

## 7999 BARTON SECTION 12 BLOCK 6 TRANSPORT IMPACT ASSESSMENT REPORT

## PROJECT NO: 7999 CHASE CONSTRUCTION

**MAY 2021** 



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#### PROJECT TITLE: Barton Section 12 Block 6 – Transport Impact Assessment

#### PROJECT NUMBER: 7999

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#### **EXECUTIVE SUMMARY**

Indesco has been engaged by Chase Construction to prepare a transport impact assessment for a proposed residential development in Barton Section 12 Block 6.

The following provides an executive summary of the report. The report sets out an assessment of the anticipated transport implications of the planning proposal, including consideration of the:

- 1. Existing traffic and parking conditions surrounding the site
- 2. Suitability of the proposed access arrangements for the site
- 3. The traffic generation of the development and its impact on the surrounding road network
- 4. Suitability of parking in terms of supply
- 5. Pedestrian and bicycle requirements
- 6. Public transport connections
- 7. Service vehicle requirements

The proposal is for an office building with 19,000 m<sup>2</sup> GFA and is expected to generate 304 and 228 trips in AM and PM peak hour respectively.

#### **Traffic Impact**

The following intersections compose the impacted traffic network:

- 1. Brisbane Avenue / State Circle
- 2. National Circuit / Brisbane Avenue
- 3. National Circuit / Blackall Street

Vehicle access to the development is accommodated as indicated below:

- One-way access from Blackall Street to the development (parking access)
- One-way egress from development to Brisbane Avenue
- One-way access from Brisbane Avenue to the development (Pick-up area access)

Vehicle access can be accommodated from Blackall Street and an egress onto Brisbane Avenue with sight distance available at each location. A set-down and pick-up access can also be provided from Brisbane Avenue. Note that the egress from the development to Brisbane Avenue should be controlled with traffic control devices to avoid direct access to midblock U-turn in Brisbane Avenue.

Based on the SIDRA simulation results, the development will have a minor effect on intersections traffic performance. Analysis of the 'future' scenario (10-year horizon) indicates that additional traffic volumes on the road network will reduce operating conditions, as such extended delays and queue lengths are expected; however, all nominated intersections operate with acceptable performance (LOS A or C) in future post-development scenario.

#### Parking

The development has a car parking requirement of 190 spaces for employees, all of which are recommended to be provided on-site. Visitor parking can be supplied either on Brisbane Avenue and Blackall Street or in surrounding carparks within a 400m radius.

A minimum of 6 motorcycle parking spaces and 6 disabled parking spaces must be provided on-site.

The development has a bicycle parking requirement of 95 spaces for the commercial area, including 20 visitor spaces. As such the appropriate end of trip facilities should be provided on site.

#### Active Travel

Whilst walking and cycling access to the site is generally good, it is recommended to construct a 2m wide pedestrian path along Brisbane Avenue in front of the site to provide sufficient active travel infrastructure for bicycle and pedestrian use.



#### **Service Vehicles**

Any loading / waste collection activities should occur on-site. On this basis, the physical design of the vehicle access points should consider waste collection vehicles to accommodate service activities with forward entry-forward exit movements in compliance with the Development Control Code for Best Practice Waste Management in the ACT 2019.



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#### 1. INTRODUCTION

#### 1.1 INTRODUCTION

Indesco has been engaged by Chase Construction to prepare a transport impact assessment (TIA) for a proposed residential development in Barton Section 12 Block 6. This report has been prepared to support the proposed development through the analysis and assessment of traffic, parking impacts, public transport and active travel impact.

#### 1.2 PURPOSE OF THIS REPORT

This report sets out an assessment of the anticipated transport implications of the planning proposal, including consideration of the:

- 1. Existing traffic and parking conditions surrounding the site
- 2. Suitability of the proposed access arrangements for the site
- 3. Suitability of parking supply
- 4. The traffic generation of the development and its impact on the surrounding road network
- 5. Service vehicle requirements
- 6. Pedestrian and bicycle requirements
- 7. Public transport connections

#### 1.3 **PROPONENT**

The development is proposed to be undertaken by Chase Construction.



#### 2. PROPOSED DEVELOPMENT

The development is proposed to be an office building in Barton, Section 12, Block 6 with 19,000m<sup>2</sup> GFA and associated facilities including car parking, motorcycle parking, bicycle parking and end of trip facilities.

#### 3. EXISTING CONDITIONS

#### 3.1 SUBJECT SITE

The subject site is located at Barton Section 12, Block 6 in the ACT. The site is bounded by Blackall Street to the North, National Circuit to the East and Brisbane Avenue to the South. It is an urban approved block with a total area of 4,636m<sup>2</sup> and designated land use zoning (DES). The site area can be seen in Figure 1.



Figure 1: The Subject Site

Table 1 outlines the key existing features of the development site.

Table 1. Existing realules of Subj	
Site Feature	Detail
Existing Use	Offices
Zoning & Overlays	Designated Use (DES)
Total Site Area	4,636m <sup>2</sup>
Existing On-Site Car Parking	Restricted Parking (gate parking barrier)
	Brisbane Avenue: 2P hour (North side) and No Stopping / No Parking (South side)
On-Street Car Parking	Blackall Street: 2P hour (South side) and No Stopping / No Parking with minimal 1/2P hour (North side)
	Blackall St/ Windsor Walk: decent sized pay parking zone with on street parking along West end of Windsor Walk.

#### Table 1: Existing Features of Subject Site



#### 3.2 ROAD NETWORK

**Brisbane Avenue** is an arterial road that extends between National Circuit in the West and joins Wentworth Avenue in the East.

Brisbane Avenue generally provides a four (4) lane, two-way divided carriageway with a wide green area in median.

Brisbane Avenue is subject to a posted speed limit of 60km/h.

Parking is generally subject to time-based parking restrictions on the North side of the road (2P) and No Stopping / No Parking restrictions on the South side of the road.

**National Circuit** is a minor collector road from Adelaide Avenue in the West to Canberra Avenue in the East, becoming a major collector road from Canberra Avenue in the South/West to Kings Avenue in the North.

National Circuit generally provides a two (2) lane, two-way undivided carriageway.

Intersections with National Circuit are generally unrestricted, with the intersection at Brisbane Avenue using traffic lights.

National Circuit is subject to a posted speed limit of 60km/h.

**Blackall Street** is a local access road extending from Windsor Walk in the East and turning North until it reaches Kings Avenue.

Near the site, Blackall Street provides parking (generally 2P) on its South side as well as a couple of 1/2P parking spots.

A sign posted speed limit of 60km/h on Kings Avenue applies to Blackall Street.

Figure 2 shows the road hierarchy in the study area.



Figure 2: The Road Hierarchy in The Study Area



#### 3.3 SUSTAINABLE TRANSPORT INFRASTRUCTURE

#### 3.3.1 Public Transport

The site is well served by public transport infrastructure, with the Barton Bus Station being a 300m walk from the site. Bus Routes 56, 59, 182 as well as the R2 and R6 all provide access to the Narrabundah/Fyshwick region in the South and to the City in the North. The R6 also provides access to Woden in the West.

Figure 3 outlines the nearby public transport services.



Figure 3: Public Transport Local Area Map

#### 3.3.2 Active Travel

The subject site is served by an existing pedestrian path network that provides active travel connections to the subject site. A 1.2-1.7m footpath circles the site providing access on all sides.

Strategically, the ACTive Infrastructure Practitioner Tool shows a principal CBR cycling route along Macquarie Street joining Commonwealth Avenue. Cycling routes can be seen in Figure 4.



Figure 4: Walking and Cycling Routes



#### 3.4 CRASH DATA

Historical crash data has been reviewed for the sections of Brisbane Avenue from the State Circle intersection to the National Circuit intersection, along National Circuit from its intersection with Brisbane Avenue to its intersection with Blackall Street and along Blackall Street west of its intersection with National Circuit. This data listed the type, location, severity and other details of all reported crashes in this section of the road network, that occurred in the five years from 2015 to 2019.

The crash data showed a total of 61 crashes. Table 2 shows the details of crashes occurred:

Location Type	Location Description	Number of Property Damage Crashes	Number of Injury Crashes	Total Number of Crashes	
Mid Block	National Cct (Brisbane Av -> Blackall St)	1	0	1	
Intersection	Blackall St/National Cct	7	1	8	
Mid Block	Blackall St (National Cct-> Blackall St)	3	0	3	
Intersection	Brisbane Av/National Cct	20	1	21	
Mid Block	Brisbane Av (National Cct -> John McEwan Cres)	2	0	2	
Intersection	Brisbane Av/John McEwan Cres	1	0	1	
Mid Block	Brisbane Av (John McEwan Cres-> State Circle)	7	0	7	
Intersection	Brisbane Av/State Circle	14	4	18	
Total		55	6	61	

#### Table 2: Details of Crash Data

The three most prevalent crash types at the study area were as follows:

- Rear-end crashes (RUM Code 301) which accounted for 16% of all crashes
- · Left side rear-end crashes (RUM code 302) which accounted for 16% of all crashes
- Straight ahead through-through crashes (RUM code 101) which accounted for 16% of all crashes

As the data shows most of the crashes are common crashes type at intersections.

The total number of injuries was recorded at 6.

#### 3.5 TRAFFIC SURVEYS

The traffic survey has been undertaken by Trans Traffic Survey on Wednesday 31<sup>st</sup> March 2021 during the AM period (7:30am-9:30am) and PM period (3pm-7pm). Following intersections have been surveyed:

- 1. Brisbane Avenue / State Circle
- 2. National Circuit / Brisbane Avenue
- 3. National Circuit / Blackall Street
- 4. Two mid-block U-Turns in Brisbane Avenue

A summary of the existing movements during each peak hour at both intersections are presented in Figure 5 and Figure 6, with the full data provided in Appendix A.



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Figure 5: Existing AM Peak Traffic Volumes



Figure 6: Existing PM Peak Traffic Volumes

#### 3.5.1 Intersection Performance

The performance of the key intersections and the site access have been assessed using SIDRA INTERSECTION 9.0 analytical traffic modelling software. SIDRA analysis defines intersection performance based on the following four key parameters:

- Degree of saturation (DOS), which represents the ratio of traffic demand to theoretical intersection capacity
- Average delay (in seconds) experienced by vehicles undertaking each movement at the intersection
- Level of Service (LOS), which converts the average delay to a letter grade that reflects the average driver's perception of the traffic conditions



 95<sup>th</sup> percentile queue lengths, which reflect the length of queuing (in metres), on each approach lane at the intersection that has a 5% (or 1-in-20) chance of being exceeded

The RMS Traffic Modelling Guidelines identify the maximum practical DOS for various intersection controls as presented in the Table 3.

### Table 3: Maximum Practical DOS for Various Intersection Controls

Intersection Control	Maximum Practical DOS
Traffic Signals	0.90
Roundabout (incl. Metered)	0.85
Priority-Controlled	0.80

The RMS Traffic Modelling Guidelines also identify LOS criteria for intersections as shown in the Table 4.

LOS	Average delay per vehicle
А	≤ 14s
В	15s – 28s
С	29s – 42s
D	43s – 56s
Е	57s – 70s
F	> 70s

#### Table 4: LOS Criteria for Intersection

95<sup>th</sup> percentile queue lengths have been assessed against the available storage length within each respective lane.

Table 5 summarises the performance of Intersections' existing condition. Further details of the SIDRA analysis are provided in Appendix D.

Table 0. Intersection renormance ourinnary Existing conditions (Ain & Fin Feak notics)									
Intersection	Intersection Arrangement	AM Peak Hour			PM Peak Hour				
		DOS	Delay	LOS	Queue	DOS	Delay	LOS	Queue
Blackall St/ National Cct	Give-way Intersection	0.295	3.2	А	6.9	0.213	2.5	А	5.9
Brisbane Av / National Cct	Signalised Intersection	0.826	21.5	В	44.1	0.828	16.4	В	22.5
Brisbane Av/ State Cir	Signalised Intersection	0.704	22.0	С	131.9	0.852	26.6	С	91.6

#### Table 5: Intersection Performance Summary - Existing Conditions (AM & PM Peak Hours)

The SIDRA simulation results show that nominated intersections operate with acceptable performance (LOS A, B and C) in AM and PM peak hours. Results also confirm that the maximum practical DOS for each intersection is within acceptable parameters and queue lengths do not pose any constraint in the existing conditions.



#### 4. TRAFFIC ASSESSMENT

#### 4.1 TRAFFIC GENERATION

Given the trip generation rate provided in the Guide to Traffic Generation Developments (Updated traffic surveys – August 2013), the peak trip generation rate for the general office centre is as follows:

- Weekday AM peak: 1.6 per 100 m<sup>2</sup> GFA
- Weekday PM peak: 1.2 per 100 m<sup>2</sup> GFA

Table 6: Traffic Generation (Peak Hours)

The Table 6 summarises the hourly traffic generation for the proposed development.

Туре	Sizo	AM Volum	es	PM Volumes				
	5120	Rate	Move/Hour	Rate	Move/Hour			
Office	19,000m² GFA	1.6 per 100 m <sup>2</sup> GFA	304	1.2 per 100 m <sup>2</sup> GFA	228			
Total			304		228			

#### 4.2 SITE ACCESS

The proposal seeks to provide the following access points:

- One-way access from Blackall Street to the development (parking access)
- One-way egress from development to Brisbane Avenue
- One-way access from Brisbane Avenue to the development (Pick-up area access)

Given the considerable traffic volume on Brisbane Avenue, exit movements from the site should be internally controlled before exiting the boundary by implementing Left Only, Stop/Give way signs as appropriate.

In order to maintain movements safety and avoiding intense weaving, the egress movement from the development to the Brisbane Avenue shall be design in a way the vehicles cannot have access the midblock U-turn in Brisbane Avenue.



Figure 7 shows the vehicle access locations.

Figure 7: Vehicle Access Locations



#### 4.3 TRAFFIC DISTRIBUTION

Traffic volumes generated by the subject site have been distributed in the surrounding road network via four key routes. The percentage allocation of traffic to each route has been based on the 2016 ABS Census 'Journey to Work' data for residents of Barton which provides the residential location information for Barton workers.

A summary of the adopted allocation splits is provided in Table 7, whilst a summary diagram of the four key distribution zones (Figure 8) and routes (Figure 9) through the local road network are shown below.

Table	7:	Traffic	Distribution

Route	Streets	Allocation
North	Blackall St - National Cct	46%
South-West	Blackall St - National Cct - Brisbane Av	24%
South/East	Blackall St - Macquarie St - Brisbane Av	26%
Central	Blackall St - National Cct	5%
Total		100%



Figure 8: Traffic Distribution Areas



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#### **Figure 9: Traffic Distribution Routes**

The inbound/outbound splits for the trip distribution for the site land uses are summarised in Table 8.

#### **Table 8: Inbound and Outbound Splits**

Land use	Peak	Inbound	Outbound
Office	AM	80%	20%
	PM	20%	80%



#### 4.4 PEAK HOUR TRAFFIC VOLUME ANALYSIS

#### 4.4.1 Development Peak Hour Volumes

The turning movements generated by the development on the road network are shown in Figure 10 and Figure 11.



Figure 10: AM Peak Hour – Development Volumes



Figure 11: PM Peak Hour – Development Volumes



#### 4.4.2 Future Scenario Non-Development Traffic Volumes

Future traffic volume data set has been developed by applying annual growth rate of 1.5% (driven from CSTM data) to all traffic movement in the network. A growth factor of 1.5% p.a. (linear) has been adopted for analysis, applied over a 10-year period.

The future scenario volumes are shown in Figure 12 and Figure 13.



Figure 12: AM Peak Hour – Future Non-Development Volumes



Figure 13: PM Peak Hour – Future Non-Development Volumes

#### 4.4.3 Future Scenario Post-Development Traffic Volumes

Future traffic volumes with considering development's traffic generation are shown in Figure 14 and Figure 15.



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Figure 14: AM Peak Hour – Future Post-Development Volumes



Figure 15: PM Peak Hour – Future Post-Development Volumes

#### 4.4.4 Capacity Analysis – Post Development & Future

SIDRA traffic modelling has been undertaken for the future traffic volumes scenario. A summary of the SIDRA model outputs for each intersection in 2031 Non-development scenario is shown in Table 9. Further details of the SIDRA analysis are provided in Appendix E.

		iiiiai y	i atare		olopin	///							
	Intersection		AM Pea	ak Houi		PM Peak Hour							
Intersection	Arrangement	DOS	Delay	LOS	Queue	DOS	Delay	LOS	Queue				
Blackall St /National Cct	Give-way Intersection	0.343	3.4	А	9.1	0.269	2.7	А	7.7				
Brisbane Av / National Cct	Signalised Intersection	0.867	25.5	В	61.3	0.786	17.8	В	29.6				
Brisbane Av /State Cir	Signalised Intersection	0.759	24.2	В	174.6	0.825	26.5	В	112.2				



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A summary of the SIDRA model outputs for each intersection in 2031 post development scenario (Future) is shown in Table 10. Further details of the SIDRA analysis are provided in Appendix F.

Interception	Intersection		AM Pea	ak Houi			PM Peak Hour				
Intersection	Arrangement	DOS	Delay	LOS	Queue	DOS	Delay	LOS	Queue		
Blackall St/ National Cct	Give-way Intersection	0.436	5.0	A	25.7	0.301	3.0	A	9.2		
Brisbane Av/ National Cct	Signalised Intersection	0.891	31.9	С	89.7	0.893	24.3	В	49.1		
Brisbane Av/ State Cir	Signalised Intersection	0.765	23.6	В	170.2	0.825	26.4	В	112.2		

 Table 10: Intersection Performance Summary – Future Post-Development

The SIDRA simulation results show that nominated intersections operate with acceptable performance (LOS A or C) in future post-development scenario. Therefore, the traffic impact of the development is negligible and the road network will operate at an acceptable level of performance. Degree of Saturation and queue lengths are also shown to remain within acceptable parameters.



#### 5. CAR PARKING ASSESSMENT

#### 5.1 CAR PARKING REQUIREMENTS

The ACTPLA Parking and Vehicular Access General Code provides car parking requirements for developments.

In this case, the subject site is classified as a designated land use zone, which has the following car parking requirements:

• 1 space per 100m<sup>2</sup> GFA

Based on the above rates, the car parking requirements for the proposed development are shown in Table 11.

Land Use	GFA	Car parking Rate	Parking Requirement (Space)
Office	19,000m <sup>2</sup>	1 spaces / 100m <sup>2</sup> GFA	190
Total			190

#### **Table 11: Car Parking Assessment**

#### 5.2 CAR PARKING LOCATION

The ACTPLA Parking and Vehicular Access General Code also provides guidance in relation to the location of car parking.

For non-residential, childcare or special dwelling, the following requirements apply:

- Staff Parking (long term) On-site or in publicly available car parks up to 1km distance
- Visitor Parking (short term) On-site or within 400m

In view of the above, the 190 spaces associated with staff parking are advised to be provided on site to ensure sufficient parking is available for all employees.

Two large adjacent payed carparks are located within 200m of the site, each one accommodating a large number of vehicles for an unrestricted time period. In addition to the above, the existing short stay (1/2P and 2P) on-street parking provided by Blackall St and Brisbane Av could accommodate for the visitor parking demand. Within 400m, a maximum of about 40 on-street parking spaces may be available.

#### 5.3 DISABLED CAR PARKING

The ACTPLA Parking and Vehicular Access General Code indicates that at least 3% of the general parking should be comprised of disabled parking spaces. As such, six (6) disabled spaces should be provided on-site as a part of the 190 standard parking spaces mentioned above.



#### 5.4 MOTORCYCLE PARKING

**Table 12: Bicycle Parking Assessment** 

The ACTPLA Parking and Vehicular Access General Code requires that parking for motorcycles and motor scooters is provided at a rate of 3 spaces for each 100 car parking spaces provided. As such, six (6) spaces should be provided on-site for motorcycles.

#### 5.5 BICYCLE PARKING

The provision of bicycle parking is set out in the ACTPLA Bicycle Parking General Code.

For office buildings, the code requires 1 bicycle parking space per 250m<sup>2</sup> GFA after the first 250m<sup>2</sup> GFA for employees and 1 space per 950m<sup>2</sup> GFA after the first 400m<sup>2</sup> for visitors. A summary of the bicycle parking requirements is provided in Table 12.

Land Use	Number / Size	Bicycle Parking Rate	Bicycle Parking Requirement (space)
Commercial	10.000m <sup>2</sup> CEA	1 space / 250m <sup>2</sup> GFA after the first 250m <sup>2</sup> GFA	75 spaces
Commerciai	19,000m-GFA	1 space / 950m <sup>2</sup> GFA after the first 400m <sup>2</sup> GFA	20 spaces
Т	otal		95 spaces

## For employee bicycle parking, the code requires class 2 bicycle parking facilities. Therefore, it is recommended that locked cages or compounds containing installations such as metal hoops and

recommended that locked cages or compounds containing installations such as metal hoops and rails be used to lock the bicycle by the wheels.

For visitors bicycle parking, the code required class 3 facilities, as such, metal hoops and rails that allow the bicycle frame to be locked will satisfy the requirement.

#### 5.6 CAR PARKING ACCESSES

Assuming all required employee parking spaces are provided on site, considering a maximum of 190 spaces and Table 3.1 of the AS 2890.1, the proposed development requires a category (2) access for the Blackall Street frontage and a category (2) access for the Brisbane Avenue frontage.

Using Table 3.2 of the same standards, a category 2 access requires a 6.0m to 9.0m width combined entry/exit and a category 3 access requires a 6.0m entry width and between 4.0 and 6.0 metres for exiting.

The proposed development has:

- One entrance driveway from Blackall Street with 6.0m width conforming to the category 2 requirements stated above
- One exit driveway onto Brisbane Avenue with 6.0m width conforming to the category 3 requirements stated above

Table 13: Selection of Access Facility Category (Table 3.1 of the AS 2890.1)

Close of		Access Facility Category											
Parking Facility	Frontage Road Type	Number of Parking Spaces											
		<25	25 to 100	101 to 300	301 to 600	>600							
1 1 1	Arterial	1	2	3	4	5							
т, т <b>а</b>	Local	1	1	2	3	4							



#### 5.7 END OF TRIP FACILITIES

The provision of the end of trip facilities is set out in the ACTPLA Bicycle Parking General Code. Given the number of 75 employee bicycle parking spaces, the following are to be considered as the end of trip facility:

- A total of 8 showers
- A total of 75 clothing lockers
- Separate shower and change facilities are to be provided for males and females
- Showers and change facilities must be provided as one communal change room for each gender, directly accessible from the showers for that gender without passing through a public space
- Shower and change facilities must be located so that users and their belongings have a high level of security
- All showers provided are to dispense both hot and cold water
- Signs should be provided to direct cyclists to bicycle parking. Signage should be designed in accordance with Australian Standard 2890.3 Bicycle Parking Facilities

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#### 6. ACTIVE TRAVEL ASSESSMENT

The following key walking and cycling link are located in close proximity to the subject site:

Brisbane Avenue - Footpath on site boundary along the Avenue

**Brisbane Avenue** – two (2) signalised crossing points at crossing with National Circuit and one (1) informal and unsignalised point near proposed site

National Circuit – Footpath along the road with crossings at intersection with Brisbane Avenue

National Circuit - Bicycle lane starts after crossing with national circuit heading North

**Blackall Street** – Footpath along site boundary

A summary of existing facilities is shown in Figure 16.



