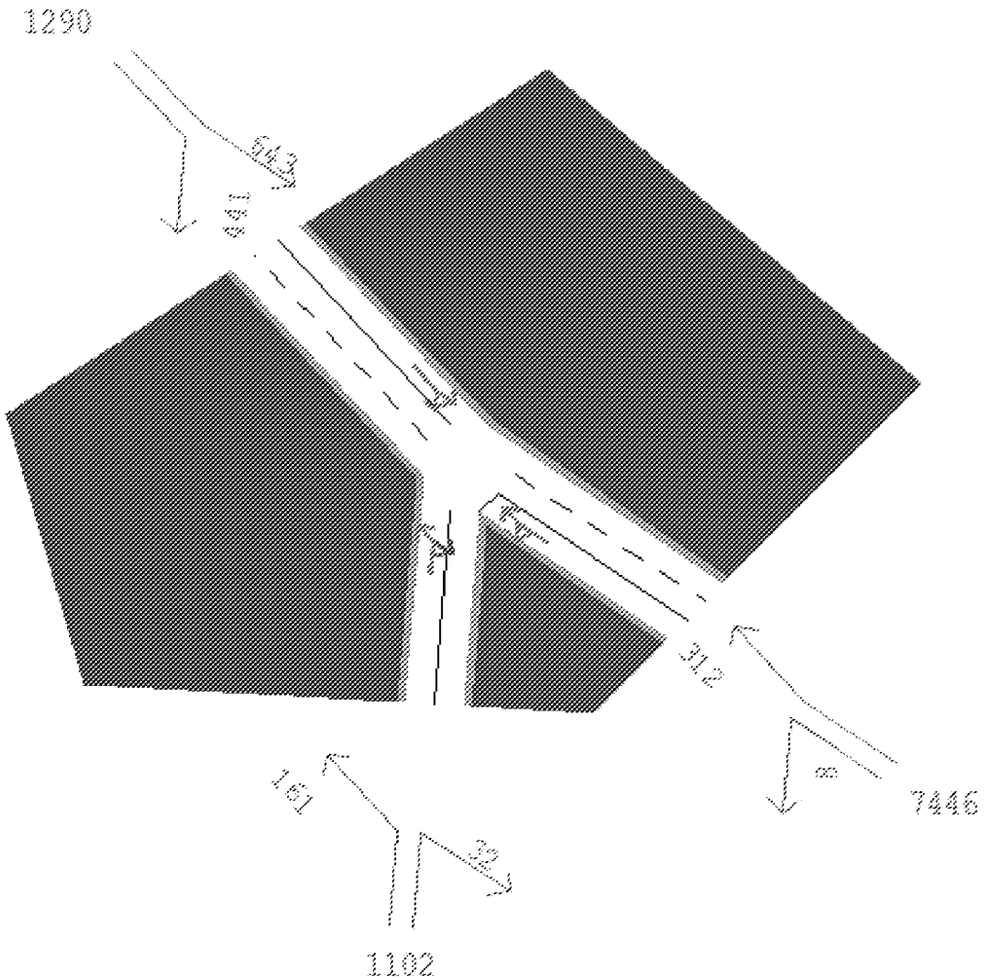
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 32 X 2
ICV = 90

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1302

37

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1188

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
6 Warnings
3 Ser.Warns

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

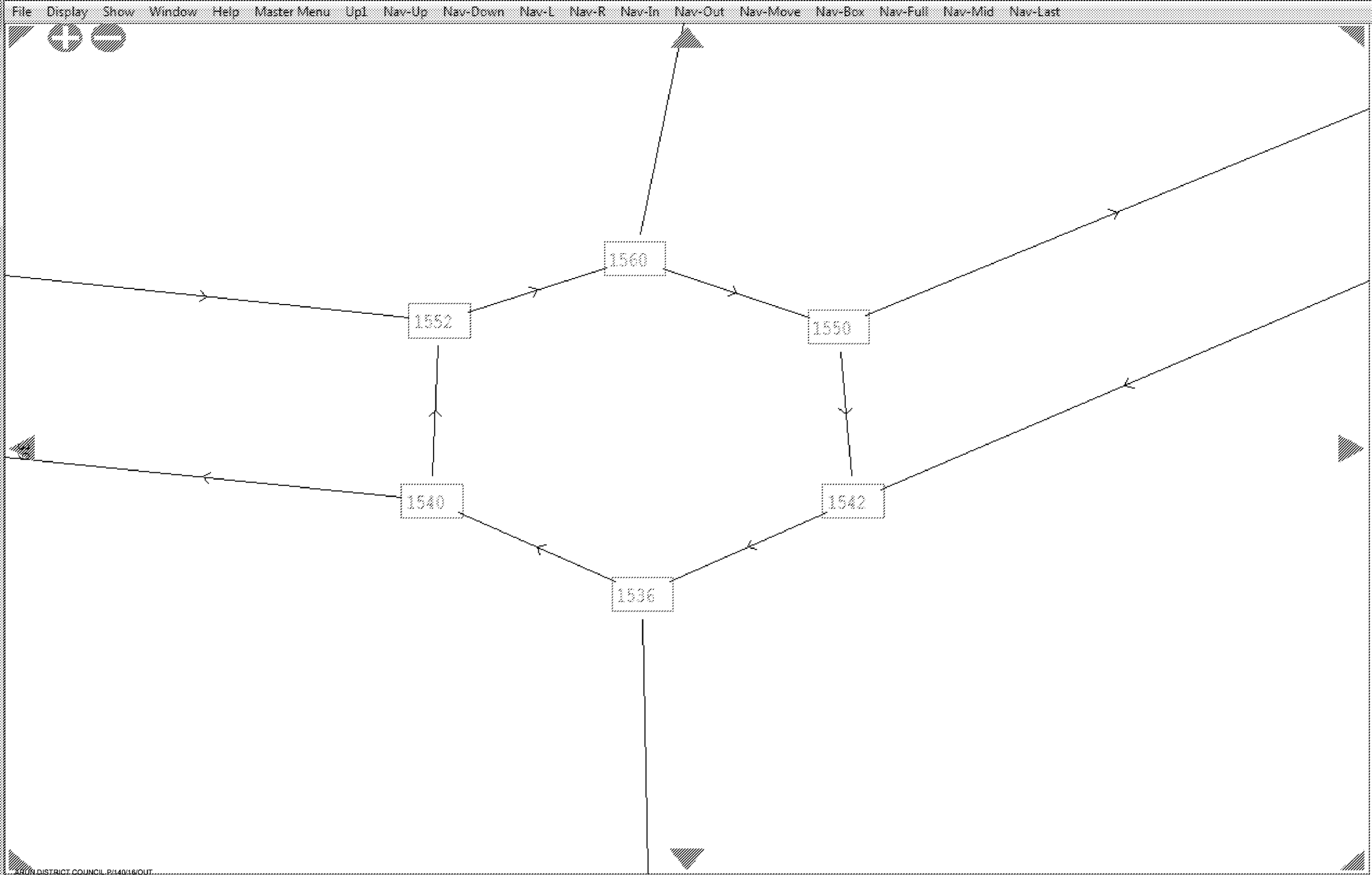
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
SWARN 137 x 2
SWARN 135 x 1
WARN 98 x 2
WARN 32 x 3
WARN 12 x 1
ECX = 90

Node 1188

38

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



ARUN DISTRICT COUNCIL P/140/16/OUT

West Sussex County Strategic Transport Model 2031 AM Stage 3 No M 13- 2-17

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last

Node-based
Data display
Choices:

Current data

Arrive flow

New choice:

Cancel (none x
nOde data ON
Link data >
Turn data >

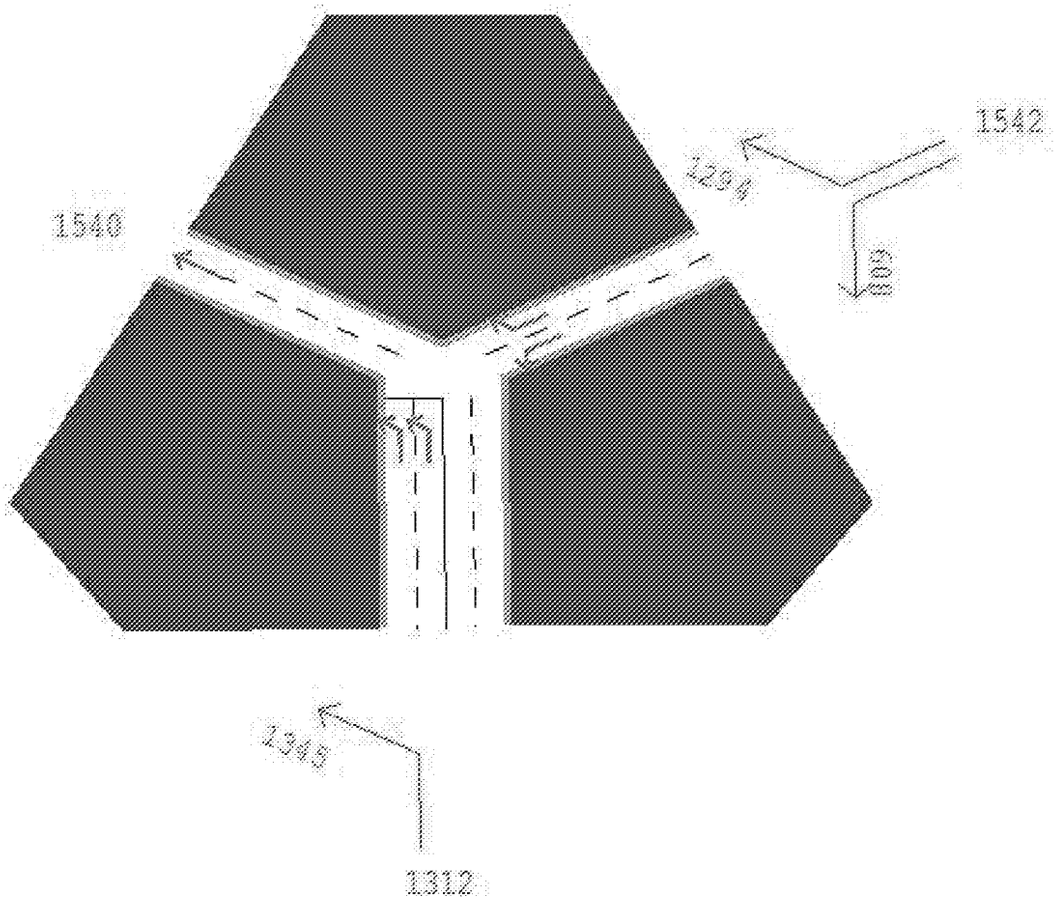
Display mode s
Arrows

Arrow type: s
line+number

Banner >

Q - Return

+ Menu bar(

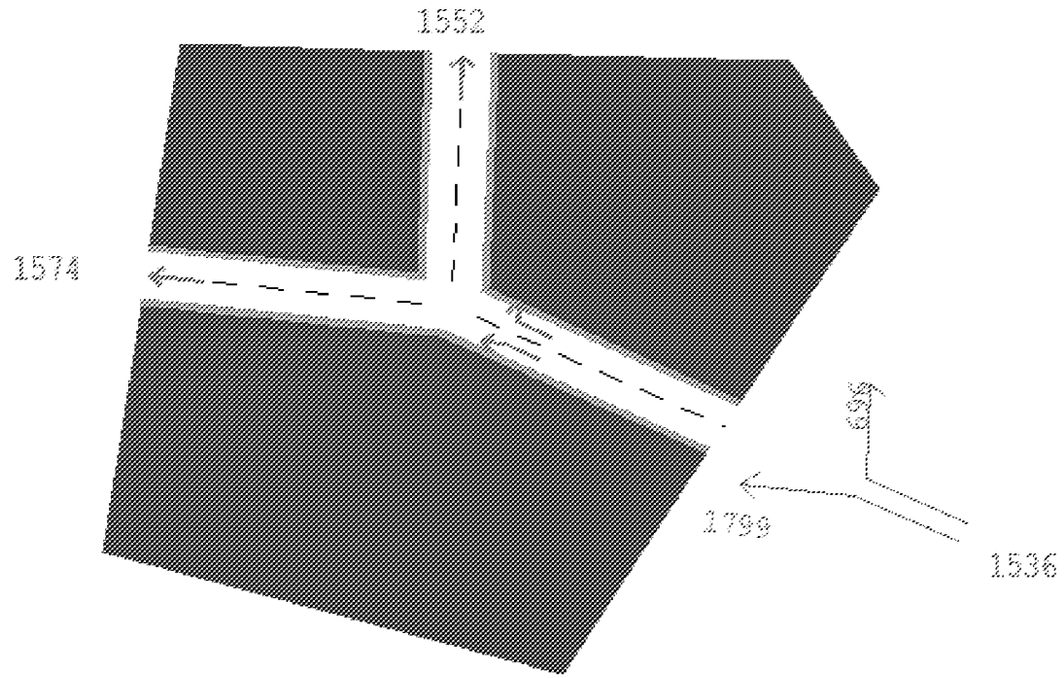


40

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 32 x 1

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1536



Node Graphic
Master Menu:

NODE 1540

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

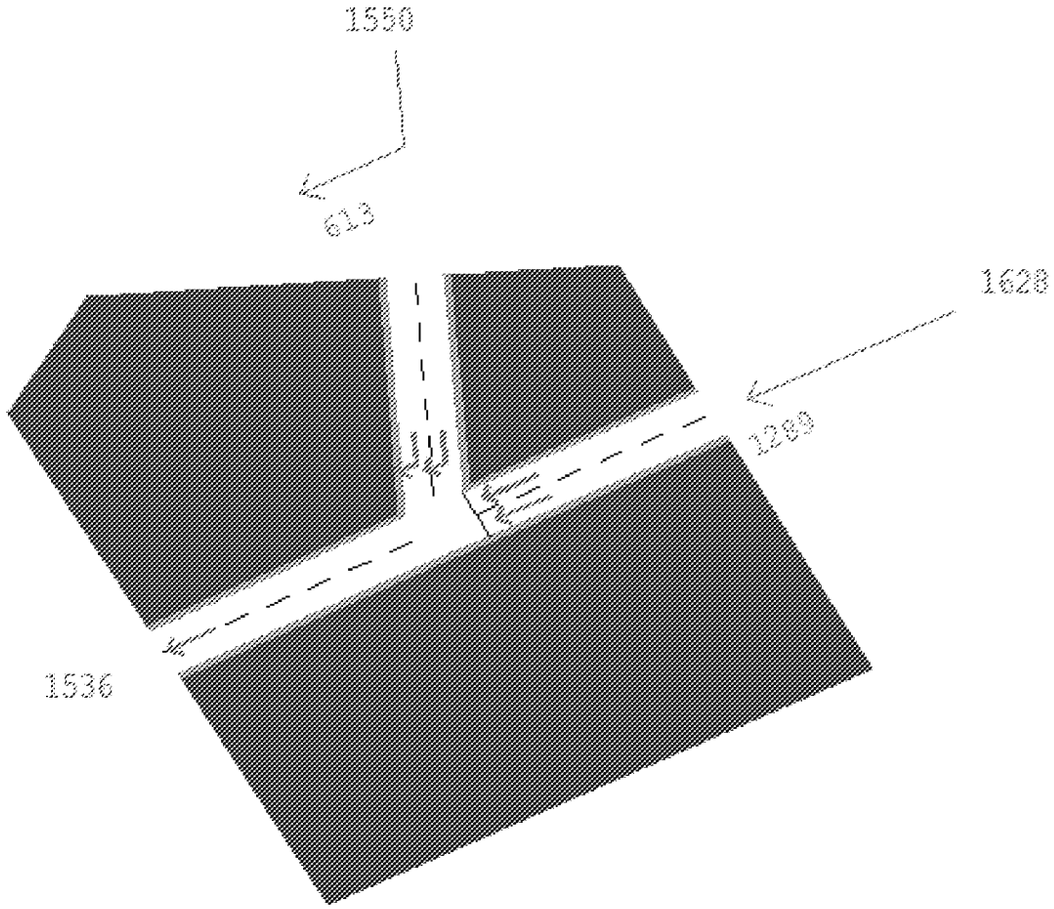
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICX = 90

Node 1540

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1542

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

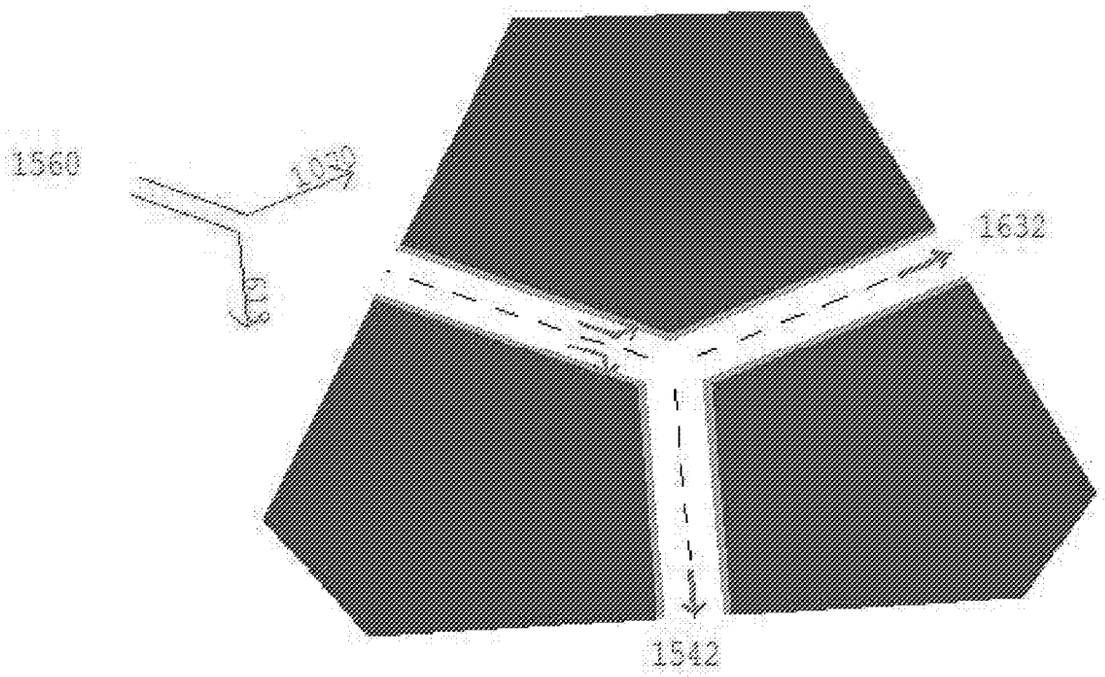
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCY = 90

Node 1542

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1550

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb
dOwn ers)
Mouse set ex
- this plot
- Network
numBer set

Centered >
network plot

info:Network >

auxiliarY >
network plot

Q - Return

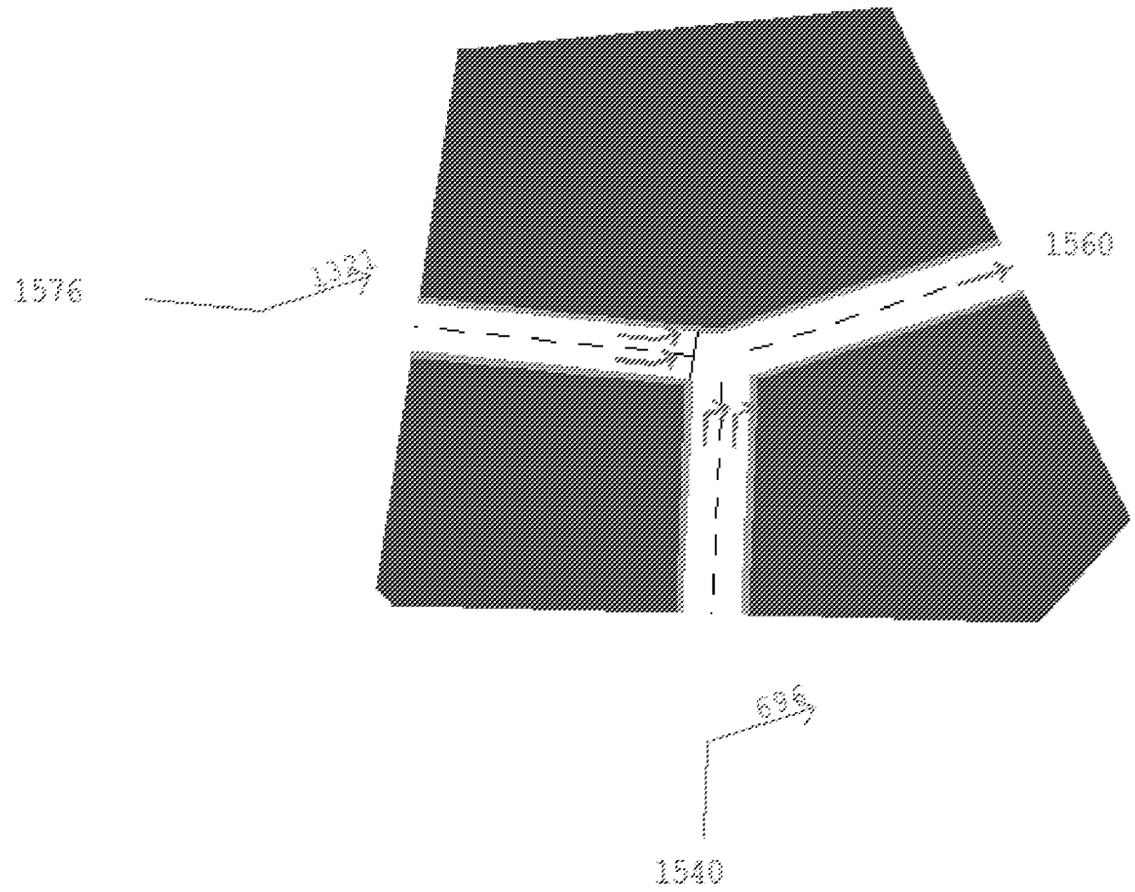
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
FCX = .00

Node 1550

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1552

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

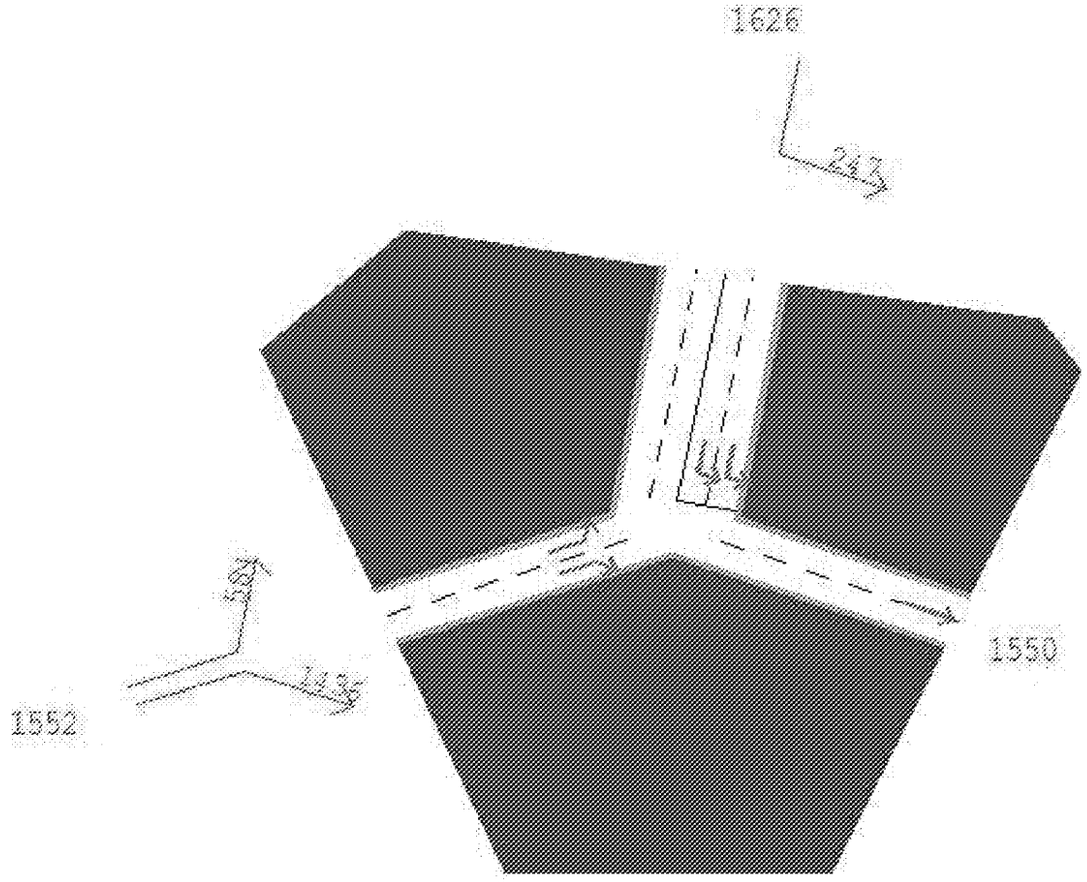
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
TCY = 90

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1552

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1560

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
text >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
down ers) >
Mouse set ex >
- this plot
- Network >
number set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

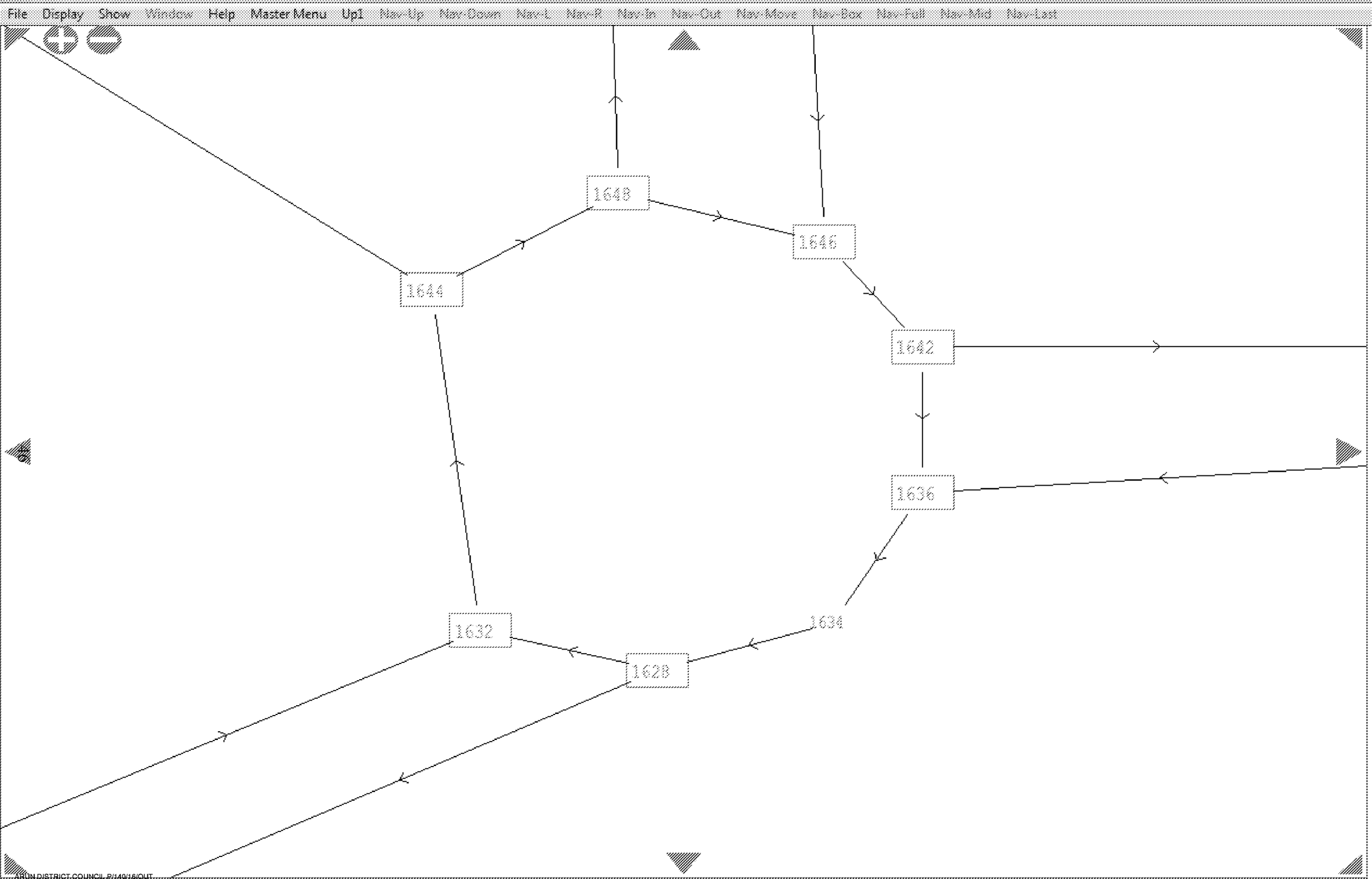
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
KCV = 90

ARUN DISTRICT COUNCIL P/140/16/OUT

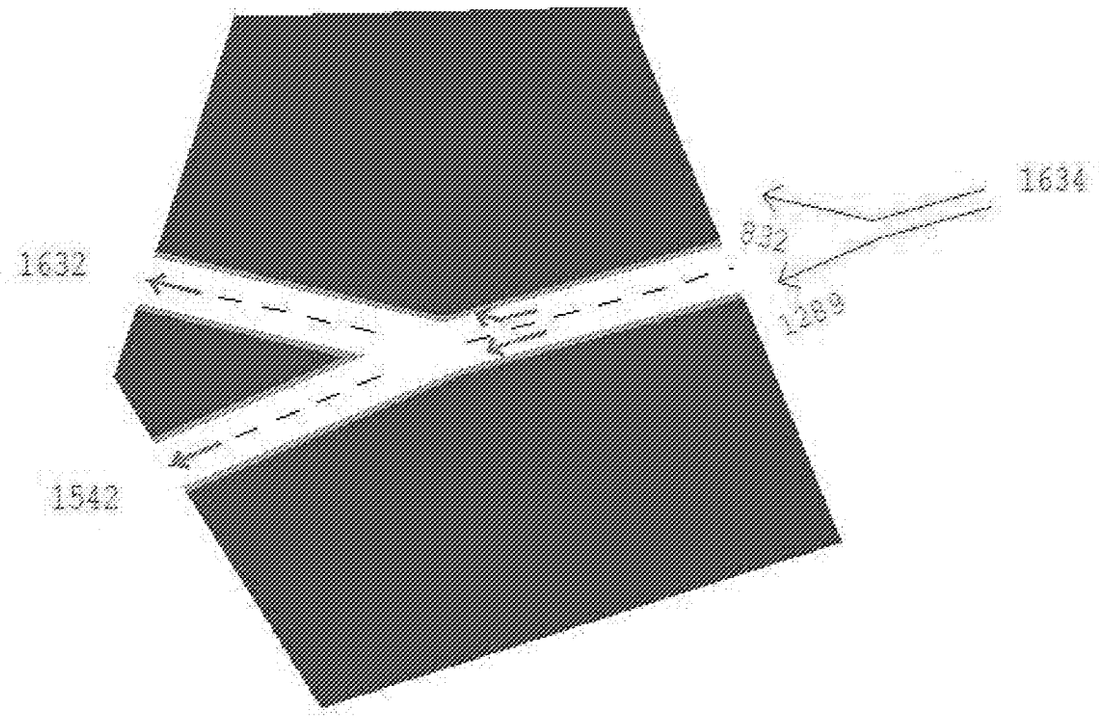
Node 1560

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1628

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

info:Network >

auxiliarY >
network plot

Q - Return

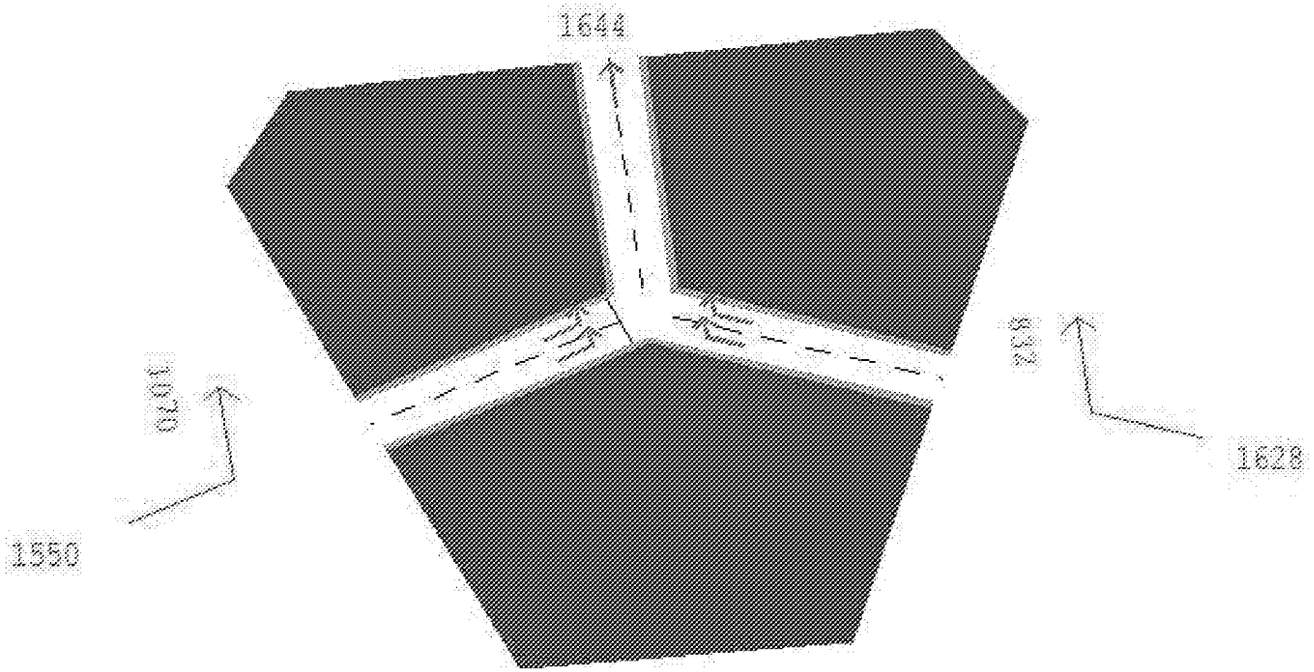
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
FCX = .00

© ARUN DISTRICT COUNCIL P/4016/OUT

Node 1628

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NONE 1632

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

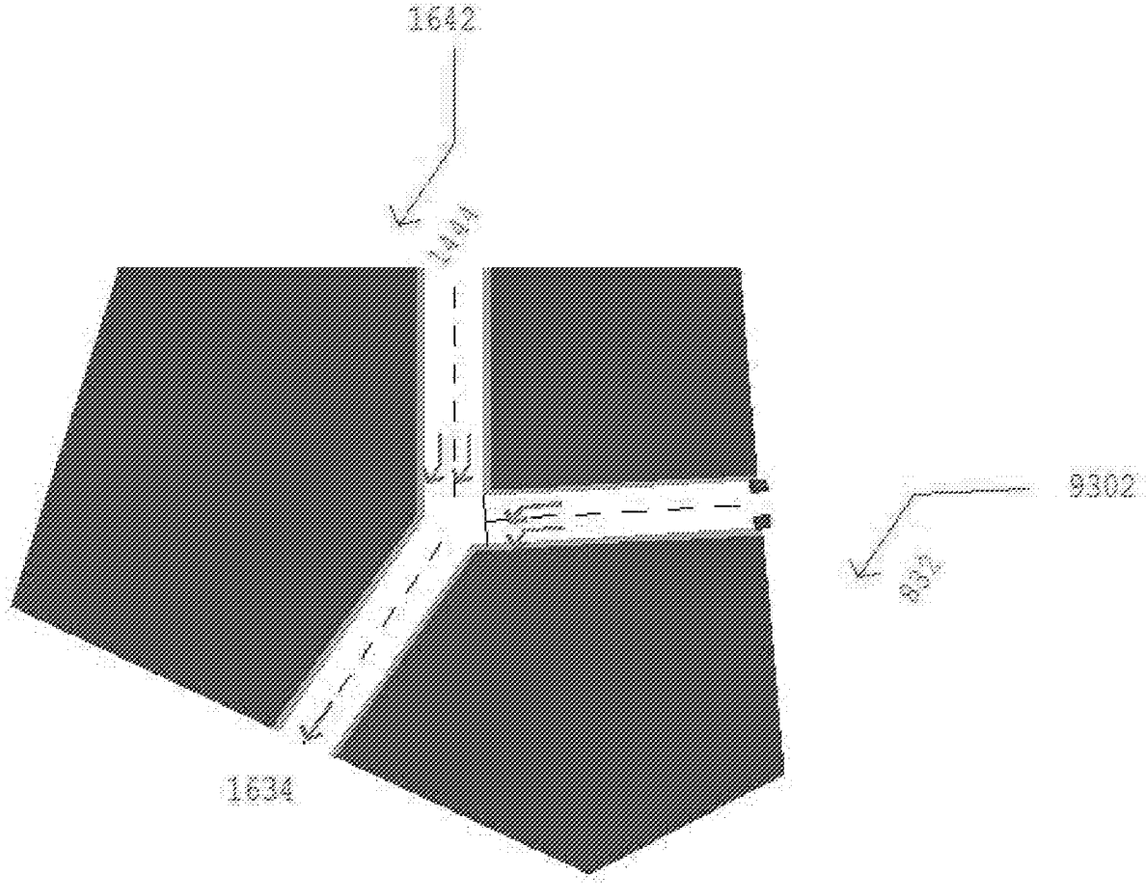
+ Menu bar!

CFP Convergence
OUT CFP 0.00
[ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1632

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last

Blocks Back



Node Graphic
Master Menu:

NODE 1636

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

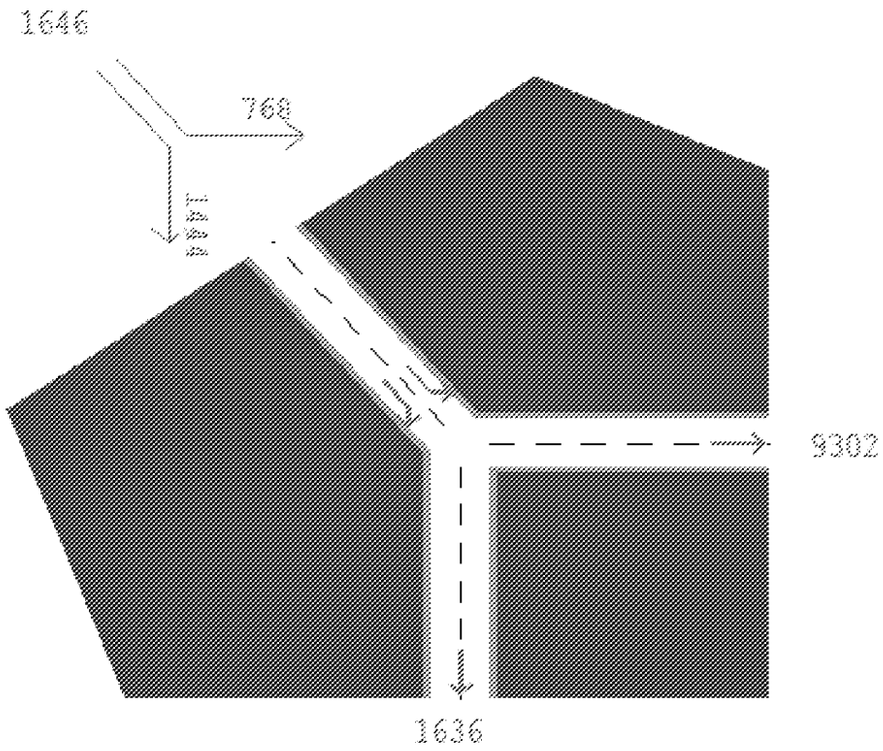
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
TCX = 00

Node 1636

TARBIN DISTRICT COUNCIL P/14/18/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1642

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror Checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

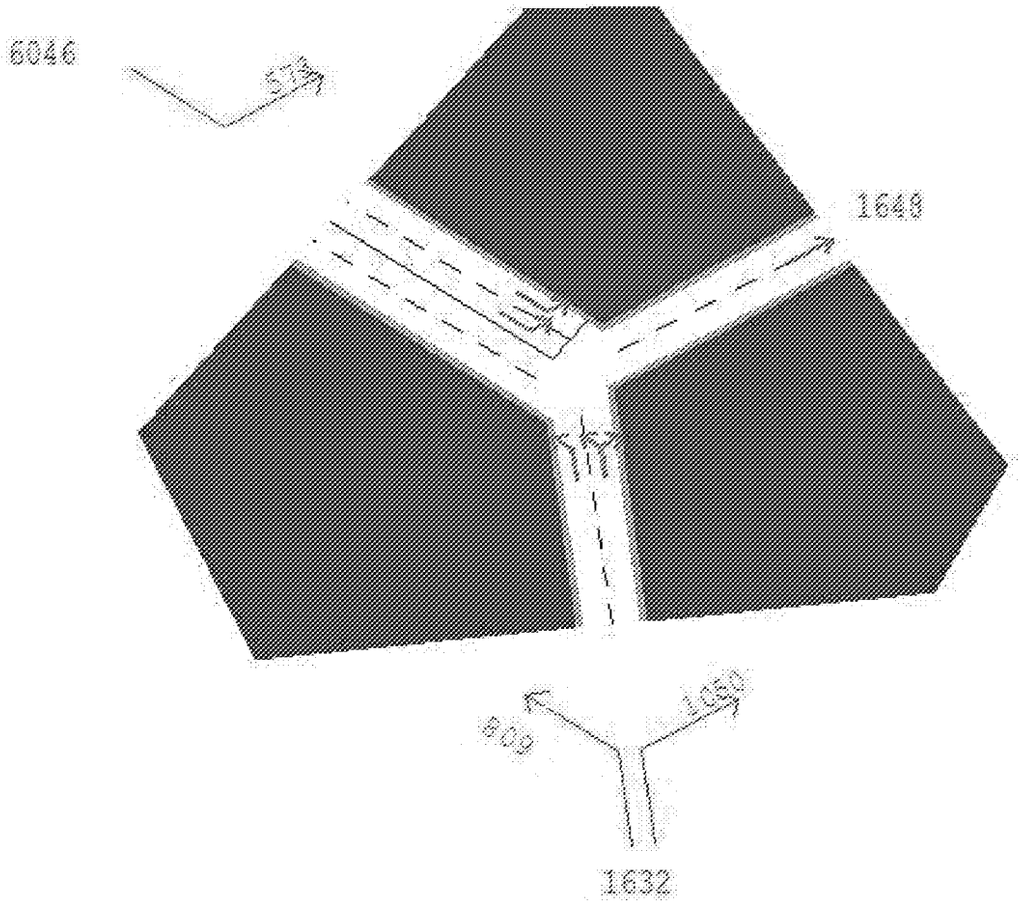
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 65 x 1
CX = 90

Node 1642

50

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1644

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Ser.Warns

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

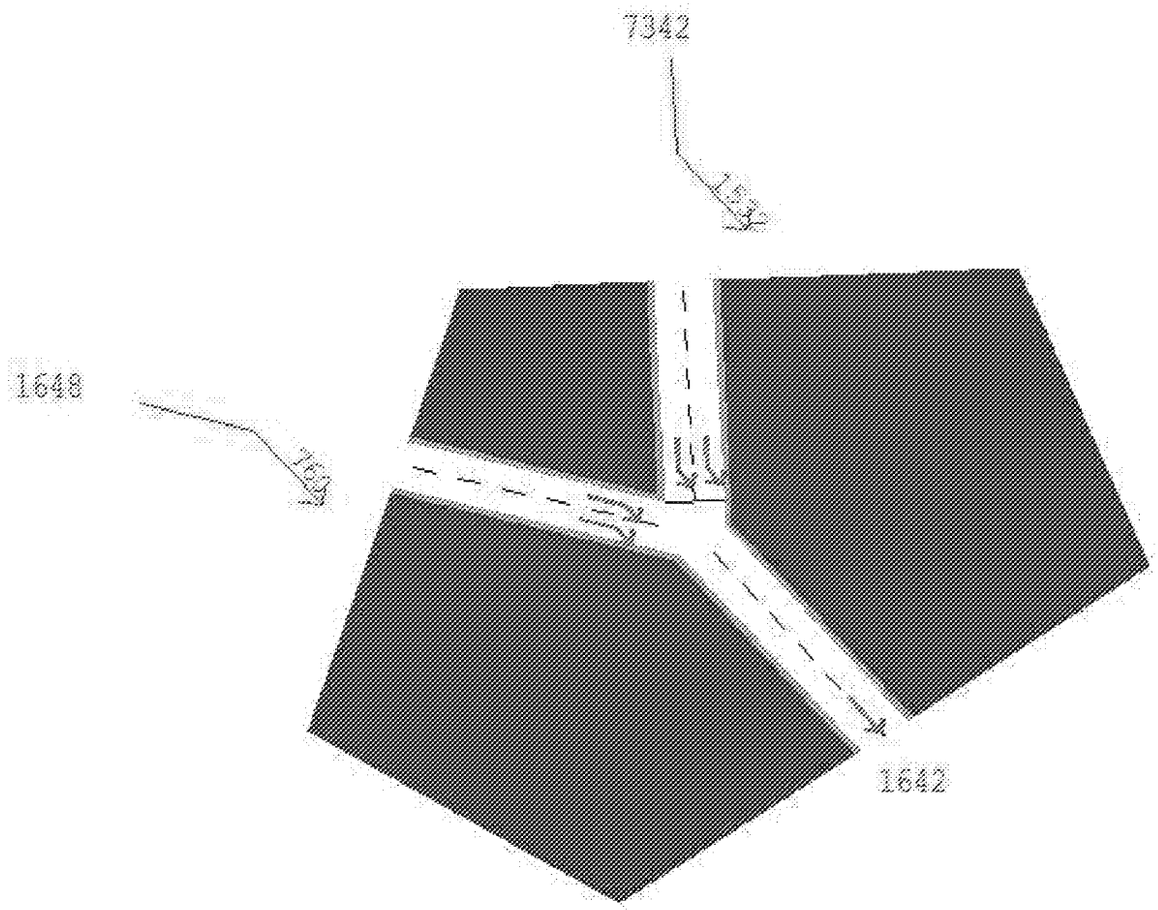
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
SWARM 137 X 1
FCX = 80

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1644

51

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1646

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

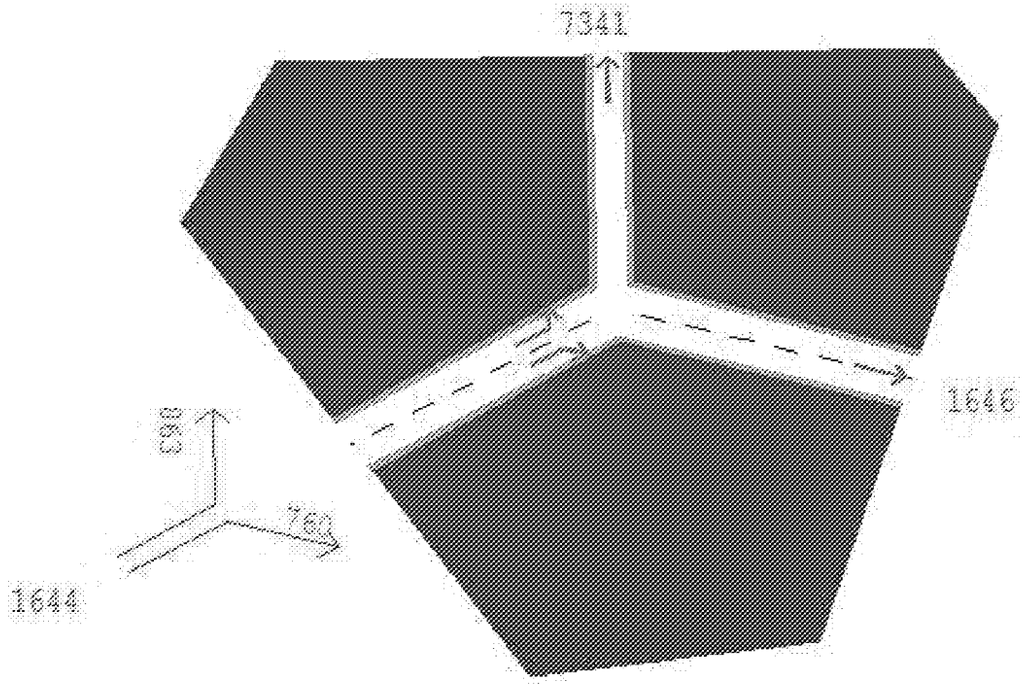
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
FCV = 90

Node 1646

ARUN DISTRICT COUNCIL P/1401/6/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1640

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
number set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

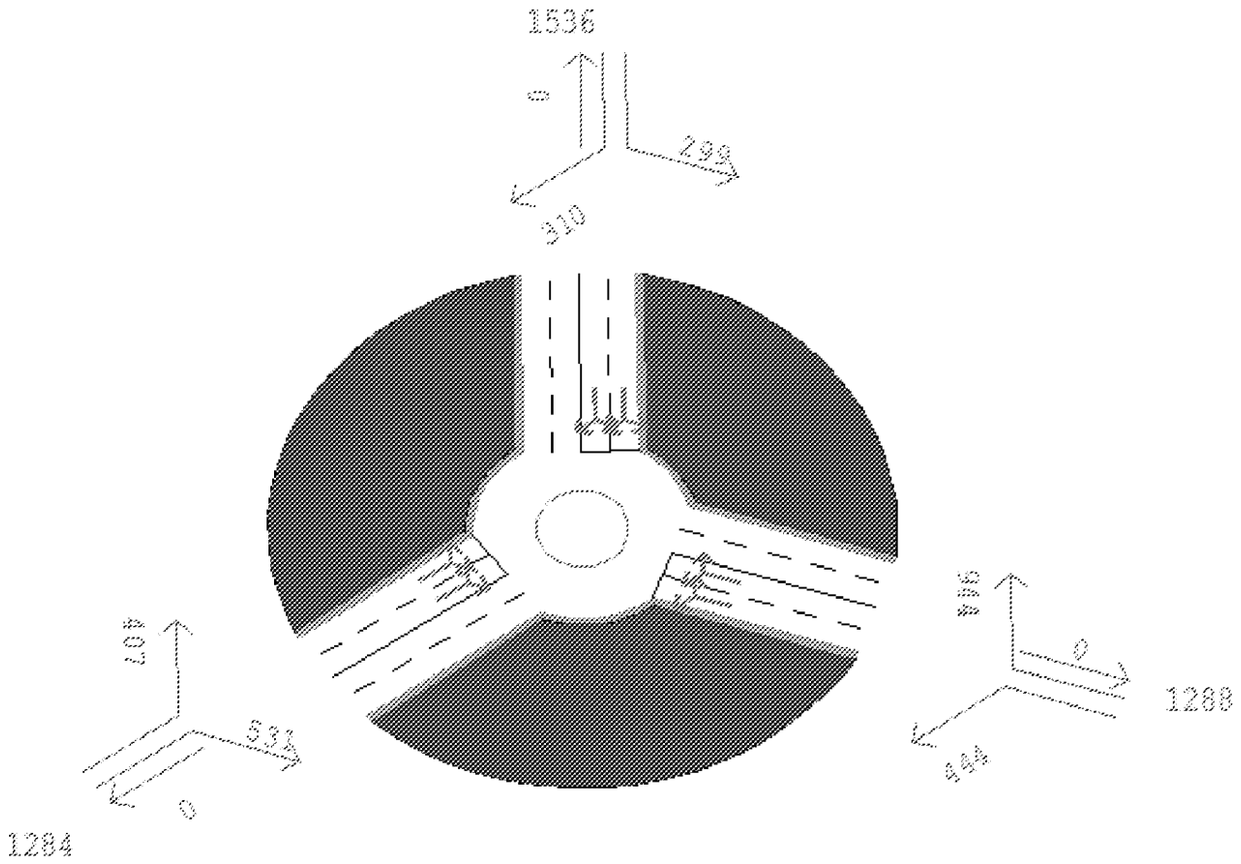
Q - Return

+ Menu bar!

CFD Convergence
OUT CFD 0.00
IN CFD 0.00
ICV = 90

Node 1640

ARUN DISTRICT COUNCIL P/140/16/OUT



Node Graphic
Master Menu:

NODE 1312

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
3 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

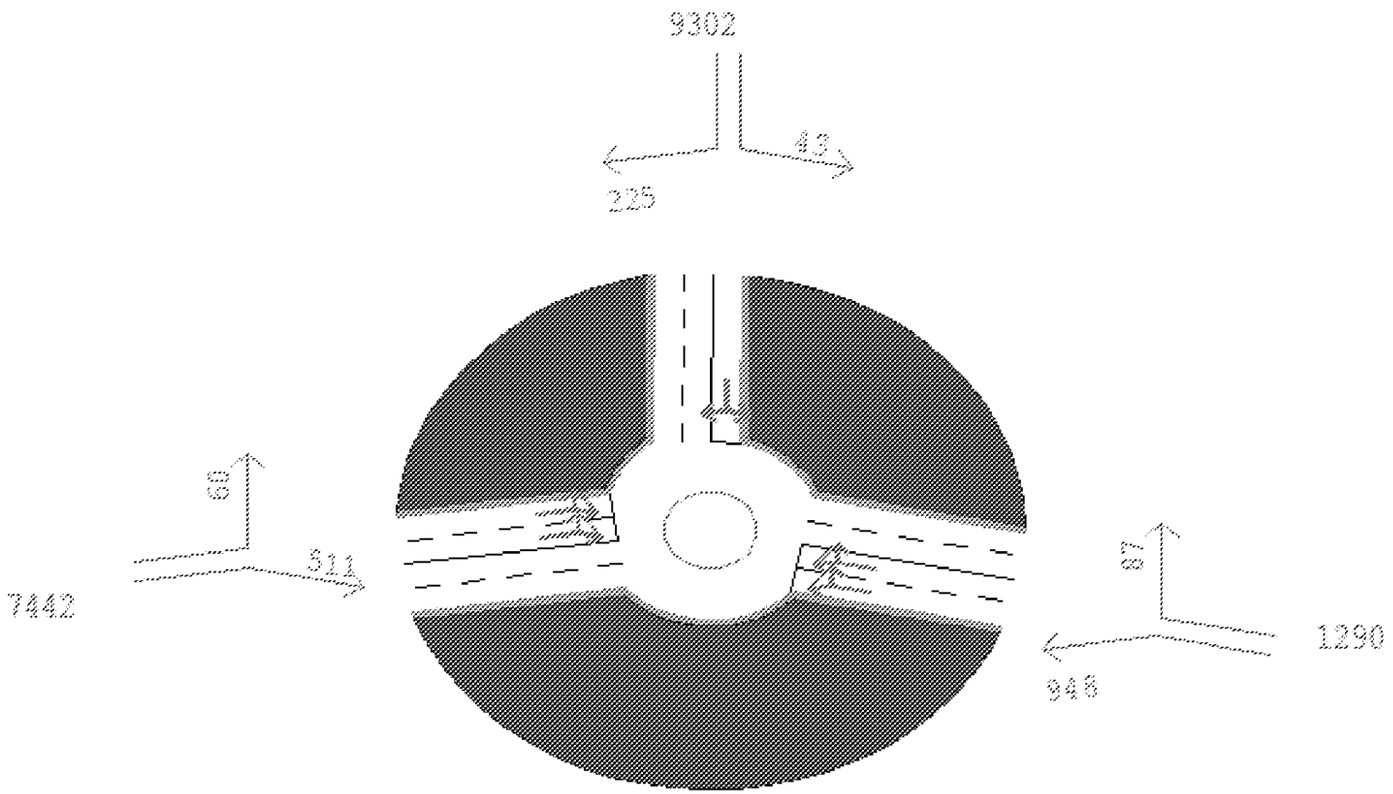
inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 32 X 3
CX = 90



Node Graphic
Master Menu:

NODE 1302

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

eRror checks X
2 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

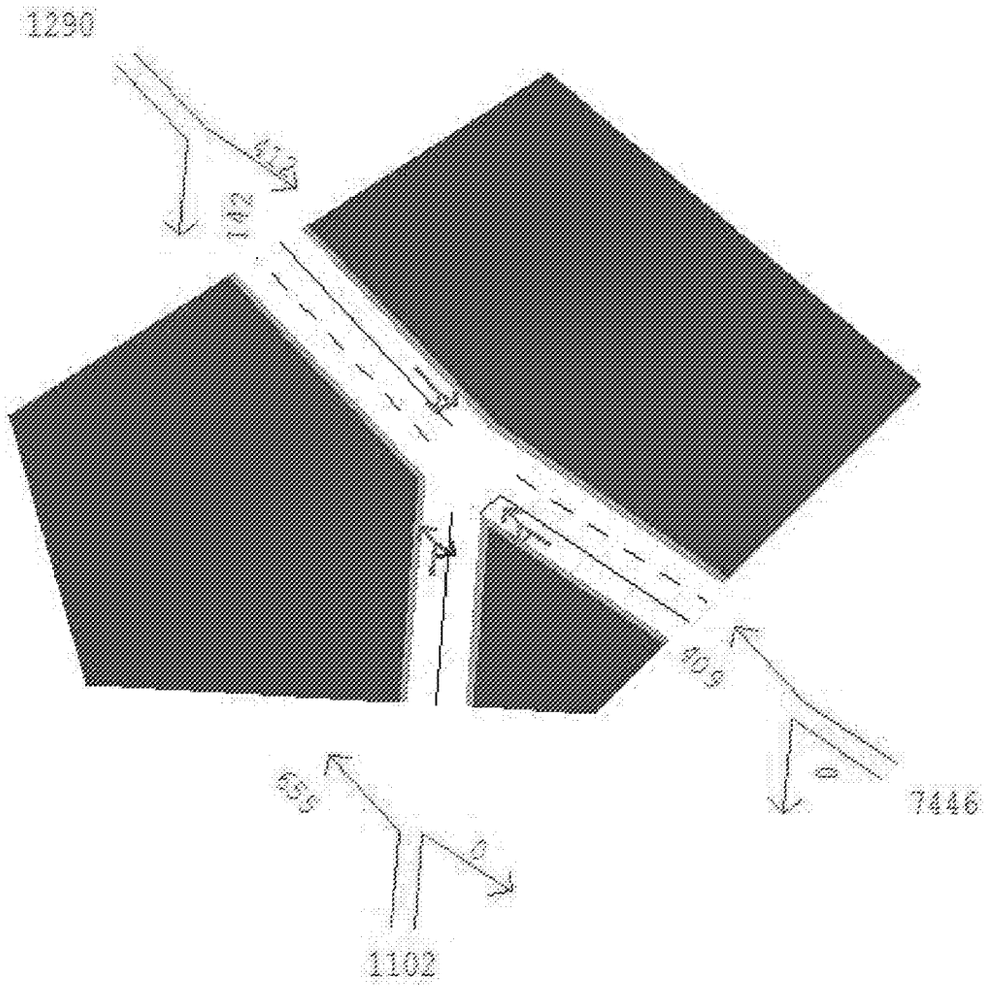
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 32 x 2
SCX = 90

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1302

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1108

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
6 Warnings
3 Ser.Warns

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

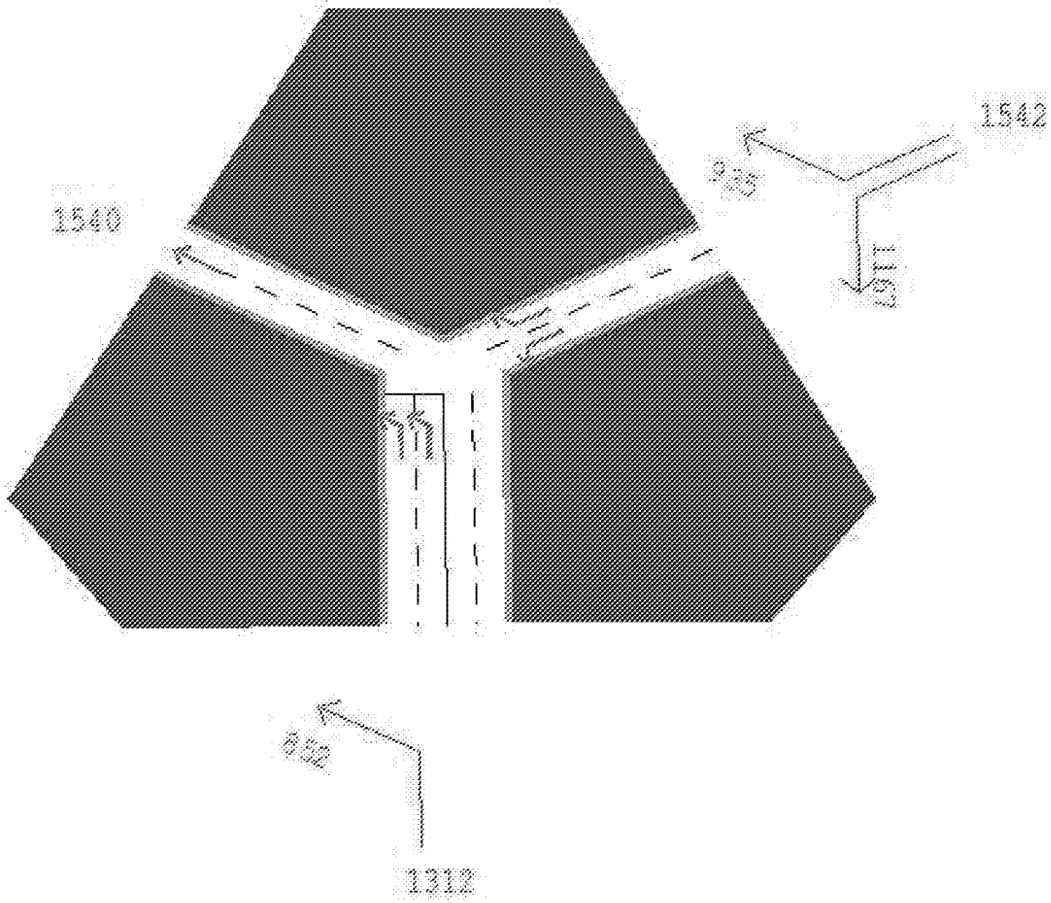
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
SWARN 137 x 2
SWARN 135 x 1
WARN 98 x 2
WARN 32 x 3
WARN 12 x 1
LCY = 90

Node 1108

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node-based
Data display
Choices:

Current data

Arrive flow

New choice:

Cancel (none x
nOde data ON
Link data >
Turn data >

Display mode s
Arrows

Arrow type: s
line+number

Banner >

Q - Return

+ Menu bar!

57

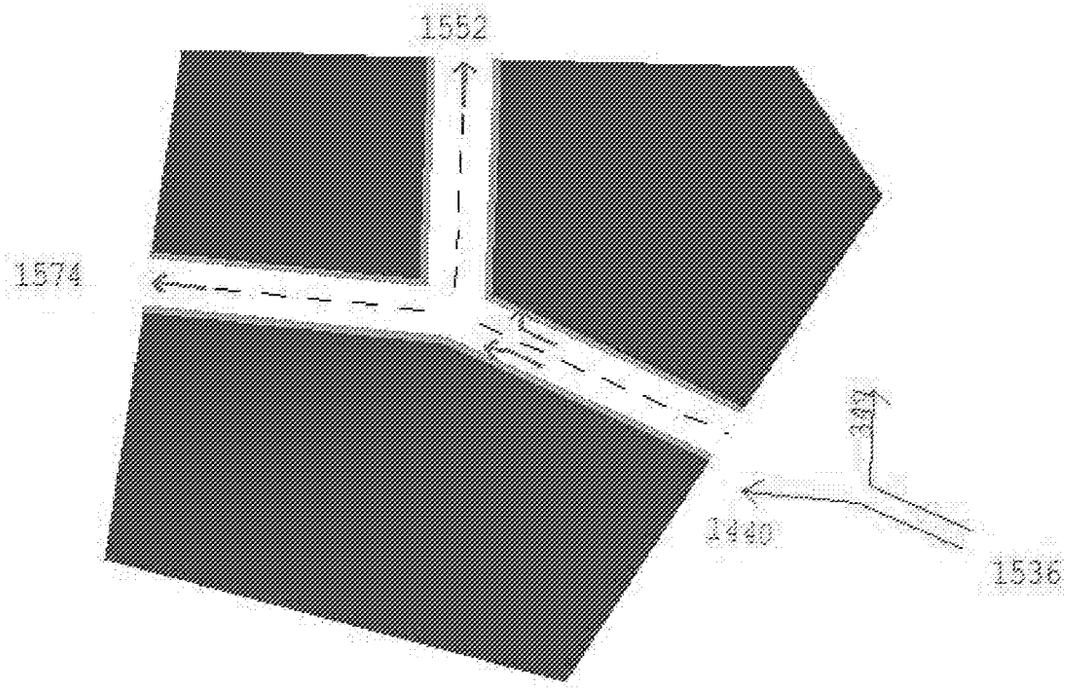
CFP Convergence
OUT CFP 0.00
IN CFP 0.00

ARUN DISTRICT COUNCIL P/140/16/OUT

MARK 32 X 1
TCK = 90

Node 1536

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1540

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxillarY >
network plot

Q - Return

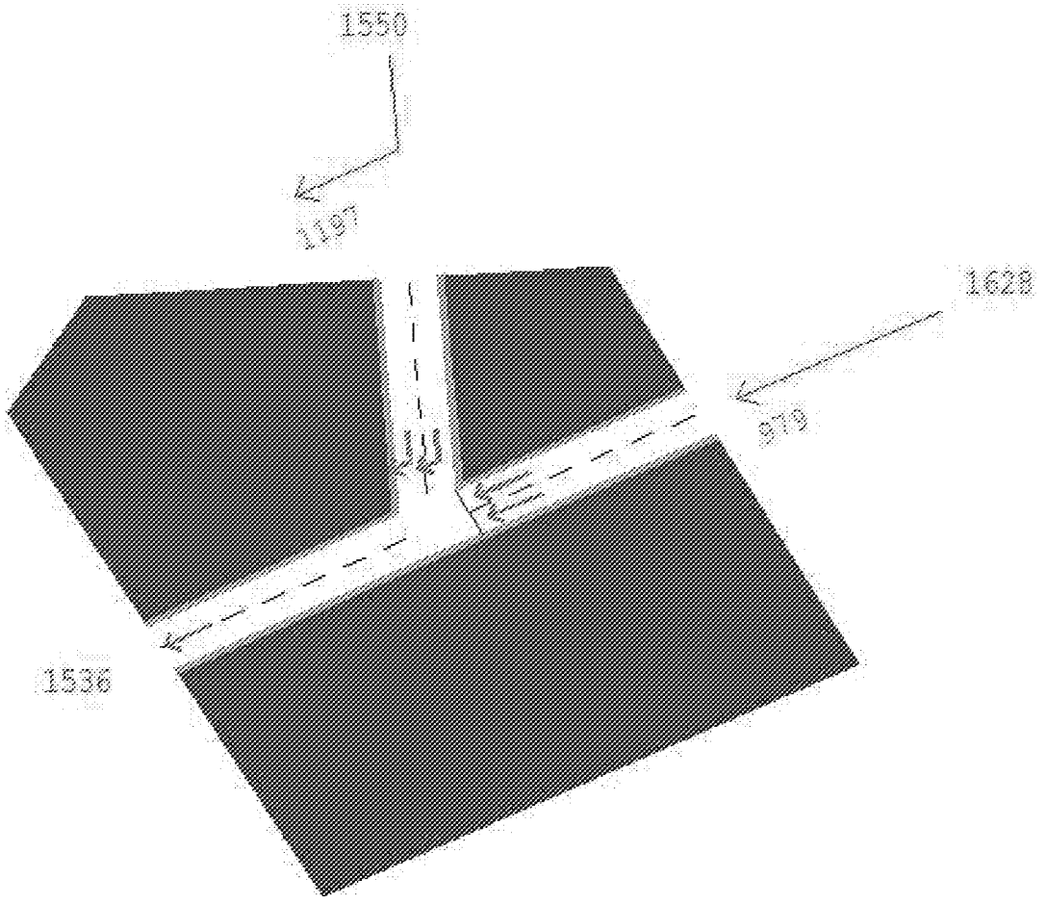
+ Menu bar!

58

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICX = 90

Node 1540

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1542

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

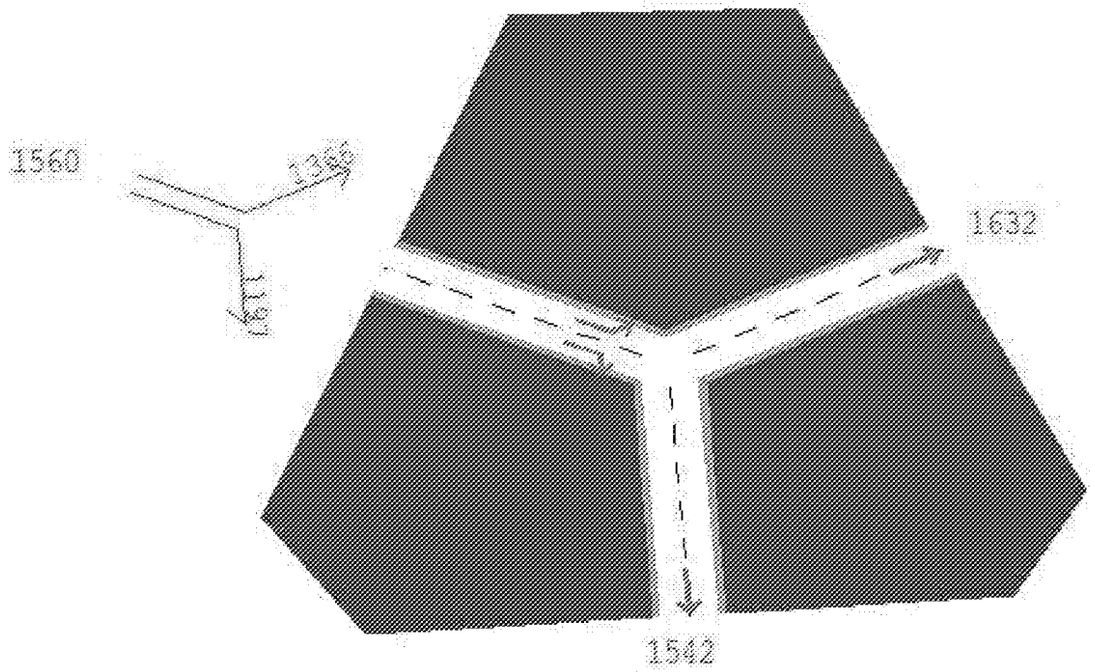
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICX = 90

ARUN DISTRICT COUNCIL P/16/16/OUT

Node 1542

59

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1550

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

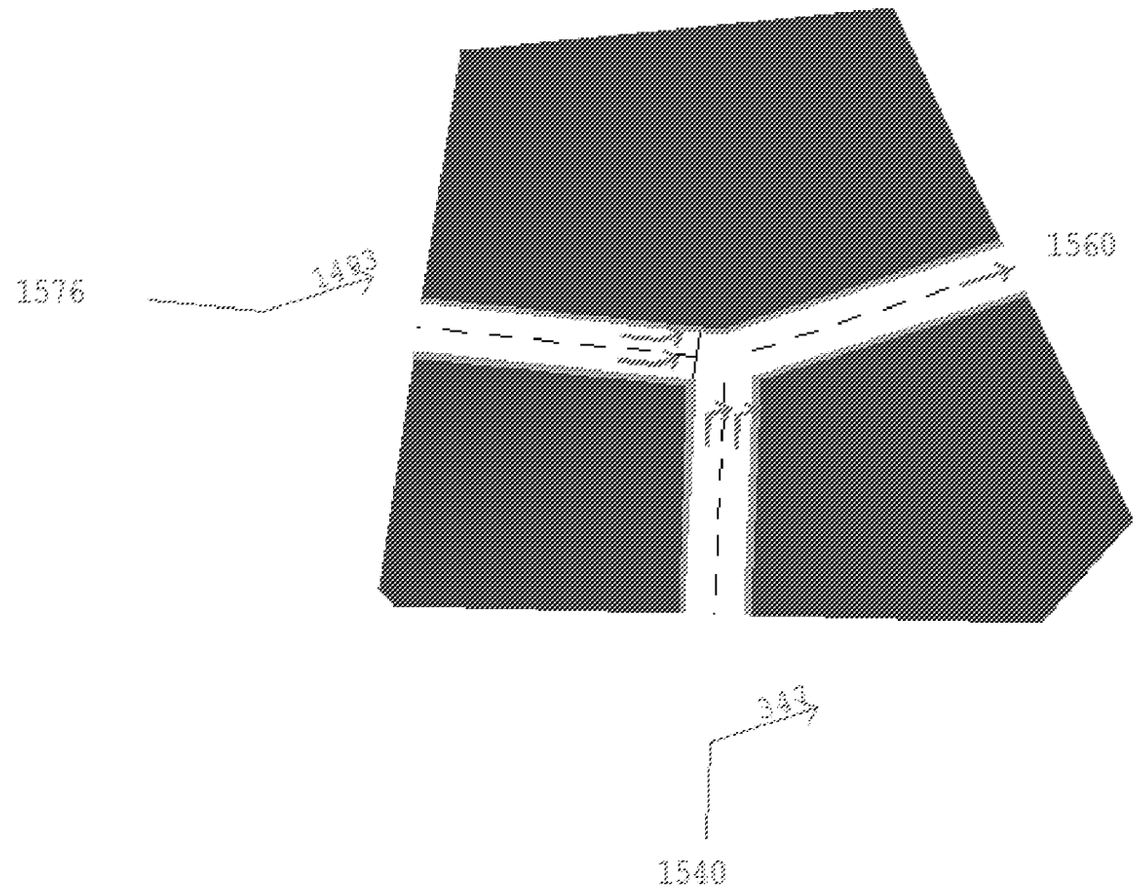
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCV = 80

Node 1550

ARUN DISTRICT COUNCIL P/14/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1552

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

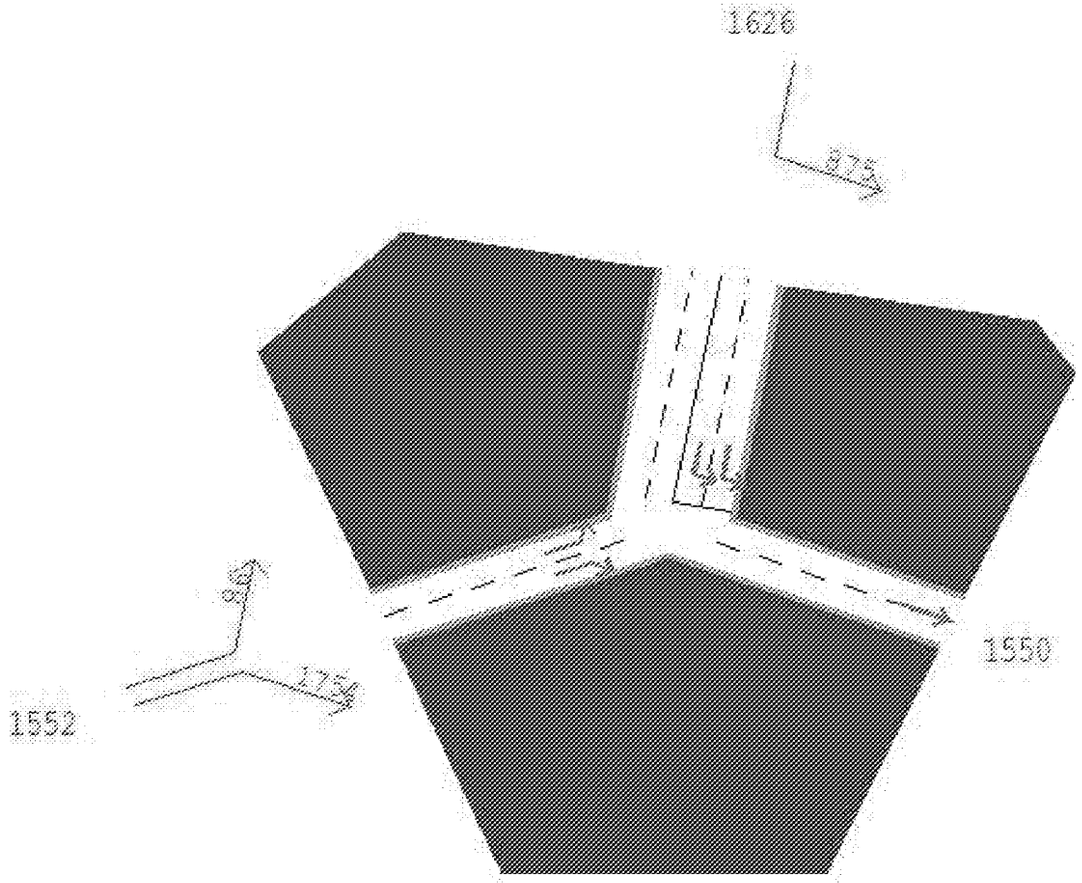
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICY = 90

Node 1552

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1560

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

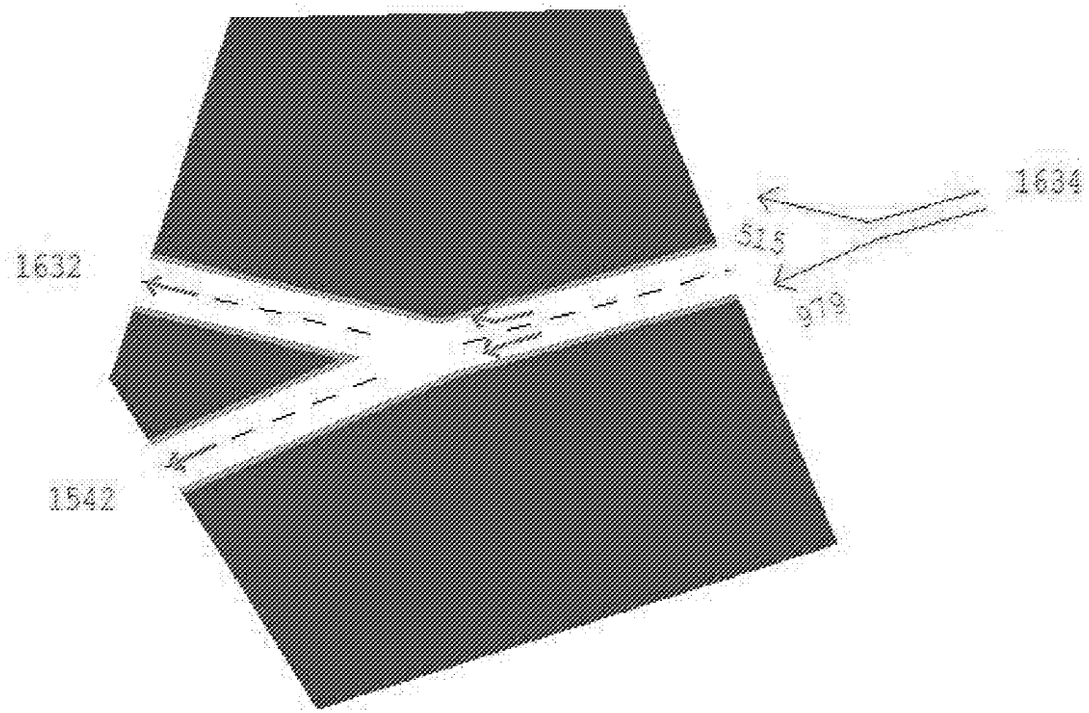
Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICY = 90

Node 1560

ARUN DISTRICT COUNCIL P/147/16/OUT



Node Graphic
Master Menu:

NODE 1638

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

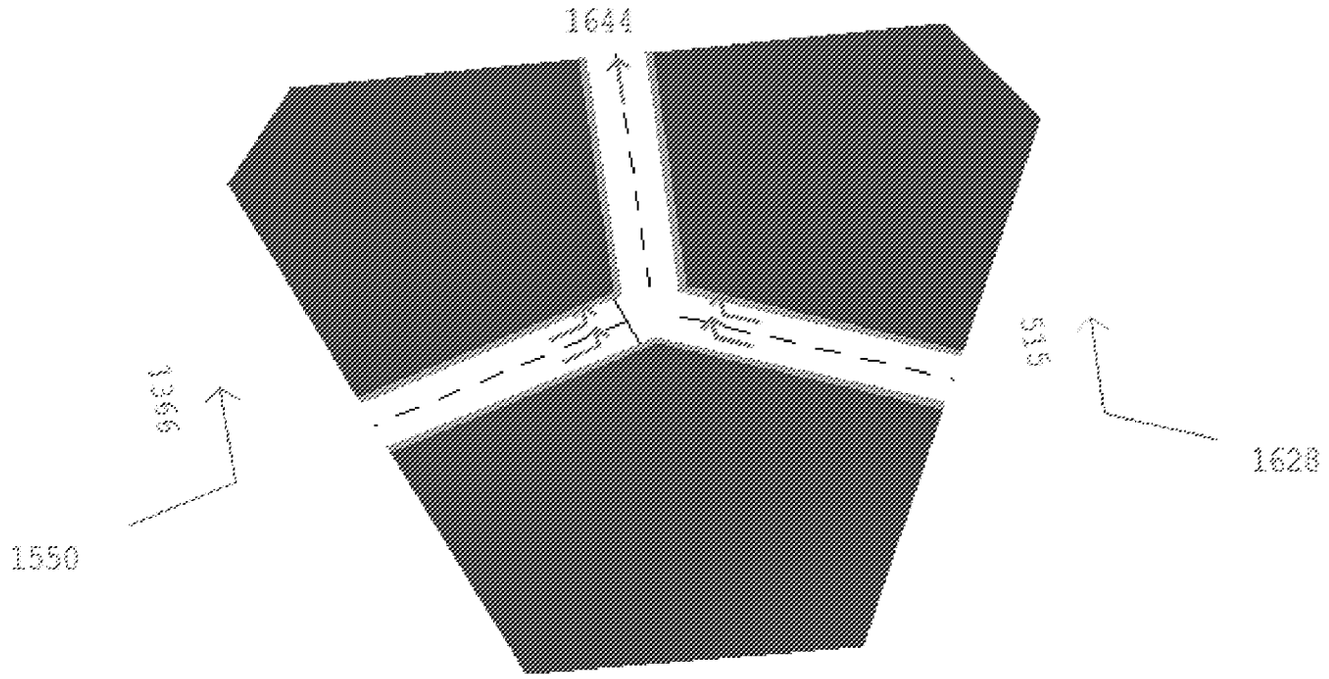
Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCX = 90

ARUN DISTRICT COUNCIL P/1404/18/OUT

Node 1638



Node Graphic
Master Menu:

NODE 1632

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

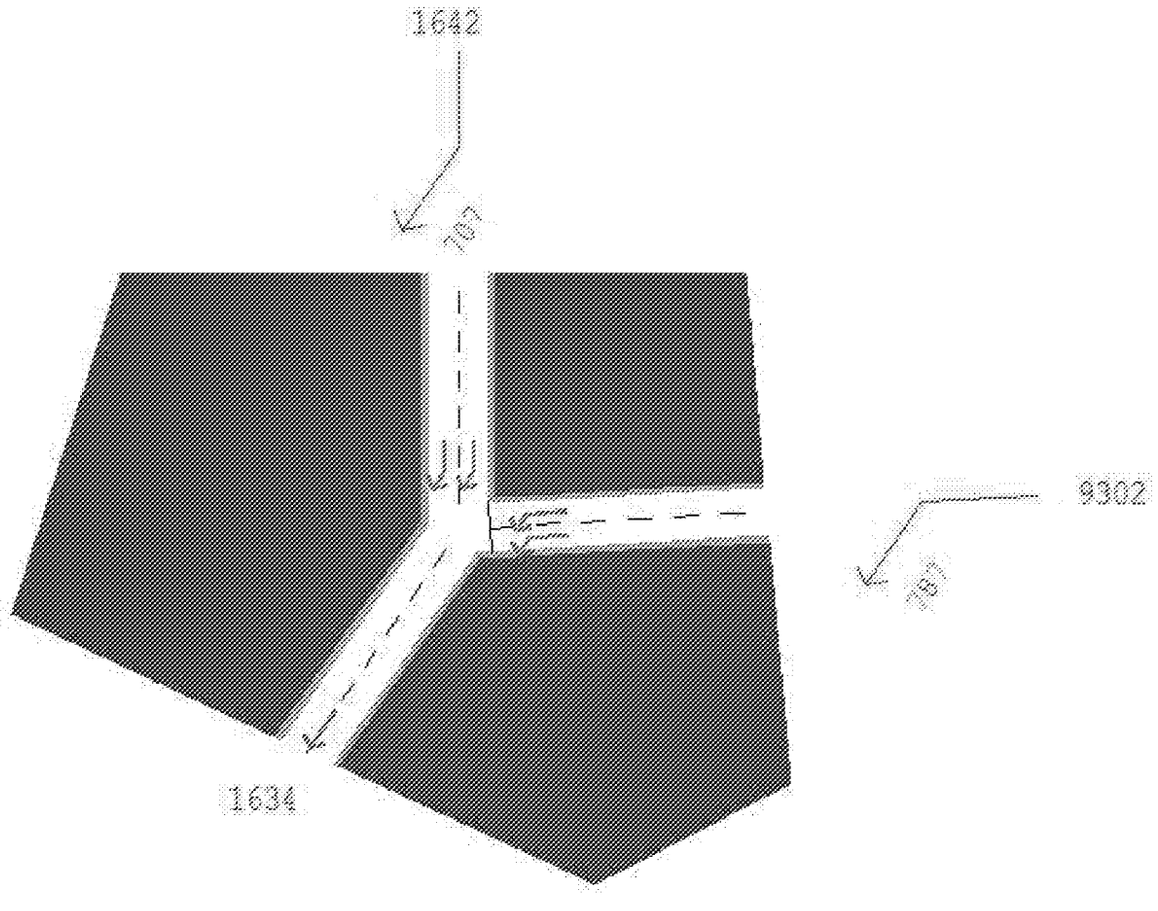
Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00

ARUN DISTRICT COUNCIL P/140/16/OUT

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1636

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

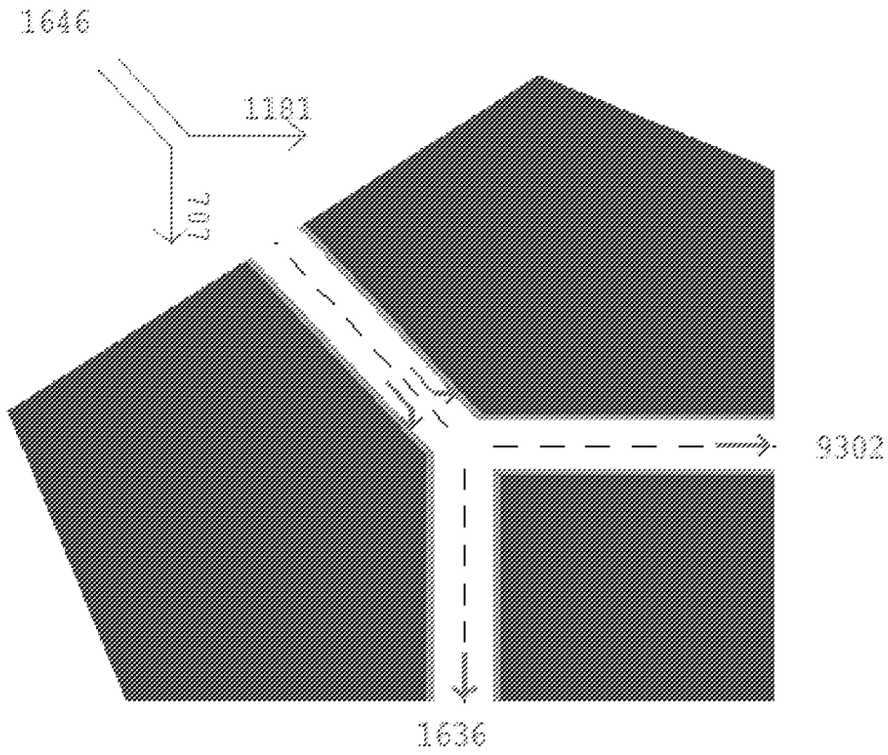
Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICY = 90

Node 1636

ARUN DISTRICT COUNCIL P/140/16/OUT



99

Node Graphic
Master Menu:

NODE 1642

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
1 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

InFo:Network >

auxiliarY >
network plot

Q - Return

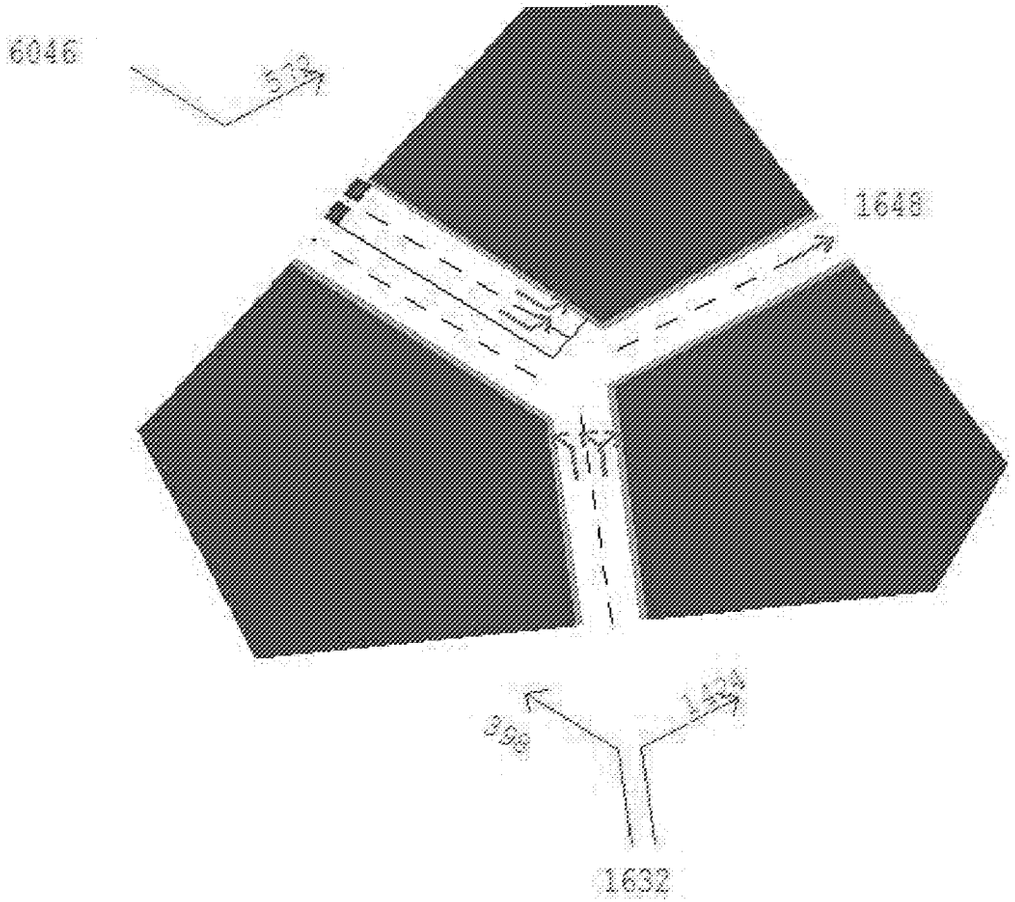
+ Menu bar!

