



Reference: 16.199r08v03

traffix
traffic & transport planners

03 August 2017

Suite 2.08
50 Holt Street
Surry Hills NSW 2010
PO Box 1124
Strawberry Hills NSW 2012
t: +61 2 8324 8700
f: +61 2 9380 4481
w: www.traffix.com.au
director Graham Pindar
acn: 065132961
abn: 66065132961

JQZ
18 Parramatta Road
Homebush NSW 2140

Attention: Mr Jeremy Hung,

Re: 152 –200 and 206 Rocky Point Road, Kogarah - Traffic Statement in Response to Bayside Council's Request for Information DA-2017/224 dated 14th June 2017

Dear Jeremy,

We refer to the abovementioned proposed development and confirm that we have reviewed all relevant information provided to us including *Bayside Council's* letter dated 14th June 2017.

TRAFFIX has taken Council's advice into consideration with the intention of satisfying all requirements of the Council's DCP and other relevant authority's requirements including *Roads and Maritime Services Modelling Guideline*. In this regard, additional traffic modelling has been undertaken according to requirement 10(d) of Council Letter which states:

One-way movement for part of Production Lane

Consideration to be given to making the section of Production Lane between the main basement access and the intersection with Production Avenue into a one-way road in a north-bound direction.

This section of laneway is of a non-compliant width to permit two-way movement and, more importantly, the one-way movement would prevent cars and service vehicles using Production Avenue (including additional vehicles associated with future commercial uses in the B6 zone) from passing through the residential area and new road to exit the locality.

Traffic modelling is required to demonstrate that this proposal will not result in adverse impacts to traffic flow within the surrounding road network.

Additional modelling was required to assess the practicality of Council's suggested change on Production Lane, including an assessment of any possible impact on the functionality of the local road network. *SIDRA intersection 7.0 network* has been utilised to assess both existing and the proposed scenarios (i.e. application of one-way condition on Production Lane).

This matter is discussed further below.



1. TRIP GENERATION

The number of trips generated by the proposed development is presented in **Table 1**. It is understood that this remains unchanged following the applicant's response to additional information.

Table 1: Traffic Generation of Proposed Development

Land Use	No. unit / Area (GLFA) / Child	Block Location	Trip Rate (vehicle per hour)	Trip Generation				
				Total	in	out		
<i>Childcare Centre</i>								
AM Peak	65 children	-	0.8 per child	52	26	26		
PM Peak			0.7 per child	46	23	23		
<i>Residential Flat Building (units)</i>								
AM peak	513	B, C, D, E, BC, CD, DE	0.3 per unit	154	31	123		
PM peak			0.3 per unit	154	123	31		
<i>Townhouse</i>								
AM peak	20	-	1 per dwelling	20	4	16		
PM peak			1 per dwelling	20	16	4		
<i>Commercial (m²)</i>								
AM peak	(20,000 m ²) ²	B6 land	1.6 per 100m ² GLFA	320	256	64		
PM peak			1.2 per 100m ² GLFA	240	48	192		
<i>Totals</i>			AM	546	317	229		
<i>Totals</i>			PM	459	210	250		

¹To maintain a conservative assessment TRAFFIX have adopted a Trip Generation Rate of 0.3 for both the AM and PM peak periods for the residential component of the proposed development.

² This is based on the maximum permissible GFA of land in the B6 zone.

2. TRIP DISTRIBUTION

The one-way movement for that part of Production Lane will result in a change in the anticipated trip distribution figures and percentages. A summary of the changes in trip routes are as follows:

- ➊ *Residential component* - Southbound traffic movements on Rocky Point Road that are to access the residential parking area on Production Lane will access the site via Rocky Point Road / Weeney Street / New Access Road intersection (left-turn movement on north approach).
- ➋ *Commercial component* - Southbound traffic movements generated by the commercial component are required to exit the site onto Production Avenue only, which is one-way in an eastbound direction. The only way for commercial traffic to access Rocky Point Road (southbound) when exiting the commercial development is to utilise the Phillips Road / Rocky Point Road intersection.

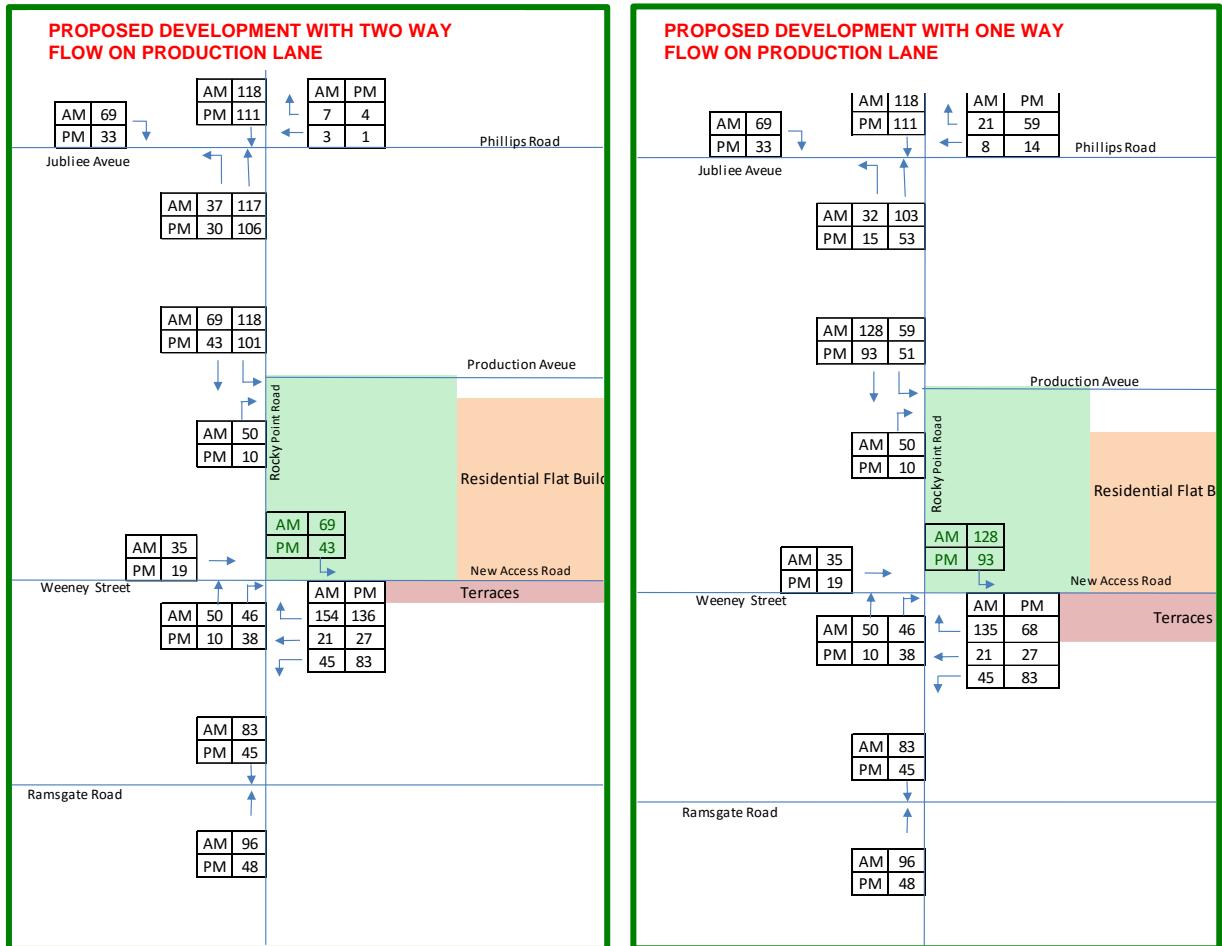
Westbound traffic movements generated by the commercial component are required to exit the site onto Production Avenue only, which is one-way in an eastbound direction. The only way for commercial traffic to access the western suburbs is via the intersection of Phillips Road / Jubilee Avenue / Rocky Point Road by driving through the intersection from Phillips Road towards Jubilee Avenue (west approach).



④ *Childcare centre component – access to the childcare centre will be limited to Rocky Point Road / Weeney Street / New Access Road intersection.*

The trip distribution figures presented in **Figure 1**, below:

Figure 1: Traffic Distribution Diagram of Proposed Development



3. TRAFFIC MODELLING CONSIDERATIONS

Rocky Point Road is an RMS State road (MR 199) and in order to establish a genuine model with appropriate time phases, traffic movements on Rocky Point Road have been defined as the main route (northbound trend for AM peak and southbound trend for PM period).

Furthermore, since the last submission, TRAFFIX has redistributed the traffic; it has been assumed previously that the majority of traffic would access the site via the proposed intersection to provide a conservative assessment. However, it is noted during the last DA meeting with Council that the proposed section of commercial GFA to the north of the proposed new road may require the main car park access to be located on Production Avenue. This proposal will result in rerouting the commercial access from Rocky Point Road / Weeney Street / New Proposed Road intersection to the Rocky Point Road / Production Avenue intersection. Therefore, it can be seen in **Figure 1** that 50 vehicle trips per hour during the AM peak and 10 vehicle trips per hour during the PM peak of the



northbound movement intending to enter the site on Rocky Point Road can only use Production Avenue to access the site. This assumption has been modified in the traffic distribution diagram and traffic model has been updated to represent this change.

4. TRAFFIC MODELLING RESULTS

On the above basis, the “one-way scenario under *requirement 10(d)*.” has been created in SIDRA modelling and for comparative purposes a summary of results for both the existing and new one-way scenario are provided in **Table 2** below with all SIDRA outputs in **Attachment 1**.

Table 2: Surrounding Intersection Performance for Existing Situation and One-way Scenario

Intersection Description	Control Type	Model	Period	Degree of Saturation	Intersection Delay	Level of Service
Rocky Point Road / Phillips Road (Paired in the SIDRA Network Model)	Signals	Two-Way Scenario	AM	0.392	4.4	LOS A
			PM	0.703	12.4	LOS A
		One-way Scenario	AM	0.458	5.0	LOS A
			PM	0.723	14.9	LOS B
Rocky Point Road / Jubilee Avenue (Paired in the SIDRA Network Model)	Signals	Two-Way Scenario	AM	1.104	29.6	LOS C
			PM	0.692	9.9	LOS A
		One-way Scenario	AM	1.104	29.6	LOS C
			PM	0.719	10.2	LOS A
Rocky Point Road / Production Avenue	T-intersection	Two-Way Scenario	AM	0.588	19.4	LOS B
			PM	0.501	41.5	LOS C
		One-way Scenario	AM	0.549	18.5	LOS B
			PM	0.470	39.7	LOS C
Rocky Point Road / Weeney Street / (proposed new road)	Signals	Two-Way Scenario	AM	0.885	17.7	LOS B
			PM	0.919	12.7	LOS A
		One-way Scenario	AM	0.898	14.1	LOS A
			PM	0.695	8.6	LOS A
Rocky Point Road / Ramsgate Road	Signals	Two-Way Scenario	AM	1.030	37.8	LOS C
			PM	0.958	39.7	LOS C
		One-way Scenario	AM	1.030	38.0	LOS C
			PM	0.958	39.7	LOS C

As presented in **Table 2**, it is evident that all intersections operate with the same LoS with an exception for Rocky Point Road / Phillips Road intersection under the one-way scenario during the PM peak period which has dropped from LoS A to LoS B.

Notwithstanding, the following results have been extracted from the lane movement summary, which are of greater significance.



5. TRAFFIC IMPACTS

It is noted that Councils one-way suggestion will restrict all traffic using Production Avenue to use the proposed new intersection. This means that any traffic movement on Production Avenue needing to exit to the north will only be able to do so via Phillips Road. Consideration should also be given to the fact that the traffic model only takes into account the traffic impacts of existing traffic movements and the development yield increase. However, if the one-way scenario is implemented, all existing and future traffic from Production Avenue will be directed away from the new intersection, meaning that it will not be operating efficiently due to the lower traffic volumes passing through.

Rocky Point Road / Jubilee Avenue / Phillips Road intersection under the Common Control Signal Group

- Queue lengths during the AM peak period for the through movements at the southern approach on Rocky Point Road increased from 130.4m to 197.5m under the proposed one-way scenario. This caused an increase in the probability of blockage from 11.7% to 50% which results in the adverse impact on the functionality of Rocky Point Road (northbound). The main reason for this blockage is an increase in the traffic movements on Phillips Road. In addition, the total length of the southern approach of this intersection (from its intersection with Production Avenue) is 121m and the envisaged queue length will result in queuing in the downstream intersections.
- Queue lengths during the PM peak period for the through movements at the eastern leg on Phillips Road increased from 19.6m to 44.4m under the proposed one-way scenario.
- Queue lengths during the PM peak period at the northern approach on Rocky Point Road increased for the through movements from 165.7m to 180.2m.

Rocky Point Road / Production Avenue intersection

- As expected during the AM peak period, traffic accessing the B6 zone will be restricted to use the northern intersection of Rocky Point Road / Jubilee Avenue / Phillips Road only. This resulted in an adverse impact in the performance of Phillips Road in terms of increased delays and queuing. This also has an impact the queuing on other approaches to the intersection. The queue will extend northbound on Rocky point Road to the next intersection and will have an adverse impact on its operation.

On the above basis, whilst the proposed one-way scenario will have an acceptable impact on the surrounding road network, with all intersections operating at a Level of Service C or above according to the RMS Guidelines. However, there will be localised negative impacts on Rocky Point Road in the form of additional queuing and intersection delay as demonstrated in the SIDRA intersection analysis.

5. CONCLUSION

In summary:

- Council's proposed one-way traffic flow on Production Lane has been modelled and assessed according to *requirement 10(d)* of the *Bayside Council's letter dated 14th June 2017*.
- *SIDRA INTERSECTION 7.0 NETWORK* has been utilised to assess the impact of this change on the local traffic network. Traffic generation created by the proposed development will not change under this scenario, however the traffic will be redistributed under the new one-way scenario across the network to reflect this change.



- ④ SIDRA modelling demonstrates that under the new one-way scenario all intersections are functioning satisfactorily under the minimum RMS Guidelines' requirements, with Level of Service C or above. However, this change will create an adverse impact on the performance of northbound movement on Rocky Point during the AM peak period, and will also have some localised adverse impacts on the functionality of Phillips Road during the PM peak period.

On the above basis, TRAFFIX consider that the alternate arrangement will result in adverse impacts on the surrounding network. Thank you for referring this matter for our consideration and, in the meantime, please contact us should you have any queries.

