

## Lane End, Kirkby in Ashfield

### Highways Technical Note

### Response to Highways Comments from Nottinghamshire County Council

### Planning Application Reference: V/2025/0003

December 2025

AMA Project Number: 50082/JF

## INTRODUCTION

This Highways Technical Note (HTN) has been prepared by Andrew Moseley Associates (AMA) in response to comments received from Nottinghamshire County Council (NCC) dated 8<sup>th</sup> September 2025 in relation to the Transport Assessment (TA) and Travel Plan (TP) submitted for the proposed development of a drive-thru located on Lane End, Kirkby-in-Ashfield. The NCC planning reference is V/2025/0003. A copy of NCC's consultation response is included at [Appendix A](#).

Each of the LHAs queries are addressed below.

## PEDESTRIAN INFRASTRUCTURE

The LHA have requested an updated plan which demonstrates the width of the footway along the site frontage. This plan is included at [Appendix B](#) and demonstrates that a 2m width is achievable for the full extent of the site frontage.

Within the previous HTN prepared by AMA, the applicant agreed to provide a financial contribution of £100,000 via a S106 contribution for further pedestrian improvements, including a controlled crossing on Lane End. Within this previous HTN it was suggested that given this upgrade is to be brought forward by the Council, no drawings are required to be provided by the applicant.

The LHA have continued to request that a detailed drawing for the scheme be provided by the applicant.

Whilst the applicant is fully committed to providing the agreed financial contribution to secure the improvements, it is considered that the design and detailed specification of the scheme remain the responsibility of the Council.

The obligation in the S106 agreement will be to provide a commuted sum of £100,000 for the delivery of the pedestrian crossing. This is a financial contribution, specifically intended to fund a council-led project. It does not constitute an obligation on the applicant to design and deliver works on the public highway.

For the applicant to produce a detailed design drawing runs the risk of creating abortive work and unnecessary cost. Any design commissioned by the applicant would still require:

- ▶ Formal approval by the Council's Highway team; and
- ▶ Subsequent re-design by the Council's own engineers to ensure compliance with their internal standards, maintenance requirements, and procurement specifications.

We believe the most efficient and direct route is for the Council to utilise the committed £100,000 contribution to commission and manage the design work internally once the S106 is completed.

In summary, we are fully committed to the £100,000 contribution but strongly maintain that the design and ultimate delivery of the public highway scheme should be led by NCC as the Highway Authority.

It is considered that all queries relating to pedestrian infrastructure and improvements have now been satisfactorily addressed.

## SERVICING

NCC have stated that “Sufficient space will need to be provided within the site for servicing and delivery vehicles to enter turn and exit the site in a forward gear without impacting the daily operations of the site”.

It is considered that the drawings provided as part of the previous HTN demonstrated that service and delivery vehicles can undertake these manoeuvres appropriately, without impacting the daily operations of the site.

As previously noted, McDonald’s restaurants receive three deliveries per week, with refuse collected three times per week. Therefore, the number of service vehicles using the site is very low, and on average equates to less than one vehicle per day. Servicing is undertaken during quieter trading periods.

Servicing of the site will be actively managed by McDonald’s and Martin Brower, and staff will alert customers of the presence of a service vehicle and ensure the route for the service vehicle is clear before it arrives at the site. This is the case for McDonald’s restaurants across the country and follows a tried and tested methodology.

Given the low frequency of vehicle movements associated with servicing of the site, and the timing of servicing outside of the site’s busy periods, it is considered that this is an appropriate strategy to manage servicing and deliveries at the site. The applicant is willing to agree to a condition requiring the provision of a Servicing and Delivery Management Plan to provide further reassurance to NCC that this will be appropriately managed.

## COMMITTED DEVELOPMENT

It is considered that this element is now agreed, and no further information is required.

## TRIP GENERATION

NCC continue to raise concerns with the trip generation assessment undertaken within the TA. Specifically, they suggest that the McDonald’s restaurants surveyed to inform the assessment are not locally proximate to the proposed development.

We maintain that geographical location is not the primary factor influencing the travel characteristics of a McDonald’s restaurant. The key component to impact trip generation for this type of development is the operational environment and surrounding context, such as whether the site is suburban; road-side; or part of a wider retail or mixed-use development.

It is considered that the three surveys used within the TA possess directly comparable characteristics to the proposed development site, as previously detailed in the HTN:

- ▶ All sites are located adjacent to a key transport route (e.g. A-road, main distributor road);
- ▶ All are situated within a suburban area; and
- ▶ All are surrounded by similar land uses.

Nevertheless, in order to address the concerns of the LHA, two additional surveys have been undertaken at McDonald’s restaurants within Nottinghamshire. These are:

- ▶ Retford Road, Worksop; and
- ▶ Priestsic Road, Sutton in Ashfield.

As with the previous surveys used, these sites are considered to have similar characteristics of the proposed development site and should therefore provide a good basis from which to estimate trip generation.

The results of the surveys undertaken at the above sites are summarised at [Appendix C](#). Each of the surveys were undertaken on a Thursday and Friday between 07:00-10:00 and 15:00-19:00 and a Saturday between 11:00-15:00, which represent McDonald’s trading peaks. The survey results showed higher levels

of vehicle movements on a Friday rather than a Thursday and therefore the Friday data has been used as the assessed weekday throughout the remainder of this assessment.

The average peak hour trip generation for the surveyed sites has been used to calculate the potential trip generation of the proposed restaurant for the AM, PM and Saturday peak hours. The peak hour trip generation of the proposed development is set out in **Table 1**.

**Table 1 McDonald's Proposed Trip Generation**

	Arrivals	Departures
Friday 08:00-09:00	84	82
Friday 16:00-17:00	103	105
Saturday 11:00-12:00	87	73

#### McDelivery

The new store surveys show that c. 8% of trips were made up of McDelivery trips. Whilst it is not considered that this represents a significant proportion of trips, in order to ensure a robust assessment, specific consideration has been given to these trips. The trips associated with McDelivery are outlined in **Table 2** below. These trips have been assigned to the network in the same way as the 'new' trips.

**Table 2 McDonald's Proposed Trip Generation - McDelivery**

	Arrivals	Departures
Friday 08:00-09:00	6	6
Friday 16:00-17:00	12	12
Saturday 11:00-12:00	7	7

#### Trips by Type

The updated McDonald's store surveys included customer interviews relating to behaviour and trip patterns. The average trip type profiles of the two sites are set out in **Table 3**.

**Table 3 McDonald's Proposed Trip Types**

Trip Type	Friday AM Peak	Friday PM Peak	Saturday Peak
New	28%	33%	28%
Pass by	47%	48%	36%
Shared	25%	20%	36%
Total	100%	100%	100%

For robustness, Shared trips have been assessed in the same way as Pass by trips. These trips are likely to already exist on the network, and in some cases won't result in vehicular trips directly to the site. For example, a customer may drive to the adjacent Aldi store, walk over to the McDonald's restaurant and return to their vehicle. This vehicle would not necessarily have impacted the site access junction but has been assessed as entering and exiting the site.

This exercise has demonstrated that 28%-33% of vehicle trips to the proposed restaurant have the potential to be additional trips i.e. new to the local highway network. The remaining 67%-72% of trips are likely to already exist on the local highway network.

The resulting trips, by type, are summarised in **Table 4**, which is inclusive of the trips associated with McDelivery.

Table 4 McDonald's Proposed Trip Types

Trip Type	Friday AM Peak		Friday PM Peak		Saturday Peak	
	In	Out	In	Out	In	Out
New	27	27	42	42	29	25
Pass by	57	55	59	57	57	47
Total	84	82	101	99	87	73

No changes are proposed to the trip distribution set out within the TA. 'New' trips have been distributed based on local population within a 10-minute drive time, and 'pass-by' trips are expected to be passing the site on the B6020.

## TRAFFIC IMPACT

The LHA contends that the TA and previous HTN underestimate the off-site traffic impacts and that capacity assessments should not be limited solely to the site access. The LHA suggest the applicant assess the scheme in accordance with the adopted policy (Parts 1.2 and appendix C of the HDG), to determine the necessity of wider network capacity assessments.

Furthermore, the LHA requests an examination of existing highway conditions in the vicinity of the site to identify any current peak-period congestion that might warrant the application of a lower development traffic threshold for off-site assessments.

Nottinghamshire's Highway Design Guide (HDG) states the following:

*"In assessing proposals that would increase traffic, and/or provide new streets and junctions, the following criteria should be considered:*

- ▶ *the contribution to sustainable development and regeneration including improved connectivity,*
- ▶ *how conditions for pedestrians, cyclists, public transport users, freight and residents can be improved,*
- ▶ *how safety for all is improved,*
- ▶ *the extent of any additional traffic and any effects it may have on the locality, and the extent to which congestion can be reduced, and*
- ▶ *how a net benefit to the environment can be provided.*

*Proposals should show, overall, a net benefit across these criteria when taken as a whole. All proposals must show how any dis-benefits will be mitigated."*

It is considered that at present, the scheme is delivering a net benefit in highways terms, particularly through:

- ▶ Proposed improvements to local pedestrian infrastructure;
- ▶ Agreement to a £100,000 contribution towards a new controlled crossing; and
- ▶ The implementation of a Travel Plan to actively promote sustainable travel.

The HDG also notes that the 30 two-way trip threshold, previously established within the DfT Guidance on Transport Assessment, will be used as the threshold to determine the scope of the assessment in terms of main junctions to be included. The HDG does allow for circumstances where this threshold may be adjusted (upwards or downwards).

We have previously requested that if the LHA has specific concerns about the operation of particular junctions, and believes an assessment is required based on a reduced threshold, they should advise the applicant accordingly. It is considered unreasonable to expect the applicant to unilaterally assess every junction where the development may have a minimal impact to identify the applicability of a lower threshold. This would result in an extensive, unnecessary scope of work with significant associated costs.

However, to avoid further delay to the project, surveys have been undertaken at three additional junctions within the vicinity of the site. These are:

- ▶ B6020 / Portland Street;
- ▶ B6020 / Ellis Street; and
- ▶ B6020 / B6021 Kingsway.

Based on a review of Google traffic data, these appear to be the busiest junctions within the vicinity of the site.

The network peak hours have been established from the existing survey data from 2024, as well as the three new surveys. The network peak hours have been identified as:

- ▶ Weekday AM Peak - 07:45-08:45;
- ▶ Weekday PM Peak – 16:15-17:15; and
- ▶ Saturday Peak – 11:15-12:15.

The following scenarios have been assessed:

- ▶ 2025 Base
- ▶ 2030 Base
- ▶ 2030 Base + Development

All updated traffic flow diagrams are included at [Appendix D](#).

Junctions9 software has been used to prepare the site access model. Junctions9 software analyses the traffic movements on each arm of the junction and assesses the Ratio Flow to Capacity (RFC) and queue lengths in Passenger Car Units (PCUs).

LinSig software has been used to prepare models for the signal-controlled junctions. LinSig software analyses the traffic movements on each arm of the junction and assesses the Degree of Saturation (DoS) and the Mean Maximum Queues (MMQ). LinSig also considers the overall junctions Practical Reserve Capacity (PRC) and Total Traffic Delay (TTD) in PCUs per hour (pcuHr).

## Junction Modelling Results

### **Site Access**

**Table 3** sets out the operational capacity of the proposed site access. The detailed modelling outputs are included at [Appendix E](#).

**Table 5 Site Access Modelling Summary - 2030 Base + Development**

Arms	AM Peak		PM Peak		Saturday Peak	
	RFC	Queue	RFC	Queue	RFC	Queue
B6020 Lane End	0.10	0	0.13	0	0.09	0
Site Access	0.24	0	0.30	0	0.20	0

The site access is expected to operate well within its design capacity, with no queueing expected on any arm. It is therefore considered suitable to serve the proposed development.

## B6020 / Portland Street

**Table 6** sets out the operational capacity of the B6020 / Portland Street signalised junction. The detailed modelling outputs are included at **Appendix F**.

**Table 6 B6020 / Portland Street Modelling Summary**

Arms	AM Peak		PM Peak		SAT Peak	
	DoS	MMQ	DoS	MMQ	DoS	MMQ
2025 Base						
Station Street	51.4%	6	61.2%	9	51.2%	6
Urban Road	57.6%	10	59.9%	10	59.8%	11
Portland Street	55.8%	4	60.9%	6	59.8%	5
Junction Total	PRC	Delay	PRC	Delay	PRC	Delay
	56.3%	7.2	47.0%	9.4	50.4%	8.0
2030 Base						
Station Street	53.2%	6	63.3%	10	53.2%	7
Urban Road	59.7%	11	62.2%	11	62.2%	11
Portland Street	58.0%	4	63.1%	7	62.3%	5
Junction Total	PRC	Delay	PRC	Delay	PRC	Delay
	50.7%	7.6	42.1%	10.0	44.5%	8.5
2030 Base + Development						
Station Street	54.3%	7	65.2%	11	54.3%	7
Urban Road	60.8%	11	64.3%	11	63.4%	12
Portland Street	58.0%	4	63.1%	7	62.3%	5
Junction Total	PRC	Delay	PRC	Delay	PRC	Delay
	47.9%	7.8	38.1%	10.4	42.0%	8.7

The B6020 / Portland Street signal junction currently operates well and is expected to continue to do so in all future scenarios, even when the development flows are considered. The proposals are not expected to result in a noticeable impact on the operation of this junction.

## B6020 / Ellis Street

**Table 7** sets out the operational capacity of the B6020 / Ellis Street signalised junction. The detailed modelling outputs are included at **Appendix G**.

**Table 7 B6020 / Ellis Street Modelling Summary**

Arms	AM Peak		PM Peak		SAT Peak	
	DoS	MMQ	DoS	MMQ	DoS	MMQ
2025 Base						
B6020 Station Street (E)	28.7%	3	25.8%	3	25.7%	2
B6020 Station Street (W)	37.5%	6	42.9%	7	37.8%	6
Ellis Street	36.4%	4	42.5%	5	37.0%	4
Junction Delay	PRC	Delay	PRC	Delay	PRC	Delay
	140%	3.8	109.7%	4.5	137.9%	3.8
2030 Base						
B6020 Station Street (E)	29.7%	3	26.7%	3	26.7%	3
B6020 Station Street (W)	39.0%	6	44.5%	7	39.3%	6
Ellis Street	37.8%	4	44.1%	5	38.2%	4
Junction Delay	PRC	Delay	PRC	Delay	PRC	Delay
	131.1%	3.9	102.3%	4.7	128.9%	4.0
2030 Base + Development						
B6020 Station Street (E)	30.4%	3	27.8%	3	27.5%	3
B6020 Station Street (W)	39.4%	6	45.4%	7	39.6%	6
Ellis Street	39.2%	4	45.6%	6	39.7%	4
Junction Delay	PRC	Delay	PRC	Delay	PRC	Delay
	128.4%	4.0	97.5%	4.9	127.0%	4.0

The B6020 / Ellis Street junction is shown to operate well in all scenarios. The proposed development is shown to have a negligible impact on queueing and delay at this junction.

## B6020 / B6021 Kingsway

**Table 8** sets out the operational capacity of the B6020 / B6021 Kingsway signalised junction. The detailed modelling outputs are included at **Appendix H**.

**Table 8 B6020 / B6021 Kingsway Modelling Summary**

Arms	AM Peak		PM Peak		SAT Peak	
	DoS	MMQ	DoS	MMQ	DoS	MMQ
2025 Base						
B6020 Diamond Avenue	75.2%	8	85.2%	9	71.7%	8
Kingsway	77.8%	10	84.7%	11	74.5%	9
B6020 Station Street	78.5%	9	82.2%	12	73.0%	9
Junction Total	PRC	Delay	PRC	Delay	PRC	Delay
	14.7%	15.8	5.6%	19.3	20.8%	14.5
2030 Base						
B6020 Diamond Avenue	78.1%	9	88.5%	10	74.6%	8
Kingsway	80.7%	11	87.6%	12	77.5%	9
B6020 Station Street	81.6%	10	85.3%	13	75.8%	10
Junction Total	PRC	Delay	PRC	Delay	PRC	Delay
	10.3%	17.1	1.7%	21.6	16.1%	15.6
2030 Base + Development						
B6020 Diamond Avenue	79.9%	9	86.3%	10	76.4%	8
Kingsway	81.8%	11	89.3%	13	78.6%	10
B6020 Station Street	82.5%	10	90.1%	15	76.9%	10
Junction Total	PRC	Delay	PRC	Delay	PRC	Delay
	9.1%	17.7	-0.1%	23.5	14.5%	16.2

The B6020 / Kingsway junction operates adequately within the current scenario, and close to capacity in the 2030 base scenario, though no significant delays or queueing are observed.

Following the inclusion of the development flows,, delay increases only marginally. The maximum impact is an increase of two vehicles in the queue on the B6020 Station Street arm during the PM peak.

This demonstrates that despite the junction operating with minimal spare capacity, the impact of the proposed development is negligible due to the low number of additional trips directed through it.

### Traffic Impact Summary

The traffic impact assessment presented in this report is highly robust, representing a worst-case scenario for the development's impact on the local road network.

Although the B6020 operates as a busy town centre corridor during peak periods, and the development's Friday evening peak traffic marginally exceeds the 30-trip threshold (while staying below it for all other peak periods), the modelling results demonstrate a negligible impact across all assessed junctions.

Queueing is shown to increase by no more than one or two vehicles in any peak period. Consequently, the proposals will not result in any significant or severe impacts on the local highway network, fully aligning with the requirements of Nottinghamshire's Highway Design Guide and the National Planning Policy Framework (NPPF).

## CONCLUSION

This Highways Technical Note provides responses to the comments received from NCC along with additional information where appropriate. In conclusion, the information provided within this Note and previous submissions demonstrate that the proposed development is acceptable in highways terms.

## **APPENDICES**

Appendix A NCC Response

Appendix B Site Access Design and Pedestrian Infrastructure

Appendix C Summary of McDonald's Surveys

Appendix D Updated Traffic Flow Diagrams

Appendix E Site Access Modelling Results

Appendix F B6020 / Portland Street Modelling Results

Appendix G B6020 / Ellis Street Modelling Results

Appendix H B6020 / B6021 Kingsway Modelling Results

***Appendix A***  
***NCC Consultation Response***

**TOWN AND COUNTRY PLANNING ACT**

**HIGHWAY REPORT ON PROPOSALS FOR DEVELOPMENT**

<b>DISTRICT:</b>	Ashfield	Date Received	09/01/2025
<b>OFFICER:</b>	Daniel Power		
<b>PROPOSAL:</b>	Development of a drive-thru restaurant (use class e/sul generis) with associated access, servicing, car parking, hard and soft landscaping and other associated works	D.C. No.	V/2025/0003
<b>LOCATION:</b>	Street Record, Lane End, Kirkby In Ashfield, Nottinghamshire		
<b>APPLICANT:</b>	[Applicant]		

These comments relate to a Technical Note (TN) dated August 2025 produced by Andrew Moseley Associates (AMA). The TN was submitted by the applicant for the purpose of resolving issues raised by Nottinghamshire County Council in comments dated 22<sup>nd</sup> July 2025.

A meeting was held between the applicant, Ashfield District Council (ADC) and Nottinghamshire County Council (NCC) on the 5<sup>th</sup> August to discuss the outstanding issues. The TN was then produced to help resolve the outstanding issues.

**Pedestrian Infrastructure**

Concerns were raised by NCC regarding the width of the footway along the frontage of the site along Lane End. A 2m wide footway along the site frontage is required to be provided as part of this development to encourage pedestrian activity to/from the site as an alternative to using vehicles. This will need to be shown on any site plan submitted as this will require development land to achieve this. Drawing AMA-50082-SK-018 2.2 Ref P02 only shows that the footway in the vicinity of the access to the site is over 2.0m in width. There is no key on the drawing and it is unclear what the blue lines represent at the site access.

This drawing also provides dimensions for the proposed ghost island right turn on Lane End which would provide vehicular access to the site.

The applicant has now also given an undertaking to provide a financial contribution of £100,000 for further pedestrian improvements including a controlled crossing on Lane End. Following consultation with Via East Midlands Signals Design Manager as previously requested a detailed drawing for this is required to demonstrate the details below,

- The location is on an 'S' bend and forward visibility will need to be checked to ensure all current relevant standards are met.
- Similarly, intervisibility between pedestrians and vehicles at the crossing must be achieved.
- Widening of the footway at the site frontage.

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- Street lighting will need to be assessed and possibly upgraded.

### **Traffic Impact**

The Highway Authority continues to consider that the TN underestimates the off-site development traffic impacts on the highway network in the vicinity of the site. The Highway Authority is unable to agree that capacity assessments should be limited only to the site access. As indicated in the highway authority's response to the applicant's Highway Scoping Note, the TN should assess the scheme in accordance with the highway authority's adopted policy, set out in Parts 1.2 and Appendix C of the HDG, to determine the need for (or otherwise) capacity assessments on the wider highway network beyond the site access. In addition, the applicant should examine existing highway conditions in the vicinity of the site to determine whether there is existing congestion during peak periods which could result in the application of lower development traffic thresholds in determining whether off-site capacity assessments are required (and/or a change in the peak periods subject to assessment). This was stated in the previous comments and is still relevant.

### **Servicing**

NCC's comments dated 22<sup>nd</sup> July raised a concern regarding the servicing arrangements at the proposed McDonalds. Drawing AMA-50082-ATR003-3.4 P01 showed that delivery vehicles would encroach into the proposed right turn lane in addition servicing vehicles would also cross over the pedestrian walkway on the site.

During the Meeting on the 5<sup>th</sup> August the applicant gave further information on the servicing arrangements:

- McDonald's restaurants receive three deliveries per week, with refuse collected three times per week. Servicing is undertaken during quieter trading periods.
- Servicing of the site will be actively managed by McDonald's staff. It is pointed out that the staff will alert customers of the presence of a service vehicle and ensure the route for the service vehicle is clear before it arrives at the site.

Sufficient space will need to be provided within the site for servicing and delivery vehicles to enter turn and exit the site in a forward gear without impacting the daily operations of the site.

### **Committed Development**

NCC has previously raised concerns regarding the transport assessment (TA) submitted in support of the application, one concern was the lack of committed development traffic included within the TA. During the meeting on the 5<sup>th</sup> August a methodology was agreed for accounting for committed development traffic.

AMA have now carried out a review of all planning applications determined since January 2023 by searching the website using the key words 'Kirkby in Ashfield'. This review does not identify any specific sites that are of relevance to the current proposals, or that would generate a notable level of vehicle movements along the B6020.

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## Trip Generation

NCC have raised several queries in relation to the trip generation assessment undertaken within the TA, and in particular how the trip types have been derived. During the meeting on 5th August, it was agreed that AMA would provide additional information on the surveys used to support the trip generation assessment and further justification on the methodology applied.

The points of concern raised by NCC are outlined as follows:

- The TA has discounted 80% of the forecast trips to the proposed development on the basis that they would be “Pass by Trips” that already exist on the network. NCC were concerned that the methodology used to justify the discount was not sufficiently robust and therefore requested further evidence.
- Surveys were provided by the TA, but no explanation of the terms used to describe trip types within the survey were provided.
- Independent food delivery trips from services such as Deliveroo and Uber Eats now account for a significant number of trips to all fast-food outlets, however no account of these trips was made within the TA.

On the first and second points of concern the Technical Note (TN) has now provided further information on the surveys used to justify the discounting figure as well as definitions of the types of trips surveyed. Data collected from three new McDonalds drive through sites have been provided.

The survey collected data on three different trip types:

- Additional Trips (primary) - Customers have the same origin and destination and visiting the McDonald’s restaurant is the sole purpose of their trip.
- Existing Trips (secondary) Customers have a different origin and destination; or Customers have the same origin and destination, but visiting the McDonald’s restaurant was not the sole purpose of their trip.
- Shared Trips (secondary) Customers visit adjacent shops and facilities before or after visiting the McDonald’s restaurant

The TN states that the results of the survey have demonstrated that 19%-21% of vehicle trips to the proposed restaurant will be additional trips i.e. new to the local highway network. Therefore, leading to the conclusion that between 79% and 81% of trips will be existing, or shared trips that are already on the local highway network. The sites surveyed are not local to this area. It would be of benefit if surveys could be carried out at McDonalds within Nottinghamshire such as High Hoe Road, Worksop or Forest Road, Sutton in Ashfield to provide a greater level of reassurance that the data submitted is acceptable. Also, the transport consultant should consider undertaking surveys at recently built restaurants where they have prepared the TA, for the purposes of reviewing the accuracy of McDonalds traffic predictions.

With regard to independent food delivery services such as Deliveroo and Uber Eats, the TN states that the use of McDelivery serves to reduce the total number of vehicle movements to restaurants. The

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TN contains a statement that these trips have been accounted for within the trip generation figures and it is therefore stated that the assessment is robust.

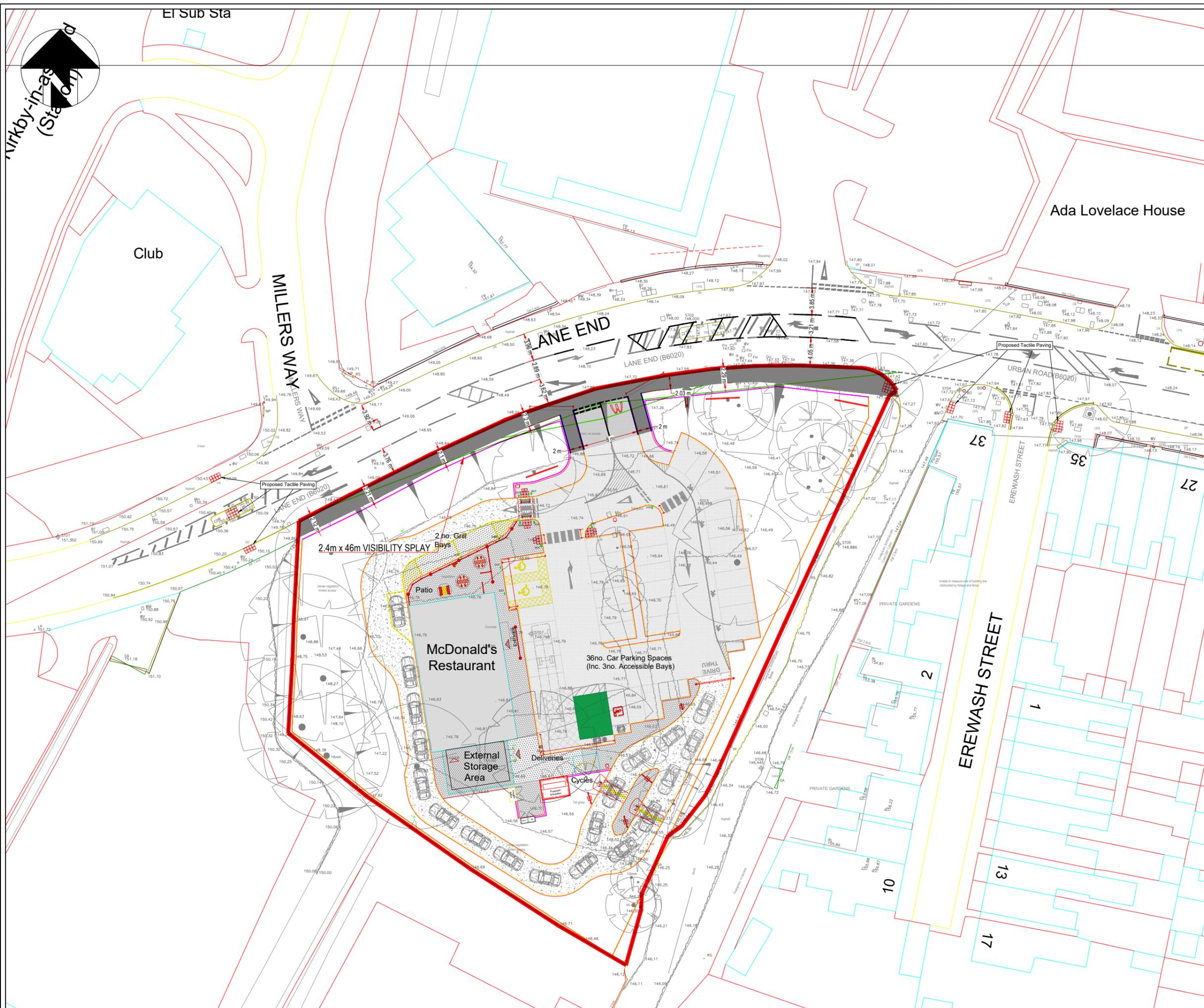
There are still outstanding matters to be satisfactorily addressed for this application and the Highway Authority would wish to be re-consulted once further details are submitted.

Stella Euerby  
Principal Development Control Officer

08/09/25



***Appendix B***  
***Site Access Design and Pedestrian***  
***Infrastructure***



P03	Updated following comments from LC	04.12.25	JF
P02	Updated following comments from LHA	07.08.25	OHJ
P01	Preliminary Issue	02.07.25	OHJ

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Project:  
**LANE END, KIRKBY IN ASHFIELD**

Client:  
**MCDONALDS RESTAURANTS LTD**

Drawing:  
**PROPOSED ACCESS DESIGN**

Drawn By: <b>OHJ</b>	Date: <b>02.07.2025</b>
Checked: <b>GDM</b>	Scale: <b>1:500</b>
Drawing No. <b>AMA-50082-SK-018 1.2</b>	Paper: <b>A3</b>
	Rev. <b>P03</b>

***Appendix C***  
***Summary of McDonald's Surveys***

**SUMMARY OF McDONALD'S SURVEY DATA**  
**RETFORD ROAD, WORKSOP**

*Table 1 Surveyed Traffic - Weekday*

Time	Thursday		Friday	
	In	Out	In	Out
07:00 - 08:00	64	56	67	60
08:00 - 09:00	89	82	86	82
09:00 - 10:00	93	86	96	82
15:00-16:00	97	84	101	92
16:00 - 17:00	78	87	101	93
17:00 - 18:00	82	82	110	116
18:00 - 19:00	92	89	119	119
Total	595	566	680	644

*Table 2 Surveyed Traffic - Saturday*

Time	Saturday	
	In	Out
11:00 - 12:00	92	80
12:00 - 13:00	104	100
13:00 - 14:00	108	108
14:00 - 15:00	83	99
Total	387	387

*Table 3 Surveyed Pedestrians - Weekday*

Time	Thursday		Friday	
	In	Out	In	Out
07:00 - 08:00	11	6	12	8
08:00 - 09:00	11	10	9	9
09:00 - 10:00	6	8	3	2
15:00-16:00	29	12	14	11
16:00 - 17:00	14	29	17	16
17:00 - 18:00	26	27	22	20
18:00 - 19:00	22	21	23	27
Total	119	113	100	93

Table 4 Surveyed Pedestrians - Saturday

Time	Saturday	
	In	Out
11:00 - 12:00	12	12
12:00 - 13:00	25	17
13:00 - 14:00	19	20
14:00 - 15:00	19	18
Total	75	67

Table 5 Surveyed Drive Thru Queues

	Friday AM	Friday PM	Saturday
Min Q	0	1	0
Max Q	10	15	11
Average Q	4	6	5

Table 6 Surveyed Parking Demand - Weekday

Time	Thursday	Friday	Time	Thursday	Friday
	Demand	Demand		Demand	Demand
07:00	6	7	15:00	20	25
07:15	9	9	15:15	23	28
07:30	10	11	15:30	24	28
07:45	5	14	15:45	32	31
08:00	14	12	16:00	32	31
08:15	20	14	16:15	25	24
08:30	21	15	16:30	31	30
08:45	24	16	16:45	26	29
09:00	21	15	17:00	21	30
09:15	32	19	17:15	20	32
09:30	32	28	17:30	24	33
09:45	28	32	17:45	27	33
			18:00	23	33
			18:15	27	27
			18:30	30	31
			18:45	28	29
			19:00	18	25

Table 7 Surveyed Parking Demand - Saturday

Time	Saturday
	Demand
11:00	26
11:15	21
11:30	34
11:45	31
12:00	39
12:15	36
12:30	44
12:45	48
13:00	39
13:15	41
13:30	42
13:45	39
14:00	41
14:15	37
14:30	36
14:45	24
15:00	21

Table 8 Surveyed Customer Activity

Activity		Friday		Saturday	
		No.	%	No.	%
1	Drive in, use restaurant, drive out	164	23%	144	35%
2	Drive in, use restaurant, eat in vehicle, drive out	24	3%	7	2%
3	Drive in, drive thru, drive out	346	49%	146	36%
4	Drive in, use drive thru, park, eat in vehicle, drive out	91	13%	61	15%
5	Drive in, park, do not use restaurant, drive out	13	2%	14	3%
6	Drive in, park, use restaurant, walk off site (or visa versa), drive out	2	0%	0	0%
7	Drive in/drive out	13	2%	11	3%
8	Drive in, McDelivery pick-up, drive out	51	7%	27	7%
<b>Total</b>		<b>704</b>	<b>100%</b>	<b>410</b>	<b>100%</b>

Table 9 Customer Interview Survey Results

Trip Type	Destination	Friday AM		Friday PM		Saturday	
		No.	%	No.	%	No.	%
Additional	Same origin & destination. McDonald's sole purpose of trip.	12	24%	14	30%	19	30%
Existing	McDonald's not sole purpose of trip.	28	55%	25	53%	29	46%
Shared	Visit nearby amenities	11	22%	8	17%	15	24%
<b>Total</b>		<b>51</b>	<b>100%</b>	<b>47</b>	<b>100%</b>	<b>63</b>	<b>100%</b>

**SUMMARY OF McDONALD'S SURVEY DATA**  
**SUTTON IN ASHFIELD**

*Table 1 Surveyed Traffic - Weekday*

Time	Thursday		Friday	
	In	Out	In	Out
07:00 - 08:00	55	53	55	48
08:00 - 09:00	63	55	82	82
09:00 - 10:00	66	68	73	64
15:00-16:00	88	79	102	86
16:00 - 17:00	85	82	105	116
17:00 - 18:00	103	98	143	138
18:00 - 19:00	105	118	121	125
Total	565	553	681	659

*Table 2 Surveyed Traffic - Saturday*

Time	Saturday	
	In	Out
11:00 - 12:00	81	65
12:00 - 13:00	109	116
13:00 - 14:00	120	121
14:00 - 15:00	100	112
Total	410	414

*Table 3 Surveyed Pedestrians - Weekday*

Time	Thursday		Friday	
	In	Out	In	Out
07:00 - 08:00	26	19	26	18
08:00 - 09:00	22	30	40	32
09:00 - 10:00	32	28	56	51
15:00-16:00	62	37	78	54
16:00 - 17:00	60	54	78	89
17:00 - 18:00	83	65	84	72
18:00 - 19:00	49	68	54	66
Total	334	301	416	382

Table 4 Surveyed Pedestrians - Saturday

Time	Saturday	
	In	Out
11:00 - 12:00	107	69
12:00 - 13:00	103	116
13:00 - 14:00	94	102
14:00 - 15:00	91	98
Total	395	385

Table 5 Surveyed Drive Thru Queues

	Friday AM	Friday PM	Saturday
Min Q	0	1	0
Max Q	7	16	16
Average Q	3	7	6

Table 6 Surveyed Parking Demand - Weekday

Time	Thursday	Friday	Time	Thursday	Friday
	Demand	Demand		Demand	Demand
07:00	4	6	15:00	7	9
07:15	7	3	15:15	9	7
07:30	4	5	15:30	7	15
07:45	4	11	15:45	13	24
08:00	4	11	16:00	15	21
08:15	3	7	16:15	16	17
08:30	11	11	16:30	14	20
08:45	8	10	16:45	11	19
09:00	13	12	17:00	13	15
09:15	11	10	17:15	18	25
09:30	14	16	17:30	17	26
09:45	12	16	17:45	15	20
			18:00	22	19
			18:15	19	19
			18:30	13	18
			18:45	6	24
			19:00	8	14

Table 7 Surveyed Parking Demand - Saturday

Time	Saturday
	Demand
11:00	17
11:15	8
11:30	13
11:45	14
12:00	22
12:15	24
12:30	15
12:45	22
13:00	23
13:15	13
13:30	10
13:45	17
14:00	17
14:15	21
14:30	16
14:45	17
15:00	7

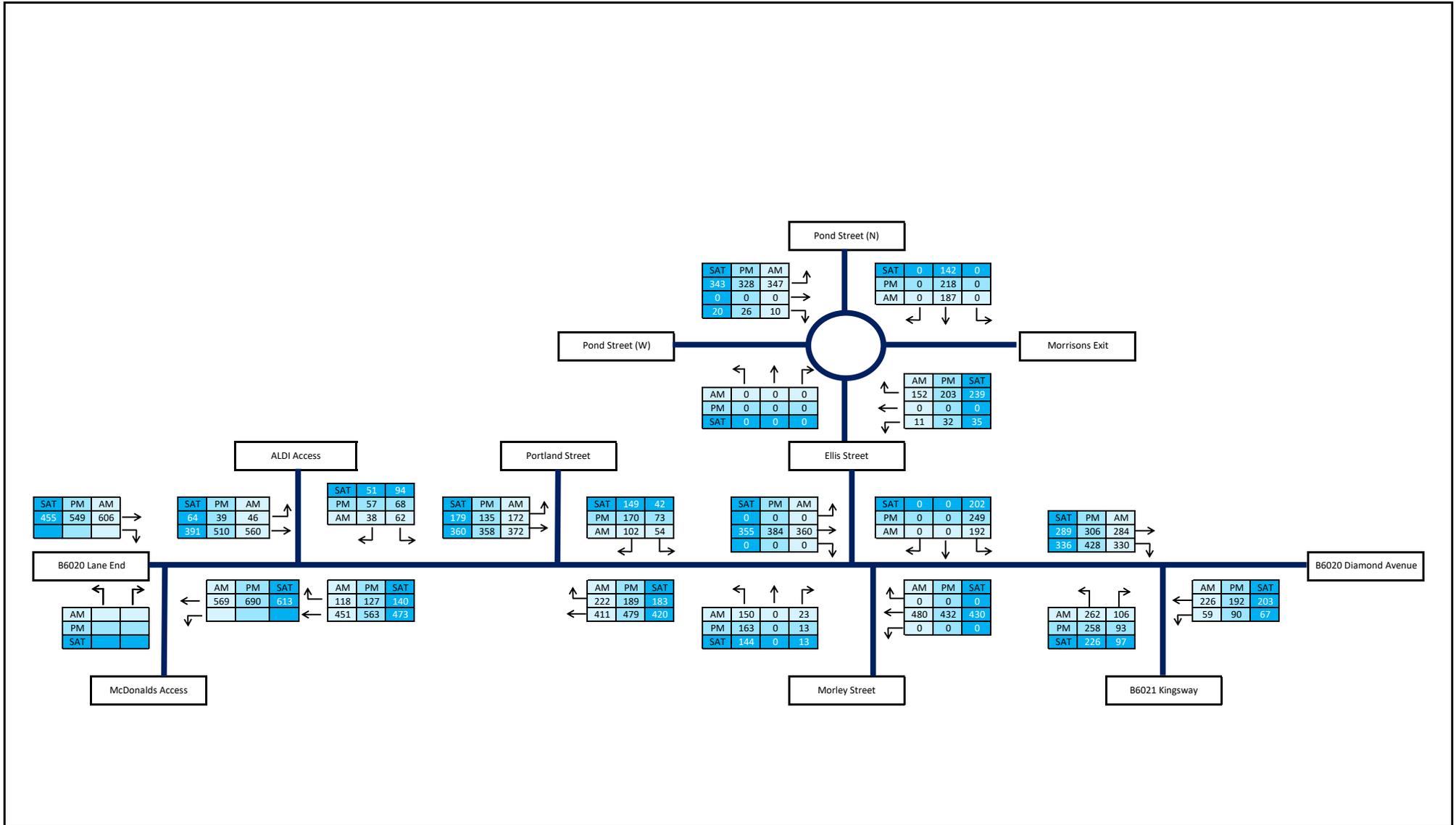
Table 8 Surveyed Customer Activity

Activity		Friday		Saturday	
		No.	%	No.	%
1	Drive in, use restaurant, drive out	131	19%	96	23%
2	Drive in, use restaurant, eat in vehicle, drive out	16	2%	21	5%
3	Drive in, drive thru, drive out	338	49%	232	54%
4	Drive in, use drive thru, park, eat in vehicle, drive out	97	14%	12	3%
5	Drive in, park, do not use restaurant, drive out	26	4%	9	2%
6	Drive in, park, use restaurant, walk off site (or visa versa), drive out	10	1%	13	3%
7	Drive in/drive out	11	2%	5	1%
8	Drive in, McDelivery pick-up, drive out	67	10%	38	9%
<b>Total</b>		<b>696</b>	<b>100%</b>	<b>426</b>	<b>100%</b>

Table 9 Customer Interview Survey Results

Trip Type	Destination	Friday AM		Friday PM		Saturday	
		No.	%	No.	%	No.	%
Additional	Same origin & destination. McDonald's sole purpose of trip.	18	29%	31	35%	23	26%
Existing	McDonald's not sole purpose of trip.	25	40%	37	42%	23	26%
Shared	Visit nearby amenities	19	31%	20	23%	44	49%
<b>Total</b>		<b>62</b>	<b>100%</b>	<b>88</b>	<b>100%</b>	<b>90</b>	<b>100%</b>

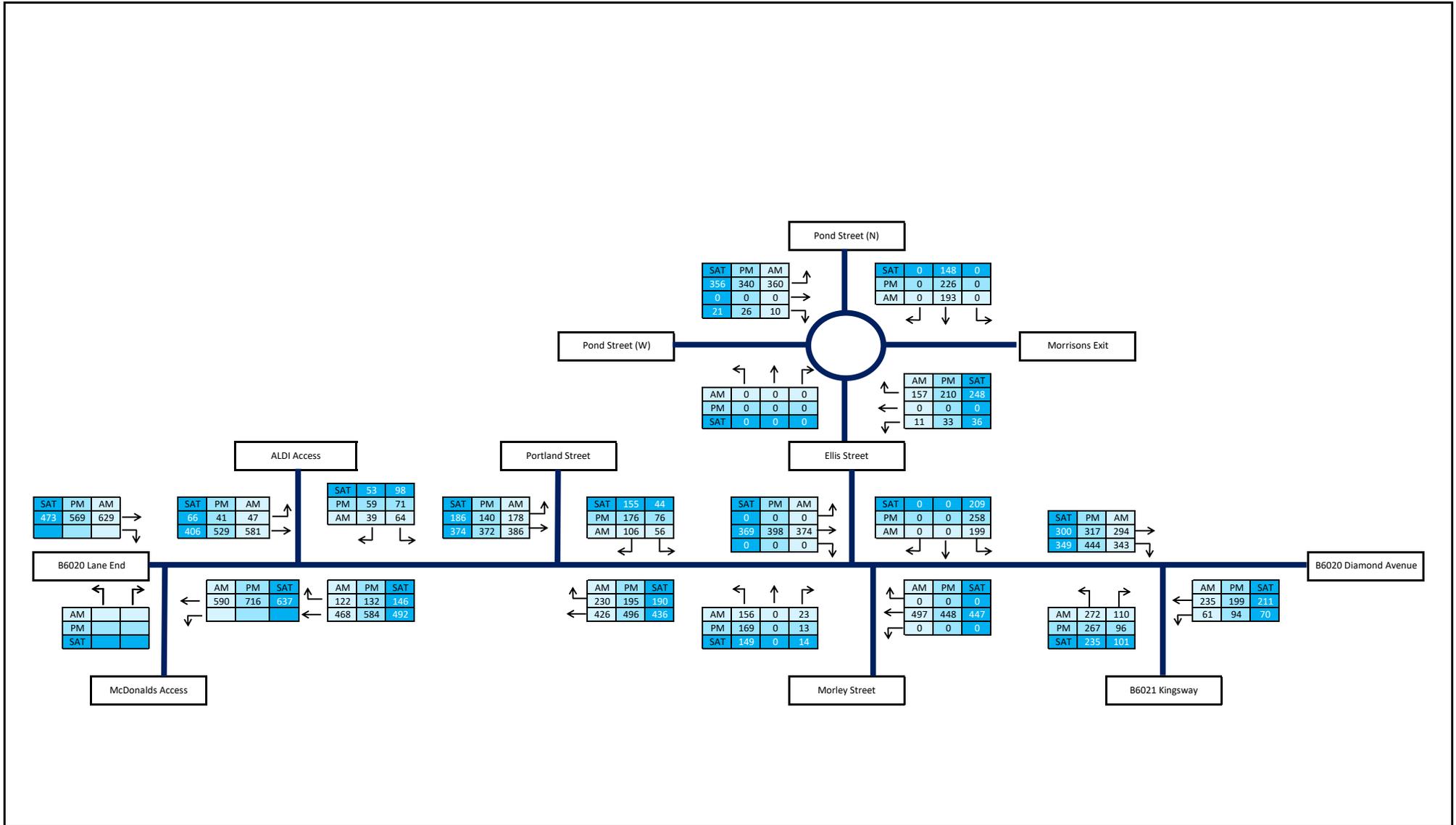
***Appendix D***  
***Updated Traffic Flow Diagrams***



05/12/2025  
AMA/50082  
Appendix J

Lane End, Kirkby-in-Ashfield  
2025 Base Traffic Flow Diagram

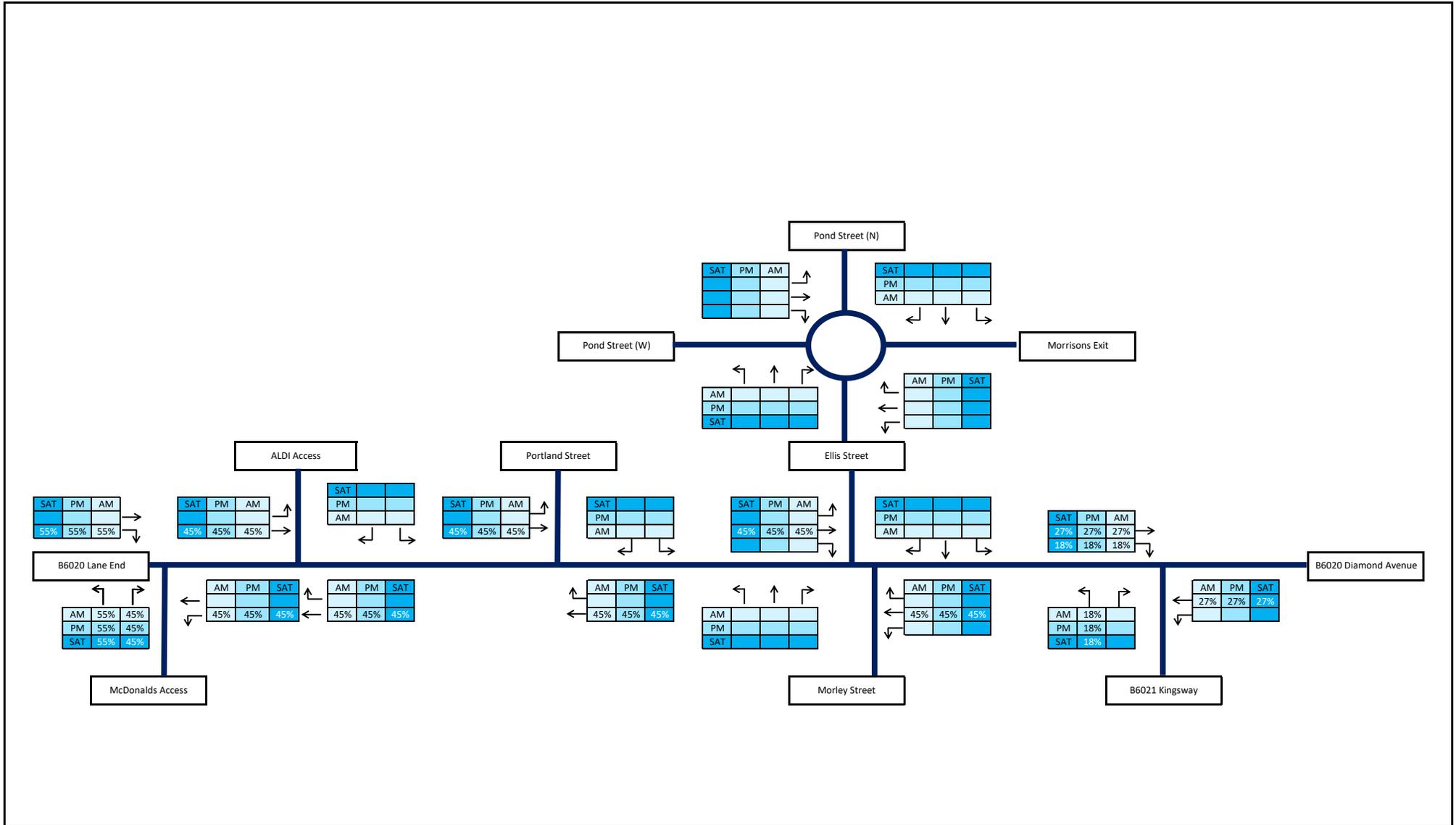
In PCU's	AM	07:45 - 08:45
Drawn by: CF	PM	16:15 - 17:15
Checked: JF	SAT	11:15 - 12:15