CFP Convergence
OUT CFP 0.02
IN CFP 0.00

WARN 65 x 1

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last

Blocks Back



Node Graphic Master Menu:

NODE 1644

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print X

Data Tables:
teXt >
Window >
Table 2 X

eRror checks X
1 Ser.Warns

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

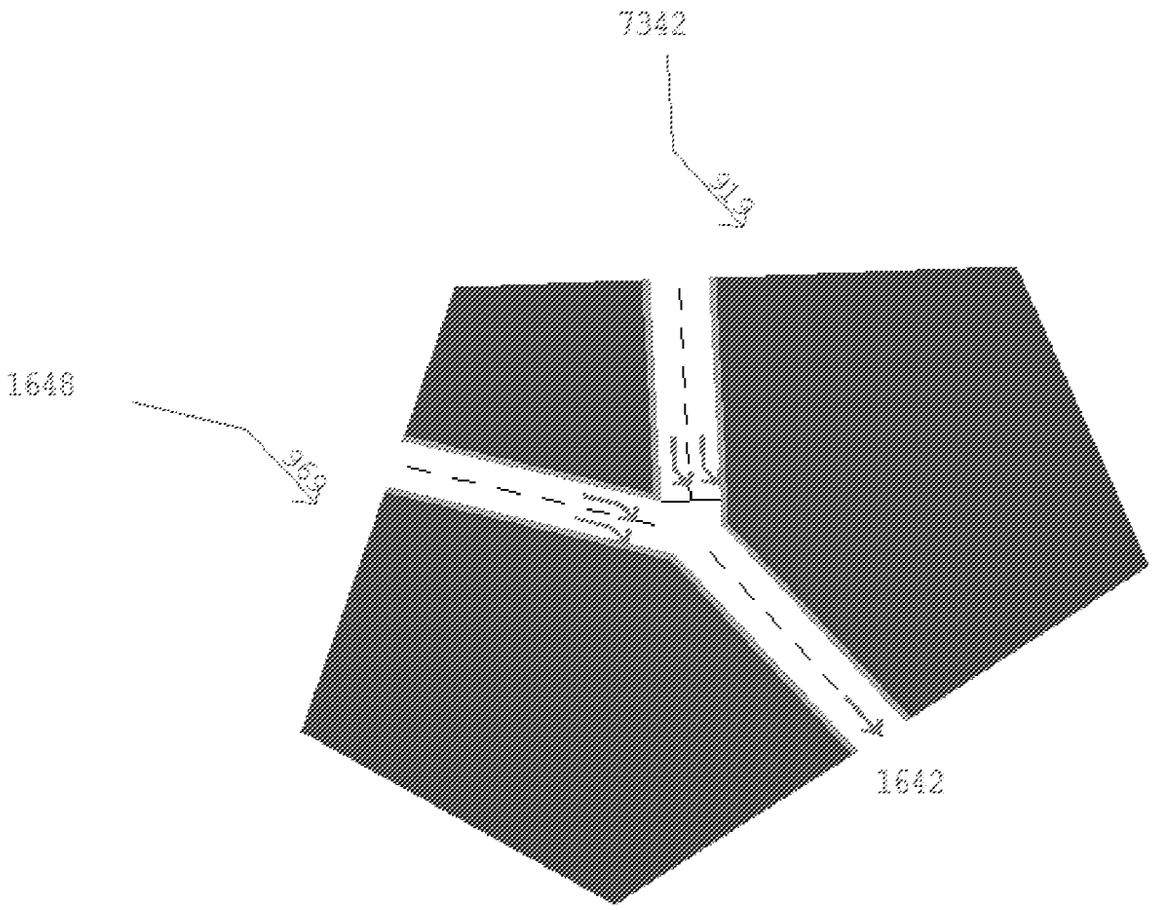
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
SWARM 137 X 1
ICX = 60

ARUN DISTRICT COUNCIL-P/140/16/OUT

Node 1644

67



Node Graphic
Master Menu:

NODE 1646

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

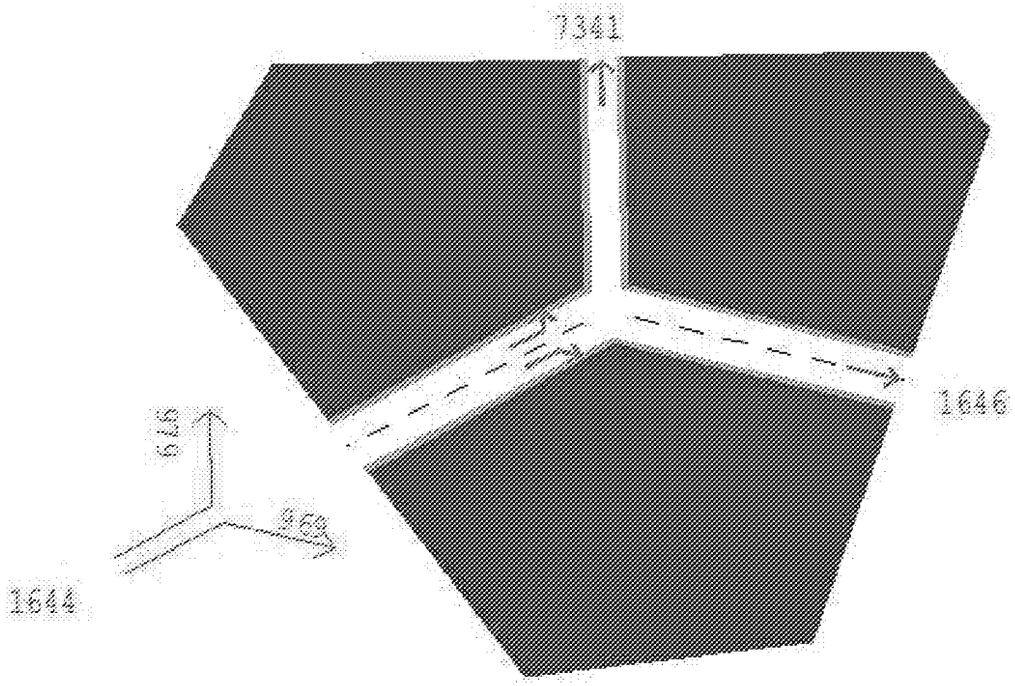
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
ICV = 90

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1646

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1648

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

No errors

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

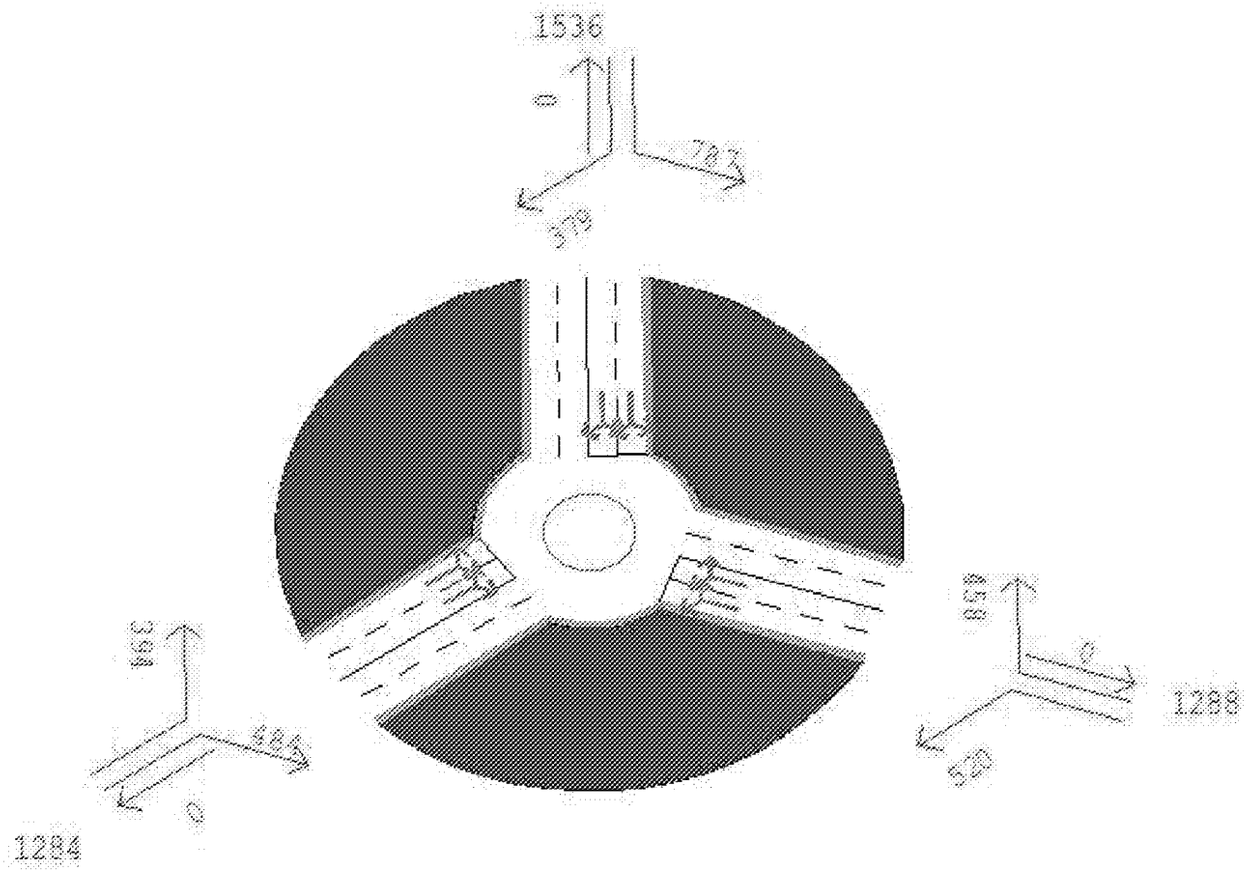
CFP Convergence
OUT CFP 0.01
IN CFP 0.00
FCX = 00

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1648

69

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



Node Graphic
Master Menu:

NODE 1312

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
text >
Window >
Table 2 x

eRror checks x
2 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

InFo:Network >

auxiliarY >
network plot

Q - Return

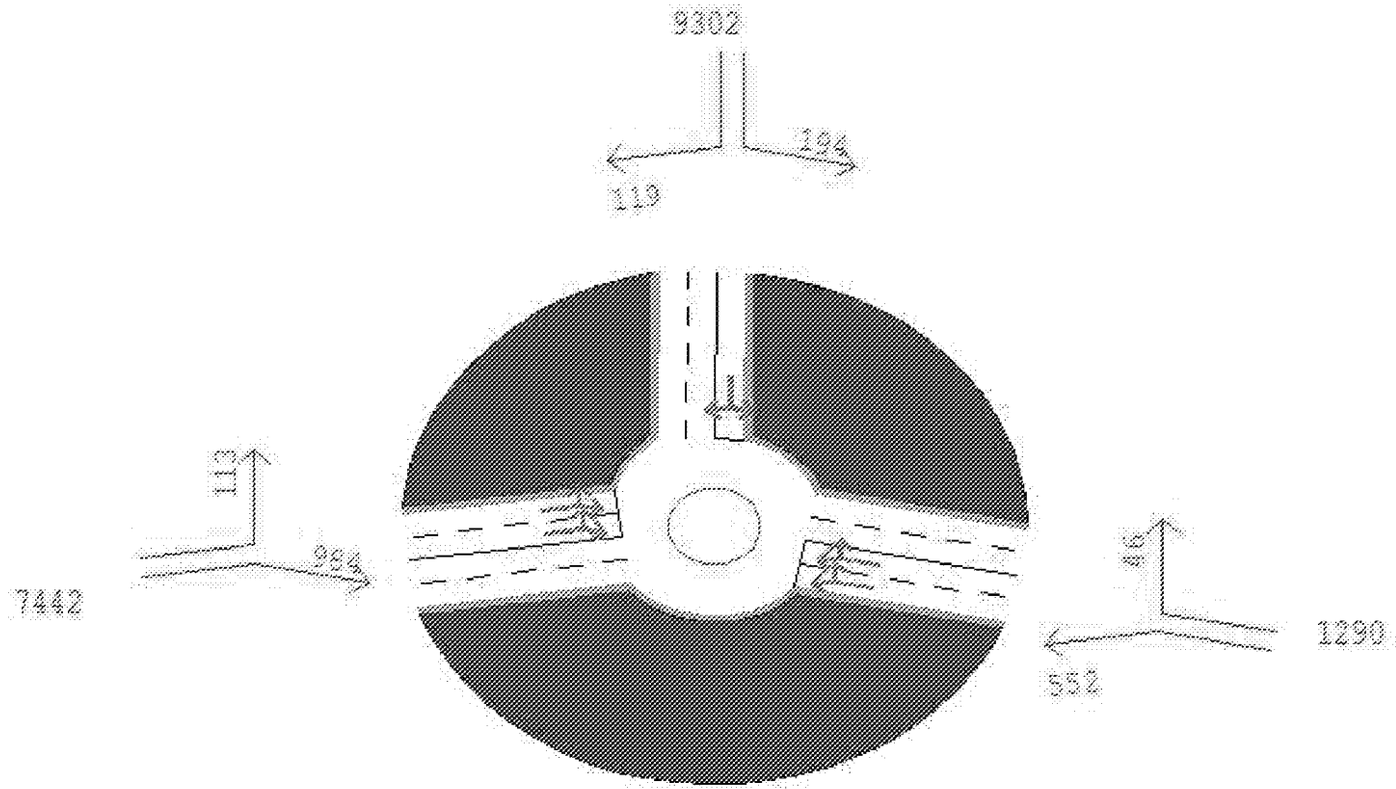
+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00

ARUN DISTRICT COUNCIL 7/140/16/OUT

Node 1312

File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last



71

Node Graphic
Master Menu:

NODE 1302

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
3 Warnings

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
number set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

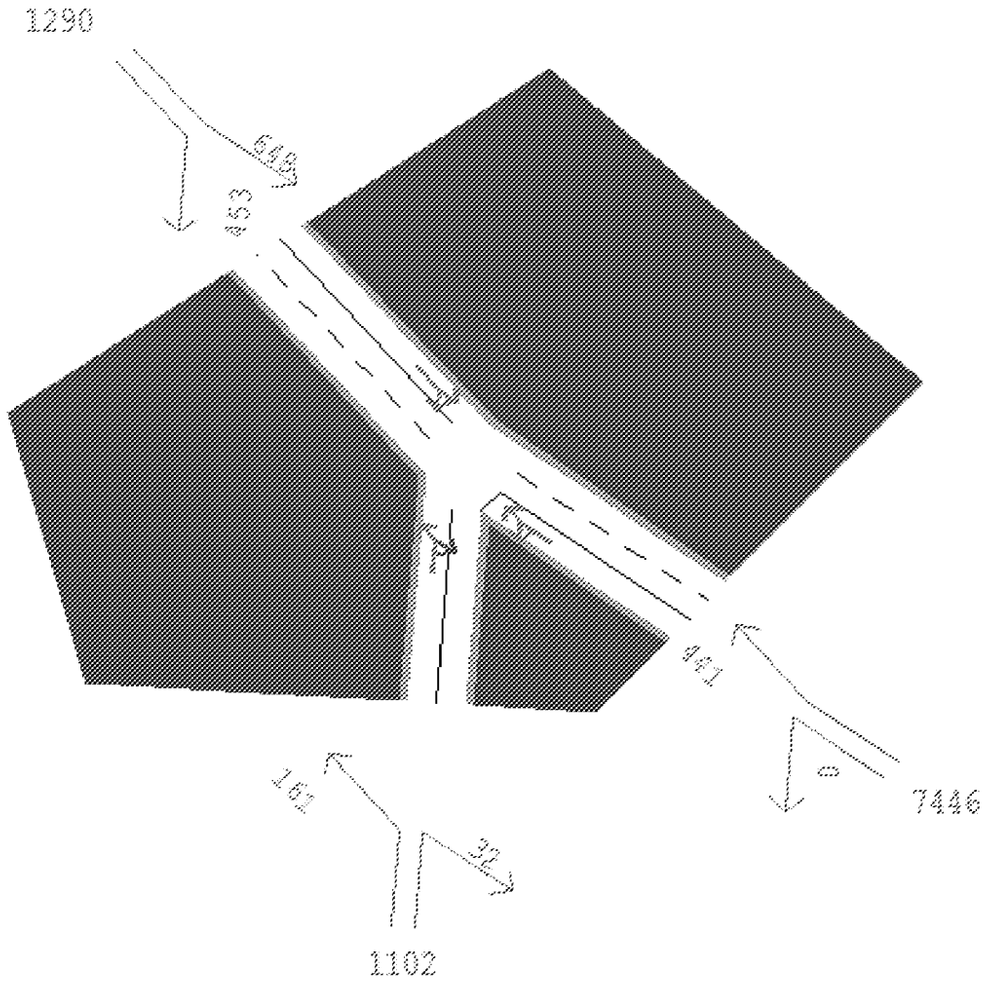
Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 32 X 3
ICY = 80

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1302



Node Graphic
Master Menu:

NODE 1188

General disp >
Data display >

Animation >
/ DRACULA

Information >
Print x

Data Tables:
teXt >
Window >
Table 2 x

eRror checks x
6 Warnings
3 Ser.Warns

Edit >

Change node:

Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >

Centered >
network plot

inFo:Network >

auxiliarY >
network plot

Q - Return

+ Menu bar!

CFP Convergence
OUT CFP 0.00
IN CFP 0.00
SWARN 137 x 2
SWARN 135 x 1
WARN 98 x 2
WARN 32 x 3
WARN 12 x 1
ICV = 90

ARUN DISTRICT COUNCIL P/140/16/OUT

Node 1188

Appendix 3

2031 SATURN Turning Movement Diagrams

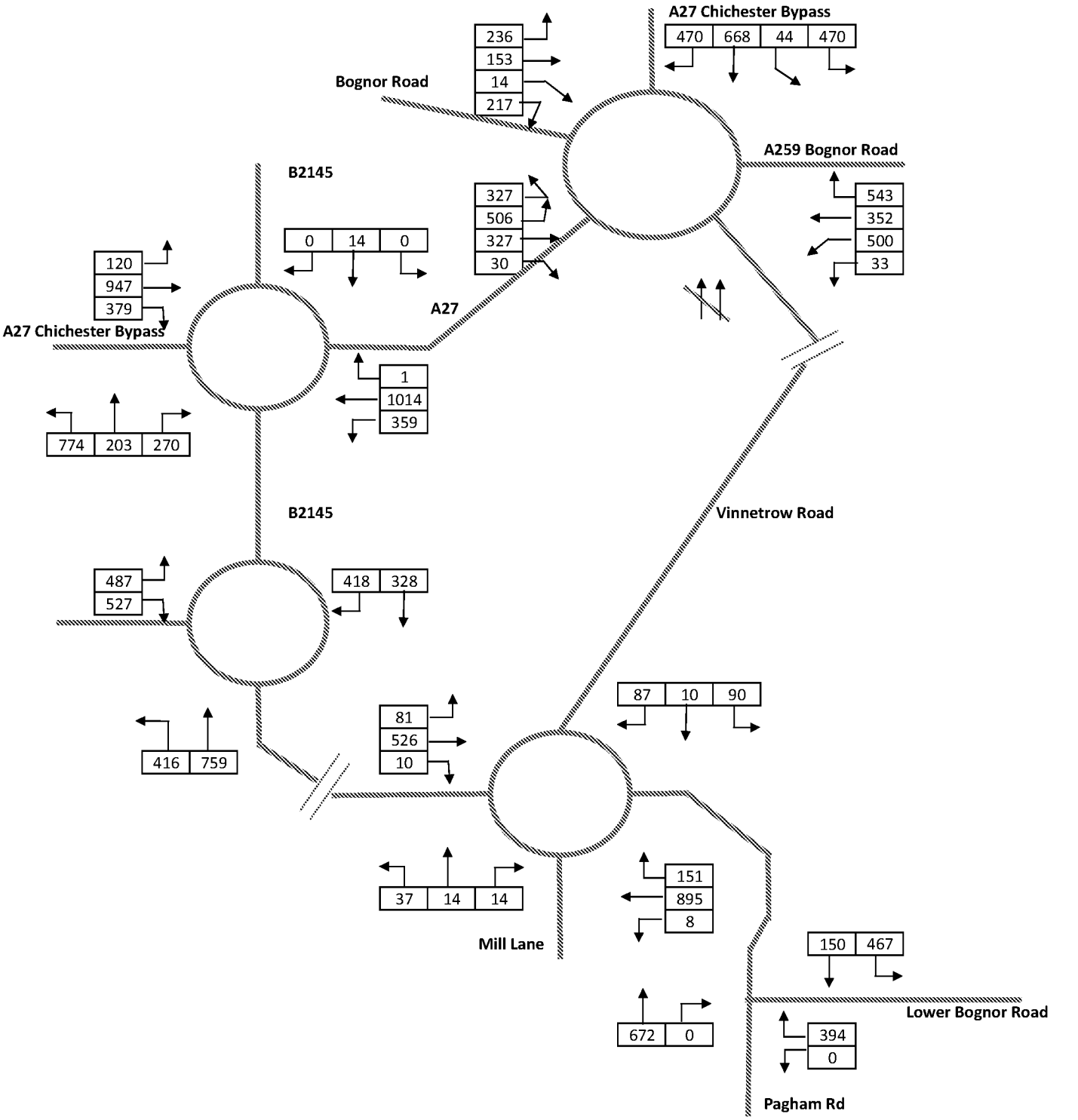
ARUN DISTRICT COUNCIL P/140/16/OUT

Pagham South

2031 SATURN Flows, Mitigation - A27 & Surrounding Network

AM Peak Hour 0800-0900

PCUs



HighgateTransportation

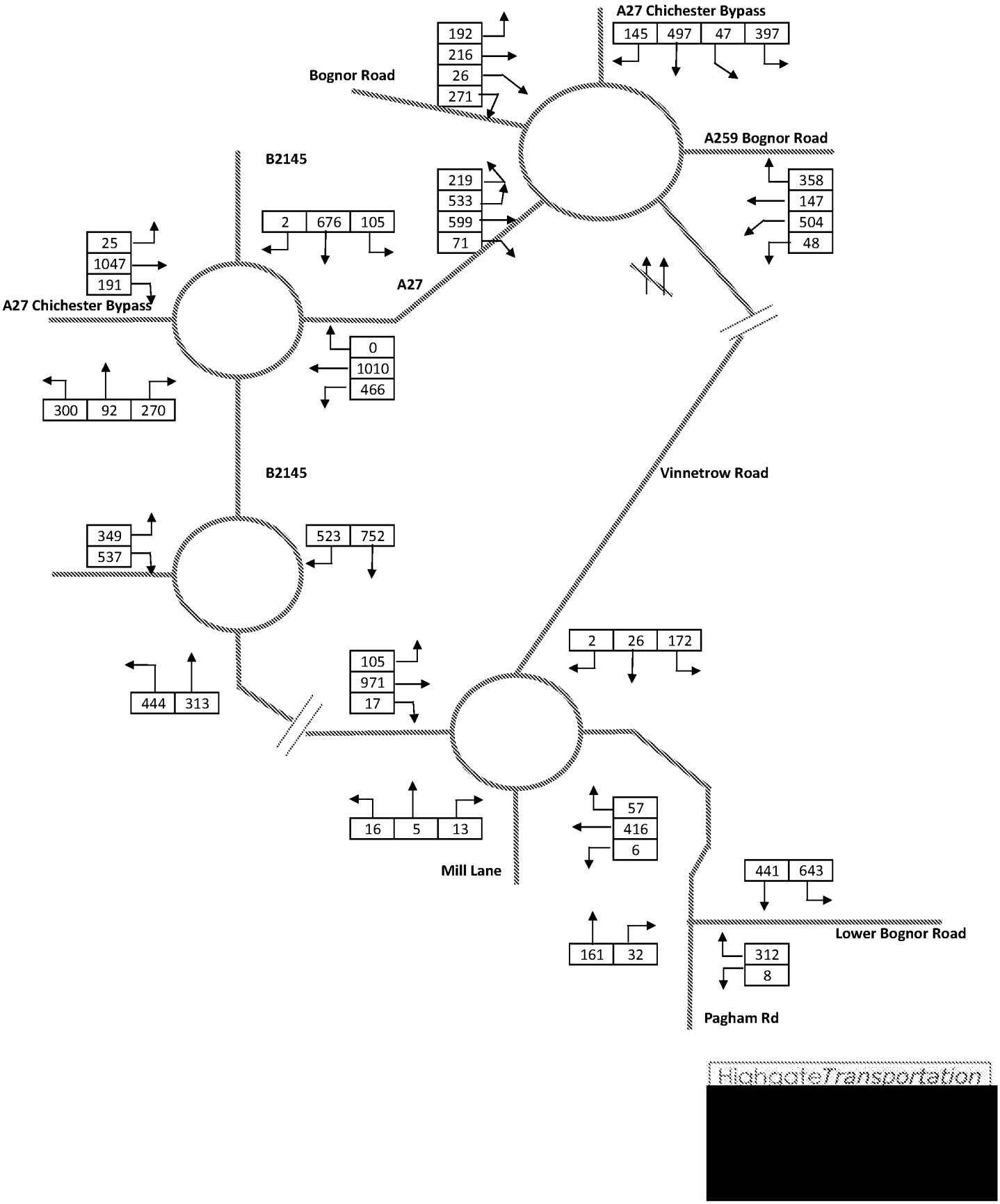
ARUN DISTRICT COUNCIL P/140/16/OUT

Pagham South

2031 SATURN Flows, Mitigation - A27 & Surrounding Network

PM Peak Hour 1700-1800

PCUs



HighgateTransportation

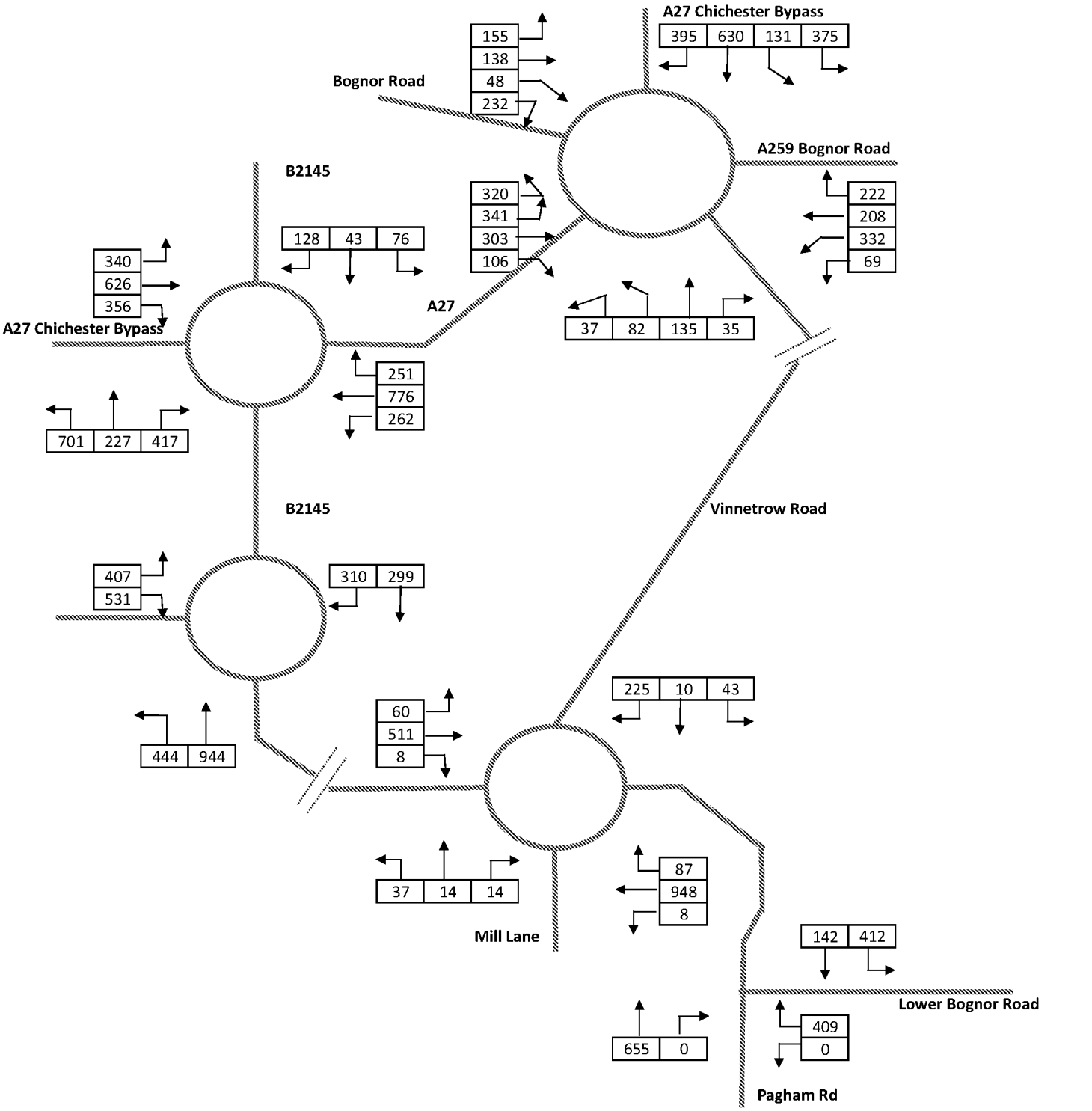
[redacted]

Pagham South

2031 SATURN Flows, No Mitigation - A27 & Surrounding Network

AM Peak Hour 0800-0900

PCUs



HighgateTransportation

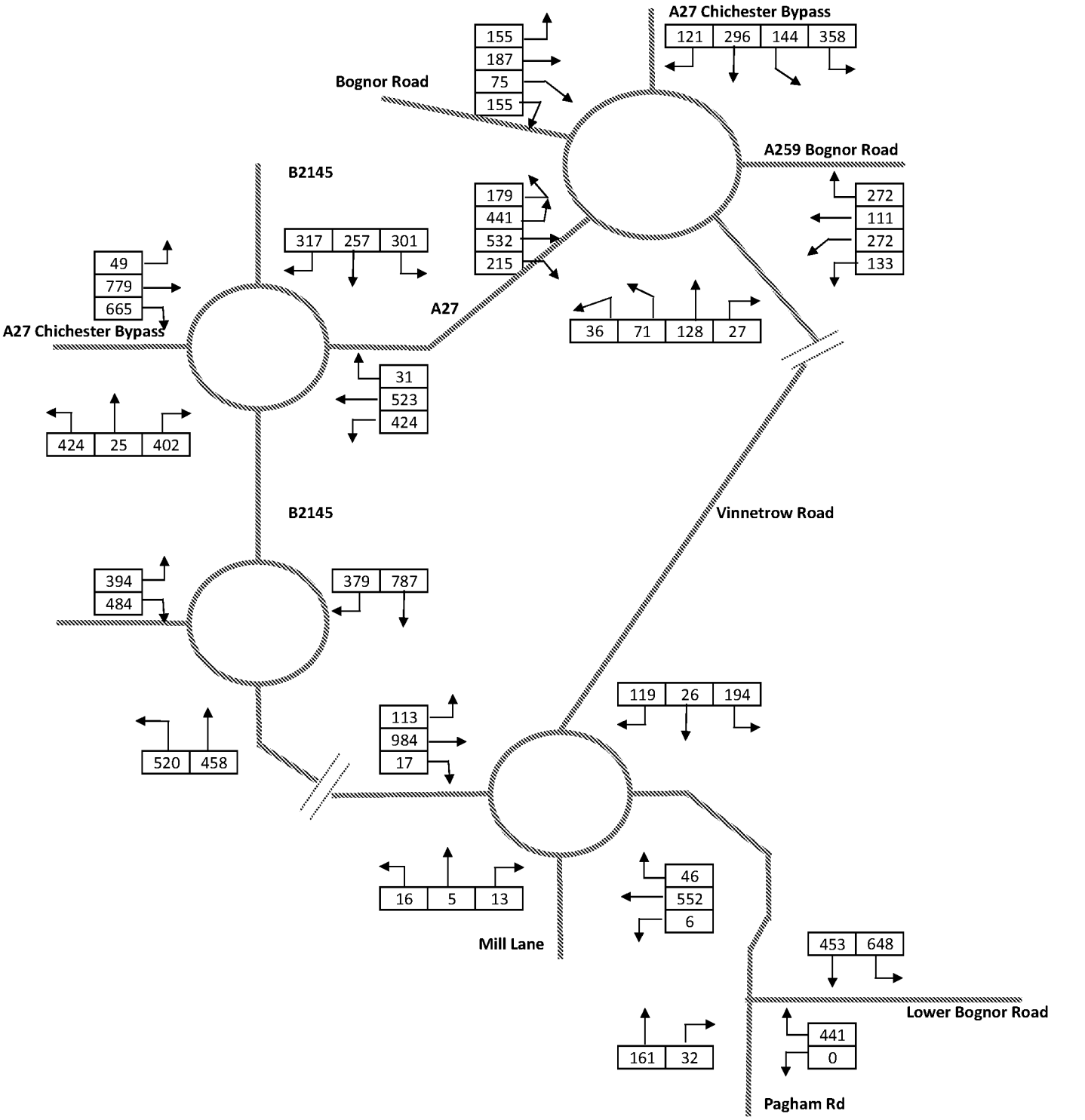
[redacted]

Pagham South

2031 SATURN Flows, No Mitigation - A27 & Surrounding Network

PM Peak Hour 1700-1800

PCUs



HighgateTransportation

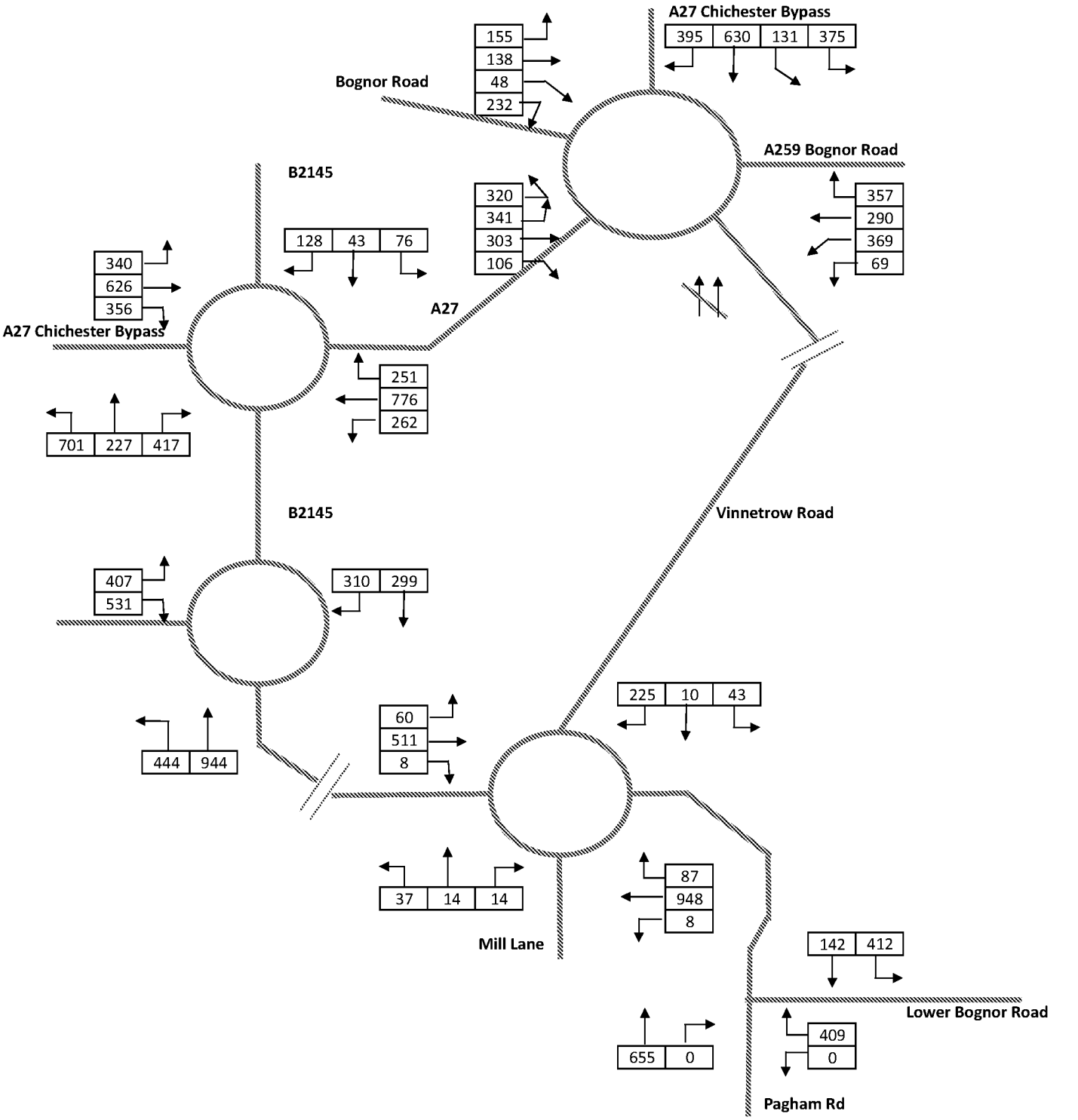
[redacted]

Pagham South

2031 SATURN Flows, No Mitigation (adjusted) - A27 & Surrounding Network

AM Peak Hour 0800-0900

PCUs



HighgateTransportation

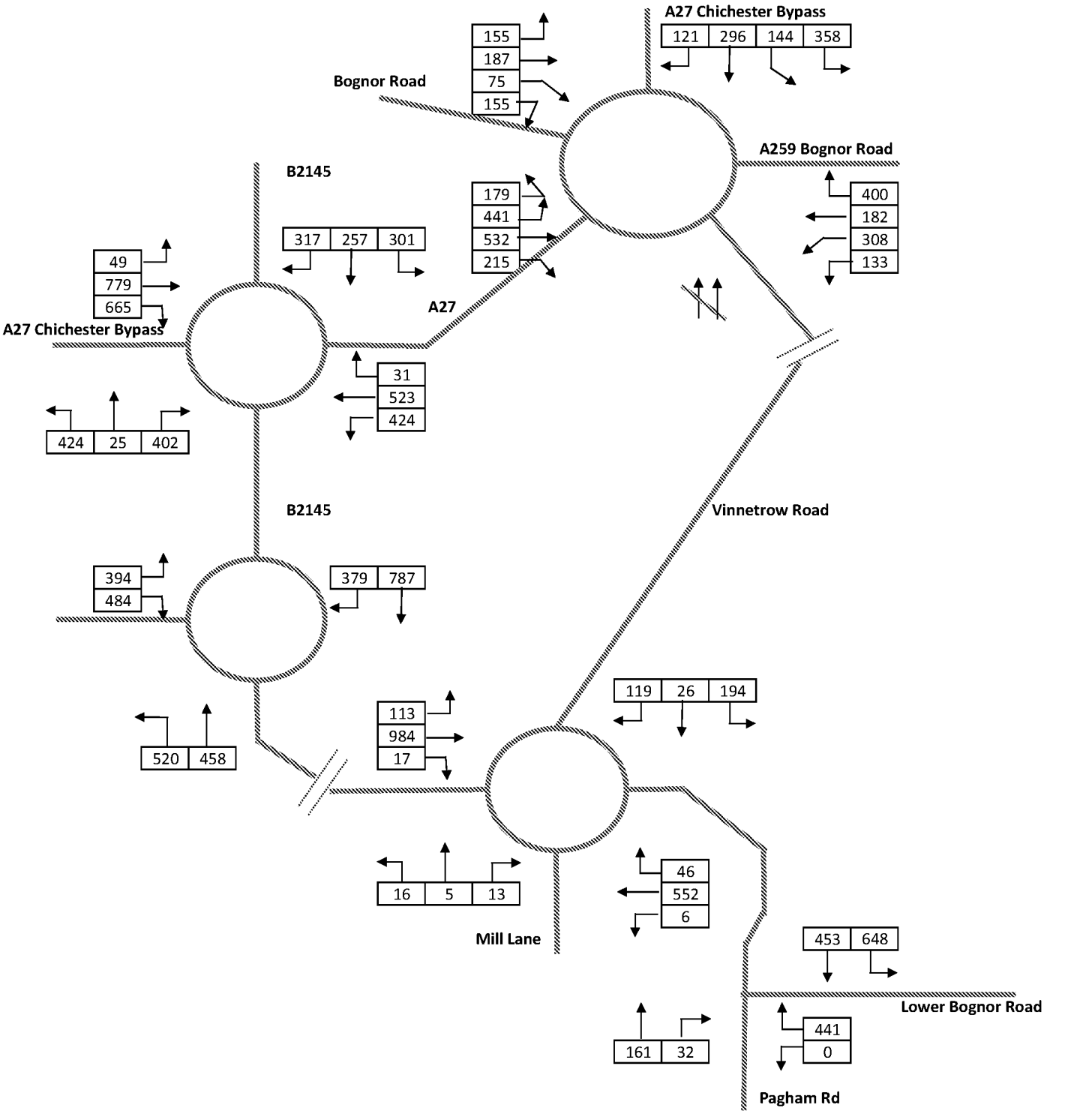
[redacted]

Pagham South

2031 SATURN Flows, No Mitigation (adjusted) - A27 & Surrounding Network

PM Peak Hour 1700-1800

PCUs



HighgateTransportation

[redacted]

Appendix 4

Pagham South Development Turning Movement Diagrams

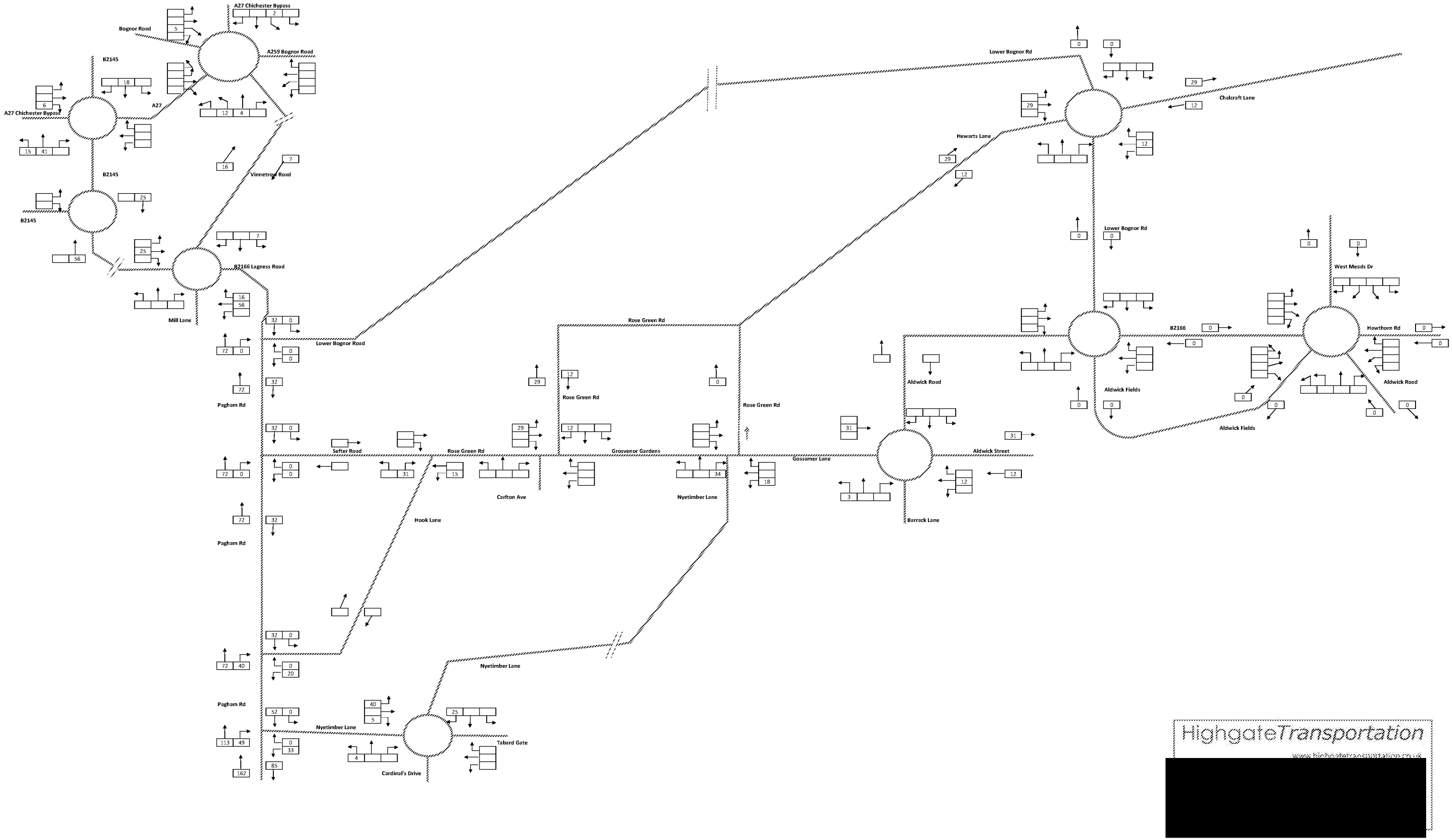
ARUN DISTRICT COUNCIL P/140/16/OUT

ARUN DISTRICT COUNCIL P/140/16/OUT

Pagham South

Pagham South Total Development Traffic Flows

AM Peak Hour



HighgateTransportation

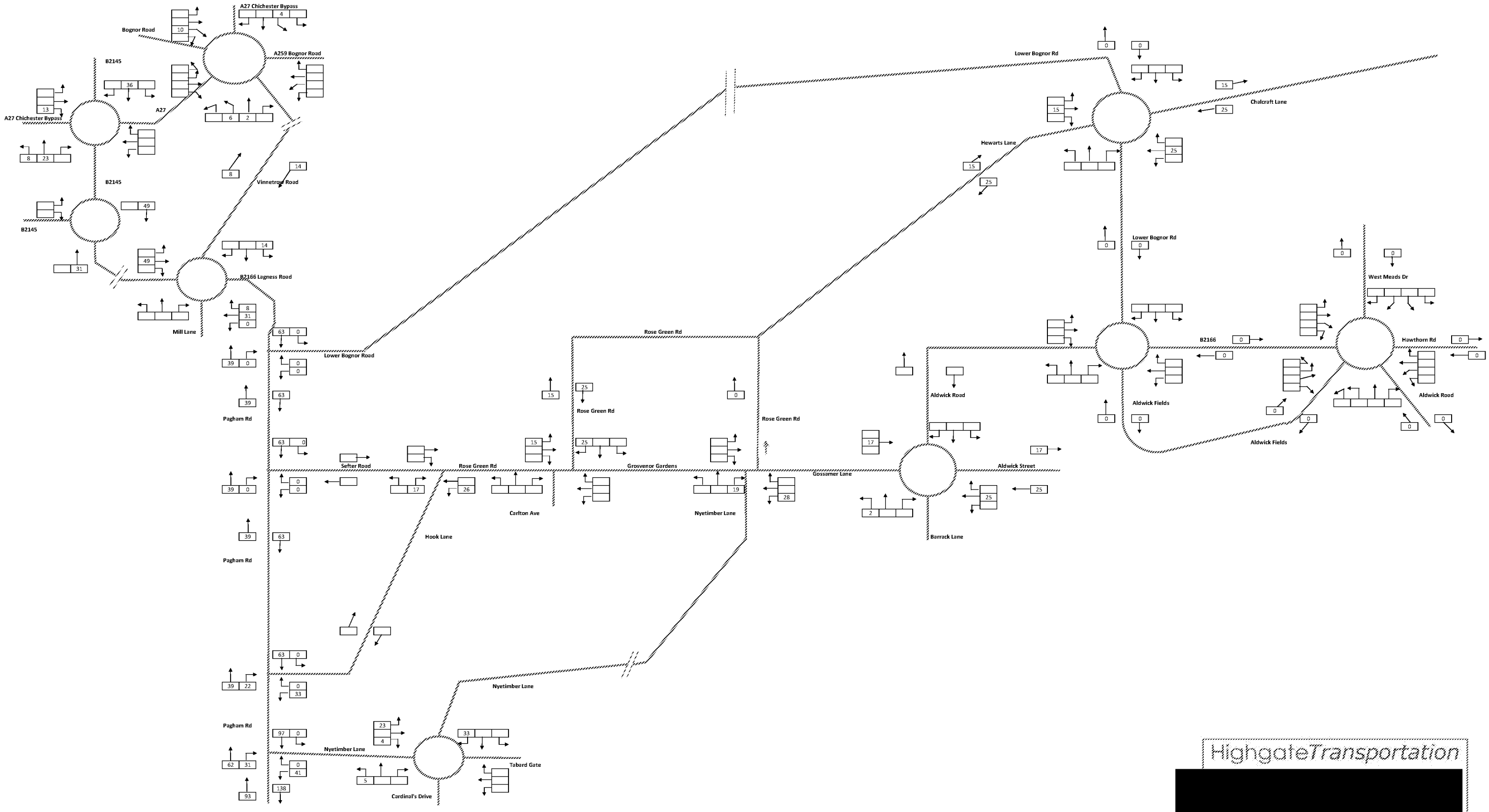
[redacted]

ARUN DISTRICT COUNCIL P/140/16/OUT

Pagham South

Pagham South Total Development Traffic Flows

PM Peak Hour



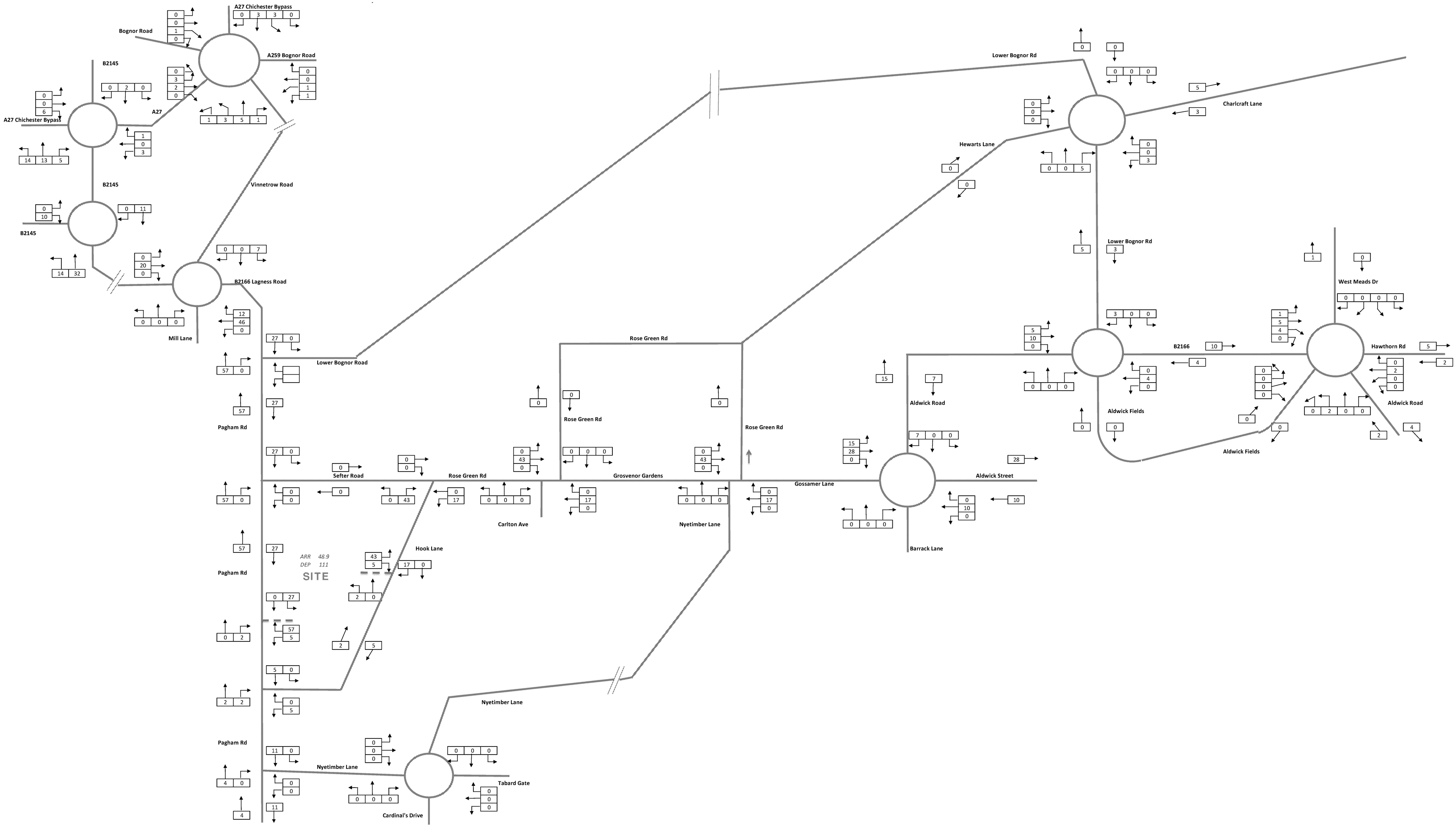
HighgateTransportation

[redacted]

Appendix 5

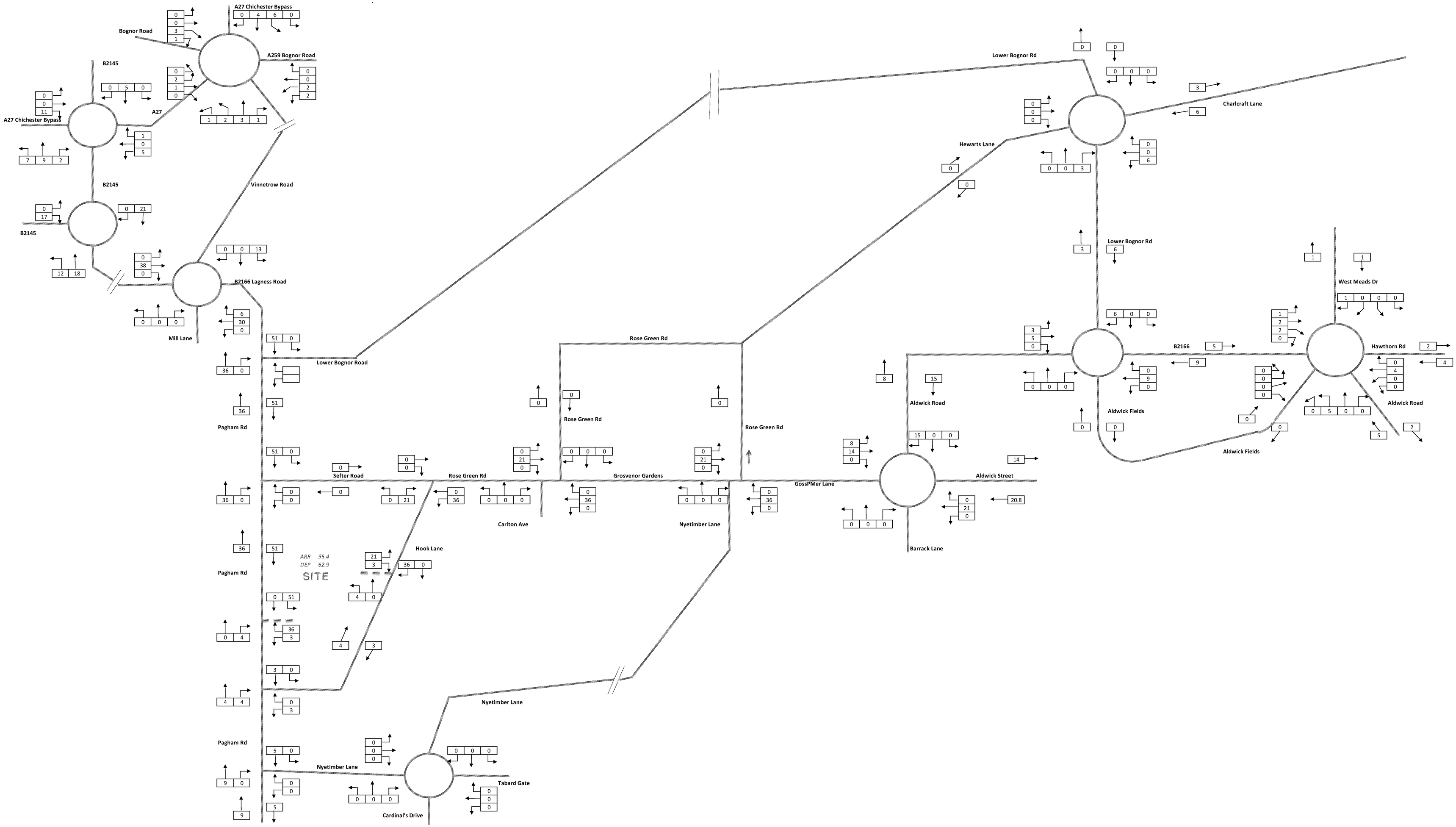
Hallam Development Turning Movement Diagrams

ARUN DISTRICT COUNCIL P/140/16/OUT



RPS

Hook Lane, Pagham
JNY 8840
Total Development Flows
AM Peak
All Vehicles



RPS

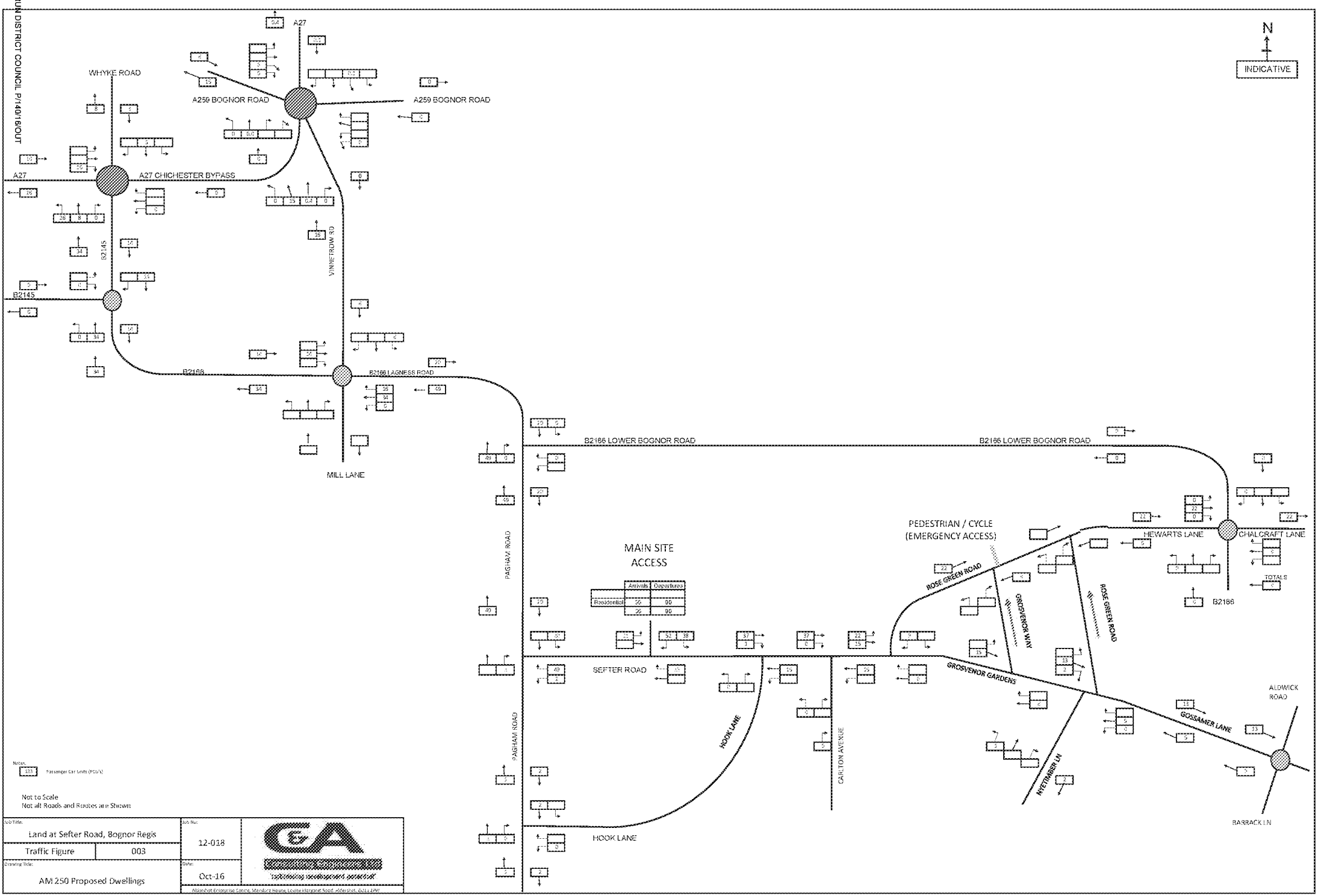
Hook Lane, PaghPM
JNY 8840
Total Development Flows
PM Peak
All Vehicles

Appendix 6

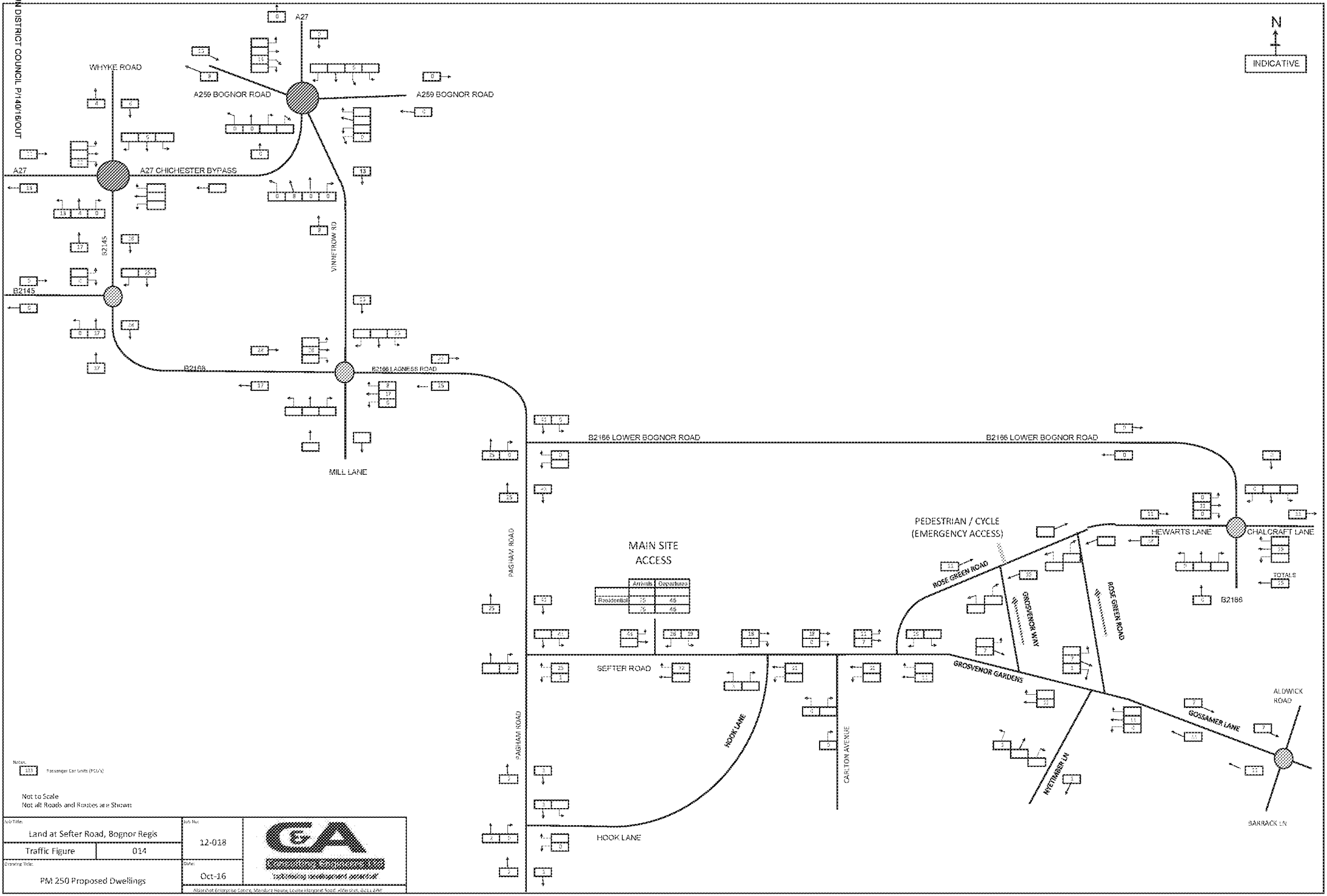
Taylor Wimpey Development Turning Movement Diagrams

ARUN DISTRICT COUNCIL P/140/16/OUT

ARUN DISTRICT COUNCIL P/140/16/OUT



ARUN DISTRICT COUNCIL P/140/16/OUT



Job Title: Land at Sefter Road, Bognor Regis	Job No: 12-018	
Traffic Figure 014		
Drawing Title: PM 250 Proposed Dwellings	Date: Oct-16	

Aldershot Enterprise Centre, Mandora House, Lysons Avenue, Aldershot, GU11 1DW

Appendix 7

Modelling Outputs – 2031 'With Development'

Enterprise Bognor Regis + Local Plan with mitigation

Enterprise Bognor Regis + Local Plan without mitigation

ARUN DISTRICT COUNCIL P/140/16/OUT

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.1.4646 []
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[redacted]

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

Filename: Lower Bognor Rd 2031 With Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 15/03/2017 12:51:49

»2031 LP + mitigation, AM
»2031 LP + mitigation, PM
»2031 LP - mitigation, AM
»2031 LP - mitigation, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation													
Stream B-AC	40.4	325.83	1.18	F	76.28	F	-26 % [Stream B-AC]	14.5	150.33	1.02	F	30.37	D	-18 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.2	8.51	0.11	A			
	2031 LP - mitigation													
Stream B-AC	43.3	340.90	1.19	F	86.18	F	-27 % [Stream B-AC]	88.6	799.58	1.43	F	203.47	F	-34 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.2	8.59	0.12	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. 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	(untitled)
Location	
Site number	
Date	19/09/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-MD9GBJC\Fiona
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	76.26	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-26	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	Pagham Road North		Major
B	Lower Bognor Road		Minor
C	Pagham Road South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30			60.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.50	35	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	576	0.099	0.250	0.158	0.358
1	B-C	736	0.106	0.269	-	-
1	C-B	609	0.223	0.223	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	617	100.000
B		✓	394	100.000
C		✓	672	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	467	150
	B	394	0	0
	C	672	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	5
	B	1	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.18	325.83	48.4	73.8	F
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	297	434	0.684	289	2.0	23.915	C
C-AB	0	505	0.000	0	0.0	0.000	A
C-A	506			506			
A-B	352			352			
A-C	113			113			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	354	406	0.872	343	4.9	49.995	E
C-AB	0	485	0.000	0	0.0	0.000	A
C-A	604			604			
A-B	420			420			
A-C	135			135			

08:15 - 08:30

Stream	Total Demand	Capacity	RFC	Throughput	End queue (PCU)	Delay (s)	LOS

	(PCU/hr)	(PCU/hr)		(PCU/hr)			
B-AC	434	368	1.180	360	28.4	165.843	F
C-AB	0	458	0.000	0	0.0	0.000	A
C-A	740			740			
A-B	514			514			
A-C	165			165			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	434	368	1.180	366	40.4	325.828	F
C-AB	0	458	0.000	0	0.0	0.000	A
C-A	740			740			
A-B	514			514			
A-C	165			165			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	354	406	0.872	396	29.9	319.388	F
C-AB	0	485	0.000	0	0.0	0.000	A
C-A	604			604			
A-B	420			420			
A-C	135			135			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	297	434	0.684	405	2.9	141.316	F
C-AB	0	505	0.000	0	0.0	0.000	A
C-A	506			506			
A-B	352			352			
A-C	113			113			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.01	0.19	1.12	3.71	4.73			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	4.88	0.18	2.60	11.35	15.28			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	23.41	7.03	20.84	39.28	45.94			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	40.40	15.28	37.20	64.29	73.77			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	29.93	9.13	26.77	50.36	58.86			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.85	0.03	0.33	5.02	14.91			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 LP + mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	30.37	D

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-18	Stream B-AC

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)
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1084	100.000
B		✓	320	100.000
C		✓	193	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	643	441
	B	312	0	8
	C	161	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.02	150.33	14.5	45.1	F
C-AB	0.11	8.51	0.2	1.2	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	241	421	0.572	236	1.3	18.981	C
C-AB	31	520	0.060	31	0.1	7.450	A
C-A	114			114			
A-B	484			484			
A-C	332			332			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	288	390	0.738	283	2.5	32.181	C
C-AB	40	505	0.080	40	0.1	7.846	A
C-A	133			133			
A-B	578			578			
A-C	396			396			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	352	347	1.015	322	10.0	93.111	F
C-AB	56	487	0.114	55	0.2	8.485	A
C-A	157			157			
A-B	708			708			
A-C	486			486			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	352	347	1.015	335	14.5	150.334	F
C-AB	56	487	0.114	56	0.2	8.511	A
C-A	157			157			
A-B	708			708			
A-C	486			486			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	288	390	0.738	332	3.4	78.239	F
C-AB	41	505	0.080	41	0.1	7.890	A
C-A	133			133			
A-B	578			578			
A-C	396			396			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	241	421	0.573	249	1.4	21.787	C
C-AB	32	520	0.061	32	0.1	7.481	A
C-A	114			114			
A-B	484			484			

A-C	332			332			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.27	0.55	1.19	1.67	1.86			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.50	0.09	1.46	5.81	8.04			N/A	N/A
C-AB	0.13	0.03	0.25	0.46	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	10.04	0.60	6.64	22.31	29.00			N/A	N/A
C-AB	0.21	0.03	0.28	0.50	1.20			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	14.49	0.52	8.98	34.01	45.10			N/A	N/A
C-AB	0.22	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	3.36	0.04	0.42	9.29	17.06			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.41	0.03	0.30	1.48	6.43			N/A	N/A
C-AB	0.10	0.00	0.00	0.10	0.10			N/A	N/A

2031 LP - mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	55.15	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-27	Stream B-AC

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)
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	554	100.000
B		✓	409	100.000
C		✓	655	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	412	142
	B	409	0	0
	C	655	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	5
	B	1	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.19	340.93	43.3	77.4	F
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	308	441	0.698	299	2.1	24.368	C
C-AB	0	516	0.000	0	0.0	0.000	A
C-A	493			493			
A-B	310			310			
A-C	107			107			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	368	415	0.886	355	5.3	51.863	F
C-AB	0	498	0.000	0	0.0	0.000	A
C-A	589			589			
A-B	370			370			
A-C	128			128			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	450	379	1.189	371	35.0	170.146	F
C-AB	0	473	0.000	0	0.0	0.000	A
C-A	721			721			
A-B	454			454			
A-C	156			156			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	450	379	1.189	377	43.3	337.133	F
C-AB	0	473	0.000	0	0.0	0.000	A
C-A	721			721			
A-B	454			454			
A-C	156			156			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	368	415	0.886	406	33.8	340.931	F
C-AB	0	498	0.000	0	0.0	0.000	A
C-A	589			589			
A-B	370			370			
A-C	128			128			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	308	441	0.698	428	3.8	169.745	F
C-AB	0	516	0.000	0	0.0	0.000	A
C-A	493			493			
A-B	310			310			

A-C	107			107			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.13	0.18	1.18	4.00	5.18			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	5.28	0.21	2.91	12.18	16.32			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	25.00	7.95	22.42	41.36	48.13			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	43.28	17.28	40.13	67.77	77.38			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	33.80	11.21	30.59	55.73	64.69			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	3.79	0.04	0.37	9.38	20.38			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 LP - mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	263.47	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-34	Stream B-AC

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)
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1101	100.000
B		✓	441	100.000
C		✓	193	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	648	453
	B	441	0	0
	C	161	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.43	799.58	88.6	137.3	F
C-AB	0.12	8.59	0.2	1.2	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	332	415	0.800	319	3.3	33.868	D
C-AB	31	517	0.061	31	0.1	7.492	A
C-A	114			114			
A-B	488			488			
A-C	341			341			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	396	384	1.033	362	12.0	99.486	F
C-AB	41	502	0.081	40	0.1	7.901	A
C-A	133			133			
A-B	583			583			
A-C	407			407			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	486	340	1.427	339	48.7	343.400	F
C-AB	56	483	0.116	56	0.2	8.565	A
C-A	157			157			
A-B	713			713			
A-C	499			499			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	486	340	1.427	340	66.1	687.754	F
C-AB	56	483	0.116	56	0.2	8.592	A
C-A	157			157			
A-B	713			713			
A-C	499			499			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	396	383	1.034	383	88.5	799.580	F
C-AB	41	502	0.081	41	0.1	7.945	A
C-A	133			133			
A-B	583			583			
A-C	407			407			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	332	415	0.800	410	88.0	892.754	F
C-AB	32	517	0.061	32	0.1	7.520	A
C-A	114			114			
A-B	488			488			

A-C	341			341			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	3.31	0.04	0.35	7.57	17.85			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	11.98	0.21	5.92	30.50	42.26			N/A	N/A
C-AB	0.13	0.03	0.25	0.46	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	48.67	20.76	45.52	74.70	84.75			N/A	N/A
C-AB	0.22	0.03	0.28	0.50	1.21			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	85.08	49.25	82.33	116.52	127.68			N/A	N/A
C-AB	0.22	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	88.55	48.36	85.26	124.41	137.32			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	68.99	28.51	64.45	107.48	122.37			N/A	N/A
C-AB	0.10	0.00	0.00	0.10	0.10			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: Vinnetrow Road B2166 With Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 15/03/2017 13:19:35

»2031 LP + mitigation, AM
»2031 LP + mitigation, PM
»2031 LP - mitigation, AM
»2031 LP - mitigation, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation													
Arm 1	0.3	5.59	0.23	A	7.93	A	25 % [Arm 2]	0.6	9.61	0.36	A	17.76	C	3 % [Arm 4]
Arm 2	3.0	9.36	0.75	A				0.5	3.45	0.33	A			
Arm 3	0.1	6.36	0.11	A				0.0	3.50	0.04	A			
Arm 4	1.2	6.38	0.54	A				8.2	25.97	0.80	D			
	2031 LP - mitigation													
Arm 1	0.5	6.47	0.34	A	9.11	A	17 % [Arm 2]	1.6	16.32	0.63	C	19.28	C	2 % [Arm 4]
Arm 2	3.7	11.87	0.79	B				0.8	4.35	0.44	A			
Arm 3	0.1	7.45	0.13	A				0.0	4.13	0.04	A			
Arm 4	1.0	5.59	0.49	A				9.2	28.73	0.91	D			

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. Junction LOS and Junction Delay are demand-weighted averages. 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	B2166 jw Vinnetrow Road
Location	
Site number	
Date	10/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	1616
Enumerator	FB
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	7.93	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	Arm 2

Arms

Arms

Arm	Name	Description
1	Vinnetrow Road	
2	B2166 E	
3	Mill Lane	
4	B2166 W	

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	3.00	6.00	5.0	30.0	30.0	35.0	
2	4.00	6.00	12.0	30.0	30.0	30.0	
3	3.00	7.00	8.0	20.0	30.0	30.0	
4	3.50	6.00	6.0	20.0	30.0	30.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.559	1219
2	0.649	1633
3	0.591	1375
4	0.593	1385