Yours faithfully,

traffix



Martin Mallia
Executive Engineer

Attachments: 1) SIDRA Outputs



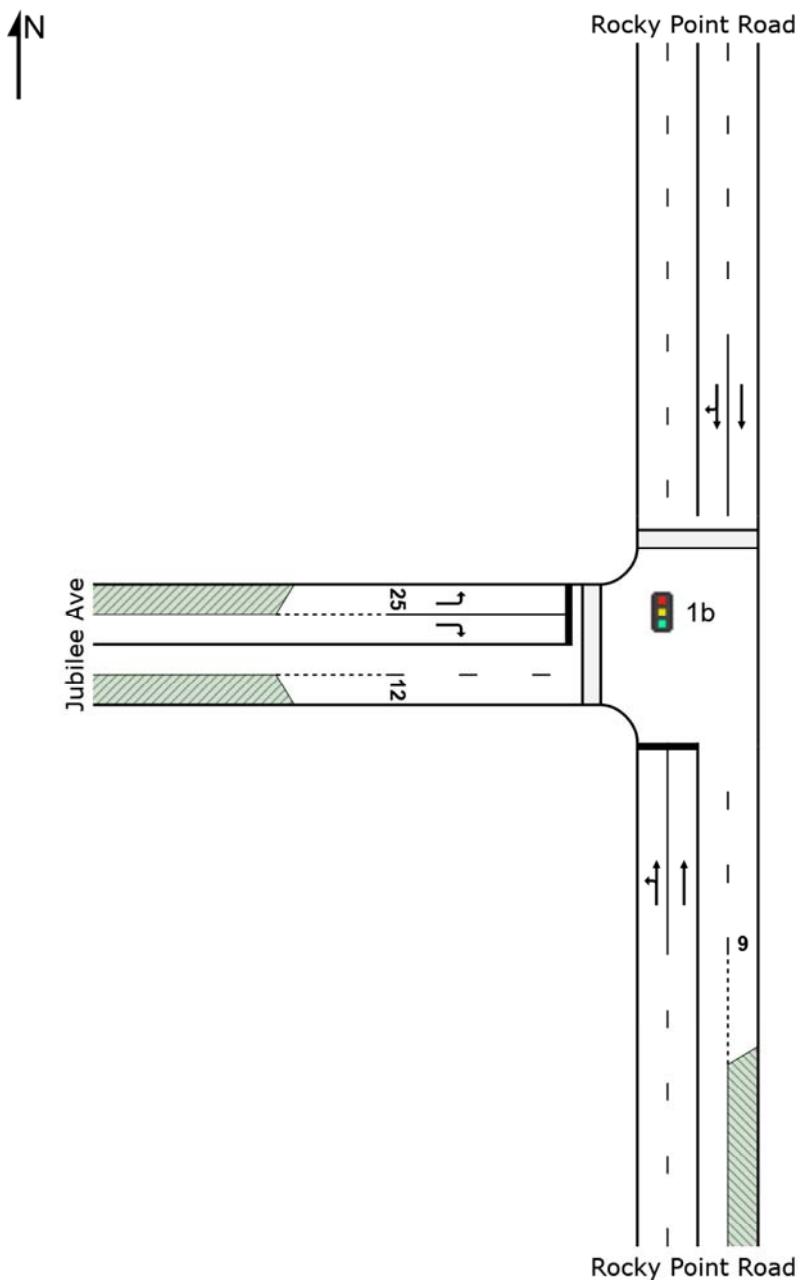
Attachment 1

SIDRA Results

SITE LAYOUT

 Site: 1b [AM FU - Rocky Point Rd x Jubilee Ave - One way]

Residential DA + Approved Commercial + Childcare
Signalised Intersection: Rocky Point Rd x Jubilee Ave
Period: AM
Signals - Fixed Time Isolated



MOVEMENT SUMMARY

Site: 1b [AM FU - Rocky Point Rd x Jubilee Ave - One way]

Network: N101 [AM FU - Residential DA+Childcare +Commercial - One way Scenario]

Residential DA + Approved Commercial + Childcare

Signalised Intersection: Rocky Point Rd x Jubilee Ave

Period: AM

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Common Control Group: CCG1 [Intersection of Rocky Point Road x Jubilee Ave X Phillips Road]

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average Delay v/c	Level of Service sec	95% Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road													
1	L2	238	0.4	238	0.4	0.898	20.9	LOS B	27.7	197.5	0.49	0.61	32.0
2	T1	1484	2.9	1484	2.9	0.898	22.3	LOS B	27.7	197.5	0.70	0.76	15.9
Approach		1722	2.6	1722	2.6	0.898	22.1	LOS B	27.7	197.5	0.67	0.74	18.6
North: Rocky Point Road													
8	T1	626	8.7	626	8.7	0.315	0.0	LOS A	0.0	0.0	0.00	0.05	51.6
9	R2	69	4.5	69	4.5	0.315	2.1	LOS A	0.0	0.0	0.00	0.06	50.8
Approach		696	8.3	696	8.3	0.315	0.2	LOS A	0.0	0.0	0.00	0.05	51.1
West: Jubilee Ave													
10	L2	106	2.0	106	2.0	0.498	60.9	LOS E	6.0	43.0	0.98	0.79	11.2
12	R2	206	2.0	206	2.0	1.104	175.8	LOS F	22.9	163.4	1.00	1.32	4.3
Approach		313	2.0	313	2.0	1.104	136.7	LOS F	22.9	163.4	0.99	1.14	5.4
All Vehicles		2731	4.0	2731	4.0	1.104	29.6	LOS C	27.7	197.5	0.54	0.61	13.3

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 14.3 %

Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P3	North Full Crossing	21	54.2	LOS E	0.1	0.1	0.95	0.95	
P4	West Full Crossing	53	10.0	LOS B	0.1	0.1	0.41	0.41	
All Pedestrians		74	22.6	LOS C			0.56	0.56	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

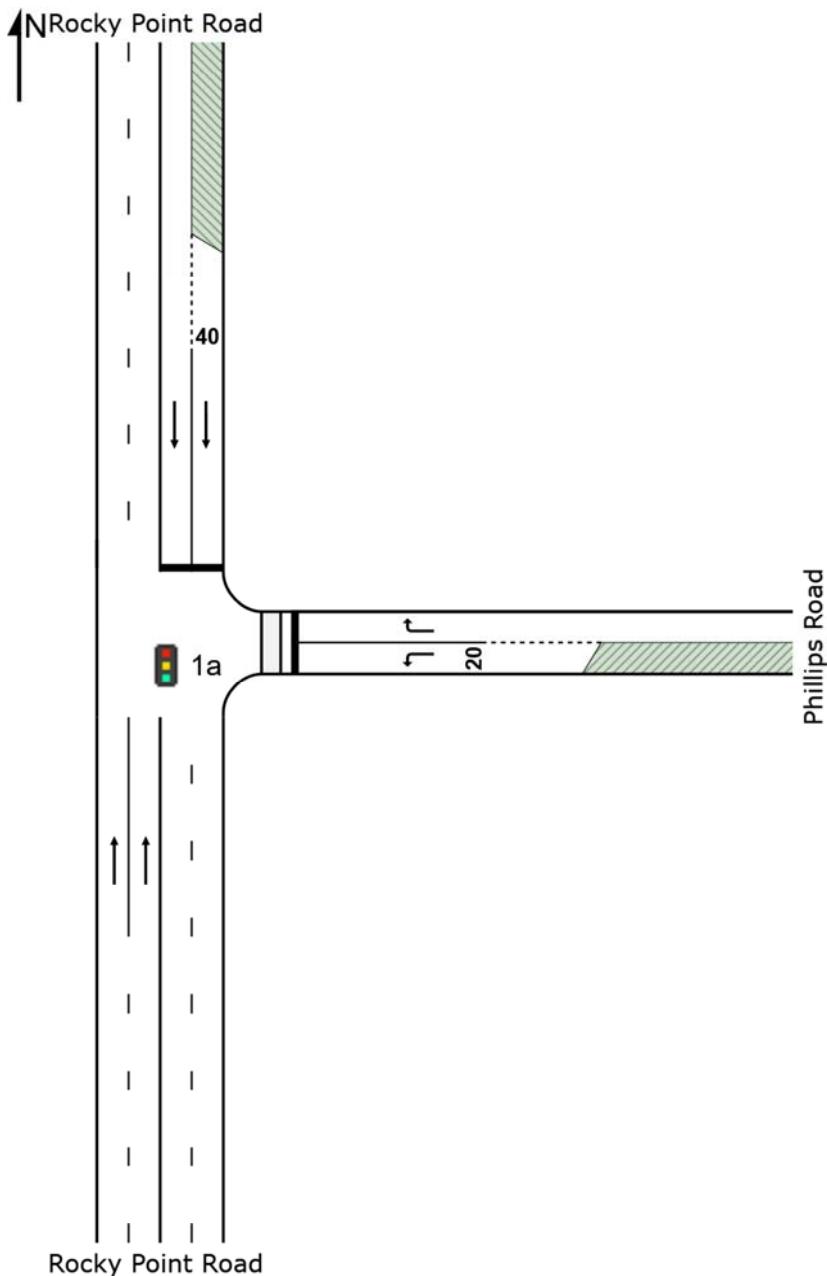
Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

Site: 1a [AM FU - Rocky Point Rd x Phillips Rd - One way]

Residential DA + Approved Commercial + Childcare
Signalised Intersection: Rocky Point Rd x Phillips Rd
Period: AM
Signals - Fixed Time Isolated



MOVEMENT SUMMARY

Site: 1a [AM FU - Rocky Point Rd x Phillips Rd - One way]

Network: N101 [AM FU - Residential DA+Childcare +Commercial - One way Scenario]

Residential DA + Approved Commercial + Childcare

Signalised Intersection: Rocky Point Rd x Phillips Rd

Period: AM

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Common Control Group: CCG1 [Intersection of Rocky Point Road x Jubilee Ave X Phillips Road]

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average Delay v/c	Level of Service sec	95% Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road													
2	T1	1484	2.9	1484	2.9	0.388	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1484	2.9	1484	2.9	0.388	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
East: Phillips Road													
4	L2	36	8.8	36	8.8	0.410	69.7	LOS E	2.2	16.5	1.00	0.73	12.2
6	R2	41	5.1	41	5.1	0.458	69.7	LOS E	2.5	18.4	1.00	0.73	24.4
Approach		77	6.8	77	6.8	0.458	69.7	LOS E	2.5	18.4	1.00	0.73	19.7
North: Rocky Point Road													
8	T1	747	7.0	747	7.0	0.297	8.3	LOS A	8.7	64.6	0.44	0.38	47.8
Approach		747	7.0	747	7.0	0.297	8.3	LOS A	8.7	64.6	0.44	0.38	47.8
All Vehicles		2308	4.4	2308	4.4	0.458	5.0	LOS A	8.7	64.6	0.17	0.15	52.0

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 14.3 %

Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P2	East Full Crossing	53	8.1	LOS A	0.1	0.1	0.37	0.37	
All Pedestrians		53	8.1	LOS A			0.37	0.37	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

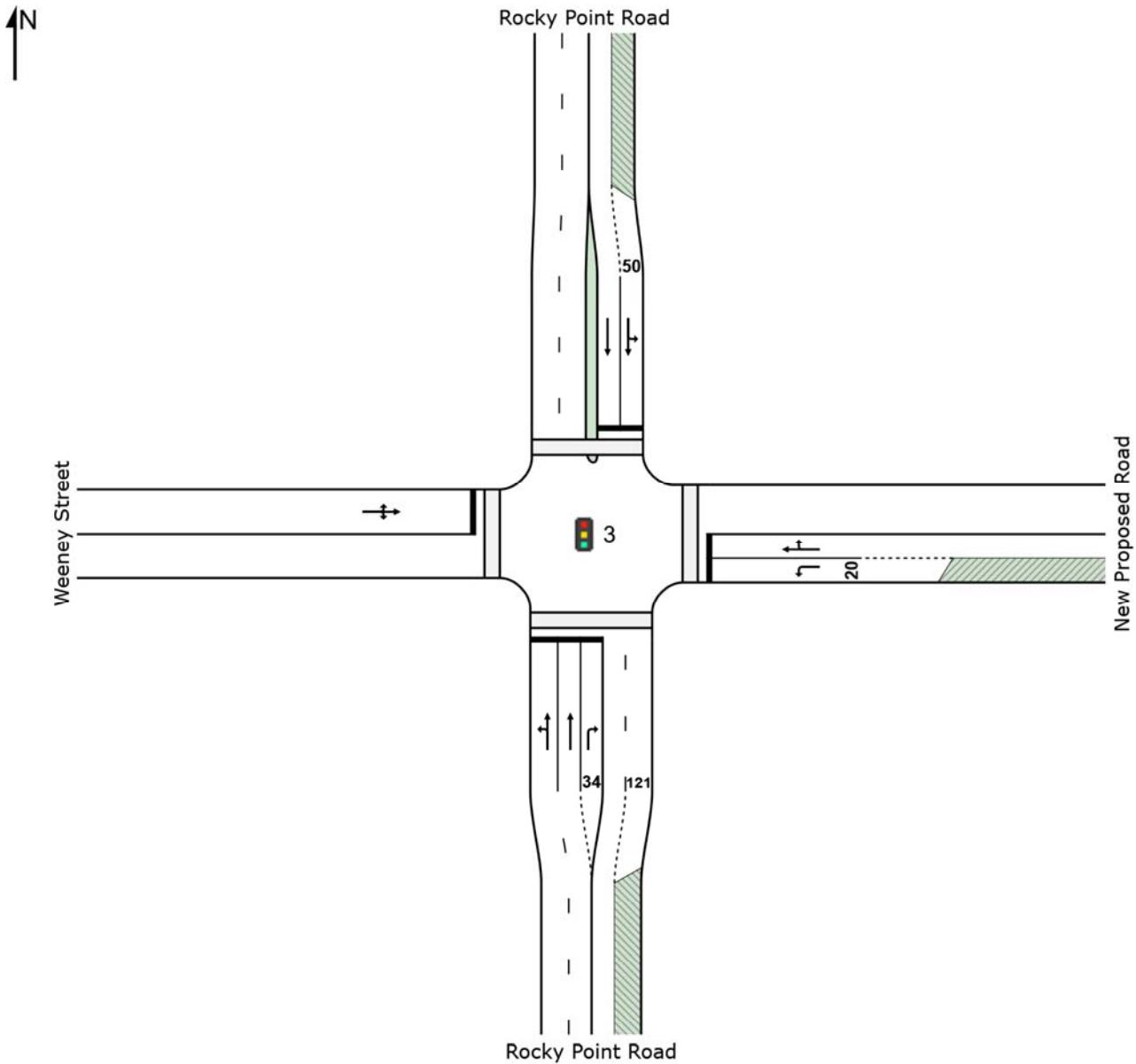
Site: 3 [AM FU - Rocky Point Rd x Weeney St x New Proposed Road- One way]

Residential DA + Approved Commercial + Childcare

Intersection: Rocky Point Rd x Weeney St x New Proposed Road

Period: AM

Signals - Fixed Time Isolated



MOVEMENT SUMMARY

Site: 3 [AM FU - Rocky Point Rd x Weeney St x New Proposed Road- One way]

Network: N101 [AM FU - Residential DA+Childcare +Commercial - One way Scenario]

Residential DA + Approved Commercial + Childcare

Intersection: Rocky Point Rd x Weeney St x New Proposed Road

Period: AM

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles														
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average v/c	Delay sec	Level of Service	95% Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road														
1	L2	57	5.6	57	5.6	0.788	11.1	LOS A	22.6	161.9	0.41	0.40	49.7	
2	T1	1665	2.7	1665	2.7	0.788	5.2	LOS A	22.6	161.9	0.37	0.36	51.5	
3	R2	48	0.0	48	0.0	0.533	72.2	LOS F	3.0	21.2	1.00	0.74	22.6	
Approach		1771	2.7	1771	2.7	0.788	7.2	LOS A	22.6	161.9	0.39	0.37	49.1	
East: New Proposed Road														
4	L2	47	0.0	47	0.0	0.083	35.9	LOS C	1.9	13.6	0.74	0.70	15.6	
5	T1	22	0.0	22	0.0	0.898	71.8	LOS F	11.7	81.9	1.00	1.09	12.0	
6	R2	142	0.0	142	0.0	0.898	76.3	LOS F	11.7	81.9	1.00	1.09	8.9	
Approach		212	0.0	212	0.0	0.898	66.8	LOS E	11.7	81.9	0.94	1.00	10.2	
North: Rocky Point Road														
7	L2	135	0.0	130	0.0	0.321	17.7	LOS B	8.1	59.2	0.44	0.51	32.7	
8	T1	703	8.1	692	8.2	0.487	12.7	LOS A	12.7	95.1	0.48	0.46	23.3	
Approach		838	6.8	822 ^{N1}	6.9	0.487	13.5	LOS A	12.7	95.1	0.47	0.47	25.6	
West: Weeney Street														
10	L2	13	0.0	13	0.0	0.135	46.3	LOS D	2.5	17.6	0.85	0.67	8.6	
11	T1	37	0.0	37	0.0	0.135	41.7	LOS C	2.5	17.6	0.85	0.67	17.9	
12	R2	3	0.0	3	0.0	0.135	46.2	LOS D	2.5	17.6	0.85	0.67	8.6	
Approach		53	0.0	53	0.0	0.135	43.1	LOS D	2.5	17.6	0.85	0.67	15.6	
All Vehicles		2873	3.7	2857 ^{N1}	3.7	0.898	14.1	LOS A	22.6	161.9	0.46	0.45	37.8	

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 14.3 %

Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	53	47.8	LOS E	0.2	0.2	0.89	0.89	
P2	East Full Crossing	53	14.5	LOS B	0.1	0.1	0.49	0.49	
P3	North Full Crossing	53	46.9	LOS E	0.2	0.2	0.89	0.89	
P4	West Full Crossing	53	14.0	LOS B	0.1	0.1	0.48	0.48	
All Pedestrians		211	30.8	LOS D			0.69	0.69	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