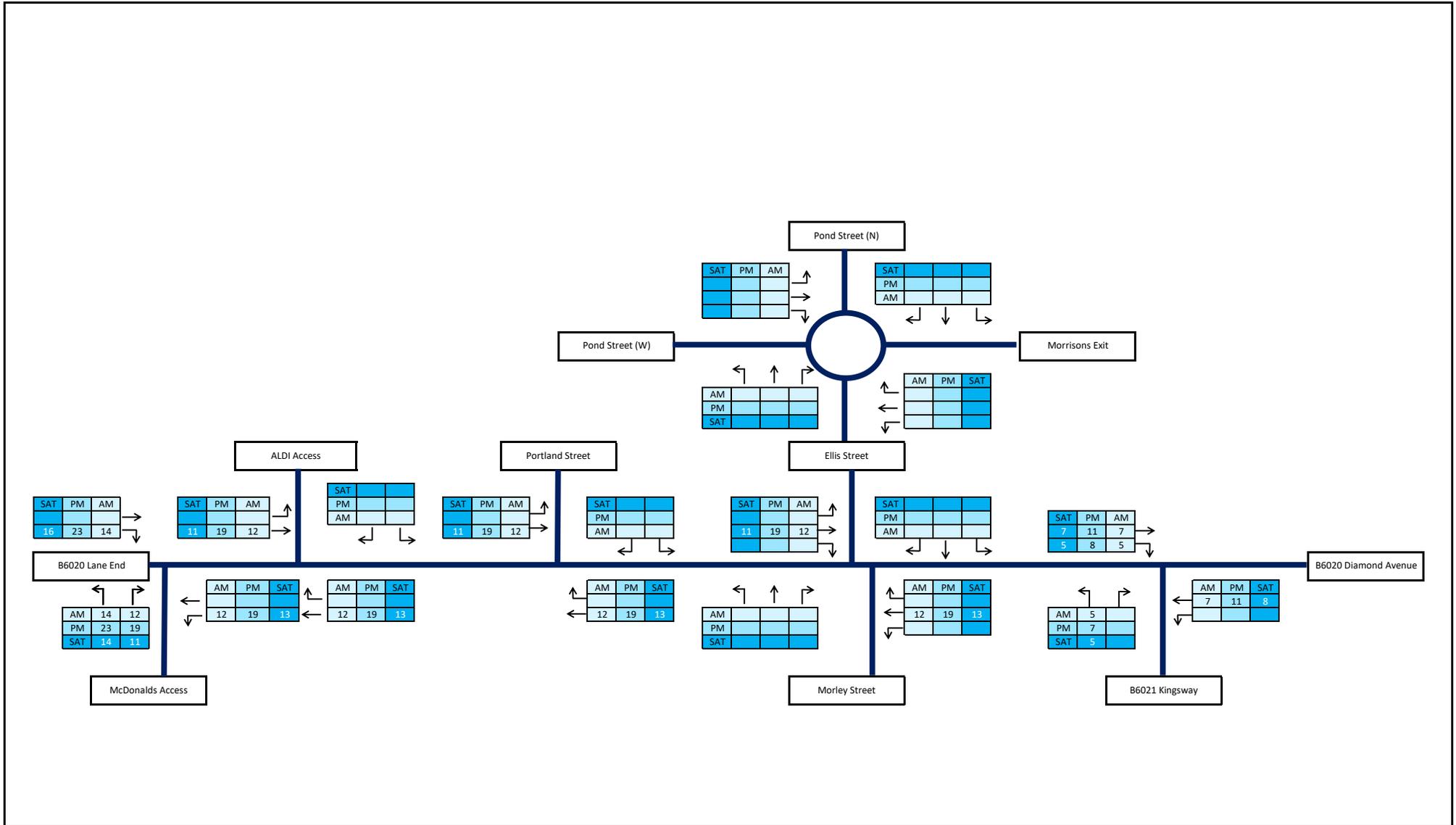
05/12/2025  
AMA/50082  
Appendix J

Lane End, Kirkby-in-Ashfield  
2030 Base Traffic Flow Diagram

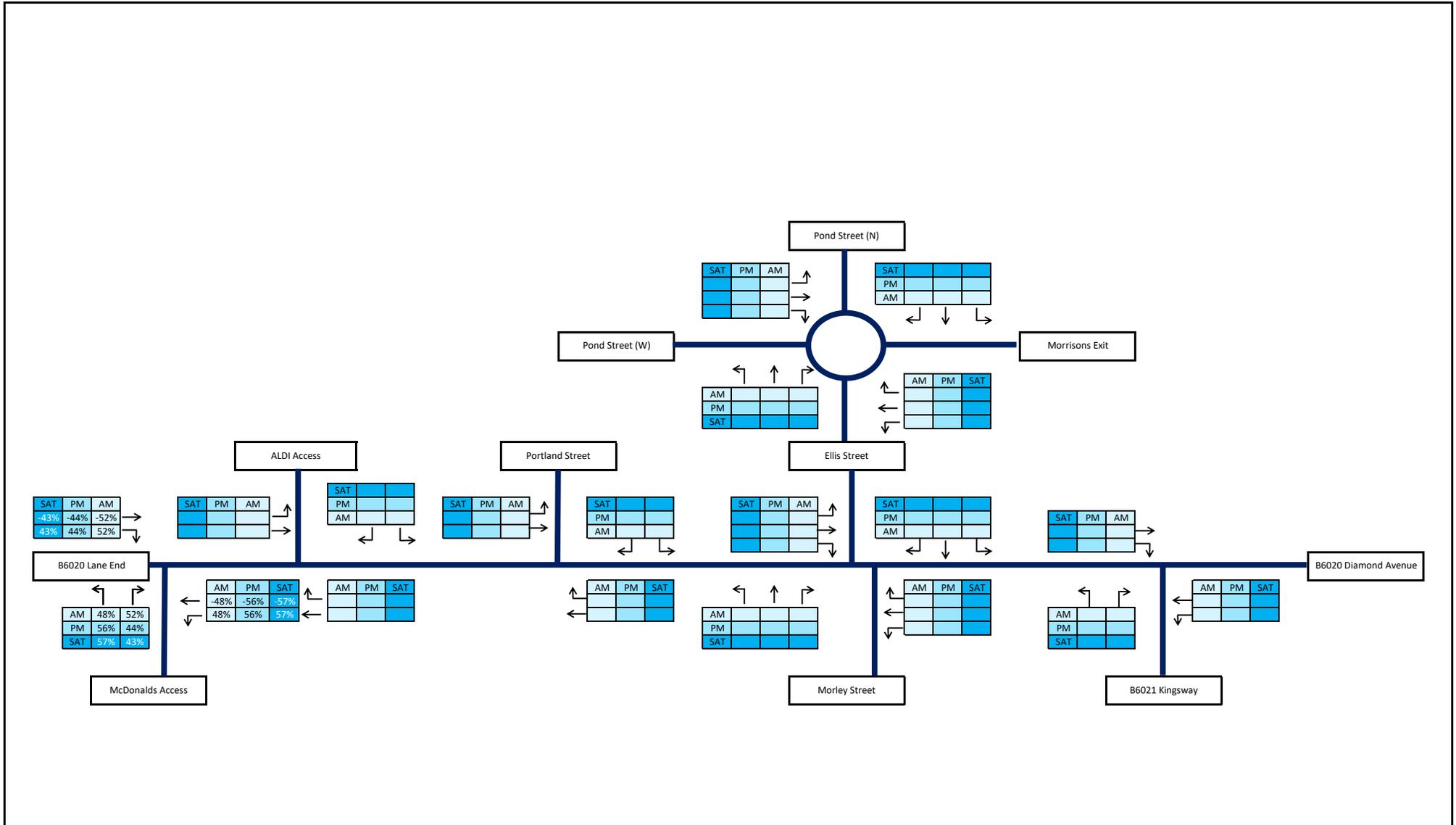
In PCU's	AM	07:45 - 08:45
Drawn by: CF	PM	16:15 - 17:15
Checked: JF	SAT	11:15 - 12:15



	05/12/2025	Lane End, Kirkby-in-Ashfield  'New' Distribution	In PCU's	AM	07:45 - 08:45
	AMA/50082		Drawn by: CF	PM	16:15 - 17:15
	Appendix J		Checked: JF	SAT	11:15 - 12:15



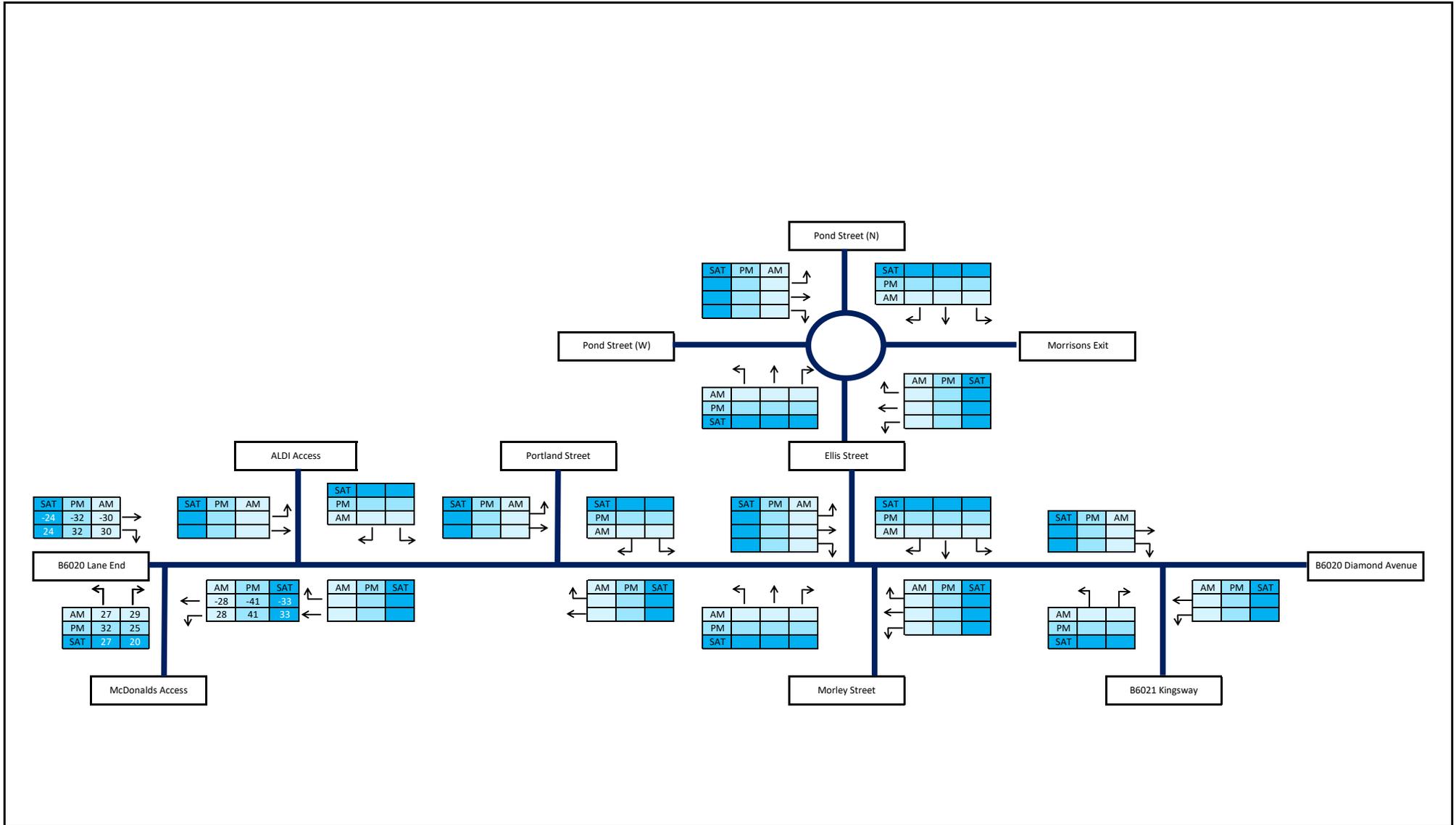
	05/12/2025	Lane End, Kirkby-in-Ashfield	In PCU's	AM	07:45 - 08:45
	AMA/50082		Drawn by:	PM	16:15 - 17:15
	Appendix J		Checked:	SAT	11:15 - 12:15
'New' Trip Generation			CF		
			JF		



05/12/2025  
 AMA/50082  
 Appendix J

Lane End, Kirkby-in-Ashfield  
 'Pass-By' Distribution

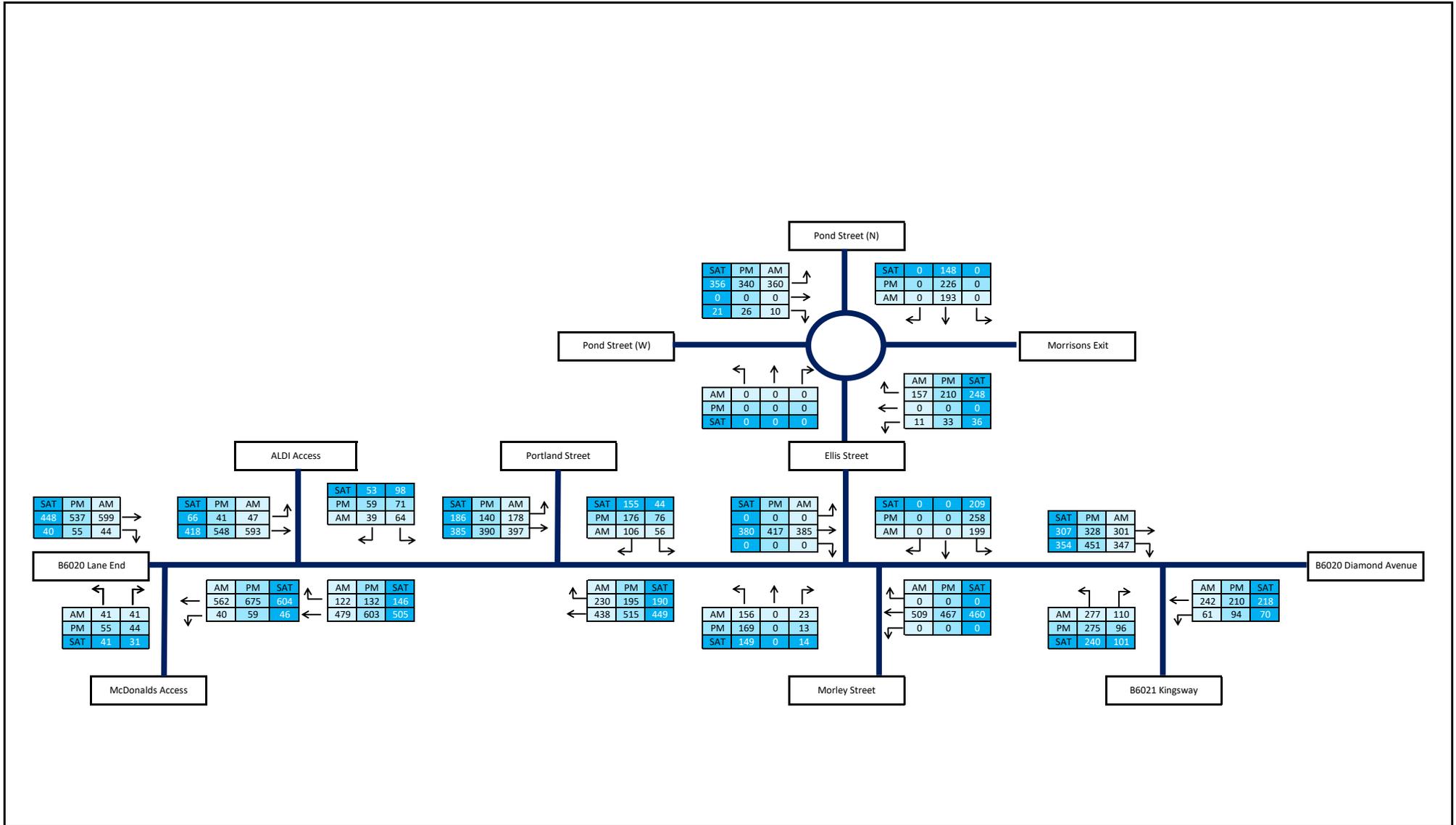
In PCU's	AM	07:45 - 08:45
Drawn by: CF	PM	16:15 - 17:15
Checked: JF	SAT	11:15 - 12:15



05/12/2025  
 AMA/50082  
 Appendix J

Lane End, Kirkby-in-Ashfield  
 'Pass-By' Trip Generation

In PCU's	AM	07:45 - 08:45
Drawn by: CF	PM	16:15 - 17:15
Checked: JF	SAT	11:15 - 12:15



05/12/2025  
 AMA/50082  
 Appendix J

Lane End, Kirkby-in-Ashfield  
 2030 Design Traffic Flow Diagram

In PCU's	AM	07:45 - 08:45
Drawn by:	CF	PM 16:15 - 17:15
Checked:	JF	SAT 11:15 - 12:15

***Appendix E***  
***Site Access Modelling Results***

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

**Filename:** B6020 Urban Road - Lane End - Site Access.j9  
**Path:** C:\AMA\AMA\AMA - McDonald's\002 - East\50082 - Lane End, Kirkby in Ashfield\D Models and Drawings\PICADY\2025 Rebuttal  
**Report generation date:** 04/12/2025 11:29:03

- »B6020 Urban Road / Lane End - 2030 DESIGN, AM
- »B6020 Urban Road / Lane End - 2030 DESIGN, PM
- »B6020 Urban Road / Lane End - 2030 DESIGN, SAT

**Summary of junction performance**

	AM					PM					SAT				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
B6020 Urban Road / Lane End - 2030 DESIGN															
Stream B-AC	D1	0.3	12.59	0.24	B	D2	0.4	14.47	0.30	B	D3	0.2	11.22	0.20	B
Stream C-AB		0.1	7.79	0.10	A		0.2	8.62	0.13	A		0.1	7.97	0.09	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.

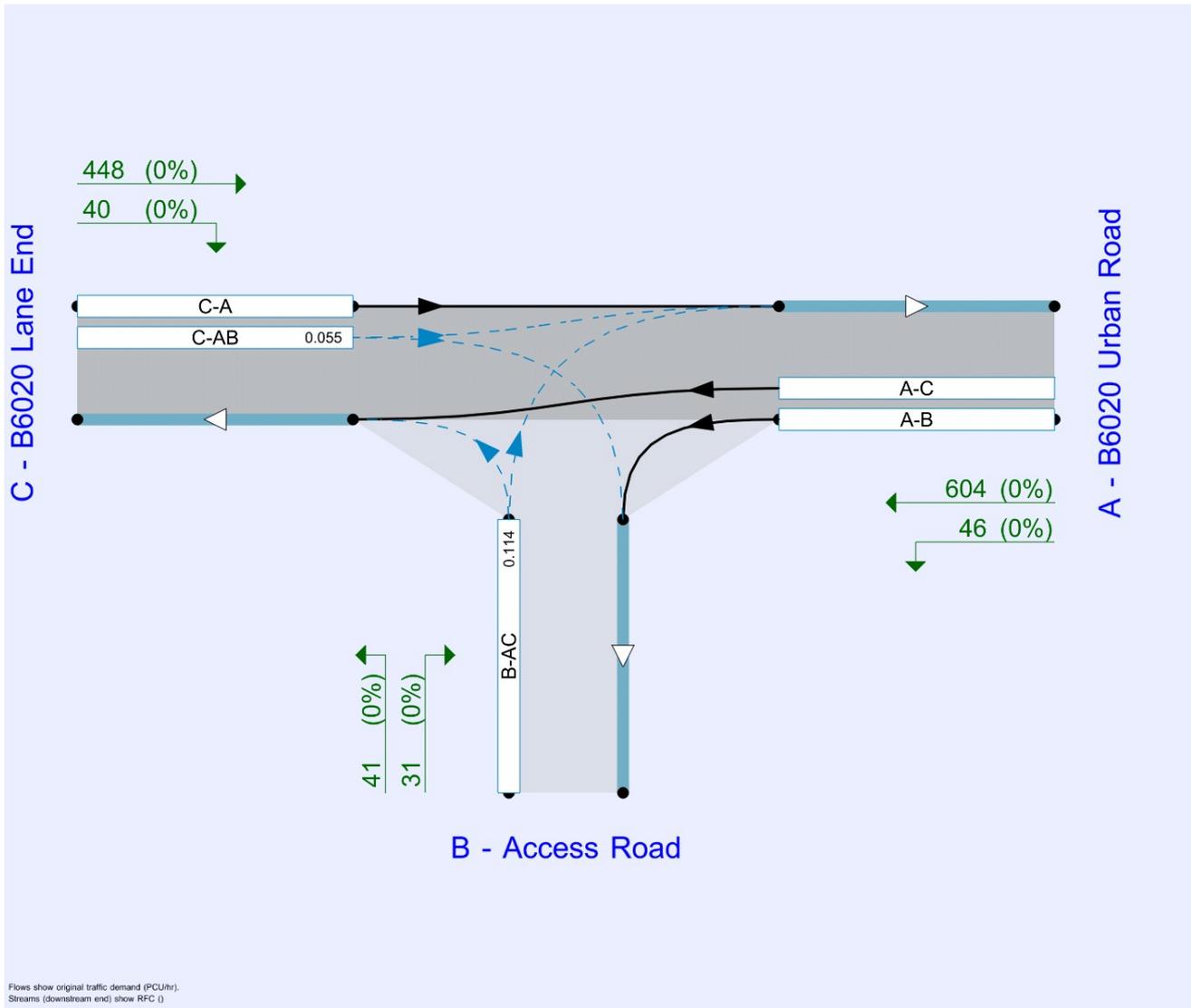
**File summary**

**File Description**

<b>Title</b>	B6020 Urban Road / Lane End
<b>Location</b>	Kirkby-in-Ashfield
<b>Site number</b>	
<b>Date</b>	09/04/2024
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	AzureAD\Modellinglaptop
<b>Description</b>	

**Units**

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



The junction diagram reflects the last run of Junctions.

**Analysis Options**

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	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 segment length (min)	Run automatically
D1	2030 DESIGN	AM	ONE HOUR	08:45	10:15	15	✓
D2	2030 DESIGN	PM	ONE HOUR	16:30	18:00	15	✓
D3	2030 DESIGN	SAT	ONE HOUR	12:15	13:45	15	✓

**Analysis Set Details**

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	B6020 Urban Road / Lane End	✓	100.000	100.000

# B6020 Urban Road / Lane End - 2030 DESIGN, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	B6020 Urban Road / Lane End	T-Junction	Two-way		1.04	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	B6020 Urban Road		Major
B	Access Road		Minor
C	B6020 Lane End		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - B6020 Lane End	7.20		✓	2.72	100.0	✓	2.00

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 - Access Road	One lane	3.60	104	51

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	569	0.098	0.248	0.156	0.355
B-C	695	0.101	0.255	-	-
C-B	668	0.245	0.245	-	-

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)	Run automatically
D1	2030 DESIGN	AM	ONE HOUR	08:45	10:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6020 Urban Road		ONE HOUR	✓	602	100.000
B - Access Road		ONE HOUR	✓	82	100.000
C - B6020 Lane End		ONE HOUR	✓	643	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	40	562
	B - Access Road	41	0	41
	C - B6020 Lane End	599	44	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	0	0
	B - Access Road	0	0	0
	C - B6020 Lane End	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.24	12.59	0.3	B	75	113
C-AB	0.10	7.79	0.1	A	41	61
C-A					549	824
A-B					37	55
A-C					516	774

### Main Results for each time segment

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	15	460	0.134	61	0.0	0.2	9.018	A
C-AB	33	8	558	0.060	33	0.0	0.1	6.852	A
C-A	451	113			451				
A-B	30	8			30				
A-C	423	106			423				

#### 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	18	425	0.173	74	0.2	0.2	10.224	B
C-AB	40	10	538	0.074	40	0.1	0.1	7.226	A
C-A	538	135			538				
A-B	36	9			36				
A-C	505	126			505				

#### 09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	376	0.240	90	0.2	0.3	12.551	B
C-AB	49	12	511	0.096	49	0.1	0.1	7.786	A
C-A	659	165			659				
A-B	44	11			44				
A-C	619	155			619				

#### 09:30 - 09:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	376	0.240	90	0.3	0.3	12.587	B
C-AB	49	12	511	0.096	49	0.1	0.1	7.789	A
C-A	659	165			659				
A-B	44	11			44				
A-C	619	155			619				

#### 09:45 - 10:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	18	425	0.173	74	0.3	0.2	10.263	B
C-AB	40	10	538	0.074	40	0.1	0.1	7.232	A
C-A	538	135			538				
A-B	36	9			36				
A-C	505	126			505				

#### 10:00 - 10:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	15	460	0.134	62	0.2	0.2	9.059	A
C-AB	33	8	558	0.060	33	0.1	0.1	6.862	A
C-A	451	113			451				
A-B	30	8			30				
A-C	423	106			423				

# B6020 Urban Road / Lane End - 2030 DESIGN, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	B6020 Urban Road / Lane End	T-Junction	Two-way		1.34	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 segment length (min)	Run automatically
D2	2030 DESIGN	PM	ONE HOUR	16:30	18:00	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6020 Urban Road		ONE HOUR	✓	734	100.000
B - Access Road		ONE HOUR	✓	99	100.000
C - B6020 Lane End		ONE HOUR	✓	592	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	59	675
	B - Access Road	44	0	55
	C - B6020 Lane End	537	55	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	0	0
	B - Access Road	0	0	0
	C - B6020 Lane End	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.30	14.47	0.4	B	91	136
C-AB	0.13	8.62	0.2	A	51	77
C-A					492	738
A-B					54	81
A-C					619	929

### Main Results for each time segment

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	450	0.166	74	0.0	0.2	9.547	A
C-AB	42	10	535	0.078	41	0.0	0.1	7.292	A
C-A	404	101			404				
A-B	44	11			44				
A-C	508	127			508				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	89	22	412	0.216	89	0.2	0.3	11.120	B
C-AB	50	12	510	0.098	50	0.1	0.1	7.813	A
C-A	482	121			482				
A-B	53	13			53				
A-C	607	152			607				

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	109	27	358	0.305	108	0.3	0.4	14.399	B
C-AB	62	15	479	0.129	62	0.1	0.1	8.617	A
C-A	590	147			590				
A-B	65	16			65				
A-C	743	186			743				

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	109	27	358	0.305	109	0.4	0.4	14.472	B
C-AB	62	15	479	0.129	62	0.1	0.2	8.624	A
C-A	590	147			590				
A-B	65	16			65				
A-C	743	186			743				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	89	22	412	0.216	90	0.4	0.3	11.184	B
C-AB	50	12	510	0.098	50	0.2	0.1	7.821	A
C-A	482	121			482				
A-B	53	13			53				
A-C	607	152			607				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	450	0.166	75	0.3	0.2	9.607	A
C-AB	42	10	535	0.078	42	0.1	0.1	7.304	A
C-A	404	101			404				
A-B	44	11			44				
A-C	508	127			508				

# B6020 Urban Road / Lane End - 2030 DESIGN, SAT

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	B6020 Urban Road / Lane End	T-Junction	Two-way		0.93	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 segment length (min)	Run automatically
D3	2030 DESIGN	SAT	ONE HOUR	12:15	13:45	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6020 Urban Road		ONE HOUR	✓	650	100.000
B - Access Road		ONE HOUR	✓	72	100.000
C - B6020 Lane End		ONE HOUR	✓	488	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	46	604
	B - Access Road	31	0	41
	C - B6020 Lane End	448	40	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	0	0
	B - Access Road	0	0	0
	C - B6020 Lane End	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	11.22	0.2	B	66	99
C-AB	0.09	7.97	0.1	A	37	55
C-A					411	616
A-B					42	63
A-C					554	831

### Main Results for each time segment

#### 12:15 - 12:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	14	477	0.114	54	0.0	0.1	8.485	A
C-AB	30	8	549	0.055	30	0.0	0.1	6.936	A
C-A	337	84			337				
A-B	35	9			35				
A-C	455	114			455				

#### 12:30 - 12:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	445	0.145	65	0.1	0.2	9.448	A
C-AB	36	9	526	0.069	36	0.1	0.1	7.343	A
C-A	403	101			403				
A-B	41	10			41				
A-C	543	136			543				

#### 12:45 - 13:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	20	400	0.198	79	0.2	0.2	11.204	B
C-AB	44	11	496	0.089	44	0.1	0.1	7.965	A
C-A	493	123			493				
A-B	51	13			51				
A-C	665	166			665				

#### 13:00 - 13:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	20	400	0.198	79	0.2	0.2	11.225	B
C-AB	44	11	496	0.089	44	0.1	0.1	7.969	A
C-A	493	123			493				
A-B	51	13			51				
A-C	665	166			665				

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	65	16	445	0.145	65	0.2	0.2	9.473	A
C-AB	36	9	526	0.069	36	0.1	0.1	7.349	A
C-A	403	101			403				
A-B	41	10			41				
A-C	543	136			543				

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	14	477	0.114	54	0.2	0.1	8.515	A
C-AB	30	8	549	0.055	30	0.1	0.1	6.943	A
C-A	337	84			337				
A-B	35	9			35				
A-C	455	114			455				

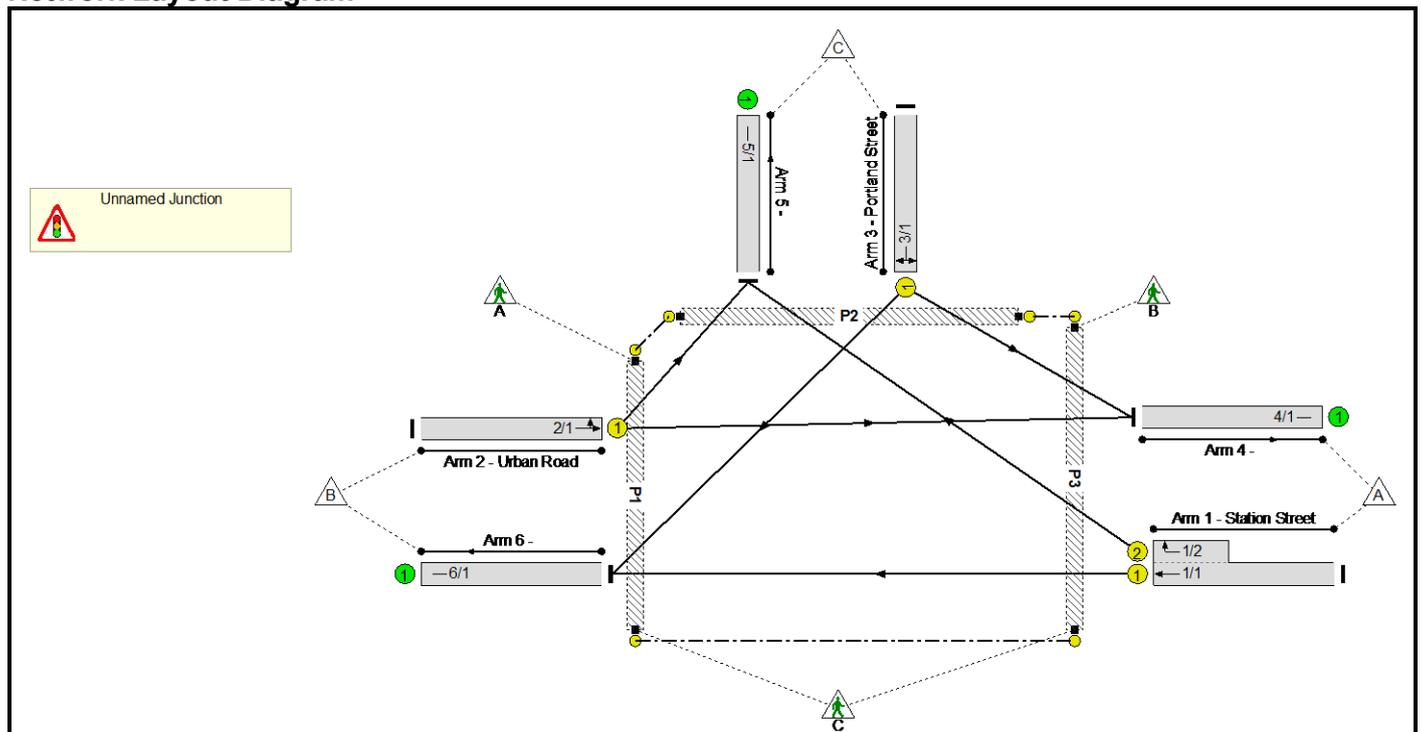
***Appendix F***  
***B6020 / Portland Street Modelling***  
***Results***

Full Input Data And Results  
**Full Input Data And Results**

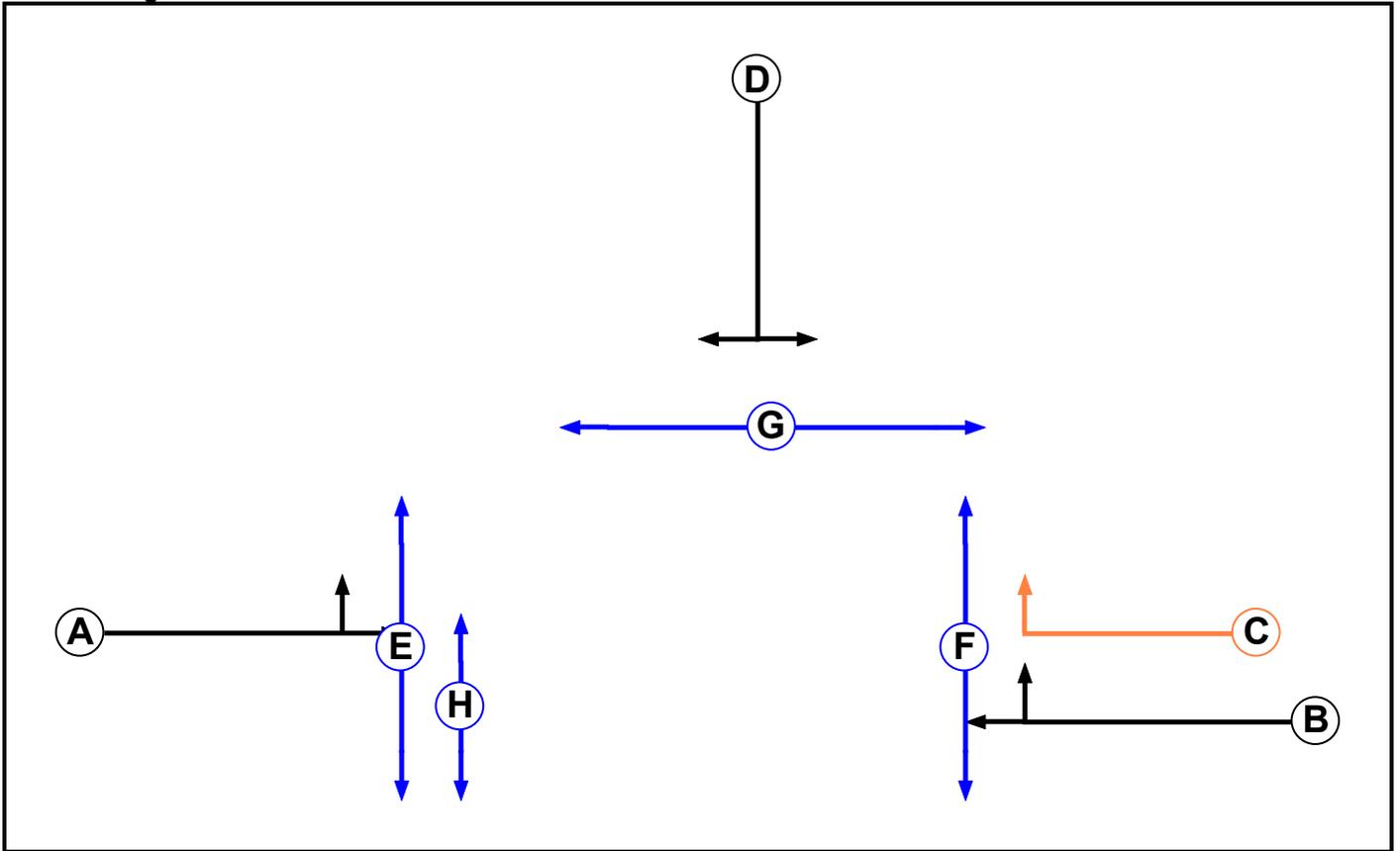
**User and Project Details**

<b>Project:</b>	
<b>Title:</b>	
<b>Location:</b>	
<b>Additional detail:</b>	
<b>File name:</b>	Station Street-Portland Street.lsg3x
<b>Author:</b>	
<b>Company:</b>	
<b>Address:</b>	

**Network Layout Diagram**



**Phase Diagram**



**Phase Input Data**

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Filter with Closing Amber (Not UK)		4	4
D	Traffic		7	7
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7

## Full Input Data And Results

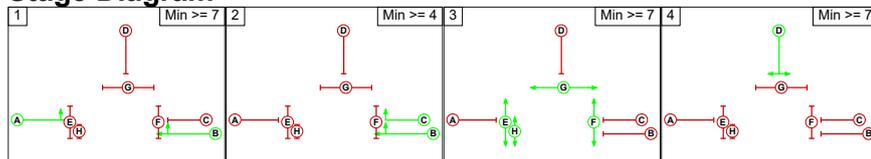
### Phase Intergrens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A	-	6	7	9	9	9	9	9
	B	-	-	5	9	9	9	9	9
	C	5	-	5	9	9	9	9	9
	D	5	5	5	-	9	9	9	9
	E	0	0	0	0	-	-	-	-
	F	0	0	0	0	-	-	-	-
	G	0	0	0	0	-	-	-	-
	H	0	0	0	0	-	-	-	-

### Phases in Stage

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

### Stage Diagram



### Phase Delays

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

### Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1	-	6	9	7
	2	5	-	9	5
	3	2	2	-	2
	4	5	5	9	-

Full Input Data And Results

**Give-Way Lane Input Data**

**Junction: Unnamed Junction**

There are no Opposed Lanes in this Junction

Full Input Data And Results

**Lane Input Data**

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Station Street)	U	B	2	3	60.0	Geom	-	3.01	0.00	Y	Arm 6 Ahead	Inf
1/2 (Station Street)	U	B C	2	3	5.0	Geom	-	2.80	0.00	Y	Arm 5 Right	9.53
2/1 (Urban Road)	U	A	2	3	60.0	Geom	-	3.59	0.00	Y	Arm 4 Ahead	Inf
											Arm 5 Left	10.50
3/1 (Portland Street)	U	D	2	3	60.0	Geom	-	3.82	0.00	Y	Arm 4 Left	13.09
											Arm 6 Right	13.62
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 BASE AM'	07:45	08:45	01:00	
2: '2025 BASE PM'	16:15	17:15	01:00	
3: '2025 BASE SAT'	11:15	12:15	01:00	
4: '2030 BASE AM'	07:45	08:45	01:00	
5: '2030 BASE PM'	16:15	17:15	01:00	
6: '2030 BASE SAT'	11:15	12:15	01:00	
7: '2030 DESIGN AM'	07:45	08:45	01:00	
8: '2030 DESIGN PM'	16:15	17:15	01:00	
9: '2030 DESIGN SAT'	11:15	12:15	01:00	

Full Input Data And Results

Scenario 1: '2025 BASE AM' (FG1: '2025 BASE AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	411	222	633
	B	372	0	172	544
	C	54	102	0	156
	Tot.	426	513	394	1333

Traffic Lane Flows

Lane	Scenario 1: 2025 BASE AM
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	633(In) 411(Out)
1/2 (short)	222
2/1	544
3/1	156
4/1	426
5/1	394
6/1	513

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	68.4 %	1889	1889
				Arm 5 Left	10.50	31.6 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	34.6 %	1796	1796
				Arm 6 Right	13.62	65.4 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2025 BASE PM' (FG2: '2025 BASE PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	479	189	668
	B	358	0	135	493
	C	73	170	0	243
	Tot.	431	649	324	1404

Traffic Lane Flows

Lane	Scenario 2: 2025 BASE PM
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	668(In) 479(Out)
1/2 (short)	189
2/1	493
3/1	243
4/1	431
5/1	324
6/1	649

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	72.6 %	1900	1900
				Arm 5 Left	10.50	27.4 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	30.0 %	1797	1797
				Arm 6 Right	13.62	70.0 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2025 BASE SAT' (FG3: '2025 BASE SAT', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	420	183	603
	B	360	0	179	539
	C	42	149	0	191
	Tot.	402	569	362	1333

Traffic Lane Flows

Lane	Scenario 3: 2025 BASE SAT
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	603(In) 420(Out)
1/2 (short)	183
2/1	539
3/1	191
4/1	402
5/1	362
6/1	569

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	66.8 %	1885	1885
				Arm 5 Left	10.50	33.2 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	22.0 %	1797	1797
				Arm 6 Right	13.62	78.0 %		
4/1				Infinite Saturation Flow			Inf	Inf
5/1				Infinite Saturation Flow			Inf	Inf
6/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 4: '2030 BASE AM' (FG4: '2030 BASE AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	426	230	656
	B	386	0	178	564
	C	56	106	0	162
	Tot.	442	532	408	1382

Traffic Lane Flows

Lane	Scenario 4: 2030 BASE AM
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	656(In) 426(Out)
1/2 (short)	230
2/1	564
3/1	162
4/1	442
5/1	408
6/1	532

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	68.4 %	1889	1889
				Arm 5 Left	10.50	31.6 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	34.6 %	1796	1796
				Arm 6 Right	13.62	65.4 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2030 BASE PM' (FG5: '2030 BASE PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	496	195	691
	B	372	0	140	512
	C	76	176	0	252
	Tot.	448	672	335	1455

Traffic Lane Flows

Lane	Scenario 5: 2030 BASE PM
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	691(In) 496(Out)
1/2 (short)	195
2/1	512
3/1	252
4/1	448
5/1	335
6/1	672

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	72.7 %	1900	1900
				Arm 5 Left	10.50	27.3 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	30.2 %	1797	1797
				Arm 6 Right	13.62	69.8 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2030 BASE SAT' (FG6: '2030 BASE SAT', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	436	190	626
	B	374	0	186	560
	C	44	155	0	199
	Tot.	418	591	376	1385

Traffic Lane Flows

Lane	Scenario 6: 2030 BASE SAT
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	626(In) 436(Out)
1/2 (short)	190
2/1	560
3/1	199
4/1	418
5/1	376
6/1	591

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	66.8 %	1885	1885
				Arm 5 Left	10.50	33.2 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	22.1 %	1797	1797
				Arm 6 Right	13.62	77.9 %		
4/1				Infinite Saturation Flow			Inf	Inf
5/1				Infinite Saturation Flow			Inf	Inf
6/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 7: '2030 DESIGN AM' (FG7: '2030 DESIGN AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	438	230	668
	B	397	0	178	575
	C	56	106	0	162
	Tot.	453	544	408	1405

Traffic Lane Flows

Lane	Scenario 7: 2030 DESIGN AM
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	668(In) 438(Out)
1/2 (short)	230
2/1	575
3/1	162
4/1	453
5/1	408
6/1	544

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	69.0 %	1890	1890
				Arm 5 Left	10.50	31.0 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	34.6 %	1796	1796
				Arm 6 Right	13.62	65.4 %		
4/1				Infinite Saturation Flow			Inf	Inf
5/1				Infinite Saturation Flow			Inf	Inf
6/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 8: '2030 DESIGN PM' (FG8: '2030 DESIGN PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	515	195	710
	B	390	0	140	530
	C	76	176	0	252
	Tot.	466	691	335	1492

Traffic Lane Flows

Lane	Scenario 8: 2030 DESIGN PM
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	710(In) 515(Out)
1/2 (short)	195
2/1	530
3/1	252
4/1	466
5/1	335
6/1	691

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	73.6 %	1902	1902
				Arm 5 Left	10.50	26.4 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	30.2 %	1797	1797
				Arm 6 Right	13.62	69.8 %		
4/1				Infinite Saturation Flow			Inf	Inf
5/1				Infinite Saturation Flow			Inf	Inf
6/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 9: '2030 DESIGN SAT' (FG9: '2030 DESIGN SAT', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	449	190	639
	B	385	0	186	571
	C	44	155	0	199
	Tot.	429	604	376	1409

Traffic Lane Flows

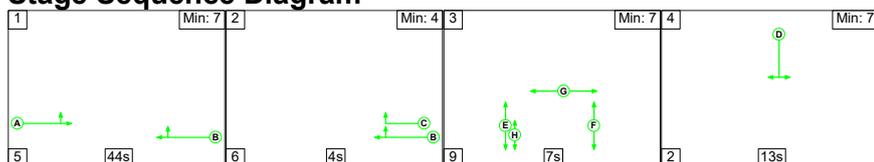
Lane	Scenario 9: 2030 DESIGN SAT
<b>Junction: Unnamed Junction</b>	
1/1 (with short)	639(In) 449(Out)
1/2 (short)	190
2/1	571
3/1	199
4/1	429
5/1	376
6/1	604

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street)	3.01	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1916	1916
1/2 (Station Street)	2.80	0.00	Y	Arm 5 Right	9.53	100.0 %	1637	1637
2/1 (Urban Road)	3.59	0.00	Y	Arm 4 Ahead	Inf	67.4 %	1886	1886
				Arm 5 Left	10.50	32.6 %		
3/1 (Portland Street)	3.82	0.00	Y	Arm 4 Left	13.09	22.1 %	1797	1797
				Arm 6 Right	13.62	77.9 %		
4/1				Infinite Saturation Flow			Inf	Inf
5/1				Infinite Saturation Flow			Inf	Inf
6/1				Infinite Saturation Flow			Inf	Inf