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	187	100.000
2		✓	1054	100.000
3		✓	65	100.000
4		✓	617	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	90	10	87
	2	151	0	8	895
	3	14	14	0	37
	4	81	526	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	11	5
	2	5	0	0	3
	3	0	0	0	0
	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.23	5.59	0.3	1.4	A
2	0.75	9.36	3.0	9.3	A
3	0.11	6.36	0.1	0.5	A
4	0.54	6.38	1.2	1.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	141	412	989	0.142	140	0.2	4.443	A
2	794	80	1581	0.502	789	1.0	4.669	A
3	49	849	873	0.056	49	0.1	4.364	A
4	465	134	1306	0.356	462	0.6	4.444	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	168	494	943	0.178	168	0.2	4.867	A
2	948	96	1571	0.603	945	1.5	5.921	A
3	58	1016	774	0.075	58	0.1	5.030	A
4	555	161	1290	0.430	554	0.8	5.100	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	604	881	0.234	206	0.3	5.582	A
2	1160	118	1557	0.745	1155	2.9	9.121	A
3	72	1242	641	0.112	71	0.1	6.322	A
4	679	196	1269	0.535	678	1.2	6.339	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	606	880	0.234	206	0.3	5.593	A
2	1160	118	1557	0.745	1160	3.0	9.357	A
3	72	1247	638	0.112	72	0.1	6.360	A
4	679	197	1268	0.536	679	1.2	6.379	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	168	496	942	0.179	168	0.2	4.881	A
2	948	96	1571	0.603	953	1.6	6.070	A
3	58	1024	769	0.076	59	0.1	5.067	A
4	555	162	1289	0.430	556	0.8	5.139	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	141	415	987	0.143	141	0.2	4.460	A
2	794	81	1581	0.502	796	1.1	4.746	A
3	49	855	869	0.056	49	0.1	4.390	A
4	465	135	1305	0.356	465	0.6	4.479	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	1.03	0.57	1.03	1.45	1.50			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.57	0.57	1.04	1.46	1.51			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.23	0.00	0.00	0.23	0.23			N/A	N/A
2	1.54	0.06	0.71	3.76	5.59			N/A	N/A
3	0.08	0.03	0.26	0.46	0.49			N/A	N/A
4	0.78	0.12	0.90	1.46	1.53			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.32	0.03	0.27	0.48	0.51			N/A	N/A
2	2.91	0.03	0.29	2.91	9.32			N/A	N/A
3	0.12	0.03	0.26	0.47	0.49			N/A	N/A
4	1.19	0.03	0.27	1.19	1.19			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.32	0.03	0.33	1.10	1.38			N/A	N/A
2	2.96	0.03	0.28	2.96	2.96			N/A	N/A

3	0.13	0.03	0.25	0.45	0.48			N/A	N/A
4	1.19	0.03	0.28	1.19	1.35			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.23	0.00	0.00	0.23	0.23			N/A	N/A
2	1.60	0.07	0.98	3.62	5.07			N/A	N/A
3	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4	0.80	0.21	0.97	1.45	1.51			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.18	0.00	0.00	0.18	0.18			N/A	N/A
2	1.05	0.04	0.45	2.53	3.95			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.58	0.06	0.63	1.38	1.47			N/A	N/A

2031 LP + mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	17.76	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	3	Arm 4

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)
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	200	100.000
2		✓	479	100.000
3		✓	34	100.000
4		✓	1093	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	172	26	2
	2	57	0	6	416
	3	5	13	0	16
	4	105	971	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	0	3
	3	0	0	0	0

	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.36	9.61	0.6	2.7	A
2	0.33	3.45	0.5	2.3	A
3	0.04	3.50	0.0	0.5	A
4	0.90	25.97	8.2	44.6	D

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	151	748	801	0.188	150	0.2	5.662	A
2	361	34	1612	0.224	359	0.3	2.961	A
3	26	356	1164	0.022	26	0.0	3.160	A
4	823	56	1352	0.609	817	1.6	6.813	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	180	896	718	0.250	179	0.3	6.854	A
2	431	40	1607	0.268	430	0.4	3.153	A
3	31	427	1123	0.027	31	0.0	3.295	A
4	983	67	1345	0.730	978	2.7	9.925	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	220	1085	612	0.360	219	0.6	9.370	A
2	527	49	1602	0.329	527	0.5	3.451	A
3	37	522	1066	0.035	37	0.0	3.498	A
4	1203	82	1336	0.901	1184	7.5	21.914	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	220	1100	604	0.364	220	0.6	9.611	A
2	527	49	1601	0.329	527	0.5	3.454	A
3	37	523	1066	0.035	37	0.0	3.499	A
4	1203	83	1336	0.901	1201	8.2	25.972	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	180	919	705	0.255	181	0.4	7.054	A
2	431	41	1607	0.268	431	0.4	3.159	A
3	31	428	1122	0.027	31	0.0	3.299	A
4	983	68	1345	0.731	1004	2.9	11.417	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	151	758	795	0.189	151	0.2	5.736	A
2	361	34	1611	0.224	361	0.3	2.970	A
3	26	358	1163	0.022	26	0.0	3.165	A
4	823	57	1352	0.609	828	1.6	7.109	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.24	0.00	0.00	0.24	0.24			N/A	N/A
2	0.30	0.00	0.00	0.30	0.30			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.56	0.61	1.50	1.89	2.00			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2	0.38	0.00	0.00	0.38	0.38			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	2.67	0.06	0.81	7.21	11.24			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.57	0.03	0.26	0.57	0.57			N/A	N/A
2	0.50	0.03	0.26	0.50	0.50			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	7.46	0.05	0.48	21.13	38.85			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.58	0.03	0.32	1.03	2.71			N/A	N/A
2	0.50	0.03	0.31	1.42	2.26			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	8.18	0.04	0.36	17.03	44.65			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.35	0.00	0.00	0.35	0.35			N/A	N/A
2	0.38	0.00	0.00	0.38	0.38			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	2.89	0.04	0.44	8.01	14.23			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.24	0.00	0.00	0.24	0.24			N/A	N/A
2	0.30	0.00	0.00	0.30	0.30			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.62	0.03	0.33	3.35	8.48			N/A	N/A

2031 LP - mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	9.11	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	17	Arm 2

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)
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	278	100.000
2		✓	1043	100.000
3		✓	65	100.000
4		✓	579	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	43	10	225
	2	87	0	8	948
	3	14	14	0	37
	4	60	511	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	11	5
	2	5	0	0	3
	3	0	0	0	0

	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.34	6.47	0.5	2.5	A
2	0.79	11.87	3.7	16.1	B
3	0.13	7.45	0.1	0.5	A
4	0.49	5.59	1.0	1.8	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	209	399	996	0.210	208	0.3	4.795	A
2	785	182	1515	0.518	781	1.1	5.026	A
3	49	943	817	0.060	49	0.1	4.683	A
4	436	86	1334	0.327	434	0.5	4.170	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	250	479	951	0.263	250	0.4	5.385	A
2	938	218	1492	0.629	935	1.7	6.642	A
3	58	1130	707	0.083	58	0.1	5.551	A
4	521	103	1324	0.393	520	0.7	4.674	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	586	892	0.343	305	0.5	6.443	A
2	1148	267	1460	0.787	1141	3.6	11.366	B
3	72	1379	559	0.128	71	0.1	7.372	A
4	637	126	1310	0.486	636	1.0	5.570	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	587	891	0.344	306	0.5	6.465	A
2	1148	268	1460	0.787	1148	3.7	11.869	B
3	72	1387	555	0.129	72	0.1	7.446	A
4	637	127	1310	0.487	637	1.0	5.593	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	250	480	950	0.263	251	0.4	5.408	A
2	938	219	1491	0.629	945	1.8	6.895	A
3	58	1141	700	0.083	59	0.1	5.610	A
4	521	104	1323	0.393	522	0.7	4.701	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	209	402	994	0.210	210	0.3	4.821	A
2	785	183	1514	0.519	788	1.1	5.130	A
3	49	952	812	0.060	49	0.1	4.718	A
4	436	87	1334	0.327	437	0.5	4.198	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2	1.10	0.57	1.03	1.44	1.50			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.50	0.00	0.00	0.50	0.50			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.37	0.00	0.00	0.37	0.37			N/A	N/A
2	1.71	0.05	0.64	4.33	6.62			N/A	N/A
3	0.09	0.00	0.00	0.09	0.09			N/A	N/A
4	0.67	0.12	0.90	1.44	1.50			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.54	0.03	0.27	0.54	0.54			N/A	N/A
2	3.59	0.03	0.31	3.59	16.15			N/A	N/A
3	0.15	0.03	0.26	0.47	0.49			N/A	N/A
4	0.98	0.03	0.27	0.98	0.98			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.55	0.03	0.32	1.45	2.51			N/A	N/A
2	3.69	0.03	0.29	3.69	7.42			N/A	N/A
3	0.15	0.03	0.25	0.45	0.48			N/A	N/A
4	0.98	0.03	0.28	0.98	1.79			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2	1.78	0.06	0.75	4.48	6.74			N/A	N/A
3	0.09	0.00	0.00	0.09	0.09			N/A	N/A
4	0.68	0.28	0.99	1.45	1.51			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2	1.12	0.04	0.39	2.84	4.97			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.51	0.05	0.46	1.33	1.45			N/A	N/A

2031 LP - mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	19.28	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	Arm 4

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)
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	339	100.000
2		✓	604	100.000
3		✓	34	100.000
4		✓	1114	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	194	26	119
	2	46	0	6	552
	3	5	13	0	16
	4	113	984	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	0	3
	3	0	0	0	0

	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.63	16.32	1.6	6.3	C
2	0.44	4.35	0.8	2.3	A
3	0.04	4.13	0.0	0.5	A
4	0.91	28.73	9.2	50.7	D

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	758	795	0.321	253	0.5	6.730	A
2	455	121	1555	0.292	453	0.4	3.363	A
3	26	537	1057	0.024	25	0.0	3.488	A
4	839	48	1357	0.618	832	1.6	6.950	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	907	712	0.428	304	0.7	8.948	A
2	543	145	1539	0.353	542	0.6	3.719	A
3	31	644	994	0.031	31	0.0	3.733	A
4	1001	57	1351	0.741	997	2.8	10.268	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	1097	606	0.616	370	1.6	15.321	C
2	665	177	1519	0.438	664	0.8	4.336	A
3	37	787	910	0.041	37	0.0	4.127	A
4	1227	70	1343	0.913	1205	8.3	23.571	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	1113	597	0.626	373	1.6	16.316	C
2	665	178	1518	0.438	665	0.8	4.350	A
3	37	789	908	0.041	37	0.0	4.133	A
4	1227	70	1343	0.913	1223	9.2	28.734	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	934	697	0.437	308	0.8	9.494	A
2	543	147	1538	0.353	544	0.6	3.738	A
3	31	647	993	0.031	31	0.0	3.741	A
4	1001	58	1351	0.741	1026	3.1	12.127	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	255	768	789	0.323	256	0.5	6.887	A
2	455	123	1554	0.293	455	0.4	3.377	A
3	26	541	1055	0.024	26	0.0	3.498	A
4	839	48	1357	0.618	844	1.7	7.273	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.48	0.00	0.00	0.48	0.48			N/A	N/A
2	0.42	0.00	0.00	0.42	0.42			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.63	0.62	1.08	1.95	2.13			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.75	0.09	0.84	1.43	1.50			N/A	N/A
2	0.56	0.56	1.03	1.44	1.49			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	2.82	0.06	0.84	7.66	11.93			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.57	0.03	0.28	1.57	4.73			N/A	N/A
2	0.80	0.03	0.26	0.80	0.80			N/A	N/A
3	0.04	0.03	0.25	0.45	0.48			N/A	N/A
4	8.25	0.05	0.73	23.91	41.79			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.65	0.03	0.29	1.65	6.25			N/A	N/A
2	0.80	0.03	0.28	0.80	2.34			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	9.19	0.04	0.39	21.85	50.66			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.80	0.07	0.74	1.23	1.73			N/A	N/A
2	0.57	0.57	1.03	1.44	1.49			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	3.07	0.04	0.44	8.50	15.30			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.49	0.04	0.39	1.18	1.18			N/A	N/A
2	0.43	0.00	0.00	0.43	0.43			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.69	0.03	0.33	3.35	8.85			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

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Filename: B2145 B2166 2031 With Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 20/03/2017 09:09:10

»2031 LP + mitigation, AM
»2031 LP + mitigation, PM
»2031 LP - mitigation, AM
»2031 LP - mitigation, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation													
Arm 1	1.8	7.77	0.62	A	24.27	C	-1 % [Arm 2]	60.0	139.31	1.07	F	64.49	F	-10 % [Arm 1]
Arm 2	12.8	37.88	0.94	E				1.7	7.48	0.63	A			
Arm 3	6.1	20.64	0.86	C				1.5	5.54	0.59	A			
	2031 LP - mitigation													
Arm 1	1.1	5.98	0.51	A	64.95	F	-10 % [Arm 2]	13.9	41.40	0.95	E	21.55	C	-2 % [Arm 1]
Arm 2	55.1	118.73	1.08	F				3.3	11.28	0.77	B			
Arm 3	6.4	23.67	0.87	C				1.8	6.62	0.63	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. 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	B2145 j/w B2166
Location	
Site number	
Date	05/12/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	1616
Enumerator	FB
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	24.27	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	Arm 2

Arms

Arms

Arm	Name	Description
1	B2145 North	
2	B2166	
3	untitled	

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	3.30	7.10	11.4	46.0	30.0	8.0	
2	3.20	7.80	16.0	24.0	30.0	37.0	
3	4.10	7.70	9.0	65.0	30.0	10.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.694	1719
2	0.646	1668
3	0.731	1898

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	746	100.000
2		✓	1175	100.000
3		✓	1014	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	328	418
	2	759	0	416
	3	487	527	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.62	7.77	1.8	2.0	A
2	0.94	37.88	12.8	16.8	E
3	0.86	20.64	6.1	8.9	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	562	394	1445	0.389	559	0.7	4.338	A
2	885	313	1466	0.604	878	1.5	6.250	A
3	763	567	1484	0.514	759	1.1	5.155	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	671	472	1391	0.482	669	1.0	5.333	A
2	1056	375	1426	0.741	1051	2.8	9.764	A
3	912	679	1402	0.650	908	1.9	7.559	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	821	573	1321	0.622	818	1.7	7.621	A
2	1294	459	1372	0.943	1262	10.8	27.986	D
3	1116	815	1303	0.857	1102	5.5	17.576	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	821	579	1317	0.624	821	1.8	7.772	A
2	1294	460	1371	0.944	1286	12.8	37.880	E
3	1116	831	1292	0.864	1114	6.1	20.642	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	671	482	1384	0.484	674	1.0	5.446	A
2	1056	377	1424	0.742	1095	3.1	12.483	B
3	912	707	1382	0.660	928	2.1	8.555	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	562	399	1442	0.389	563	0.7	4.393	A
2	885	315	1464	0.604	891	1.6	6.530	A
3	763	575	1478	0.516	767	1.1	5.314	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.68	0.59	1.07	1.50	1.55			N/A	N/A
2	1.54	0.58	1.44	1.97	2.34			N/A	N/A
3	1.09	0.57	1.05	1.48	1.53			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.99	0.08	0.91	1.65	2.04			N/A	N/A
2	2.83	0.05	0.60	7.82	12.59			N/A	N/A
3	1.89	0.05	0.50	5.00	7.96			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.72	0.03	0.29	1.72	1.72			N/A	N/A
2	10.79	0.08	1.94	31.17	48.87			N/A	N/A
3	5.50	0.04	0.39	13.27	29.93			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.75	0.03	0.29	1.75	1.75			N/A	N/A
2	12.76	0.05	0.71	36.76	66.80			N/A	N/A
3	6.08	0.03	0.33	7.72	29.36			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.02	0.12	1.02	1.48	1.87			N/A	N/A
2	3.09	0.04	0.42	8.41	15.71			N/A	N/A
3	2.08	0.05	0.48	5.61	9.19			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.69	0.06	0.57	1.37	1.37			N/A	N/A
2	1.60	0.03	0.31	2.31	7.91			N/A	N/A

3	1.13	0.03	0.34	2.36	5.68			N/A	N/A

2031 LP + mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	54.49	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-10	Arm 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)
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1275	100.000
2		✓	757	100.000
3		✓	886	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	752	523
	2	313	0	444
	3	349	537	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	1.07	138.31	60.0	125.4	F
2	0.63	7.48	1.7	2.2	A
3	0.59	5.54	1.5	1.9	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	960	403	1439	0.667	952	2.0	7.458	A
2	570	390	1416	0.403	567	0.7	4.305	A
3	667	235	1727	0.386	664	0.6	3.490	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1146	482	1384	0.828	1136	4.5	14.317	B
2	681	466	1367	0.498	679	1.0	5.320	A
3	796	281	1693	0.470	795	0.9	4.136	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1404	590	1310	1.072	1283	34.7	88.692	F
2	833	526	1328	0.628	831	1.7	7.330	A
3	976	343	1647	0.592	973	1.5	5.495	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1404	591	1309	1.073	1303	60.0	138.312	F
2	833	534	1323	0.630	833	1.7	7.485	A
3	976	345	1647	0.592	975	1.5	5.539	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1146	484	1383	0.829	1356	7.4	94.437	F
2	681	556	1309	0.520	683	1.1	5.880	A
3	796	282	1692	0.471	799	0.9	4.172	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	960	405	1438	0.668	981	2.1	8.441	A
2	570	402	1408	0.405	572	0.7	4.390	A
3	667	236	1726	0.387	668	0.7	3.518	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.00	0.17	1.07	3.76	4.83			N/A	N/A
2	0.68	0.56	1.02	1.43	1.48			N/A	N/A
3	0.65	0.57	1.03	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.53	0.06	1.23	12.67	19.73			N/A	N/A
2	1.00	0.08	0.88	1.74	2.18			N/A	N/A
3	0.91	0.08	0.85	1.47	1.88			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	34.73	7.08	29.52	64.33	77.50			N/A	N/A
2	1.68	0.03	0.27	1.68	1.68			N/A	N/A
3	1.48	0.03	0.27	1.48	1.48			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	59.97	15.90	52.99	105.88	125.41			N/A	N/A
2	1.71	0.03	0.27	1.71	1.71			N/A	N/A
3	1.49	0.03	0.27	1.49	1.49			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	7.40	0.06	1.34	21.38	34.60			N/A	N/A
2	1.12	0.17	1.08	1.67	1.94			N/A	N/A
3	0.93	0.24	1.00	1.18	1.18			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.11	0.03	0.29	2.11	7.45			N/A	N/A
2	0.70	0.05	0.59	1.50	1.52			N/A	N/A
3	0.65	0.07	0.71	1.40	1.49			N/A	N/A

2031 LP - mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	54.95	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-10	Arm 2

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)
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	609	100.000
2		✓	1388	100.000
3		✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	299	310
	2	944	0	444
	3	407	531	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.51	5.98	1.1	2.1	A
2	1.06	118.73	65.1	124.5	F
3	0.87	23.67	6.4	33.1	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	458	397	1443	0.318	457	0.5	3.896	A
2	1045	232	1518	0.688	1036	2.2	7.563	A
3	706	705	1384	0.510	702	1.1	5.473	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	547	475	1389	0.394	547	0.7	4.570	A
2	1248	278	1488	0.838	1237	4.9	14.182	B
3	843	841	1284	0.657	840	1.9	8.388	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	671	576	1319	0.508	669	1.1	5.910	A
2	1528	340	1448	1.055	1416	32.9	58.099	F
3	1033	963	1195	0.864	1018	5.7	19.716	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	671	583	1314	0.510	670	1.1	5.983	A
2	1528	341	1448	1.056	1439	35.1	118.732	F
3	1033	979	1183	0.873	1030	6.4	23.667	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	547	486	1382	0.396	549	0.7	4.636	A
2	1248	279	1488	0.839	1440	7.1	77.693	F
3	843	979	1183	0.713	858	2.7	12.038	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	458	403	1439	0.319	459	0.5	3.935	A
2	1045	234	1517	0.689	1064	2.3	8.506	A
3	706	724	1370	0.516	712	1.1	5.763	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.50	0.00	0.00	0.50	0.50			N/A	N/A
2	2.21	0.24	1.32	4.01	5.08			N/A	N/A
3	1.07	0.57	1.05	1.48	1.53			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.69	0.10	0.89	1.46	1.53			N/A	N/A
2	4.88	0.07	1.41	13.60	20.91			N/A	N/A
3	1.94	0.05	0.54	5.10	8.03			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.09	0.03	0.28	1.09	1.09			N/A	N/A
2	32.86	5.14	26.93	63.78	78.07			N/A	N/A
3	5.72	0.04	0.41	14.84	31.00			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.11	0.03	0.29	1.11	2.07			N/A	N/A
2	55.07	11.07	46.86	103.14	124.52			N/A	N/A
3	6.41	0.03	0.34	10.39	33.12			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.71	0.22	1.00	1.48	1.54			N/A	N/A
2	7.08	0.06	0.97	20.54	34.51			N/A	N/A
3	2.69	0.06	1.02	7.12	10.77			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.50	0.04	0.43	1.32	1.46			N/A	N/A
2	2.34	0.03	0.30	2.34	9.70			N/A	N/A
3	1.12	0.03	0.33	2.15	5.71			N/A	N/A

2031 LP - mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	21.55	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-2	Arm 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)
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1166	100.000
2		✓	978	100.000
3		✓	878	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	787	379
	2	458	0	520
	3	394	484	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.95	41.40	13.9	70.2	E
2	0.77	11.28	3.3	13.0	B
3	0.63	6.62	1.8	2.4	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	878	363	1467	0.598	872	1.5	6.149	A
2	736	283	1485	0.496	732	1.0	4.850	A
3	661	343	1648	0.401	658	0.7	3.757	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1048	434	1417	0.740	1043	2.8	9.736	A
2	879	339	1449	0.607	877	1.5	6.394	A
3	789	411	1598	0.494	788	1.0	4.597	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1284	531	1350	0.951	1249	11.5	29.636	D
2	1077	406	1406	0.766	1070	3.2	10.731	B
3	967	501	1532	0.631	964	1.7	6.527	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1284	533	1349	0.952	1274	13.9	41.399	E
2	1077	414	1400	0.769	1076	3.3	11.283	B
3	967	504	1530	0.632	967	1.8	6.615	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1048	437	1416	0.740	1092	3.1	12.805	B
2	879	355	1439	0.611	886	1.6	6.714	A
3	789	415	1595	0.495	792	1.0	4.662	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	878	365	1466	0.599	884	1.6	6.419	A
2	736	287	1482	0.497	739	1.0	4.949	A
3	661	346	1646	0.402	662	0.7	3.796	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.50	0.56	1.39	1.96	2.34			N/A	N/A
2	0.99	0.56	1.02	1.43	1.48			N/A	N/A
3	0.69	0.57	1.04	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.80	0.05	0.54	7.75	12.57			N/A	N/A
2	1.55	0.05	0.67	3.80	5.70			N/A	N/A
3	1.00	0.07	0.84	1.81	2.39			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	11.49	0.09	2.73	32.79	50.11			N/A	N/A
2	3.18	0.03	0.30	3.18	13.00			N/A	N/A
3	1.74	0.03	0.27	1.74	1.74			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	13.88	0.06	1.31	40.71	70.21			N/A	N/A
2	3.29	0.03	0.28	3.29	5.75			N/A	N/A
3	1.76	0.03	0.28	1.76	1.76			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	3.06	0.04	0.41	8.25	15.64			N/A	N/A
2	1.63	0.06	0.87	3.88	5.66			N/A	N/A
3	1.02	0.14	1.02	1.48	1.84			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.56	0.03	0.31	1.98	7.50			N/A	N/A
2	1.02	0.04	0.40	2.53	4.21			N/A	N/A
3	0.70	0.06	0.63	1.38	1.38			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: Bognor Bridge Rd_PB_no EMP_With Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 17/03/2017 10:51:40

»A27 Bognor RBT - 2031 LP + mitigation, AM
»A27 Bognor RBT - 2031 LP + mitigation, PM
»A27 Bognor RBT - 2031 LP - mitigation, AM
»A27 Bognor RBT - 2031 LP - mitigation, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	A27 Bognor RBT - 2031 LP + mitigation									
1 - A27 North	1.2	2.63	0.52	A	A	0.7	2.28	0.39	A	A
2 - A259 Bognor Rd East	2.3	5.71	0.67	A		0.9	3.01	0.45	A	
4 - A27 South	1.0	3.13	0.48	A		1.0	2.55	0.48	A	
5 - A259 Bognor Road West	0.8	4.79	0.43	A		1.2	6.00	0.52	A	
	A27 Bognor RBT - 2031 LP - mitigation									
1 - A27 North	1.1	2.54	0.50	A	A	0.5	2.07	0.32	A	A
2 - A259 Bognor Rd East	1.2	4.08	0.53	A		0.8	2.86	0.43	A	
4 - A27 South	0.7	2.44	0.40	A		1.0	2.52	0.47	A	
5 - A259 Bognor Road West	0.6	3.83	0.36	A		0.8	5.09	0.42	A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

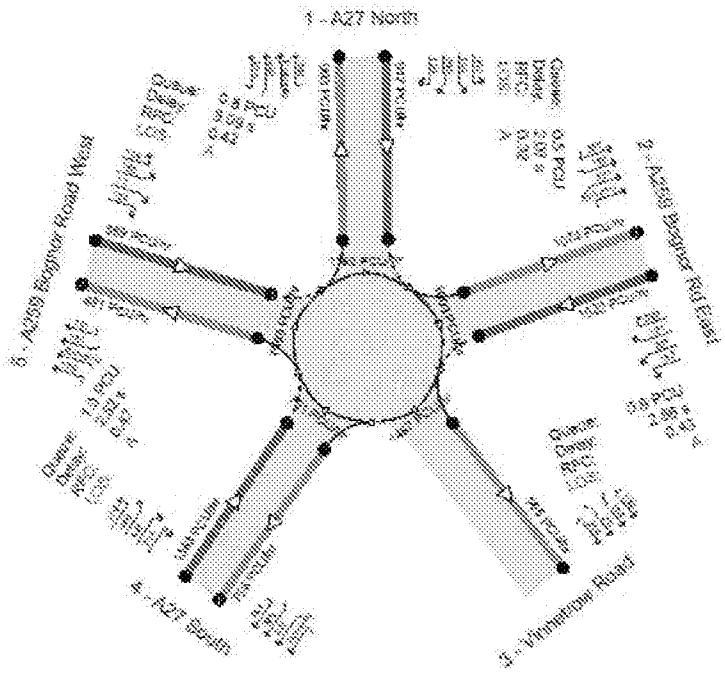
File summary

File Description

Title	A27 Bognor RBT
Location	Chichester
Site number	
Date	30/03/2015
Version	HTp/01
Status	
Identifier	
Client	
Jobnumber	1616
Enumerator	UKNAW004
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



Flows show modelled flow through junction (PCU/hr).
Time Segment: 16:00-16:15

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2031 LP + mitigation	AM	FLAT	08:00	09:00	60	15	✓
D2	2031 LP + mitigation	PM	FLAT	16:00	17:00	60	15	✓
D3	2031 LP - mitigation	AM	FLAT	08:00	09:00	60	15	✓
D4	2031 LP - mitigation	PM	FLAT	16:00	17:00	60	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	A27 Bognor RBT	✓	100.000	100.000

A27 Bognor RBT - 2031 LP + mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A27 North	
2	A259 Bognor Rd East	
3	Vinnetrow Road	
4	A27 South	
5	A259 Bognor Road West	

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 - A27 North	8.80	12.37	112.7	43.7	84.0	32.0	
2 - A259 Bognor Rd East	7.00	11.18	63.0	30.5	84.0	44.0	
3 - Vinnetrow Road							✓
4 - A27 South	9.36	11.09	44.0	44.2	84.0	25.0	
5 - A259 Bognor Road West	4.02	8.11	55.7	27.5	84.0	37.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A27 North	0.760	3720
2 - A259 Bognor Rd East	0.654	3065
3 - Vinnetrow Road		
4 - A27 South	0.726	3447
5 - A259 Bognor Road West	0.534	2197

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2031 LP + mitigation	AM	FLAT	08:00	09:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1652	100.000
2 - A259 Bognor Rd East		FLAT	✓	1428	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1190	100.000
5 - A259 Bognor Road West		FLAT	✓	620	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	470	44	668	470
	2 - A259 Bognor Rd East	543	0	33	500	352
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	506	327	30	0	327
	5 - A259 Bognor Road West	236	153	14	217	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.52	2.63	1.2	A	1652	1652
2 - A259 Bognor Rd East	0.67	5.71	2.3	A	1428	1428
3 - Vinnetrow Road						
4 - A27 South	0.48	3.13	1.0	A	1190	1190
5 - A259 Bognor Road West	0.43	4.79	0.8	A	620	620

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1652	413	738	3159	0.523	1647	1279	0.0	1.2	2.610	A
2 - A259 Bognor Rd East	1428	357	1438	2124	0.672	1419	947	0.0	2.2	5.550	A
3 - Vinnetrow Road			2737				120				
4 - A27 South	1190	298	1358	2461	0.484	1186	1379	0.0	1.0	3.094	A
5 - A259 Bognor Road West	620	155	1400	1450	0.427	617	1144	0.0	0.8	4.732	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1652	413	741	3157	0.523	1652	1285	1.2	1.2	2.631	A
2 - A259 Bognor Rd East	1428	357	1443	2121	0.673	1428	950	2.2	2.2	5.711	A
3 - Vinnetrow Road			2750				121				
4 - A27 South	1190	298	1365	2456	0.484	1190	1385	1.0	1.0	3.126	A

5 - A259 Bognor Road West	620	155	1406	1447	0.428	620	1149	0.8	0.8	4.787	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1652	413	741	3157	0.523	1652	1285	1.2	1.2	2.631	A
2 - A259 Bognor Rd East	1428	357	1443	2121	0.673	1428	950	2.2	2.3	5.713	A
3 - Vinnetrow Road			2750				121				
4 - A27 South	1190	298	1365	2456	0.484	1190	1385	1.0	1.0	3.126	A
5 - A259 Bognor Road West	620	155	1406	1447	0.428	620	1149	0.8	0.8	4.787	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1652	413	741	3157	0.523	1652	1285	1.2	1.2	2.631	A
2 - A259 Bognor Rd East	1428	357	1443	2121	0.673	1428	950	2.3	2.3	5.713	A
3 - Vinnetrow Road			2750				121				
4 - A27 South	1190	298	1365	2456	0.484	1190	1385	1.0	1.0	3.126	A
5 - A259 Bognor Road West	620	155	1406	1447	0.428	620	1149	0.8	0.8	4.787	A

A27 Bognor RBT - 2031 LP + mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.16	A

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 period length (min)	Time segment length (min)	Run automatically
D2	2031 LP + mitigation	PM	FLAT	16:00	17:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1086	100.000
2 - A259 Bognor Rd East		FLAT	✓	1057	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1422	100.000
5 - A259 Bognor Road West		FLAT	✓	705	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	397	47	497	145
	2 - A259 Bognor Rd East	358	0	48	504	147
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	533	599	71	0	219
	5 - A259 Bognor Road West	192	216	26	271	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.39	2.28	0.7	A	1086	1086
2 - A259 Bognor Rd East	0.45	3.01	0.9	A	1057	1057
3 - Vinnetrow Road						
4 - A27 South	0.48	2.55	1.0	A	1422	1422
5 - A259 Bognor Road West	0.52	6.00	1.2	A	705	705

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1086	272	1178	2825	0.384	1083	1079	0.0	0.7	2.267	A
2 - A259 Bognor Rd East	1057	264	1053	2376	0.445	1053	1208	0.0	0.9	2.987	A
3 - Vinnetrow Road			1915				191				
4 - A27 South	1422	356	648	2977	0.478	1418	1267	0.0	1.0	2.534	A
5 - A259 Bognor Road West	705	176	1556	1367	0.516	700	510	0.0	1.2	5.903	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1086	272	1183	2821	0.385	1086	1083	0.7	0.7	2.282	A
2 - A259 Bognor Rd East	1057	264	1057	2374	0.445	1057	1212	0.9	0.9	3.007	A
3 - Vinnetrow Road			1922				192				
4 - A27 South	1422	356	650	2975	0.478	1422	1272	1.0	1.0	2.548	A
5 - A259 Bognor Road West	705	176	1561	1364	0.517	705	511	1.2	1.2	6.005	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1086	272	1183	2821	0.385	1086	1083	0.7	0.7	2.282	A
2 - A259 Bognor Rd East	1057	264	1057	2374	0.445	1057	1212	0.9	0.9	3.007	A
3 - Vinnetrow Road			1922				192				
4 - A27 South	1422	356	650	2975	0.478	1422	1272	1.0	1.0	2.548	A
5 - A259 Bognor Road West	705	176	1561	1364	0.517	705	511	1.2	1.2	6.005	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1086	272	1183	2821	0.385	1086	1083	0.7	0.7	2.282	A
2 - A259 Bognor Rd East	1057	264	1057	2374	0.445	1057	1212	0.9	0.9	3.007	A
3 - Vinnetrow Road			1922				192				
4 - A27 South	1422	356	650	2975	0.478	1422	1272	1.0	1.0	2.548	A
5 - A259 Bognor Road West	705	176	1561	1364	0.517	705	511	1.2	1.2	6.005	A

A27 Bognor RBT - 2031 LP - mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.08	A

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 period length (min)	Time segment length (min)	Run automatically
D3	2031 LP - mitigation	AM	FLAT	08:00	09:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1531	100.000
2 - A259 Bognor Rd East		FLAT	✓	1085	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1070	100.000
5 - A259 Bognor Road West		FLAT	✓	573	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	375	131	630	395
	2 - A259 Bognor Rd East	357	0	69	369	290
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	341	303	106	0	320
	5 - A259 Bognor Road West	155	138	48	232	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.50	2.54	1.1	A	1531	1531
2 - A259 Bognor Rd East	0.53	4.08	1.2	A	1085	1085
3 - Vinnetrow Road						
4 - A27 South	0.40	2.44	0.7	A	1070	1070
5 - A259 Bognor Road West	0.36	3.83	0.6	A	573	573

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1531	383	824	3093	0.495	1527	850	0.0	1.1	2.522	A
2 - A259 Bognor Rd East	1085	271	1537	2059	0.527	1080	814	0.0	1.2	4.024	A
3 - Vinnetrow Road			2265				353				
4 - A27 South	1070	268	1038	2694	0.397	1067	1227	0.0	0.7	2.430	A
5 - A259 Bognor Road West	573	143	1103	1609	0.356	571	1002	0.0	0.6	3.808	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1531	383	827	3091	0.495	1531	853	1.1	1.1	2.537	A
2 - A259 Bognor Rd East	1085	271	1542	2056	0.528	1085	816	1.2	1.2	4.076	A
3 - Vinnetrow Road			2273				354				
4 - A27 South	1070	268	1042	2691	0.398	1070	1231	0.7	0.7	2.442	A
5 - A259 Bognor Road West	573	143	1107	1607	0.357	573	1005	0.6	0.6	3.830	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1531	383	827	3091	0.495	1531	853	1.1	1.1	2.537	A
2 - A259 Bognor Rd East	1085	271	1542	2056	0.528	1085	816	1.2	1.2	4.076	A
3 - Vinnetrow Road			2273				354				
4 - A27 South	1070	268	1042	2691	0.398	1070	1231	0.7	0.7	2.442	A
5 - A259 Bognor Road West	573	143	1107	1607	0.357	573	1005	0.6	0.6	3.830	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1531	383	827	3091	0.495	1531	853	1.1	1.1	2.537	A
2 - A259 Bognor Rd East	1085	271	1542	2056	0.528	1085	816	1.2	1.2	4.076	A
3 - Vinnetrow Road			2273				354				
4 - A27 South	1070	268	1042	2691	0.398	1070	1231	0.7	0.7	2.442	A
5 - A259 Bognor Road West	573	143	1107	1607	0.357	573	1005	0.6	0.6	3.830	A

A27 Bognor RBT - 2031 LP - mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	2.88	A

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 period length (min)	Time segment length (min)	Run automatically
D4	2031 LP - mitigation	PM	FLAT	16:00	17:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	919	100.000
2 - A259 Bognor Rd East		FLAT	✓	1023	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1367	100.000
5 - A259 Bognor Road West		FLAT	✓	572	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	358	144	296	121
	2 - A259 Bognor Rd East	400	0	133	308	182
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	441	532	215	0	179
	5 - A259 Bognor Road West	155	187	75	155	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.32	2.07	0.5	A	919	919
2 - A259 Bognor Rd East	0.43	2.86	0.8	A	1023	1023
3 - Vinnetrow Road						
4 - A27 South	0.47	2.52	1.0	A	1367	1367
5 - A259 Bognor Road West	0.42	5.09	0.8	A	572	572

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	919	230	1160	2839	0.324	917	993	0.0	0.5	2.059	A
2 - A259 Bognor Rd East	1023	256	1003	2409	0.425	1020	1074	0.0	0.8	2.845	A
3 - Vinnetrow Road			1457				565				
4 - A27 South	1367	342	701	2938	0.465	1363	756	0.0	1.0	2.507	A
5 - A259 Bognor Road West	572	143	1583	1352	0.423	569	481	0.0	0.8	5.034	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	919	230	1164	2835	0.324	919	996	0.5	0.5	2.066	A
2 - A259 Bognor Rd East	1023	256	1006	2407	0.425	1023	1077	0.8	0.8	2.860	A
3 - Vinnetrow Road			1462				567				
4 - A27 South	1367	342	703	2937	0.465	1367	759	1.0	1.0	2.521	A
5 - A259 Bognor Road West	572	143	1588	1350	0.424	572	482	0.8	0.8	5.089	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	919	230	1164	2835	0.324	919	996	0.5	0.5	2.066	A
2 - A259 Bognor Rd East	1023	256	1006	2407	0.425	1023	1077	0.8	0.8	2.860	A
3 - Vinnetrow Road			1462				567				
4 - A27 South	1367	342	703	2937	0.465	1367	759	1.0	1.0	2.521	A
5 - A259 Bognor Road West	572	143	1588	1350	0.424	572	482	0.8	0.8	5.089	A

16:45 - 17:00

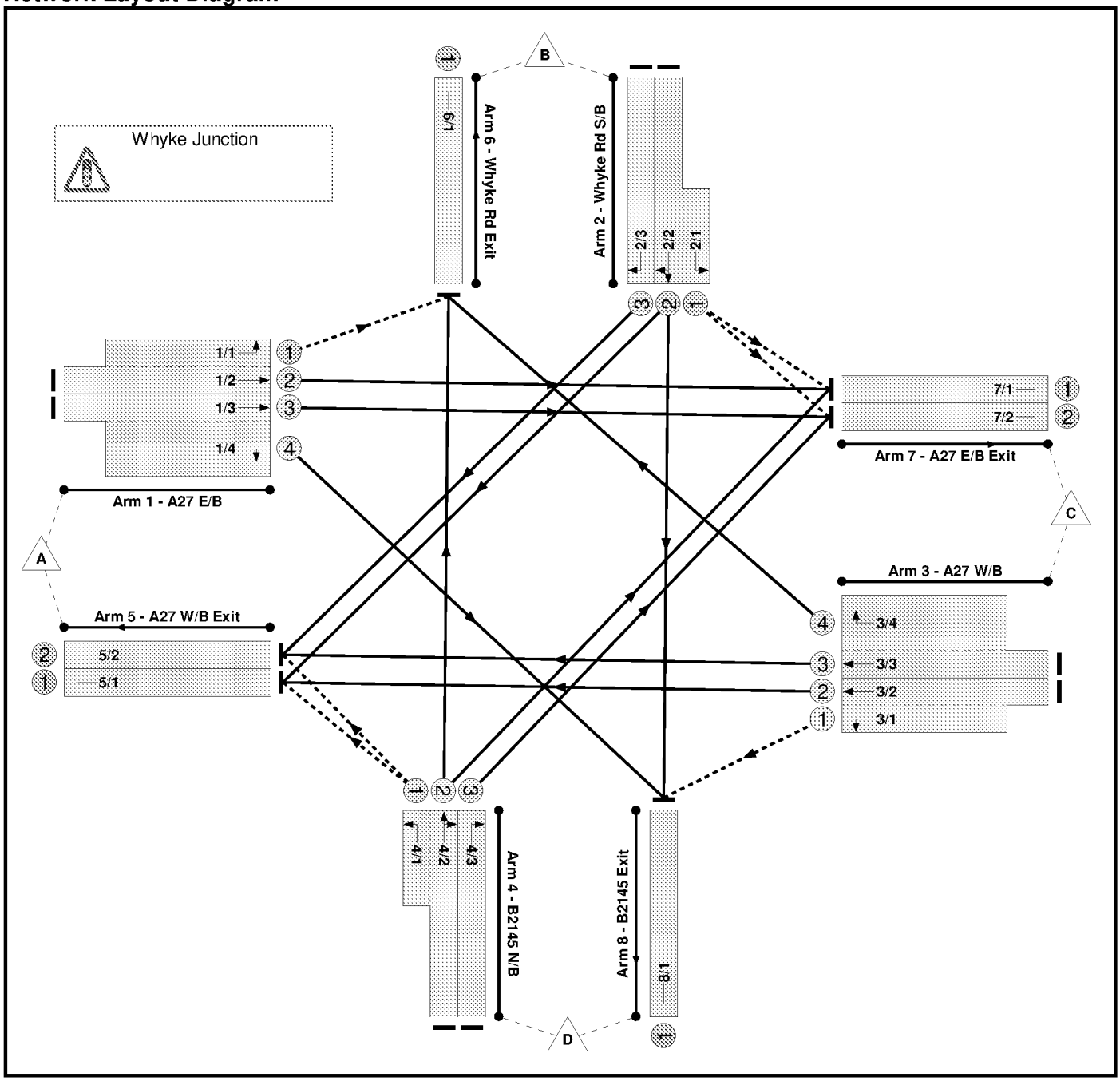
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	919	230	1164	2835	0.324	919	996	0.5	0.5	2.066	A
2 - A259 Bognor Rd East	1023	256	1006	2407	0.425	1023	1077	0.8	0.8	2.860	A
3 - Vinnetrow Road			1462				567				
4 - A27 South	1367	342	703	2937	0.465	1367	759	1.0	1.0	2.521	A
5 - A259 Bognor Road West	572	143	1588	1350	0.424	572	482	0.8	0.8	5.089	A

Full Input Data And Results

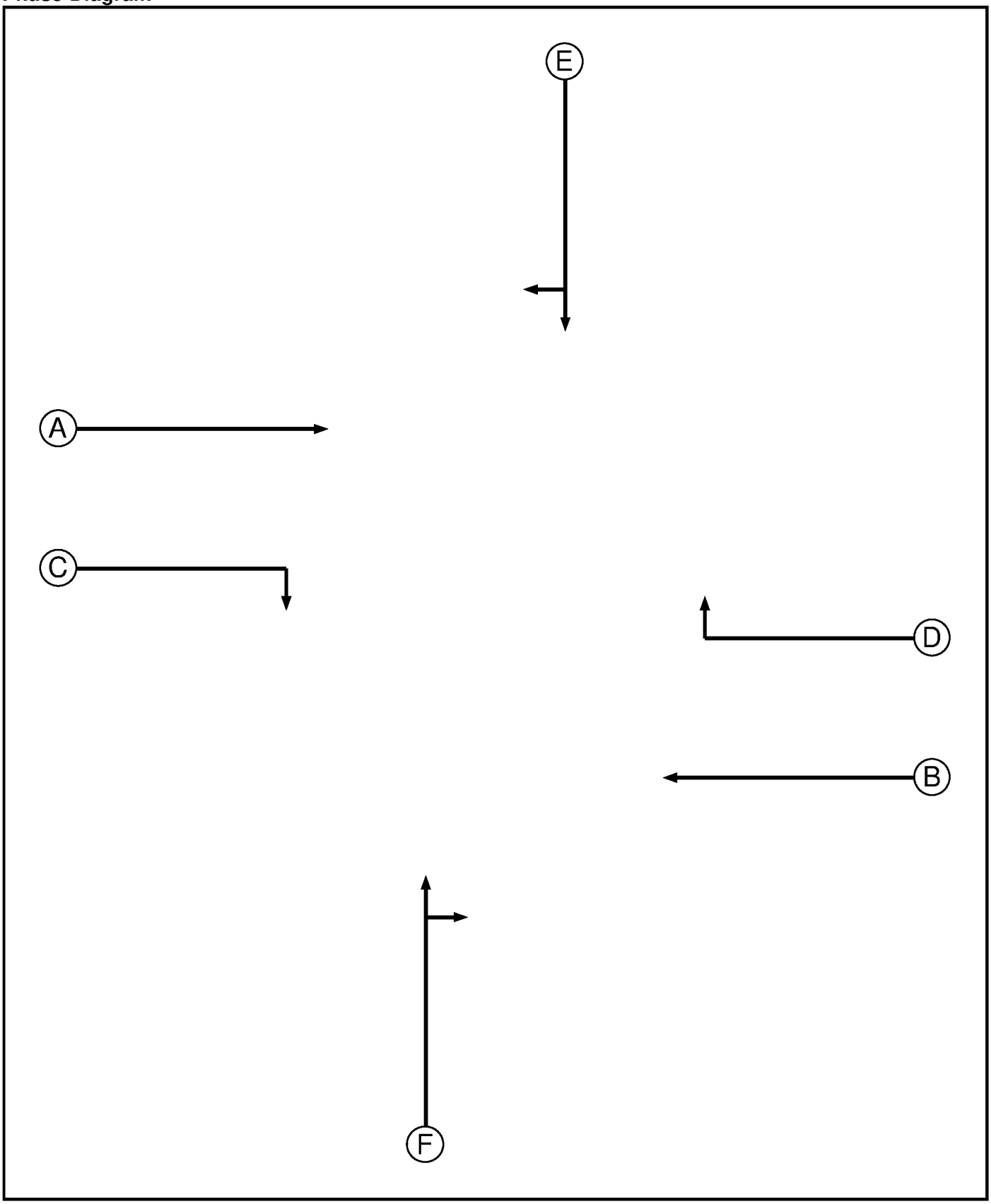
User and Project Details

Project:	**Pagham South**
Title:	**A27 Whyke Junction With Development**
Location:	Chichester
File name:	Whyke Jctn Mitigation v3 (Wtd) ATA03A.lsg3x
Author:	FB
Company:	Highgate Transportation Ltd
Address:	First Floor, 42-43 Park Street, Bristol BS1 5NL
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7

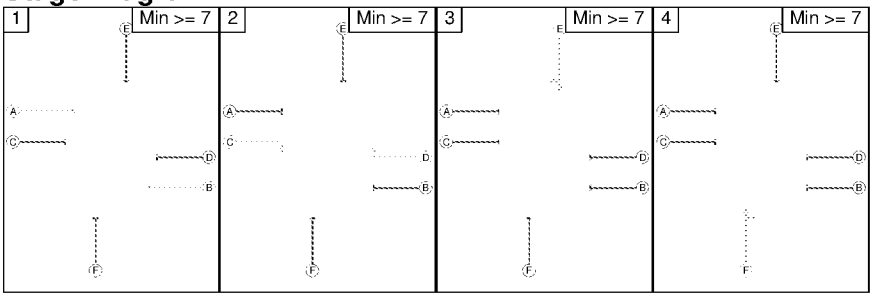
Phase Intergreens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		-	-	5	6	5
	B	-		5	-	5	6
	C	-	6		-	5	5
	D	6	-	-		5	5
	E	5	7	6	6		8
	F	7	5	6	6	8	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4
1		5	6	6
2	6		5	5
3	7	6		8
4	7	6	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Whyke Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A27 E/B)	6/1 (Left)	715	0	4/2	0.22	To 6/1 (Ahead)	-	-	-	-	-
				3/4	0.22	All					
2/1 (Whyke Rd S/B)	7/1 (Left)	715	0	1/2	0.22	All	-	-	-	-	-
				1/3	0.22	All					
				4/2	0.22	To 7/1 (Right)					
				4/3	0.22	All					
	7/2 (Left)	715	0	1/2	0.22	All					
				1/3	0.22	All					
				4/2	0.22	To 7/1 (Right)					
				4/3	0.22	All					
3/1 (A27 W/B)	8/1 (Left)	715	0	2/2	0.22	To 8/1 (Ahead)	-	-	-	-	-
				1/4	0.22	All					
4/1 (B2145 N/B)	5/1 (Left)	715	0	3/2	0.22	All	-	-	-	-	-
				3/3	0.22	All					
				2/2	0.22	To 5/1 (Right)					
				2/3	0.22	All					
	5/2 (Left)	715	0	3/2	0.22	All					
				3/3	0.22	All					
				2/2	0.22	To 5/1 (Right)					
				2/3	0.22	All					

Full Input Data And Results

Lane Input Data

Junction: Whyke Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A27 E/B)	O		2	3	20.9	Geom	-	3.50	0.00	Y	Arm 6 Left	30.00
1/2 (A27 E/B)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Ahead	Inf
1/3 (A27 E/B)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Ahead	Inf
1/4 (A27 E/B)	U	C	2	3	17.4	User	3828	-	-	-	-	-
2/1 (Whyke Rd S/B)	O		2	3	5.2	Geom	-	3.50	0.00	Y	Arm 7 Left	20.00
2/2 (Whyke Rd S/B)	U	E	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Right	15.00
											Arm 8 Ahead	Inf
2/3 (Whyke Rd S/B)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Right	15.00
3/1 (A27 W/B)	O		2	3	20.9	Geom	-	3.50	0.00	Y	Arm 8 Left	30.00
3/2 (A27 W/B)	U	B	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Ahead	Inf
3/3 (A27 W/B)	U	B	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Ahead	Inf
3/4 (A27 W/B)	U	D	2	3	17.4	User	3828	-	-	-	-	-
4/1 (B2145 N/B)	O		2	3	5.2	Geom	-	3.50	0.00	Y	Arm 5 Left	20.00
4/2 (B2145 N/B)	U	F	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Right	15.00
4/3 (B2145 N/B)	U	F	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Right	15.00
5/1 (A27 W/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A27 W/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Whyke Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A27 E/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

7/2 (A27 E/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B2145 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 Max SE AM Peak'	08:00	09:00	01:00	
2: '2031 Max SE PM Peak'	17:00	18:00	01:00	
3: '2031 LP + mitigation AM'	08:00	09:00	01:00	
4: '2031 LP + mitigation PM'	17:00	18:00	01:00	
5: '2031 LP - mitigation AM'	08:00	09:00	01:00	
6: '2031 LP - mitigation PM'	17:00	18:00	01:00	

Scenario 1: '2031 LP + mitigation AM' (FG3: '2031 LP + mitigation AM', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	120	947	379	1446
	B	0	0	0	14	14
	C	1014	1	0	359	1374
	D	774	203	270	0	1247
	Tot.	1788	324	1217	752	4081

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2031 LP + mitigation AM
Junction: Whyke Junction	
1/1 (short)	120
1/2 (with short)	632(In) 512(Out)
1/3 (with short)	814(In) 435(Out)
1/4 (short)	379
2/1 (short)	0
2/2 (with short)	14(In) 14(Out)
2/3	0
3/1 (short)	359
3/2 (with short)	906(In) 547(Out)
3/3 (with short)	468(In) 467(Out)
3/4 (short)	1
4/1 (short)	774
4/2 (with short)	977(In) 203(Out)
4/3	270
5/1	934
5/2	854
6/1	324
7/1	512
7/2	705
8/1	752

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	0.0 %	1965	1965
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	0.0 %	1965	1965
				Arm 8 Ahead	Inf	100.0 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	0.0 %	2105	2105
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
				Arm 7 Right	15.00	0.0 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2031 LP + mitigation PM' (FG4: '2031 LP + mitigation PM', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	25	1047	191	1263
	B	2	0	105	676	783
	C	1010	0	0	466	1476
	D	300	92	270	0	662
	Tot.	1312	117	1422	1333	4184

Traffic Lane Flows

Lane	Scenario 2: 2031 LP + mitigation PM
Junction: Whyke Junction	
1/1 (short)	25
1/2 (with short)	532(In) 507(Out)
1/3 (with short)	731(In) 540(Out)
1/4 (short)	191
2/1 (short)	105
2/2 (with short)	781(In) 676(Out)
2/3	2
3/1 (short)	466
3/2 (with short)	1018(In) 552(Out)
3/3 (with short)	458(In) 458(Out)
3/4 (short)	0
4/1 (short)	300
4/2 (with short)	486(In) 186(Out)
4/3	176
5/1	702
5/2	610
6/1	117
7/1	653
7/2	769
8/1	1333

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	0.0 %	1965	1965
				Arm 8 Ahead	Inf	100.0 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	49.5 %	1870	1870
				Arm 7 Right	15.00	50.5 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2031 LP - mitigation AM' (FG5: '2031 LP - mitigation AM', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	340	626	356	1322
	B	128	0	76	43	247
	C	776	251	0	262	1289
	D	701	227	417	0	1345
	Tot.	1605	818	1119	661	4203

Traffic Lane Flows

Lane	Scenario 3: 2031 LP - mitigation AM
Junction: Whyke Junction	
1/1 (short)	340
1/2 (with short)	966(In) 626(Out)
1/3 (with short)	356(In) 0(Out)
1/4 (short)	356
2/1 (short)	76
2/2 (with short)	179(In) 103(Out)
2/3	68
3/1 (short)	262
3/2 (with short)	674(In) 412(Out)
3/3 (with short)	615(In) 364(Out)
3/4 (short)	251
4/1 (short)	701
4/2 (with short)	963(In) 262(Out)
4/3	382
5/1	822
5/2	783
6/1	818
7/1	699
7/2	420
8/1	661

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	0.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	58.3 %	1857	1857
				Arm 8 Ahead	Inf	41.7 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	86.6 %	1939	1939
				Arm 7 Right	15.00	13.4 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2031 LP - mitigation PM' (FG6: '2031 LP - mitigation PM', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	49	779	665	1493
	B	317	0	301	257	875
	C	523	31	0	424	978
	D	424	25	402	0	851
	Tot.	1264	105	1482	1346	4197

Traffic Lane Flows

Lane	Scenario 4: 2031 LP - mitigation PM
Junction: Whyke Junction	
1/1 (short)	49
1/2 (with short)	828(In) 779(Out)
1/3 (with short)	665(In) 0(Out)
1/4 (short)	665
2/1 (short)	301
2/2 (with short)	579(In) 278(Out)
2/3	296
3/1 (short)	424
3/2 (with short)	732(In) 308(Out)
3/3 (with short)	246(In) 215(Out)
3/4 (short)	31
4/1 (short)	424
4/2 (with short)	632(In) 208(Out)
4/3	219
5/1	541
5/2	723
6/1	105
7/1	1112
7/2	370
8/1	1346

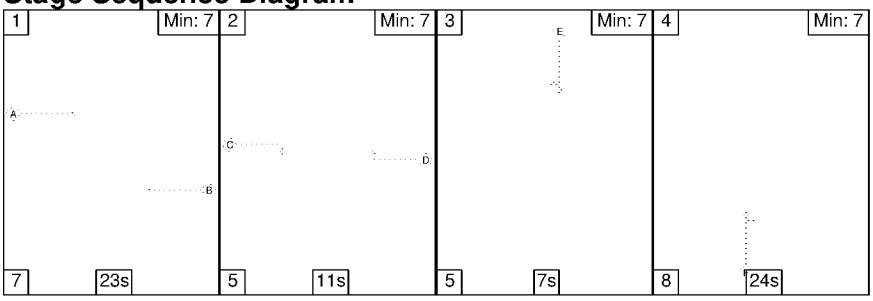
Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	0.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	7.6 %	1950	1950
				Arm 8 Ahead	Inf	92.4 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	12.0 %	1806	1806
				Arm 7 Right	15.00	88.0 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2031 LP + mitigation AM' (FG3: '2031 LP + mitigation AM', Plan 1: 'Single Stage')

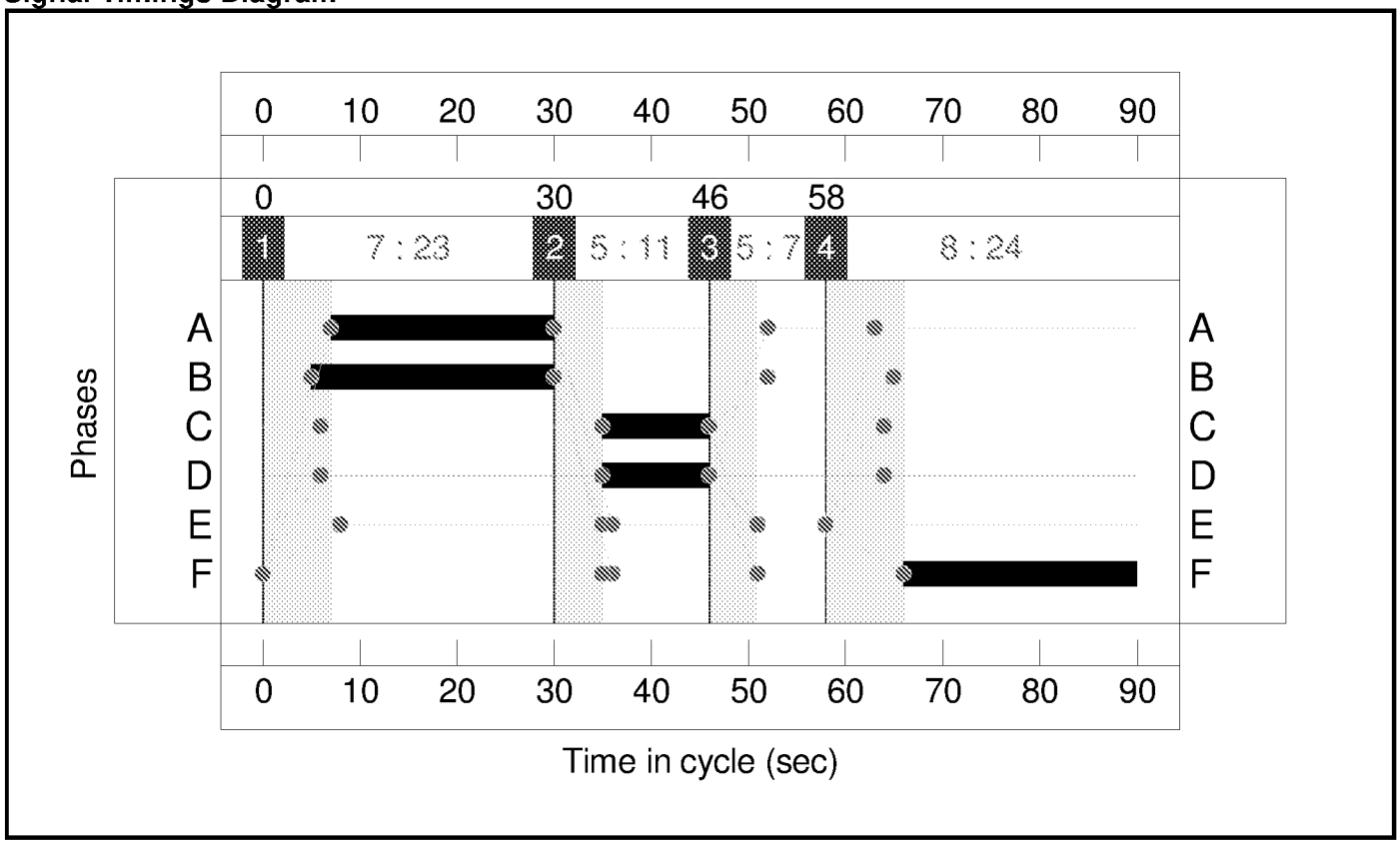
Stage Sequence Diagram



Stage Timings

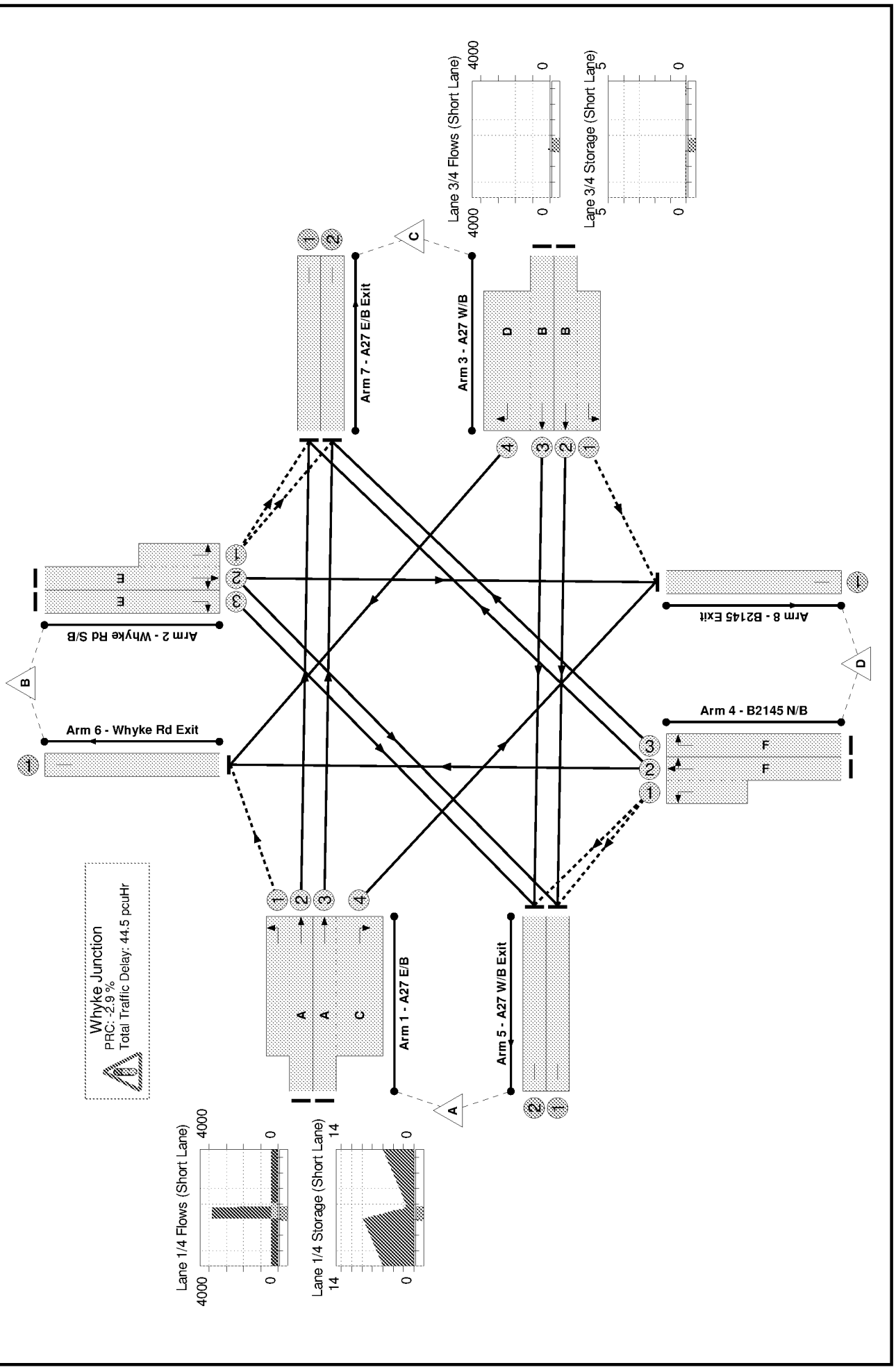
Stage	1	2	3	4
Duration	23	11	7	24
Change Point	0	30	46	58

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.6%**
Whyke Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.6%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	23	-	632	2105:1871	693	91.2%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	23:11	-	814	2105:3828	1072	76.0%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	7	-	14	1965:1965	175	8.0%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	7	-	0	2105	187	0.0%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	25	-	906	2105:1871	1007	90.0%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	25:11	-	468	2105:3828	609	76.8%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	24	-	977	1965:1828	1055	92.6%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	24	-	270	1914	532	50.8%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	934	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	854	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	324	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	512	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	705	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	752	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**194**	**1059**	**0**	**26.6**	**17.9**	**0.0**	**44.5**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**194**	**1059**	**0**	**26.6**	**17.9**	**0.0**	**44.5**	**-**	**-**	**-**	**-**
1/2+1/1	632	632	49	71	0	4.5	4.5	-	9.1	51.6	12.4	4.5	16.9
1/3+1/4	814	814	-	-	-	7.6	1.6	-	9.2	40.7	10.0	1.6	11.6
2/2+2/1	14	14	0	0	0	0.1	0.0	-	0.2	49.0	0.3	0.0	0.4
2/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	906	906	55	304	0	4.8	4.1	-	8.9	35.3	13.1	4.1	17.2
3/3+3/4	468	468	-	-	-	3.8	1.6	-	5.4	41.7	10.6	1.6	12.3
4/2+4/1	977	977	89	685	0	3.7	5.5	-	9.2	33.7	16.3	5.5	21.8
4/3	270	270	-	-	-	2.1	0.5	-	2.6	34.2	5.6	0.5	6.1
5/1	934	934	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	854	854	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	324	324	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	705	705	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	752	752	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -2.9
PRC Over All Lanes (%): -2.9

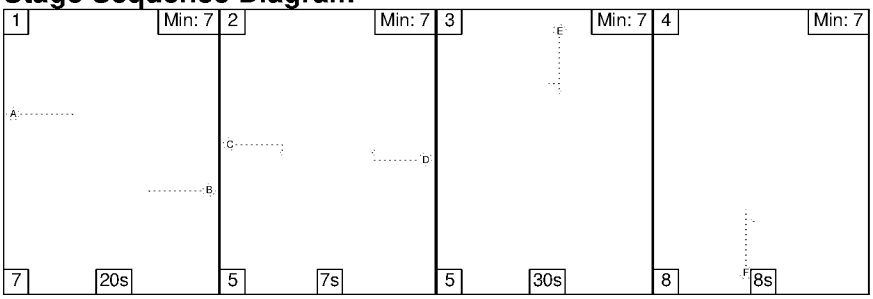
Total Delay for Signalled Lanes (pcuHr): 44.48
Total Delay Over All Lanes(pcuHr): 44.48

Cycle Time (s): 90

Full Input Data And Results

Scenario 2: '2031 LP + mitigation PM' (FG4: '2031 LP + mitigation PM', Plan 1: 'Single Stage')

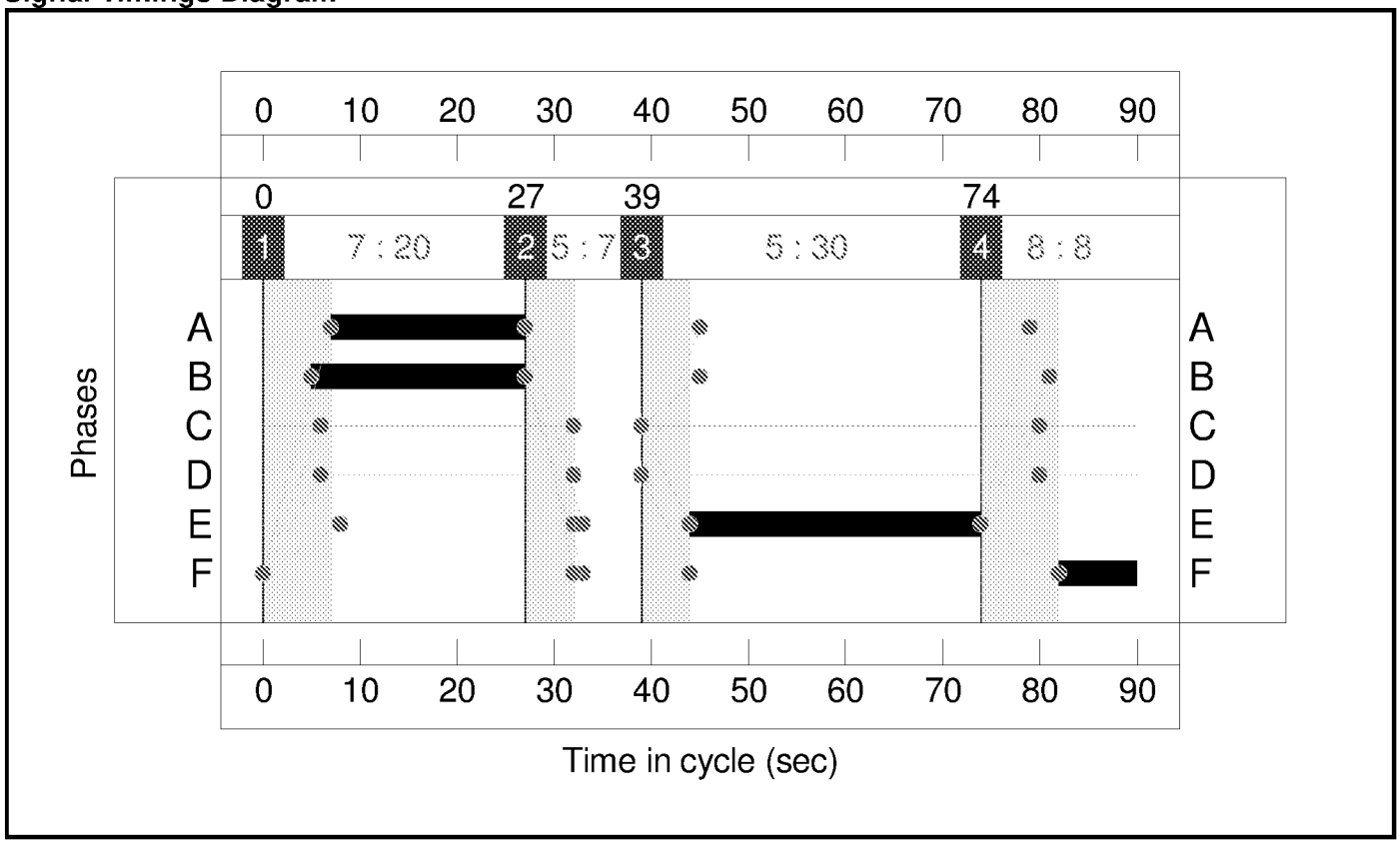
Stage Sequence Diagram



Stage Timings

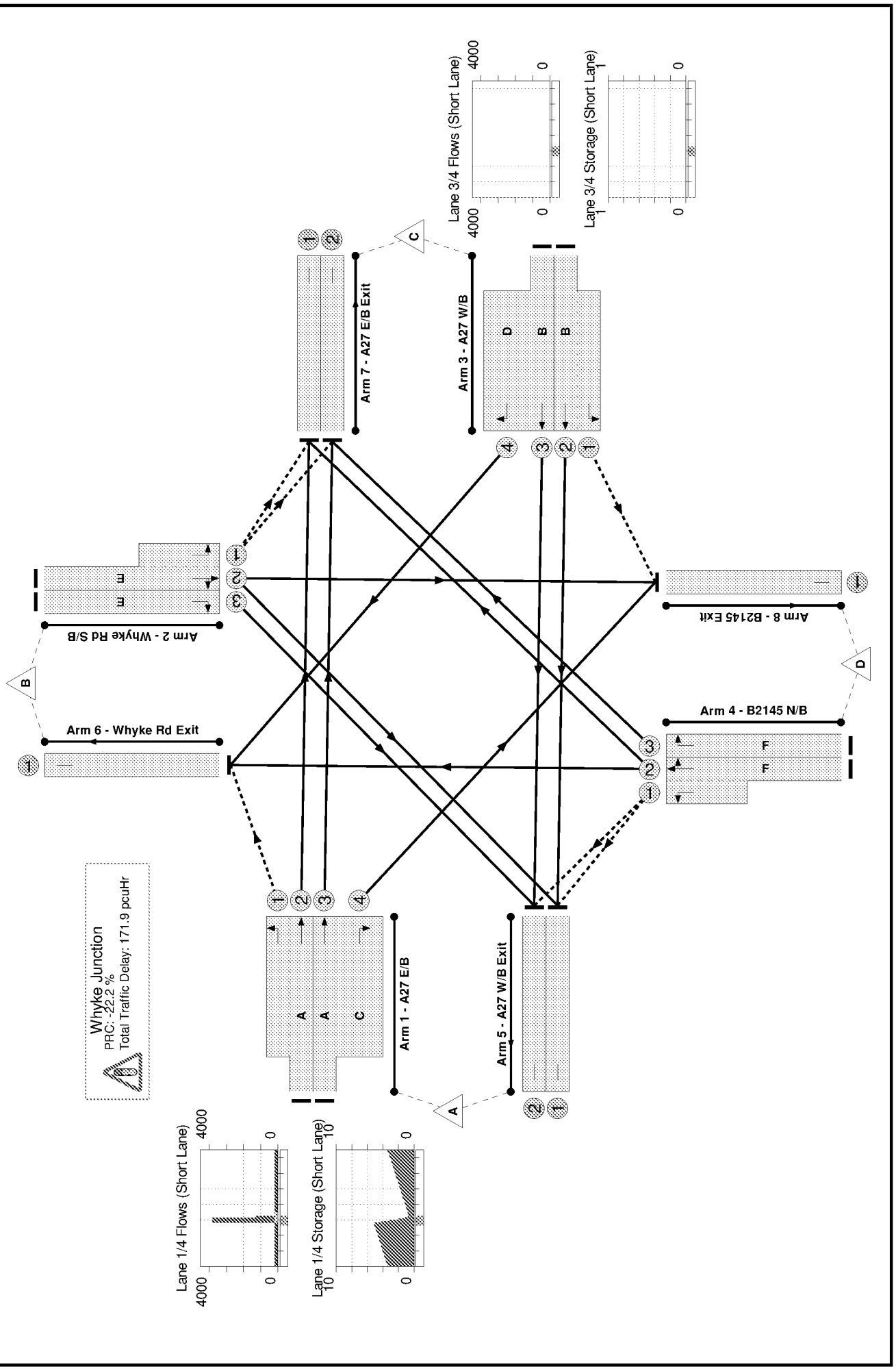
Stage	1	2	3	4
Duration	20	7	30	8
Change Point	0	27	39	74

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**109.9%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**109.9%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	20	-	532	2105:1871	515	103.2%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	20:7	-	731	2105:3828	665	109.9%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	30	-	781	1965:1828	712	109.7%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	30	-	2	1914	659	0.3%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	22	-	1018	2105:1871	992	102.6%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	22:7	-	458	2105:3828	538	85.1%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	8	-	486	1870:1828	489	99.5%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	8	-	176	1914	191	92.0%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	702	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	117	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	653	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	769	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	1333	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**261**	**634**	**0**	**37.6**	**134.3**	**0.0**	**171.9**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**261**	**634**	**0**	**37.6**	**134.3**	**0.0**	**171.9**	**-**	**-**	**-**	**-**
1/2+1/1	532	516	5	20	0	5.6	16.4	-	22.0	148.7	13.1	16.4	29.5
1/3+1/4	731	682	-	-	-	9.4	37.9	-	47.3	233.1	14.7	37.9	52.6
2/2+2/1	781	720	8	96	0	8.1	39.4	-	47.5	218.9	22.8	39.4	62.2
2/3	2	2	-	-	-	0.0	0.0	-	0.0	22.4	0.0	0.0	0.0
3/2+3/1	1018	1004	138	328	0	6.1	23.7	-	29.8	105.3	14.2	23.7	37.9
3/3+3/4	458	458	-	-	-	4.1	2.7	-	6.7	53.0	10.8	2.7	13.5
4/2+4/1	486	486	110	190	0	2.4	10.4	-	12.8	94.7	4.6	10.4	15.0
4/3	176	176	-	-	-	2.0	3.8	-	5.8	118.3	4.4	3.8	8.2
5/1	689	686	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	117	117	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	636	636	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	719	719	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1273	1273	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -22.2
PRC Over All Lanes (%): -22.2

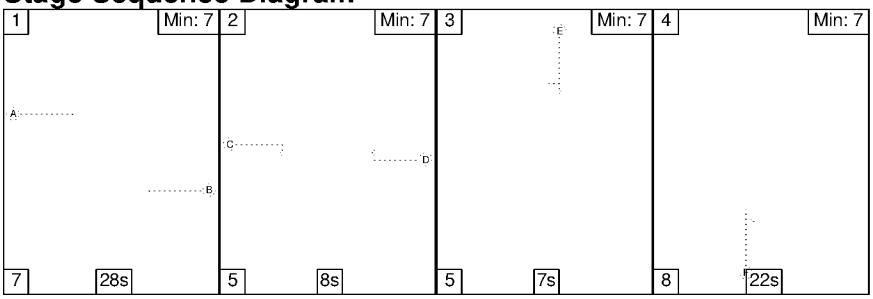
Total Delay for Signalled Lanes (pcuHr): 171.89
Total Delay Over All Lanes(pcuHr): 171.89

Cycle Time (s): 90

Full Input Data And Results

Scenario 3: '2031 LP - mitigation AM' (FG5: '2031 LP - mitigation AM', Plan 1: 'Single Stage')

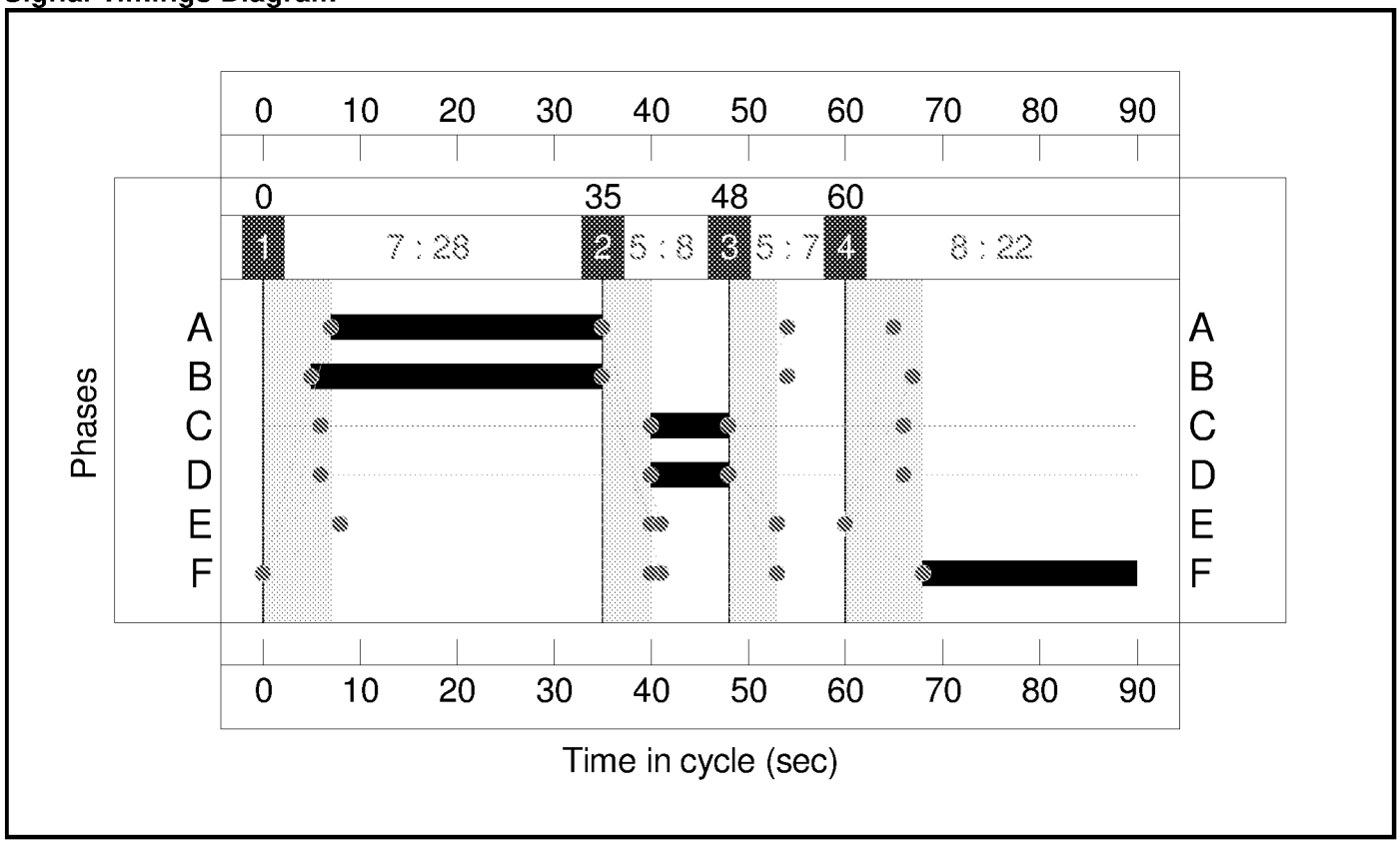
Stage Sequence Diagram



Stage Timings

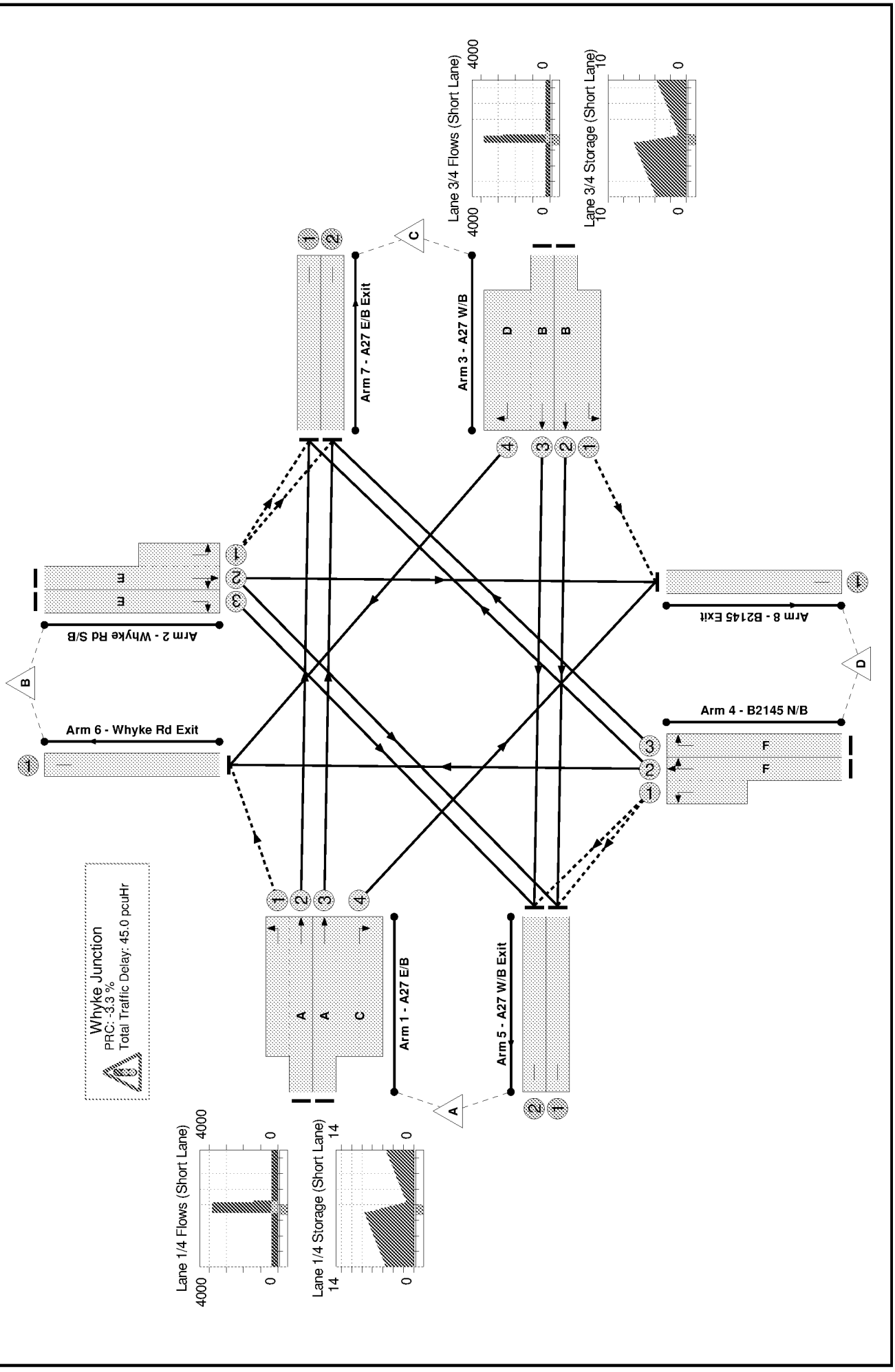
Stage	1	2	3	4
Duration	28	8	7	22
Change Point	0	35	48	60