Figure 16: Existing Walking / Cycling Infrastructure

Whilst the above existing network provides good walking linkages, it is recommended to construct a 2.0 meter wide shared path along Brisbane Avenue in front of the site to provide a wide shared path for bicycle and pedestrian use.

#### 7. PUBLIC TRANSPORT IMPACTS

Barton Bus Station being a 300m walk from the site operates along National Circuit is expected to be impacted by the development's trip demand. On this basis, an impact on bus routes number 2 and 6 of the public transport services by Transport Canberra may be required.

#### 8. SERVICE VEHICLES

Any loading / waste collection activities should occur on-site. On this basis, the physical design of the vehicle access points should consider heavy vehicles to accommodate service activities with forward entry-forward exit movements in compliance with the Development Control Code for Best Practice Waste Management in the ACT 2019.

Construction vehicles will be subject to separate traffic management plans and access will be for duration periods.



#### 9. CONCLUSION

Indesco has been engaged by Chase Construction to prepare a transport impact assessment for a proposed residential development in Barton Section 12 Block 6.

The proposal is for an office building with 19,000 m<sup>2</sup> GFA.

The SIDRA modelling was undertaken to assess the impact on key external intersections:

- 1. Brisbane Avenue / State Circle (signalised intersection)
- 2. National Circuit / Brisbane Avenue (signalised intersection)
- 3. National Circuit / Blackall Street (give-way intersection)

The analysis and relevant discussion in this report led to the following conclusions:

- 1. The proposed development is expected to generate 304 and 228 trips in AM and PM peak hour respectively.
- 2. Based on the SIDRA simulation results, the development will have a minor effect on intersections traffic performance and all nominated intersections will perform with an acceptable level of service (LOS A or C).
- 3. Vehicle access can be accommodated from Blackall Street with good sight distance available and an egress onto Brisbane Avenue. A pick-up access can also be provided from Brisbane Avenue. Note that the egress from the development to Brisbane Avenue should be controlled with traffic control devices to avoid direct access to midblock U-turn in Brisbane Avenue.
- 4. Capacity analysis of the surrounding road network post development showed that the development results in minor deterioration to operating conditions. It is noted that the contribution of traffic volumes from the development is minor in comparison to the traffic volumes on the existing road network.
- 5. Analysis of the 'future' scenario (10-year horizon) indicates that additional traffic volumes on the road network will reduce operating conditions, as such slight increase in delays and queue lengths are expected; however, all nominated intersections operate with acceptable performance (LOS A or C) in future post-development scenario.
- 6. The development has a car parking requirement of 190 spaces for employees. These spaces are recommended to be provided on-site whilst visitor parking can be supplied either on-street or in surrounding carparks within a 400m distance to the site.
- 7. A minimum of 6 motorcycle and 6 disabled parking spaces are required for the development, both of which are to be provided on-site as a part of the 190 spaces mentioned above.
- 8. The development has a bicycle parking requirement of 95 spaces for the commercial area, including 20 visitor spaces. As such the appropriate end of trip facilities should be provided on site.
- 9. Whilst walking and cycling access to the site is generally good, it is recommended to construct a 2.0 meter wide shared path along Brisbane Avenue in front of the site to provide a wide shared path for bicycle and pedestrian use.
- 10. Public transport is expected to be impacted by the proposed development, with the nearby Barton bus station being subject to an increase in users. A review of bus services to the area by Transport Canberra may be required.
- 11. The final design of the site access arrangements should allow for the trucks associated with service and loading on the subject site.



Appendix A: Peak Hour Traffic Counts



0,0	00.000110, 140.1200							
Date:	Wed 31/03/21	No	orth:	State Circle		Survey	AM:	7:30 AM-9:30 AM
Weather:	Overcast	Ea	ast:	Brisbane Avenue		Period	PM:	3:00 PM-7:00 PM
Suburban:	Barton	So	outh:	State Circle		Traffic	AM:	8:15 AM-9:15 AM
Customer:	Indesco	We	/est:	Brisbane Avenue		Peak	PM:	4:45 PM-5:45 PM
					-			

All Vehicles	5																		
Ti	me	Nort	h Approa	ch State	Circle	East A	pproach l	Brisbane	Avenue	So	uth Approa	ch State C	ircle	West A	pproach	Brisbane	Avenue	Hourl	y Total
Period Star	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	1	152	82	0	11	3	26	0	1	84	1	0	0	0	1	1988	
7:45	8:00	0	2	183	109	0	29	0	23	0	9	102	1	0	2	0	3	2371	
8:00	8:15	0	0	217	99	0	18	0	35	0	7	121	0	0	0	0	1	2609	
8:15	8:30	0	1	229	148	0	30	4	47	0	30	174	1	0	0	0	1	2757	Peak
8:30	8:45	0	2	265	151	0	31	0	70	0	26	193	2	0	2	1	2	2608	
8:45	9:00	0	0	225	157	0	41	1	54	0	36	185	0	0	1	1	0		
9:00	9:15	0	1	222	143	0	46	0	39	0	28	167	0	0	0	0	0		
9:15	9:30	0	2	170	111	0	23	0	24	0	10	175	0	0	0	0	1		
15:00	15:15	0	1	124	49	0	27	0	48	0	4	92	1	0	0	0	4	1506	
15:15	15:30	0	0	135	44	0	38	0	44	0	2	111	1	0	1	0	1	1533	
15:30	15:45	0	1	112	38	0	48	1	47	0	5	143	0	0	0	0	1	1623	
15:45	16:00	0	0	127	41	0	24	0	43	0	3	140	1	0	0	1	3	1705	
16:00	16:15	0	0	131	32	0	28	0	53	0	5	127	0	0	0	0	1	1833	
16:15	16:30	0	1	172	31	0	34	0	83	0	1	145	0	0	0	0	0	2066	
16:30	16:45	0	0	180	41	0	34	1	74	0	3	143	0	0	0	1	1	2251	
16:45	17:00	0	0	188	37	0	40	0	71	0	5	170	0	0	0	0	0	2343	Peak
17:00	17:15	0	0	206	49	0	69	0	93	0	4	189	0	0	0	0	0	2294	
17:15	17:30	0	1	219	61	0	64	0	104	0	6	194	0	0	0	0	3	2052	
17:30	17:45	0	0	190	40	0	68	0	119	0	1	152	0	0	0	0	0	1754	
17:45	18:00	0	0	160	51	0	46	0	77	0	6	122	0	0	0	0	0	1509	
18:00	18:15	0	0	103	34	0	45	0	63	0	6	117	0	0	0	0	0	1310	
18:15	18:30	0	1	106	53	0	32	0	59	0	2	101	0	0	0	0	0		
18:30	18:45	0	0	110	44	0	31	0	48	0	1	91	0	0	0	0	0		
18:45	19:00	0	0	86	25	0	20	0	40	0	2	90	0	0	0	0	0		
Book	Time	Nori	h Annrea	ch State	Circle	Eact A	nnroach	Brichana	Δνορμε	60	ith Approx	ch State C	irclo	West	nnroach	Brichano	Avenue	Poak	
Period Star	Period End			SB			R	WR			R	NR		II II	R	FR	Avenue	total	
8:15	9:15	0	4	941	599	0	148	5	210	0	120	719	3	0	3	2	3	2757	
16:45	17:45	0	1	803	187	0	241	0	387	0	16	705	0	0	0	0	3	2343	

## TRANS TRAFFIC SURVEY

010	00.000101, 140.100-	20			 		
Date:	Wed 31/03/21	Nort	h: National	Circuit	Survey	AM:	7:30 AM-9:30 AM
Weather:	Overcast	East	: Brisbane	Avenue	Period	PM:	3:00 PM-7:00 PM
Suburban:	Barton	Sout	h: State Circ	cle	Traffic	AM:	8:15 AM-9:15 AM
Customer:	Indesco	West	t: National	Circuit	Peak	PM:	4:45 PM-5:45 PM
All Vehicles	3						
						-	

	me	North	Approacr	National	Circuit	East A	pproacn i	Brisbane	Avenue	501	ith Approa	ch State C	ircie	west	Approacn	National	Circuit	Houri	y i otai
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	4	26	8	1	16	46	8	0	3	25	5	0	11	46	6	1135	
7:45	8:00	0	5	31	14	0	18	34	7	0	6	33	6	0	21	53	12	1367	
8:00	8:15	0	4	27	11	1	31	63	16	0	6	38	5	0	24	42	23	1541	
8:15	8:30	0	12	49	16	0	26	71	14	0	10	59	9	0	27	67	39	1604	Peak
8:30	8:45	0	15	39	15	0	39	107	19	0	10	52	7	0	26	70	38	1503	
8:45	9:00	0	13	55	12	1	27	82	11	0	17	56	14	0	15	61	50		
9:00	9:15	0	9	41	8	1	43	65	12	0	9	50	11	0	12	60	33		
9:15	9:30	0	8	38	10	0	22	53	11	0	9	60	10	0	6	50	21		
15:00	15:15	0	8	32	14	1	7	49	2	0	7	27	4	0	13	46	5	835	
15:15	15:30	0	13	26	9	3	6	60	12	0	8	29	6	0	8	38	6	849	
15:30	15:45	0	11	29	13	1	6	52	4	0	3	28	5	0	7	39	3	872	
15:45	16:00	0	5	24	15	1	8	42	7	0	5	27	10	0	6	36	9	926	
16:00	16:15	0	12	37	12	0	8	45	10	0	6	30	10	0	9	39	11	997	
16:15	16:30	0	16	36	19	0	6	56	2	0	9	39	7	0	6	35	16	1097	
16:30	16:45	0	17	28	26	0	15	49	9	0	7	39	16	0	7	25	17	1261	
16:45	17:00	0	28	38	20	0	6	46	8	0	8	40	14	0	12	30	16	1371	Peak
17:00	17:15	0	34	48	29	0	9	54	4	0	11	47	18	0	15	40	20	1370	
17:15	17:30	0	40	57	27	0	6	78	6	0	14	71	17	0	20	54	21	1301	
17:30	17:45	0	29	64	23	0	13	81	6	0	10	55	11	0	9	47	17	1131	
17:45	18:00	0	21	39	19	0	6	43	5	0	12	45	18	0	11	28	18	963	
18:00	18:15	0	19	39	13	0	4	48	5	0	11	40	13	0	7	46	15	848	
18:15	18:30	0	16	37	13	0	8	44	1	0	6	32	13	0	7	45	19		
18:30	18:45	0	6	21	12	0	6	47	5	0	7	32	5	0	12	36	8		
18:45	19:00	0	9	18	6	0	4	35	6	0	4	30	3	0	5	25	5		
Peak	Time	North	Approach	National	Circuit	East A	pproach I	Brisbane	Avenue	Sou	th Approa	ch State C	ircle	West	Approach	National	Circuit	Peak	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total	
8:15	9:15	0	49	184	51	2	135	325	56	0	46	217	41	0	80	258	160	1604	
16:45	17:45	0	131	207	99	0	34	259	24	0	43	213	60	0	56	171	74	1371	

# TRANS TRAFFIC SURVEY

0/3	-33.300032, 143.1333	50						
Date:	Wed 31/03/21	Λ	North:	National Circuit		Survey	AM:	7:30 AM-9:30 AM
Weather:	Overcast	E	East:	Blackall Street		Period	PM:	3:00 PM-7:00 PM
Suburban:	Barton	S	South:	State Circle		Traffic	AM:	8:15 AM-9:15 AM
Customer:	Indesco	V	West:	Blackall Street		Peak	PM:	4:45 PM-5:45 PM
-					-			

All Vehicles	6																		
Ti	me	North	Approach	National	I Circuit	East	Approach	n Blackall	Street	So	uth Approa	ach State C	ircle	West	Approach	h Blackall	Street	Hourl	y Total
Period Star	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	8	31	4	0	9	5	3	0	0	40	6	0	1	0	2	665	
7:45	8:00	0	19	34	1	0	4	8	4	0	6	43	12	0	5	0	4	800	
8:00	8:15	0	18	43	4	0	11	5	4	0	5	64	18	0	1	0	3	936	
8:15	8:30	0	23	60	5	0	3	10	6	0	5	86	37	0	2	1	2	998	Peak
8:30	8:45	0	23	52	6	0	7	10	3	0	11	90	30	0	6	3	3	955	
8:45	9:00	0	32	57	5	0	9	20	11	0	17	85	36	0	3	0	1		
9:00	9:15	0	22	49	6	0	10	7	12	0	4	90	30	0	2	1	5		
9:15	9:30	0	17	55	5	0	3	4	3	0	6	82	19	0	2	0	1		
15:00	15:15	1	1	39	2	0	4	4	1	0	2	33	1	0	8	2	6	430	
15:15	15:30	0	3	38	1	0	3	5	3	1	2	38	5	0	5	3	9	466	
15:30	15:45	0	2	37	1	0	1	6	2	0	3	34	1	0	12	2	7	512	
15:45	16:00	0	1	30	3	0	2	6	1	0	0	38	3	0	10	1	7	576	
16:00	16:15	0	2	48	8	0	6	3	1	0	1	45	5	0	11	1	9	673	
16:15	16:30	0	3	57	4	0	3	7	0	0	4	52	3	0	11	0	18	777	
16:30	16:45	0	2	54	6	0	4	5	0	0	5	59	5	0	12	1	19	881	
16:45	17:00	0	1	65	8	0	2	11	0	0	2	60	2	0	12	4	32	966	Peak
17:00	17:15	0	4	78	6	0	5	16	0	0	5	65	3	0	25	2	35	940	
17:15	17:30	0	0	91	5	0	3	11	3	0	3	88	2	0	20	1	39	851	
17:30	17:45	0	3	87	4	0	5	15	0	0	4	81	3	0	22	2	31	739	
17:45	18:00	0	5	47	2	0	5	8	3	0	2	65	1	0	23	0	12	574	
18:00	18:15	0	5	50	4	0	2	5	1	0	5	54	0	0	14	3	12	481	
18:15	18:30	0	0	52	5	0	7	10	0	0	5	53	1	0	8	0	13		
18:30	18:45	0	0	28	3	0	2	3	0	0	3	43	2	0	4	1	3		
18:45	19:00	0	0	27	3	0	0	1	0	0	1	38	0	0	3	1	6		
Peak	Time	North	Annroach	National	Circuit	Fast	Annroach	Blackall	Street	So	uth Approa	ch State C	ircle	West	Annroact	h Blackall	Street	Peak	1
Period Star	Period End	U	R	SB		U	R	WB		U U	R	NB		U	R	EB		total	
8:15	9:15	0	100	218	22	0	29	47	32	0	37	351	133	0	13	5	11	998	
16:45	17:45	0	8	321	23	0	15	53	3	0	14	294	10	0	79	9	137	966	]



Date:	Wed 31/03/21
Weather:	Overcast
Suburban:	Barton
Customer:	Indesco

#### Light Vehicles

Ti	me	1 - Near State Circle	2 - Near National Circuit Intersection
Period Start	Period End	East - East (U-Turn)	West - West (U-Turn)
7:30	7:45	5	0
7:45	8:00	7	10
8:00	8:15	11	8
8:15	8:30	10	7
8:30	8:45	13	15
8:45	9:00	24	12
9:00	9:15	19	10
9:15	9:30	20	8
15:00	15:15	7	4
15:15	15:30	1	6
15:30	15:45	2	11
15:45	16:00	4	8
16:00	16:15	9	6
16:15	16:30	4	13
16:30	16:45	2	9
16:45	17:00	10	17
17:00	17:15	5	19
17:15	17:30	6	27
17:30	17:45	2	27
17:45	18:00	2	23
18:00	18:15	9	15
18:15	18:30	6	12
18:30	18:45	3	6
18:45	19:00	4	10



Appendix B: CSTM Data











Appendix C: Crash Data

#### STREET REPORT

### History Location: Report Date Range:

#### NATIONAL CIRCUIT - showing Intersections and Midblocks 01/01/2013 12:00:00 AM -> 31/12/2019 11:59:59 PM

Location Type Location Description

Intersection BRISBANE/NATIONAL

Location : Chainage	Police Reference	Date/Time Direction	Severity Lane	<b>Injury Type</b> Position	Crash Type Movement	Number of Casualties Visibility	Number o s Vehicles	f Road Surface	Weather	Rum Code
BRISBANE/NATIONAL	2013-2233214 Vehicle 1 Vehicle 2	<b>10/01/2013 14:10</b> West bound North bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	2 Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
BRISBANE/NATIONAL	2013-312060306 Vehicle 1 Vehicle 2	<b>30/01/2013 10:37</b> East bound East bound	Property Damage Only 2nd lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Left turn	Not obstructed Not obstructed	0	2 Good dry surface	Fine	305
BRISBANE/NATIONAL	2013-1097664 Vehicle 1 Vehicle 2	14/02/2013 8:10 East bound East bound	Property Damage Only 2nd lane Left turn lane	Within intersection Within intersection	Straight ahead Left turn	Not obstructed Not known	0	2 Good dry surface	Fine	305
BRISBANE/NATIONAL	<b>2013-1162042</b> Vehicle 1 Vehicle 2	18/02/2013 8:15 East bound East bound	<ul> <li>Property Damage Only</li> <li>2nd lane</li> <li>Left turn lane</li> </ul>	Approaching intersection Within intersection	Straight ahead Left turn	Not obstructed Not obstructed	0	2 Good dry surface	Fine	305
BRISBANE/NATIONAL	2013-1133889 Vehicle 1 Vehicle 2	20/02/2013 8:55 East bound East bound	<ul> <li>Property Damage Only</li> <li>1st (kerb or left) lane</li> <li>2nd lane</li> </ul>	Within intersection Within intersection	: Left turn Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	305
BRISBANE/NATIONAL	2013-2163364 Vehicle 1 Vehicle 2	12/05/2013 11:26 South bound West bound	i Injury Right turn lane 2nd lane	Received medical treatme Within intersection Within intersection	Right turn Straight ahead	2 Not obstructed Not obstructed	2	2 Good dry surface	Fine	102
BRISBANE/NATIONAL	2013-1158216 Vehicle 1 Vehicle 2	24/08/2013 14:15 West bound South bound	Property Damage Only 2nd lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
BRISBANE/NATIONAL	2014-1175589 Vehicle 1 Vehicle 2	12/05/2014 17:05 South bound South bound	<ul> <li>Property Damage Only</li> <li>1st (kerb or left) lane</li> <li>1st (kerb or left) lane</li> </ul>	Within intersection Approaching intersection	Left turn Left turn	Not obstructed Not obstructed	0	2 Good dry surface	Fine	302
BRISBANE/NATIONAL	2014-1112923 Vehicle 1 Vehicle 2	22/05/2014 6:45 East bound East bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Approaching intersection Approaching intersection	Straight ahead Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	301
BRISBANE/NATIONAL	2014-1006084 Vehicle 1 Vehicle 2	12/08/2014 8:40 North bound North bound	Property Damage Only 2nd lane 2nd lane	Within intersection Within intersection	Straight ahead Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	301
BRISBANE/NATIONAL	<b>2015-1130131</b> Vehicle 1 Vehicle 2	<b>19/02/2015 12:00</b> East bound East bound	Property Damage Only 1st (kerb or left) lane 2nd lane	Within intersection Within intersection	Straight ahead Right turn	Not obstructed Not obstructed	0	2 Good dry surface	Fine	308
BRISBANE/NATIONAL	2015-2195442 Vehicle 1 Vehicle 2	16/03/2015 15:00 South bound South bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Approaching intersection Approaching intersection	Straight ahead Straight ahead	Not known Not known	0	2 Good dry surface	Fine	301
BRISBANE/NATIONAL	2015-1160293 Vehicle 1 Vehicle 2	<b>16/04/2015 14:30</b> West bound North bound	Property Damage Only 1st (kerb or left) lane 2nd lane	Within intersection Within intersection	Right turn Straight ahead	Not obstructed Not known	0	2 Good dry surface	Fine	102
BRISBANE/NATIONAL	2015-1205008 Vehicle 1 Vehicle 2	6/11/2015 16:30 East bound North bound	Property Damage Only 2nd lane 2nd lane	Within intersection Within intersection	Straight ahead Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
BRISBANE/NATIONAL	2015-1194673 Vehicle 1 Vehicle 2	17/12/2015 10:00 North bound North bound	Property Damage Only 1st (kerb or left) lane Right turn lane	Within intersection Within intersection	Straight ahead Left turn	Not obstructed Not obstructed	0	2 Good dry surface	Fine	309
BRISBANE/NATIONAL	2016-2199411 Vehicle 1 Vehicle 2	23/04/2016 15:21 South bound West bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
BRISBANE/NATIONAL	2018-1137542 Vehicle 1 Vehicle 2	2/05/2018 20:00 North bound North bound	Property Damage Only 2nd lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Right turn	Not obstructed Not obstructed	0	2 Good dry surface	Fine	308
BRISBANE/NATIONAL	2018-1173096 Vehicle 1 Vehicle 2	28/07/2018 11:00 North bound East bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
BRISBANE/NATIONAL	2018-1104191 Vehicle 1 Vehicle 2	12/09/2018 7:38 South bound South bound	Property Damage Only 2nd lane 1st (kerb or left) lane	Within intersection Within intersection	Right turn Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	305
BRISBANE/NATIONAL	2019-2238783 Vehicle 1 Vehicle 2	24/05/2019 16:00 East bound South bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
BRISBANE/NATIONAL Crashes = 21	2019-2159631 Vehicle 1	12/12/2019 11:38 West bound	Property Damage Only 1st (kerb or left) lane	Within intersection	19 Straight ahead	Not obstructed	0	1 Good dry surface	Fine	704
Location Type Location Description	Mid Block NATIONAL CIRCUIT (BR	ISBANE -> BLACKA	ц)							
Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Number o Vehicles	f Road Surface	Weather	Rum Code

	Direction	Lane	Position	Movement	Visibility				
NATIONAL CIRCUIT (BRISBANE -> 2017-1081235	15/12/2017 17:1	15 Property Dama	ge Only		6	0	2 Good dry surface	Fine	301
Vehicle 1	North bound	Merge lane	Not related to inte	rsection Straight ahead	Not obstructed				
Vehicle 2	North bound	Merge lane	Not related to inte	rsection Straight ahead	Not obstructed				

