Appendix C: Future Base Traffic Model Development Report

Koala Park Traffic Management Study

Future Base Traffic Model Development

Document Issue History

Report File Name	Prepared	Reviewed	Issued	Date	Issued to
P5288.001R Koala Park Traffic Study_Future Base Model Development	▮▮▮▮	▮▮▮▮	▮▮▮▮	14/07/2022	Jake Matuzic, sent via: JMATUZIC@goldcoast.qld.gov.au
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1. INTRODUCTION

1.1 Overview

This traffic modelling report has been prepared to document the development and outcomes of the Aimsun future year base modelling as a part of the Koala Park Traffic Management Study commissioned by the City of Gold Coast Council (Council).

Council commissioned Bitzios Consulting to complete the study to inform investigations into the Burleigh Heads / Koala Park area, with a key focus on the Tabilban Street / Ikkina Road corridor. The corridor services the local residential catchments, however is also experiencing increased through traffic who use the route as a 'rat-run' to avoid the Gold Coast Highway-West Burleigh Road corridors.

The future Aimsun modelling facilitated detailed forecasts of medium and long-term traffic movements within the study area allowing for options testing of potential solutions for traffic operational issues currently experienced in the Koala Park precinct, focusing primarily on the Tabilban Street / Ikkina Road corridor.

This report follows on from the Base Model Calibration and Validation Report (*refer: P5288.002R Koala Park Traffic Study_Base Model Calibration_Validation*) which documented the outcomes of the 2021 Aimsun base model development.

1.2 Study Area

The study area is bounded by Tabilban Street (south), West Burleigh Road (west), Gold Coast Highway (north) and Julia Street (east) in Burleigh heads as shown indicatively in Figure 1.1.
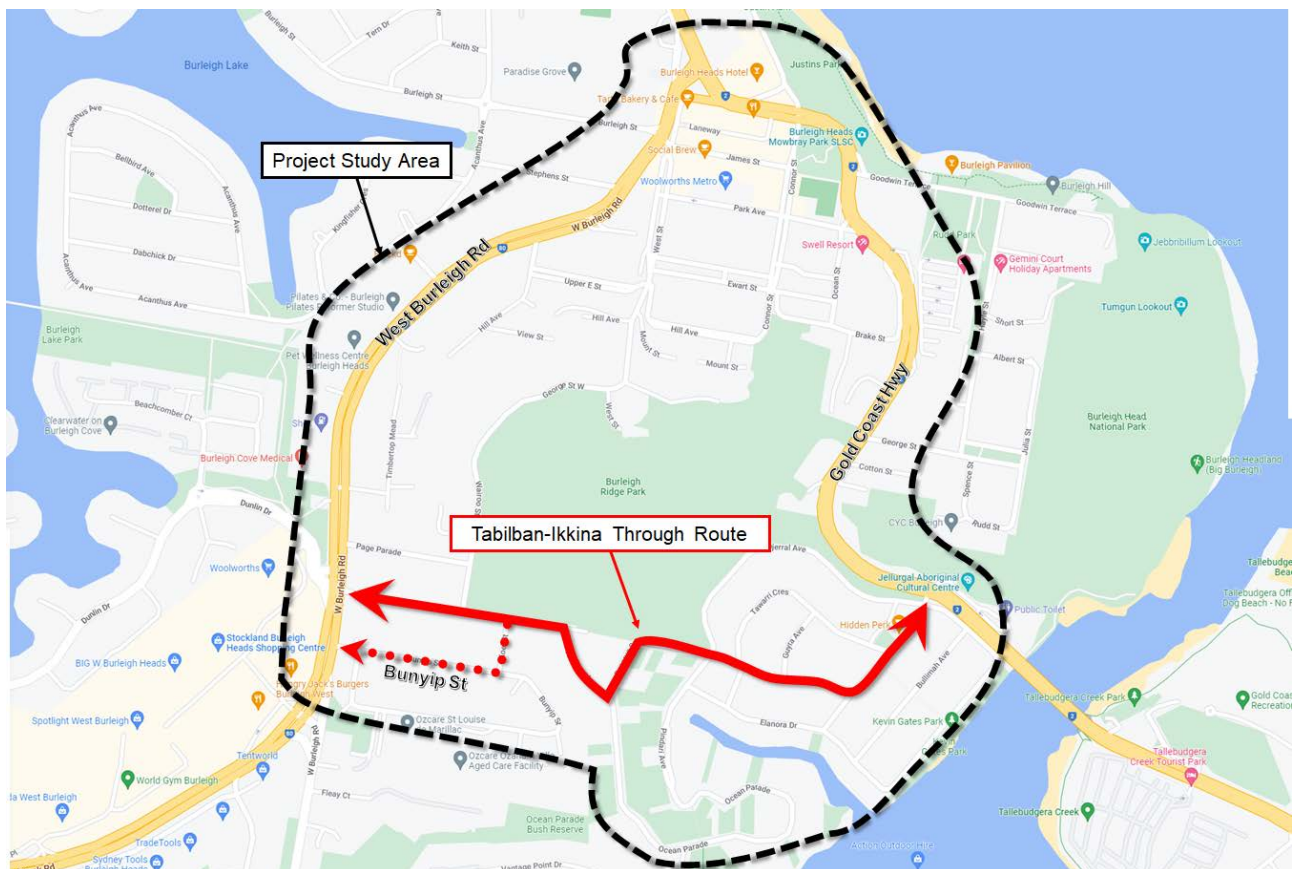
SOURCE: Google Maps (edited by Bitzios)

Figure 1.1: Study Area

1.3   Planning Context

The development of the future year models was informed through use of the *Gold Coast Strategic Transport Model – Multi Modal v2.2 PUG* (GCSTM-MM) for the development of traffic demands. This includes the relevant infrastructure and land use planning forecast into the future years by road authorities. For network development, key pieces of transport infrastructure and their timing of delivery were included in the assessment as follows:

- Gold Coast Light Rail Stage 3 (GCLR3): *assumed operational by 2025*
- Pacific Motorway Varsity Lakes to Tugun (M1 VL2T): *assumed operational by 2025,* including:
    - Widening 10km of the M1 from 2 to a minimum of 3 lanes in both directions
    - Constructing a new two-way western service road between Tallebudgera (Exit 89) and Palm Beach (Exit 92) and a new bridge over Tallebudgera Creek connecting the new western service road
    - Access to the service road and the M1 via Nineteenth Avenue
- Gold Coast Light Rail Stage 4 (GCLR4): *assumed operational by 2041 design scenario.*

The timing of the above key pieces of infrastructure are based on current estimated timing published on the Department of Transport and Main Roads (TMR) website at the time of undertaking this study, and transport infrastructure included in the GCSTM-MM. While it is noted that GCLR4 may be operational prior to 2041, this timing simply aligns with the modelled design years and scenarios.

1.4   Purpose of Assessment

The purpose of this report is to document future year Base Case model development and findings for the Burleigh Heads / Koala Park study area. A separate Options Analysis report documents the testing of different options completed for the study area for Base and Future Year scenarios.

Future year base models were developed for medium-term (2024 and 2026) and long-term (2041) design years. The key objectives of the future base model development were as follows:

- Develop a 2024 traffic model representing 'worst case' traffic conditions that are expected to occur prior to the construction of the GCLR3 and delivery of the M1 VL2T upgrade including:
    - Developing 2024 forecast traffic demands on the road network adopting appropriate traffic growth rates
    - Determining congestion and delays on key road links and critical intersections with the increased traffic
    - Evaluating any change in driver decisions with increased traffic volumes on the network with particular consideration to the proportion / quantity of drivers using the 'rat-run' route though Tabilban-Ikkina
- Develop a 2026 traffic model representing expected traffic conditions following the construction of GCLR3 and M1 VL2T upgrade, including:
    - Developing 2026 forecast traffic demands from the GCSTM-MM including traffic re-distributions due to the planned transport infrastructure and demographic growth
    - Updating the modelled road network to incorporate the GCLR3 and associated changes to the surrounding road network and public transport services
    - Identifying key changes to congestion and traffic flow through the study area following construction of the GCLR3 and M1 VL2T and determine any corresponding changes in driver decisions / route choice
- Develop a 2041 traffic model representing expected traffic conditions following the construction of GCLR 3, GCLR4 and M1 VL2T, including:
    - Developing 2041 forecast traffic demands from the GCSTM-MM including traffic re-distributions due to the planned transport infrastructure
    - Updating the modelled road network to incorporate the GCLR3 and associated changes to the surrounding road network and public transport services
    - Identifying key changes to congestion and traffic flow through the study area following construction of the GCLR3, GCLR4 and M1 VL2T and determine any corresponding changes in driver decisions / route choice

The key findings for the above objectives are detailed herein and were used to inform Options scoping, development and analysis.

2. STRATEGIC (EMME) MODELLING

2.1 Overview

The *Gold Coast Strategic Transport Model – Multi Modal (GCSTM-MM) v2.2 PUG* was supplied by Council and used to determine demand forecasts for input into the developed Aimsun traffic models. Demand forecasts were adopted from a cordon of the 2021, 2026 and 2041 GCSTM-MM models which were unchanged from the strategic models supplied by Council.

A snapshot of the study area and relevant zones, zone connectors and links is shown in Figure 2.1.
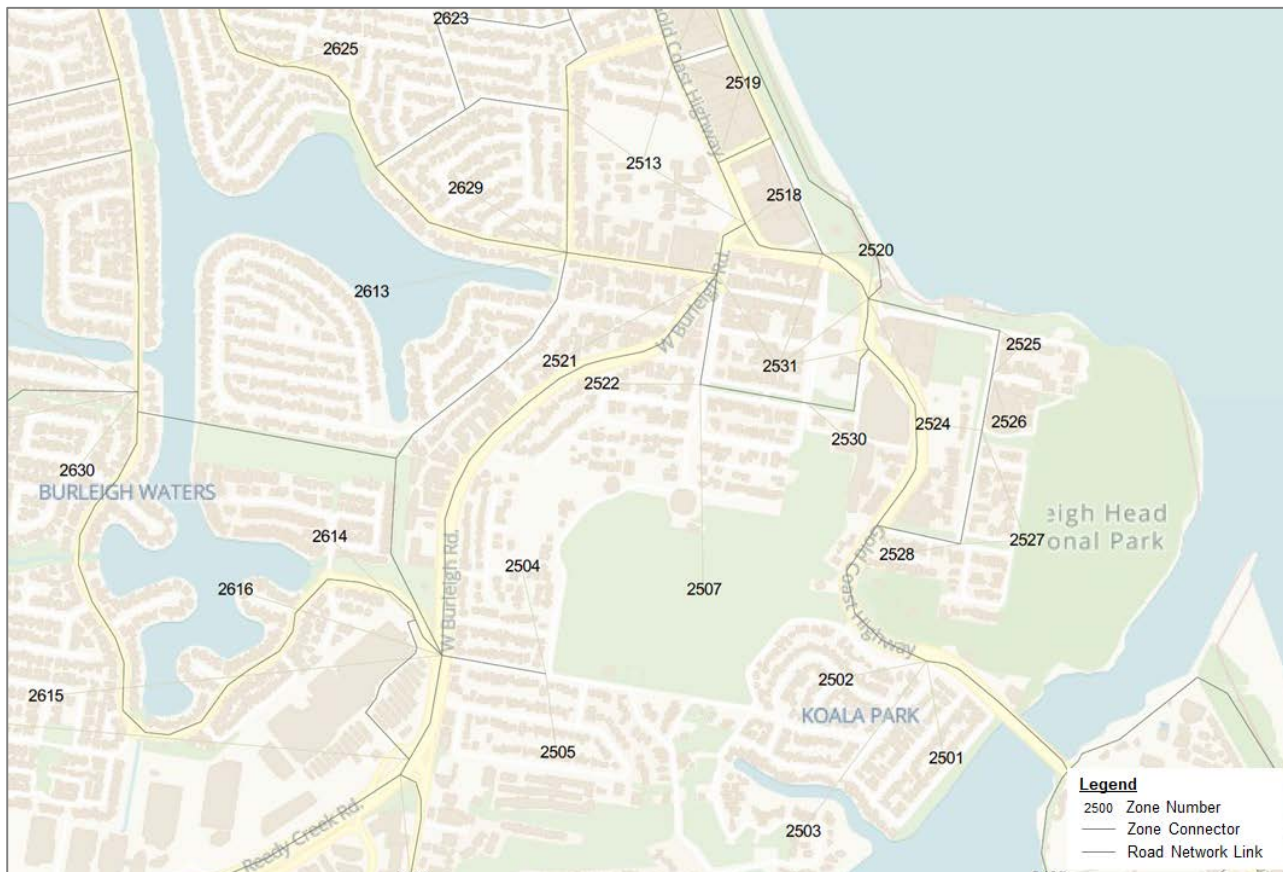
SOURCE: City of Gold Coast Council, GCSTM-MM v2.2 PUG

Figure 2.1: **Study Area Network and Zones**

2.2 Transport Network Inclusions

The future year model networks included the following key pieces of transport infrastructure (relevant to the Koala Park study area).

Table 2.1: **Future Year Strategic Model – Network Inclusions**

Scenario	Network Inclusions
2026 GCSTM v2.2 Base	▪ Gold Coast Light Rail Stage 3 (GCLR3) ▪ Pacific Motorway Varsity Lakes to Tugun (M1 VL2T)
2041 GCSTM v2.2 Base	▪ Gold Coast Light Rail Stage 3 (GCLR3) ▪ Pacific Motorway Varsity Lakes to Tugun (M1 VL2T) ▪ Gold Coast Light Rail Stage 4 (GCLR4)

2.3 Demographics

Table 2.2 summarises the total population, education and employment demographics for each of the 2021, 2026 and 2041 Base land use scenarios within study area. This includes the percentage change for each design year compared to 2021 Base.

Table 2.2: Demographic Statistics

Scenario	Population		Education		Employment	
	Total	% Change	Total	% Change	Total	% Change
2021 GCSTM v2.2 Base	4,194	-	156	-	2,858	-
2026 GCSTM v2.2 Base	4,674	+11.4%	174	+11.5%	3,070	+7.4%
2041 GCSTM v2.2 Base	5,633	+34.3%	203	+30.1%	3,528	+23.4%

The strategic model shows a consistent increase in demographics within the study area over the medium-term (5 years) and long-term (20 years) summarised as follows:

- 2026 Medium-term (5 years):
  - Population and education increased by approximately 11.5%
  - Employment increased by approximately 7.5%

- 2041 Long-term (20 years):
  - Population and education increased by approximately 30-35%%
  - Employment increased by approximately 23%

The outputs show the study area is expected to experience consistent growth in key demographics which are inherently accounted for within the cordon matrices extracted for model development (refer Section 3.2 for further details).

2.4 Traffic Volumes

The study area (and wider Gold Coast network) was found to experience population and employment growth, however; conversely traffic volumes through the study area were found to be reduced in the strategic model over the medium-to-long-term.

Several factors beyond population and employment are forecast to have significant impacts on travel behaviour in the Burleigh Heads area, most notably the construction of GCLR3, GCLR4 and completion of the M1 VL2T upgrade. Key influences of this infrastructure to vehicle movements in the study area were found to include:

- A mode shift from private vehicles to more public and active transport
- A change in private vehicle route choice away from the Gold Coast Highway with the higher impedance of Gold Coast Highway connections following the GCLR construction
- Traffic choosing the Nineteenth Avenue connection to the motorway given the M1 VL2T upgrade opposed to travelling through the study area.

The daily traffic volumes on the Gold Coast Highway and West Burleigh Road at study area extents are outlined in Table 2.3 with the forecast volume change from the 2021 base model shown.

Table 2.3: Strategic Model Daily Volume Comparison – Study Area Extents

Year	Gold Coast Highway North		West Burleigh Road		Gold Coast Highway South	
	Volume	% Change	Volume	% Change	Volume	% Change
2021	42,177	-	26,506	-	41,480	-
2026	31,290	-25.8%	23,660	-10.7%	28,297	-31.8%
2041	30,587	-27.5%	32,771	+23.6%	18,710	-54.9%

Daily volume changes forecast by the GCSTM-MM between 2021-2026 are shown in the difference plots in Figure 2.2, with changes between 2021-2041 shown in Figure 2.3.
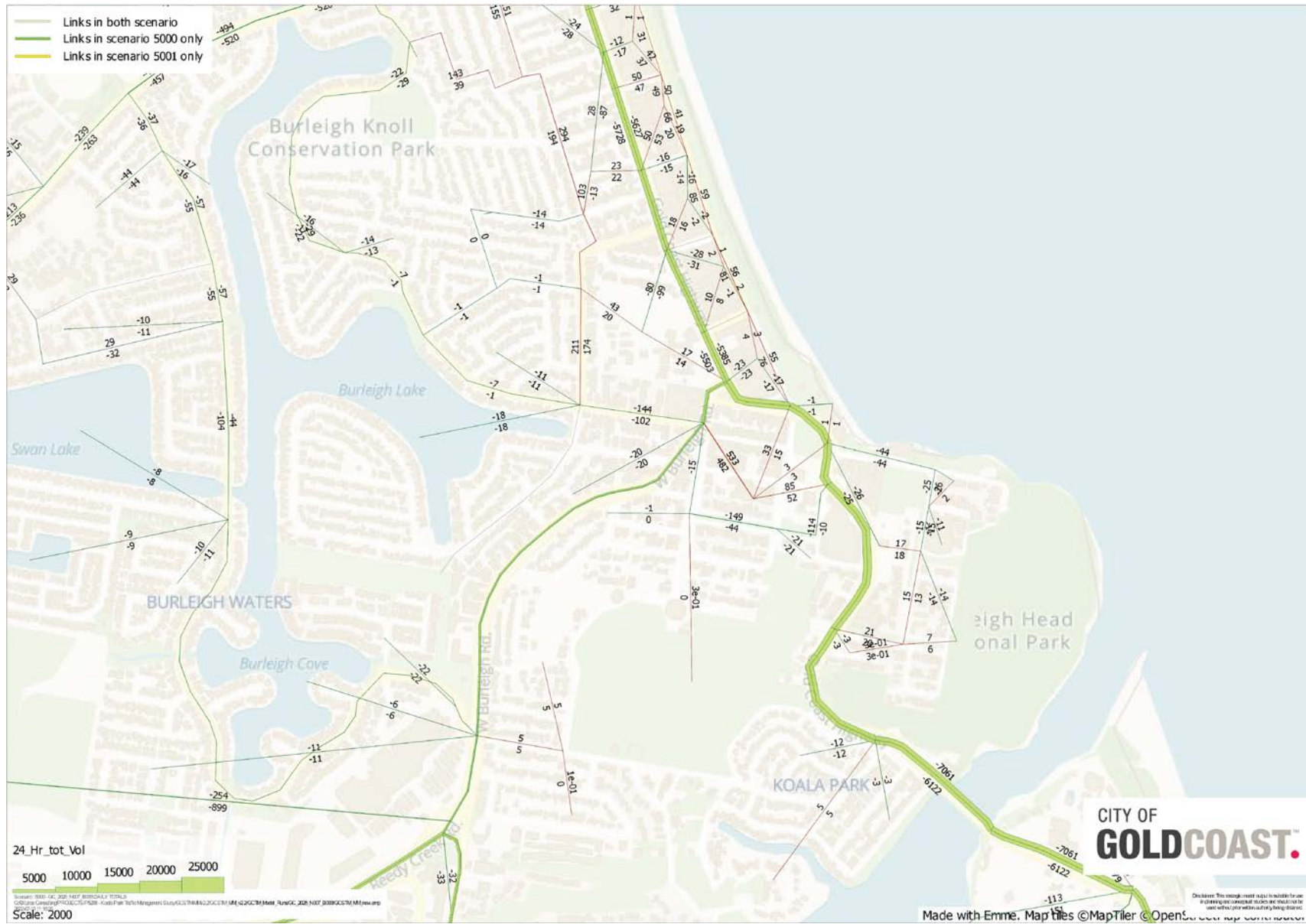
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NOTE: 'Green' difference bars represent a reduction in traffic volume, 'Red" difference bars represent an increase in traffic volume

Figure 2.2: **GCSTM-MM 2021 to 2026 Daily Difference Plot**
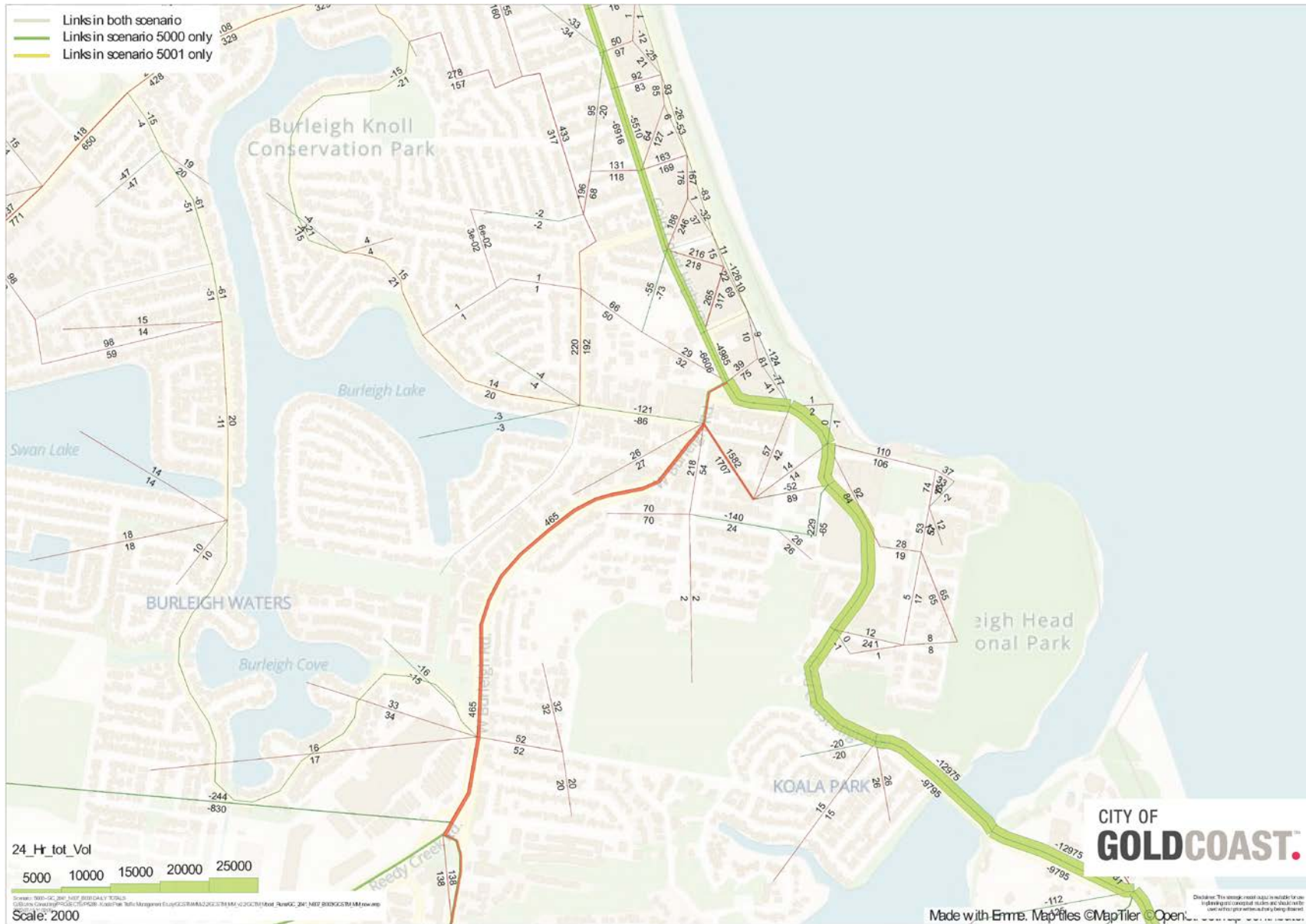
NOTE: 'Green' difference bars represent a reduction in traffic volume, 'Red" difference bars represent an increase in traffic volume

Figure 2.3: GCSTM-MM 2021 to 2041 Daily Difference Plot

The key changes in traffic volumes are summarised as follows:

- The implementation of GCLR3 and M1 VL2T in 2026 results in significant reductions compared to 2021 on the Gold Coast Highway ranging from 25-32%, and an approximate 11% reduction on West Burleigh Road. This is likely due to a combination of:
  - Modal shift to public and active transport with the introduction of GCLR3 and associated works
  - Redistribution of traffic to the Pacific Motorway given its increased capacity and additional connections
  - Redistribution of traffic avoiding the Gold Coast Highway due to GCLR3

- The implementation of GLCR4 south of Burleigh in the 2041 scenario results in a further significant reduction of approximately 55% on the Gold Coast Highway south compared to 2021. This is likely attributed to:
  - Modal shift to public and active transport with the introduction of GCLR4 and associated works
  - Redistribution of traffic avoiding the Gold Coast Highway south due to GCLR4

- The implementation of GCLR4 south of Burleigh in 2041 also shows an approximate 23% increase in volumes on West Burleigh Road compared to the Gold Coast Highway which is seeing in the order of 28-55% reduction. This may be attributed to:
  - A proportion of traffic previously using Gold Coast Highway south avoiding this route and travelling via West Burleigh Road instead

As shown, the current GCSTM-MM is forecasting some significant traffic volume changes in the future based on the analysis of the 2026 and 2041 networks. This quantum of traffic volume change could be considered aspirational, hence for the purpose of the Koala Park modelling study, an interim 2024 design year scenario was considered. This 2024 scenario adopts more conventional traffic growth rates (rather than forecast reductions) applied to the study area to allow consideration of a 'worst case' in terms of traffic volumes. The demand development is outlined in Section 3.2.

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3. AIMSUN MODEL DEVELOPMENT

3.1 Modelling Scenarios

Three (3) future year base model scenarios were developed and agreed with Council officers to consider medium to long-term forecasts, as well as short term growth.