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.0%**
Whyke Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.0%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	28	-	966	2105:1871	1047	92.3%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	28:8	-	356	2105:3828	383	93.0%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	7	-	179	1857:1828	287	62.4%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	7	-	68	1914	170	40.0%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	30	-	674	2105:1871	1186	56.8%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	30:8	-	615	2105:3828	1102	55.8%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	22	-	963	1939:1828	1052	91.6%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	22	-	382	1914	489	78.1%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	822	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	763	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	318	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	689	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	420	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	661	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**321**	**1058**	**0**	**25.8**	**19.2**	**0.0**	**45.0**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**321**	**1058**	**0**	**25.8**	**19.2**	**0.0**	**45.0**	**-**	**-**	**-**	**-**
1/2+1/1	966	966	110	230	0	5.2	5.3	-	10.4	38.9	15.0	5.3	20.2
1/3+1/4	356	356	-	-	-	4.0	4.9	-	8.8	89.5	4.4	4.9	9.3
2/2+2/1	179	179	44	32	0	1.1	0.8	-	1.9	39.2	2.5	0.8	3.3
2/3	68	68	-	-	-	0.7	0.3	-	1.1	56.2	1.6	0.3	1.9
3/2+3/1	674	674	28	234	0	2.8	0.7	-	3.4	18.4	8.4	0.7	9.0
3/3+3/4	615	615	-	-	-	5.1	0.6	-	5.7	33.5	7.2	0.6	7.8
4/2+4/1	963	963	139	562	0	3.6	4.9	-	8.5	31.7	12.2	4.9	17.0
4/3	382	382	-	-	-	3.3	1.7	-	5.0	47.4	8.8	1.7	10.5
5/1	822	822	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	733	733	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	818	818	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	420	420	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	661	661	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -3.3
PRC Over All Lanes (%): -3.3

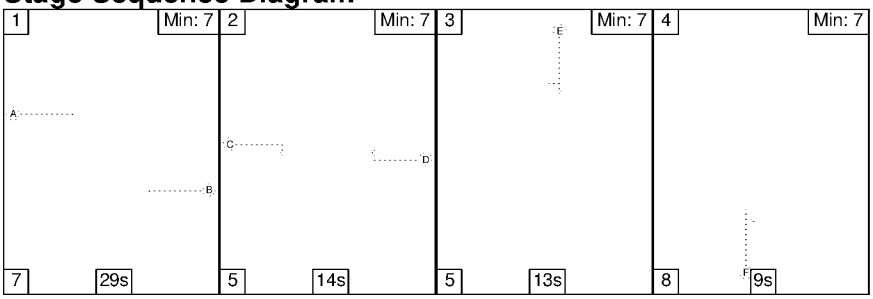
Total Delay for Signalled Lanes (pcuHr): 44.98
Total Delay Over All Lanes(pcuHr): 44.98

Cycle Time (s): 90

Full Input Data And Results

Scenario 4: '2031 LP - mitigation PM' (FG6: '2031 LP - mitigation PM', Plan 1: 'Single Stage')

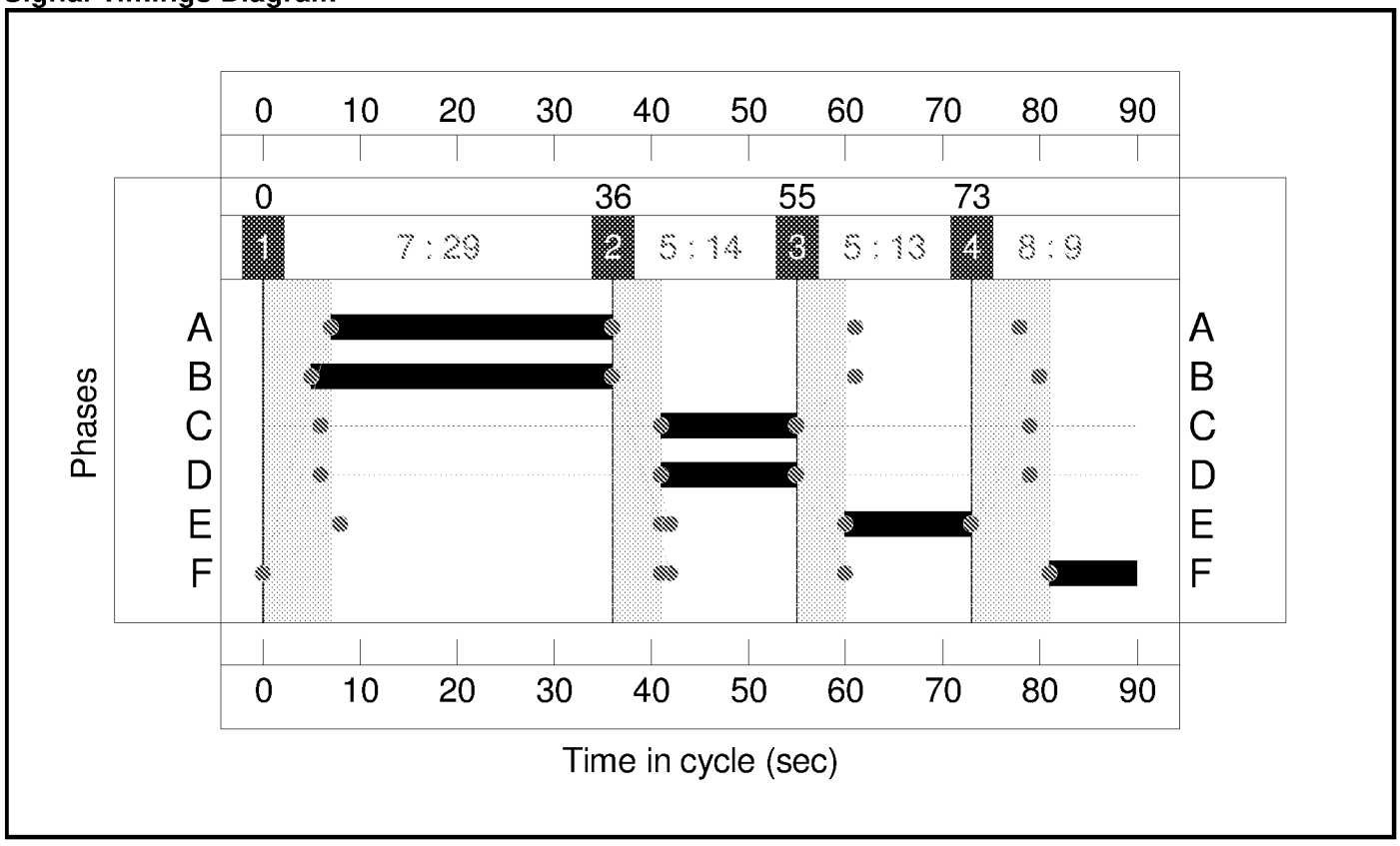
Stage Sequence Diagram



Stage Timings

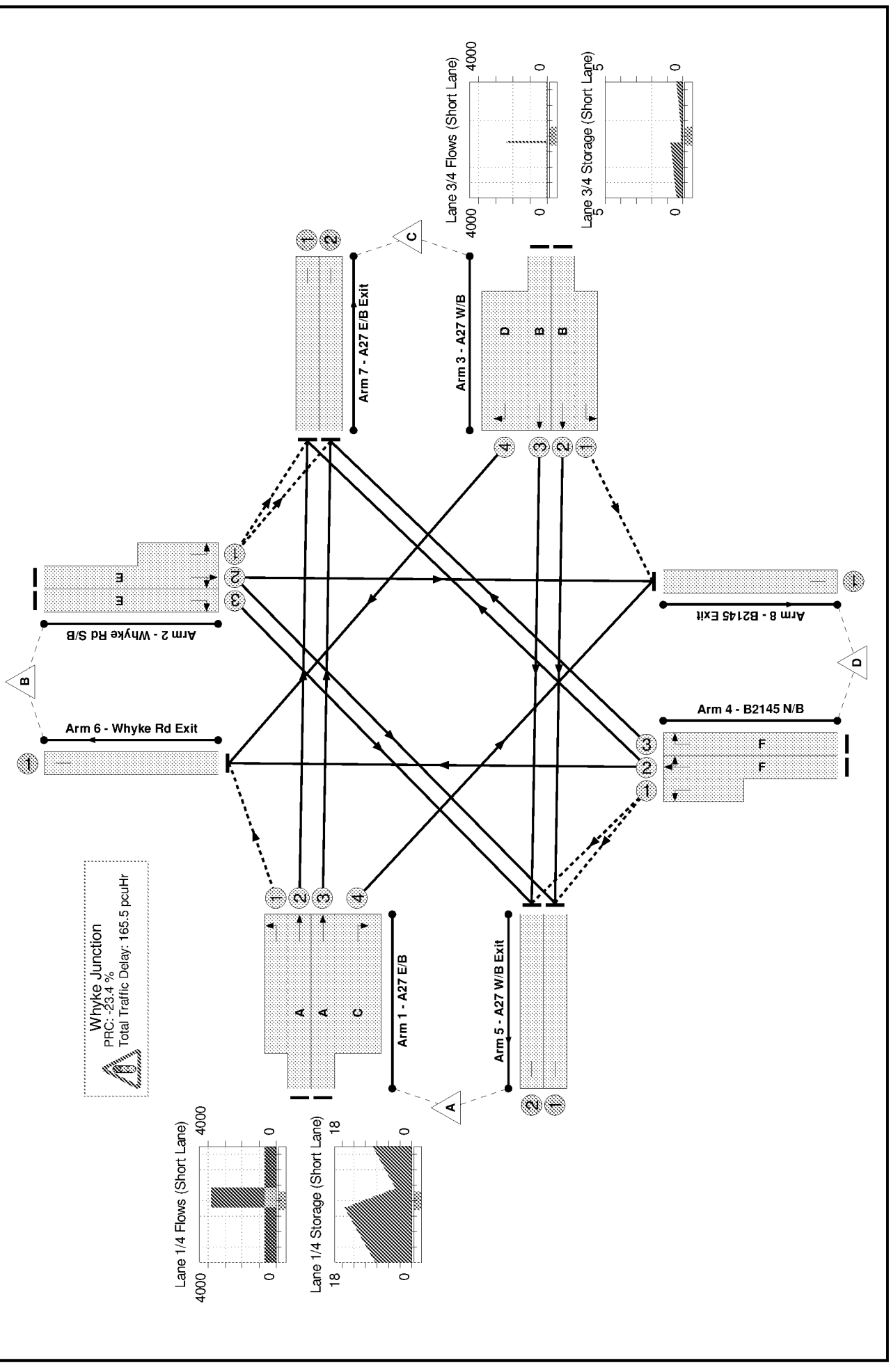
Stage	1	2	3	4
Duration	29	14	13	9
Change Point	0	36	55	73

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**111.0%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**111.0%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	29	-	828	2105:1871	746	111.0%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	29:14	-	665	2105:3828	638	104.2%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	13	-	579	1950:1828	536	108.1%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	13	-	296	1914	298	99.4%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	31	-	732	2105:1871	1621	45.2%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	31:14	-	246	2105:3828	856	28.7%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	9	-	632	1806:1828	610	103.7%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	9	-	219	1914	213	103.0%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	541	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	723	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	105	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	1112	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	370	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	1346	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**349**	**843**	**0**	**34.3**	**131.2**	**0.0**	**165.5**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**349**	**843**	**0**	**34.3**	**131.2**	**0.0**	**165.5**	**-**	**-**	**-**	**-**
1/2+1/1	828	751	14	35	0	9.9	45.6	-	55.5	241.3	23.7	45.6	69.3
1/3+1/4	665	638	-	-	-	7.9	21.3	-	29.2	158.1	8.6	21.3	30.0
2/2+2/1	579	558	84	217	0	4.1	27.0	-	31.0	193.0	10.8	27.0	37.8
2/3	296	296	-	-	-	3.1	8.2	-	11.3	137.4	7.3	8.2	15.5
3/2+3/1	732	732	59	365	0	2.3	0.4	-	2.7	13.4	5.7	0.4	6.1
3/3+3/4	246	246	-	-	-	1.5	0.2	-	1.7	25.1	3.8	0.2	4.0
4/2+4/1	632	618	193	225	0	2.8	19.3	-	22.1	126.0	5.6	19.3	24.9
4/3	219	213	-	-	-	2.8	9.2	-	11.9	195.7	5.6	9.2	14.8
5/1	536	536	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	720	720	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	104	104	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1028	1028	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	364	364	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1300	1300	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -23.4
PRC Over All Lanes (%): -23.4

Total Delay for Signalled Lanes (pcuHr): 165.52
Total Delay Over All Lanes(pcuHr): 165.52

Cycle Time (s): 90

Appendix 8

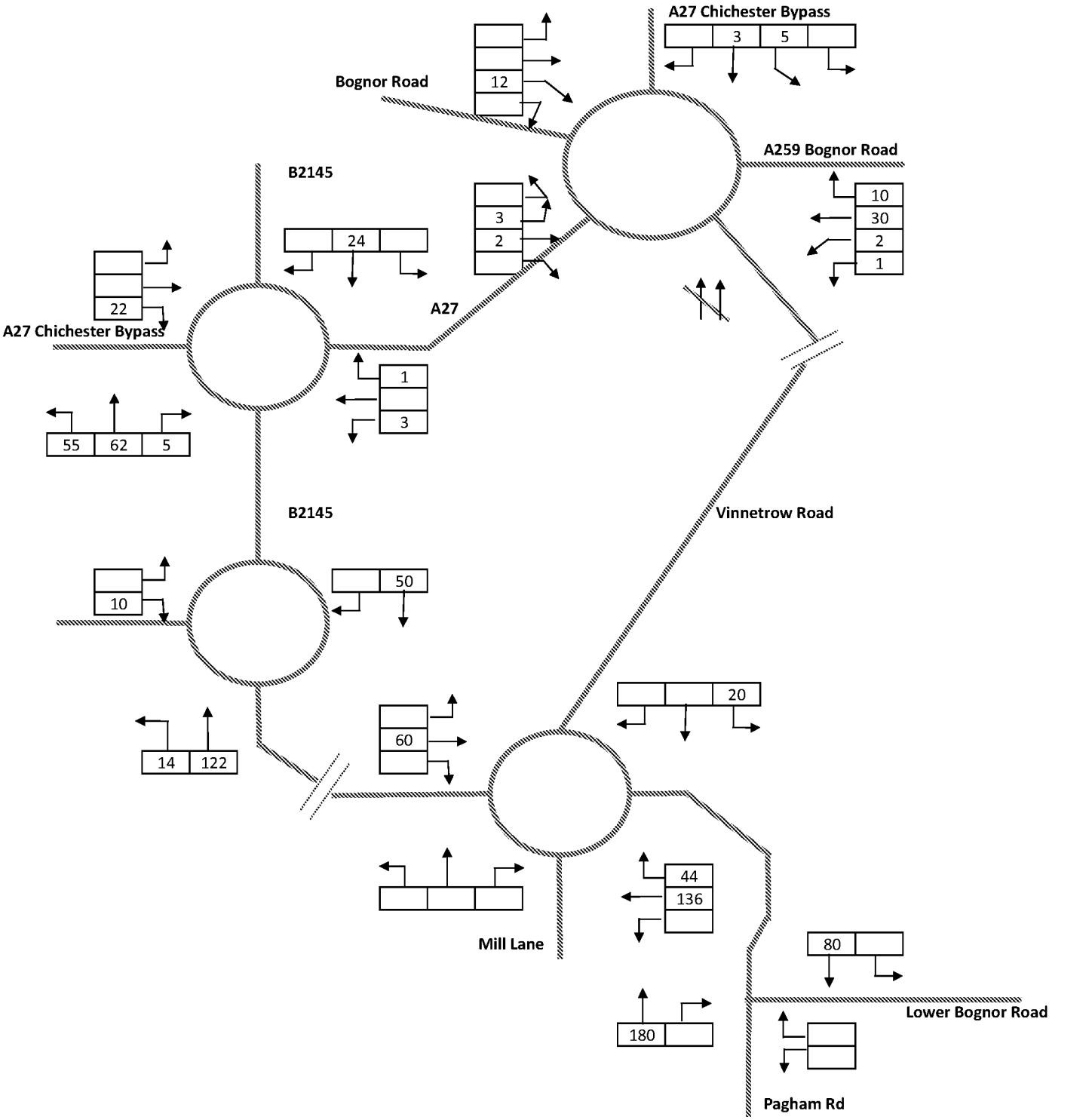
Cumulative Development Turning Movement Diagrams

ARUN DISTRICT COUNCIL P/140/16/OUT

Pagham South

2031 Cumulative Development Flows

AM Peak Hour 0800-0900



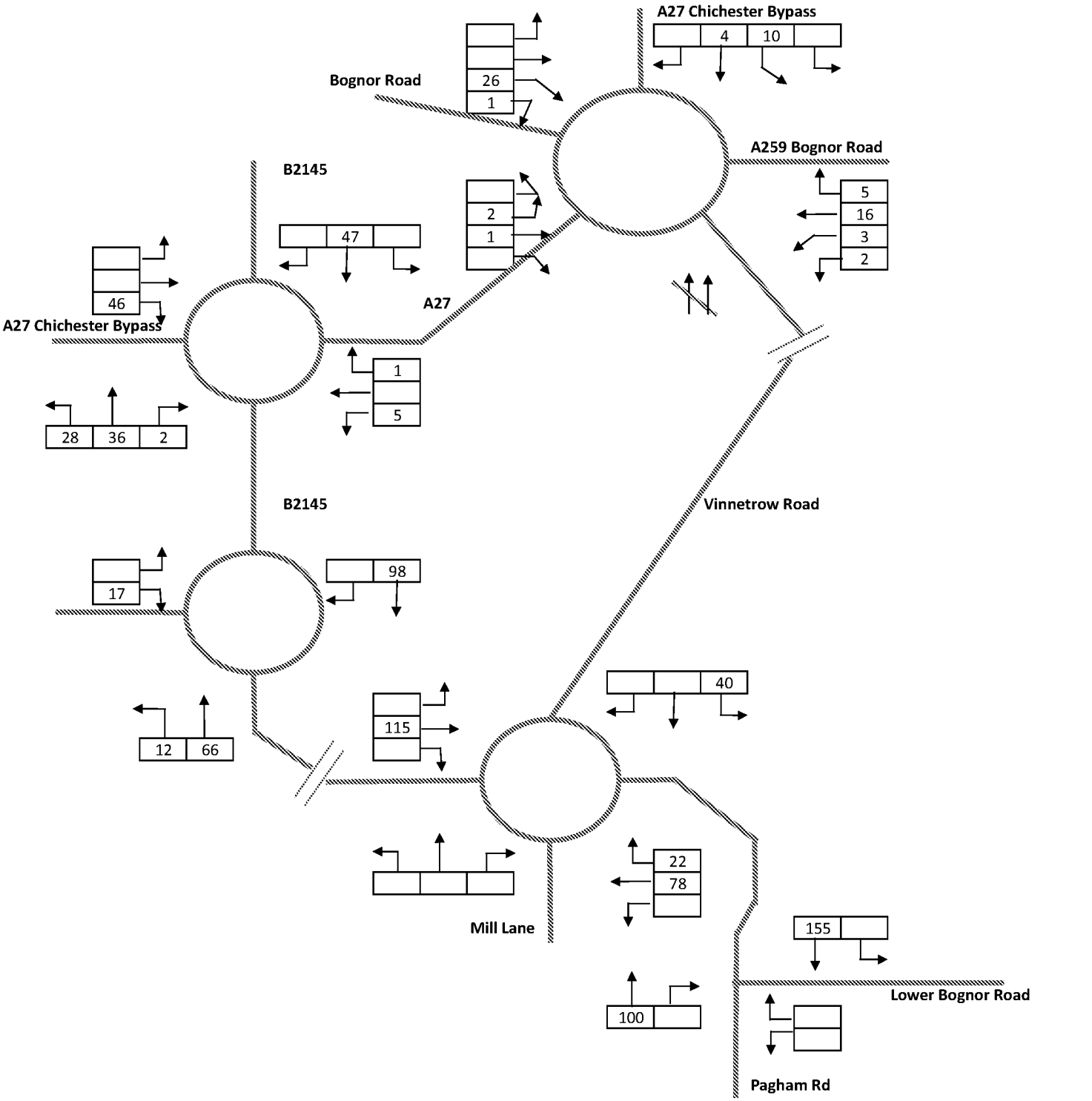
HighgateTransportation

[redacted]

Pagham South

2031 Cumulative Development Flows

PM Peak Hour 1700-1800



HighgateTransportation

[redacted]

Appendix 9

2031 Turning Movement Diagrams (Without Development)

Without Cumulative Development (3 Sites)

Plus Pagham South

Plus Pagham South and Hallam

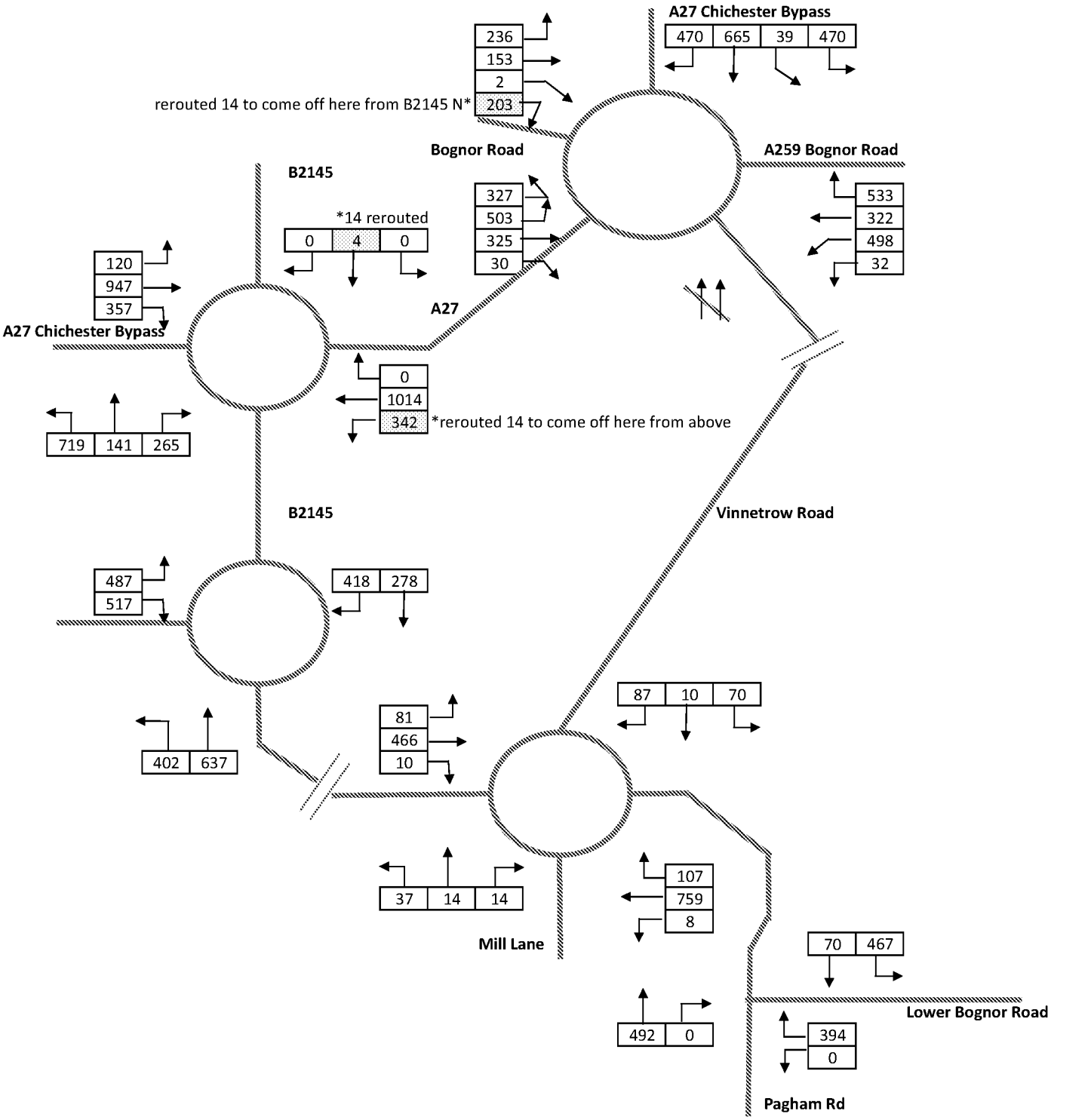
ARUN DISTRICT COUNCIL P/140/16/OUT

Pagham South

2031 SATURN Flows, Mitigation, Reduction for Cumulative Impact

AM Peak Hour 0800-0900

PCUs



*Rerouting development flows to account for changes in SATURN flows

HighgateTransportation

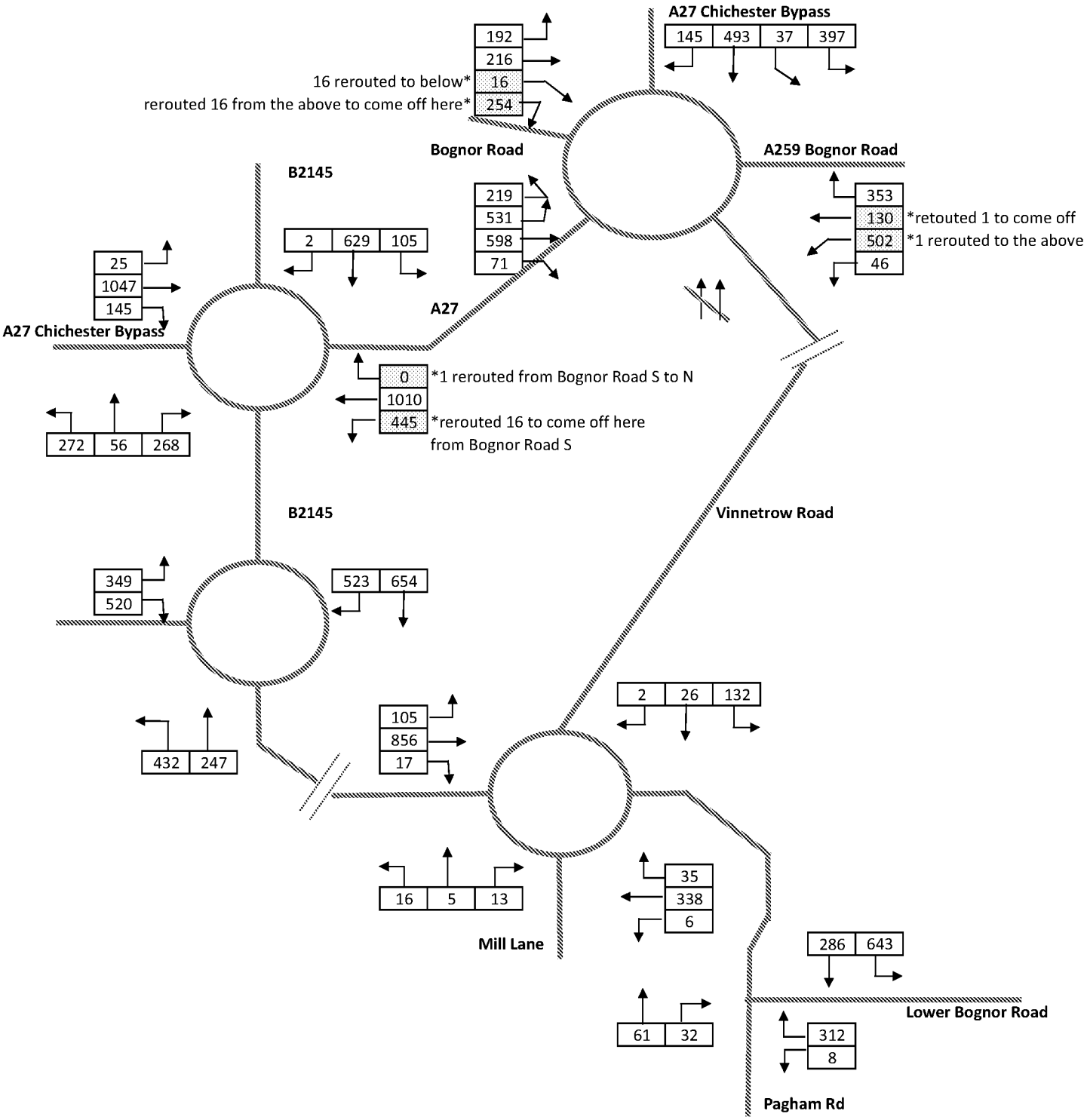
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Pagham South

2031 SATURN Flows, Mitigation, Reduction for Cumulative Impact

PM Peak Hour 1700-1800

PCUs



*Rerouting development flows to account for changes in SATURN flows

HighgateTransportation

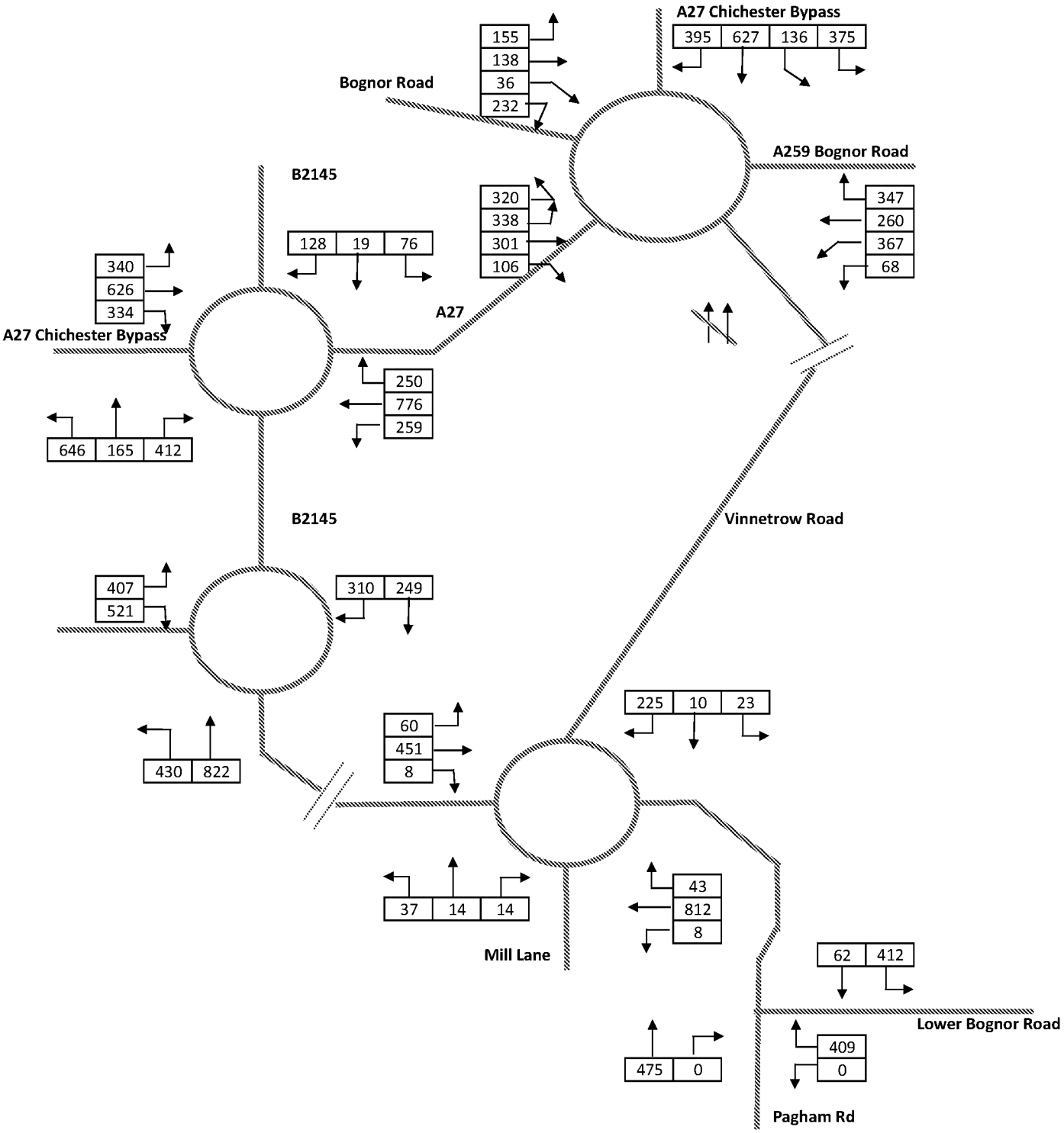
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Pagham South

2031 SATURN Flows, No Mitigation (adjusted), Reduction for Cumulative Impact

AM Peak Hour 0800-0900

PCUs



HighgateTransportation

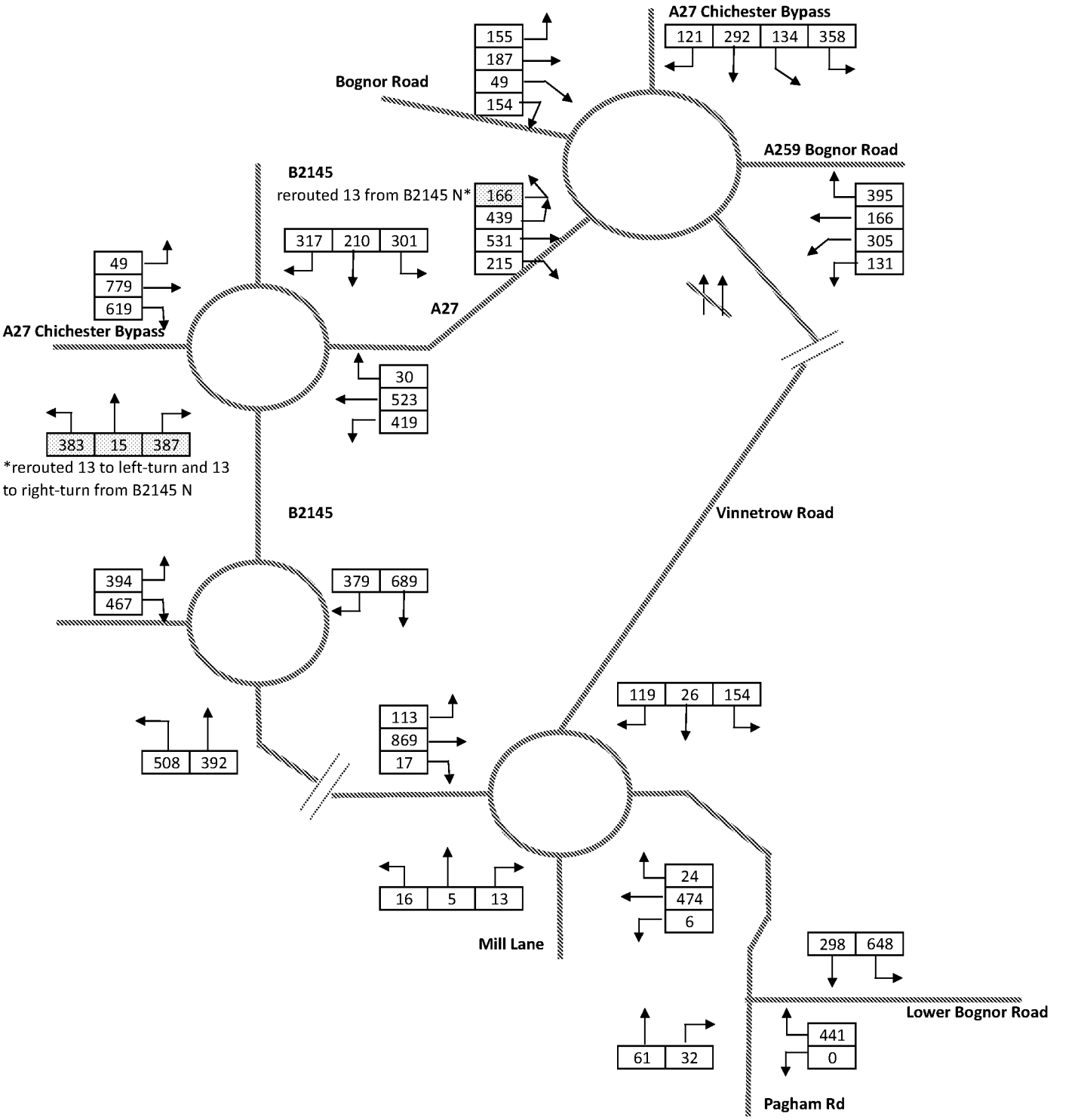
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Pagham South

2031 SATURN Flows, No Mitigation (adjusted), Reduction for Cumulative Impact

PM Peak Hour 1700-1800

PCUs



*Rerouting development flows to account for changes in SATURN flows

HighgateTransportation

[redacted]

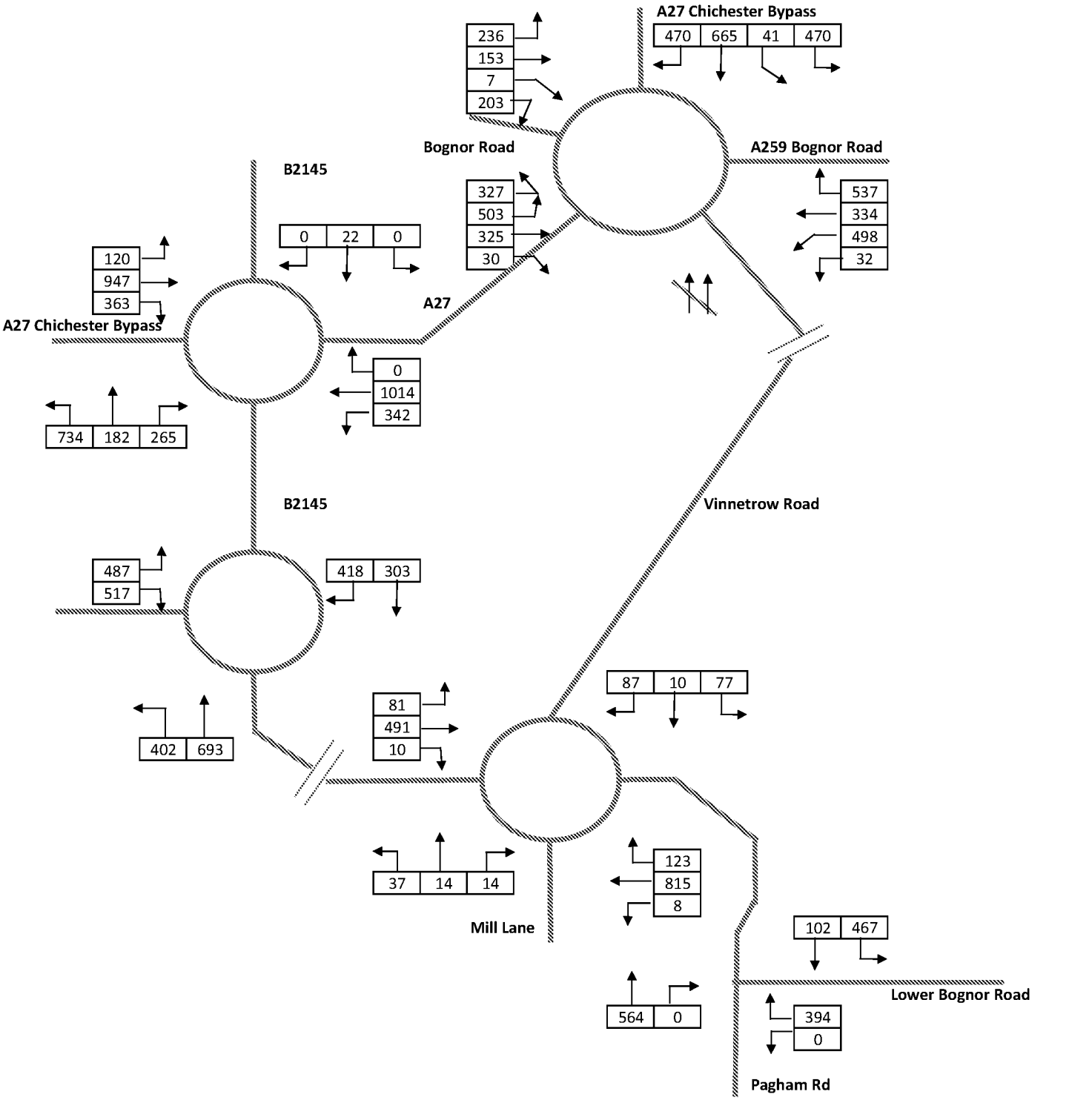
Pagham South

2031 SATURN Flows, Mitigation, Reduction for Cumulative Impact

Plus Pagham South

AM Peak Hour 0800-0900

PCUs



HighgateTransportation

[redacted]

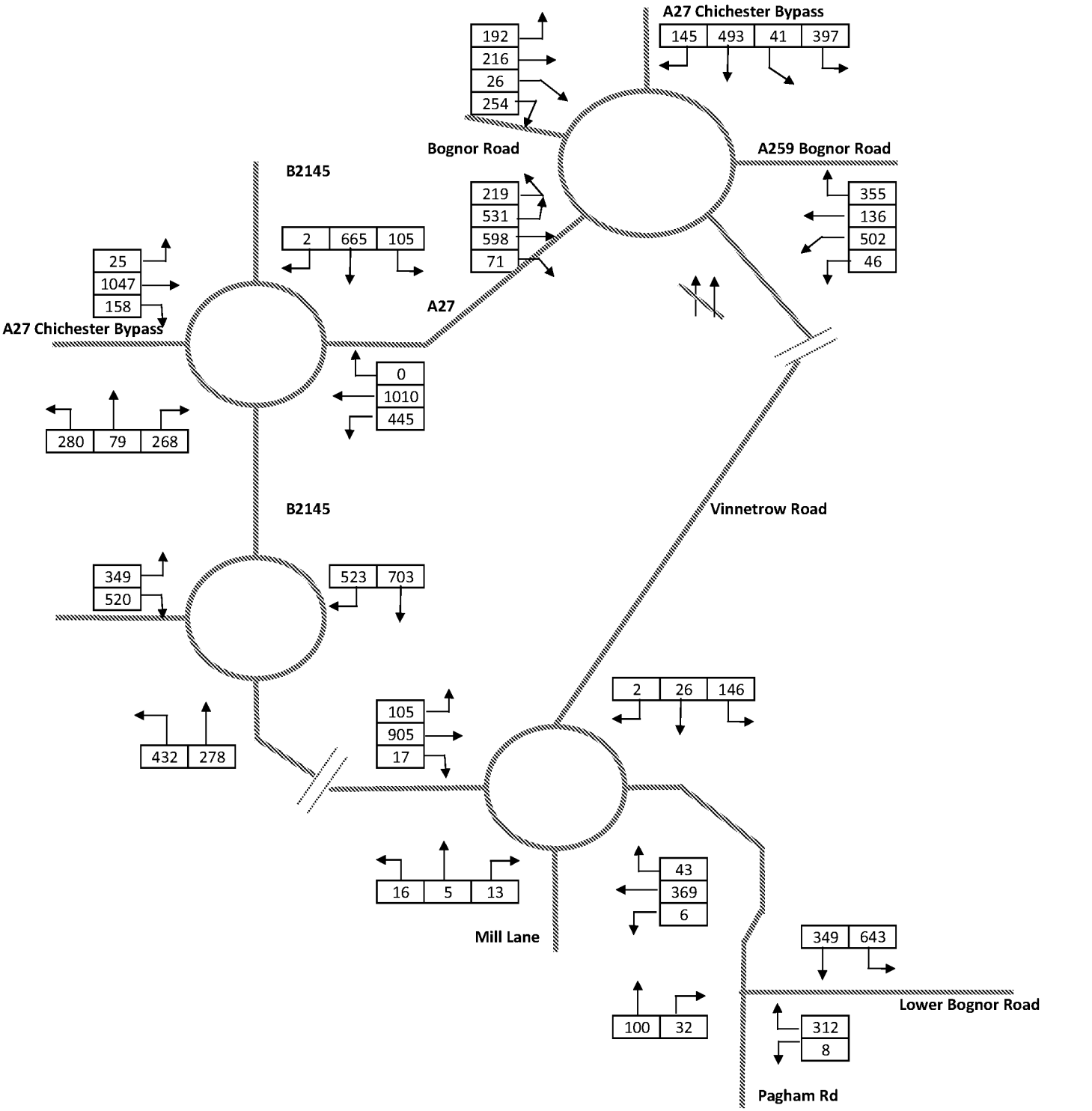
Pagham South

2031 SATURN Flows, Mitigation, Reduction for Cumulative Impact

Plus Pagham South

PM Peak Hour 1700-1800

PCUs



HighgateTransportation

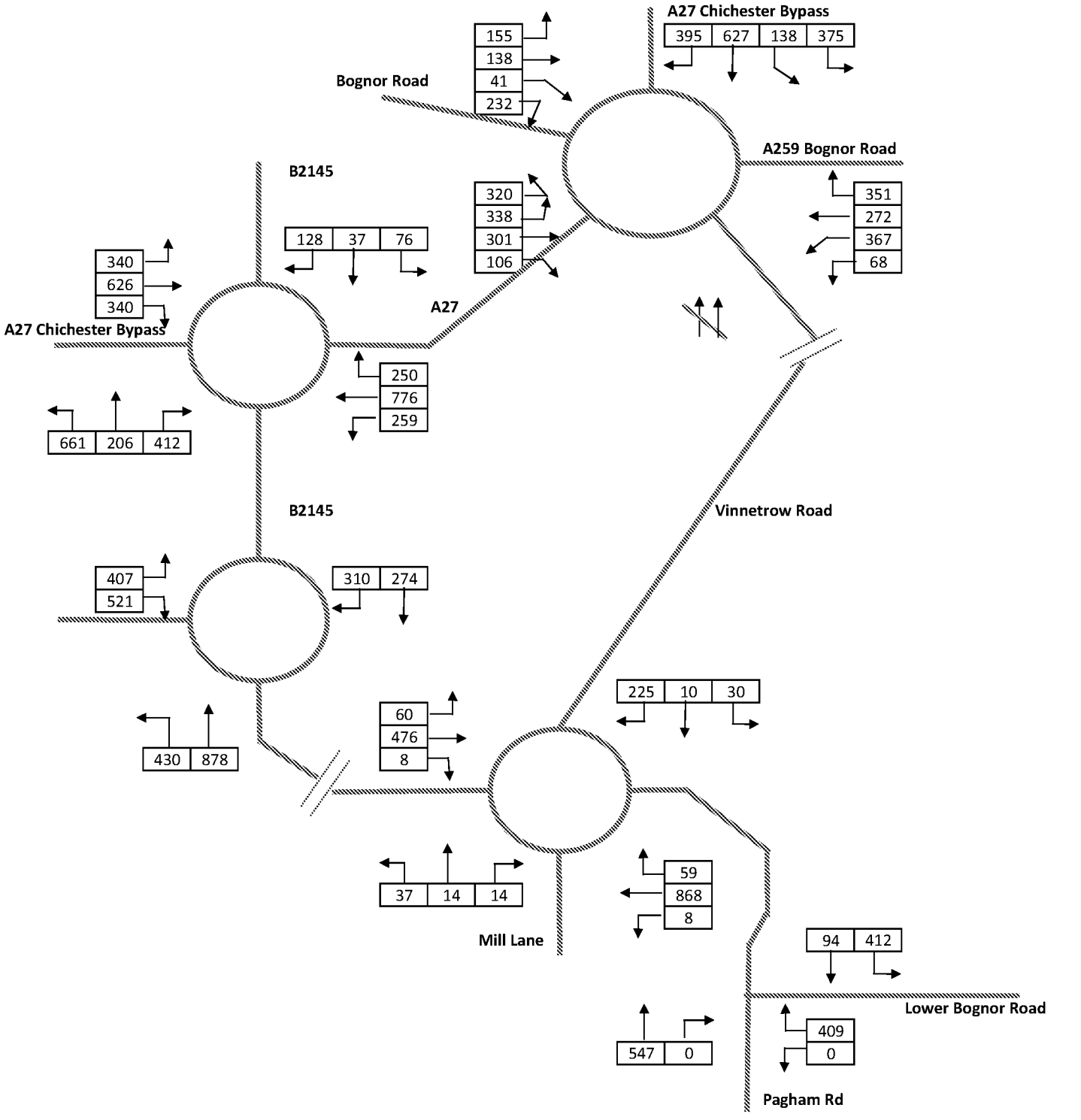
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Pagham South

2031 SATURN Flows, No Mitigation (adjusted), Reduction for Cumulative Impact Plus Pagham South

AM Peak Hour 0800-0900

PCUs



HighgateTransportation

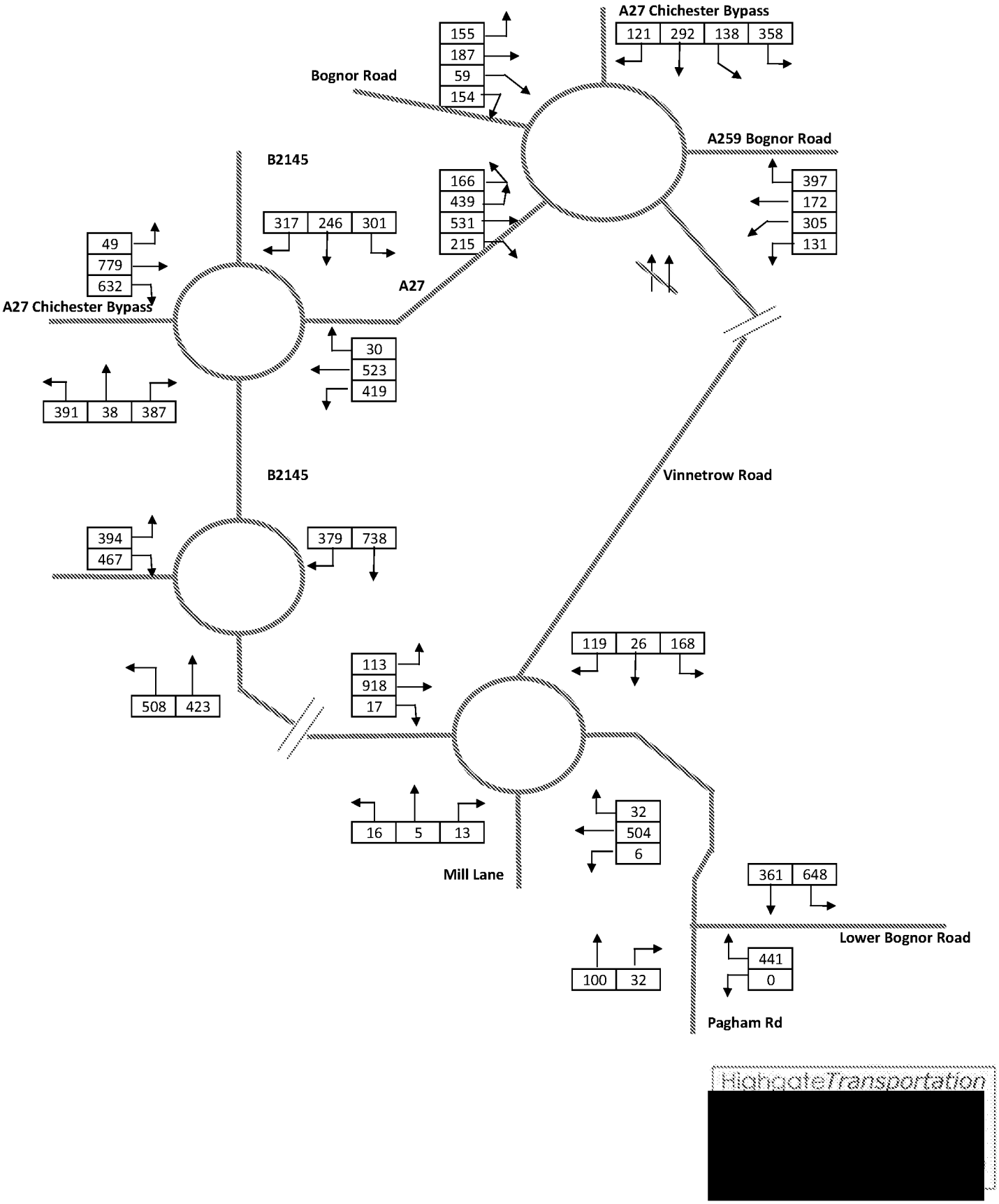
[redacted]

Pagham South

2031 SATURN Flows, No Mitigation (adjusted), Reduction for Cumulative Impact Plus Pagham South

PM Peak Hour 1700-1800

PCUs



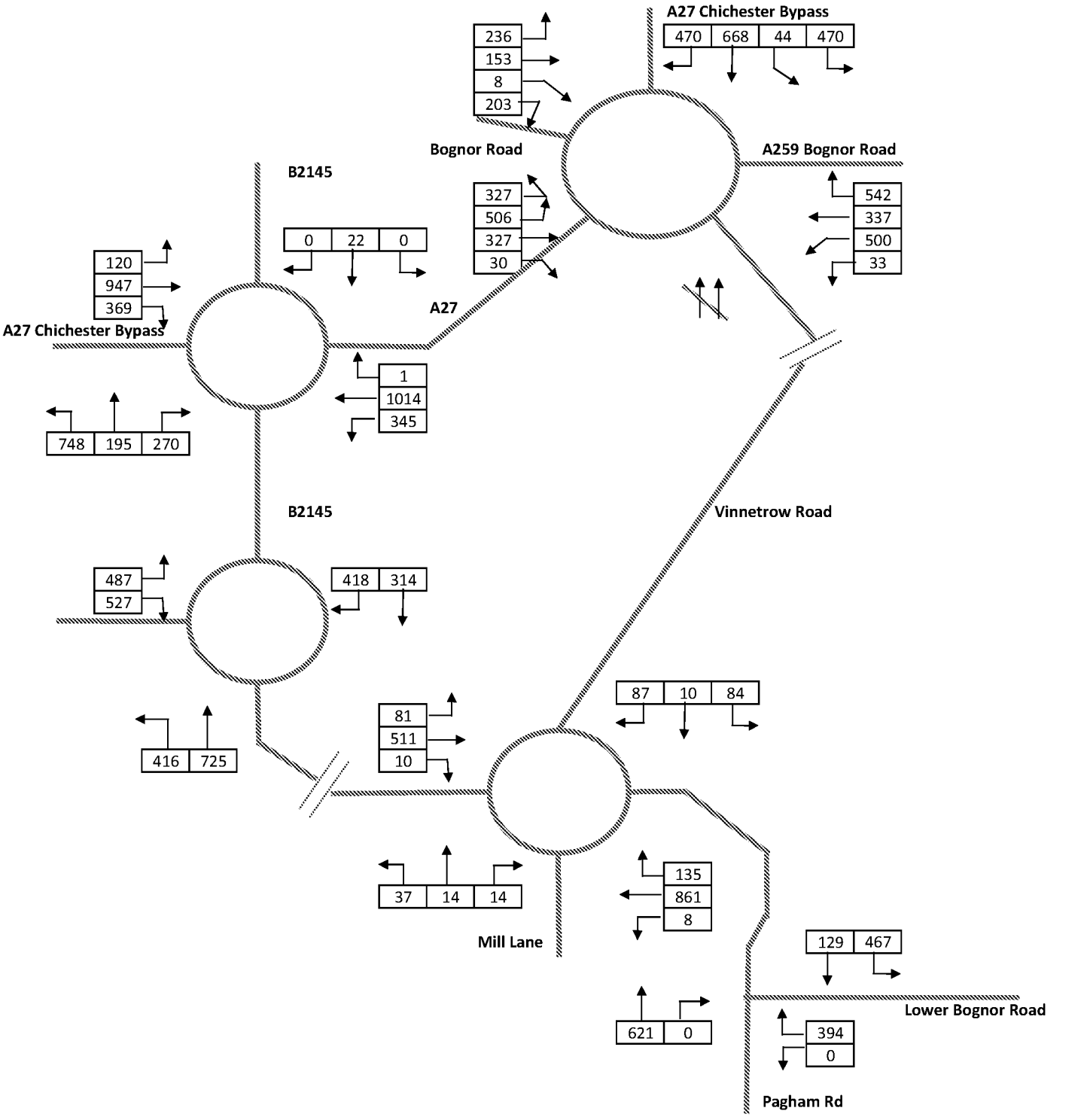
Pagham South

2031 SATURN Flows, Mitigation, Reduction for Cumulative Impact

Plus Pagham South and Hallam Land

AM Peak Hour 0800-0900

PCUs



HighgateTransportation

[redacted]

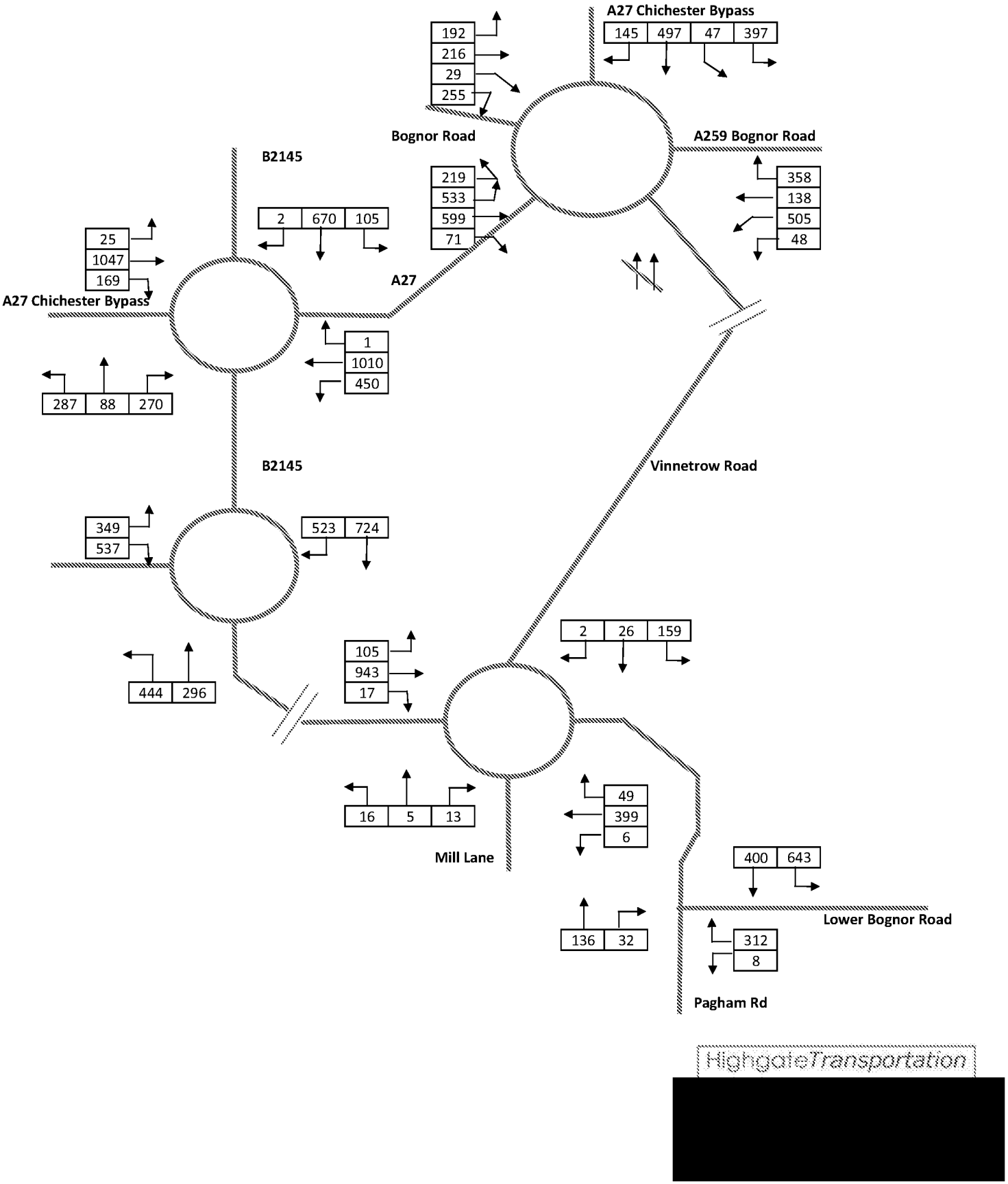
Pagham South

2031 SATURN Flows, Mitigation, Reduction for Cumulative Impact

Plus Pagham South and Hallam Land

PM Peak Hour 1700-1800

PCUs



HighgateTransportation

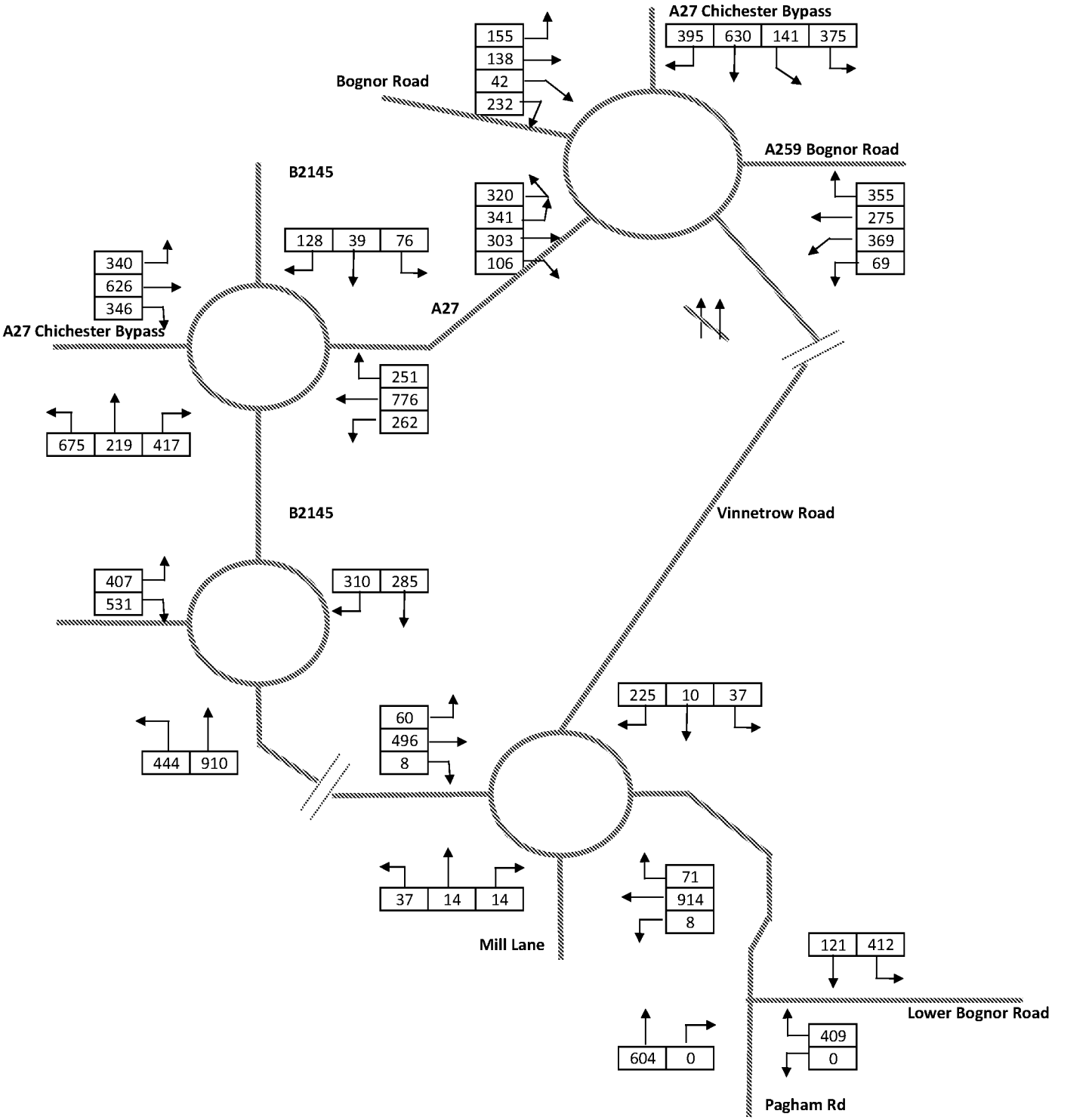
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Pagham South

2031 SATURN Flows, No Mitigation (adjusted), Reduction for Cumulative Impact Plus Pagham South and Hallam Land

AM Peak Hour 0800-0900

PCUs



HighgateTransportation

[redacted]

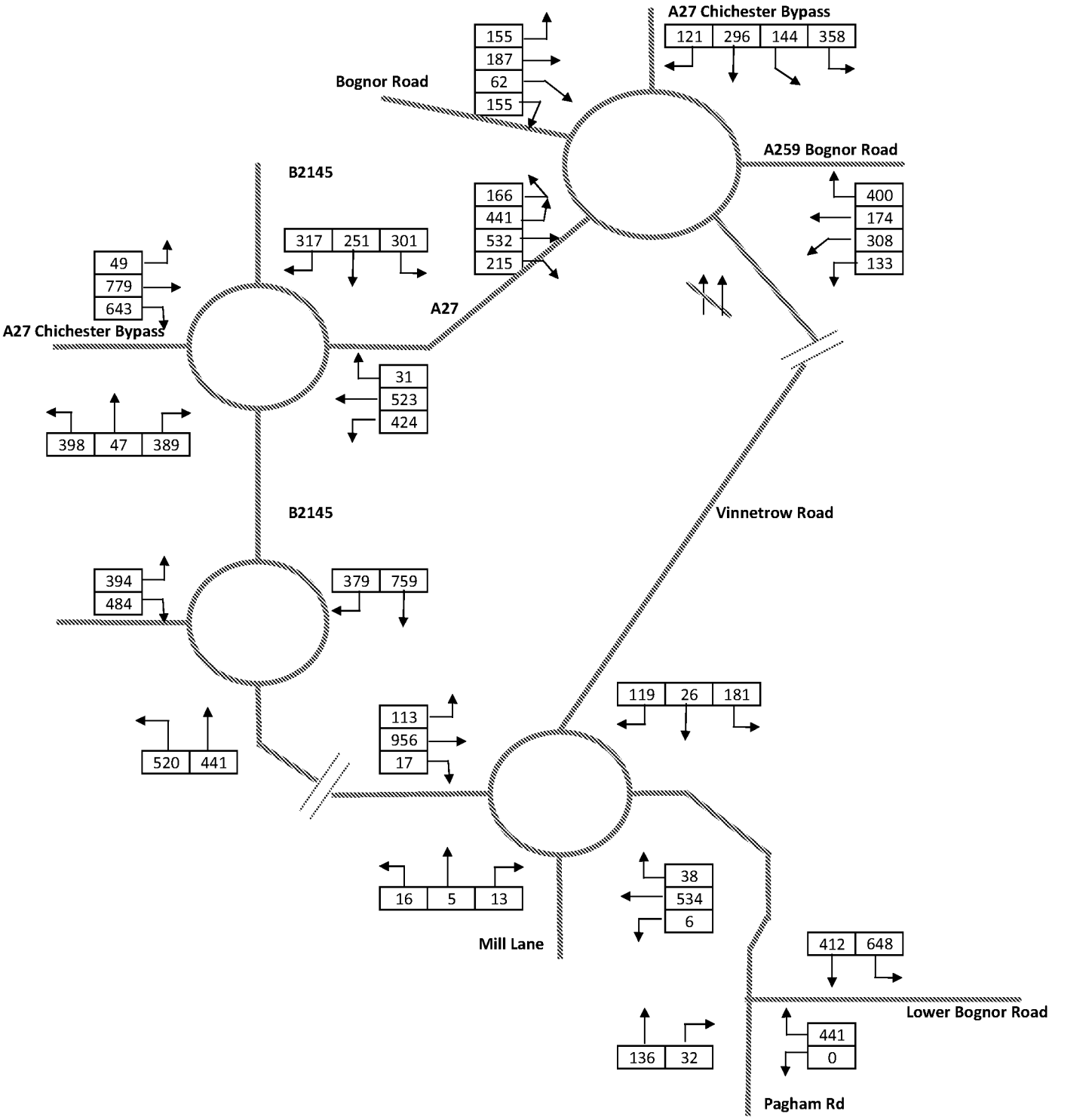
Pagham South

2031 SATURN Flows, No Mitigation (adjusted), Reduction for Cumulative Impact

Plus Pagham South and Hallam Land

PM Peak Hour 1700-1800

PCUs



HighgateTransportation

[redacted]

Appendix 10

Modelling Outputs – 2031 'Without Development'

Enterprise Bognor Regis + Local Plan with mitigation

- *Without Cumulative Development (3 Sites)*
- *Plus Pagham South*
- *Plus Pagham South and Hallam*

Enterprise Bognor Regis + Local Plan without mitigation

- *Without Cumulative Development (3 Sites)*
- *Plus Pagham South*
- *Plus Pagham South and Hallam*

ARUN DISTRICT COUNCIL P/140/16/OUT

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.1.4646 []
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Filename: Lower Bognor Rd 2031 Without Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 18/03/2017 18:37:02

»2031 LP + mitigation - Cumulative, AM
»2031 LP + mitigation - Cumulative, PM
»2031 LP - mitigation - Cumulative, AM
»2031 LP - mitigation - Cumulative, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation - Cumulative													
Stream B-AC	18.4	152.77	1.03	F	42.30	E	-19 % [Stream B-AC]	5.3	57.94	0.87	F	14.07	B	-9 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.1	9.25	0.10	A			
	2031 LP - mitigation - Cumulative													
Stream B-AC	20.4	162.13	1.04	F	46.63	E	-20 % [Stream B-AC]	50.7	337.67	1.21	F	118.73	F	-28 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.1	9.35	0.10	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. 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	(untitled)
Location	
Site number	
Date	19/09/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-MD9GBJC\Fiona
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 LP + mitigation - Cumulative	AM	ONE HOUR	07:45	09:15	15
D6	2031 LP + mitigation - Cumulative	PM	ONE HOUR	16:45	18:15	15
D7	2031 LP - mitigation - Cumulative	AM	ONE HOUR	07:45	09:15	15
D8	2031 LP - mitigation - Cumulative	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation - Cumulative, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	42.36	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-19	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	Pagham Road North		Major
B	Lower Bognor Road		Minor
C	Pagham Road South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30			60.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.50	35	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	576	0.099	0.250	0.158	0.358
1	B-C	736	0.106	0.269	-	-
1	C-B	609	0.223	0.223	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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)
D5	2031 LP + mitigation - Cumulative	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)

HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	537	100.000
B		✓	394	100.000
C		✓	492	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	467	70
	B	394	0	0
	C	492	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	5
	B	1	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.53	152.77	18.4	53.2	F
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	297	470	0.631	290	1.6	19.565	C
C-AB	0	519	0.000	0	0.0	0.000	A
C-A	370			370			
A-B	352			352			
A-C	53			53			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	354	449	0.788	348	3.2	33.716	D
C-AB	0	501	0.000	0	0.0	0.000	A
C-A	442			442			
A-B	420			420			
A-C	63			63			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	434	421	1.031	397	12.4	92.173	F
C-AB	0	477	0.000	0	0.0	0.000	A
C-A	542			542			
A-B	514			514			
A-C	77			77			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	434	421	1.031	410	18.4	152.774	F
C-AB	0	477	0.000	0	0.0	0.000	A
C-A	542			542			
A-B	514			514			
A-C	77			77			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	354	449	0.788	408	4.8	37.376	F
C-AB	0	501	0.000	0	0.0	0.000	A
C-A	442			442			
A-B	420			420			
A-C	63			63			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	297	470	0.631	309	1.8	23.940	C
C-AB	0	519	0.000	0	0.0	0.000	A
C-A	370			370			
A-B	352			352			
A-C	53			53			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.63	0.58	1.03	2.09	2.63			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	3.23	0.12	1.44	7.58	10.42			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	12.41	0.99	8.76	26.71	34.19			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	18.39	1.15	12.66	41.06	53.15			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	4.82	0.05	0.52	13.77	23.47			N/A	N/A

C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.83	0.03	0.31	2.55	8.98			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 LP + mitigation - Cumulative, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	14.07	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-9	Stream B-AC

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)
D6	2031 LP + mitigation - Cumulative	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	929	100.000
B		✓	320	100.000
C		✓	93	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	643	286
	B	312	0	8
	C	61	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.67	57.94	5.3	28.1	F
C-AB	0.10	9.25	0.1	0.6	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	241	462	0.522	237	1.1	15.715	C
C-AB	27	487	0.055	26	0.1	7.838	A
C-A	43			43			
A-B	484			484			
A-C	215			215			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	288	439	0.655	285	1.8	22.907	C
C-AB	33	465	0.070	33	0.1	8.371	A
C-A	51			51			
A-B	578			578			
A-C	257			257			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	352	407	0.865	341	4.6	47.549	E
C-AB	42	434	0.096	42	0.1	9.233	A
C-A	61			61			
A-B	708			708			
A-C	315			315			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	352	407	0.865	350	5.3	57.936	F
C-AB	42	434	0.096	42	0.1	9.249	A
C-A	61			61			
A-B	708			708			
A-C	315			315			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	288	439	0.656	301	2.0	28.040	D
C-AB	33	465	0.070	33	0.1	8.395	A
C-A	51			51			
A-B	578			578			
A-C	257			257			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	241	462	0.522	245	1.1	16.842	C
C-AB	27	487	0.055	27	0.1	7.858	A
C-A	43			43			

A-B	484			484			
A-C	215			215			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.05	0.55	1.00	1.40	1.45			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.78	0.09	1.25	3.74	5.01			N/A	N/A
C-AB	0.09	0.03	0.26	0.46	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	4.64	0.06	0.98	13.21	21.26			N/A	N/A
C-AB	0.13	0.03	0.27	0.48	0.57			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	5.26	0.04	0.41	14.25	28.12			N/A	N/A
C-AB	0.13	0.03	0.25	0.45	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.04	0.04	0.40	5.52	9.97			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.13	0.03	0.32	2.25	5.75			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

2031 LP - mitigation - Cumulative, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	48.85	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-20	Stream B-AC

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)
D7	2031 LP - mitigation - Cumulative	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	474	100.000
B		✓	409	100.000
C		✓	475	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	412	62
	B	409	0	0
	C	475	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	5
	B	1	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.04	182.13	20.4	85.8	F
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	308	478	0.645	301	1.7	19.885	C
C-AB	0	529	0.000	0	0.0	0.000	A
C-A	358			358			
A-B	310			310			
A-C	47			47			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	368	459	0.802	361	3.5	34.794	D
C-AB	0	514	0.000	0	0.0	0.000	A
C-A	427			427			
A-B	370			370			
A-C	56			56			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	450	432	1.042	410	13.5	85.781	F
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	523			523			
A-B	454			454			
A-C	68			68			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	450	432	1.042	423	20.4	182.128	F
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	523			523			
A-B	454			454			
A-C	68			68			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	368	459	0.802	427	5.5	111.293	F
C-AB	0	514	0.000	0	0.0	0.000	A
C-A	427			427			
A-B	370			370			
A-C	56			56			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	308	478	0.645	322	2.0	25.212	D
C-AB	0	529	0.000	0	0.0	0.000	A
C-A	358			358			

A-B	310			310			
A-C	47			47			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.72	0.58	1.13	2.43	2.84			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	3.46	0.12	1.59	8.12	11.13			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	13.51	1.34	9.91	28.31	35.85			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	20.44	1.29	14.93	43.86	55.84			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	5.54	0.06	0.94	15.93	26.20			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.95	0.03	0.31	2.77	9.65			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 LP - mitigation - Cumulative, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	118.73	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-28	Stream B-AC

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)
D8	2031 LP - mitigation - Cumulative	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	946	100.000
B		✓	441	100.000
C		✓	93	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	648	298
	B	441	0	0
	C	61	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.21	397.67	50.7	88.6	F
C-AB	0.10	9.35	0.1	0.6	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	332	456	0.728	322	2.4	25.379	D
C-AB	27	485	0.055	26	0.1	7.886	A
C-A	43			43			
A-B	488			488			
A-C	224			224			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	396	433	0.916	381	6.3	58.710	F
C-AB	33	462	0.071	33	0.1	8.436	A
C-A	51			51			
A-B	583			583			
A-C	268			268			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	486	400	1.213	395	28.1	183.646	F
C-AB	42	430	0.097	42	0.1	9.332	A
C-A	61			61			
A-B	713			713			
A-C	328			328			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	486	400	1.213	399	50.7	369.429	F
C-AB	42	430	0.097	42	0.1	9.345	A
C-A	61			61			
A-B	713			713			
A-C	328			328			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	396	433	0.916	424	43.7	397.670	F
C-AB	33	462	0.071	33	0.1	8.459	A
C-A	51			51			
A-B	583			583			
A-C	268			268			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	332	456	0.728	446	15.3	245.314	F
C-AB	27	485	0.055	27	0.1	7.906	A
C-A	43			43			

A-B	488			488			
A-C	224			224			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.41	0.11	1.03	5.38	7.32			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	6.32	0.23	3.53	14.82	19.89			N/A	N/A
C-AB	0.09	0.03	0.26	0.47	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	29.08	10.30	26.48	46.85	54.01			N/A	N/A
C-AB	0.13	0.03	0.27	0.48	0.57			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	50.68	22.56	47.64	76.65	86.56			N/A	N/A
C-AB	0.13	0.03	0.25	0.45	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	43.74	15.22	39.92	71.50	82.71			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	15.29	1.39	11.11	32.49	41.28			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.1.4646 []
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Filename: Lower Bognor Rd 2031 Without Cumu + PS.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 18/03/2017 12:44:02

»2031 LP + mitigation - Cumulative + PS, AM
»2031 LP + mitigation - Cumulative + PS, PM
»2031 LP - mitigation - Cumulative + PS, AM
»2031 LP - mitigation - Cumulative +PS, PM
»2031 LP + mitigation - Cumulative +PS +H, AM
»2031 LP + mitigation - Cumulative +PS +H, PM
»2031 LP - mitigation - Cumulative +PS +H, AM
»2031 LP - mitigation - Cumulative +PS +H, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation - Cumulative + PS													
Stream B-AC	28.1	210.46	1.09	F	54.30	F	-22 % [Stream B-AC]	7.5	82.47	0.92	F	18.53	C	-13 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.2	8.96	0.10	A			
	2031 LP - mitigation - Cumulative + PS													
Stream B-AC	28.6	221.13	1.10	F	61.86	F	-23 % [Stream B-AC]							
Stream C-AB	0.0	0.00	0.00	A										
	2031 LP - mitigation - Cumulative +PS													
Stream B-AC								63.8	543.80	1.29	F	151.82	F	-31 % [Stream B-AC]
Stream C-AB								0.2	9.05	0.10	A			
	2031 LP + mitigation - Cumulative +PS +H													
Stream B-AC	33.5	268.66	1.13	F	65.71	F	-24 % [Stream B-AC]	10.7	114.85	0.97	F	24.25	C	-16 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.2	8.67	0.11	A			
	2031 LP - mitigation - Cumulative +PS +H													
Stream B-AC	36.2	279.87	1.14	F	74.04	F	-25 % [Stream B-AC]	78.2	662.58	1.06	F	180.58	F	-33 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.2	8.76	0.11	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. 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	ATA03 A

Location	
Site number	
Date	19/09/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-MD9GBJC\Fiona
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation - Cumulative + PS	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation - Cumulative + PS	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation - Cumulative + PS	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15
D5	2031 LP + mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15
D6	2031 LP + mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15
D7	2031 LP - mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15
D8	2031 LP - mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation - Cumulative + PS, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	84.36	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-22	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	Pagham Road North		Major
B	Lower Bognor Road		Minor
C	Pagham Road South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30			60.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.50	35	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	576	0.099	0.250	0.158	0.358
1	B-C	736	0.106	0.269	-	-
1	C-B	609	0.223	0.223	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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)
D1	2031 LP + mitigation - Cumulative + PS	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)

HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	569	100.000
B		✓	394	100.000
C		✓	564	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	467	102
	B	394	0	0
	C	564	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	5
	B	1	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.09	210.46	26.1	60.2	F
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	297	456	0.651	290	1.8	21.113	C
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	425			425			
A-B	352			352			
A-C	77			77			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	354	432	0.820	346	3.8	38.026	E
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	507			507			
A-B	420			420			
A-C	92			92			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	434	400	1.086	384	16.2	118.530	F
C-AB	0	469	0.000	0	0.0	0.000	A
C-A	621			621			
A-B	514			514			
A-C	112			112			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	434	400	1.086	394	26.1	210.459	F
C-AB	0	469	0.000	0	0.0	0.000	A
C-A	621			621			
A-B	514			514			
A-C	112			112			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	354	432	0.820	416	10.6	166.975	F
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	507			507			
A-B	420			420			
A-C	92			92			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	297	456	0.651	331	2.0	35.711	E
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	425			425			
A-B	352			352			
A-C	77			77			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.76	0.51	1.10	2.70	3.16			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	3.75	0.13	1.77	8.83	12.06			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	16.22	2.31	13.08	31.17	38.19			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	26.09	4.50	21.66	49.51	60.23			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	10.65	0.27	5.86	25.98	35.23			N/A	N/A

C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.04	0.03	0.31	2.56	9.76			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 LP + mitigation - Cumulative + PS, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	18.53	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-13	Stream B-AC

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)
D2	2031 LP + mitigation - Cumulative + PS	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	992	100.000
B		✓	320	100.000
C		✓	132	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	643	349
	B	312	0	8
	C	100	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.92	82.47	7.5	35.1	F
C-AB	0.10	8.96	0.2	0.8	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	241	445	0.541	236	1.1	16.888	C
C-AB	28	499	0.057	28	0.1	7.691	A
C-A	71			71			
A-B	484			484			
A-C	263			263			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	288	419	0.686	284	2.0	25.963	D
C-AB	35	480	0.074	35	0.1	8.169	A
C-A	83			83			
A-B	578			578			
A-C	314			314			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	352	383	0.920	336	6.2	81.232	F
C-AB	47	453	0.103	46	0.2	8.939	A
C-A	99			99			
A-B	708			708			
A-C	384			384			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	352	383	0.920	347	7.5	82.474	F
C-AB	47	454	0.103	47	0.2	8.961	A
C-A	99			99			
A-B	708			708			
A-C	384			384			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	288	419	0.686	308	2.4	36.811	E
C-AB	36	480	0.074	36	0.1	8.201	A
C-A	83			83			
A-B	578			578			
A-C	314			314			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	241	445	0.541	246	1.2	18.429	C
C-AB	28	499	0.057	29	0.1	7.714	A
C-A	71			71			

A-B	484			484			
A-C	263			263			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.13	0.55	1.03	1.13	1.13			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.01	0.09	1.31	4.45	6.04			N/A	N/A
C-AB	0.10	0.03	0.27	0.48	0.64			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	6.16	0.10	1.97	16.56	24.17			N/A	N/A
C-AB	0.16	0.03	0.27	0.49	0.84			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	7.49	0.06	1.33	21.67	35.12			N/A	N/A
C-AB	0.16	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.40	0.04	0.40	6.46	12.07			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.23	0.03	0.31	1.97	6.17			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

2031 LP - mitigation - Cumulative + PS, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	81.86	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-23	Stream B-AC

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)
D3	2031 LP - mitigation - Cumulative + PS	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	506	100.000
B		✓	409	100.000
C		✓	547	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	412	94
	B	409	0	0
	C	547	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	5
	B	1	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.10	221.13	28.6	63.3	F
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	308	463	0.665	300	1.9	21.479	C
C-AB	0	524	0.000	0	0.0	0.000	A
C-A	412			412			
A-B	310			310			
A-C	71			71			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	368	441	0.833	359	4.0	40.369	E
C-AB	0	507	0.000	0	0.0	0.000	A
C-A	492			492			
A-B	370			370			
A-C	85			85			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	450	411	1.096	396	17.5	120.892	F
C-AB	0	485	0.000	0	0.0	0.000	A
C-A	602			602			
A-B	454			454			
A-C	103			103			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	450	411	1.096	406	28.6	221.126	F
C-AB	0	485	0.000	0	0.0	0.000	A
C-A	602			602			
A-B	454			454			
A-C	103			103			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	368	441	0.833	426	14.0	185.822	F
C-AB	0	507	0.000	0	0.0	0.000	A
C-A	492			492			
A-B	370			370			
A-C	85			85			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	308	463	0.665	355	2.2	44.845	E
C-AB	0	524	0.000	0	0.0	0.000	A
C-A	412			412			

A-B	310			310			
A-C	71			71			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.87	0.49	1.19	2.89	3.58			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	4.04	0.14	1.96	9.47	12.89			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	17.53	2.93	14.44	32.99	40.11			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	28.57	5.87	24.27	52.58	63.26			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	13.96	0.90	9.55	30.89	39.93			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.20	0.03	0.31	2.95	10.73			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 LP - mitigation - Cumulative +PS, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	151.62	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-31	Stream B-AC