Scenario 1: '2025 BASE AM' (FG1: '2025 BASE AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

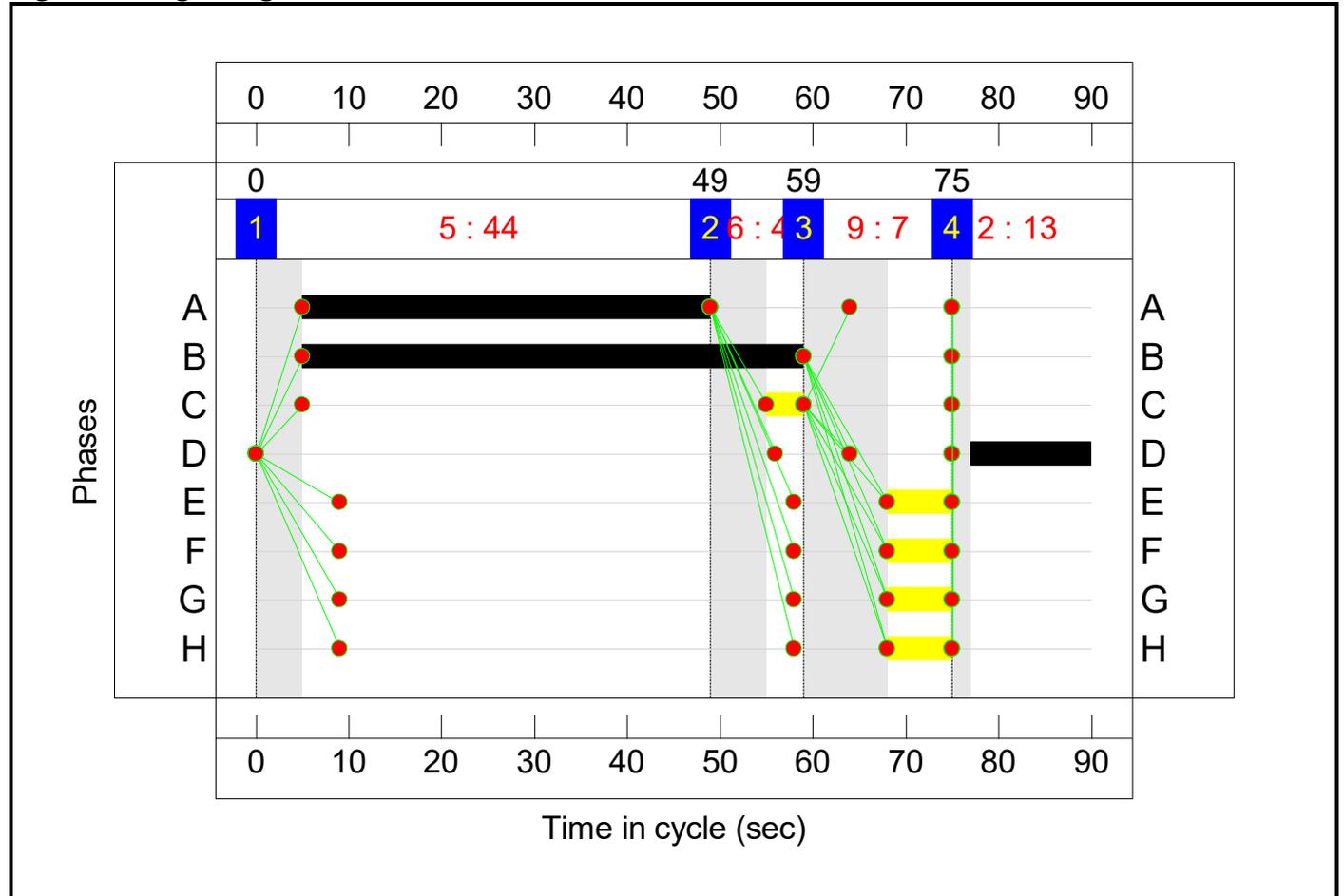


Full Input Data And Results

Stage Timings

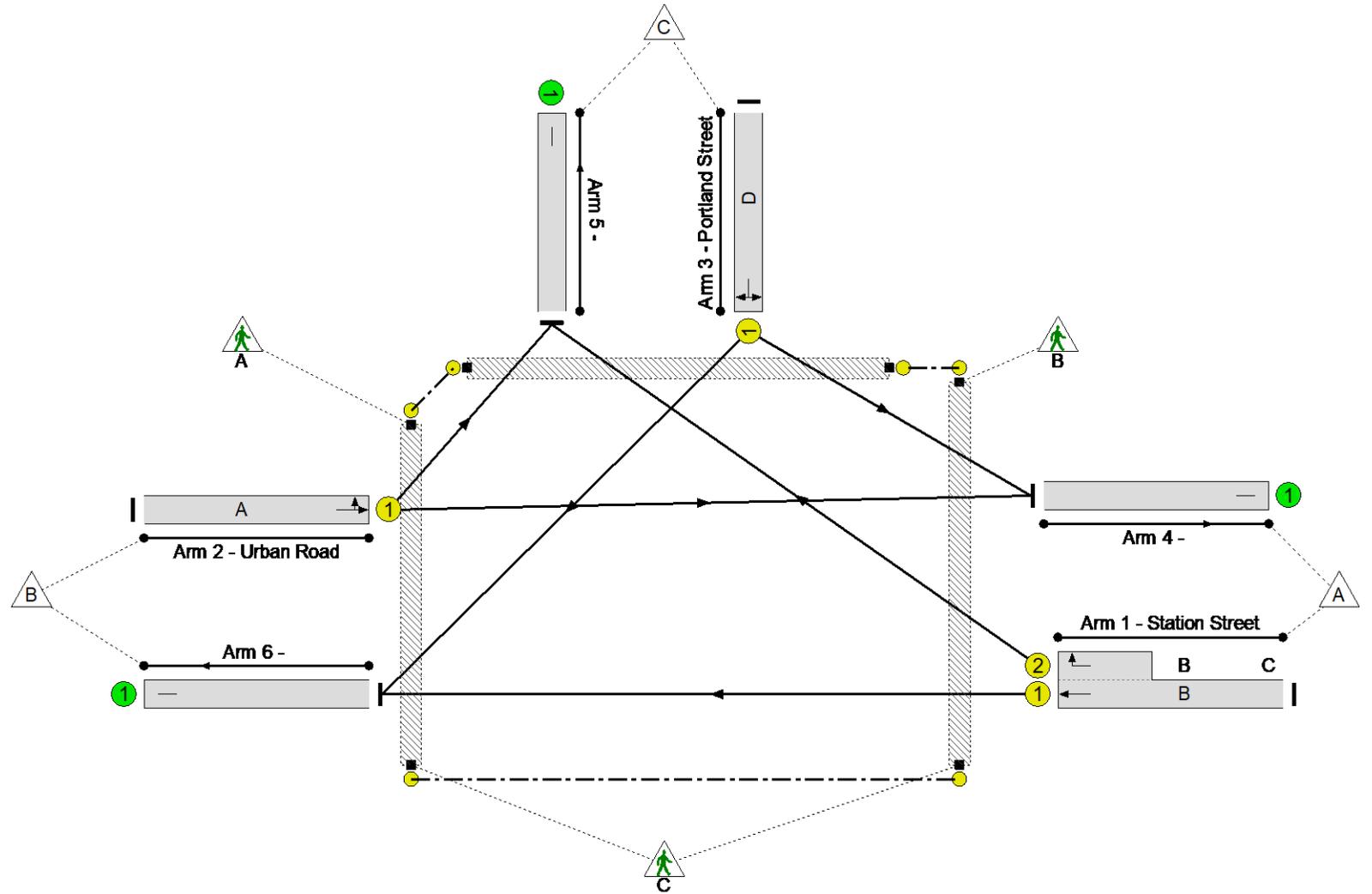
Stage	1	2	3	4
Duration	44	4	7	13
Change Point	0	49	59	75

Signal Timings Diagram



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

Unnamed Junction  
PRC: 56.3 %  
Total Traffic Delay: 7.2 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	57.6%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	57.6%
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	54	4	633	1916:1637	800+432	51.4 : 51.4%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	44	-	544	1889	944	57.6%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	13	-	156	1796	279	55.8%
4/1		U	N/A	N/A	-		-	-	-	426	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	394	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	513	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%

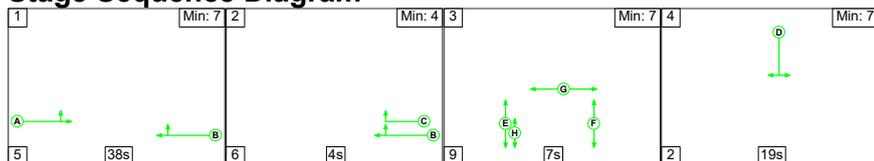
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	5.4	1.8	0.0	7.2	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	5.4	1.8	0.0	7.2	-	-	-	-
1/1+1/2	633	633	-	-	-	1.5	0.5	-	2.0	11.4	5.0	0.5	5.6
2/1	544	544	-	-	-	2.4	0.7	-	3.1	20.3	9.5	0.7	10.2
3/1	156	156	-	-	-	1.5	0.6	-	2.1	49.6	3.6	0.6	4.2
4/1	426	426	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	394	394	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	513	513	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
<p style="text-align: center;">C1                      PRC for Signalled Lanes (%): 56.3                      Total Delay for Signalled Lanes (pcuHr): 7.22                      Cycle Time (s): 90</p> <p style="text-align: center;">   PRC Over All Lanes (%): 56.3                      Total Delay Over All Lanes(pcuHr): 7.22</p>													

Full Input Data And Results

Scenario 2: '2025 BASE PM' (FG2: '2025 BASE PM', Plan 1: 'Network Control Plan 1')

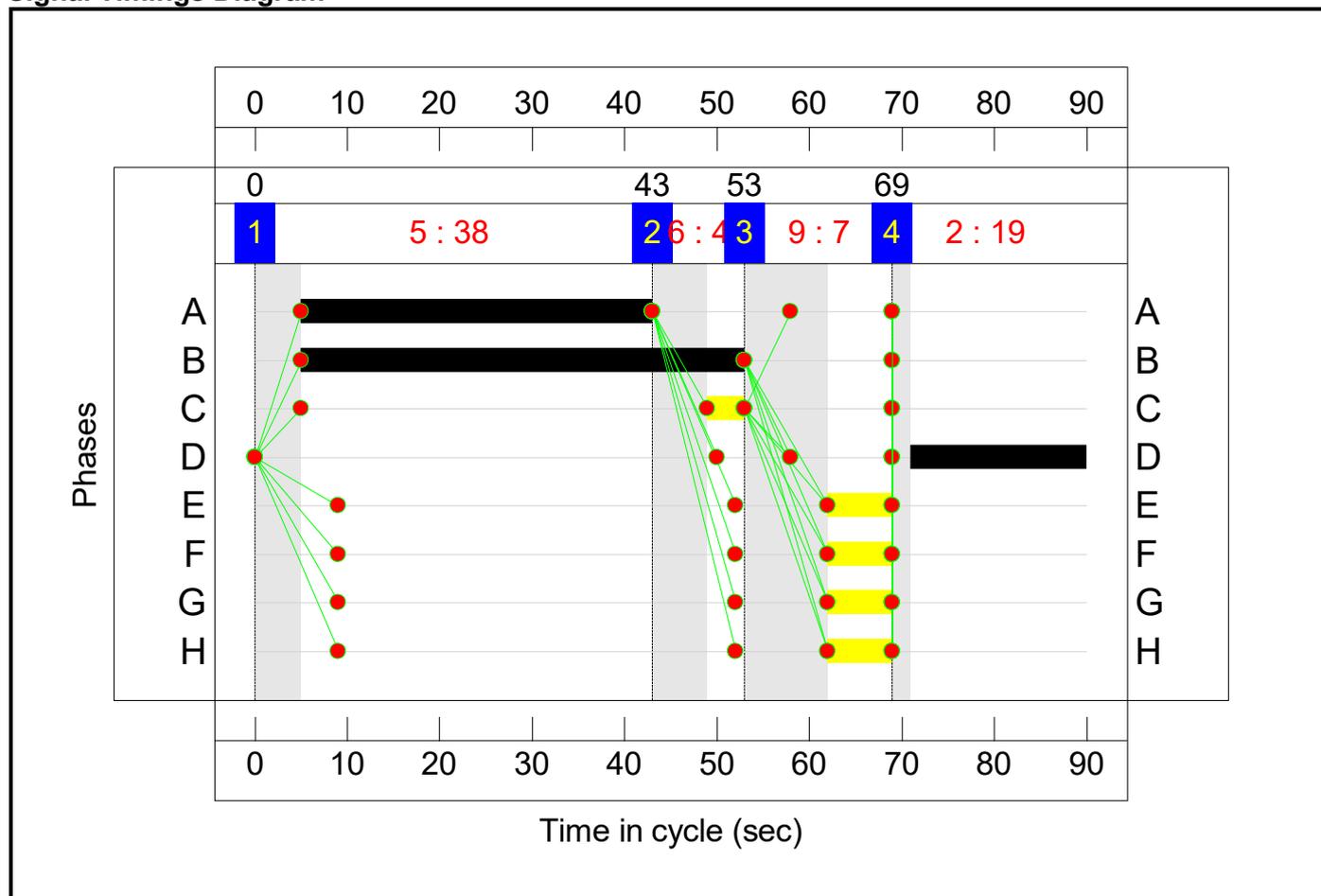
Stage Sequence Diagram



Stage Timings

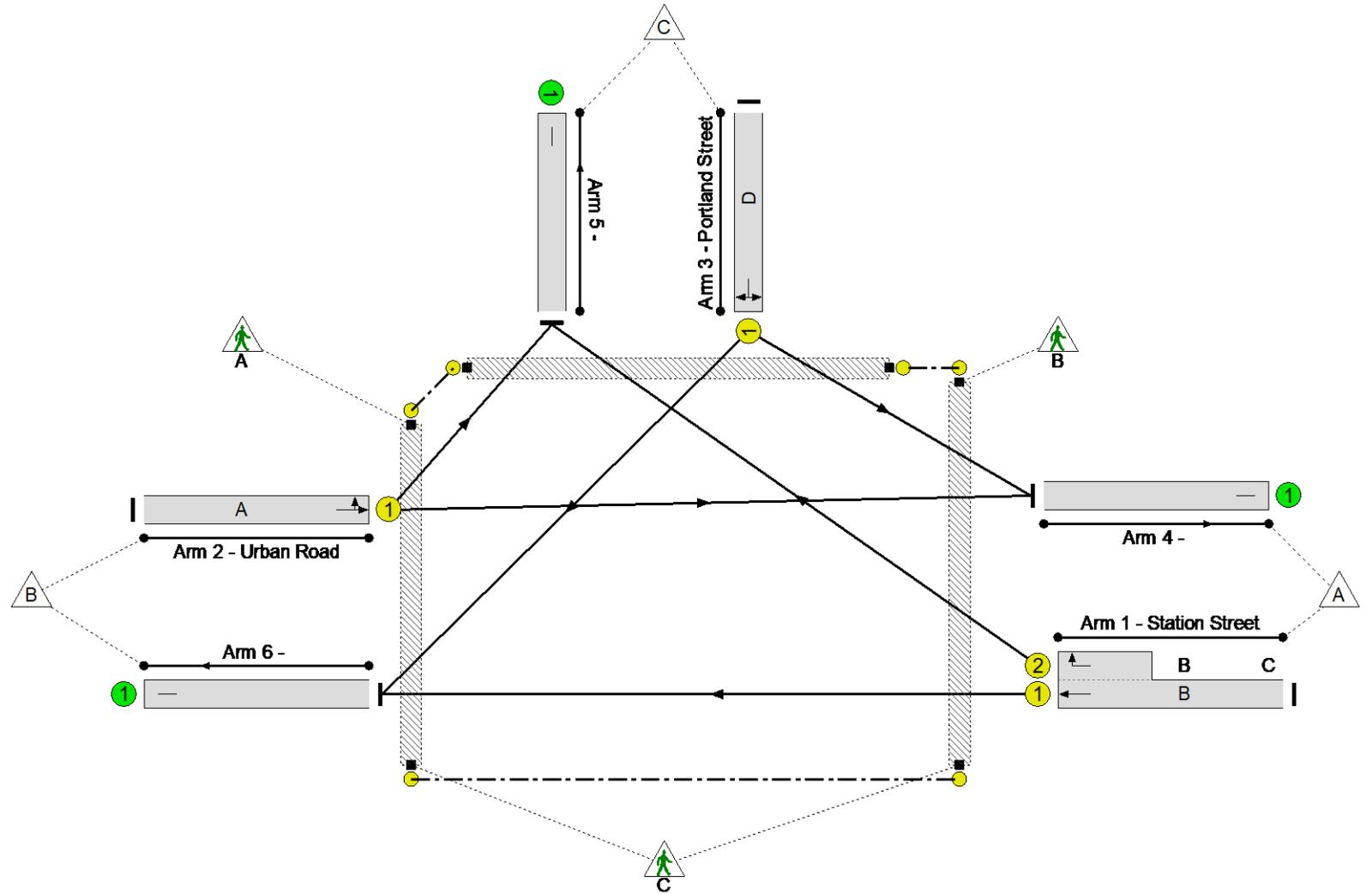
Stage	1	2	3	4
Duration	38	4	7	19
Change Point	0	43	53	69

Signal Timings Diagram



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

Unnamed Junction  
PRC: 47.0 %  
Total Traffic Delay: 9.4 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	61.2%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	61.2%
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	48	4	668	1916:1637	783+309	61.2 : 61.2%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	38	-	493	1900	823	59.9%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	19	-	243	1797	399	60.9%
4/1		U	N/A	N/A	-		-	-	-	431	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	324	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	649	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%

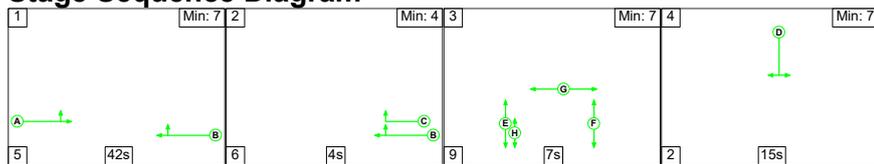
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	7.1	2.3	0.0	9.4	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	7.1	2.3	0.0	9.4	-	-	-	-
1/1+1/2	668	668	-	-	-	2.3	0.8	-	3.1	16.6	8.6	0.8	9.4
2/1	493	493	-	-	-	2.7	0.7	-	3.4	24.9	9.3	0.7	10.1
3/1	243	243	-	-	-	2.1	0.8	-	2.9	42.9	5.4	0.8	6.2
4/1	431	431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	324	324	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	649	649	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
<p style="text-align: center;">C1                      PRC for Signalled Lanes (%): 47.0                      Total Delay for Signalled Lanes (pcuHr): 9.39                      Cycle Time (s): 90</p> <p style="text-align: center;">                                 PRC Over All Lanes (%): 47.0                      Total Delay Over All Lanes(pcuHr): 9.39</p>													

Full Input Data And Results

Scenario 3: '2025 BASE SAT' (FG3: '2025 BASE SAT', Plan 1: 'Network Control Plan 1')

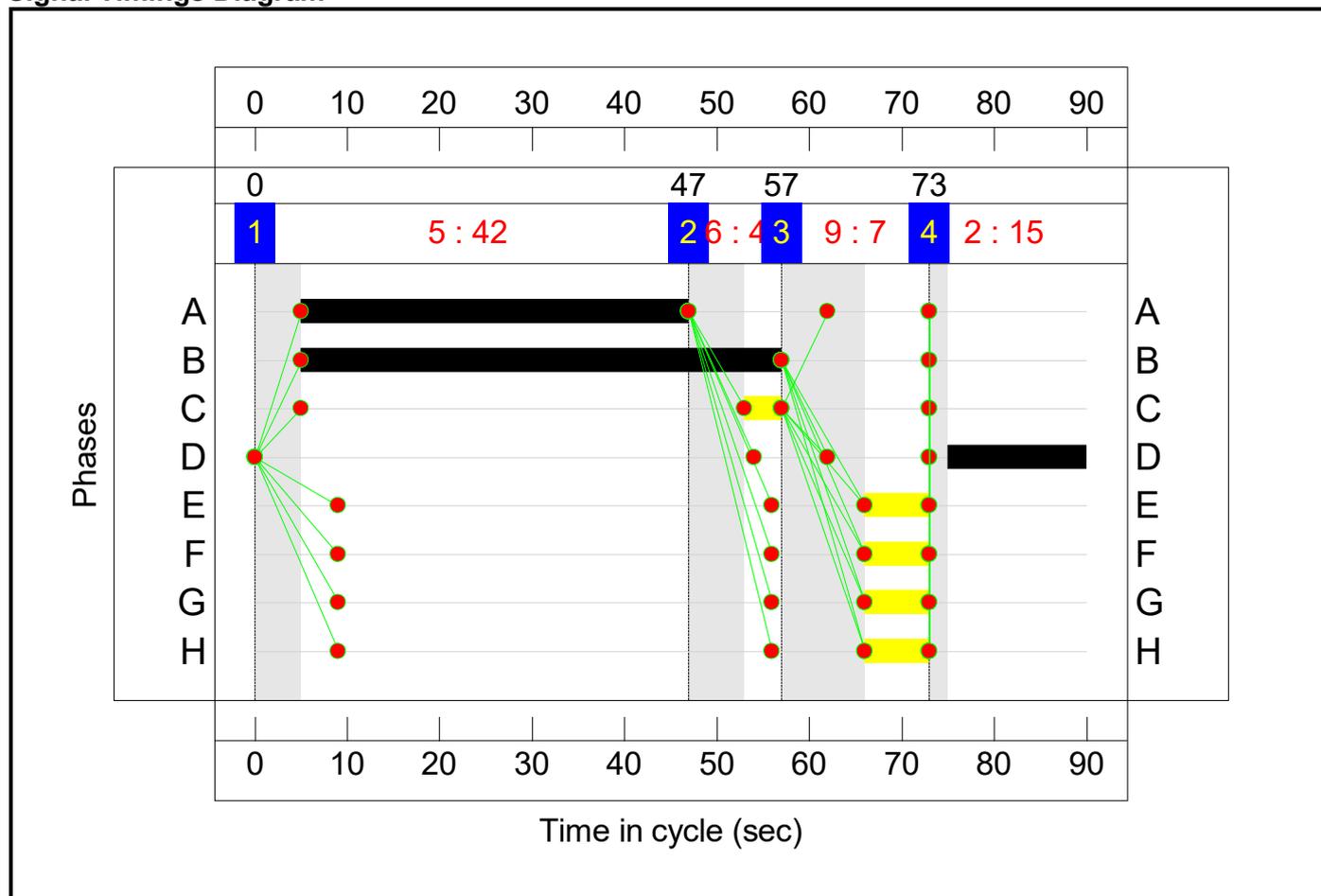
Stage Sequence Diagram



Stage Timings

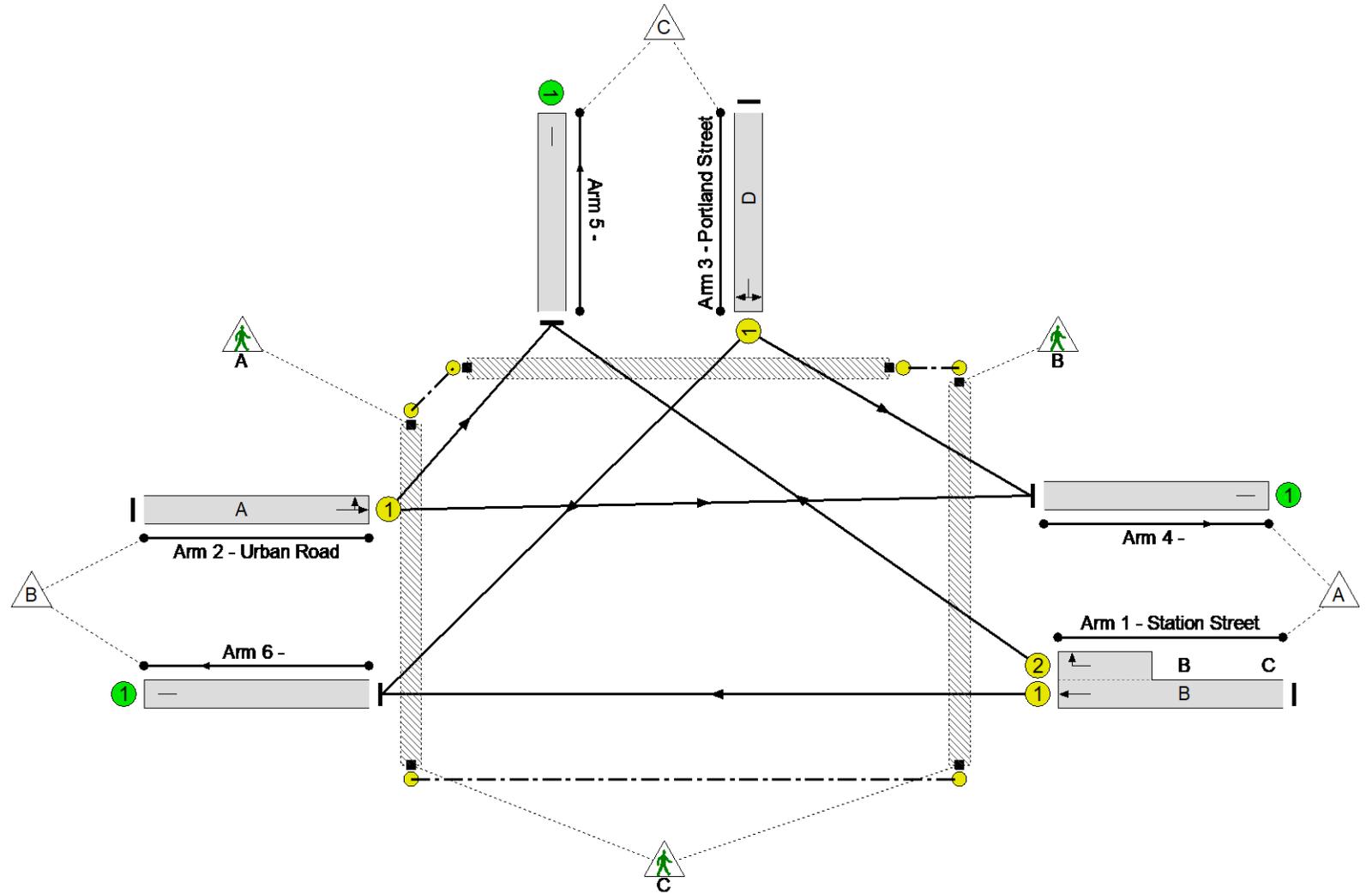
Stage	1	2	3	4
Duration	42	4	7	15
Change Point	0	47	57	73

Signal Timings Diagram



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

Unnamed Junction  
PRC: 50.4 %  
Total Traffic Delay: 8.0 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	59.8%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	59.8%
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	52	4	603	1916:1637	820+357	51.2 : 51.2%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	42	-	539	1885	901	59.8%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	15	-	191	1797	319	59.8%
4/1		U	N/A	N/A	-		-	-	-	402	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	362	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	569	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%

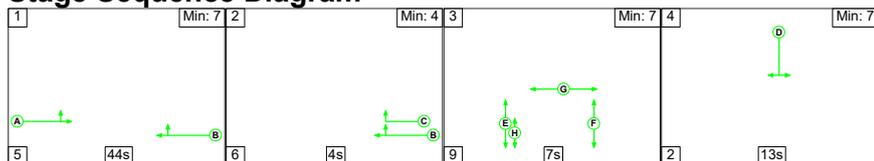
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	6.0	2.0	0.0	8.0	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	6.0	2.0	0.0	8.0	-	-	-	-
1/1+1/2	603	603	-	-	-	1.6	0.5	-	2.1	12.5	5.8	0.5	6.4
2/1	539	539	-	-	-	2.6	0.7	-	3.3	22.1	9.7	0.7	10.5
3/1	191	191	-	-	-	1.8	0.7	-	2.5	47.9	4.4	0.7	5.1
4/1	402	402	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	362	362	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	569	569	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
<p style="text-align: center;">C1                      PRC for Signalled Lanes (%): 50.4                      Total Delay for Signalled Lanes (pcuHr): 7.96                      Cycle Time (s): 90                      PRC Over All Lanes (%): 50.4                      Total Delay Over All Lanes(pcuHr): 7.96</p>													

Full Input Data And Results

Scenario 4: '2030 BASE AM' (FG4: '2030 BASE AM', Plan 1: 'Network Control Plan 1')

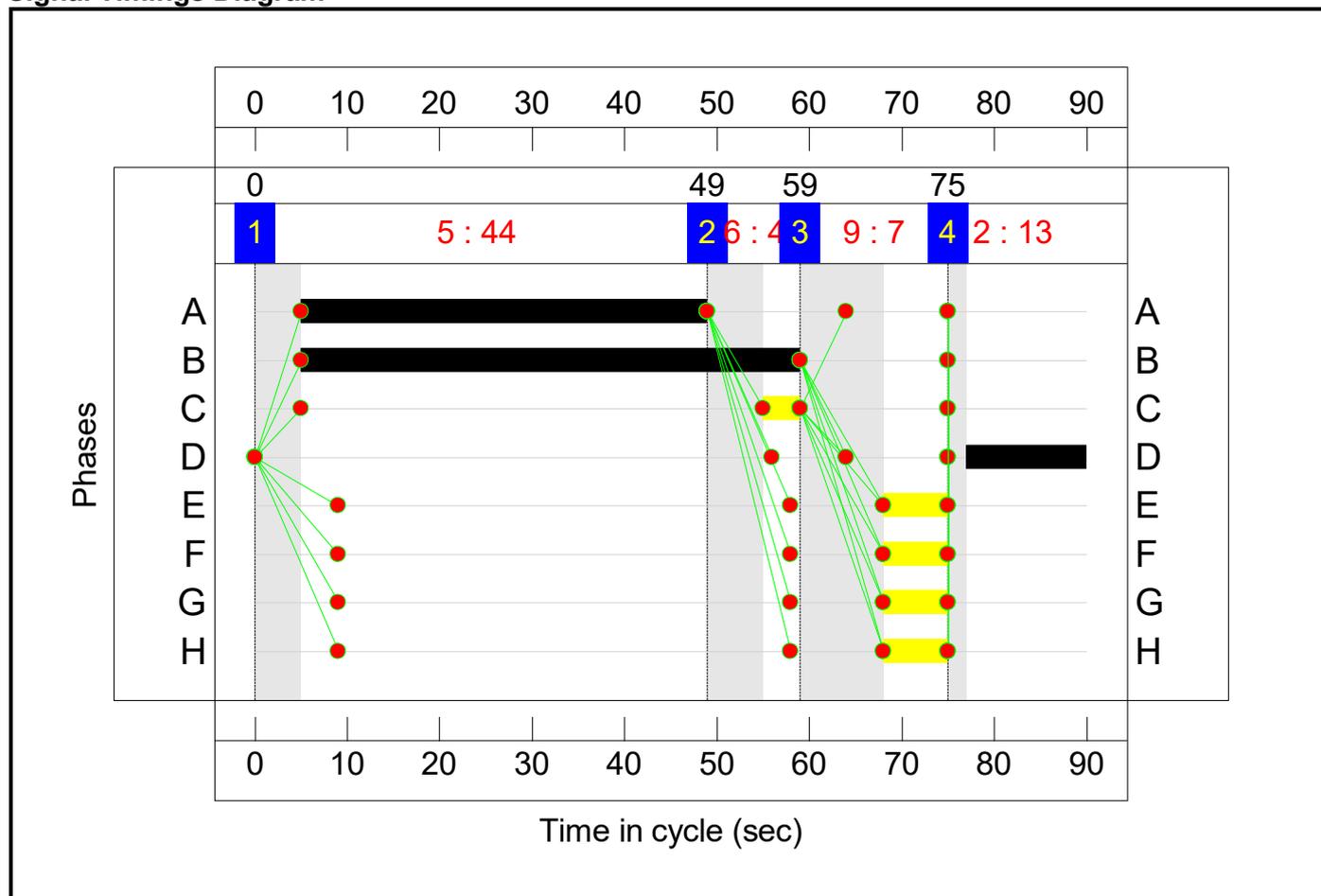
Stage Sequence Diagram



Stage Timings

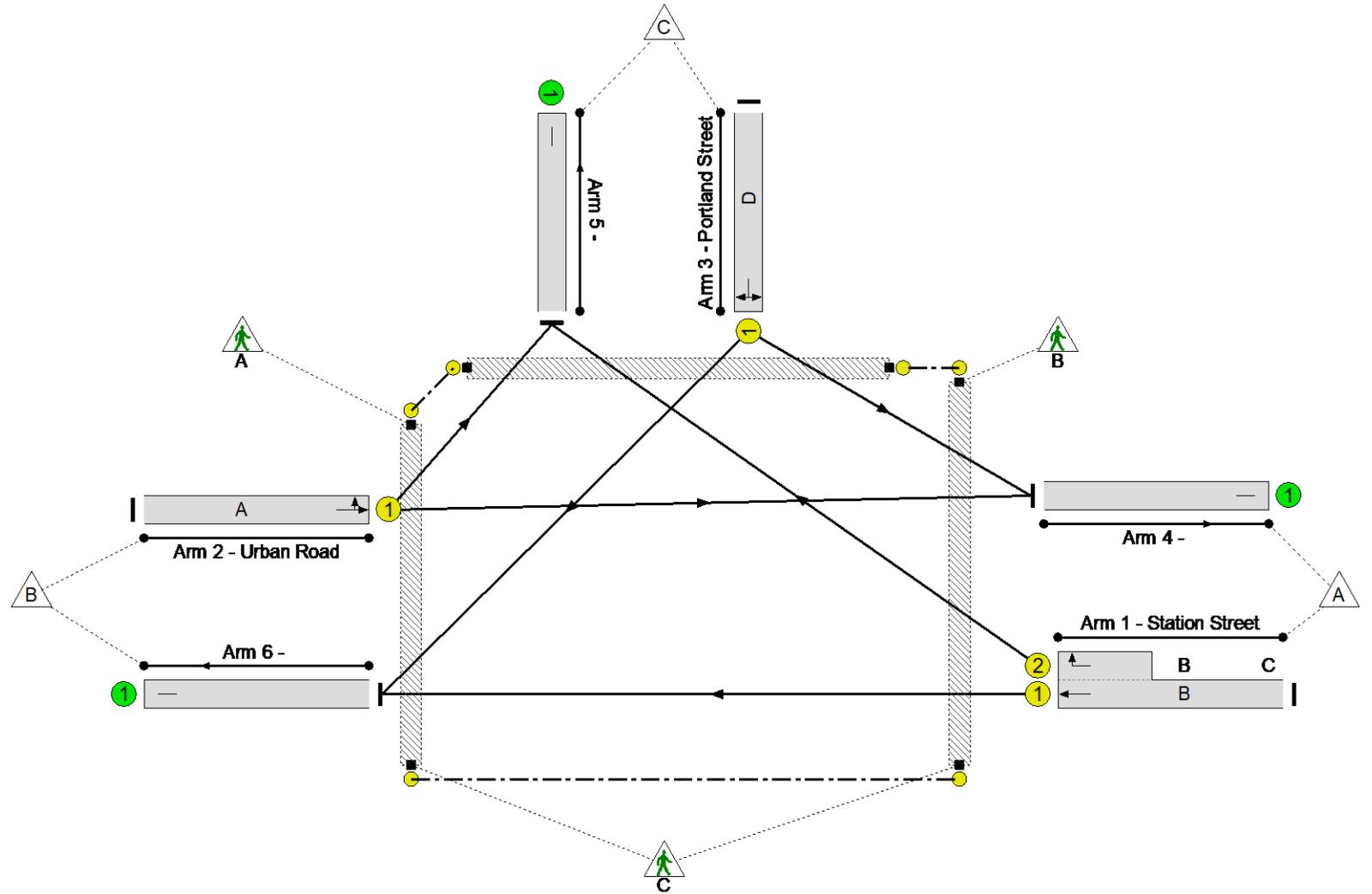
Stage	1	2	3	4
Duration	44	4	7	13
Change Point	0	49	59	75

Signal Timings Diagram



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

Unnamed Junction  
PRC: 50.7 %  
Total Traffic Delay: 7.6 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	59.7%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	59.7%
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	54	4	656	1916:1637	800+432	53.2 : 53.2%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	44	-	564	1889	944	59.7%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	13	-	162	1796	279	58.0%
4/1		U	N/A	N/A	-		-	-	-	442	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	408	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%

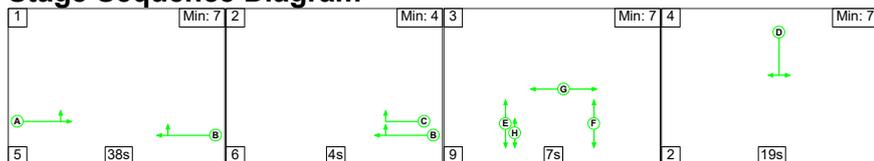
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	5.6	2.0	0.0	7.6	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	5.6	2.0	0.0	7.6	-	-	-	-
1/1+1/2	656	656	-	-	-	1.5	0.6	-	2.1	11.6	5.4	0.6	5.9
2/1	564	564	-	-	-	2.5	0.7	-	3.3	20.8	10.0	0.7	10.8
3/1	162	162	-	-	-	1.6	0.7	-	2.3	50.4	3.7	0.7	4.4
4/1	442	442	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	408	408	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1			PRC for Signalled Lanes (%):		50.7	Total Delay for Signalled Lanes (pcuHr):			7.63	Cycle Time (s): 90			
			PRC Over All Lanes (%):		50.7	Total Delay Over All Lanes(pcuHr):			7.63				

Full Input Data And Results

Scenario 5: '2030 BASE PM' (FG5: '2030 BASE PM', Plan 1: 'Network Control Plan 1')

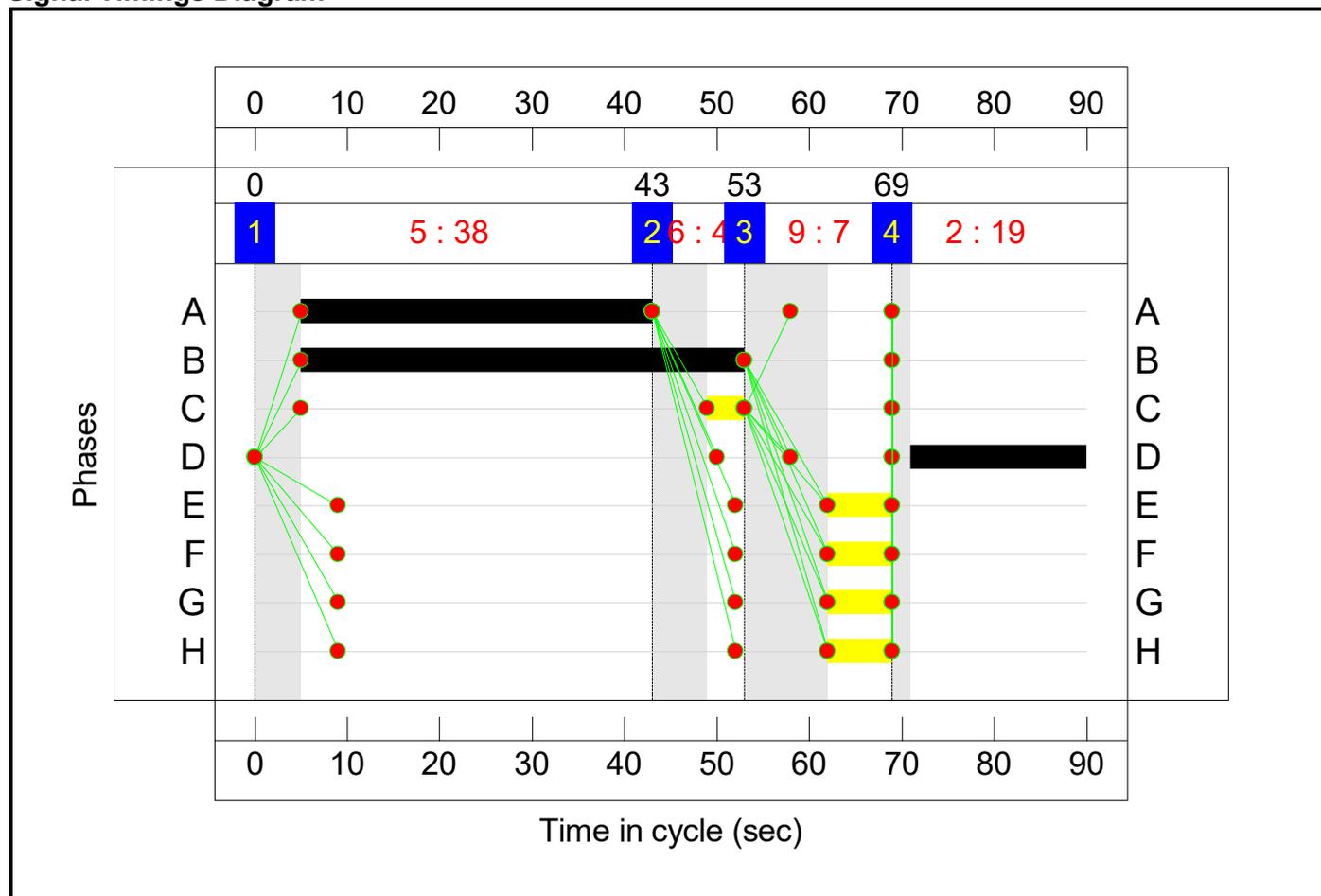
Stage Sequence Diagram



Stage Timings

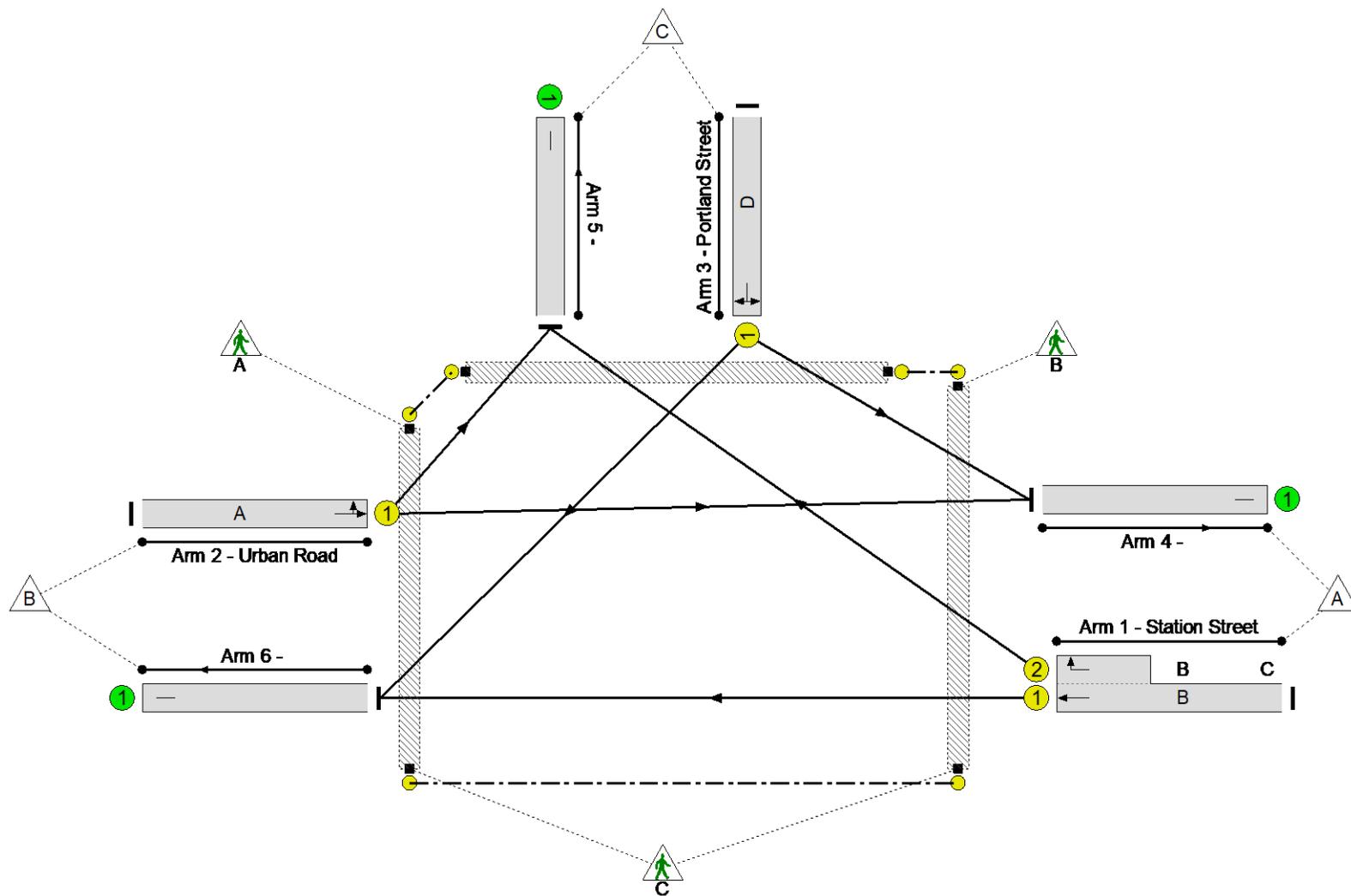
Stage	1	2	3	4
Duration	38	4	7	19
Change Point	0	43	53	69

Signal Timings Diagram



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

Unnamed Junction  
PRC: 42.1 %  
Total Traffic Delay: 10.0 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	63.3%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	63.3%
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	48	4	691	1916:1637	783+308	63.3 : 63.3%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	38	-	512	1900	823	62.2%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	19	-	252	1797	399	63.1%
4/1		U	N/A	N/A	-		-	-	-	448	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	672	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%

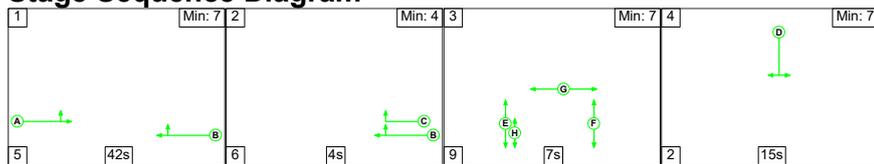
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	7.4	2.5	0.0	10.0	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	7.4	2.5	0.0	10.0	-	-	-	-
1/1+1/2	691	691	-	-	-	2.4	0.9	-	3.3	17.0	9.2	0.9	10.0
2/1	512	512	-	-	-	2.8	0.8	-	3.6	25.5	9.8	0.8	10.6
3/1	252	252	-	-	-	2.2	0.8	-	3.1	43.7	5.7	0.8	6.5
4/1	448	448	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	672	672	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1			PRC for Signalled Lanes (%):		42.1	Total Delay for Signalled Lanes (pcuHr):			9.97	Cycle Time (s): 90			
			PRC Over All Lanes (%):		42.1	Total Delay Over All Lanes(pcuHr):			9.97				

Full Input Data And Results

Scenario 6: '2030 BASE SAT' (FG6: '2030 BASE SAT', Plan 1: 'Network Control Plan 1')