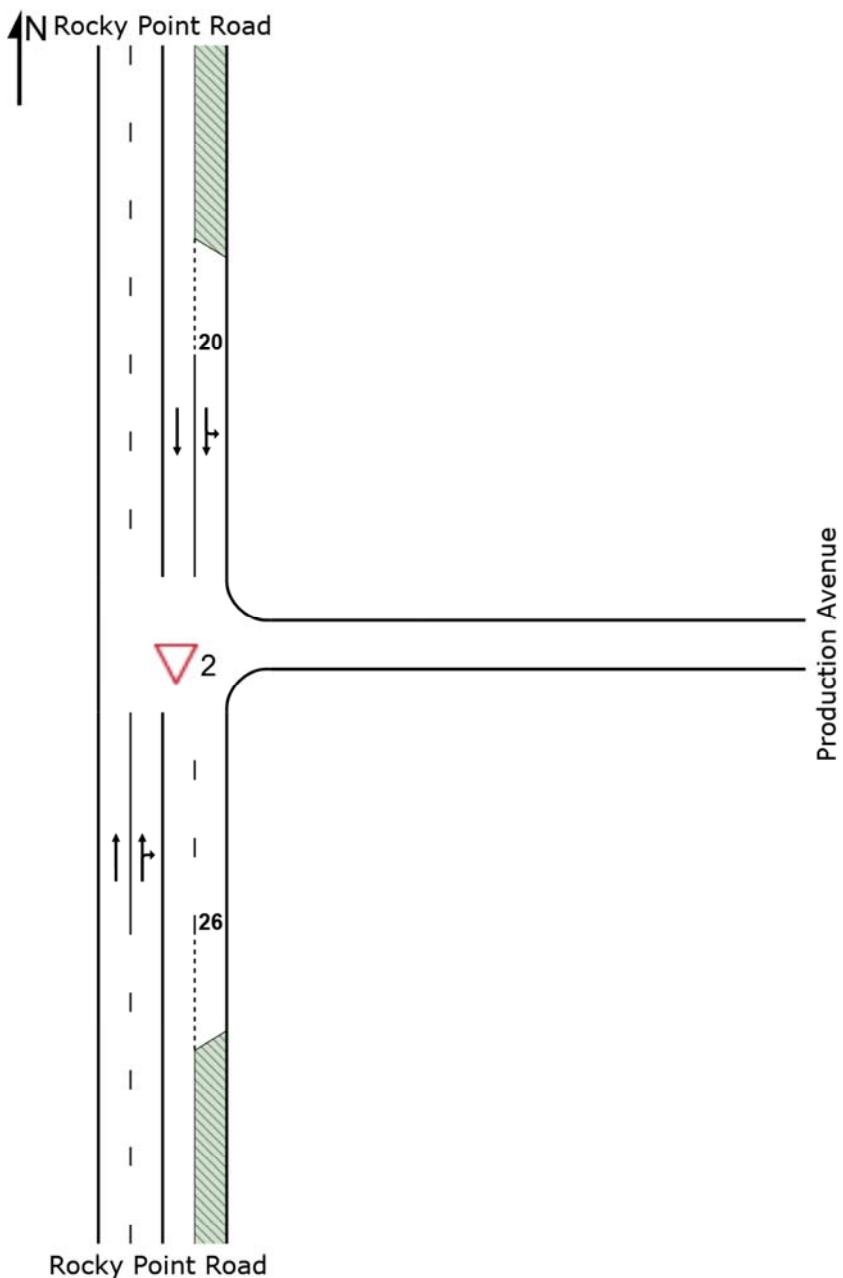
Organisation: TRAFFIX PTY LTD | Processed: Tuesday, 25 July 2017 6:12:07 PM

Project: \\192.168.3.1\\data\\Synergy\\Projects\\16\\16.199\\Modelling\\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

SITE LAYOUT

▽ Site: 2 [AM FU - Rocky Point Road x Production Avenue - One way]

Residential DA + Approved Commercial + Childcare
T-intersection: Rocky Point Road x Production Avenue
Period: AM
Giveaway / Yield (Two-Way)



MOVEMENT SUMMARY

▽ Site: 2 [AM FU - Rocky Point Road x Production Avenue - One way]

◆◆ Network: N101 [AM FU - Residential DA+Childcare +Commercial - One way Scenario]

Residential DA + Approved Commercial + Childcare
T-intersection: Rocky Point Road x Production Avenue
Period: AM
Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Arrival Flows Total	HV	Deg. Satn	Average Delay v/c	Level of Service sec	95% Back of Queue Vehicles	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road													
2	T1	1711	2.5	1711	2.5	0.549	2.0	LOS A	18.9	134.8	0.19	0.04	45.3
3	R2	98	2.2	98	2.2	0.549	18.5	LOS B	18.9	134.8	0.49	0.11	43.0
Approach		1808	2.5	1808	2.5	0.549	2.9	NA	18.9	134.8	0.21	0.05	44.9
North: Rocky Point Road													
7	L2	124	0.0	121	0.0	0.091	5.5	LOS A	0.0	0.0	0.00	0.42	48.1
8	T1	852	7.0	835	7.1	0.423	0.0	LOS A	0.0	0.0	0.00	0.02	58.2
Approach		976	6.1	956 ^{N1}	6.2	0.423	0.7	NA	0.0	0.0	0.00	0.07	54.7
All Vehicles		2784	3.8	2765 ^{N1}	3.8	0.549	2.1	NA	18.9	134.8	0.14	0.06	48.1

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.

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 14.3 %

Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

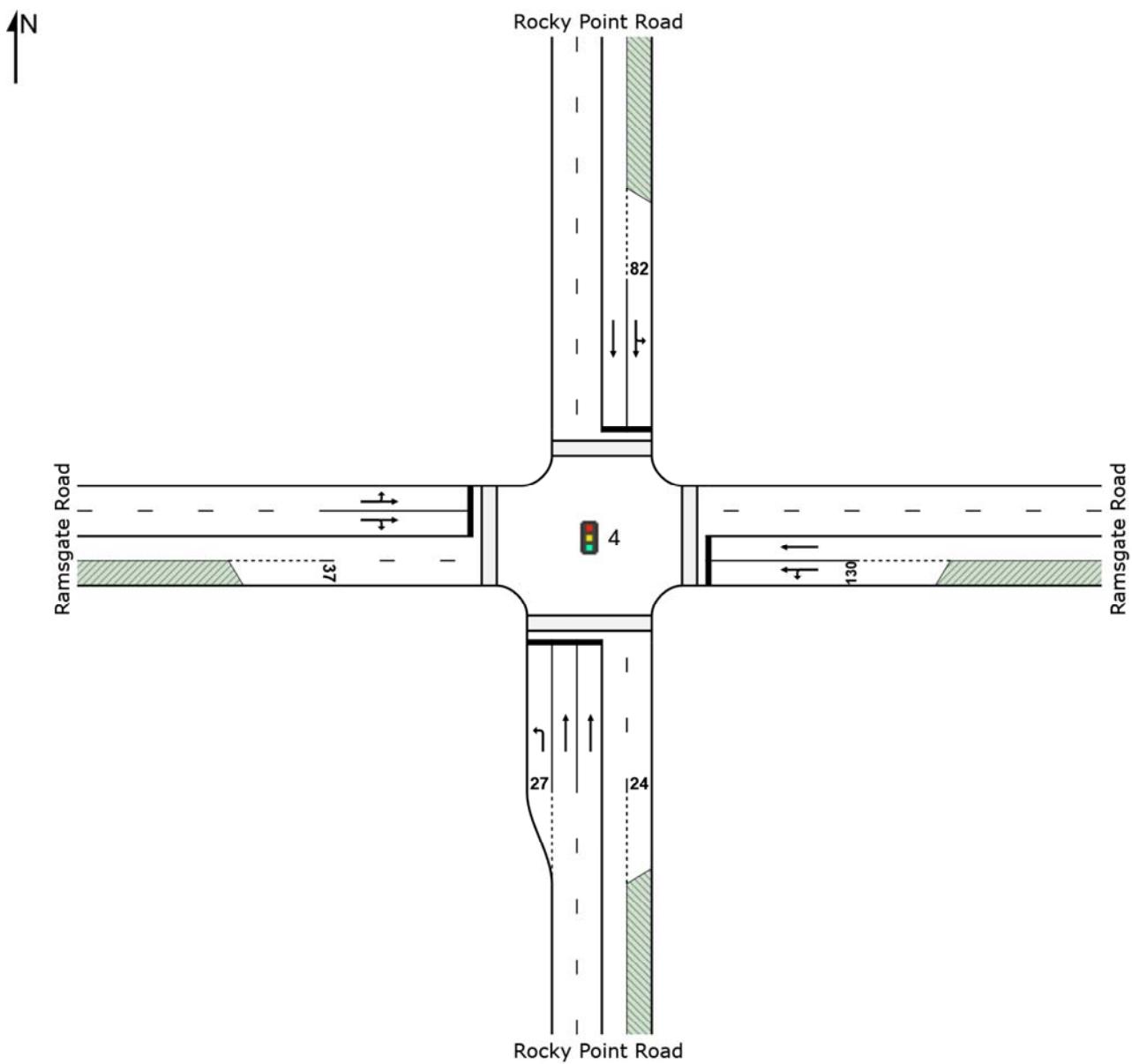
Organisation: TRAFFIX PTY LTD | Processed: Tuesday, 25 July 2017 6:12:07 PM

Project: \\192.168.3.1\\data\\Synergy\\Projects\\16\\16.199\\Modelling\\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

SITE LAYOUT

 Site: 4 [AM FU - Rocky Point Road x Ramsgate Road - One way]

Residential DA + Approved Commercial + Childcare
Signalised Intersection: Rocky Point Road x Ramsgate Road
Period: AM
Signals - Fixed Time Isolated



MOVEMENT SUMMARY

Site: 4 [AM FU - Rocky Point Road x Ramsgate Road - One way]

Network: N101 [AM FU - Residential DA+Childcare +Commercial - One way Scenario]

Residential DA + Approved Commercial + Childcare

Signalised Intersection: Rocky Point Road x Ramsgate Road

Period: AM

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Deg. Satn	Average Delay v/c	Level of Service	95% Back of Queue Vehicles	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h			
South: Rocky Point Road													
1	L2	360	5.3 360	5.3	0.350	11.2	LOS A	6.9	50.3	0.36	0.68	45.6	
2	T1	1658	2.6 1658	2.6	0.894	32.8	LOS C	56.7	405.9	0.85	0.88	25.0	
Approach		2018	3.1 2018	3.1	0.894	29.0	LOS C	56.7	405.9	0.76	0.84	28.6	
East: Ramsgate Road													
4	L2	27	7.7 27	7.7	0.296	54.4	LOS D	4.5	33.2	0.93	0.74	26.9	
5	T1	386	3.5 386	3.5	1.030	105.5	LOS F	29.8	215.3	0.99	1.25	15.9	
Approach		414	3.8 414	3.8	1.030	102.1	LOS F	29.8	215.3	0.98	1.22	16.4	
North: Rocky Point Road													
7	L2	33	9.7 32	9.8	0.133	19.5	LOS B	4.3	32.4	0.58	0.54	44.9	
8	T1	706	7.5 696	7.5	0.581	18.1	LOS B	23.8	177.4	0.73	0.66	45.1	
Approach		739	7.5 728 ^{N1}	7.6	0.581	18.1	LOS B	23.8	177.4	0.72	0.65	45.1	
West: Ramsgate Road													
10	L2	46	13.6 46	13.6	0.567	41.7	LOS C	16.4	120.7	0.88	0.77	20.8	
11	T1	293	4.7 293	4.7	0.567	36.0	LOS C	16.4	120.7	0.88	0.77	30.7	
12	R2	213	8.4 213	8.4	0.837	69.5	LOS E	12.7	95.4	1.00	1.08	22.2	
Approach		552	6.9 552	6.9	0.837	49.4	LOS D	16.4	120.7	0.93	0.89	26.0	
All Vehicles		3722	4.6 3711 ^{N1}	4.6	1.030	38.0	LOS C	56.7	405.9	0.81	0.86	28.7	

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 14.3 %

Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	53	53.3	LOS E	0.2	0.2	0.94	0.94	
P2	East Full Crossing	53	15.5	LOS B	0.1	0.1	0.51	0.51	
P3	North Full Crossing	53	50.5	LOS E	0.2	0.2	0.92	0.92	
P4	West Full Crossing	53	15.5	LOS B	0.1	0.1	0.51	0.51	
All Pedestrians		211	33.7	LOS D			0.72	0.72	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: TRAFFIX PTY LTD | Processed: Tuesday, 25 July 2017 6:12:07 PM

Project: \\192.168.3.1\ldata\Synergy\Projects\16\16.199\Modelling\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

MOVEMENT SUMMARY

Site: 1a [AM FU Rocky Point Rd x Phillips Rd]

Network: N101 [AM FU - Residential DA+Childcare +Commercial]

Signalled Intersection: Rocky Point Rd x Phillips Rd

Period: AM

Scenario: Future

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Common Control Group: CCG1 [Intersection of Rocky Point Road x Jubilee Ave X Phillips Road]

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road													
2	T1	1499	2.9	1499	2.9	0.392	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1499	2.9	1499	2.9	0.392	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
East: Phillips Road													
4	L2	31	10.3	31	10.3	0.353	69.5	LOS E	1.9	14.2	1.00	0.72	12.2
6	R2	26	8.0	26	8.0	0.300	69.0	LOS E	1.6	11.9	1.00	0.71	24.5
Approach		57	9.3	57	9.3	0.353	69.2	LOS E	1.9	14.2	1.00	0.72	18.9
North: Rocky Point Road													
8	T1	747	7.0	747	7.0	0.297	8.3	LOS A	8.7	64.6	0.44	0.38	47.8
Approach		747	7.0	747	7.0	0.297	8.3	LOS A	8.7	64.6	0.44	0.38	47.8
All Vehicles		2303	4.4	2303	4.4	0.392	4.4	LOS A	8.7	64.6	0.17	0.14	52.8

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 8.7 %

Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped	
P2	East Full Crossing	53	8.1	LOS A	0.1	0.1	0.37	0.37	
All Pedestrians		53	8.1	LOS A			0.37	0.37	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

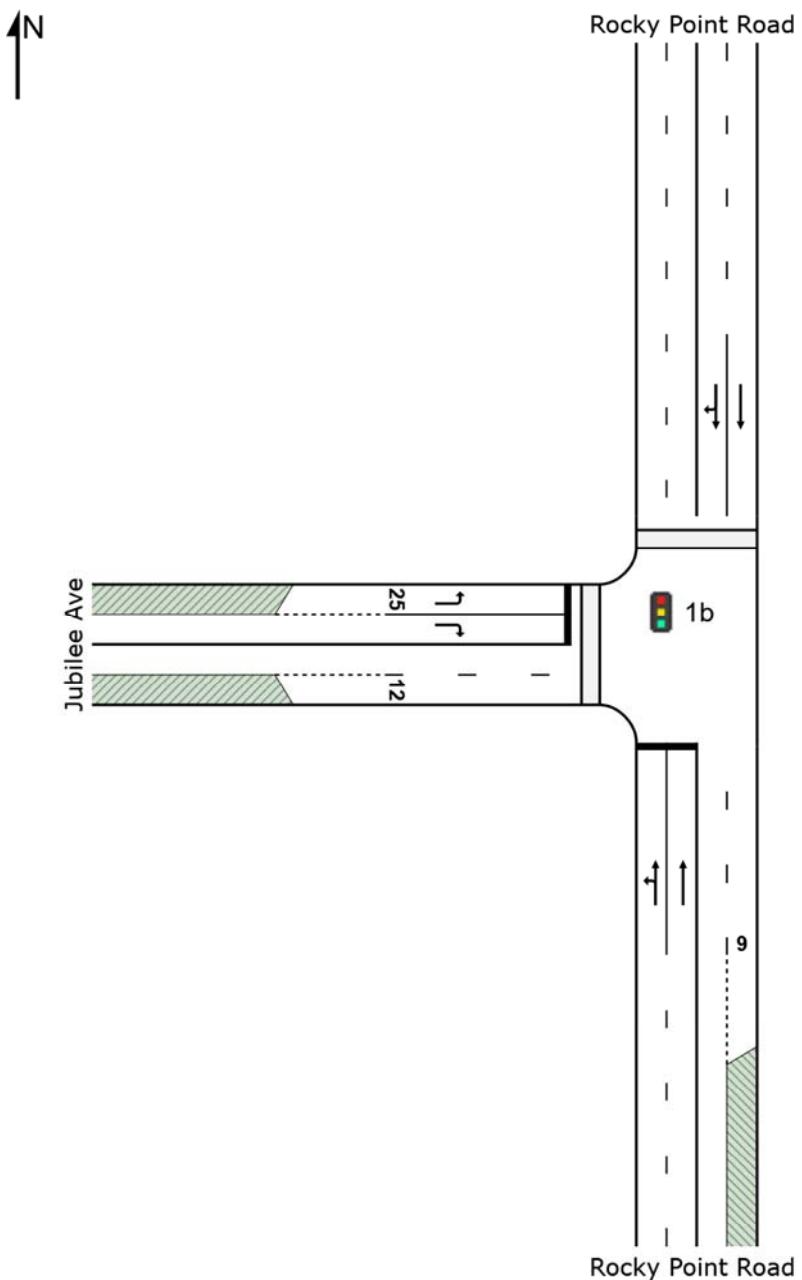
Site: 1b [AM FU Rocky Point Rd x Jubilee Ave]

Signalised Intersection: Rocky Point Rd x Jubilee Ave

Period: AM

Scenario: Future

Signals - Fixed Time Isolated



MOVEMENT SUMMARY

Site: 1b [AM FU Rocky Point Rd x Jubilee Ave]

Network: N101 [AM FU - Residential DA+Childcare +Commercial]

Signalised Intersection: Rocky Point Rd x Jubilee Ave

Period: AM

Scenario: Future

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Common Control Group: CCG1 [Intersection of Rocky Point Road x Jubilee Ave X Phillips Road]