Traffic modelling scenarios were developed for the following design years:

- **2024:** *Short-term, prior to GCLR3 and M1 VL2T, historical traffic growth applied*
- **2026:** *Medium-term, post GCLR3 and M1 VL2T, GCSTM-MM forecast demands applied*
- **2041:** *Long-term, post GCLR3, GCLR4 and M1 VL2T, GCSTM-MM forecast demands applied.*

3.2 Network Zoning System

The Aimsun network zoning system adopted in the future year base models were converted from GCSTM-MM zones to Aimsun zones as shown in Figure 3.1.
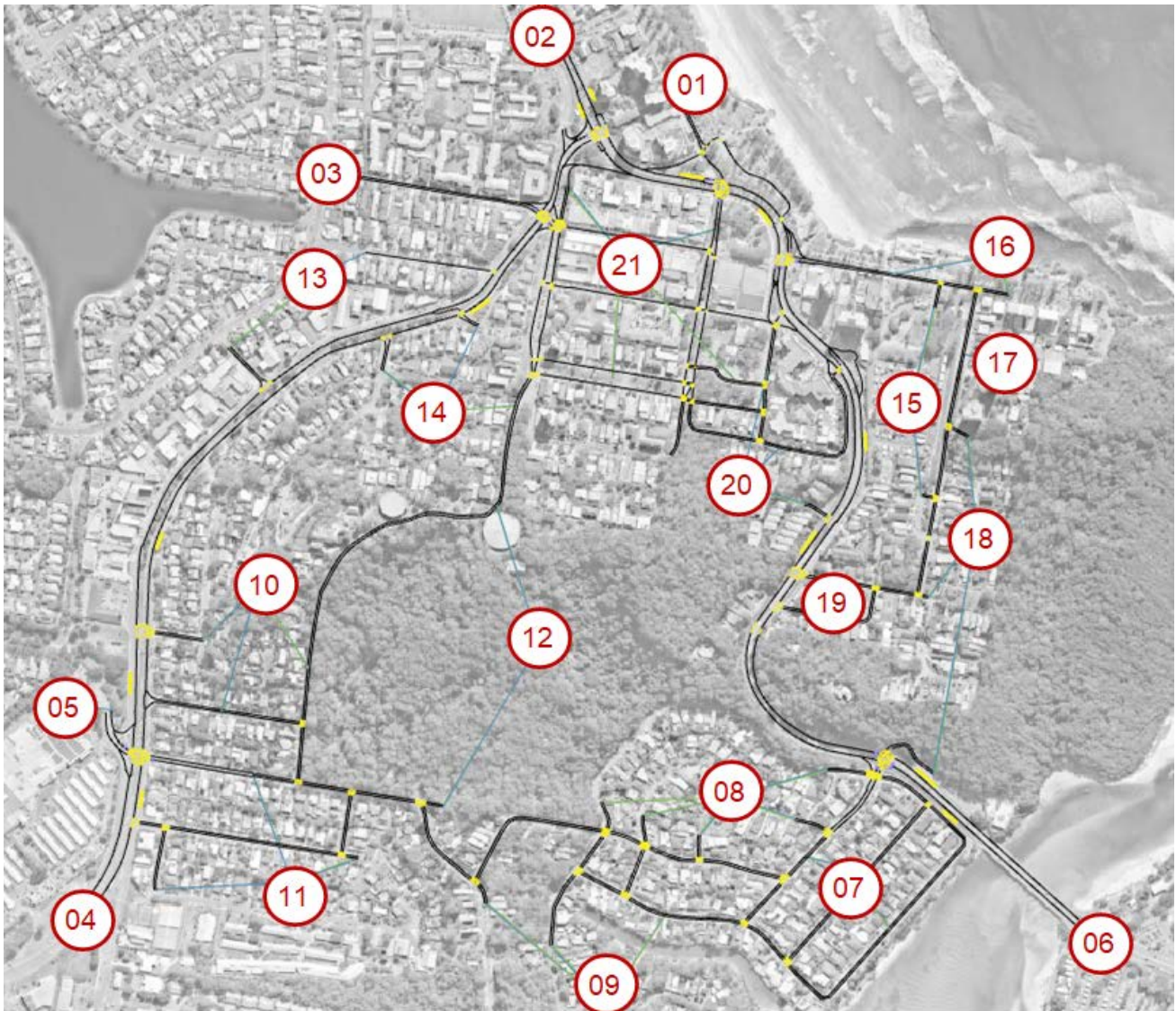
SOURCE: Nearmap

Figure 3.1: **Aimsun Network Zoning System**

A description of the above zoning system is provided in Table 3.1.

Table 3.1: **Aimsun Network Zoning Details**

Centroid	Name	Centroid	Name
Internal Zones			
1107	Bullimah Avenue Residential	1115	Burleigh Beach Tourist Park
1108	Tawarri Crescent Residential	1116	Burleigh Pavilion & Hill
1109	Ocean Parade Residential	1117	Nathan Street Apartments
1110	Timbertop Mead Residential	1118	Julia Street Residential
1111	Bunyip Street Residential	1119	Cotton Street Residential
1112	Burleigh Ridge Park	1120	Swell Resort & Surrounds
1113	West Burleigh Road Mixed-Use	1121	Burleigh Heads Town Centre
1114	Water Tower Residential		
External Zones			
1101	The Esplanade	1104	West Burleigh Road
1102	Gold Coast Highway North	1105	Dunlin Drive
1103	Burleigh Street	1106	Gold Coast Highway South

3.3 Demand Development

3.3.1 2024 Design Scenario

Traffic demands for the 2024 design scenario were determined by applying compounding annual growth rates (CAGR) to the validated / calibrated 2021 origin-destination (OD) matrices. The growth rates applied were determined based on a review of GCSTM-MM growth for internal study area zones, and historical growth sourced through Open Source Data from the Queensland Government.

The adopted growth rates applied to the 2021 OD matrices are outlined in Table 3.2.

Table 3.2: **2024 Design Scenario: Adopted Compounding Annual Growth Rates**

Growth Area	Description	CAGR
Internal Zones	Trips to/from internal zones in Koala Park determined via comparison of 2021 and 2041 demographic data incorporated in the GCSTM-MM	**0.77%**
External Zones	Trips between Gold Coast Highway external zones (1102 & 1106) to/from West Burleigh Road external zone (1104) based on historical traffic census data	**2.56%**
	Trips between Gold Coast Highway north (1102) to/from Gold Coast Highway south (1106) external zones based on historical traffic census data	**1.57%**

As detailed above, the 0.77% per annum compounding rate is considered consistent with an established, built-out area such as Koala Park, while still allowing for growth in demands based on potential future infill development.

Trips to and from external zones were determined from historical growth data sourced from the Queensland Government *Traffic Censes for the Queensland State-Declared Road Network* for the years 2010 and 2020. These growth rates are considered to represent the growth across the wider central Gold Coast Area resulting in higher growth of trips through the study area in comparison to trips to/from internal zones.

The above approach was discussed and agreed with Council prior to adoption.

3.3.2   2026 and 2041 Design Scenarios

Development of the 2026 and 2041 model demands was determined using cordon matrices extracted from the GCSTM-MM to determine the change between zone-to-zone OD movements to then be applied to the 2021 Aimsun model matrices.

Two (2) methods were considered for determining the change (delta) matrices, including:

- Absolute Change Method
- Relative (%) Change Method.

The basic calculation / equation of the **Absolute Change** method is summarised below (*Note, Negative OD values removed in Absolute Change method*):

$$Future\ Year\ Aimsun\ =\ 2021\ Aimsun\ +\ (Future\ Year\ GCSTM\ -\ 2021\ GCSTM)$$

The basic calculation / equation of the **Relative (%) Change** method is summarised below:

$$Future\ Year\ Aimsun\ =\ 2021\ Aimsun\ \times\ (Future\ Year\ GCSTM\ \div\ 2021\ GCSTM)$$

Application of the above methods resulted in the following Aimsun demand matrix totals.

Table 3.3:   2026 and 2041 Absolute Change Delta Matrix Analysis

Change Method	Demand Matrix Totals			Difference from 2021	
	2021	2026	2041	2021-2026	2021-2041
AM Peak					
Absolute Change	12,731	10,025	10,807	-2,706	-1,924
Relative Change		10,690	11,967	-2040	-763
			Difference	**665**	**1,160**
PM Peak					
Absolute Change	12,329	9,905	10,327	-2,424	-2,002
Relative Change		10,386	11,840	-1,943	-489
			Difference	**481**	**1,512**

As shown it was found that the Absolute Change method for determining Aimsun model demands resulted in a greater reduction from 2021 than the Relative (%) Change method.

The above information was presented to Council and agreed that the preferred method was the Relative (%) Change method. This was adopted and the 2026 and 2041 Aimsun demand matrices were developed using this methodology.

3.4   Transport Network Changes

3.4.1   2024 Network Updates

The 2024 Base model was developed to determine the impacts of future traffic growth on the existing network with respect to the key objectives of the study. This interim year was adopted as it represents a network prior to the delivery of GCLR3 and the M1 VL2T upgrades. As such, no updates were made to the 2024 Aimsun Base model beyond the traffic demand updates as defined above.

The road network of the 2024 Base model is therefore consistent with the 2021 Base model detailed in the Calibration and Validation report.

3.4.2   2026 Network Updates

The 2026 modelled network includes all road network changes associated with the proposed development of the GCLR 3. Updates to the transport network were based on the GCLR3A reference design plans prepared by Aurecon (*Drawings: 502438-1-10-05-DG-1100-GA-01018* and *502438-1-10-05-DG-1100-GA-01019*) dated January 2020.

The plans are consistent with the latest publicly available Gold Coast Light Rail – Stage 3 Reference Design Layout (*Drawing 502438-1-10-05-SK-00121*).

Key updates to the 2026 modelled road network are listed below:

1. Addition of the centre-running light rail line
2. Updates to the intersections of:
   - Gold Coast Highway / West Burleigh Road
   - West Burleigh Road / Lower Gold Coast Highway intersections
3. Updates to the Gold Coast Highway / Goodwin Terrace signalised intersection
4. Addition of the Burleigh Heads light rail station and adjacent bus stop interchange
5. Termination of the GCLR 3 light rail line immediately north of Brake Street.

The above 2026 Aimsun model network changes are illustrated in Figure 3.2.

Figure 3.2:   2026 Aimsun Network Inclusions

3.4.3 2041 Transport Network Updates

The 2041 road network has been updated to include all of the 2026 transport network updates above including all changes associated with the GCLR4 at the time of developing the models. The network updates are based on the latest available TMR concept plan and flythrough videos for the GCLR.

Key updates to the 2041 modelled network are listed below:

1. Continuation of the light rail line beyond Brake Street to the southern extent of the study area
2. Signalisation of the Gold Coast Highway / George Street E intersection
3. Closure of the Gold Coast Highway / Cotton Street intersection
4. Removal of the northern approach on the existing Gold Coast Highway / Ikkina Road intersection
5. Closure of the Ikkina Road / Djerral Avenue / Beelyu Street intersection
6. New 'Burleigh Head National Park' light rail station
7. New left-in / left-out signalised intersection access to the Jellurgal Aboriginal Cultural Centre.

The above 2041 Aimsun model network changes are illustrated in Figure 3.3.
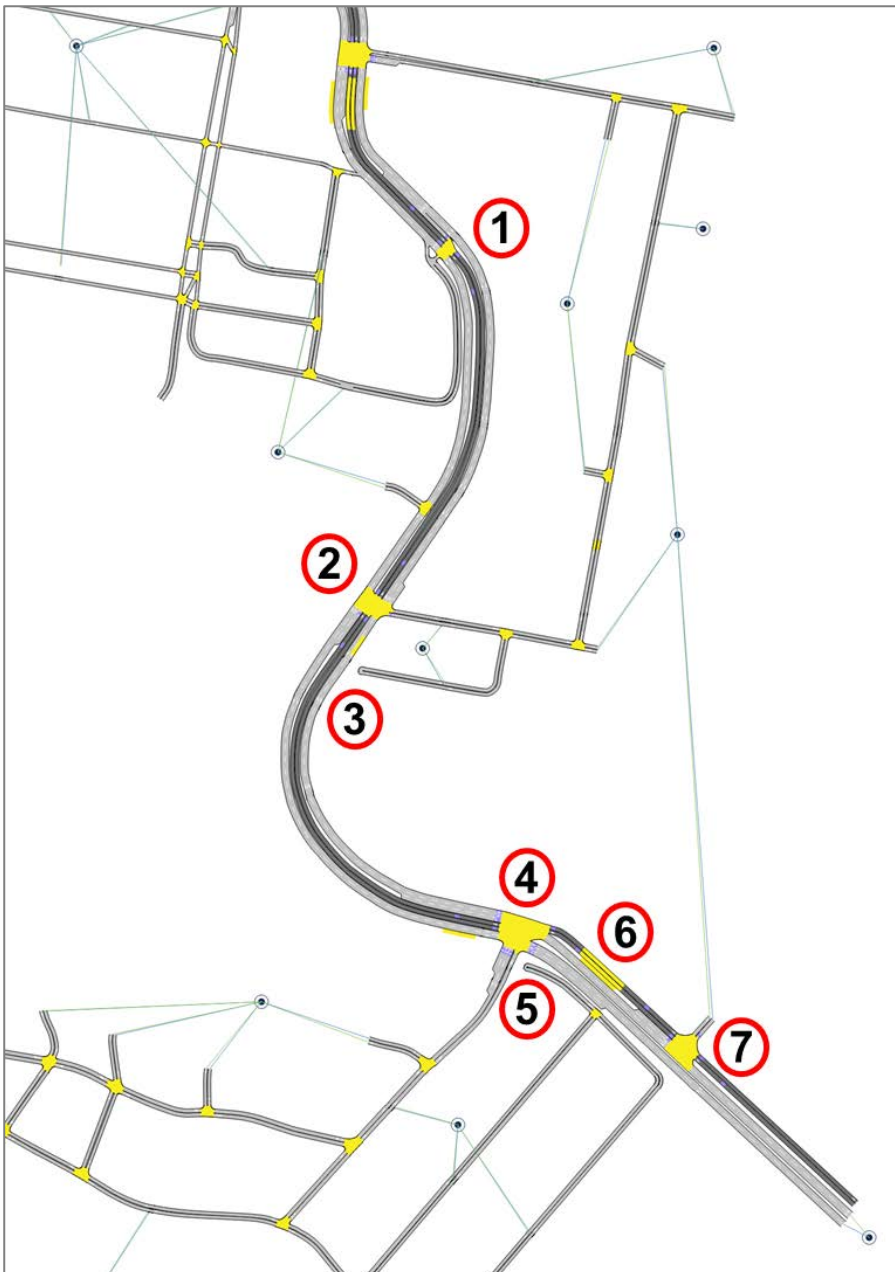
Figure 3.3: **2041 Aimsun Road Network Inclusions**

4. AIMSUN MODELLING RESULTS

4.1 Overview

The future base Aimsun models were developed based on the methodology outlined above and tested for the relevant modelling design scenarios for 2024, 2026 and 2041 to:

- Determine congestion and delays on key links and critical intersections with the change in traffic
- Evaluate change in driver decisions with changed traffic volumes on the network
- Consider the proportion / quantity of drivers using the 'rat-run' route though Tabilban-Ikkina
- Inform options scoping and options development to address key network issues.

No other network changes or options were considered as part of this future base testing outside of those outlined in Section 3.4.

4.2 Network Statistics

A summary of key Aimsun network statistics across the study area are detailed in Table 4.1. These statistics allow an overarching review to show subtle differences between each design scenario.

Table 4.1:   Aimsun Base Model Network Statistic Comparison

Statistic	2021 Base	Design Scenario		
		2024 Base	2026 Base	2041 Base
AM Peak				
Input Vehicle Count	12,822 vehicles	13,525 vehicles	10,886 vehicles	12,110 vehicles
Total Vehicle Hours (VHT)	646.6 hours	711.34 hours	511 hours	667.4 hours
Total Vehicle km (VKT)	20,327 km	21,755 km	15,856 km	17,463 km
Average Speed (km/h)	34.5 km/h	33.7 km/h	34 km/h	30 km/h
PM Peak				
Input Vehicle Count	12,369 vehicles	12,762 vehicles	10,630 vehicles	11,836 vehicles
Total Vehicle Hours (VHT)	631.9 hours	656.2 hours	487.4 hours	628.8 hours
Total Vehicle km (VKT)	20,155 km	20,780 km	15,891 km	17,217 km
Average Speed (km/h)	35.9 km/h	35.8 km/h	35.9 km/h	31.7 km/h

Key outcomes from the above are as follows:

- Compared to the 2021 base, traffic volumes in the study area averaged across both peaks:
  - Increase by 4.4% in the 2024 scenario
  - Reduce by 14.6% in the 2026 scenario
  - Reduce by 4.9% in the 2041 scenario
- VHT and VKT values increase and reduce relatively to the changes in input traffic volumes
- Average speed is reduced in the 2041 base model, indicative of the reduced speed limits on the Gold Coast Highway with construction of the light rail and localised congestion issues.

4.3 Route Choice Comparison

As previously detailed, a key metric of the Koala Park Traffic Management Study is to determine the proportion of drivers choosing to use the 'rat-run' route via Tabilban Street and Ikkina Road as opposed to using the state controlled road network. The comparison routes are shown in Figure 4.1.

Figure 4.1: **Comparison Routes**

A comparison of route choice options, consistent with the Calibration & Validation report, is shown in Table 4.2 for the eastbound and westbound directions of travel.

Table 4.2:   Network Route Choice Comparison

Route		Peak	2021 Base	2024 Base	2026 Base	2041 base
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	27%	24%	9%	1%
		PM	25%	28%	26%	6%
Route 2	Tabilban Street-Ikkina Road	AM	32%	25%	44%	82%
		PM	37%	43%	72%	90%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	42%	50%	48%	18%
		PM	38%	29%	2%	6%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	28%	30%	27%	3%
		PM	31%	34%	20%	3%
Route 2	Tabilban Street-Ikkina Road	AM	71%	69%	73%	97%
		PM	68%	65%	80%	96%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	0%	1%

As shown, in 2024 there is an expected slight shift of the proportion of vehicles using the 'rat-run' (Routes 2 & 3) to instead use the state road network (Route 1) when traveling eastbound. The proportion of trips using the 'rat-run' is similar between 2021 and 2024 in the westbound direction. Comparatively, in 2026 and 2041, a greater proportion of drivers are expected to choose the 'rat-run' route, most notably different in the 2041 scenario.

It should however be noted that, as input volumes vary, the future year proportional change in route choice does not directly correspond to an absolute change in traffic volumes using each route.

4.4   Key Intersection Link Delays

Observations at key intersections in relation to approach delay are summarised below:

- Intersection delays at each end of the rat-run route (i.e. West Burleigh Road / Tabilban Street and Gold Coast Highway / Ikkina Road) generally fluctuate proportionately with network input traffic volumes, specifically:
  - 2024 intersection delays are increased in comparison to 2021 delays due to traffic growth
  - 2026 and 2041 intersection delays reduce in comparison to 2021 as volumes between external zones are lower coinciding with the construction of GCLR3, GCLR4 and M1 VL2T upgrades
- Aimsun modelling shows significant delays at the West Burleigh Road / Burleigh Street and Gold Coast Highway / West Burleigh Road intersections in the north of the study area. Contrary to delays at Tabilban-Ikkina Street intersections, delays in this area are expected to increase in 2041 due to traffic growth for movements that aren't offset by Light Rail mode change, as well as impacts to signal efficiency associated with Light Rail infrastructure.

Modelled approach delays to key intersection locations within the base models are illustrated in Figure 4.2 to Figure 4.9.

2021 Base Model Intersection Approach Delays:
- West Burleigh Road / Tabilban Street (Bottom-Left)
- Gold Coast Highway / West Burliegh Road (Top-Right)
- Gold Coast Highway / Ikkina Road (Bottom-Right)

Figure 4.2: 2021 AM Base Model Key Intersection Delays

2021 PM Base Model Intersection Approach Delays:
- West Burleigh Road / Tabilban Street (Bottom-Left)
- Gold Coast Highway / West Burliegh Road (Top-Right)
- Gold Coast Highway / Ikkina Road (Bottom-Right)

Figure 4.3: 2021 PM Base Model Key Intersection Delays

2024 AM Base Model Intersection Approach Delays:
- West Burleigh Road / Tabilban Street (Bottom-Left)
- Gold Coast Highway / West Burliegh Road (Top-Right)
- Gold Coast Highway / Ikkina Road (Bottom-Right)

Figure 4.4: 2024 AM Base Model Key Intersection Delays

2024 PM Base Model Intersection Approach Delays:
- West Burleigh Road / Tabilban Street (Bottom-Left)
- Gold Coast Highway / West Burliegh Road (Top-Right)
- Gold Coast Highway / Ikkina Road (Bottom-Right)
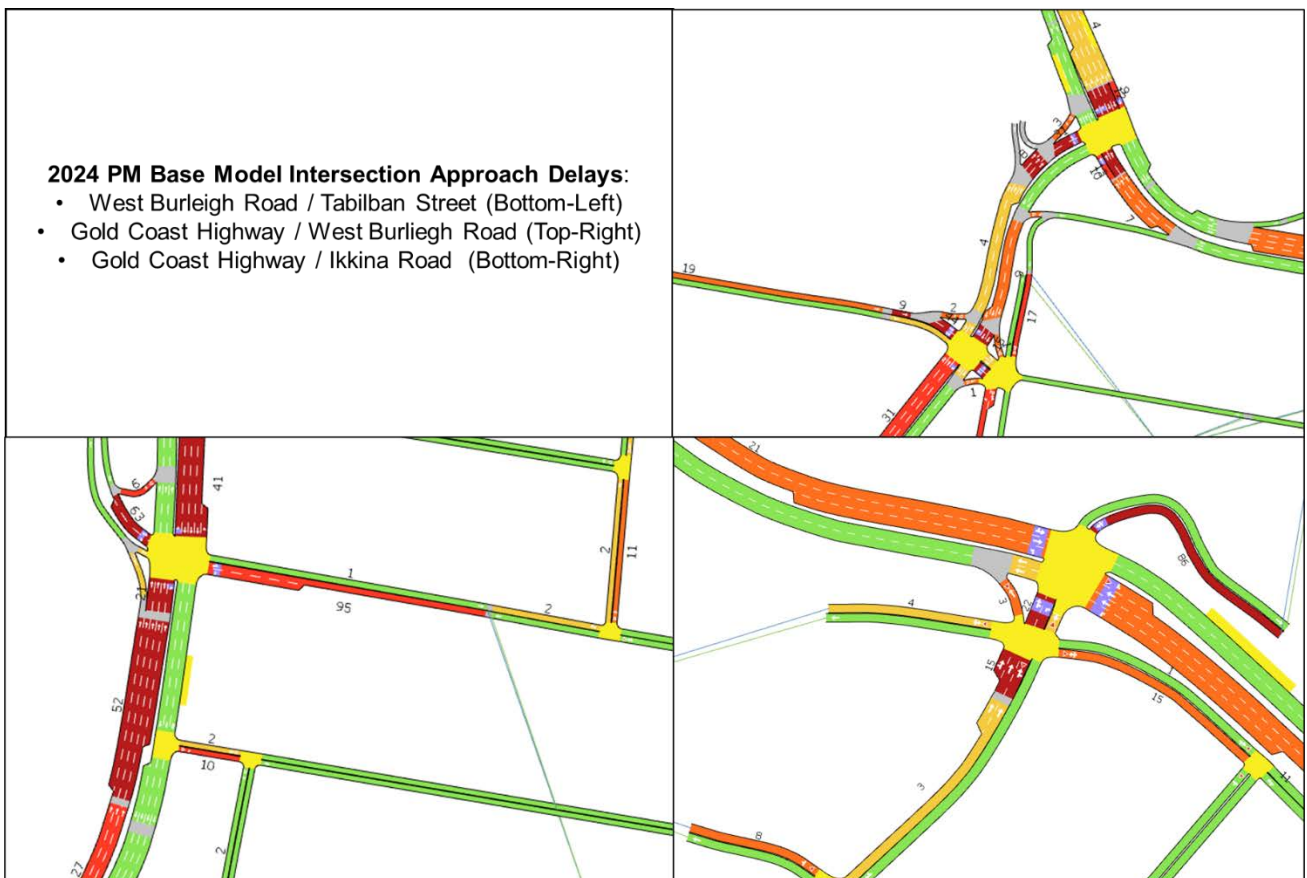
Figure 4.5: 2024 PM Base Model Key Intersection Delays

2026 AM Base Model Intersection Approach Delays:
- West Burleigh Road / Tabilban Street (Bottom-Left)
- Gold Coast Highway / West Burliegh Road (Top-Right)
- Gold Coast Highway / Ikkina Road (Bottom-Right)
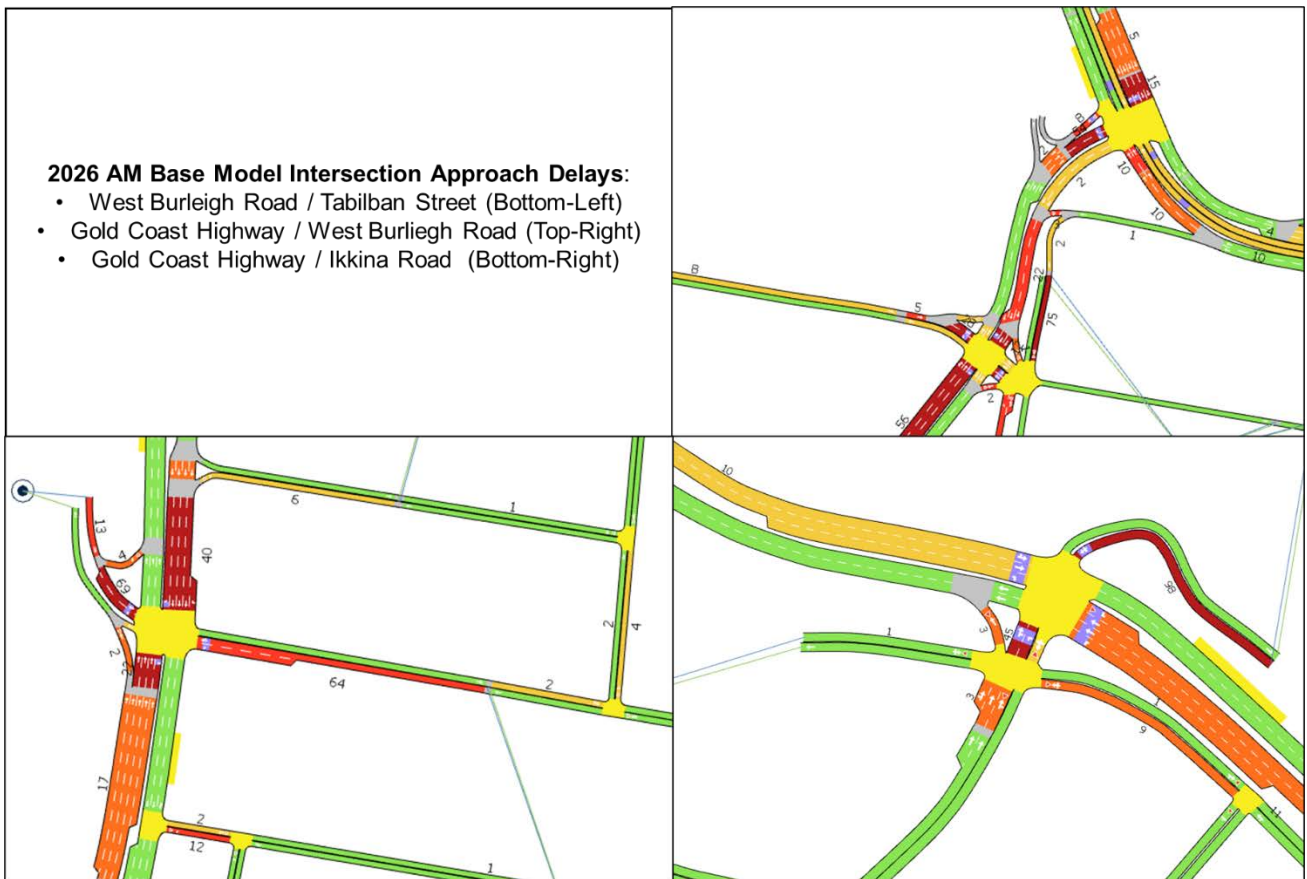
Figure 4.6: 2026 AM Base Model Key Intersection Delays