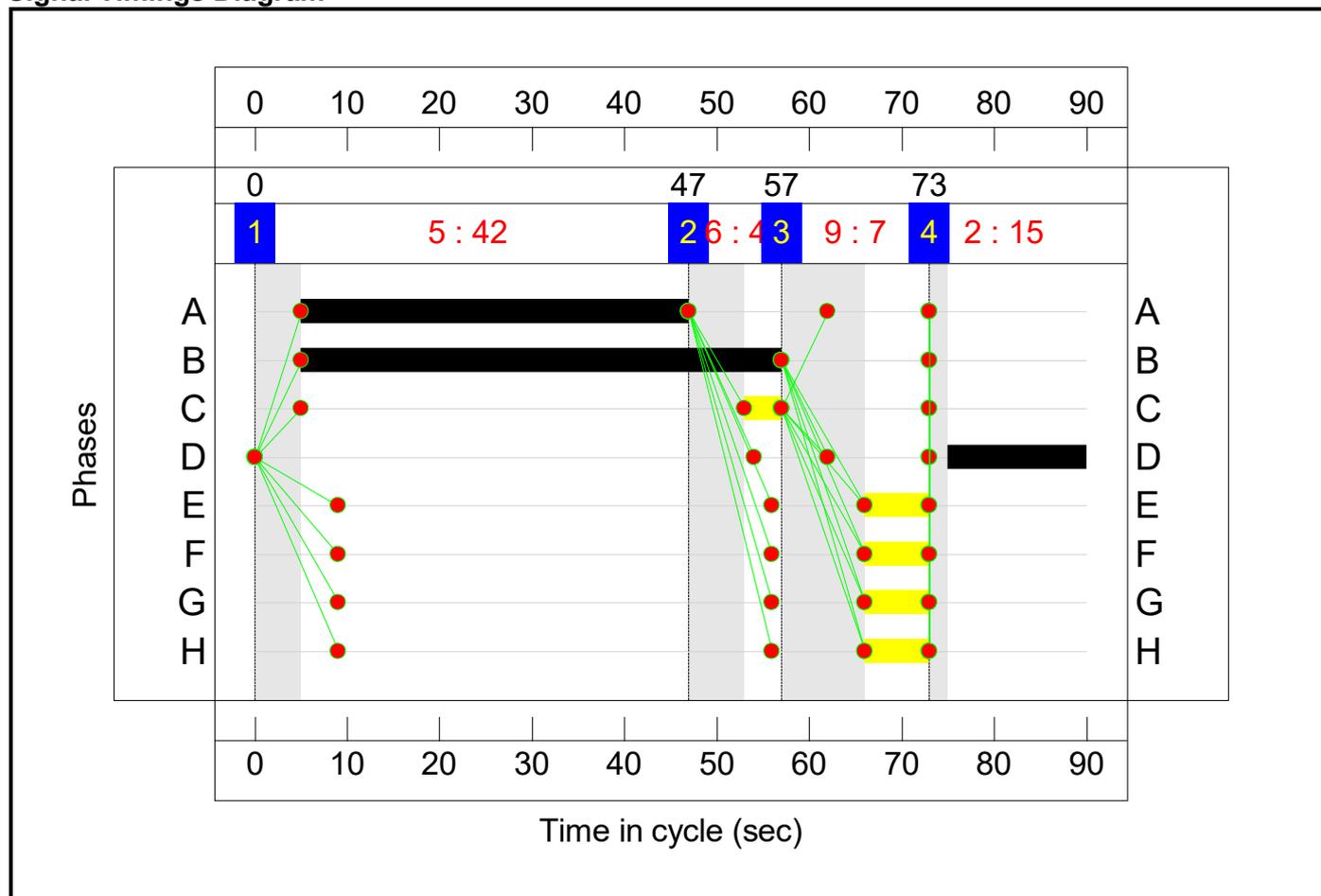
Stage Sequence Diagram



Stage Timings

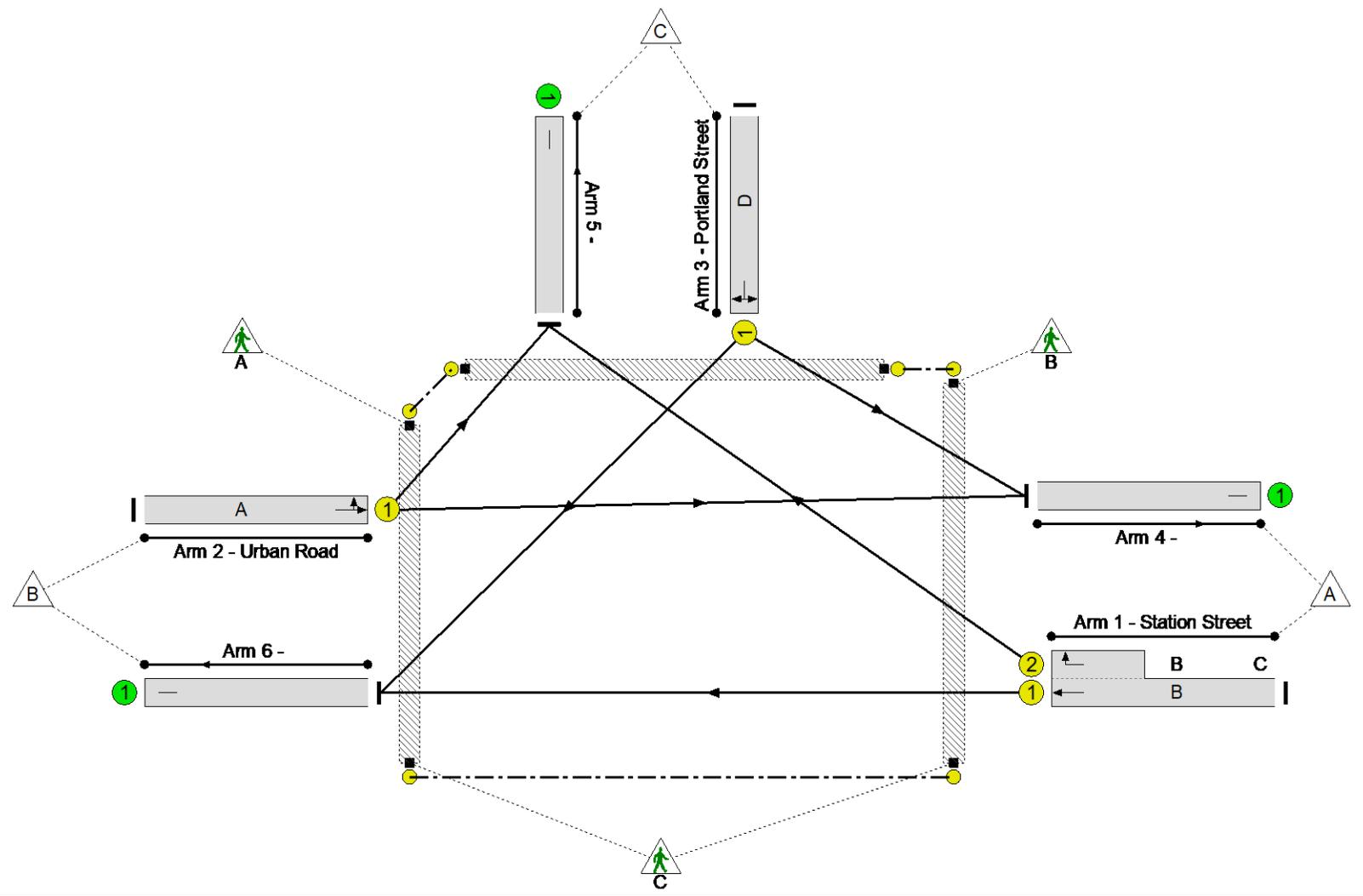
Stage	1	2	3	4
Duration	42	4	7	15
Change Point	0	47	57	73

Signal Timings Diagram



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

Unnamed Junction  
PRC: 44.5 %  
Total Traffic Delay: 8.5 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>62.3%</b>
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>62.3%</b>
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	52	4	626	1916:1637	820+357	53.2 : 53.2%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	42	-	560	1885	901	62.2%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	15	-	199	1797	319	62.3%
4/1		U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	376	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	591	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%

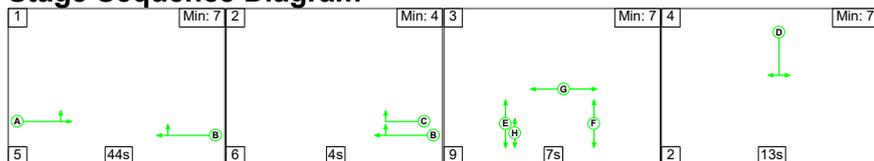
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	6.3	2.2	0.0	8.5	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	6.3	2.2	0.0	8.5	-	-	-	-
1/1+1/2	626	626	-	-	-	1.7	0.6	-	2.2	12.8	6.2	0.6	6.8
2/1	560	560	-	-	-	2.7	0.8	-	3.5	22.7	10.3	0.8	11.1
3/1	199	199	-	-	-	1.9	0.8	-	2.7	49.0	4.6	0.8	5.4
4/1	418	418	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	376	376	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	591	591	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1			PRC for Signalled Lanes (%):		44.5	Total Delay for Signalled Lanes (pcuHr):		8.47	Cycle Time (s):		90		
			PRC Over All Lanes (%):		44.5	Total Delay Over All Lanes(pcuHr):		8.47					

Full Input Data And Results

Scenario 7: '2030 DESIGN AM' (FG7: '2030 DESIGN AM', Plan 1: 'Network Control Plan 1')

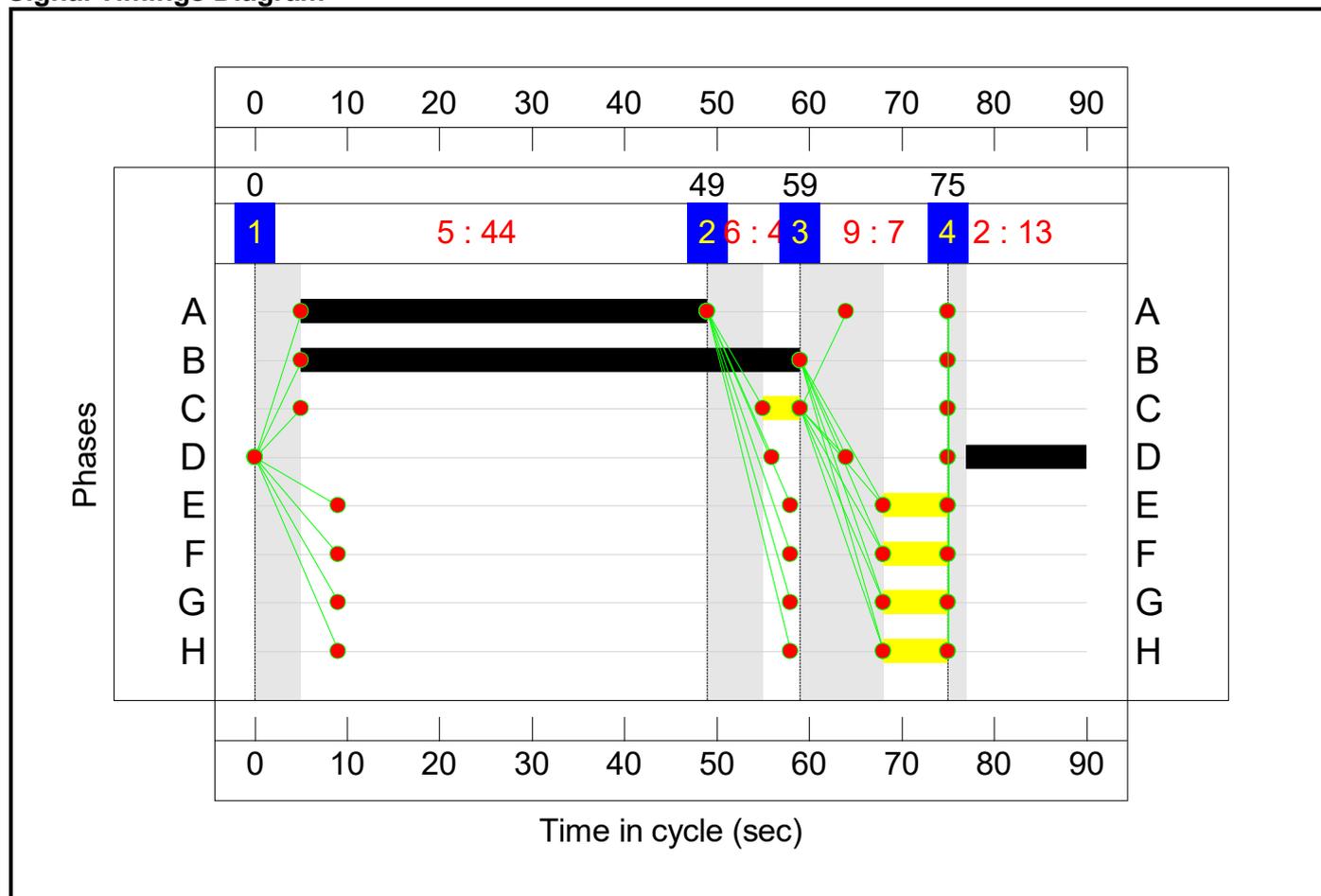
Stage Sequence Diagram



Stage Timings

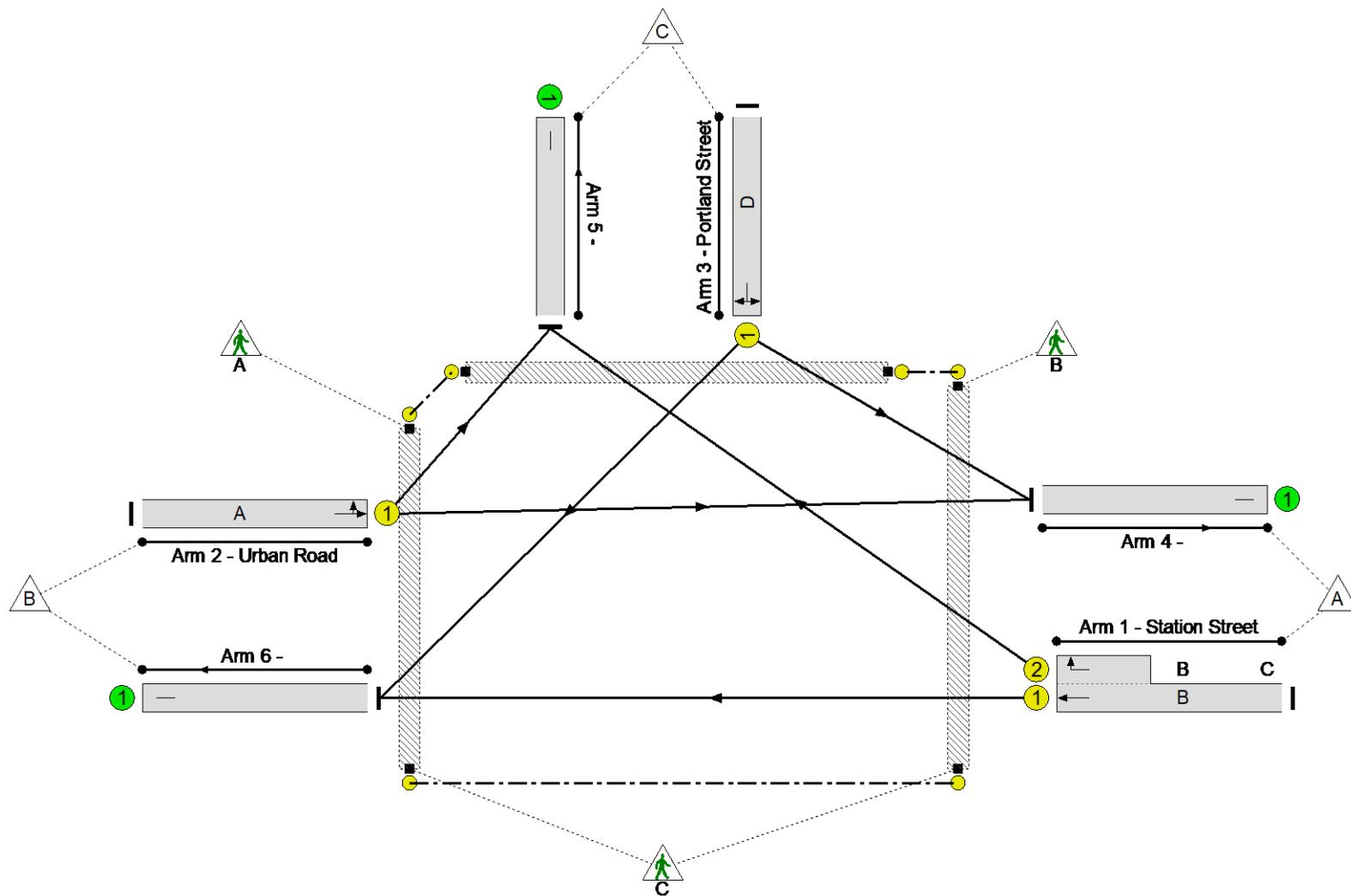
Stage	1	2	3	4
Duration	44	4	7	13
Change Point	0	49	59	75

Signal Timings Diagram



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

Unnamed Junction  
PRC: 47.9 %  
Total Traffic Delay: 7.8 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>60.8%</b>
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>60.8%</b>
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	54	4	668	1916:1637	807+424	54.3 : 54.3%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	44	-	575	1890	945	60.8%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	13	-	162	1796	279	58.0%
4/1		U	N/A	N/A	-		-	-	-	453	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	408	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	544	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%

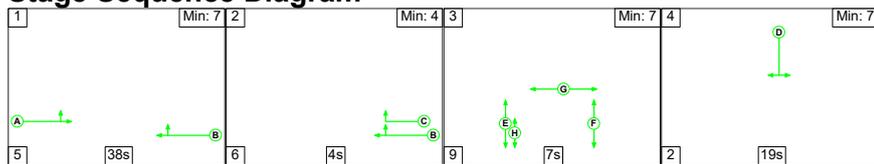
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	5.8	2.0	0.0	7.8	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	5.8	2.0	0.0	7.8	-	-	-	-
1/1+1/2	668	668	-	-	-	1.6	0.6	-	2.2	11.7	5.9	0.6	6.5
2/1	575	575	-	-	-	2.6	0.8	-	3.4	21.0	10.2	0.8	11.0
3/1	162	162	-	-	-	1.6	0.7	-	2.3	50.4	3.7	0.7	4.4
4/1	453	453	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	408	408	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
<p style="text-align: center;">C1                      PRC for Signalled Lanes (%): 47.9                      Total Delay for Signalled Lanes (pcuHr): 7.80                      Cycle Time (s): 90</p> <p style="text-align: center;">   PRC Over All Lanes (%): 47.9                      Total Delay Over All Lanes(pcuHr): 7.80</p>													

Full Input Data And Results

Scenario 8: '2030 DESIGN PM' (FG8: '2030 DESIGN PM', Plan 1: 'Network Control Plan 1')

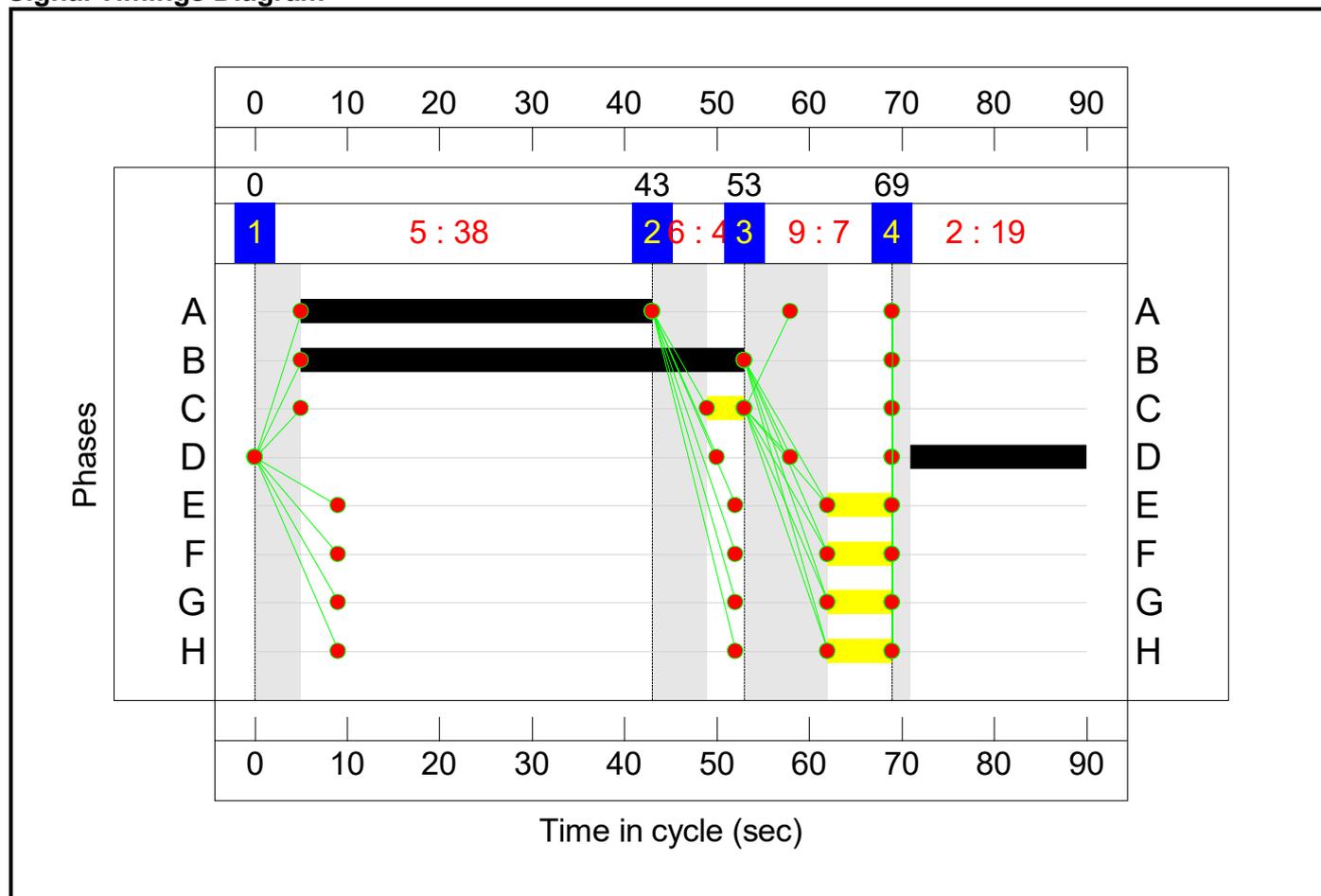
Stage Sequence Diagram



Stage Timings

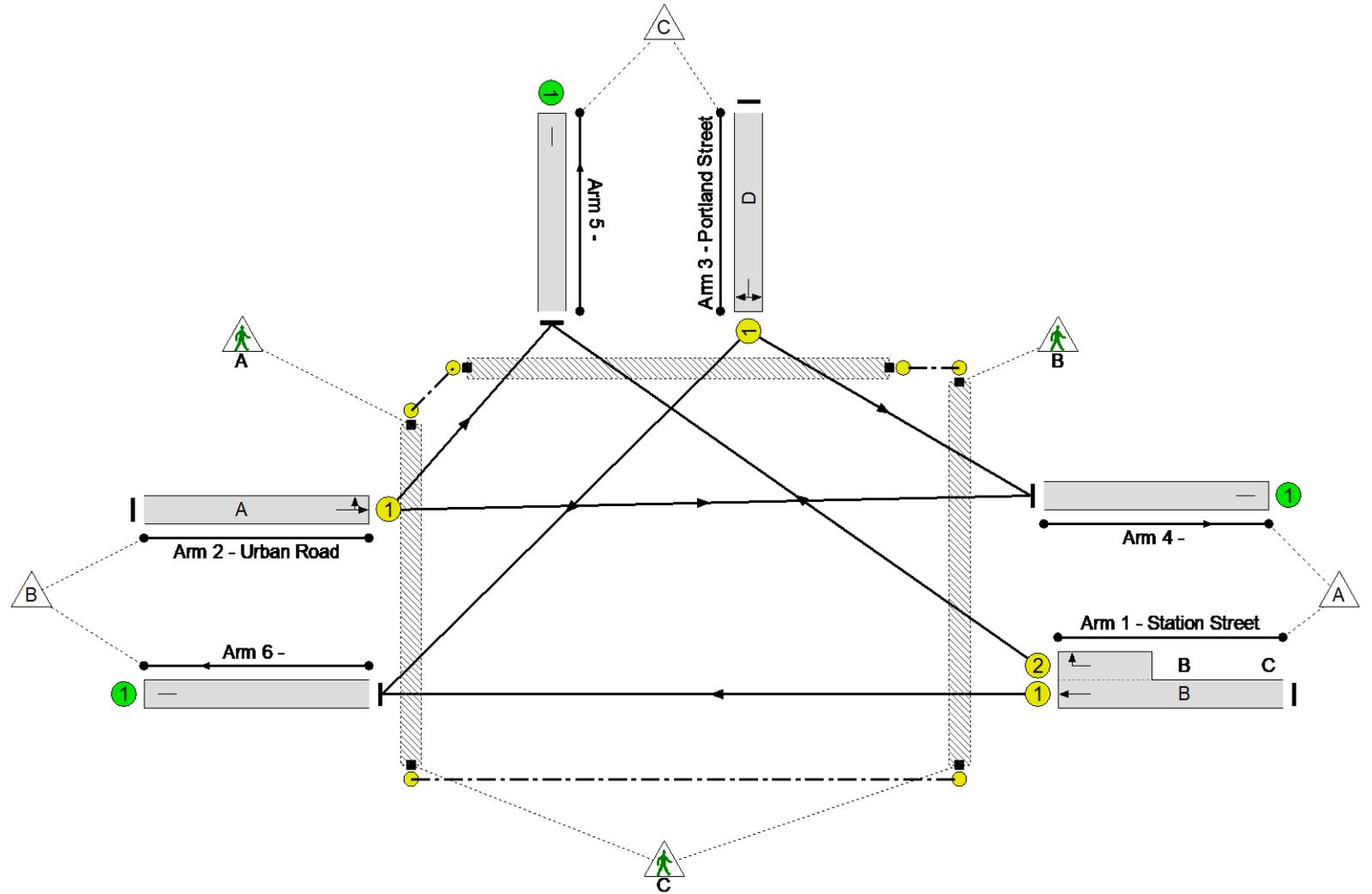
Stage	1	2	3	4
Duration	38	4	7	19
Change Point	0	43	53	69

Signal Timings Diagram



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

Unnamed Junction  
PRC: 38.1 %  
Total Traffic Delay: 10.4 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	65.2%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	65.2%
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	48	4	710	1916:1637	790+299	65.2 : 65.2%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	38	-	530	1902	824	64.3%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	19	-	252	1797	399	63.1%
4/1		U	N/A	N/A	-		-	-	-	466	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%

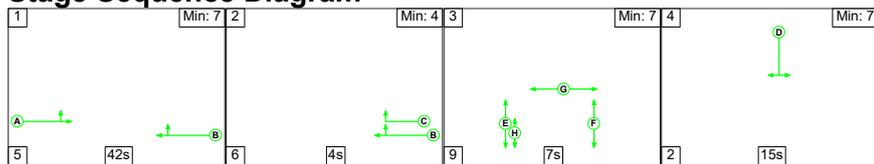
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	7.7	2.7	0.0	10.4	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	7.7	2.7	0.0	10.4	-	-	-	-
1/1+1/2	710	710	-	-	-	2.5	0.9	-	3.5	17.5	9.7	0.9	10.7
2/1	530	530	-	-	-	2.9	0.9	-	3.8	26.1	10.3	0.9	11.2
3/1	252	252	-	-	-	2.2	0.8	-	3.1	43.7	5.7	0.8	6.5
4/1	466	466	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
<p style="text-align: center;">C1                      PRC for Signalled Lanes (%): 38.1                      Total Delay for Signalled Lanes (pcuHr): 10.36                      Cycle Time (s): 90</p> <p style="text-align: center;">                                 PRC Over All Lanes (%): 38.1                      Total Delay Over All Lanes(pcuHr): 10.36</p>													

Full Input Data And Results

Scenario 9: '2030 DESIGN SAT' (FG9: '2030 DESIGN SAT', Plan 1: 'Network Control Plan 1')

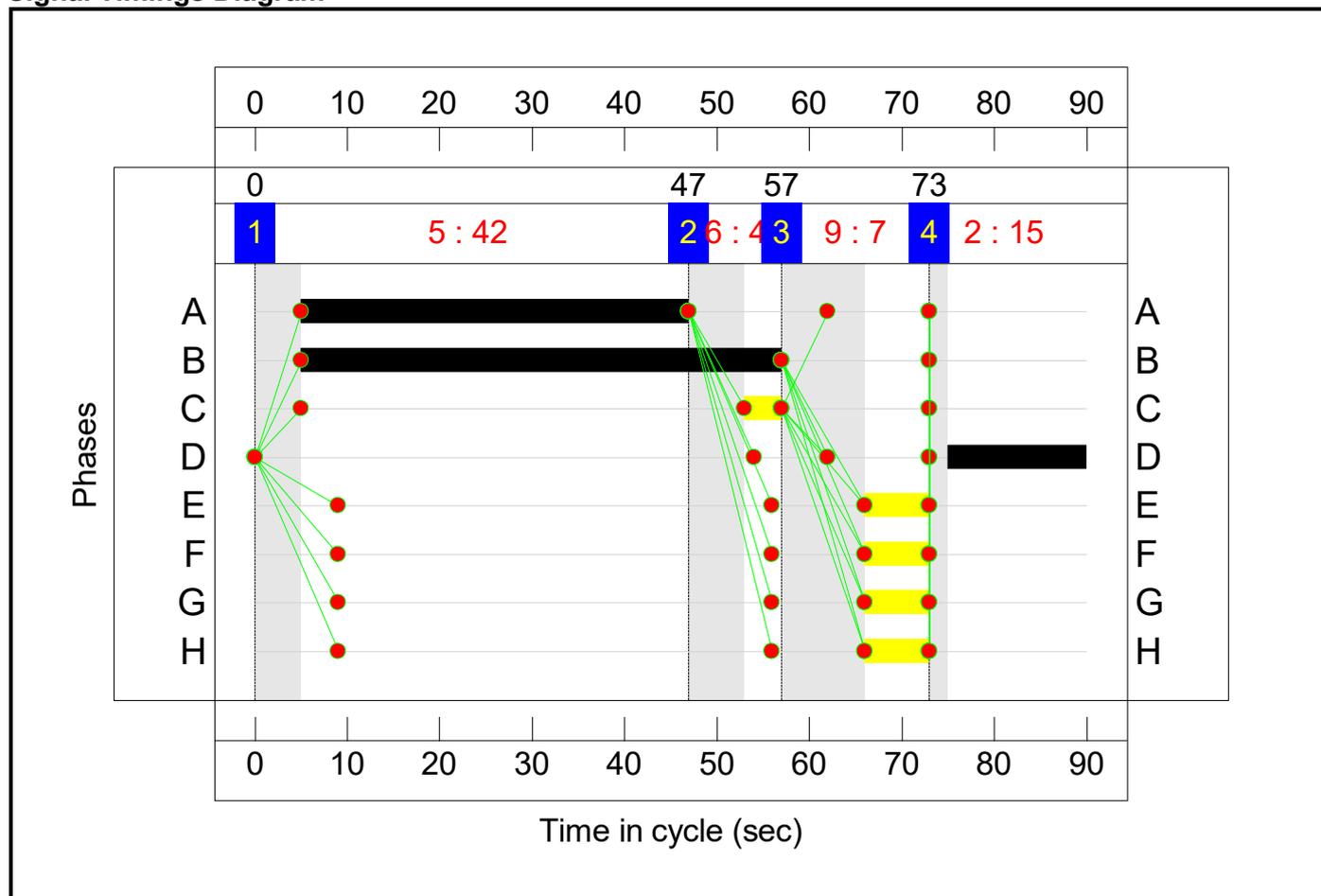
Stage Sequence Diagram



Stage Timings

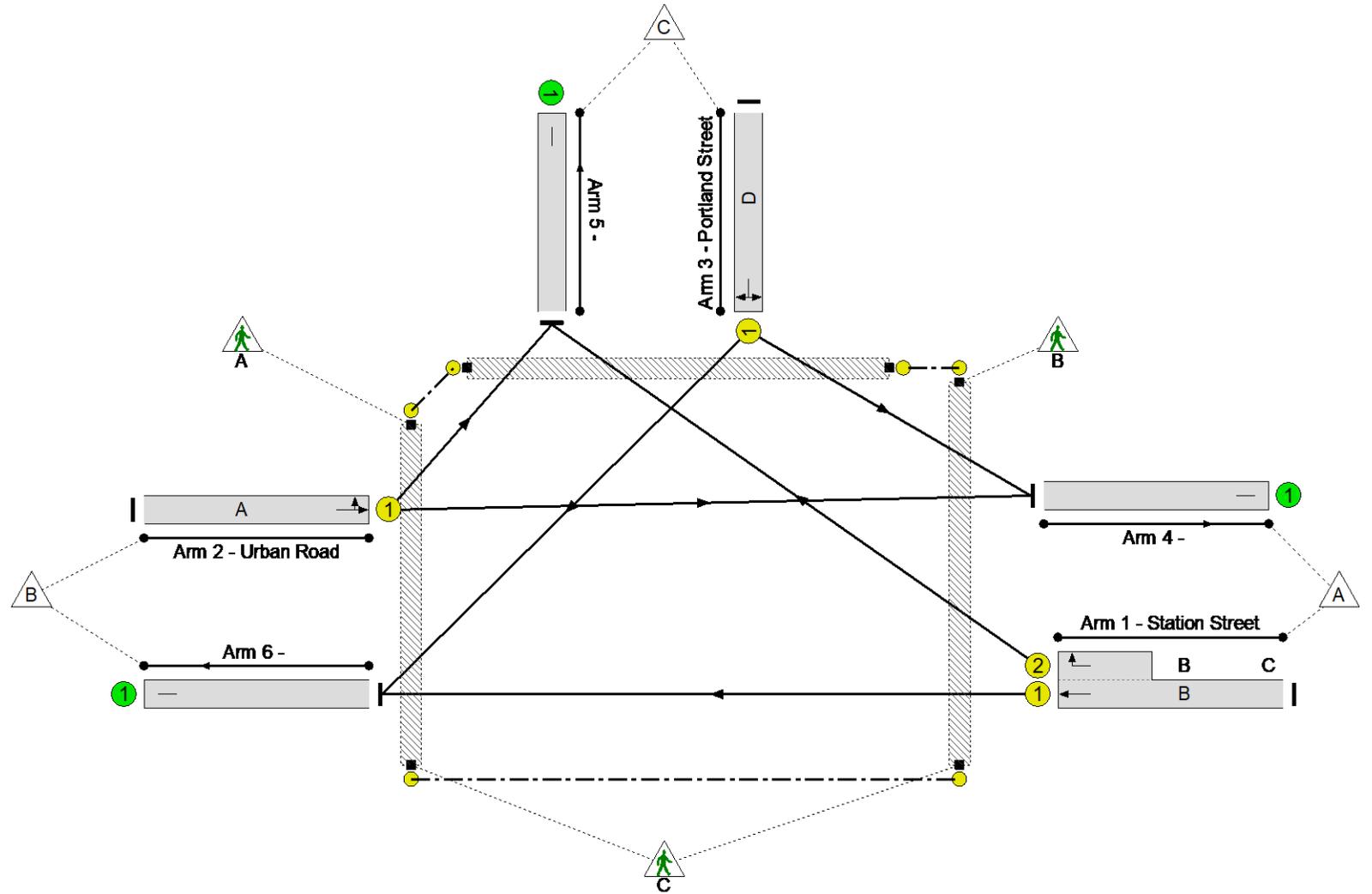
Stage	1	2	3	4
Duration	42	4	7	15
Change Point	0	47	57	73

Signal Timings Diagram



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

Unnamed Junction  
PRC: 42.0 %  
Total Traffic Delay: 8.7 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>63.4%</b>
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>63.4%</b>
1/1+1/2	Station Street Right Ahead	U	N/A	N/A	B	C	1	52	4	639	1916:1637	826+350	54.3 : 54.3%
2/1	Urban Road Ahead Left	U	N/A	N/A	A		1	42	-	571	1886	901	63.4%
3/1	Portland Street Left Right	U	N/A	N/A	D		1	15	-	199	1797	319	62.3%
4/1		U	N/A	N/A	-		-	-	-	429	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	376	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	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)
<b>Network</b>	-	-	0	0	0	6.4	2.3	0.0	8.7	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	6.4	2.3	0.0	8.7	-	-	-	-
1/1+1/2	639	639	-	-	-	1.7	0.6	-	2.3	13.0	6.6	0.6	7.2
2/1	571	571	-	-	-	2.8	0.9	-	3.7	23.0	10.6	0.9	11.5
3/1	199	199	-	-	-	1.9	0.8	-	2.7	49.0	4.6	0.8	5.4
4/1	429	429	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	376	376	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1			PRC for Signalled Lanes (%):		42.0	Total Delay for Signalled Lanes (pcuHr):			8.66	Cycle Time (s): 90			
			PRC Over All Lanes (%):		42.0	Total Delay Over All Lanes(pcuHr):			8.66				

***Appendix G***

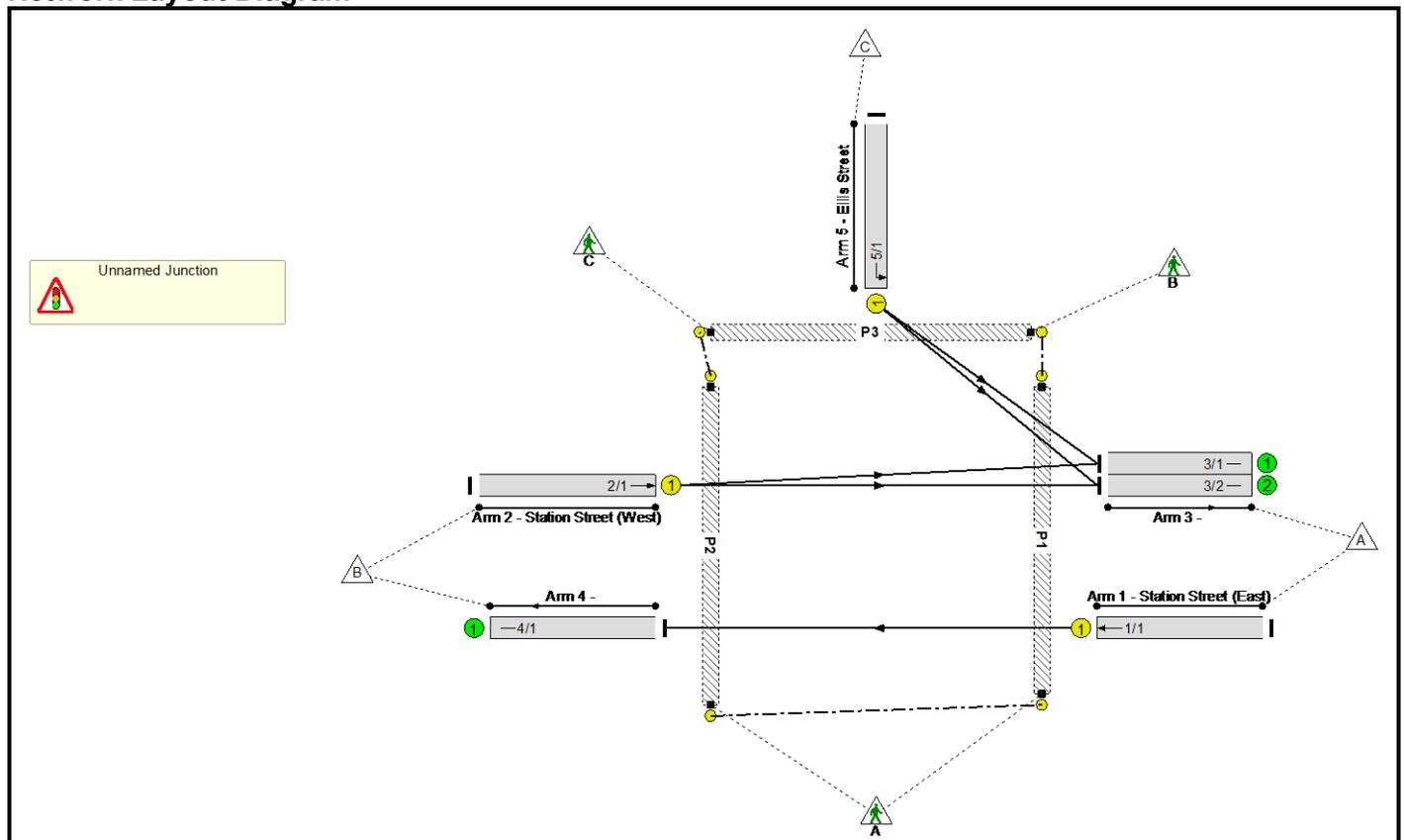
***B6020 / Ellis Street Modelling Results***

Full Input Data And Results  
**Full Input Data And Results**

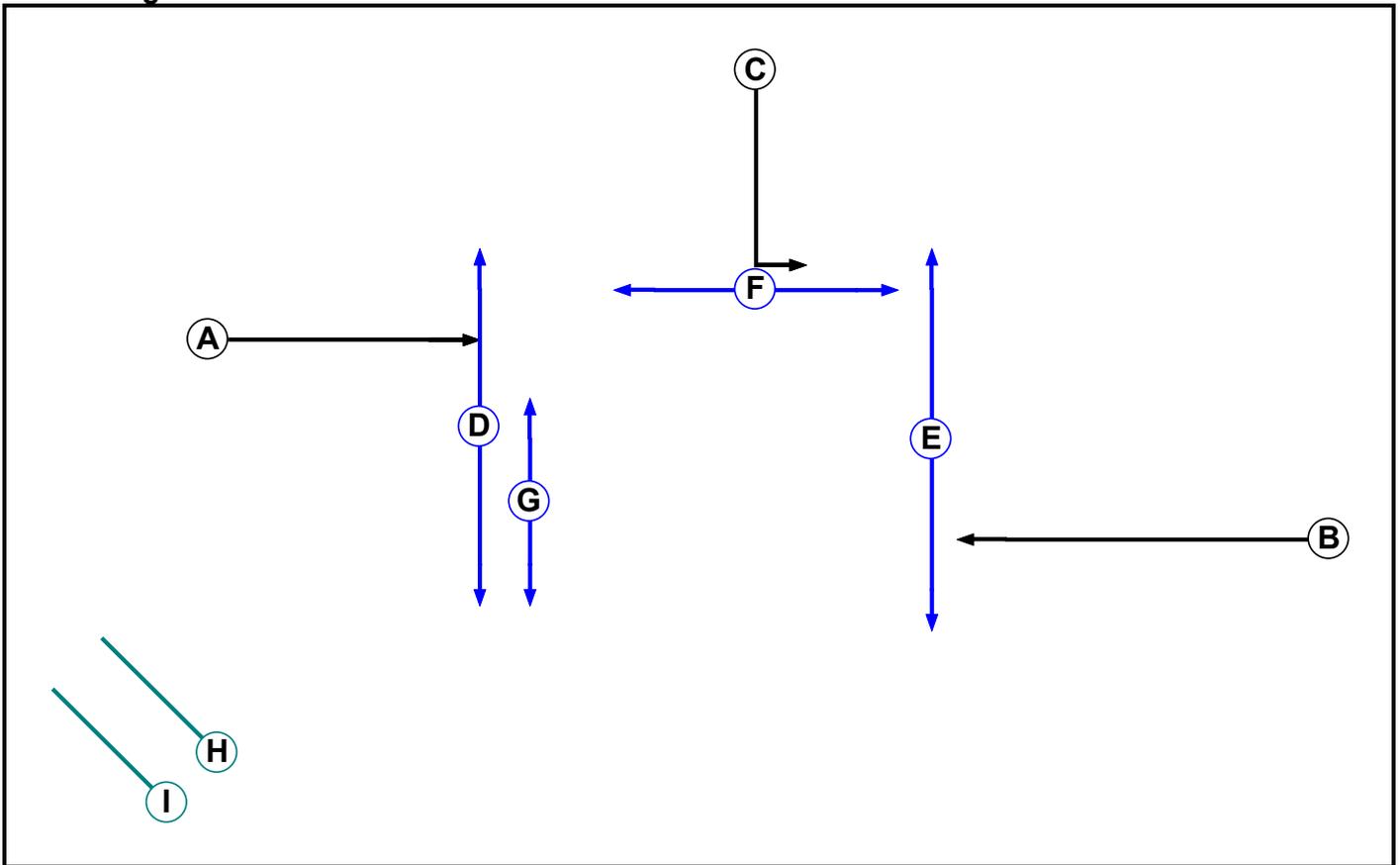
**User and Project Details**

<b>Project:</b>	
<b>Title:</b>	
<b>Location:</b>	
<b>Additional detail:</b>	
<b>File name:</b>	Station Street-Ellis Street.lsg3x
<b>Author:</b>	
<b>Company:</b>	
<b>Address:</b>	

**Network Layout Diagram**



**Phase Diagram**



**Phase Input Data**

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		7	7
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Dummy		7	7
I	Dummy		7	7

Full Input Data And Results

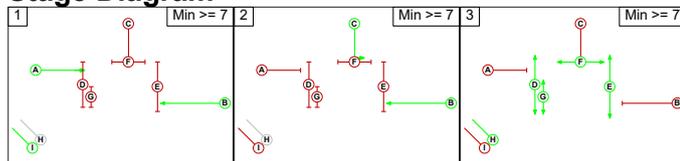
**Phase Intergrens Matrix**

Terminating Phase	Starting Phase									
		A	B	C	D	E	F	G	H	I
	A	-	5	7	7	-	7	-	-	-
	B	-	-	7	7	-	7	-	-	
	C	5	-	-	7	7	-	-	5	
	D	0	0	-	-	-	-	-	0	
	E	0	0	0	-	-	-	-	0	
	F	-	-	0	-	-	-	-	0	
	G	0	0	-	-	-	-	-	0	
	H	-	-	-	-	-	-	-	-	
I	-	-	5	7	7	7	7	-		

**Phases in Stage**

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

**Stage Diagram**



**Phase Delays**

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

**Prohibited Stage Change**

From Stage	To Stage			
	1	2	3	
	1	-	5	7
	2	5	-	7
3	2	2	-	

Full Input Data And Results

**Give-Way Lane Input Data**

**Junction: Unnamed Junction**

There are no Opposed Lanes in this Junction

Full Input Data And Results

**Lane Input Data**

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Station Street (East))	U	B	2	3	60.0	Geom	-	3.95	0.00	Y	Arm 4 Ahead	Inf
2/1 (Station Street (West))	U	A	2	3	60.0	Geom	-	3.49	0.00	Y	Arm 3 Ahead	Inf
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/2	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Ellis Street)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 3 Left	14.36

**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 BASE AM'	07:45	08:45	01:00	
2: '2025 BASE PM'	16:15	17:15	01:00	
3: '2025 BASE SAT'	11:15	12:15	01:00	
4: '2030 BASE AM'	07:45	08:45	01:00	
5: '2030 BASE PM'	16:15	17:15	01:00	
6: '2030 BASE SAT'	11:15	12:15	01:00	
7: '2030 DESIGN AM'	07:45	08:45	01:00	
8: '2030 DESIGN PM'	16:15	17:15	01:00	
9: '2030 DESIGN SAT'	11:15	12:15	01:00	