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop per veh	Average Speed km/h
South: Rocky Point Road													
1	L2	243	0.4	243	0.4	0.903	20.4	LOS B	18.3	130.4	0.22	0.40	32.4
2	T1	1499	2.9	1499	2.9	0.903	22.1	LOS B	27.5	197.5	0.60	0.70	15.9
Approach		1742	2.5	1742	2.5	0.903	21.9	LOS B	27.5	197.5	0.55	0.65	18.7
North: Rocky Point Road													
8	T1	626	8.7	626	8.7	0.313	0.0	LOS A	0.0	0.0	0.00	0.05	52.1
9	R2	64	4.9	64	4.9	0.313	2.1	LOS A	0.0	0.0	0.00	0.06	50.7
Approach		691	8.4	691	8.4	0.313	0.2	LOS A	0.0	0.0	0.00	0.05	51.3
West: Jubilee Ave													
10	L2	106	2.0	106	2.0	0.581	63.5	LOS E	6.2	44.2	1.00	0.79	10.8
12	R2	206	2.0	206	2.0	1.104	175.8	LOS F	22.9	163.4	1.00	1.32	4.3
Approach		313	2.0	313	2.0	1.104	137.6	LOS F	22.9	163.4	1.00	1.14	5.4
All Vehicles		2745	3.9	2745	3.9	1.104	29.6	LOS C	27.5	197.5	0.46	0.56	13.3

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 8.7 %

Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P3	North Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95	
P4	West Full Crossing	53	10.0	LOS B	0.1	0.1	0.41	0.41	
All Pedestrians		105	32.1	LOS D			0.68	0.68	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

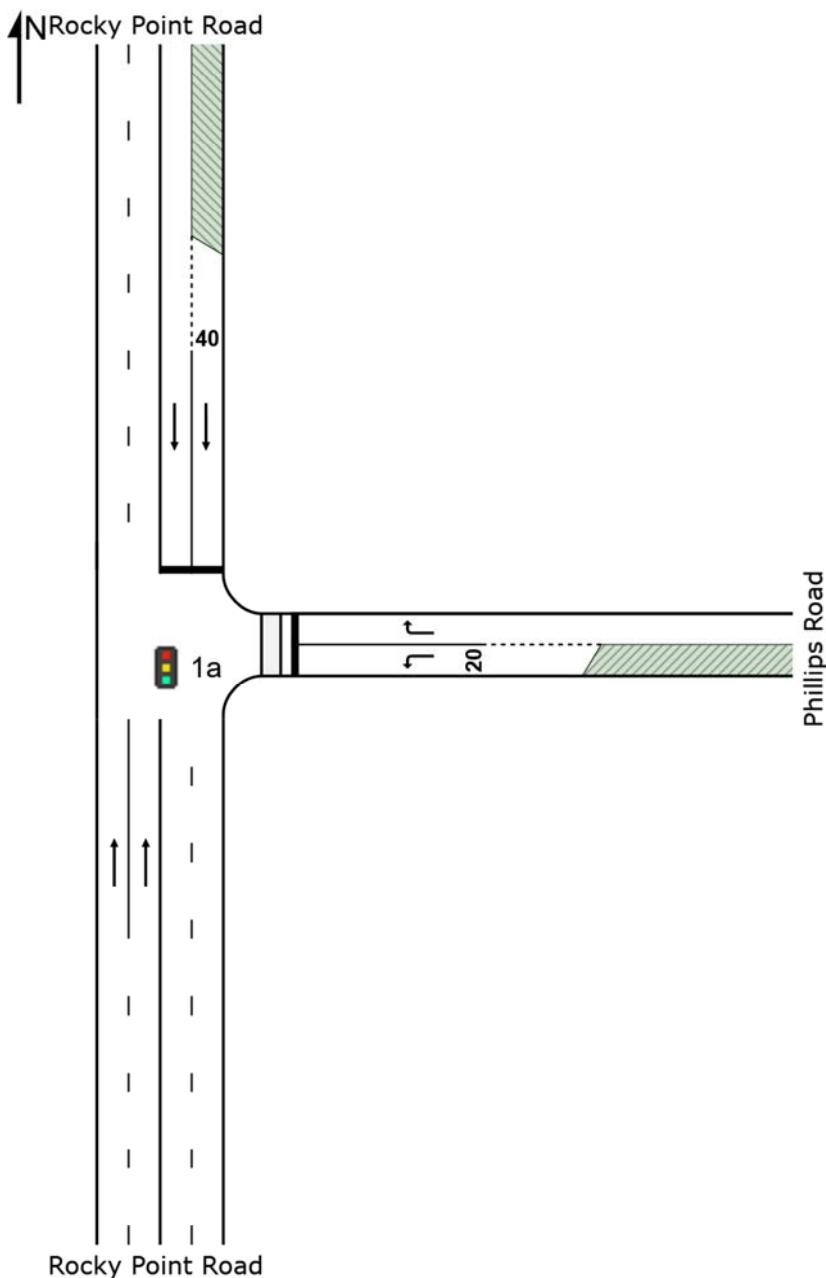
Site: 1a [AM FU Rocky Point Rd x Phillips Rd]

Signalised Intersection: Rocky Point Rd x Phillips Rd

Period: AM

Scenario: Future

Signals - Fixed Time Isolated



SITE LAYOUT

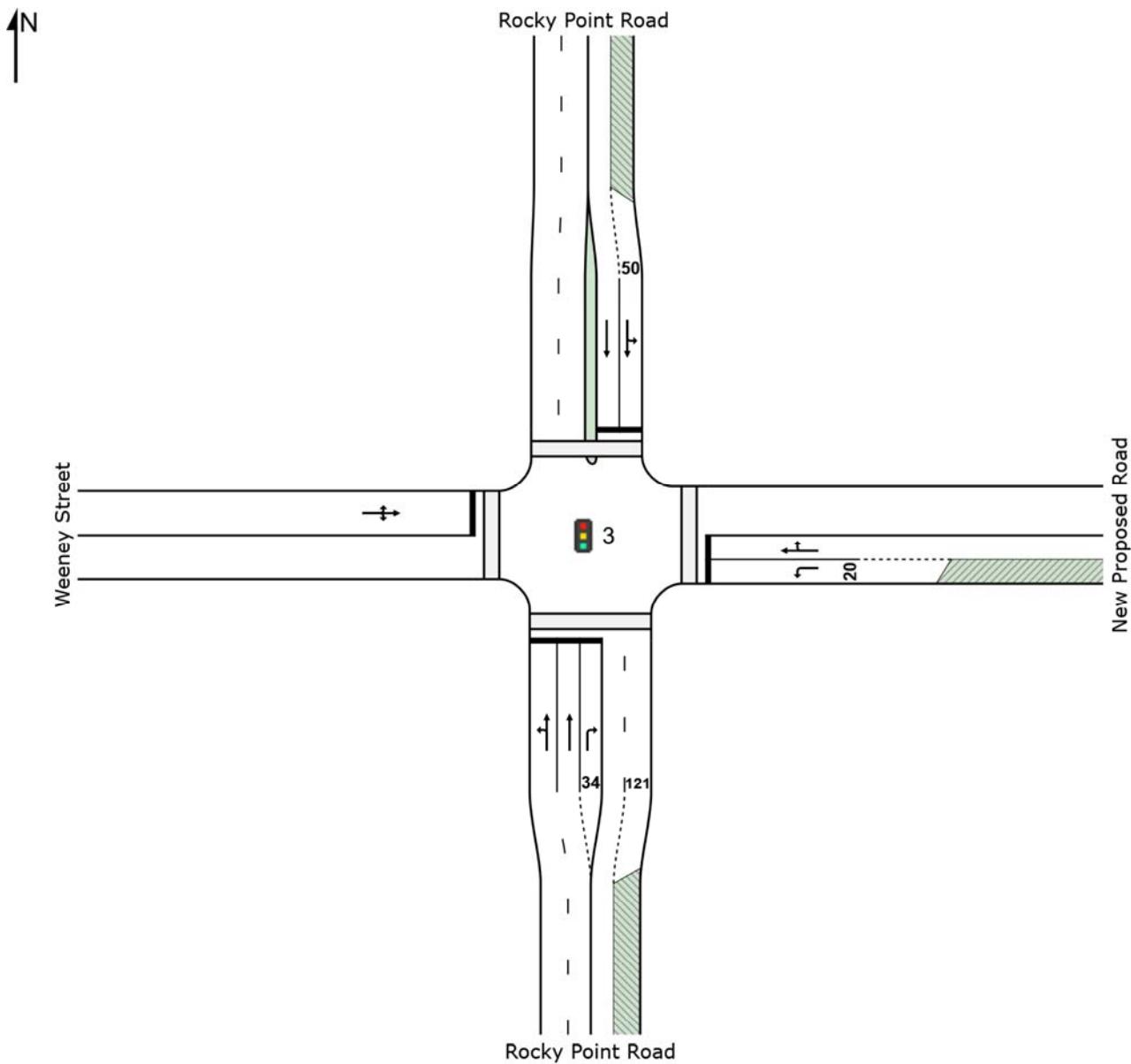
Site: 3 [AM FU Rocky Point Rd x Weeney St x New Proposed Road]

Intersection: Rocky Point Rd x Weeney St x New Proposed Road

Period: AM

Scenario: FU without Left Turn Deceleration Lane

Signals - Fixed Time Isolated



MOVEMENT SUMMARY

Site: 3 [AM FU Rocky Point Rd x Weeney St x New Proposed Road]

Network: N101 [AM FU - Residential DA+Childcare +Commercial]

Intersection: Rocky Point Rd x Weeney St x New Proposed Road

Period: AM

Scenario: FU without Left Turn Deceleration Lane

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Arrival Flows Total	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	
South: Rocky Point Road													
1	L2	57	5.6	57	5.6	0.859	13.7	LOS A	31.7	227.4	0.54	0.53	47.1
2	T1	1665	2.7	1665	2.7	0.859	10.1	LOS A	31.7	227.4	0.48	0.49	45.7
3	R2	48	0.0	48	0.0	0.456	70.9	LOS F	3.0	20.9	1.00	0.74	22.8
Approach		1771	2.7	1771	2.7	0.859	11.8	LOS A	31.7	227.4	0.50	0.50	44.1
East: New Proposed Road													
4	L2	47	0.0	47	0.0	0.072	31.4	LOS C	1.8	12.6	0.69	0.69	17.0
5	T1	22	0.0	22	0.0	0.885	67.4	LOS E	12.9	90.4	1.00	1.06	12.6
6	R2	162	0.0	162	0.0	0.885	71.9	LOS F	12.9	90.4	1.00	1.06	9.3
Approach		232	0.0	232	0.0	0.885	63.2	LOS E	12.9	90.4	0.94	0.99	10.6
North: Rocky Point Road													
7	L2	71	0.0	68	0.0	0.327	20.5	LOS B	8.5	62.9	0.50	0.49	31.2
8	T1	703	8.1	692	8.2	0.496	15.7	LOS B	13.0	97.2	0.53	0.49	20.6
Approach		774	7.3	760 ^{N1}	7.4	0.496	16.2	LOS B	13.0	97.2	0.53	0.49	22.1
West: Weeney Street													
10	L2	13	0.0	13	0.0	0.113	41.8	LOS C	2.4	16.6	0.81	0.65	9.4
11	T1	37	0.0	37	0.0	0.113	37.2	LOS C	2.4	16.6	0.81	0.65	19.2
12	R2	3	0.0	3	0.0	0.113	41.7	LOS C	2.4	16.6	0.81	0.65	9.4
Approach		53	0.0	53	0.0	0.113	38.6	LOS C	2.4	16.6	0.81	0.65	16.8
All Vehicles		2828	3.7	2815 ^{N1}	3.7	0.885	17.7	LOS B	31.7	227.4	0.55	0.54	34.7

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 8.7 %

Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians													
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian Distance	Back of Queue	Prop. Queued	Effective Stop Rate per ped					
P1	South Full Crossing	53	43.4	LOS E	0.2	0.2	0.85	0.85					
P2	East Full Crossing	53	17.6	LOS B	0.1	0.1	0.54	0.54					
P3	North Full Crossing	53	42.6	LOS E	0.2	0.2	0.84	0.84					
P4	West Full Crossing	53	17.1	LOS B	0.1	0.1	0.53	0.53					
All Pedestrians		211	30.2	LOS D			0.69	0.69					

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: TRAFFIX PTY LTD | Processed: Tuesday, 25 July 2017 6:14:29 PM

Project: \\192.168.3.1\ldata\Synergy\Projects\16\16.199\Modelling\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

SITE LAYOUT

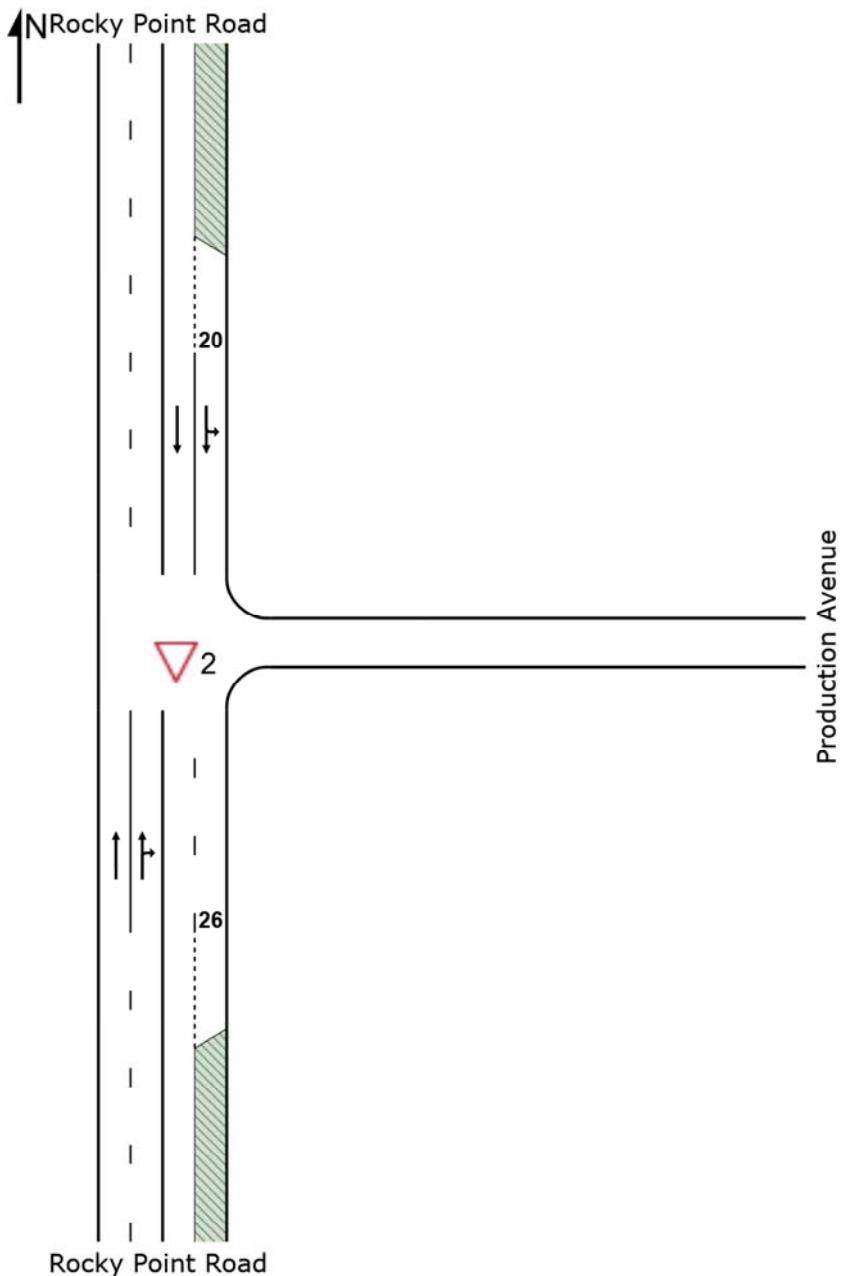
▽ Site: 2 [AM FU Rocky Point Road x Production Avenue]

T-intersection: Rocky Point Road x Production Avenue

Period: AM

Scenario: Future

Giveaway / Yield (Two-Way)



MOVEMENT SUMMARY

▽ Site: 2 [AM FU Rocky Point Road x Production Avenue]

◆◆ Network: N101 [AM FU - Residential DA+Childcare +Commercial]

T-intersection: Rocky Point Road x Production Avenue

Period: AM

Scenario: Future

Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		veh/h	%	veh/h	%	v/c	sec		veh	m			
South: Rocky Point Road													
2	T1	1731	2.5	1731	2.5	0.588	2.1	LOS A	21.0	150.3	0.21	0.04	44.4
3	R2	98	2.2	98	2.2	0.588	19.4	LOS B	21.0	150.3	0.49	0.10	43.1
Approach		1828	2.5	1828	2.5	0.588	3.1	NA	21.0	150.3	0.22	0.05	44.2
North: Rocky Point Road													
7	L2	187	0.0	182	0.0	0.098	5.5	LOS A	0.0	0.0	0.00	0.58	45.9
8	T1	787	7.6	773	7.7	0.416	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		975	6.2	955 ^{N1}	6.2	0.416	1.1	NA	0.0	0.0	0.00	0.11	53.2
All Vehicles		2803	3.8	2784 ^{N1}	3.8	0.588	2.4	NA	21.0	150.3	0.15	0.07	47.3

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.