2026 PM Base Model Intersection Approach Delays:
- West Burleigh Road / Tabilban Street (Bottom-Left)
- Gold Coast Highway / West Burliegh Road (Top-Right)
- Gold Coast Highway / Ikkina Road (Bottom-Right)
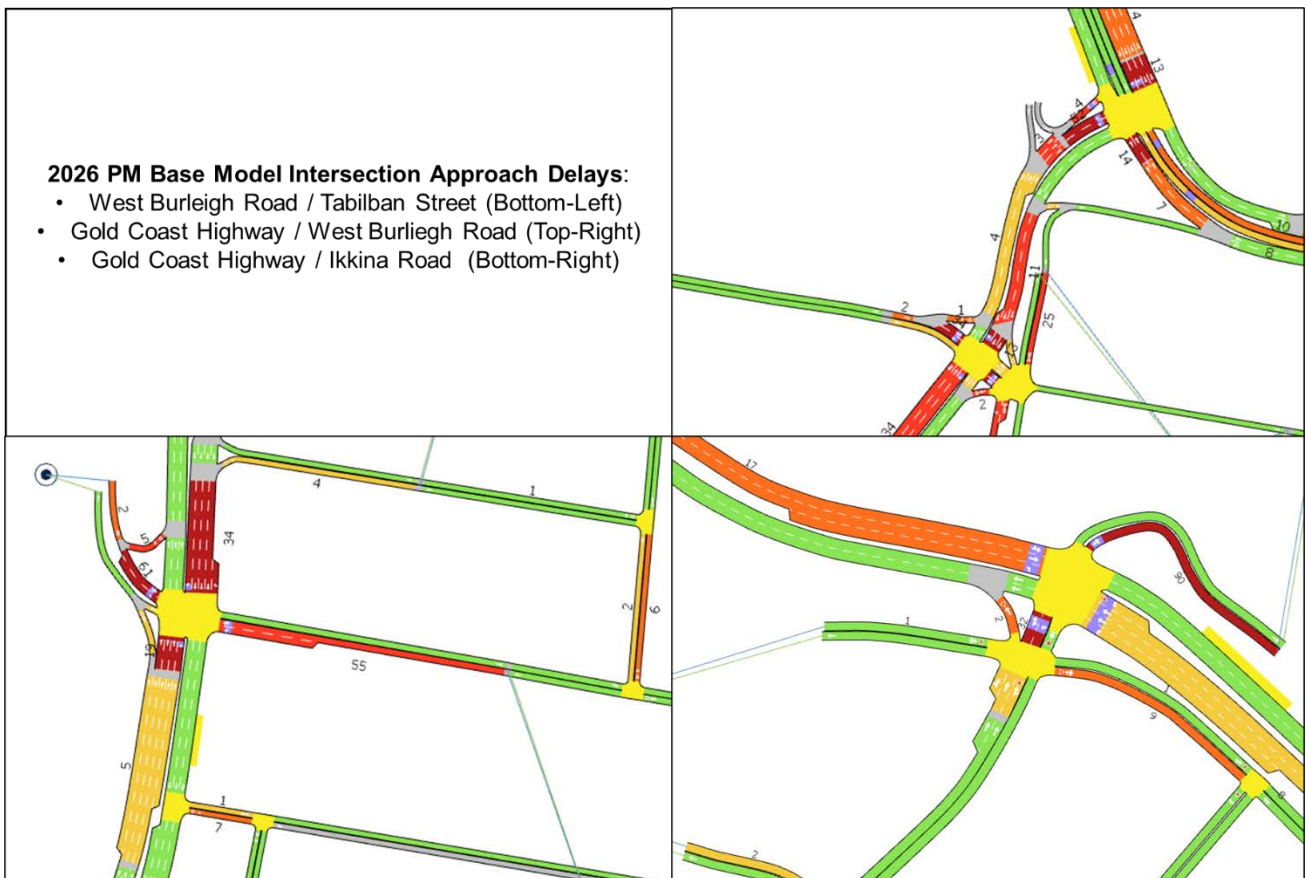
Figure 4.7: 2026 PM Base Model Key Intersection Delays

2041 AM Base Model Intersection Approach Delays:
- West Burleigh Road / Tabilban Street (Bottom-Left)
- Gold Coast Highway / West Burliegh Road (Top-Right)
- Gold Coast Highway / Ikkina Road (Bottom-Right)

Figure 4.8: **2041 AM Base Model Key Intersection Delays**

2041 PM Base Model Intersection Approach Delays:
- West Burleigh Road / Tabilban Street (Bottom-Left)
- Gold Coast Highway / West Burliegh Road (Top-Right)
- Gold Coast Highway / Ikkina Road (Bottom-Right)

Figure 4.9: **2041 PM Base Model Key Intersection Delays**

5. SUMMARY OF FINDINGS

The process and findings of the future base modelling development are summarised as follows:

- Future base microsimulation (Aimsun) models were developed for years 2024, 2026 and 2041 to accompany the 2021 calibrated and validated base model

- 2026 and 2041 demographic data and study area traffic volumes were sourced using the GCSTM-MM v2.2 PUG strategic model to account for future planning and transport infrastructure, including GCLR3, GCLR4 and M1 VL2T upgrades

- 2024 OD demand matrices were developed through application of historical traffic growth for external zones and growth determined from the GCSTM-MM for internal zones

- 2026 and 2041 OD demand matrices were developed by applying a Relative (%) Change method between 2021 base and future year strategic model cordon matrices for the study area

- The 2024 base model network was maintained as per the 2021 base model to test the effects of traffic growth on the existing road network (worst case scenario)

- 2026 and 2041 base model networks were revised in accordance with the latest available planning for GCLR3, GCLR4 and M1 VL2T upgrades

- 2026 and 2041 traffic volumes in the study area are expected to reduce with the construction of the relevant stages of the GCLR and completion of M1 VL2T. This corresponds to a reduction in VHT and VKT for these modelled years

- As traffic volumes reduce between the Gold Coast Highway and West Burleigh Road for these future years, the proportion of vehicles making this trip and using the Tabilban Street 'rat-run' route increases

- The modelling identified key areas experiencing intersection performance issues, delays and high levels of congestion, including:
  - The signalised intersections at each end of the Tabilban-Ikkina 'rat-run' route
  - In the vicinity of the West Burleigh Road / Burleigh Street intersection

The future base model development and key findings were used to inform the scoping of options to address the issues specific to the study area and progress an Options Assessment. This is documented in a separate Options Modelling Report.

Appendix D: Options Modelling and Assessment Report

Koala Park Traffic Management Study

Options Modelling and Assessment

Document Issue History

Report File Name	Prepared	Reviewed	Issued	Date	Issued to
P5288.001T Koala Park Traffic Study_Options Assessment	███	███	███	16/08/2022	Jake Matuzic, sent via: *JMATUZIC@goldcoast.qld.gov.au*
P5288.002R Koala Park Traffic Study_Options Assessment	███	███	███	27/10/2022	Jake Matuzic, sent via: *JMATUZIC@goldcoast.qld.gov.au*

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1. INTRODUCTION

1.1 Background

This Options Assessment report has been prepared to document the process and outcomes of the traffic modelling using Aimsun and options assessment for the Koala Park Traffic Management Study commissioned by the City of Gold Coast Council (Council).

Council engaged Bitzios Consulting to complete the study to inform investigations into the Burleigh Heads / Koala Park area, with a focus on the Tabilban Street-Ikkina Road route. The investigations respond to a petition received in 2021 requesting Council to consider closing Reserve Street to through traffic and to construct the so-called 'missing link' at Tabilban Street. The route services local residents, however through traffic continues to use the route as a 'rat-run' to avoid the Gold Coast Highway and West Burleigh Road.

The Aimsun options modelling started with future year base case models which included forecasts of short, medium and long-term traffic movements within the study area under the existing street configurations. The model was then used for testing options to address traffic operational issues currently experienced in the Koala Park precinct. The options testing focused on the Tabilban Street-Ikkina Road route, however considered the traffic network for the entire study area and any potential impacts of each option external to the study area.

1.2 Study Area

The study area is bound by Tabilban Street (south), West Burleigh Road (west), Gold Coast Highway (north) and Julia Street (east) in Burleigh Heads as shown in Figure 1.1.

SOURCE: Google Maps (edited by Bitzios)
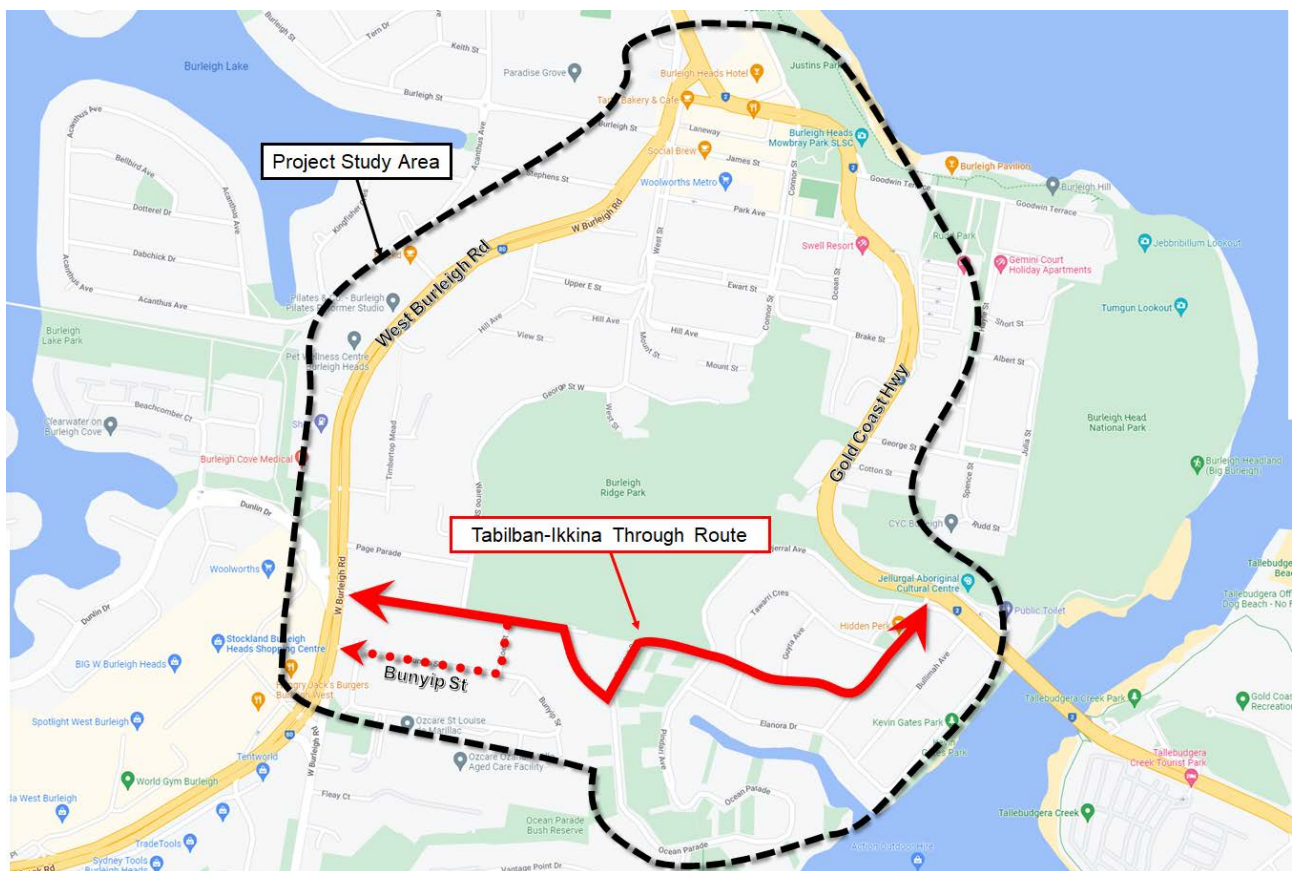
Figure 1.1: Study Area

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A more detailed figure showing the Tabilban Street-Ikkina Road route, including the so-called 'missing link' within the unformed road reserve of Tabilban Street is shown in Figure 1.2.

SOURCE: Nearmap (edited by Bitzios)

Figure 1.2: **Tabilban-Ikkina Route**

1.3 Scope of the Assessment

The purpose of this report is to document the options development, traffic modelling and results interpretation for the study area. The development and assessment of the options was completed through a 'strategic merit test' and a 'multi-criteria analysis' (MCA) process under the Australian Transport Assessment and Planning (ATAP) guidelines.

The scope of work for the Options Assessment included:

- Identifying the overarching goals, objectives and strategic plan for the study area
- Clearly defining the Tabilban-Ikkina route function and role in the network and its alignment with the identified goals and objectives set by Council
- Undertaking an options scoping process to develop an Options Long List for further review
- Undertaking a strategic merit test of the Options Long List to create the Short List of options for detailed testing
- Undertaking a rapid appraisal of the options short list supported by Aimsun traffic modelling outputs from which detailed modelling outputs for the entire model study area and specific Tabilban-Ikkina route metrics were extracted for options comparison purposes
- Assisting Council in developing material for the options consultation process and reviewing the consultation feedback
- Undertaking a MCA of the options informed by the modelling and consultation feedback, including key metrics for safety, efficiency, amenity, accessibility, environment and cost
- Identifying a preferred option and undertaking detailed 'sub-option' testing within the preferred network to determine the effects of specific treatments along the Tabilban-Ikkina route
- Preparing concept designs of the options, including sub-option treatments within the preferred network; including indicative cost estimates
- Providing recommendations on a preferred option.

1.4 Reference Documents

A number of reports were prepared by Bitzios Consulting for the Koala Park Traffic Management Study which have informed the findings and outcomes within the options assessment. These include:

- Existing Conditions Road Safety Audit report (ref: P5288.001R Koala Park Traffic Management Study RSA, 14 October 2021)

- Base Model Calibration and Validation report (ref: P5288.002R Koala Park Traffic Study_Base Model Calibration_Validation, 24 February 2022)

- Future Base Traffic Model Development report (ref: P5288.001R Koala Park Traffic Study_Future Base Model Development, 14 July 2022)

The above reports shall be read in conjunction with this report.

2. NETWORK PLANNING & FUNCTION

2.1   Planning Context

A number of key infrastructure projects are planned and/or are currently underway in the vicinity of the study area. These projects and their expected timing of delivery at the date of this report are:

- Gold Coast Light Rail Stage 3 (GCLR3): *assumed to be operational by 2025*
- Pacific Motorway Varsity Lakes to Tugun (M1 VL2T): *assumed operational by 2025,* including:
  - Widening 10km of the M1 from 2 to a minimum of 3 lanes in both directions
  - Constructing a new two-way western service road between Tallebudgera (Exit 89) and Palm Beach (Exit 92) and a new bridge over Tallebudgera Creek connecting the new western service road
  - Access to the service road and the M1 via Nineteenth Avenue
- Gold Coast Light Rail Stage 4 (GCLR4): assumed operational by 2041.

These infrastructure projects are included within the *Gold Coast Strategic Transport Model – Multi Modal v2.2 PUG* (GCSTM-MM) which also includes demographic forecasts made by Council. The future traffic demands for the local area Aimsun modelling for this study came from the GCSTM-MM.

The timing of the above projects are based on current estimated timing published on the Department of Transport and Main Roads (TMR) website, and transport infrastructure assumptions included in the GCSTM-MM. While it is noted that GCLR4 may be operational prior to 2041, this timing simply aligns with the modelled design years and scenarios.

A review of Council's Local Government Infrastructure Plan (LGIP) and state government projects list does not identify any other transport projects that would be expected to influence the study area.

2.2   Study Area Roads and Road Hierarchy

Table 2.1 details the characteristics of key roads within the study area.

Table 2.1:   Study Area Key Roads: Cross-sections

Road Name	Control	Width (approximate)			Lanes	Direct Access	Parking	Speed
		Reserve	Pavement	Verge				
Tabilban St	Council	20m	12m (varies)	4m / 4m	2	Yes	Yes	40km/h
Bunyip St	Council	19m	10m	4m / 5m	2	Yes	Yes	50km/h
Ocean Pde	Council	20m	7.5m (varies)	6.5m / 6m	2	Yes	Yes	50km/h
Reserve St	Council	20m	7m	3.5m / 9.5m	2	Yes	No	40km/h
Ikkina Rd	Council	20m (varies)	12m (varies)	4m / 4m	2	Yes	Yes	40km/h
Gold Coast Hwy	TMR	*Varies*			4 (divided)	No	No	60km/h
W Burleigh Rd	TMR	*Varies*			6 (divided)	No	Limited	60km/h

Council's Functional Road Hierarchy map for the study area is shown in Figure 2.1. This mapping shows roads that have a primary through traffic-carrying function.
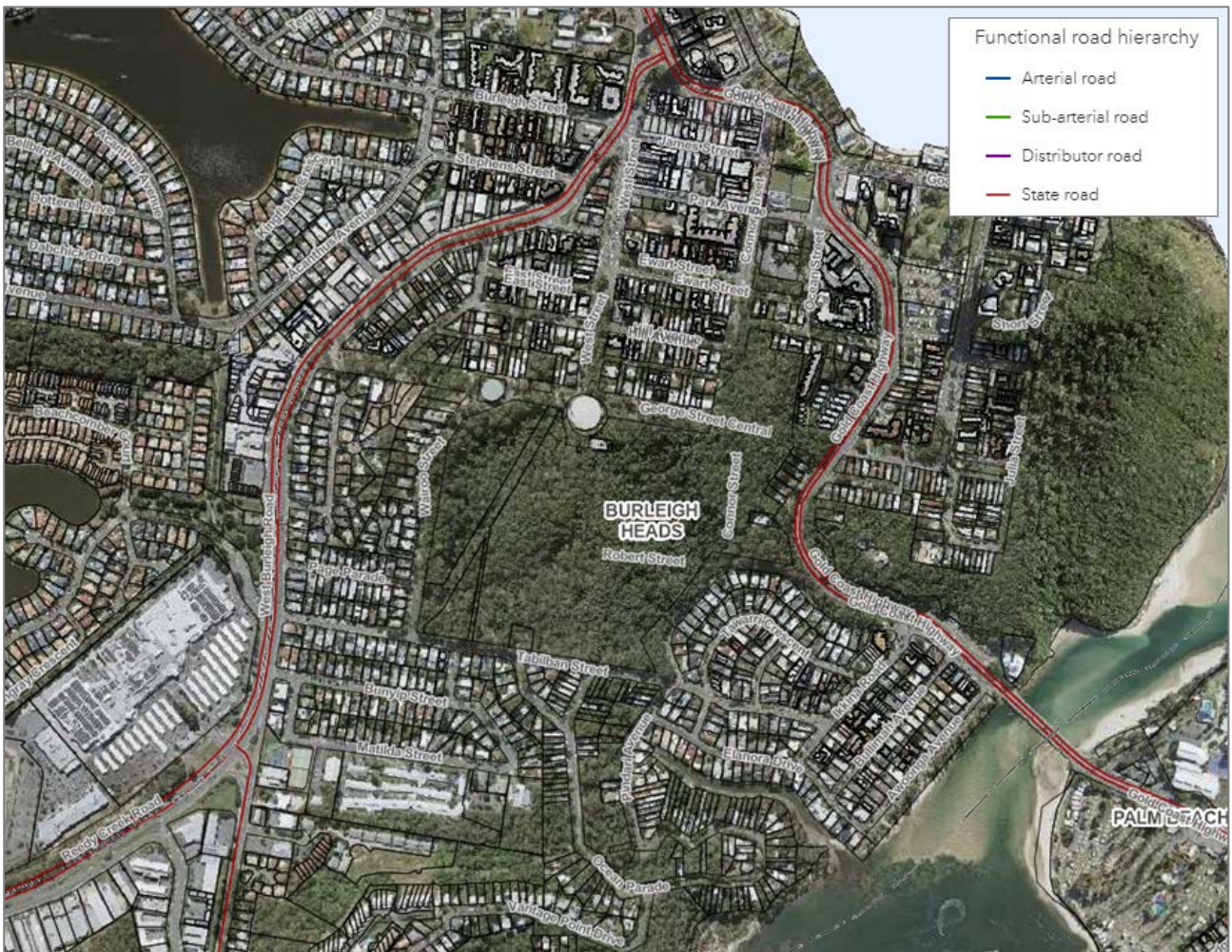
SOURCE: City of Gold Coast website: Interactive Mapping

Figure 2.1: Council Functional Road Hierarchy

Council's mapping does not identify any roads/streets within the Koala Park area on its Functional Road Hierarchy map meaning that all roads in the Koala Park area are intended to function as Collector-type roads or local streets with a low through traffic carrying function. The applicable hierarchy class for each key road in the study area is listed in Table 2.2.

Table 2.2: Study Area Key Roads: Hierarchy

Road Name	Jurisdiction	Hierarchy	Environmental Capacity	Current Volumes
Tabilban St	Council	Major Collector	7,500-10,000 veh/day	9,088 veh/day[1]
West Burleigh Rd	TMR	Sub-arterial	14,000-27,000 veh/day	31,659 veh/day[2]
Gold Coast Hwy	TMR	Arterial	>20,000 veh/day	42,809 veh/day[3]

[1]Source: Average weekday tube count data between Reserve Street and Pindari Avenue, April 2021
[2]Source: Publicly available Annual Average Daily Traffic (AADT) Traffic Census (adjacent Stocklands shopping centre), 2020
[3]Source: Publicly available Annual Average Daily Traffic (AADT) Traffic Census (Tallebudgera Creek bridge), 2020

A snapshot of the Council cross-section which most closely resembles the Tabilban Street 'Residential Collector' cross-section is shown in Figure 2.2.

RESIDENTIAL COLLECTOR STREET WITH BUS ROUTE
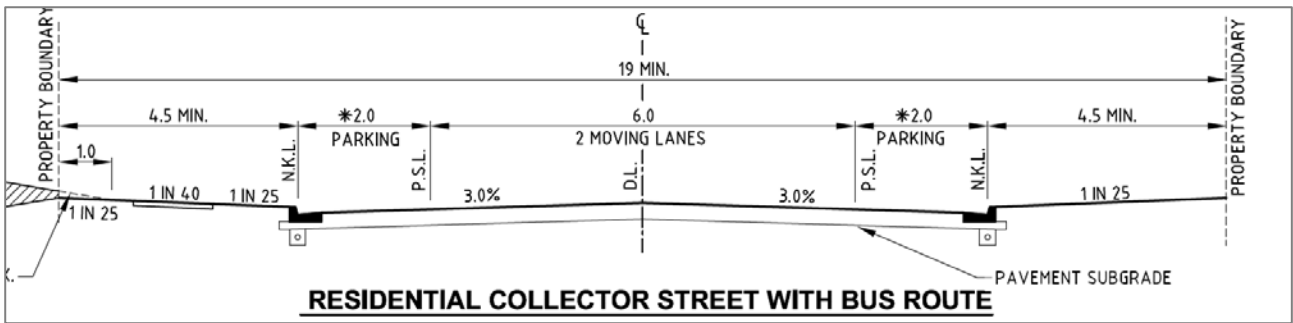
SOURCE: Council City Plan: Schedule 6 City Plan policies, SC6.11 City Plan policy – Land development guidelines, 10 Standard drawings

Figure 2.2: **Residential Collector Typical Cross-section**

2.3 Tabilban-Ikkina Route Function

The primary function of the Tabilban-Ikkina corridor was determined to be for servicing the local residential catchment with direct property access and providing connections to the broader traffic-carrying network. In relation to the study area, the arterial roads of West Burleigh Road and Gold Coast Highway have the primary function of carrying through traffic.

The intended function of the Tabilban-Ikkina route for is further evidenced by its local area traffic management (LATM) treatments to discourage through traffic and to manage traffic speeds, including:

- Reduced speed limits (40km/h)
- Road humps
- Kerb build-outs
- Raised crossing(s)
- Heavy vehicle access restrictions (albeit not being complied with).

It is clear however that the Tabilban-Ikkina route is currently carrying a high volume of traffic due to external through traffic 'rat-running' between the Gold Coast Highway and West Burleigh Road resulting in a composition of traffic which was not intended i.e. external through traffic opposed to local area traffic. This is resulting in a range of potential safety and amenity issues for local traffic and residents along the route, as well as along Bunyip Street as traffic tries to avoid the West Burleigh Road intersection.

Given the function of the route within the study area, the topographic road geometry constraints, the crash history and speed data collected, the corridor was determined to have a *Road Risk Metric* (RRM) of "HIGH" as outlined in Section 5 of the *Queensland Manual of Uniform Traffic Control Devices* (MUTCD), *Transport and Main Roads (March 2022), Part 4: Speed Controls*. Options to treat / manage speeds in the local area are therefore required to assist in reducing this risk level through introducing LATM to reduce speeds, improve amenity, and subsequently achieve a more sustainable balance between the local and state road network in terms of their access and traffic carrying functions.

The approach to the options development has therefore considered preserving improvements that aim to:

- Reduce through traffic volumes
- Reduce vehicle speeds
- Improve road safety
- Maintain local resident amenity / accessibility.

The options development process and outcomes is outlined in Section 3.

3. OPTIONS DEVELOPMENT

3.1 Methodology Overview

The *Australian Transport Assessment and Planning* (ATAP) guidelines were adopted as the basis for options development and assessment in this study, including:

- Developing an Options Long List (Initial Options)
- Stage 1: Strategic Merit Test (Filtered Options)
- Stage 2: Rapid Appraisal (Final Options)
- Stage 3: Detailed Appraisal (Preferred Option).

In developing the **Options Long List**, an options scoping process took place where three (3) overarching option strategies were formed, with a range of sub-options (called Initial Options) were identified within each overarching strategy.

The **Strategic Merit Test** included consideration of an option's alignment with goals, objectives and strategic plans being considered from the Options Long List to reduce the options down to a short list (called the Filtered Options). Specific to the Koala Park Study, this included:

- Addressing the petition option submitted to Council for connection of the 'missing link' at Tabilban Street
- Preserving the intended function of the Tabilban-Ikkina route within the broader network as for servicing the local residential catchment and maximising safety, amenity and accessibility for local residents

A **rapid appraisal** was then undertaken which included detailed Aimsun traffic modelling of the short listed options to and a public consultation process held by Council. A Multi-Criteria Analysis (MCA) was then undertaken based on outcomes from the modelling and the consultation findings and a final set of sub-options / treatments were tested within the preferred network (called the Final Options).