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)
D4	2031 LP - mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1009	100.000
B		✓	441	100.000
C		✓	132	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	648	361
	B	441	0	0
	C	100	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.29	543.80	68.8	104.7	F
C-AB	0.10	9.05	0.2	0.9	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	332	440	0.755	321	2.7	28.288	D
C-AB	28	497	0.057	28	0.1	7.737	A
C-A	71			71			
A-B	488			488			
A-C	272			272			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	396	413	0.960	375	8.1	70.217	F
C-AB	36	476	0.075	35	0.1	8.230	A
C-A	83			83			
A-B	583			583			
A-C	325			325			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	486	376	1.291	373	36.3	236.896	F
C-AB	47	450	0.104	47	0.2	9.029	A
C-A	99			99			
A-B	713			713			
A-C	397			397			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	486	376	1.291	376	53.8	481.142	F
C-AB	47	450	0.104	47	0.2	9.052	A
C-A	99			99			
A-B	713			713			
A-C	397			397			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	396	413	0.960	406	51.2	543.799	F
C-AB	36	477	0.075	36	0.1	8.264	A
C-A	83			83			
A-B	583			583			
A-C	325			325			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	332	439	0.755	432	38.1	408.843	F
C-AB	28	497	0.057	29	0.1	7.761	A
C-A	71			71			

A-B	488			488			
A-C	272			272			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.71	0.05	0.72	7.40	11.67			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	8.08	0.22	4.32	19.63	26.68			N/A	N/A
C-AB	0.11	0.03	0.27	0.48	0.62			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	36.26	14.73	33.63	56.26	64.08			N/A	N/A
C-AB	0.16	0.03	0.27	0.49	0.86			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	63.76	33.27	61.01	91.02	101.01			N/A	N/A
C-AB	0.16	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	61.25	27.40	57.68	92.70	104.68			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	36.14	8.30	31.23	65.38	78.12			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

2031 LP + mitigation - Cumulative +PS +H, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	55.71	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-24	Stream B-AC

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)
D5	2031 LP + mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	596	100.000
B		✓	394	100.000
C		✓	621	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	467	129
	B	394	0	0
	C	621	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	5
	B	1	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.13	268.88	33.5	67.1	F
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	297	444	0.669	289	1.9	22.551	C
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	468			468			
A-B	352			352			
A-C	97			97			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	354	418	0.848	345	4.3	44.443	E
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	558			558			
A-B	420			420			
A-C	116			116			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	434	382	1.135	371	19.9	141.010	F
C-AB	0	463	0.000	0	0.0	0.000	A
C-A	684			684			
A-B	514			514			
A-C	142			142			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	434	382	1.135	379	33.5	268.885	F
C-AB	0	463	0.000	0	0.0	0.000	A
C-A	684			684			
A-B	514			514			
A-C	142			142			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	354	418	0.848	406	20.6	243.559	F
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	558			558			
A-B	420			420			
A-C	116			116			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	297	444	0.669	370	2.3	75.437	F
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	468			468			
A-B	352			352			
A-C	97			97			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.89	0.29	1.13	3.11	3.91			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	4.30	0.15	2.15	10.07	13.70			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	19.92	4.59	17.11	35.35	42.12			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	33.52	9.76	29.85	57.21	67.13			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	20.65	3.48	17.05	38.98	47.37			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.32	0.03	0.31	3.01	11.22			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 LP + mitigation - Cumulative +PS +H, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	24.25	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-16	Stream B-AC

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)
D6	2031 LP + mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1043	100.000
B		✓	320	100.000
C		✓	168	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	643	400
	B	312	0	8
	C	136	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.97	114.85	10.7	40.9	F
C-AB	0.11	8.67	0.2	1.1	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	241	432	0.558	236	1.2	18.011	C
C-AB	30	512	0.059	30	0.1	7.540	A
C-A	96			96			
A-B	484			484			
A-C	301			301			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	288	403	0.714	283	2.3	29.174	D
C-AB	38	495	0.077	38	0.1	7.964	A
C-A	113			113			
A-B	578			578			
A-C	360			360			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	352	363	0.971	329	8.1	77.219	F
C-AB	52	474	0.109	51	0.2	8.648	A
C-A	133			133			
A-B	708			708			
A-C	440			440			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	352	363	0.971	342	10.7	114.854	F
C-AB	52	474	0.109	52	0.2	8.672	A
C-A	133			133			
A-B	708			708			
A-C	440			440			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	288	403	0.715	319	2.8	52.747	F
C-AB	38	495	0.077	39	0.1	8.003	A
C-A	113			113			
A-B	578			578			
A-C	360			360			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	241	431	0.559	247	1.3	20.112	C
C-AB	30	512	0.059	30	0.1	7.568	A
C-A	96			96			
A-B	484			484			
A-C	301			301			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.21	0.56	1.11	1.45	1.73			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.26	0.09	1.38	5.15	7.11			N/A	N/A
C-AB	0.12	0.03	0.26	0.46	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	8.06	0.22	4.27	19.65	26.74			N/A	N/A
C-AB	0.19	0.03	0.27	0.49	1.06			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	10.72	0.14	4.30	28.60	40.91			N/A	N/A
C-AB	0.19	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.84	0.04	0.40	7.68	14.44			N/A	N/A
C-AB	0.12	0.00	0.00	0.12	0.12			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.32	0.03	0.30	1.72	6.35			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

2031 LP - mitigation - Cumulative +PS +H, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	74.04	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-25	Stream B-AC

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)
D7	2031 LP - mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	533	100.000
B		✓	409	100.000
C		✓	604	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	412	121
	B	409	0	0
	C	604	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	2	5
	B	1	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.14	279.87	36.2	70.5	F
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	308	451	0.682	300	2.0	22.962	C
C-AB	0	519	0.000	0	0.0	0.000	A
C-A	455			455			
A-B	310			310			
A-C	91			91			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	368	427	0.861	357	4.6	46.051	E
C-AB	0	502	0.000	0	0.0	0.000	A
C-A	543			543			
A-B	370			370			
A-C	109			109			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	450	393	1.145	383	21.4	145.387	F
C-AB	0	478	0.000	0	0.0	0.000	A
C-A	665			665			
A-B	454			454			
A-C	133			133			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	450	393	1.145	391	36.2	279.868	F
C-AB	0	478	0.000	0	0.0	0.000	A
C-A	665			665			
A-B	454			454			
A-C	133			133			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	368	427	0.861	415	24.3	264.402	F
C-AB	0	502	0.000	0	0.0	0.000	A
C-A	543			543			
A-B	370			370			
A-C	109			109			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	308	451	0.682	395	2.6	96.476	F
C-AB	0	519	0.000	0	0.0	0.000	A
C-A	455			455			
A-B	310			310			
A-C	91			91			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.00	0.28	1.21	3.48	4.31			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	4.64	0.17	2.43	10.81	14.58			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	21.38	5.39	18.60	37.30	44.18			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	36.24	11.53	32.66	60.50	70.47			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	24.30	5.36	20.81	43.87	52.48			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.55	0.03	0.32	3.87	12.87			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2031 LP - mitigation - Cumulative +PS +H, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Major road direction	Junction Delay (s)	Junction LOS
1	Lower Bognor Road j/w Pagham Road	T-Junction	Two-way	180.58	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-33	Stream B-AC

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)
D8	2031 LP - mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1060	100.000
B		✓	441	100.000
C		✓	168	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	648	412
	B	441	0	0
	C	136	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	1.38	882.56	76.2	122.3	F
C-AB	0.11	8.76	0.2	1.1	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	332	426	0.780	320	3.0	31.226	D
C-AB	30	509	0.059	30	0.1	7.583	A
C-A	96			96			
A-B	488			488			
A-C	310			310			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	396	396	1.000	368	10.1	85.446	F
C-AB	38	492	0.078	38	0.1	8.023	A
C-A	113			113			
A-B	583			583			
A-C	370			370			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	486	356	1.364	354	43.0	291.545	F
C-AB	52	470	0.110	52	0.2	8.732	A
C-A	133			133			
A-B	713			713			
A-C	454			454			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	486	356	1.365	355	75.5	591.490	F
C-AB	52	470	0.111	52	0.2	8.757	A
C-A	133			133			
A-B	713			713			
A-C	454			454			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	396	396	1.000	394	76.2	882.564	F
C-AB	38	492	0.078	39	0.1	8.062	A
C-A	113			113			
A-B	583			583			
A-C	370			370			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	332	426	0.780	420	54.2	580.979	F
C-AB	30	509	0.059	30	0.1	7.608	A
C-A	96			96			
A-B	488			488			
A-C	310			310			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	3.02	0.04	0.40	8.16	15.51			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	10.07	0.22	5.18	25.10	34.47			N/A	N/A
C-AB	0.12	0.03	0.26	0.46	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	43.01	18.32	40.18	65.91	74.77			N/A	N/A
C-AB	0.19	0.03	0.27	0.49	1.07			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	75.53	42.45	72.86	104.69	115.13			N/A	N/A
C-AB	0.19	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	76.22	38.92	72.85	109.94	122.32			N/A	N/A
C-AB	0.13	0.00	0.00	0.13	0.13			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	54.20	18.38	49.39	89.58	103.92			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: Vinnetrow Road B2166 Without Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 18/03/2017 18:31:53

»2031 LP + mitigation - Cumulative, AM
»2031 LP + mitigation - Cumulative, PM
»2031 LP - mitigation - Cumulative, AM
»2031 LP - mitigation - Cumulative, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation - Cumulative													
Arm 1	0.3	5.15	0.20	A	5.85	A	49 % [Arm 2]	0.4	7.41	0.26	A	10.05	B	17 % [Arm 4]
Arm 2	1.7	6.25	0.62	A				0.4	3.13	0.26	A			
Arm 3	0.1	5.27	0.09	A				0.0	3.29	0.03	A			
Arm 4	0.9	5.49	0.47	A				3.9	13.39	0.80	B			
	2031 LP - mitigation - Cumulative													
Arm 1	0.4	5.75	0.29	A	6.28	A	37 % [Arm 2]	1.0	10.85	0.49	B	10.62	B	15 % [Arm 4]
Arm 2	1.9	7.28	0.65	A				0.6	3.85	0.37	A			
Arm 3	0.1	6.00	0.11	A				0.0	3.85	0.04	A			
Arm 4	0.8	4.90	0.43	A				4.2	14.20	0.81	B			

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. Junction LOS and Junction Delay are demand-weighted averages. 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	B2166 jw Vinnetrow Road
Location	
Site number	
Date	10/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	1616
Enumerator	FB
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 LP + mitigation - Cumulative	AM	ONE HOUR	07:45	09:15	15
D6	2031 LP + mitigation - Cumulative	PM	ONE HOUR	16:45	18:15	15
D7	2031 LP - mitigation - Cumulative	AM	ONE HOUR	07:45	09:15	15
D8	2031 LP - mitigation - Cumulative	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation - Cumulative, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	5.85	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	49	Arm 2

Arms

Arms

Arm	Name	Description
1	Vinnetrow Road	
2	B2166 E	
3	Mill Lane	
4	B2166 W	

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	3.00	6.00	5.0	30.0	30.0	35.0	
2	4.00	6.00	12.0	30.0	30.0	30.0	
3	3.00	7.00	8.0	20.0	30.0	30.0	
4	3.50	6.00	6.0	20.0	30.0	30.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.559	1219
2	0.649	1633
3	0.591	1375
4	0.593	1385

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031 LP + mitigation - Cumulative	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	167	100.000
2		✓	874	100.000
3		✓	65	100.000
4		✓	557	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	70	10	87
	2	107	0	8	759
	3	14	14	0	37
	4	81	466	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	11	5
	2	5	0	0	3
	3	0	0	0	0
	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.20	5.15	0.3	1.1	A
2	0.62	6.25	1.7	2.3	A
3	0.09	5.27	0.1	0.5	A
4	0.47	5.49	0.9	2.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	126	367	1014	0.124	125	0.1	4.248	A
2	658	80	1581	0.416	655	0.7	4.011	A
3	49	714	953	0.051	49	0.1	3.981	A
4	419	101	1325	0.316	417	0.5	4.129	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	150	440	973	0.154	150	0.2	4.587	A
2	786	96	1571	0.500	785	1.0	4.717	A
3	58	855	869	0.067	58	0.1	4.439	A
4	501	121	1313	0.381	500	0.6	4.613	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	184	538	918	0.200	184	0.3	5.143	A
2	962	118	1557	0.618	960	1.6	6.195	A
3	72	1047	756	0.095	71	0.1	5.258	A
4	613	148	1297	0.473	612	0.9	5.473	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	184	539	917	0.200	184	0.3	5.148	A
2	962	118	1557	0.618	962	1.7	6.247	A
3	72	1049	755	0.095	72	0.1	5.269	A
4	613	149	1297	0.473	613	0.9	5.491	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	150	441	972	0.154	150	0.2	4.599	A
2	786	96	1571	0.500	788	1.0	4.761	A
3	58	859	867	0.067	59	0.1	4.455	A
4	501	122	1313	0.381	502	0.6	4.635	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	126	369	1012	0.124	126	0.1	4.260	A
2	658	81	1581	0.416	659	0.7	4.037	A
3	49	719	950	0.052	49	0.1	3.995	A
4	419	102	1325	0.317	420	0.5	4.154	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.15	0.00	0.00	0.15	0.15			N/A	N/A
2	0.73	0.57	1.03	1.44	1.50			N/A	N/A
3	0.05	0.00	0.00	0.05	0.05			N/A	N/A
4	0.48	0.00	0.00	0.48	0.48			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.19	0.00	0.00	0.19	0.19			N/A	N/A
2	1.02	0.08	0.89	1.80	2.33			N/A	N/A
3	0.07	0.03	0.25	0.45	0.48			N/A	N/A
4	0.64	0.12	0.89	1.43	1.50			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.26	0.03	0.27	0.48	0.51			N/A	N/A
2	1.64	0.03	0.27	1.64	1.64			N/A	N/A
3	0.10	0.03	0.26	0.47	0.49			N/A	N/A
4	0.92	0.03	0.27	0.92	0.92			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.26	0.03	0.30	0.66	1.12			N/A	N/A
2	1.66	0.03	0.27	1.66	1.66			N/A	N/A

3	0.10	0.00	0.00	0.10	0.10			N/A	N/A
4	0.93	0.03	0.28	0.93	1.98			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.19	0.00	0.00	0.19	0.19			N/A	N/A
2	1.04	0.16	1.04	1.49	1.83			N/A	N/A
3	0.07	0.00	0.00	0.07	0.07			N/A	N/A
4	0.65	0.57	1.04	1.46	1.51			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.15	0.00	0.00	0.15	0.15			N/A	N/A
2	0.74	0.07	0.73	1.38	1.38			N/A	N/A
3	0.05	0.00	0.00	0.05	0.05			N/A	N/A
4	0.49	0.04	0.39	1.25	1.41			N/A	N/A

2031 LP + mitigation - Cumulative, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	10.05	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	17	Arm 4

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)
D6	2031 LP + mitigation - Cumulative	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	160	100.000
2		✓	379	100.000
3		✓	34	100.000
4		✓	978	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	132	26	2
	2	35	0	6	338
	3	5	13	0	16
	4	105	856	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	0	3
	3	0	0	0	0

	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.26	7.41	0.4	1.5	A
2	0.26	3.13	0.4	1.5	A
3	0.03	3.29	0.0	0.5	A
4	0.80	13.39	3.9	18.2	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	120	663	848	0.142	120	0.2	5.058	A
2	285	34	1612	0.177	284	0.2	2.794	A
3	26	281	1209	0.021	26	0.0	3.042	A
4	736	40	1362	0.541	732	1.2	5.814	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	144	794	775	0.186	144	0.2	5.839	A
2	341	40	1607	0.212	340	0.3	2.928	A
3	31	337	1176	0.026	31	0.0	3.142	A
4	879	48	1357	0.648	877	1.8	7.638	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	176	969	677	0.260	176	0.4	7.343	A
2	417	49	1601	0.261	417	0.4	3.132	A
3	37	413	1131	0.033	37	0.0	3.290	A
4	1077	58	1351	0.797	1069	3.8	12.762	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	176	975	674	0.261	176	0.4	7.411	A
2	417	50	1601	0.261	417	0.4	3.132	A
3	37	413	1131	0.033	37	0.0	3.291	A
4	1077	58	1351	0.797	1076	3.9	13.390	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	144	804	770	0.187	144	0.2	5.904	A
2	341	41	1607	0.212	341	0.3	2.930	A
3	31	337	1176	0.026	31	0.0	3.145	A
4	879	48	1357	0.648	887	1.9	7.980	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	120	670	845	0.143	121	0.2	5.098	A
2	285	34	1611	0.177	286	0.2	2.797	A
3	26	283	1208	0.021	26	0.0	3.043	A
4	736	40	1361	0.541	739	1.2	5.956	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	0.22	0.00	0.00	0.22	0.22			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.19	0.56	1.02	1.43	1.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.23	0.00	0.00	0.23	0.23			N/A	N/A
2	0.28	0.00	0.00	0.28	0.28			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	1.84	0.06	0.77	4.67	7.01			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.36	0.03	0.26	0.47	0.50			N/A	N/A
2	0.36	0.03	0.26	0.47	0.49			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	3.78	0.03	0.32	4.84	18.25			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.36	0.03	0.33	1.22	1.50			N/A	N/A
2	0.36	0.03	0.33	1.22	1.49			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	3.89	0.03	0.29	3.89	9.75			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.24	0.00	0.00	0.24	0.24			N/A	N/A
2	0.28	0.00	0.00	0.28	0.28			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	1.93	0.05	0.63	5.01	7.76			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	0.22	0.00	0.00	0.22	0.22			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.22	0.04	0.39	3.08	5.63			N/A	N/A

2031 LP - mitigation - Cumulative, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	6.28	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	Arm 2

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)
D7	2031 LP - mitigation - Cumulative	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	245	100.000
2		✓	863	100.000
3		✓	65	100.000
4		✓	519	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	10	10	225
	2	43	0	8	812
	3	14	14	0	37
	4	60	451	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	11	5
	2	5	0	0	3
	3	0	0	0	0

	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.29	5.75	0.4	1.7	A
2	0.65	7.28	1.9	2.9	A
3	0.11	6.00	0.1	0.5	A
4	0.43	4.90	0.8	2.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	184	355	1021	0.181	184	0.2	4.518	A
2	650	182	1515	0.429	647	0.8	4.258	A
3	49	809	897	0.055	49	0.1	4.245	A
4	391	53	1354	0.289	389	0.4	3.892	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	220	425	982	0.224	220	0.3	4.971	A
2	776	218	1492	0.520	774	1.1	5.164	A
3	58	969	802	0.073	58	0.1	4.841	A
4	467	64	1347	0.346	466	0.5	4.263	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	270	520	928	0.291	269	0.4	5.743	A
2	950	267	1460	0.651	947	1.9	7.191	A
3	72	1186	674	0.106	71	0.1	5.972	A
4	571	78	1339	0.427	571	0.8	4.889	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	270	521	928	0.291	270	0.4	5.753	A
2	950	268	1460	0.651	950	1.9	7.278	A
3	72	1189	672	0.107	72	0.1	5.995	A
4	571	78	1339	0.427	571	0.8	4.899	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	220	426	981	0.225	221	0.3	4.985	A
2	776	219	1491	0.520	779	1.1	5.232	A
3	58	974	799	0.073	59	0.1	4.865	A
4	467	64	1347	0.346	467	0.6	4.278	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	184	357	1020	0.181	185	0.2	4.538	A
2	650	183	1514	0.429	651	0.8	4.304	A
3	49	815	893	0.055	49	0.1	4.264	A
4	391	54	1353	0.289	391	0.4	3.909	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.23	0.00	0.00	0.23	0.23			N/A	N/A
2	0.77	0.57	1.03	1.44	1.49			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.42	0.00	0.00	0.42	0.42			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2	1.10	0.07	0.87	2.03	2.86			N/A	N/A
3	0.08	0.03	0.26	0.47	0.49			N/A	N/A
4	0.55	0.55	1.04	1.46	1.51			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.43	0.03	0.27	0.48	0.51			N/A	N/A
2	1.88	0.03	0.28	1.88	1.88			N/A	N/A
3	0.12	0.03	0.26	0.47	0.49			N/A	N/A
4	0.77	0.03	0.27	0.77	0.77			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.43	0.03	0.33	1.39	1.68			N/A	N/A
2	1.90	0.03	0.27	1.90	1.90			N/A	N/A
3	0.12	0.00	0.00	0.12	0.12			N/A	N/A
4	0.77	0.03	0.29	0.77	2.53			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2	1.13	0.11	1.05	1.82	2.22			N/A	N/A
3	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4	0.56	0.56	1.04	1.46	1.51			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.23	0.00	0.00	0.23	0.23			N/A	N/A
2	0.78	0.06	0.63	1.32	1.84			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.43	0.00	0.00	0.43	0.43			N/A	N/A

2031 LP - mitigation - Cumulative, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	10.62	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	15	Arm 4

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)
D8	2031 LP - mitigation - Cumulative	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	299	100.000
2		✓	504	100.000
3		✓	34	100.000
4		✓	999	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	154	26	119
	2	24	0	6	474
	3	5	13	0	16
	4	113	869	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	0	3
	3	0	0	0	0

	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.49	10.85	1.0	3.9	B
2	0.37	3.85	0.6	2.7	A
3	0.04	3.85	0.0	0.5	A
4	0.81	14.20	4.2	20.5	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	225	672	843	0.267	224	0.4	5.891	A
2	379	121	1555	0.244	378	0.3	3.149	A
3	26	463	1102	0.023	26	0.0	3.345	A
4	752	32	1366	0.550	747	1.2	5.904	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	269	806	769	0.350	268	0.5	7.292	A
2	453	145	1539	0.294	453	0.4	3.413	A
3	31	554	1047	0.029	31	0.0	3.539	A
4	898	38	1363	0.659	895	1.9	7.846	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	329	982	670	0.492	328	1.0	10.625	B
2	555	177	1518	0.366	554	0.6	3.844	A
3	37	678	974	0.038	37	0.0	3.842	A
4	1100	46	1358	0.810	1091	4.1	13.435	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	329	989	666	0.494	329	1.0	10.849	B
2	555	178	1518	0.366	555	0.6	3.851	A
3	37	679	973	0.038	37	0.0	3.846	A
4	1100	46	1358	0.810	1099	4.2	14.199	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	269	816	763	0.352	270	0.6	7.450	A
2	453	147	1538	0.295	454	0.4	3.420	A
3	31	556	1046	0.029	31	0.0	3.546	A
4	898	38	1363	0.659	907	2.0	8.241	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	225	680	839	0.268	226	0.4	5.968	A
2	379	122	1554	0.244	380	0.3	3.161	A
3	26	465	1100	0.023	26	0.0	3.349	A
4	752	32	1366	0.550	755	1.3	6.066	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.37	0.00	0.00	0.37	0.37			N/A	N/A
2	0.33	0.00	0.00	0.33	0.33			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.24	0.56	1.03	1.44	1.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.54	0.54	1.02	1.42	1.47			N/A	N/A
2	0.43	0.00	0.00	0.43	0.43			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	1.93	0.06	0.75	4.95	7.51			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.96	0.03	0.27	0.96	0.96			N/A	N/A
2	0.59	0.03	0.26	0.59	0.59			N/A	N/A
3	0.04	0.03	0.25	0.45	0.48			N/A	N/A
4	4.06	0.03	0.33	6.13	20.54			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.98	0.03	0.29	1.07	3.86			N/A	N/A
2	0.59	0.03	0.30	1.29	2.73			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	4.21	0.03	0.29	4.21	12.09			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.56	0.06	0.65	1.35	1.44			N/A	N/A
2	0.43	0.00	0.00	0.43	0.43			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	2.03	0.05	0.55	5.39	8.47			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.38	0.03	0.31	0.97	1.25			N/A	N/A
2	0.33	0.00	0.00	0.33	0.33			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.27	0.04	0.38	3.23	6.03			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: Vinnetrow Road B2166 Without Cumu +PS.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 18/03/2017 17:30:17

»2031 LP + mitigation - Cumulative +PS, AM
»2031 LP + mitigation - Cumulative +PS, PM
»2031 LP - mitigation - Cumulative +PS, AM
»2031 LP - mitigation - Cumulative +PS, PM
»2031 LP + mitigation - Cumulative +PS +H, AM
»2031 LP + mitigation - Cumulative +PS +H, PM
»2031 LP - mitigation - Cumulative +PS +H, AM
»2031 LP - mitigation - Cumulative +PS +H, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation - Cumulative +PS													
Arm 1	0.3	5.31	0.21	A	6.51	A	38 % [Arm 2]	0.4	8.16	0.30	A	12.27	B	11 % [Arm 4]
Arm 2	2.1	7.21	0.67	A				0.4	3.25	0.29	A			
Arm 3	0.1	5.66	0.10	A				0.0	3.37	0.03	A			
Arm 4	1.0	5.82	0.50	A				5.1	16.93	0.84	C			
	2031 LP - mitigation - Cumulative +PS													
Arm 1	0.5	6.09	0.32	A	7.13	A	28 % [Arm 2]	1.2	12.53	0.54	B	13.07	B	9 % [Arm 4]
Arm 2	2.4	8.62	0.71	A				0.7	4.03	0.39	A			
Arm 3	0.1	6.50	0.11	A				0.0	3.95	0.04	A			
Arm 4	0.9	5.16	0.45	A				5.6	18.20	0.85	C			
	2031 LP + mitigation - Cumulative +PS +H													
Arm 1	0.3	5.47	0.22	A	7.18	A	31 % [Arm 2]	0.5	8.89	0.33	A	14.83	B	6 % [Arm 4]
Arm 2	2.5	8.22	0.71	A				0.5	3.37	0.31	A			
Arm 3	0.1	6.01	0.11	A				0.0	3.44	0.03	A			
Arm 4	1.1	6.10	0.52	A				6.5	21.12	0.87	C			
	2031 LP - mitigation - Cumulative +PS +H													
Arm 1	0.5	6.30	0.33	A	8.04	A	22 % [Arm 2]	1.4	14.36	0.59	B	15.95	C	5 % [Arm 4]
Arm 2	3.0	10.11	0.75	B				0.7	4.21	0.42	A			
Arm 3	0.1	6.98	0.12	A				0.0	4.05	0.04	A			
Arm 4	0.9	5.38	0.47	A				7.2	23.05	0.89	C			

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. Junction LOS and Junction Delay are demand-weighted averages. 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	B2166 jw Vinnetrow Road
Location	
Site number	
Date	10/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	1616
Enumerator	FB
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation - Cumulative +PS	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation - Cumulative +PS	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15
D5	2031 LP + mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15
D6	2031 LP + mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15
D7	2031 LP - mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15
D8	2031 LP - mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation - Cumulative +PS, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	6.51	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	38	Arm 2

Arms

Arms

Arm	Name	Description
1	Vinnetrow Road	
2	B2166 E	
3	Mill Lane	
4	B2166 W	

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	3.00	6.00	5.0	30.0	30.0	35.0	
2	4.00	6.00	12.0	30.0	30.0	30.0	
3	3.00	7.00	8.0	20.0	30.0	30.0	
4	3.50	6.00	6.0	20.0	30.0	30.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.559	1219
2	0.649	1633
3	0.591	1375
4	0.593	1385

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation - Cumulative +PS	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	174	100.000
2		✓	946	100.000
3		✓	65	100.000
4		✓	582	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	77	10	87
	2	123	0	8	815
	3	14	14	0	37
	4	81	491	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	11	5
	2	5	0	0	3
	3	0	0	0	0
	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.21	5.31	0.3	1.2	A
2	0.67	7.21	2.1	3.4	A
3	0.10	5.66	0.1	0.5	A
4	0.50	5.82	1.0	1.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	131	386	1003	0.131	130	0.2	4.323	A
2	712	80	1581	0.450	709	0.8	4.243	A
3	49	768	921	0.053	49	0.1	4.126	A
4	438	113	1318	0.332	436	0.5	4.250	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	156	462	960	0.163	156	0.2	4.693	A
2	850	96	1571	0.541	849	1.2	5.136	A
3	58	920	831	0.070	58	0.1	4.658	A
4	523	136	1305	0.401	522	0.7	4.798	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	192	566	903	0.212	191	0.3	5.305	A
2	1042	118	1557	0.669	1038	2.0	7.115	A
3	72	1125	710	0.101	71	0.1	5.638	A
4	641	166	1287	0.498	639	1.0	5.791	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	192	567	902	0.212	192	0.3	5.314	A
2	1042	118	1557	0.669	1041	2.1	7.207	A
3	72	1128	708	0.101	72	0.1	5.658	A
4	641	166	1286	0.498	641	1.0	5.816	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	156	464	960	0.163	157	0.2	4.704	A
2	850	96	1571	0.541	854	1.2	5.207	A
3	58	925	828	0.071	59	0.1	4.680	A
4	523	136	1304	0.401	525	0.7	4.826	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	131	388	1002	0.131	131	0.2	4.337	A
2	712	81	1581	0.450	714	0.9	4.292	A
3	49	773	918	0.053	49	0.1	4.145	A
4	438	114	1318	0.333	439	0.5	4.279	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.16	0.00	0.00	0.16	0.16			N/A	N/A
2	0.84	0.57	1.03	1.45	1.50			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.52	0.00	0.00	0.52	0.52			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.20	0.00	0.00	0.20	0.20			N/A	N/A
2	1.20	0.07	0.85	2.49	3.45			N/A	N/A
3	0.08	0.03	0.26	0.46	0.48			N/A	N/A
4	0.69	0.12	0.90	1.43	1.50			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.28	0.03	0.27	0.48	0.51			N/A	N/A
2	2.04	0.03	0.28	2.04	2.12			N/A	N/A
3	0.11	0.03	0.26	0.47	0.49			N/A	N/A
4	1.02	0.03	0.27	1.02	1.02			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.28	0.03	0.31	0.90	1.25			N/A	N/A
2	2.06	0.03	0.27	2.06	2.06			N/A	N/A

3	0.11	0.00	0.00	0.11	0.11			N/A	N/A
4	1.03	0.03	0.28	1.03	1.70			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.21	0.00	0.00	0.21	0.21			N/A	N/A
2	1.23	0.11	1.08	2.02	2.74			N/A	N/A
3	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4	0.71	0.26	0.98	1.45	1.51			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.16	0.00	0.00	0.16	0.16			N/A	N/A
2	0.85	0.06	0.64	1.60	2.05			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.52	0.05	0.49	1.34	1.45			N/A	N/A

2031 LP + mitigation - Cumulative +PS, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	12.27	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	11	Arm 4

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)
D2	2031 LP + mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	174	100.000
2		✓	418	100.000
3		✓	34	100.000
4		✓	1027	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	146	26	2
	2	43	0	6	369
	3	5	13	0	16
	4	105	905	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	0	3
	3	0	0	0	0

	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.30	8.16	0.4	1.6	A
2	0.29	3.25	0.4	1.5	A
3	0.03	3.37	0.0	0.5	A
4	0.84	16.93	5.1	26.5	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	131	699	828	0.158	130	0.2	5.282	A
2	315	34	1612	0.195	314	0.2	2.857	A
3	26	311	1191	0.021	26	0.0	3.087	A
4	773	46	1358	0.569	768	1.3	6.195	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	156	838	751	0.208	156	0.3	6.204	A
2	376	40	1607	0.234	376	0.3	3.012	A
3	31	372	1155	0.026	31	0.0	3.200	A
4	923	55	1353	0.683	920	2.1	8.460	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	192	1020	649	0.295	191	0.4	8.046	A
2	460	49	1601	0.287	460	0.4	3.250	A
3	37	455	1106	0.034	37	0.0	3.368	A
4	1131	67	1345	0.841	1120	4.9	15.631	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	192	1029	644	0.298	192	0.4	8.158	A
2	460	50	1601	0.287	460	0.4	3.250	A
3	37	456	1106	0.034	37	0.0	3.369	A
4	1131	67	1345	0.841	1130	5.1	16.928	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	156	851	743	0.210	157	0.3	6.300	A
2	376	41	1607	0.234	376	0.3	3.017	A
3	31	373	1155	0.026	31	0.0	3.201	A
4	923	55	1353	0.683	935	2.3	9.054	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	131	707	824	0.159	131	0.2	5.332	A
2	315	34	1611	0.195	315	0.3	2.861	A
3	26	312	1191	0.022	26	0.0	3.089	A
4	773	46	1358	0.569	777	1.4	6.384	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.19	0.00	0.00	0.19	0.19			N/A	N/A
2	0.25	0.00	0.00	0.25	0.25			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.33	0.56	1.02	1.43	1.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2	0.31	0.00	0.00	0.31	0.31			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	2.14	0.06	0.74	5.62	8.63			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.42	0.03	0.26	0.47	0.50			N/A	N/A
2	0.41	0.03	0.26	0.47	0.49			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	4.88	0.04	0.35	10.19	26.47			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.43	0.03	0.33	1.38	1.64			N/A	N/A
2	0.41	0.03	0.33	1.35	1.53			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	5.11	0.03	0.30	5.11	20.06			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2	0.32	0.00	0.00	0.32	0.32			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	2.27	0.05	0.48	6.16	10.13			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.20	0.00	0.00	0.20	0.20			N/A	N/A
2	0.25	0.00	0.00	0.25	0.25			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.38	0.04	0.36	3.37	6.90			N/A	N/A

2031 LP - mitigation - Cumulative +PS, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	7.13	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	28	Arm 2

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)
D3	2031 LP - mitigation - Cumulative +PS	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	265	100.000
2		✓	935	100.000
3		✓	65	100.000
4		✓	544	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	30	10	225
	2	59	0	8	868
	3	14	14	0	37
	4	60	476	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	11	5
	2	5	0	0	3
	3	0	0	0	0

	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.32	6.09	0.5	2.1	A
2	0.71	8.62	2.4	5.4	A
3	0.11	6.50	0.1	0.5	A
4	0.45	5.16	0.9	2.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	200	373	1010	0.197	198	0.3	4.655	A
2	704	182	1515	0.465	700	0.9	4.537	A
3	49	863	865	0.057	49	0.1	4.410	A
4	410	65	1346	0.304	408	0.5	3.999	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	238	447	969	0.246	238	0.3	5.173	A
2	841	218	1492	0.563	839	1.3	5.669	A
3	58	1034	764	0.077	58	0.1	5.103	A
4	489	78	1339	0.365	488	0.6	4.420	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	292	547	913	0.320	291	0.5	6.080	A
2	1029	267	1460	0.705	1025	2.4	8.449	A
3	72	1264	628	0.114	71	0.1	6.468	A
4	599	95	1329	0.451	598	0.8	5.140	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	292	548	912	0.320	292	0.5	6.095	A
2	1029	268	1460	0.705	1029	2.4	8.616	A
3	72	1268	625	0.114	72	0.1	6.502	A
4	599	96	1328	0.451	599	0.9	5.155	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	238	449	968	0.246	239	0.3	5.191	A
2	841	219	1491	0.564	845	1.4	5.781	A
3	58	1040	760	0.077	59	0.1	5.136	A
4	489	79	1339	0.365	490	0.6	4.437	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	200	375	1009	0.198	200	0.3	4.678	A
2	704	183	1514	0.465	706	0.9	4.600	A
3	49	869	861	0.057	49	0.1	4.433	A
4	410	66	1346	0.304	410	0.5	4.020	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.26	0.00	0.00	0.26	0.26			N/A	N/A
2	0.89	0.57	1.03	1.44	1.49			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.45	0.00	0.00	0.45	0.45			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2	1.31	0.06	0.80	2.90	4.10			N/A	N/A
3	0.08	0.03	0.25	0.45	0.48			N/A	N/A
4	0.60	0.10	0.86	1.43	1.50			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.49	0.03	0.27	0.49	0.51			N/A	N/A
2	2.39	0.03	0.29	2.39	5.40			N/A	N/A
3	0.13	0.03	0.26	0.47	0.49			N/A	N/A
4	0.85	0.03	0.27	0.85	0.85			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.49	0.03	0.32	1.45	2.09			N/A	N/A
2	2.43	0.03	0.28	2.43	2.43			N/A	N/A
3	0.13	0.03	0.25	0.45	0.48			N/A	N/A
4	0.85	0.03	0.29	0.85	2.21			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.35	0.00	0.00	0.35	0.35			N/A	N/A
2	1.35	0.08	1.03	2.69	3.63			N/A	N/A
3	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4	0.61	0.57	1.04	1.46	1.51			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.26	0.00	0.00	0.26	0.26			N/A	N/A
2	0.90	0.05	0.49	1.92	2.86			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.46	0.00	0.00	0.46	0.46			N/A	N/A

2031 LP - mitigation - Cumulative +PS, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	13.07	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	9	Arm 4

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)
D4	2031 LP - mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	313	100.000
2		✓	542	100.000
3		✓	34	100.000
4		✓	1048	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	168	26	119
	2	32	0	6	504
	3	5	13	0	16
	4	113	918	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	0	3
	3	0	0	0	0

	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.54	12.53	1.2	4.4	B
2	0.39	4.03	0.7	2.8	A
3	0.04	3.95	0.0	0.5	A
4	0.85	18.20	5.6	29.0	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	236	709	823	0.286	234	0.4	6.196	A
2	408	121	1555	0.262	407	0.4	3.225	A
3	26	491	1085	0.024	26	0.0	3.398	A
4	789	38	1363	0.579	783	1.4	6.309	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	281	849	744	0.378	281	0.6	7.873	A
2	487	145	1539	0.317	487	0.5	3.522	A
3	31	588	1027	0.030	31	0.0	3.610	A
4	942	45	1358	0.694	939	2.3	8.715	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	345	1033	641	0.537	342	1.1	12.142	B
2	597	177	1518	0.393	596	0.7	4.017	A
3	37	720	950	0.039	37	0.0	3.946	A
4	1154	55	1353	0.853	1142	5.3	16.595	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	345	1043	636	0.542	344	1.2	12.534	B
2	597	178	1518	0.393	597	0.7	4.027	A
3	37	721	949	0.039	37	0.0	3.950	A
4	1154	55	1352	0.853	1153	5.6	18.202	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	281	864	736	0.382	284	0.6	8.118	A
2	487	147	1538	0.317	488	0.5	3.536	A
3	31	590	1026	0.030	31	0.0	3.615	A
4	942	45	1358	0.694	955	2.4	9.417	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	236	717	818	0.288	237	0.4	6.298	A
2	408	122	1554	0.263	408	0.4	3.238	A
3	26	494	1083	0.024	26	0.0	3.406	A
4	789	38	1363	0.579	793	1.4	6.515	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.39	0.58	1.22	1.68	1.86			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.61	0.09	0.81	1.38	1.45			N/A	N/A
2	0.47	0.00	0.00	0.47	0.47			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	2.25	0.06	0.75	5.95	9.16			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.15	0.03	0.27	1.15	1.28			N/A	N/A
2	0.66	0.03	0.26	0.66	0.66			N/A	N/A
3	0.04	0.03	0.25	0.45	0.48			N/A	N/A
4	5.30	0.04	0.37	12.12	28.97			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.18	0.03	0.29	1.18	4.39			N/A	N/A
2	0.67	0.03	0.29	1.00	2.75			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	5.59	0.03	0.31	5.59	24.12			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.64	0.07	0.72	1.37	1.46			N/A	N/A
2	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	2.39	0.05	0.47	6.58	10.98			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.41	0.04	0.36	1.18	1.36			N/A	N/A
2	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.43	0.04	0.35	3.44	7.28			N/A	N/A

2031 LP + mitigation - Cumulative +PS +H, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	7.18	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	31	Arm 2

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)
D5	2031 LP + mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	181	100.000
2		✓	1004	100.000
3		✓	65	100.000
4		✓	602	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	84	10	87
	2	135	0	8	861
	3	14	14	0	37
	4	81	511	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
	1	0	4	11	5

From	2	5	0	0	3
	3	0	0	0	0
	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.22	5.47	0.3	1.3	A
2	0.71	8.22	2.5	5.3	A
3	0.11	6.01	0.1	0.5	A
4	0.52	6.10	1.1	1.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	136	401	995	0.137	136	0.2	4.390	A
2	756	80	1581	0.478	752	0.9	4.463	A
3	49	811	895	0.055	49	0.1	4.251	A
4	453	122	1313	0.345	451	0.5	4.350	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	163	480	950	0.171	163	0.2	4.788	A
2	903	96	1571	0.575	901	1.4	5.531	A
3	58	972	800	0.073	58	0.1	4.851	A
4	541	146	1298	0.417	540	0.7	4.951	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	199	588	890	0.224	199	0.3	5.456	A
2	1105	118	1557	0.710	1101	2.5	8.074	A
3	72	1188	673	0.106	71	0.1	5.986	A
4	663	179	1279	0.518	661	1.1	6.067	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	199	589	890	0.224	199	0.3	5.466	A
2	1105	118	1557	0.710	1105	2.5	8.221	A
3	72	1192	670	0.107	72	0.1	6.014	A
4	663	179	1279	0.518	663	1.1	6.099	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	163	482	949	0.171	163	0.2	4.803	A
2	903	96	1571	0.575	907	1.4	5.632	A
3	58	978	797	0.073	59	0.1	4.879	A
4	541	147	1298	0.417	543	0.8	4.985	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	136	403	993	0.137	136	0.2	4.406	A
2	756	81	1581	0.478	758	1.0	4.523	A
3	49	817	892	0.055	49	0.1	4.273	A
4	453	123	1312	0.345	454	0.6	4.383	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	0.94	0.57	1.03	1.45	1.50			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.55	0.55	1.04	1.46	1.51			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.22	0.00	0.00	0.22	0.22			N/A	N/A
2	1.37	0.06	0.78	3.08	4.53			N/A	N/A
3	0.08	0.03	0.26	0.47	0.50			N/A	N/A
4	0.74	0.12	0.90	1.44	1.51			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.30	0.03	0.27	0.48	0.51			N/A	N/A
2	2.45	0.03	0.29	2.45	5.26			N/A	N/A
3	0.12	0.03	0.26	0.47	0.49			N/A	N/A
4	1.11	0.03	0.27	1.11	1.11			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.30	0.03	0.32	1.02	1.32			N/A	N/A
2	2.49	0.03	0.28	2.49	2.49			N/A	N/A
3	0.12	0.00	0.00	0.12	0.12			N/A	N/A
4	1.12	0.03	0.28	1.12	1.49			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.22	0.00	0.00	0.22	0.22			N/A	N/A
2	1.41	0.08	1.06	2.84	3.85			N/A	N/A
3	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4	0.75	0.24	0.98	1.45	1.51			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	0.95	0.05	0.50	2.01	3.01			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.55	0.06	0.58	1.37	1.47			N/A	N/A

2031 LP + mitigation - Cumulative +PS +H, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	14.83	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	6	Arm 4

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)
D6	2031 LP + mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	187	100.000
2		✓	454	100.000
3		✓	34	100.000
4		✓	1065	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	159	26	2
	2	49	0	6	399
	3	5	13	0	16
	4	105	943	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
	1	0	3	0	0

From	2	4	0	0	3
	3	0	0	0	0
	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.33	8.89	0.5	2.1	A
2	0.31	3.37	0.5	1.9	A
3	0.03	3.44	0.0	0.5	A
4	0.87	21.12	6.5	33.2	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	141	727	812	0.173	140	0.2	5.482	A
2	342	34	1612	0.212	341	0.3	2.916	A
3	26	338	1175	0.022	26	0.0	3.130	A
4	802	50	1355	0.592	796	1.5	6.528	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	168	871	732	0.230	168	0.3	6.539	A
2	408	40	1607	0.254	408	0.3	3.093	A
3	31	404	1136	0.027	31	0.0	3.255	A
4	957	60	1349	0.710	954	2.4	9.225	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	1058	627	0.328	205	0.5	8.724	A
2	500	49	1601	0.312	499	0.5	3.364	A
3	37	495	1082	0.035	37	0.0	3.444	A
4	1173	74	1341	0.874	1158	6.1	18.714	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	1070	621	0.332	206	0.5	8.893	A
2	500	50	1601	0.312	500	0.5	3.367	A
3	37	495	1082	0.035	37	0.0	3.445	A
4	1173	74	1341	0.874	1171	6.5	21.124	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	168	889	722	0.233	169	0.3	6.682	A
2	408	41	1607	0.254	409	0.4	3.099	A
3	31	405	1136	0.027	31	0.0	3.259	A
4	957	60	1349	0.710	973	2.6	10.189	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	141	736	807	0.174	141	0.2	5.546	A
2	342	34	1611	0.212	342	0.3	2.923	A
3	26	339	1175	0.022	26	0.0	3.132	A
4	802	50	1355	0.592	806	1.5	6.770	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.21	0.00	0.00	0.21	0.21			N/A	N/A
2	0.28	0.00	0.00	0.28	0.28			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.46	0.59	1.34	1.79	1.92			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	2.42	0.06	0.76	6.48	10.04			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.49	0.03	0.26	0.49	0.50			N/A	N/A
2	0.47	0.03	0.26	0.47	0.49			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	6.12	0.04	0.41	15.83	33.25			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.50	0.03	0.32	1.48	2.11			N/A	N/A
2	0.47	0.03	0.32	1.42	1.94			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	6.54	0.03	0.33	8.81	32.09			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	2.59	0.05	0.46	7.14	12.28			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.22	0.00	0.00	0.22	0.22			N/A	N/A
2	0.28	0.00	0.00	0.28	0.28			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.51	0.03	0.34	3.40	7.78			N/A	N/A

2031 LP - mitigation - Cumulative +PS +H, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	8.04	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	22	Arm 2

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)
D7	2031 LP - mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	272	100.000
2		✓	993	100.000
3		✓	65	100.000
4		✓	564	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	37	10	225
	2	71	0	8	914
	3	14	14	0	37
	4	60	496	8	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1	2	3	4
1	0	4	11	5

From	2	5	0	0	3
	3	0	0	0	0
	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.33	6.30	0.5	2.3	A
2	0.75	10.11	3.0	10.4	B
3	0.12	6.98	0.1	0.5	A
4	0.47	5.38	0.9	2.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	205	388	1002	0.204	204	0.3	4.733	A
2	748	182	1515	0.493	744	1.0	4.788	A
3	49	906	839	0.058	49	0.1	4.552	A
4	425	74	1341	0.317	423	0.5	4.087	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	245	465	959	0.255	244	0.4	5.289	A
2	893	218	1492	0.598	891	1.5	6.154	A
3	58	1085	733	0.080	58	0.1	5.334	A
4	507	89	1332	0.381	506	0.6	4.551	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	299	569	901	0.332	299	0.5	6.278	A
2	1093	267	1460	0.749	1088	2.9	9.814	A
3	72	1326	591	0.121	71	0.1	6.923	A
4	621	109	1321	0.470	620	0.9	5.357	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	299	570	900	0.333	299	0.5	6.296	A
2	1093	268	1460	0.749	1093	3.0	10.105	B
3	72	1332	587	0.122	72	0.1	6.978	A
4	621	109	1320	0.470	621	0.9	5.376	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	245	467	958	0.255	245	0.4	5.312	A
2	893	219	1491	0.599	898	1.6	6.321	A
3	58	1094	728	0.080	59	0.1	5.378	A
4	507	89	1332	0.381	508	0.6	4.571	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	205	391	1001	0.205	205	0.3	4.756	A
2	748	183	1514	0.494	750	1.0	4.870	A
3	49	913	835	0.059	49	0.1	4.582	A
4	425	75	1341	0.317	425	0.5	4.112	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2	0.99	0.57	1.03	1.44	1.50			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.48	0.00	0.00	0.48	0.48			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2	1.51	0.06	0.72	3.66	5.39			N/A	N/A
3	0.09	0.03	0.25	0.45	0.48			N/A	N/A
4	0.64	0.12	0.90	1.43	1.50			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.52	0.03	0.27	0.52	0.52			N/A	N/A
2	2.95	0.03	0.30	2.95	10.45			N/A	N/A
3	0.14	0.03	0.26	0.47	0.49			N/A	N/A
4	0.92	0.03	0.27	0.92	0.92			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.52	0.03	0.32	1.46	2.35			N/A	N/A
2	3.01	0.03	0.28	3.01	3.66			N/A	N/A
3	0.14	0.03	0.25	0.45	0.48			N/A	N/A
4	0.92	0.03	0.28	0.92	1.96			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2	1.56	0.07	0.93	3.59	5.09			N/A	N/A
3	0.09	0.00	0.00	0.09	0.09			N/A	N/A
4	0.65	0.57	1.04	1.46	1.52			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2	1.02	0.04	0.43	2.46	3.93			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.49	0.04	0.39	1.25	1.41			N/A	N/A

2031 LP - mitigation - Cumulative +PS +H, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	15.95	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	5	Arm 4

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)
D8	2031 LP - mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	326	100.000
2		✓	578	100.000
3		✓	34	100.000
4		✓	1086	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	181	26	119
	2	38	0	6	534
	3	5	13	0	16
	4	113	956	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
	1	0	3	0	0

From	2	4	0	0	3
	3	0	0	0	0
	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.59	14.36	1.4	5.2	B
2	0.42	4.21	0.7	2.6	A
3	0.04	4.05	0.0	0.5	A
4	0.89	23.05	7.2	27.8	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	245	737	807	0.304	244	0.4	6.476	A
2	435	121	1555	0.280	434	0.4	3.304	A
3	26	518	1069	0.024	25	0.0	3.450	A
4	818	42	1360	0.601	812	1.5	6.653	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	293	883	725	0.404	292	0.7	8.425	A
2	520	145	1539	0.338	519	0.5	3.634	A
3	31	620	1008	0.030	31	0.0	3.681	A
4	976	50	1355	0.720	972	2.5	9.523	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	359	1071	620	0.579	356	1.3	13.717	B
2	636	177	1519	0.419	636	0.7	4.196	A
3	37	759	926	0.040	37	0.0	4.049	A
4	1196	62	1349	0.887	1179	6.7	20.014	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	359	1084	613	0.585	359	1.4	14.360	B
2	636	178	1518	0.419	636	0.7	4.208	A
3	37	761	925	0.040	37	0.0	4.054	A
4	1196	62	1349	0.887	1194	7.2	23.051	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	293	903	714	0.410	296	0.7	8.799	A
2	520	147	1538	0.338	520	0.5	3.650	A
3	31	623	1007	0.030	31	0.0	3.690	A
4	976	50	1355	0.720	994	2.7	10.695	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	245	747	802	0.306	246	0.5	6.605	A
2	435	123	1554	0.280	436	0.4	3.317	A
3	26	521	1067	0.024	26	0.0	3.459	A
4	818	42	1360	0.601	822	1.6	6.916	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2	0.40	0.00	0.00	0.40	0.40			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.52	0.60	1.43	1.84	1.96			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.68	0.09	0.83	1.39	1.46			N/A	N/A
2	0.52	0.52	1.03	1.44	1.49			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	2.55	0.06	0.78	6.86	10.67			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.35	0.03	0.28	1.35	2.49			N/A	N/A
2	0.74	0.03	0.26	0.74	0.74			N/A	N/A
3	0.04	0.03	0.25	0.45	0.48			N/A	N/A
4	6.71	0.04	0.43	18.28	36.06			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.40	0.03	0.29	1.40	5.16			N/A	N/A
2	0.74	0.03	0.29	0.74	2.60			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	7.25	0.03	0.34	12.17	37.80			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.72	0.07	0.74	1.10	1.10			N/A	N/A
2	0.53	0.53	1.03	1.44	1.49			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	2.74	0.05	0.45	7.58	13.22			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.45	0.04	0.38	1.27	1.44			N/A	N/A
2	0.40	0.00	0.00	0.40	0.40			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.57	0.03	0.34	3.42	8.15			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: B2145 B2166 2031 Without Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 20/03/2017 09:14:14

»2031 LP + mitigation no cumulative developments, AM
»2031 LP + mitigation no cumulative developments, PM
»2031 LP - mitigation no cumulative developments, AM
»2031 LP - mitigation no cumulative developments, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation no cumulative developments													
Arm 1	1.5	6.91	0.58	A	12.74	B	9 % [Arm 2]	19.9	56.87	0.93	F	27.85	D	-4 % [Arm 1]
Arm 2	4.9	16.13	0.83	C				1.4	6.61	0.57	A			
Arm 3	4.0	13.27	0.80	B				1.3	5.01	0.56	A			
	2031 LP - mitigation no cumulative developments													
Arm 1	0.9	5.46	0.47	A	24.94	C	-1 % [Arm 2]	6.0	19.33	0.88	C	11.94	B	6 % [Arm 1]
Arm 2	14.3	39.72	0.95	E				2.4	8.98	0.71	A			
Arm 3	4.6	16.74	0.82	C				1.5	5.85	0.60	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. 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	B2145 j/w B2166
Location	
Site number	
Date	05/12/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	1616
Enumerator	FB
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation no cumulative developments	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation no cumulative developments	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation no cumulative developments	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation no cumulative developments	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation no cumulative developments, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	12.74	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	9	Arm 2

Arms

Arms

Arm	Name	Description
1	B2145 North	
2	B2166	
3	untitled	

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	3.30	7.10	11.4	46.0	30.0	8.0	
2	3.20	7.80	16.0	24.0	30.0	37.0	
3	4.10	7.70	9.0	65.0	30.0	10.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.694	1719
2	0.646	1668
3	0.731	1898

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation no cumulative developments	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	696	100.000
2		✓	1039	100.000
3		✓	1004	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	278	418
	2	637	0	402
	3	487	517	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.58	6.91	1.5	1.6	A
2	0.83	16.13	4.9	25.3	C
3	0.80	13.27	4.0	18.1	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	524	387	1450	0.361	522	0.6	4.144	A
2	782	313	1466	0.534	778	1.2	5.355	A
3	756	477	1550	0.488	752	1.0	4.688	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	626	464	1397	0.448	625	0.9	4.989	A
2	934	375	1426	0.655	931	1.9	7.449	A
3	903	571	1481	0.609	900	1.6	6.441	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	766	565	1327	0.577	764	1.4	6.825	A
2	1144	459	1372	0.834	1133	4.7	14.867	B
3	1105	694	1391	0.795	1097	3.8	12.413	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	766	569	1324	0.579	766	1.5	6.914	A
2	1144	460	1371	0.835	1143	4.9	16.126	C
3	1105	701	1386	0.797	1105	4.0	13.273	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	626	469	1393	0.449	628	0.9	5.058	A
2	934	377	1424	0.656	946	2.0	7.927	A
3	903	580	1475	0.612	912	1.7	6.782	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	524	391	1448	0.362	525	0.6	4.186	A
2	782	315	1464	0.534	785	1.2	5.487	A
3	756	482	1547	0.489	759	1.0	4.788	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.60	0.59	1.07	1.50	1.55			N/A	N/A
2	1.16	0.57	1.03	1.44	1.49			N/A	N/A
3	0.98	0.57	1.04	1.46	1.51			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.86	0.09	0.90	1.52	1.52			N/A	N/A
2	1.91	0.05	0.55	5.01	7.85			N/A	N/A
3	1.60	0.05	0.53	4.04	6.21			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.44	0.03	0.28	1.44	1.44			N/A	N/A
2	4.71	0.03	0.35	9.23	25.32			N/A	N/A
3	3.79	0.03	0.32	4.65	18.12			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.46	0.03	0.29	1.46	1.52			N/A	N/A
2	4.94	0.03	0.30	4.94	18.60			N/A	N/A
3	3.95	0.03	0.30	3.95	10.76			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.88	0.16	0.99	1.53	1.59			N/A	N/A
2	2.01	0.05	0.49	5.39	8.71			N/A	N/A
3	1.68	0.06	0.67	4.16	6.32			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.61	0.06	0.59	1.42	1.53			N/A	N/A
2	1.20	0.04	0.35	2.86	5.93			N/A	N/A

3	1.01	0.04	0.38	2.49	4.59			N/A	N/A

2031 LP + mitigation no cumulative developments, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	27.85	D

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-4	Arm 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)
D2	2031 LP + mitigation no cumulative developments	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1177	100.000
2		✓	679	100.000
3		✓	869	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	654	523
	2	247	0	432
	3	349	520	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.98	86.87	19.9	83.3	F
2	0.57	6.61	1.4	1.5	A
3	0.56	5.01	1.3	1.6	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	886	390	1448	0.612	880	1.6	6.425	A
2	511	391	1415	0.361	509	0.6	4.030	A
3	654	185	1763	0.371	652	0.6	3.340	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1058	467	1395	0.759	1052	3.1	10.589	B
2	610	468	1366	0.447	609	0.8	4.834	A
3	781	222	1736	0.450	780	0.8	3.886	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1296	571	1322	0.980	1248	15.1	38.541	E
2	748	555	1310	0.571	746	1.3	6.467	A
3	957	271	1700	0.563	955	1.3	4.977	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1296	573	1322	0.981	1277	19.9	56.973	F
2	748	567	1301	0.574	747	1.4	6.607	A
3	957	272	1700	0.563	957	1.3	5.006	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1058	469	1394	0.759	1124	3.4	16.751	C
2	610	499	1345	0.454	612	0.9	5.011	A
3	781	223	1736	0.450	783	0.9	3.914	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	886	392	1447	0.612	893	1.7	6.749	A
2	511	397	1412	0.362	512	0.6	4.076	A
3	654	186	1762	0.371	655	0.6	3.362	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.59	0.52	1.45	2.26	2.79			N/A	N/A
2	0.57	0.56	1.02	1.42	1.47			N/A	N/A
3	0.61	0.57	1.03	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	3.08	0.05	0.62	8.56	13.86			N/A	N/A
2	0.81	0.09	0.85	1.41	1.41			N/A	N/A
3	0.84	0.08	0.85	1.54	1.57			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	15.05	0.20	6.84	39.48	55.57			N/A	N/A
2	1.33	0.03	0.27	1.33	1.33			N/A	N/A
3	1.31	0.03	0.27	1.31	1.31			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	19.86	0.13	6.23	55.98	83.28			N/A	N/A
2	1.36	0.03	0.27	1.36	1.36			N/A	N/A
3	1.32	0.03	0.27	1.32	1.32			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	3.42	0.04	0.41	9.17	17.86			N/A	N/A
2	0.85	0.20	0.96	1.44	1.50			N/A	N/A
3	0.85	0.38	1.00	1.45	1.50			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.65	0.03	0.30	1.65	7.42			N/A	N/A
2	0.58	0.06	0.58	1.35	1.44			N/A	N/A
3	0.61	0.07	0.73	1.39	1.47			N/A	N/A

2031 LP - mitigation no cumulative developments, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	24.94	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	Arm 2

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)
D3	2031 LP - mitigation no cumulative developments	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	559	100.000
2		✓	1252	100.000
3		✓	928	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	249	310
	2	822	0	430
	3	407	521	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.47	5.46	0.9	2.6	A
2	0.95	39.72	14.3	72.9	E
3	0.82	16.74	4.6	22.2	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	421	390	1448	0.291	419	0.4	3.740	A
2	943	232	1518	0.621	936	1.7	6.302	A
3	699	614	1449	0.482	695	1.0	4.951	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	503	467	1395	0.360	502	0.6	4.315	A
2	1126	278	1488	0.756	1120	3.1	9.914	A
3	834	735	1361	0.613	832	1.6	7.053	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	615	568	1325	0.465	614	0.9	5.415	A
2	1378	341	1448	0.952	1343	11.9	28.706	D
3	1022	882	1254	0.815	1011	4.2	14.863	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	615	573	1321	0.466	615	0.9	5.461	A
2	1378	341	1448	0.952	1369	14.3	39.722	E
3	1022	899	1242	0.823	1020	4.6	16.741	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	503	475	1390	0.362	504	0.6	4.358	A
2	1126	279	1488	0.757	1169	3.4	13.113	B
3	834	768	1338	0.624	845	1.8	7.796	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	421	394	1446	0.291	422	0.4	3.766	A
2	943	234	1517	0.621	949	1.7	6.603	A
3	699	623	1443	0.484	702	1.0	5.086	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2	1.66	0.58	1.04	2.20	2.73			N/A	N/A
3	0.96	0.57	1.04	1.46	1.51			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.60	0.08	0.82	1.45	1.53			N/A	N/A
2	3.06	0.05	0.66	8.50	13.69			N/A	N/A
3	1.62	0.05	0.52	4.09	6.32			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.92	0.03	0.27	0.92	0.92			N/A	N/A
2	11.91	0.09	2.75	34.09	52.28			N/A	N/A
3	4.21	0.03	0.34	7.54	22.19			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.93	0.03	0.30	0.93	2.63			N/A	N/A
2	14.30	0.06	1.26	41.92	72.91			N/A	N/A
3	4.56	0.03	0.31	4.56	17.75			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.61	0.59	1.07	1.50	1.55			N/A	N/A
2	3.36	0.04	0.42	9.16	17.16			N/A	N/A
3	1.77	0.05	0.57	4.55	7.02			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2	1.72	0.03	0.32	2.49	8.52			N/A	N/A
3	0.99	0.04	0.35	2.31	4.76			N/A	N/A

2031 LP - mitigation no cumulative developments, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	11.94	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	6	Arm 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)
D4	2031 LP - mitigation no cumulative developments	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1068	100.000
2		✓	900	100.000
3		✓	859	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	689	379
	2	392	0	508
	3	392	467	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.86	19.33	6.0	30.8	C
2	0.71	8.98	2.4	5.8	A
3	0.60	5.85	1.5	1.9	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	804	350	1476	0.545	799	1.2	5.424	A
2	678	284	1485	0.456	674	0.8	4.504	A
3	647	294	1684	0.384	644	0.6	3.579	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	960	419	1428	0.672	957	2.1	7.785	A
2	809	340	1449	0.558	807	1.3	5.703	A
3	772	352	1641	0.470	771	0.9	4.282	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1176	513	1363	0.863	1161	5.7	17.218	C
2	991	412	1402	0.707	986	2.4	8.736	A
3	946	430	1585	0.597	943	1.5	5.797	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1176	514	1362	0.863	1174	6.0	19.327	C
2	991	417	1399	0.708	991	2.4	8.976	A
3	946	432	1583	0.597	946	1.5	5.853	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	960	421	1427	0.673	976	2.2	8.456	A
2	809	346	1444	0.560	814	1.3	5.852	A
3	772	354	1640	0.471	775	0.9	4.327	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	804	352	1475	0.545	808	1.2	5.573	A
2	678	287	1483	0.457	679	0.9	4.573	A
3	647	296	1682	0.384	648	0.7	3.610	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.21	0.57	1.06	1.21	1.56			N/A	N/A
2	0.85	0.56	1.02	1.43	1.48			N/A	N/A
3	0.64	0.57	1.04	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.05	0.05	0.51	5.48	8.72			N/A	N/A
2	1.27	0.06	0.78	2.80	3.96			N/A	N/A
3	0.91	0.08	0.85	1.48	1.89			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	5.66	0.04	0.38	13.73	30.84			N/A	N/A
2	2.38	0.03	0.28	2.38	5.77			N/A	N/A
3	1.51	0.03	0.27	1.51	1.51			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	6.02	0.03	0.32	6.66	28.08			N/A	N/A
2	2.43	0.03	0.27	2.43	2.43			N/A	N/A
3	1.53	0.03	0.28	1.53	1.53			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.17	0.05	0.46	5.92	9.96			N/A	N/A
2	1.32	0.08	1.00	2.63	3.54			N/A	N/A
3	0.93	0.20	1.00	1.33	1.33			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.25	0.03	0.34	2.72	6.32			N/A	N/A
2	0.86	0.05	0.47	1.86	2.79			N/A	N/A
3	0.65	0.06	0.68	1.41	1.50			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: B2145 B2166 2031 Without Cumu +PS.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 20/03/2017 09:12:00

»2031 LP + mitigation - Cumulative +PS, AM
»2031 LP + mitigation - Cumulative +PS, PM
»2031 LP - mitigation - Cumulative +PS, AM
»2031 LP - mitigation - Cumulative +PS, PM
»2031 LP + mitigation - Cumulative +PS +H, AM
»2031 LP + mitigation - Cumulative +PS +H, PM
»2031 LP - mitigation - Cumulative +PS +H, AM
»2031 LP - mitigation - Cumulative +PS +H, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation - Cumulative +PS													
Arm 1	1.6	7.27	0.60	A	15.83	C	5 % [Arm 2]	34.1	87.34	1.02	F	41.54	E	-7 % [Arm 1]
Arm 2	6.9	21.60	0.88	C				1.5	6.95	0.60	A			
Arm 3	4.6	15.67	0.82	C				1.4	5.18	0.57	A			
	2031 LP - mitigation - Cumulative +PS													
Arm 1	1.0	5.68	0.49	A	37.17	E	-5 % [Arm 2]	8.4	26.01	0.90	D	14.93	B	3 % [Arm 1]
Arm 2	25.2	83.59	0.99	F				2.7	9.78	0.73	A			
Arm 3	5.3	19.73	0.85	C				1.6	6.11	0.61	A			
	2031 LP + mitigation - Cumulative +PS +H													
Arm 1	1.7	7.54	0.61	A	19.86	C	1 % [Arm 2]	47.1	114.05	1.06	F	53.08	F	-9 % [Arm 1]
Arm 2	9.5	29.18	0.92	D				1.6	7.30	0.62	A			
Arm 3	5.4	18.26	0.85	C				1.5	5.43	0.59	A			
	2031 LP - mitigation - Cumulative +PS +H													
Arm 1	1.1	5.85	0.50	A	51.79	F	-8 % [Arm 2]	10.8	33.01	0.93	D	17.98	C	0 % [Arm 1]
Arm 2	40.5	92.55	1.03	F				3.1	10.70	0.76	B			
Arm 3	6.0	22.09	0.86	C				1.7	6.46	0.63	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. 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	B2145 j/w B2166
Location	
Site number	

Date	05/12/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	1616
Enumerator	FB
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation - Cumulative +PS	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation - Cumulative +PS	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15
D5	2031 LP + mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15
D6	2031 LP + mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15
D7	2031 LP - mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15
D8	2031 LP - mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation - Cumulative +PS, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	15.83	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	5	Arm 2

Arms

Arms

Arm	Name	Description
1	B2145 North	
2	B2166	
3	untitled	

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	3.30	7.10	11.4	46.0	30.0	8.0	
2	3.20	7.80	16.0	24.0	30.0	37.0	
3	4.10	7.70	9.0	65.0	30.0	10.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.694	1719
2	0.646	1668
3	0.731	1898

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation - Cumulative +PS	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	721	100.000
2		✓	1095	100.000
3		✓	1004	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	303	418
	2	693	0	402
	3	487	517	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.60	7.27	1.6	1.8	A
2	0.88	21.60	6.9	24.7	C
3	0.82	15.67	4.6	22.9	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	543	387	1450	0.374	540	0.6	4.227	A
2	824	313	1466	0.562	819	1.3	5.690	A
3	756	518	1520	0.497	752	1.0	4.871	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	648	463	1397	0.464	647	0.9	5.134	A
2	984	375	1426	0.690	981	2.2	8.262	A
3	903	621	1445	0.625	900	1.7	6.862	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	794	564	1328	0.598	791	1.6	7.157	A
2	1206	459	1372	0.879	1189	6.4	18.800	C
3	1105	753	1349	0.820	1095	4.4	14.243	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	794	569	1324	0.599	794	1.6	7.268	A
2	1206	460	1371	0.880	1204	6.9	21.602	C
3	1105	762	1342	0.824	1104	4.6	15.670	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	648	471	1392	0.466	651	0.9	5.218	A
2	984	377	1424	0.691	1002	2.4	9.141	A
3	903	634	1435	0.629	914	1.8	7.366	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	543	391	1448	0.375	544	0.6	4.273	A
2	824	315	1464	0.563	828	1.3	5.870	A
3	756	524	1515	0.499	759	1.1	4.991	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.64	0.59	1.07	1.50	1.55			N/A	N/A
2	1.30	0.58	1.17	1.58	1.82			N/A	N/A
3	1.02	0.57	1.04	1.46	1.51			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.92	0.09	0.90	1.33	1.81			N/A	N/A
2	2.23	0.05	0.51	6.01	9.59			N/A	N/A
3	1.70	0.05	0.51	4.39	6.87			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.56	0.03	0.28	1.56	1.56			N/A	N/A
2	6.38	0.04	0.42	16.82	34.57			N/A	N/A
3	4.37	0.03	0.34	7.66	22.91			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.59	0.03	0.29	1.59	1.59			N/A	N/A
2	6.86	0.03	0.33	10.23	34.66			N/A	N/A
3	4.63	0.03	0.30	4.63	16.83			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.94	0.14	1.00	1.55	1.55			N/A	N/A
2	2.37	0.05	0.45	6.52	11.21			N/A	N/A
3	1.81	0.05	0.52	4.72	7.36			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.65	0.06	0.59	1.46	1.57			N/A	N/A
2	1.35	0.03	0.33	2.80	6.93			N/A	N/A

3	1.05	0.04	0.36	2.51	5.05			N/A	N/A

2031 LP + mitigation - Cumulative +PS, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	41.54	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-7	Arm 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)
D2	2031 LP + mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1226	100.000
2		✓	710	100.000
3		✓	869	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	703	523
	2	278	0	432
	3	349	520	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	1.02	87.34	34.1	100.3	F
2	0.60	6.95	1.5	1.7	A
3	0.57	5.18	1.4	1.7	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	923	390	1448	0.637	916	1.8	6.850	A
2	535	391	1416	0.378	532	0.6	4.135	A
3	654	208	1746	0.375	652	0.6	3.392	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1102	467	1395	0.790	1095	3.6	12.004	B
2	638	467	1366	0.467	637	0.9	5.018	A
3	781	249	1716	0.455	780	0.9	3.970	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1350	571	1322	1.021	1275	22.3	48.135	E
2	782	544	1317	0.594	779	1.5	6.790	A
3	957	305	1675	0.571	955	1.4	5.147	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1350	573	1322	1.021	1303	34.1	87.335	F
2	782	556	1309	0.597	782	1.5	6.946	A
3	957	306	1675	0.571	957	1.4	5.179	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1102	469	1394	0.791	1221	4.3	32.814	D
2	638	521	1331	0.479	640	0.9	5.318	A
3	781	251	1715	0.455	783	0.9	3.999	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	923	392	1447	0.638	933	1.8	7.312	A
2	535	398	1411	0.379	536	0.6	4.193	A
3	654	210	1745	0.375	655	0.6	3.417	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.76	0.29	1.52	2.88	3.59			N/A	N/A
2	0.61	0.56	1.02	1.42	1.48			N/A	N/A
3	0.62	0.57	1.03	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	3.64	0.06	0.84	10.18	16.30			N/A	N/A
2	0.88	0.08	0.87	1.31	1.75			N/A	N/A
3	0.86	0.08	0.85	1.15	1.67			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	22.34	1.42	15.52	49.85	64.41			N/A	N/A
2	1.46	0.03	0.27	1.46	1.46			N/A	N/A
3	1.36	0.03	0.27	1.36	1.36			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	34.05	1.42	23.47	77.23	100.29			N/A	N/A
2	1.49	0.03	0.27	1.49	1.49			N/A	N/A
3	1.37	0.03	0.27	1.37	1.37			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.25	0.04	0.42	11.53	22.40			N/A	N/A
2	0.95	0.19	0.99	1.52	1.52			N/A	N/A
3	0.87	0.32	1.00	1.46	1.51			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.85	0.03	0.30	1.85	7.53			N/A	N/A
2	0.63	0.06	0.60	1.39	1.49			N/A	N/A
3	0.62	0.07	0.72	1.39	1.47			N/A	N/A

2031 LP - mitigation - Cumulative +PS, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	37.17	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-5	Arm 2

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)
D3	2031 LP - mitigation - Cumulative +PS	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	584	100.000
2		✓	1308	100.000
3		✓	928	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	274	310
	2	878	0	430
	3	407	521	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.49	5.68	1.0	2.4	A
2	0.99	63.59	25.2	94.2	F
3	0.85	19.73	5.3	26.2	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	440	390	1448	0.304	438	0.5	3.808	A
2	985	232	1518	0.649	977	1.9	6.768	A
3	699	656	1419	0.492	695	1.0	5.155	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	525	467	1395	0.376	524	0.6	4.422	A
2	1176	278	1488	0.790	1169	3.7	11.346	B
3	834	784	1325	0.629	831	1.7	7.555	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	643	567	1326	0.485	642	1.0	5.623	A
2	1440	341	1448	0.995	1382	18.2	38.863	E
3	1022	928	1221	0.837	1009	4.8	16.870	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	643	572	1322	0.487	643	1.0	5.678	A
2	1440	341	1448	0.995	1412	25.2	63.592	F
3	1022	948	1206	0.847	1020	5.3	19.733	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	525	476	1389	0.378	526	0.7	4.478	A
2	1176	279	1488	0.790	1260	4.2	21.461	C
3	834	846	1281	0.651	848	2.0	8.925	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	440	394	1445	0.304	440	0.5	3.837	A
2	985	234	1517	0.649	994	1.9	7.200	A
3	699	667	1411	0.495	703	1.0	5.326	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2	1.86	0.50	1.18	2.89	3.52			N/A	N/A
3	1.00	0.57	1.04	1.46	1.51			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.64	0.10	0.87	1.46	1.53			N/A	N/A
2	3.66	0.06	0.89	10.24	16.31			N/A	N/A
3	1.73	0.05	0.52	4.48	6.98			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.00	0.03	0.27	1.00	1.00			N/A	N/A
2	18.22	0.35	9.97	45.46	62.01			N/A	N/A
3	4.80	0.04	0.37	10.60	26.16			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.01	0.03	0.29	1.01	2.35			N/A	N/A
2	25.20	0.25	11.59	66.80	94.20			N/A	N/A
3	5.33	0.03	0.32	5.60	24.51			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.66	0.59	1.07	1.50	1.55			N/A	N/A
2	4.18	0.04	0.43	11.43	21.76			N/A	N/A
3	2.00	0.05	0.57	5.25	8.24			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.47	0.04	0.36	1.18	1.39			N/A	N/A
2	1.95	0.03	0.31	2.04	8.96			N/A	N/A
3	1.03	0.03	0.34	2.25	5.13			N/A	N/A

2031 LP - mitigation - Cumulative +PS, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	14.93	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	3	Arm 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)
D4	2031 LP - mitigation - Cumulative +PS	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1117	100.000
2		✓	931	100.000
3		✓	861	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	738	379
	2	423	0	508
	3	394	467	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.90	26.01	8.4	45.8	D
2	0.73	9.78	2.7	8.3	A
3	0.61	6.11	1.6	2.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	841	350	1476	0.570	836	1.3	5.726	A
2	701	284	1485	0.472	697	0.9	4.636	A
3	648	317	1667	0.389	646	0.7	3.644	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1004	419	1428	0.703	1000	2.4	8.554	A
2	837	339	1449	0.578	835	1.4	5.959	A
3	774	379	1621	0.477	773	0.9	4.394	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1230	513	1363	0.902	1209	7.6	21.560	C
2	1025	410	1403	0.731	1020	2.7	9.447	A
3	948	463	1560	0.608	945	1.6	6.047	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1230	514	1362	0.903	1227	8.4	26.005	D
2	1025	416	1399	0.733	1025	2.7	9.781	A
3	948	466	1558	0.608	948	1.6	6.114	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1004	421	1427	0.704	1028	2.5	9.768	A
2	837	349	1443	0.580	842	1.4	6.160	A
3	774	383	1619	0.478	777	1.0	4.443	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	841	352	1474	0.570	845	1.4	5.918	A
2	701	287	1483	0.473	703	0.9	4.715	A
3	648	319	1665	0.389	649	0.7	3.680	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.34	0.58	1.23	1.70	1.89			N/A	N/A
2	0.90	0.56	1.02	1.43	1.48			N/A	N/A
3	0.66	0.57	1.04	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.36	0.05	0.51	6.43	10.37			N/A	N/A
2	1.37	0.06	0.74	3.14	4.64			N/A	N/A
3	0.94	0.08	0.85	1.59	1.98			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	7.58	0.05	0.49	21.54	39.42			N/A	N/A
2	2.66	0.03	0.29	2.66	8.31			N/A	N/A
3	1.58	0.03	0.27	1.58	1.58			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	8.36	0.04	0.37	17.85	45.81			N/A	N/A
2	2.73	0.03	0.28	2.73	3.06			N/A	N/A
3	1.60	0.03	0.28	1.60	1.60			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.52	0.04	0.43	6.92	12.33			N/A	N/A
2	1.43	0.07	0.97	3.02	4.26			N/A	N/A
3	0.96	0.18	1.00	1.55	1.56			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.38	0.03	0.32	2.53	7.09			N/A	N/A
2	0.92	0.04	0.44	2.07	3.31			N/A	N/A
3	0.67	0.06	0.66	1.43	1.52			N/A	N/A

2031 LP + mitigation - Cumulative +PS +H, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	19.86	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	1	Arm 2

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)
D5	2031 LP + mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	732	100.000
2		✓	1141	100.000
3		✓	1014	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	314	418
	2	725	0	416
	3	487	527	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.61	7.54	1.7	1.9	A
2	0.92	29.18	9.5	32.5	D
3	0.85	18.26	5.4	27.2	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	551	395	1445	0.381	548	0.7	4.290	A
2	859	313	1466	0.586	853	1.4	6.001	A
3	763	542	1502	0.508	759	1.1	5.031	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	658	472	1391	0.473	657	1.0	5.243	A
2	1026	375	1426	0.719	1021	2.6	9.067	A
3	912	649	1424	0.640	909	1.8	7.246	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	806	574	1321	0.610	803	1.6	7.410	A
2	1256	459	1372	0.916	1232	8.5	23.436	C
3	1116	783	1326	0.842	1104	5.0	16.045	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	806	579	1317	0.612	806	1.7	7.545	A
2	1256	460	1371	0.916	1252	9.5	29.176	D
3	1116	796	1317	0.848	1115	5.4	18.255	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	658	481	1385	0.475	661	1.0	5.344	A
2	1026	377	1424	0.720	1053	2.7	10.665	B
3	912	669	1410	0.647	925	2.0	7.974	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	551	399	1442	0.382	552	0.7	4.339	A
2	859	315	1464	0.587	864	1.5	6.227	A
3	763	549	1497	0.510	767	1.1	5.171	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.66	0.59	1.07	1.50	1.55			N/A	N/A
2	1.43	0.59	1.33	1.83	1.97			N/A	N/A
3	1.07	0.57	1.04	1.46	1.51			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.95	0.08	0.91	1.51	1.94			N/A	N/A
2	2.55	0.05	0.54	6.99	11.24			N/A	N/A
3	1.82	0.05	0.51	4.77	7.53			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.64	0.03	0.28	1.64	1.64			N/A	N/A
2	8.50	0.06	0.84	24.67	42.69			N/A	N/A
3	4.99	0.04	0.37	10.84	27.19			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.67	0.03	0.29	1.67	1.67			N/A	N/A
2	9.55	0.04	0.40	23.33	52.53			N/A	N/A
3	5.41	0.03	0.32	5.41	23.70			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.98	0.13	1.01	1.26	1.74			N/A	N/A
2	2.75	0.04	0.43	7.56	13.70			N/A	N/A
3	1.96	0.05	0.49	5.20	8.41			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.67	0.06	0.58	1.49	1.60			N/A	N/A
2	1.49	0.03	0.32	2.58	7.60			N/A	N/A
3	1.10	0.03	0.34	2.47	5.49			N/A	N/A

2031 LP + mitigation - Cumulative +PS +H, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	53.06	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-9	Arm 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)
D6	2031 LP + mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1247	100.000
2		✓	740	100.000
3		✓	886	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	724	523
	2	296	0	444
	3	349	537	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	1.05	114.05	47.1	112.5	F
2	0.62	7.30	1.6	2.0	A
3	0.59	5.43	1.5	1.8	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	939	403	1439	0.652	931	1.9	7.165	A
2	557	391	1416	0.394	554	0.7	4.242	A
3	667	222	1736	0.384	664	0.6	3.459	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1121	482	1384	0.810	1112	4.1	13.164	B
2	665	467	1367	0.487	664	1.0	5.207	A
3	796	266	1704	0.467	795	0.9	4.087	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1373	590	1310	1.048	1275	28.6	57.785	F
2	815	535	1323	0.616	812	1.6	7.141	A
3	976	325	1661	0.587	973	1.4	5.388	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1373	591	1309	1.049	1299	47.1	114.055	F
2	815	545	1316	0.619	815	1.6	7.303	A
3	976	326	1660	0.588	975	1.5	5.428	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1121	484	1383	0.811	1289	5.1	60.016	F
2	665	541	1319	0.504	668	1.0	5.646	A
3	796	267	1703	0.468	799	0.9	4.119	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	939	405	1438	0.653	952	2.0	7.782	A
2	557	399	1410	0.395	559	0.7	4.310	A
3	667	223	1735	0.384	668	0.6	3.489	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.88	0.21	1.04	3.29	4.10			N/A	N/A
2	0.66	0.56	1.02	1.43	1.48			N/A	N/A
3	0.64	0.57	1.03	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.06	0.06	1.03	11.38	18.00			N/A	N/A
2	0.95	0.08	0.88	1.61	1.97			N/A	N/A
3	0.90	0.08	0.85	1.42	1.84			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	28.56	3.55	22.70	57.22	70.86			N/A	N/A
2	1.60	0.03	0.27	1.60	1.60			N/A	N/A
3	1.45	0.03	0.27	1.45	1.45			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	47.08	7.46	38.73	91.94	112.64			N/A	N/A
2	1.63	0.03	0.27	1.63	1.63			N/A	N/A
3	1.46	0.03	0.27	1.46	1.46			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	5.15	0.05	0.45	14.33	26.65			N/A	N/A
2	1.05	0.17	1.04	1.50	1.82			N/A	N/A
3	0.91	0.26	1.00	1.49	1.55			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.97	0.03	0.29	1.97	7.41			N/A	N/A
2	0.67	0.06	0.60	1.26	1.26			N/A	N/A
3	0.65	0.07	0.72	1.40	1.48			N/A	N/A

2031 LP - mitigation - Cumulative +PS +H, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	51.79	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-8	Arm 2

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)
D7	2031 LP - mitigation - Cumulative +PS +H	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	595	100.000
2		✓	1354	100.000
3		✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	285	310
	2	910	0	444
	3	407	531	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.50	5.85	1.1	2.2	A
2	1.03	82.55	40.6	110.2	F
3	0.86	22.09	6.0	29.8	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	448	397	1443	0.310	446	0.5	3.857	A
2	1019	232	1518	0.672	1011	2.1	7.206	A
3	706	680	1402	0.504	702	1.0	5.331	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	535	476	1389	0.385	534	0.7	4.504	A
2	1217	278	1488	0.818	1208	4.3	12.836	B
3	843	812	1305	0.646	840	1.9	8.013	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	655	577	1319	0.497	654	1.0	5.781	A
2	1491	341	1448	1.030	1405	25.9	49.707	E
3	1033	944	1209	0.854	1019	5.4	18.528	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	655	583	1314	0.498	655	1.1	5.845	A
2	1491	341	1448	1.030	1432	40.6	82.555	F
3	1033	963	1195	0.864	1030	6.0	22.090	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	535	486	1382	0.387	536	0.7	4.565	A
2	1217	279	1488	0.818	1358	5.3	44.188	E
3	843	913	1232	0.685	858	2.3	10.415	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	448	403	1440	0.311	449	0.5	3.891	A
2	1019	234	1517	0.672	1032	2.2	7.830	A
3	706	693	1392	0.507	711	1.1	5.554	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.48	0.00	0.00	0.48	0.48			N/A	N/A
2	2.05	0.31	1.26	3.53	4.35			N/A	N/A
3	1.05	0.57	1.05	1.47	1.52			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.67	0.10	0.88	1.46	1.53			N/A	N/A
2	4.30	0.06	1.16	12.01	18.77			N/A	N/A
3	1.86	0.05	0.52	4.87	7.63			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.04	0.03	0.28	1.04	1.04			N/A	N/A
2	25.86	1.76	19.01	55.59	70.74			N/A	N/A
3	5.36	0.04	0.39	13.14	29.04			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.06	0.03	0.29	1.06	2.20			N/A	N/A
2	40.51	3.17	30.21	86.91	110.24			N/A	N/A
3	6.00	0.03	0.33	8.40	29.76			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.68	0.21	0.99	1.48	1.54			N/A	N/A
2	5.28	0.05	0.46	14.79	27.27			N/A	N/A
3	2.34	0.06	0.75	6.20	9.62			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.49	0.04	0.39	1.27	1.44			N/A	N/A
2	2.16	0.03	0.30	2.16	9.35			N/A	N/A
3	1.09	0.03	0.33	2.19	5.47			N/A	N/A