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 8.7 %

Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: TRAFFIX PTY LTD | Processed: Tuesday, 25 July 2017 6:14:29 PM

Project: \\192.168.3.1\\data\\Synergy\\Projects\\16\\16.199\\Modelling\\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

SITE LAYOUT

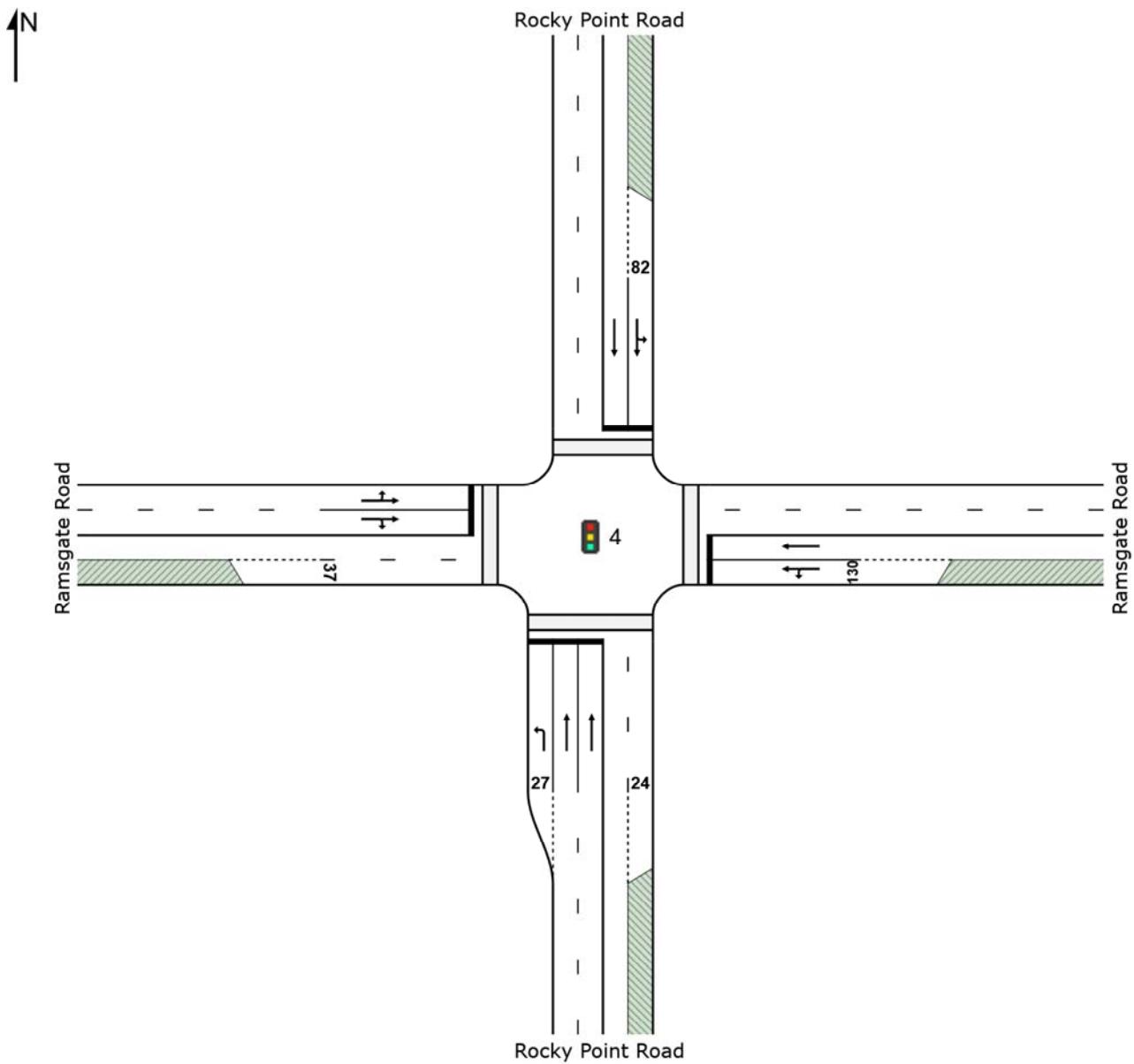
Site: 4 [AM FU Rocky Point Road x Ramsgate Road]

Signalised Intersection: Rocky Point Road x Ramsgate Road

Period: AM

Scenario: Future

Signals - Fixed Time Isolated



MOVEMENT SUMMARY

Site: 4 [AM FU Rocky Point Road x Ramsgate Road]

Network: N101 [AM FU - Residential DA+Childcare +Commercial]

Signalled Intersection: Rocky Point Road x Ramsgate Road

Period: AM

Scenario: Future

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Arrival Flows Total	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	
		veh/h	%	veh/h	%	v/c	sec	veh	m				
South: Rocky Point Road													
1	L2	360	5.3	360	5.3	0.350	11.2	LOS A	6.9	50.3	0.36	0.68	45.6
2	T1	1658	2.6	1658	2.6	0.894	32.8	LOS C	56.7	405.9	0.85	0.88	25.0
Approach		2018	3.1	2018	3.1	0.894	29.0	LOS C	56.7	405.9	0.76	0.84	28.6
East: Ramsgate Road													
4	L2	27	7.7	27	7.7	0.296	54.4	LOS D	4.5	33.2	0.93	0.74	26.9
5	T1	386	3.5	386	3.5	1.030	105.5	LOS F	29.8	215.3	0.99	1.25	15.9
Approach		414	3.8	414	3.8	1.030	102.1	LOS F	29.8	215.3	0.98	1.22	16.4
North: Rocky Point Road													
7	L2	33	9.7	32	9.8	0.132	18.6	LOS B	4.0	30.2	0.55	0.52	45.5
8	T1	706	7.5	696	7.5	0.576	16.8	LOS B	22.7	169.4	0.69	0.63	45.9
Approach		739	7.5	728 ^{N1}	7.6	0.576	16.8	LOS B	22.7	169.4	0.69	0.62	45.9
West: Ramsgate Road													
10	L2	46	13.6	46	13.6	0.567	41.7	LOS C	16.4	120.7	0.88	0.77	20.8
11	T1	293	4.7	293	4.7	0.567	36.0	LOS C	16.4	120.7	0.88	0.77	30.7
12	R2	213	8.4	213	8.4	0.837	69.5	LOS E	12.7	95.4	1.00	1.08	22.2
Approach		552	6.9	552	6.9	0.837	49.4	LOS D	16.4	120.7	0.93	0.89	26.0
All Vehicles		3722	4.6	3711 ^{N1}	4.6	1.030	37.8	LOS C	56.7	405.9	0.80	0.85	28.8

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 8.7 %

Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	53	53.3	LOS E	0.2	0.2	0.94	0.94	
P2	East Full Crossing	53	15.5	LOS B	0.1	0.1	0.51	0.51	
P3	North Full Crossing	53	50.5	LOS E	0.2	0.2	0.92	0.92	
P4	West Full Crossing	53	15.5	LOS B	0.1	0.1	0.51	0.51	
All Pedestrians		211	33.7	LOS D			0.72	0.72	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

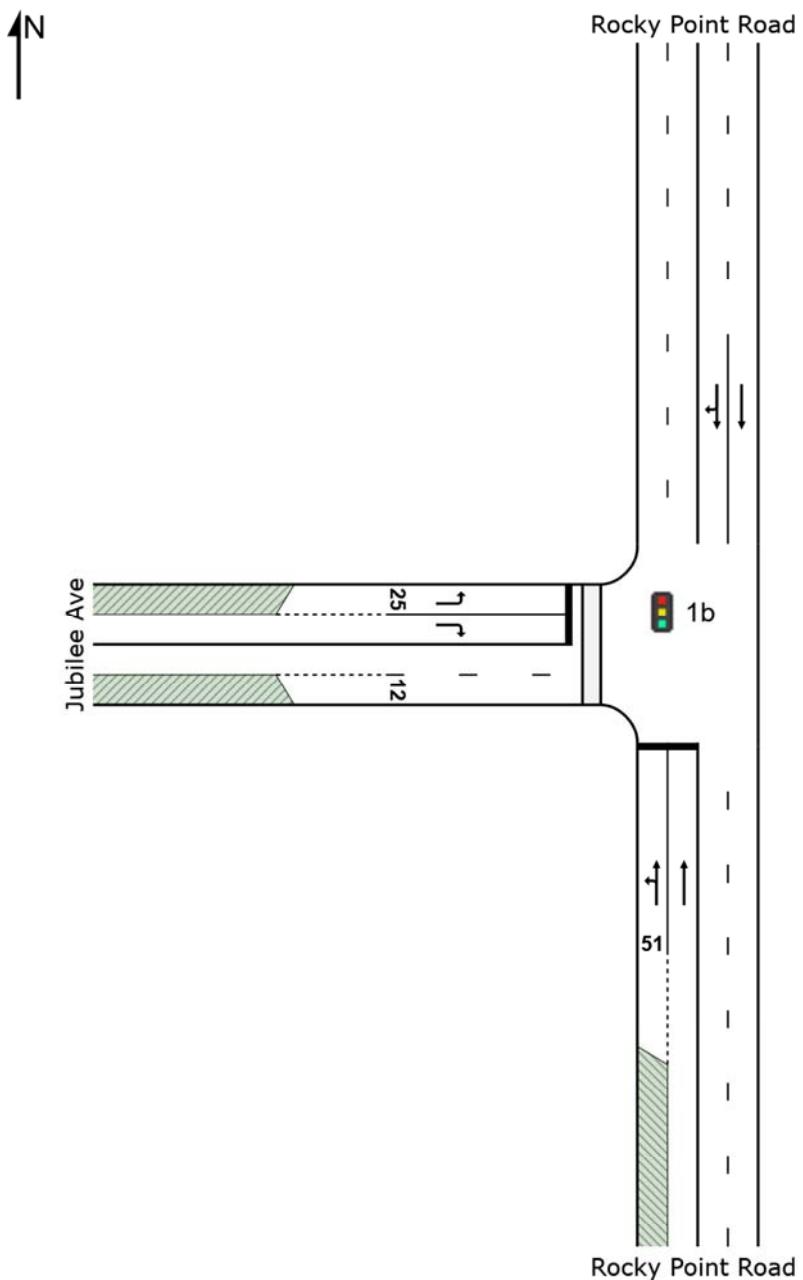
Organisation: TRAFFIX PTY LTD | Processed: Tuesday, 25 July 2017 6:14:29 PM

Project: \\192.168.3.1\ldata\Synergy\Projects\16\16.199\Modelling\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

SITE LAYOUT

Site: 1b [PM FU - Rocky Point Rd x Jubilee Ave - One way]

Residential DA + Approved Commercial + Childcare
Signalised Intersection: Rocky Point Rd x Jubilee Ave
Period: PM
Signals - Fixed Time Coordinated



MOVEMENT SUMMARY

Site: 1b [PM FU - Rocky Point Rd x Jubilee Ave - One way]

Network: 2 [PM FU - Residential DA+Childcare +Commercial - Oneway Scenario]

Residential DA + Approved Commercial + Childcare

Signalled Intersection: Rocky Point Rd x Jubilee Ave

Period: PM

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Common Control Group: CCG1 [Intersection of Rocky Point Road x Jubilee Avenue x Phillips Road]

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average Delay v/c	Level of Service sec	95% Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road													
1	L2	139	2.3	139	2.3	0.517	17.5	LOS B	9.6	68.5	0.42	0.49	34.5
2	T1	685	2.5	685	2.5	0.517	12.6	LOS A	10.3	73.6	0.45	0.45	22.9
Approach		824	2.4	824	2.4	0.517	13.4	LOS A	10.3	73.6	0.45	0.46	25.9
North: Rocky Point Road													
8	T1	1460	2.2	1460	2.2	0.421	0.0	LOS A	0.0	0.0	0.00	0.04	52.9
9	R2	148	2.8	148	2.8	0.421	2.1	LOS A	0.0	0.0	0.00	0.10	51.1
Approach		1608	2.3	1608	2.3	0.421	0.2	LOS A	0.0	0.0	0.00	0.05	51.9
West: Jubilee Ave													
10	L2	81	1.3	81	1.3	0.203	47.2	LOS D	3.9	27.6	0.86	0.76	13.7
12	R2	245	0.4	245	0.4	0.719	53.1	LOS D	13.4	94.3	0.96	0.85	12.5
Approach		326	0.6	326	0.6	0.719	51.7	LOS D	13.4	94.3	0.93	0.82	12.8
All Vehicles		2759	2.1	2759	2.1	0.719	10.2	LOS A	13.4	94.3	0.24	0.26	22.4

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P4	West Full Crossing	53	17.6	LOS B	0.1	0.1	0.54	0.54
All Pedestrians		53	17.6	LOS B			0.54	0.54

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

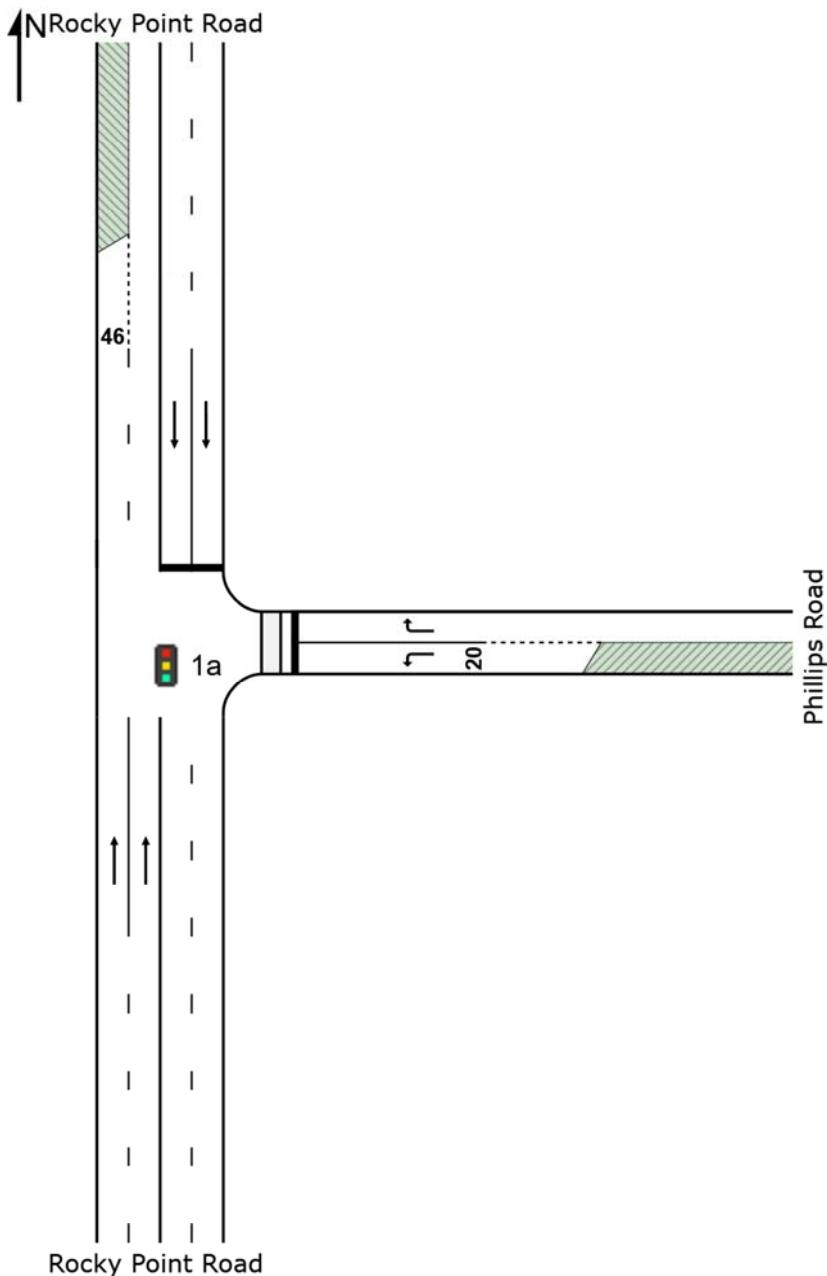
Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

Site: 1a [PM FU - Rocky Point Rd x Phillips Rd - One way]

Residential DA + Approved Commercial + Childcare
Signalised Intersection: Rocky Point Rd x Phillips Rd
Period: PM
Signals - Fixed Time Coordinated



MOVEMENT SUMMARY

Site: 1a [PM FU - Rocky Point Rd x Phillips Rd - One way]