A **detailed appraisal** was then undertaken on the Final Options through additional Aimsun modelling and SIDRA Intersection modelling to identify the recommended Preferred Option.

3.2 Options Scoping

Three (3) overarching option strategies were identified for the Tabilban-Ikkina route based on (but not limited to):

- Road hierarchy and network function
- Safety for all road users
- The petition option submitted to Council.

The three (3) overarching option strategies included:

- Option A: 'Do Minimum' including minor network improvements to the existing arrangement
- Option B: 'Promote Through Route' via construction of Tabilban Street 'missing link'
- Option C: 'Local Traffic Only' which removes/closes the east-west connection of Tabilban Street.

A total of 14 sub-options were then created as the Options Long List and included different combinations of treatments within each overarching strategy. A summary of the Options Long List is detailed in Table 3.1.
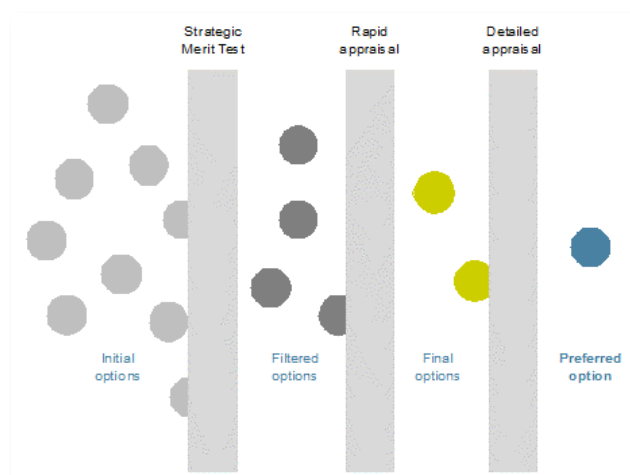
Table 3.1: Options Long List Summary

Option		Summary of Option Inclusions
Option A: 'Do Minimum'	**A1**	▪ Largely maintains existing arrangement with east-west through connection ▪ Includes a small roundabout treatment at Wairoo St to assist in slowing traffic and changing priorities of approaching traffic to improve gaps/ability for Wairoo St traffic to exit
	A2	▪ Largely maintains existing arrangement with east-west through connection ▪ Includes a roundabout treatment at Ikkina Rd / Tabilban St to assist in slowing traffic and addressing key issues at the intersection identified in the Road Safety Audit
	A3	▪ Combination of Options A1 and A2, including: ▪ Largely maintains existing arrangement with east-west through connection ▪ Includes a roundabout treatment at Wairoo St and Ikkina Rd / Tabilban St to assist in slowing traffic and improving operations / safety
	AX	▪ As per Option A3, with exception to: ▪ Implements a one-way (northbound) treatment at Koel St to remove westbound rat-run
Option B: 'Promote Through Traffic'	**B1**	▪ Constructs the Tabilban St 'missing link' connection as per the petition option raised ▪ Maintains the existing Reserve St & Ocean Pde access (stop/give-way priority) ▪ Includes signal improvements at Gold Coast Hwy for left turns into Ikkina Rd (improved efficiency) ▪ Removal of LATM traffic calming along Ikkina Rd (excluding pedestrian crossing) and Tabilban St ▪ Reinstates the default urban speed limit of 50km/h on the through route
	B2	▪ As per Option B1, with exception to: ▪ Closure of Reserve St at the top of the hill where it meets Tabilban St (provided as a cul-de-sac) ▪ Ocean Pde connection remains yet gives-way to Tabilban St as a traditional T-intersection
	B3	▪ As per B2, with exception to: ▪ Implements a one-way (northbound) treatment at Koel St to remove westbound rat-run ▪ Includes left turn slip lane at Tabilban St to W Burleigh Rd to improve capacity with one-way Koel St
	B4	▪ As per B1, with exception to: ▪ DOES NOT connect the Tabilban St 'missing link', promotes through traffic by other means ▪ Re-prioritises Ocean Pde / Reserve St intersection giving the through route priority
	B5	▪ As per B4, with exception to: ▪ Implements a one-way (northbound) treatment at Koel St to remove westbound rat-run ▪ Includes left turn slip lane at Tabilban St to W Burleigh Rd to improve capacity with one-way Koel St
Option C: 'Local Traffic Only'	**C1**	▪ DOES NOT connect Tabilban St link ▪ Closure of Reserve St at Tabilban St (provided as a cul-de-sac), east-west link kept via Ocean Pde ▪ Installation of LATM along Tabilban St west (slow points, kerb build outs)
	C2	▪ As per C1, with exception to: ▪ Includes a small roundabout treatment at Wairoo St only
	C3	▪ DOES NOT connect Tabilban St link ▪ Closure of Ocean Pde at Tabilban St (provided as a cul-de-sac), east-west link completely severed ▪ Includes a roundabout at Ikkina Rd / Tabilban St only to slow traffic and address key safety issues
	C4	▪ As per C1, with exception to: ▪ Includes a roundabout treatment at Wairoo St and Ikkina Rd / Tabilban St only
	C5	▪ DOES NOT connect Tabilban St link ▪ Closure of Reserve St at Tabilban St (provided as a cul-de-sac), east-west link kept via Ocean Pde ▪ Includes roundabout provided at Tabilban St / Ikkina Rd only

A strategic level review was undertaken of the Options Long List to filter out options based on their relative benefits and impacts. This process was undertaken in partnership with Council and considered:

- Road user safety (speeds, crash history, near misses, active transport provisions)
- Environmental impact
- Existing resident complaints / feedback
- Physical constraints (steep grades, limited sight lines, property access, etc.)
- The intent of each overarching option strategy and network function
- Social / amenity impacts to local residents (traffic volume, accessibility, noise, etc.)

The Options Long List Review is included in **Appendix A** which provides a tabulated summary of the high-level benefits and impacts of each option and those options taken forward to the short list.

3.3   Short Listed Options

The strategic review of the Options Long List resulted in a total of seven (7) short listed options. A summary of the short listed options is included in Table 3.2 and provided at **Appendix B** which includes the benefits and impacts review of each option.

Table 3.2:   Short Listed Options Summary

Option		Summary of Option Inclusions
Option A: 'Do Minimum'	A3	▪ Largely maintains existing arrangement with east-west through connection ▪ Includes a small roundabout treatment at Wairoo St to assist in slowing traffic and changing priorities of approaching traffic to improve gaps/ability for Wairoo St traffic to exit ▪ Includes a roundabout treatment at Ikkina Rd / Tabilban St to assist in slowing traffic and addressing key issues at the intersection identified in the Road Safety Audit
	AX	▪ As per Option A3, with exception to: ▪ Implements a one-way (northbound) treatment at Koel St to remove westbound rat-run
Option B: 'Promote Through Traffic'	B2	▪ Constructs the Tabilban St 'missing link' connection as per the petition option raised ▪ Closure of Reserve St at the top of the hill where it meets Tabilban St (provided as a cul-de-sac) ▪ Ocean Pde connection remains yet gives-way to Tabilban St as a traditional T-intersection ▪ Includes signal improvements at Gold Coast Hwy for left turns into Ikkina Rd (improved efficiency) ▪ Removal of LATM traffic calming along Ikkina Rd (excluding pedestrian crossing) and Tabilban St ▪ Reinstates the default urban speed limit of 50km/h on the through route
	B3	▪ As per B2, with exception to: ▪ Implements a one-way (northbound) treatment at Koel St to remove westbound rat-run ▪ Includes left turn slip lane at Tabilban St to W Burleigh Rd to improve capacity with one-way Koel St
	B4	▪ DOES NOT connect the Tabilban St 'missing link', promotes through traffic by other means ▪ Re-prioritises Ocean Pde / Reserve St intersection giving the through route priority ▪ Maintains the existing Reserve St & Ocean Pde access (stop/give-way priority) ▪ Includes signal improvements at Gold Coast Hwy for left turns into Ikkina Rd (improved efficiency) ▪ Removal of LATM traffic calming along Ikkina Rd (excluding pedestrian crossing) and Tabilban St ▪ Reinstates the default urban speed limit of 50km/h on the through route
Option C: 'Local Traffic Only'	C3	▪ DOES NOT connect Tabilban St link ▪ Closure of Ocean Pde at Tabilban St (provided as a cul-de-sac), east-west link completely severed ▪ Includes a roundabout at Ikkina Rd / Tabilban St only to slow traffic and address key safety issues
	C5	▪ DOES NOT connect Tabilban St link ▪ Closure of Reserve St at Tabilban St (provided as a cul-de-sac), east-west link kept via Ocean Pde ▪ Includes roundabout provided at Tabilban St / Ikkina Rd only

The short listed (Filtered) options were taken forward for detailed Aimsun modelling to understand the operational performance of each one.

4. OPTIONS MODEL DEVELOPMENT

4.1 Source Models and Scenarios

The options modelling was undertaken with the previously calibrated/validated base year models and associated future year models. The software that was used was Aimsun Next 20.0.1.

The following scenarios were developed and agreed with Council officers as the basis for testing each option across short, medium and long-term horizons, including:

- **2021:** Base Case, to understand an option's operational performance on existing conditions
- **2024:** Short-term, prior to GCLR3 and M1 VL2T, historical traffic growth applied
- **2026:** Medium-term, post GCLR3 and M1 VL2T, GCSTM-MM forecast demands applied
- **2041:** Long-term, post GCLR3, GCLR4 and M1 VL2T, GCSTM-MM forecast demands applied.

4.2 Model Development

4.2.1 Traffic Demands Development

No changes to the model zoning system or the base case or the future year base case traffic demands were made for the options modelling. The only changes made related to the network configuration (see Section 4.2.3).

Specifically, the following traffic demands were adopted for each relevant option model:

- 2021 Base Case: 2021 calibrated/validated model traffic demands adopted
- 2024 Short-term: 2024 future base model traffic demands adopted
- 2026 Medium-term: 2026 future base model traffic demands adopted
- 2041 Long-term: 2041 future base model traffic demands adopted.

For details on the base and future year base traffic demands development, refer to *P5288.002R Koala Park Traffic Study_Base Model Calibration_Validation* and *P5288.001R Koala Park Traffic Study_Future Base Model Development*.

4.2.2 Dynamic Route Choice

Route choice within the model study area was maintained consistent with the previously developed models to ensure traffic were able to choose their route based on influences such as congestion, travel time and the network option changes that were being tested.

Refer to *P5288.002R Koala Park Traffic Study_Base Model Calibration_Validation* and *P5288.001R Koala Park Traffic Study_Future Base Model Development* for details on model route choice.

4.2.3 Network Development

The traffic network for each scenario outlined above was modified to reflect each short-listed option. All other components of the model network i.e. external configurations and future infrastructure projects (e.g. GCLR and M1 VL2T) were kept consistent with the base case and future base case modelling (*refer: P5288.002R Koala Park Traffic Study_Future Base Model Development*). This approach allowed for consistency between external influences and direct performance comparisons between the base case and the options modelling results.

The key option model network changes are described in Table 3.2 and shown in Figure 4.2 to Figure 4.8 (compared to the base network in Figure 4.1).

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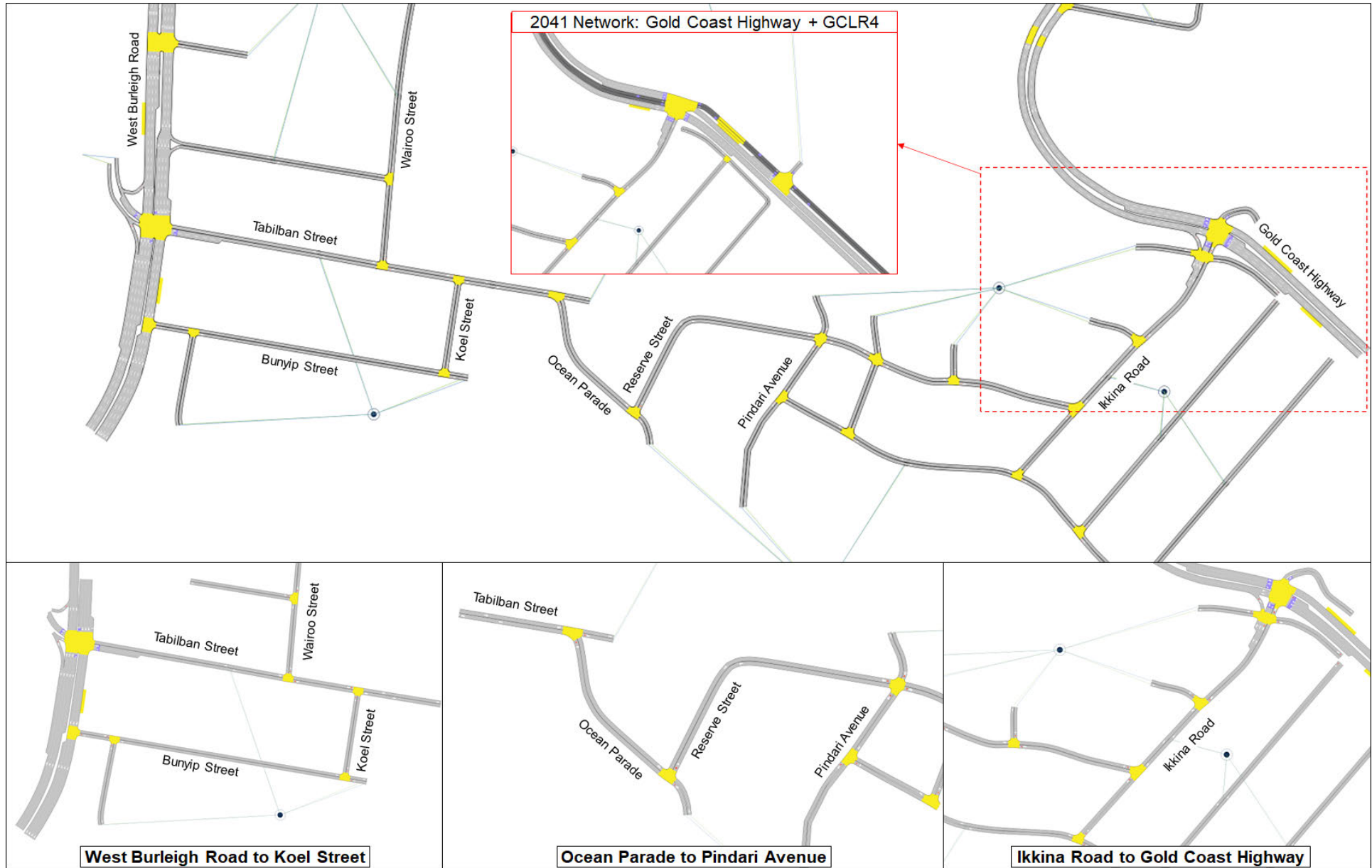
Figure 4.1: **Base Model Network**
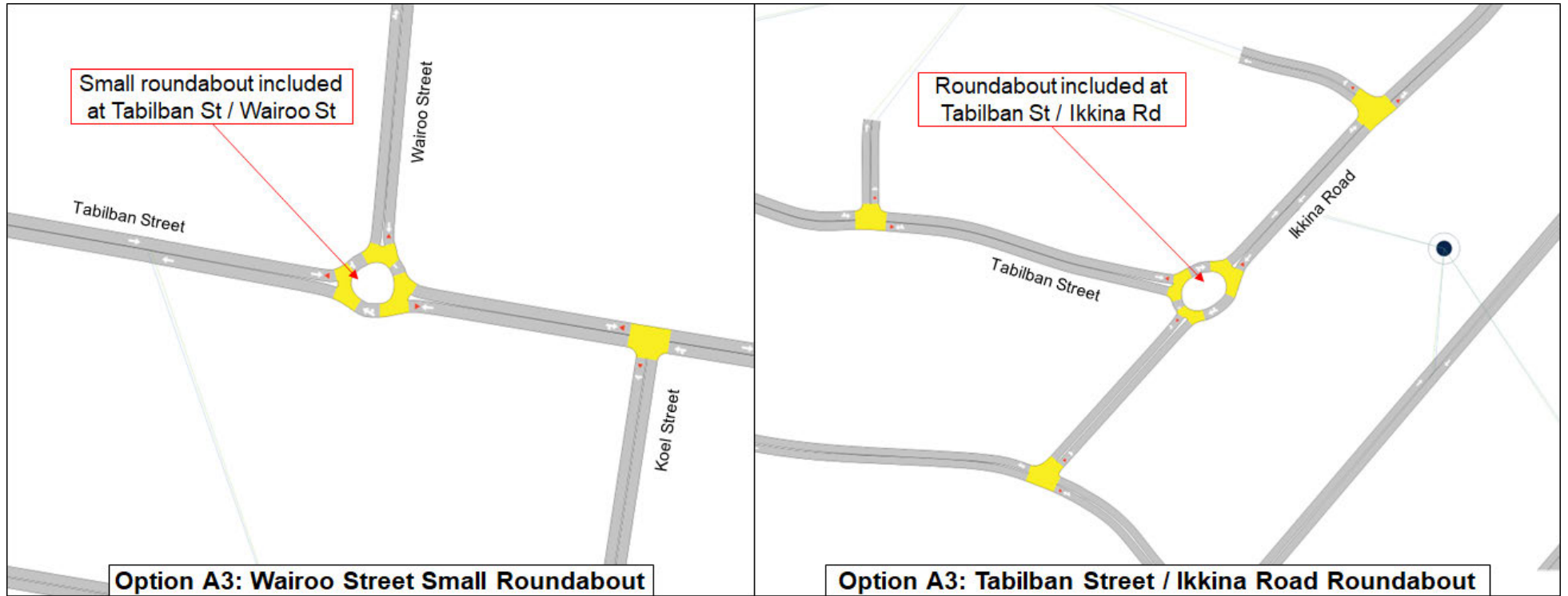
Figure 4.2: Option A3 Model Network Inclusions
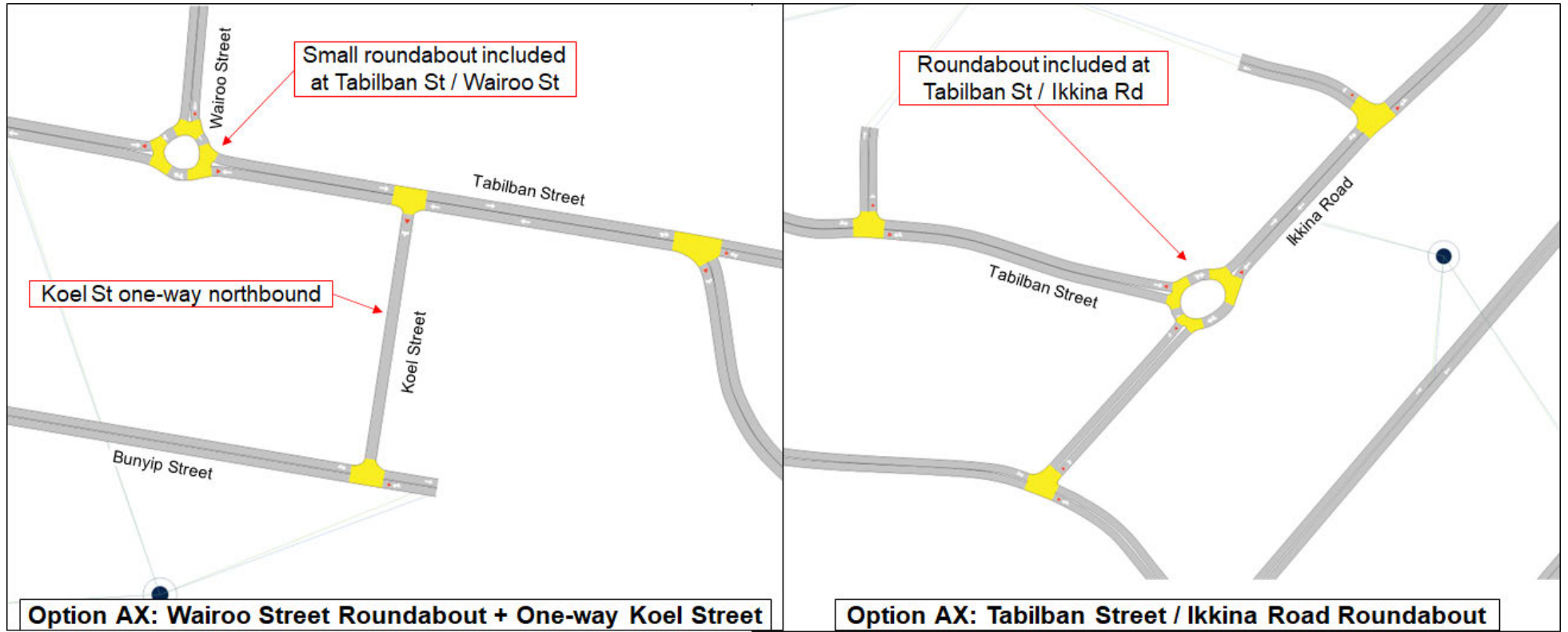
Figure 4.3: **Option AX Model Network Inclusions**
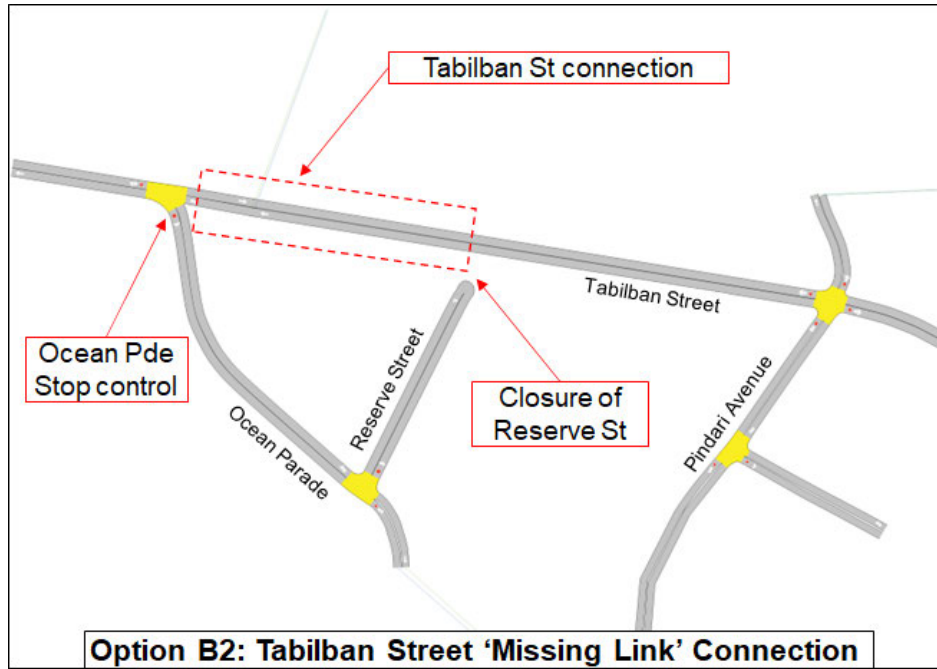
Figure 4.4: Option B2 Model Network Inclusions
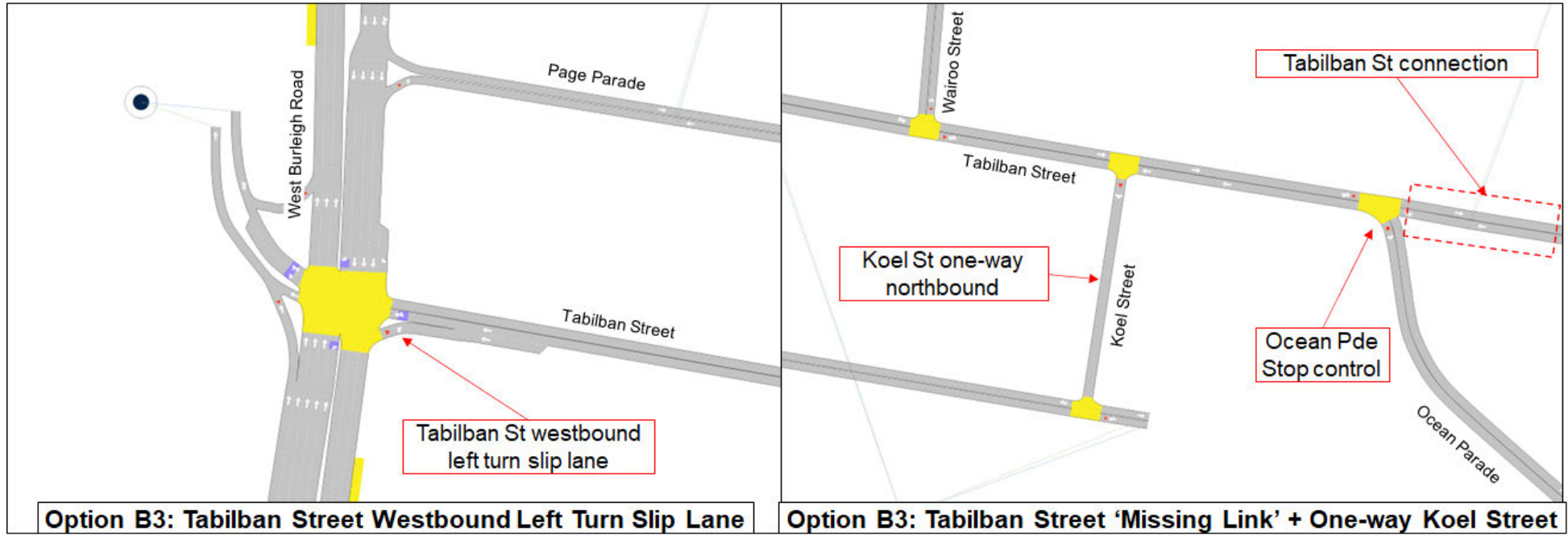
Figure 4.5: Option B3 Model Network Inclusions
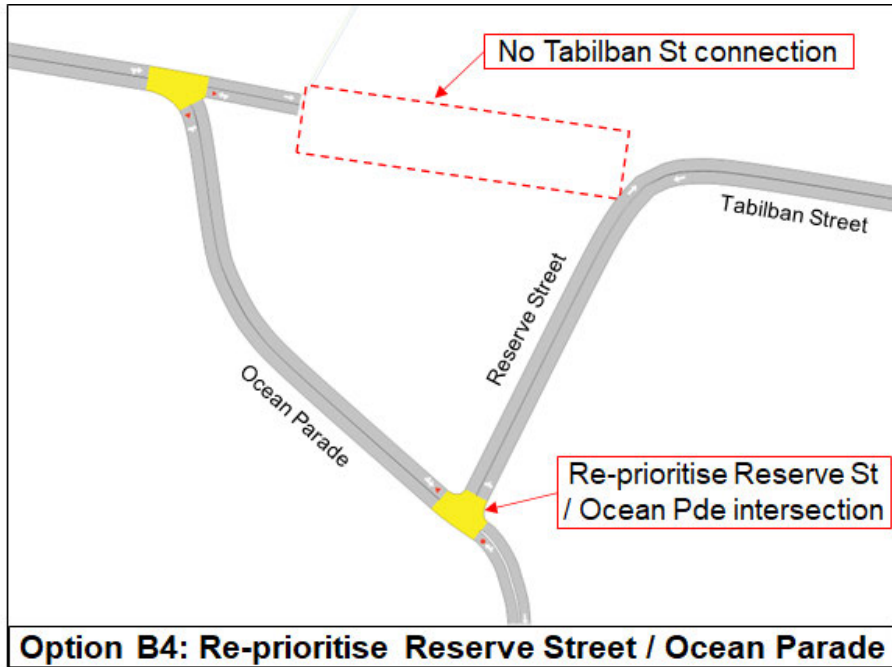
Figure 4.6: Option B4 Model Network Inclusions
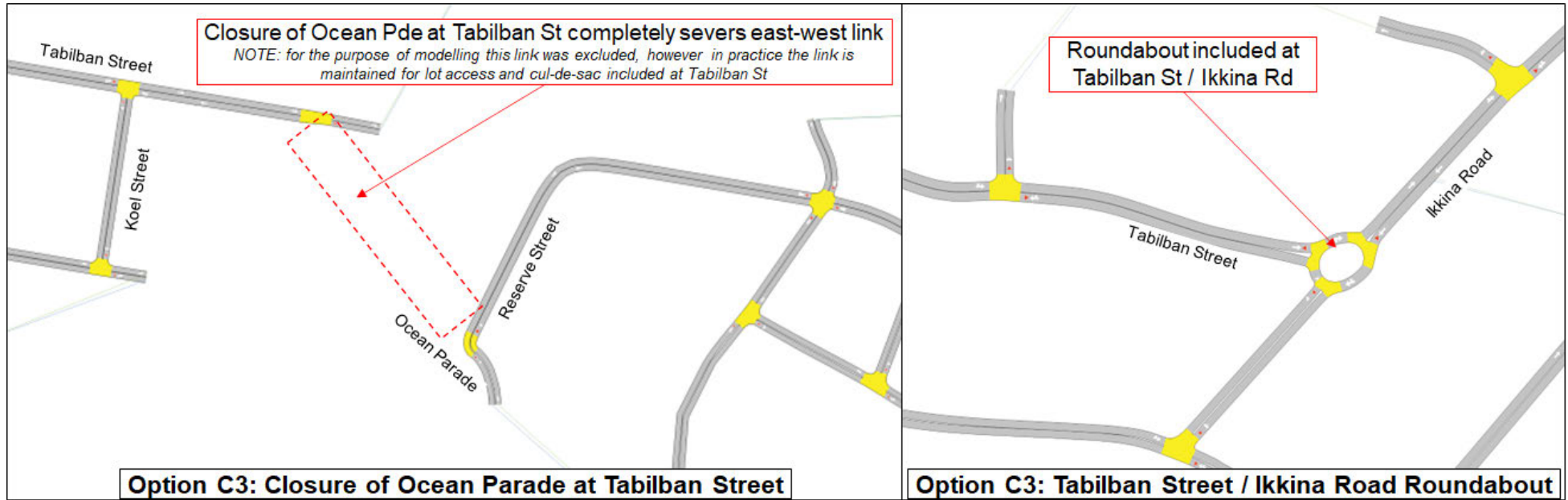
Figure 4.7: Option C3 Model Network Inclusions
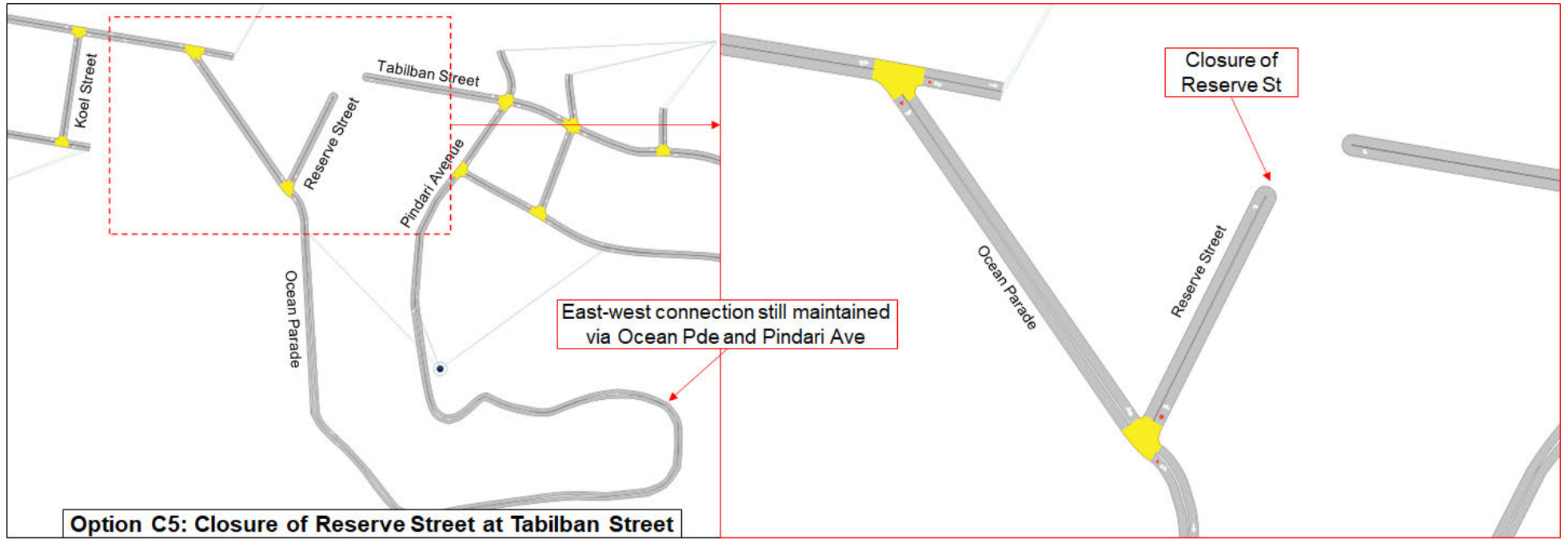
Figure 4.8: Option C5 Model Network Inclusions