2031 LP - mitigation - Cumulative +PS +H, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	17.98	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	0	Arm 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)
D8	2031 LP - mitigation - Cumulative +PS +H	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1138	100.000
2		✓	961	100.000
3		✓	878	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	759	379
	2	441	0	520
	3	394	484	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.93	33.01	10.8	38.7	D
2	0.76	10.70	3.1	11.2	B
3	0.63	6.46	1.7	2.3	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	857	363	1467	0.584	851	1.4	5.946	A
2	723	283	1485	0.487	720	1.0	4.770	A
3	661	330	1657	0.399	658	0.7	3.725	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1023	434	1417	0.722	1018	2.6	9.156	A
2	864	339	1449	0.596	862	1.5	6.226	A
3	789	395	1609	0.490	788	1.0	4.534	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1253	531	1350	0.928	1226	9.4	25.500	D
2	1058	408	1404	0.753	1052	3.0	10.242	B
3	967	483	1546	0.625	964	1.7	6.378	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1253	533	1349	0.929	1247	10.8	33.006	D
2	1058	415	1400	0.756	1058	3.1	10.700	B
3	967	485	1544	0.626	967	1.7	6.459	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1023	437	1416	0.723	1055	2.8	11.084	B
2	864	351	1441	0.600	870	1.6	6.490	A
3	789	399	1607	0.491	792	1.0	4.594	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	857	365	1466	0.585	862	1.5	6.177	A
2	723	287	1483	0.488	726	1.0	4.861	A
3	661	333	1655	0.399	662	0.7	3.763	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.42	0.58	1.32	1.83	1.99			N/A	N/A
2	0.96	0.56	1.02	1.43	1.48			N/A	N/A
3	0.68	0.57	1.04	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.57	0.05	0.51	7.06	11.45			N/A	N/A
2	1.48	0.06	0.69	3.58	5.29			N/A	N/A
3	0.99	0.07	0.84	1.76	2.27			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	9.37	0.06	1.40	27.36	45.08			N/A	N/A
2	2.98	0.03	0.30	2.98	11.21			N/A	N/A
3	1.70	0.03	0.27	1.70	1.70			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	10.75	0.04	0.45	29.05	58.68			N/A	N/A
2	3.07	0.03	0.28	3.07	4.59			N/A	N/A
3	1.72	0.03	0.28	1.72	1.72			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.78	0.04	0.42	7.57	13.98			N/A	N/A
2	1.55	0.06	0.90	3.59	5.08			N/A	N/A
3	1.01	0.15	1.02	1.40	1.78			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.47	0.03	0.31	2.24	7.33			N/A	N/A
2	0.98	0.04	0.41	2.39	3.88			N/A	N/A
3	0.69	0.06	0.64	1.26	1.26			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: Bognor Bridge Rd_PB_no EMP_Without Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 17/03/2017 15:20:28

»A27 Bognor RBT - 2031 LP + mitigation no cumulative developments, AM
»A27 Bognor RBT - 2031 LP + mitigation no cumulative developements, PM
»A27 Bognor RBT - 2031 LP - mitigation no cumulative developments, AM
»A27 Bognor RBT - 2031 LP - mitigation no cumulative developments, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	A27 Bognor RBT - 2031 LP + mitigation no cumulative developments									
1 - A27 North	1.2	2.58	0.52	A	A					
2 - A259 Bognor Rd East	2.0	5.22	0.65	A						
4 - A27 South	1.0	3.04	0.48	A						
5 - A259 Bognor Road West	0.8	4.60	0.41	A						
	A27 Bognor RBT - 2031 LP + mitigation no cumulative developements									
1 - A27 North						0.7	2.24	0.38	A	A
2 - A259 Bognor Rd East						0.8	2.89	0.43	A	
4 - A27 South						1.0	2.52	0.47	A	
5 - A259 Bognor Road West						1.1	5.73	0.50	A	
	A27 Bognor RBT - 2031 LP - mitigation no cumulative developments									
1 - A27 North	1.1	2.52	0.49	A	A	0.5	2.03	0.32	A	A
2 - A259 Bognor Rd East	1.1	3.88	0.51	A		0.8	2.76	0.41	A	
4 - A27 South	0.7	2.39	0.39	A		0.9	2.47	0.46	A	
5 - A259 Bognor Road West	0.6	3.76	0.35	A		0.7	4.89	0.40	A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

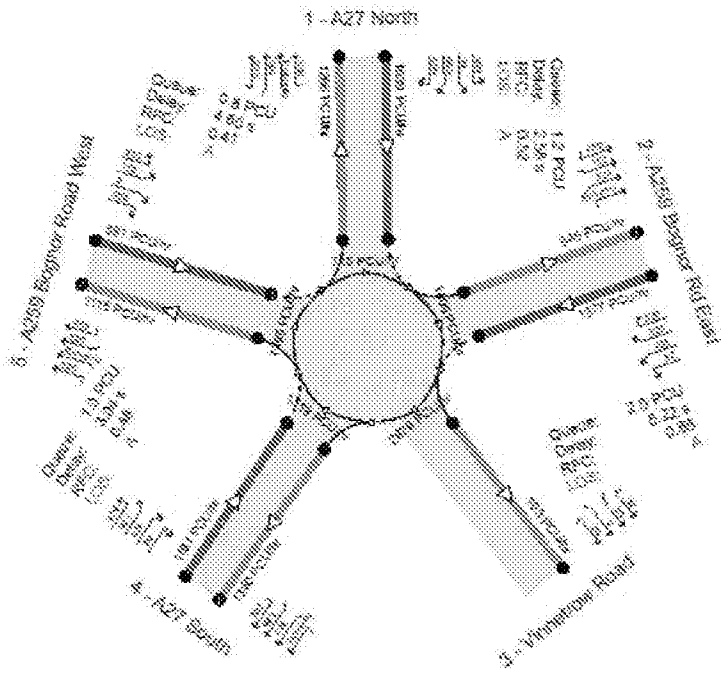
File summary

File Description

Title	A27 Bognor RBT
Location	Chichester
Site number	
Date	30/03/2015
Version	HTp/01
Status	
Identifier	
Client	
Jobnumber	1616
Enumerator	UKNAW004
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



Flows show modelled two-hourly junction (PCU/hr).
Time Segment: 08:00-09:15

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2031 LP + mitigation no cumulative developments	AM	FLAT	08:00	09:00	60	15	✓
D2	2031 LP + mitigation no cumulative developements	PM	FLAT	16:00	17:00	60	15	✓
D3	2031 LP - mitigation no cumulative developments	AM	FLAT	08:00	09:00	60	15	✓
D4	2031 LP - mitigation no cumulative developments	PM	FLAT	16:00	17:00	60	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	A27 Bognor RBT	✓	100.000	100.000

A27 Bognor RBT - 2031 LP + mitigation no cumulative developments, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A27 North	
2	A259 Bognor Rd East	
3	Vinnetrow Road	
4	A27 South	
5	A259 Bognor Road West	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A27 North	8.80	12.37	112.7	43.7	84.0	32.0	
2 - A259 Bognor Rd East	7.00	11.18	63.0	30.5	84.0	44.0	
3 - Vinnetrow Road							✓
4 - A27 South	9.36	11.09	44.0	44.2	84.0	25.0	
5 - A259 Bognor Road West	4.02	8.11	55.7	27.5	84.0	37.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A27 North	0.760	3720
2 - A259 Bognor Rd East	0.654	3065
3 - Vinnetrow Road		
4 - A27 South	0.726	3447
5 - A259 Bognor Road West	0.534	2197

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2031 LP + mitigation no cumulative developments	AM	FLAT	08:00	09:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1644	100.000
2 - A259 Bognor Rd East		FLAT	✓	1385	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1185	100.000
5 - A259 Bognor Road West		FLAT	✓	594	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	470	39	665	470
	2 - A259 Bognor Rd East	533	0	32	498	322
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	503	325	30	0	327
	5 - A259 Bognor Road West	236	153	2	203	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.52	2.58	1.2	A	1644	1644
2 - A259 Bognor Rd East	0.65	5.22	2.0	A	1385	1385
3 - Vinnetrow Road						
4 - A27 South	0.48	3.04	1.0	A	1185	1185
5 - A259 Bognor Road West	0.41	4.60	0.8	A	594	594

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1644	411	710	3180	0.517	1639	1266	0.0	1.2	2.563	A
2 - A259 Bognor Rd East	1385	346	1405	2146	0.645	1377	945	0.0	2.0	5.098	A
3 - Vinnetrow Road			2679				103				
4 - A27 South	1185	296	1319	2490	0.476	1181	1360	0.0	1.0	3.017	A
5 - A259 Bognor Road West	594	149	1385	1458	0.407	591	1115	0.0	0.7	4.551	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1644	411	713	3178	0.517	1644	1272	1.2	1.2	2.581	A
2 - A259 Bognor Rd East	1385	346	1409	2143	0.646	1385	948	2.0	2.0	5.219	A

3 - Vinnetrow Road			2691				103				
4 - A27 South	1185	296	1325	2485	0.477	1185	1366	1.0	1.0	3.044	A
5 - A259 Bognor Road West	594	149	1391	1455	0.408	594	1119	0.7	0.8	4.598	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1644	411	713	3178	0.517	1644	1272	1.2	1.2	2.581	A
2 - A259 Bognor Rd East	1385	346	1409	2143	0.646	1385	948	2.0	2.0	5.221	A
3 - Vinnetrow Road			2691				103				
4 - A27 South	1185	296	1325	2485	0.477	1185	1366	1.0	1.0	3.044	A
5 - A259 Bognor Road West	594	149	1391	1455	0.408	594	1119	0.8	0.8	4.598	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1644	411	713	3178	0.517	1644	1272	1.2	1.2	2.581	A
2 - A259 Bognor Rd East	1385	346	1409	2143	0.646	1385	948	2.0	2.0	5.221	A
3 - Vinnetrow Road			2691				103				
4 - A27 South	1185	296	1325	2485	0.477	1185	1366	1.0	1.0	3.044	A
5 - A259 Bognor Road West	594	149	1391	1455	0.408	594	1119	0.8	0.8	4.598	A

A27 Bognor RBT - 2031 LP + mitigation no cumulative developements, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.06	A

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 period length (min)	Time segment length (min)	Run automatically
D2	2031 LP + mitigation no cumulative developements	PM	FLAT	16:00	17:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1072	100.000
2 - A259 Bognor Rd East		FLAT	✓	1031	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1419	100.000
5 - A259 Bognor Road West		FLAT	✓	678	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	397	37	493	145
	2 - A259 Bognor Rd East	353	0	46	502	130
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	531	598	71	0	219
	5 - A259 Bognor Road West	192	216	16	254	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.38	2.24	0.7	A	1072	1072
2 - A259 Bognor Rd East	0.43	2.89	0.8	A	1031	1031
3 - Vinnetrow Road						
4 - A27 South	0.47	2.52	1.0	A	1419	1419
5 - A259 Bognor Road West	0.50	5.73	1.1	A	678	678

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1072	268	1150	2846	0.377	1069	1072	0.0	0.7	2.226	A
2 - A259 Bognor Rd East	1031	258	1012	2403	0.429	1028	1207	0.0	0.8	2.872	A
3 - Vinnetrow Road			1871				169				
4 - A27 South	1419	355	626	2993	0.474	1415	1245	0.0	1.0	2.504	A
5 - A259 Bognor Road West	678	170	1549	1371	0.495	674	493	0.0	1.1	5.646	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1072	268	1155	2842	0.377	1072	1076	0.7	0.7	2.236	A
2 - A259 Bognor Rd East	1031	258	1016	2400	0.430	1031	1211	0.8	0.8	2.891	A
3 - Vinnetrow Road			1877				170				
4 - A27 South	1419	355	628	2991	0.474	1419	1249	1.0	1.0	2.518	A
5 - A259 Bognor Road West	678	170	1553	1369	0.495	678	494	1.1	1.1	5.733	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1072	268	1155	2842	0.377	1072	1076	0.7	0.7	2.236	A
2 - A259 Bognor Rd East	1031	258	1016	2400	0.430	1031	1211	0.8	0.8	2.891	A
3 - Vinnetrow Road			1877				170				
4 - A27 South	1419	355	628	2991	0.474	1419	1249	1.0	1.0	2.518	A
5 - A259 Bognor Road West	678	170	1553	1369	0.495	678	494	1.1	1.1	5.733	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1072	268	1155	2842	0.377	1072	1076	0.7	0.7	2.236	A
2 - A259 Bognor Rd East	1031	258	1016	2400	0.430	1031	1211	0.8	0.8	2.891	A
3 - Vinnetrow Road			1877				170				
4 - A27 South	1419	355	628	2991	0.474	1419	1249	1.0	1.0	2.518	A
5 - A259 Bognor Road West	678	170	1553	1369	0.495	678	494	1.1	1.1	5.733	A

A27 Bognor RBT - 2031 LP - mitigation no cumulative developments, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	2.99	A

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 period length (min)	Time segment length (min)	Run automatically
D3	2031 LP - mitigation no cumulative developments	AM	FLAT	08:00	09:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1533	100.000
2 - A259 Bognor Rd East		FLAT	✓	1042	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1065	100.000
5 - A259 Bognor Road West		FLAT	✓	561	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	375	136	627	395
	2 - A259 Bognor Rd East	347	0	68	367	260
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	338	301	106	0	320
	5 - A259 Bognor Road West	155	138	36	232	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.49	2.52	1.1	A	1533	1533
2 - A259 Bognor Rd East	0.51	3.88	1.1	A	1042	1042
3 - Vinnetrow Road						
4 - A27 South	0.39	2.39	0.7	A	1065	1065
5 - A259 Bognor Road West	0.35	3.76	0.6	A	561	561

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1533	383	810	3104	0.494	1529	837	0.0	1.1	2.508	A
2 - A259 Bognor Rd East	1042	261	1527	2066	0.504	1038	812	0.0	1.1	3.835	A
3 - Vinnetrow Road			2220				345				
4 - A27 South	1065	266	998	2722	0.391	1062	1222	0.0	0.7	2.381	A
5 - A259 Bognor Road West	561	140	1089	1616	0.347	559	972	0.0	0.6	3.736	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1533	383	813	3102	0.494	1533	840	1.1	1.1	2.523	A
2 - A259 Bognor Rd East	1042	261	1532	2063	0.505	1042	814	1.1	1.1	3.879	A
3 - Vinnetrow Road			2228				346				
4 - A27 South	1065	266	1002	2720	0.392	1065	1226	0.7	0.7	2.392	A
5 - A259 Bognor Road West	561	140	1092	1615	0.347	561	975	0.6	0.6	3.757	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1533	383	813	3102	0.494	1533	840	1.1	1.1	2.523	A
2 - A259 Bognor Rd East	1042	261	1532	2063	0.505	1042	814	1.1	1.1	3.879	A
3 - Vinnetrow Road			2228				346				
4 - A27 South	1065	266	1002	2720	0.392	1065	1226	0.7	0.7	2.392	A
5 - A259 Bognor Road West	561	140	1092	1615	0.347	561	975	0.6	0.6	3.757	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1533	383	813	3102	0.494	1533	840	1.1	1.1	2.523	A
2 - A259 Bognor Rd East	1042	261	1532	2063	0.505	1042	814	1.1	1.1	3.879	A
3 - Vinnetrow Road			2228				346				
4 - A27 South	1065	266	1002	2720	0.392	1065	1226	0.7	0.7	2.392	A
5 - A259 Bognor Road West	561	140	1092	1615	0.347	561	975	0.6	0.6	3.757	A

A27 Bognor RBT - 2031 LP - mitigation no cumulative developments, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	2.79	A

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 period length (min)	Time segment length (min)	Run automatically
D4	2031 LP - mitigation no cumulative developments	PM	FLAT	16:00	17:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	905	100.000
2 - A259 Bognor Rd East		FLAT	✓	997	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1351	100.000
5 - A259 Bognor Road West		FLAT	✓	545	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	358	134	292	121
	2 - A259 Bognor Rd East	395	0	131	305	166
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	439	531	215	0	166
	5 - A259 Bognor Road West	155	187	49	154	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.32	2.03	0.5	A	905	905
2 - A259 Bognor Rd East	0.41	2.76	0.8	A	997	997
3 - Vinnetrow Road						
4 - A27 South	0.46	2.47	0.9	A	1351	1351
5 - A259 Bognor Road West	0.40	4.89	0.7	A	545	545

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	905	226	1132	2860	0.316	903	986	0.0	0.5	2.022	A
2 - A259 Bognor Rd East	997	249	962	2436	0.409	994	1073	0.0	0.8	2.741	A
3 - Vinnetrow Road			1429				527				
4 - A27 South	1351	338	680	2954	0.457	1347	749	0.0	0.9	2.460	A
5 - A259 Bognor Road West	545	136	1576	1357	0.402	542	452	0.0	0.7	4.844	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	905	226	1136	2856	0.317	905	989	0.5	0.5	2.028	A
2 - A259 Bognor Rd East	997	249	965	2434	0.410	997	1076	0.8	0.8	2.755	A
3 - Vinnetrow Road			1433				529				
4 - A27 South	1351	338	682	2952	0.458	1351	751	0.9	0.9	2.472	A
5 - A259 Bognor Road West	545	136	1580	1354	0.402	545	453	0.7	0.7	4.893	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	905	226	1136	2856	0.317	905	989	0.5	0.5	2.028	A
2 - A259 Bognor Rd East	997	249	965	2434	0.410	997	1076	0.8	0.8	2.755	A
3 - Vinnetrow Road			1433				529				
4 - A27 South	1351	338	682	2952	0.458	1351	751	0.9	0.9	2.472	A
5 - A259 Bognor Road West	545	136	1580	1354	0.402	545	453	0.7	0.7	4.893	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	905	226	1136	2856	0.317	905	989	0.5	0.5	2.028	A
2 - A259 Bognor Rd East	997	249	965	2434	0.410	997	1076	0.8	0.8	2.755	A
3 - Vinnetrow Road			1433				529				
4 - A27 South	1351	338	682	2952	0.458	1351	751	0.9	0.9	2.472	A
5 - A259 Bognor Road West	545	136	1580	1354	0.402	545	453	0.7	0.7	4.893	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: BB Rd_PB_no EMP Without Cumu +PS.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 18/03/2017 17:59:53

»A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS, AM
»A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS, PM
»A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS, AM
»A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS, PM
»A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS +H, AM
»A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS +H, PM
»A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS +H, AM
»A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS +H, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS									
1 - A27 North	1.2	2.59	0.52	A	A	0.7	2.25	0.38	A	A
2 - A259 Bognor Rd East	2.1	5.37	0.66	A		0.8	2.93	0.43	A	
4 - A27 South	1.0	3.07	0.48	A		1.0	2.53	0.48	A	
5 - A259 Bognor Road West	0.8	4.64	0.41	A		1.1	5.83	0.50	A	
	A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS									
1 - A27 North	1.1	2.53	0.50	A	A	0.5	2.04	0.32	A	A
2 - A259 Bognor Rd East	1.1	3.91	0.51	A		0.8	2.79	0.41	A	
4 - A27 South	0.7	2.40	0.39	A		0.9	2.48	0.46	A	
5 - A259 Bognor Road West	0.6	3.78	0.35	A		0.8	4.96	0.41	A	
	A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS +H									
1 - A27 North	1.1	2.48	0.51	A	A	0.7	2.27	0.38	A	A
2 - A259 Bognor Rd East	2.1	5.48	0.66	A		0.9	2.97	0.44	A	
4 - A27 South	1.0	3.10	0.48	A		1.0	2.54	0.48	A	
5 - A259 Bognor Road West	0.6	4.18	0.35	A		1.1	5.89	0.51	A	
	A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS +H									
1 - A27 North	1.1	2.55	0.50	A	A	0.5	2.06	0.32	A	A
2 - A259 Bognor Rd East	1.2	4.02	0.52	A		0.8	2.83	0.42	A	
4 - A27 South	0.7	2.42	0.40	A		0.9	2.49	0.46	A	
5 - A259 Bognor Road West	0.6	3.80	0.35	A		0.8	5.01	0.41	A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

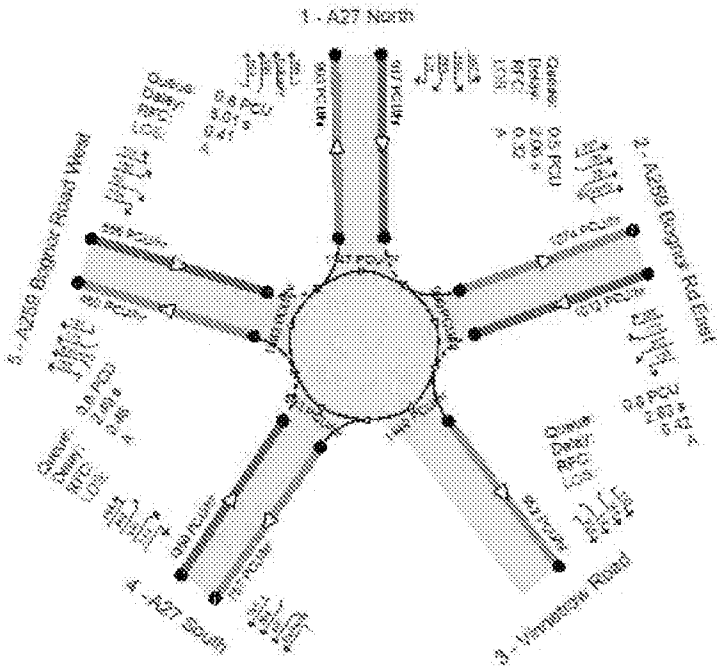
File summary

File Description

Title	A27 Bognor RBT
Location	Chichester
Site number	
Date	30/03/2015
Version	HTp/01
Status	
Identifier	
Client	
Jobnumber	1616
Enumerator	UKNAW004
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



Flows shown rounded for through junction (PCU/hr).
Time Segment: 16:00-16:15

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2031 LP + mitigation - Cumulative +PS	AM	FLAT	08:00	09:00	60	15	✓
D2	2031 LP + mitigation - Cumulative +PS	PM	FLAT	16:00	17:00	60	15	✓
D3	2031 LP - mitigation - Cumulative +PS	AM	FLAT	08:00	09:00	60	15	✓
D4	2031 LP - mitigation - Cumulative +PS	PM	FLAT	16:00	17:00	60	15	✓
D5	2031 LP + mitigation - Cumulative +PS +H	AM	FLAT	08:00	09:00	60	15	✓
D6	2031 LP + mitigation - Cumulative +PS +H	PM	FLAT	16:00	17:00	60	15	✓
D7	2031 LP - mitigation - Cumulative +PS +H	AM	FLAT	08:00	09:00	60	15	✓
D8	2031 LP - mitigation - Cumulative +PS +H	PM	FLAT	16:00	17:00	60	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	A27 Bognor RBT	✓	100.000	100.000

A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A27 North	
2	A259 Bognor Rd East	
3	Vinnetrow Road	
4	A27 South	
5	A259 Bognor Road West	

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 - A27 North	8.80	12.37	112.7	43.7	84.0	32.0	
2 - A259 Bognor Rd East	7.00	11.18	63.0	30.5	84.0	44.0	
3 - Vinnetrow Road							✓
4 - A27 South	9.36	11.09	44.0	44.2	84.0	25.0	
5 - A259 Bognor Road West	4.02	8.11	55.7	27.5	84.0	37.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A27 North	0.760	3720
2 - A259 Bognor Rd East	0.654	3065
3 - Vinnetrow Road		
4 - A27 South	0.726	3447
5 - A259 Bognor Road West	0.534	2197

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2031 LP + mitigation - Cumulative +PS	AM	FLAT	08:00	09:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1646	100.000
2 - A259 Bognor Rd East		FLAT	✓	1401	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1185	100.000
5 - A259 Bognor Road West		FLAT	✓	599	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	470	41	665	470
	2 - A259 Bognor Rd East	537	0	32	498	334
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	503	325	30	0	327
	5 - A259 Bognor Road West	236	153	7	203	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.52	2.59	1.2	A	1646	1646
2 - A259 Bognor Rd East	0.66	5.37	2.1	A	1401	1401
3 - Vinnetrow Road						
4 - A27 South	0.48	3.07	1.0	A	1185	1185
5 - A259 Bognor Road West	0.41	4.64	0.8	A	599	599

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1646	412	715	3176	0.518	1641	1270	0.0	1.2	2.572	A
2 - A259 Bognor Rd East	1401	350	1411	2142	0.654	1393	945	0.0	2.0	5.233	A
3 - Vinnetrow Road			2695				110				
4 - A27 South	1185	296	1335	2478	0.478	1181	1360	0.0	1.0	3.044	A
5 - A259 Bognor Road West	599	150	1389	1456	0.411	596	1127	0.0	0.8	4.588	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1646	412	718	3174	0.519	1646	1276	1.2	1.2	2.590	A
2 - A259 Bognor Rd East	1401	350	1416	2139	0.655	1401	948	2.0	2.1	5.365	A
3 - Vinnetrow Road			2707				110				

4 - A27 South	1185	296	1341	2474	0.479	1185	1366	1.0	1.0	3.072	A
5 - A259 Bognor Road West	599	150	1395	1453	0.412	599	1131	0.8	0.8	4.636	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1646	412	718	3174	0.519	1646	1276	1.2	1.2	2.590	A
2 - A259 Bognor Rd East	1401	350	1416	2139	0.655	1401	948	2.1	2.1	5.367	A
3 - Vinnetrow Road			2707				110				
4 - A27 South	1185	296	1341	2474	0.479	1185	1366	1.0	1.0	3.072	A
5 - A259 Bognor Road West	599	150	1395	1453	0.412	599	1131	0.8	0.8	4.636	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1646	412	718	3174	0.519	1646	1276	1.2	1.2	2.590	A
2 - A259 Bognor Rd East	1401	350	1416	2139	0.655	1401	948	2.1	2.1	5.367	A
3 - Vinnetrow Road			2707				110				
4 - A27 South	1185	296	1341	2474	0.479	1185	1366	1.0	1.0	3.072	A
5 - A259 Bognor Road West	599	150	1395	1453	0.412	599	1131	0.8	0.8	4.636	A

A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.09	A

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 period length (min)	Time segment length (min)	Run automatically
D2	2031 LP + mitigation - Cumulative +PS	PM	FLAT	16:00	17:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1076	100.000
2 - A259 Bognor Rd East		FLAT	✓	1039	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1419	100.000
5 - A259 Bognor Road West		FLAT	✓	688	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	397	41	493	145
	2 - A259 Bognor Rd East	355	0	46	502	136
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	531	598	71	0	219
	5 - A259 Bognor Road West	192	216	26	254	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.38	2.25	0.7	A	1076	1076
2 - A259 Bognor Rd East	0.43	2.93	0.8	A	1039	1039
3 - Vinnetrow Road						
4 - A27 South	0.48	2.53	1.0	A	1419	1419
5 - A259 Bognor Road West	0.50	5.83	1.1	A	688	688

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1076	269	1160	2838	0.379	1073	1074	0.0	0.7	2.241	A
2 - A259 Bognor Rd East	1039	260	1026	2394	0.434	1036	1207	0.0	0.8	2.908	A
3 - Vinnetrow Road			1879				183				
4 - A27 South	1419	355	634	2987	0.475	1415	1245	0.0	1.0	2.513	A
5 - A259 Bognor Road West	688	172	1551	1370	0.502	684	499	0.0	1.1	5.733	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1076	269	1165	2834	0.380	1076	1078	0.7	0.7	2.251	A
2 - A259 Bognor Rd East	1039	260	1030	2391	0.435	1039	1211	0.8	0.8	2.927	A
3 - Vinnetrow Road			1885				184				
4 - A27 South	1419	355	636	2986	0.475	1419	1249	1.0	1.0	2.527	A
5 - A259 Bognor Road West	688	172	1555	1368	0.503	688	500	1.1	1.1	5.826	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1076	269	1165	2834	0.380	1076	1078	0.7	0.7	2.251	A
2 - A259 Bognor Rd East	1039	260	1030	2391	0.435	1039	1211	0.8	0.8	2.927	A
3 - Vinnetrow Road			1885				184				
4 - A27 South	1419	355	636	2986	0.475	1419	1249	1.0	1.0	2.527	A
5 - A259 Bognor Road West	688	172	1555	1368	0.503	688	500	1.1	1.1	5.826	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1076	269	1165	2834	0.380	1076	1078	0.7	0.7	2.251	A
2 - A259 Bognor Rd East	1039	260	1030	2391	0.435	1039	1211	0.8	0.8	2.927	A
3 - Vinnetrow Road			1885				184				
4 - A27 South	1419	355	636	2986	0.475	1419	1249	1.0	1.0	2.527	A
5 - A259 Bognor Road West	688	172	1555	1368	0.503	688	500	1.1	1.1	5.826	A

A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.01	A

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 period length (min)	Time segment length (min)	Run automatically
D3	2031 LP - mitigation - Cumulative +PS	AM	FLAT	08:00	09:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1535	100.000
2 - A259 Bognor Rd East		FLAT	✓	1046	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1065	100.000
5 - A259 Bognor Road West		FLAT	✓	566	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	375	138	627	395
	2 - A259 Bognor Rd East	351	0	68	367	260
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	338	301	106	0	320
	5 - A259 Bognor Road West	155	138	41	232	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.50	2.53	1.1	A	1535	1535
2 - A259 Bognor Rd East	0.51	3.91	1.1	A	1046	1046
3 - Vinnetrow Road						
4 - A27 South	0.39	2.40	0.7	A	1065	1065
5 - A259 Bognor Road West	0.35	3.78	0.6	A	566	566

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1535	384	815	3100	0.495	1531	841	0.0	1.1	2.517	A
2 - A259 Bognor Rd East	1046	262	1534	2061	0.507	1042	812	0.0	1.1	3.866	A
3 - Vinnetrow Road			2224				352				
4 - A27 South	1065	266	1002	2720	0.392	1062	1222	0.0	0.7	2.385	A
5 - A259 Bognor Road West	566	142	1093	1614	0.351	564	972	0.0	0.6	3.761	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1535	384	818	3098	0.495	1535	844	1.1	1.1	2.532	A
2 - A259 Bognor Rd East	1046	262	1539	2058	0.508	1046	814	1.1	1.1	3.911	A
3 - Vinnetrow Road			2232				353				
4 - A27 South	1065	266	1006	2717	0.392	1065	1226	0.7	0.7	2.396	A
5 - A259 Bognor Road West	566	142	1096	1612	0.351	566	975	0.6	0.6	3.783	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1535	384	818	3098	0.495	1535	844	1.1	1.1	2.532	A
2 - A259 Bognor Rd East	1046	262	1539	2058	0.508	1046	814	1.1	1.1	3.912	A
3 - Vinnetrow Road			2232				353				
4 - A27 South	1065	266	1006	2717	0.392	1065	1226	0.7	0.7	2.396	A
5 - A259 Bognor Road West	566	142	1096	1612	0.351	566	975	0.6	0.6	3.783	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1535	384	818	3098	0.495	1535	844	1.1	1.1	2.532	A
2 - A259 Bognor Rd East	1046	262	1539	2058	0.508	1046	814	1.1	1.1	3.912	A
3 - Vinnetrow Road			2232				353				
4 - A27 South	1065	266	1006	2717	0.392	1065	1226	0.7	0.7	2.396	A
5 - A259 Bognor Road West	566	142	1096	1612	0.351	566	975	0.6	0.6	3.783	A

A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	2.82	A

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 period length (min)	Time segment length (min)	Run automatically
D4	2031 LP - mitigation - Cumulative +PS	PM	FLAT	16:00	17:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	909	100.000
2 - A259 Bognor Rd East		FLAT	✓	1005	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1351	100.000
5 - A259 Bognor Road West		FLAT	✓	555	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	358	138	292	121
	2 - A259 Bognor Rd East	397	0	131	305	172
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	439	531	215	0	166
	5 - A259 Bognor Road West	155	187	59	154	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.32	2.04	0.5	A	909	909
2 - A259 Bognor Rd East	0.41	2.79	0.8	A	1005	1005
3 - Vinnetrow Road						
4 - A27 South	0.46	2.48	0.9	A	1351	1351
5 - A259 Bognor Road West	0.41	4.96	0.8	A	555	555

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	909	227	1142	2852	0.319	907	988	0.0	0.5	2.034	A
2 - A259 Bognor Rd East	1005	251	976	2427	0.414	1002	1073	0.0	0.8	2.774	A
3 - Vinnetrow Road			1437				541				
4 - A27 South	1351	338	688	2948	0.458	1347	749	0.0	0.9	2.469	A
5 - A259 Bognor Road West	555	139	1578	1356	0.409	552	458	0.0	0.8	4.909	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	909	227	1146	2849	0.319	909	991	0.5	0.5	2.041	A
2 - A259 Bognor Rd East	1005	251	979	2425	0.414	1005	1076	0.8	0.8	2.788	A
3 - Vinnetrow Road			1441				543				
4 - A27 South	1351	338	690	2946	0.459	1351	751	0.9	0.9	2.481	A
5 - A259 Bognor Road West	555	139	1582	1353	0.410	555	459	0.8	0.8	4.960	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	909	227	1146	2849	0.319	909	991	0.5	0.5	2.041	A
2 - A259 Bognor Rd East	1005	251	979	2425	0.415	1005	1076	0.8	0.8	2.788	A
3 - Vinnetrow Road			1441				543				
4 - A27 South	1351	338	690	2946	0.459	1351	751	0.9	0.9	2.481	A
5 - A259 Bognor Road West	555	139	1582	1353	0.410	555	459	0.8	0.8	4.960	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	909	227	1146	2849	0.319	909	991	0.5	0.5	2.041	A
2 - A259 Bognor Rd East	1005	251	979	2425	0.415	1005	1076	0.8	0.8	2.788	A
3 - Vinnetrow Road			1441				543				
4 - A27 South	1351	338	690	2946	0.459	1351	751	0.9	0.9	2.481	A
5 - A259 Bognor Road West	555	139	1582	1353	0.410	555	459	0.8	0.8	4.961	A

A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS +H, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.71	A

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 period length (min)	Time segment length (min)	Run automatically
D5	2031 LP + mitigation - Cumulative +PS +H	AM	FLAT	08:00	09:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1652	100.000
2 - A259 Bognor Rd East		FLAT	✓	1412	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1190	100.000
5 - A259 Bognor Road West		FLAT	✓	500	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	470	44	668	470
	2 - A259 Bognor Rd East	542	0	33	500	337
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	506	327	30	0	327
	5 - A259 Bognor Road West	236	53	8	203	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.51	2.48	1.1	A	1652	1652
2 - A259 Bognor Rd East	0.66	5.48	2.1	A	1412	1412
3 - Vinnetrow Road						
4 - A27 South	0.48	3.10	1.0	A	1190	1190
5 - A259 Bognor Road West	0.35	4.18	0.6	A	500	500

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1652	413	619	3250	0.508	1647	1278	0.0	1.1	2.464	A
2 - A259 Bognor Rd East	1412	353	1419	2137	0.661	1404	847	0.0	2.1	5.340	A
3 - Vinnetrow Road			2708				115				
4 - A27 South	1190	298	1342	2473	0.481	1186	1365	0.0	1.0	3.078	A
5 - A259 Bognor Road West	500	125	1399	1451	0.345	498	1130	0.0	0.6	4.144	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1652	413	621	3248	0.509	1652	1284	1.1	1.1	2.480	A
2 - A259 Bognor Rd East	1412	353	1423	2134	0.662	1412	850	2.1	2.1	5.481	A
3 - Vinnetrow Road			2720				115				
4 - A27 South	1190	298	1349	2468	0.482	1190	1371	1.0	1.0	3.098	A
5 - A259 Bognor Road West	500	125	1405	1448	0.345	500	1134	0.6	0.6	4.178	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1652	413	621	3248	0.509	1652	1284	1.1	1.1	2.480	A
2 - A259 Bognor Rd East	1412	353	1423	2134	0.662	1412	850	2.1	2.1	5.483	A
3 - Vinnetrow Road			2720				115				
4 - A27 South	1190	298	1349	2468	0.482	1190	1371	1.0	1.0	3.098	A
5 - A259 Bognor Road West	500	125	1405	1448	0.345	500	1134	0.6	0.6	4.178	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1652	413	621	3248	0.509	1652	1284	1.1	1.1	2.480	A
2 - A259 Bognor Rd East	1412	353	1423	2134	0.662	1412	850	2.1	2.1	5.483	A
3 - Vinnetrow Road			2720				115				
4 - A27 South	1190	298	1349	2468	0.482	1190	1371	1.0	1.0	3.098	A
5 - A259 Bognor Road West	500	125	1405	1448	0.345	500	1134	0.6	0.6	4.178	A

A27 Bognor RBT - 2031 LP + mitigation - Cumulative +PS +H, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.12	A

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 period length (min)	Time segment length (min)	Run automatically
D6	2031 LP + mitigation - Cumulative +PS +H	PM	FLAT	16:00	17:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1086	100.000
2 - A259 Bognor Rd East		FLAT	✓	1049	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1422	100.000
5 - A259 Bognor Road West		FLAT	✓	692	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	397	47	497	145
	2 - A259 Bognor Rd East	358	0	48	505	138
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	533	599	71	0	219
	5 - A259 Bognor Road West	192	216	29	255	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.38	2.27	0.7	A	1086	1086
2 - A259 Bognor Rd East	0.44	2.97	0.9	A	1049	1049
3 - Vinnetrow Road						
4 - A27 South	0.48	2.54	1.0	A	1422	1422
5 - A259 Bognor Road West	0.51	5.89	1.1	A	692	692

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1086	272	1165	2834	0.383	1083	1079	0.0	0.7	2.259	A
2 - A259 Bognor Rd East	1049	262	1040	2385	0.440	1046	1208	0.0	0.9	2.950	A
3 - Vinnetrow Road			1891				194				
4 - A27 South	1422	356	639	2983	0.477	1418	1252	0.0	1.0	2.523	A
5 - A259 Bognor Road West	692	173	1556	1367	0.506	688	501	0.0	1.1	5.794	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1086	272	1170	2831	0.384	1086	1083	0.7	0.7	2.269	A
2 - A259 Bognor Rd East	1049	262	1044	2382	0.440	1049	1212	0.9	0.9	2.969	A
3 - Vinnetrow Road			1898				195				
4 - A27 South	1422	356	641	2982	0.477	1422	1257	1.0	1.0	2.538	A
5 - A259 Bognor Road West	692	173	1561	1364	0.507	692	502	1.1	1.1	5.889	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1086	272	1170	2831	0.384	1086	1083	0.7	0.7	2.269	A
2 - A259 Bognor Rd East	1049	262	1044	2382	0.440	1049	1212	0.9	0.9	2.969	A
3 - Vinnetrow Road			1898				195				
4 - A27 South	1422	356	641	2982	0.477	1422	1257	1.0	1.0	2.538	A
5 - A259 Bognor Road West	692	173	1561	1364	0.507	692	502	1.1	1.1	5.889	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1086	272	1170	2831	0.384	1086	1083	0.7	0.7	2.269	A
2 - A259 Bognor Rd East	1049	262	1044	2382	0.440	1049	1212	0.9	0.9	2.969	A
3 - Vinnetrow Road			1898				195				
4 - A27 South	1422	356	641	2982	0.477	1422	1257	1.0	1.0	2.538	A
5 - A259 Bognor Road West	692	173	1561	1364	0.507	692	502	1.1	1.1	5.889	A

A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS +H, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	3.05	A

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 period length (min)	Time segment length (min)	Run automatically
D7	2031 LP - mitigation - Cumulative +PS +H	AM	FLAT	08:00	09:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	1541	100.000
2 - A259 Bognor Rd East		FLAT	✓	1068	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1070	100.000
5 - A259 Bognor Road West		FLAT	✓	567	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	375	141	630	395
	2 - A259 Bognor Rd East	355	0	69	369	275
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	341	303	106	0	320
	5 - A259 Bognor Road West	155	138	42	232	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.50	2.55	1.1	A	1541	1541
2 - A259 Bognor Rd East	0.52	4.02	1.2	A	1068	1068
3 - Vinnetrow Road						
4 - A27 South	0.40	2.42	0.7	A	1070	1070
5 - A259 Bognor Road West	0.35	3.80	0.6	A	567	567

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1541	385	818	3098	0.497	1537	848	0.0	1.1	2.528	A
2 - A259 Bognor Rd East	1068	267	1541	2057	0.519	1063	814	0.0	1.2	3.968	A
3 - Vinnetrow Road			2248				357				
4 - A27 South	1070	268	1021	2706	0.395	1067	1227	0.0	0.7	2.412	A
5 - A259 Bognor Road West	567	142	1101	1610	0.352	565	987	0.0	0.6	3.782	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1541	385	821	3096	0.498	1541	851	1.1	1.1	2.546	A
2 - A259 Bognor Rd East	1068	267	1546	2054	0.520	1068	816	1.2	1.2	4.017	A
3 - Vinnetrow Road			2256				358				
4 - A27 South	1070	268	1025	2703	0.396	1070	1231	0.7	0.7	2.424	A
5 - A259 Bognor Road West	567	142	1105	1608	0.353	567	990	0.6	0.6	3.804	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1541	385	821	3096	0.498	1541	851	1.1	1.1	2.546	A
2 - A259 Bognor Rd East	1068	267	1546	2054	0.520	1068	816	1.2	1.2	4.017	A
3 - Vinnetrow Road			2256				358				
4 - A27 South	1070	268	1025	2703	0.396	1070	1231	0.7	0.7	2.424	A
5 - A259 Bognor Road West	567	142	1105	1608	0.353	567	990	0.6	0.6	3.804	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	1541	385	821	3096	0.498	1541	851	1.1	1.1	2.546	A
2 - A259 Bognor Rd East	1068	267	1546	2054	0.520	1068	816	1.2	1.2	4.017	A
3 - Vinnetrow Road			2256				358				
4 - A27 South	1070	268	1025	2703	0.396	1070	1231	0.7	0.7	2.424	A
5 - A259 Bognor Road West	567	142	1105	1608	0.353	567	990	0.6	0.6	3.804	A

A27 Bognor RBT - 2031 LP - mitigation - Cumulative +PS +H, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A27 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A259 Bognor Rd East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A27 South - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	5 - A259 Bognor Road West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Bognor Bridge Road - WSP Mitigation	Standard Roundabout	1,2,3,4,5	2.84	A

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 period length (min)	Time segment length (min)	Run automatically
D8	2031 LP - mitigation - Cumulative +PS +H	PM	FLAT	16:00	17:00	60	15	✓

Default vehicle mix	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 - A27 North		FLAT	✓	919	100.000
2 - A259 Bognor Rd East		FLAT	✓	1015	100.000
3 - Vinnetrow Road					
4 - A27 South		FLAT	✓	1354	100.000
5 - A259 Bognor Road West		FLAT	✓	559	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West
From	1 - A27 North	0	358	144	296	121
	2 - A259 Bognor Rd East	400	0	133	308	174
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	441	532	215	0	166
	5 - A259 Bognor Road West	155	187	62	155	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A27 North	2 - A259 Bognor Rd East	3 - Vinnetrow Road	4 - A27 South	5 - A259 Bognor Road West

From	1 - A27 North	10	10	10	10	10
	2 - A259 Bognor Rd East	10	10	10	10	10
	3 - Vinnetrow Road	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4 - A27 South	10	10	10	10	10
	5 - A259 Bognor Road West	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A27 North	0.32	2.06	0.5	A	919	919
2 - A259 Bognor Rd East	0.42	2.83	0.8	A	1015	1015
3 - Vinnetrow Road						
4 - A27 South	0.46	2.49	0.9	A	1354	1354
5 - A259 Bognor Road West	0.41	5.01	0.8	A	559	559

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	919	230	1147	2848	0.323	917	993	0.0	0.5	2.049	A
2 - A259 Bognor Rd East	1015	254	990	2417	0.420	1012	1074	0.0	0.8	2.811	A
3 - Vinnetrow Road			1449				552				
4 - A27 South	1354	339	693	2944	0.460	1350	757	0.0	0.9	2.480	A
5 - A259 Bognor Road West	559	140	1583	1352	0.413	556	460	0.0	0.8	4.953	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	919	230	1151	2845	0.323	919	996	0.5	0.5	2.055	A
2 - A259 Bognor Rd East	1015	254	993	2415	0.420	1015	1077	0.8	0.8	2.827	A
3 - Vinnetrow Road			1454				554				
4 - A27 South	1354	339	695	2943	0.460	1354	759	0.9	0.9	2.492	A
5 - A259 Bognor Road West	559	140	1588	1350	0.414	559	461	0.8	0.8	5.006	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	919	230	1151	2845	0.323	919	996	0.5	0.5	2.055	A
2 - A259 Bognor Rd East	1015	254	993	2415	0.420	1015	1077	0.8	0.8	2.827	A
3 - Vinnetrow Road			1454				554				
4 - A27 South	1354	339	695	2943	0.460	1354	759	0.9	0.9	2.492	A
5 - A259 Bognor Road West	559	140	1588	1350	0.414	559	461	0.8	0.8	5.006	A

16:45 - 17:00

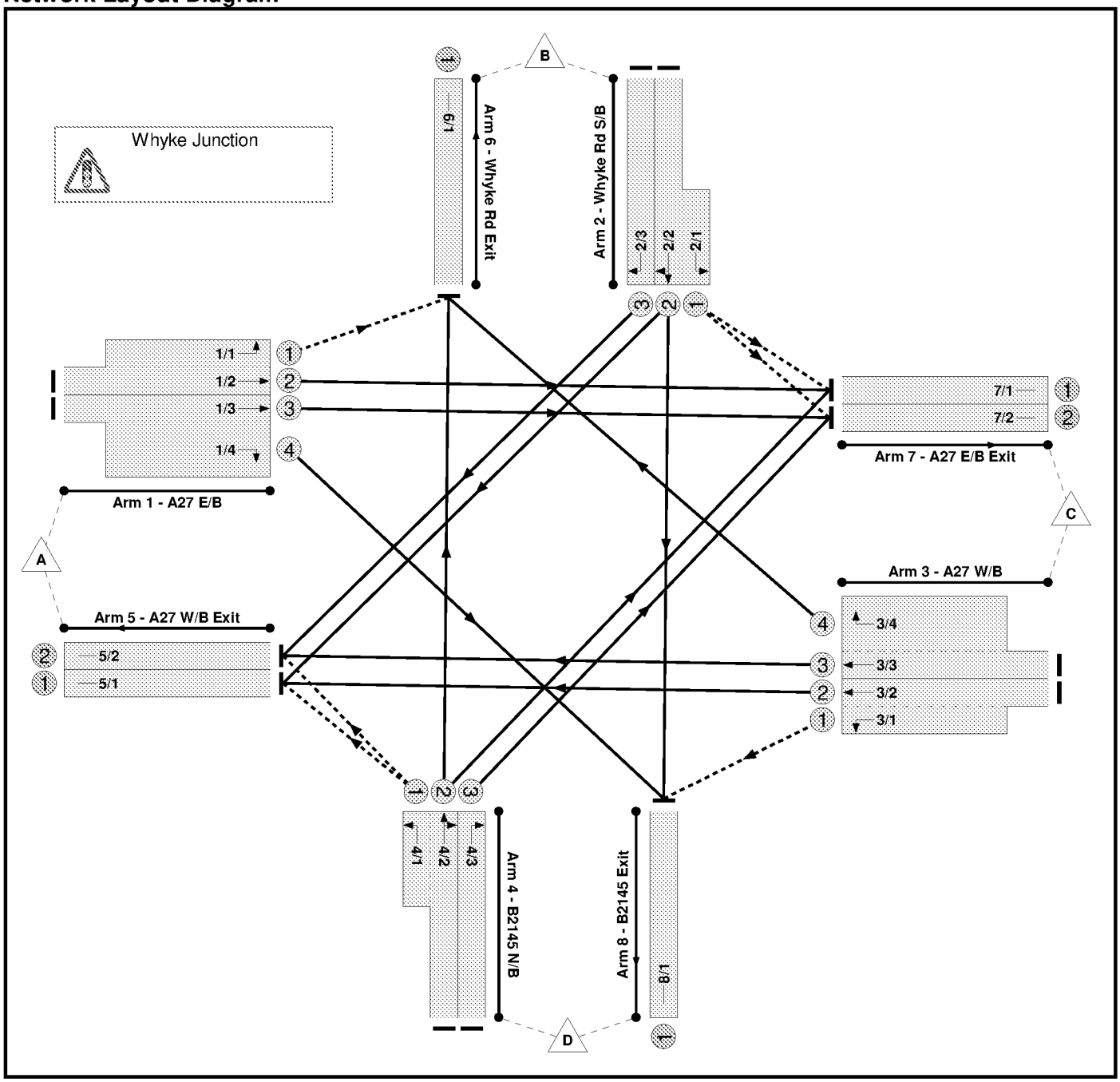
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A27 North	919	230	1151	2845	0.323	919	996	0.5	0.5	2.055	A
2 - A259 Bognor Rd East	1015	254	993	2415	0.420	1015	1077	0.8	0.8	2.827	A
3 - Vinnetrow Road			1454				554				
4 - A27 South	1354	339	695	2943	0.460	1354	759	0.9	0.9	2.492	A
5 - A259 Bognor Road West	559	140	1588	1350	0.414	559	461	0.8	0.8	5.006	A

Full Input Data And Results

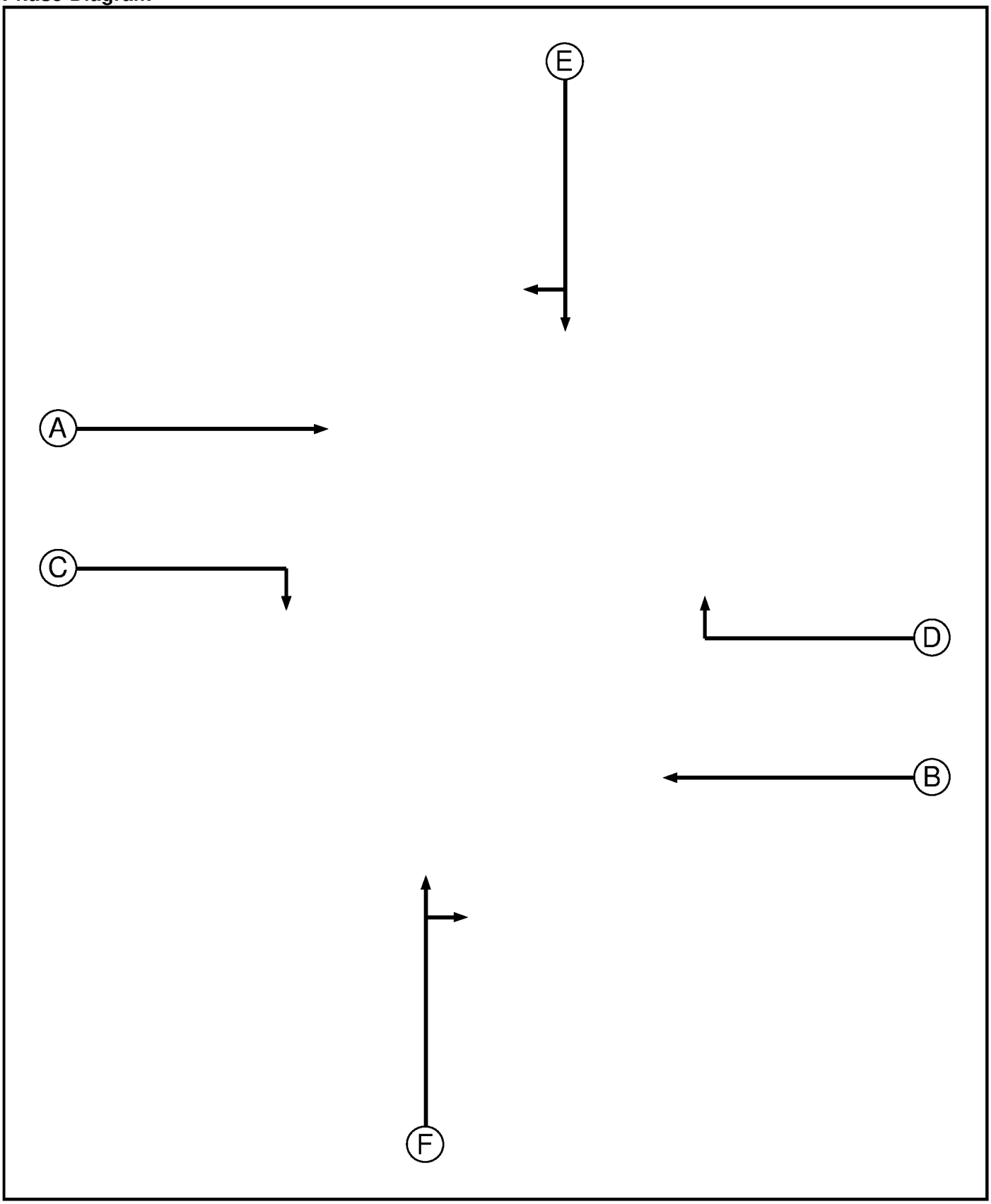
User and Project Details

Project:	**Pagham South**
Title:	**A27 Whyke Junction Without Cumulative Development**
Location:	Chichester
File name:	Whyke Jctn Mitigation v3 (Wtd) 2031 - Cumulative.lsg3x
Author:	FB
Company:	Highgate Transportation Ltd
Address:	First Floor, 42-43 Park Street, Bristol BS1 5NL
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7

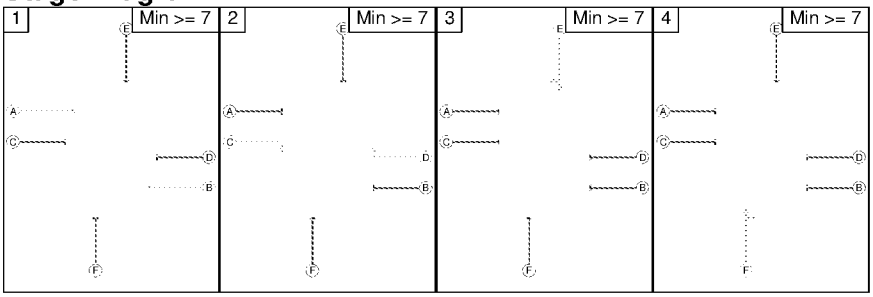
Phase Intergreens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		-	-	5	6	5
	B	-		5	-	5	6
	C	-	6		-	5	5
	D	6	-	-		5	5
	E	5	7	6	6		8
	F	7	5	6	6	8	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4
1		5	6	6
2	6		5	5
3	7	6		8
4	7	6	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Whyke Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A27 E/B)	6/1 (Left)	715	0	4/2	0.22	To 6/1 (Ahead)	-	-	-	-	-
				3/4	0.22	All					
2/1 (Whyke Rd S/B)	7/1 (Left)	715	0	1/2	0.22	All	-	-	-	-	-
				1/3	0.22	All					
				4/2	0.22	To 7/1 (Right)					
				4/3	0.22	All					
	7/2 (Left)	715	0	1/2	0.22	All					
				1/3	0.22	All					
				4/2	0.22	To 7/1 (Right)					
				4/3	0.22	All					
3/1 (A27 W/B)	8/1 (Left)	715	0	2/2	0.22	To 8/1 (Ahead)	-	-	-	-	-
				1/4	0.22	All					
4/1 (B2145 N/B)	5/1 (Left)	715	0	3/2	0.22	All	-	-	-	-	-
				3/3	0.22	All					
				2/2	0.22	To 5/1 (Right)					
				2/3	0.22	All					
	5/2 (Left)	715	0	3/2	0.22	All					
				3/3	0.22	All					
				2/2	0.22	To 5/1 (Right)					
				2/3	0.22	All					

Full Input Data And Results

Lane Input Data

Junction: Whyke Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A27 E/B)	O		2	3	20.9	Geom	-	3.50	0.00	Y	Arm 6 Left	30.00
1/2 (A27 E/B)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Ahead	Inf
1/3 (A27 E/B)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Ahead	Inf
1/4 (A27 E/B)	U	C	2	3	17.4	User	3828	-	-	-	-	-
2/1 (Whyke Rd S/B)	O		2	3	5.2	Geom	-	3.50	0.00	Y	Arm 7 Left	20.00
2/2 (Whyke Rd S/B)	U	E	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Right	15.00
											Arm 8 Ahead	Inf
2/3 (Whyke Rd S/B)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Right	15.00
3/1 (A27 W/B)	O		2	3	20.9	Geom	-	3.50	0.00	Y	Arm 8 Left	30.00
3/2 (A27 W/B)	U	B	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Ahead	Inf
3/3 (A27 W/B)	U	B	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Ahead	Inf
3/4 (A27 W/B)	U	D	2	3	17.4	User	3828	-	-	-	-	-
4/1 (B2145 N/B)	O		2	3	5.2	Geom	-	3.50	0.00	Y	Arm 5 Left	20.00
4/2 (B2145 N/B)	U	F	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Right	15.00
4/3 (B2145 N/B)	U	F	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Right	15.00
5/1 (A27 W/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A27 W/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Whyke Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A27 E/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

7/2 (A27 E/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B2145 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 Max SE AM Peak'	08:00	09:00	01:00	
2: '2031 Max SE PM Peak'	17:00	18:00	01:00	
3: '2031 LP + mitigation AM no cumulative'	08:00	09:00	01:00	
4: '2031 LP + mitigation PM no cumulative'	17:00	18:00	01:00	
5: '2031 LP - mitigation AM no cumulative'	08:00	09:00	01:00	
6: '2031 LP - mitigation PM no cumulative'	17:00	18:00	01:00	

Scenario 1: '2031 LP + mitigation AM no cumulative' (FG3: '2031 LP + mitigation AM no cumulative', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	120	947	357	1424
	B	0	0	0	4	4
	C	1014	0	0	342	1356
	D	719	141	265	0	1125
	Tot.	1733	261	1212	703	3909

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2031 LP + mitigation AM no cumulative
Junction: Whyke Junction	
1/1 (short)	120
1/2 (with short)	581(In) 461(Out)
1/3 (with short)	843(In) 486(Out)
1/4 (short)	357
2/1 (short)	0
2/2 (with short)	4(In) 4(Out)
2/3	0
3/1 (short)	342
3/2 (with short)	872(In) 530(Out)
3/3 (with short)	484(In) 484(Out)
3/4 (short)	0
4/1 (short)	719
4/2 (with short)	860(In) 141(Out)
4/3	265
5/1	889
5/2	844
6/1	261
7/1	461
7/2	751
8/1	703

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	0.0 %	1965	1965
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	0.0 %	1965	1965
				Arm 8 Ahead	Inf	100.0 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	0.0 %	2105	2105
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
				Arm 7 Right	15.00	0.0 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2031 LP + mitigation PM no cumulative' (FG4: '2031 LP + mitigation PM no cumulative', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	25	1047	145	1217
	B	2	0	105	629	736
	C	1010	0	0	445	1455
	D	272	56	268	0	596
	Tot.	1284	81	1420	1219	4004

Traffic Lane Flows

Lane	Scenario 2: 2031 LP + mitigation PM no cumulative
Junction: Whyke Junction	
1/1 (short)	25
1/2 (with short)	547(In) 522(Out)
1/3 (with short)	670(In) 525(Out)
1/4 (short)	145
2/1 (short)	105
2/2 (with short)	734(In) 629(Out)
2/3	2
3/1 (short)	445
3/2 (with short)	962(In) 517(Out)
3/3 (with short)	493(In) 493(Out)
3/4 (short)	0
4/1 (short)	272
4/2 (with short)	443(In) 171(Out)
4/3	153
5/1	653
5/2	631
6/1	81
7/1	689
7/2	731
8/1	1219

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	0.0 %	1965	1965
				Arm 8 Ahead	Inf	100.0 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	32.7 %	1841	1841
				Arm 7 Right	15.00	67.3 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2031 LP - mitigation AM no cumulative' (FG5: '2031 LP - mitigation AM no cumulative', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	340	626	334	1300
	B	128	0	76	19	223
	C	776	250	0	259	1285
	D	646	165	412	0	1223
	Tot.	1550	755	1114	612	4031

Traffic Lane Flows

Lane	Scenario 3: 2031 LP - mitigation AM no cumulative
Junction: Whyke Junction	
1/1 (short)	340
1/2 (with short)	694(In) 354(Out)
1/3 (with short)	606(In) 272(Out)
1/4 (short)	334
2/1 (short)	76
2/2 (with short)	170(In) 94(Out)
2/3	53
3/1 (short)	259
3/2 (with short)	661(In) 402(Out)
3/3 (with short)	624(In) 374(Out)
3/4 (short)	250
4/1 (short)	646
4/2 (with short)	895(In) 249(Out)
4/3	328
5/1	800
5/2	750
6/1	755
7/1	476
7/2	638
8/1	612

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	79.8 %	1820	1820
				Arm 8 Ahead	Inf	20.2 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	66.3 %	1901	1901
				Arm 7 Right	15.00	33.7 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2031 LP - mitigation PM no cumulative' (FG6: '2031 LP - mitigation PM no cumulative', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	49	779	619	1447
	B	317	0	301	210	828
	C	523	30	0	419	972
	D	383	15	387	0	785
	Tot.	1223	94	1467	1248	4032

Traffic Lane Flows

Lane	Scenario 4: 2031 LP - mitigation PM no cumulative
Junction: Whyke Junction	
1/1 (short)	49
1/2 (with short)	718(In) 669(Out)
1/3 (with short)	729(In) 110(Out)
1/4 (short)	619
2/1 (short)	301
2/2 (with short)	550(In) 249(Out)
2/3	278
3/1 (short)	419
3/2 (with short)	724(In) 305(Out)
3/3 (with short)	248(In) 218(Out)
3/4 (short)	30
4/1 (short)	383
4/2 (with short)	585(In) 202(Out)
4/3	200
5/1	535
5/2	688
6/1	94
7/1	1006
7/2	461
8/1	1248

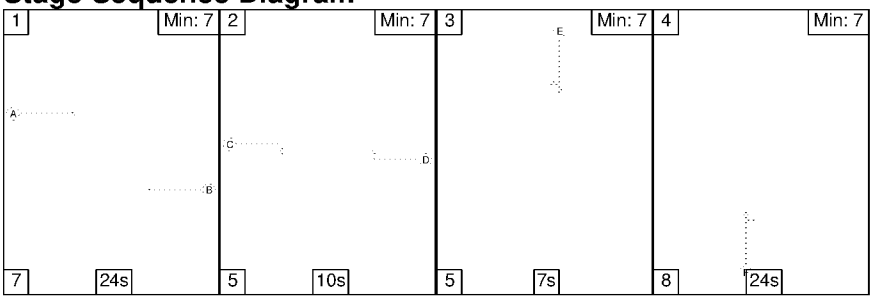
Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	15.7 %	1935	1935
				Arm 8 Ahead	Inf	84.3 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	7.4 %	1799	1799
				Arm 7 Right	15.00	92.6 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2031 LP + mitigation AM no cumulative' (FG3: '2031 LP + mitigation AM no cumulative', Plan 1: 'Single Stage')

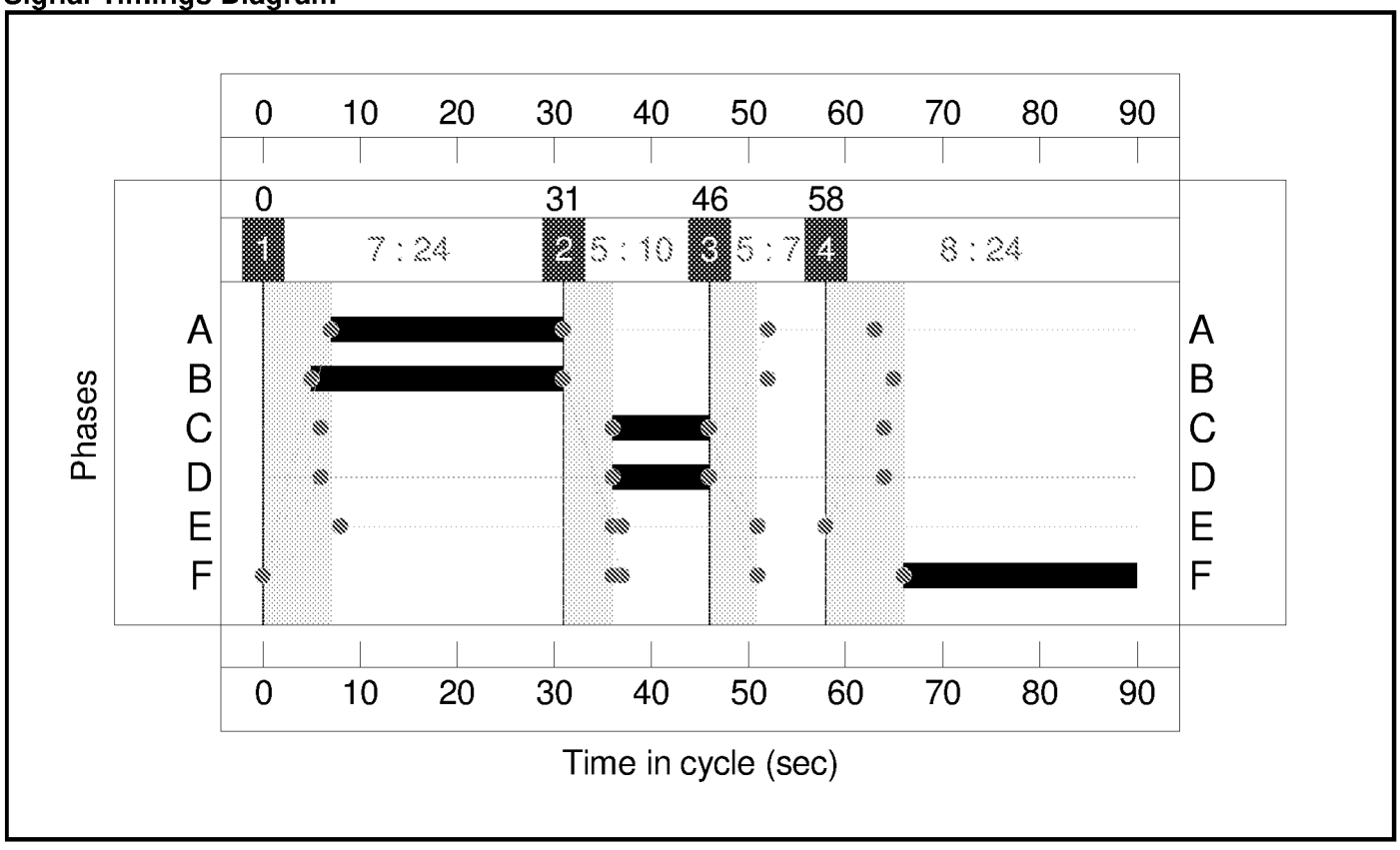
Stage Sequence Diagram



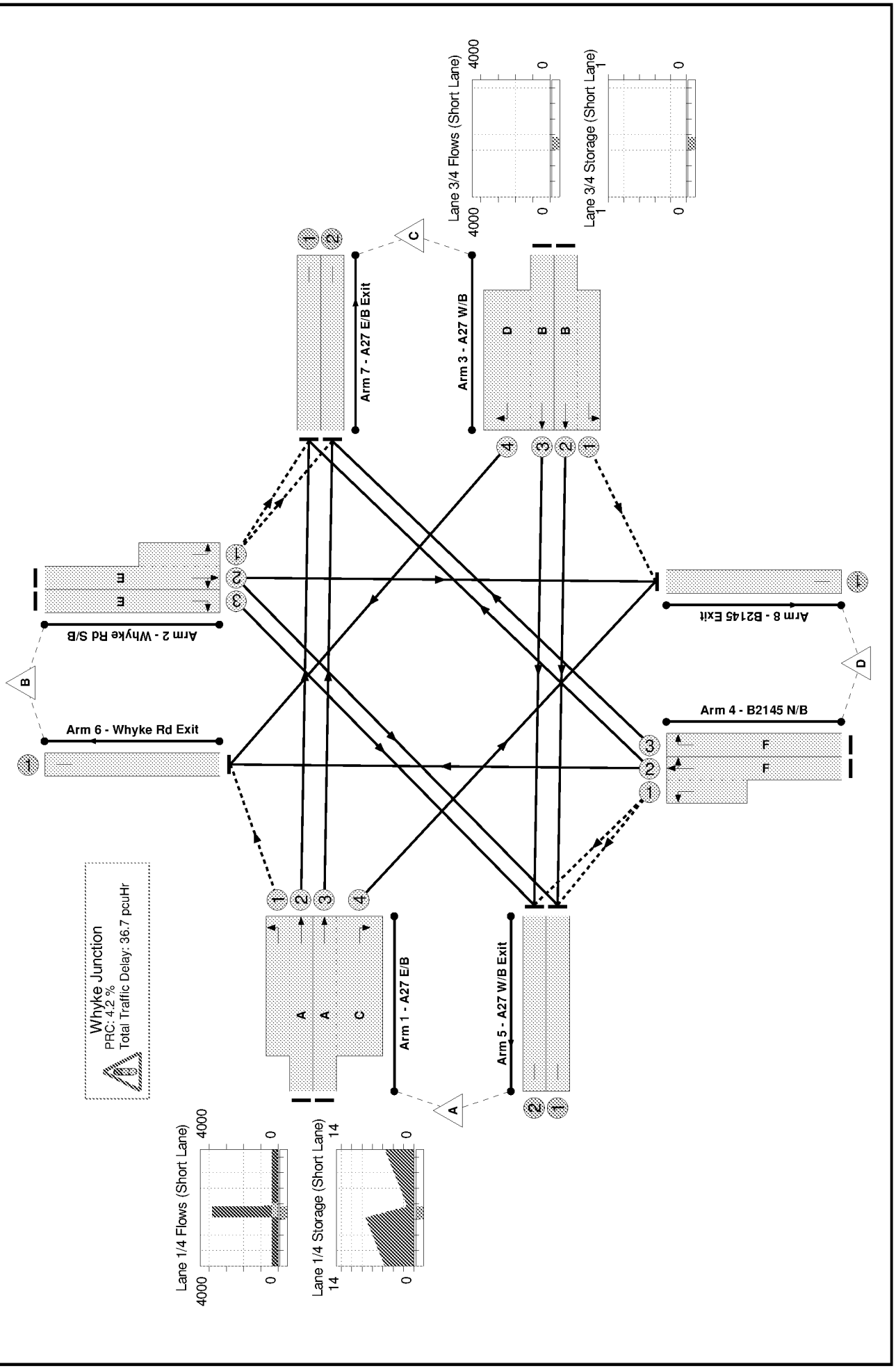
Stage Timings

Stage	1	2	3	4
Duration	24	10	7	24
Change Point	0	31	46	58

Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.4%**
Whyke Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.4%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	24	-	581	2105:1871	737	78.8%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	24:10	-	843	2105:3828	1017	82.9%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	7	-	4	1965:1965	175	2.3%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	7	-	0	2105	187	0.0%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	26	-	872	2105:1871	1039	83.9%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	26:10	-	484	2105:3828	632	76.6%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	24	-	860	1965:1828	995	86.4%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	24	-	265	1914	532	49.8%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	869	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	844	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	261	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	461	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	751	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	703	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**197**	**984**	**0**	**24.8**	**11.9**	**0.0**	**36.7**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**197**	**984**	**0**	**24.8**	**11.9**	**0.0**	**36.7**	**-**	**-**	**-**	**-**
1/2+1/1	581	581	48	72	0	3.8	1.8	-	5.7	35.1	10.6	1.8	12.4
1/3+1/4	843	843	-	-	-	7.9	2.4	-	10.3	43.9	11.3	2.4	13.7
2/2+2/1	4	4	0	0	0	0.0	0.0	-	0.1	48.4	0.1	0.0	0.1
2/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	872	872	51	291	0	4.4	2.5	-	6.9	28.6	12.4	2.5	14.9
3/3+3/4	484	484	-	-	-	3.9	1.6	-	5.5	40.6	10.9	1.6	12.5
4/2+4/1	860	860	99	620	0	2.8	3.0	-	5.8	24.4	13.6	3.0	16.6
4/3	265	265	-	-	-	2.0	0.5	-	2.5	34.0	5.5	0.5	6.0
5/1	889	889	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	844	844	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	261	261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	461	461	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	751	751	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	703	703	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): 4.2
PRC Over All Lanes (%): 4.2

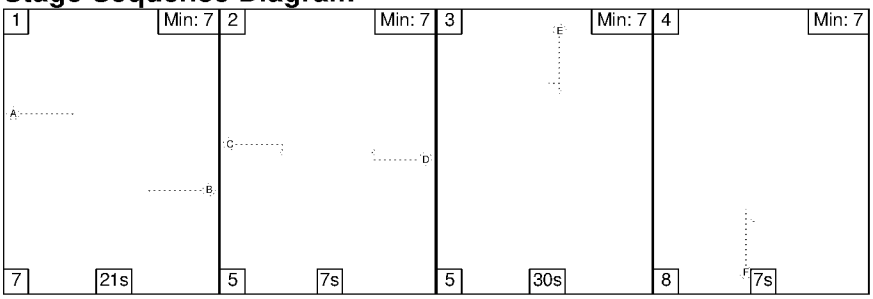
Total Delay for Signalled Lanes (pcuHr): 36.71
Total Delay Over All Lanes(pcuHr): 36.71

Cycle Time (s): 90

Full Input Data And Results

Scenario 2: '2031 LP + mitigation PM no cumulative' (FG4: '2031 LP + mitigation PM no cumulative', Plan 1: 'Single Stage')

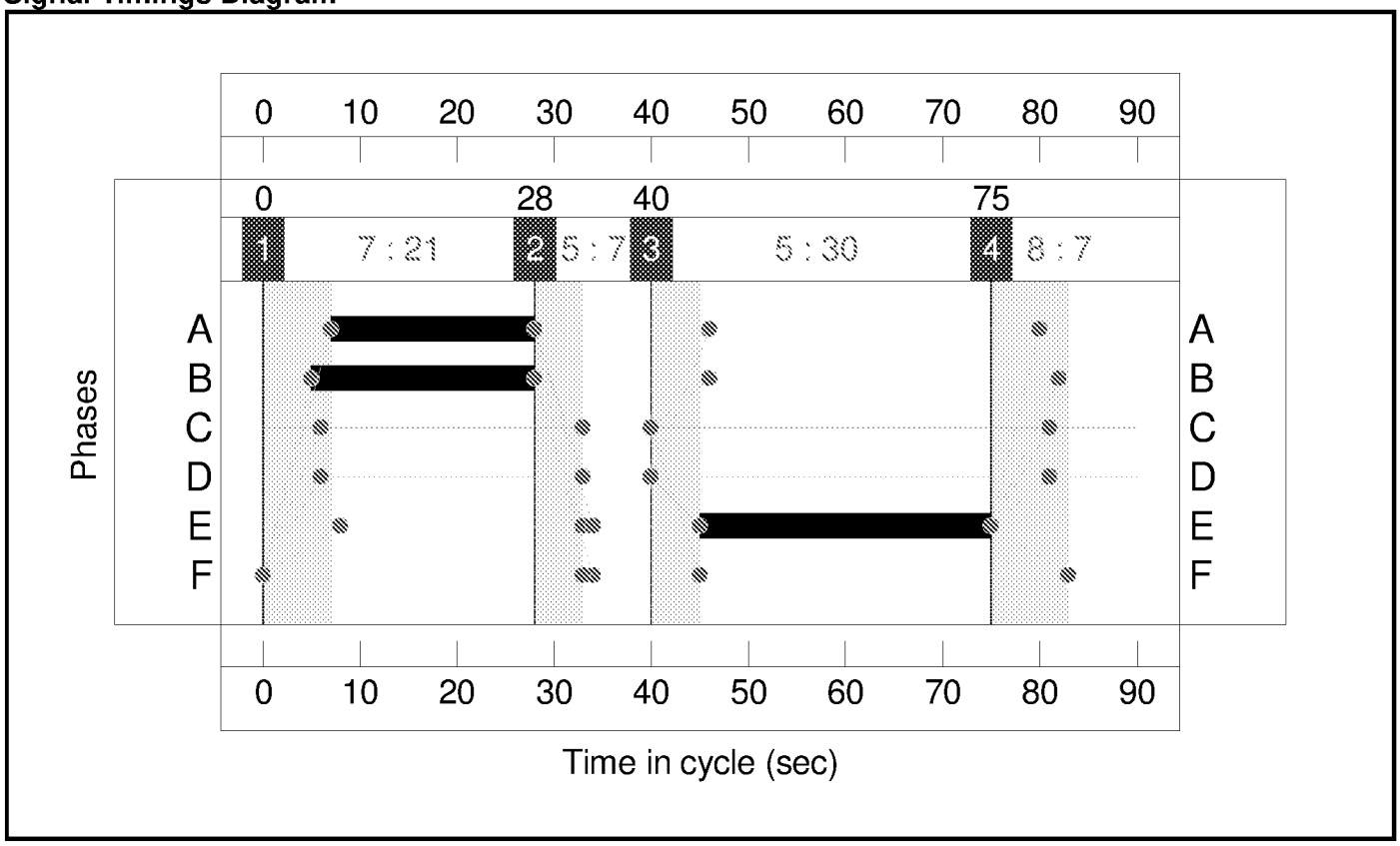
Stage Sequence Diagram



Stage Timings

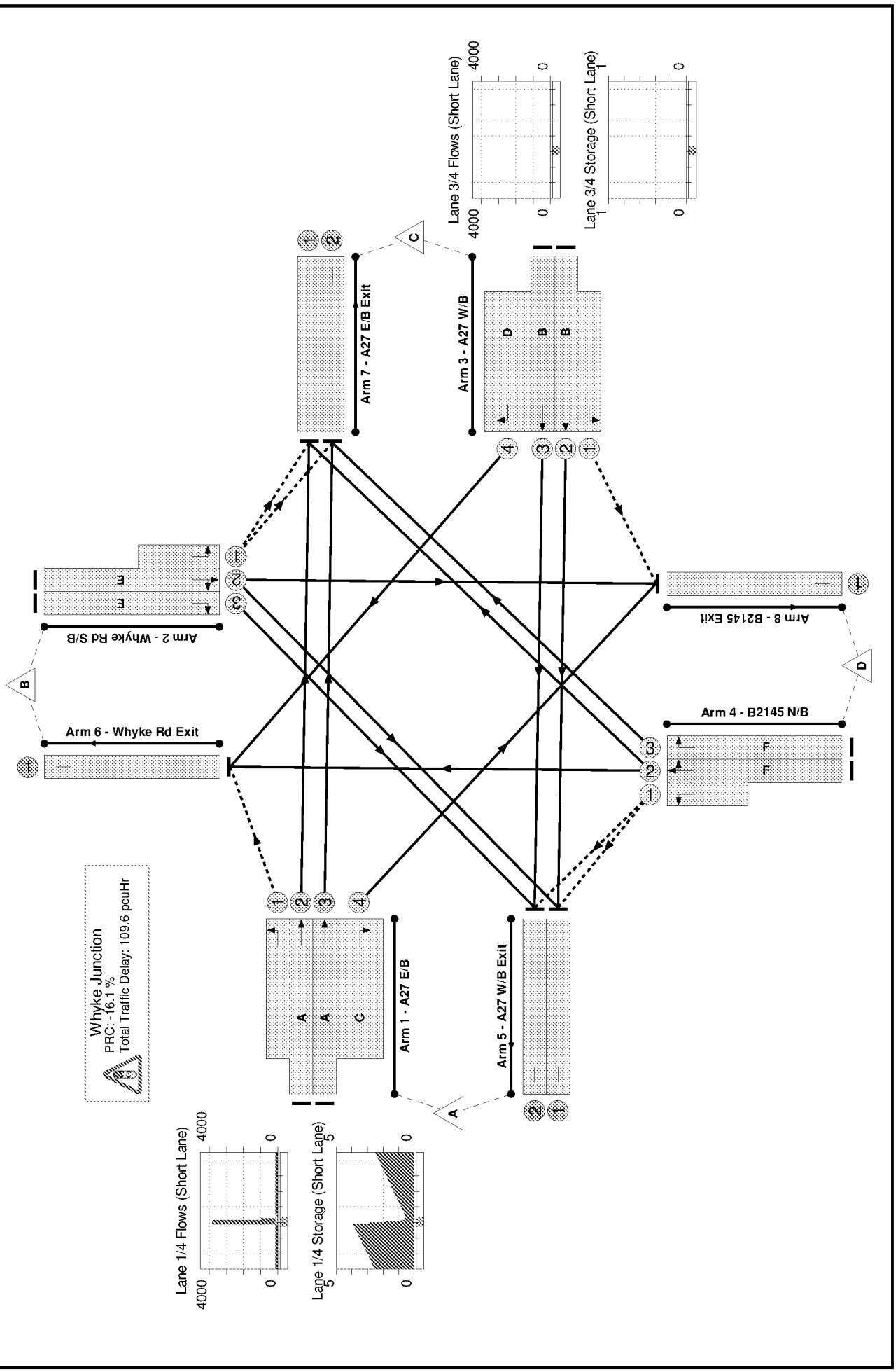
Stage	1	2	3	4
Duration	21	7	30	7
Change Point	0	28	40	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.5%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.5%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	21	-	547	2105:1871	539	101.4%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	21:7	-	670	2105:3828	657	102.0%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	30	-	734	1965:1828	714	102.8%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	30	-	2	1914	659	0.3%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	23	-	962	2105:1871	1044	92.1%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	23:7	-	493	2105:3828	561	87.8%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	7	-	443	1841:1828	424	104.5%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	7	-	153	1914	170	89.9%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	653	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	631	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	81	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	689	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	731	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	1219	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**267**	**580**	**0**	**31.7**	**77.9**	**0.0**	**109.6**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**267**	**580**	**0**	**31.7**	**77.9**	**0.0**	**109.6**	**-**	**-**	**-**	**-**
1/2+1/1	547	540	4	21	0	5.3	13.8	-	19.1	125.5	13.2	13.8	27.0
1/3+1/4	670	660	-	-	-	7.0	16.7	-	23.7	127.3	13.4	16.7	30.1
2/2+2/1	734	717	6	99	0	6.1	19.4	-	25.4	124.8	18.5	19.4	37.8
2/3	2	2	-	-	-	0.0	0.0	-	0.0	22.4	0.0	0.0	0.0
3/2+3/1	962	962	148	297	0	4.9	5.2	-	10.0	37.6	12.5	5.2	17.7
3/3+3/4	493	493	-	-	-	4.3	3.3	-	7.6	55.6	11.8	3.3	15.1
4/2+4/1	443	436	109	163	0	2.5	16.3	-	18.8	152.9	4.4	16.3	20.7
4/3	153	153	-	-	-	1.7	3.2	-	5.0	116.8	3.8	3.2	7.0
5/1	653	653	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	631	631	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	79	79	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	677	677	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	721	721	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1202	1202	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -16.1
PRC Over All Lanes (%): -16.1