**Scenario 1: '2025 BASE AM'** (FG1: '2025 BASE AM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

Origin	Destination				Tot.
	A	B	C	Tot.	
A	0	480	0	480	
B	360	0	0	360	
C	192	0	0	192	
Tot.	552	480	0	1032	

Full Input Data And Results

**Traffic Lane Flows**

Lane	Scenario 1: 2025 BASE AM
<b>Junction: Unnamed Junction</b>	
1/1	480
2/1	360
3/1	276
3/2	276
4/1	480
5/1	192

**Lane Saturation Flows**

<b>Junction: Unnamed Junction</b>								
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 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 2: '2025 BASE PM'** (FG2: '2025 BASE PM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

		Destination			
		A	B	C	Tot.
Origin	A	0	432	0	432
	B	384	0	0	384
	C	249	0	0	249
	Tot.	633	432	0	1065

**Traffic Lane Flows**

Lane	Scenario 2: 2025 BASE PM
<b>Junction: Unnamed Junction</b>	
1/1	432
2/1	384
3/1	317
3/2	316
4/1	432
5/1	249

Full Input Data And Results

**Lane Saturation Flows**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 3: '2025 BASE SAT'** (FG3: '2025 BASE SAT', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	430	0	430
	B	355	0	0	355
	C	202	0	0	202
	Tot.	557	430	0	987

**Traffic Lane Flows**

Lane	Scenario 3: 2025 BASE SAT
<b>Junction: Unnamed Junction</b>	
1/1	430
2/1	355
3/1	279
3/2	278
4/1	430
5/1	202

Full Input Data And Results

**Lane Saturation Flows**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 4: '2030 BASE AM'** (FG4: '2030 BASE AM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	497	0	497
	B	374	0	0	374
	C	199	0	0	199
	Tot.	573	497	0	1070

**Traffic Lane Flows**

Lane	Scenario 4: 2030 BASE AM
<b>Junction: Unnamed Junction</b>	
1/1	497
2/1	374
3/1	287
3/2	286
4/1	497
5/1	199

Full Input Data And Results

**Lane Saturation Flows**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 5: '2030 BASE PM'** (FG5: '2030 BASE PM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	448	0	448
	B	398	0	0	398
	C	258	0	0	258
	Tot.	656	448	0	1104

**Traffic Lane Flows**

Lane	Scenario 5: 2030 BASE PM
<b>Junction: Unnamed Junction</b>	
1/1	448
2/1	398
3/1	328
3/2	328
4/1	448
5/1	258

Full Input Data And Results

**Lane Saturation Flows**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 6: '2030 BASE SAT'** (FG6: '2030 BASE SAT', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	447	0	447
	B	369	0	0	369
	C	209	0	0	209
	Tot.	578	447	0	1025

**Traffic Lane Flows**

Lane	Scenario 6: 2030 BASE SAT
<b>Junction: Unnamed Junction</b>	
1/1	447
2/1	369
3/1	290
3/2	288
4/1	447
5/1	209

Full Input Data And Results

**Lane Saturation Flows**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 7: '2030 DESIGN AM'** (FG7: '2030 DESIGN AM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	510	0	510
	B	387	0	0	387
	C	199	0	0	199
	Tot.	586	510	0	1096

**Traffic Lane Flows**

Lane	Scenario 7: 2030 DESIGN AM
<b>Junction: Unnamed Junction</b>	
1/1	510
2/1	387
3/1	294
3/2	292
4/1	510
5/1	199

Full Input Data And Results

**Lane Saturation Flows**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 8: '2030 DESIGN PM'** (FG8: '2030 DESIGN PM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	466	0	466
	B	416	0	0	416
	C	258	0	0	258
	Tot.	674	466	0	1140

**Traffic Lane Flows**

Lane	Scenario 8: 2030 DESIGN PM
<b>Junction: Unnamed Junction</b>	
1/1	466
2/1	416
3/1	337
3/2	337
4/1	466
5/1	258

Full Input Data And Results

**Lane Saturation Flows**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 9: '2030 DESIGN SAT'** (FG9: '2030 DESIGN SAT', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	460	0	460
	B	380	0	0	380
	C	209	0	0	209
	Tot.	589	460	0	1049

**Traffic Lane Flows**

Lane	Scenario 9: 2030 DESIGN SAT
<b>Junction: Unnamed Junction</b>	
1/1	460
2/1	380
3/1	295
3/2	294
4/1	460
5/1	209

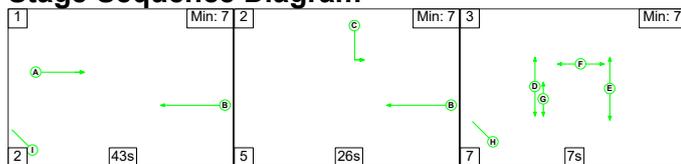
Full Input Data And Results

**Lane Saturation Flows**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Station Street (East))	3.95	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2010	2010
2/1 (Station Street (West))	3.49	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1964	1964
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Ellis Street)	3.25	0.00	Y	Arm 3 Left	14.36	100.0 %	1757	1757

**Scenario 1: '2025 BASE AM'** (FG1: '2025 BASE AM', Plan 1: 'Network Control Plan 1')

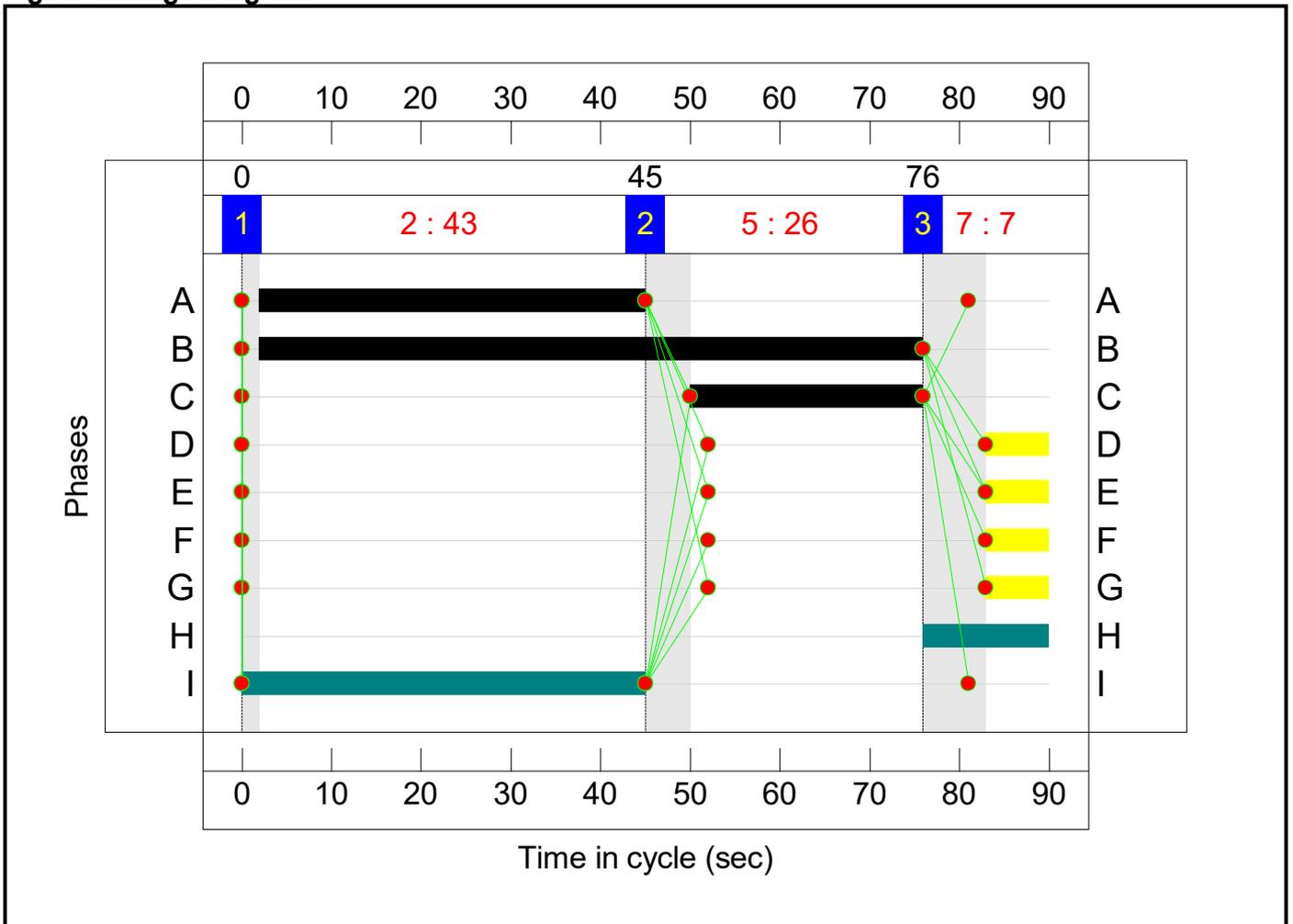
**Stage Sequence Diagram**



**Stage Timings**

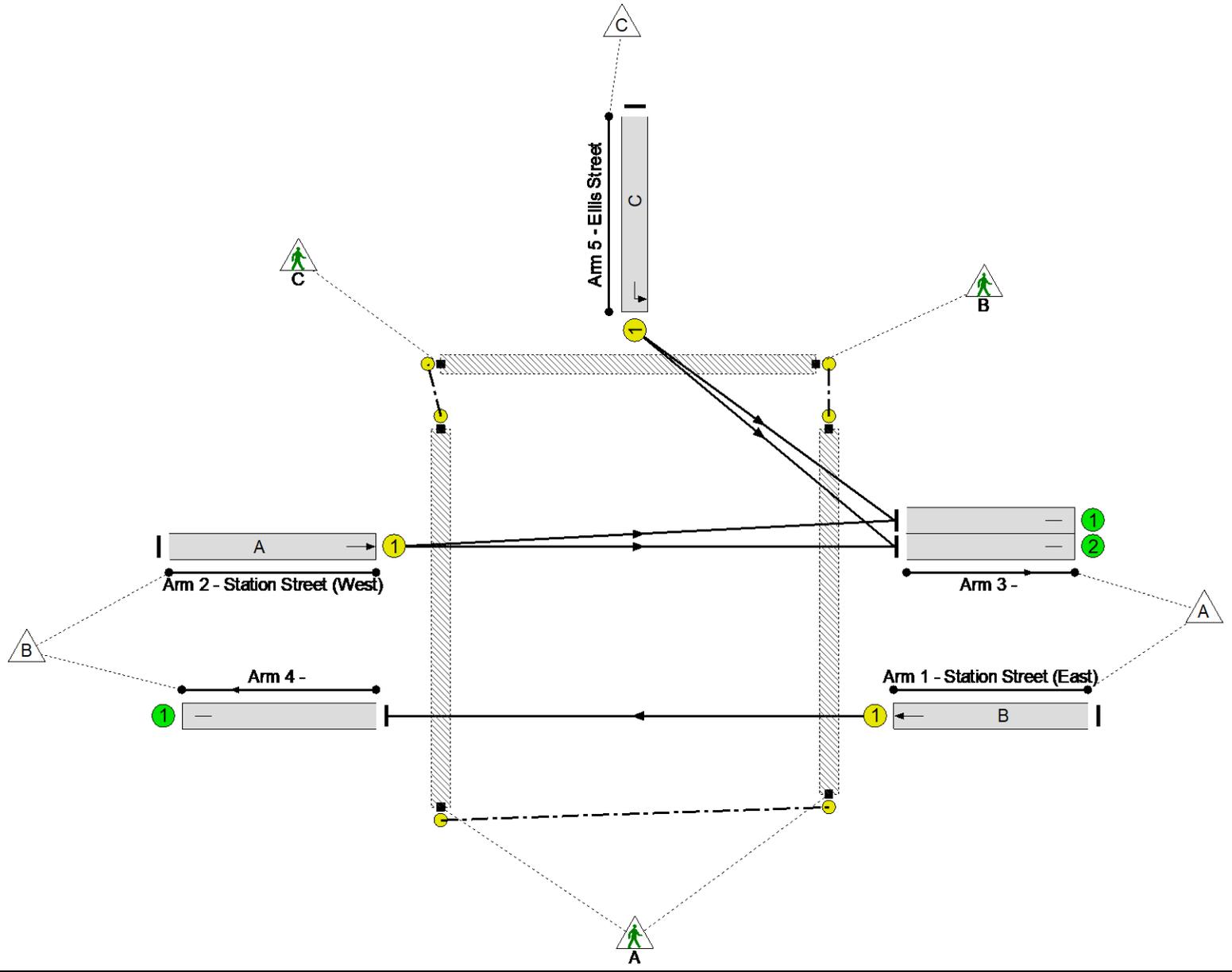
Stage	1	2	3
Duration	43	26	7
Change Point	0	45	76

### Signal Timings Diagram



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

Unnamed Junction  
PRC: 140.0 %  
Total Traffic Delay: 3.8 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>37.5%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>37.5%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	480	2010	1675	28.7%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	43	-	360	1964	960	37.5%
3/1		U	N/A	N/A	-		-	-	-	276	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	276	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	480	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	26	-	192	1757	527	36.4%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%

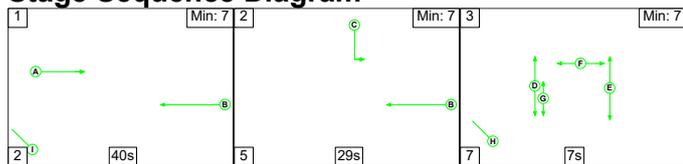
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	3.0	0.8	0.0	3.8	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.0	0.8	0.0	3.8	-	-	-	-
1/1	480	480	-	-	-	0.2	0.2	-	0.4	3.2	2.5	0.2	2.7
2/1	360	360	-	-	-	1.4	0.3	-	1.7	17.4	5.6	0.3	5.9
3/1	276	276	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	276	276	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	480	480	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	192	192	-	-	-	1.3	0.3	-	1.6	30.1	3.7	0.3	4.0
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
C1			PRC for Signalled Lanes (%): 140.0			Total Delay for Signalled Lanes (pcuHr): 3.77			Cycle Time (s): 90				
			PRC Over All Lanes (%): 140.0			Total Delay Over All Lanes(pcuHr): 3.77							

Full Input Data And Results

Scenario 2: '2025 BASE PM' (FG2: '2025 BASE PM', Plan 1: 'Network Control Plan 1')

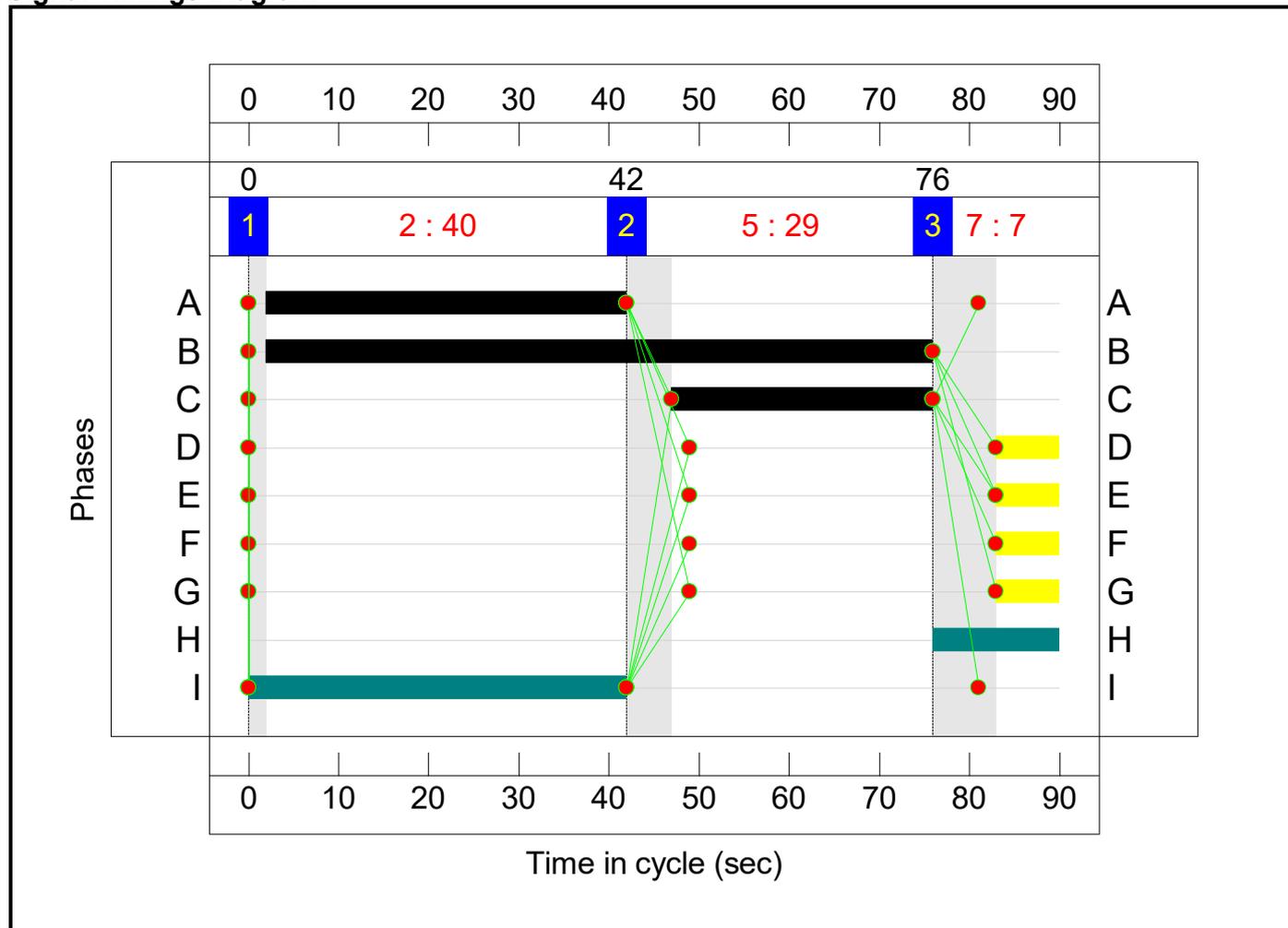
Stage Sequence Diagram



Stage Timings

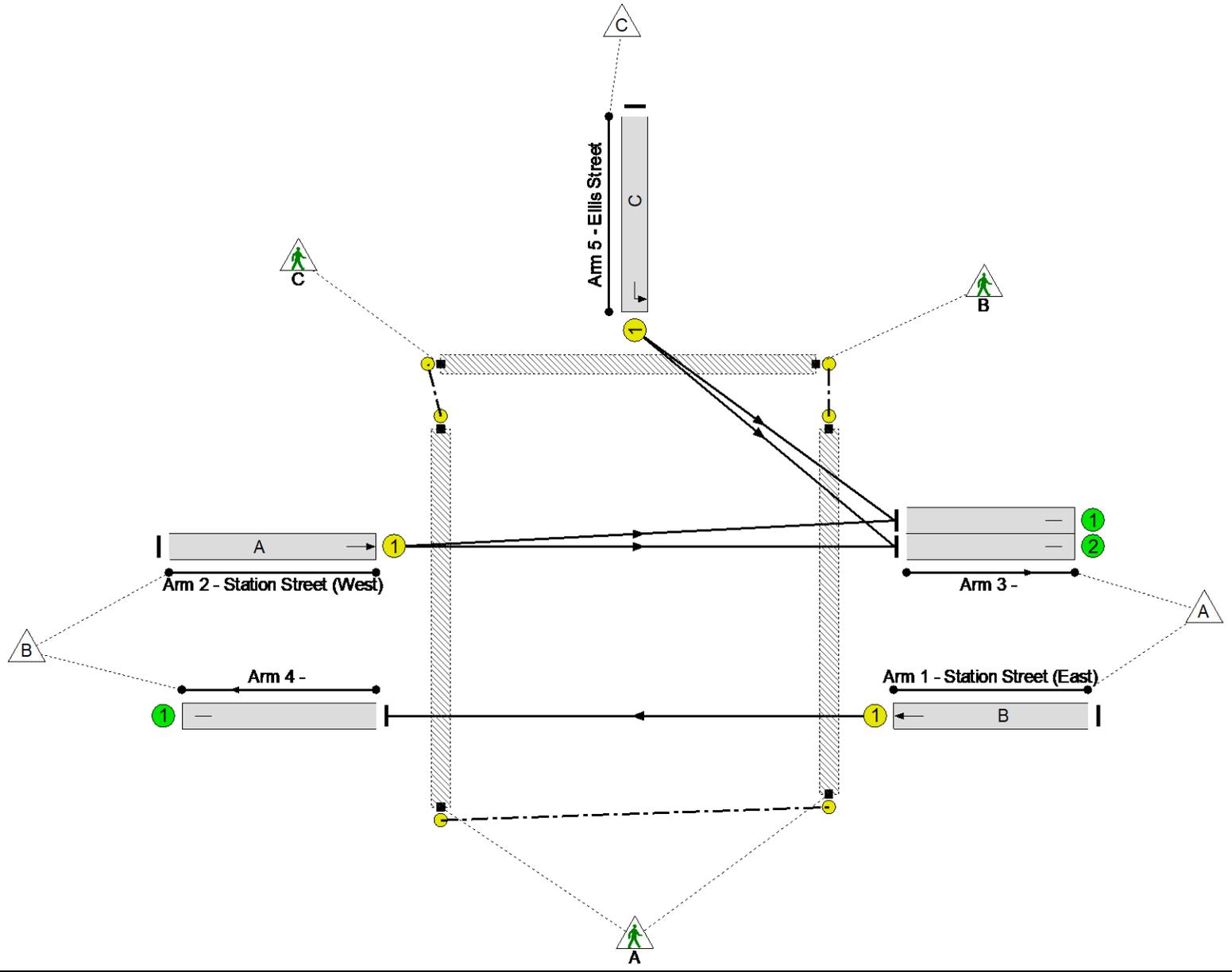
Stage	1	2	3
Duration	40	29	7
Change Point	0	42	76

Signal Timings Diagram



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

Unnamed Junction  
PRC: 109.7 %  
Total Traffic Delay: 4.5 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>42.9%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>42.9%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	432	2010	1675	25.8%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	40	-	384	1964	895	42.9%
3/1		U	N/A	N/A	-		-	-	-	317	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	316	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	432	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	29	-	249	1757	586	42.5%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%

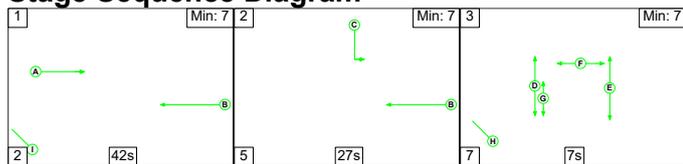
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	3.6	0.9	0.0	4.5	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.6	0.9	0.0	4.5	-	-	-	-
1/1	432	432	-	-	-	0.2	0.2	-	0.4	3.0	2.3	0.2	2.5
2/1	384	384	-	-	-	1.8	0.4	-	2.1	20.1	6.4	0.4	6.8
3/1	317	317	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	316	316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	432	432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	249	249	-	-	-	1.6	0.4	-	2.0	28.6	4.8	0.4	5.1
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
<p>C1      PRC for Signalled Lanes (%): 109.7      Total Delay for Signalled Lanes (pcuHr): 4.49      Cycle Time (s): 90  PRC Over All Lanes (%): 109.7      Total Delay Over All Lanes(pcuHr): 4.49</p>													

Full Input Data And Results

Scenario 3: '2025 BASE SAT' (FG3: '2025 BASE SAT', Plan 1: 'Network Control Plan 1')

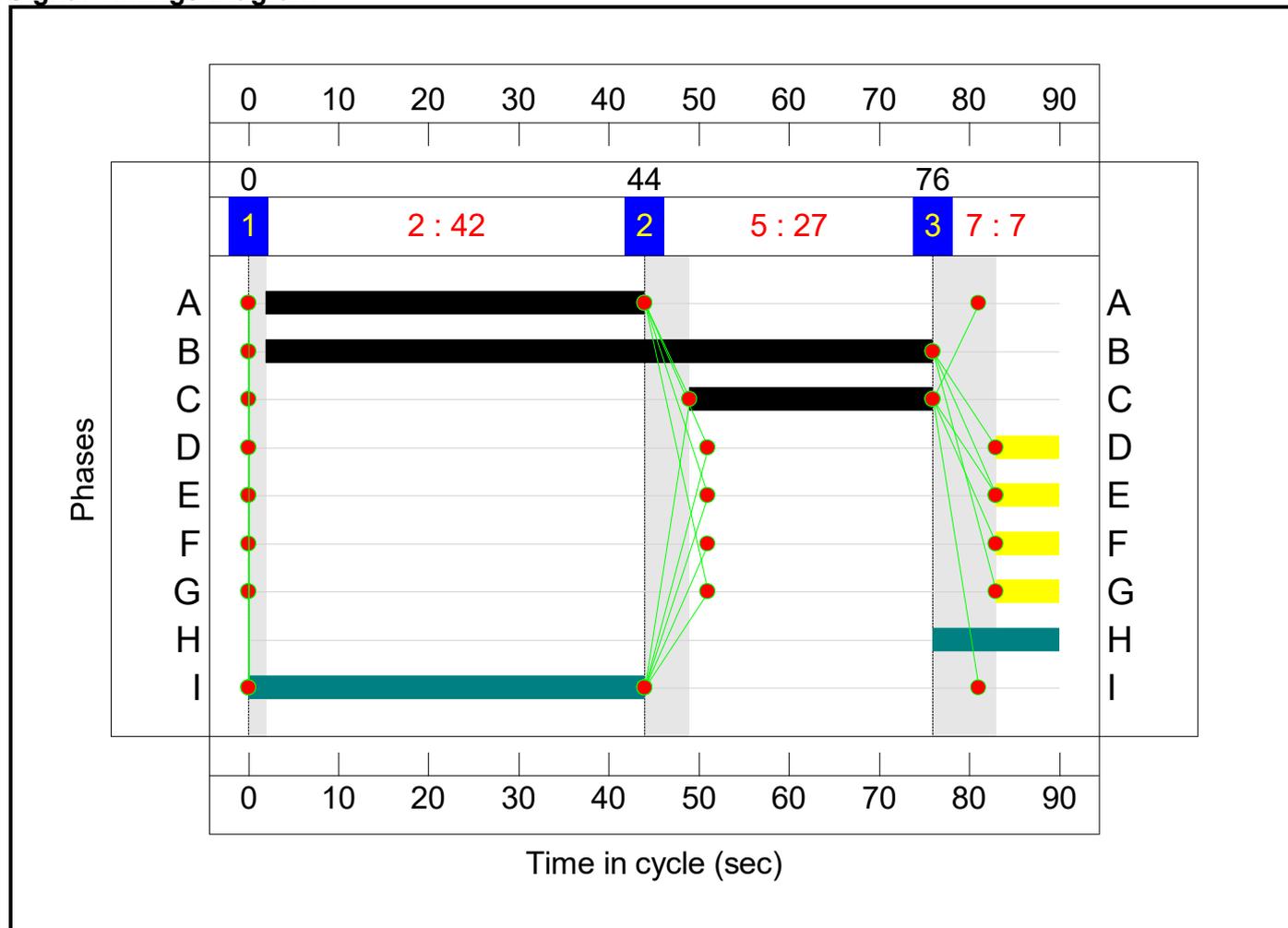
Stage Sequence Diagram



Stage Timings

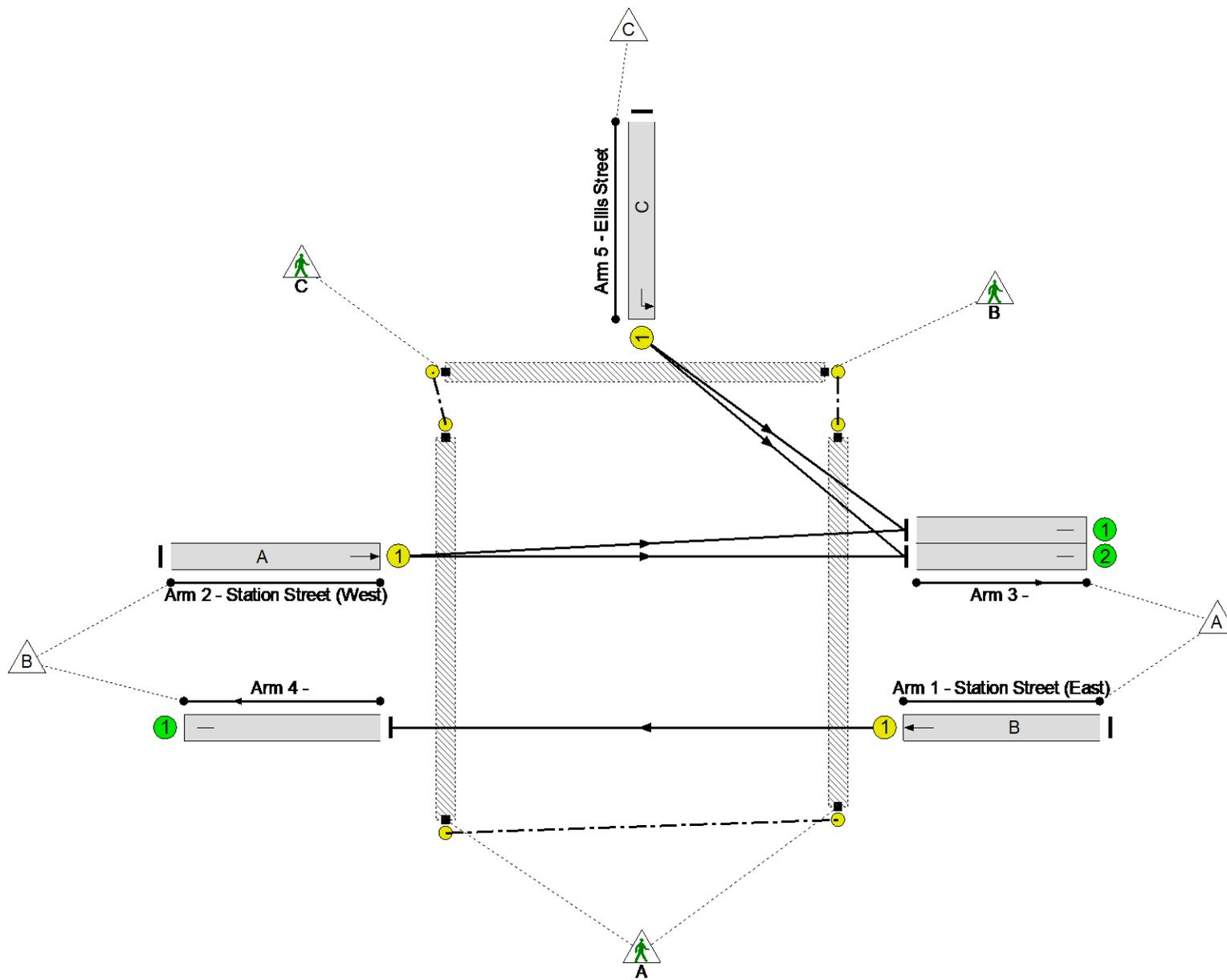
Stage	1	2	3
Duration	42	27	7
Change Point	0	44	76

Signal Timings Diagram



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

Unnamed Junction  
PRC: 137.9 %  
Total Traffic Delay: 3.8 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>37.8%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>37.8%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	430	2010	1675	25.7%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	42	-	355	1964	938	37.8%
3/1		U	N/A	N/A	-		-	-	-	279	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	278	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	430	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	27	-	202	1757	547	37.0%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%

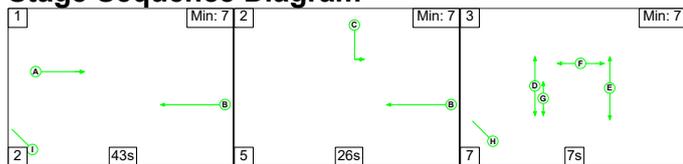
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	3.0	0.8	0.0	3.8	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.0	0.8	0.0	3.8	-	-	-	-
1/1	430	430	-	-	-	0.2	0.2	-	0.4	3.0	2.3	0.2	2.4
2/1	355	355	-	-	-	1.5	0.3	-	1.8	18.1	5.6	0.3	5.9
3/1	279	279	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	278	278	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	430	430	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	202	202	-	-	-	1.4	0.3	-	1.6	29.3	3.9	0.3	4.2
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
C1			PRC for Signalled Lanes (%): 137.9			Total Delay for Signalled Lanes (pcuHr): 3.79			Cycle Time (s): 90				
			PRC Over All Lanes (%): 137.9			Total Delay Over All Lanes(pcuHr): 3.79							

Full Input Data And Results

Scenario 4: '2030 BASE AM' (FG4: '2030 BASE AM', Plan 1: 'Network Control Plan 1')

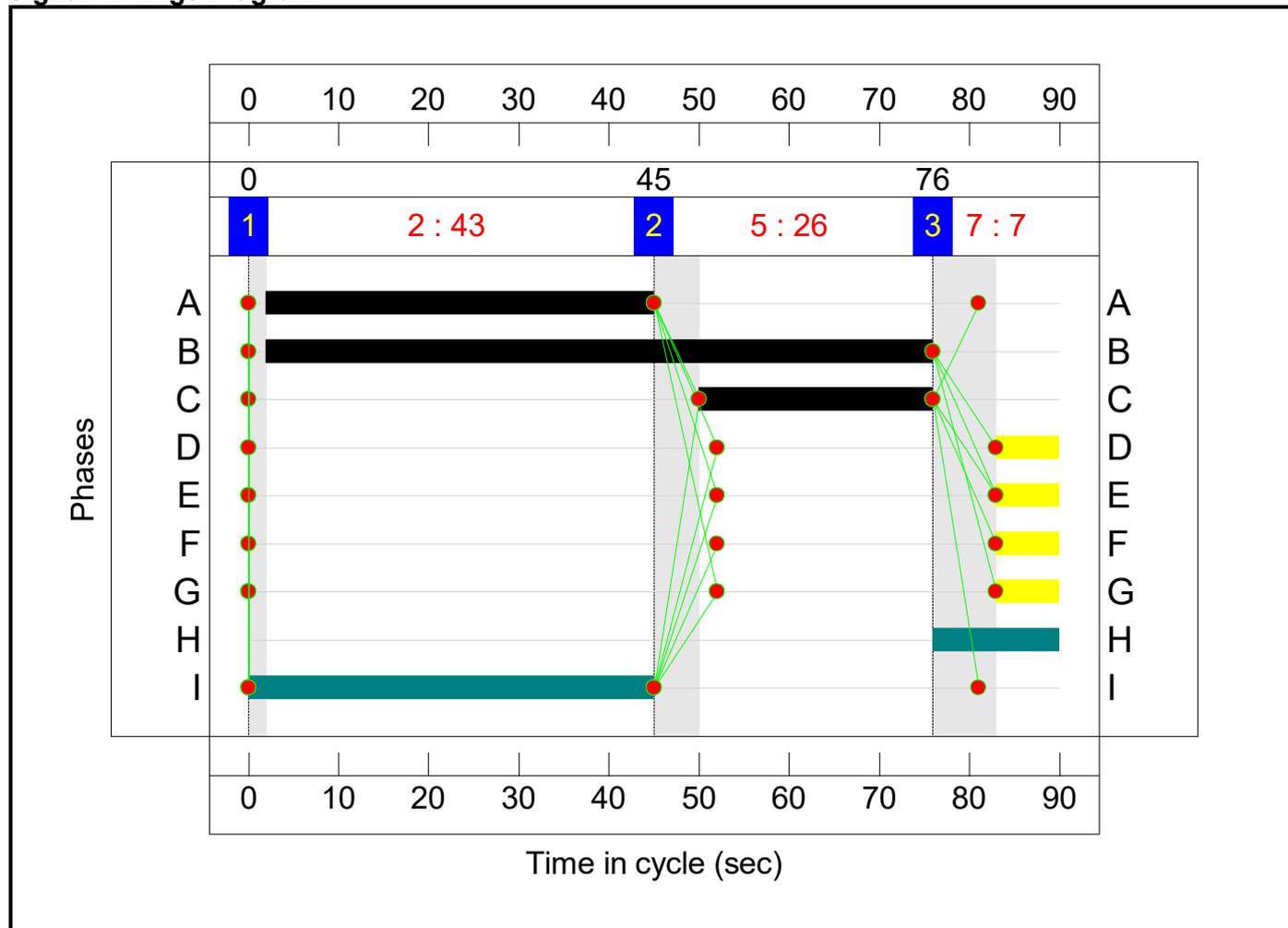
Stage Sequence Diagram



Stage Timings

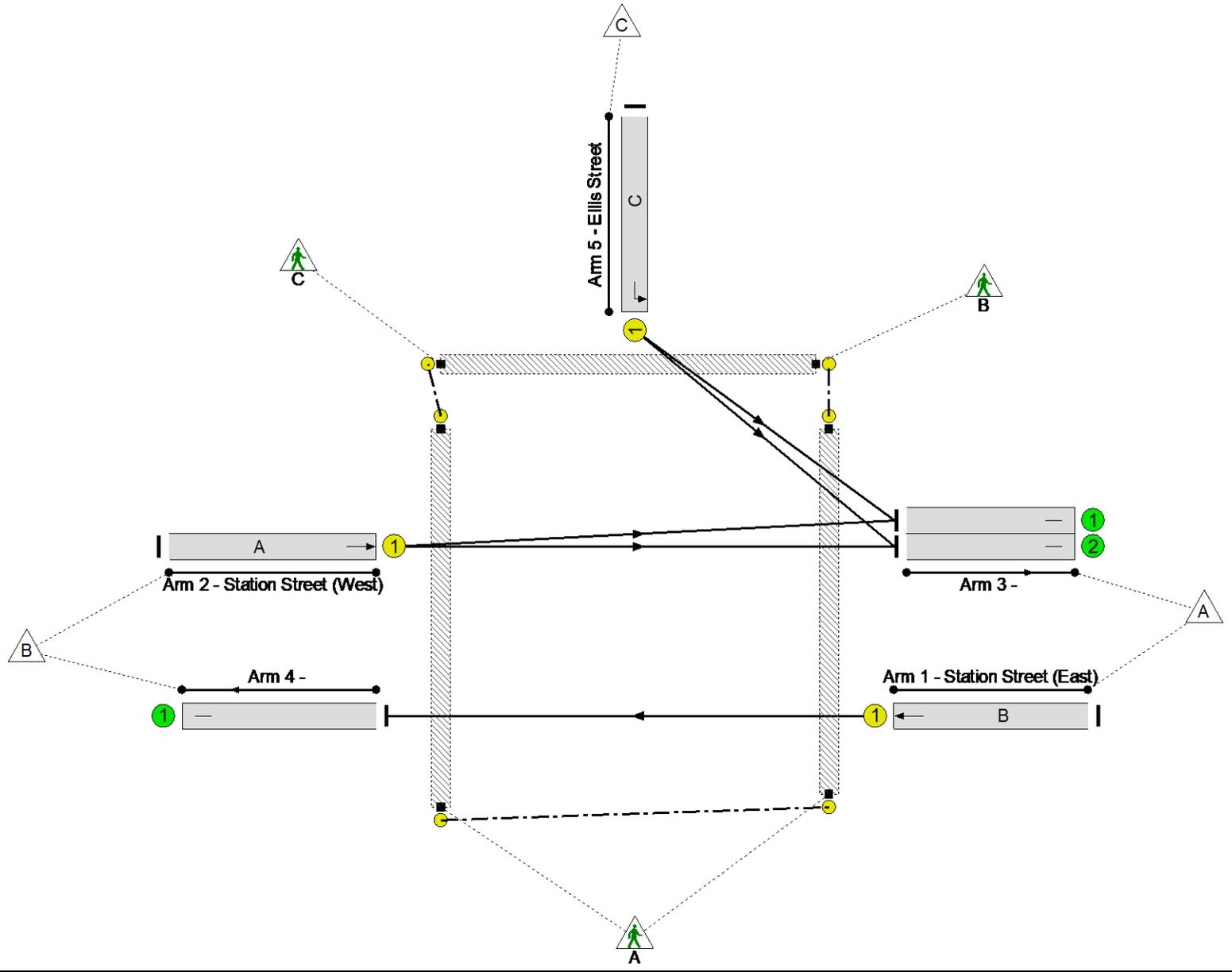
Stage	1	2	3
Duration	43	26	7
Change Point	0	45	76

Signal Timings Diagram



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

Unnamed Junction  
PRC: 131.1 %  
Total Traffic Delay: 3.9 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>39.0%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>39.0%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	497	2010	1675	29.7%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	43	-	374	1964	960	39.0%
3/1		U	N/A	N/A	-		-	-	-	287	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	286	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	497	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	26	-	199	1757	527	37.8%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%

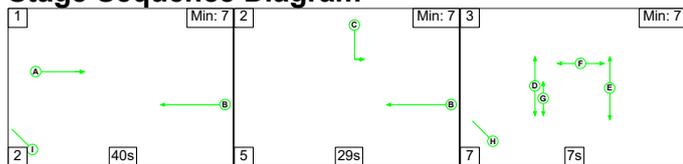
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	3.1	0.8	0.0	3.9	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.1	0.8	0.0	3.9	-	-	-	-
1/1	497	497	-	-	-	0.2	0.2	-	0.4	3.2	2.6	0.2	2.8
2/1	374	374	-	-	-	1.5	0.3	-	1.8	17.6	5.8	0.3	6.1
3/1	287	287	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	286	286	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	497	497	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	199	199	-	-	-	1.4	0.3	-	1.7	30.3	3.9	0.3	4.2
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
C1			PRC for Signalled Lanes (%): 131.1			Total Delay for Signalled Lanes (pcuHr): 3.95			Cycle Time (s): 90				
			PRC Over All Lanes (%): 131.1			Total Delay Over All Lanes(pcuHr): 3.95							

Full Input Data And Results

Scenario 5: '2030 BASE PM' (FG5: '2030 BASE PM', Plan 1: 'Network Control Plan 1')

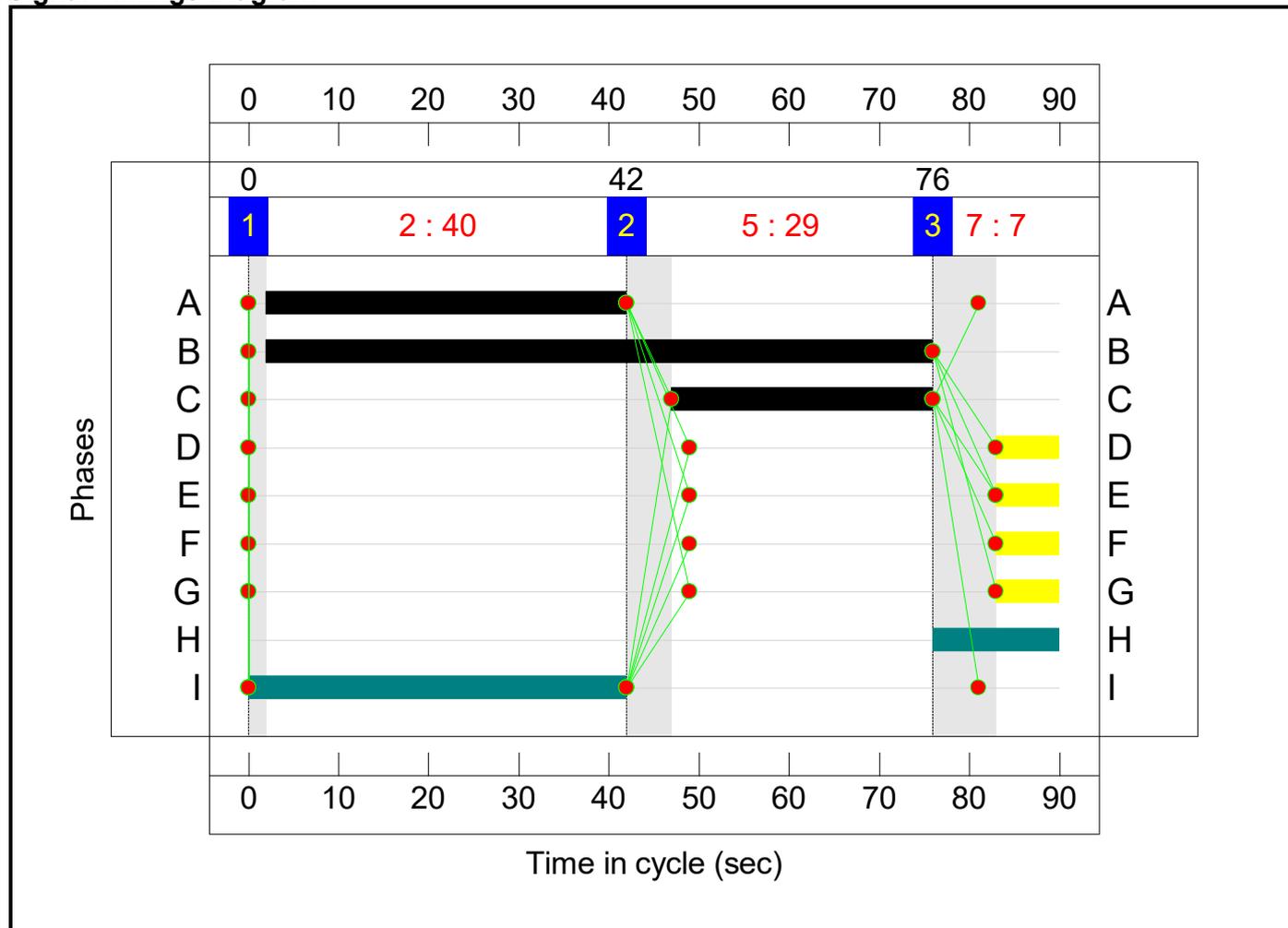
Stage Sequence Diagram



Stage Timings

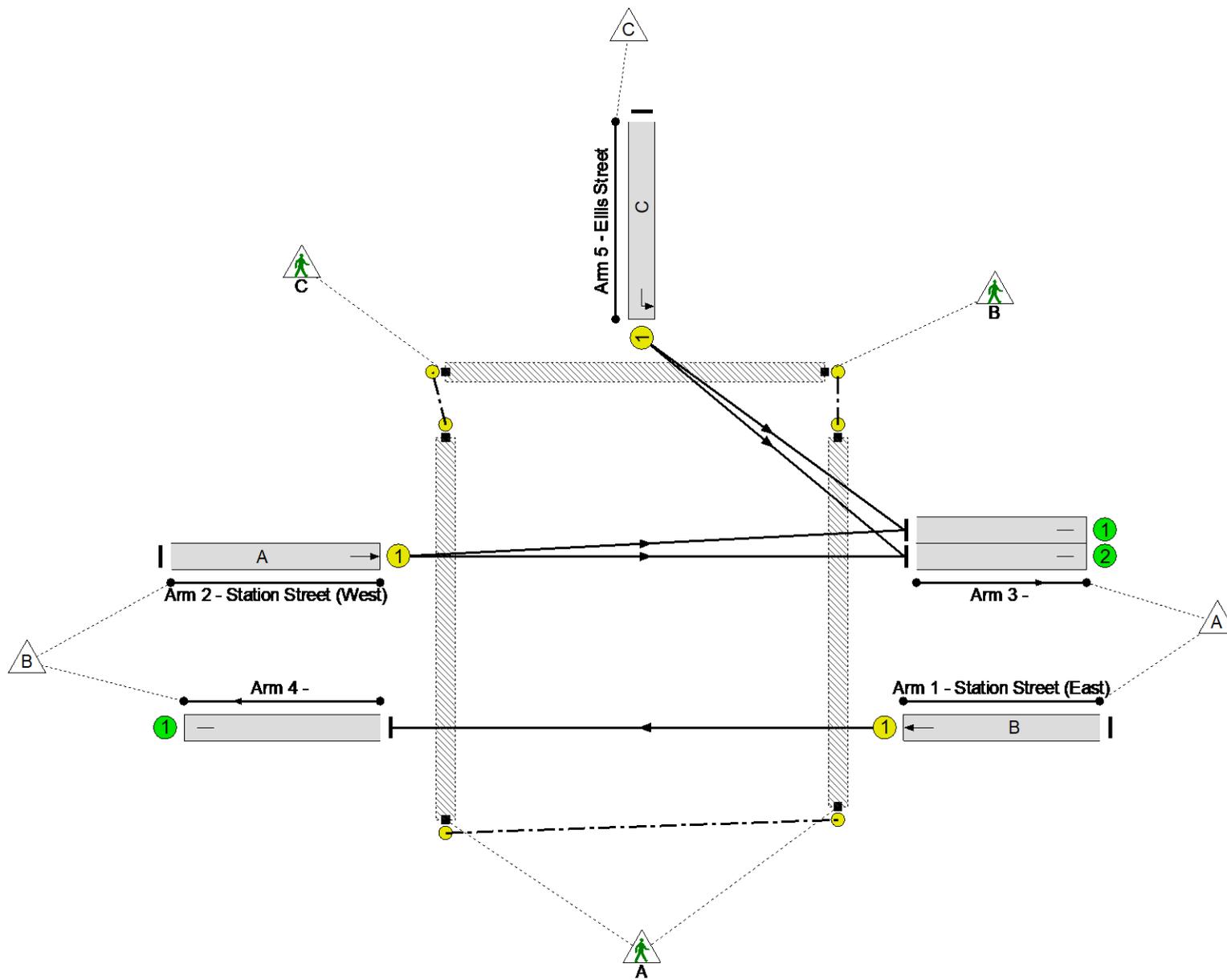
Stage	1	2	3
Duration	40	29	7
Change Point	0	42	76