#### Crashes = 1

#### Location Type

crashes - 1	
Location Type	Intersection
Location Description	BLACKALL/NATIONAL

Location : Chainage	Police Reference	Date/Time Direction	<b>Severity</b> Lane	Injury Type Position	Crash Type Movement	Number of Casualtie Visibility	Number of Vehicles	Road Surface	Weather	Rum Code
BLACKALL/NATIONAL	2013-2134770 Vehicle 1 Vehicle 2 Vehicle 3	20/02/2013 17:30 West bound North bound East bound	<b>Injury</b> 1st (kerb or left) lane 1st (kerb or left) lane 1st (kerb or left) lane	Received medical treatme Within intersection Within intersection Within intersection	Straight ahead Straight ahead Right turn	2 Not obstructed Not obstructed Not obstructed	1 :	3 Wet surface	Light rain	101
BLACKALL/NATIONAL	2013-1144752_2 Vehicle 1 Vehicle 2	7/08/2013 12:15 South bound East bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Right turn	2 Not obstructed Not obstructed	0 :	2 Good dry surface	Fine	102
BLACKALL/NATIONAL	<b>2014-1176947</b> Vehicle 1 Vehicle 2	24/03/2014 8:40 South bound West bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	2 Not obstructed Not obstructed	0 :	2 Good dry surface	Cloudy or	101
BLACKALL/NATIONAL	<b>2014-1176997</b> Vehicle 1 Vehicle 2	25/03/2014 8:00 South bound South bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Approaching intersection Within intersection	Straight ahead Right turn	6 Not obstructed Not obstructed	0	2 Good dry surface	Fine	303
BLACKALL/NATIONAL	<b>2016-1118633</b> Vehicle 1 Vehicle 2	<b>12/01/2016 13:40</b> North bound South bound	Property Damage Only 1st (kerb or left) lane Cycle Lane	Within intersection Within intersection	Right turn Straight ahead	1 Other	0	2 Good dry surface	Fine	202
BLACKALL/NATIONAL	<b>2016-2145041</b> Vehicle 1 Vehicle 2	<b>28/05/2016 16:30</b> North bound West bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	2 Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
BLACKALL/NATIONAL	<b>2016-1170097</b> Vehicle 1 Vehicle 2	19/07/2016 8:45 South bound North bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Right turn	1 Not obstructed Not known	0	2 Wet surface	Fine	202
BLACKALL/NATIONAL Crashes = 8	2019-1187132_2 Vehicle 1 Vehicle 2	26/02/2019 17:05 West bound North bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	2 Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
### STREET REPORT

History Location: Report Date Range:

#### BRISBANE AVENUE - showing Intersections and Midblocks 01/01/2013 12:00:00 AM -> 31/12/2019 11:59:59 PM

Intersection BRISBANE/NATIONAL Location Type Location Description

> Vehicle 1 Vehicle 2

Vehicle 1 Vehicle 2

Vehicle 1

Vehicle 2

Vehicle 1

Mid Block

Police Reference

Vehicle 1

BRISBANE/NATIONAL

BRISBANE/NATIONAL

BRISBANE/NATIONAL

Location Description

Location : Chainage

BRISBANE AVENUE (NATIONAL -: 2013-1206733

Crashes = 21 Location Type 2018-1104191

2019-2238783

2019-2159631

East bound

South bound South bound

East bound

BRISBANE AVENUE (NATIONAL -> JOHN MCEWEN)

Date/Time

Direction

West bound

South bound

1st (kerb or left) lane

2nd lane 1st (kerb or left) lane

1st (kerb or left) lane

1st (kerb or left) lane

12/09/2018 7:38 Property Damage Only

24/05/2019 16:00 Property Damage Only

12/12/2019 11:38Property Damage OnlyWest bound1st (kerb or left) lane

Severity

Lane

21/08/2013 9:15 Property Damage Only

1st (kerb or left) lane

Location : Chainage	Police Reference	Date/Time Direction	Severity Lane	<b>Injury Type</b> Position	Crash Type Movement	Number of Casualtie Visibility	Number of S Vehicles	f Road Surface	Weather	Rum Code
BRISBANE/NATIONAL	2013-2233214	10/01/2013 14:10	Property Damage Only			2	0	2 Good dry surface	Fine	101
	Vehicle 1	West bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	North bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
BRISBANE/NATIONAL	2013-312060306	30/01/2013 10:37	Property Damage Only			3	0	2 Good dry surface	Fine	305
	Vehicle 1	East bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
BRISBANE/NATIONAL	2013-1097664	14/02/2013 8:10	Property Damage Only			3	0	2 Good dry surface	Fine	305
	Vehicle 1	East bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	Left turn lane	Within intersection	Left turn	Not known				
BRISBANE/NATIONAL	2013-1162042	18/02/2013 8:15	Property Damage Only			3	0	2 Good dry surface	Fine	305
	Vehicle 1	East bound	2nd lane	Approaching intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	Left turn lane	Within intersection	Left turn	Not obstructed				
BRISBANE/NATIONAL	2013-1133889	20/02/2013 8:55	Property Damage Only			3	0	2 Good dry surface	Fine	305
	Vehicle 1	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	East bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
BRISBANE/NATIONAL	2013-2163364	12/05/2013 11:26	Injury	Received medical treatme	2	2	2	2 Good dry surface	Fine	102
	Vehicle 1	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	West bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
BRISBANE/NATIONAL	2013-1158216	24/08/2013 14:15	Property Damage Only			2	0	2 Good dry surface	Fine	101
	Vehicle 1	West bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	South bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
BRISBANE/NATIONAL	2014-1175589	12/05/2014 17:05	Property Damage Only			6	0	2 Good dry surface	Fine	302
	Vehicle 1	South bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	South bound	1st (kerb or left) lane	Approaching intersection	Left turn	Not obstructed				
BRISBANE/NATIONAL	2014-1112923	22/05/2014 6:45	Property Damage Only			6	0	2 Good dry surface	Fine	301
	Vehicle 1	East bound	1st (kerb or left) lane	Approaching intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Approaching intersection	Straight ahead	Not obstructed				
BRISBANE/NATIONAL	2014-1006084	12/08/2014 8:40	Property Damage Only			6	0	2 Good dry surface	Fine	301
	Vehicle 1	North bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	North bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
BRISBANE/NATIONAL	2015-1130131	19/02/2015 12:00	Property Damage Only			3	0	2 Good dry surface	Fine	308
	Vehicle 1	East bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	2nd lane	Within intersection	Right turn	Not obstructed				
BRISBANE/NATIONAL	2015-2195442	16/03/2015 15:00	Property Damage Only			6	0	2 Good dry surface	Fine	301
	Vehicle 1	South bound	1st (kerb or left) lane	Approaching intersection	Straight ahead	Not known				
	Vehicle 2	South bound	1st (kerb or left) lane	Approaching intersection	Straight ahead	Not known				
BRISBANE/NATIONAL	2015-1160293	16/04/2015 14:30	Property Damage Only			2	0	2 Good dry surface	Fine	102
	Vehicle 1	West bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	North bound	2nd lane	Within intersection	Straight ahead	Not known				
BRISBANE/NATIONAL	2015-1205008	6/11/2015 16:30	Property Damage Only			2	0	2 Good dry surface	Fine	101
	Vehicle 1	East bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	North bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
BRISBANE/NATIONAL	2015-1194673	17/12/2015 10:00	Property Damage Only			3	0	2 Good dry surface	Fine	309
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
	Venicle 2	North bound	Kight turn lane	within intersection	Left turn	Not obstructed				
BRISBANE/NATIONAL	2016-2199411	23/04/2016 15:21	Property Damage Only			2	0	2 Good dry surface	Fine	101
	Vehicle 1	South bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	West bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
BRISBANE/NATIONAL	2018-1137542	2/05/2018 20:00	Property Damage Only			3	0	2 Good dry surface	Fine	308
	Vehicle 1	North bound	2nd lane	Within intersection	Straight ahead	Not obstructed				
	venicie 2	NOT LEE DOUND	THE REPORT OF LELEN AND	within intersection	night turfi	NUL UDSTFUCTED				
BRISBANE/NATIONAL	2018-1173096	28/07/2018 11:00	Property Damage Only			2	0	2 Good dry surface	Fine	101
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				

Not related to intersection Straight ahead

Within intersection

Within intersection

Within intersection

Within intersection

Within intersection

Within intersection

Injury Type

Position

Straight ahead

Right turn

Straight ahead

Straight ahead

Straight ahead

Straight ahead

Crash Type

Movement

Not obstructed

Not obstructed Not obstructed

Not obstructed

Not obstructed

Not obstructed

Visibility

Not obstructed

3

0

0

0

Number of Casualties Vehicles

0

Number of

2 Good dry surface

2 Good dry surface

1 Good dry surface

Road Surface

2 Good dry surface

Fine

Fine

Fine

305

101

704

Rum

307

Weather Code

Fine

3

2

19

	Vehicle 2	West bound	2nd lane	Not related to intersection	Straight ahead	Not obstructed				
BRISBANE AVENUE (NATIONAL -	2019-2142166 Vehicle 1	12/02/2019 10:05 West bound	Property Damage Only 2nd lane	Not related to intersection	1 Straight ahead	12 Not obstructed	D	1 Good dry surface	Fine	60
	1-1									
Location Type Location Description	BRISBANE/JOHN MCEW	/EN								
Location : Chainage	Police Reference	Date/Time Direction	<b>Severity</b> Lane	<b>Injury Type</b> Position	Crash Type Movement	Number of Casualties Visibility	Number o Vehicles	f Road Surface	Weather	Rum Code
BRISBANE/JOHN MCEWEN	<b>2015-1191167</b> Vehicle 1 Vehicle 2	<b>10/03/2015 16:40</b> North bound North bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Left turn Left turn	6 Not obstructed Not obstructed	0	2 Good dry surface	Fine	302
	Mid Dia da									
Location Type Location Description	BRISBANE AVENUE (JOH	IN MCEWEN -> STA	ATE)							
Location : Chainage	Police Reference	Date/Time Direction	Severity Lane	<b>Injury Type</b> Position	Crash Type Movement	Number of Casualties Visibility	Number o Vehicles	f Road Surface	Weather	Rum Code
BRISBANE AVENUE (JOHN MCEW	2013-2185946 Vehicle 1 Vehicle 2	2/11/2013 10:15 West bound West bound	Property Damage Only 2nd lane 1st (kerb or left) lane	Not related to intersection Not related to intersection	n Straight ahead n Right turn	3 Not obstructed Not obstructed	D	2 Good dry surface	Fine	306
BRISBANE AVENUE (JOHN MCEW	2014-1160314 Vehicle 1 Vehicle 2	<b>24/07/2014 14:45</b> East bound South bound	Property Damage Only 2nd lane Other	Not related to intersection Out of driveway	Straight ahead Left turn	9 Not obstructed Not obstructed	0	2 Good dry surface	Fine	406
BRISBANE AVENUE (JOHN MCEW	2014-1198321 Vehicle 1 Vehicle 2	8/10/2014 17:20 West bound West bound	Property Damage Only 1st (kerb or left) lane 2nd lane	Not related to intersection Not related to intersection	n Right turn 1 Straight ahead	3 Not obstructed Not obstructed	D	2 Good dry surface	Fine	306
BRISBANE AVENUE (JOHN MCEW	<b>2014-1115151</b> Vehicle 1 Vehicle 2	<b>31/10/2014 9:00</b> East bound East bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Not related to intersection Not related to intersection	Parked Straight ahead	9 Not obstructed Not obstructed	D	2 Good dry surface	Fine	403
BRISBANE AVENUE (JOHN MCEW	2015-1222009_2 Vehicle 1 Vehicle 2	3/09/2015 13:45 West bound West bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Not related to intersection Not related to intersection	Parked Backing	9 Not obstructed Not known	0	2 Good dry surface	Fine	403
BRISBANE AVENUE (JOHN MCEW	2016-1158447 Vehicle 1 Vehicle 2 Vehicle 3 Vehicle 4	29/01/2016 15:30 East bound East bound East bound East bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane 1st (kerb or left) lane 1st (kerb or left) lane	Not related to intersection Not related to intersection Not related to intersection Not related to intersection	9 Straight ahead 9 Straight ahead 9 Straight ahead 9 Straight ahead 9 Straight ahead	6 Not obstructed Not obstructed Not obstructed Not obstructed	D	4 Wet surface	Cloudy or	301
BRISBANE AVENUE (JOHN MCEW	2019-1204542 Vehicle 1 Vehicle 2	<b>10/05/2019 13:10</b> West bound West bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Not related to intersection Not related to intersection	n Straight ahead n Straight ahead	6 Not obstructed Not obstructed	D	2 Wet surface	Light rain	301
Crashes = 7										
Location Type Location Description	Intersection BRISBANE/STATE									
Location : Chainage	Police Reference	Date/Time	Severity	<b>Injury Type</b> Position	Crash Type	Number of Casualties	Number o Vehicles	f Road Surface	Weather	Rum Code
BRISBANE/STATE	<b>2013-2227714</b> Vehicle 1 Vehicle 2	13/09/2013 16:35 North bound West bound	Injury Right turn lane 3rd lane	Received medical treatme Within intersection Within intersection	Right turn Straight ahead	2 Not obstructed Not obstructed	2	2 Good dry surface	Fine	104
BRISBANE/STATE	2014-2235480 Vehicle 1	11/01/2014 13:20 North bound	<b>Injury</b> 1st (kerb or left) lane	Received medical treatme Approaching intersection	straight ahead	13 Not obstructed	1	1 Good dry surface	Fine	705
BRISBANE/STATE	<b>2014-1194645</b> Vehicle 1 Vehicle 2	<b>12/05/2014 16:00</b> West bound West bound	Property Damage Only Left turn lane Left turn lane	Within intersection Within intersection	Left turn Left turn	6 Not obstructed Not known	D	2 Good dry surface	Fine	302
BRISBANE/STATE	2014-1001357 Vehicle 1 Vehicle 2	<b>13/06/2014 16:10</b> West bound South bound	Property Damage Only Right turn lane 2nd lane	Within intersection Within intersection	Right turn Straight ahead	2 Not obstructed Not obstructed	D	2 Wet surface	Cloudy or	104
BRISBANE/STATE	2014-1113839 Vehicle 1 Vehicle 2	17/07/2014 9:00 West bound West bound	Property Damage Only Left turn lane Left turn lane	Within intersection Within intersection	Left turn Left turn	6 Not obstructed Not obstructed	D	2 Good dry surface	Fine	302
BRISBANE/STATE	2014-1119409 Vehicle 1 Vehicle 2	28/08/2014 16:35 North bound North bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Approaching intersection Approaching intersection	Straight ahead Straight ahead	6 Not obstructed Not obstructed	D	2 Good dry surface	Fine	301
BRISBANE/STATE	2014-1179760 Vehicle 1 Vehicle 2	15/12/2014 9:00 West bound West bound	Property Damage Only Left turn lane Left turn lane	Within intersection Within intersection	Left turn Left turn	6 Not obstructed Not known	D	2 Good dry surface	Fine	302
BRISBANE/STATE	2015-1196220 Vehicle 1 Vehicle 2	2/04/2015 12:45 West bound West bound	Property Damage Only Left turn lane Left turn lane	Within intersection Within intersection	Left turn Left turn	6 Not obstructed Not obstructed	D	2 Good dry surface	Fine	302
BRISBANE/STATE	2015-1189558 Vehicle 1 Vehicle 2	25/11/2015 17:50 West bound West bound	Property Damage Only Left turn lane Left turn lane	Within intersection Within intersection	Left turn Left turn	6 Not obstructed Not obstructed	D	2 Good dry surface	Fine	302
BRISBANE/STATE	<b>2016-1205926</b> Vehicle 1 Vehicle 2	28/06/2016 12:05 South bound South bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Approaching intersection Approaching intersection	Straight ahead Straight ahead	6 Not obstructed Not obstructed	D	2 Good dry surface	Fine	301
BRISBANE/STATE	2016-1161434 Vehicle 1 Vehicle 2	12/07/2016 8:55 South bound South bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Approaching intersection Approaching intersection	Straight ahead Left turn	6 Not obstructed Not obstructed	D	2 Wet surface	Cloudy or	302

BRISBANE/STATE	2016-1104870 Vehicle 1 Vehicle 2	24/11/2016 8:05 West bound West bound	Property Damage Only Left turn lane Left turn lane	Within intersection Within intersection	Left turn Left turn	6 Not obstructed Not obstructed	0	2 Good dry surface	Fine	302
BRISBANE/STATE	2017-1226029 Vehicle 1 Vehicle 2	28/02/2017 22:10 South bound South bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Approaching intersection Approaching intersection	Straight ahead Straight ahead	6 Not obstructed Not known	0	2 Good dry surface	Fine	301
BRISBANE/STATE	<b>2018-1105235</b> Vehicle 1 Vehicle 2	20/02/2018 8:29 South bound South bound	Property Damage Only Left turn lane Left turn lane	Within intersection Within intersection	Left turn Left turn	6 Not obstructed Not obstructed	0	2 Good dry surface	Fine	302
BRISBANE/STATE	2018-2179371 Vehicle 1 Vehicle 2	<b>27/04/2018 19:20</b> South bound North bound	Injury 2nd Iane On wrong side of road	Received medical treatme Within intersection Approaching intersection	straight ahead Straight ahead	5 Not obstructed Not obstructed	1	2 Good dry surface	Fine	201
BRISBANE/STATE	2018-1078150 Vehicle 1 Vehicle 2	<b>27/11/2018 16:15</b> South bound South bound	Property Damage Only 2nd lane 2nd lane	Approaching intersection Approaching intersection	Straight ahead Straight ahead	6 Not obstructed Not obstructed	0	2 Good dry surface	Fine	301
BRISBANE/STATE	<b>2019-1114308</b> Vehicle 1 Vehicle 2	3/05/2019 11:45 West bound South bound	Property Damage Only Right turn lane 2nd lane	Within intersection Within intersection	Right turn Straight ahead	2 Fence, pole, etc Not obstructed	0	2 Good dry surface	Fine	104
BRISBANE/STATE Crashes = 18	2019-2107982 Vehicle 1 Vehicle 2	10/09/2019 7:58 South bound West bound	<b>Injury</b> Footpath Left turn lane	Received medical treatme Within intersection Within intersection	Straight ahead Left turn	9 Not obstructed Other	1	2 Good dry surface	Fine	408

#### History Location: Report Date Range: BLACKALL STREET - showing Intersections and Midblocks 01/01/2013 12:00:00 AM -> 31/12/2019 11:59:59 PM

Location Type Location Description

	Intersection
ı	<b>BLACKALL/NATIONAL</b>

Location : Chainage	Police Reference	Date/Time Direction	<b>Severity</b> Lane	<b>Injury Type</b> Position	Crash Type Movement	Number of Casualtie Visibility	Number of Vehicles	Road Surface	Weather	Rum Code
BLACKALL/NATIONAL	2013-2134770 Vehicle 1 Vehicle 2 Vehicle 3	20/02/2013 17:30 West bound North bound East bound	Injury 1st (kerb or left) lane 1st (kerb or left) lane 1st (kerb or left) lane	Received medical treatme Within intersection Within intersection Within intersection	Straight ahead Straight ahead Right turn	2 Not obstructed Not obstructed Not obstructed	1	3 Wet surface	Light rain	101
<b>BLACKALL/NATIONAL</b>	2013-1144752_2 Vehicle 1 Vehicle 2	7/08/2013 12:15 South bound East bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Right turn	2 Not obstructed Not obstructed	0	2 Good dry surface	Fine	102
BLACKALL/NATIONAL	<b>2014-1176947</b> Vehicle 1 Vehicle 2	24/03/2014 8:40 South bound West bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	2 Not obstructed Not obstructed	0	2 Good dry surface	Cloudy or	101
BLACKALL/NATIONAL	<b>2014-1176997</b> Vehicle 1 Vehicle 2	25/03/2014 8:00 South bound South bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Approaching intersection Within intersection	Straight ahead Right turn	6 Not obstructed Not obstructed	0	2 Good dry surface	Fine	303
BLACKALL/NATIONAL	<b>2016-1118633</b> Vehicle 1 Vehicle 2	<b>12/01/2016 13:40</b> North bound South bound	Property Damage Only 1st (kerb or left) lane Cycle Lane	Within intersection Within intersection	Right turn Straight ahead	1 Other	0	2 Good dry surface	Fine	202
BLACKALL/NATIONAL	<b>2016-2145041</b> Vehicle 1 Vehicle 2	28/05/2016 16:30 North bound West bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Straight ahead	2 Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
BLACKALL/NATIONAL	<b>2016-1170097</b> Vehicle 1 Vehicle 2	<b>19/07/2016 8:45</b> South bound North bound	Property Damage Only 1st (kerb or left) lane 1st (kerb or left) lane	Within intersection Within intersection	Straight ahead Right turn	1 Not obstructed Not known	0	2 Wet surface	Fine	202
BLACKALL/NATIONAL	2019-1187132_2 Vehicle 1 Vehicle 2	26/02/2019 17:05 West bound North bound	<ul> <li>Property Damage Only</li> <li>1st (kerb or left) lane</li> <li>1st (kerb or left) lane</li> </ul>	Within intersection Within intersection	Straight ahead Straight ahead	2 Not obstructed Not obstructed	0	2 Good dry surface	Fine	101
crasnes = 8 Location Type Location Description	Mid Block BLACKALL STREET (NA	TIONAL -> BLACKAL	L)							
Location : Chainage	Police Reference	Date/Time Direction	<b>Severity</b> Lane	<b>Injury Type</b> Position	Crash Type Movement	Number of Casualtie Visibility	Number of s Vehicles	Road Surface	Weather	Rum Code

						,				
BLACKALL STREET (NATIONAL ->	> 2013-1097712	8/03/2013 8:05	Property Damage Only			9 0		2 Good dry surface	Fine	402
	Vehicle 1	West bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	West bound	1st (kerb or left) lane	Within intersection	Backing	Not obstructed				
BLACKALL STREET (NATIONAL ->	> 2017-1209765	7/08/2017 9:30	Property Damage Only			9 0		2 Wet surface	Cloudy or	403
	Vehicle 1	East bound	1st (kerb or left) lane	Not related to intersection	Parked	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Not related to intersection	Overtaking right side	Not obstructed				
BLACKALL STREET (NATIONAL ->	> 2019-1149766	13/05/2019 8:45	Property Damage Only			9 0	,	2 Good dry surface	Fine	403
	Vehicle 1	East bound	1st (kerb or left) lane	Not related to intersection	Parked	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Not related to intersection	Backing	Not obstructed				
Crashes = 3										
Location Type Location Description	Intersection BLACKALL (END)									
							Number o	f		Rum
Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Vehicles	Road Surface	Weather	Code
		Direction	Lane	Position	Movement	Visibility				
Crachoc = 0										

Crashes = 0





Appendix D: SIDRA Outputs - Existing

# SITE LAYOUT

V Site: 101 [NationalCct/BlackallSt - 2021 - AM (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com Organisation: INDESCO | Licence: NETWORK / 1PC | Created: Thursday, 13 May 2021 12:18:37 PM Project: H:\7999 Barton Section 12 Block 6\50 Design and PM\50.7 Reports\1\_7999 TIA\SIDRA-Nick\NationalCctBlackallSt.sip9