5. OPTIONS MODELLING RESULTS

5.1 Overview

The Aimsun options models were developed based on the methodology outlined above and tested for the traffic demand years of 2021, 2024, 2026 and 2041 to:

- Determine congestion and delays on key links and critical intersections with the option changes
- Evaluate change in driver decisions with changed volumes on the network given each option
- Consider the proportion / quantity of drivers using the Tabilban-Ikkina route given each option
- Inform the options assessment and development of a preferred option.

No other network changes or demand changes were considered as part of this options testing outside of those outlined in Section 3 and 4.3.3.

5.2 Network Statistics

Network statistics are network-wide parameters of traffic performance. A summary of the key network statistics from the Aimsun model and across the study area for the base case and future base case models are shown in Table 5.1 for the purposes of comparison to the options results later.

Table 5.1: **Base Model: Network Statistics Comparison**

Statistic	2021 Base	Base Scenario		
		2024 Base	**2026 Base**	**2041 Base**
AM Peak				
Input Vehicle Count	12,822 veh	13,525 veh	10,886 veh	12,110 veh
Total Vehicle Hours (VHT)	646.6 hrs	711.34 hrs	511 hrs	667.4 hrs
Total Vehicle km (VKT)	20,327 km	21,755 km	15,856 km	17,463 km
Average Speed (km/h)	34.5 km/h	33.7 km/h	34 km/h	30 km/h
PM Peak				
Input Vehicle Count	12,369 veh	12,762 veh	10,630 veh	11,836 veh
Total Vehicle Hours (VHT)	631.9 hrs	656.2 hrs	487.4 hrs	628.8 hrs
Total Vehicle km (VKT)	20,155 km	20,780 km	15,891 km	17,217 km
Average Speed (km/h)	35.9 km/h	35.8 km/h	35.9 km/h	31.7 km/h

NOTE: This network statistics table has been reproduced from the Future Base Modelling Report for comparison purposes.

The above results show:

- Compared to the 2021 base, traffic volumes in the study area averaged across both peaks:
  - Increase by 4.4% in the 2024 scenario
  - Reduce by 14.6% in the 2026 scenario
  - Reduce by 4.9% in the 2041 scenario
- VHT and VKT values increase and reduce relative to the changes in input traffic volumes
- Average speed is reduced in the 2041 base model, indicative of the reduced speed limits on the Gold Coast Highway with construction of the light rail and localised congestion issues.

The reductions in traffic in 2026 and (less so) in 2041 compared to 2024 are associated with the opening of the M1 improvements through Palm Beach, and a general shift in traffic from the Gold Coast Highway (and some of this traffic that passes through Koala Park) and to the M1.

A summary of Aimsun network statistics for each option tested is included in Table 5.2 to Table 5.4.

Table 5.2: Option A Models: Network Statistic Comparison

Statistic	Option Modelling Scenario			
	2021	2024	2026	2041
OPTION A3				
AM Peak				
Total Vehicle Hours (VHT)	652.7 hrs	712 hrs	504.9 hrs	656.2 hrs
Total Vehicle km (VKT)	20,494 km	21,791 km	15,872 km	17,453 km
Average Speed (km/h)	34.5	33.5	34.3	30.4
PM Peak				
Total Vehicle Hours (VHT)	631.8 hrs	656.3 hrs	486.8 hrs	641 hrs
Total Vehicle km (VKT)	20,149 km	20,903 km	15,888 km	17,211 km
Average Speed (km/h)	36.0	35.9	35.9	31.5
OPTION AX				
AM Peak				
Total Vehicle Hours (VHT)	693.1 hrs	775.3 hrs	514.1 hrs	659.5 hrs
Total Vehicle km (VKT)	20,545 km	22,107 km	15,882 km	17,374 km
Average Speed (km/h)	33.2	32.3	33.8	30.2
PM Peak				
Total Vehicle Hours (VHT)	645.2 hrs	665.8 hrs	486.5 hrs	630 hrs
Total Vehicle km (VKT)	20,408 km	21,202 km	15,897 km	17,211 km
Average Speed (km/h)	35.7	35.9	35.9	31.7

Table 5.3: Option B Models: Network Statistic Comparison

Statistic	Option Modelling Scenario			
	2021	2024	2026	2041
OPTION B2				
AM Peak				
Total Vehicle Hours (VHT)	614.9 hrs	686.6 hrs	505.7 hrs	654.6 hrs
Total Vehicle km (VKT)	19,629 km	21,003 km	15,745 km	17,370 km
Average Speed (km/h)	34.9	33.8	34.1	30.5
PM Peak				
Total Vehicle Hours (VHT)	637.4 hrs	651 hrs	476.4 hrs	620 hrs
Total Vehicle km (VKT)	19,573 km	20,142 km	15,763 km	17,114 km
Average Speed (km/h)	35.3	35.4	36.4	31.9
OPTION B3				
AM Peak				
Total Vehicle Hours (VHT)	600.5 hrs	676.5 hrs	489.6 hrs	621.3 hrs
Total Vehicle km (VKT)	19,628 km	20,987 km	15,776 km	17,357 km
Average Speed (km/h)	35.6	34.3	35.1	31.8
PM Peak				
Total Vehicle Hours (VHT)	623.8 hrs	630.2 hrs	472.8 hrs	589.9 hrs
Total Vehicle km (VKT)	19,442 km	20,117 km	15,691 km	17,096 km
Average Speed (km/h)	36.0	36.3	36.9	33.1
OPTION B4				
AM Peak				
Total Vehicle Hours (VHT)	624 hrs	692.6 hrs	512 hrs	652.7 hrs
Total Vehicle km (VKT)	19,929 km	21,283 km	15,847 km	17,397 km
Average Speed (km/h)	34.8	33.7	33.9	30.4
PM Peak				
Total Vehicle Hours (VHT)	632.9 hrs	654.7 hrs	486.7 hrs	616.7 hrs
Total Vehicle km (VKT)	19,859 km	20,558 km	15,842 km	17,173 km
Average Speed (km/h)	35.4	35.5	35.9	31.9

Table 5.4: Option C Models: Network Statistic Comparison

Statistic	Option Modelling Scenario			
	2021	**2024**	**2026**	**2041**
OPTION C3				
AM Peak				
Total Vehicle Hours (VHT)	905 hrs	898.2 hrs	521.8 hrs	718.7 hrs
Total Vehicle km (VKT)	21,997 km	23,791 km	16,911 km	18,395 km
Average Speed (km/h)	31.8	32.1	35.3	30.2
PM Peak				
Total Vehicle Hours (VHT)	714 hrs	749.3 hrs	512.3 hrs	690.3 hrs
Total Vehicle km (VKT)	22,174 km	22,944 km	16,813 km	18,171 km
Average Speed (km/h)	35.9	35.6	36.9	31.4
OPTION C5				
AM Peak				
Total Vehicle Hours (VHT)	714.7 hrs	808 hrs	525.2 hrs	675.1 hrs
Total Vehicle km (VKT)	21,809 km	23,396 km	16,645 km	18,124 km
Average Speed (km/h)	35.1	33.6	34.9	30.7
PM Peak				
Total Vehicle Hours (VHT)	652 hrs	707.6 hrs	491.8 hrs	656.1 hrs
Total Vehicle km (VKT)	22,027 km	22,783 km	16,572 km	17,836 km
Average Speed (km/h)	37.0	36.2	37.1	31.8

A summary of the overall findings is provided below with a focus on key metrics of VHT which is the network delay / time spent in the network, and VKT which is the km travelled in the network:

- Option A3 showed a general reduction in VHT across the AM peak except in 2021 while the PM peak showed similar results to the base case. VKT showed marginal differences overall

- Option AX mostly increases VHT across both peaks except for in the 2026 PM and 2041 AM periods. This translates to more time spent in the network. VKT was found to be similar across all years yet generally showing an increase in distance travelled; except for 2041 which yielded a minor reduction in VKT

- Option B2 showed a general reduction in VHT and VKT across the years and peaks due to the direct connection through the study area

- Option B3 resulted in further improvements to each metric from Option B2 predominantly due to the inclusion of the west-to-south left turn slip lane from Tabilban Street to West Burleigh Road

- Option B4 yielded reductions in the AM peak for VHT and VKT while the PM peak showed results similar to the base case

- The Option C networks resulted in significant increases in VHT and VKT with Option C3 showing the greatest increases / impacts to the network overall.

5.3 Route Choice Comparison

A key metric for the options evaluation is the proportion of drivers choosing to use the 'rat-run' route via Tabilban Street-Ikkina Road versus those using the state controlled road network.

The comparison routes are shown in Figure 5.1.

Figure 5.1: Comparison Routes

A comparison of route choice for the Base Case and Future Base Case models is shown in Table 5.5 for comparison to the options results which follow.

Table 5.5:   Base Case Through Traffic Route Choice Comparison

Route		Peak	Base Scenario			
			2021 Base	**2024 Base**	**2026 Base**	**2041 Base**
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	27%	24%	9%	1%
		PM	25%	28%	26%	6%
Route 2	Tabilban Street-Ikkina Road	AM	32%	25%	44%	82%
		PM	37%	43%	72%	90%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	42%	50%	48%	18%
		PM	38%	29%	2%	6%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	28%	28%	27%	3%
		PM	31%	34%	20%	3%
Route 2	Tabilban Street-Ikkina Road	AM	71%	71%	73%	97%
		PM	68%	65%	80%	96%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	0%	1%

As shown, in 2024 there is slight shift of the proportion of vehicles using the 'rat-run' (Routes 2 & 3) to instead use the state road network (Route 1) when travelling eastbound. The proportion of trips using the 'rat-run' is similar between 2021 and 2024 in the westbound direction. Comparatively, in 2026 and 2041, a greater proportion of drivers are expected to choose the 'rat-run' route, most notably different in the 2041 scenario as they look to avoid the Burleigh CBD area and GCLR corridor and signals.

What is happening here is that some of the longer distance through traffic is relocating to the M1 route in 2026 and 2041, leaving lower volumes on the Gold Coast Highway but a larger proportion with more localised destinations, say at Burleigh Heads, Tallebudgera or West Burleigh. This means that whilst the scale of potential rat running traffic reduces in 2026 and 2041 compared to 2024, the percentage that get a benefit from local rat running is larger.

What is important to the options assessment is the relativities between options and the base case rather than the relativities between years in the base case.

A comparison of route choice for the Options models is shown in Table 5.6 to Table 5.8.

Table 5.6:   Option A Route Choice Comparison

Route		Peak	Option Modelling Scenario			
			2021	**2024**	**2026**	**2041**
OPTION A3						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	38%	29%	8%	2%
		PM	27%	32%	27%	6%
Route 2	Tabilban Street-Ikkina Road	AM	22%	25%	48%	66%
		PM	32%	46%	68%	76%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	40%	46%	44%	33%
		PM	41%	22%	4%	19%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	30%	29%	27%	7%
		PM	32%	36%	17%	2%
Route 2	Tabilban Street-Ikkina Road	AM	69%	70%	73%	93%
		PM	67%	63%	82%	97%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	0%	2%
OPTION AX						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	40%	36%	9%	3%
		PM	50%	63%	29%	8%
Route 2	Tabilban Street-Ikkina Road	AM	60%	64%	91%	97%
		PM	50%	37%	71%	92%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	25%	31%	27%	4%
		PM	33%	36%	18%	2%
Route 2	Tabilban Street-Ikkina Road	AM	74%	68%	73%	96%
		PM	66%	63%	81%	97%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	0%	2%

NOTE: In Option AX, no westbound through traffic can choose Route 3 (Bunyip St) due to the one-way northbound treatment of Koel St.

Table 5.7:   Option B Route Choice Comparison

Route		Peak	Option Modelling Scenario			
			2021	2024	2026	2041
OPTION B2						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	4%	5%	6%	1%
		PM	7%	5%	9%	0%
Route 2	Tabilban Street-Ikkina Road	AM	51%	49%	87%	82%
		PM	77%	57%	90%	98%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	45%	46%	7%	17%
		PM	16%	38%	1%	2%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	8%	7%	20%	6%
		PM	20%	22%	15%	0%
Route 2	Tabilban Street-Ikkina Road	AM	91%	92%	80%	94%
		PM	79%	77%	84%	98%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	1%	2%
OPTION B3						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	2%	2%	5%	1%
		PM	1%	1%	9%	
Route 2	Tabilban Street-Ikkina Road	AM	98%	98%	95%	99%
		PM	99%	99%	91%	
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	8%	6%	20%	4%
		PM	15%	19%	15%	0%
Route 2	Tabilban Street-Ikkina Road	AM	91%	93%	80%	96%
		PM	84%	80%	84%	98%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	1%	2%
OPTION B4						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	7%	6%	7%	1%
		PM	9%	13%	13%	13%
Route 2	Tabilban Street-Ikkina Road	AM	40%	40%	64%	82%
		PM	55%	53%	87%	87%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	53%	54%	29%	17%
		PM	36%	34%	0%	0%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	12%	9%	25%	4%
		PM	25%	27%	17%	17%
Route 2	Tabilban Street-Ikkina Road	AM	86%	90%	75%	96%
		PM	74%	72%	83%	83%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	0%	0%

NOTE: In Option B3, no westbound through traffic can choose Route 3 (Bunyip St) due to the one-way northbound treatment of Koel St.

Note, Option C3 completely severs the east-west link through closure of Ocean Parade at Tabilban Street and hence does not include route choice results associated with Tabilban-Ikkina route (i.e. all OD trips must use the state controlled network).

Table 5.8:   Option C Route Choice Comparison

Route		Peak	Option Modelling Scenario			
			2021	2024	2026	2041
OPTION C5						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	80%	72%	100%	62%
		PM	100%	99%	100%	92%
Route 2	Tabilban Street-Ikkina Road	AM	3%	16%	0%	12%
		PM	0%	1%	0%	7%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	17%	12%	0%	26%
		PM	0%	0%	0%	1%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	99%	99%	100%	97%
		PM	99%	99%	100%	97%
Route 2	Tabilban Street-Ikkina Road	AM	0%	0%	0%	3%
		PM	0%	0%	0%	2%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	1%
		PM	1%	1%	0%	1%

In summary:

- Option A models showed similar route choice patterns to the base network scenarios. The exception is Option AX in the westbound direction given the one-way Koel Street arrangement which pushes a greater proportion of traffic to Routes 1 and 2

- Option B2 and B3 result in a clear increase in traffic choosing Routes 2 and/or 3 ('rat-run' routes) which is expected given the intent of these options is to make east-west travel through the study area easier for through traffic. Option B4 shows this effect to a lesser extent given it does not connect the Tabilban Street 'missing link', however still prioritises through traffic which then increases from the base case

- Option C5 shows a clear shift of traffic to the state network which is expected due to closure of the direct east-west route. However, this option shows that some vehicles are still choosing the westbound route via the Ocean Parade-Pindari Avenue connection that remains in the AM peak in 2024 and in 2041

- Option C3 was not included as it completely severs the east-west link and hence all traffic must use the state controlled network. That is, there is no rat running route to report on.

5.4 Traffic Volume Comparisons

A review of traffic volumes along the Tabilban-Ikkina route was undertaken for each option and compared to the base case and for each assessment year. The model volumes were extracted at three (3) screenline locations along the route as shown in Figure 5.2.

SOURCE: Nearmap (edited by Bitzios)

Figure 5.2: **Tabilban-Ikkina Route Traffic Volume Screenline Locations**

The screenline volumes have been presented as daily volume estimates along the route. As the Aimsun models developed are for AM and PM peak periods, a "peak-to-daily" expansion factor was calculated using the existing 24hr tube count data collected along the route for the study.

The expansion factor was calculated to be *3.16* which was then applied to extracted AM (2hr) and PM (2hr) peak period volumes to create the estimated daily volumes in Table 5.9.

Table 5.9: **Tabilban-Ikkina Route Screenline Daily Traffic Volumes**

Year	Screenline	Base Volumes	Option Volumes						
			A3	AX	B2	B3	B4	C3	C5
2021	West	7,438	6,788	8,900	10,425	13,566	8,613	2,074	2,459
	Central	9,045	8,373	7,470	11,612	12,559	10,759	-	2,055
	East	9,288	8,644	7,744	11,820	13,165	11,088	1,721	1,809
2024	West	7,460	7,628	8,704	10,033	15,505	8,957	2,242	3,072
	Central	9,241	8,995	7,283	12,464	13,295	11,407	-	2,399
	East	9,828	9,579	7,864	12,944	13,632	11,984	1,837	2,355
2026	West	4,878	4,811	5,856	7,489	7,290	5,872	1,509	2,276
	Central	4,177	4,152	4,129	6,993	6,201	4,578	-	1,222
	East	4,439	4,442	4,423	7,047	6,766	4,843	1,812	938
2041	West	7,160	6,655	7,533	7,833	7,631	6,838	3,217	4,003
	Central	4,060	4,010	3,940	4,581	4,635	4,499	-	2,229
	East	4,414	4,407	4,319	4,691	6,608	4,824	2,428	1,866

NOTE: Option C3 does not include a volume at the Central Screenline as this location is where the link is severed in the model network.

Similar to the network statistics, traffic volumes reduce in the study area in 2026 and 2041 due to the broader re-routing of traffic associated with GCLR and the completed M1 upgrade.

A review of the option volumes compared to the base case volumes reveals:

- Option A models show volumes similar to those of the Base Case, with Option AX resulting in higher volumes at the western screenline due to the one-way arrangement of Koel Street, forcing more westbound traffic using the route along Tabilban Street (opposed to Bunyip Street)

- Option B models result in an increase in volumes along the route given the connection of the Tabilban 'missing link' and promoting through traffic along the route

- Option C models show a significant reduction in volumes to a level generally consistent with the capacity of a Residential Collector (~3,000veh/day) due to effectively removing the east-west connection and forcing traffic to use the state controlled network.

These results suggest that from a traffic volume perspective:

- Option A models remain generally consistent with the existing volumes, not inducing additional external through traffic ('rat-running') and maintaining local connections and general amenity for residents

- Option B models induce additional external through traffic with traffic volume increases in the order of 33% when compared to the base (i.e. 2024 Option B2) while Option B3 more than doubled the volumes (>100% increase) at the western screenline when compared to the base. This significant increase in external through traffic has the potential to exacerbate existing issues and safety risks resulting in reducing residential amenity and property access, and endorsing a higher speed environment

- Option C models remove the external through traffic ('rat-run') through the area, however impacts local residential connections and amenity through effectively severing the local link and creating congestion and impacts on the broader road network.

Considering the above, Options B and C were not found to align with the overall function of the corridor, with Option B resulting in traffic volumes far in excess of a Major Collector road capacity (>10,000 veh/day).

5.5   Network Link Delays

The network link delays have been extracted from the models and shown in **Appendix C** for each option. The colour coding is relative to the delay in the network and gives an indication of where delays and congestion are concentrated.

Delays are concentrated at signalised intersections at each end of the Tabilban-Ikkina route, and within the Burleigh Heads CBD area, particularly where West Burleigh Road intersects with Gold Coast Highway.

In **Appendix C** of particular note is the Option C models resulting in significant impacts to the state network with delays and queuing observed at the West Burleigh Road / Gold Coast Highway intersection which then blocks streets such as James Street and Burleigh Street. Option C (removing the east-west Tabilban link) has a significant impact on the broader network.

6. OPTIONS ASSESSMENT

6.1 Approach Overview

A rapid appraisal was undertaken to refine the short listed (filtered) options. The method considered the options modelling results with these results informing a two-stage process, including:

- Public Consultation
- Multi-criteria Analysis (MCA).

6.2 Public Consultation

Public consultation material was prepared with Council and the consultation material is provided in **Appendix D**. The material was presented to the public on Council's website and in person via three (3) community information sessions held at the Tallebudgera Creek Recreation Centre. It is understood that over 200 people attended in total. The material included a community feedback survey / form prepared by Council to seek feedback and to:

- Better understand the opinion from the local community regarding the extent of the issues raised in the petition provided to Council in 2021
- Obtain feedback on the overarching options and their benefits and disbenefits.

There was a total of 362 respondents of which approximately 94% identified themselves as local Koala Park residents. The survey results were grouped into two (2) categories including:

- Traffic outcome priorities
- Support of traffic management outcomes.

Responses were scored based on the relevant scoring matrix (see below) and the results ranked and listed in order of preference. A summary of the results are provided in Table 6.1 to Table 6.4.