Signal Timings Diagram



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

Unnamed Junction  
PRC: 102.3 %  
Total Traffic Delay: 4.7 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>44.5%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>44.5%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	448	2010	1675	26.7%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	40	-	398	1964	895	44.5%
3/1		U	N/A	N/A	-		-	-	-	328	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	328	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	448	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	29	-	258	1757	586	44.1%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%

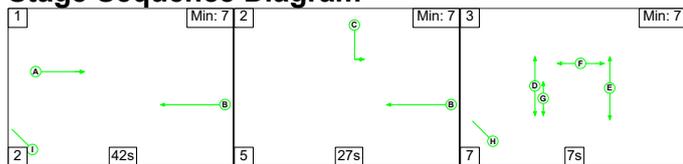
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	3.7	1.0	0.0	4.7	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.7	1.0	0.0	4.7	-	-	-	-
1/1	448	448	-	-	-	0.2	0.2	-	0.4	3.1	2.4	0.2	2.5
2/1	398	398	-	-	-	1.9	0.4	-	2.3	20.4	6.7	0.4	7.1
3/1	328	328	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	328	328	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	448	448	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	258	258	-	-	-	1.7	0.4	-	2.1	28.9	5.0	0.4	5.4
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
<p style="text-align: center;">C1      PRC for Signalled Lanes (%): 102.3      Total Delay for Signalled Lanes (pcuHr): 4.71      Cycle Time (s): 90                      PRC Over All Lanes (%): 102.3      Total Delay Over All Lanes(pcuHr): 4.71</p>													

Full Input Data And Results

Scenario 6: '2030 BASE SAT' (FG6: '2030 BASE SAT', Plan 1: 'Network Control Plan 1')

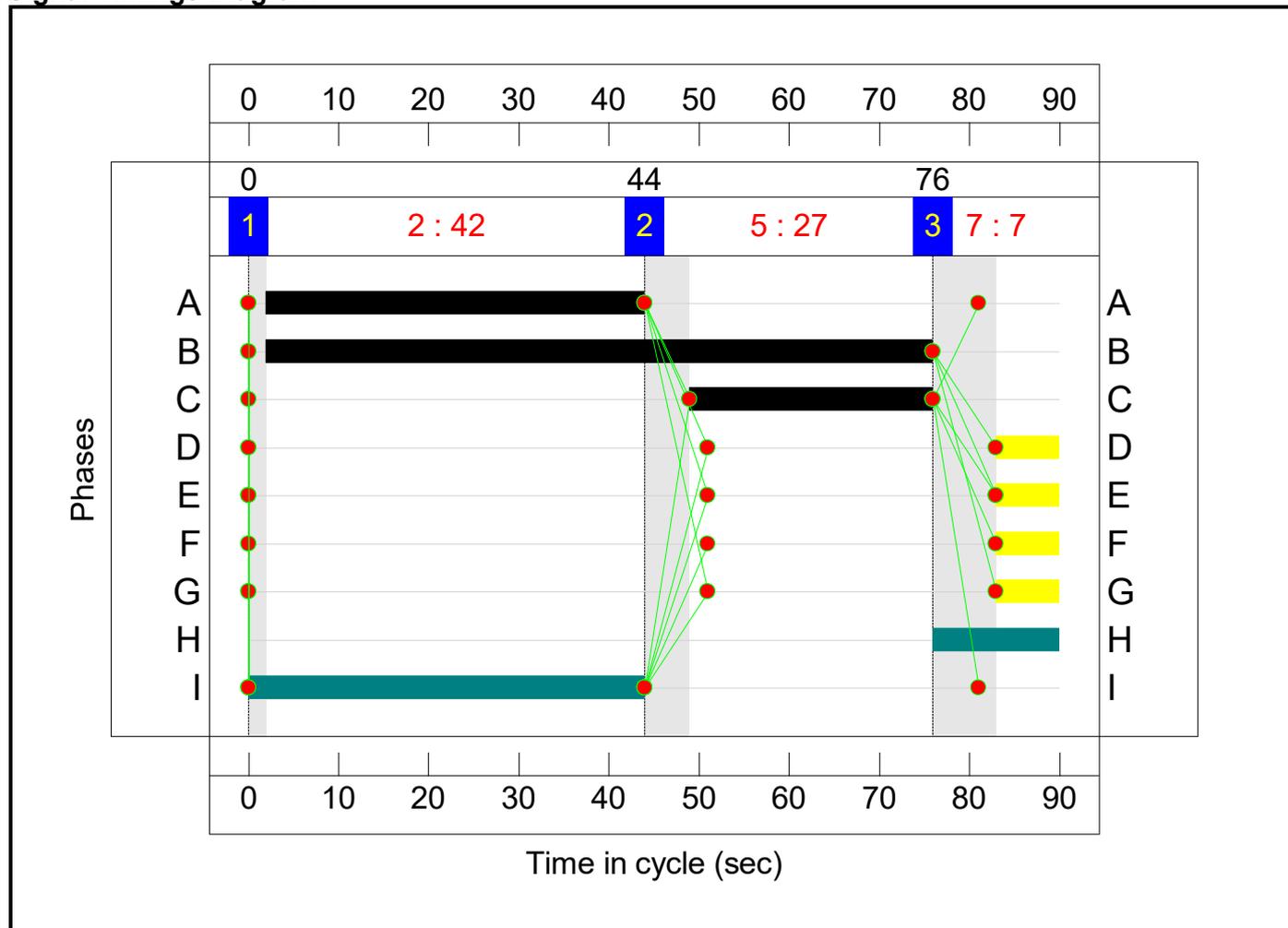
Stage Sequence Diagram



Stage Timings

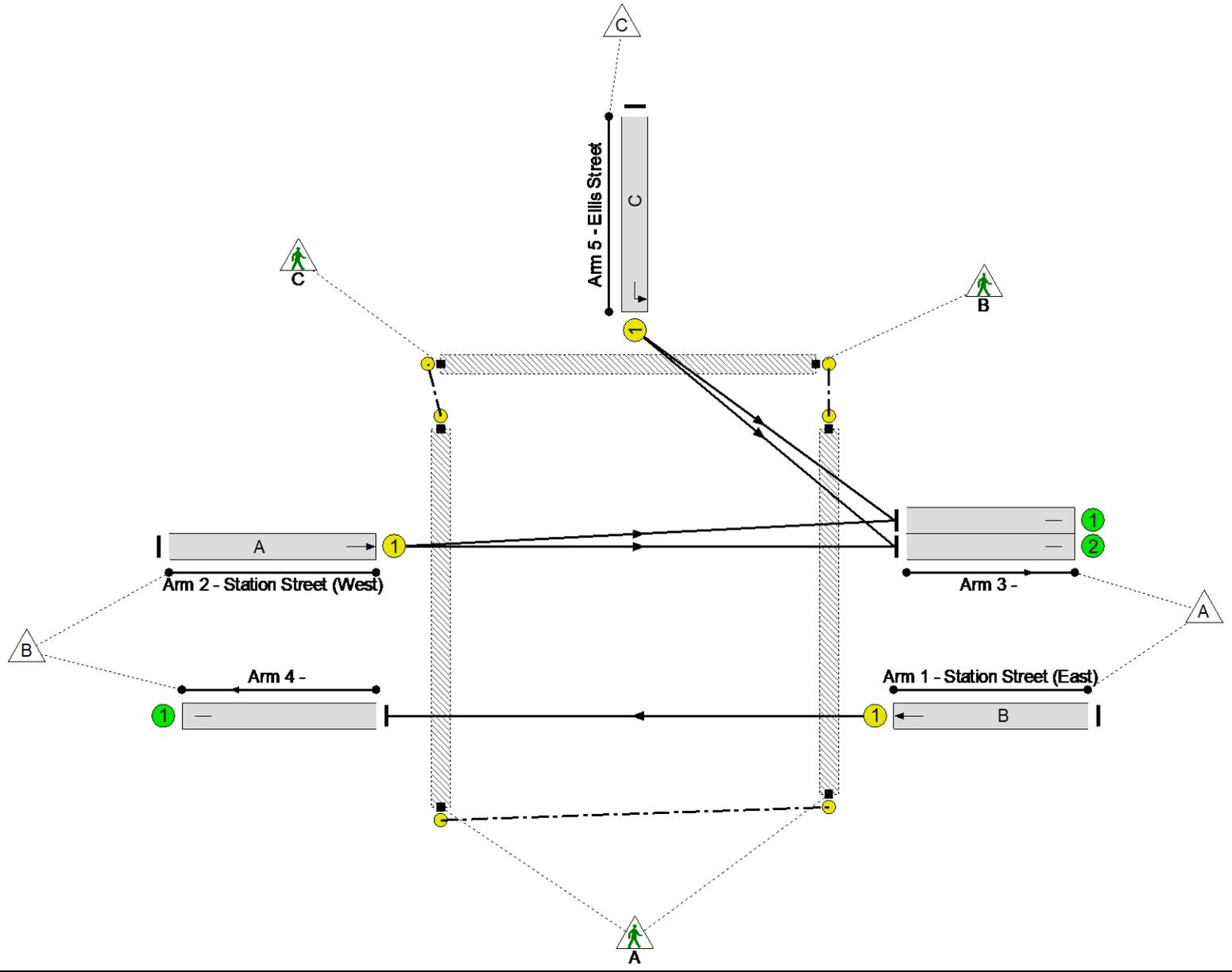
Stage	1	2	3
Duration	42	27	7
Change Point	0	44	76

Signal Timings Diagram



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

Unnamed Junction  
PRC: 128.9 %  
Total Traffic Delay: 4.0 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>39.3%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>39.3%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	447	2010	1675	26.7%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	42	-	369	1964	938	39.3%
3/1		U	N/A	N/A	-		-	-	-	290	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	288	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	447	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	27	-	209	1757	547	38.2%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%

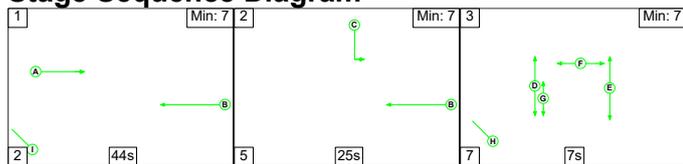
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	3.2	0.8	0.0	4.0	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.2	0.8	0.0	4.0	-	-	-	-
1/1	447	447	-	-	-	0.2	0.2	-	0.4	3.1	2.4	0.2	2.5
2/1	369	369	-	-	-	1.5	0.3	-	1.9	18.3	5.8	0.3	6.2
3/1	290	290	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	288	288	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	447	447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	209	209	-	-	-	1.4	0.3	-	1.7	29.6	4.1	0.3	4.4
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
<p style="text-align: center;">C1      PRC for Signalled Lanes (%): 128.9      Total Delay for Signalled Lanes (pcuHr): 3.97      Cycle Time (s): 90                      PRC Over All Lanes (%): 128.9      Total Delay Over All Lanes(pcuHr): 3.97</p>													

Full Input Data And Results

Scenario 7: '2030 DESIGN AM' (FG7: '2030 DESIGN AM', Plan 1: 'Network Control Plan 1')

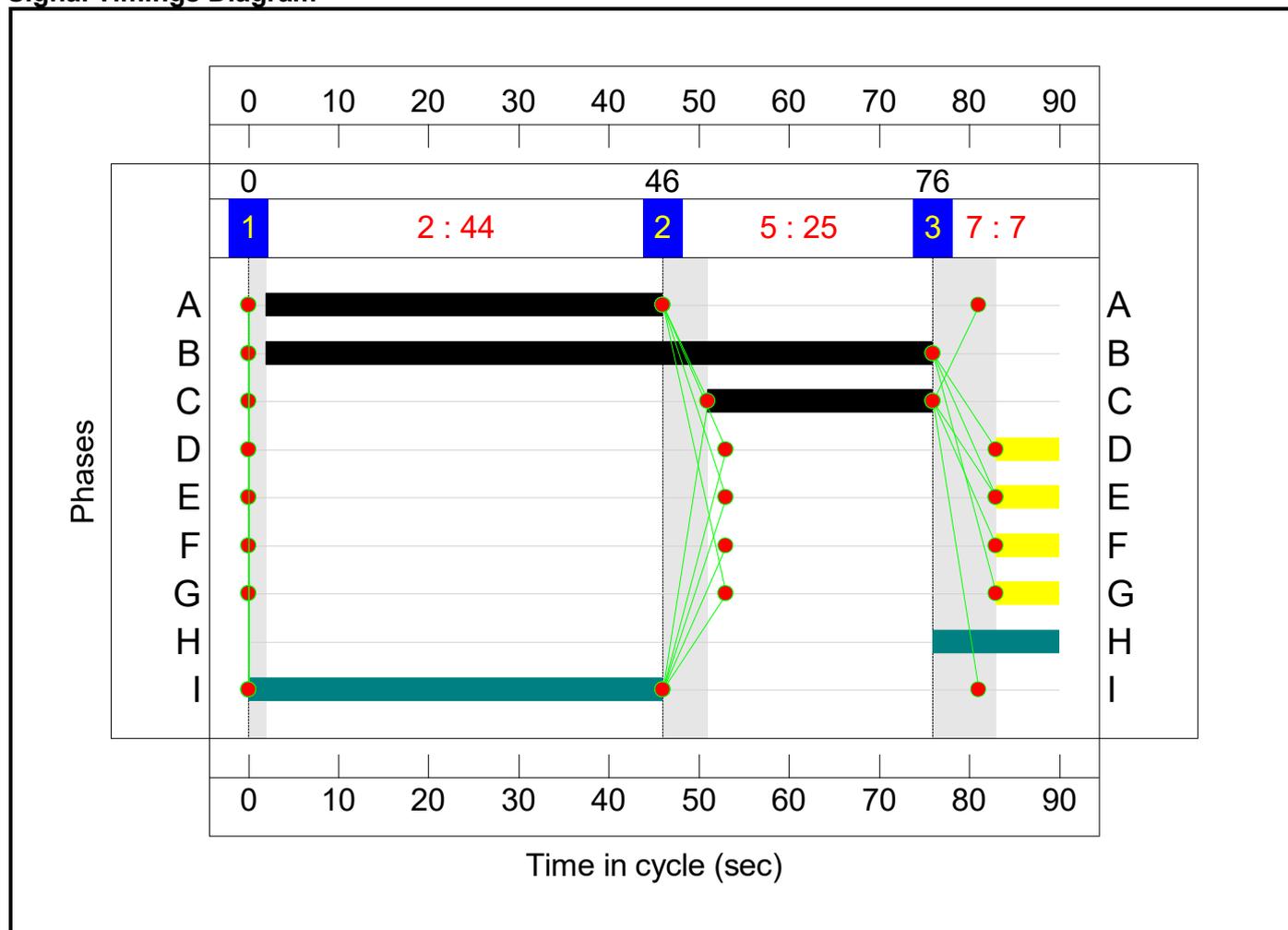
Stage Sequence Diagram



Stage Timings

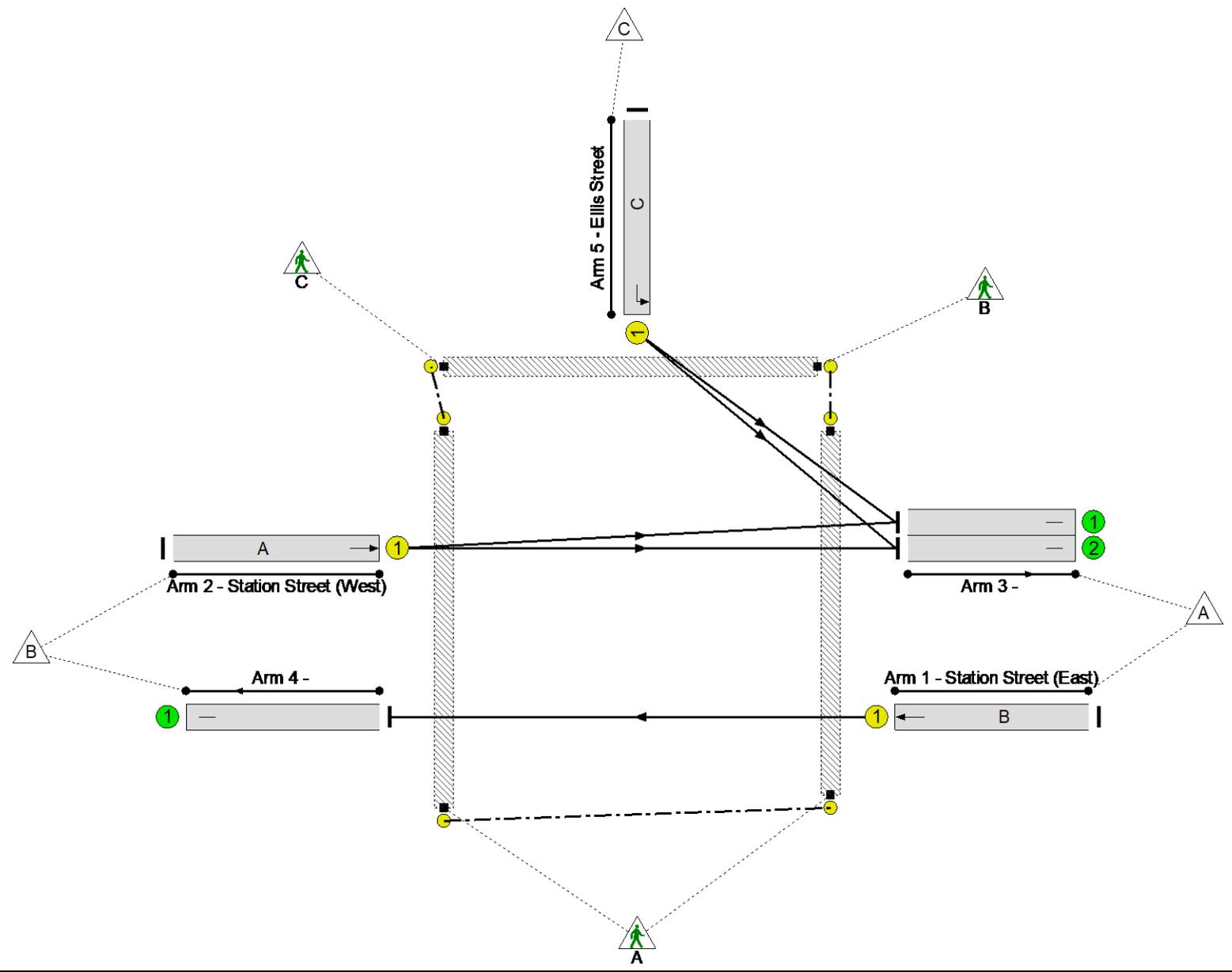
Stage	1	2	3
Duration	44	25	7
Change Point	0	46	76

Signal Timings Diagram



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

Unnamed Junction  
PRC: 128.4 %  
Total Traffic Delay: 4.0 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>39.4%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>39.4%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	510	2010	1675	30.4%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	44	-	387	1964	982	39.4%
3/1		U	N/A	N/A	-		-	-	-	294	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	292	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	510	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	25	-	199	1757	508	39.2%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%

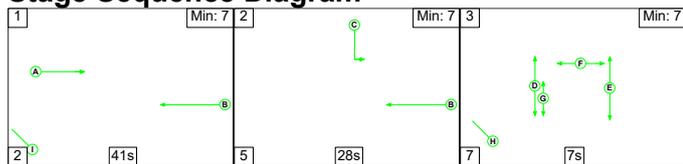
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	3.2	0.9	0.0	4.0	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.2	0.9	0.0	4.0	-	-	-	-
1/1	510	510	-	-	-	0.2	0.2	-	0.5	3.2	2.8	0.2	3.1
2/1	387	387	-	-	-	1.5	0.3	-	1.8	17.0	6.0	0.3	6.3
3/1	294	294	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	292	292	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	510	510	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	199	199	-	-	-	1.4	0.3	-	1.7	31.5	4.0	0.3	4.3
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
C1			PRC for Signalled Lanes (%): 128.4			Total Delay for Signalled Lanes (pcuHr): 4.03			Cycle Time (s): 90				
			PRC Over All Lanes (%): 128.4			Total Delay Over All Lanes(pcuHr): 4.03							

Full Input Data And Results

Scenario 8: '2030 DESIGN PM' (FG8: '2030 DESIGN PM', Plan 1: 'Network Control Plan 1')

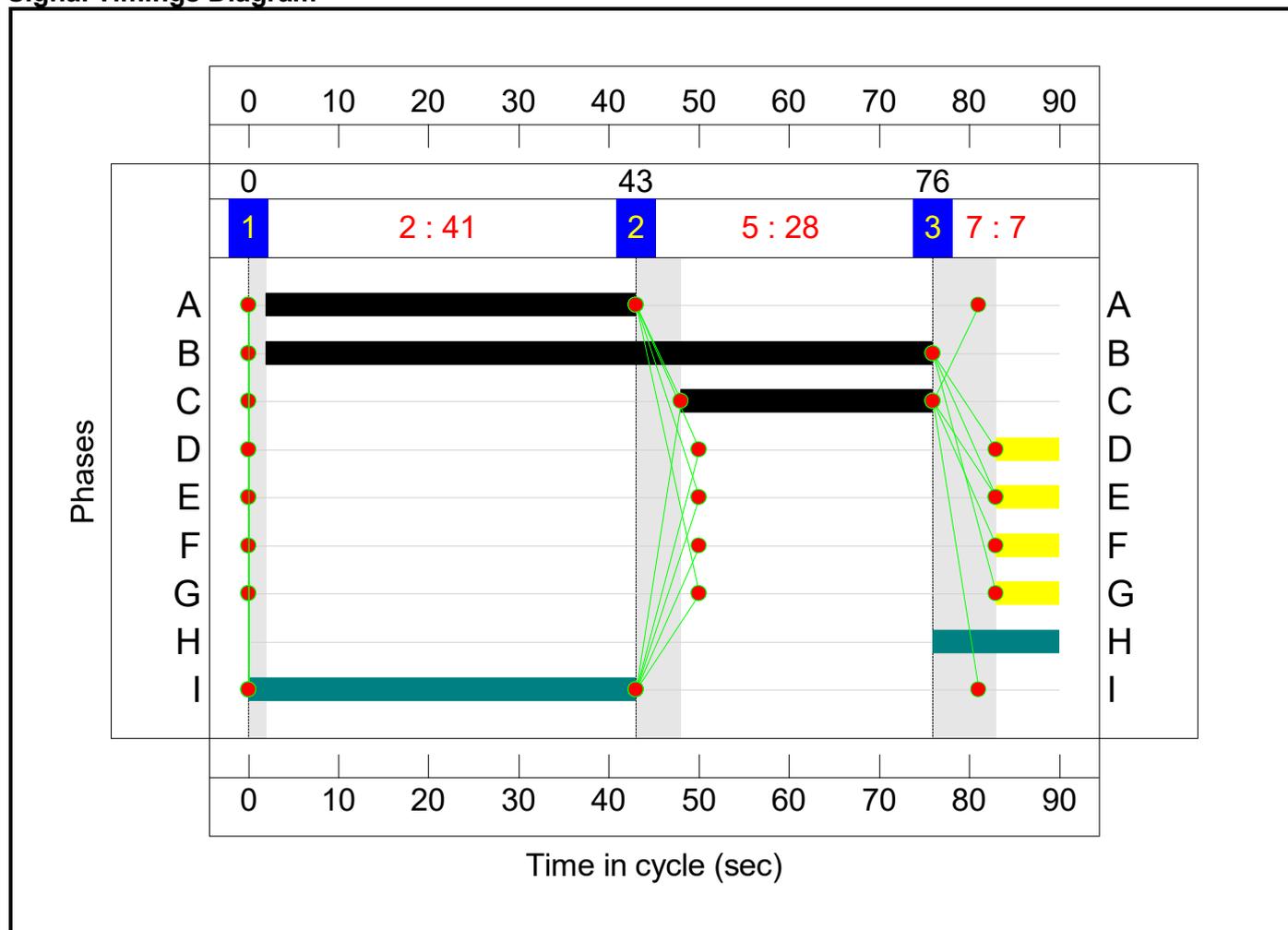
Stage Sequence Diagram



Stage Timings

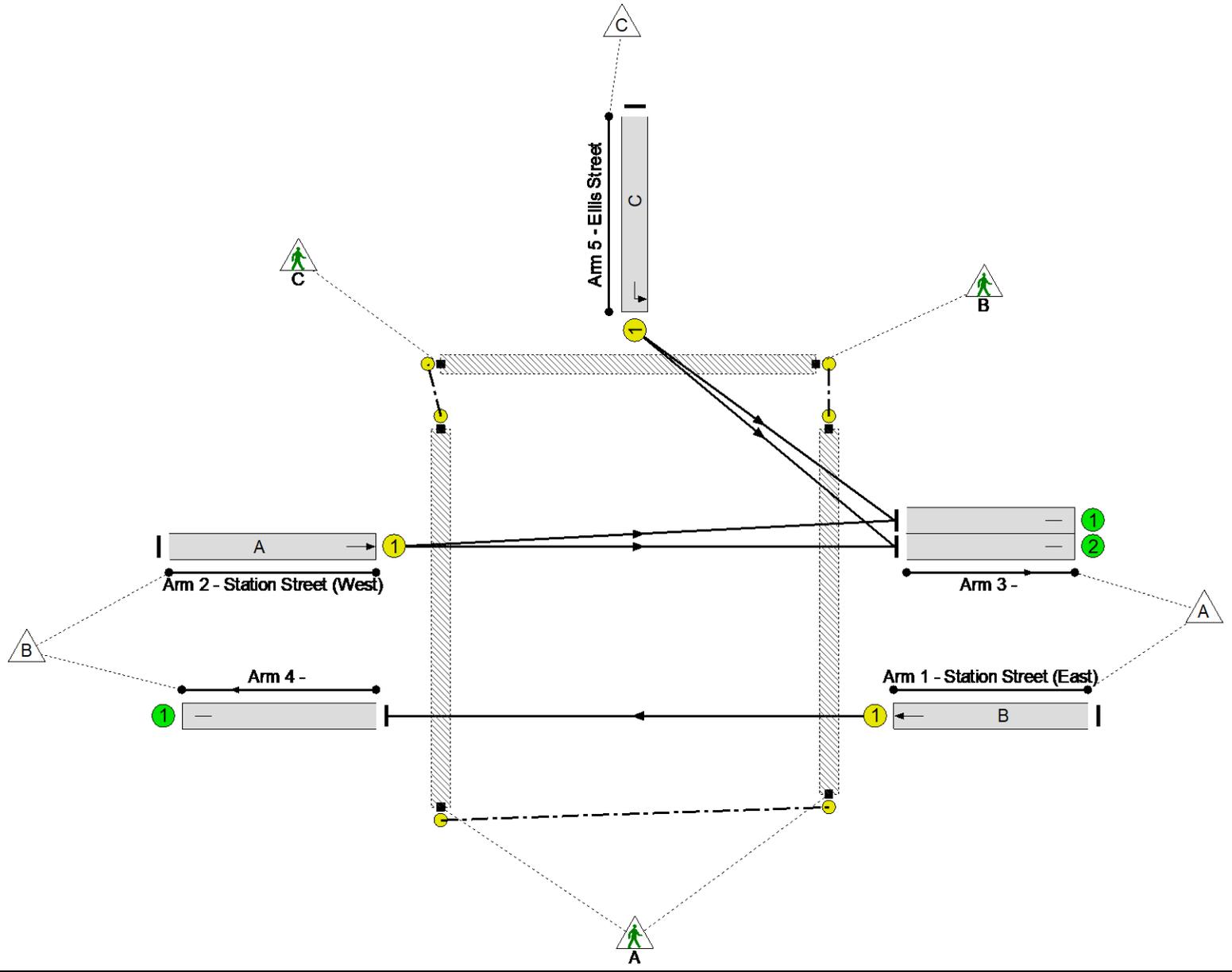
Stage	1	2	3
Duration	41	28	7
Change Point	0	43	76

Signal Timings Diagram



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

Unnamed Junction  
PRC: 97.5 %  
Total Traffic Delay: 4.9 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>45.6%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>45.6%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	466	2010	1675	27.8%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	41	-	416	1964	917	45.4%
3/1		U	N/A	N/A	-		-	-	-	337	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	337	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	466	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	28	-	258	1757	566	45.6%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%

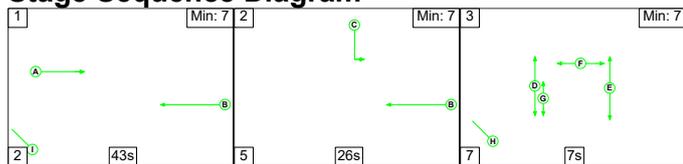
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	3.8	1.0	0.0	4.9	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.8	1.0	0.0	4.9	-	-	-	-
1/1	466	466	-	-	-	0.2	0.2	-	0.4	3.1	2.5	0.2	2.7
2/1	416	416	-	-	-	1.9	0.4	-	2.3	19.8	6.9	0.4	7.3
3/1	337	337	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	337	337	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	466	466	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	258	258	-	-	-	1.7	0.4	-	2.2	30.1	5.1	0.4	5.5
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
<p>C1      PRC for Signalled Lanes (%): 97.5      Total Delay for Signalled Lanes (pcuHr): 4.85      Cycle Time (s): 90</p> <p>          PRC Over All Lanes (%): 97.5      Total Delay Over All Lanes(pcuHr): 4.85</p>													

Full Input Data And Results

Scenario 9: '2030 DESIGN SAT' (FG9: '2030 DESIGN SAT', Plan 1: 'Network Control Plan 1')

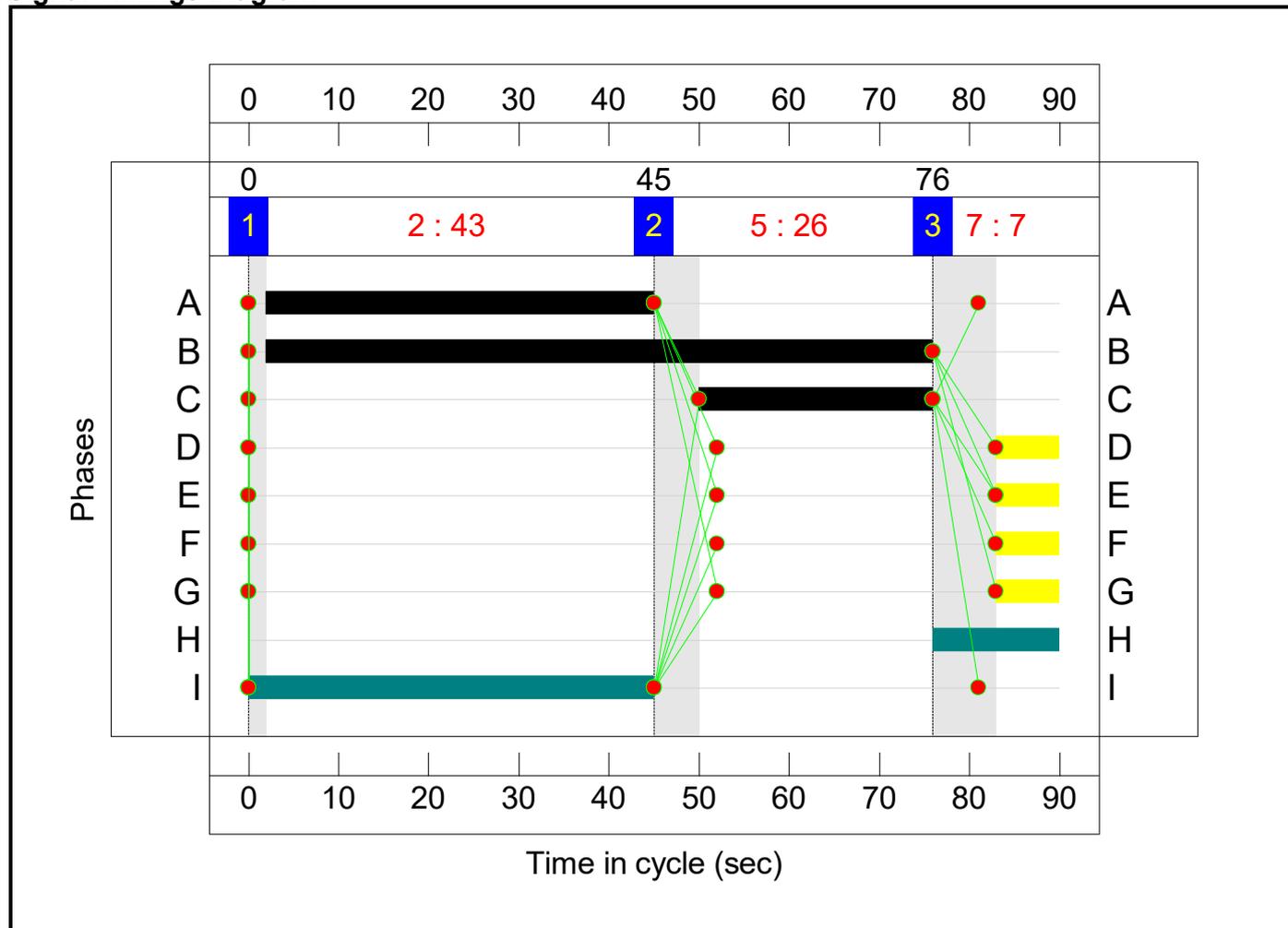
Stage Sequence Diagram



Stage Timings

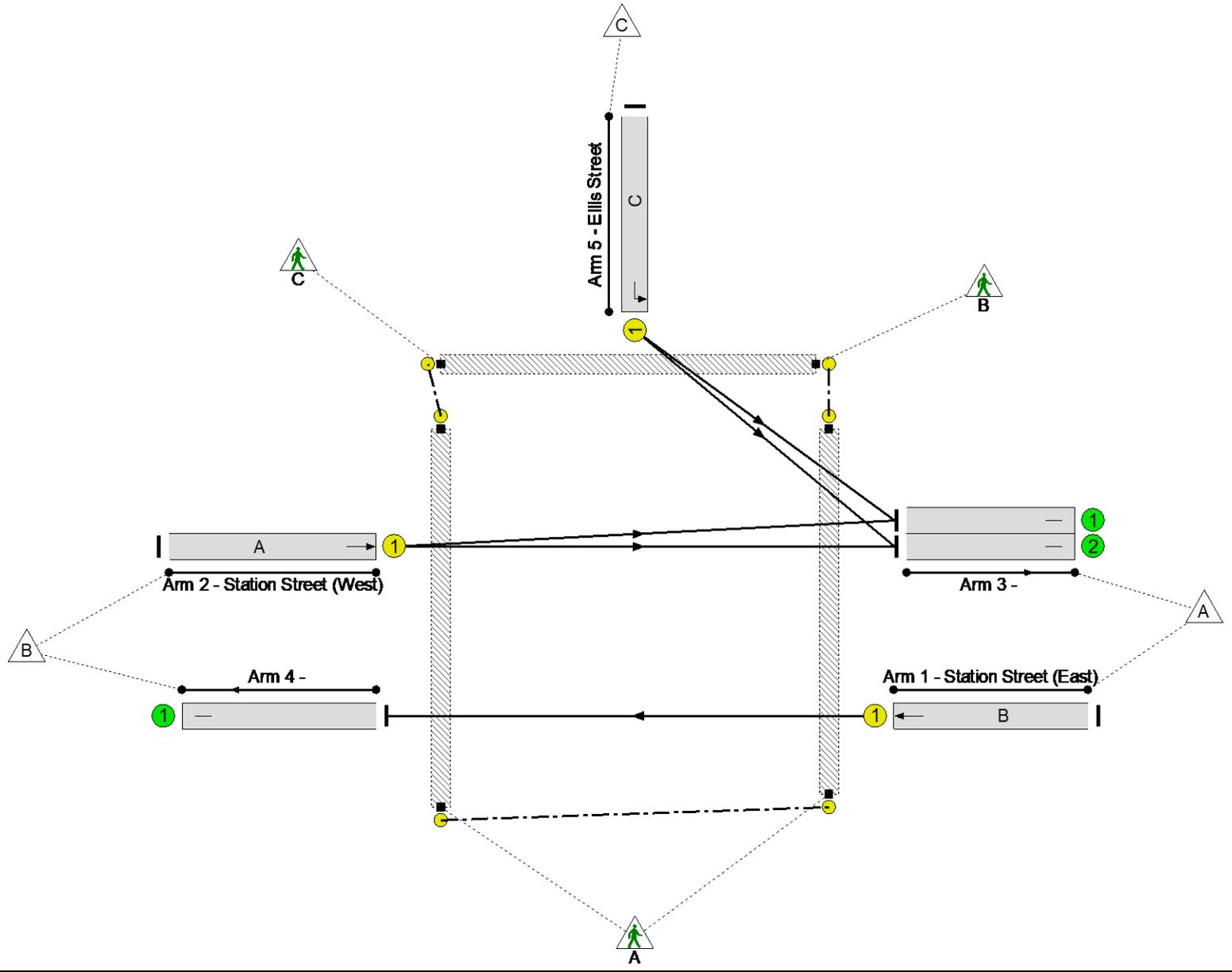
Stage	1	2	3
Duration	43	26	7
Change Point	0	45	76

Signal Timings Diagram



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

Unnamed Junction  
PRC: 127.0 %  
Total Traffic Delay: 4.0 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>39.7%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>39.7%</b>
1/1	Station Street (East) Ahead	U	N/A	N/A	B		1	74	-	460	2010	1675	27.5%
2/1	Station Street (West) Ahead	U	N/A	N/A	A		1	43	-	380	1964	960	39.6%
3/1		U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	294	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%
5/1	Ellis Street Left	U	N/A	N/A	C		1	26	-	209	1757	527	39.7%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	0.0%
Ped Link: P3	Unnamed Ped Link	-	-	-			0	0	-	0	-	72000	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)
<b>Network</b>	-	-	0	0	0	3.2	0.8	0.0	4.0	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	3.2	0.8	0.0	4.0	-	-	-	-
1/1	460	460	-	-	-	0.2	0.2	-	0.4	3.1	2.4	0.2	2.6
2/1	380	380	-	-	-	1.5	0.3	-	1.9	17.7	6.0	0.3	6.3
3/1	295	295	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	294	294	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	460	460	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	209	209	-	-	-	1.5	0.3	-	1.8	30.7	4.1	0.3	4.4
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P3	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
C1			PRC for Signalled Lanes (%): 127.0			Total Delay for Signalled Lanes (pcuHr): 4.04			Cycle Time (s): 90				
			PRC Over All Lanes (%): 127.0			Total Delay Over All Lanes(pcuHr): 4.04							

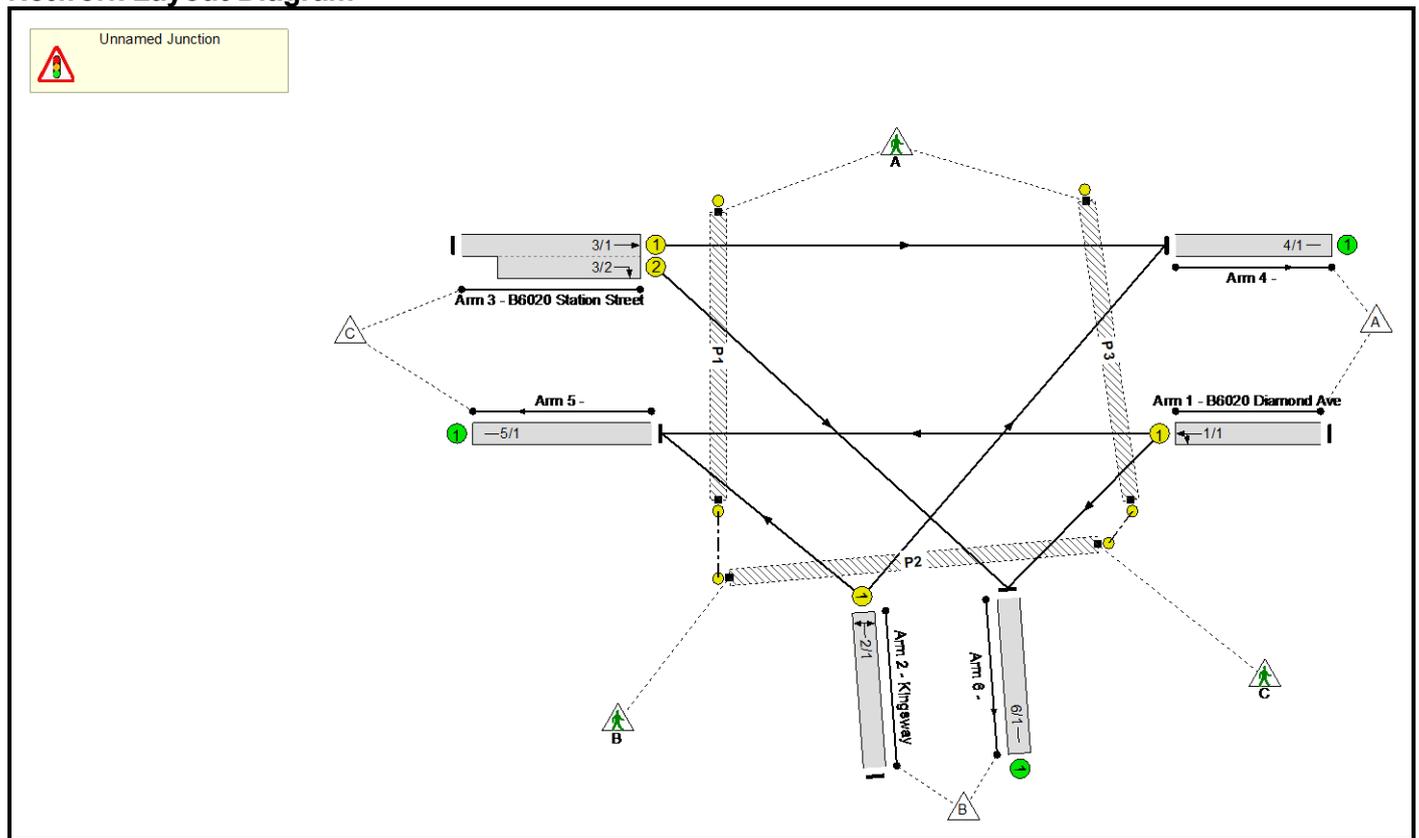
***Appendix H***  
***B6020 / B6021 Kingsway Modelling***  
***Results***

Full Input Data And Results  
Full Input Data And Results

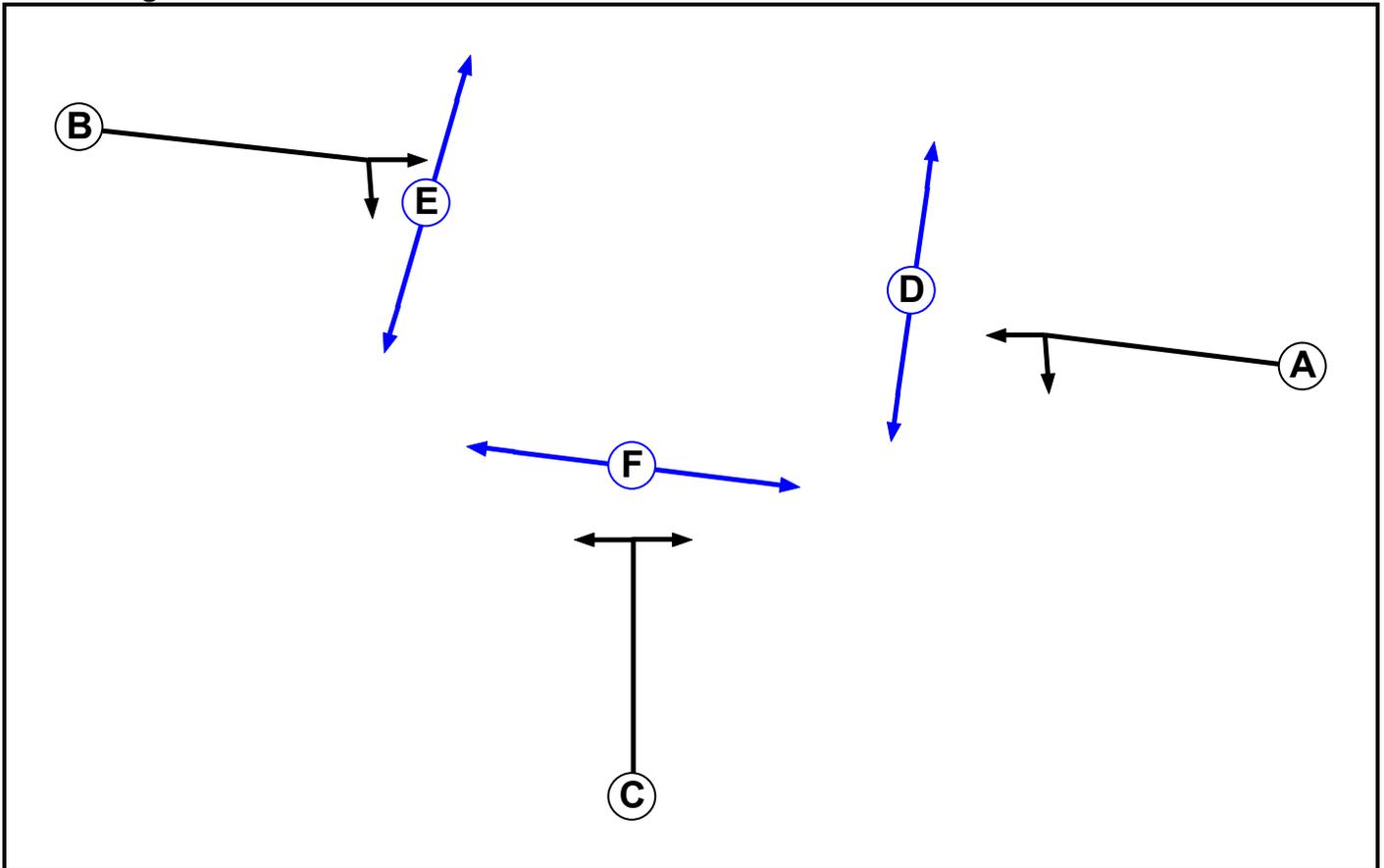
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Kingsway-Station Street Junction.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