Network: 2 [PM FU - Residential DA+Childcare +Commercial - Oneway Scenario]

Residential DA + Approved Commercial + Childcare

Signalled Intersection: Rocky Point Rd x Phillips Rd

Period: PM

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Common Control Group: CCG1 [Intersection of Rocky Point Road x Jubilee Avenue x Phillips Road]

Movement Performance - Vehicles														
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average v/c	Delay sec	Level of Service	95% Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road														
2	T1	738	2.3	738	2.3	0.299	0.0	LOS A	0.0	0.0	0.00	0.00	59.9	
Approach		738	2.3	738	2.3	0.299	0.0	LOS A	0.0	0.0	0.00	0.00	59.9	
East: Phillips Road														
4	L2	100	1.1	100	1.1	0.667	65.4	LOS E	6.0	42.1	1.00	0.82	12.8	
6	R2	105	0.0	105	0.0	0.714	66.2	LOS E	6.3	44.4	1.00	0.83	25.2	
Approach		205	0.5	205	0.5	0.714	65.8	LOS E	6.3	44.4	1.00	0.83	20.2	
North: Rocky Point Road														
8	T1	1503	2.4	1503	2.4	0.723	15.3	LOS B	25.2	180.2	0.63	0.57	40.8	
Approach		1503	2.4	1503	2.4	0.723	15.3	LOS B	25.2	180.2	0.63	0.57	40.8	
All Vehicles		2446	2.2	2446	2.2	0.723	14.9	LOS B	25.2	180.2	0.47	0.42	41.2	

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P2	East Full Crossing	53	15.0	LOS B	0.1	0.1	0.50	0.50	
All Pedestrians		53	15.0	LOS B			0.50	0.50	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

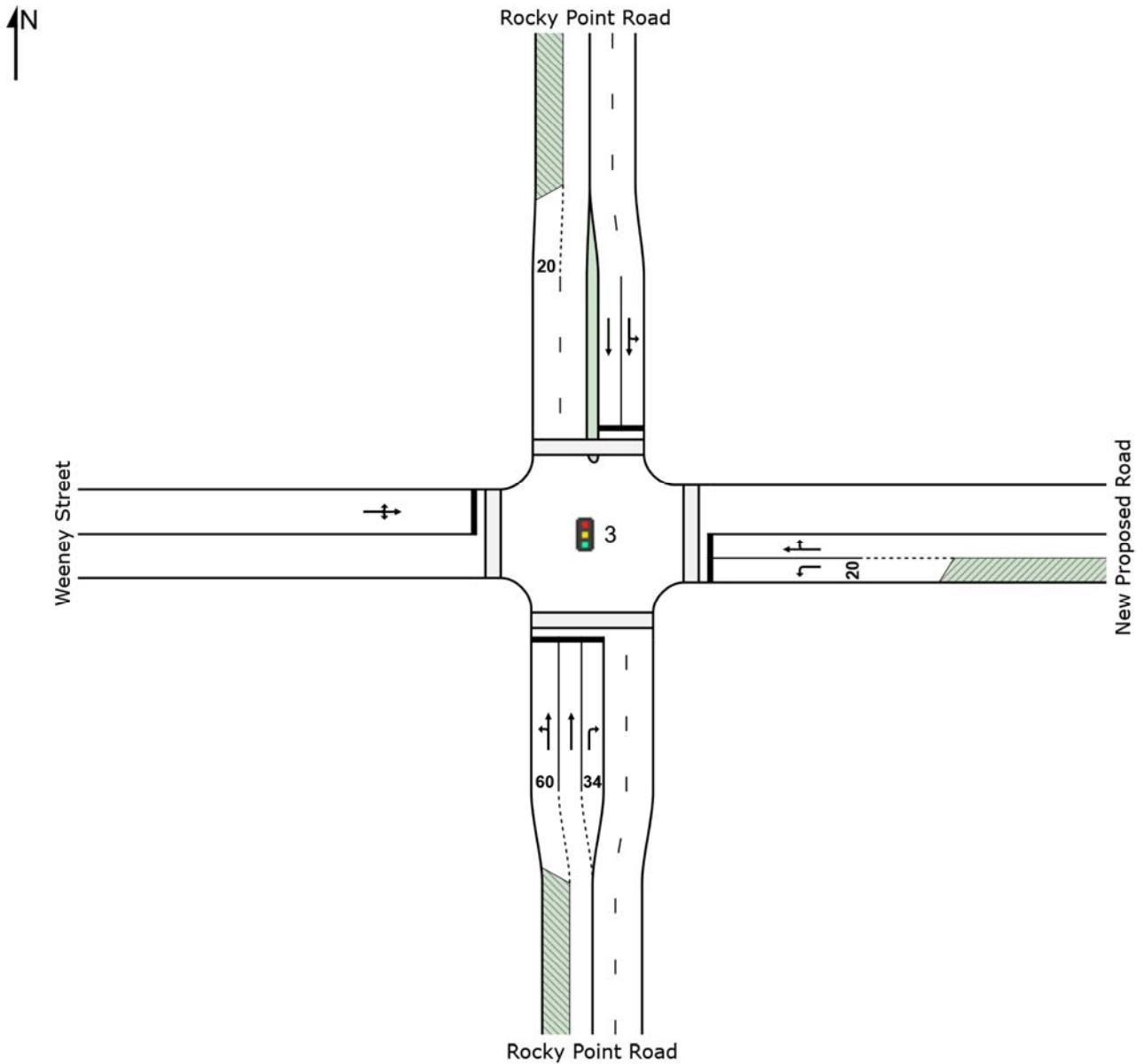
Site: 3 [PM FU - Rocky Point Rd x Weeney St x New Proposed Road - One way]

Residential DA + Approved Commercial + Childcare Intersection: Rocky Point Rd x Weeney St x New Proposed Road

Period: PM

Scenario: FU without Left Turn Deceleration Lane

Signals - Fixed Time Coordinated



MOVEMENT SUMMARY

Site: 3 [PM FU - Rocky Point Rd x Weeney St x New Proposed Road - One way]

Network: 2 [PM FU - Residential DA+Childcare +Commercial - Oneway Scenario]

Residential DA + Approved Commercial + Childcare Intersection: Rocky Point Rd x Weeney St x New Proposed Road

Period: PM

Scenario: FU without Left Turn Deceleration Lane

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average Delay v/c	Level of Service	95% Back of Queue Vehicles	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road													
1	L2	19	5.6	19	5.6	0.094	5.9	LOS A	0.2	1.3	0.02	0.10	55.2
2	T1	766	2.6	766	2.6	0.436	0.5	LOS A	1.3	9.2	0.04	0.04	59.0
3	R2	40	0.0	40	0.0	0.440	69.6	LOS E	2.4	16.9	1.00	0.73	23.1
Approach		825	2.6	825	2.6	0.440	3.9	LOS A	2.4	16.9	0.08	0.08	53.4
East: New Proposed Road													
4	L2	87	0.0	87	0.0	0.218	46.3	LOS D	4.2	29.6	0.86	0.75	13.0
5	T1	28	0.0	28	0.0	0.695	60.1	LOS E	6.0	42.2	1.00	0.85	13.7
6	R2	72	0.0	72	0.0	0.695	64.7	LOS E	6.0	42.2	1.00	0.85	10.3
Approach		187	0.0	187	0.0	0.695	55.4	LOS D	6.0	42.2	0.94	0.81	12.0
North: Rocky Point Road													
7	L2	116	0.0	116	0.0	0.621	9.1	LOS A	9.4	66.7	0.22	0.27	44.0
8	T1	1482	2.2	1482	2.2	0.621	3.6	LOS A	9.5	67.6	0.22	0.24	40.9
Approach		1598	2.0	1598	2.0	0.621	4.0	LOS A	9.5	67.6	0.22	0.24	41.4
West: Weeney Street													
10	L2	25	0.0	25	0.0	0.243	58.7	LOS E	2.8	19.5	0.95	0.73	6.7
11	T1	20	0.0	20	0.0	0.243	54.2	LOS D	2.8	19.5	0.95	0.73	14.8
12	R2	5	0.0	5	0.0	0.243	58.7	LOS E	2.8	19.5	0.95	0.73	6.7
Approach		51	0.0	51	0.0	0.243	56.9	LOS E	2.8	19.5	0.95	0.73	10.3
All Vehicles		2661	2.0	2661	2.0	0.695	8.6	LOS A	9.5	67.6	0.24	0.24	39.4

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95	
P2	East Full Crossing	53	9.6	LOS A	0.1	0.1	0.40	0.40	
P3	North Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95	
P4	West Full Crossing	53	9.2	LOS A	0.1	0.1	0.39	0.39	
All Pedestrians		211	31.8	LOS D			0.67	0.67	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

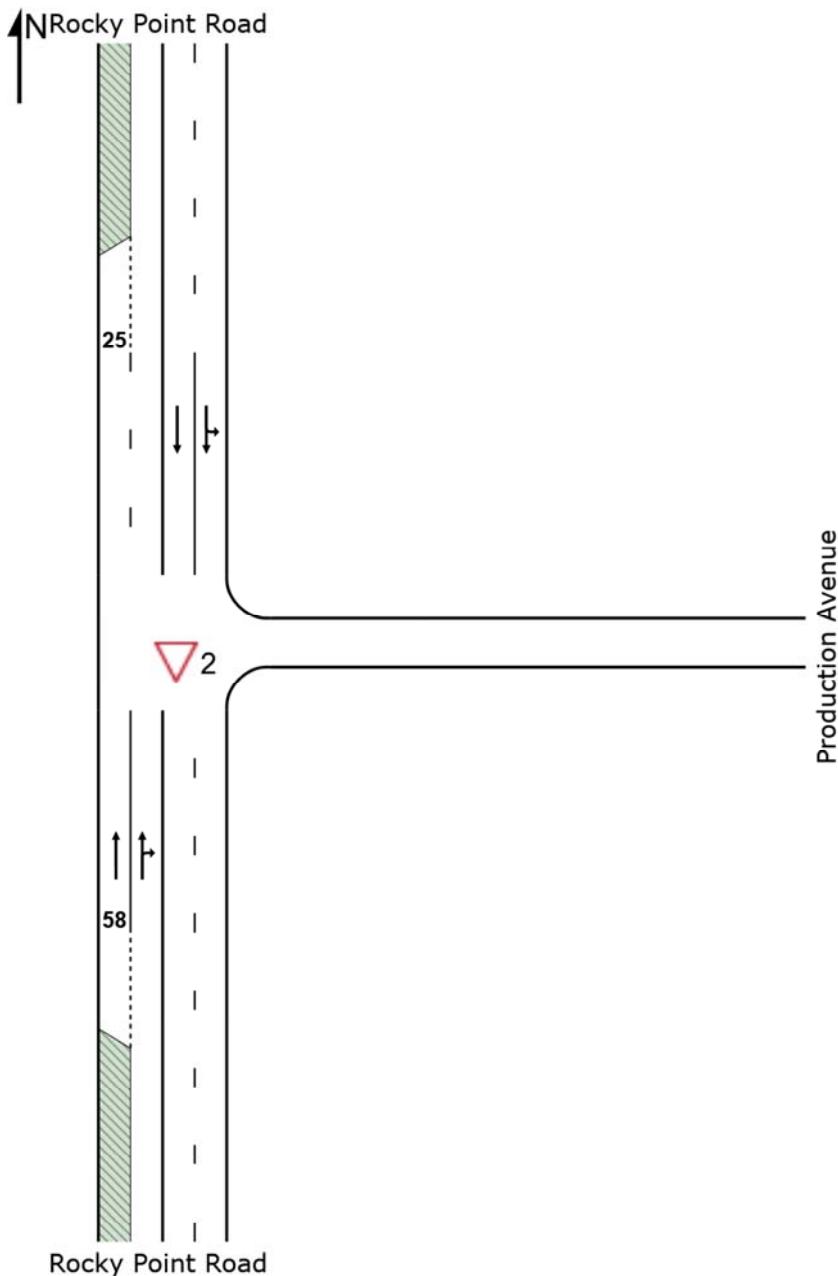
Organisation: TRAFFIX PTY LTD | Processed: Tuesday, 25 July 2017 6:13:01 PM

Project: \\192.168.3.1\ldata\Synergy\Projects\16\16.199\Modelling\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

SITE LAYOUT

▽ Site: 2 [PM FU - Rocky Point Road x Production Avenue - One way]

Residential DA + Approved Commercial + Childcare
T-intersection: Rocky Point Road x Production Avenue
Period: PM
Giveaway / Yield (Two-Way)



MOVEMENT SUMMARY

▽ Site: 2 [PM FU - Rocky Point Road x Production Avenue - One way]

◆◆ Network: 2 [PM FU - Residential DA+Childcare +Commercial - Oneway Scenario]

Residential DA + Approved Commercial + Childcare
T-intersection: Rocky Point Road x Production Avenue
Period: PM
Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Arrival Flows Total	HV	Deg. Satn	Average Delay v/c	Level of Service sec	95% Back of Queue Vehicles	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road													
2	T1	826	2.4	826	2.4	0.470	5.9	LOS A	11.6	82.9	0.77	0.03	32.5
3	R2	25	0.0	25	0.0	0.470	39.7	LOS C	11.6	82.9	1.00	0.04	40.8
Approach		852	2.3	852	2.3	0.470	6.9	NA	11.6	82.9	0.78	0.03	33.0
North: Rocky Point Road													
7	L2	104	1.0	104	1.0	0.446	5.6	LOS A	0.0	0.0	0.00	0.07	54.0
8	T1	1609	2.0	1609	2.0	0.446	0.0	LOS A	0.0	0.0	0.00	0.03	57.6
Approach		1714	2.0	1714	2.0	0.446	0.4	NA	0.0	0.0	0.00	0.04	57.0
All Vehicles		2565	2.1	2565	2.1	0.470	2.5	NA	11.6	82.9	0.26	0.03	46.1

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.

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

SITE LAYOUT

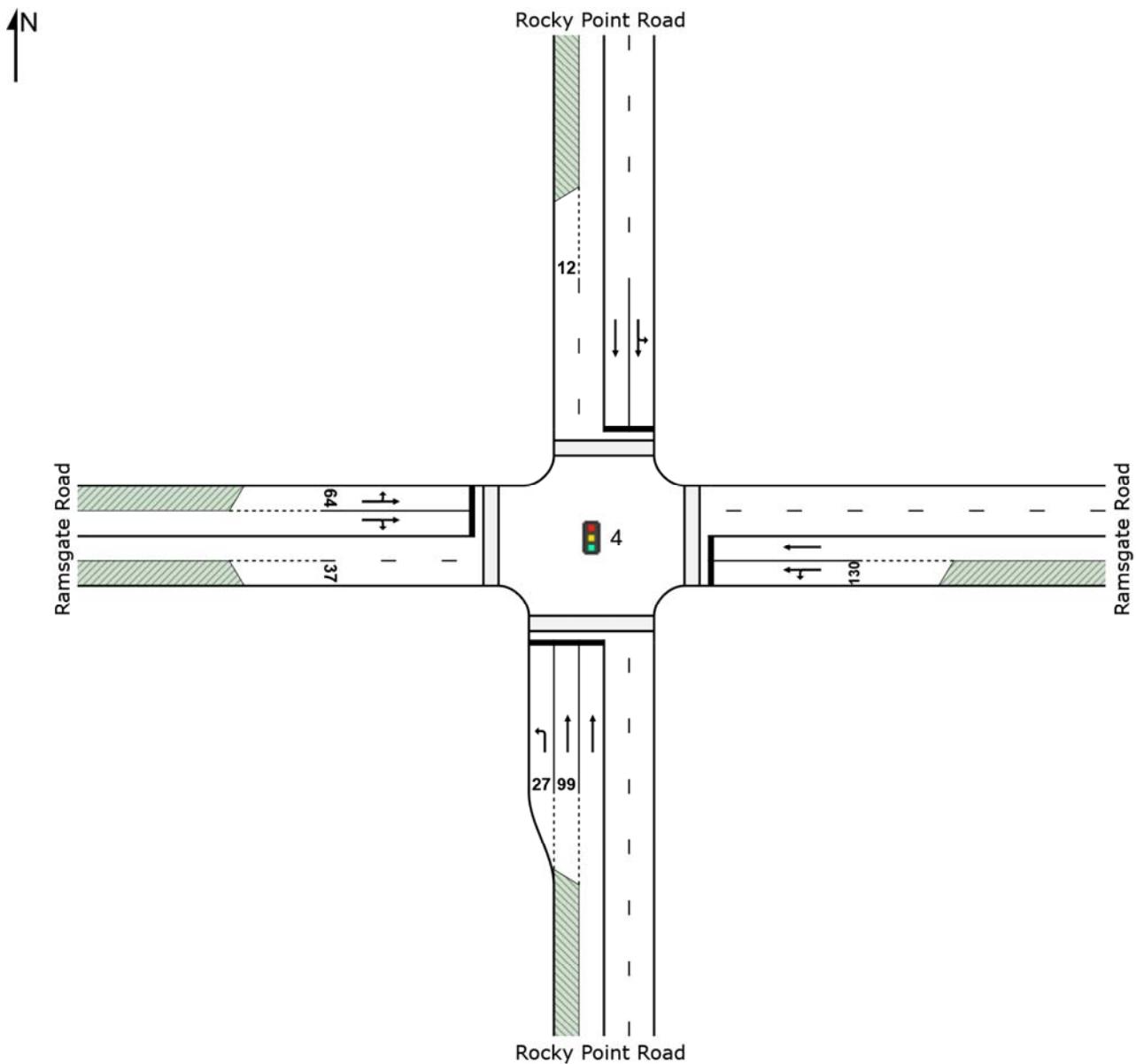
Site: 4 [PM FU - Rocky Point Road x Ramsgate Road - One way]