## **MOVEMENT SUMMARY**

### V Site: 101 [NationalCct/BlackallSt - 2021 - AM (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Vehi	cle M	ovemen	t Perfo	rmance										
Mov	Turn	INP	UT	DEM	AND	Deg.	Aver.	Level of	95% BA		Prop. E	ffective	Aver.	Aver.
טו		VULU [ Total		FLU [ Total	vvS н\/ 1	Sath	Delay	Service	QUI [\/eh	EUE Dist 1	Que	Stop Rate	NO. Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		Trate	Cycles	km/h
Sout	h: Natio	onal Circu	uit - S											
1	L2	133	5.0	140	5.0	0.295	5.8	LOS A	0.4	3.1	0.10	0.18	0.10	47.0
2	T1	351	5.0	369	5.0	0.295	0.1	LOS A	0.4	3.1	0.10	0.18	0.10	51.7
3	R2	37	5.0	39	5.0	0.295	6.4	LOS A	0.4	3.1	0.10	0.18	0.10	45.4
Appr	oach	521	5.0	548	5.0	0.295	2.0	NA	0.4	3.1	0.10	0.18	0.10	49.8
East	Black	all Street	- E											
4	L2	32	5.0	34	5.0	0.122	6.2	LOS A	0.4	2.8	0.38	0.68	0.38	37.0
5	T1	47	5.0	49	5.0	0.122	6.8	LOS A	0.4	2.8	0.38	0.68	0.38	40.7
6	R2	29	5.0	31	5.0	0.122	8.3	LOS A	0.4	2.8	0.38	0.68	0.38	38.2
Appr	oach	108	5.0	114	5.0	0.122	7.0	LOS A	0.4	2.8	0.38	0.68	0.38	39.0
North	n: Natio	onal Circu	iit - N											
7	L2	22	5.0	23	5.0	0.210	7.4	LOS A	1.0	6.9	0.41	0.23	0.41	44.7
8	T1	218	5.0	229	5.0	0.210	1.0	LOS A	1.0	6.9	0.41	0.23	0.41	47.5
9	R2	100	5.0	105	5.0	0.210	7.5	LOS A	1.0	6.9	0.41	0.23	0.41	43.4
Appr	oach	340	5.0	358	5.0	0.210	3.3	NA	1.0	6.9	0.41	0.23	0.41	45.8
West	: Black	all Street	- W											
10	L2	11	5.0	12	5.0	0.036	6.6	LOS A	0.1	0.8	0.43	0.68	0.43	38.5
11	T1	5	5.0	5	5.0	0.036	6.3	LOS A	0.1	0.8	0.43	0.68	0.43	40.0
12	R2	13	5.0	14	5.0	0.036	8.8	LOS A	0.1	0.8	0.43	0.68	0.43	35.8
Appr	oach	29	5.0	31	5.0	0.036	7.5	LOS A	0.1	0.8	0.43	0.68	0.43	37.6
All Vehio	cles	998	5.0	1051	5.0	0.295	3.2	NA	1.0	6.9	0.24	0.26	0.24	46.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## LANE SUMMARY

### V Site: 101 [NationalCct/BlackallSt - 2021 - AM (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Lane Use and Performance													
	DEM. FLO	AND WS	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE	CK OF	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[ Total veh/h	HV ] %	veh/h	v/c	%	sec		[ Veh	Dist ] m		m	%	%
South: Natio	onal Circi	uit - S											
Lane 1	548	5.0	1858	0.295	100	2.0	LOS A	0.4	3.1	Full	100	0.0	0.0
Approach	548	5.0		0.295		2.0	NA	0.4	3.1				
East: Black	all Street	- E											
Lane 1	114	5.0	928	0.122	100	7.0	LOS A	0.4	2.8	Full	150	0.0	0.0
Approach	114	5.0		0.122		7.0	LOS A	0.4	2.8				
North: Natio	nal Circu	uit - N											
Lane 1	358	5.0	1702	0.210	100	3.3	LOS A	1.0	6.9	Full	120	0.0	0.0
Approach	358	5.0		0.210		3.3	NA	1.0	6.9				
West: Black	all Street	t - W											
Lane 1	31	5.0	859	0.036	100	7.5	LOS A	0.1	0.8	Full	150	0.0	0.0
Approach	31	5.0		0.036		7.5	LOS A	0.1	0.8				
Intersectio n	1051	5.0		0.295		3.2	NA	1.0	6.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## **MOVEMENT SUMMARY**

### V Site: 101 [NationalCct/BlackallSt - 2021 - PM (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Vehi	/ehicle Movement Performance Mov. Turn INPLIT DEMAND Deg Aver Level of 95% BACK OF Prop. Effective Aver Aver													
Mov	Turn	INP	UT	DEM	AND	Deg.	Aver.	Level of	95% BA		Prop. E	ffective	Aver.	Aver.
<b>ח</b> ו		VULU [ Total		FLU [ Total	vvS ц\/1	Sath	Delay	Service	QUI [ \/oh	EUE Diet 1	Que	Stop Rate	INO. Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		Trate	Cycles	km/h
Sout	h: Nati	onal Circu	uit - S											
1	L2	10	5.0	11	5.0	0.179	6.4	LOS A	0.1	1.1	0.06	0.04	0.06	50.9
2	T1	294	5.0	309	5.0	0.179	0.1	LOS A	0.1	1.1	0.06	0.04	0.06	57.1
3	R2	14	5.0	15	5.0	0.179	6.7	LOS A	0.1	1.1	0.06	0.04	0.06	49.0
Appr	oach	318	5.0	335	5.0	0.179	0.6	NA	0.1	1.1	0.06	0.04	0.06	56.4
East	Black	all Street	- E											
4	L2	3	5.0	3	5.0	0.081	6.5	LOS A	0.2	1.7	0.43	0.70	0.43	37.8
5	T1	53	5.0	56	5.0	0.081	5.8	LOS A	0.2	1.7	0.43	0.70	0.43	41.6
6	R2	15	5.0	16	5.0	0.081	8.5	LOS A	0.2	1.7	0.43	0.70	0.43	39.0
Appr	oach	71	5.0	75	5.0	0.081	6.4	LOS A	0.2	1.7	0.43	0.70	0.43	40.9
North	n: Natio	onal Circu	iit - N											
7	L2	23	5.0	24	5.0	0.197	5.9	LOS A	0.1	0.7	0.03	0.05	0.03	51.6
8	T1	321	5.0	338	5.0	0.197	0.0	LOS A	0.1	0.7	0.03	0.05	0.03	57.4
9	R2	8	5.0	8	5.0	0.197	6.6	LOS A	0.1	0.7	0.03	0.05	0.03	49.8
Appr	oach	352	5.0	371	5.0	0.197	0.6	NA	0.1	0.7	0.03	0.05	0.03	56.6
West	: Black	kall Street	: - W											
10	L2	137	5.0	144	5.0	0.213	6.6	LOS A	0.8	5.9	0.41	0.67	0.41	39.1
11	T1	9	5.0	9	5.0	0.213	6.1	LOS A	0.8	5.9	0.41	0.67	0.41	40.6
12	R2	79	5.0	83	5.0	0.213	8.4	LOS A	0.8	5.9	0.41	0.67	0.41	36.3
Appr	oach	225	5.0	237	5.0	0.213	7.2	LOS A	0.8	5.9	0.41	0.67	0.41	38.2
All Vehio	cles	966	5.0	1017	5.0	0.213	2.5	NA	0.8	5.9	0.16	0.24	0.16	48.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## LANE SUMMARY

### V Site: 101 [NationalCct/BlackallSt - 2021 - PM (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Lane Use and Performance													
	DEM/ FLO	AND WS	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE	CK OF	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[ Total veh/h	HV ] %	veh/h	v/c	%	sec		[ Veh	Dist ] m		m	%	%
South: Natio	onal Circu	uit - S											
Lane 1	335	5.0	1871	0.179	100	0.6	LOS A	0.1	1.1	Full	100	0.0	0.0
Approach	335	5.0		0.179		0.6	NA	0.1	1.1				
East: Black	all Street	- E											
Lane 1	75	5.0	922	0.081	100	6.4	LOS A	0.2	1.7	Full	150	0.0	0.0
Approach	75	5.0		0.081		6.4	LOS A	0.2	1.7				
North: Natio	nal Circu	iit - N											
Lane 1	371	5.0	1877	0.197	100	0.6	LOS A	0.1	0.7	Full	120	0.0	0.0
Approach	371	5.0		0.197		0.6	NA	0.1	0.7				
West: Black	all Street	- W											
Lane 1	237	5.0	1112	0.213	100	7.2	LOS A	0.8	5.9	Full	150	0.0	0.0
Approach	237	5.0		0.213		7.2	LOS A	0.8	5.9				
Intersectio n	1017	5.0		0.213		2.5	NA	0.8	5.9				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## **NETWORK LAYOUT**

### ■■ Network: N101 [BrisbaneAv/NationalCct-AM (Network

Folder: General)]

New Network Network Category: (None) EQUISAT (Fixed-Time/SCATS) Isolated Common Control Group: CCG1 [CCG - 1]

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NE	TWORK	
Site ID	CCG ID	Site Name
101	CCG1	BrisbaneAv/NationalCc-N-2021-AM
102	CCG1	BrisbaneAv/NationalCc-S-2021-AM

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## CCG MOVEMENT SUMMARY

### □ Common Control Group: CCG1 [CCG - 1]

### Network: N101 [BrisbaneAv/ NationalCct-AM (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehi	cle Mo	vement	Perfor	mance	e (CC	G)								
Mov ID	Turn [	DEMAND	FLOW	S ARRI FLO	VAL WS HV/1	Deg. Satn	Aver. Delay	Level of Service	AVERAG OF QI	E BACK UEUE Dist 1	Prop. Que	Effective/ Stop	ver. No. Cycles	Aver. Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		Nate		km/h
Site:	101 [Bri	isbaneAv/	/Nationa	alCc-N-	2021	-AM]								
Sout	h: Media	an												
2	T1	371	5.0	371	5.0	0.779	11.7	LOS A	4.1	30.0	0.79	0.71	0.85	25.0
3	R2	51	5.0	51	5.0	0.156	8.2	LOS A	0.3	2.1	0.28	0.51	0.28	30.4
Appr	oach	421	5.0	421	5.0	0.779	11.3	LOS A	4.1	30.0	0.73	0.69	0.78	25.6
North	n: Natior	nal Circuit	- N											
7	L2	54	5.0	54	5.0	0.539	26.9	LOS B	2.5	18.6	0.95	0.78	0.95	22.0
8	T1	245	5.0	245	5.0	0.539	21.7	LOS B	2.5	18.6	0.95	0.78	0.97	13.7
Appr	oach	299	5.0	299	5.0	0.539	22.7	LOS B	2.5	18.6	0.95	0.78	0.97	15.6
West	: Brisba	ne Avenu	e - W											
10	L2	168	5.0	168	5.0	0.697	27.0	LOS B	4.2	30.7	0.96	0.88	1.09	24.9
11	T1	272	5.0	272	5.0	0.697	21.8	LOS B	4.2	30.7	0.97	0.88	1.11	31.5
12	R2	84	5.0	84	5.0	0.697	27.6	LOS B	3.8	27.4	0.97	0.88	1.12	26.5
Appr	oach	524	5.0	524	5.0	0.697	24.4	LOS B	4.2	30.7	0.97	0.88	1.11	28.4
All Ve	ehicles	1244	5.0	1244	5.0	0.779	19.5	LOS B	4.2	30.7	0.88	0.79	0.96	25.2
Site:	102 [Bri	isbaneAv/	Nation	alCc-S-	2021	-AM]								
Sout	h: Natio	nal Circui	t S											
1	L2	43	5.0	43	5.0	0.614	26.2	LOS B	2.3	17.1	0.94	0.82	1.04	30.0
2	T1	277	5.0	277	5.0	0.614	20.6	LOS B	2.4	17.8	0.94	0.82	1.04	13.3
Appr	oach	320	5.0	320	5.0	0.614	21.4	LOS B	2.4	17.8	0.94	0.82	1.04	16.9
East:	Brisbar	ne Avenue	еE											
4	L2	59	5.0	59	5.0	*0.826	31.1	LOS C	6.0	44.1	1.00	1.02	1.35	19.6
5	T1	342	5.0	342	5.0	0.826	25.9	LOS B	6.0	44.1	1.00	1.02	1.37	29.7
6	R2	144	5.0	144	5.0	0.826	34.2	LOS C	3.5	25.8	1.00	1.03	1.52	12.4
Appr	oach	545	5.0	545	5.0	0.826	28.7	LOS C	6.0	44.1	1.00	1.02	1.41	24.9
North	n: Media	in												
8	T1	278	5.0	278	5.0	*0.814	9.0	LOS A	3.4	24.9	0.65	0.59	0.73	27.1
9	R2	52	5.0	52	5.0	0.814	13.9	LOS A	3.4	24.9	0.79	0.72	0.89	35.6
Appr	oach	329	5.0	329	5.0	0.814	9.8	LOS A	3.4	24.9	0.67	0.61	0.75	29.4
All Ve	ehicles	1195	5.0	1195	5.0	0.826	21.5	LOS B	6.0	44.1	0.89	0.85	1.13	23.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## CCG LANE SUMMARY

### □ Common Control Group: CCG1 [CCG - 1]

### Network: N101 [BrisbaneAv/ NationalCct-AM (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (CCG Optimum Cycle Time - Minimum Delay)

Lane Use	and P	erforn	nance	(CCG	)										
	DEM	AND	ARR	IVAL	~	Deg.	Lane	Aver.	Level of	AVE	RAGE	Lane	Lane	Cap.	Prob.
	FLO	WS	FLO	WS	Cap.	Satn	Util.	Delay	Service	BAC		Config	Length	Adj.	Block.
	[ Total	HV 1	[ Total	HV 1						[ Veh	Dist 1				
	veh/h	%	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
Site: 101 [E	Brisbane	eAv/Na	tionalC	c-N-20	21-AM	]									
South: Med	lian														
Lane 1	353	5.0	353	5.0	453	0.779	100	12.0	LOS A	4.1 <sup>N4</sup>	30.0 <sup>N4</sup>	Full	30	0.0	<mark>50.0</mark>
Lane 2	68	5.0	68	5.0	436	0.156	20 <sup>6</sup>	7.5	LOS A	0.3	2.1	Full	30	0.0	0.0
Approach	421	5.0	421	5.0		0.779		11.3	LOS A	4.1	30.0				
North: Natio	onal Cir	cuit - N	J												
	176	5 0	176	E 0	226	0 520	100	22.4		2.5	10.6	<b>E</b>	100	0.0	0.0
	1/0	5.0	170	5.0	320 220	0.539	100	20.1		2.0 1.9	13.5	Fuii Short	60	0.0	0.0
	200	5.0	200	5.0	229	0.539	100	22.1		2.5	19.5	Short	00	-52.1	
Арргоасті	299	5.0	299	5.0		0.559		22.1	L03 D	2.5	10.0				
West: Brisb	ane Av	enue -	W												
Lane 1	281	5.0	281	5.0	403	0.697	100	24.7	LOS B	4.2	30.7	Full	300	0.0	0.0
Lane 2	244	5.0	244	5.0	349	0.697	100	24.0	LOS B	3.8	27.4	Full	300	<mark>-14.4</mark> <sup>N3</sup>	0.0
Approach	524	5.0	524	5.0		0.697		24.4	LOS B	4.2	30.7				
Intersectio	1244	5.0	1244	5.0		0.779		19.5	LOS B	4.2	30.7				
n															
Site: 102 [E	Brisbane	eAv/Na	tionalC	c-S-20	21-AM	]									
South: Nati	onal Cir	rcuit S													
Lane 1	156	5.0	156	5.0	255	0.614	100	22.2	LOS B	2.3	17.1	Full	90	<mark>-42.0</mark> <sup>N3</sup>	0.0
Lane 2	164	5.0	164	5.0	267	0.614	100	20.6	LOS B	2.4	17.8	Short	60	<mark>-41.2</mark> <sup>N3</sup>	NA
Approach	320	5.0	320	5.0		0.614		21.4	LOS B	2.4	17.8				
East: Brich															
			050	5.0	400	0.000	400	00.4					100		
Lane 1	352	5.0	352	5.0	426	0.826	100	26.4	LOSB	6.0	44.1	Full	130		0.0
Lane 2	193	5.0	193	5.0	234	0.826	100	32.8		3.5	25.8	Full	130	<mark>-41.5</mark>	0.0
Approach	545	5.0	545	5.0		0.826		28.7	LUSC	6.0	44.1				
North: Med	ian														
Lane 1	55	5.0	55	5.0	340	0.163	20 <sup>6</sup>	1.4	LOS A	0.1	0.4	Full	30	0.0	0.0
Lane 2	274	5.0	274	5.0	337	0.814	100	11.5	LOS A	3.4	24.9	Full	30	0.0	<mark>32.7</mark>
Approach	329	5.0	329	5.0		0.814		9.8	LOS A	3.4	24.9				
Intersectio	1195	5.0	1195	5.0		0.826		21.5	LOS B	6.0	44.1				
n															

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

N4 Average back of queue has been restricted to the available queue storage space.

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## CCG PHASING SUMMARY

□ Common Control Group: CCG1 [CCG - 1]

### Network: N101 [BrisbaneAv/ NationalCct-AM (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (CCG Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Network Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: CCG Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Phase 1	Timina	Summarv	(CCG)
---------	--------	---------	-------

Phase	Α	В	С
Phase Change Time (sec)	0	17	35
Green Time (sec)	11	12	9
Phase Time (sec)	17	18	15
Phase Split	34 %	36 %	30 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence (CCG)**







REF: Reference Phase VAR: Variable Phase



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## CCG MOVEMENT SUMMARY

### □ Common Control Group: CCG1 [CCG-PM]

### ■ Network: N101 [BrisbaneAv/ NationalCct-PM (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)														
Mov ID	Turn [	DEMAND	FLOW	S ARRI FLO	VAL WS	Deg. Satn	Aver. Delay	Level of Service	AVERAG OF Q	E BACK	Prop. Que	EffectiveA Stop	Aver. No. Cycles	Aver. Speed
		[ Total	HV ]	[ Total	HV ]				[Veh.	Dist ]		Rate		l con /la
Site	101 [Bri	ven/n ishaneΔw	% /Nation:	ven/n alCc-N-	% 2021	_PM1	sec	_	ven	m	_	_	_	KM/N
Sout	h: Modic		ination		2021	-1 101]								
Sout			5.0	000			0.4	100.4		10.0	0.70	0.00	0.00	
2	11	260	5.0	260	5.0	*0.776	9.4	LOSA	2.6	18.6	0.78	0.68	0.86	28.3
3	R2	45	5.0	45	5.0	0.155	5.0	LOSA	0.1	0.6	0.13	0.53	0.13	35.0
Appr	oacn	305	5.0	305	5.0	0.776	8.7	LOSA	2.6	18.6	0.68	0.66	0.75	29.3
North	n: Natior	nal Circuit	: - N											
7	L2	104	5.0	104	5.0	0.620	22.1	LOS B	3.0	22.2	0.95	0.83	1.02	24.7
8	T1	356	5.0	356	5.0	0.620	16.8	LOS B	3.0	22.2	0.95	0.82	1.04	16.4
Appr	oach	460	5.0	460	5.0	0.620	18.0	LOS B	3.0	22.2	0.95	0.82	1.04	18.9
West	: Brisba	ne Avenu	e - W											
10	L2	78	5.0	78	5.0	0.604	24.5	LOS B	2.1	15.0	0.97	0.82	1.08	26.2
11	T1	180	5.0	180	5.0	*0.604	19.1	LOS B	2.1	15.0	0.98	0.82	1.09	33.2
12	R2	59	5.0	59	5.0	0.604	24.9	LOS B	1.9	13.8	0.98	0.83	1.10	28.0
Appr	oach	317	5.0	317	5.0	0.604	21.5	LOS B	2.1	15.0	0.98	0.82	1.09	30.4
All Ve	ehicles	1082	5.0	1082	5.0	0.776	16.4	LOS B	3.0	22.2	0.88	0.78	0.97	25.9
Site:	102 [Br	isbaneAv	/Nation	alCc-S-	2021	-PM]								
Sout	h: Natio	nal Circui	t S											
1	L2	63	5.0	63	5.0	0.531	23.1	LOS B	2.0	14.3	0.95	0.78	0.97	31.6
2	T1	269	5.0	269	5.0	0.531	17.6	LOS B	2.0	14.5	0.95	0.77	0.97	14.8
Appr	oach	333	5.0	333	5.0	0.531	18.6	LOS B	2.0	14.5	0.95	0.77	0.97	20.0
East:	Brisbar	ne Avenue	еE											
4	L2	25	5.0	25	5.0	0.583	23.7	LOS B	2.1	15.3	0.96	0.81	1.04	23.7
5	T1	273	5.0	273	5.0	0.583	18.5	LOS B	2.1	15.3	0.97	0.81	1.05	34.7
6	R2	36	5.0	36	5.0	0.583	24.5	LOS B	2.0	14.5	0.98	0.81	1.06	18.1
Appr	oach	334	5.0	334	5.0	0.583	19.5	LOS B	2.1	15.3	0.97	0.81	1.05	32.8
North	n: Media	in												
8	T1	277	5.0	277	5.0	*0.828	5.3	LOS A	3.1	22.5	0.54	0.54	0.63	33.6
9	R2	138	5.0	138	5.0	0.828	9.6	LOS A	3.1	22.5	0.70	0.70	0.81	39.9
Appr	oach	415	5.0	415	5.0	0.828	6.7	LOS A	3.1	22.5	0.59	0.60	0.69	36.9
All Ve	ehicles	1081	5.0	1081	5.0	0.828	14.3	LOS A	3.1	22.5	0.82	0.72	0.89	30.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## CCG LANE SUMMARY

### □ Common Control Group: CCG1 [CCG-PM]

### Network: N101 [BrisbaneAv/ NationalCct-PM (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (CCG Optimum Cycle Time - Minimum Delay)