**Phase Diagram**



**Phase Input Data**

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

## Full Input Data And Results

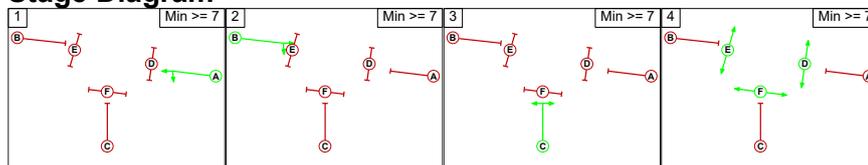
### Phase Intergrens Matrix

	Starting Phase					
	A	B	C	D	E	F
Terminating Phase	A	5	5	10	10	10
	B	7	6	10	10	10
	C	5	5	10	10	10
	D	-	-	-	-	-
	E	-	-	-	-	-
	F	-	-	-	-	-

### Phases in Stage

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

### Stage Diagram



### Phase Delays

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

### Prohibited Stage Change

	To Stage			
	1	2	3	4
From Stage	1	5	5	10
	2	7	6	10
	3	5	5	10
	4	2	2	2

Full Input Data And Results

**Give-Way Lane Input Data**

**Junction: Unnamed Junction**

There are no Opposed Lanes in this Junction

Full Input Data And Results

**Lane Input Data**

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B6020 Diamond Ave)	U	A	2	3	60.0	Geom	-	3.46	0.00	Y	Arm 5 Ahead	Inf
2/1 (Kingsway)	U	C	2	3	60.0	Geom	-	3.15	0.00	Y	Arm 6 Left	9.01
											Arm 4 Right	12.43
											Arm 5 Left	20.14
3/1 (B6020 Station Street)	U	B	2	3	60.0	Geom	-	2.79	0.00	Y	Arm 4 Ahead	Inf
3/2 (B6020 Station Street)	U	B	2	3	14.6	Geom	-	2.79	0.00	Y	Arm 6 Right	29.49
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 BASE AM'	07:45	08:45	01:00	
2: '2025 BASE PM'	16:15	17:15	01:00	
3: '2025 BASE SAT'	11:15	12:15	01:00	
4: '2030 BASE AM'	07:45	08:45	01:00	
5: '2030 BASE PM'	16:15	17:15	01:00	
6: '2030 BASE SAT'	11:15	12:15	01:00	
7: '2030 DESIGN AM'	07:45	08:45	01:00	
8: '2030 DESIGN PM'	16:15	17:15	01:00	
9: '2030 DESIGN SAT'	11:15	12:15	01:00	

**Scenario 1: '2025 BASE AM'** (FG1: '2025 BASE AM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	59	226	285
	B	106	0	262	368
	C	284	330	0	614
	Tot.	390	389	488	1267

**Traffic Lane Flows**

Lane	Scenario 1: 2025 BASE AM
<b>Junction: Unnamed Junction</b>	
1/1	285
2/1	368
3/1 (with short)	614(In) 284(Out)
3/2 (short)	330
4/1	390
5/1	488
6/1	389

**Lane Saturation Flows**

<b>Junction: Unnamed Junction</b>								
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 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	79.3 %	1896	1896
				Arm 6 Left	9.01	20.7 %		
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	28.8 %	1774	1774
				Arm 5 Left	20.14	71.2 %		
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2025 BASE PM' (FG2: '2025 BASE PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	90	192	282
	B	93	0	258	351
	C	306	428	0	734
	Tot.	399	518	450	1367

Traffic Lane Flows

Lane	Scenario 2: 2025 BASE PM
<b>Junction: Unnamed Junction</b>	
1/1	282
2/1	351
3/1 (with short)	734(In) 306(Out)
3/2 (short)	428
4/1	399
5/1	450
6/1	518

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	68.1 %	1862	1862
				Arm 6 Left	9.01	31.9 %		
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	26.5 %	1776	1776
				Arm 5 Left	20.14	73.5 %		
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2025 BASE SAT' (FG3: '2025 BASE SAT', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	67	203	270
	B	97	0	226	323
	C	289	336	0	625
	Tot.	386	403	429	1218

Traffic Lane Flows

Lane	Scenario 3: 2025 BASE SAT
<b>Junction: Unnamed Junction</b>	
1/1	270
2/1	323
3/1 (with short)	625(In) 289(Out)
3/2 (short)	336
4/1	386
5/1	429
6/1	403

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	75.2 %	1883	1883
				Arm 6 Left	9.01	24.8 %		
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	30.0 %	1773	1773
				Arm 5 Left	20.14	70.0 %		
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2030 BASE AM' (FG4: '2030 BASE AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	61	235	296
	B	110	0	272	382
	C	294	343	0	637
	Tot.	404	404	507	1315

Traffic Lane Flows

Lane	Scenario 4: 2030 BASE AM
<b>Junction: Unnamed Junction</b>	
1/1	296
2/1	382
3/1 (with short)	637(In) 294(Out)
3/2 (short)	343
4/1	404
5/1	507
6/1	404

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>									
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 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	79.4 %	1896	1896	
				Arm 6 Left	9.01	20.6 %			
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	28.8 %	1774	1774	
				Arm 5 Left	20.14	71.2 %			
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894	
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802	
4/1	Infinite Saturation Flow							Inf	Inf
5/1	Infinite Saturation Flow							Inf	Inf
6/1	Infinite Saturation Flow							Inf	Inf

Full Input Data And Results

Scenario 5: '2030 BASE PM' (FG5: '2030 BASE PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	94	199	293
	B	96	0	267	363
	C	317	444	0	761
	Tot.	413	538	466	1417

Traffic Lane Flows

Lane	Scenario 5: 2030 BASE PM
<b>Junction: Unnamed Junction</b>	
1/1	293
2/1	363
3/1 (with short)	761(In) 317(Out)
3/2 (short)	444
4/1	413
5/1	466
6/1	538

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	67.9 %	1862	1862
				Arm 6 Left	9.01	32.1 %		
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	26.4 %	1776	1776
				Arm 5 Left	20.14	73.6 %		
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

**Scenario 6: '2030 BASE SAT'** (FG6: '2030 BASE SAT', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

		Destination			
		A	B	C	Tot.
Origin	A	0	70	211	281
	B	101	0	235	336
	C	300	349	0	649
	Tot.	401	419	446	1266

**Traffic Lane Flows**

Lane	Scenario 6: 2030 BASE SAT
<b>Junction: Unnamed Junction</b>	
1/1	281
2/1	336
3/1 (with short)	649(In) 300(Out)
3/2 (short)	349
4/1	401
5/1	446
6/1	419

**Lane Saturation Flows**

<b>Junction: Unnamed Junction</b>								
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 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	75.1 %	1883	1883
				Arm 6 Left	9.01	24.9 %		
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	30.1 %	1773	1773
				Arm 5 Left	20.14	69.9 %		
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2030 DESIGN AM' (FG7: '2030 DESIGN AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	61	242	303
	B	110	0	277	387
	C	301	347	0	648
	Tot.	411	408	519	1338

Traffic Lane Flows

Lane	Scenario 7: 2030 DESIGN AM
<b>Junction: Unnamed Junction</b>	
1/1	303
2/1	387
3/1 (with short)	648(In) 301(Out)
3/2 (short)	347
4/1	411
5/1	519
6/1	408

Lane Saturation Flows

<b>Junction: Unnamed Junction</b>								
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 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	79.9 %	1897	1897
				Arm 6 Left	9.01	20.1 %		
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	28.4 %	1775	1775
				Arm 5 Left	20.14	71.6 %		
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

**Scenario 8: '2030 DESIGN PM'** (FG8: '2030 DESIGN PM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

		Destination			
		A	B	C	Tot.
Origin	A	0	94	210	304
	B	96	0	274	370
	C	328	451	0	779
	Tot.	424	545	484	1453

**Traffic Lane Flows**

Lane	Scenario 8: 2030 DESIGN PM
<b>Junction: Unnamed Junction</b>	
1/1	304
2/1	370
3/1 (with short)	779(In) 328(Out)
3/2 (short)	451
4/1	424
5/1	484
6/1	545

**Lane Saturation Flows**

<b>Junction: Unnamed Junction</b>								
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 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	69.1 %	1865	1865
				Arm 6 Left	9.01	30.9 %		
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	25.9 %	1776	1776
				Arm 5 Left	20.14	74.1 %		
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 9: '2030 DESIGN SAT' (FG9: '2030 DESIGN SAT', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	70	218	288
	B	101	0	240	341
	C	307	354	0	661
	Tot.	408	424	458	1290

Traffic Lane Flows

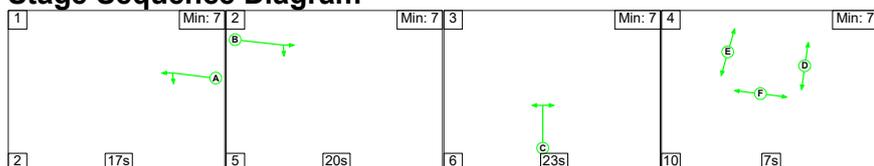
Lane	Scenario 9: 2030 DESIGN SAT
<b>Junction: Unnamed Junction</b>	
1/1	288
2/1	341
3/1 (with short)	661(In) 307(Out)
3/2 (short)	354
4/1	408
5/1	458
6/1	424

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B6020 Diamond Ave)	3.46	0.00	Y	Arm 5 Ahead	Inf	75.7 %	1885	1885
				Arm 6 Left	9.01	24.3 %		
2/1 (Kingsway)	3.15	0.00	Y	Arm 4 Right	12.43	29.6 %	1774	1774
				Arm 5 Left	20.14	70.4 %		
3/1 (B6020 Station Street)	2.79	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1894	1894
3/2 (B6020 Station Street)	2.79	0.00	Y	Arm 6 Right	29.49	100.0 %	1802	1802
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2025 BASE AM' (FG1: '2025 BASE AM', Plan 1: 'Network Control Plan 1')

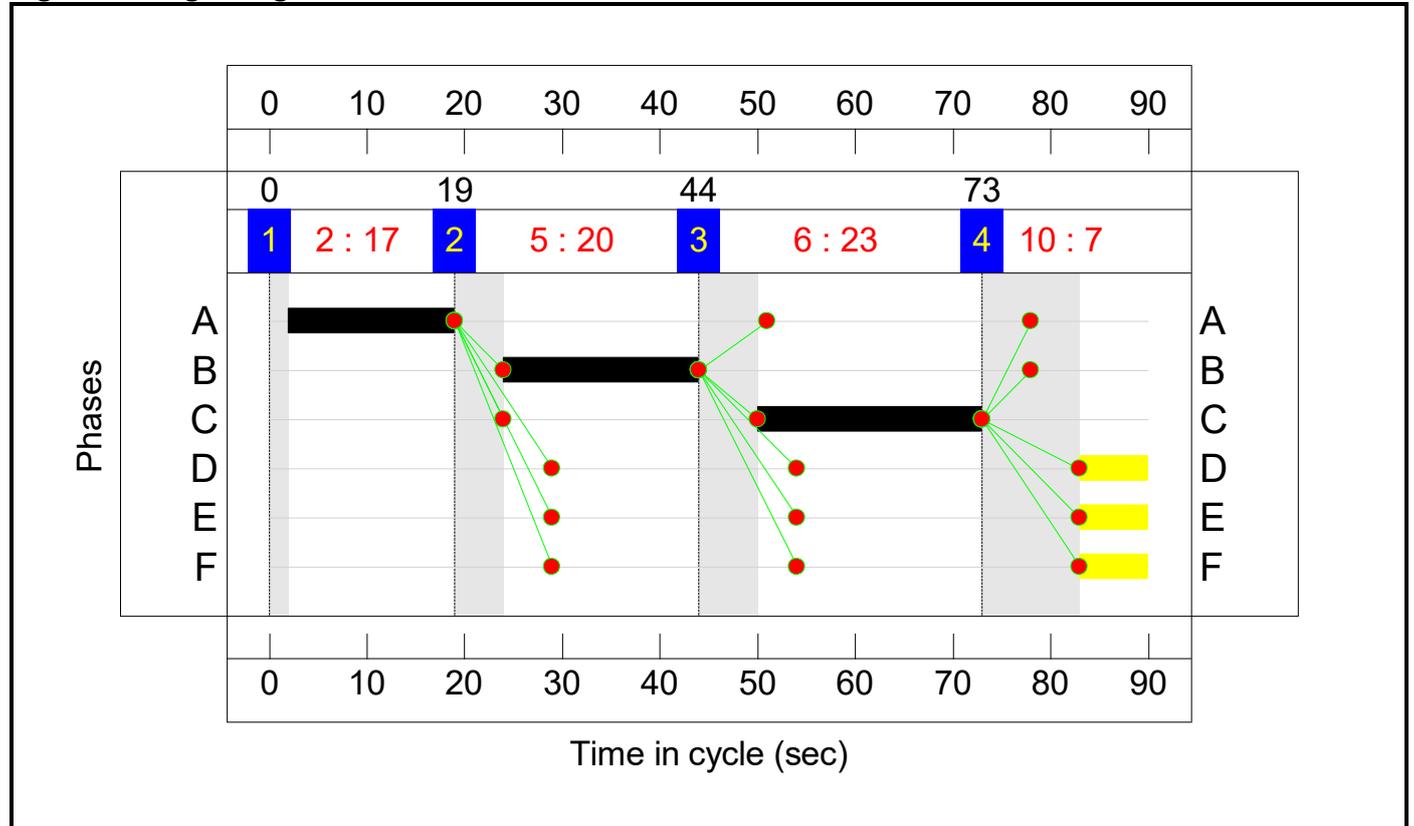
Stage Sequence Diagram



**Stage Timings**

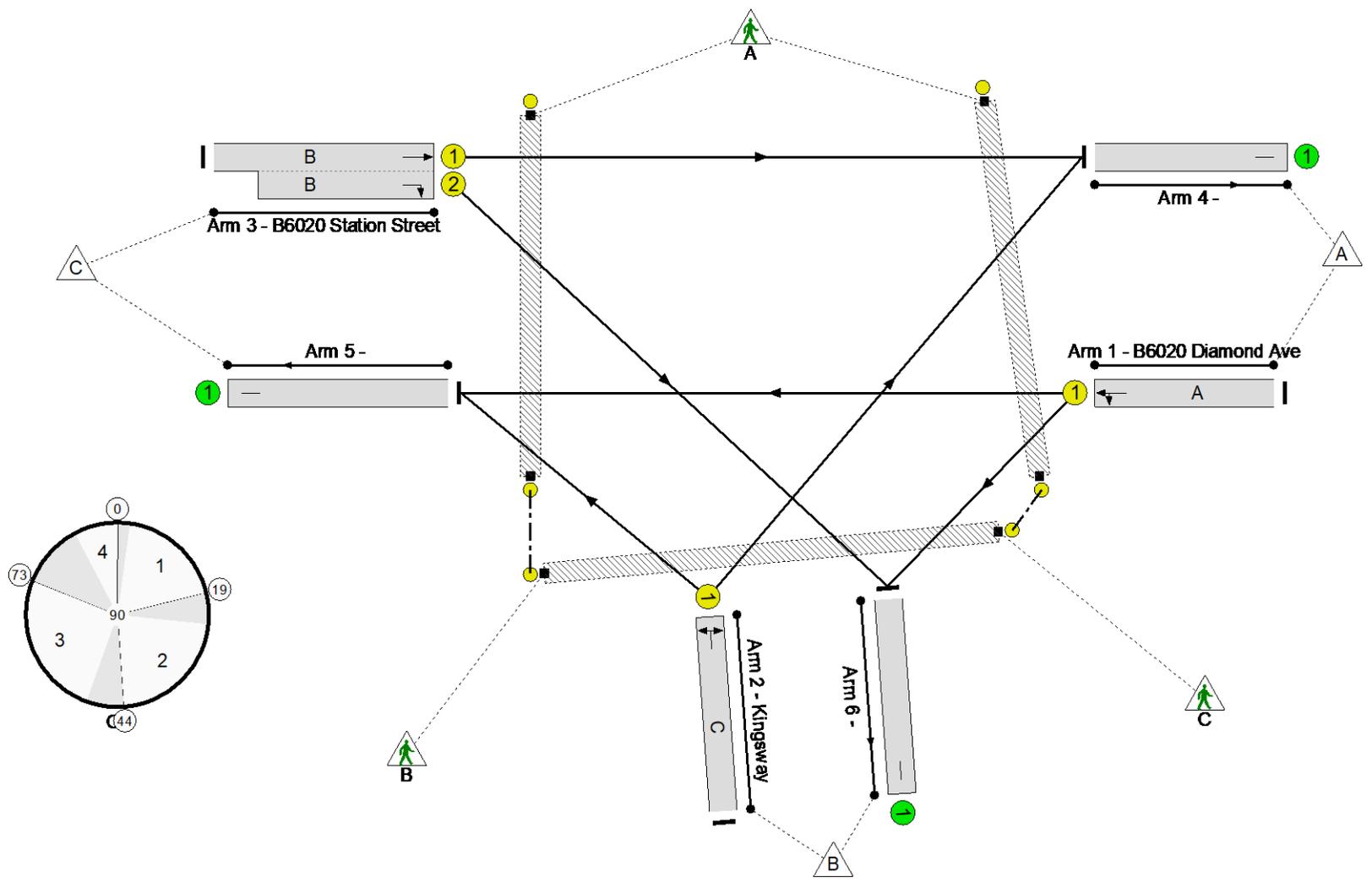
Stage	1	2	3	4
Duration	17	20	23	7
Change Point	0	19	44	73

**Signal Timings Diagram**



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

Unnamed Junction  
 PRC: 14.7 %  
 Total Traffic Delay: 15.8 pcuHr  
 Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>78.5%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>78.5%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	17	-	285	1896	379	75.2%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	23	-	368	1774	473	77.8%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	20	-	614	1894:1802	413+420	68.8 : 78.5%
4/1		U	N/A	N/A	-		-	-	-	390	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	488	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	389	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	0.0%

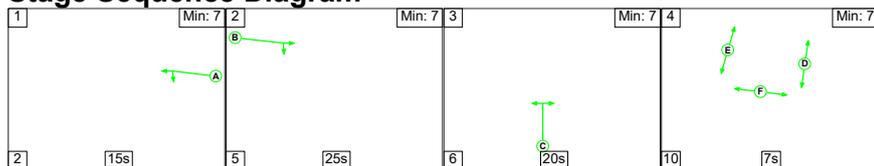
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	11.2	4.5	0.0	15.8	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	11.2	4.5	0.0	15.8	-	-	-	-
1/1	285	285	-	-	-	2.7	1.5	-	4.2	52.4	6.7	1.5	8.1
2/1	368	368	-	-	-	3.1	1.7	-	4.8	47.1	8.5	1.7	10.2
3/1+3/2	614	614	-	-	-	5.4	1.4	-	6.8	39.9	7.7	1.4	9.1
4/1	390	390	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	488	488	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1			PRC for Signalled Lanes (%):		14.7	Total Delay for Signalled Lanes (pcuHr):		15.77	Cycle Time (s):		90		
			PRC Over All Lanes (%):		14.7	Total Delay Over All Lanes (pcuHr):		15.77					

Full Input Data And Results

Scenario 2: '2025 BASE PM' (FG2: '2025 BASE PM', Plan 1: 'Network Control Plan 1')

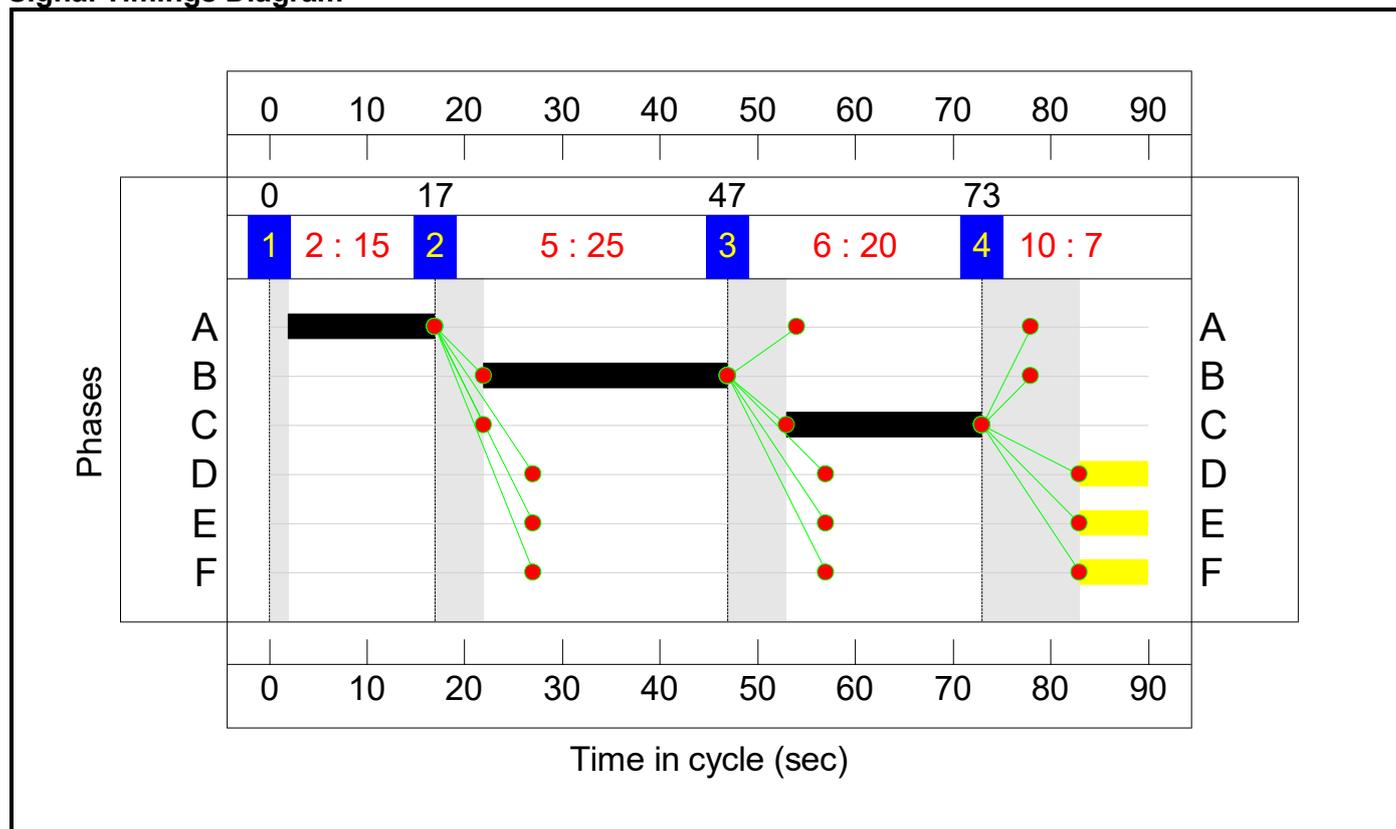
Stage Sequence Diagram



Stage Timings

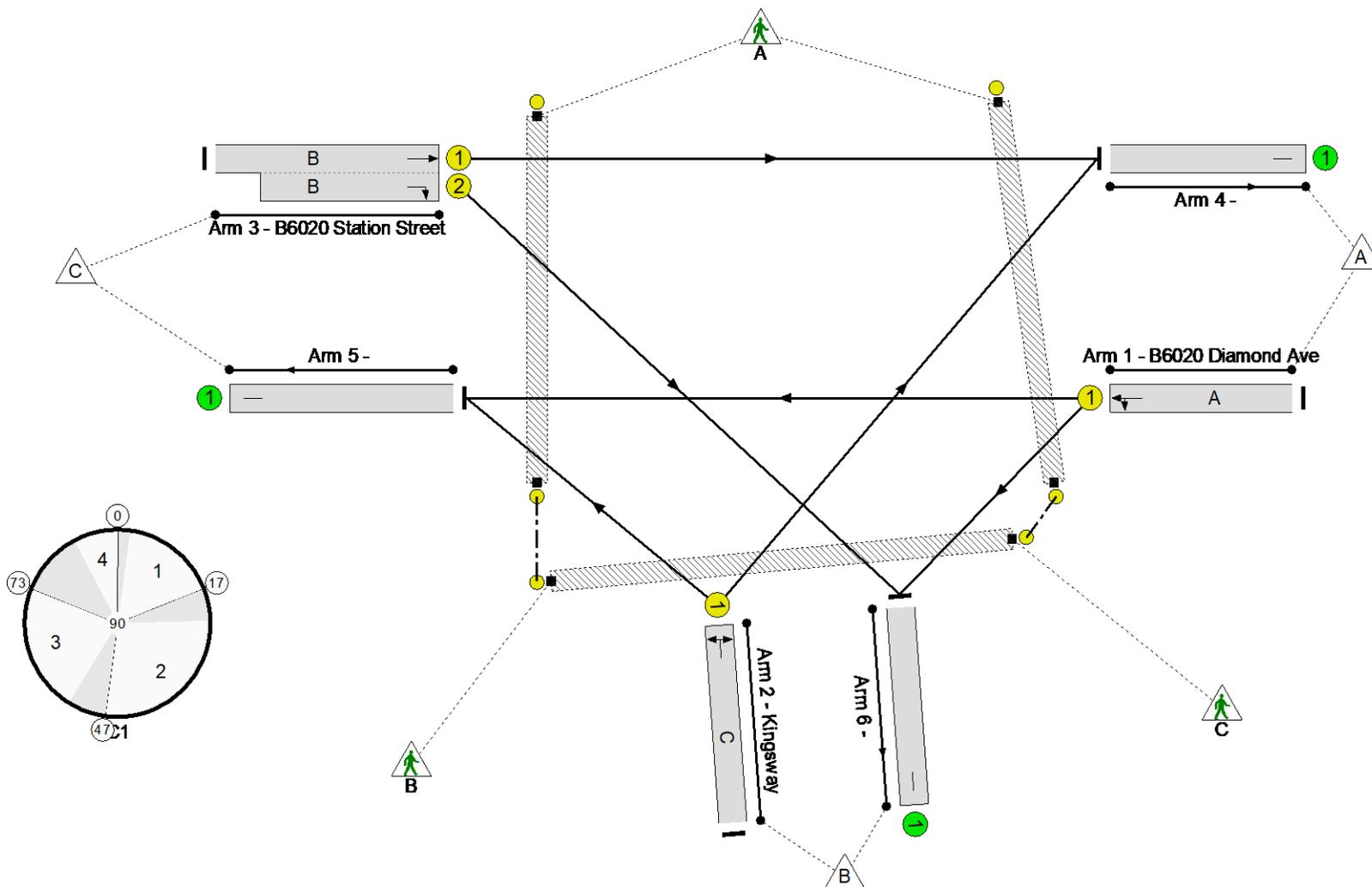
Stage	1	2	3	4
Duration	15	25	20	7
Change Point	0	17	47	73

Signal Timings Diagram



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

Unnamed Junction  
 PRC: 5.6 %  
 Total Traffic Delay: 19.3 pcuHr  
 Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>85.2%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>85.2%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	15	-	282	1862	331	85.2%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	20	-	351	1776	414	84.7%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	25	-	734	1894:1802	372+521	82.2 : 82.2%
4/1		U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	450	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	518	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	0.0%

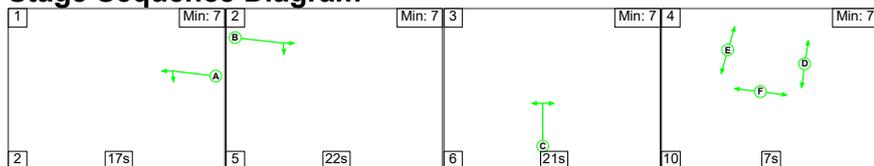
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	11.9	7.4	0.0	19.3	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	11.9	7.4	0.0	19.3	-	-	-	-
1/1	282	282	-	-	-	2.8	2.6	-	5.4	69.1	6.8	2.6	9.4
2/1	351	351	-	-	-	3.2	2.6	-	5.8	59.2	8.3	2.6	10.8
3/1+3/2	734	734	-	-	-	5.9	2.2	-	8.1	39.7	9.9	2.2	12.1
4/1	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	450	450	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	518	518	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1      PRC for Signalled Lanes (%): 5.6      Total Delay for Signalled Lanes (pcuHr): 19.29      Cycle Time (s): 90 PRC Over All Lanes (%): 5.6      Total Delay Over All Lanes(pcuHr): 19.29													

Full Input Data And Results

Scenario 3: '2025 BASE SAT' (FG3: '2025 BASE SAT', Plan 1: 'Network Control Plan 1')

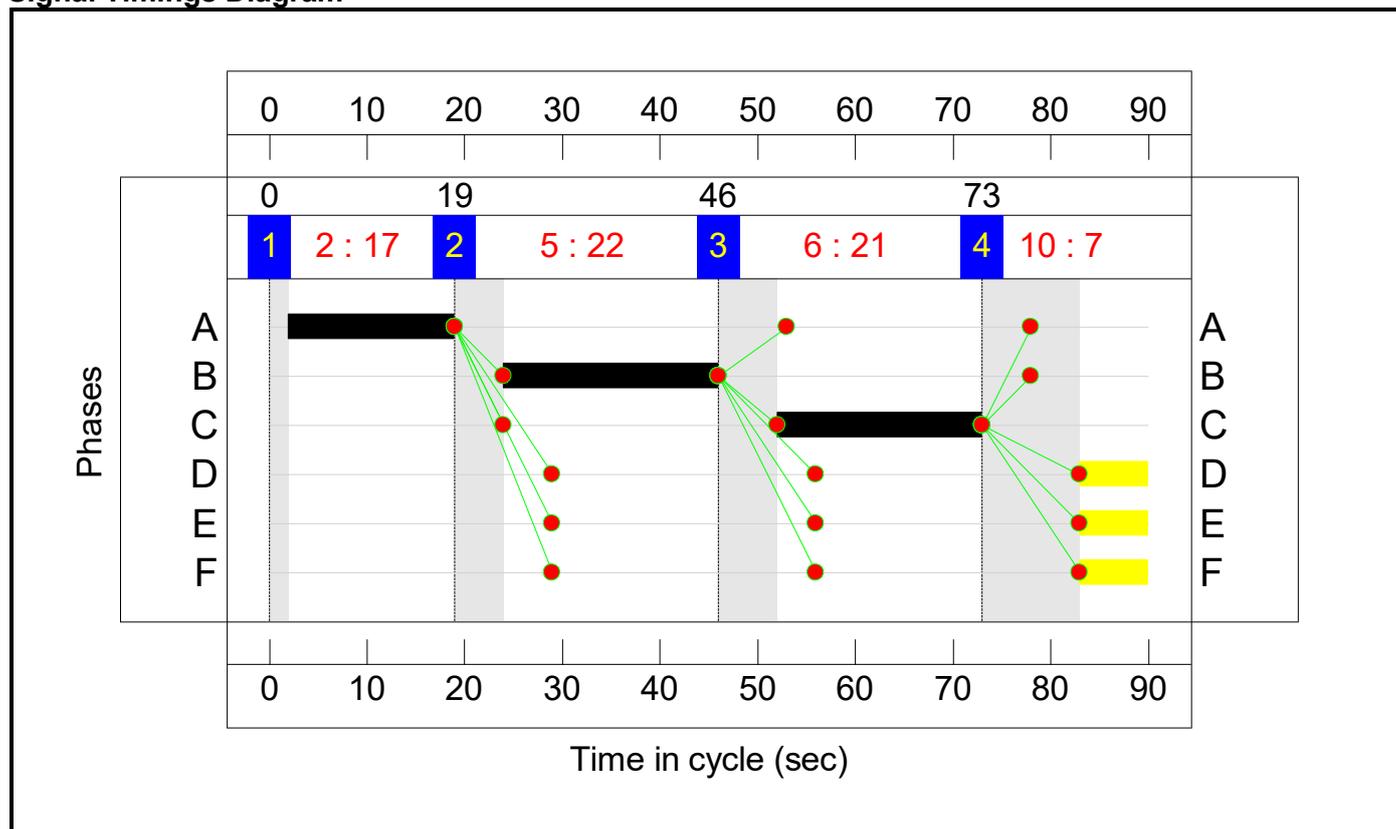
Stage Sequence Diagram



Stage Timings

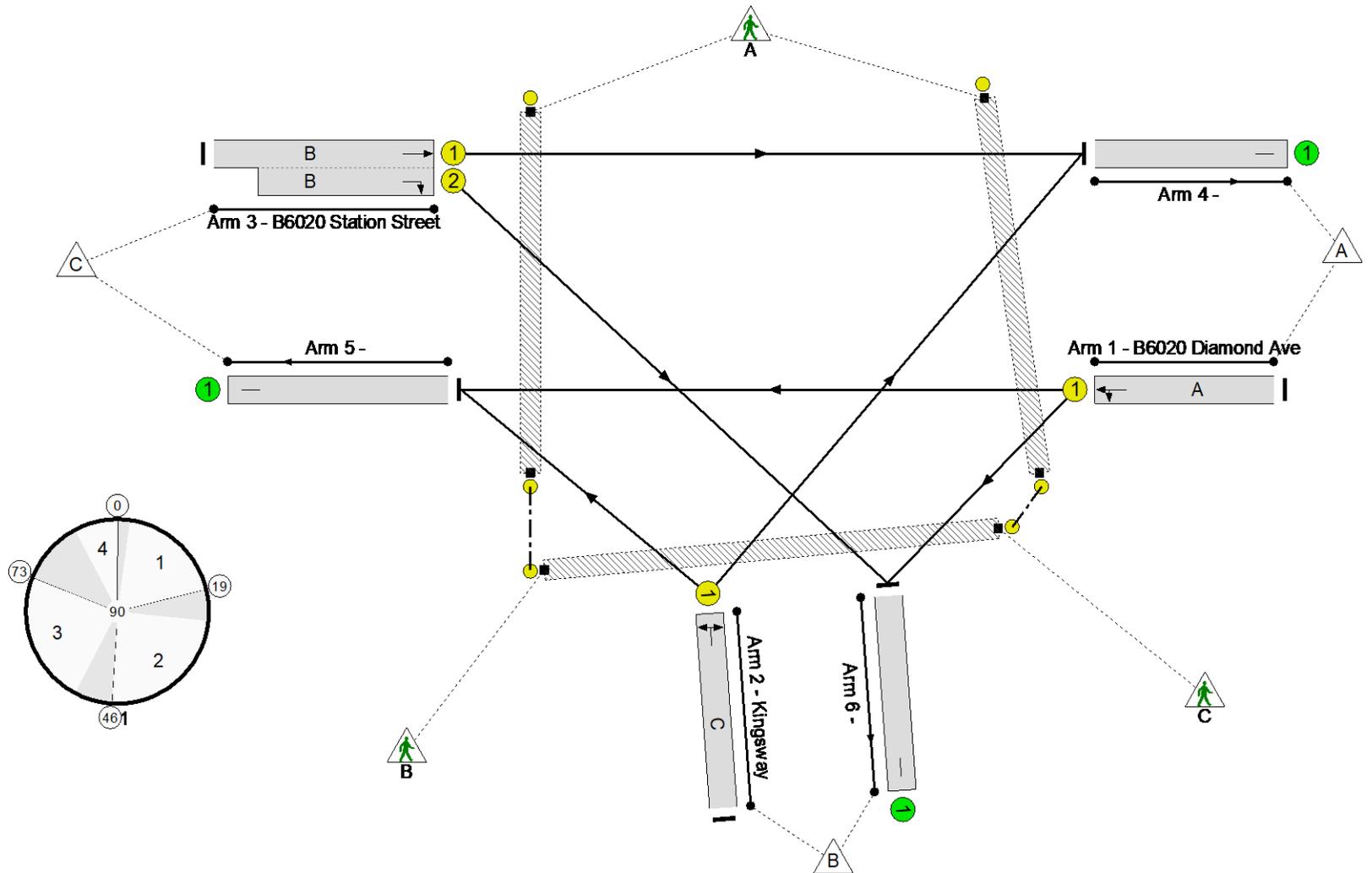
Stage	1	2	3	4
Duration	17	22	21	7
Change Point	0	19	46	73

Signal Timings Diagram



# Full Input Data And Results Network Layout Diagram

Unnamed Junction  
PRC: 20.8 %  
Total Traffic Delay: 14.5 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>74.5%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>74.5%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	17	-	270	1883	377	71.7%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	21	-	323	1773	433	74.5%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	22	-	625	1894:1802	405+461	71.4 : 73.0%
4/1		U	N/A	N/A	-		-	-	-	386	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	429	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	403	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	0.0%

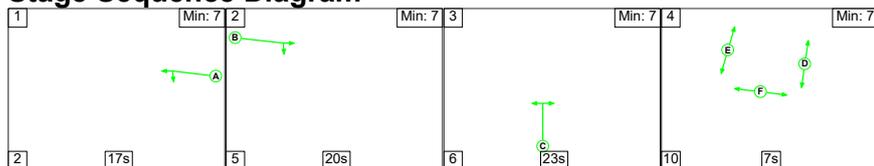
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	10.6	3.9	0.0	14.5	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	10.6	3.9	0.0	14.5	-	-	-	-
1/1	270	270	-	-	-	2.5	1.2	-	3.8	50.1	6.3	1.2	7.5
2/1	323	323	-	-	-	2.8	1.4	-	4.2	47.3	7.4	1.4	8.9
3/1+3/2	625	625	-	-	-	5.2	1.3	-	6.5	37.5	7.7	1.3	8.9
4/1	386	386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	429	429	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	403	403	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
<p>C1      PRC for Signalled Lanes (%): 20.8      Total Delay for Signalled Lanes (pcuHr): 14.51      Cycle Time (s): 90</p> <p>          PRC Over All Lanes (%): 20.8      Total Delay Over All Lanes(pcuHr): 14.51</p>													

Full Input Data And Results

Scenario 4: '2030 BASE AM' (FG4: '2030 BASE AM', Plan 1: 'Network Control Plan 1')

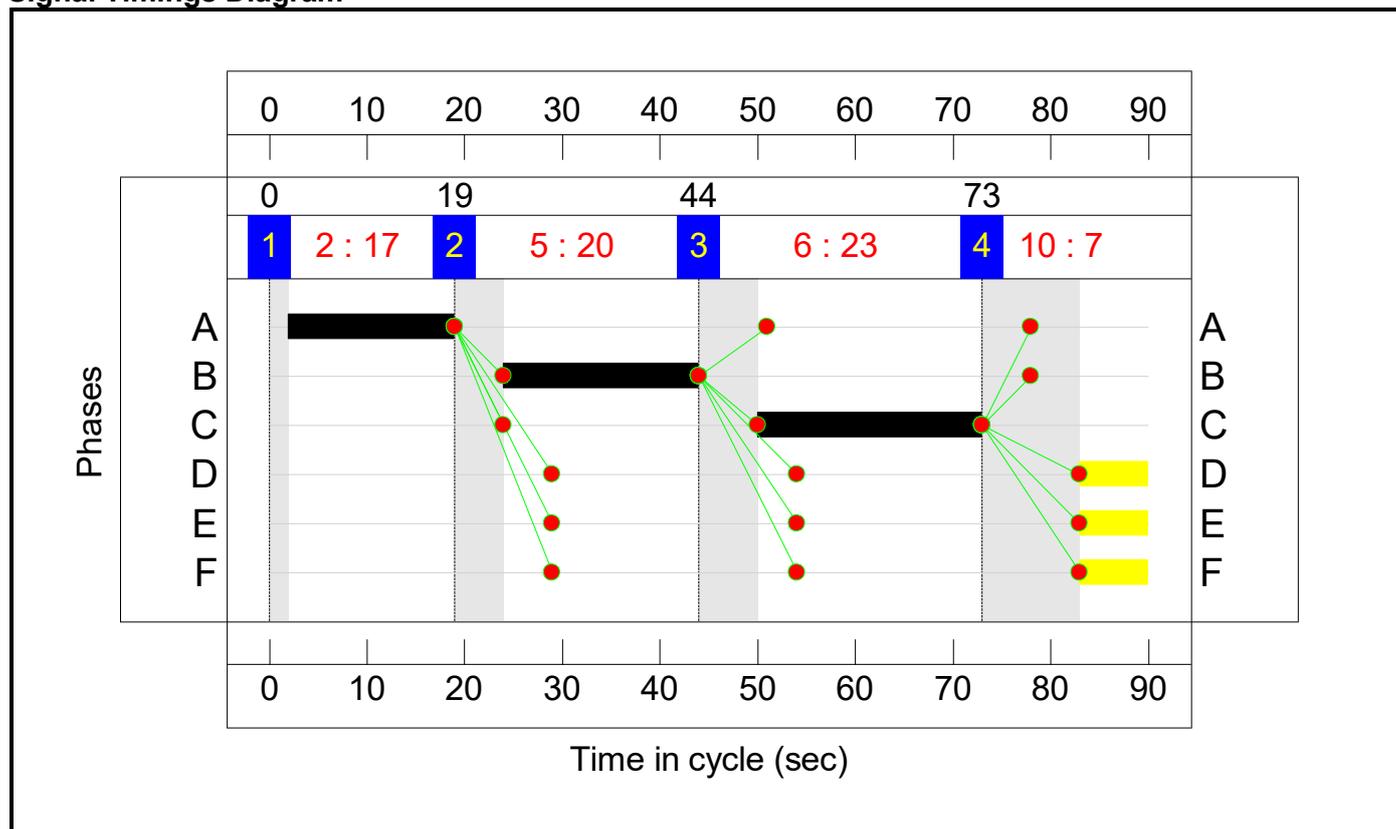
Stage Sequence Diagram



Stage Timings

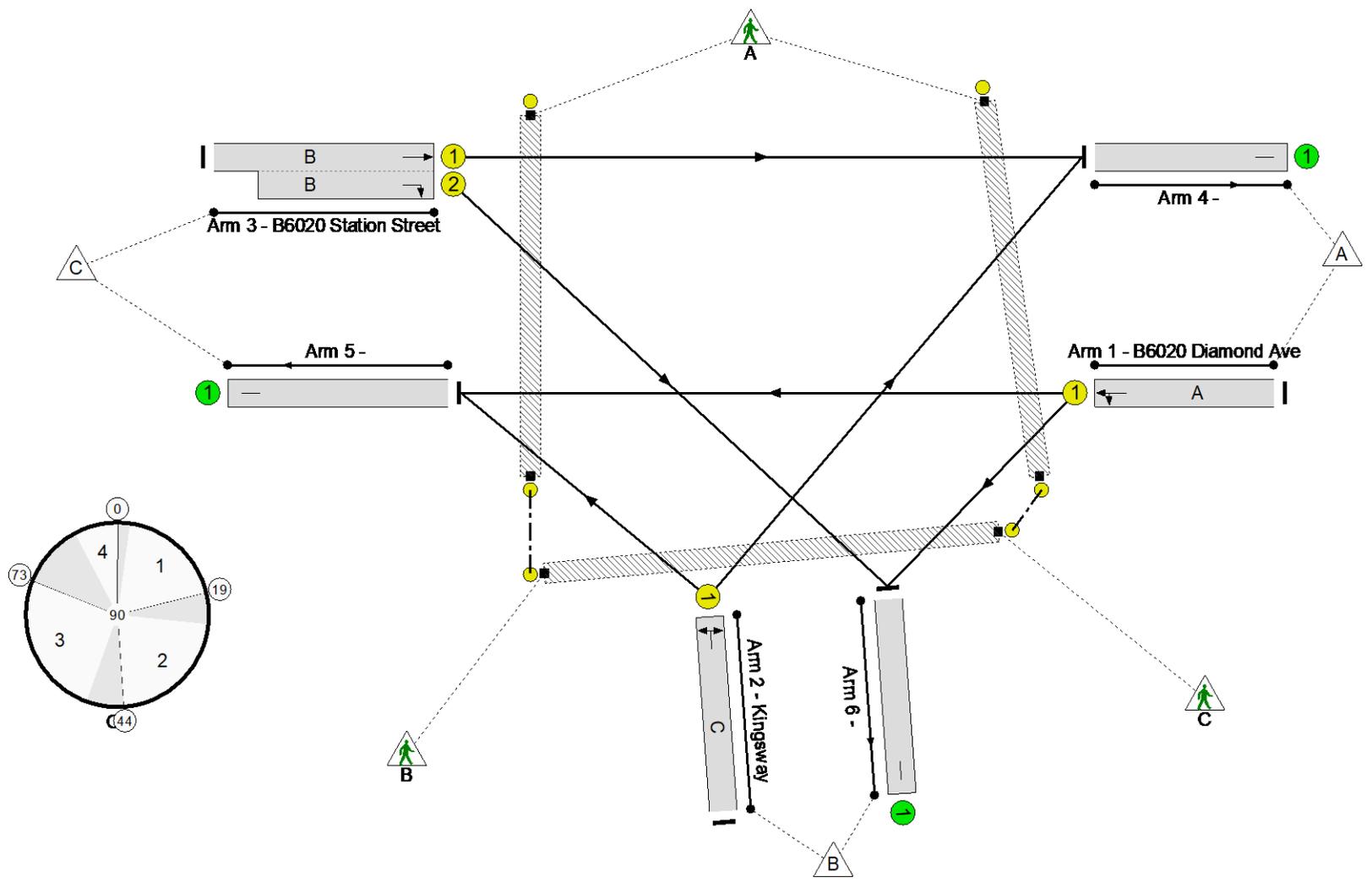
Stage	1	2	3	4
Duration	17	20	23	7
Change Point	0	19	44	73

Signal Timings Diagram



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

Unnamed Junction  
 PRC: 10.3 %  
 Total Traffic Delay: 17.1 pcuHr  
 Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>81.6%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>81.6%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	17	-	296	1896	379	78.1%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	23	-	382	1774	473	80.7%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	20	-	637	1894:1802	410+420	71.8 : 81.6%
4/1		U	N/A	N/A	-		-	-	-	404	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	507	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	404	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	0.0%

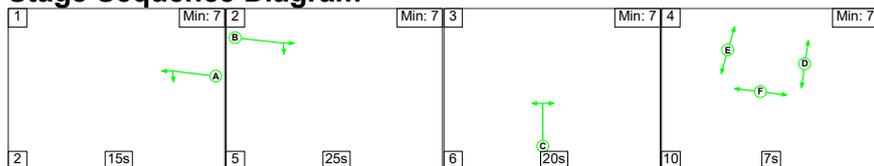
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	11.7	5.3	0.0	17.1	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	11.7	5.3	0.0	17.1	-	-	-	-
1/1	296	296	-	-	-	2.8	1.7	-	4.5	54.9	7.0	1.7	8.7
2/1	382	382	-	-	-	3.3	2.0	-	5.3	49.8	8.9	2.0	10.9
3/1+3/2	637	637	-	-	-	5.7	1.6	-	7.3	41.2	8.1	1.6	9.7
4/1	404	404	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	507	507	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	404	404	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1      PRC for Signalled Lanes (%): 10.3      Total Delay for Signalled Lanes (pcuHr): 17.09      Cycle Time (s): 90 PRC Over All Lanes (%): 10.3      Total Delay Over All Lanes(pcuHr): 17.09													