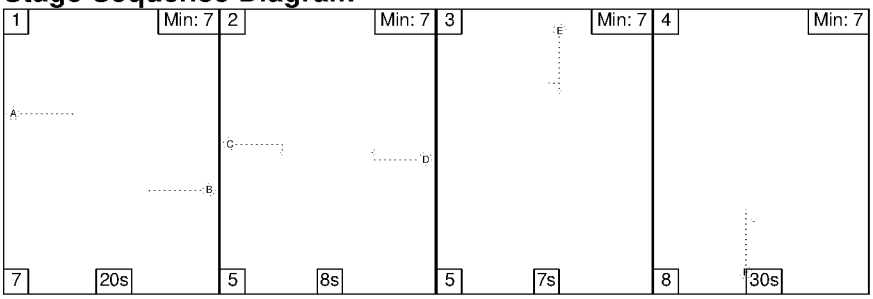
Total Delay for Signalled Lanes (pcuHr): 109.65
Total Delay Over All Lanes(pcuHr): 109.65

Cycle Time (s): 90

Full Input Data And Results

Scenario 3: '2031 LP - mitigation AM no cumulative' (FG5: '2031 LP - mitigation AM no cumulative', Plan 1: 'Single Stage')

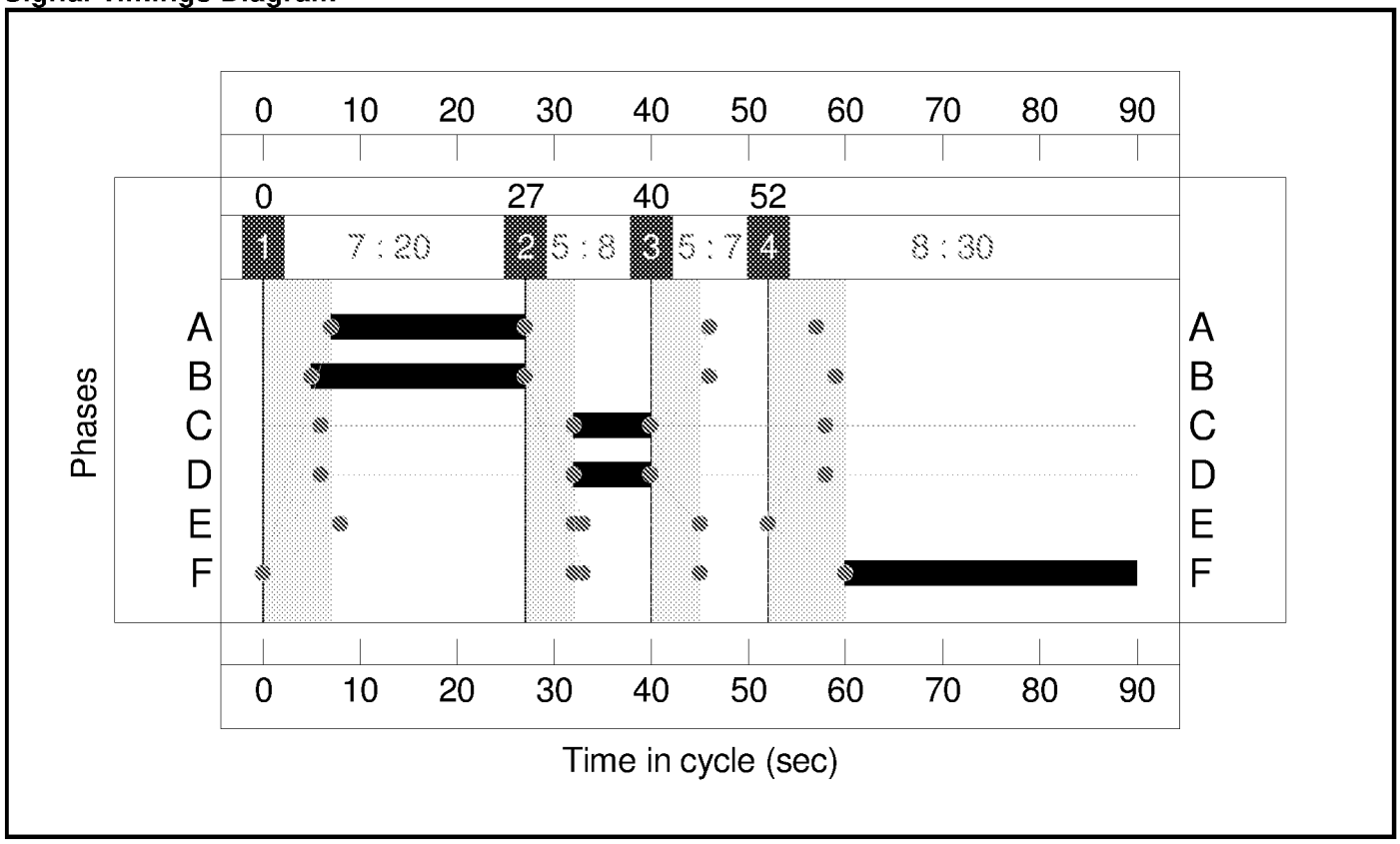
Stage Sequence Diagram



Stage Timings

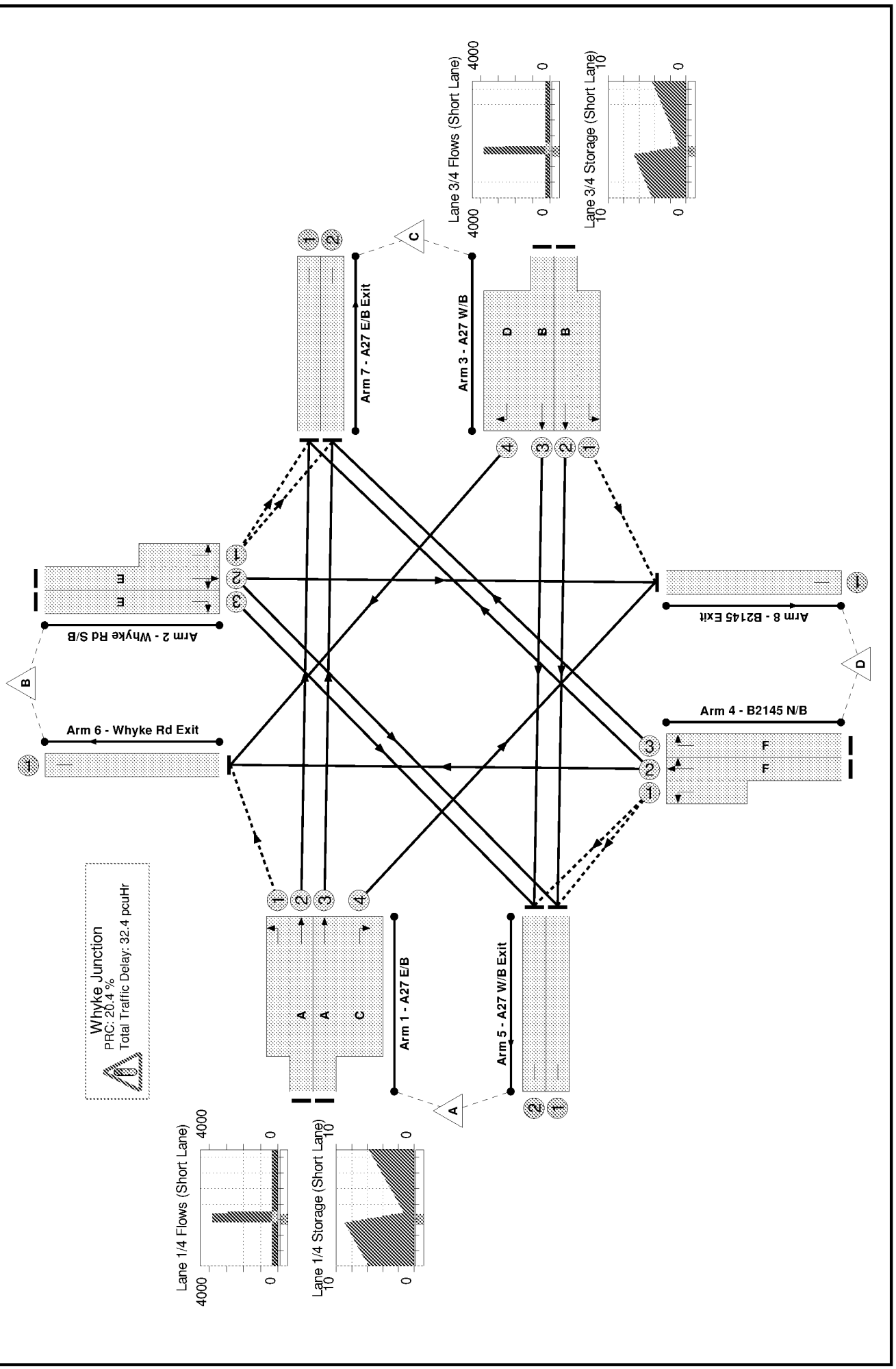
Stage	1	2	3	4
Duration	20	8	7	30
Change Point	0	27	40	52

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.7%**
Whyke Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.7%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	20	-	694	2105:1871	963	72.1%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	20:8	-	606	2105:3828	874	69.3%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	7	-	170	1820:1828	293	58.1%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	7	-	53	1914	170	31.2%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	22	-	661	2105:1871	885	74.7%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	22:8	-	624	2105:3828	921	67.8%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	30	-	895	1901:1828	1198	74.7%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	30	-	328	1914	659	49.8%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	800	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	750	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	755	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	638	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	612	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**296**	**1025**	**0**	**24.7**	**7.8**	**0.0**	**32.4**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**296**	**1025**	**0**	**24.7**	**7.8**	**0.0**	**32.4**	**-**	**-**	**-**	**-**
1/2+1/1	694	694	141	199	0	3.2	1.3	-	4.4	23.0	8.1	1.3	9.3
1/3+1/4	606	606	-	-	-	6.0	1.1	-	7.1	42.3	6.0	1.1	7.1
2/2+2/1	170	170	44	32	0	1.0	0.7	-	1.7	36.7	2.2	0.7	2.9
2/3	53	53	-	-	-	0.6	0.2	-	0.8	53.8	1.2	0.2	1.5
3/2+3/1	661	661	31	228	0	3.5	1.5	-	4.9	26.9	9.2	1.5	10.6
3/3+3/4	624	624	-	-	-	5.9	1.0	-	6.9	39.8	8.4	1.0	9.5
4/2+4/1	895	895	81	565	0	2.4	1.5	-	3.9	15.6	9.5	1.5	11.0
4/3	328	328	-	-	-	2.1	0.5	-	2.6	28.8	6.5	0.5	7.0
5/1	800	800	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	750	750	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	755	755	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	476	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	638	638	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	612	612	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): 20.4
PRC Over All Lanes (%): 20.4

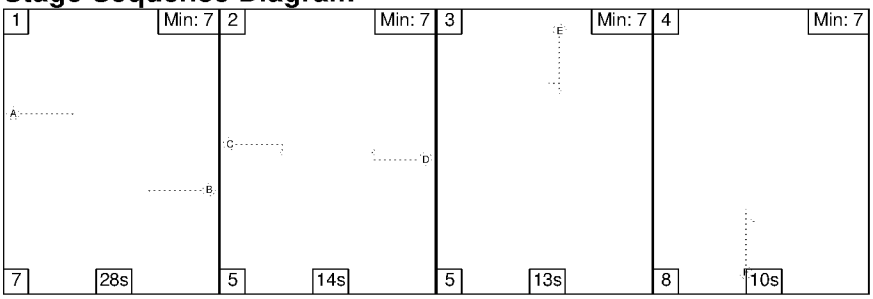
Total Delay for Signalled Lanes (pcuHr): 32.44
Total Delay Over All Lanes(pcuHr): 32.44

Cycle Time (s): 90

Full Input Data And Results

Scenario 4: '2031 LP - mitigation PM no cumulative' (FG6: '2031 LP - mitigation PM no cumulative', Plan 1: 'Single Stage')

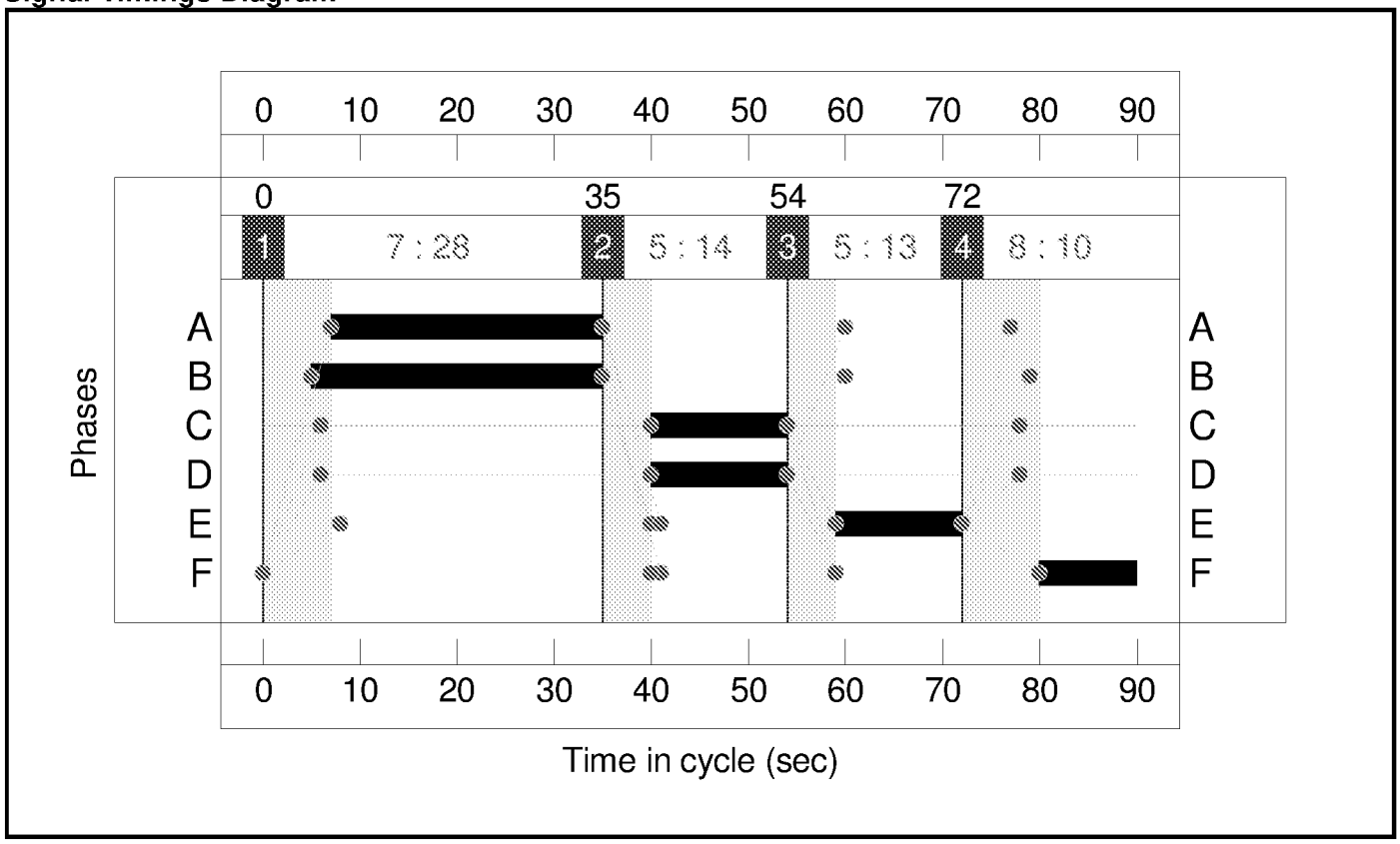
Stage Sequence Diagram



Stage Timings

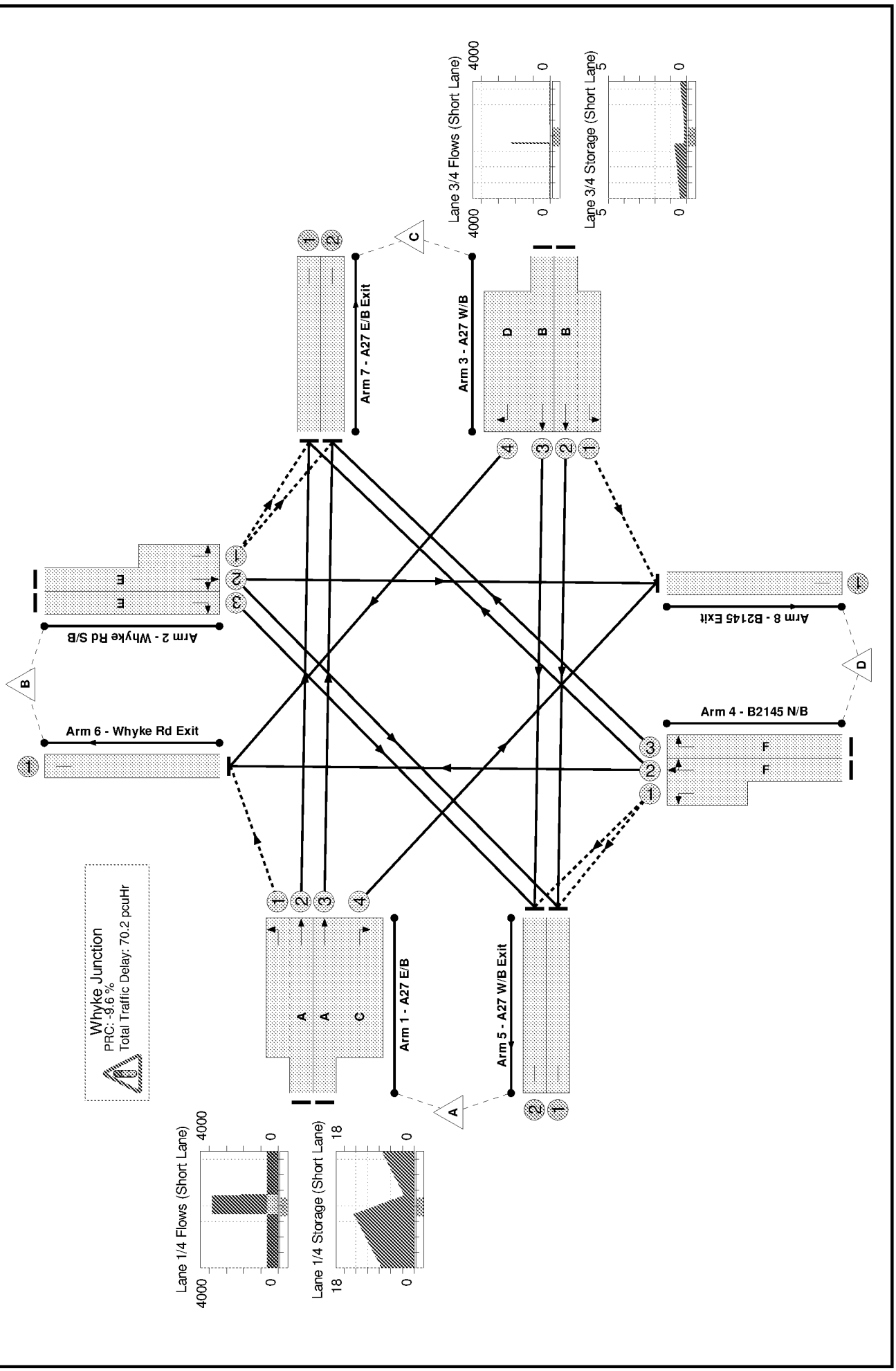
Stage	1	2	3	4
Duration	28	14	13	10
Change Point	0	35	54	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.6%**
Whyke Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.6%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	28	-	718	2105:1871	728	98.6%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	28:14	-	729	2105:3828	751	97.0%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	13	-	550	1935:1828	562	97.9%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	13	-	278	1914	298	93.4%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	30	-	724	2105:1871	1606	45.1%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	30:14	-	248	2105:3828	825	30.1%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	10	-	585	1799:1828	621	94.2%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	10	-	200	1914	234	85.5%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	535	inf	inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	669	inf	inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	94	inf	inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	1006	inf	inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	461	inf	inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	1248	inf	inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**331**	**821**	**0**	**26.9**	**43.4**	**0.0**	**70.2**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**331**	**821**	**0**	**26.9**	**43.4**	**0.0**	**70.2**	**-**	**-**	**-**	**-**
1/2+1/1	718	718	14	35	0	5.6	11.1	-	16.8	84.1	16.5	11.1	27.7
1/3+1/4	729	729	-	-	-	7.1	9.0	-	16.1	79.5	7.7	9.0	16.7
2/2+2/1	550	550	76	225	0	2.9	9.2	-	12.1	78.9	7.5	9.2	16.7
2/3	278	278	-	-	-	2.9	4.8	-	7.7	99.1	6.8	4.8	11.5
3/2+3/1	724	724	68	351	0	2.3	0.4	-	2.7	13.5	5.8	0.4	6.2
3/3+3/4	248	248	-	-	-	1.6	0.2	-	1.8	25.9	3.9	0.2	4.2
4/2+4/1	585	585	173	210	0	2.4	6.1	-	8.5	52.0	4.9	6.1	11.0
4/3	200	200	-	-	-	2.2	2.6	-	4.7	84.8	4.9	2.6	7.4
5/1	535	535	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	668	668	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	94	94	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1006	1006	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	461	461	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1248	1248	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -9.6
PRC Over All Lanes (%): -9.6

Total Delay for Signalled Lanes (pcuHr): 70.24
Total Delay Over All Lanes(pcuHr): 70.24

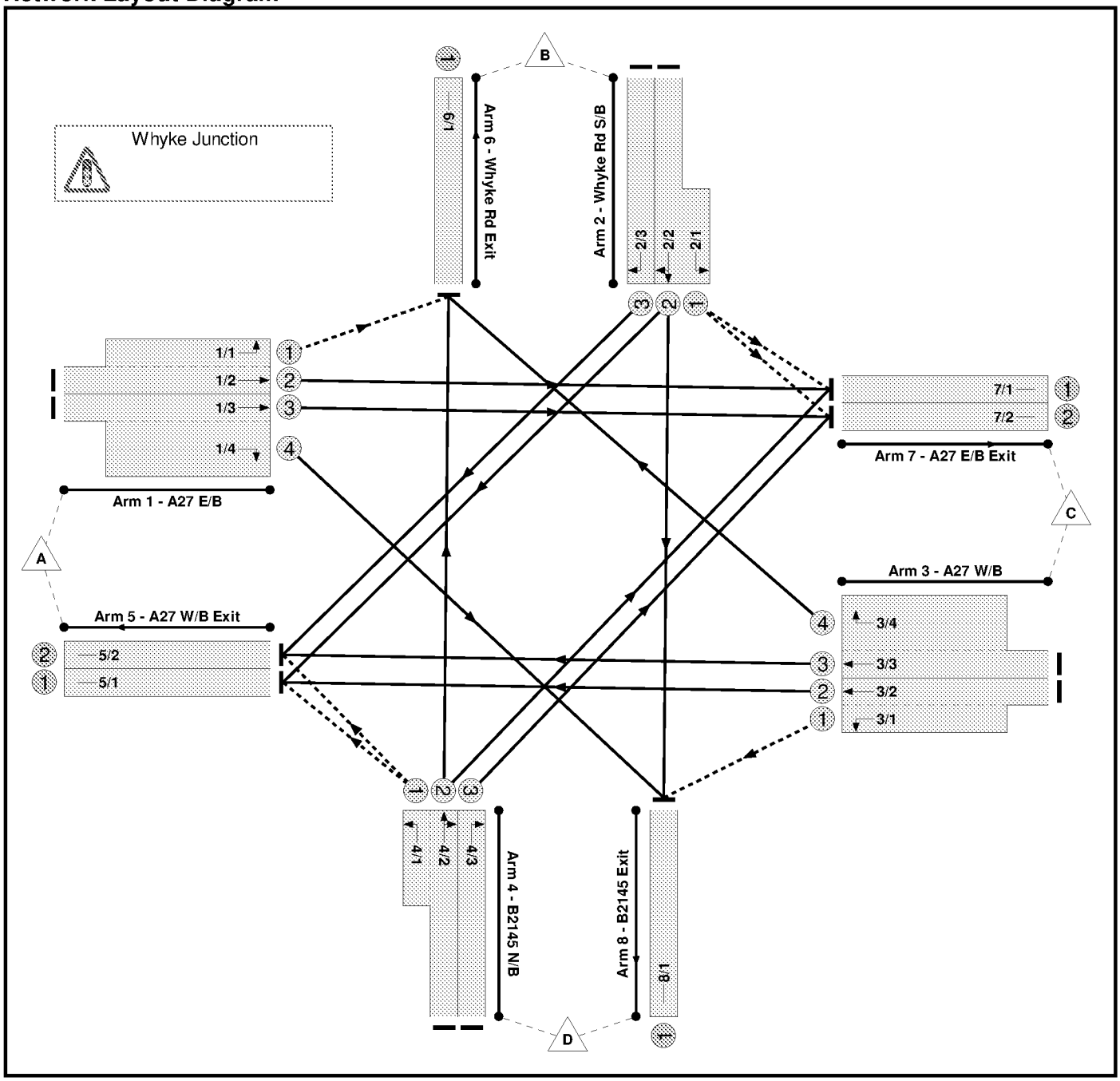
Cycle Time (s): 90

Full Input Data And Results

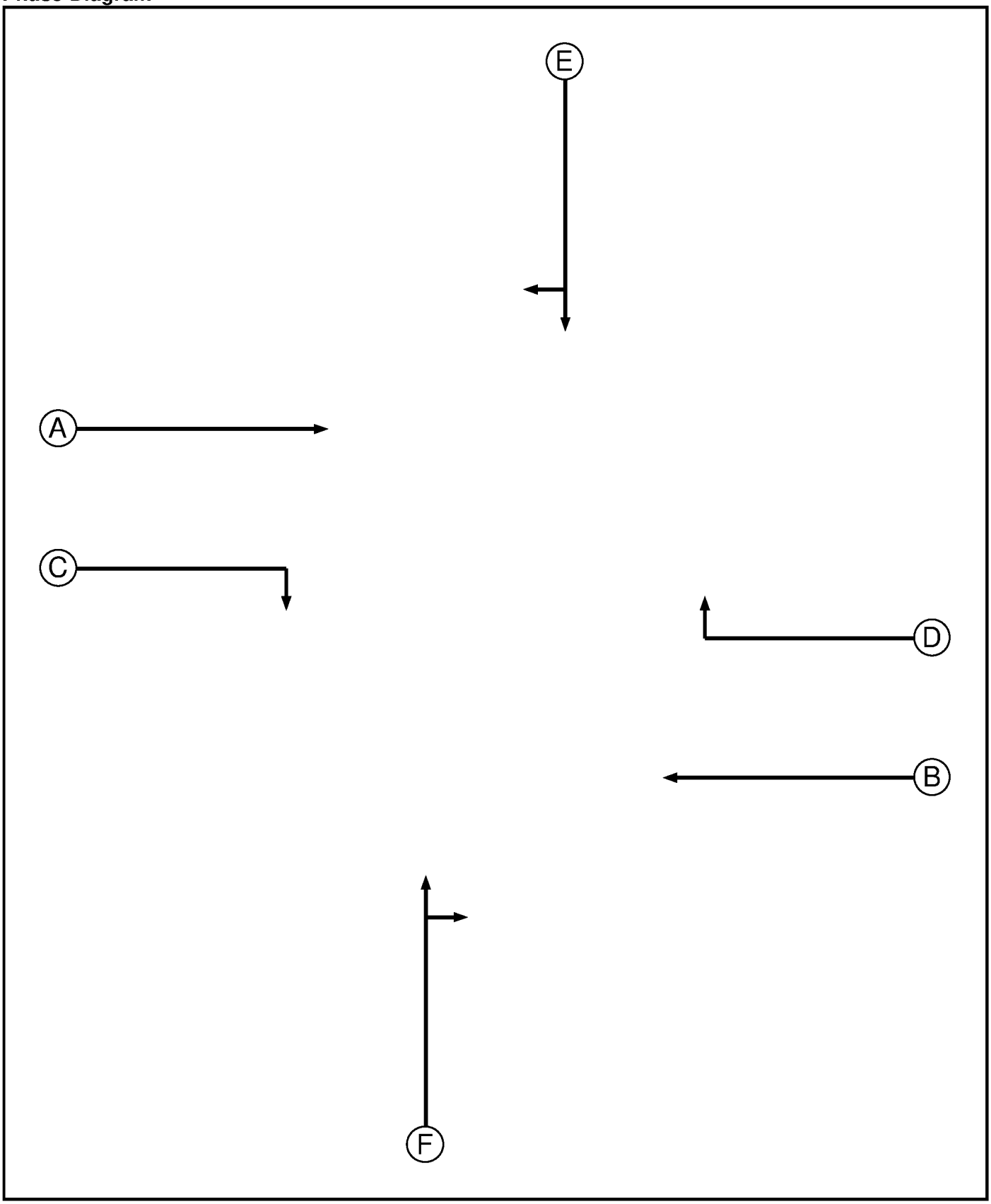
User and Project Details

Project:	**Pagham South**
Title:	**A27 Whyke Junction Without Cumulative (+Pagham South, +Hallam)**
Location:	Chichester
File name:	Whyke Jctn Mitigation v3 (Wtd) 2031 - Cumu+PS.lsg3x
Author:	FB
Company:	Highgate Transportation Ltd
Address:	First Floor, 42-43 Park Street, Bristol BS1 5NL
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7

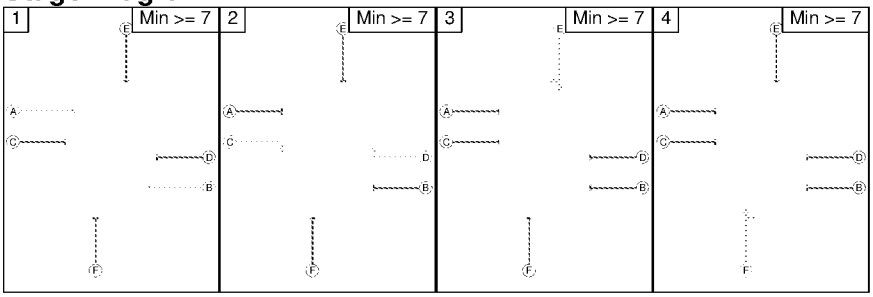
Phase Intergreens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		-	-	5	6	5
	B	-		5	-	5	6
	C	-	6		-	5	5
	D	6	-	-		5	5
	E	5	7	6	6		8
	F	7	5	6	6	8	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4
1		5	6	6
2	6		5	5
3	7	6		8
4	7	6	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Whyke Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A27 E/B)	6/1 (Left)	715	0	4/2	0.22	To 6/1 (Ahead)	-	-	-	-	-
				3/4	0.22	All					
2/1 (Whyke Rd S/B)	7/1 (Left)	715	0	1/2	0.22	All	-	-	-	-	-
				1/3	0.22	All					
				4/2	0.22	To 7/1 (Right)					
				4/3	0.22	All					
	7/2 (Left)	715	0	1/2	0.22	All					
				1/3	0.22	All					
				4/2	0.22	To 7/1 (Right)					
				4/3	0.22	All					
3/1 (A27 W/B)	8/1 (Left)	715	0	2/2	0.22	To 8/1 (Ahead)	-	-	-	-	-
				1/4	0.22	All					
4/1 (B2145 N/B)	5/1 (Left)	715	0	3/2	0.22	All	-	-	-	-	-
				3/3	0.22	All					
				2/2	0.22	To 5/1 (Right)					
				2/3	0.22	All					
	5/2 (Left)	715	0	3/2	0.22	All					
				3/3	0.22	All					
				2/2	0.22	To 5/1 (Right)					
				2/3	0.22	All					

Full Input Data And Results

Lane Input Data

Junction: Whyke Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A27 E/B)	O		2	3	20.9	Geom	-	3.50	0.00	Y	Arm 6 Left	30.00
1/2 (A27 E/B)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Ahead	Inf
1/3 (A27 E/B)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Ahead	Inf
1/4 (A27 E/B)	U	C	2	3	17.4	User	3828	-	-	-	-	-
2/1 (Whyke Rd S/B)	O		2	3	5.2	Geom	-	3.50	0.00	Y	Arm 7 Left	20.00
2/2 (Whyke Rd S/B)	U	E	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Right	15.00
											Arm 8 Ahead	Inf
2/3 (Whyke Rd S/B)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Right	15.00
3/1 (A27 W/B)	O		2	3	20.9	Geom	-	3.50	0.00	Y	Arm 8 Left	30.00
3/2 (A27 W/B)	U	B	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Ahead	Inf
3/3 (A27 W/B)	U	B	2	3	60.0	Geom	-	3.50	0.00	N	Arm 5 Ahead	Inf
3/4 (A27 W/B)	U	D	2	3	17.4	User	3828	-	-	-	-	-
4/1 (B2145 N/B)	O		2	3	5.2	Geom	-	3.50	0.00	Y	Arm 5 Left	20.00
4/2 (B2145 N/B)	U	F	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Right	15.00
4/3 (B2145 N/B)	U	F	2	3	60.0	Geom	-	3.50	0.00	N	Arm 7 Right	15.00
5/1 (A27 W/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A27 W/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Whyke Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A27 E/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

7/2 (A27 E/B Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B2145 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 Max SE AM Peak'	08:00	09:00	01:00	
2: '2031 Max SE PM Peak'	17:00	18:00	01:00	
3: '2031 LP + mitigation AM - Cumulative +PS'	08:00	09:00	01:00	
4: '2031 LP + mitigation PM - Cumulative +PS'	17:00	18:00	01:00	
5: '2031 LP - mitigation AM - Cumulative +PS'	08:00	09:00	01:00	
6: '2031 LP - mitigation PM - Cumulative +PS'	17:00	18:00	01:00	
7: '2031 LP + mitigation AM - Cumulative +PS+H'	08:00	09:00	01:00	
8: '2031 LP + mitigation PM - Cumulative +PS+H'	17:00	18:00	01:00	
9: '2031 LP - mitigation AM - Cumulative +PS+H'	08:00	09:00	01:00	
10: '2031 LP - mitigation PM - Cumulative +PS+H'	17:00	18:00	01:00	

Scenario 1: '2031 LP + mitigation AM - Cumulative +PS' (FG3: '2031 LP + mitigation AM - Cumulative +PS', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	120	947	363	1430
	B	0	0	0	22	22
	C	1014	0	0	342	1356
	D	734	182	265	0	1181
	Tot.	1748	302	1212	727	3989

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2031 LP + mitigation AM - Cumulative +PS
Junction: Whyke Junction	
1/1 (short)	120
1/2 (with short)	577(In) 457(Out)
1/3 (with short)	853(In) 490(Out)
1/4 (short)	363
2/1 (short)	0
2/2 (with short)	22(In) 22(Out)
2/3	0
3/1 (short)	342
3/2 (with short)	875(In) 533(Out)
3/3 (with short)	481(In) 481(Out)
3/4 (short)	0
4/1 (short)	734
4/2 (with short)	916(In) 182(Out)
4/3	265
5/1	900
5/2	848
6/1	302
7/1	457
7/2	755
8/1	727

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	0.0 %	1965	1965
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	0.0 %	1965	1965
				Arm 8 Ahead	Inf	100.0 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	0.0 %	2105	2105
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
				Arm 7 Right	15.00	0.0 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2031 LP + mitigation PM - Cumulative +PS' (FG4: '2031 LP + mitigation PM - Cumulative +PS', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	25	1047	158	1230
	B	2	0	105	665	772
	C	1010	0	0	445	1455
	D	280	79	268	0	627
	Tot.	1292	104	1420	1268	4084

Traffic Lane Flows

Lane	Scenario 2: 2031 LP + mitigation PM - Cumulative +PS
Junction: Whyke Junction	
1/1 (short)	25
1/2 (with short)	547(In) 522(Out)
1/3 (with short)	683(In) 525(Out)
1/4 (short)	158
2/1 (short)	105
2/2 (with short)	770(In) 665(Out)
2/3	2
3/1 (short)	445
3/2 (with short)	968(In) 523(Out)
3/3 (with short)	487(In) 487(Out)
3/4 (short)	0
4/1 (short)	280
4/2 (with short)	455(In) 175(Out)
4/3	172
5/1	663
5/2	629
6/1	104
7/1	670
7/2	750
8/1	1268

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	0.0 %	1965	1965
				Arm 8 Ahead	Inf	100.0 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	45.1 %	1863	1863
				Arm 7 Right	15.00	54.9 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2031 LP - mitigation AM - Cumulative +PS' (FG5: '2031 LP - mitigation AM - Cumulative +PS', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	340	626	340	1306
	B	128	0	76	37	241
	C	776	250	0	259	1285
	D	661	206	412	0	1279
	Tot.	1565	796	1114	636	4111

Traffic Lane Flows

Lane	Scenario 3: 2031 LP - mitigation AM - Cumulative +PS
Junction: Whyke Junction	
1/1 (short)	340
1/2 (with short)	683(In) 343(Out)
1/3 (with short)	623(In) 283(Out)
1/4 (short)	340
2/1 (short)	76
2/2 (with short)	177(In) 101(Out)
2/3	64
3/1 (short)	259
3/2 (with short)	646(In) 387(Out)
3/3 (with short)	639(In) 389(Out)
3/4 (short)	250
4/1 (short)	661
4/2 (with short)	927(In) 266(Out)
4/3	352
5/1	781
5/2	784
6/1	796
7/1	441
7/2	673
8/1	636

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	63.4 %	1848	1848
				Arm 8 Ahead	Inf	36.6 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	77.4 %	1922	1922
				Arm 7 Right	15.00	22.6 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2031 LP - mitigation PM - Cumulative +PS' (FG6: '2031 LP - mitigation PM - Cumulative +PS', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	49	779	632	1460
	B	317	0	301	246	864
	C	523	30	0	419	972
	D	391	38	387	0	816
	Tot.	1231	117	1467	1297	4112

Traffic Lane Flows

Lane	Scenario 4: 2031 LP - mitigation PM - Cumulative +PS
Junction: Whyke Junction	
1/1 (short)	49
1/2 (with short)	712(In) 663(Out)
1/3 (with short)	748(In) 116(Out)
1/4 (short)	632
2/1 (short)	301
2/2 (with short)	565(In) 264(Out)
2/3	299
3/1 (short)	419
3/2 (with short)	725(In) 306(Out)
3/3 (with short)	247(In) 217(Out)
3/4 (short)	30
4/1 (short)	391
4/2 (with short)	603(In) 212(Out)
4/3	213
5/1	519
5/2	712
6/1	117
7/1	987
7/2	480
8/1	1297

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	6.8 %	1952	1952
				Arm 8 Ahead	Inf	93.2 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	17.9 %	1816	1816
				Arm 7 Right	15.00	82.1 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2031 LP + mitigation AM - Cumulative +PS+H' (FG7: '2031 LP + mitigation AM - Cumulative +PS+H', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	120	947	369	1436
	B	0	0	0	22	22
	C	1014	1	0	345	1360
	D	748	195	270	0	1213
	Tot.	1762	316	1217	736	4031

Traffic Lane Flows

Lane	Scenario 5: 2031 LP + mitigation AM - Cumulative +PS+H
Junction: Whyke Junction	
1/1 (short)	120
1/2 (with short)	575(In) 455(Out)
1/3 (with short)	861(In) 492(Out)
1/4 (short)	369
2/1 (short)	0
2/2 (with short)	22(In) 22(Out)
2/3	0
3/1 (short)	345
3/2 (with short)	878(In) 533(Out)
3/3 (with short)	482(In) 481(Out)
3/4 (short)	1
4/1 (short)	748
4/2 (with short)	943(In) 195(Out)
4/3	270
5/1	907
5/2	855
6/1	316
7/1	455
7/2	762
8/1	736

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	0.0 %	1965	1965
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	0.0 %	1965	1965
				Arm 8 Ahead	Inf	100.0 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	0.0 %	2105	2105
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
				Arm 7 Right	15.00	0.0 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2031 LP + mitigation PM - Cumulative +PS+H' (FG8: '2031 LP + mitigation PM - Cumulative +PS+H', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	25	1047	169	1241
	B	2	0	105	670	777
	C	1010	1	0	450	1461
	D	287	88	270	0	645
	Tot.	1299	114	1422	1289	4124

Traffic Lane Flows

Lane	Scenario 6: 2031 LP + mitigation PM - Cumulative +PS+H
Junction: Whyke Junction	
1/1 (short)	25
1/2 (with short)	547(In) 522(Out)
1/3 (with short)	694(In) 525(Out)
1/4 (short)	169
2/1 (short)	105
2/2 (with short)	775(In) 670(Out)
2/3	2
3/1 (short)	450
3/2 (with short)	973(In) 523(Out)
3/3 (with short)	488(In) 487(Out)
3/4 (short)	1
4/1 (short)	287
4/2 (with short)	467(In) 180(Out)
4/3	178
5/1	666
5/2	633
6/1	114
7/1	666
7/2	756
8/1	1289

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	0.0 %	1965	1965
				Arm 8 Ahead	Inf	100.0 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	48.9 %	1869	1869
				Arm 7 Right	15.00	51.1 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2031 LP - mitigation AM - Cumulative +PS+H' (FG9: '2031 LP - mitigation AM - Cumulative +PS+H', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	340	626	346	1312
	B	128	0	76	39	243
	C	776	251	0	262	1289
	D	675	219	417	0	1311
	Tot.	1579	810	1119	647	4155

Traffic Lane Flows

Lane	Scenario 7: 2031 LP - mitigation AM - Cumulative +PS+H
Junction: Whyke Junction	
1/1 (short)	340
1/2 (with short)	685(In) 345(Out)
1/3 (with short)	627(In) 281(Out)
1/4 (short)	346
2/1 (short)	76
2/2 (with short)	178(In) 102(Out)
2/3	65
3/1 (short)	262
3/2 (with short)	649(In) 387(Out)
3/3 (with short)	640(In) 389(Out)
3/4 (short)	251
4/1 (short)	675
4/2 (with short)	945(In) 270(Out)
4/3	366
5/1	787
5/2	792
6/1	810
7/1	434
7/2	685
8/1	647

Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	61.8 %	1851	1851
				Arm 8 Ahead	Inf	38.2 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	81.1 %	1929	1929
				Arm 7 Right	15.00	18.9 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 8: '2031 LP - mitigation PM - Cumulative +PS+H' (FG10: '2031 LP - mitigation PM - Cumulative +PS+H', Plan 1: 'Single Stage')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	49	779	643	1471
	B	317	0	301	251	869
	C	523	31	0	424	978
	D	398	47	389	0	834
	Tot.	1238	127	1469	1318	4152

Traffic Lane Flows

Lane	Scenario 8: 2031 LP - mitigation PM - Cumulative +PS+H
Junction: Whyke Junction	
1/1 (short)	49
1/2 (with short)	726(In) 677(Out)
1/3 (with short)	745(In) 102(Out)
1/4 (short)	643
2/1 (short)	301
2/2 (with short)	567(In) 266(Out)
2/3	302
3/1 (short)	424
3/2 (with short)	729(In) 305(Out)
3/3 (with short)	249(In) 218(Out)
3/4 (short)	31
4/1 (short)	398
4/2 (with short)	613(In) 215(Out)
4/3	221
5/1	519
5/2	719
6/1	127
7/1	995
7/2	474
8/1	1318

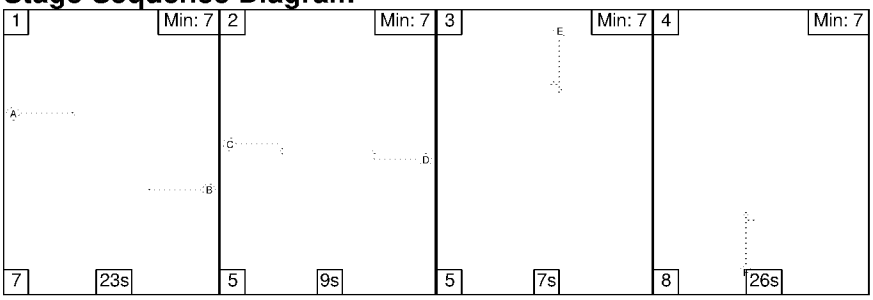
Lane Saturation Flows

Junction: Whyke Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 E/B)	3.50	0.00	Y	Arm 6 Left	30.00	100.0 %	1871	1871
1/2 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/3 (A27 E/B)	3.50	0.00	N	Arm 7 Ahead	Inf	100.0 %	2105	2105
1/4 (A27 E/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
2/1 (Whyke Rd S/B)	3.50	0.00	Y	Arm 7 Left	20.00	100.0 %	1828	1828
2/2 (Whyke Rd S/B)	3.50	0.00	Y	Arm 5 Right	15.00	5.6 %	1954	1954
				Arm 8 Ahead	Inf	94.4 %		
2/3 (Whyke Rd S/B)	3.50	0.00	N	Arm 5 Right	15.00	100.0 %	1914	1914
3/1 (A27 W/B)	3.50	0.00	Y	Arm 8 Left	30.00	100.0 %	1871	1871
3/2 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/3 (A27 W/B)	3.50	0.00	N	Arm 5 Ahead	Inf	100.0 %	2105	2105
3/4 (A27 W/B Lane 4)	This lane uses a directly entered Saturation Flow						3828	3828
4/1 (B2145 N/B)	3.50	0.00	Y	Arm 5 Left	20.00	100.0 %	1828	1828
4/2 (B2145 N/B)	3.50	0.00	Y	Arm 6 Ahead	Inf	21.9 %	1823	1823
				Arm 7 Right	15.00	78.1 %		
4/3 (B2145 N/B)	3.50	0.00	N	Arm 7 Right	15.00	100.0 %	1914	1914
5/1 (A27 W/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A27 W/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Whyke Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A27 E/B Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/2 (A27 E/B Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
8/1 (B2145 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2031 LP + mitigation AM - Cumulative +PS' (FG3: '2031 LP + mitigation AM - Cumulative +PS', Plan 1: 'Single Stage')

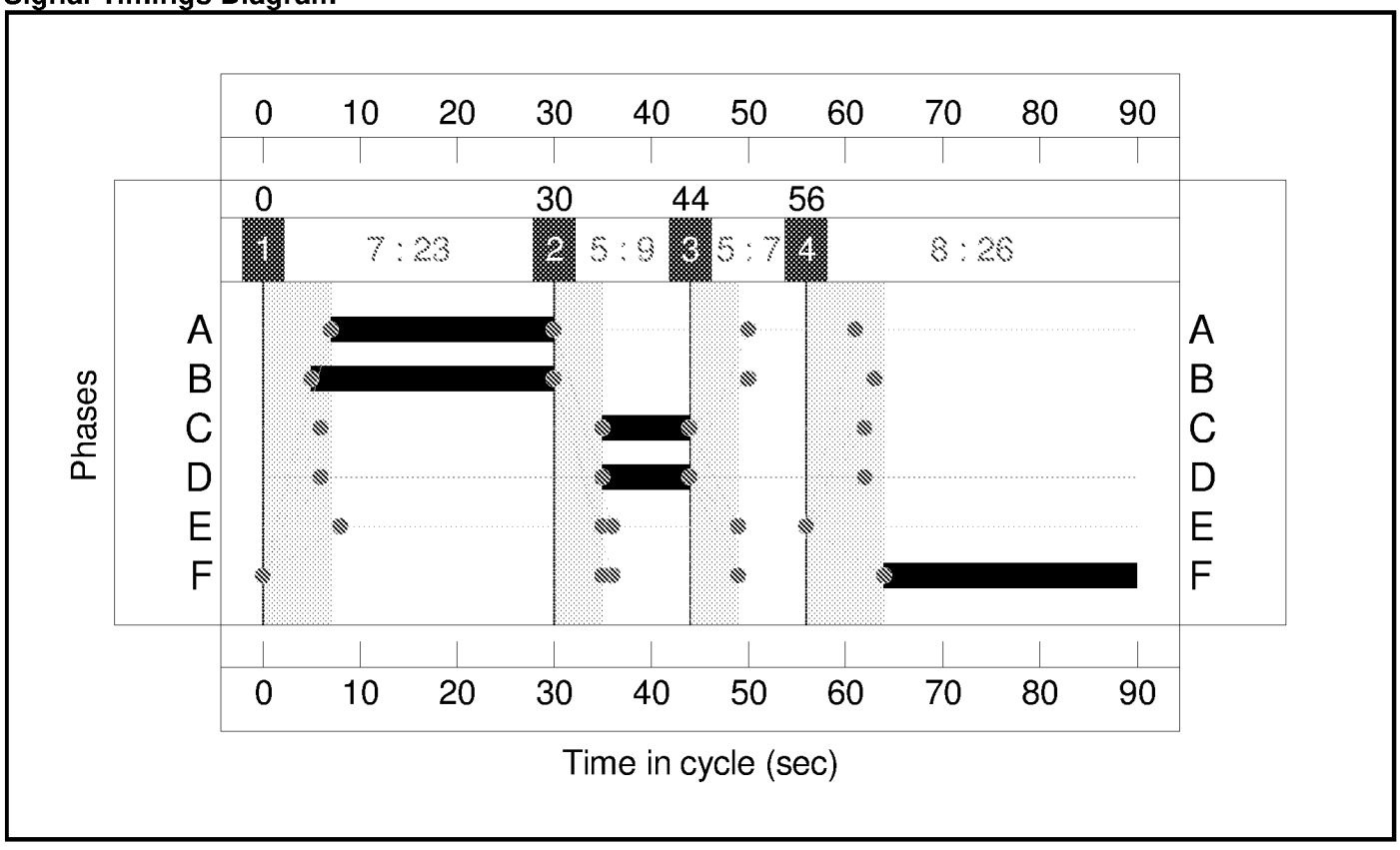
Stage Sequence Diagram



Stage Timings

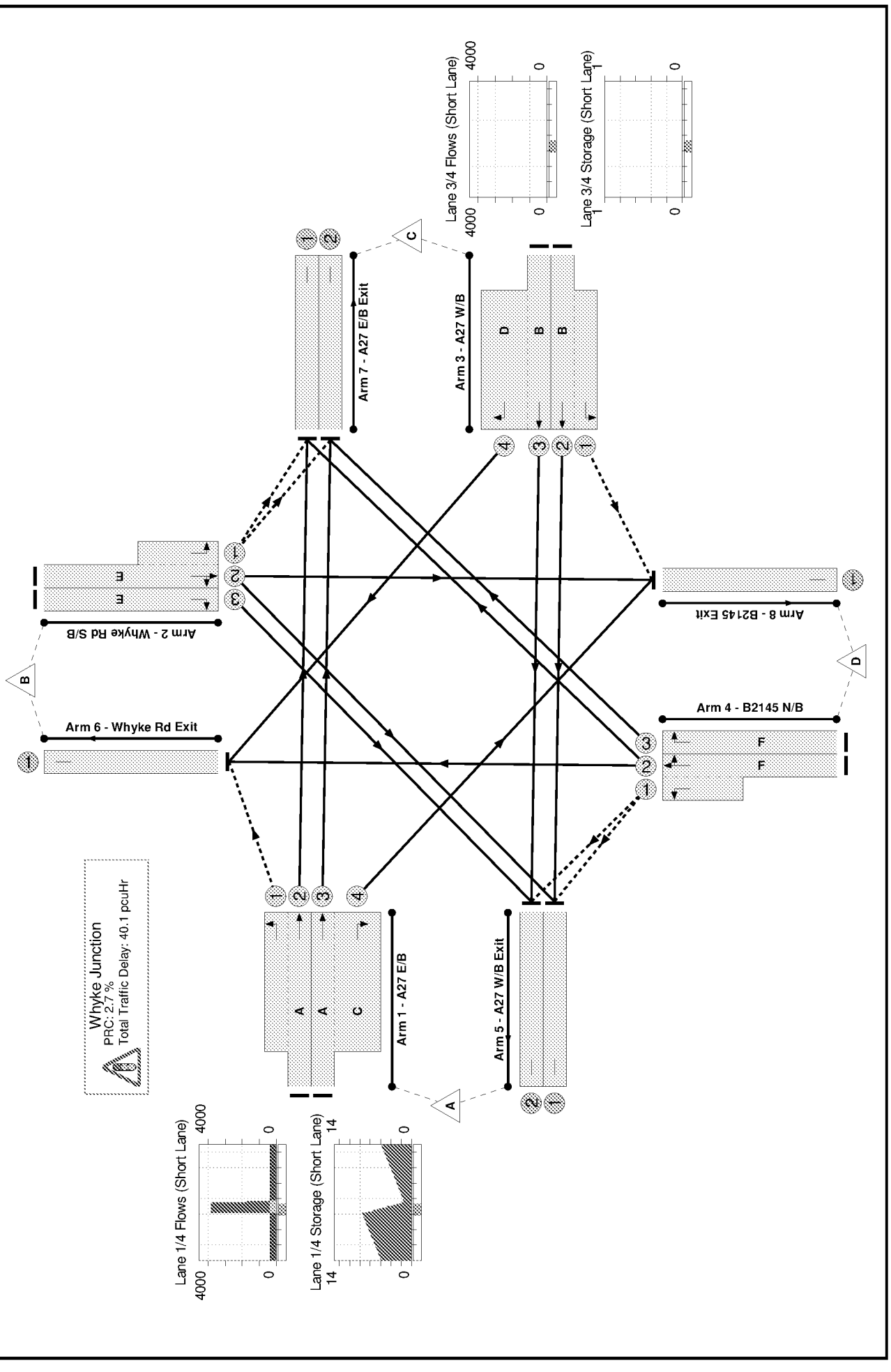
Stage	1	2	3	4
Duration	23	9	7	26
Change Point	0	30	44	56

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.6%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.6%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	23	-	577	2105:1871	709	81.4%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	23:9	-	853	2105:3828	987	86.5%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	7	-	22	1965:1965	175	12.6%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	7	-	0	2105	187	0.0%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	25	-	875	2105:1871	998	87.6%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	25:9	-	481	2105:3828	608	79.1%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	26	-	916	1965:1828	1046	87.6%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	26	-	265	1914	574	46.2%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	900	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	848	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	302	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	755	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	727	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**182**	**1014**	**0**	**25.9**	**14.2**	**0.0**	**40.1**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**182**	**1014**	**0**	**25.9**	**14.2**	**0.0**	**40.1**	**-**	**-**	**-**	**-**
1/2+1/1	577	577	49	71	0	3.9	2.1	-	6.0	37.7	10.7	2.1	12.8
1/3+1/4	853	853	-	-	-	8.3	3.1	-	11.3	47.7	11.7	3.1	14.8
2/2+2/1	22	22	0	0	0	0.2	0.1	-	0.3	49.6	0.5	0.1	0.6
2/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	875	875	41	301	0	4.6	3.4	-	7.9	32.7	12.6	3.4	15.9
3/3+3/4	481	481	-	-	-	3.9	1.8	-	5.8	43.3	11.0	1.8	12.8
4/2+4/1	916	916	91	643	0	3.1	3.4	-	6.4	25.3	14.1	3.4	17.4
4/3	265	265	-	-	-	1.9	0.4	-	2.3	31.4	5.4	0.4	5.8
5/1	900	900	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	848	848	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	302	302	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	755	755	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	727	727	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): 2.7
PRC Over All Lanes (%): 2.7

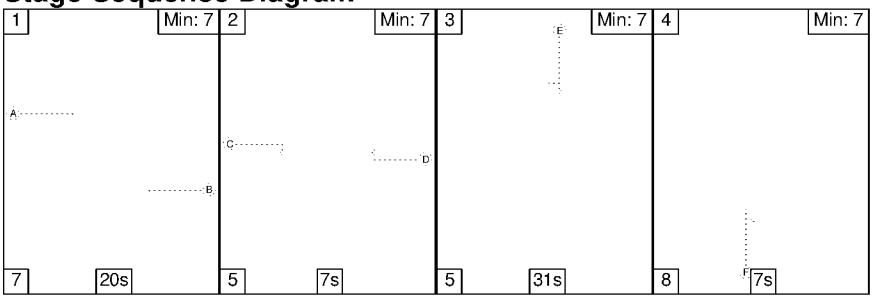
Total Delay for Signalled Lanes (pcuHr): 40.12
Total Delay Over All Lanes(pcuHr): 40.12

Cycle Time (s): 90

Full Input Data And Results

Scenario 2: '2031 LP + mitigation PM - Cumulative +PS' (FG4: '2031 LP + mitigation PM - Cumulative +PS', Plan 1: 'Single Stage')

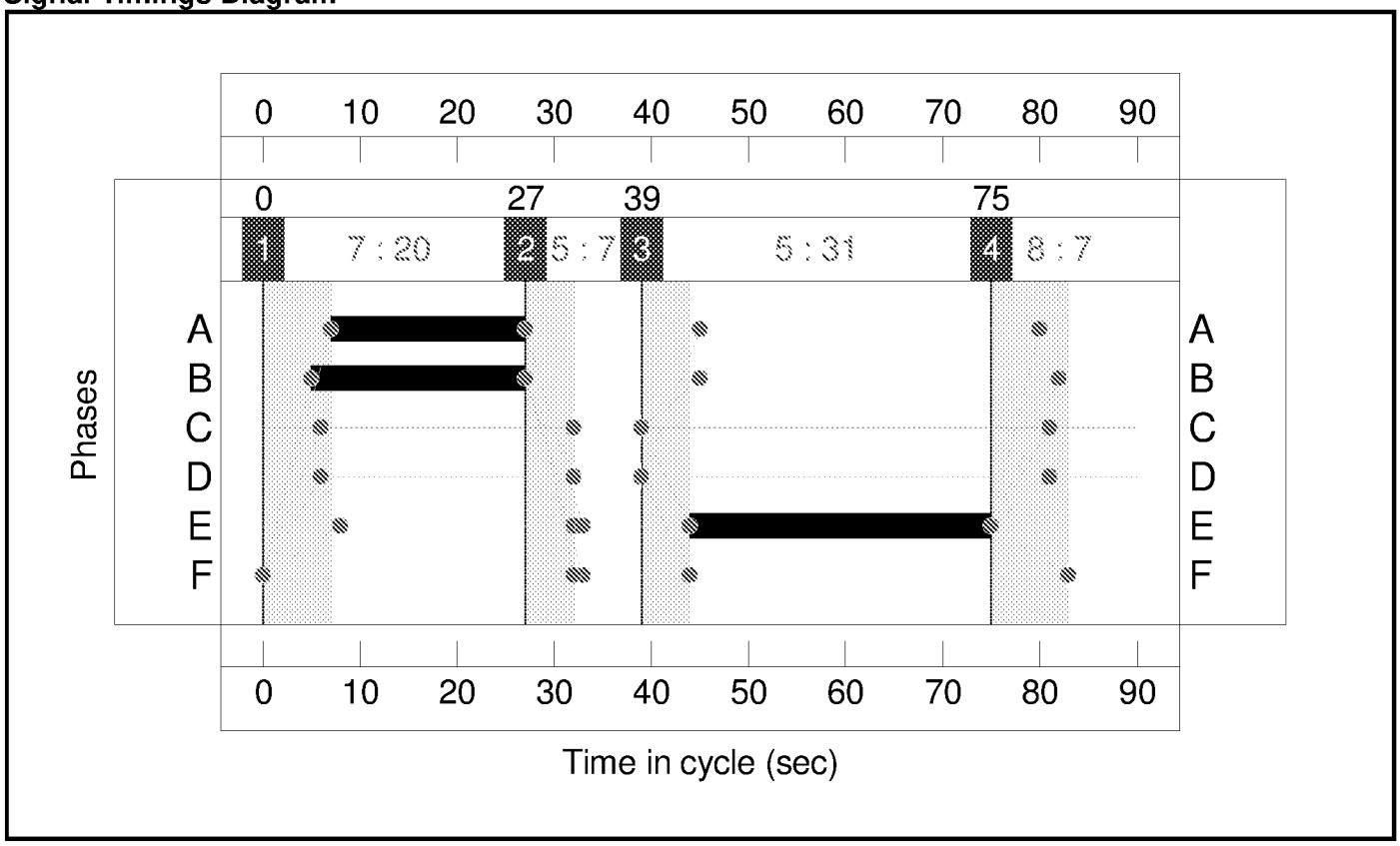
Stage Sequence Diagram



Stage Timings

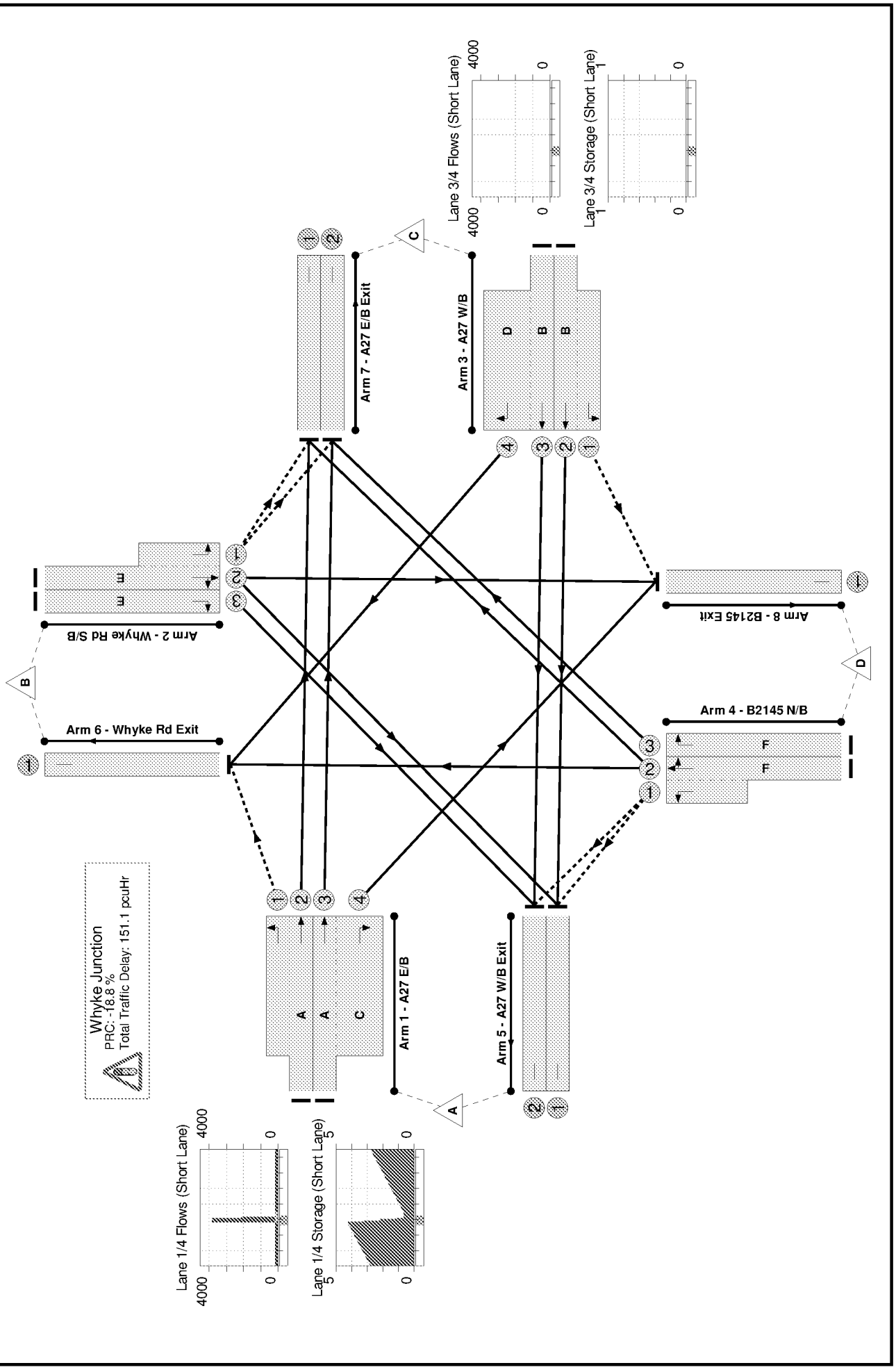
Stage	1	2	3	4
Duration	20	7	31	7
Change Point	0	27	39	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**106.9%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**106.9%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	20	-	547	2105:1871	515	106.3%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	20:7	-	683	2105:3828	639	106.9%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	31	-	770	1965:1828	734	104.9%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	31	-	2	1914	681	0.3%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	22	-	968	2105:1871	996	97.2%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	22:7	-	487	2105:3828	538	90.5%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	7	-	455	1863:1828	431	105.7%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	7	-	172	1914	170	101.1%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	663	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	629	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	104	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	670	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	750	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	1268	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**265**	**590**	**0**	**35.6**	**115.5**	**0.0**	**151.1**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**265**	**590**	**0**	**35.6**	**115.5**	**0.0**	**151.1**	**-**	**-**	**-**	**-**
1/2+1/1	547	516	4	21	0	6.4	22.3	-	28.7	188.7	13.8	22.3	36.1
1/3+1/4	683	649	-	-	-	8.3	28.1	-	36.3	191.6	14.0	28.1	42.1
2/2+2/1	770	739	6	99	0	6.8	25.5	-	32.3	150.9	20.6	25.5	46.1
2/3	2	2	-	-	-	0.0	0.0	-	0.0	21.7	0.0	0.0	0.0
3/2+3/1	968	968	148	297	0	5.1	10.1	-	15.2	56.5	12.9	10.1	23.0
3/3+3/4	487	487	-	-	-	4.4	4.1	-	8.5	62.9	11.8	4.1	15.9
4/2+4/1	455	446	107	173	0	2.7	18.4	-	21.1	166.6	4.6	18.4	23.0
4/3	172	170	-	-	-	2.1	7.0	-	9.1	190.3	4.3	7.0	11.4
5/1	663	663	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	629	629	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	634	634	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1237	1237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -18.8
PRC Over All Lanes (%): -18.8

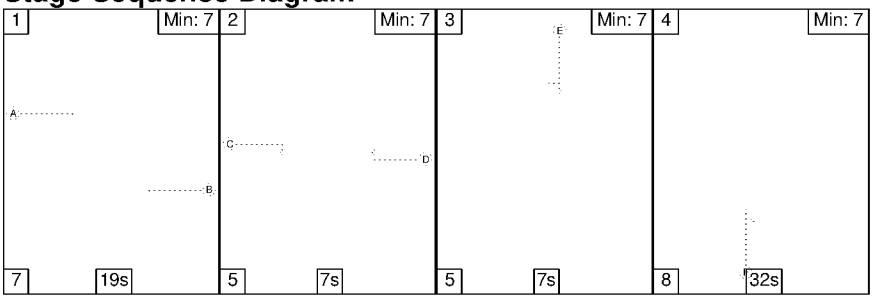
Total Delay for Signalled Lanes (pcuHr): 151.15
Total Delay Over All Lanes(pcuHr): 151.15

Cycle Time (s): 90

Full Input Data And Results

Scenario 3: '2031 LP - mitigation AM - Cumulative +PS' (FG5: '2031 LP - mitigation AM - Cumulative +PS', Plan 1: 'Single Stage')

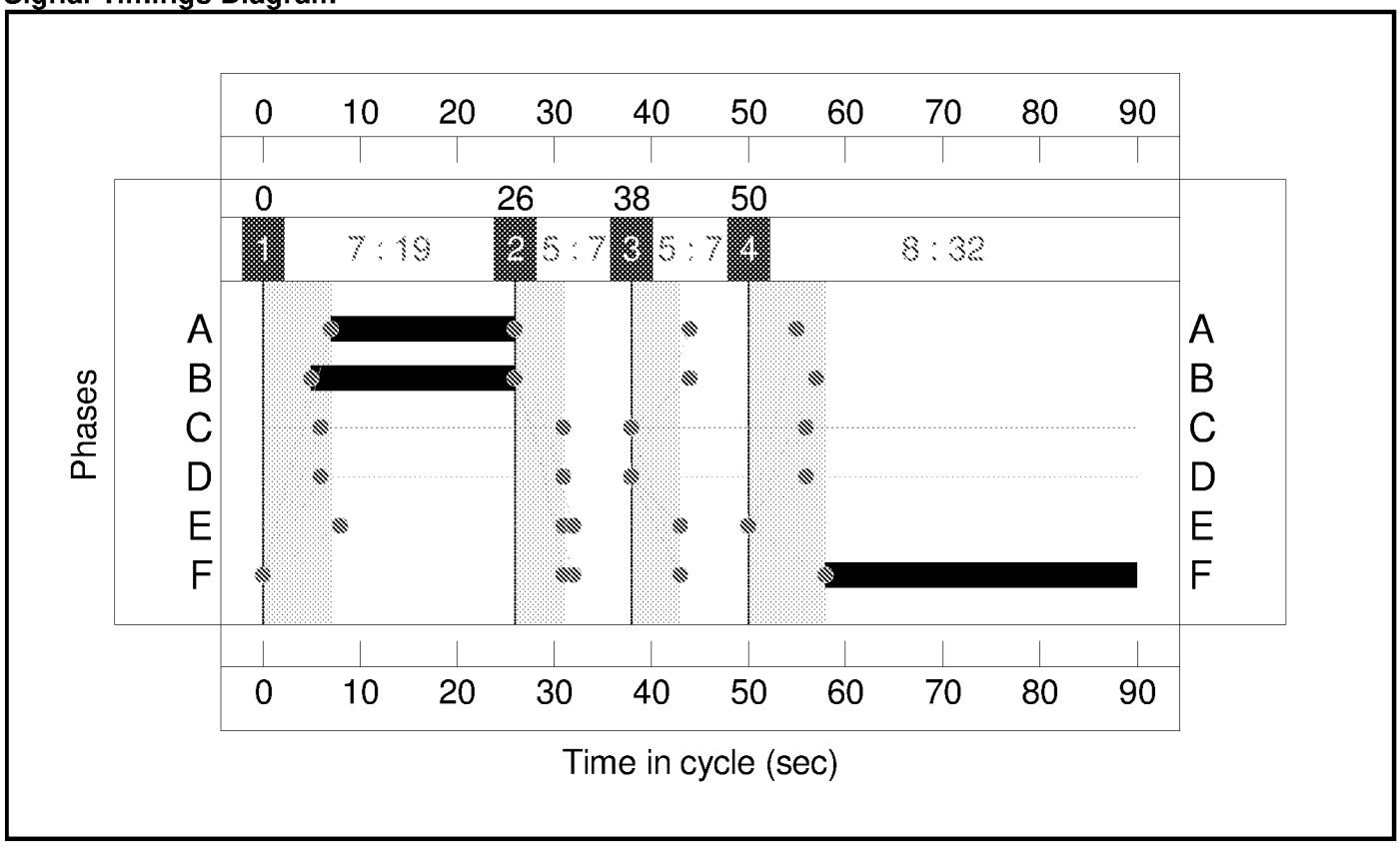
Stage Sequence Diagram



Stage Timings

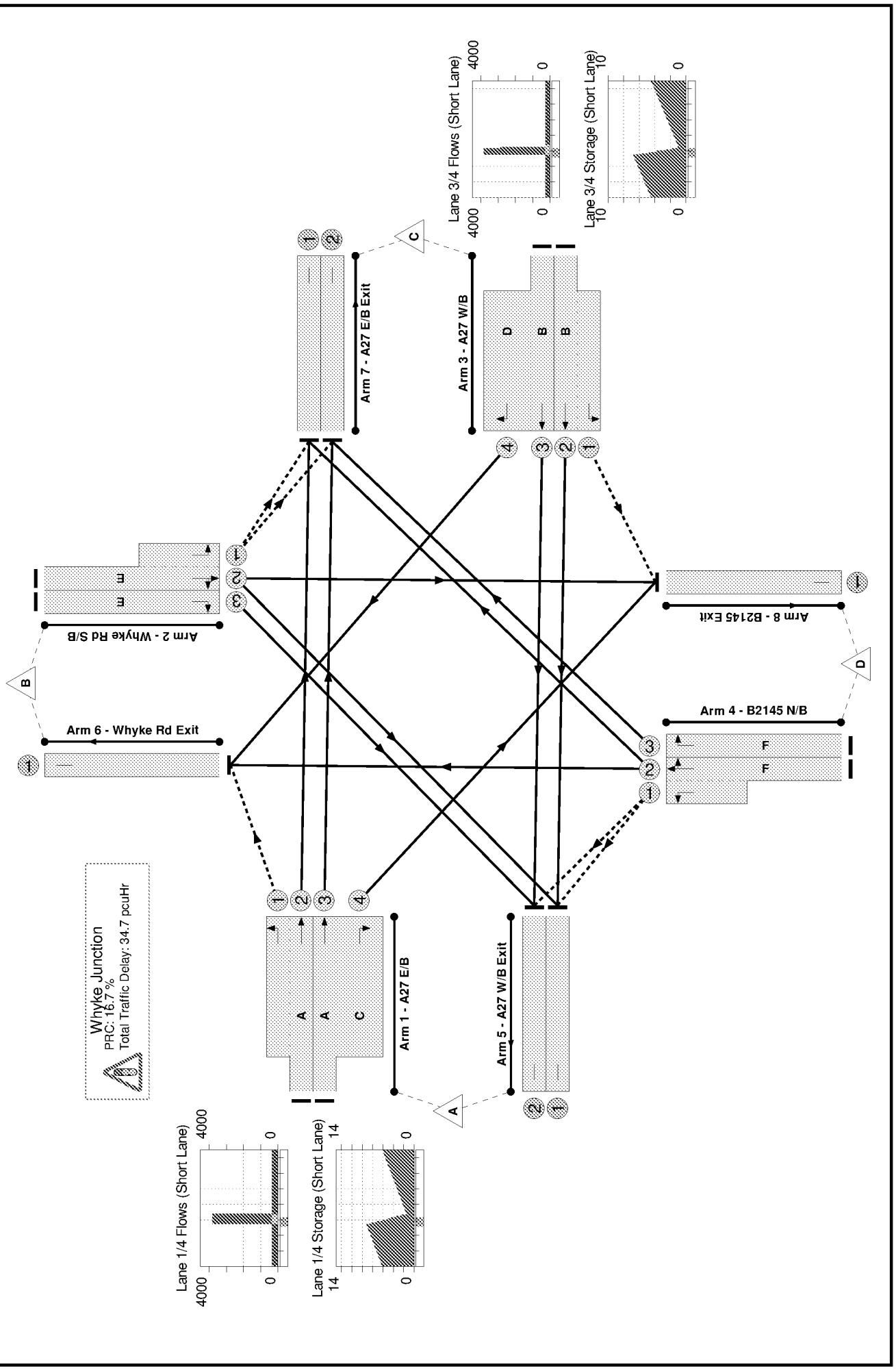
Stage	1	2	3	4
Duration	19	7	7	32
Change Point	0	26	38	50

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.1%**
Whyke Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.1%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	19	-	683	2105:1871	931	73.3%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	19:7	-	623	2105:3828	808	77.1%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	7	-	177	1848:1828	288	61.5%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	7	-	64	1914	170	37.6%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	21	-	646	2105:1871	859	75.2%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	21:7	-	639	2105:3828	855	74.8%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	32	-	927	1922:1828	1218	76.1%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	32	-	352	1914	702	50.2%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	781	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	764	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	796	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	441	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	673	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	636	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**283**	**1053**	**0**	**25.5**	**9.1**	**0.0**	**34.7**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**283**	**1053**	**0**	**25.5**	**9.1**	**0.0**	**34.7**	**-**	**-**	**-**	**-**
1/2+1/1	683	683	140	200	0	3.1	1.4	-	4.5	23.7	7.9	1.4	9.3
1/3+1/4	623	623	-	-	-	6.3	1.7	-	8.0	46.2	6.3	1.7	7.9
2/2+2/1	177	177	45	31	0	1.1	0.8	-	1.9	39.0	2.4	0.8	3.2
2/3	64	64	-	-	-	0.7	0.3	-	1.0	55.5	1.5	0.3	1.8
3/2+3/1	646	646	23	236	0	3.4	1.5	-	4.9	27.4	8.9	1.5	10.4
3/3+3/4	639	639	-	-	-	6.2	1.5	-	7.6	43.1	9.0	1.5	10.4
4/2+4/1	927	927	75	586	0	2.5	1.6	-	4.1	15.7	9.9	1.6	11.5
4/3	352	352	-	-	-	2.2	0.5	-	2.7	27.3	6.7	0.5	7.2
5/1	781	781	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	734	734	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	796	796	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	441	441	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	673	673	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	636	636	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): 16.7
PRC Over All Lanes (%): 16.7

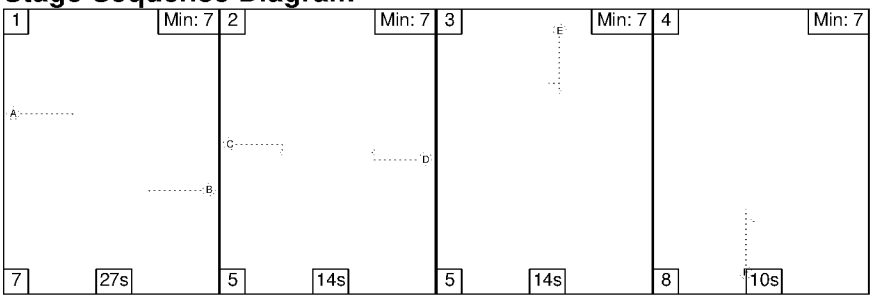
Total Delay for Signalled Lanes (pcuHr): 34.66
Total Delay Over All Lanes(pcuHr): 34.66

Cycle Time (s): 90

Full Input Data And Results

Scenario 4: '2031 LP - mitigation PM - Cumulative +PS' (FG6: '2031 LP - mitigation PM - Cumulative +PS', Plan 1: 'Single Stage')

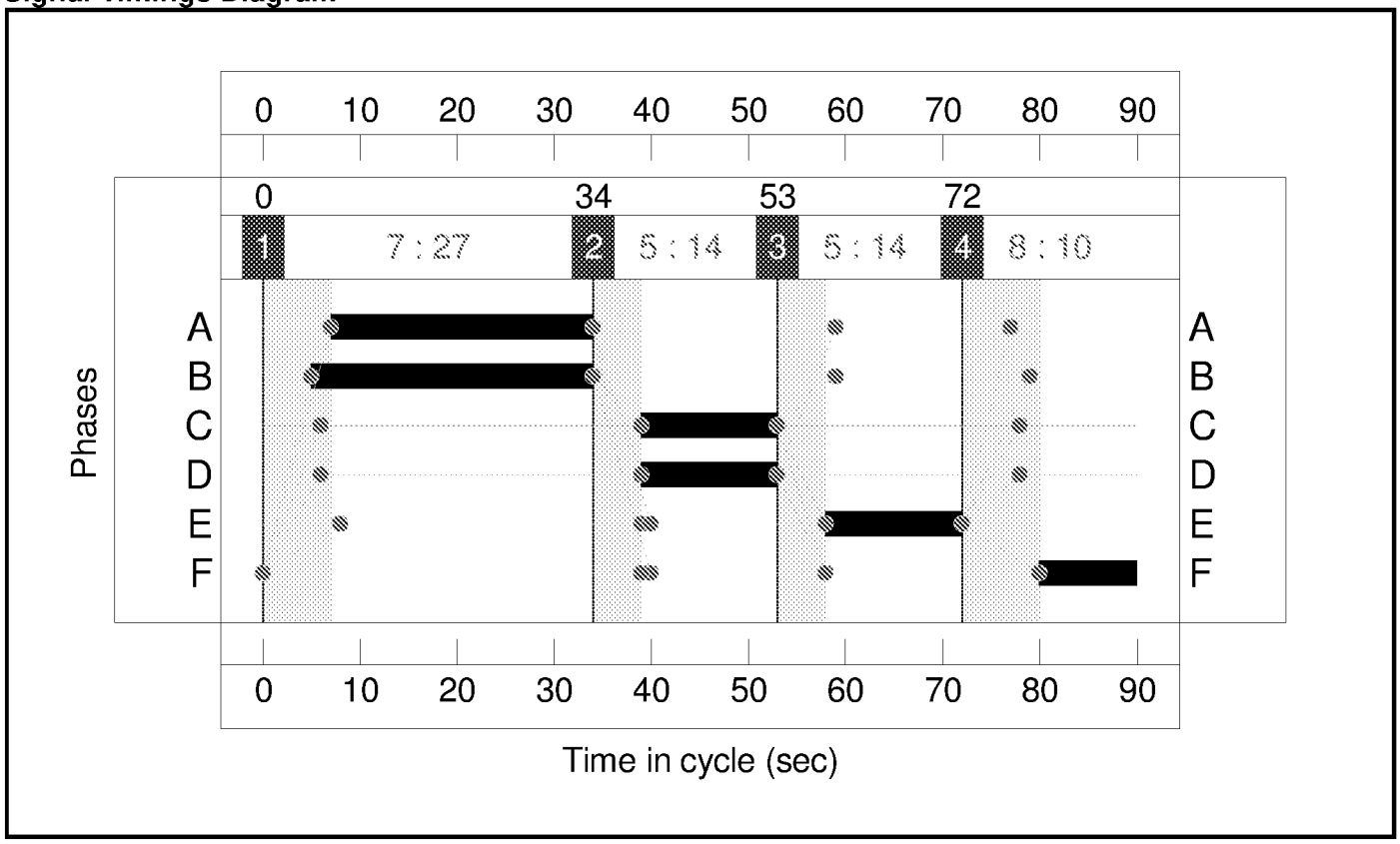
Stage Sequence Diagram



Stage Timings

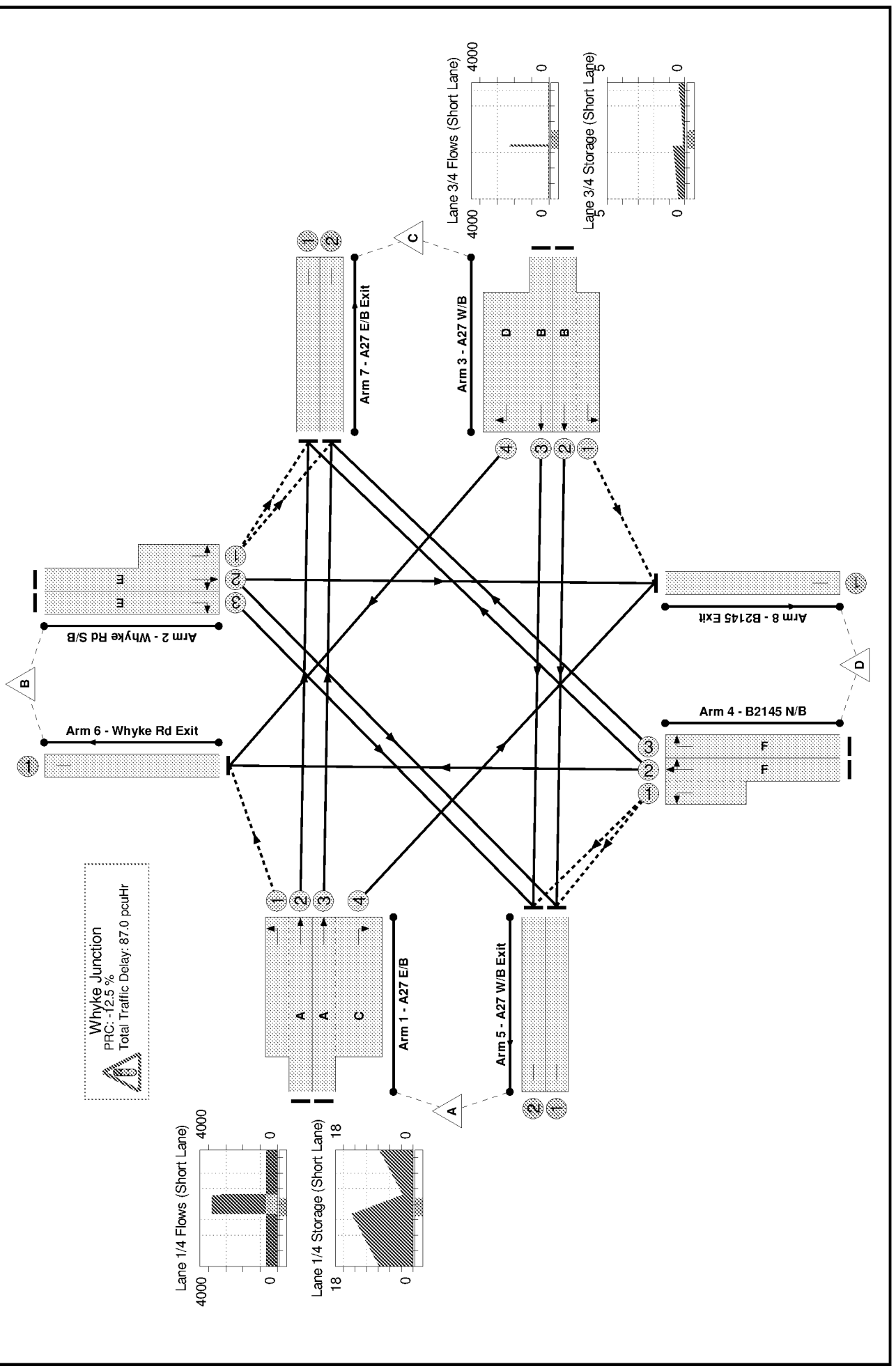
Stage	1	2	3	4
Duration	27	14	14	10
Change Point	0	34	53	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**101.2%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**101.2%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	27	-	712	2105:1871	703	101.2%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	27:14	-	748	2105:3828	755	99.1%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	14	-	565	1952:1828	569	99.4%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	14	-	299	1914	319	93.7%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	29	-	725	2105:1871	1567	46.3%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	29:14	-	247	2105:3828	799	30.9%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	10	-	603	1816:1828	610	98.8%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	10	-	213	1914	234	91.1%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	519	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	712	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	117	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	987	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	480	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	1297	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**325**	**835**	**0**	**28.3**	**58.7**	**0.0**	**87.0**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**325**	**835**	**0**	**28.3**	**58.7**	**0.0**	**87.0**	**-**	**-**	**-**	**-**
1/2+1/1	712	704	14	35	0	6.1	15.7	-	21.8	110.0	16.8	15.7	32.5
1/3+1/4	748	748	-	-	-	7.3	12.0	-	19.3	93.0	7.8	12.0	19.8
2/2+2/1	565	565	66	235	0	3.0	11.0	-	14.0	89.5	8.2	11.0	19.2
2/3	299	299	-	-	-	3.1	5.0	-	8.1	97.1	7.3	5.0	12.3
3/2+3/1	725	725	65	354	0	2.4	0.4	-	2.9	14.2	6.0	0.4	6.4
3/3+3/4	247	247	-	-	-	1.6	0.2	-	1.8	26.7	4.0	0.2	4.2
4/2+4/1	603	603	180	211	0	2.5	10.6	-	13.1	78.2	5.4	10.6	16.0
4/3	213	213	-	-	-	2.3	3.7	-	6.1	102.3	5.2	3.7	9.0
5/1	519	519	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	712	712	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	117	117	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	979	979	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	480	480	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1297	1297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -12.5
PRC Over All Lanes (%): -12.5