Table 6.1: Traffic Outcome Priorities: Score Matrix

Response	Score
Extremely Important	4
Very Important	3
Moderately Important	2
Slightly Important	1
Not at all important	0

Table 6.2: Traffic Outcome Priorities: Results

Traffic Outcome	Score	Priority
Improving road safety	1,303	1
Preserving the local environment and Koala population	1,301	2
Reducing traffic volume	1,280	3
Reducing traffic speed	1,221	4
Prioritising local traffic	1,178	5
Upgrading the active transport network (pathways) in the local area	991	6
Maintaining the connection for local traffic between West Burleigh and Palm Beach	627	7
Prioritising through traffic	357	8

Table 6.3: Support of Traffic Management Outcomes: Score Matrix

Response	Score
Strongly Support	3
Moderately Support	2
Somewhat Support	1
Do Not Support	0

Table 6.4: Support of Traffic Management Outcomes: Results

Traffic Management Option	Score	Priority	% 'Do Not Support'
Installing roundabouts and/or intersection treatments to prioritise local traffic and discourage through traffic	934	1	3%
Providing a fauna crossing to preserve the local environment including the Burleigh Ridge Koala population	837	2	8%
Installing traffic management devices such as speed humps and chicanes to reduce speed and discourage through traffic	807	3	8%
Provide a high quality active transport pathway between Tabilban West and East	583	4	32%
Remove existing traffic calming devices to improve through traffic efficiency	519	5	36%
Making Koel Street one-way northbound to stop through traffic	179	6	76%

The community feedback identified the following traffic outcome priorities as most important:

- Improving road safety
- Reducing traffic volume and speeds
- Prioritising local traffic
- Preserving the local environment and koala population.

Upgrading the active transport provisions / connections was considered moderately important.

The following traffic management outcomes were strongly supported:

- Installing local area traffic management and roundabouts at key intersections
- Installing a Fauna Crossing.

Improving active transport only received moderate support while 76% of respondents were strongly against implementing a one-way northbound arrangement for Koel Street.

Of the 362 respondents, 358 provided a 1-3 ranking preference of the three (3) overarching options taken to consultation. The results are included in Table 6.5 in order of preference.

Table 6.5: Overarching Option Preference

Overarching Option	Percentage Preference
Option A: 'Minor Network Improvements'	32%
Option B: 'Promote Through Traffic'	17%
Option C: 'Local Traffic Only'	51%

The results indicate that:

- 51% of respondent's have a preference for removing an east-west link (Option C)
- 49% of respondent's have a preference for maintaining an east-west link (Options A and B).

This indicates that the community has <u>no clear consensus</u> on maintaining or removing the east west link, noting that 94% of respondents identified as 'locals'.

Although 51% of residents favoured Option C, the modelling showed that Option C effectively just 'moves the problem' elsewhere in the network. It results in significant impacts to the state network with delays and queuing observed at the West Burleigh Road / Gold Coast Highway intersection which then blocks streets such as James Street and Burleigh Street within Burleigh Village. Option C has a significant impact on the broader network which is not considered tenable, acceptable or feasible to address.

6.3   Multi-Criteria Analysis (MCA)

TMR's *Smarter Solutions – Multi-criteria Assessment (MCA) Tool* was used to assist in determining a preferred option from the seven (7) short listed options. A set of selected criteria was adopted which is outlined in detail in **Appendix E** and summarised below:

- Economic data (implementation costs)
- Traffic performance and integration (road user safety, network connectivity, network-wide operating conditions, active transport – cyclists/pedestrians)
- Social factors (impact on property owners)
- Environmental impact (flora and fauna, noise and air quality)
- Construction and constructability (community disruption, engineering / constructability).

Each criterion was ranked by order of importance based on a neutral perspective considering Council objectives, traffic assessment, community consultation and feedback and the broader network including state authorities. The "Rank Sum" method for weighting the ranked criteria was adopted (as outlined in TMR's MCA Tool User Guide).

Each option was given a score ranging from 1-5, with 1 being the least favourable score (e.g. greatest level of impact or greatest order of cost), 5 being the most favourable (e.g. lowest comparative level of impact or lowest order of cost), and 3 being little or no change / impact from the Base.

The detailed MCA results are included in **Appendix E**.

6.4   Preferred Option

The MCA results show **Option A3** as the overall preferred option.

This option was found to best align with the function and intent of the network, and the community consultation feedback. It was found to provide the preferred solution given it:

- Achieves the intended function of the road network
- Maintains an east-west connection
- Results in a balanced level of traffic demand between the local and state networks
- Better manages speeds and improves road user safety
- Preserves the local environment and minimises environmental impact
- Provides active transport improvements and connections.

Multiple treatments (sub-options) are possible at different locations along the route in Option A3. The proposed treatments, including sub-option treatments at specific locations, are detailed in Table 6.6.

The treatments and sub-option treatments underwent further testing in a detailed appraisal process outlined in Section 6.5 below.

Table 6.6: Preferred Option Treatments and Sub-option Treatments

Location	Treatment Description	Additional Sub-option Description
Tabilban St / W Burleigh Rd Intersection	▪ Signalised pedestrian crossing on southern leg of intersection to improve active transport connection *Note: this is a state-controlled intersection and is subject to TMR approval and implementation.*	
Tabilban St West (W Burleigh Rd to Wairoo St)	▪ Additional line-marking of parking lanes ▪ Lengthening left-turn lane exiting Tabilban St	
Tabilban St / Wairoo St Intersection	▪ Installation of mini-roundabout ▪ Changes priority improving side street access and slows speeds through the intersection	▪ Installation of intersection LATM (e.g. chicane) ▪ Forces vehicle deflection and slows speed through the intersection
Tabilban St / Koel St Intersection	▪ Improved intersection LATM ▪ Additional line marking and installation of kerb build-outs on southern side forcing deflection and slowing speeds	
Tabilban St / Ocean Pde Intersection	▪ Improved intersection LATM ▪ Formalise intersection priorities & delineation ▪ Kerb extension and formalisation of eastern leg with clear delineation ▪ Improved visual cues to define the directional of travel and priorities	
Reserve St / Ocean Pde Intersection	▪ Trim vegetation as required for sight line improvements	▪ Re-prioritisation of the intersection plus LATM improvements; or ▪ Installation of a mini-roundabout; or ▪ Full intersection signalisation; or ▪ Partial intersection signalisation *Note: partial signalisation was not modelled.*
Reserve St	▪ Installation of speed management devices / road hump(s)	▪ Minor road widening to provide additional road shoulder width.
Tabilban St East (Reserve St to Pindari Ave)	▪ Wide Centre Line Treatment (WCLT) ▪ LATM treatment (narrow point through median installation) ▪ Improved chevron alignment markers (CAMs) to clearly indicate curve ▪ Installation of upgraded shared path connecting through Tabilban St link ▪ Consideration of electronic signage to delineate curve in low light conditions	
Tabilban St / Pindari Ave / Djerral Ave Intersection	▪ Realigning the intersections and reducing kerb return radii ▪ Narrow the intersection width improving angle of approach and sight lines ▪ Shortening crossing distance and angle for pedestrians/cyclists	▪ Installing a roundabout changing priority and managing speed ▪ Improvements to active transport through pathways and kerb ramps
Tabilban St / Parnoo Ave / Tawarri Cres Intersection	▪ Realigning Tawarri Cres intersection and reducing kerb return radii ▪ Narrow the intersection width improving angle of approach and sight lines ▪ Shortening crossing distance and angle for pedestrians/cyclists	
Tabilban St / Ikkina Rd Intersection	▪ Installing a roundabout changing priority and managing speed ▪ Addressing alignment and configuration issues raised in Road Safety Audit	▪ Intersection realignment to achieve a more traditional T-intersection ▪ Reinforcing the direction of flow / priority through improved medians & line marking
Ikkina Rd / Gold Coast Hwy Intersection	▪ Signal improvements at Gold Coast Hwy for left turns into Ikkina Rd	
Full Length of Corridor	Signs and line marking improvements, including considering electronic signage	

6.5 Detailed Appraisal

6.5.1 Sub-Options and Inclusions

The multiple treatments (sub-options) considered at locations identified above were tested in a more detailed modelling process (the Detailed Appraisal) including:

- Additional Aimsun modelling within the preferred overarching model network (Option A3)
- Detailed SIDRA Intersection testing of certain intersection treatments along the corridor.

A list of each sub-option inclusions are provided in Table 6.7.

Table 6.7: Detailed Appraisal Sub-Options

Sub-Option (Description)	Summary of Sub-Option Inclusions
A3i ("2x Roundabouts")	▪ Tabilban St / W Burleigh Rd intersection: *signalised pedestrian crossing on southern leg* ▪ Tabilban St / Wairoo St: *small roundabout treatment* ▪ Ocean Pde / Reserve St: *as per existing STOP control arrangement* ▪ Tabilban St / Pindari Ave: *intersection realignment (generally as per existing)* ▪ Tabilban St / Ikkina Rd: *roundabout treatment* ▪ Ikkina Rd / Gold Coast Hwy: *signal improvements for left turns into Ikkina Rd*
A3ii ("4x Roundabouts")	▪ Tabilban St / W Burleigh Rd intersection: *signalised pedestrian crossing on southern leg* ▪ Tabilban St / Wairoo St: *small roundabout treatment* ▪ Ocean Pde / Reserve St: small roundabout treatment ▪ Tabilban St / Pindari Ave: *roundabout treatment* ▪ Tabilban St / Ikkina Rd: *roundabout treatment* ▪ Ikkina Rd / Gold Coast Hwy: *signal improvements for left turns into Ikkina Rd*
A3iii ("3x Roundabouts")	▪ Tabilban St / W Burleigh Rd intersection: *signalised pedestrian crossing on southern leg* ▪ Tabilban St / Wairoo St: *small roundabout treatment* ▪ Ocean Pde / Reserve St: intersection re-prioritisation ▪ Tabilban St / Pindari Ave: *roundabout treatment* ▪ Tabilban St / Ikkina Rd: *roundabout treatment* ▪ Ikkina Rd / Gold Coast Hwy: *signal improvements for left turns into Ikkina Rd*
A3iv ("3x Roundabouts + Reserve St Signals")	▪ Tabilban St / W Burleigh Rd intersection: *signalised pedestrian crossing on southern leg* ▪ Tabilban St / Wairoo St: *small roundabout treatment* ▪ Ocean Pde / Reserve St: full intersection signalisation ▪ Tabilban St / Pindari Ave: *roundabout treatment* ▪ Tabilban St / Ikkina Rd: *roundabout treatment* ▪ Ikkina Rd / Gold Coast Hwy: *signal improvements for left turns into Ikkina Rd*
A3v ("0x Roundabouts")	▪ Tabilban St / W Burleigh Rd intersection: *signalised pedestrian crossing on southern leg* ▪ Tabilban St / Wairoo St: *LATM treatment (i.e. chicane)* ▪ Ocean Pde / Reserve St: *intersection re-prioritisation* ▪ Tabilban St / Pindari Ave: *intersection realignment (generally as per existing)* ▪ Tabilban St / Ikkina Rd: *Improved T-intersection alignment* ▪ Ikkina Rd / Gold Coast Hwy: *signal improvements for left turns into Ikkina Rd*

6.5.2 Aimsun Modelling Results

The additional sub-option treatments tested in the Aimsun model network are shown in Figure 6.1. Other network / intersection configurations were shown previously in Figure 4.1 to Figure 4.8.
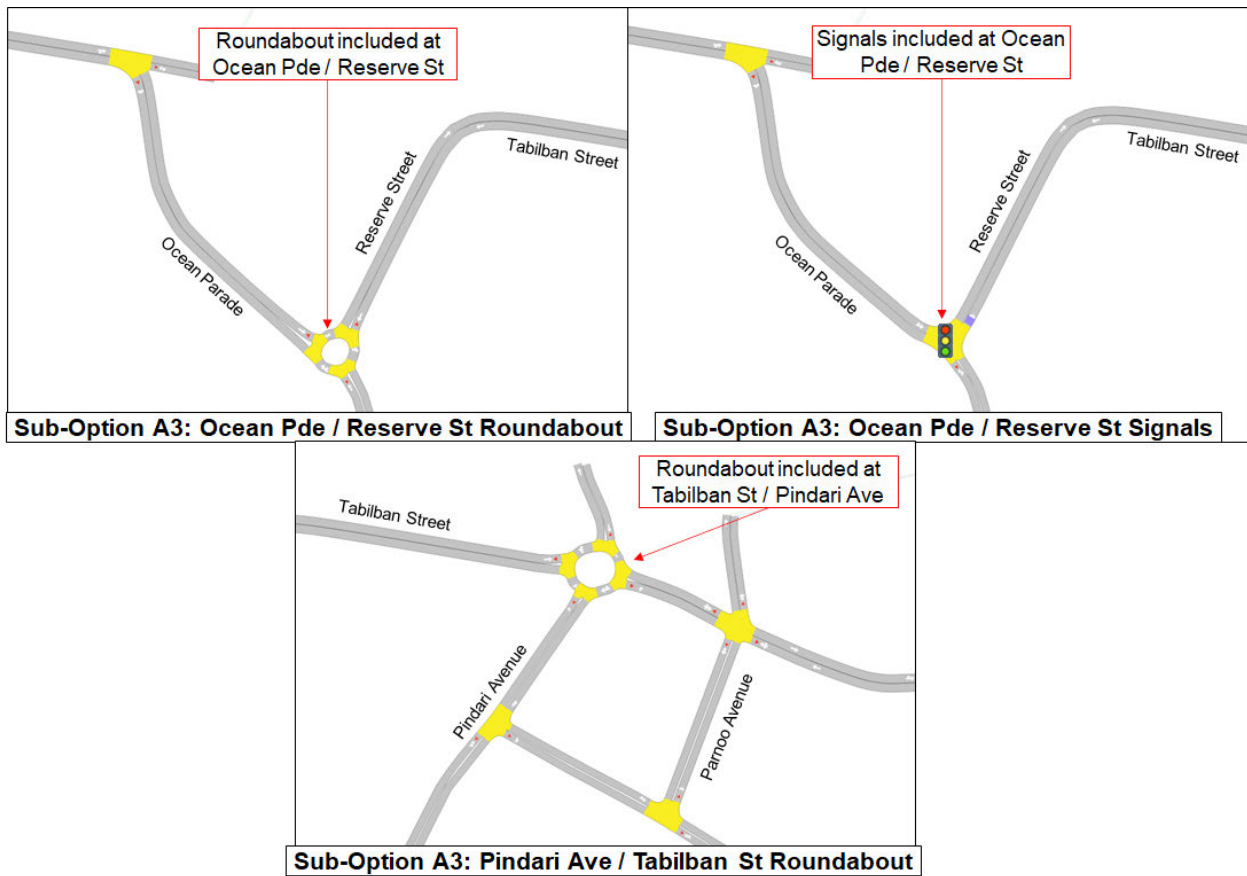
Figure 6.1: **Additional Sub-Option Treatments Tested in Aimsun**

The Aimsun modelling results for the sub-options have been extracted consistent with the above modelling results and are presented below.

Table 6.8 presents a comparison of screenline volumes against the base model.

Table 6.8: **Tabilban-Ikkina Route Screenline Traffic Volume Comparison (sub-options)**

Year	Screenline	Base Volumes	Sub-Option Volumes				
			A3i	A3ii	A3iii	A3iv	A3v
2021	West	7,438	6,892	7,384	7,792	7,009	6,753
	Central	9,045	8,897	10,434	10,456	9,257	10,267
	East	9,288	9,193	10,718	10,804	9,629	10,576
2024	West	7,460	7,498	7,397	7,539	7,628	7,264
	Central	9,241	9,058	11,040	10,823	9,976	10,804
	East	9,828	9,620	11,609	11,435	10,646	11,403
2026	West	4,878	4,619	5,869	4,868	4,789	4,429
	Central	4,177	4,117	8,079	4,313	4,098	4,221
	East	4,439	4,410	8,467	4,590	4,445	4,499
2041	West	7,160	6,270	6,365	6,444	6,112	6,273
	Central	4,060	4,066	4,092	4,139	3,912	4,142
	East	4,414	4,407	4,439	4,496	4,287	4,496

Table 6.9 shows the key network statistics of VHT and VKT for each sub-option.

Table 6.9:   Option A3 (sub-option) Models: Network Statistic Comparison

Statistic	Option Modelling Scenario			
	2021	2024	2026	2041
OPTION A3i				
AM Peak				
Total Vehicle Hours (VHT)	642.5 hrs	726.7 hrs	502.1 hrs	649.8 hrs
Total Vehicle km (VKT)	20,484 km	21,281 km	15,885 km	17,487 km
PM Peak				
Total Vehicle Hours (VHT)	626.9 hrs	652.2 hrs	491.4 hrs	633.4 hrs
Total Vehicle km (VKT)	19,991 km	20,720 km	15,900 km	17,173 km
OPTION A3ii				
AM Peak				
Total Vehicle Hours (VHT)	622.1 hrs	680.6 hrs	508.6 hrs	661.3 hrs
Total Vehicle km (VKT)	20,069 km	21,437 km	15,878 km	17,500 km
PM Peak				
Total Vehicle Hours (VHT)	629.4 hrs	650.3 hrs	488.7 hrs	628.6 hrs
Total Vehicle km (VKT)	20,023 km	20,683 km	15,901 km	17,179 km
OPTION A3iii				
AM Peak				
Total Vehicle Hours (VHT)	621.2 hrs	676.9 hrs	512.5 hrs	654.0 hrs
Total Vehicle km (VKT)	20,045 km	21,437 km	15,853 km	17,454 km
PM Peak				
Total Vehicle Hours (VHT)	633.7 hrs	647.4 hrs	489.2 hrs	635.9 hrs
Total Vehicle km (VKT)	20,004 km	20,614 km	15,880 km	17,188 km
OPTION A3iv				
AM Peak				
Total Vehicle Hours (VHT)	629.9 hrs	686.8 hrs	508.7 hrs	660.2 hrs
Total Vehicle km (VKT)	20,131 km	21,508 km	15,897 km	17,551 km
PM Peak				
Total Vehicle Hours (VHT)	638 hrs	663.1 hrs	490.0 hrs	645.5 hrs
Total Vehicle km (VKT)	20,287 km	20,900 km	15,895 km	17,186 km
OPTION A3v				
AM Peak				
Total Vehicle Hours (VHT)	620.3 hrs	682.1 hrs	507.1 hrs	650.5 hrs
Total Vehicle km (VKT)	20,043 km	21,428 km	15,856 km	17,475 km
PM Peak				
Total Vehicle Hours (VHT)	610.1 hrs	644.6 hrs	486.5 hrs	632.1 hrs
Total Vehicle km (VKT)	20,019 km	20,639 km	15,892 km	17,167 km

Table 6.10 presents the route choice comparison between each sub-option.

Table 6.10: Option A3 (sub-options) Route Choice Comparison

Route		Peak	Option Modelling Scenario			
			2021	2024	2026	2041
OPTION A3i						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	25%	39%	9%	1%
		PM	14%	15%	26%	6%
Route 2	Tabilban Street-Ikkina Road	AM	22%	19%	46%	52%
		PM	48%	46%	53%	67%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	53%	43%	46%	48%
		PM	38%	39%	21%	27%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	58%	32%	27%	5%
		PM	33%	32%	21%	1%
Route 2	Tabilban Street-Ikkina Road	AM	41%	67%	73%	95%
		PM	67%	68%	79%	97%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	0%	2%
OPTION A3ii						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	9%	7%	7%	1%
		PM	15%	14%	27%	7%
Route 2	Tabilban Street-Ikkina Road	AM	24%	26%	26%	53%
		PM	40%	33%	58%	68%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	67%	67%	67%	46%
		PM	45%	53%	15%	26%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	19%	16%	16%	7%
		PM	28%	33%	17%	1%
Route 2	Tabilban Street-Ikkina Road	AM	80%	83%	83%	93%
		PM	72%	67%	83%	97%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	1%	0%
		PM	1%	1%	0%	2%
OPTION A3iii						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	8%	7%	7%	1%
		PM	14%	15%	25%	8%
Route 2	Tabilban Street-Ikkina Road	AM	26%	29%	40%	51%
		PM	51%	36%	64%	67%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	66%	64%	52%	48%
		PM	35%	49%	10%	25%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	20%	23%	26%	5%
		PM	27%	31%	17%	0%
Route 2	Tabilban Street-Ikkina Road	AM	79%	76%	74%	95%
		PM	73%	68%	83%	98%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	0%	2%

Route		Peak	Option Modelling Scenario			
			2021	2024	2026	2041
OPTION A3iv						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	14%	11%	11%	7%
		PM	47%	37%	33%	12%
Route 2	Tabilban Street-Ikkina Road	AM	27%	32%	38%	41%
		PM	20%	32%	63%	68%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	59%	57%	51%	51%
		PM	32%	31%	4%	20%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	19%	23%	26%	4%
		PM	26%	33%	17%	0%
Route 2	Tabilban Street-Ikkina Road	AM	80%	76%	74%	96%
		PM	74%	67%	83%	98%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	1%	1%	0%	2%
OPTION A3v						
Westbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	9%	7%	8%	1%
		PM	18%	16%	28%	5%
Route 2	Tabilban Street-Ikkina Road	AM	23%	27%	36%	44%
		PM	27%	34%	50%	80%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	68%	66%	55%	55%
		PM	55%	50%	22%	15%
Eastbound Direction						
Route 1	West Burleigh Road-Gold Coast Highway	AM	22%	27%	26%	4%
		PM	28%	32%	17%	0%
Route 2	Tabilban Street-Ikkina Road	AM	77%	73%	74%	96%
		PM	72%	68%	83%	99%
Route 3	Ikkina Road-Tabilban Street-Bunyip Street	AM	1%	1%	0%	0%
		PM	0%	1%	0%	1%

In summary, Option A3i resulted in a greater proportion of traffic choosing the state controlled road network and hence lower traffic volumes using the Tabilban-Ikkina route compared to other sub-options.

Similar to the base modelling results, in future years post-delivery of GCLR4 and M1 VL2T (particularly 2041) the results show that the majority of trips choose the Tabilban-Ikkina route over the state controlled route in the eastbound direction however it should be noted that the total volume is reduced because the longer distance through traffic has been diverted from the Gold Coast Highway towards the upgraded M1.

6.5.3   SIDRA Intersection Modelling Results

Traffic volumes for each sub-option were extracted from Aimsun and tested in SIDRA Intersection (version 9.0). The SIDRA layouts of each sub-option are shown in Figure 6.2 to Figure 6.6.