L ono Lloo	and D	orform	nonoo		•										
Lane Use			nance		י <b>ו</b>	Dee	اممه	A	Louislaf			Lene	Lana	0.00	Droh
	FLO	AND WS	FLO	WS	Cap.	Satn	Util.	Delav	Service	BAC	K OF	Config	Length	Cap. Adi.	Block.
								,		QUI	EUE				
	[ Total	HV ]	[ Total	HV]	1.7					[Veh	Dist]				
Site: 101 [	ven/n	% ••••/••••	ven/n	% • N 20		V/C	%	sec	-	_	m	-	m	%	%
		AV/INd	luonaic	C-IN-20	1-1-10	IJ									
South: Med	lian														
Lane 1	256	5.0	256	5.0	331	0.776	100	9.5	LOS A	2.6	18.6	Full	30	0.0	<mark>6.3</mark>
Lane 2	49	5.0	49	5.0	315	0.155	20 <sup>°</sup>	4.8	LOS A	0.1	0.6	Full	30	0.0	0.0
Approach	305	5.0	305	5.0		0.776		8.7	LOS A	2.6	18.6				
North: Natio	onal Cir	cuit - N	١												
Lane 1	258	5.0	258	5.0	416	0.620	100	18.8	LOS B	3.0	22.2	Full	100	0.0	0.0
Lane 2	202	5.0	202	5.0	326	0.620	100	17.0	LOS B	2.4	17.8	Short	60	<mark>-23.3</mark> <sup>N3</sup>	NA
Approach	460	5.0	460	5.0		0.620		18.0	LOS B	3.0	22.2				
West: Brisk	ane Av	enue -	W												
Lane 1	167	5.0	167	5.0	276	0 604	100	21.6		2.1	15.0	Full	300	0.0	0.0
Lane 2	150	5.0	150	5.0	248	0.004	100	21.0		1 0	13.8	Full	300	-10.7 <sup>N3</sup>	0.0
Approach	317	5.0	317	5.0	240	0.004	100	21.5		2.1	15.0	1 dii	500	-10.7	0.0
Арргоаст	517	5.0	517	5.0		0.004		21.5	L00 D	2.1	15.0				
Intersectio	1082	5.0	1082	5.0		0.776		16.4	LOS B	3.0	22.2				
n															
Site: 102 [E	Brisbane	eAv/Na	itionalC	c-S-20	)21-PM	]									
South: Nati	onal Cir	rcuit S													
Lane 1	165	5.0	165	5.0	311	0.531	100	19.7	LOS B	2.0	14.3	Full	90	<mark>-4.0</mark> <sup>N3</sup>	0.0
Lane 2	168	5.0	168	5.0	316	0.531	100	17.6	LOS B	2.0	14.5	Short	60	<mark>-4.5</mark> <sup>N3</sup>	NA
Approach	333	5.0	333	5.0		0.531		18.6	LOS B	2.0	14.5				
East: Brisb	ane Ave	enue E													
Lane 1	173	5.0	173	5.0	207	0 583	100	18.9	LOSB	21	15 3	Full	130	0.0	0.0
Lane 2	161	5.0	161	5.0	276	0.505	100	20.2		2.1	14.5	Full	130	-1 4 <sup>N3</sup>	0.0
Approach	334	5.0	334	5.0	210	0.583	100	19.5	LOS B	2.0	15.3	i uli	150	- I. <del>T</del>	0.0
North: Med	ian						6								
Lane 1	70	5.0	70	5.0	425	0.166	20 <sup>°</sup>	1.4	LOS A	0.1	0.6	Full	30	0.0	0.0
Lane 2	344	5.0	344	5.0	416	0.828	100	7.8	LOS A	3.1	22.5	Full	30	0.0	<mark>23.3</mark>
Approach	415	5.0	415	5.0		0.828		6.7	LOS A	3.1	22.5				
Intersectio	1081	5.0	1081	5.0		0.828		14.3	LOS A	3.1	22.5				
n															

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

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## CCG PHASING SUMMARY

□ Common Control Group: CCG1 [CCG-PM]

### Network: N101 [BrisbaneAv/ NationalCct-PM (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (CCG Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Network Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: CCG Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Phase Timing Summary (CCG)

Phase	Α	В	С
Phase Change Time (sec)	0	12	25
Green Time (sec)	6	7	9
Phase Time (sec)	12	13	15
Phase Split	30 %	33 %	38 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence (CCG)**







REF: Reference Phase VAR: Variable Phase



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## SITE LAYOUT Site: 101 [State Crc/Brisbane Av- AM (Site Folder: General)]

New Site Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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## **MOVEMENT SUMMARY**

### Site: 101 [State Crc/Brisbane Av- AM (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance														
Mov	Turn	INP	UT	DEM.	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU		FLO	WS	Satn	Delay	Service		EUE	Que	Stop	No.	Speed
		veh/h	пvј %	veh/h	пvј %	v/c	sec		veh	m		Rale	Cycles	km/h
South	n: Stat	e Circle -	S											
1	L2	3	5.0	3	5.0	0.587	27.6	LOS C	10.9	79.3	0.88	0.76	0.88	30.7
2	T1	719	5.0	757	5.0	0.587	20.8	LOS C	10.9	79.4	0.88	0.76	0.88	35.5
3	R2	120	5.0	126	5.0	*0.704	43.3	LOS D	4.6	33.9	1.00	0.85	1.19	22.0
Appro	oach	842	5.0	886	5.0	0.704	24.1	LOS C	10.9	79.4	0.89	0.77	0.92	32.6
East:	Brisba	ane Aven	ue											
4	L2	210	5.0	221	5.0	0.236	9.8	LOS A	2.6	19.0	0.46	0.68	0.46	42.5
5	T1	5	5.0	5	5.0	*0.697	37.4	LOS D	5.8	42.2	1.00	0.87	1.15	21.2
6	R2	148	5.0	156	5.0	0.697	40.4	LOS D	5.8	42.2	1.00	0.87	1.15	22.8
Appro	oach	363	5.0	382	5.0	0.697	22.7	LOS C	5.8	42.2	0.69	0.76	0.75	31.2
North	n: State	e Circle -	N											
7	L2	599	5.0	631	5.0	0.704	19.2	LOS B	18.1	131.9	0.80	0.83	0.80	36.1
8	T1	941	5.0	991	5.0	*0.704	21.7	LOS C	18.1	131.9	0.91	0.82	0.94	34.4
9	R2	4	5.0	4	5.0	0.023	38.2	LOS D	0.1	1.0	0.92	0.64	0.92	22.4
Appro	oach	1544	5.0	1625	5.0	0.704	20.8	LOS C	18.1	131.9	0.87	0.82	0.89	35.0
West	: Birsb	ane Av -	Extensic	n										
10	L2	3	5.0	3	5.0	0.017	16.5	LOS B	0.1	0.7	0.82	0.58	0.82	31.8
11	T1	2	5.0	2	5.0	*0.017	13.3	LOS B	0.1	0.7	0.82	0.58	0.82	32.3
12	R2	3	5.0	3	5.0	0.021	36.3	LOS D	0.1	0.8	0.94	0.62	0.94	21.7
Appro	oach	8	5.0	8	5.0	0.021	23.1	LOS C	0.1	0.8	0.87	0.60	0.87	27.2
All Vehic	les	2757	5.0	2902	5.0	0.704	22.0	LOS C	18.1	131.9	0.85	0.80	0.88	33.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## LANE SUMMARY

### Site: 101 [State Crc/Brisbane Av- AM (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Lane Use	and Per	formar	nce										
	DEM/ FLO	AND WS HV ]	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE [ Veh	CK OF UE Dist ]	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
South: State	veh/h	% ©	veh/h	V/C	%	sec	_	_	m	_	m	%	%
South. State		3											
Lane 1	380	5.0	648	0.587	100	21.0	LOS C	10.9	79.3	Full	200	0.0	0.0
Lane 2	380	5.0	648	0.587	100	20.7	LOS C	10.9	79.4	Full	200	0.0	0.0
Lane 3	126	5.0	179	0.704	100	43.3	LOS D	4.6	33.9	Short	95	0.0	NA
Approach	886	5.0		0.704		24.1	LOS C	10.9	79.4				
East: Brisba	ane Aven	ue											
Lane 1	221	5.0	937	0.236	100	9.8	LOS A	2.6	19.0	Full	200	0.0	0.0
Lane 2	161	5.0	231	0.697	100	40.3	LOS D	5.8	42.2	Full	200	0.0	0.0
Approach	382	5.0		0.697		22.7	LOS C	5.8	42.2				
North: State	e Circle -	N											
Lane 1	709	5.0	1008	0.704	100	18.4	LOS B	18.1	131.9	Full	200	0.0	0.0
Lane 2	456	5.0	648	0.704	100	22.5	LOS C	14.0	102.5	Full	200	0.0	0.0
Lane 3	456	5.0	648	0.704	100	22.5	LOS C	14.0	102.5	Full	200	0.0	0.0
Lane 4	4	5.0	179	0.023	100	38.2	LOS D	0.1	1.0	Short	110	0.0	NA
Approach	1625	5.0		0.704		20.8	LOS C	18.1	131.9				
West: Birsb	ane Av -	Extensio	on										
Lane 1	5	5.0	307	0.017	100	15.2	LOS B	0.1	0.7	Full	200	0.0	0.0
Lane 2	3	5.0	154	0.021	100	36.3	LOS D	0.1	0.8	Short	60	0.0	NA
Approach	8	5.0		0.021		23.1	LOS C	0.1	0.8				
Intersectio n	2902	5.0		0.704		22.0	LOS C	18.1	131.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# PHASING SUMMARY

### Site: 101 [State Crc/Brisbane Av- AM (Site Folder: General)]

New Site Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Optimum Cycle Time - Minimum Delay) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: State Circle Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C, D1\*, D2\*, D3\* Output Phase Sequence: A, B, C, D1\* (\* Variable Phase)

#### Phase Timing Summary

Phase	Α	В	С	D1
Phase Change Time (sec)	0	30	45	57
Green Time (sec)	24	9	6	7
Phase Time (sec)	30	15	12	13
Phase Split	43 %	21 %	17 %	19 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence**



REF: Reference Phase VAR: Variable Phase



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## **MOVEMENT SUMMARY**

### Site: 101 [State Crc/Brisbane Av- PM (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance														
Mov	Turn	INP	UT	DEM	AND	Deg.	Aver.	Level of	95% BA	CK OF	Prop. E	ffective	Aver.	Aver.
ID		VOLU	MES	FLO	WS	Satn	Delay	Service	QUE [ \/ob		Que	Stop	No.	Speed
		veh/h	пvј %	veh/h	пvј %	v/c	sec		veh	m		Rale	Cycles	km/h
South	n: State	e Circle -	S											
1	L2	1	5.0	1	5.0	0.843	38.0	LOS D	12.5	91.6	1.00	1.01	1.33	25.3
2	T1	705	5.0	742	5.0	<b>*</b> 0.843	31.0	LOS C	12.5	91.6	1.00	1.01	1.33	28.6
3	R2	16	5.0	17	5.0	*0.094	34.6	LOS C	0.5	3.5	0.94	0.69	0.94	25.2
Appro	oach	722	5.0	760	5.0	0.843	31.1	LOS C	12.5	91.6	1.00	1.00	1.32	28.5
East:	Brisba	ane Aveni	Je											
4	L2	387	5.0	407	5.0	0.383	9.0	LOS A	4.1	30.1	0.50	0.71	0.50	43.4
5	T1	1	5.0	1	5.0	*0.852	36.6	LOS D	8.8	64.0	1.00	1.02	1.44	21.4
6	R2	241	5.0	254	5.0	0.852	39.6	LOS D	8.8	64.0	1.00	1.02	1.44	23.1
Appro	oach	629	5.0	662	5.0	0.852	20.8	LOS C	8.8	64.0	0.69	0.83	0.86	32.5
North	: State	e Circle - I	N											
7	L2	187	5.0	197	5.0	0.757	31.2	LOS C	11.2	81.6	0.97	0.91	1.12	29.3
8	T1	803	5.0	845	5.0	0.757	26.0	LOS C	11.2	81.6	0.98	0.91	1.14	31.2
9	R2	1	5.0	1	5.0	0.006	33.4	LOS C	0.0	0.2	0.92	0.59	0.92	24.1
Appro	oach	991	5.0	1043	5.0	0.757	27.0	LOS C	11.2	81.6	0.98	0.91	1.14	30.8
West	: Birsb	ane Av - I	Extensio	on										
10	L2	3	5.0	3	5.0	0.009	13.7	LOS B	0.1	0.5	0.74	0.56	0.74	33.4
11	T1	1	5.0	1	5.0	*0.009	10.5	LOS B	0.1	0.5	0.74	0.56	0.74	34.0
12	R2	1	5.0	1	5.0	0.006	30.4	LOS C	0.0	0.2	0.92	0.58	0.92	23.7
Appro	oach	5	5.0	5	5.0	0.009	16.4	LOS B	0.1	0.5	0.77	0.56	0.77	31.0
All Vehic	les	2347	5.0	2471	5.0	0.852	26.6	LOS C	12.5	91.6	0.91	0.92	1.12	30.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## LANE SUMMARY

### Site: 101 [State Crc/Brisbane Av- PM (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Lane Use	and Per	formar	nce										
	DEM		Can	Deg.	Lane	Aver.	Level of	95% BA	CK OF	Lane	Lane	Cap.	Prob.
	FLO [ Total	VVS HV 1	Oap.	Sath	Util.	Delay	Service	QUE [Veh	UE Dist 1	Config	Length	Adj.	BIOCK.
	veh/h	%	veh/h	v/c	%	sec		[	m		m	%	%
South: State	e Circle -	S											
Lane 1	372	5.0	441	0.843	100	31.4	LOS C	12.5	91.6	Full	200	0.0	0.0
Lane 2	372	5.0	441	0.843	100	30.7	LOS C	12.4	90.8	Full	200	0.0	0.0
Lane 3	17	5.0	179	0.094	100	34.6	LOS C	0.5	3.5	Short	95	0.0	NA
Approach	760	5.0		0.843		31.1	LOS C	12.5	91.6				
East: Brisba	ane Aven	ue											
Lane 1	407	5.0	1062	0.383	100	9.0	LOS A	4.1	30.1	Full	200	0.0	0.0
Lane 2	255	5.0	299	0.852	100	39.6	LOS D	8.8	64.0	Full	200	0.0	0.0
Approach	662	5.0		0.852		20.8	LOS C	8.8	64.0				
North: State	e Circle -	N											
Lane 1	375	5.0	495	0.757	100	28.0	LOS C	11.2	81.6	Full	200	0.0	0.0
Lane 2	334	5.0	441	0.757	100	26.4	LOS C	10.1	73.9	Full	200	0.0	0.0
Lane 3	334	5.0	441	0.757	100	26.4	LOS C	10.1	73.9	Full	200	0.0	0.0
Lane 4	1	5.0	179	0.006	100	33.4	LOS C	0.0	0.2	Short	110	0.0	NA
Approach	1043	5.0		0.757		27.0	LOS C	11.2	81.6				
West: Birsb	ane Av -	Extensio	on										
Lane 1	4	5.0	476	0.009	100	12.9	LOS B	0.1	0.5	Full	200	0.0	0.0
Lane 2	1	5.0	179	0.006	100	30.4	LOS C	0.0	0.2	Short	60	0.0	NA
Approach	5	5.0		0.009		16.4	LOS B	0.1	0.5				
Intersectio n	2471	5.0		0.852		26.6	LOS C	12.5	91.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# **PHASING SUMMARY**

#### Site: 101 [State Crc/Brisbane Av- PM (Site Folder: General)]

New Site

Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: State Circle Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C, D1\*, D2\*, D3\* Output Phase Sequence: A, B, C, D1\* (\* Variable Phase)

#### Phase Timing Summary

Phase	Α	В	С	D1
Phase Change Time (sec)	0	20	36	48
Green Time (sec)	14	10	6	6
Phase Time (sec)	20	16	12	12
Phase Split	33 %	27 %	20 %	20 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence**



**REF: Reference Phase** VAR: Variable Phase

**\_\_** 

٦I٢ State Circle - S



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Appendix E: SIDRA Outputs - Future – Non-Development

# SITE LAYOUT

### V Site: 101 [NationalCct/BlackallSt - 2031 - AM - NonDev (Site

Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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## **MOVEMENT SUMMARY**

### V Site: 101 [NationalCct/BlackallSt - 2031 - AM - NonDev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance														
Mov	Turn					Deg.	Aver. Level of		95% BA	95% BACK OF		Prop. Effective		Aver.
טו		VULU [ Total		FLU [ Total	vvS н\/ 1	Sath	Delay Service		QUI [\/eh	QUEUE		Stop Rate	NO. Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		Trate	Cycles	km/h
Sout	h: Natio	onal Circu	uit - S											
1	L2	154	5.0	162	5.0	0.343	5.8	LOS A	0.5	4.0	0.11	0.18	0.11	46.9
2	T1	407	5.0	428	5.0	0.343	0.2	LOS A	0.5	4.0	0.11	0.18	0.11	51.5
3	R2	43	5.0	45	5.0	0.343	6.7	LOS A	0.5	4.0	0.11	0.18	0.11	45.3
Appr	oach	604	5.0	636	5.0	0.343	2.1	NA	0.5	4.0	0.11	0.18	0.11	49.6
East	Black	all Street	- E											
4	L2	37	5.0	39	5.0	0.161	6.3	LOS A	0.5	3.7	0.43	0.70	0.43	36.1
5	T1	55	5.0	58	5.0	0.161	7.6	LOS A	0.5	3.7	0.43	0.70	0.43	39.8
6	R2	34	5.0	36	5.0	0.161	9.2	LOS A	0.5	3.7	0.43	0.70	0.43	37.3
Appr	oach	126	5.0	133	5.0	0.161	7.7	LOS A	0.5	3.7	0.43	0.70	0.43	38.1
North: Natio		onal Circu	iit - N											
7	L2	26	5.0	27	5.0	0.253	8.0	LOS A	1.2	9.1	0.46	0.24	0.46	44.2
8	T1	253	5.0	266	5.0	0.253	1.3	LOS A	1.2	9.1	0.46	0.24	0.46	46.7
9	R2	116	5.0	122	5.0	0.253	8.1	LOS A	1.2	9.1	0.46	0.24	0.46	42.8
Appr	oach	395	5.0	416	5.0	0.253	3.8	NA	1.2	9.1	0.46	0.24	0.46	45.2
West: Blackall Street - W														
10	L2	13	5.0	14	5.0	0.047	6.8	LOS A	0.1	1.0	0.47	0.72	0.47	37.6
11	T1	6	5.0	6	5.0	0.047	6.9	LOS A	0.1	1.0	0.47	0.72	0.47	39.2
12	R2	15	5.0	16	5.0	0.047	9.8	LOS A	0.1	1.0	0.47	0.72	0.47	35.0
Appr	oach	34	5.0	36	5.0	0.047	8.1	LOS A	0.1	1.0	0.47	0.72	0.47	36.7
All Vehio	cles	1159	5.0	1220	5.0	0.343	3.4	NA	1.2	9.1	0.28	0.27	0.28	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## LANE SUMMARY

### V Site: 101 [NationalCct/BlackallSt - 2031 - AM - NonDev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Lane Use	and Pei	rformai	nce										
	DEMAND FLOWS		Deg. Cap. Satn		Lane Util.	Aver. Delay	Level of Service	95% BACK OF QUEUE		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[ Total veh/h	HV ] %	veh/h	v/c	%	sec		[ Veh	Dist ] m		m	%	%
South: Natio	onal Circ	uit - S											
Lane 1	636	5.0	1852	0.343	100	2.1	LOS A	0.5	4.0	Full	100	0.0	0.0
Approach	636	5.0		0.343		2.1	NA	0.5	4.0				
East: Black	all Street	- E											
Lane 1	133	5.0	821	0.161	100	7.7	LOS A	0.5	3.7	Full	150	0.0	0.0
Approach	133	5.0		0.161		7.7	LOS A	0.5	3.7				
North: Natio	nal Circu	uit - N											
Lane 1	416	5.0	1640	0.253	100	3.8	LOS A	1.2	9.1	Full	120	0.0	0.0
Approach	416	5.0		0.253		3.8	NA	1.2	9.1				
West: Blackall Street - W													
Lane 1	36	5.0	758	0.047	100	8.1	LOS A	0.1	1.0	Full	150	0.0	0.0
Approach	36	5.0		0.047		8.1	LOS A	0.1	1.0				
Intersectio n	1220	5.0		0.343		3.4	NA	1.2	9.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## **MOVEMENT SUMMARY**

### V Site: 101 [NationalCct/BlackallSt - 2031 - PM - NonDev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance														
Mov	Turn					Deg.	Aver. Level of		95% BACK OF		Prop. Effective		Aver.	Aver.
טו		VULU [ Total		FLU [ Total	vvS н\/ 1	Sath	Delay	Service	QUI [\/eh	EUE Diet 1	Que	Stop Rate	NO. Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		Trate	Cycles	km/h
Sout	h: Natio	onal Circu	uit - S											
1	L2	12	5.0	13	5.0	0.208	6.6	LOS A	0.2	1.3	0.07	0.05	0.07	50.8
2	T1	341	5.0	359	5.0	0.208	0.1	LOS A	0.2	1.3	0.07	0.05	0.07	57.0
3	R2	16	5.0	17	5.0	0.208	7.0	LOS A	0.2	1.3	0.07	0.05	0.07	48.9
Appr	oach	369	5.0	388	5.0	0.208	0.6	NA	0.2	1.3	0.07	0.05	0.07	56.3
East	Black	all Street	- E											
4	L2	3	5.0	3	5.0	0.103	6.8	LOS A	0.3	2.1	0.47	0.75	0.47	37.1
5	T1	61	5.0	64	5.0	0.103	6.3	LOS A	0.3	2.1	0.47	0.75	0.47	40.8
6	R2	17	5.0	18	5.0	0.103	9.3	LOS A	0.3	2.1	0.47	0.75	0.47	38.2
Appr	oach	81	5.0	85	5.0	0.103	6.9	LOS A	0.3	2.1	0.47	0.75	0.47	40.2
North: Natio		onal Circu	iit - N											
7	L2	27	5.0	28	5.0	0.229	6.0	LOS A	0.1	0.8	0.04	0.05	0.04	51.5
8	T1	372	5.0	392	5.0	0.229	0.0	LOS A	0.1	0.8	0.04	0.05	0.04	57.3
9	R2	9	5.0	9	5.0	0.229	6.9	LOS A	0.1	0.8	0.04	0.05	0.04	49.7
Appr	oach	408	5.0	429	5.0	0.229	0.6	NA	0.1	0.8	0.04	0.05	0.04	56.6
West: Blackall Street - W														
10	L2	159	5.0	167	5.0	0.269	6.8	LOS A	1.1	7.7	0.46	0.71	0.47	38.3
11	T1	10	5.0	11	5.0	0.269	6.7	LOS A	1.1	7.7	0.46	0.71	0.47	39.9
12	R2	92	5.0	97	5.0	0.269	9.2	LOS A	1.1	7.7	0.46	0.71	0.47	35.6
Appr	oach	261	5.0	275	5.0	0.269	7.7	LOS A	1.1	7.7	0.46	0.71	0.47	37.5
All Vehio	cles	1119	5.0	1178	5.0	0.269	2.7	NA	1.1	7.7	0.18	0.25	0.18	48.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## LANE SUMMARY