Residential DA + Approved Commercial + Childcare

Signalised Intersection: Rocky Point Road x Ramsgate Road

Period: PM

Signals - Fixed Time Coordinated



MOVEMENT SUMMARY

Site: 4 [PM FU - Rocky Point Road x Ramsgate Road - One way]

Network: 2 [PM FU - Residential DA+Childcare +Commercial - Oneway Scenario]

Residential DA + Approved Commercial + Childcare

Signalised Intersection: Rocky Point Road x Ramsgate Road

Period: PM

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles														
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average v/c	Delay sec	Level of Service	95% Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road														
1	L2	317	2.0	317	2.0	0.281	11.6	LOS A	4.2	29.9	0.25	0.65	45.5	
2	T1	786	2.4	786	2.4	0.834	28.9	LOS C	31.6	225.8	0.79	0.74	26.9	
Approach		1103	2.3	1103	2.3	0.834	23.9	LOS B	31.6	225.8	0.64	0.71	32.4	
East: Ramsgate Road														
4	L2	46	0.0	46	0.0	0.275	42.2	LOS C	6.6	46.4	0.83	0.71	30.9	
5	T1	623	1.0	623	1.0	0.958	68.3	LOS E	39.9	282.1	0.97	1.11	21.6	
Approach		669	0.9	669	0.9	0.958	66.5	LOS E	39.9	282.1	0.96	1.09	22.1	
North: Rocky Point Road														
7	L2	48	2.2	48	2.2	0.897	44.4	LOS D	42.5	303.0	0.95	0.96	33.5	
8	T1	1413	2.1	1413	2.1	0.897	38.7	LOS C	42.8	305.1	0.95	0.96	35.2	
Approach		1461	2.1	1461	2.1	0.897	38.9	LOS C	42.8	305.1	0.95	0.96	35.1	
West: Ramsgate Road														
10	L2	29	0.0	29	0.0	0.385	27.0	LOS B	12.7	92.6	0.69	0.61	28.2	
11	T1	313	5.4	313	5.4	0.385	21.5	LOS B	12.7	92.6	0.69	0.61	38.2	
12	R2	258	2.4	258	2.4	0.810	65.4	LOS E	14.6	104.5	1.00	1.06	23.1	
Approach		600	3.9	600	3.9	0.810	40.6	LOS C	14.6	104.5	0.82	0.81	29.2	
All Vehicles		3834	2.2	3834	2.2	0.958	39.7	LOS C	42.8	305.1	0.84	0.89	30.8	

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	53	40.9	LOS E	0.1	0.1	0.83	0.83	
P2	East Full Crossing	53	26.1	LOS C	0.1	0.1	0.66	0.66	
P3	North Full Crossing	53	38.5	LOS D	0.1	0.1	0.80	0.80	
P4	West Full Crossing	53	26.1	LOS C	0.1	0.1	0.66	0.66	
All Pedestrians		211	32.9	LOS D			0.74	0.74	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: TRAFFIX PTY LTD | Processed: Tuesday, 25 July 2017 6:13:01 PM

Project: \\192.168.3.1\tdata\Synergy\Projects\16\16.199\Modelling\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

SITE LAYOUT

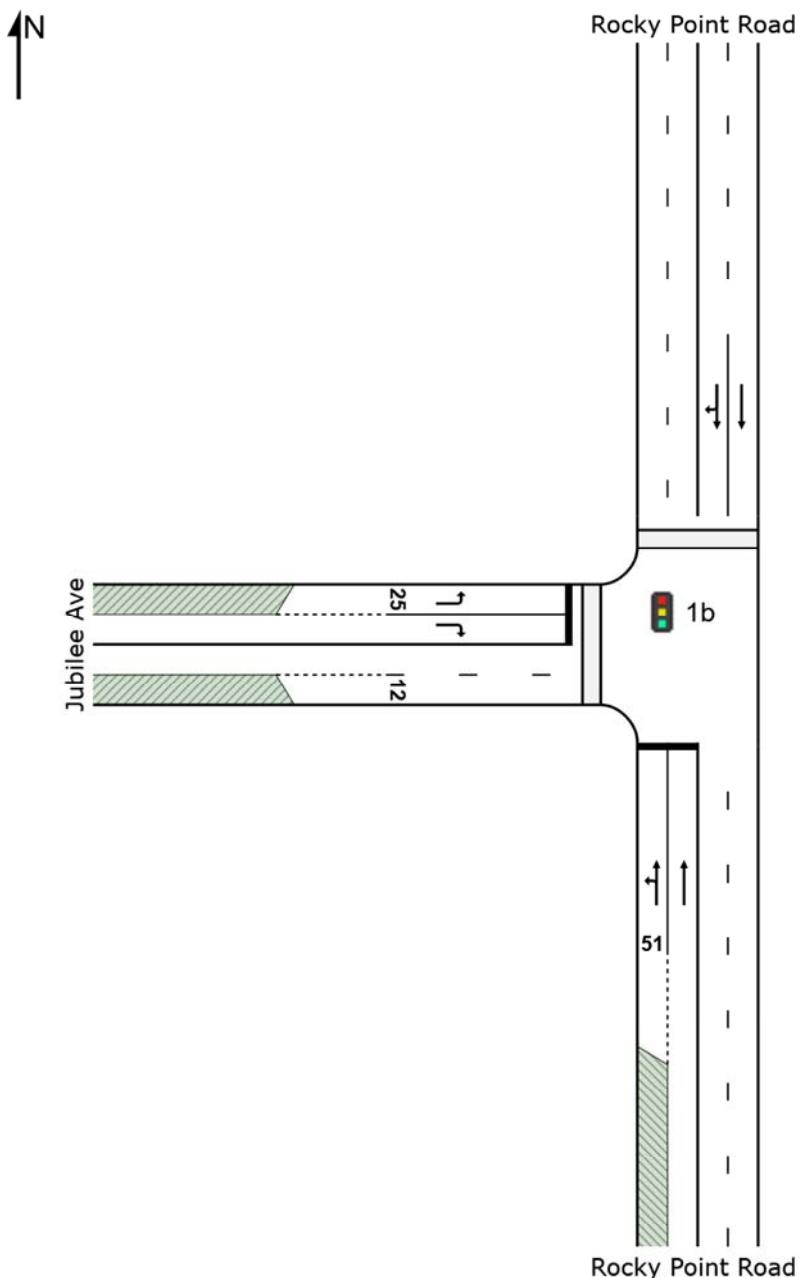
Site: 1b [PM FU Rocky Point Rd x Jubilee Ave]

Signalised Intersection: Rocky Point Rd x Jubilee Ave

Period: PM

Scenario: Future

Signals - Fixed Time Coordinated



MOVEMENT SUMMARY

Site: 1b [PM FU Rocky Point Rd x Jubilee Ave]

Network: 2 [PM FU - Residential DA+Childcare +Commercial]

Signalled Intersection: Rocky Point Rd x Jubilee Ave

Period: PM

Scenario: Future

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Common Control Group: CCG1 [Intersection of Rocky Point Road x Jubilee Avenue x Phillips Road]

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average Delay v/c	Level of Service	95% Back of Queue Vehicles	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Rocky Point Road													
1	L2	156	2.0	156	2.0	0.544	16.4	LOS B	10.0	71.0	0.40	0.48	35.5
2	T1	740	2.3	740	2.3	0.544	11.5	LOS A	10.8	77.2	0.44	0.44	24.1
Approach		896	2.2	896	2.2	0.544	12.3	LOS A	10.8	77.2	0.43	0.45	27.2
North: Rocky Point Road													
8	T1	1460	2.2	1460	2.2	0.417	0.0	LOS A	0.0	0.0	0.00	0.04	53.4
9	R2	135	3.1	135	3.1	0.417	2.1	LOS A	0.0	0.0	0.00	0.09	51.1
Approach		1595	2.3	1595	2.3	0.417	0.2	LOS A	0.0	0.0	0.00	0.04	52.2
West: Jubilee Ave													
10	L2	81	1.3	81	1.3	0.220	49.1	LOS D	4.0	28.3	0.88	0.76	13.3
12	R2	245	0.4	245	0.4	0.692	51.4	LOS D	13.1	92.2	0.95	0.83	12.8
Approach		326	0.6	326	0.6	0.692	50.8	LOS D	13.1	92.2	0.93	0.82	12.9
All Vehicles		2817	2.1	2817	2.1	0.692	9.9	LOS A	13.1	92.2	0.24	0.26	23.0

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	53	44.3	LOS E	0.2	0.2	0.86	0.86
P4	West Full Crossing	53	16.6	LOS B	0.1	0.1	0.53	0.53
All Pedestrians		105	30.4	LOS D			0.69	0.69

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

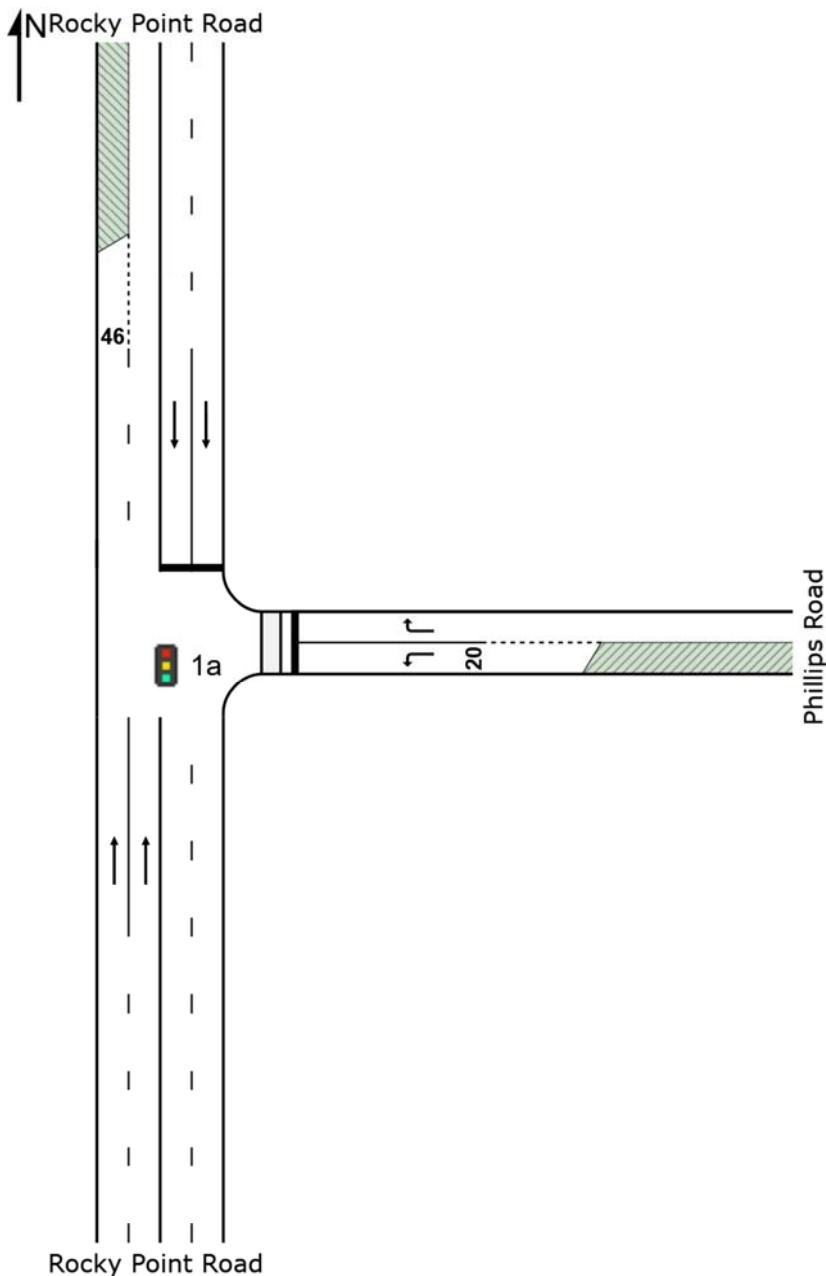
Site: 1a [PM FU Rocky Point Rd x Phillips Rd]

Signalised Intersection: Rocky Point Rd x Phillips Rd

Period: PM

Scenario: Future

Signals - Fixed Time Coordinated



MOVEMENT SUMMARY

Site: 1a [PM FU Rocky Point Rd x Phillips Rd]

Network: 2 [PM FU - Residential DA+Childcare +Commercial]

Signalled Intersection: Rocky Point Rd x Phillips Rd

Period: PM

Scenario: Future

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Common Control Group: CCG1 [Intersection of Rocky Point Road x Jubilee Avenue x Phillips Road]

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Total	Flows HV	Arrival Total	Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance m	Prop. Queued	Effective Stop per veh	Average Speed km/h
South: Rocky Point Road													
2	T1	740	2.3	740	2.3	0.300	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		740	2.3	740	2.3	0.300	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
East: Phillips Road													
4	L2	86	1.2	86	1.2	0.703	69.6	LOS E	5.4	37.9	1.00	0.83	12.2
6	R2	47	0.0	47	0.0	0.383	66.4	LOS E	2.8	19.6	0.99	0.74	25.2
Approach		134	0.8	134	0.8	0.703	68.5	LOS E	5.4	37.9	1.00	0.80	17.7
North: Rocky Point Road													
8	T1	1503	2.4	1503	2.4	0.701	13.6	LOS A	23.2	165.7	0.58	0.53	42.4
Approach		1503	2.4	1503	2.4	0.701	13.6	LOS A	23.2	165.7	0.58	0.53	42.4
All Vehicles		2377	2.3	2377	2.3	0.703	12.4	LOS A	23.2	165.7	0.42	0.38	43.4

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped	
P2	East Full Crossing	53	14.0	LOS B	0.1	0.1	0.48	0.48	
All Pedestrians		53	14.0	LOS B			0.48	0.48	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

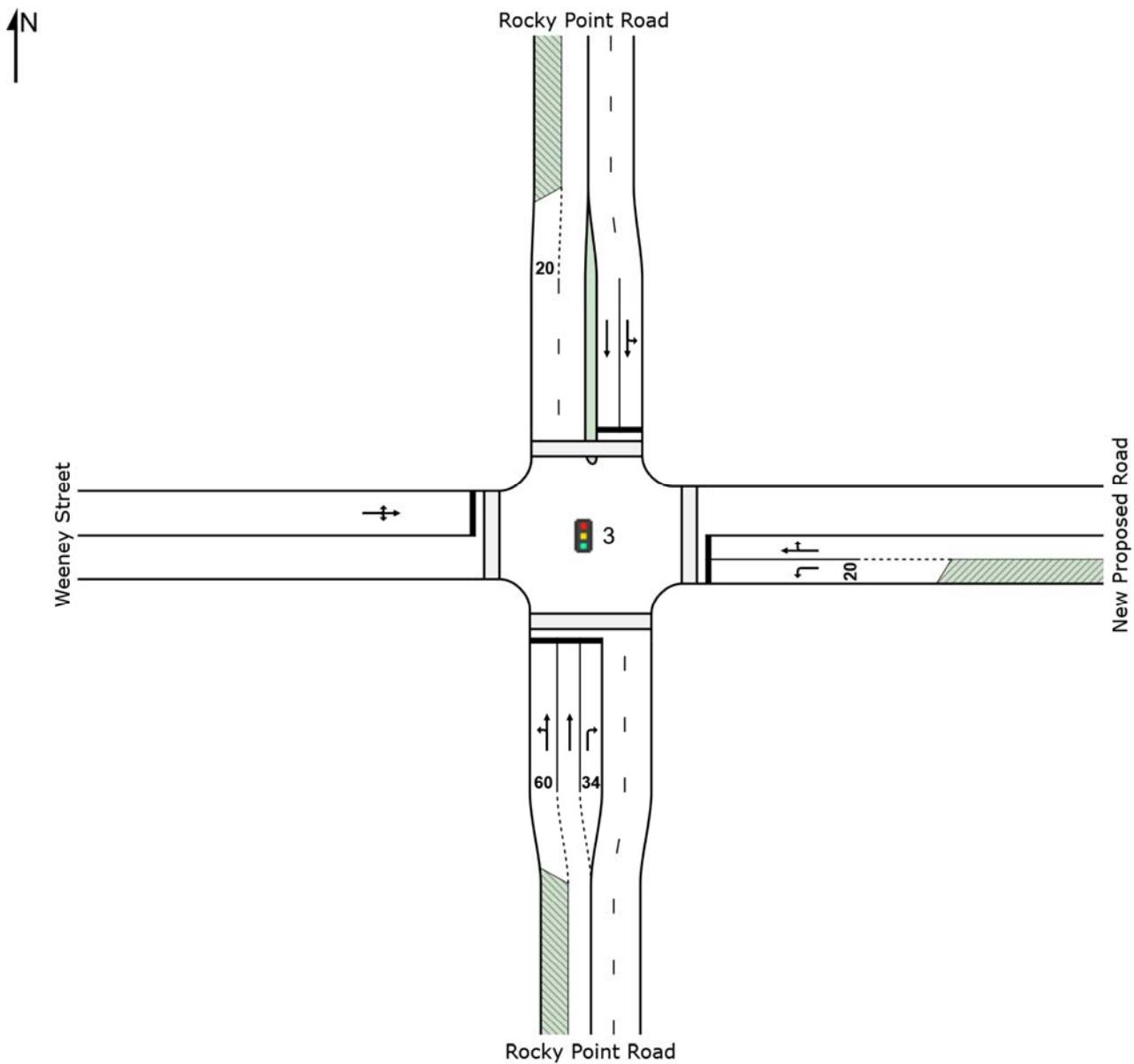
Site: 3 [PM FU Rocky Point Rd x Weeney St x New Proposed Road]