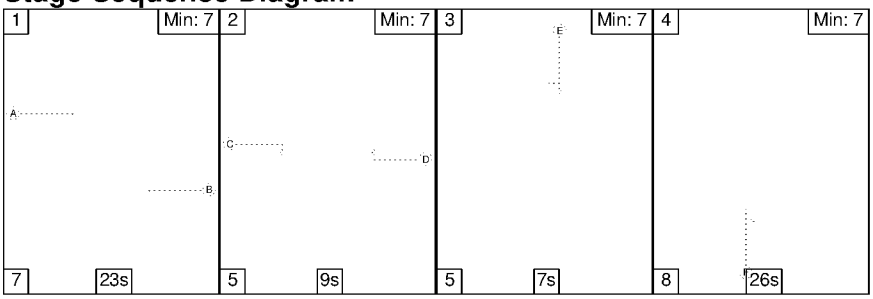
Total Delay for Signalled Lanes (pcuHr): 87.03
Total Delay Over All Lanes(pcuHr): 87.03

Cycle Time (s): 90

Full Input Data And Results

Scenario 5: '2031 LP + mitigation AM - Cumulative +PS+H' (FG7: '2031 LP + mitigation AM - Cumulative +PS+H', Plan 1: 'Single Stage')

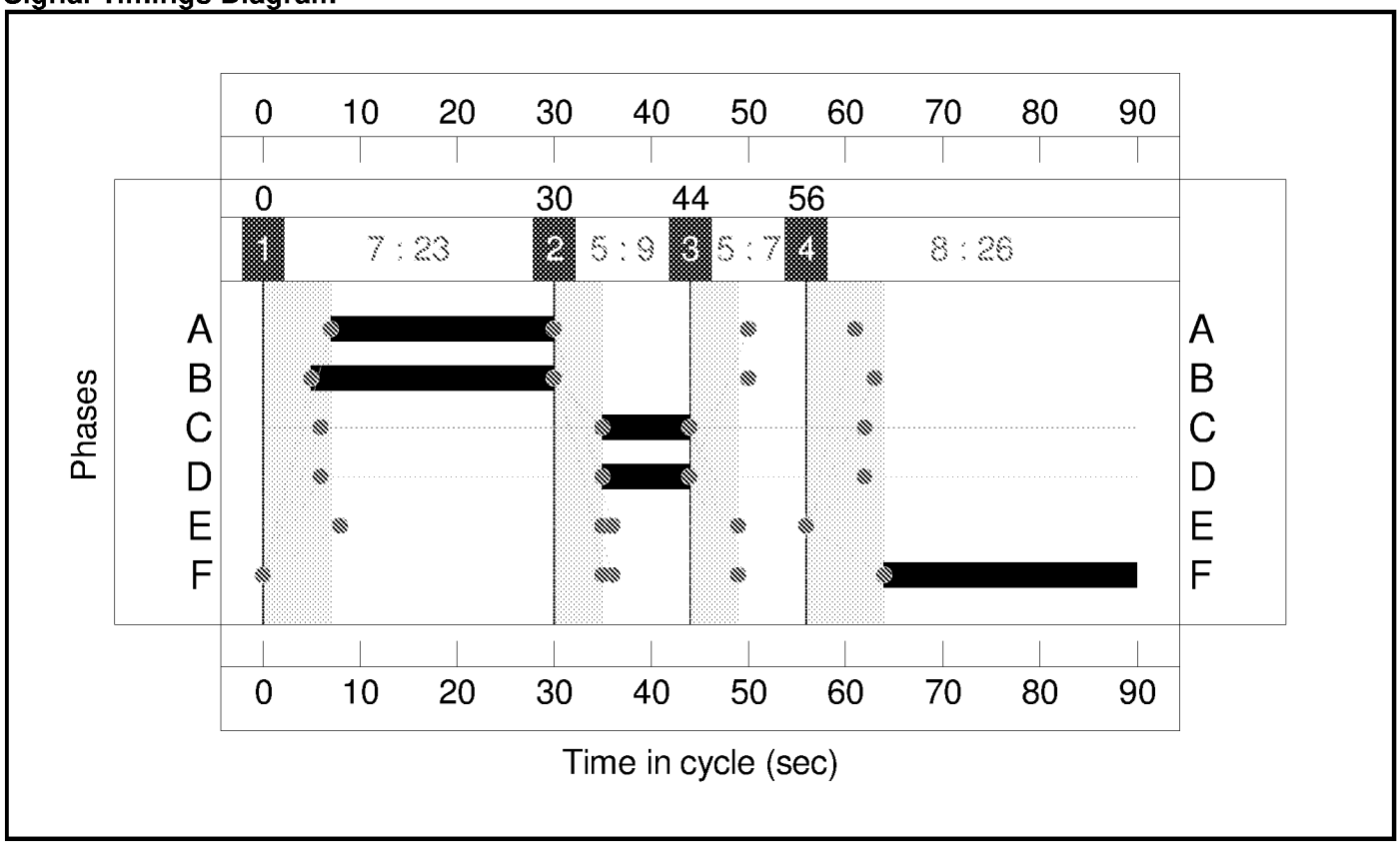
Stage Sequence Diagram



Stage Timings

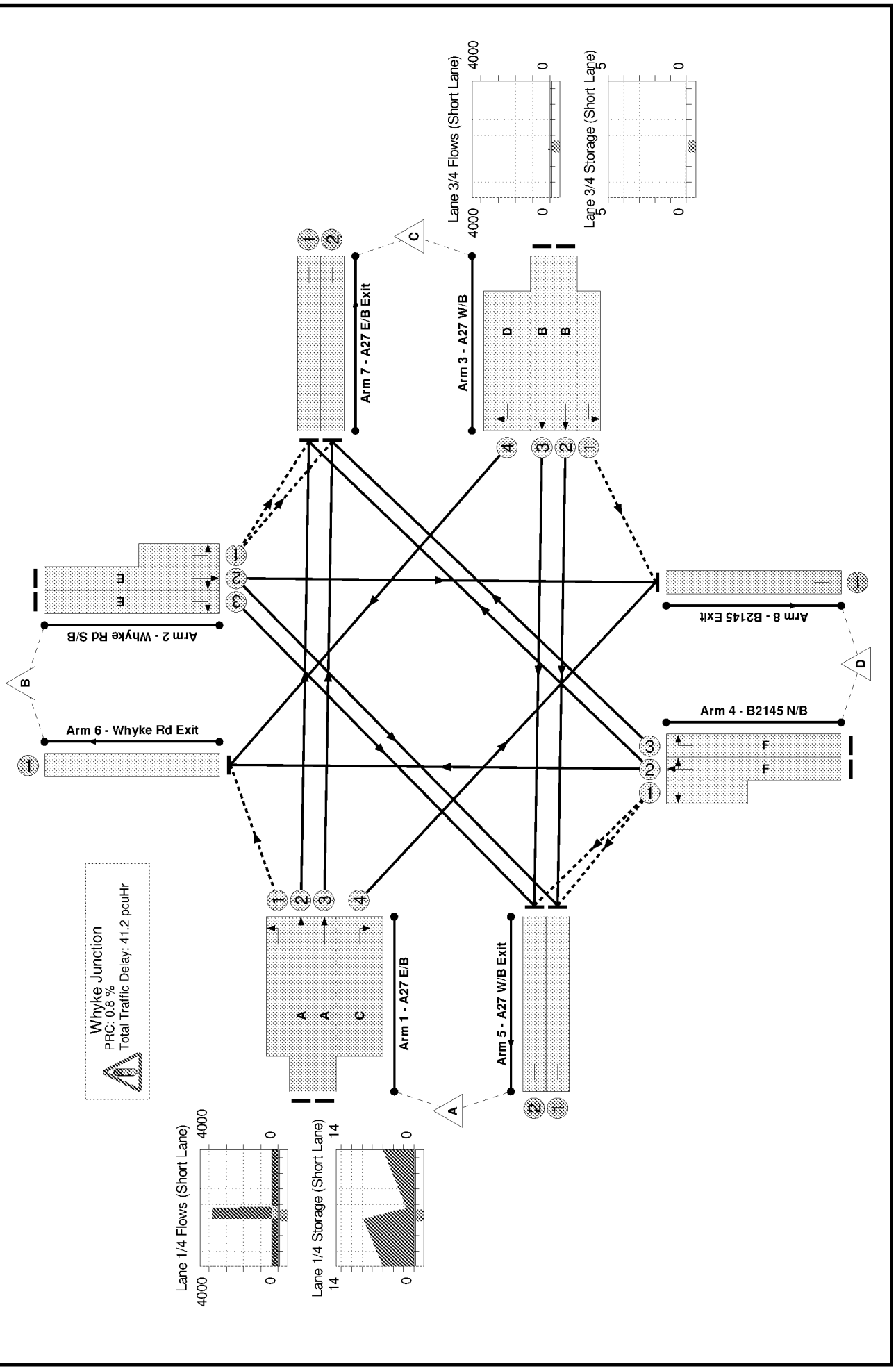
Stage	1	2	3	4
Duration	23	9	7	26
Change Point	0	30	44	56

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.2%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.2%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	23	-	575	2105:1871	709	81.1%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	23:9	-	861	2105:3828	987	87.3%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	7	-	22	1965:1965	175	12.6%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	7	-	0	2105	187	0.0%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	25	-	878	2105:1871	1002	87.6%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	25:9	-	482	2105:3828	609	79.1%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	26	-	943	1965:1828	1057	89.2%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	26	-	270	1914	574	47.0%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	907	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	855	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	316	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	455	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	762	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	736	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**181**	**1032**	**0**	**26.2**	**14.9**	**0.0**	**41.2**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**181**	**1032**	**0**	**26.2**	**14.9**	**0.0**	**41.2**	**-**	**-**	**-**	**-**
1/2+1/1	575	575	49	71	0	3.9	2.1	-	6.0	37.4	10.6	2.1	12.7
1/3+1/4	861	861	-	-	-	8.4	3.3	-	11.6	48.5	11.8	3.3	15.0
2/2+2/1	22	22	0	0	0	0.2	0.1	-	0.3	49.6	0.5	0.1	0.6
2/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	878	878	40	304	0	4.6	3.4	-	7.9	32.6	12.6	3.4	15.9
3/3+3/4	482	482	-	-	-	4.0	1.8	-	5.8	43.2	11.0	1.8	12.8
4/2+4/1	943	943	91	657	0	3.3	3.9	-	7.2	27.4	15.0	3.9	18.8
4/3	270	270	-	-	-	1.9	0.4	-	2.4	31.6	5.5	0.4	5.9
5/1	907	907	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	855	855	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	316	316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	455	455	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	762	762	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	736	736	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): 0.8
PRC Over All Lanes (%): 0.8

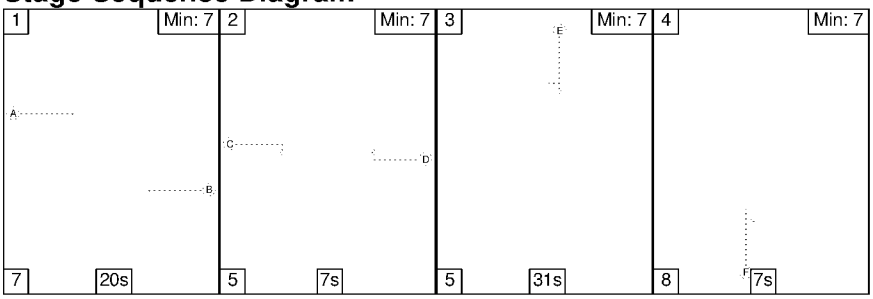
Total Delay for Signalled Lanes (pcuHr): 41.16
Total Delay Over All Lanes(pcuHr): 41.16

Cycle Time (s): 90

Full Input Data And Results

Scenario 6: '2031 LP + mitigation PM - Cumulative +PS+H' (FG8: '2031 LP + mitigation PM - Cumulative +PS+H', Plan 1: 'Single Stage')

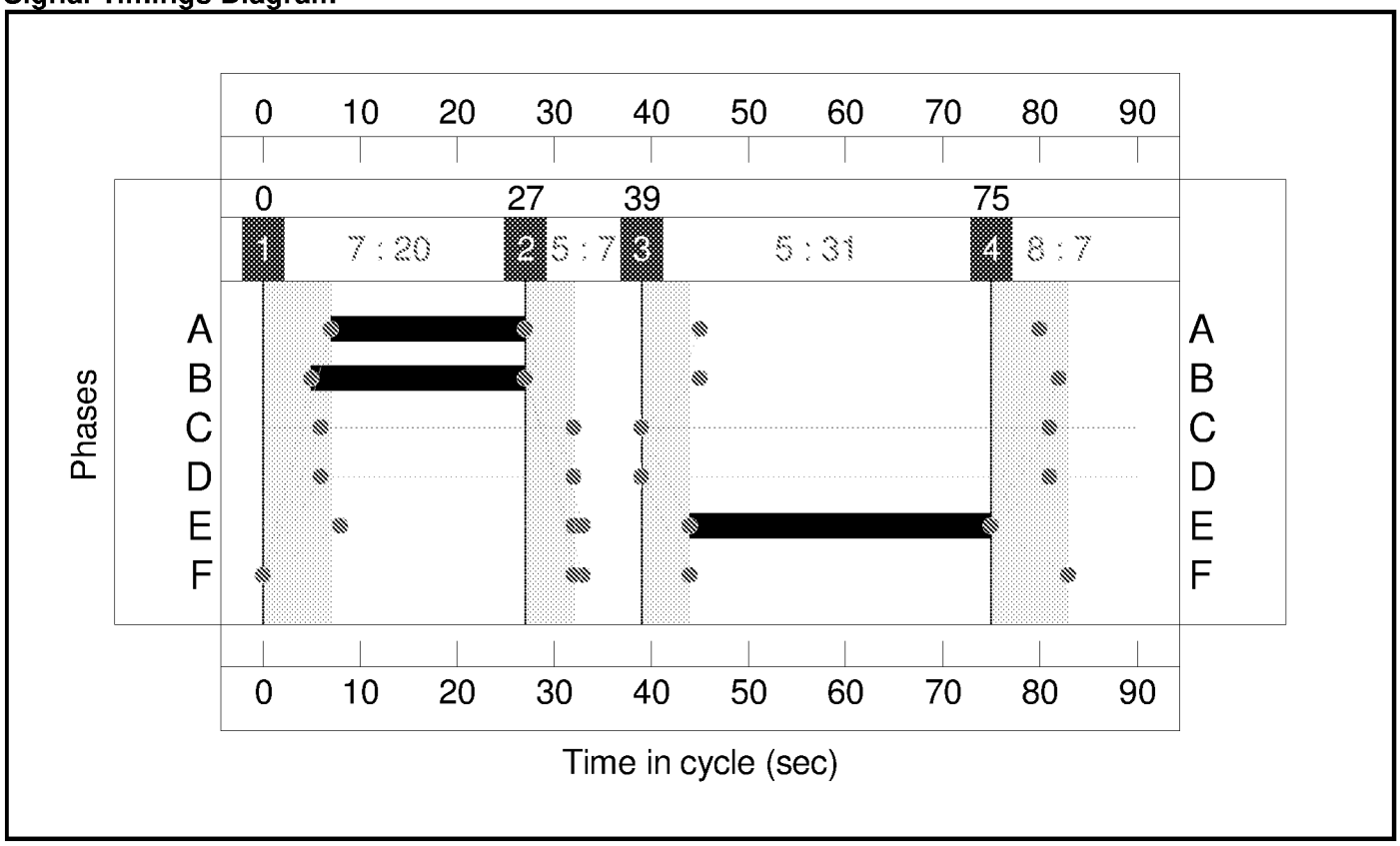
Stage Sequence Diagram



Stage Timings

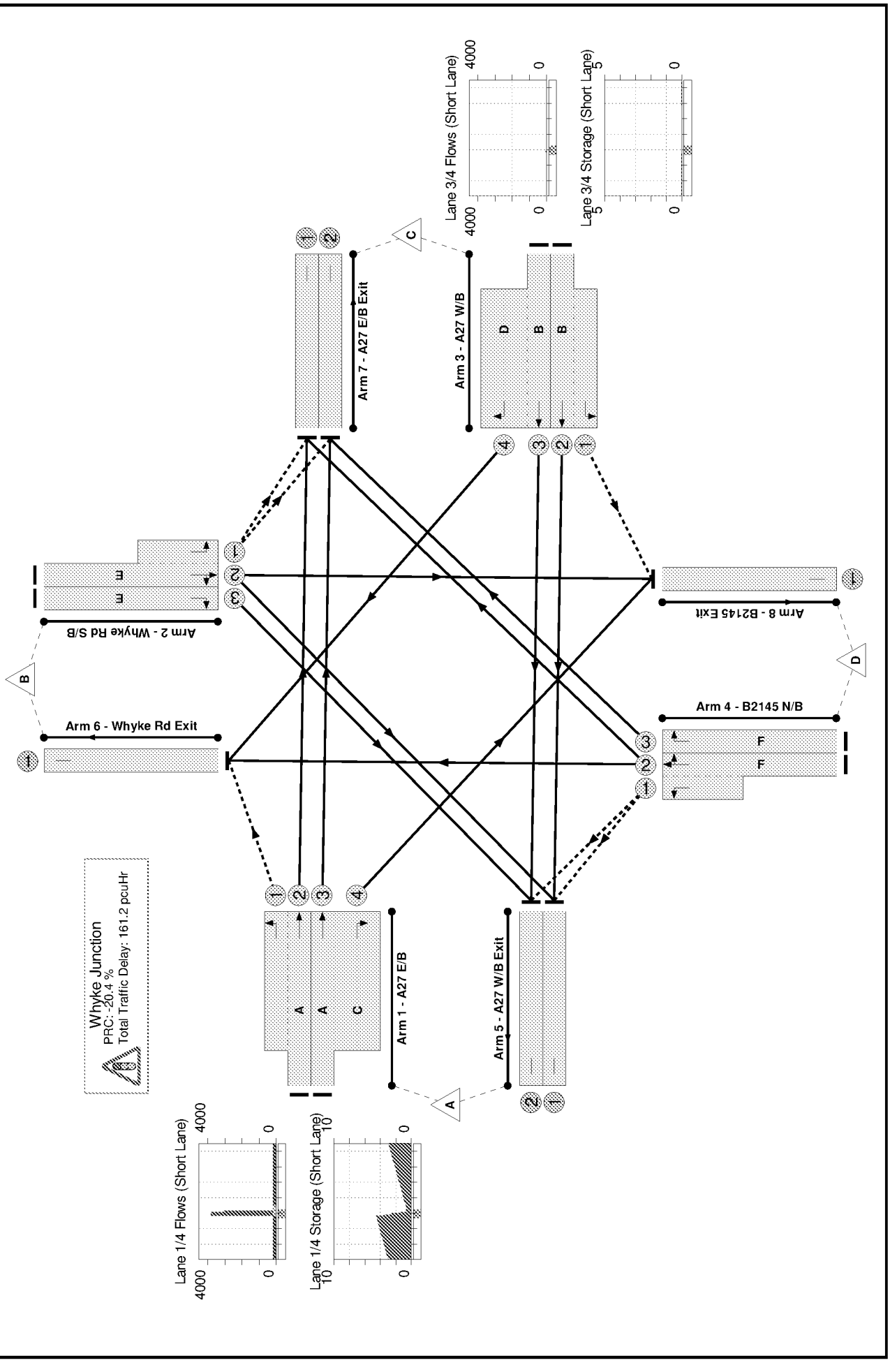
Stage	1	2	3	4
Duration	20	7	31	7
Change Point	0	27	39	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.3%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.3%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	20	-	547	2105:1871	515	106.3%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	20:7	-	694	2105:3828	649	106.9%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	31	-	775	1965:1828	734	105.6%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	31	-	2	1914	681	0.3%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	22	-	973	2105:1871	1001	97.2%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	22:7	-	488	2105:3828	539	90.5%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	7	-	467	1869:1828	431	108.3%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	7	-	178	1914	170	104.6%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	666	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	633	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	114	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	666	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	756	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	1269	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**267**	**600**	**0**	**36.6**	**124.5**	**0.0**	**161.2**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**267**	**600**	**0**	**36.6**	**124.5**	**0.0**	**161.2**	**-**	**-**	**-**	**-**
1/2+1/1	547	516	4	21	0	6.4	22.3	-	28.7	188.7	13.8	22.3	36.1
1/3+1/4	694	660	-	-	-	8.4	28.5	-	36.8	191.1	14.0	28.5	42.4
2/2+2/1	775	739	7	98	0	7.0	27.6	-	34.6	160.5	20.9	27.6	48.5
2/3	2	2	-	-	-	0.0	0.0	-	0.0	21.7	0.0	0.0	0.0
3/2+3/1	973	973	145	305	0	5.1	10.1	-	15.2	56.4	12.9	10.1	23.1
3/3+3/4	488	488	-	-	-	4.4	4.1	-	8.5	62.8	11.8	4.1	15.9
4/2+4/1	467	453	109	178	0	2.9	23.1	-	26.0	200.4	4.9	23.1	28.0
4/3	178	170	-	-	-	2.4	8.9	-	11.3	229.5	4.7	8.9	13.6
5/1	666	666	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	633	633	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	107	107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	628	628	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1253	1253	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -20.4
PRC Over All Lanes (%): -20.4

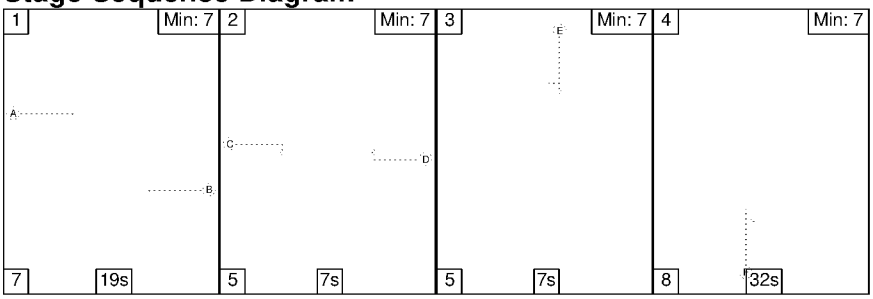
Total Delay for Signalled Lanes (pcuHr): 161.17
Total Delay Over All Lanes(pcuHr): 161.17

Cycle Time (s): 90

Full Input Data And Results

Scenario 7: '2031 LP - mitigation AM - Cumulative +PS+H' (FG9: '2031 LP - mitigation AM - Cumulative +PS+H', Plan 1: 'Single Stage')

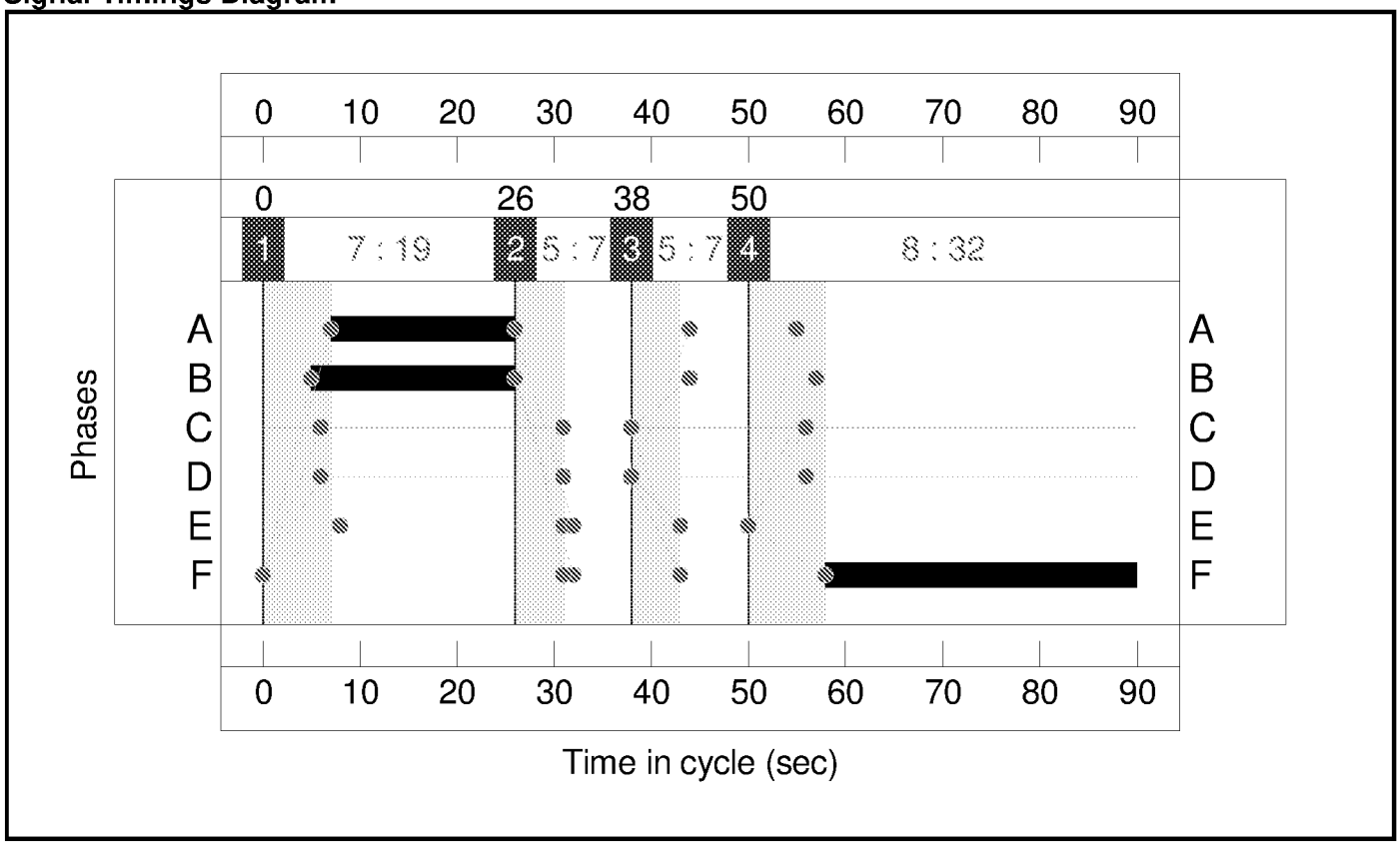
Stage Sequence Diagram



Stage Timings

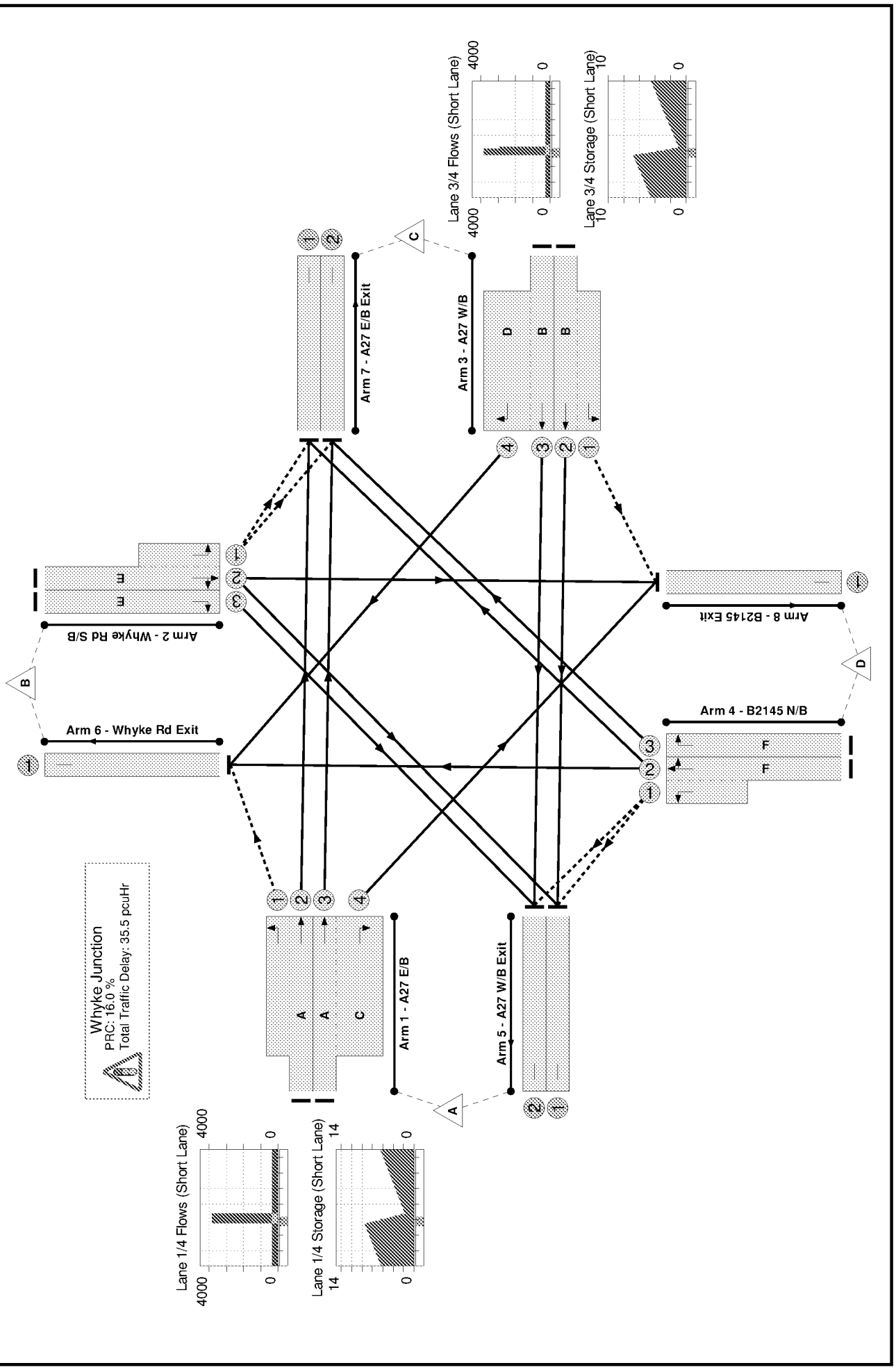
Stage	1	2	3	4
Duration	19	7	7	32
Change Point	0	26	38	50

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.6%**
Whyke Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.6%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	19	-	685	2105:1871	929	73.8%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	19:7	-	627	2105:3828	808	77.6%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	7	-	178	1851:1828	287	62.0%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	7	-	65	1914	170	38.2%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	21	-	649	2105:1871	863	75.2%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	21:7	-	640	2105:3828	855	74.9%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	32	-	945	1929:1828	1222	77.4%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	32	-	366	1914	702	52.2%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	767	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	792	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	310	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	434	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	535	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	647	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**283**	**1070**	**0**	**26.1**	**9.4**	**0.0**	**35.5**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**283**	**1070**	**0**	**26.1**	**9.4**	**0.0**	**35.5**	**-**	**-**	**-**	**-**
1/2+1/1	685	685	140	200	0	3.2	1.4	-	4.5	23.9	8.0	1.4	9.3
1/3+1/4	627	621	-	-	-	6.6	1.7	-	8.3	47.8	6.2	1.7	7.9
2/2+2/1	178	178	45	31	0	1.1	0.8	-	1.9	39.3	2.4	0.8	3.2
2/3	65	65	-	-	-	0.7	0.3	-	1.0	55.7	1.5	0.3	1.8
3/2+3/1	649	649	23	239	0	3.4	1.5	-	4.9	27.3	8.9	1.5	10.4
3/3+3/4	640	640	-	-	-	6.2	1.5	-	7.7	43.1	9.0	1.5	10.4
4/2+4/1	945	945	75	600	0	2.6	1.7	-	4.3	16.2	10.3	1.7	12.0
4/3	366	366	-	-	-	2.3	0.5	-	2.8	27.7	7.1	0.5	7.7
5/1	787	787	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	792	792	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	810	810	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	434	434	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	685	685	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	641	641	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): 16.0
PRC Over All Lanes (%): 16.0

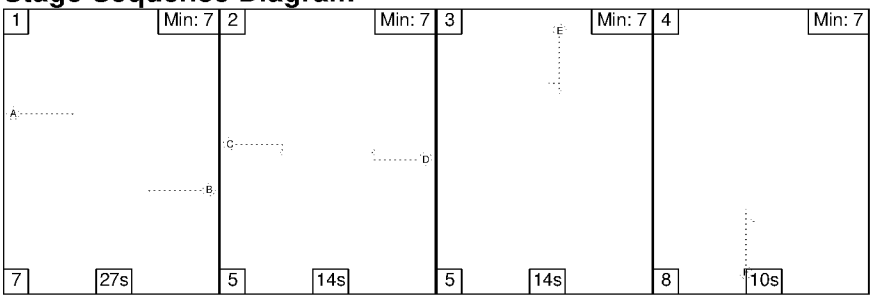
Total Delay for Signalled Lanes (pcuHr): 35.46
Total Delay Over All Lanes(pcuHr): 35.46

Cycle Time (s): 90

Full Input Data And Results

Scenario 8: '2031 LP - mitigation PM - Cumulative +PS+H' (FG10: '2031 LP - mitigation PM - Cumulative +PS+H', Plan 1: 'Single Stage')

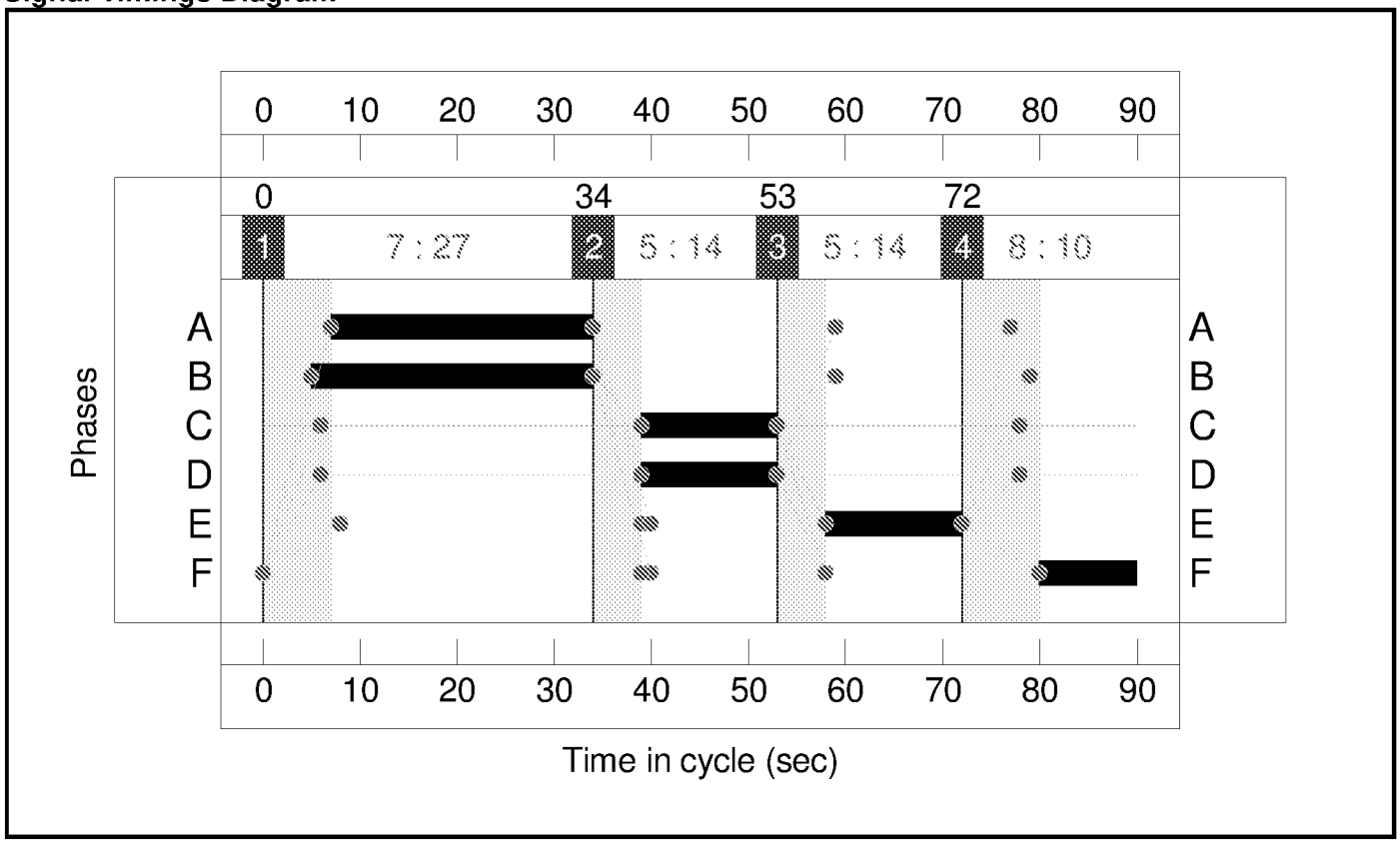
Stage Sequence Diagram



Stage Timings

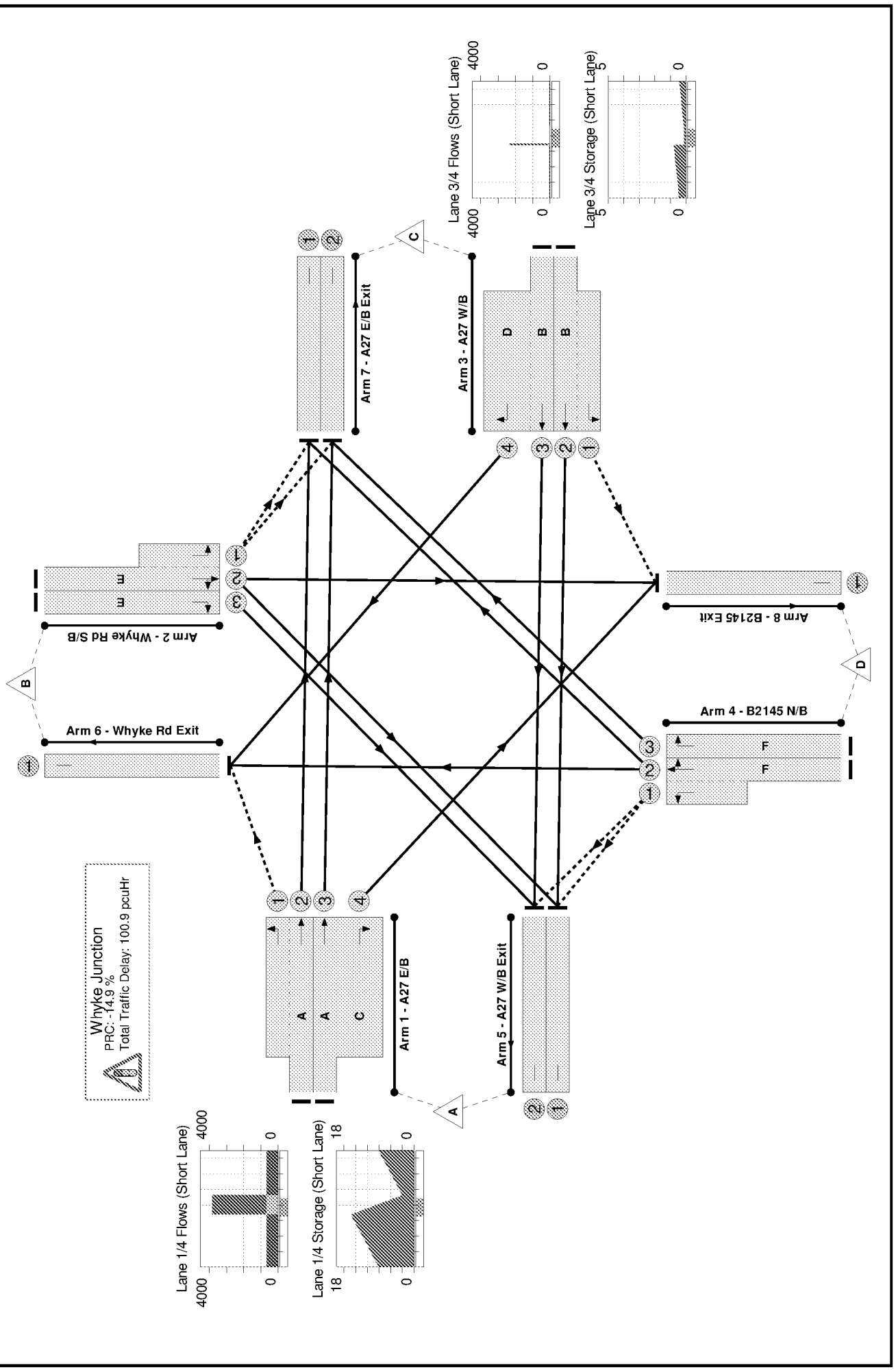
Stage	1	2	3	4
Duration	27	14	14	10
Change Point	0	34	53	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**103.4%**
Whyke Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**103.4%**
1/2+1/1	A27 E/B Left Ahead	U+O	N/A	N/A	A -		1	27	-	726	2105:1871	702	103.4%
1/3+1/4	A27 E/B Ahead Right	U	N/A	N/A	A C		1	27:14	-	745	2105:3828	739	100.8%
2/2+2/1	Whyke Rd S/B Right Left Ahead	U+O	N/A	N/A	E -		1	14	-	567	1954:1828	567	100.0%
2/3	Whyke Rd S/B Right	U	N/A	N/A	E		1	14	-	302	1914	319	94.7%
3/2+3/1	A27 W/B Ahead Left	U+O	N/A	N/A	B -		1	29	-	729	2105:1871	1566	46.6%
3/3+3/4	A27 W/B Ahead Right	U	N/A	N/A	B D		1	29:14	-	249	2105:3828	801	31.1%
4/2+4/1	B2145 N/B Left Ahead Right	U+O	N/A	N/A	F -		1	10	-	613	1823:1828	612	100.2%
4/3	B2145 N/B Right	U	N/A	N/A	F		1	10	-	221	1914	234	94.5%
5/1	A27 W/B Exit	U	N/A	N/A	-		-	-	-	519	Inf	Inf	0.0%
5/2	A27 W/B Exit	U	N/A	N/A	-		-	-	-	719	Inf	Inf	0.0%
6/1	Whyke Rd Exit	U	N/A	N/A	-		-	-	-	127	Inf	Inf	0.0%
7/1	A27 E/B Exit	U	N/A	N/A	-		-	-	-	995	Inf	Inf	0.0%
7/2	A27 E/B Exit	U	N/A	N/A	-		-	-	-	474	Inf	Inf	0.0%
8/1	B2145 Exit	U	N/A	N/A	-		-	-	-	1316	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**327**	**845**	**0**	**29.5**	**71.4**	**0.0**	**100.9**	**-**	**-**	**-**	**-**
Whyke Junction	**-**	**-**	**327**	**845**	**0**	**29.5**	**71.4**	**0.0**	**100.9**	**-**	**-**	**-**	**-**
1/2+1/1	726	704	14	35	0	6.8	20.6	-	27.4	136.1	17.5	20.6	38.1
1/3+1/4	745	740	-	-	-	7.5	15.2	-	22.7	109.6	8.1	15.2	23.3
2/2+2/1	567	567	67	234	0	3.0	11.9	-	15.0	95.1	8.3	11.9	20.3
2/3	302	302	-	-	-	3.1	5.4	-	8.5	101.7	7.5	5.4	12.9
3/2+3/1	729	729	64	360	0	2.4	0.4	-	2.9	14.2	5.9	0.4	6.4
3/3+3/4	249	249	-	-	-	1.6	0.2	-	1.8	26.7	4.0	0.2	4.2
4/2+4/1	613	613	182	216	0	2.6	12.7	-	15.3	89.6	5.9	12.7	18.6
4/3	221	221	-	-	-	2.4	4.9	-	7.3	118.6	5.5	4.9	10.3
5/1	519	519	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	719	719	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	127	127	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	973	973	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	474	474	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1313	1313	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - Whyke

PRC for Signalled Lanes (%): -14.9
PRC Over All Lanes (%): -14.9

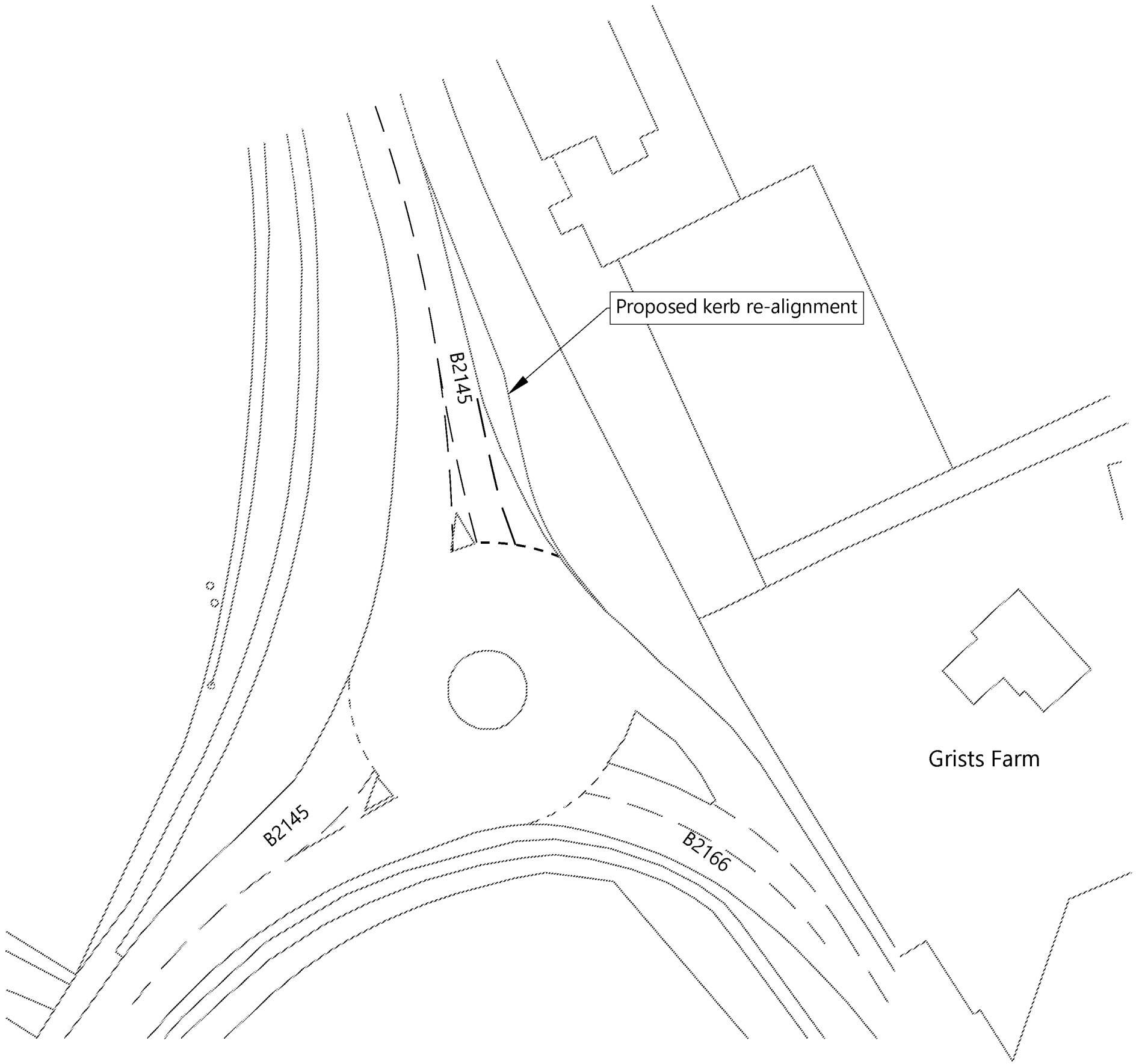
Total Delay for Signalled Lanes (pcuHr): 100.91
Total Delay Over All Lanes(pcuHr): 100.91

Cycle Time (s): 90

Appendix 11

Proposed Mitigation

ARUN DISTRICT COUNCIL P/140/16/OUT



NOTES:

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ISSUE	REASON FOR REVISION	DATE

PROJECT:

PAGHAM SOUTH, PAGHAM

CLIENT:

HANBURY PM Ltd

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1616	13	1:500 @ A3

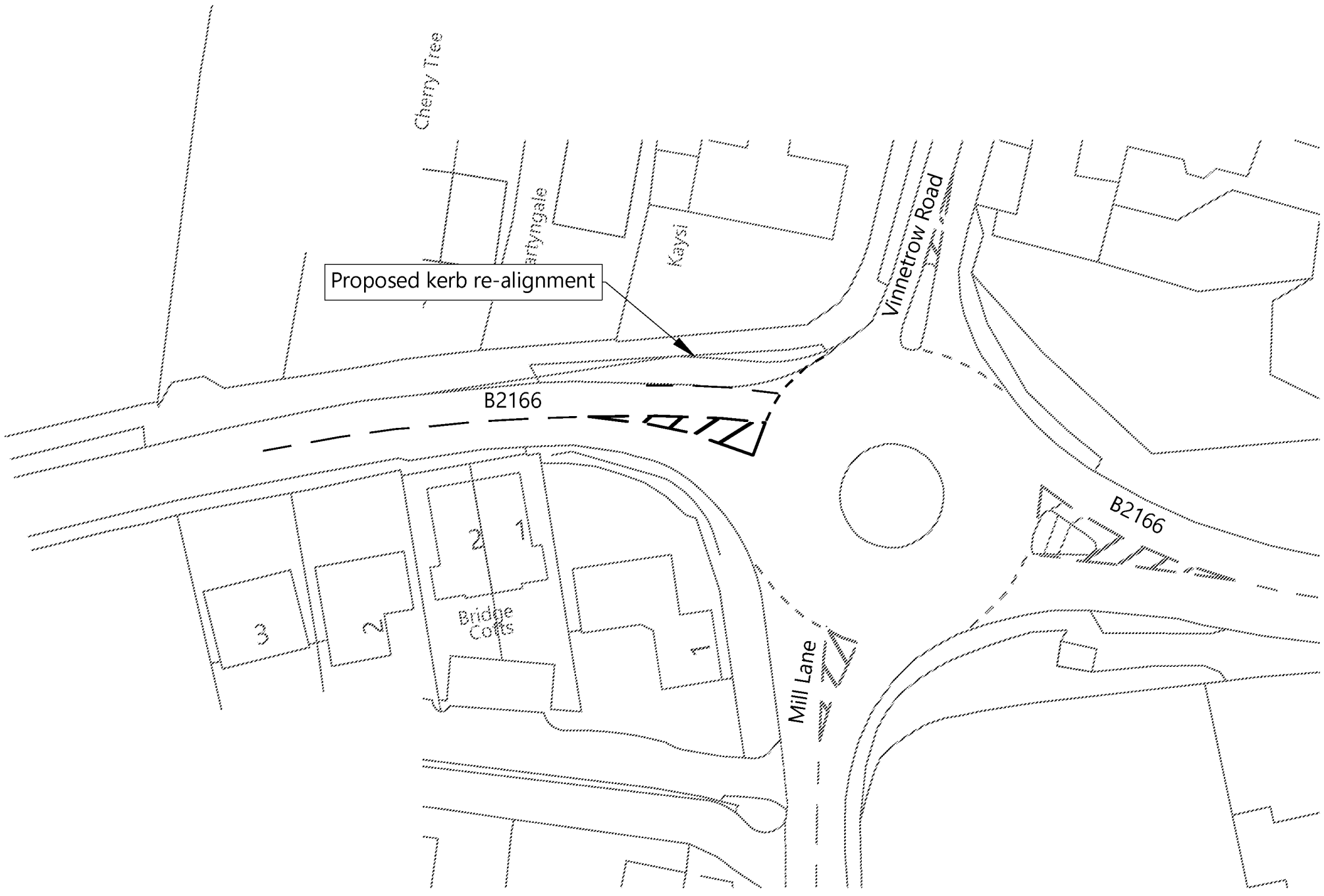
HighgateTransportation
www.highgatetransportation.co.uk
[redacted]

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TITLE:

PROPOSED MITIGATION WORKS - B2145/B2166

DATE:	DRAWN BY:	CHECKED:
17/03/17	FB	DT



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ISSUE	REASON FOR REVISION	DATE

PROJECT:

PAGHAM SOUTH, PAGHAM

CLIENT:

HANBURY PM Ltd

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1616	14	1:500 @ A3

HighgateTransportation
www.highgatetransportation.co.uk
Box 13, 42 Triangle West
Park Street, Bristol BS8 1ES
07973 375 937 / 07595 892 217

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TITLE:

PROPOSED MITIGATION WORKS - B2166 VINNETROW ROAD

DATE:	DRAWN BY:	CHECKED:
17/03/17	FB	DT

Appendix 12

Modelling Outputs - Mitigation

ARUN DISTRICT COUNCIL P/140/16/OUT

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: Mitigation Scheme B2145 B2166 With Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 20/03/2017 09:18:16

»2031 LP + mitigation, AM
»2031 LP + mitigation, PM
»2031 LP - mitigation, AM
»2031 LP - mitigation, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation													
Arm 1	1.3	5.54	0.54	A	23.72	C	-1 % [Arm 2]	11.1	30.46	0.93	D	17.04	C	1 % [Arm 1]
Arm 2	12.8	37.92	0.94	E				1.8	7.89	0.64	A			
Arm 3	6.1	20.64	0.86	C				1.5	5.54	0.59	A			
	2031 LP - mitigation													
Arm 1	0.8	4.56	0.44	A	64.69	F	-10 % [Arm 2]	4.7	13.70	0.83	B	10.88	B	11 % [Arm 1]
Arm 2	55.1	118.80	1.08	F				3.3	11.35	0.77	B			
Arm 3	6.4	23.66	0.87	C				1.8	6.62	0.63	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. 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	B2145 j/w B2166
Location	
Site number	
Date	05/12/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	1616
Enumerator	FB
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	23.72	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	Arm 2

Arms

Arms

Arm	Name	Description
1	B2145 North	
2	B2166	
3	untitled	

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	3.30	7.70	25.0	30.0	30.0	22.0	
2	3.20	7.80	16.0	24.0	30.0	37.0	
3	4.10	7.70	9.0	65.0	30.0	10.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.720	1934
2	0.646	1668
3	0.731	1898

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	746	100.000
2		✓	1175	100.000
3		✓	1014	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	328	418
	2	759	0	416
	3	487	527	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.54	5.54	1.3	1.6	A
2	0.94	37.62	12.8	16.9	E
3	0.86	20.64	6.1	8.9	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	562	394	1651	0.340	559	0.5	3.526	A
2	885	313	1466	0.604	878	1.5	6.252	A
3	763	567	1484	0.514	759	1.1	5.155	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	671	472	1595	0.421	670	0.8	4.165	A
2	1056	375	1426	0.741	1051	2.8	9.767	A
3	912	679	1402	0.650	908	1.9	7.559	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	821	573	1522	0.540	819	1.2	5.472	A
2	1294	459	1371	0.943	1262	10.8	28.042	D
3	1116	815	1303	0.857	1102	5.5	17.572	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	821	579	1518	0.541	821	1.3	5.536	A
2	1294	460	1371	0.944	1286	12.8	37.920	E
3	1116	831	1292	0.864	1114	6.1	20.642	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	671	482	1588	0.422	672	0.8	4.223	A
2	1056	377	1425	0.741	1095	3.1	12.470	B
3	912	707	1382	0.660	928	2.1	8.556	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	562	399	1648	0.341	563	0.6	3.556	A
2	885	315	1464	0.604	891	1.6	6.525	A
3	763	575	1478	0.516	767	1.1	5.314	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.55	0.55	1.07	1.50	1.55			N/A	N/A
2	1.54	0.58	1.44	1.97	2.35			N/A	N/A
3	1.09	0.57	1.05	1.48	1.53			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.77	0.10	0.87	1.49	1.57			N/A	N/A
2	2.83	0.05	0.60	7.83	12.60			N/A	N/A
3	1.89	0.05	0.50	5.00	7.96			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.24	0.03	0.28	1.24	1.24			N/A	N/A
2	10.81	0.08	1.96	31.23	48.91			N/A	N/A
3	5.50	0.04	0.39	13.26	29.92			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.25	0.03	0.29	1.25	1.36			N/A	N/A
2	12.78	0.05	0.72	36.81	66.86			N/A	N/A
3	6.08	0.03	0.33	7.72	29.37			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.79	0.30	1.02	1.49	1.55			N/A	N/A
2	3.09	0.04	0.42	8.39	15.70			N/A	N/A
3	2.08	0.05	0.48	5.61	9.19			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.56	0.05	0.54	1.39	1.50			N/A	N/A
2	1.60	0.03	0.31	2.30	7.91			N/A	N/A

3	1.13	0.03	0.34	2.36	5.68			N/A	N/A

2031 LP + mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	17.04	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	1	Arm 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)
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1275	100.000
2		✓	757	100.000
3		✓	886	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	752	523
	2	313	0	444
	3	349	537	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.93	30.46	11.1	9.1.0	D
2	0.64	7.89	1.8	2.3	A
3	0.59	5.54	1.5	1.9	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	960	403	1645	0.584	954	1.4	5.306	A
2	570	391	1415	0.403	567	0.7	4.309	A
3	667	235	1727	0.386	664	0.6	3.490	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1146	482	1588	0.722	1142	2.6	8.195	A
2	681	468	1366	0.498	679	1.0	5.331	A
3	796	281	1693	0.470	795	0.9	4.136	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1404	590	1510	0.930	1375	9.7	23.599	C
2	833	564	1304	0.639	830	1.8	7.696	A
3	976	343	1648	0.592	973	1.5	5.495	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1404	591	1509	0.930	1398	11.1	30.460	D
2	833	574	1297	0.642	833	1.8	7.892	A
3	976	345	1647	0.592	975	1.5	5.539	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1146	484	1586	0.723	1180	2.8	9.791	A
2	681	484	1355	0.502	684	1.0	5.482	A
3	796	283	1692	0.471	799	0.9	4.174	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	960	405	1643	0.584	965	1.5	5.490	A
2	570	396	1412	0.404	571	0.7	4.366	A
3	667	236	1726	0.387	668	0.7	3.520	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.42	0.57	1.32	1.85	2.01			N/A	N/A
2	0.68	0.56	1.02	1.43	1.48			N/A	N/A
3	0.65	0.57	1.03	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.58	0.05	0.48	7.13	11.90			N/A	N/A
2	1.00	0.07	0.86	1.78	2.33			N/A	N/A
3	0.91	0.08	0.85	1.47	1.88			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	9.74	0.06	1.32	28.48	47.51			N/A	N/A
2	1.76	0.03	0.27	1.76	1.76			N/A	N/A
3	1.48	0.03	0.27	1.48	1.48			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	11.13	0.04	0.44	29.48	61.00			N/A	N/A
2	1.80	0.03	0.27	1.80	1.80			N/A	N/A
3	1.49	0.03	0.27	1.49	1.49			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.76	0.04	0.42	7.56	13.90			N/A	N/A
2	1.04	0.11	0.99	1.63	1.94			N/A	N/A
3	0.93	0.24	1.00	1.18	1.18			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.46	0.03	0.31	2.19	7.28			N/A	N/A
2	0.69	0.05	0.54	1.52	1.60			N/A	N/A
3	0.65	0.07	0.71	1.40	1.49			N/A	N/A

2031 LP - mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	64.69	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-10	Arm 2

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)
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	609	100.000
2		✓	1388	100.000
3		✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	299	310
	2	944	0	444
	3	407	531	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	3	0	3
	3	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.44	4.56	0.8	2.8	A
2	1.06	118.80	55.1	124.5	F
3	0.87	23.66	6.4	33.1	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	458	397	1649	0.278	457	0.4	3.228	A
2	1045	233	1518	0.688	1036	2.2	7.565	A
3	706	705	1384	0.510	702	1.1	5.473	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	547	475	1592	0.344	547	0.6	3.683	A
2	1248	278	1488	0.838	1237	4.9	14.186	B
3	843	841	1284	0.657	840	1.9	8.388	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	671	576	1520	0.441	669	0.8	4.524	A
2	1528	341	1448	1.055	1416	32.9	59.143	F
3	1033	963	1195	0.864	1018	5.7	19.711	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	671	583	1515	0.443	670	0.8	4.562	A
2	1528	341	1448	1.056	1439	55.1	118.805	F
3	1033	979	1183	0.873	1030	6.4	23.664	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	547	486	1585	0.345	549	0.6	3.723	A
2	1248	279	1488	0.839	1440	7.1	77.707	F
3	843	979	1183	0.713	858	2.7	12.043	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	458	403	1644	0.279	459	0.4	3.254	A
2	1045	234	1517	0.689	1064	2.3	8.504	A
3	706	724	1370	0.516	712	1.1	5.763	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2	2.22	0.24	1.32	4.02	5.08			N/A	N/A
3	1.07	0.57	1.05	1.48	1.53			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.56	0.56	1.07	1.50	1.55			N/A	N/A
2	4.88	0.07	1.41	13.61	20.92			N/A	N/A
3	1.94	0.05	0.54	5.10	8.03			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.84	0.03	0.27	0.84	0.84			N/A	N/A
2	32.89	5.16	26.97	63.82	78.11			N/A	N/A
3	5.72	0.04	0.41	14.84	30.99			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.85	0.03	0.30	0.85	2.78			N/A	N/A
2	55.10	11.09	46.89	103.18	124.57			N/A	N/A
3	6.41	0.03	0.34	10.39	33.12			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.57	0.57	1.07	1.50	1.55			N/A	N/A
2	7.08	0.06	0.96	20.52	34.49			N/A	N/A
3	2.69	0.06	1.02	7.12	10.77			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2	2.34	0.03	0.30	2.34	9.69			N/A	N/A
3	1.12	0.03	0.33	2.15	5.71			N/A	N/A

2031 LP - mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2145 jw B2166	Standard Roundabout	10.88	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	11	Arm 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)
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1166	100.000
2		✓	978	100.000
3		✓	878	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	787	379
	2	458	0	520
	3	394	484	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	2
	2	3	0	1
	3	7	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.83	13.70	4.7	23.3	B
2	0.77	11.35	3.3	13.4	B
3	0.63	6.62	1.8	2.4	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	878	363	1673	0.525	873	1.1	4.595	A
2	736	284	1485	0.496	732	1.0	4.852	A
3	661	343	1648	0.401	658	0.7	3.757	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1048	434	1622	0.646	1045	1.8	6.380	A
2	879	340	1449	0.607	877	1.5	6.393	A
3	789	411	1598	0.494	788	1.0	4.597	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1284	531	1552	0.827	1273	4.5	12.769	B
2	1077	414	1401	0.769	1070	3.2	10.880	B
3	967	501	1532	0.631	964	1.7	6.526	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1284	533	1551	0.828	1283	4.7	13.696	B
2	1077	417	1399	0.770	1076	3.3	11.355	B
3	967	504	1530	0.632	967	1.8	6.616	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1048	437	1620	0.647	1059	1.9	6.718	A
2	879	344	1446	0.608	886	1.6	6.634	A
3	789	415	1595	0.495	792	1.0	4.661	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	878	365	1672	0.525	881	1.1	4.691	A
2	736	286	1483	0.496	739	1.0	4.944	A
3	661	346	1646	0.402	662	0.7	3.796	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.12	0.56	1.03	1.44	1.49			N/A	N/A
2	0.99	0.56	1.02	1.43	1.48			N/A	N/A
3	0.69	0.57	1.04	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.84	0.05	0.49	4.87	7.81			N/A	N/A
2	1.55	0.05	0.66	3.82	5.74			N/A	N/A
3	1.00	0.07	0.84	1.81	2.39			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.54	0.03	0.33	7.27	23.34			N/A	N/A
2	3.22	0.03	0.30	3.22	13.43			N/A	N/A
3	1.74	0.03	0.27	1.74	1.74			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.73	0.03	0.29	4.73	14.72			N/A	N/A
2	3.32	0.03	0.28	3.32	5.90			N/A	N/A
3	1.76	0.03	0.28	1.76	1.76			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.92	0.05	0.51	5.05	7.96			N/A	N/A
2	1.61	0.06	0.82	3.86	5.68			N/A	N/A
3	1.02	0.14	1.02	1.48	1.84			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.15	0.04	0.36	2.80	5.55			N/A	N/A
2	1.02	0.04	0.40	2.53	4.24			N/A	N/A
3	0.70	0.06	0.63	1.38	1.38			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: Mitigation Scheme Vinnetrow Road With Dev.j9
Path: C:\Users\Fiona\OneDrive - Highgate Transportation\1600 - Projects\1616 - Summer Lane, Pagham\ATA03 Modelling\ATA03A
Report generation date: 20/03/2017 10:00:57

»2031 LP + mitigation, AM
»2031 LP + mitigation, PM
»2031 LP - mitigation, AM
»2031 LP - mitigation, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2031 LP + mitigation													
Arm 1	0.3	5.59	0.23	A	7.35	A	25 % [Arm 2]	0.6	9.65	0.37	A	8.01	A	23 % [Arm 4]
Arm 2	3.0	9.36	0.75	A				0.5	3.45	0.33	A			
Arm 3	0.1	6.36	0.11	A				0.0	3.50	0.04	A			
Arm 4	0.9	4.57	0.45	A				3.2	9.85	0.76	A			
	2031 LP - mitigation													
Arm 1	0.5	6.47	0.34	A	8.68	A	17 % [Arm 2]	1.7	16.46	0.63	C	9.46	A	12 % [Arm 1]
Arm 2	3.7	11.87	0.79	B				0.8	4.35	0.44	A			
Arm 3	0.1	7.45	0.13	A				0.0	4.13	0.04	A			
Arm 4	0.7	4.13	0.41	A				3.4	10.27	0.77	B			

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. Junction LOS and Junction Delay are demand-weighted averages. 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	B2166 jw Vinnetrow Road
Location	
Site number	
Date	10/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	1616
Enumerator	FB
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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2031 LP + mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	7.35	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	Arm 2

Arms

Arms

Arm	Name	Description
1	Vinnetrow Road	
2	B2166 E	
3	Mill Lane	
4	B2166 W	

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	3.00	6.00	5.0	30.0	30.0	35.0	
2	4.00	6.00	12.0	30.0	30.0	30.0	
3	3.00	7.00	8.0	20.0	30.0	30.0	
4	3.50	6.00	18.0	15.0	30.0	17.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.559	1219
2	0.649	1633
3	0.591	1375
4	0.653	1631

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2031 LP + mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	187	100.000
2		✓	1054	100.000
3		✓	65	100.000
4		✓	617	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	90	10	87
	2	151	0	8	895
	3	14	14	0	37
	4	81	526	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	11	5
	2	5	0	0	3
	3	0	0	0	0
	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.23	5.59	0.3	1.4	A
2	0.75	9.36	3.0	9.3	A
3	0.11	6.36	0.1	0.5	A
4	0.45	4.57	0.9	2.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	141	412	988	0.142	140	0.2	4.444	A
2	794	80	1581	0.502	789	1.0	4.669	A
3	49	849	873	0.056	49	0.1	4.364	A
4	465	134	1543	0.301	463	0.4	3.471	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	168	494	943	0.178	168	0.2	4.868	A
2	948	96	1571	0.603	945	1.5	5.921	A
3	58	1016	774	0.075	58	0.1	5.030	A
4	555	161	1526	0.364	554	0.6	3.864	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	605	881	0.234	206	0.3	5.584	A
2	1160	118	1557	0.745	1155	2.9	9.122	A
3	72	1242	641	0.112	71	0.1	6.322	A
4	679	196	1503	0.452	678	0.9	4.553	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	606	880	0.234	206	0.3	5.593	A
2	1160	118	1557	0.745	1160	3.0	9.357	A
3	72	1247	638	0.112	72	0.1	6.360	A
4	679	197	1502	0.452	679	0.9	4.567	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	168	495	942	0.178	168	0.2	4.879	A
2	948	96	1571	0.603	953	1.6	6.070	A
3	58	1024	769	0.076	59	0.1	5.065	A
4	555	162	1525	0.364	556	0.6	3.880	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	141	415	987	0.143	141	0.2	4.460	A
2	794	81	1581	0.502	796	1.1	4.745	A
3	49	855	869	0.056	49	0.1	4.388	A
4	465	135	1542	0.301	465	0.5	3.488	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	1.03	0.57	1.03	1.45	1.50			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.45	0.00	0.00	0.45	0.45			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.23	0.00	0.00	0.23	0.23			N/A	N/A
2	1.54	0.06	0.71	3.76	5.59			N/A	N/A
3	0.08	0.03	0.26	0.46	0.49			N/A	N/A
4	0.59	0.09	0.83	1.42	1.49			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.32	0.03	0.27	0.48	0.51			N/A	N/A
2	2.91	0.03	0.29	2.91	9.32			N/A	N/A
3	0.12	0.03	0.26	0.47	0.49			N/A	N/A
4	0.85	0.03	0.27	0.85	0.85			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.32	0.03	0.33	1.10	1.38			N/A	N/A
2	2.96	0.03	0.28	2.96	2.96			N/A	N/A

3	0.13	0.03	0.25	0.45	0.48			N/A	N/A
4	0.86	0.03	0.29	0.86	2.16			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.23	0.00	0.00	0.23	0.23			N/A	N/A
2	1.60	0.07	0.98	3.62	5.07			N/A	N/A
3	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4	0.60	0.57	1.04	1.46	1.51			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.18	0.00	0.00	0.18	0.18			N/A	N/A
2	1.05	0.04	0.45	2.53	3.95			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.45	0.00	0.00	0.45	0.45			N/A	N/A

2031 LP + mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	8.01	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	23	Arm 4

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)
D2	2031 LP + mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	200	100.000
2		✓	479	100.000
3		✓	34	100.000
4		✓	1093	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	172	26	2
	2	57	0	6	416
	3	5	13	0	16
	4	105	971	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	0	3
	3	0	0	0	0

	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.37	9.65	0.6	2.7	A
2	0.33	3.45	0.5	2.3	A
3	0.04	3.50	0.0	0.5	A
4	0.76	9.85	3.2	11.6	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	151	750	800	0.188	150	0.2	5.670	A
2	361	34	1612	0.224	359	0.3	2.961	A
3	26	356	1164	0.022	26	0.0	3.160	A
4	823	56	1594	0.516	819	1.1	4.729	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	180	898	717	0.251	179	0.3	6.858	A
2	431	40	1607	0.268	430	0.4	3.153	A
3	31	427	1123	0.027	31	0.0	3.295	A
4	983	67	1587	0.619	980	1.6	6.058	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	220	1097	606	0.363	219	0.6	9.527	A
2	527	49	1601	0.329	527	0.5	3.451	A
3	37	522	1066	0.035	37	0.0	3.498	A
4	1203	82	1577	0.763	1197	3.2	9.564	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	220	1102	603	0.365	220	0.6	9.646	A
2	527	50	1601	0.329	527	0.5	3.454	A
3	37	523	1066	0.035	37	0.0	3.499	A
4	1203	83	1577	0.763	1203	3.2	9.852	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	180	905	713	0.252	181	0.3	6.954	A
2	431	41	1607	0.268	431	0.4	3.158	A
3	31	428	1122	0.027	31	0.0	3.299	A
4	983	68	1587	0.619	989	1.7	6.229	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	151	756	796	0.189	151	0.2	5.726	A
2	361	34	1611	0.224	361	0.3	2.967	A
3	26	358	1163	0.022	26	0.0	3.163	A
4	823	57	1594	0.516	825	1.1	4.814	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.24	0.00	0.00	0.24	0.24			N/A	N/A
2	0.30	0.00	0.00	0.30	0.30			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.08	0.56	1.02	1.43	1.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2	0.38	0.00	0.00	0.38	0.38			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	1.64	0.05	0.65	4.07	6.17			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.58	0.03	0.26	0.58	0.58			N/A	N/A
2	0.50	0.03	0.26	0.50	0.50			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	3.16	0.03	0.30	3.16	11.57			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.58	0.03	0.31	1.53	2.73			N/A	N/A
2	0.50	0.03	0.31	1.42	2.26			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	3.23	0.03	0.28	3.23	3.67			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.35	0.00	0.00	0.35	0.35			N/A	N/A
2	0.38	0.00	0.00	0.38	0.38			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	1.70	0.06	0.92	4.00	5.83			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.24	0.00	0.00	0.24	0.24			N/A	N/A
2	0.30	0.00	0.00	0.30	0.30			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.11	0.04	0.43	2.74	4.45			N/A	N/A

2031 LP - mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	8.68	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	17	Arm 2

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)
D3	2031 LP - mitigation	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	278	100.000
2		✓	1043	100.000
3		✓	65	100.000
4		✓	579	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	43	10	225
	2	87	0	8	948
	3	14	14	0	37
	4	60	511	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	11	5
	2	5	0	0	3
	3	0	0	0	0

	4	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.34	6.47	0.5	2.5	A
2	0.79	11.87	3.7	16.1	B
3	0.13	7.45	0.1	0.5	A
4	0.41	4.13	0.7	2.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	209	400	995	0.210	208	0.3	4.796	A
2	785	182	1515	0.518	781	1.1	5.026	A
3	49	943	817	0.060	49	0.1	4.683	A
4	436	86	1574	0.277	434	0.4	3.295	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	250	479	951	0.263	250	0.4	5.386	A
2	938	218	1492	0.629	935	1.7	6.642	A
3	58	1130	707	0.083	58	0.1	5.551	A
4	521	103	1563	0.333	520	0.5	3.603	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	586	891	0.343	305	0.5	6.445	A
2	1148	267	1460	0.787	1141	3.6	11.366	B
3	72	1379	559	0.128	71	0.1	7.372	A
4	637	126	1548	0.412	637	0.7	4.123	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	587	891	0.344	306	0.5	6.465	A
2	1148	268	1460	0.787	1148	3.7	11.869	B
3	72	1387	555	0.129	72	0.1	7.446	A
4	637	127	1548	0.412	637	0.7	4.131	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	250	480	951	0.263	251	0.4	5.406	A
2	938	219	1491	0.629	945	1.8	6.895	A
3	58	1141	700	0.083	59	0.1	5.612	A
4	521	104	1563	0.333	521	0.5	3.617	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	209	402	994	0.210	210	0.3	4.823	A
2	785	183	1514	0.519	788	1.1	5.130	A
3	49	952	812	0.060	49	0.1	4.716	A
4	436	87	1574	0.277	436	0.4	3.307	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2	1.10	0.57	1.03	1.44	1.50			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.40	0.00	0.00	0.40	0.40			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.37	0.00	0.00	0.37	0.37			N/A	N/A
2	1.71	0.05	0.64	4.33	6.62			N/A	N/A
3	0.09	0.00	0.00	0.09	0.09			N/A	N/A
4	0.52	0.00	0.00	0.52	0.52			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.54	0.03	0.27	0.54	0.54			N/A	N/A
2	3.59	0.03	0.31	3.59	16.15			N/A	N/A
3	0.15	0.03	0.26	0.47	0.49			N/A	N/A
4	0.73	0.03	0.26	0.73	0.73			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.55	0.03	0.32	1.45	2.51			N/A	N/A
2	3.69	0.03	0.29	3.69	7.42			N/A	N/A
3	0.15	0.03	0.25	0.45	0.48			N/A	N/A
4	0.73	0.03	0.29	0.73	2.67			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2	1.78	0.06	0.75	4.48	6.74			N/A	N/A
3	0.09	0.00	0.00	0.09	0.09			N/A	N/A
4	0.53	0.53	1.04	1.46	1.52			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2	1.12	0.04	0.39	2.84	4.97			N/A	N/A
3	0.06	0.00	0.00	0.06	0.06			N/A	N/A
4	0.40	0.00	0.00	0.40	0.40			N/A	N/A

2031 LP - mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	Junction Delay (s)	Junction LOS
1	B2166 jw Vinnetrow Road	Standard Roundabout	9.46	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	12	Arm 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)
D4	2031 LP - mitigation	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	339	100.000
2		✓	604	100.000
3		✓	34	100.000
4		✓	1114	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	194	26	119
	2	46	0	6	552
	3	5	13	0	16
	4	113	984	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	0	0
	2	4	0	0	3
	3	0	0	0	0

	4	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.63	16.46	1.7	6.3	C
2	0.44	4.35	0.8	2.3	A
3	0.04	4.13	0.0	0.5	A
4	0.77	10.27	3.4	13.2	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	759	794	0.321	253	0.5	6.743	A
2	455	121	1555	0.292	453	0.4	3.363	A
3	26	537	1057	0.024	25	0.0	3.488	A
4	839	48	1599	0.524	834	1.1	4.794	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	909	711	0.429	304	0.8	8.974	A
2	543	145	1539	0.353	542	0.6	3.719	A
3	31	644	994	0.031	31	0.0	3.733	A
4	1001	57	1593	0.629	999	1.7	6.185	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	1111	598	0.624	370	1.6	15.800	C
2	665	177	1519	0.438	664	0.8	4.336	A
3	37	787	910	0.041	37	0.0	4.127	A
4	1227	70	1585	0.774	1220	3.3	9.934	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	1116	595	0.627	373	1.7	16.463	C
2	665	178	1518	0.438	665	0.8	4.350	A
3	37	789	908	0.041	37	0.0	4.133	A
4	1227	70	1585	0.774	1226	3.4	10.268	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	918	706	0.432	308	0.8	9.285	A
2	543	147	1538	0.353	544	0.6	3.737	A
3	31	647	993	0.031	31	0.0	3.741	A
4	1001	58	1593	0.629	1008	1.8	6.377	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	255	766	791	0.323	256	0.5	6.863	A
2	455	123	1554	0.293	455	0.4	3.380	A
3	26	541	1055	0.024	26	0.0	3.498	A
4	839	48	1599	0.524	841	1.1	4.881	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.48	0.00	0.00	0.48	0.48			N/A	N/A
2	0.42	0.00	0.00	0.42	0.42			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.12	0.56	1.02	1.43	1.49			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.75	0.09	0.83	1.43	1.51			N/A	N/A
2	0.56	0.56	1.03	1.44	1.49			N/A	N/A
3	0.03	0.03	0.25	0.45	0.48			N/A	N/A
4	1.70	0.05	0.63	4.32	6.61			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.61	0.03	0.29	1.61	5.27			N/A	N/A
2	0.80	0.03	0.26	0.80	0.80			N/A	N/A
3	0.04	0.03	0.25	0.45	0.48			N/A	N/A
4	3.35	0.03	0.30	3.35	13.19			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.67	0.03	0.29	1.67	6.27			N/A	N/A
2	0.80	0.03	0.28	0.80	2.34			N/A	N/A
3	0.04	0.00	0.00	0.04	0.04			N/A	N/A
4	3.43	0.03	0.28	3.43	4.55			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.79	0.06	0.69	1.25	1.76			N/A	N/A
2	0.57	0.57	1.03	1.44	1.49			N/A	N/A
3	0.03	0.00	0.00	0.03	0.03			N/A	N/A
4	1.77	0.06	0.88	4.30	6.31			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.49	0.04	0.38	1.26	1.26			N/A	N/A
2	0.43	0.00	0.00	0.43	0.43			N/A	N/A
3	0.02	0.00	0.00	0.02	0.02			N/A	N/A
4	1.14	0.04	0.42	2.87	4.79			N/A	N/A

Appendix 13

Mitigation Cost Estimates

B2145/B2166

B2166/Vinnetrow Road

ARUN DISTRICT COUNCIL P/140/16/OUT

ARUN DISTRICT COUNCIL P/140/16/OUT

HighgateTransportation

HIGHWAY INFRASTRUCTURE WORKS – COST ESTIMATE

Client:
Hanbury PM Ltd

Job Ref.:
HTp/1616

Scheme Location:
B2145 junction with B2166, Chichester

Project:
Pagham South

Ref. Drawings:
HTp/1616/13

Estimate Construction Costs				
Item	Quantity	Rate	Unit	Total
Site clearance	1	£1,000.00	item	£1,000.00
Carriageway construction	75	£110.00	m^2	£8,250.00
Carriageway resurfacing	350	£32.00	m^2	£11,200.00
Kerbs Remove	58	£9.00	m	£522.00
Kerbing works Replace	56	£36.00	m	£2,016.00
Road markings	1	£500.00	½ day	£500.00
Gullies	3	£500.00	each	£1,500.00
Gully pipework	10	£195.00	m	£1,950.00
		Estimated Construction Costs		**£26,938.00**
		Preliminaries	15%	£4,040.70
		Overheads	10%	£2,693.80
		Total Estimated Cost of Works		**£33,672.50**

Note: No survey carried out for existing stats – preliminary estimate of works only

ARUN DISTRICT COUNCIL P/140/16/OUT

HighgateTransportation

HIGHWAY INFRASTRUCTURE WORKS – COST ESTIMATE

Client: Hanbury PM Ltd

Job Ref.: HTp/1616

Scheme Location: Vinnetrow Road junction with B2166, Chichester

Project: Pagham South

Ref. Drawings: HTp/1616/14

Estimate Construction Costs				
Item	Quantity	Rate	Unit	Total
Site clearance	1	£1,000.00	item	£1,000.00
Carriageway construction	60	£110.00	m^2	£6,600.00
Carriageway resurfacing	230	£32.00	m^2	£7,360.00
Kerbs Remove	45	£9.00	m	£405.00
Kerbing works Replace	44	£36.00	m	£1,584.00
Road markings	1	£500.00	½ day	£500.00
Relocation of lighting column	1	£550.00	each	£550.00
Relocation of road sign	1	£250.00	each	£250.00
		Estimated Construction Costs		**£18,249.00**
		Preliminaries	15%	£2,737.35
		Overheads	10%	£1,824.90
		Total Estimated Cost of Works		**£22,811.25**

Note: No survey carried out for existing stats – preliminary estimate of works only