#### V Site: 101 [NationalCct/BlackallSt - 2031 - PM - NonDev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Lane Use and Performance													
	DEM. FLO	AND WS	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[ Total veh/h	HV ] %	veh/h	v/c	%	sec		[ Veh	Dist] m		m	%	%
South: Natio	onal Circ	uit - S											
Lane 1	388	5.0	1865	0.208	100	0.6	LOS A	0.2	1.3	Full	100	0.0	0.0
Approach	388	5.0		0.208		0.6	NA	0.2	1.3				
East: Black	all Street	- E											
Lane 1	85	5.0	832	0.103	100	6.9	LOS A	0.3	2.1	Full	150	0.0	0.0
Approach	85	5.0		0.103		6.9	LOS A	0.3	2.1				
North: Natio	nal Circu	uit - N											
Lane 1	429	5.0	1874	0.229	100	0.6	LOS A	0.1	0.8	Full	120	0.0	0.0
Approach	429	5.0		0.229		0.6	NA	0.1	0.8				
West: Black	all Stree	t - W											
Lane 1	275	5.0	1022	0.269	100	7.7	LOS A	1.1	7.7	Full	150	0.0	0.0
Approach	275	5.0		0.269		7.7	LOS A	1.1	7.7				
Intersectio n	1178	5.0		0.269		2.7	NA	1.1	7.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# **NETWORK LAYOUT**

### Network: N101 [BrisbaneAv/NationalCct-AM-FutureNonDev

(Network Folder: General)]

#### New Network Network Category: (None) EQUISAT (Fixed-Time/SCATS) Isolated Common Control Group: CCG1 [CCGAMFND]

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NE	SITES IN NETWORK										
Site ID	CCG ID	Site Name									
101	CCG1	BrisbaneAv/NationalCc-N-2031-AM -NonDev									
102	CCG1	BrisbaneAv/NationalCc-S-2031-AM - NonDev									

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### CCG MOVEMENT SUMMARY

### □ Common Control Group: CCG1 [CCGAMFND]

#### ■ Network: N101 [BrisbaneAv/ NationalCct-AM-FutureNonDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehi	cle Mo	vement	Perfor	mance	e (CC	G)								
Mov	Turn [	DEMAND	FLOW	S ARRI	VAL	Deg.	Aver.	Level of	AVERAG	E BACK	Prop.	EffectiveA	ver. No.	Aver.
ID		[ Total	HV/1	FLO [ Total	WS HV 1	Satn	Delay	Service	OF QU [ Veh	JEUE Dist 1	Que	Stop Rate	Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		rtate		km/h
Site:	101 [Bri	isbaneAv	Nation	alCc-N-	2031	-AM -NonD	ev]							
Sout	h: Media	an												
2	T1	431	5.0	431	5.0	<b>*</b> 0.867	15.1	LOS B	4.1	30.0	0.87	0.81	0.97	21.4
3	R2	58	5.0	58	5.0	0.173	8.8	LOS A	0.4	2.8	0.27	0.50	0.27	29.5
Appr	oach	488	5.0	488	5.0	0.867	14.4	LOS B	4.1	30.0	0.80	0.78	0.89	22.2
North	n: Natior	nal Circuit	: - N											
7	L2	62	5.0	62	5.0	0.624	30.7	LOS C	4.0	29.1	0.96	0.82	1.01	20.1
8	T1	284	5.0	284	5.0	0.624	25.9	LOS C	4.0	29.1	0.96	0.82	1.04	11.9
Appr	oach	346	5.0	346	5.0	0.624	26.8	LOS C	4.0	29.1	0.96	0.82	1.03	13.7
West	: Brisba	ne Avenu	e - W											
10	L2	196	5.0	196	5.0	0.767	31.3	LOS C	6.5	47.1	0.97	0.93	1.14	23.3
11	T1	315	5.0	315	5.0	0.767	26.5	LOS C	6.5	47.1	0.98	0.94	1.18	28.7
12	R2	98	5.0	98	5.0	0.767	32.9	LOS C	5.0	36.2	0.98	0.95	1.22	23.4
Appr	oach	608	5.0	608	5.0	0.767	29.1	LOS C	6.5	47.1	0.98	0.94	1.17	26.0
All Ve	ehicles	1443	5.0	1443	5.0	0.867	23.6	LOS C	6.5	47.1	0.91	0.85	1.04	22.7
Site:	102 [Bri	isbaneAv/	/Nation	alCc-S-	2031	-AM - NonE	Dev]							
Sout	h: Natio	nal Circui	t S											
1	L2	51	5.0	51	5.0	0.683	30.9	LOS C	3.3	24.4	0.96	0.87	1.11	27.3
2	T1	321	5.0	321	5.0	0.683	25.3	LOS C	3.5	25.3	0.96	0.87	1.10	11.3
Appr	oach	372	5.0	372	5.0	0.683	26.0	LOS C	3.5	25.3	0.96	0.87	1.10	14.7
East:	Brisbar	ne Avenue	еE											
4	L2	68	5.0	68	5.0	0.847	35.7	LOS D	8.4	61.3	1.00	1.04	1.32	17.7
5	T1	397	5.0	397	5.0	<b>*</b> 0.847	30.6	LOS C	8.4	61.3	1.00	1.04	1.35	27.3
6	R2	167	5.0	167	5.0	0.847	39.5	LOS D	5.0	36.5	1.00	1.06	1.49	11.0
Appr	oach	633	5.0	633	5.0	0.847	33.5	LOS C	8.4	61.3	1.00	1.05	1.38	22.7
North	n: Media	in												
8	T1	322	5.0	322	5.0	* 0.850	10.7	LOS B	4.1	30.0	0.68	0.62	0.76	24.7
9	R2	60	5.0	60	5.0	0.850	16.0	LOS B	4.1	30.0	0.83	0.77	0.93	33.5
Appr	oach	382	5.0	382	5.0	0.850	11.6	LOS B	4.1	30.0	0.70	0.65	0.79	27.0
All Ve	ehicles	1386	5.0	1386	5.0	0.850	25.5	LOS C	8.4	61.3	0.91	0.89	1.14	21.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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### CCG LANE SUMMARY

### □ Common Control Group: CCG1 [CCGAMFND]

#### ■ Network: N101 [BrisbaneAv/ NationalCct-AM-FutureNonDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (CCG Optimum Cycle Time - Minimum Delay)

Lane Use	and P	erforr	nance	(CCG	)										
	DEM	AND	ARR	IVAL	Can	Deg.	Lane	Aver.	Level of	AVE	RAGE	Lane	Lane	Cap.	Prob.
	FLO	WS	FLO	WS	Cap.	Satn	Util.	Delay	Service	BAC		Config	Length	Adj.	Block.
	[ Total	HV ]	[ Total	HV ]						[Veh	Dist ]				
	veh/h	%	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
Site: 101 [E	Brisbane	eAv/Na	tionalC	c-N-20	)31-AN	-NonD	ev]								
South: Med	lian														
Lane 1	410	5.0	410	5.0	472	0.867	100	15.5	LOS B	4.1 <sup>N4</sup>	30.0 <sup>N4</sup>	Full	30	0.0	<mark>50.0</mark>
Lane 2	79	5.0	79	5.0	454	0.173	20 <sup>6</sup>	8.2	LOS A	0.4	2.8	Full	30	0.0	0.0
Approach	488	5.0	488	5.0		0.867		14.4	LOS B	4.1	30.0				
North: Natio	onal Cir	cuit - N	N												
Lane 1	228	5.0	228	5.0	366	0.624	100	26.7	LOS C	4.0	29.1	Full	100	0.0	0.0
Lane 2	118	5.0	118	5.0	189	0.624	100	26.9	LOS C	2.2	16.0	Short	60	<mark>-50.0</mark> <sup>N3</sup>	NA
Approach	346	5.0	346	5.0		0.624		26.8	LOS C	4.0	29.1				
West: Brisb	ane Av	enue -	W												
Lane 1	352	5.0	352	5.0	459	0.767	100	28.8	LOS C	6.5	47.1	Full	300	0.0	0.0
Lane 2	257	5.0	257	5.0	335	0.767	100	29.5	LOS C	5.0	36.2	Full	300	<mark>-27.6</mark> <sup>N3</sup>	0.0
Approach	608	5.0	608	5.0		0.767		29.1	LOS C	6.5	47.1				
Intersectio	1443	5.0	1443	5.0		0.867		23.6	LOS C	6.5	47.1				
n															
Site: 102 [E	Brisbane	eAv/Na	tionalC	c-S-20	31-AM	- NonE	Dev]								
South: Nati	onal Cir	rcuit S													
Lane 1	182	5.0	182	5.0	266	0.683	100	26.9	LOS C	3.3	24.4	Full	90	<mark>-41.9</mark> <sup>N3</sup>	0.0
Lane 2	190	5.0	190	5.0	278	0.683	100	25.2	LOS C	3.5	25.3	Short	60	<mark>-41.2</mark> <sup>N3</sup>	NA
Approach	372	5.0	372	5.0		0.683		26.0	LOS C	3.5	25.3				
East: Brisba	ane Ave	enue E													
Lane 1	407	5.0	407	5.0	480	0.847	100	31.0	LOS C	8.4	61.3	Full	130	0.0	0.0
Lane 2	226	5.0	226	5.0	267	0.847	100	38.1	LOS D	5.0	36.5	Full	130	<mark>-41.3</mark> <sup>N3</sup>	0.0
Approach	633	5.0	633	5.0		0.847		33.5	LOS C	8.4	61.3				
North: Med	ian														
Lane 1	64	5.0	64	5.0	378	0.170	20 <sup>6</sup>	1.4	LOS A	0.1	0.5	Full	30	0.0	0.0
Lane 2	318	5.0	318	5.0	374	0.850	100	13.6	LOS B	4.1 <sup>N4</sup>	30.0 <sup>N4</sup>	Full	30	0.0	<mark>50.0</mark>
Approach	382	5.0	382	5.0		0.850		11.6	LOS B	4.1	30.0				
Intersectio	1386	5.0	1386	5.0		0.850		25.5	LOS C	8.4	61.3				
n															

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

N4 Average back of queue has been restricted to the available queue storage space.

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## CCG PHASING SUMMARY

□ Common Control Group: CCG1 [CCGAMFND]

#### ■ Network: N101 [BrisbaneAv/ NationalCct-AM-FutureNonDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (CCG Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Network Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: CCG Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

	Phase Timing	Summary	(CCG)
--	--------------	---------	-------

Phase	Α	В	С
Phase Change Time (sec)	0	21	42
Green Time (sec)	15	15	12
Phase Time (sec)	21	21	18
Phase Split	35 %	35 %	30 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence (CCG)**







REF: Reference Phase VAR: Variable Phase



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### CCG MOVEMENT SUMMARY

### □ Common Control Group: CCG1 [CCGPMFND]

#### ■ Network: N101 [BrisbaneAv/ NationalCct-PM-FutureNonDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)														
Mov	Turn [	DEMAND	FLOW	S ARRI	VAL	Deg.	Aver.	Level of	AVERAG	E BACK	Prop.	Effective/	ver. No.	Aver.
D		[ Total	HV 1	FLO [ Total	WS HV 1	Satn	Delay	Service	OF QI	UEUE Dist 1	Que	Stop Rate	Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
Site:	101 [Br	isbaneAv/	Nation	alCc-N-	2031	-PM -NonE	Dev]							
Sout	h: Media	an												
2	T1	301	5.0	301	5.0	*0.786	6.2	LOS A	2.7	19.4	0.57	0.51	0.64	34.5
3	R2	53	5.0	53	5.0	0.157	5.1	LOS A	0.1	0.7	0.11	0.53	0.11	34.9
Appr	oach	354	5.0	354	5.0	0.786	6.0	LOS A	2.7	19.4	0.50	0.51	0.56	34.6
North	n: Natior	nal Circuit	- N											
7	L2	121	5.0	121	5.0	0.568	22.1	LOS C	4.1	29.6	0.89	0.78	0.89	24.7
8	T1	413	5.0	413	5.0	0.568	16.8	LOS B	4.1	29.6	0.89	0.76	0.90	16.4
Appr	oach	534	5.0	534	5.0	0.568	18.0	LOS B	4.1	29.6	0.89	0.77	0.90	18.9
West	: Brisba	ne Avenu	e - W											
10	L2	91	5.0	91	5.0	0.768	31.8	LOS C	3.3	23.8	1.00	0.93	1.31	23.3
11	T1	208	5.0	208	5.0	*0.768	26.6	LOS C	3.3	23.8	1.00	0.93	1.33	28.8
12	R2	68	5.0	68	5.0	0.768	32.6	LOS C	2.9	20.9	1.00	0.94	1.35	23.5
Appr	oach	367	5.0	367	5.0	0.768	29.0	LOS C	3.3	23.8	1.00	0.93	1.33	26.4
All Ve	ehicles	1255	5.0	1255	5.0	0.786	17.8	LOS B	4.1	29.6	0.81	0.74	0.93	24.8
Site:	102 [Br	isbaneAv/	Nation	alCc-S-	2031	-PM -NonE	)ev]							
Sout	h: Natio	nal Circuit	t S											
1	L2	74	5.0	74	5.0	0.562	26.3	LOS C	2.7	19.9	0.95	0.79	0.96	29.5
2	T1	313	5.0	313	5.0	0.562	20.7	LOS C	2.8	20.7	0.95	0.78	0.96	13.2
Appr	oach	386	5.0	386	5.0	0.562	21.8	LOS C	2.8	20.7	0.95	0.78	0.96	18.0
East	Brisba	ne Avenue	εE											
4	L2	29	5.0	29	5.0	0.729	30.6	LOS C	3.2	23.7	1.00	0.91	1.23	19.9
5	T1	316	5.0	316	5.0	0.729	25.3	LOS C	3.2	23.7	1.00	0.90	1.23	30.3
6	R2	41	5.0	41	5.0	0.729	31.2	LOS C	3.0	22.1	1.00	0.90	1.24	14.7
Appr	oach	386	5.0	386	5.0	0.729	26.3	LOS C	3.2	23.7	1.00	0.90	1.23	28.4
North	n: Media	in												
8	T1	321	5.0	321	5.0	*0.720	4.9	LOS A	3.3	24.2	0.43	0.45	0.45	34.4
9	R2	160	5.0	160	5.0	0.720	9.1	LOS A	3.3	24.2	0.55	0.59	0.58	40.4
Appr	oach	481	5.0	481	5.0	0.720	6.3	LOS A	3.3	24.2	0.47	0.50	0.49	37.6
All Ve	ehicles	1254	5.0	1254	5.0	0.729	17.3	LOS B	3.3	24.2	0.78	0.71	0.87	27.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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### CCG LANE SUMMARY

#### □ Common Control Group: CCG1 [CCGPMFND]

#### ■ Network: N101 [BrisbaneAv/ NationalCct-PM-FutureNonDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (CCG Optimum Cycle Time - Minimum Delay)

				1000											
Lane Use	and P	ertorn	nance	(CCG	i)										
					Can	Deg.	Lane	Aver.	Level of	AVEF		Lane	Lane	Cap.	Prob.
	I LO	vv3	I LO	100	ocp.	Jain	Otil.	Delay		QUI	EUE	Conng	Lengui	Auj.	DIUCK.
	[ Total	HV ]	[ Total	HV]						[ Veh	Dist ]				
	veh/h	%	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
Site: 101 [E	Brisbane	eAv/Na	tionalC	c-N-20	)31-PN	I -NonD	ev]								
South: Med	lian														
Lane 1	297	5.0	297	5.0	378	0.786	100	6.2	LOS A	2.7	19.4	Full	30	0.0	<mark>9.9</mark>
Lane 2	57	5.0	57	5.0	360	0.157	20 <sup>6</sup>	4.9	LOS A	0.1	0.7	Full	30	0.0	0.0
Approach	354	5.0	354	5.0		0.786		6.0	LOS A	2.7	19.4				
North: Natio	onal Cir	cuit - N	١												
Lane 1	309	5.0	309	5.0	544	0.568	100	18.7	LOS B	4.1	29.6	Full	100	0.0	0.0
Lane 2	225	5.0	225	5.0	396	0.568	100	16.9	LOS B	3.0	22.0	Short	60	-30.2 <sup>N3</sup>	NA
Approach	534	5.0	534	5.0		0.568		18.0	LOS B	4.1	29.6				
West: Brisk	ane Av	enue -	W												
Lane 1	198	5.0	198	5.0	258	0.768	100	28.8	LOSIC	3.3	23.8	Full	300	0.0	0.0
Lane 2	169	5.0	169	5.0	220	0 768	100	29.3		2.9	20.9	Full	300	-14.9 <sup>N3</sup>	0.0
Approach	367	5.0	367	5.0	220	0.768	100	29.0		33	23.8	. an	000		0.0
, approach	007	0.0	001	0.0		0.700		20.0	200.0	0.0	20.0				
Intersectio	1255	5.0	1255	5.0		0.786		17.8	LOS B	4.1	29.6				
n															
Site: 102 [E	Brisbane	eAv/Na	tionalC	c-S-20	)31-PM	-NonD	ev]								
South: Nati	onal Cir	rcuit S													
Lane 1	189	5.0	189	5.0	336	0.562	100	23.0	LOS C	2.7	19.9	Full	90	-6.3 <sup>N3</sup>	0.0
Lane 2	197	5.0	197	5.0	351	0.562	100	20.7	LOS C	2.8	20.7	Short	60	-7.1 <sup>N3</sup>	NA
Approach	386	5.0	386	5.0		0.562		21.8	LOS C	2.8	20.7				
East: Brisb	ane Ave	enue E													
Lane 1	200	5.0	200	5.0	275	0.729	100	25.8	LOS C	3.2	23.7	Full	130	0.0	0.0
Lane 2	186	5.0	186	5.0	255	0.729	100	26.9	LOS C	3.0	22.1	Full	130	-2.2 <sup>N3</sup>	0.0
Approach	386	5.0	386	5.0		0.729		26.3	LOS C	3.2	23.7				
North: Med	ian														
Lane 1	82	5.0	82	5.0	567	0.144	20 <sup>6</sup>	1.2	LOS A	0.1	0.6	Full	30	0.0	0.0
Lane 2	399	5.0	399	5.0	555	0.720	100	7.4	LOS A	3.3	24.2	Full	30	0.0	30.2
Approach	481	5.0	481	5.0		0.720		6.3	LOSA	3.3	24.2				
								0.0		5.0					
Intersectio	1254	5.0	1254	5.0		0.729		17.3	LOS B	3.3	24.2				
n															

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

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### CCG PHASING SUMMARY

□ Common Control Group: CCG1 [CCGPMFND]

#### Network: N101 [BrisbaneAv/ NationalCct-PM-FutureNonDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (CCG Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Network Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: CCG Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Phase Timing Summary (CCG)

Phase	Α	В	С
Phase Change Time (sec)	0	13	29
Green Time (sec)	7	10	15
Phase Time (sec)	13	16	21
Phase Split	26 %	32 %	42 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence (CCG)**







REF: Reference Phase VAR: Variable Phase



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# SITE LAYOUT

# Site: 101 [State Crc/Brisbane Av- AM - FutureNonDev (Site

Folder: General)]

#### New Site Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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### **MOVEMENT SUMMARY**

### Site: 101 [State Crc/Brisbane Av- AM - FutureNonDev (Site

Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance														
Mov	Turn	INP	UT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop. E	ffective	Aver.	Aver.
ID		VOLU		FLO Total	WS LIV1	Satn	Delay	Service			Que	Stop	NO.	Speed
		veh/h	⊓vj %	veh/h	пvј %	v/c	sec		ven.	m Dist		Rale	Cycles	km/h
Sout	h: Stat	e Circle -	S											
1	L2	3	5.0	3	5.0	0.622	29.0	LOS C	14.1	103.2	0.87	0.76	0.87	29.9
2	T1	834	5.0	878	5.0	0.622	22.3	LOS C	14.2	103.3	0.87	0.76	0.87	34.3
3	R2	139	5.0	146	5.0	*0.725	47.5	LOS D	6.1	44.3	1.00	0.87	1.18	20.7
Appr	oach	976	5.0	1027	5.0	0.725	25.9	LOS C	14.2	103.3	0.89	0.78	0.91	31.4
East	Brisba	ane Aveni	ue											
4	L2	244	5.0	257	5.0	0.290	11.3	LOS B	3.9	28.7	0.50	0.70	0.50	40.8
5	T1	6	5.0	6	5.0	<b>*</b> 0.759	42.8	LOS D	7.8	56.8	1.00	0.90	1.20	19.7
6	R2	172	5.0	181	5.0	0.759	45.8	LOS D	7.8	56.8	1.00	0.90	1.20	21.1
Appr	oach	422	5.0	444	5.0	0.759	25.8	LOS C	7.8	56.8	0.71	0.79	0.80	29.3
North	n: State	e Circle - I	N											
7	L2	695	5.0	732	5.0	0.756	20.2	LOS C	23.9	174.6	0.82	0.84	0.82	35.2
8	T1	1092	5.0	1149	5.0	<b>*</b> 0.756	24.5	LOS C	23.9	174.6	0.93	0.86	0.97	32.4
9	R2	5	5.0	5	5.0	0.026	41.4	LOS D	0.2	1.4	0.91	0.65	0.91	21.3
Appr	oach	1792	5.0	1886	5.0	0.756	22.9	LOS C	23.9	174.6	0.88	0.85	0.91	33.4
West	: Birsb	ane Av - I	Extensic	n										
10	L2	3	5.0	3	5.0	0.019	19.6	LOS B	0.1	0.8	0.85	0.60	0.85	29.8
11	T1	2	5.0	2	5.0	<b>*</b> 0.019	16.4	LOS B	0.1	0.8	0.85	0.60	0.85	30.3
12	R2	3	5.0	3	5.0	0.023	41.9	LOS D	0.1	0.9	0.95	0.62	0.95	20.0
Appr	oach	8	5.0	8	5.0	0.023	27.2	LOS C	0.1	0.9	0.89	0.60	0.89	25.3
All Vehic	cles	3198	5.0	3366	5.0	0.759	24.2	LOS C	23.9	174.6	0.86	0.82	0.90	32.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## LANE SUMMARY