Note, two (2) layouts are shown for the Gold Coast Highway / Ikkina Road intersection in each as the 2041 layout is modified to include the GCLR4 corridor and configuration.
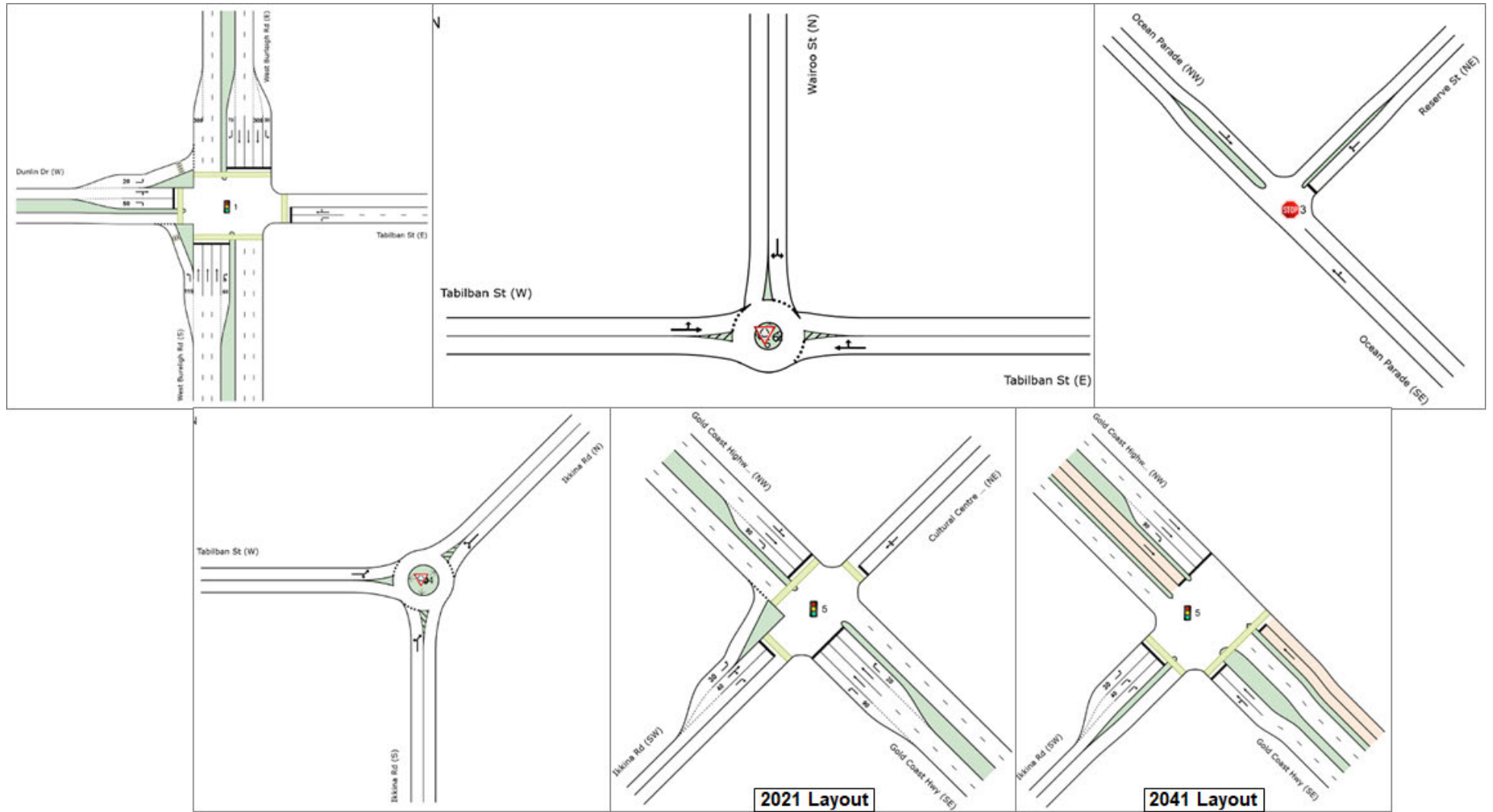
Figure 6.2:   Sub-Option A3i: SIDRA Intersection Layouts
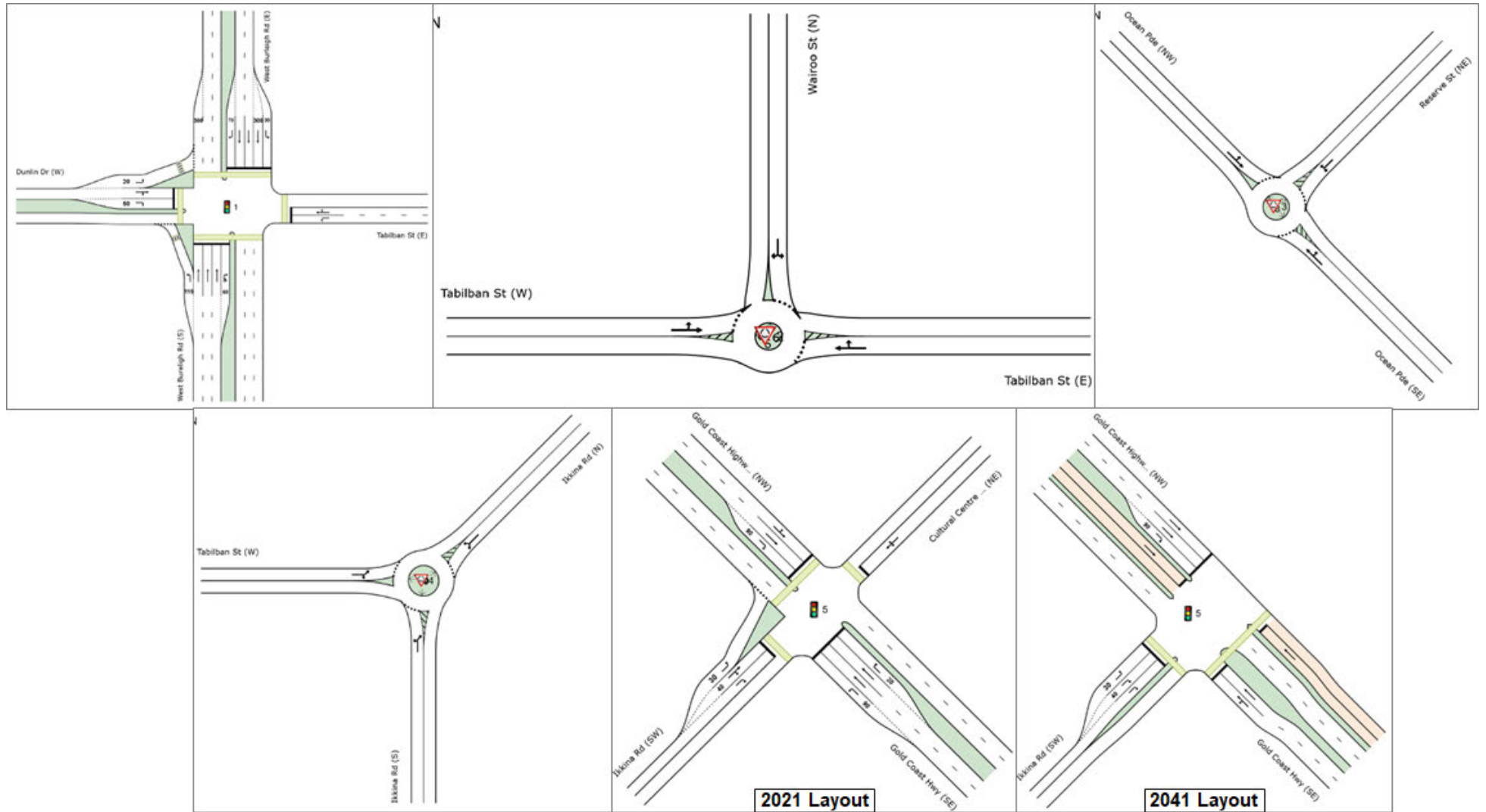
Figure 6.3: Sub-Option A3ii: SIDRA Intersection Layouts
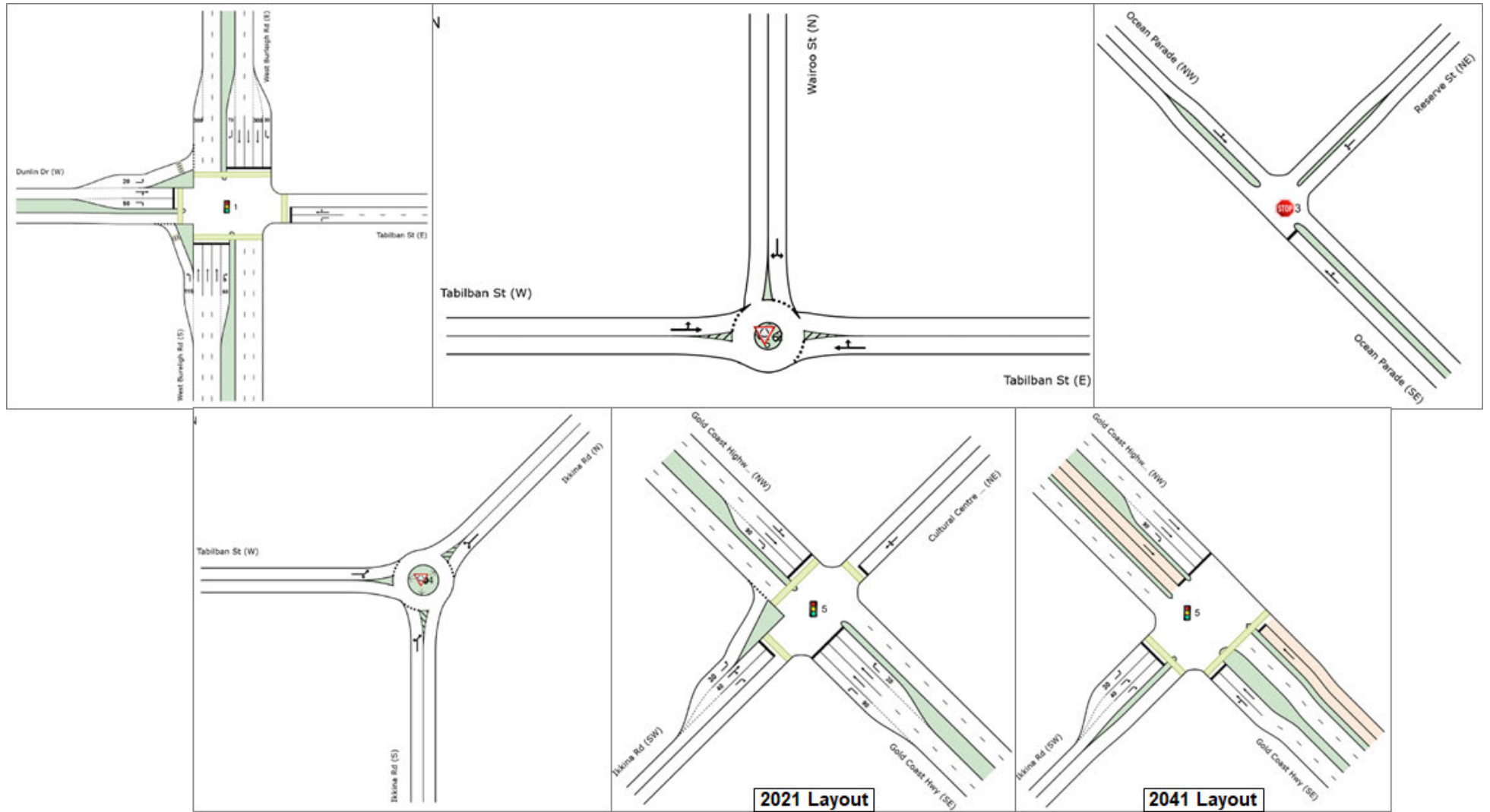
Figure 6.4: Sub-Option A3iii: SIDRA Intersection Layouts
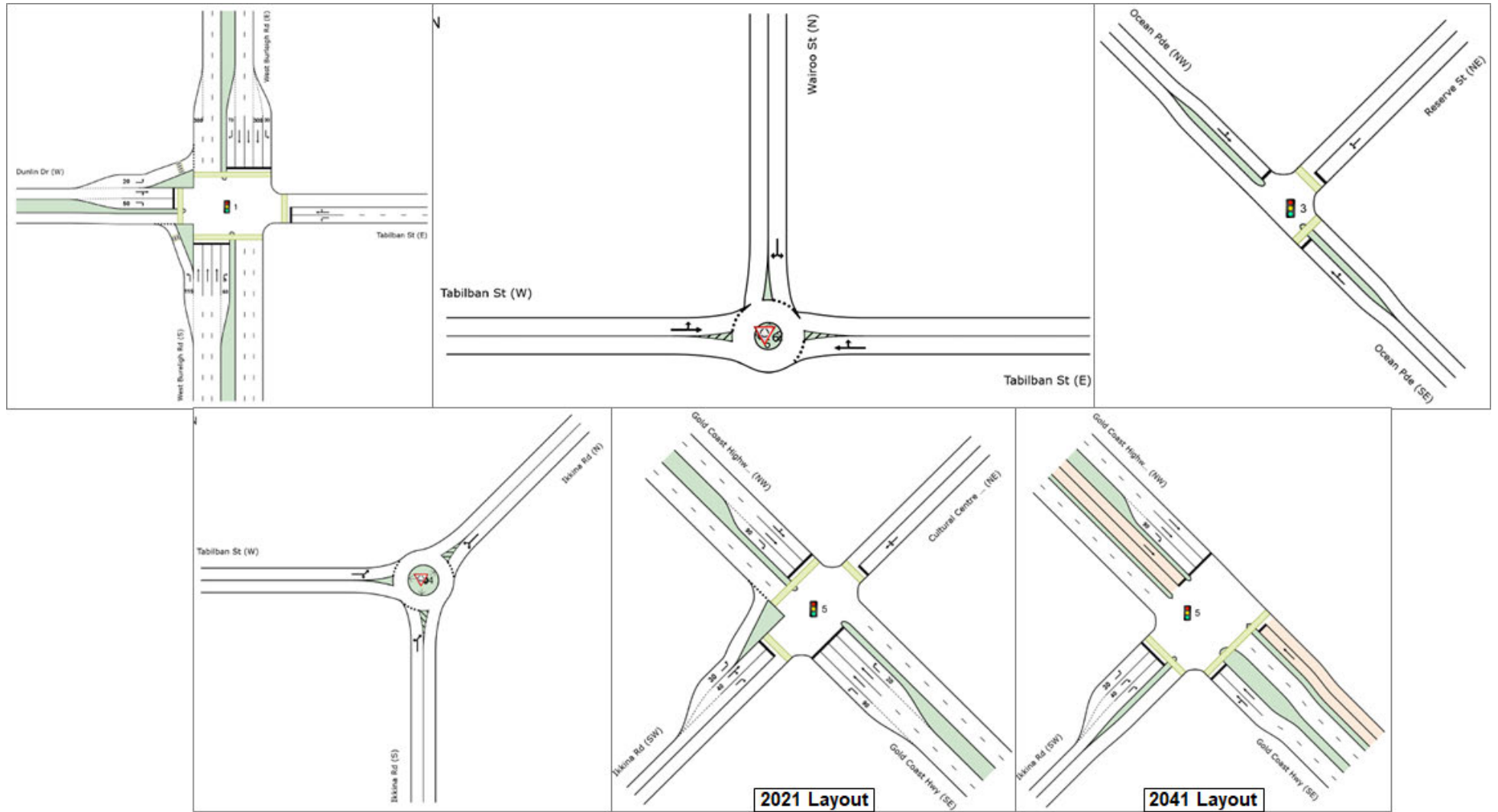
Figure 6.5: Sub-Option A3iv: SIDRA Intersection Layouts
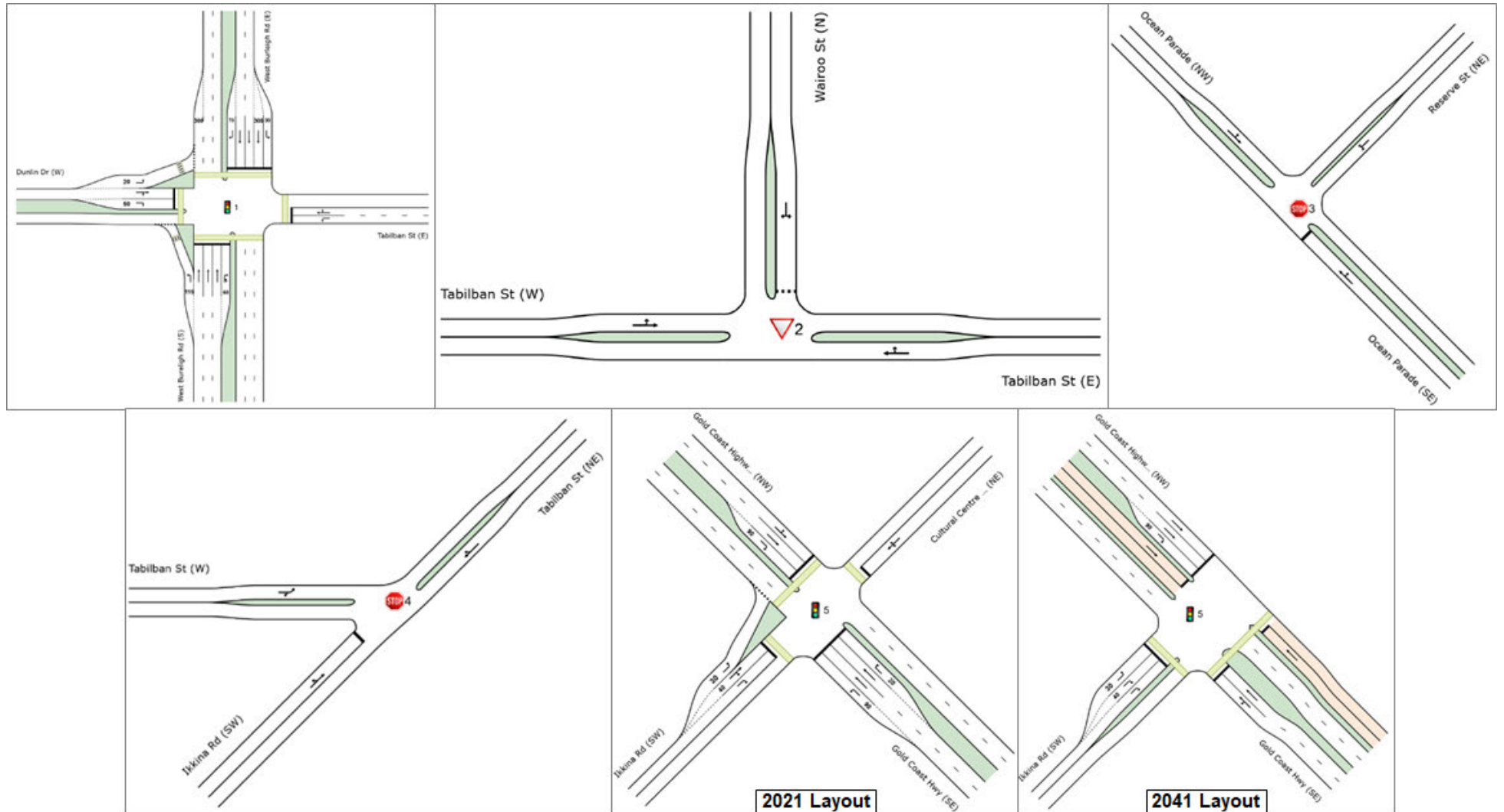
Figure 6.6: **Sub-Option A3v: SIDRA Intersection Layouts**

A summary of the SIDRA modelling results for each intersection within each sub-option is summarised below. Detailed SIDRA outputs are included in **Appendix F**.

Table 6.11: Sub-Option A3i SIDRA Modelling Results Summary

Location	AM Peak				PM Peak			
	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)
2021								
Tabilban St / W Burleigh Rd	0.66	42	D	172	0.86	44	D	219
Tabilban St / Wairoo St	0.16	3	A	6	0.35	3	A	14
Ocean Pde / Reserve St	0.55	7	-	28	0.45	6	-	18
Tabilban St / Ikkina Rd	0.33	7	A	15	0.29	6	A	14
Gold Coast Hwy / Ikkina Rd	0.57	9	A	78	0.60	19	B	122
2024								
Tabilban St / W Burleigh Rd	0.59	38	D	112	0.90	48	D	228
Tabilban St / Wairoo St	0.16	4	A	6	0.35	3	A	14
Ocean Pde / Reserve St	0.35	5	-	11	0.48	6	-	21
Tabilban St / Ikkina Rd	0.19	6	A	7	0.27	6	A	13
Gold Coast Hwy / Ikkina Rd	0.70	8	A	75	0.61	19	B	126
2026								
Tabilban St / W Burleigh Rd	0.68	43	D	176	0.50	37	D	113
Tabilban St / Wairoo St	0.17	4	A	6	0.16	3	A	5
Ocean Pde / Reserve St	0.30	5	-	9	0.18	5	-	5
Tabilban St / Ikkina Rd	0.18	7	A	7	0.11	6	A	4
Gold Coast Hwy / Ikkina Rd	0.41	9	A	41	0.29	10	B	65
2041								
Tabilban St / W Burleigh Rd	0.99	69	E	390	0.69	38	D	186
Tabilban St / Wairoo St	0.20	4	A	8	0.25	4	A	10
Ocean Pde / Reserve St	0.33	6	-	10	0.15	4	-	4
Tabilban St / Ikkina Rd	0.21	7	A	8	0.10	6	A	4
Gold Coast Hwy / Ikkina Rd	0.55	16	B	127	0.30	23	C	81

Table 6.12: Sub-Option A3ii SIDRA Modelling Results Summary

Location	AM Peak				PM Peak			
	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)
2021								
Tabilban St / W Burleigh Rd	0.66	44	D	157	0.82	43	D	196
Tabilban St / Wairoo St	0.17	3	A	7	0.37	3	A	15
Ocean Pde / Reserve St	0.48	5	A	25	0.33	4	A	17
Tabilban St / Ikkina Rd	0.45	7	A	24	0.33	6	A	17
Gold Coast Hwy / Ikkina Rd	0.54	12	B	94	0.62	22	C	133
2024								
Tabilban St / W Burleigh Rd	0.79	46	D	186	0.81	39	D	182
Tabilban St / Wairoo St	0.21	3	A	9	0.33	3	A	13
Ocean Pde / Reserve St	0.54	5	A	32	0.31	4	A	13
Tabilban St / Ikkina Rd	0.50	7	A	29	0.26	6	A	12
Gold Coast Hwy / Ikkina Rd	0.61	13	B	103	0.60	18	B	119
2026								
Tabilban St / W Burleigh Rd	0.72	44	D	181	0.52	39	D	117
Tabilban St / Wairoo St	0.16	4	A	6	0.15	3	A	5
Ocean Pde / Reserve St	0.22	5	A	8	0.14	4	A	5
Tabilban St / Ikkina Rd	0.19	7	A	7	0.11	6	A	4
Gold Coast Hwy / Ikkina Rd	0.41	9	A	41	0.29	11	B	67
2041								
Tabilban St / W Burleigh Rd	0.99	68	E	384	0.72	39	D	189
Tabilban St / Wairoo St	0.20	4	A	8	0.17	4	A	6
Ocean Pde / Reserve St	0.24	5	A	9	0.11	4	A	4
Tabilban St / Ikkina Rd	0.21	7	A	8	0.10	6	A	4
Gold Coast Hwy / Ikkina Rd	0.55	16	B	125	0.30	23	C	82

Table 6.13: Sub-Option A3iii SIDRA Modelling Results Summary

Location	AM Peak				PM Peak			
	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)
2021								
Tabilban St / W Burleigh Rd	0.67	44	D	159	0.87	46	D	225
Tabilban St / Wairoo St	0.16	3	A	7	0.36	3	A	15
Ocean Pde / Reserve St	0.42	4	-	21	0.29	4	-	9
Tabilban St / Ikkina Rd	0.45	7	A	24	0.33	6	A	17
Gold Coast Hwy / Ikkina Rd	0.54	12	B	92	0.62	22	C	130
2024								
Tabilban St / W Burleigh Rd	0.77	44	D	187	0.78	39	D	186
Tabilban St / Wairoo St	0.19	3	A	8	0.35	3	A	14
Ocean Pde / Reserve St	0.46	4	-	24	0.24	4	-	9
Tabilban St / Ikkina Rd	0.48	7	A	27	0.28	6	A	13
Gold Coast Hwy / Ikkina Rd	0.56	11	B	98	0.60	18	B	122
2026								
Tabilban St / W Burleigh Rd	0.74	43	D	182	0.53	39	D	116
Tabilban St / Wairoo St	0.16	4	A	6	0.15	3	A	5
Ocean Pde / Reserve St	0.19	4	-	7	0.12	3	-	4
Tabilban St / Ikkina Rd	0.19	7	A	7	0.12	6	A	4
Gold Coast Hwy / Ikkina Rd	0.41	10	A	40	0.29	11	B	66
2041								
Tabilban St / W Burleigh Rd	0.99	61	E	346	0.72	39	D	189
Tabilban St / Wairoo St	0.20	5	A	8	0.16	4	A	6
Ocean Pde / Reserve St	0.20	4	-	8	0.10	4	-	3
Tabilban St / Ikkina Rd	0.22	7	A	9	0.10	6	A	4
Gold Coast Hwy / Ikkina Rd	0.55	16	B	125	0.30	23	C	81

Table 6.14:   Sub-Option A3iv SIDRA Modelling Results Summary

Location	AM Peak				PM Peak			
	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)
2021								
Tabilban St / W Burleigh Rd	0.65	43	D	160	0.81	42	D	193
Tabilban St / Wairoo St	0.19	3	A	8	0.37	3	A	16
Ocean Pde / Reserve St	0.68	10	B	75	0.49	8	A	30
Tabilban St / Ikkina Rd	0.43	7	A	22	0.32	6	A	16
Gold Coast Hwy / Ikkina Rd	0.53	11	B	86	0.61	22	C	136
2024								
Tabilban St / W Burleigh Rd	0.79	46	D	196	0.79	39	D	190
Tabilban St / Wairoo St	0.22	3	A	9	0.33	3	A	13
Ocean Pde / Reserve St	0.75	12	B	94	0.54	9	A	35
Tabilban St / Ikkina Rd	0.47	7	A	26	0.28	6	A	12
Gold Coast Hwy / Ikkina Rd	0.60	10	B	89	0.60	18	B	120
2026								
Tabilban St / W Burleigh Rd	0.73	43	D	181	0.54	39	D	120
Tabilban St / Wairoo St	0.16	4	A	6	0.14	3	A	5
Ocean Pde / Reserve St	0.40	10	A	24	0.24	10	A	13
Tabilban St / Ikkina Rd	0.18	7	A	7	0.11	6	A	4
Gold Coast Hwy / Ikkina Rd	0.41	9	A	40	0.29	11	B	68
2041								
Tabilban St / W Burleigh Rd	0.98	69	E	397	0.69	38	D	182
Tabilban St / Wairoo St	0.2	4	A	8	0.15	4	A	6
Ocean Pde / Reserve St	0.45	11	B	28	0.21	9	A	11
Tabilban St / Ikkina Rd	0.21	7	A	8	0.10	6	A	3
Gold Coast Hwy / Ikkina Rd	0.55	16	B	127	0.30	24	C	82

Table 6.15: Sub-Option A3v SIDRA Modelling Results Summary

Location	AM Peak				PM Peak			
	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)	DOS	Avg. Delay (s)	LOS	95th %ile Queue (m)
2021								
Tabilban St / W Burleigh Rd	0.67	44	D	161	0.77	40	D	178
Tabilban St / Wairoo St	0.14	<1	-	<1	0.30	<1	-	1
Ocean Pde / Reserve St	0.42	4	-	20	0.29	4	-	8
Tabilban St / Ikkina Rd	0.39	3	-	2	0.26	3	-	1
Gold Coast Hwy / Ikkina Rd	0.53	12	B	95	0.62	22	C	136
2024								
Tabilban St / W Burleigh Rd	0.78	45	D	183	0.78	39	D	183
Tabilban St / Wairoo St	0.18	<1	-	<1	0.28	<1	-	<1
Ocean Pde / Reserve St	0.48	4	-	26	0.24	4	-	9
Tabilban St / Ikkina Rd	0.45	3	-	2	0.23	3	-	1
Gold Coast Hwy / Ikkina Rd	0.59	14	B	118	0.61	19	B	127
2026								
Tabilban St / W Burleigh Rd	0.72	42	D	180	0.50	38	D	113
Tabilban St / Wairoo St	0.14	2	-	1	0.11	<1	-	<1
Ocean Pde / Reserve St	0.18	4	-	7	0.10	3	-	4
Tabilban St / Ikkina Rd	0.16	3	-	<1	0.10	3	-	<1
Gold Coast Hwy / Ikkina Rd	0.41	10	A	41	0.29	11	B	67
2041								
Tabilban St / W Burleigh Rd	0.96	63	E	374	0.71	39	D	190
Tabilban St / Wairoo St	0.20	3	-	5	0.13	2	-	3
Ocean Pde / Reserve St	0.20	4	-	8	0.10	4	-	3
Tabilban St / Ikkina Rd	0.19	3	-	1	0.09	3	-	1
Gold Coast Hwy / Ikkina Rd	0.55	16	B	125	0.30	23	C	81

6.5.4   Recommended Upgrades

In summary, each sub-option treatment along the Tabilban-Ikkina route was found to generally operate within acceptable performance levels for the relevant intersection control type with no significant performance issues arising.

The only exception was the signalised configuration of the intersection of Ocean Parade / Reserve Street within sub-option A3iv. The signals showed long queues back up Reserve Street from the intersection which peaked at approximately 94m in the 2024 AM peak, essentially reaching to the crest of the hill. This queue length may increase the risk of nose-to-tail crashes. This queue would block a number of existing resident driveways; one of the key issues raised during community consultation.

Given these issues, **the Ocean Parade / Reserve Street intersection is not being recommended for signalisation**.

The recommended treatment options at each location along the route based on traffic modelling, operational performance, traffic management and consultation findings are listed in Table 6.16.

Table 6.16: Option A3 Recommended Sub-Option Treatments

Location	Recommended Treatment
Tabilban Street / West Burleigh Road	Signalised pedestrian crossing on southern leg
Tabilban Street / Wairoo Street	Improved T-intersection alignment (chicane)
Ocean Parade / Reserve Street	Small roundabout treatment
Tabilban Street / Pindari Avenue	Roundabout treatment
Tabilban Street / Ikkina Road	Improved T-intersection alignment
Gold Coast Highway / Ikkina Road	Signal improvements for left turns into Ikkina Road

6.6   Concept Design Development & Cost Estimates

The above treatment recommendations do not directly consider the spatial implications or the constructability of each option. Concept design drawings were prepared for all options, including all sub-options treatment at the relevant locations to determine the construction feasibility for each measure. The concept designs allowed for preliminary cost estimates to be completed by Council for each option which informed the MCA inputs and outcomes.

The concept design drawings for the preferred Option A3 are included in **Appendix G**.

A key element to the overall concept design is the delineation of traffic lanes along the route using edge lines. This treatment assists in clearly identifying to motorists the trafficable paths along the route given the very wide pavement widths, particularly along Tabilban Street (west) and Bunyip Street. This treatment also ensures that the alignment of the vehicle path is 'tighter' by reducing 'curve-cutting' and hence reducing average traffic speeds.

The cost estimates were documented in a detailed independent report which is provided at **Appendix H**. A summary of the cost estimates for each option is include in Table 6.17.

Table 6.17: Cost Estimate Summary

	Option A	Option B	Option C
Total Cost Estimate	$3,900,000	$12,300,000	$3,900,000

As shown, Option B was found to be more than three times the estimated cost of Options A and C.