Intersection: Rocky Point Rd x Weeney St x New Proposed Road

Period: PM

Scenario: FU without Left Turn Deceleration Lane

Signals - Fixed Time Coordinated



MOVEMENT SUMMARY

Site: 3 [PM FU Rocky Point Rd x Weeney St x New Proposed Road]

Network: 2 [PM FU - Residential DA+Childcare +Commercial]

Intersection: Rocky Point Rd x Weeney St x New Proposed Road

Period: PM

Scenario: FU without Left Turn Deceleration Lane

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	
		veh/h	%	veh/h	%	v/c	sec	veh	m			
South: Rocky Point Road												
1	L2	19	5.6	19	5.6	0.100	6.1	LOS A	0.2	1.4	0.03	0.10 55.1
2	T1	766	2.6	766	2.6	0.466	0.6	LOS A	1.5	10.9	0.04	0.05 58.7
3	R2	40	0.0	40	0.0	0.440	69.6	LOS E	2.4	16.9	1.00	0.73 23.1
Approach		825	2.6	825	2.6	0.466	4.1	LOS A	2.4	16.9	0.09	0.08 53.2
East: New Proposed Road												
4	L2	87	0.0	87	0.0	0.177	40.9	LOS C	3.9	27.5	0.81	0.74 14.2
5	T1	28	0.0	28	0.0	0.919	73.8	LOS F	12.1	84.7	1.00	1.09 11.8
6	R2	144	0.0	144	0.0	0.919	78.3	LOS F	12.1	84.7	1.00	1.09 8.7
Approach		260	0.0	260	0.0	0.919	65.3	LOS E	12.1	84.7	0.94	0.98 10.4
North: Rocky Point Road												
7	L2	63	0.0	63	0.0	0.647	12.6	LOS A	15.2	108.3	0.37	0.37 39.7
8	T1	1482	2.2	1482	2.2	0.647	7.1	LOS A	15.3	109.2	0.37	0.36 32.2
Approach		1545	2.1	1545	2.1	0.647	7.3	LOS A	15.3	109.2	0.37	0.36 32.8
West: Weeney Street												
10	L2	25	0.0	25	0.0	0.165	52.0	LOS D	2.6	18.1	0.90	0.71 7.5
11	T1	20	0.0	20	0.0	0.165	47.4	LOS D	2.6	18.1	0.90	0.71 16.1
12	R2	5	0.0	5	0.0	0.165	52.0	LOS D	2.6	18.1	0.90	0.71 7.5
Approach		51	0.0	51	0.0	0.165	50.2	LOS D	2.6	18.1	0.90	0.71 11.4
All Vehicles		2681	2.0	2681	2.0	0.919	12.7	LOS A	15.3	109.2	0.35	0.34 33.8

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	53	52.4	LOS E	0.2	0.2	0.94	0.94	
P2	East Full Crossing	53	12.2	LOS B	0.1	0.1	0.45	0.45	
P3	North Full Crossing	53	51.5	LOS E	0.2	0.2	0.93	0.93	
P4	West Full Crossing	53	11.7	LOS B	0.1	0.1	0.44	0.44	
All Pedestrians		211	31.9	LOS D			0.69	0.69	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: TRAFFIX PTY LTD | Processed: Friday, 4 August 2017 9:09:58 AM

Project: \\192.168.3.1\ldata\Synergy\Projects\16\16.199\Modelling\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7

SITE LAYOUT

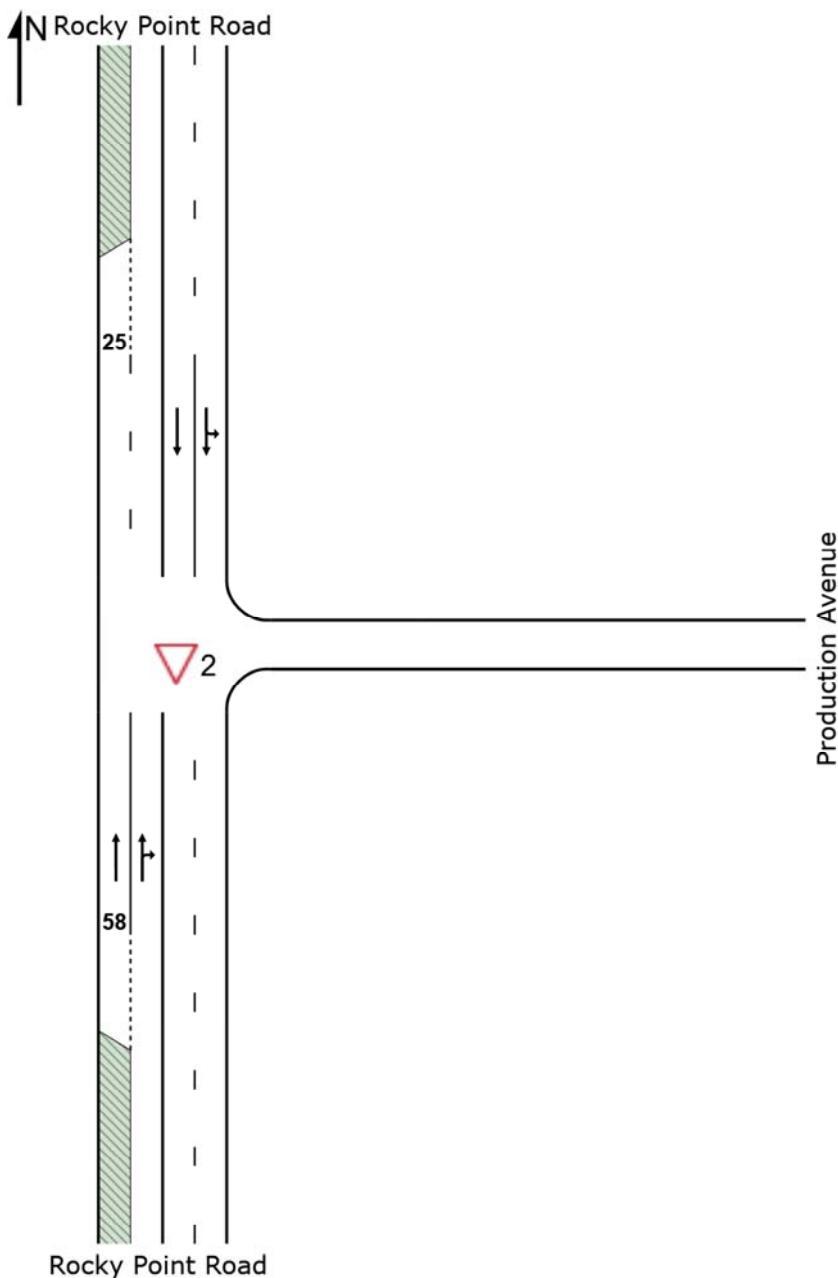
▽ Site: 2 [PM FU Rocky Point Road x Production Avenue]

T-intersection: Rocky Point Road x Production Avenue

Period: PM

Scenario: Future

Giveaway / Yield (Two-Way)



MOVEMENT SUMMARY

▽ Site: 2 [PM FU Rocky Point Road x Production Avenue]

◆◆ Network: 2 [PM FU - Residential DA+Childcare +Commercial]

T-intersection: Rocky Point Road x Production Avenue

Period: PM

Scenario: Future

Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		veh/h	%	veh/h	%	v/c	sec		veh	m			
South: Rocky Point Road													
2	T1	899	2.2	899	2.2	0.501	5.8	LOS A	12.7	90.5	0.77	0.03	32.7
3	R2	25	0.0	25	0.0	0.501	41.5	LOS C	12.7	90.5	1.00	0.04	41.0
Approach		924	2.2	924	2.2	0.501	6.8	NA	12.7	90.5	0.78	0.03	33.2
North: Rocky Point Road													
7	L2	157	0.7	157	0.7	0.447	5.6	LOS A	0.0	0.0	0.00	0.11	53.4
8	T1	1557	2.1	1557	2.1	0.447	0.0	LOS A	0.0	0.0	0.00	0.05	56.6
Approach		1714	2.0	1714	2.0	0.447	0.5	NA	0.0	0.0	0.00	0.05	55.8
All Vehicles		2638	2.0	2638	2.0	0.501	2.7	NA	12.7	90.5	0.27	0.05	45.6

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.

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

SITE LAYOUT

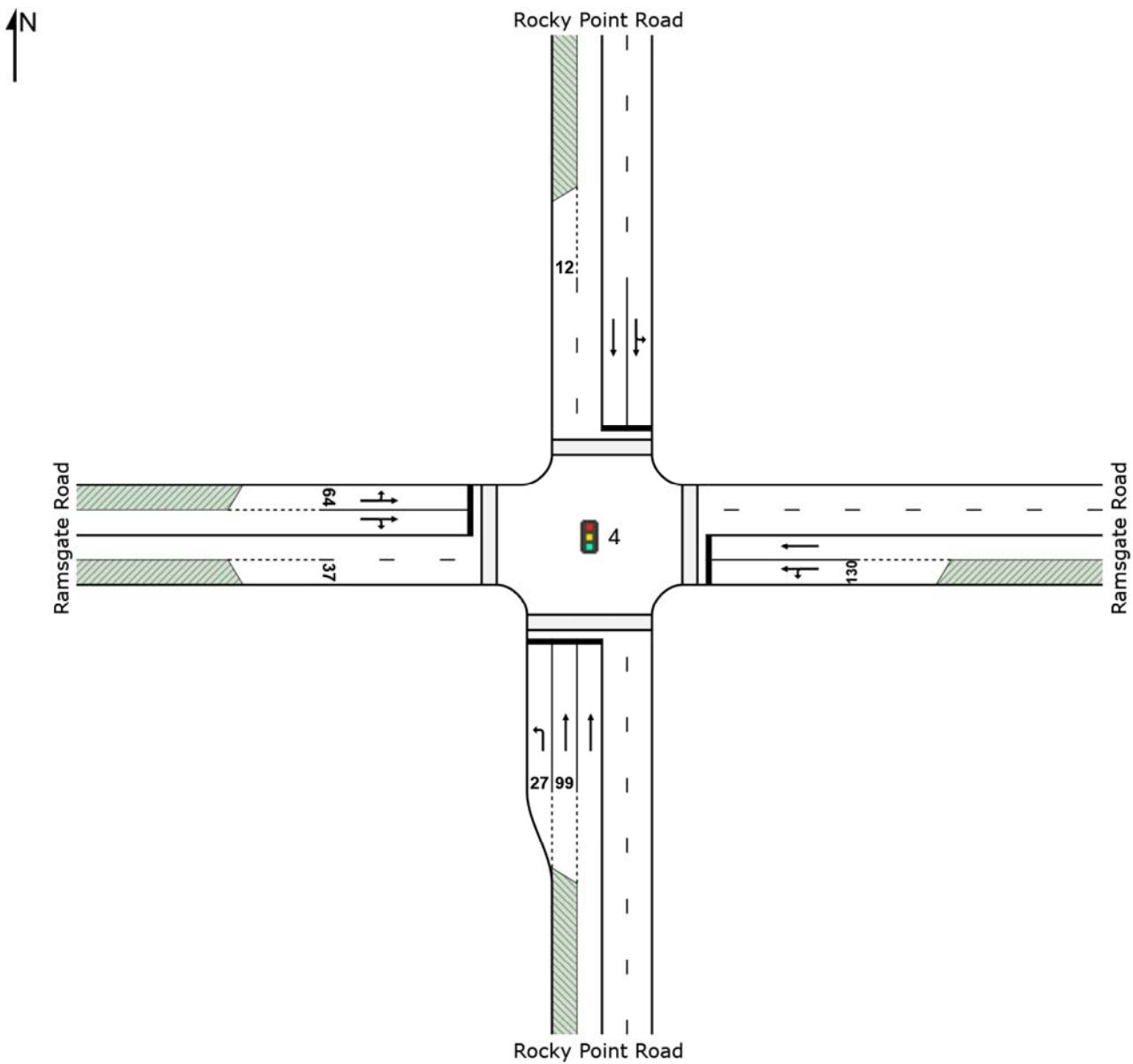
Site: 4 [PM FU Rocky Point Road x Ramsgate Road]

Signalised Intersection: Rocky Point Road x Ramsgate Road

Period: PM

Scenario: Future

Signals - Fixed Time Coordinated



MOVEMENT SUMMARY

Site: 4 [PM FU Rocky Point Road x Ramsgate Road]

Network: 2 [PM FU - Residential DA+Childcare +Commercial]

Signalised Intersection: Rocky Point Road x Ramsgate Road

Period: PM

Scenario: Future

Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	Arrival Flows HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		veh/h	%	veh/h	%	v/c	sec		veh	m			
South: Rocky Point Road													
1	L2	317	2.0	317	2.0	0.281	11.6	LOS A	4.2	29.9	0.25	0.65	45.5
2	T1	786	2.4	786	2.4	0.834	28.9	LOS C	31.6	225.8	0.79	0.74	26.9
Approach		1103	2.3	1103	2.3	0.834	23.9	LOS B	31.6	225.8	0.64	0.71	32.4
East: Ramsgate Road													
4	L2	46	0.0	46	0.0	0.275	42.2	LOS C	6.6	46.4	0.83	0.71	30.9
5	T1	623	1.0	623	1.0	0.958	68.3	LOS E	39.9	282.1	0.97	1.11	21.6
Approach		669	0.9	669	0.9	0.958	66.5	LOS E	39.9	282.1	0.96	1.09	22.1
North: Rocky Point Road													
7	L2	48	2.2	48	2.2	0.897	44.4	LOS D	42.5	303.0	0.95	0.96	33.5
8	T1	1413	2.1	1413	2.1	0.897	38.7	LOS C	42.8	305.1	0.95	0.96	35.2
Approach		1461	2.1	1461	2.1	0.897	38.9	LOS C	42.8	305.1	0.95	0.96	35.1
West: Ramsgate Road													
10	L2	29	0.0	29	0.0	0.385	27.0	LOS B	12.7	92.6	0.69	0.61	28.2
11	T1	313	5.4	313	5.4	0.385	21.5	LOS B	12.7	92.6	0.69	0.61	38.2
12	R2	258	2.4	258	2.4	0.810	65.4	LOS E	14.6	104.5	1.00	1.06	23.1
Approach		600	3.9	600	3.9	0.810	40.6	LOS C	14.6	104.5	0.82	0.81	29.2
All Vehicles		3834	2.2	3834	2.2	0.958	39.7	LOS C	42.8	305.1	0.84	0.89	30.8

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.0 %

Number of Iterations: 5 (maximum specified: 10)

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	53	40.9	LOS E	0.1	0.1	0.83	0.83	
P2	East Full Crossing	53	26.1	LOS C	0.1	0.1	0.66	0.66	
P3	North Full Crossing	53	38.5	LOS D	0.1	0.1	0.80	0.80	
P4	West Full Crossing	53	26.1	LOS C	0.1	0.1	0.66	0.66	
All Pedestrians		211	32.9	LOS D			0.74	0.74	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: TRAFFIX PTY LTD | Processed: Friday, 4 August 2017 9:09:58 AM

Project: \\192.168.3.1\tdata\Synergy\Projects\16\16.199\Modelling\16.199s03v03 TRAFFIX Network Model - RMS Comments.sip7