### Site: 101 [State Crc/Brisbane Av- AM - FutureNonDev (Site

Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Lane Use	and Pe	rformar	nce										
	DEM FLO [ Total	AND WS HV]	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE [ Veh	CK OF UE Dist ]	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
South: State	e Circle -	S S	ven/n	V/C	70	586			111	_	111	70	70
	111	50	708	0 622	100	22.4	1080	1/1	103.2	Eull	200	0.0	0.0
	441	5.0	700	0.022	100	22.4		14.1	103.2	Eull	200	0.0	0.0
	146	5.0	202	0.022	100	47.5		6.1	105.5	Short	200	0.0	0.0 NA
Approach	1027	5.0	202	0.725	100	25.0		14.2	103.3	Short	90	0.0	
Арргоаст	1027	5.0		0.725		25.9	L03 C	14.2	105.5				
East: Brisba	ane Aven	ue											
Lane 1	257	5.0	886	0.290	100	11.3	LOS B	3.9	28.7	Full	200	0.0	0.0
Lane 2	187	5.0	247	0.759	100	45.7	LOS D	7.8	56.8	Full	200	0.0	0.0
Approach	444	5.0		0.759		25.8	LOS C	7.8	56.8				
North: State	e Circle -	Ν											
Lane 1	811	5.0	1073	0.756	100	19.5	LOS B	23.9	174.6	Full	200	0.0	0.0
Lane 2	535	5.0	708	0.756	100	25.3	LOS C	19.2	140.0	Full	200	0.0	0.0
Lane 3	535	5.0	708	0.756	100	25.3	LOS C	19.2	140.0	Full	200	0.0	0.0
Lane 4	5	5.0	202	0.026	100	41.4	LOS D	0.2	1.4	Short	110	0.0	NA
Approach	1886	5.0		0.756		22.9	LOS C	23.9	174.6				
West: Birsb	ane Av -	Extensio	on										
Lane 1	5	5.0	270	0.019	100	18.4	LOS B	0.1	0.8	Full	200	0.0	0.0
Lane 2	3	5.0	134	0.023	100	41.9	LOS D	0.1	0.9	Short	60	0.0	NA
Approach	8	5.0		0.023		27.2	LOS C	0.1	0.9				
Intersectio n	3366	5.0		0.759		24.2	LOS C	23.9	174.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## **PHASING SUMMARY**

# Site: 101 [State Crc/Brisbane Av- AM - FutureNonDev (Site Folder: General)]

New Site Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: State Circle Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C, D1\*, D2\*, D3\* Output Phase Sequence: A, B, C, D1\* (\* Variable Phase)

#### **Phase Timing Summary**

Phase	Α	В	С	D1
Phase Change Time (sec)	0	36	53	65
Green Time (sec)	30	11	6	9
Phase Time (sec)	36	17	12	15
Phase Split	45 %	21 %	15 %	19 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence**



REF: Reference Phase VAR: Variable Phase



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### **MOVEMENT SUMMARY**

# Site: 101 [State Crc/Brisbane Av- PM - FutureNonDev (Site

Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehi	cle M	ovemen	t Perfo	rmance										
Mov	Turn	INP	UT	DEM.	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU		FLO	WS	Satn	Delay	Service		EUE	Que	Stop	No.	Speed
		veh/h	пvј %	veh/h	пvј %	v/c	sec		veh	m		Rale	Cycles	km/h
South	n: State	e Circle -	S											
1	L2	1	5.0	1	5.0	0.799	36.4	LOS D	15.4	112.2	0.99	0.95	1.15	26.0
2	T1	818	5.0	861	5.0	<b>*</b> 0.799	29.6	LOS C	15.4	112.2	0.99	0.94	1.15	29.4
3	R2	19	5.0	20	5.0	*0.130	40.5	LOS D	0.7	4.9	0.95	0.70	0.95	22.9
Appro	oach	838	5.0	882	5.0	0.799	29.9	LOS C	15.4	112.2	0.99	0.94	1.15	29.2
East:	Brisba	ane Aveni	ue											
4	L2	449	5.0	473	5.0	0.472	10.4	LOS B	6.6	48.0	0.55	0.73	0.55	41.9
5	T1	1	5.0	1	5.0	*0.825	37.9	LOS D	11.2	81.9	1.00	0.97	1.28	21.0
6	R2	280	5.0	295	5.0	0.825	40.9	LOS D	11.2	81.9	1.00	0.97	1.28	22.6
Appro	oach	730	5.0	768	5.0	0.825	22.1	LOS C	11.2	81.9	0.73	0.82	0.83	31.6
North	n: State	e Circle -	N											
7	L2	217	5.0	228	5.0	0.726	31.0	LOS C	13.6	99.5	0.94	0.87	1.01	29.4
8	T1	931	5.0	980	5.0	0.726	25.9	LOS C	13.6	99.5	0.96	0.87	1.03	31.3
9	R2	1	5.0	1	5.0	0.007	38.9	LOS D	0.0	0.2	0.93	0.59	0.93	22.1
Appro	oach	1149	5.0	1209	5.0	0.726	26.9	LOS C	13.6	99.5	0.95	0.87	1.02	30.9
West	: Birsb	ane Av -	Extensio	on										
10	L2	3	5.0	3	5.0	0.010	16.1	LOS B	0.1	0.6	0.76	0.57	0.76	31.7
11	T1	1	5.0	1	5.0	*0.010	12.9	LOS B	0.1	0.6	0.76	0.57	0.76	32.2
12	R2	1	5.0	1	5.0	0.007	35.9	LOS D	0.0	0.2	0.93	0.58	0.93	21.8
Appro	oach	5	5.0	5	5.0	0.010	19.5	LOS B	0.1	0.6	0.80	0.57	0.80	29.2
All Vehic	les	2722	5.0	2865	5.0	0.825	26.5	LOS C	15.4	112.2	0.90	0.88	1.01	30.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## LANE SUMMARY

#### Site: 101 [State Crc/Brisbane Av- PM - FutureNonDev (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Lane Use	and Per	formar	nce										
	DEM/ FLO [ Total	AND WS HV ]	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE [ Veh	CK OF UE Dist ]	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
South: State	e Circle -	S											
Lane 1	431	5.0	540	0.799	100	29.8	LOS C	15.4	112.2	Full	200	0.0	0.0
Lane 2	431	5.0	540	0.799	100	29.4	LOS C	15.3	111.8	Full	200	0.0	0.0
Lane 3	20	5.0	154	0.130	100	40.5	LOS D	0.7	4.9	Short	95	0.0	NA
Approach	882	5.0		0.799		29.9	LOS C	15.4	112.2				
East: Brisba	ane Aveni	ue											
Lane 1	473	5.0	1002	0.472	100	10.4	LOS B	6.6	48.0	Full	200	0.0	0.0
Lane 2	296	5.0	359	0.825	100	40.9	LOS D	11.2	81.9	Full	200	0.0	0.0
Approach	768	5.0		0.825		22.1	LOS C	11.2	81.9				
North: State	e Circle -	N											
Lane 1	425	5.0	584	0.726	100	27.9	LOS C	13.6	99.5	Full	200	0.0	0.0
Lane 2	392	5.0	540	0.726	100	26.3	LOS C	12.9	94.0	Full	200	0.0	0.0
Lane 3	392	5.0	540	0.726	100	26.3	LOS C	12.9	94.0	Full	200	0.0	0.0
Lane 4	1	5.0	154	0.007	100	38.9	LOS D	0.0	0.2	Short	110	0.0	NA
Approach	1209	5.0		0.726		26.9	LOS C	13.6	99.5				
West: Birsb	ane Av -	Extensio	on										
Lane 1	4	5.0	414	0.010	100	15.3	LOS B	0.1	0.6	Full	200	0.0	0.0
Lane 2	1	5.0	154	0.007	100	35.9	LOS D	0.0	0.2	Short	60	0.0	NA
Approach	5	5.0		0.010		19.5	LOS B	0.1	0.6				
Intersectio n	2865	5.0		0.825		26.5	LOS C	15.4	112.2				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## PHASING SUMMARY

#### Site: 101 [State Crc/Brisbane Av- PM - FutureNonDev (Site Folder: General)]

New Site Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: State Circle Phasing **Reference Phase: Phase A** Input Phase Sequence: A, B, C, D1\*, D2\*, D3\* Output Phase Sequence: A, B, C, D1\* (\* Variable Phase)

#### **Phase Timing Summary**

Phase	Α	В	С	D1
Phase Change Time (sec)	0	26	46	58
Green Time (sec)	20	14	6	6
Phase Time (sec)	26	20	12	12
Phase Split	37 %	29 %	17 %	17 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence**





**REF: Reference Phase** VAR: Variable Phase



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Appendix F: SIDRA Outputs - Future – Post-Development

# SITE LAYOUT

# V Site: 101 [NationalCct/BlackallSt - 2031 - AM - Dev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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### **MOVEMENT SUMMARY**

#### V Site: 101 [NationalCct/BlackallSt - 2031 - AM - Dev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Vehi	cle M	ovemen	t Perfo	rmance										
Mov	Turn	INP			AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop. E	ffective	Aver.	Aver.
UI		VULU [ Total		FLU [ Total	vvS н\/ 1	Sath	Delay	Service	QUI [\/eh	EUE Diet 1	Que	Stop Rate	NO. Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		Trate	Cycles	km/h
Sout	h: Nati	onal Circu	uit - S											
1	L2	302	5.0	318	5.0	0.438	5.8	LOS A	0.7	4.9	0.10	0.24	0.11	45.4
2	T1	421	5.0	443	5.0	0.438	0.2	LOS A	0.7	4.9	0.10	0.24	0.11	49.6
3	R2	43	5.0	45	5.0	0.438	6.9	LOS A	0.7	4.9	0.10	0.24	0.11	44.0
Appr	oach	766	5.0	806	5.0	0.438	2.8	NA	0.7	4.9	0.10	0.24	0.11	47.4
East	Black	all Street	- E											
4	L2	37	5.0	39	5.0	0.205	6.4	LOS A	0.6	4.6	0.51	0.73	0.52	34.3
5	T1	55	5.0	58	5.0	0.205	10.0	LOS A	0.6	4.6	0.51	0.73	0.52	38.0
6	R2	34	5.0	36	5.0	0.205	10.3	LOS A	0.6	4.6	0.51	0.73	0.52	35.5
Appr	oach	126	5.0	133	5.0	0.205	9.0	LOS A	0.6	4.6	0.51	0.73	0.52	36.3
North	n: Natio	onal Circu	uit - N											
7	L2	26	5.0	27	5.0	0.411	10.5	LOS A	3.5	25.7	0.71	0.46	0.99	38.3
8	T1	253	5.0	266	5.0	0.411	4.2	LOS A	3.5	25.7	0.71	0.46	0.99	39.0
9	R2	241	5.0	254	5.0	0.411	10.6	LOS A	3.5	25.7	0.71	0.46	0.99	37.3
Appr	oach	520	5.0	547	5.0	0.411	7.4	NA	3.5	25.7	0.71	0.46	0.99	38.1
West	: Black	all Street	t - W											
10	L2	13	5.0	14	5.0	0.058	6.9	LOS A	0.2	1.2	0.55	0.75	0.55	36.1
11	T1	6	5.0	6	5.0	0.058	8.1	LOS A	0.2	1.2	0.55	0.75	0.55	37.7
12	R2	15	5.0	16	5.0	0.058	11.8	LOS A	0.2	1.2	0.55	0.75	0.55	33.6
Appr	oach	34	5.0	36	5.0	0.058	9.3	LOS A	0.2	1.2	0.55	0.75	0.55	35.3
All Vehic	cles	1446	5.0	1522	5.0	0.438	5.1	NA	3.5	25.7	0.37	0.38	0.47	42.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## LANE SUMMARY

#### V Site: 101 [NationalCct/BlackallSt - 2031 - AM - Dev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Lane Use	and Pei	rformai	nce										
	DEM. FLO	AND WS	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[ Total veh/h	HV ] %	veh/h	v/c	%	sec		[ Veh	Dist] m		m	%	%
South: Natio	onal Circ	uit - S											
Lane 1	806	5.0	1842	0.438	100	2.8	LOS A	0.7	4.9	Full	100	0.0	0.0
Approach	806	5.0		0.438		2.8	NA	0.7	4.9				
East: Black	all Street	- E											
Lane 1	133	5.0	647	0.205	100	9.0	LOS A	0.6	4.6	Full	150	0.0	0.0
Approach	133	5.0		0.205		9.0	LOS A	0.6	4.6				
North: Natio	nal Circu	uit - N											
Lane 1	547	5.0	1332	0.411	100	7.4	LOS A	3.5	25.7	Full	120	0.0	0.0
Approach	547	5.0		0.411		7.4	NA	3.5	25.7				
West: Black	all Stree	t - W											
Lane 1	36	5.0	617	0.058	100	9.3	LOS A	0.2	1.2	Full	150	0.0	0.0
Approach	36	5.0		0.058		9.3	LOS A	0.2	1.2				
Intersectio n	1522	5.0		0.438		5.1	NA	3.5	25.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY**

#### V Site: 101 [NationalCct/BlackallSt - 2031 - PM - Dev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Vehi	cle M	ovemen	t Perfo	rmance										
Mov	Turn	INP	UT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop. E	Effective	Aver.	Aver.
<b>ח</b> ו		VULU [ Total		FLU [ Total	vvS ц\/1	Sath	Delay	Service	QUI [\/oh	EUE Diet 1	Que	Stop Rate	NO. Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		Trate	Cycles	km/h
Sout	h: Nati	onal Circu	uit - S											
1	L2	24	5.0	25	5.0	0.268	6.3	LOS A	0.2	1.5	0.06	0.05	0.06	50.7
2	T1	435	5.0	458	5.0	0.268	0.1	LOS A	0.2	1.5	0.06	0.05	0.06	57.0
3	R2	16	5.0	17	5.0	0.268	7.2	LOS A	0.2	1.5	0.06	0.05	0.06	48.9
Appr	oach	475	5.0	500	5.0	0.268	0.6	NA	0.2	1.5	0.06	0.05	0.06	56.2
East	Black	all Street	- E											
4	L2	3	5.0	3	5.0	0.115	6.8	LOS A	0.3	2.4	0.53	0.78	0.53	36.2
5	T1	61	5.0	64	5.0	0.115	6.8	LOS A	0.3	2.4	0.53	0.78	0.53	40.0
6	R2	17	5.0	18	5.0	0.115	10.2	LOS A	0.3	2.4	0.53	0.78	0.53	37.4
Appr	oach	81	5.0	85	5.0	0.115	7.5	LOS A	0.3	2.4	0.53	0.78	0.53	39.3
North	n: Natio	onal Circu	iit - N											
7	L2	27	5.0	28	5.0	0.238	6.6	LOS A	0.3	1.9	0.09	0.06	0.09	50.6
8	T1	372	5.0	392	5.0	0.238	0.2	LOS A	0.3	1.9	0.09	0.06	0.09	55.9
9	R2	20	5.0	21	5.0	0.238	7.5	LOS A	0.3	1.9	0.09	0.06	0.09	48.9
Appr	oach	419	5.0	441	5.0	0.238	0.9	NA	0.3	1.9	0.09	0.06	0.09	55.0
West	: Black	call Street	- W											
10	L2	159	5.0	167	5.0	0.302	7.5	LOS A	1.3	9.2	0.53	0.77	0.60	37.2
11	T1	10	5.0	11	5.0	0.302	7.5	LOS A	1.3	9.2	0.53	0.77	0.60	38.7
12	R2	92	5.0	97	5.0	0.302	10.4	LOS A	1.3	9.2	0.53	0.77	0.60	34.6
Appr	oach	261	5.0	275	5.0	0.302	8.5	LOS A	1.3	9.2	0.53	0.77	0.60	36.3
All Vehio	cles	1236	5.0	1301	5.0	0.302	2.8	NA	1.3	9.2	0.20	0.26	0.22	48.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## LANE SUMMARY

#### V Site: 101 [NationalCct/BlackallSt - 2031 - PM - Dev (Site Folder: General)]

New Site Site Category: (None) Give-Way (Two-Way)

Lane Use	and Per	rformar	nce										
	DEM. FLO	AND WS	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[ Iotal veh/h	HV J %	veh/h	v/c	%	sec		[ Veh	Dist J m		m	%	%
South: Natio	onal Circ	uit - S											
Lane 1	500	5.0	1868	0.268	100	0.6	LOS A	0.2	1.5	Full	100	0.0	0.0
Approach	500	5.0		0.268		0.6	NA	0.2	1.5				
East: Black	all Street	- E											
Lane 1	85	5.0	743	0.115	100	7.5	LOS A	0.3	2.4	Full	150	0.0	0.0
Approach	85	5.0		0.115		7.5	LOS A	0.3	2.4				
North: Natio	onal Circu	uit - N											
Lane 1	441	5.0	1853	0.238	100	0.9	LOS A	0.3	1.9	Full	120	0.0	0.0
Approach	441	5.0		0.238		0.9	NA	0.3	1.9				
West: Black	all Stree	t - W											
Lane 1	275	5.0	911	0.302	100	8.5	LOS A	1.3	9.2	Full	150	0.0	0.0
Approach	275	5.0		0.302		8.5	LOS A	1.3	9.2				
Intersectio n	1301	5.0		0.302		2.8	NA	1.3	9.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# **NETWORK LAYOUT**

### Network: N101 [BrisbaneAv/NationalCct-AM-FutureDev

(Network Folder: General)]

#### New Network Network Category: (None) EQUISAT (Fixed-Time/SCATS) Isolated Common Control Group: CCG1 [CCGAMFD]

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NE	TWORK	
Site ID	CCG ID	Site Name
101	CCG1	BrisbaneAv/NationalCc-N-2031-AM -Dev
102	CCG1	BrisbaneAv/NationalCc-S-2031-AM - Dev

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### CCG MOVEMENT SUMMARY

### □ Common Control Group: CCG1 [CCGAMFD]

#### Network: N101 [BrisbaneAv/ NationalCct-AM-FutureDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehi	cle Mo	vement	Perfor	mance	e (CC	G)								
Mov ID	Turn [	DEMAND	FLOWS	S ARRI FLO [ Total	VAL WS HV ]	Deg. Satn	Aver. Delay	Level of Service	AVERAG OF QL [ Veh.	E BACK JEUE Dist ]	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed
Sito	101 [Bri	veh/h isbanoAv/	% Nations	veh/h	% 2031		sec	_	veh	m	_	_	_	km/h
Sile.		isballeAv/	Nationa		2031	-Alvi -Devj								
Sout		an												
2	T1	518	5.0	518	5.0	*0.941	28.5	LOSC	4.1	30.0	0.95	1.04	1.28	13.6
3	R2	58	5.0	58	5.0	0.188	10.9	LOS B	0.6	4.6	0.33	0.49	0.33	27.2
Appro	oach	576	5.0	576	5.0	0.941	26.7	LOS C	4.1	30.0	0.89	0.99	1.19	14.5
North	n: Natior	nal Circuit	- N											
7	L2	62	5.0	62	5.0	0.672	36.2	LOS D	4.8	34.7	0.98	0.85	1.06	17.9
8	T1	284	5.0	284	5.0	0.672	31.6	LOS C	4.8	34.7	0.98	0.86	1.09	10.2
Appr	oach	346	5.0	346	5.0	0.672	32.4	LOS C	4.8	34.7	0.98	0.86	1.09	11.8
West	: Brisba	ne Avenu	e - W											
10	L2	278	5.0	278	5.0	0.775	33.4	LOS C	8.4	61.2	0.96	0.91	1.09	22.3
11	T1	323	5.0	323	5.0	0.775	28.9	LOS C	8.4	61.2	0.97	0.93	1.14	27.5
12	R2	106	5.0	106	5.0	0.775	35.2	LOS D	6.7	48.7	0.98	0.94	1.16	22.4
Appr	oach	707	5.0	707	5.0	0.775	31.6	LOS C	8.4	61.2	0.97	0.93	1.12	24.6
All Ve	ehicles	1629	5.0	1629	5.0	0.941	30.1	LOS C	8.4	61.2	0.94	0.93	1.14	19.6
Site:	102 [Bri	isbaneAv/	Nationa	alCc-S-	2031	-AM - Dev]								
Sout	n: Natio	nal Circuit	t S											
1	L2	51	5.0	51	5.0	0.653	32.4	LOS C	3.8	27.9	0.94	0.84	1.02	26.5
2	T1	335	5.0	335	5.0	0.653	26.8	LOS C	4.0	29.0	0.94	0.83	1.02	10.8
Appr	oach	385	5.0	385	5.0	0.653	27.6	LOS C	4.0	29.0	0.94	0.83	1.02	13.9
East:	Brisbar	ne Avenue	εE											
4	L2	68	5.0	68	5.0	0.855	38.8	LOS D	11.0	80.6	1.00	1.04	1.27	16.7
5	T1	397	5.0	397	5.0	0.855	33.2	LOS C	11.0	80.6	1.00	1.04	1.27	26.5
6	R2	241	5.0	241	5.0	<b>*</b> 0.917	56.1	LOS E	7.2	52.9	1.00	1.12	1.71	7.9
Appr	oach	706	5.0	706	5.0	0.917	41.5	LOS D	11.0	80.6	1.00	1.07	1.42	19.0
North	n: Media	in												
8	T1	323	5.0	323	5.0	<b>*</b> 0.936	15.7	LOS B	4.1	30.0	0.77	0.75	0.95	19.5
9	R2	67	5.0	67	5.0	0.936	22.3	LOS C	4.1	30.0	0.95	0.93	1.18	28.6
Appr	oach	391	5.0	391	5.0	0.936	16.8	LOS B	4.1	30.0	0.80	0.78	0.99	22.0
All Ve	ehicles	1482	5.0	1482	5.0	0.936	31.4	LOS C	11.0	80.6	0.93	0.93	1.20	18.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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### CCG LANE SUMMARY

#### □ Common Control Group: CCG1 [CCGAMFD]

#### Network: N101 [BrisbaneAv/ NationalCct-AM-FutureDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (CCG Optimum Cycle Time - Minimum Delay)

Lane Use	and P	erforr	nance	(CCG	)										
	DEM. FLO	AND WS	ARR FLO	IVAL WS	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	AVEF BAC	RAGE K OF	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[ Total	LI\/ 1	[ Total	LI\ / 1						QU LVob					
	veh/h	⊓vj %	veh/h	пvј %	veh/h	v/c	%	sec		[ ven	m		m	%	%
Site: 101 [I	Brisbane	eAv/Na	ationalC	c-N-20	)31-AM	-Dev]									
South: Me	dian														
Lane 1	482	5.0	482	5.0	513	0.941	100	29.9	LOS C	4.1 <sup>N4</sup>	30.0 <sup>N4</sup>	Full	30	0.0	<mark>50.0</mark>
Lane 2	93	5.0	93	5.0	496	0.188	20 <sup>6</sup>	10.2	LOS B	0.6	4.6	Full	30	0.0	0.0
Approach	576	5.0	576	5.0		0.941		26.7	LOS C	4.1	30.0				
North: Nati	onal Cir	cuit - N	N												
Lane 1	229	5.0	229	5.0	340	0.672	100	32.2	LOS C	4.8	34.7	Full	100	0.0	0.0
Lane 2	118	5.0	118	5.0	175	0.672	100	32.9	LOS C	2.6	19.0	Short	60	<mark>-50.0</mark> <sup>N3</sup>	NA
Approach	346	5.0	346	5.0		0.672		32.4	LOS C	4.8	34.7				
West: Brisl	bane Av	enue -	W												
Lane 1	403	5.0	403	5.0	521	0.775	100	31.6	LOS C	8.4	61.2	Full	300	0.0	0.0
Lane 2	304	5.0	304	5.0	393	0.775	100	31.6	LOS C	6.7	48.7	Full	300	<mark>-25.9</mark> <sup>N3</sup>	0.0
Approach	707	5.0	707	5.0		0.775		31.6	LOS C	8.4	61.2				
Intersectio	1629	5.0	1629	5.0		0.941		30.1	LOS C	8.4	61.2				
n															
Site: 102 [I	Brisbane	eAv/Na	ationalC	c-S-20	31-AM	- Dev]									
South: Nat	ional Ci	rcuit S													
Lane 1	188	5.0	188	5.0	289	0.653	100	28.4	LOS C	3.8	27.9	Full	90	<mark>-42.3</mark> <sup>N3</sup>	0.0
Lane 2	197	5.0	197	5.0	302	0.653	100	26.8	LOS C	4.0	29.0	Short	60	<mark>-41.2</mark> <sup>N3</sup>	NA
Approach	385	5.0	385	5.0		0.653		27.6	LOS C	4.0	29.0				
East: Brisb	ane Ave	enue E													
Lane 1	465	5.0	465	5.0	544	0.855	93 <sup>5</sup>	34.0	LOS C	11.0	80.6	Full	130	0.0	<mark>6.0</mark>
Lane 2	241	5.0	241	5.0	263	0.917	100	56.1	LOS E	7.2	52.9	Full	130	<mark>-48.7</mark> <sup>N3</sup>	0.0
Approach	706	5.0	706	5.0		0.917		41.5	LOS D	11.0	80.6				
North: Med	lian														
Lane 1	66	5.0	66	5.0	351	0.187	20 <sup>6</sup>	1.4	LOS A	0.1	0.5	Full	30	0.0	0.0
Lane 2	325	5.0	325	5.0	347	0.936	100	20.0	LOS B	4.1 <sup>N4</sup>	30.0 <sup>N4</sup>	Full	30	0.0	<mark>50.0</mark>
Approach	391	5.0	391	5.0		0.936		16.8	LOS B	4.1	30.0				
Intersectio	1482	5.0	1482	5.0		0.936		31.4	LOS C	11.0	80.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program

6 Lane under-utilisation due to downstream effects

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

N4 Average back of queue has been restricted to the available queue storage space.