Full Input Data And Results

Scenario 5: '2030 BASE PM' (FG5: '2030 BASE PM', Plan 1: 'Network Control Plan 1')

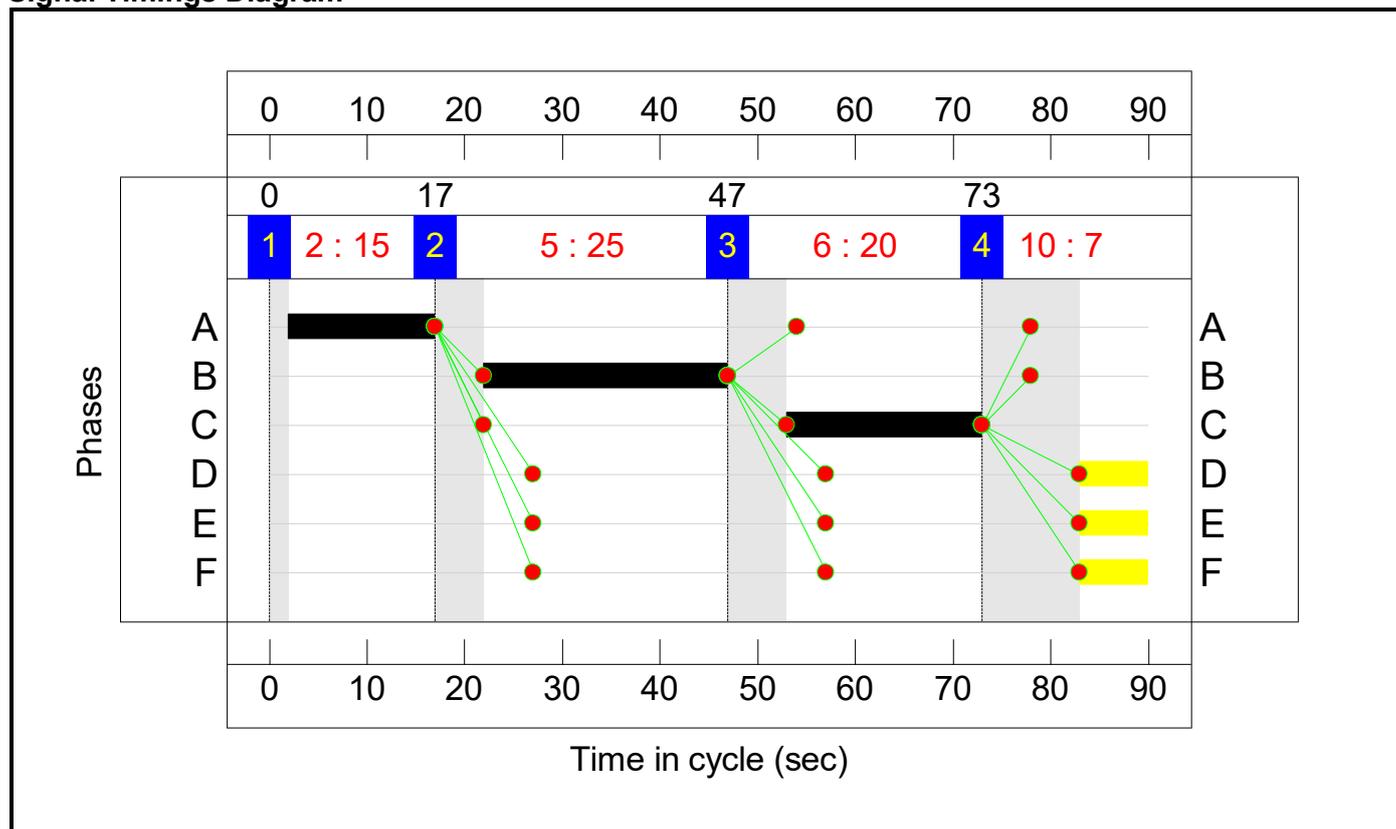
Stage Sequence Diagram



Stage Timings

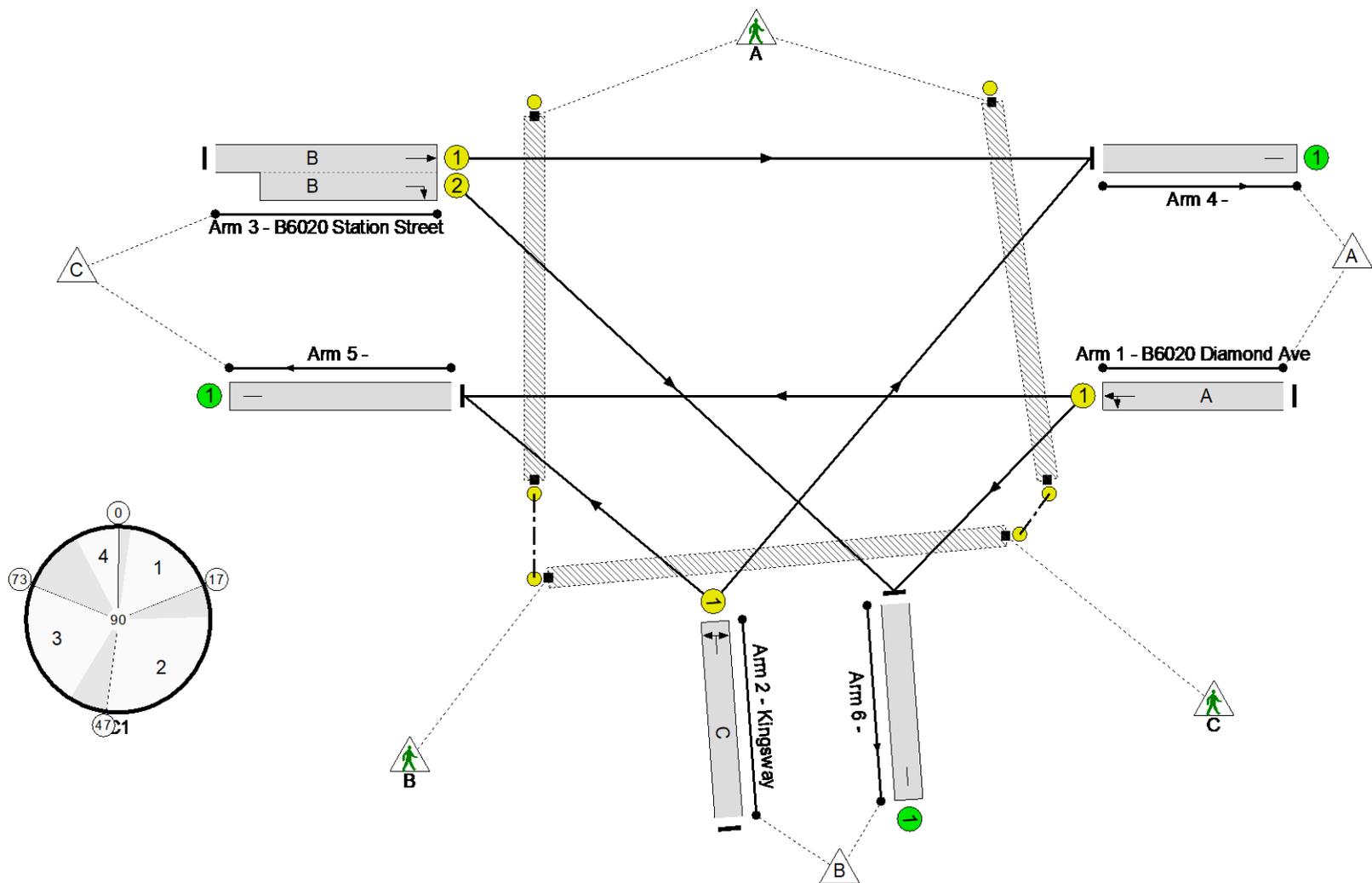
Stage	1	2	3	4
Duration	15	25	20	7
Change Point	0	17	47	73

Signal Timings Diagram



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


**Unnamed Junction**  
 PRC: 1.7 %  
 Total Traffic Delay: 21.6 pcuHr  
 Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>88.5%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>88.5%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	15	-	293	1862	331	88.5%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	20	-	363	1776	414	87.6%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	25	-	761	1894:1802	372+521	85.3 : 85.3%
4/1		U	N/A	N/A	-		-	-	-	413	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	466	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	538	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	0.0%

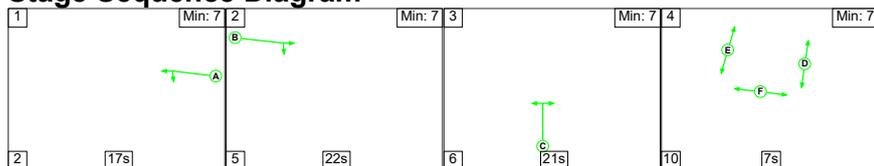
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	12.4	9.2	0.0	21.6	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	12.4	9.2	0.0	21.6	-	-	-	-
1/1	293	293	-	-	-	2.9	3.3	-	6.2	76.5	7.1	3.3	10.4
2/1	363	363	-	-	-	3.4	3.1	-	6.5	64.4	8.7	3.1	11.8
3/1+3/2	761	761	-	-	-	6.1	2.8	-	8.9	42.2	10.4	2.8	13.1
4/1	413	413	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	466	466	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	538	538	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1			PRC for Signalled Lanes (%):		1.7	Total Delay for Signalled Lanes (pcuHr):		21.63	Cycle Time (s):		90		
			PRC Over All Lanes (%):		1.7	Total Delay Over All Lanes (pcuHr):		21.63					

Full Input Data And Results

Scenario 6: '2030 BASE SAT' (FG6: '2030 BASE SAT', Plan 1: 'Network Control Plan 1')

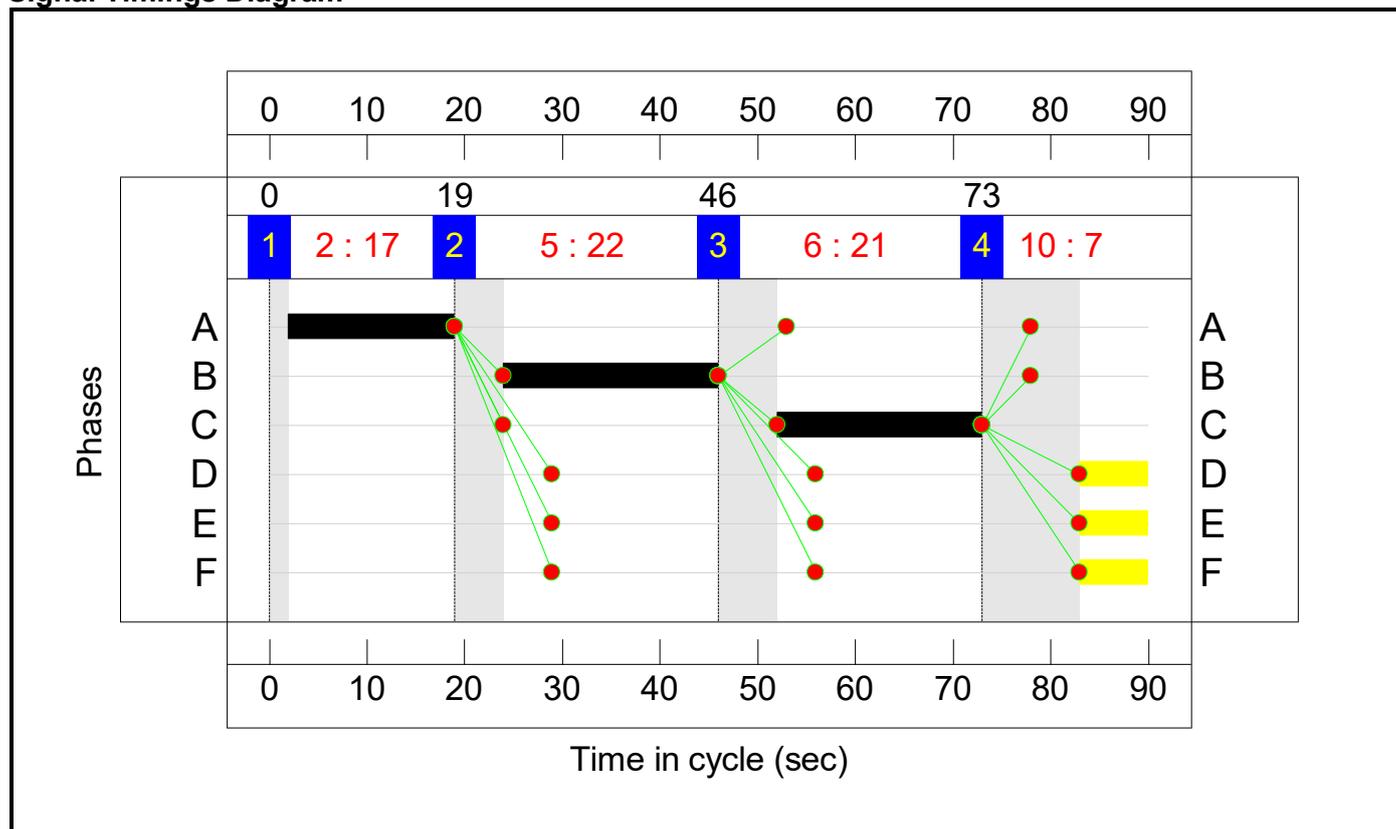
Stage Sequence Diagram



Stage Timings

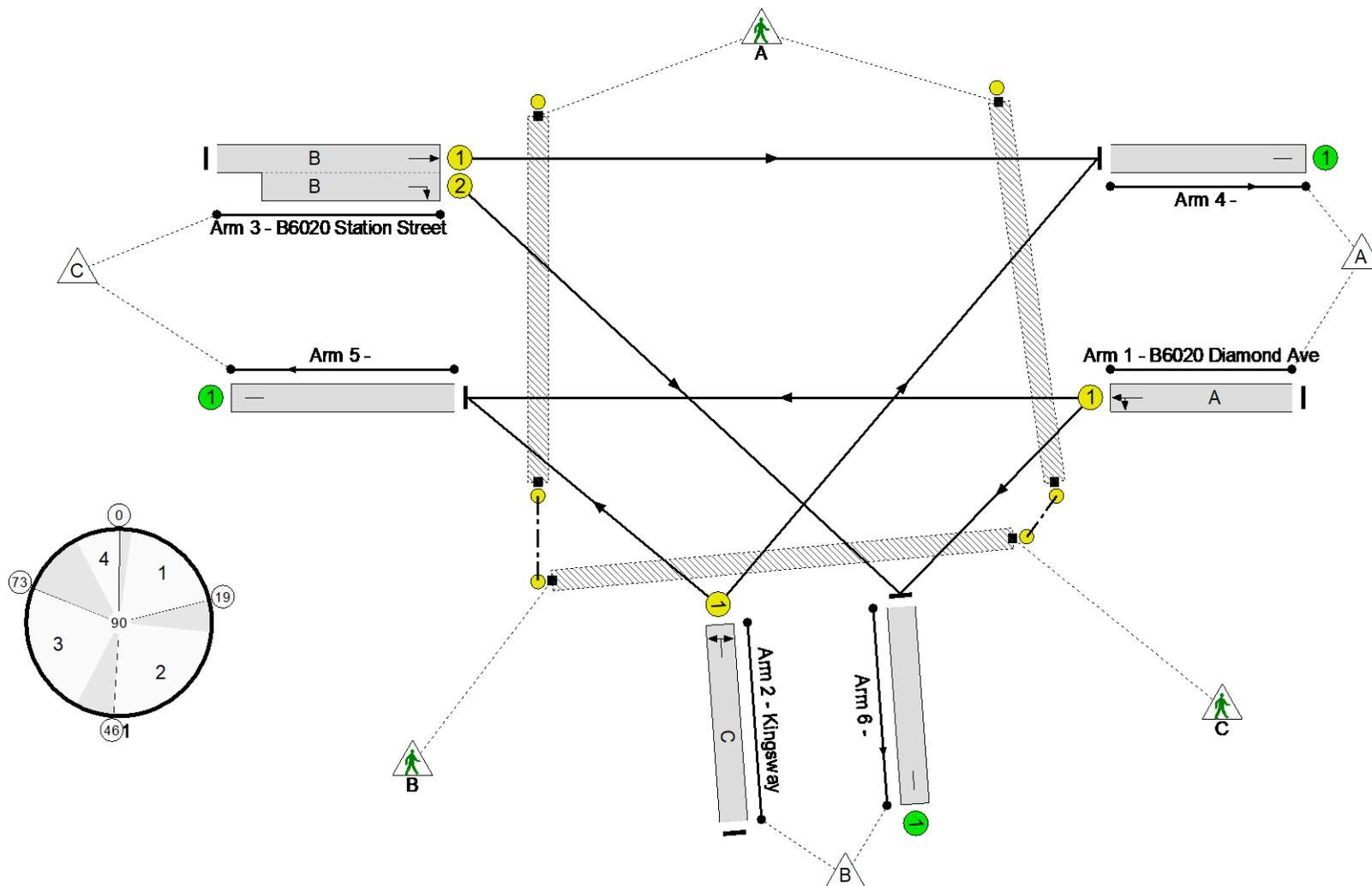
Stage	1	2	3	4
Duration	17	22	21	7
Change Point	0	19	46	73

Signal Timings Diagram



# Full Input Data And Results Network Layout Diagram

Unnamed Junction  
PRC: 16.1 %  
Total Traffic Delay: 15.6 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>77.5%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>77.5%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	17	-	281	1883	377	74.6%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	21	-	336	1773	433	77.5%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	22	-	649	1894:1802	404+461	74.2 : 75.8%
4/1		U	N/A	N/A	-		-	-	-	401	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	446	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	419	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	0.0%

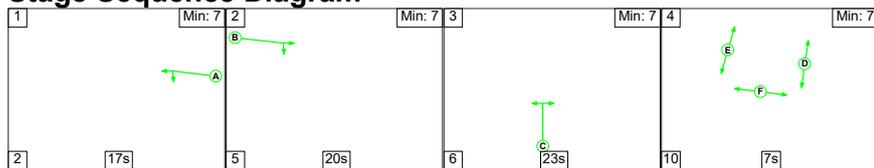
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	11.1	4.6	0.0	15.6	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	11.1	4.6	0.0	15.6	-	-	-	-
1/1	281	281	-	-	-	2.6	1.4	-	4.1	52.1	6.6	1.4	8.0
2/1	336	336	-	-	-	3.0	1.7	-	4.6	49.6	7.7	1.7	9.4
3/1+3/2	649	649	-	-	-	5.5	1.5	-	7.0	38.6	8.0	1.5	9.5
4/1	401	401	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	446	446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	419	419	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1			PRC for Signalled Lanes (%):		16.1	Total Delay for Signalled Lanes (pcuHr):		15.65	Cycle Time (s):		90		
			PRC Over All Lanes (%):		16.1	Total Delay Over All Lanes (pcuHr):		15.65					

Full Input Data And Results

Scenario 7: '2030 DESIGN AM' (FG7: '2030 DESIGN AM', Plan 1: 'Network Control Plan 1')

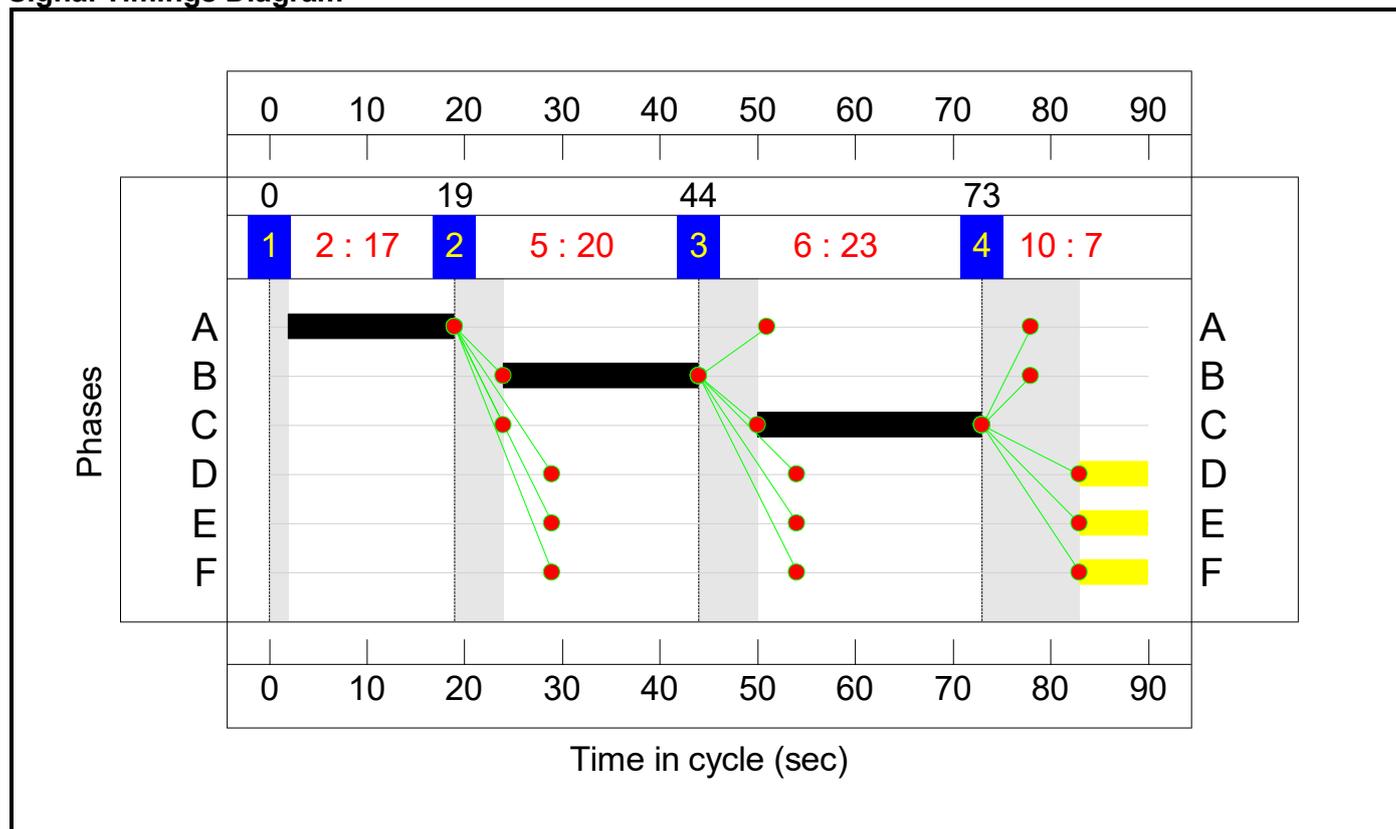
Stage Sequence Diagram



Stage Timings

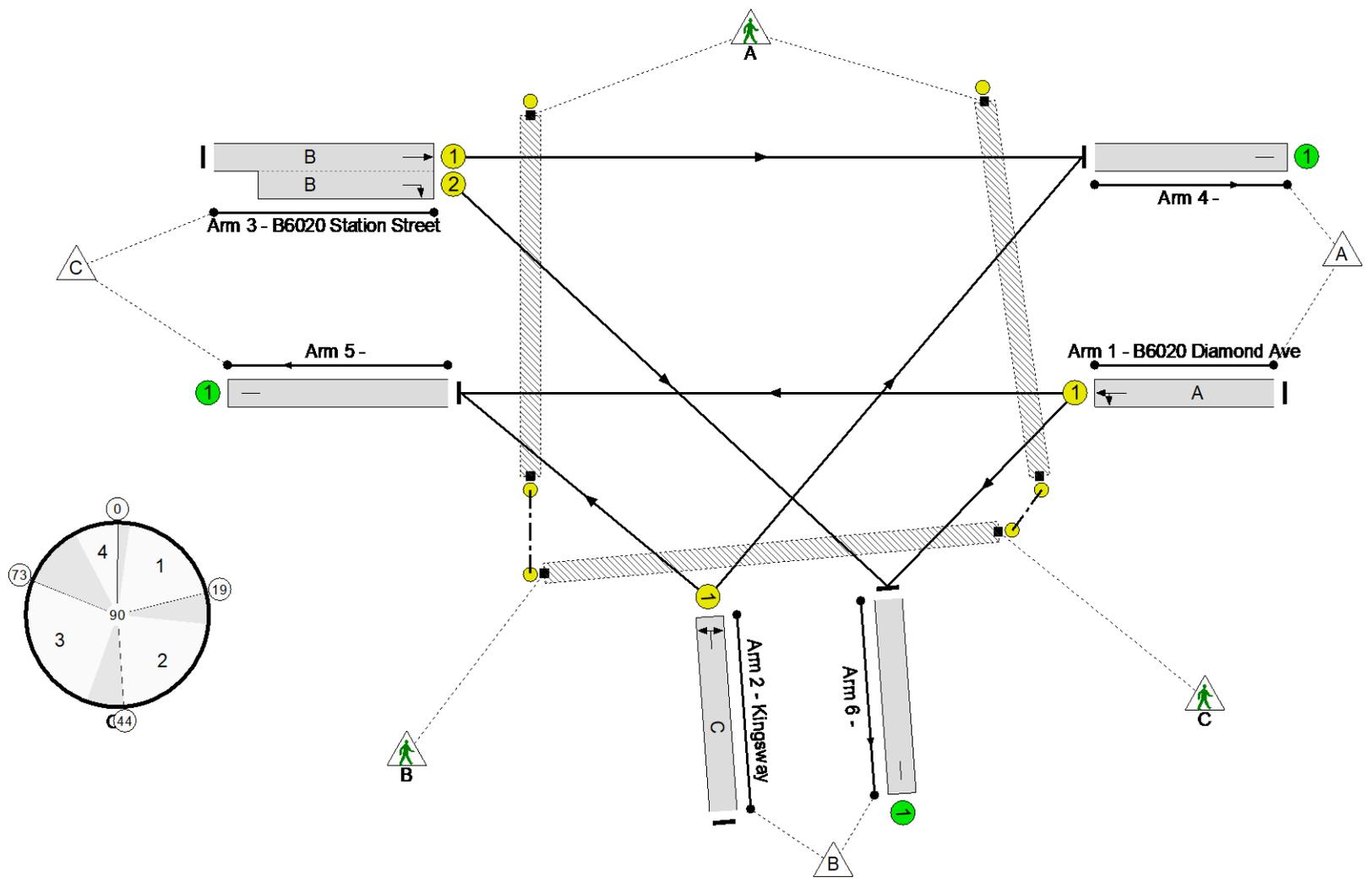
Stage	1	2	3	4
Duration	17	20	23	7
Change Point	0	19	44	73

Signal Timings Diagram



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

Unnamed Junction  
 PRC: 9.1 %  
 Total Traffic Delay: 17.7 pcuHr  
 Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>82.5%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>82.5%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	17	-	303	1897	379	79.9%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	23	-	387	1775	473	81.8%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	20	-	648	1894:1802	420+420	71.7 : 82.5%
4/1		U	N/A	N/A	-		-	-	-	411	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	519	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	408	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	0.0%

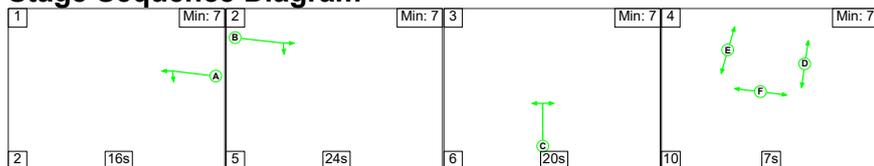
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	12.0	5.7	0.0	17.7	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	12.0	5.7	0.0	17.7	-	-	-	-
1/1	303	303	-	-	-	2.9	1.9	-	4.8	56.7	7.2	1.9	9.0
2/1	387	387	-	-	-	3.3	2.1	-	5.5	50.8	9.0	2.1	11.2
3/1+3/2	648	648	-	-	-	5.8	1.7	-	7.4	41.4	8.2	1.7	9.8
4/1	411	411	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	519	519	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	408	408	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1      PRC for Signalled Lanes (%): 9.1      Total Delay for Signalled Lanes (pcuHr): 17.68      Cycle Time (s): 90 PRC Over All Lanes (%): 9.1      Total Delay Over All Lanes(pcuHr): 17.68													

Full Input Data And Results

Scenario 8: '2030 DESIGN PM' (FG8: '2030 DESIGN PM', Plan 1: 'Network Control Plan 1')

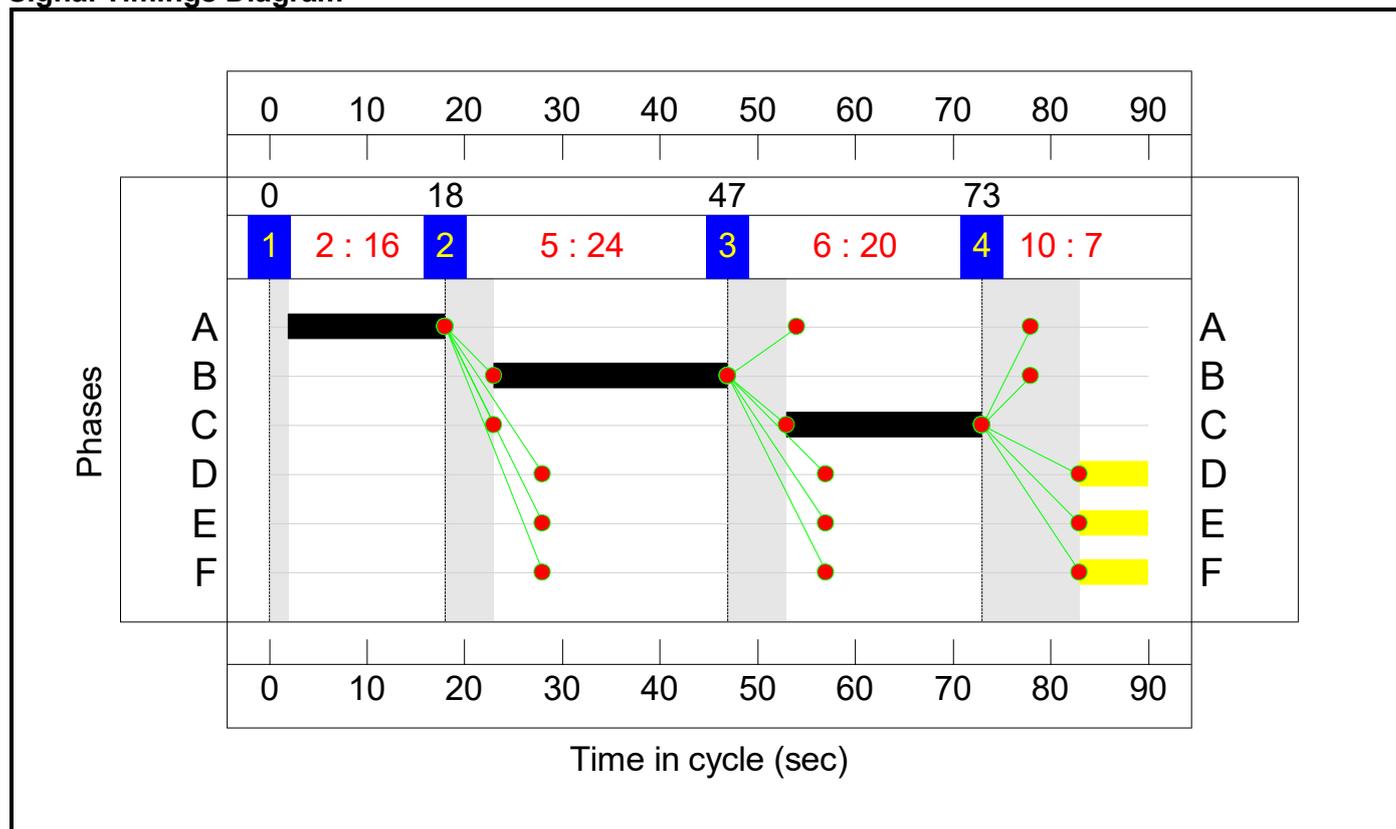
Stage Sequence Diagram



Stage Timings

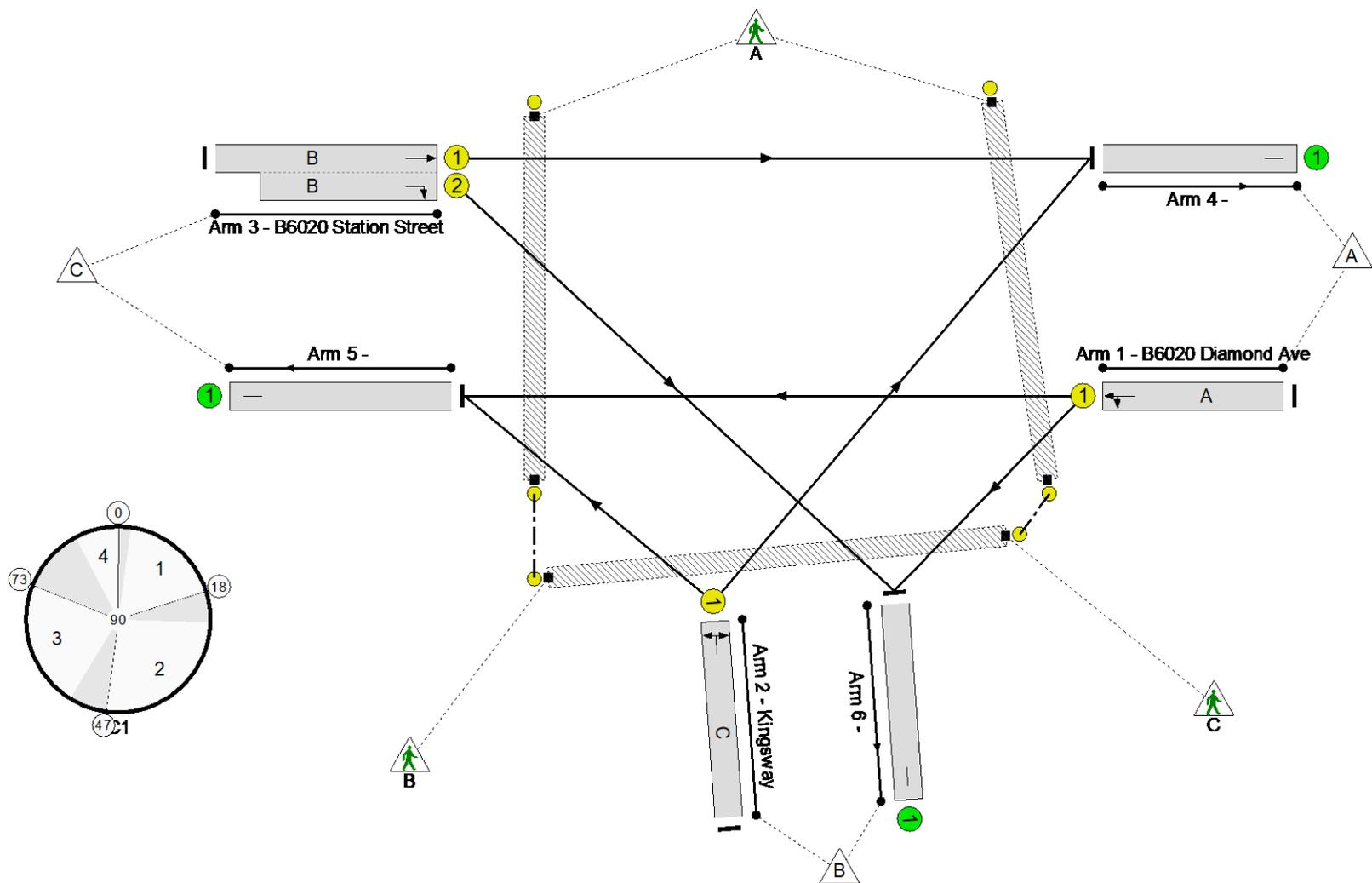
Stage	1	2	3	4
Duration	16	24	20	7
Change Point	0	18	47	73

Signal Timings Diagram



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


**Unnamed Junction**  
 PRC: -0.1 %  
 Total Traffic Delay: 23.5 pcuHr  
 Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>90.1%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>90.1%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	16	-	304	1865	352	86.3%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	20	-	370	1776	414	89.3%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	24	-	779	1894:1802	364+501	90.1 : 90.1%
4/1		U	N/A	N/A	-		-	-	-	424	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	484	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	545	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	0.0%

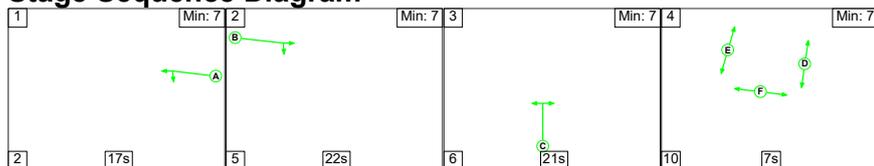
Full Input Data And Results

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)
<b>Network</b>	-	-	0	0	0	12.9	10.6	0.0	23.5	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	12.9	10.6	0.0	23.5	-	-	-	-
1/1	304	304	-	-	-	3.0	2.8	-	5.8	68.8	7.3	2.8	10.2
2/1	370	370	-	-	-	3.4	3.6	-	7.0	68.3	8.9	3.6	12.5
3/1+3/2	779	779	-	-	-	6.5	4.1	-	10.7	49.3	10.8	4.1	14.9
4/1	424	424	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	484	484	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	545	545	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1			PRC for Signalled Lanes (%):	-0.1	Total Delay for Signalled Lanes (pcuHr):			23.49	Cycle Time (s): 90				
			PRC Over All Lanes (%):	-0.1	Total Delay Over All Lanes (pcuHr):			23.49					

Full Input Data And Results

Scenario 9: '2030 DESIGN SAT' (FG9: '2030 DESIGN SAT', Plan 1: 'Network Control Plan 1')

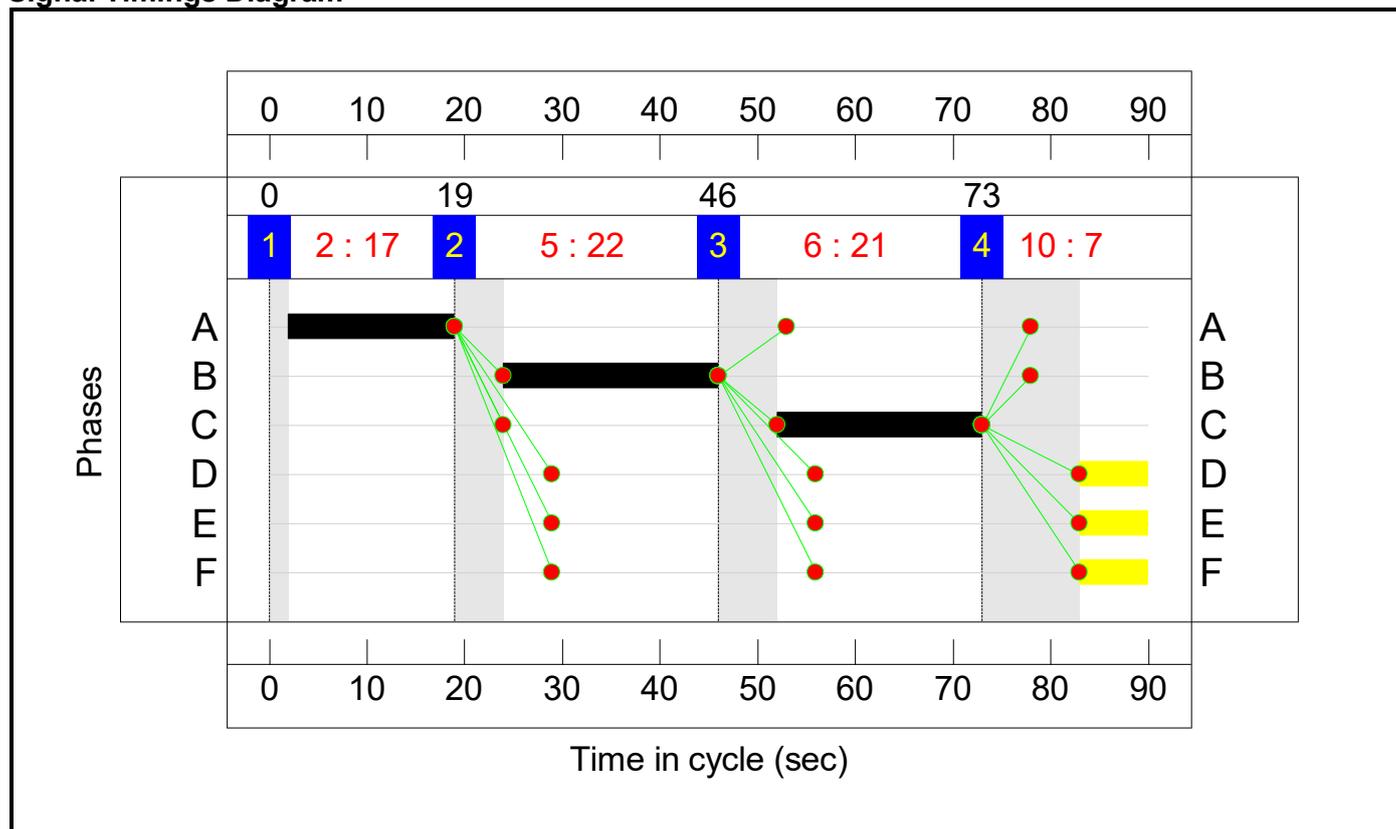
Stage Sequence Diagram



Stage Timings

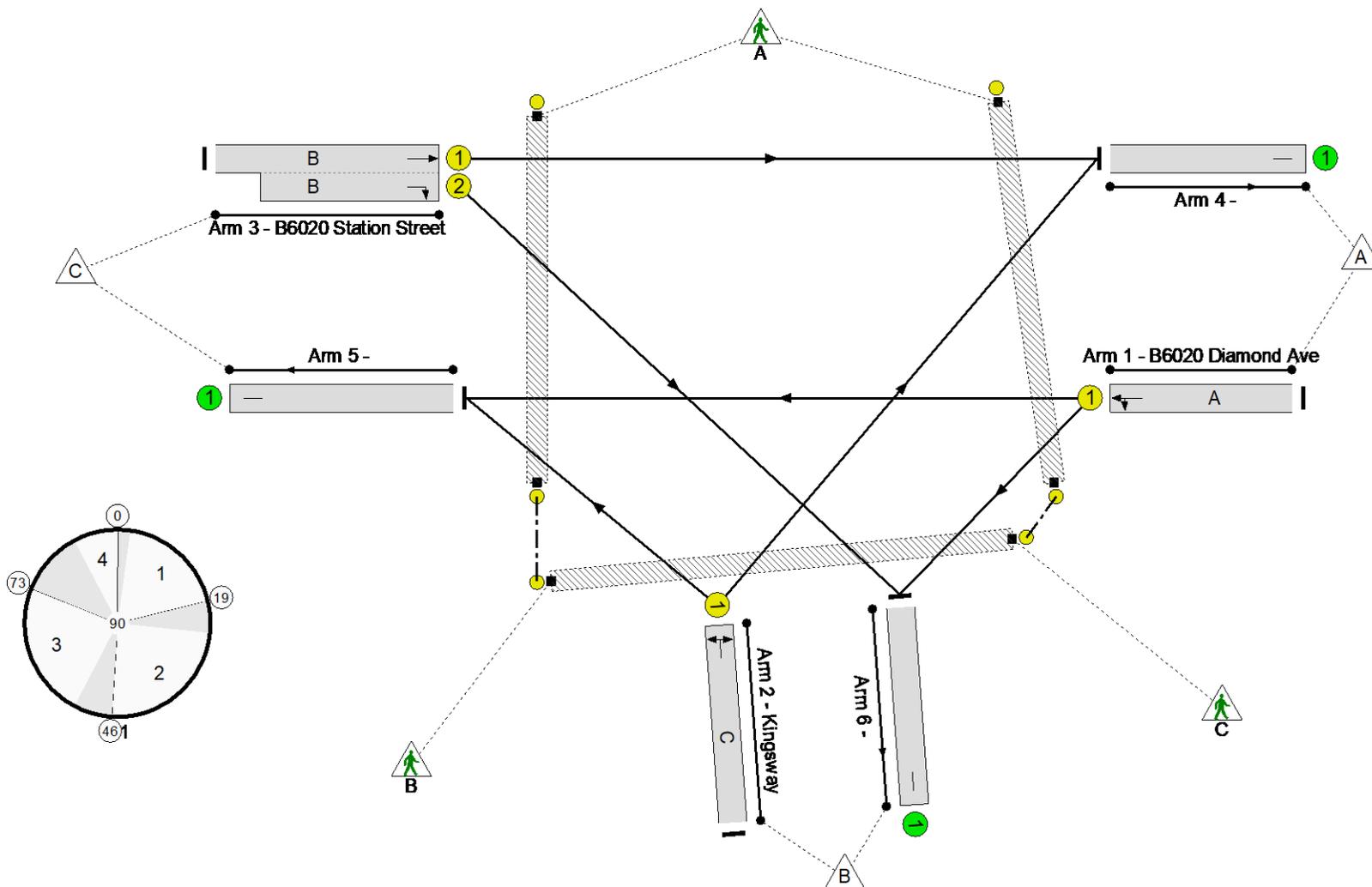
Stage	1	2	3	4
Duration	17	22	21	7
Change Point	0	19	46	73

Signal Timings Diagram



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

Unnamed Junction  
 PRC: 14.5 %  
 Total Traffic Delay: 16.2 pcuHr  
 Ave. Route Delay Per Ped: 0.0 s/Ped



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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>78.6%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>78.6%</b>
1/1	B6020 Diamond Ave Ahead Left	U	N/A	N/A	A		1	17	-	288	1885	377	76.4%
2/1	Kingsway Right Left	U	N/A	N/A	C		1	21	-	341	1774	434	78.6%
3/1+3/2	B6020 Station Street Ahead Right	U	N/A	N/A	B		1	22	-	661	1894:1802	412+461	74.5 : 76.9%
4/1		U	N/A	N/A	-		-	-	-	408	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	458	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	424	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	5600	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	7	-	0	-	5600	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	5600	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)
<b>Network</b>	-	-	0	0	0	11.3	4.9	0.0	16.2	-	-	-	-
<b>Unnamed Junction</b>	-	-	0	0	0	11.3	4.9	0.0	16.2	-	-	-	-
1/1	288	288	-	-	-	2.7	1.6	-	4.3	53.5	6.7	1.6	8.3
2/1	341	341	-	-	-	3.0	1.8	-	4.8	50.5	8.0	1.8	9.7
3/1+3/2	661	661	-	-	-	5.6	1.5	-	7.1	38.8	8.2	1.5	9.7
4/1	408	408	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	458	458	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	424	424	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P2	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
Ped Link: P3	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0
C1      PRC for Signalled Lanes (%): 14.5      Total Delay for Signalled Lanes (pcuHr): 16.20      Cycle Time (s): 90 PRC Over All Lanes (%): 14.5      Total Delay Over All Lanes(pcuHr): 16.20													