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## CCG PHASING SUMMARY

□ Common Control Group: CCG1 [CCGAMFD]

### Network: N101 [BrisbaneAv/ NationalCct-AM-FutureDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (CCG Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Network Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: CCG Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Phase 1	Timina	Summarv	(CCG)
---------	--------	---------	-------

Phase	Α	В	С
Phase Change Time (sec)	0	26	51
Green Time (sec)	20	19	13
Phase Time (sec)	26	25	19
Phase Split	37 %	36 %	27 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence (CCG)**







REF: Reference Phase VAR: Variable Phase



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### CCG MOVEMENT SUMMARY

### □ Common Control Group: CCG1 [CCGPMFD]

#### Network: N101 [BrisbaneAv/ NationalCct-PM-FutureDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (CCG Optimum Cycle Time - Minimum Delay)

Vehicle Movement Performance (CCG)														
Mov ID	Turn [	DEMAND	FLOW	s arri Flo	IVAL WS	/AL Deg. Aver. Level of AVERAGE B/ VS Satn Delay Service OF QUEU		E BACK JEUE	Prop. Que	EffectiveA Stop	ver. No. Cycles	Aver. Speed		
		[ Total	HV ]	[ Total	IHV]				[Veh.	Dist ]		Rate		
Sitor	101 [Dr	ven/n	% /Notions	ven/n	% 2021		sec	_	ven	m	_	_	_	Km/n
Sout														
2	11	308	5.0	308	5.0	* 0.803	7.8	LOSA	3.7	26.9	0.56	0.51	0.62	31.0
3	R2	53	5.0	53	5.0	0.161	5.1	LOSA	0.1	0.7	0.08	0.51	80.0	35.0
Approach		361	5.0	361	5.0	0.803	7.4	LOSA	3.7	26.9	0.49	0.51	0.54	31.6
North: National Circuit - N														
7	L2	121	5.0	121	5.0	0.641	29.0	LOS C	6.5	47.8	0.92	0.80	0.92	20.8
8	T1	413	5.0	413	5.0	0.641	24.3	LOS C	6.5	47.8	0.92	0.81	0.95	12.5
Appr	oach	534	5.0	534	5.0	0.641	25.3	LOS C	6.5	47.8	0.92	0.81	0.95	14.8
West	: Brisba	ne Avenu	e - W											
10	L2	195	5.0	195	5.0	0.808	37.2	LOS D	8.0	58.1	0.99	0.97	1.20	21.3
11	T1	264	5.0	264	5.0	*0.808	32.8	LOS C	8.0	58.1	0.99	0.98	1.24	25.6
12	R2	131	5.0	131	5.0	0.808	40.2	LOS D	5.4	39.6	1.00	1.00	1.31	19.9
Approach		589	5.0	589	5.0	0.808	35.9	LOS D	8.0	58.1	0.99	0.98	1.24	23.0
All Ve	ehicles	1484	5.0	1484	5.0	0.808	25.2	LOS C	8.0	58.1	0.84	0.80	0.96	21.4
Site: 102 [BrisbaneAv/NationalCc-S-2031-PM -Dev]														
South: National Circuit S														
1	L2	74	5.0	74	5.0	0.783	40.5	LOS D	4.5	32.8	1.00	0.96	1.28	22.9
2	T1	314	5.0	314	5.0	0.783	34.9	LOS C	4.5	32.8	1.00	0.96	1.28	8.7
Appr	oach	387	5.0	387	5.0	0.783	36.0	LOS D	4.5	32.8	1.00	0.96	1.28	12.4
East: Brisbane Avenue E														
4	L2	29	5.0	29	5.0	0.466	29.9	LOS C	3.9	28.6	0.89	0.75	0.89	20.2
5	T1	316	5.0	316	5.0	0.466	24.7	LOS C	3.9	28.6	0.90	0.75	0.90	30.6
6	R2	47	5.0	47	5.0	0.466	30.8	LOS C	3.3	24.0	0.90	0.76	0.90	14.7
Appr	oach	393	5.0	393	5.0	0.466	25.8	LOS C	3.9	28.6	0.90	0.75	0.90	28.5
North	n: Media	in												
8	T1	332	5.0	332	5.0	*0.815	9.7	LOS A	4.1	30.0	0.57	0.56	0.61	25.4
9	R2	212	5.0	212	5.0	0.815	15.9	LOS B	4.1	30.0	0.77	0.76	0.82	32.9
Approach		543	5.0	543	5.0	0.815	12.1	LOS B	4.1	30.0	0.65	0.64	0.69	29.6
All Vehicles		1323	5.0	1323	5.0	0.815	23.2	LOS C	4.5	32.8	0.83	0.77	0.93	23.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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### CCG LANE SUMMARY

#### □ Common Control Group: CCG1 [CCGPMFD]

#### Network: N101 [BrisbaneAv/ NationalCct-PM-FutureDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (CCG Optimum Cycle Time - Minimum Delay)

Lane Use and Performance (CCG)															
	DEM. FLO	AND WS	ARR FLO	IVAL WS	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	AVEF BAC QU	RAGE K OF EUE	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[ Total veh/h	HV ] %	[ Total veh/h	HV ] %	veh/h	v/c	%	sec		[ Veh	Dist ] m		m	%	%
Site: 101 [BrisbaneAv/NationalCc-N-2031-PM -Dev]															
South: Med	lian														
Lane 1	303	5.0	303	5.0	378	0.803	100	7.9	LOS A	3.7	26.9	Full	30	0.0	<mark>39.7</mark>
Lane 2	58	5.0	58	5.0	360	0.161	20 <sup>6</sup>	4.8	LOS A	0.1	0.7	Full	30	0.0	0.0
Approach	361	5.0	361	5.0		0.803		7.4	LOS A	3.7	26.9				
North: Natio	onal Cir	cuit - N	N												
Lane 1	352	5.0	352	5.0	549	0.641	100	25.3	LOS C	6.5	47.8	Full	100	0.0	0.0
Lane 2	182	5.0	182	5.0	283	0.641	100	25.4	LOS C	3.6	26.3	Short	60	<mark>-50.0</mark> <sup>N3</sup>	NA
Approach	534	5.0	534	5.0		0.641		25.3	LOS C	6.5	47.8				
West: Brisb	ane Av	enue -	W												
Lane 1	360	5.0	360	5.0	446	0.808	100	34.7	LOS C	8.0	58.1	Full	300	0.0	0.0
Lane 2	229	5.0	229	5.0	284	0.808	100	37.8	LOS D	5.4	39.6	Full	300	<mark>-36.3</mark> <sup>N3</sup>	0.0
Approach	589	5.0	589	5.0		0.808		35.9	LOS D	8.0	58.1				
Intersectio	1484	5.0	1484	5.0		0.808		25.2	LOS C	8.0	58.1				
n															
Site: 102 [E	Brisbane	eAv/Na	tionalC	c-S-20	31-PM	-Dev]									
South: Nati	onal Cir	rcuit S													
Lane 1	194	5.0	194	5.0	247	0.783	100	37.0	LOS D	4.5	32.8	Full	90	<mark>-31.8</mark> <sup>N3</sup>	0.0
Lane 2	194	5.0	194	5.0	247	0.783	100	34.9	LOS C	4.5	32.8	Short	60	-34.5 <sup>N3</sup>	NA
Approach	387	5.0	387	5.0		0.783		36.0	LOS D	4.5	32.8				
East: Brisba	ane Ave	enue E													
Lane 1	216	5.0	216	5.0	463	0.466	100	25.1	LOS C	3.9	28.6	Full	130	0.0	0.0
Lane 2	177	5.0	177	5.0	380	0.466	100	26.8	LOS C	3.3	24.0	Full	130	<mark>-16.1</mark> <sup>N3</sup>	0.0
Approach	393	5.0	393	5.0		0.466		25.8	LOS C	3.9	28.6				
North: Med	ian														
Lane 1	92	5.0	92	5.0	567	0.163	20 <sup>6</sup>	1.2	LOS A	0.1	0.7	Full	30	0.0	0.0
Lane 2	451	5.0	451	5.0	553	0.815	100	14.3	LOS B	4.1 <sup>N4</sup>	30.0 <sup>N4</sup>	Full	30	0.0	<mark>50.0</mark>
Approach	543	5.0	543	5.0		0.815		12.1	LOS B	4.1	30.0				
Intersectio n	1323	5.0	1323	5.0		0.815		23.2	LOS C	4.5	32.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6 Lane under-utilisation due to downstream effects

N3 Capacity Adjustment due to downstream lane blockage determined by the program.

N4 Average back of queue has been restricted to the available queue storage space.

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### CCG PHASING SUMMARY

□ Common Control Group: CCG1 [CCGPMFD]

### Network: N101 [BrisbaneAv/ NationalCct-PM-FutureDev (Network Folder: General)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (CCG Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Network Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: CCG Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Phase 1	Timina	Summarv	(CCG)
---------	--------	---------	-------

Phase	Α	В	С
Phase Change Time (sec)	0	23	43
Green Time (sec)	17	14	21
Phase Time (sec)	23	20	27
Phase Split	33 %	29 %	39 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence (CCG)**







REF: Reference Phase VAR: Variable Phase



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## SITE LAYOUT

# Site: 101 [State Crc/Brisbane Av- AM -FutureDev (Site Folder: General)]

#### New Site Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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### **MOVEMENT SUMMARY**

# Site: 101 [State Crc/Brisbane Av- AM -FutureDev (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehi	Vehicle Movement Performance													
Mov	Turn	INP	UT	DEM	AND	Deg.	Aver.	Level of	95% BA	CK OF	Prop. E	Effective	Aver.	Aver.
U		VOLU [ Total		FLU [ Total	vvS ы\/ 1	Sath	Delay	Service		EUE Diet 1	Que	Stop	NO.	Speed
		veh/h	пvј %	veh/h	пvј %	v/c	sec		ven.	m Dist j		Rale	Cycles	km/h
Sout	h: Stat	e Circle -	S											
1	L2	3	5.0	3	5.0	0.622	29.0	LOS C	14.1	103.2	0.87	0.76	0.87	29.9
2	T1	834	5.0	878	5.0	0.622	22.3	LOS C	14.2	103.3	0.87	0.76	0.87	34.3
3	R2	139	5.0	146	5.0	*0.725	47.5	LOS D	6.1	44.3	1.00	0.87	1.18	20.7
Appr	oach	976	5.0	1027	5.0	0.725	25.9	LOS C	14.2	103.3	0.89	0.78	0.91	31.4
East	Brisba	ane Aveni	ue											
4	L2	251	5.0	264	5.0	0.298	11.4	LOS B	4.1	29.7	0.51	0.70	0.51	40.7
5	T1	6	5.0	6	5.0	<b>*</b> 0.759	42.8	LOS D	7.8	56.8	1.00	0.90	1.20	19.7
6	R2	172	5.0	181	5.0	0.759	45.8	LOS D	7.8	56.8	1.00	0.90	1.20	21.1
Appr	oach	429	5.0	452	5.0	0.759	25.6	LOS C	7.8	56.8	0.71	0.79	0.79	29.4
North	n: State	e Circle - I	N											
7	L2	760	5.0	800	5.0	0.769	17.2	LOS B	22.9	166.9	0.73	0.82	0.74	37.6
8	T1	1092	5.0	1149	5.0	<b>*</b> 0.769	25.2	LOS C	22.9	166.9	0.93	0.87	0.99	32.0
9	R2	5	5.0	5	5.0	0.026	41.4	LOS D	0.2	1.4	0.91	0.65	0.91	21.3
Appr	oach	1857	5.0	1955	5.0	0.769	21.9	LOS C	22.9	166.9	0.85	0.85	0.89	34.1
West	: Birsb	ane Av - I	Extensio	on										
10	L2	3	5.0	3	5.0	0.019	19.6	LOS B	0.1	0.8	0.85	0.60	0.85	29.8
11	T1	2	5.0	2	5.0	*0.019	16.4	LOS B	0.1	0.8	0.85	0.60	0.85	30.3
12	R2	3	5.0	3	5.0	0.023	41.9	LOS D	0.1	0.9	0.95	0.62	0.95	20.0
Appr	oach	8	5.0	8	5.0	0.023	27.2	LOS C	0.1	0.9	0.89	0.60	0.89	25.3
All Vehic	cles	3270	5.0	3442	5.0	0.769	23.6	LOS C	22.9	166.9	0.84	0.82	0.88	32.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## LANE SUMMARY

# Site: 101 [State Crc/Brisbane Av- AM -FutureDev (Site Folder: General)]

New Site Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Lane Use	Lane Use and Performance													
	DEM.		Cap	Deg. Sata	Lane	Aver.	Level of	95% BA		Lane	Lane	Cap.	Prob.	
	[ Total	HV 1	ocp.	Saur	Oui.	Delay	Service	[ Veh	Dist ]	Coning	Lengin	Auj.	DIUCK.	
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%	
South: State	e Circle -	S												
Lane 1	441	5.0	708	0.622	100	22.4	LOS C	14.1	103.2	Full	200	0.0	0.0	
Lane 2	441	5.0	708	0.622	100	22.2	LOS C	14.2	103.3	Full	200	0.0	0.0	
Lane 3	146	5.0	202	0.725	100	47.5	LOS D	6.1	44.3	Short	95	0.0	NA	
Approach	1027	5.0		0.725		25.9	LOS C	14.2	103.3					
East: Brisba	ane Aven	ue												
Lane 1	264	5.0	885	0.298	100	11.4	LOS B	4.1	29.7	Full	200	0.0	0.0	
Lane 2	187	5.0	247	0.759	100	45.7	LOS D	7.8	56.8	Full	200	0.0	0.0	
Approach	452	5.0		0.759		25.6	LOS C	7.8	56.8					
North: State	e Circle -	N												
Lane 1	860	5.0	1118	0.769	100	16.7	LOS B	22.9	166.9	Full	200	0.0	0.0	
Lane 2	545	5.0	708	0.769	100	26.0	LOS C	19.9	145.1	Full	200	0.0	0.0	
Lane 3	545	5.0	708	0.769	100	26.0	LOS C	19.9	145.1	Full	200	0.0	0.0	
Lane 4	5	5.0	202	0.026	100	41.4	LOS D	0.2	1.4	Short	110	0.0	NA	
Approach	1955	5.0		0.769		21.9	LOS C	22.9	166.9					
West: Birsb	ane Av -	Extensio	on											
Lane 1	5	5.0	270	0.019	100	18.4	LOS B	0.1	0.8	Full	200	0.0	0.0	
Lane 2	3	5.0	134	0.023	100	41.9	LOS D	0.1	0.9	Short	60	0.0	NA	
Approach	8	5.0		0.023		27.2	LOS C	0.1	0.9					
Intersectio n	3442	5.0		0.769		23.6	LOS C	22.9	166.9					

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## PHASING SUMMARY

# Site: 101 [State Crc/Brisbane Av- AM -FutureDev (Site Folder: General)]

New Site Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: State Circle Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C, D1\*, D2\*, D3\* Output Phase Sequence: A, B, C, D1\* (\* Variable Phase)

#### **Phase Timing Summary**

Phase	Α	В	С	D1
Phase Change Time (sec)	0	36	53	65
Green Time (sec)	30	11	6	9
Phase Time (sec)	36	17	12	15
Phase Split	45 %	21 %	15 %	19 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence**



REF: Reference Phase VAR: Variable Phase



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### **MOVEMENT SUMMARY**

# Site: 101 [State Crc/Brisbane Av- PM - Future (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehi	Vehicle Movement Performance													
Mov	Turn	INP	UT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	MES	FLO	WS	Satn	Delay	Service	QUE		Que	Stop	No.	Speed
		[ Iotai veh/h	HV J %	[ Iotai veh/h	HV J %	v/c	sec		Į ven. veh	Dist J m		Rate	Cycles	km/h
South: State Circle - S														
1	L2	1	5.0	1	5.0	0.799	36.4	LOS D	15.4	112.2	0.99	0.95	1.15	26.0
2	T1	818	5.0	861	5.0	*0.799	29.6	LOS C	15.4	112.2	0.99	0.94	1.15	29.4
3	R2	19	5.0	20	5.0	*0.130	40.5	LOS D	0.7	4.9	0.95	0.70	0.95	22.9
Appro	oach	838	5.0	882	5.0	0.799	29.9	LOS C	15.4	112.2	0.99	0.94	1.15	29.2
East:	Brisba	ane Aveni	ue											
4	L2	498	5.0	524	5.0	0.523	10.6	LOS B	7.7	56.2	0.58	0.74	0.58	41.6
5	T1	1	5.0	1	5.0	*0.825	37.9	LOS D	11.2	81.9	1.00	0.97	1.28	21.0
6	R2	280	5.0	295	5.0	0.825	40.9	LOS D	11.2	81.9	1.00	0.97	1.28	22.6
Appro	oach	779	5.0	820	5.0	0.825	21.6	LOS C	11.2	81.9	0.73	0.82	0.84	31.9
North	: State	e Circle -	N											
7	L2	222	5.0	234	5.0	0.729	31.0	LOS C	13.7	100.3	0.94	0.87	1.01	29.3
8	T1	931	5.0	980	5.0	0.729	26.0	LOS C	13.7	100.3	0.96	0.87	1.03	31.2
9	R2	1	5.0	1	5.0	0.007	38.9	LOS D	0.0	0.2	0.93	0.59	0.93	22.1
Appro	oach	1154	5.0	1215	5.0	0.729	27.0	LOS C	13.7	100.3	0.95	0.87	1.03	30.8
West	: Birsb	ane Av - I	Extensic	n										
10	L2	3	5.0	3	5.0	0.010	16.1	LOS B	0.1	0.6	0.76	0.57	0.76	31.7
11	T1	1	5.0	1	5.0	*0.010	12.9	LOS B	0.1	0.6	0.76	0.57	0.76	32.2
12	R2	1	5.0	1	5.0	0.007	35.9	LOS D	0.0	0.2	0.93	0.58	0.93	21.8
Appro	oach	5	5.0	5	5.0	0.010	19.5	LOS B	0.1	0.6	0.80	0.57	0.80	29.2
All Vehic	les	2776	5.0	2922	5.0	0.825	26.3	LOS C	15.4	112.2	0.90	0.88	1.01	30.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

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## LANE SUMMARY

#### Site: 101 [State Crc/Brisbane Av- PM - Future (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Lane Use	Lane Use and Performance													
	DEM/ FLO [ Total	AND WS HV ]	Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BA QUE [ Veh	CK OF UE Dist ]	Lane Config	Lane Length	Cap. Adj.	Prob. Block.	
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%	
South: State	e Circle -	S												
Lane 1	431	5.0	540	0.799	100	29.8	LOS C	15.4	112.2	Full	200	0.0	0.0	
Lane 2	431	5.0	540	0.799	100	29.4	LOS C	15.3	111.8	Full	200	0.0	0.0	
Lane 3	20	5.0	154	0.130	100	40.5	LOS D	0.7	4.9	Short	95	0.0	NA	
Approach	882	5.0		0.799		29.9	LOS C	15.4	112.2					
East: Brisba	ane Aveni	ue												
Lane 1	524	5.0	1002	0.523	100	10.6	LOS B	7.7	56.2	Full	200	0.0	0.0	
Lane 2	296	5.0	359	0.825	100	40.9	LOS D	11.2	81.9	Full	200	0.0	0.0	
Approach	820	5.0		0.825		21.6	LOS C	11.2	81.9					
North: State	e Circle -	N												
Lane 1	427	5.0	586	0.729	100	28.0	LOS C	13.7	100.3	Full	200	0.0	0.0	
Lane 2	393	5.0	540	0.729	100	26.4	LOS C	12.9	94.5	Full	200	0.0	0.0	
Lane 3	393	5.0	540	0.729	100	26.4	LOS C	12.9	94.5	Full	200	0.0	0.0	
Lane 4	1	5.0	154	0.007	100	38.9	LOS D	0.0	0.2	Short	110	0.0	NA	
Approach	1215	5.0		0.729		27.0	LOS C	13.7	100.3					
West: Birsb	ane Av -	Extensio	on											
Lane 1	4	5.0	414	0.010	100	15.3	LOS B	0.1	0.6	Full	200	0.0	0.0	
Lane 2	1	5.0	154	0.007	100	35.9	LOS D	0.0	0.2	Short	60	0.0	NA	
Approach	5	5.0		0.010		19.5	LOS B	0.1	0.6					
Intersectio n	2922	5.0		0.825		26.3	LOS C	15.4	112.2					

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## **PHASING SUMMARY**

# Site: 101 [State Crc/Brisbane Av- PM - Future (Site Folder: General)]

New Site Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Practical Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: State Circle Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C, D1\*, D2\*, D3\* Output Phase Sequence: A, B, C, D1\* (\* Variable Phase)

#### **Phase Timing Summary**

Phase	Α	В	С	D1
Phase Change Time (sec)	0	26	46	58
Green Time (sec)	20	14	6	6
Phase Time (sec)	26	20	12	12
Phase Split	37 %	29 %	17 %	17 %

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### **Output Phase Sequence**





REF: Reference Phase VAR: Variable Phase



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