6.7　Additional Considerations

A number of additional issues were raised for consideration throughout the consultation process. Some of these included:

- Travel route software / applications (e.g. Google Maps) currently identify the Tabilban-Ikkina route as the fastest route for some destinations, which may be contributing to more unfamiliar drivers choosing this route
- Traffic exiting Bunyip Street are using the Police Vehicle Only access across the West Burleigh Road median to turn right out and avoid traffic delays along Tabilban Street.

The Police Vehicle Only median access located opposite Bunyip Street is shown in Figure 6.7.

SOURCE: Nearmap (edited by Bitzios)

Figure 6.7:　Bunyip Street – Police Vehicle Access

It is therefore recommended that the preferred option also consider:

- Liaising directly with representatives of (for example) Google Maps to determine whether a change to the street categorisation can be implemented so that the route is not included in Google's option calculation processes
- Liaising with the Burleigh Heads Police Station representatives to determine whether the current Police Vehicle Only median access is used by their staff and whether there is any scope to close this access, or to modify it to restrict the general public from using the facility.

In addition, further investigation and consideration should be undertaken for additional LATM treatments throughout Bunyip Street and Koel Street, including a speed limit review along Bunyip Street to consider 40km/h posted speeds commensurate with the surrounding speeds and LATM on Tabliban Street.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Key Conclusions

Key conclusions from the options assessment are summarised below:

- Current network planning identified the key external infrastructure projects influencing the future use of the Tabilban-Ikkina route as:
  - Gold Coast Light Rail Stage 3 (GCLR3): *assumed operational by 2025*
  - Pacific Motorway Varsity Lakes to Tugun (M1 VL2T): *assumed operational by 2025,* including:
  - Gold Coast Light Rail Stage 4 (GCLR4): assumed operational by 2041 design scenario

- The primary function of Tabilban Street-Ikkina Road is as a *Major Collector* (<10,000 veh/day) which means that through traffic usage should be discouraged where possible

- The *Australian Transport Assessment and Planning* (ATAP) guidelines were used as the framework for options development and assessment which included:
  - Developing an Options Long List (Initial Options)
  - Stage 1: Strategic Merit Test (Filtered Options)
  - Stage 2: Rapid Appraisal (Final Options)
  - Stage 3: Detailed Appraisal (Preferred Option)

- Three (3) overarching option strategies were developed through options scoping. They were:
  - Option A: 'Do Minimum' including minor network improvements to the existing arrangement
  - Option B: 'Promote Through Route' via construction of Tabilban Street 'missing link'
  - Option C: 'Local Traffic Only' which removes/closes the east-west connection of Tabilban Street

- An options long list of 14 options were developed and seven (7) of them were short-listed for detailed options assessment

- The Options Assessment involved options modelling, public consultation and a multi-criteria analysis which considered economic data, traffic performance, social/amenity factors, environmental impacts, constructability and construction costs

- Concept design drawings were prepared for the shortlisted options allowing cost estimates to be prepared which informed the MCA.

7.2 Recommendations

The key recommendations from the assessment are:

- Option A3 is the preferred overarching option for the Tabilban-Ikkina route

- The recommended treatment options within the preferred Option A3 are:
  - Tabilban St / W Burleigh Rd: signalised pedestrian crossing on southern leg
  - Tabilban St / Wairoo St: improved T-intersection alignment
  - Ocean Pde / Reserve St: small roundabout treatment
  - Tabilban St / Pindari Ave: roundabout treatment
  - Tabilban St / Ikkina Rd: improved T-intersection alignment
  - Gold Coast Hwy / Ikkina Rd: signal improvements for left turns into Ikkina Rd

- The preferred option should be considered and optimised further in detailed design

- Council should also:
  - Liaise with Google Maps to remove the Tabilban-Ikkina route as a route option within its calculations
  - Liaise with Burleigh Heads Police Station representatives to determine whether the existing Police Vehicle Only median access can be removed / modified to stop the general public from using the access
  - Consider additional LATM treatments throughout Bunyip Street and Koel Street, including a speed limit review along Bunyip Street to consider 40km/h posted speeds commensurate with the surrounding speeds and LATM on Tabliban Street

Appendix A: Options Long List Matrix

Options Long List and Review / Analysis

ID	Name	Description		i No Tabilban St connection	ii Tabilban St link connection	iii Closure of Reserve St	iv Reserve St remains open	v Closure of Ocean Pde	vi Ocean Pde Remains Open	vii One-way Koel St (northbound)	viii Re-prioritise Ocean Pde / Resere St	ix Left turn slip lane from Tabilban St to W Burleigh Rd for capacity	x 6-aspect traffic signal at left turn from GC Hwy to Ikkina Rd for capacity	xi Roundabout at Wairoo St	xii Roundabout at Ikkina Rd / Tabilban St intersection	xiii LATM Treatments along Tabilban Street	xiv Remove LATM treatments along Ikkina Rd and Tabilban St	Active transport connection through Tabilban St link + path improvements along corridor	On-road cycle lanes on Tabilban St and Ikkina Rd (removed parking)
A	Do Minimum	Largely maintains current arrangements with improvements to manage flows and safety	1	X			X		X					X				☑	
			2	X			X		X						X			☑	
			3	X			X		X					X	X	X		☑	
			X	X			X		X	X			X	X	X	X		☑	
B	Promote Through Traffic	Promote the route from east-west and west-east	1		X		X		X				X				X	☑	☑
			2		X	X			X				X				X	☑	☑
			3		X	X			X	X		X	X				X	☑	☑
			4	X			X		X		X		X				X	☑	☑
			5	X			X		X	X	X	X	X				X	☑	☑
C	Local Traffic Only	Restrict through-route & improve local access / amenity	1	X			X		X							X		☑	
			2	X			X		X					X				☑	
			3	X			X		X						X			☑	
			4	X			X		X					X	X			☑	
			5	X			X	X							X			☑	
	Total Long List Options		14																

Options Long List and Review / Analysis

Option		Summary of Inclusions	Benefits	Disadvantages	Short Listed for Testing
Do Minimum	A1	• **Maintains current arrangement** • Includes roundabout provided at Wairoo St only	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Wairoo St roundabout manages flows/speeds locally • Roundabout changes vehicle priorities allowing side street traffic to exit • Low cost of construction	• Certain safety, congestion & resident accessibility issues largely remain • Roundabout may have constructability issues given adverse crossfall • Roundabout footprint may impact on resident properties • High volume of traffic continue to use route exceeding Residential Collector capacity • No change / benefit to eastern end of corridor	
	A2	• **Maintains current arrangement** • Includes roundabout provided at Tabilban St / Ikkina Rd only	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Ikkina Rd roundabout manages flows/speeds locally • Roundabout assist in addressing design issues raised in RSA • Low cost of construction	• Certain safety, congestion & resident accessibility issues largely remain • Roundabout may impact existing direct property access • High volume of traffic continue to use route exceeding Residential Collector capacity • No change / benefit to western end of corridor	
	A3	• **Maintains current arrangement** • Includes roundabouts provided at both Wairoo St and Tabilban St / Ikkina Rd	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Roundabouts assist in managing flows/speeds at each end of the corridor • Side street accessibility at Wairoo St improved through roundabout priorities • Ikkina roundabout assists in addressing design issues raised in RSA • Low cost of construction	• Certain safety, congestion & resident accessibility issues largely remain • Wairoo St roundabout may have constructability issues given adverse crossfall • Wairoo St roundabout footprint may impact on resident properties • Ikkina Rd roundabout may impact existing direct property access • External through traffic continue to use route exceeding Residential Collector capacity	☑
	AX	• **Maintains current arrangement** • Includes roundabouts provided at both Wairoo St and Tabilban St / Ikkina Rd • Koel St one-way (northbound) to remove westbound rat-run of through traffic	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Roundabouts assist in managing flows/speeds at each end of the corridor • Side street accessibility at Wairoo St improved through roundabout priorities • Ikkina roundabout assists in addressing design issues raised in RSA • Removes Koel St 'rat-run' reducing impact to amenity for Koel St & Bunyip St residents • Low cost of construction	• Certain safety, congestion & resident accessibility issues largely remain • Wairoo St roundabout may have constructability issues given adverse crossfall • Wairoo St roundabout footprint may impact on resident properties • Ikkina Rd roundabout may impact existing direct property access • External through traffic continue to use route exceeding Residential Collector capacity • Forces 5x Koel St residents to travel northbound due to one-way arrangement (potential for non-compliance)	☑

NOTE: All options allow the opportunity to provide improvements to active transport connection and infrastructure through the Tabilban link corridor.

Option		Summary of Inclusions	Benefits	Disadvantages	Short Listed for Testing
Promote Through Route	B1	• **Implements Tabilban St link connection** • Maintains existing Reserve St & Ocean Pde access (stop/give-way priority) • Signal improvements at GC Hwy for left turns into Ikkina Rd • Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St • Reinstate default urban speed limit of 50km/h on through route	• Improved traffic flow along through-route • Shorter distance & faster travel times between GC Hwy & W Burleigh Rd • Significant benefits to state controlled network due to high proportion of vehicles choosing Tabilban link	• Increases through traffic volume exceeding Residential Collector capacity • Increase in speeds and noise impact / pollution • High environmental impact and increase in risk of animal (koala) strikes / deaths • High cost of construction of Tabilban link • Increased social impact to residents / locals accessibility & amenity due to greater opposing traffic • Potential for increased risk of vehicle incidents / crashes due to higher volumes & higher speeds • Maintaining Reserve St intersection / connection results in additional conflict & poor sight lines • Potential for non-compliance through speeding given directness of route and accelerating up incline	
	B2	• **Implements Tabilban St link connection** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Ocean Pde connection remains and gives-way to Tabilban St • Signal improvements at GC Hwy for left turns into Ikkina Rd • Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St • Reinstate default urban speed limit of 50km/h on through route	• Improved traffic flow along through-route • Shorter distance & faster travel times between GC Hwy & W Burleigh Rd • Removes conflict and sub-standard outcomes/sightlines through closure of Reserve St • Significant benefits to state controlled network due to high proportion of vehicles choosing Tabilban link	• Increases through traffic volume exceeding Residential Collector capacity • Increase in speeds and noise impact / pollution • High environmental impact and increase in risk of animal (koala) strikes / deaths • High cost of construction of Tabilban link • Increased social impact to residents / locals accessibility & amenity due to greater opposing traffic • Potential for increased risk of vehicle incidents / crashes due to higher volumes & higher speeds • Potential for non-compliance through speeding given directness of route and accelerating up incline	☑
	B3	• **Implements Tabilban St link connection** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Ocean Pde connection remains and gives-way to Tabilban St • Koel St one-way (northbound) to remove westbound rat-run of through traffic • Left turn slip lane from Tabilban St to improve capacity due to one-way Koel St • Signal improvements at GC Hwy for left turns into Ikkina Rd • Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St • Reinstate default urban speed limit of 50km/h on through route	• Improved traffic flow along through-route • Shorter distance & faster travel times between GC Hwy & W Burleigh Rd • Reduces conflict and sub-standard outcomes through closure of Reserve St • Removes Koel St 'rat-run' reducing impact to amenity for Koel St & Bunyip St residents • Improves left turn capacity out of Tabilban St • Significant benefits to state controlled network due to high proportion of vehicles choosing Tabilban link	• Increases through traffic volume exceeding Residential Collector capacity • Increase in speeds and noise impact / pollution • High environmental impact and increase in risk of animal (koala) strikes / deaths • High cost of construction of Tabilban link • Cost of acquisition / construction of Tabilban left turn slip lane • Increased social impact to residents / locals accessibility & amenity due to greater opposing traffic • Potential for increased risk of vehicle incidents / crashes due to higher volumes & higher speeds • Forces 5x Koel St residents to travel northbound due to one-way arrangement (potential for non-compliance) • Potential for non-compliance through speeding given directness of route and accelerating up incline	☑
	B4	• **DOES NOT connect Tabilban link, promotes through traffic by other means** • Maintains existing Reserve St & Ocean Pde connections to Tabilban St • Re-prioritises Ocean Pde / Reserve St intersection giving through route priority • Signal improvements at GC Hwy for left turns into Ikkina Rd • Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Low cost of construction • Partially improves traffic flow along through route • Benefits to state controlled network due to proportion of vehicles choosing Tabilban link	• Existing safety & resident accessibility issues largely remain • Increase in through traffic volume due to promoting through route • Increased social impact to residents / locals accessibility & amenity • Potential for increased risk of vehicle incidents / crashes	☑
	B5	• **DOES NOT connect Tabilban link, promotes through traffic by other means** • Maintains existing Reserve St & Ocean Pde connections to Tabilban St • Re-prioritises Ocean Pde / Reserve St intersection giving through route priority • Koel St one-way (northbound) to remove westbound rat-run of through traffic • Left turn slip lane from Tabilban St to improve capacity due to one-way Koel St • Signal improvements at GC Hwy for left turns into Ikkina Rd • Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Low cost of construction • Partially improves traffic flow along through route • Removes Koel St 'rat-run' reducing impact to amenity for Koel St & Bunyip St residents • Improves left turn capacity out of Tabilban St • Benefits to state controlled network due to proportion of vehicles choosing Tabilban link	• Existing safety & resident accessibility issues largely remain • Increase in through traffic volume due to promoting through route • Increased social impact to residents / locals accessibility & amenity • Potential for increased risk of vehicle incidents / crashes • Cost of acquisition / construction of Tabilban left turn slip lane • Forces 5x Koel St residents to travel northbound due to one-way arrangement (potential for non-compliance)	

NOTE: All options allow the opportunity to provide improvements to active transport connection and infrastructure through the Tabilban link corridor.

Options Long List and Review / Analysis

Option		Summary of Inclusions	Benefits	Disadvantages	Short Listed for Testing
Local Traffic Only	**C1**	• **DOES NOT connect Tabilban St link** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Installation of LATM along Tabilban St west (slow points, kerb build outs)	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Removes 'rat-run' and reduces traffic volumes along route • Improves residents / locals accessibility, amenity & safety due to reduced opposing volumes • Keeps major traffic trips to state controlled network • Reduces delays for side streets such as Wairoo St through lower opposing volumes • Low cost of construction • *Potential to provide local / emergency access only via narrow laneway / driveway style connection*	• Largely removes connectivty between east & west catchments (can be achieved via Ocean Pde yet arduous) • Potential to impact emergency vehicle accessibility / response times due to limited connectivity • Longer distance & travel times between GC Hwy & W Burleigh Rd, and for local residents • Impacts performance of state network to the north (GC Hwy / Burleigh St & GC Hwy / W Burleigh Rd)	
	C2	• **DOES NOT connect Tabilban St link** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Includes roundabout provided at Wairoo St only	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Removes 'rat-run' and reduces traffic volumes along route • Improves residents / locals accessibility, amenity & safety due to reduced opposing volumes • Keeps major traffic trips to state controlled network • Reduces delays for side streets such as Wairoo St through lower opposing volumes • Relatively low cost of construction • Wairoo St roundabout manages flows/speeds locally • Roundabout changes vehicle priorities allowing side street traffic to exit • *Potential to provide local / emergency access only via narrow laneway / driveway style connection*	• Largely removes connectivty between east & west catchments (can be achieved via Ocean Pde yet arduous) • Potential to impact emergency vehicle accessibility / response times due to limited connectivity • Longer distance & travel times between GC Hwy & W Burleigh Rd, and for local residents • Impacts performance of state network to the north (GC Hwy / Burleigh St & GC Hwy / W Burleigh Rd) • Roundabout may have constructability issues given adverse crossfall • Roundabout footprint may impact on resident properties	
	C3	• **DOES NOT connect Tabilban St link** • Closure of Ocean Pde (provided as a cul-de-sac at Tabilban St) • Includes roundabout provided at Tabilban St / Ikkina Rd only	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Removes 'rat-run' and reduces traffic volumes along route • Improves residents / locals accessibility, amenity & safety due to reduced opposing volumes • Keeps major traffic trips to state controlled network • Reduces delays for side streets such as Wairoo St through lower opposing volumes • Relatively low cost of construction • Ikkina Rd roundabout manages flows/speeds locally • Roundabout assist in addressing design issues raised in RSA • *Potential to provide local / emergency access only via narrow laneway / driveway style connection*	• Completely severs connection between east and west catchments • Potential to impact emergency vehicle accessibility / response times due to limited connectivity • Longer distance & travel times between GC Hwy & W Burleigh Rd, and for local residents • Impacts performance of state network to the north (GC Hwy / Burleigh St & GC Hwy / W Burleigh Rd) • Roundabout may impact existing direct property access	☑
	C4	• **DOES NOT connect Tabilban St link** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Includes roundabouts provided at both Wairoo St and Tabilban St / Ikkina Rd	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Removes 'rat-run' and reduces traffic volumes along route • Improves residents / locals accessibility, amenity & safety due to reduced opposing volumes • Keeps major traffic trips to state controlled network • Reduces delays for side streets such as Wairoo St through lower opposing volumes • Relatively low cost of construction • Roundabouts assist in managing flows/speeds at each end of the corridor • Side street accessibility at Wairoo St improved through roundabout priorities • Ikkina roundabout assists in addressing design issues raised in RSA • *Potential to provide local / emergency access only via narrow laneway / driveway style connection*	• Largely removes connectivty between east & west catchments (can be achieved via Ocean Pde yet arduous) • Potential to impact emergency vehicle accessibility / response times due to limited connectivity • Longer distance & travel times between GC Hwy & W Burleigh Rd, and for local residents • Impacts performance of state network to the north (GC Hwy / Burleigh St & GC Hwy / W Burleigh Rd) • Wairoo St roundabout may have constructability issues given adverse crossfall • Wairoo St roundabout footprint may impact on resident properties • Ikkina Rd roundabout may impact existing direct property access	
	C5	• **DOES NOT connect Tabilban St link** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Includes roundabout provided at Tabilban St / Ikkina Rd only	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Removes 'rat-run' and reduces traffic volumes along route • Improves residents / locals accessibility, amenity & safety due to reduced opposing volumes • Keeps major traffic trips to state controlled network • Reduces delays for side streets such as Wairoo St through lower opposing volumes • Relatively low cost of construction • Ikkina Rd roundabout manages flows/speeds locally • Roundabout assist in addressing design issues raised in RSA • *Potential to provide local / emergency access only via narrow laneway / driveway style connection*	• Largely removes connectivty between east & west catchments (can be achieved via Ocean Pde yet arduous) • Potential to impact emergency vehicle accessibility / response times due to limited connectivity • Longer distance & travel times between GC Hwy & W Burleigh Rd, and for local residents • Impacts performance of state network to the north (GC Hwy / Burleigh St & GC Hwy / W Burleigh Rd) • Roundabout may impact existing direct property access	☑

NOTE: All options allow the opportunity to provide improvements to active transport connection and infrastructure through the Tabilban link corridor.

Appendix B: Short Listed Options Matrix

Options Short List and Review / Analysis

ID	Name	Description		i — No Tabilban St connection	ii — Tabilban St link connection	iii — Closure of Reserve St	iv — Reserve St remains open	v — Closure of Ocean Pde	vi — Ocean Pde Remains Open	vii — One-way Koel St (northbound)	viii — Re-prioritise Ocean Pde / Resere St	ix — Left turn slip lane from Tabilban St to W Burleigh Rd for capacity	x — 6-aspect traffic signal at left turn from GC Hwy to Ikkina Rd for capacity	xi — Roundabout at Wairoo St	xii — Roundabout at Ikkina Rd / Tabilban St intersection	xiii — LATM Treatments along Tabilban Street	xiv — Remove LATM treatments along Ikkina Rd and Tabilban St	Active transport connection through Tabilban St link + path improvements along corridor	On-road cycle lanes on Tabilban St and Ikkina Rd (removed parking)
A	Do Minimum	Largely maintains current arrangements with improvements to manage flows and safety	3	X			X		X					X	X			☑	
A	Do Minimum		X	X			X		X	X			X	X	X	X		☑	
B	Promote Through Route	Promote the route from east-west and west-east	2		X	X			X				X				X	☑	☑
B	Promote Through Route		3		X	X			X	X		X	X				X	☑	☑
B	Promote Through Route		4	X			X		X		X		X				X	☑	☑
C	Local Traffic Only	Restrict through-route & improve local access / amenity	3	X			X		X						X			☑	
C	Local Traffic Only		5	X			X	X							X			☑	
		Total Long List Options	7																

Options Short List and Review / Analysis

Concept		Summary of Inclusions	Benefits	Disadvantages	Short Listed for Testing
Do Minimum	A3	• **Maintains current arrangement** • Includes roundabouts provided at both Wairoo St and Tabilban St / Ikkina Rd	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Roundabouts assist in managing flows/speeds at each end of the corridor • Side street accessibility at Wairoo St improved through roundabout priorities • Ikkina roundabout assists in addressing design issues raised in RSA • Low cost of construction	• Existing safety, congestion & resident accessibility issues largely remain • Wairoo St roundabout may have constructability issues given adverse crossfall • Wairoo St roundabout footprint may impact on resident properties • Ikkina Rd roundabout may impact existing direct property access • External through traffic continue to use route exceeding Residential Collector capacity	☑
	AX	• **Maintains current arrangement** • Includes roundabouts provided at both Wairoo St and Tabilban St / Ikkina Rd • Koel St one-way (northbound) to remove westbound rat-run of through traffic	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Roundabouts assist in managing flows/speeds at each end of the corridor • Side street accessibility at Wairoo St improved through roundabout priorities • Ikkina roundabout assists in addressing design issues raised in RSA • Removes Koel St 'rat-run' reducing impact to amenity for Koel St & Bunyip St residents • Low cost of construction	• Certain safety, congestion & resident accessibility issues largely remain • Wairoo St roundabout may have constructability issues given adverse crossfall • Wairoo St roundabout footprint may impact on resident properties • Ikkina Rd roundabout may impact existing direct property access • External through traffic continue to use route exceeding Residential Collector capacity • Forces 5x Koel St residents to travel northbound due to one-way arrangement (potential for non-compliance)	☑

NOTE: All options allow the opportunity to provide improvements to active transport connection and infrastructure through the Tabilban link corridor.

Concept		Summary of Inclusions	Benefits	Disadvantages	Short Listed for Testing
Promote Through Traffic	B2	• **Implements Tabilban St link connection** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Ocean Pde connection remains and gives-way to Tabilban St • Signal improvements at GC Hwy for left turns into Ikkina Rd • Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St • Reinstate default urban speed limit of 50km/h on through route	• Improved traffic flow along through-route • Shorter distance & faster travel times between GC Hwy & W Burleigh Rd • Removes conflict and sub-standard outcomes/sightlines through closure of Reserve St • Significant benefits to state controlled network due to high proportion of vehicles choosing Tabilban link	• Increases through traffic volume exceeding Residential Collector capacity • Increase in speeds and noise impact / pollution • High environmental impact and increase in risk of animal (koala) strikes / deaths • High cost of construction of Tabilban link • Increased social impact to residents / locals accessibility & amenity due to greater opposing traffic • Potential for increased risk of vehicle incidents / crashes due to higher volumes & higher speeds • Potential for non-compliance through speeding given directness of route and accelerating up incline	☑
	B3	• **Implements Tabilban St link connection** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Ocean Pde connection remains and gives-way to Tabilban St • Koel St one-way (northbound) to remove westbound rat-run of through traffic • Left turn slip lane from Tabilban St to improve capacity due to one-way Koel St • Signal improvements at GC Hwy for left turns into Ikkina Rd • Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St • Reinstate default urban speed limit of 50km/h on through route	• Improved traffic flow along through-route • Shorter distance & faster travel times between GC Hwy & W Burleigh Rd • Reduces conflict and sub-standard outcomes through closure of Reserve St • Removes Koel St 'rat-run' reducing impact to amenity for Koel St & Bunyip St residents • Improves left turn capacity out of Tabilban St • Significant benefits to state controlled network due to high proportion of vehicles choosing Tabilban link	• Increases through traffic volume exceeding Residential Collector capacity • Increase in speeds and noise impact / pollution • High environmental impact and increase in risk of animal (koala) strikes / deaths • High cost of construction of Tabilban link • Cost of acquisition / construction of Tabilban left turn slip lane • Increased social impact to residents / locals accessibility & amenity due to greater opposing traffic • Potential for increased risk of vehicle incidents / crashes due to higher volumes & higher speeds • Forces 5x Koel St residents to travel northbound due to one-way arrangement (potential for non-compliance) • Potential for non-compliance through speeding given directness of route and accelerating up incline	☑
	B4	• **DOES NOT connect Tabilban link, promotes through traffic by other means** • Maintains existing Reserve St & Ocean Pde connections to Tabilban St • Re-prioritises Ocean Pde / Reserve St intersection giving through route priority • Signal improvements at GC Hwy for left turns into Ikkina Rd • Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Low cost of construction • Partially improves traffic flow along through route • Benefits to state controlled network due to proportion of vehicles choosing Tabilban link	• Existing safety & resident accessibility issues largely remain • Increase in through traffic volume due to promoting through route • Increased social impact to residents / locals accessibility & amenity • Potential for increased risk of vehicle incidents / crashes	☑

NOTE: All options allow the opportunity to provide improvements to active transport connection and infrastructure through the Tabilban link corridor.

Concept		Summary of Inclusions	Benefits	Disadvantages	Short Listed for Testing
Local Traffic Only	C3	• **DOES NOT connect Tabilban St link** • Closure of Ocean Pde (provided as a cul-de-sac at Tabilban St) • Includes roundabout provided at Tabilban St / Ikkina Rd only	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Removes 'rat-run' and reduces traffic volumes along route • Improves residents / locals accessibility, amenity & safety due to reduced opposing volumes • Keeps major traffic trips to state controlled network • Reduces delays for side streets such as Wairoo St through lower opposing volumes • Relatively low cost of construction • Ikkina Rd roundabout manages flows/speeds locally • Roundabout assist in addressing design issues raised in RSA • *Potential to provide local / emergency access only via narrow laneway / driveway style connection*	• Completely severs connection between east and west catchments • Potential to impact emergency vehicle accessibility / response times due to limited connectivity • Longer distance & travel times between GC Hwy & W Burleigh Rd, and for local residents • Impacts performance of state network to the north (GC Hwy / Burleigh St & GC Hwy / W Burleigh Rd) • Roundabout may impact existing direct property access	☑
	C5	• **DOES NOT connect Tabilban St link** • Closure of Reserve St (provided as a cul-de-sac at Tabilban St) • Includes roundabout provided at Tabilban St / Ikkina Rd only	• Minimises environmental impact on Burleigh Ridge Park / Koalas • Removes 'rat-run' and reduces traffic volumes along route • Improves residents / locals accessibility, amenity & safety due to reduced opposing volumes • Keeps major traffic trips to state controlled network • Reduces delays for side streets such as Wairoo St through lower opposing volumes • Relatively low cost of construction • Ikkina Rd roundabout manages flows/speeds locally • Roundabout assist in addressing design issues raised in RSA • *Potential to provide local / emergency access only via narrow laneway / driveway style connection*	• Largely removes connectivty between east & west catchments (can be achieved via Ocean Pde yet arduous) • Potential to impact emergency vehicle accessibility / response times due to limited connectivity • Longer distance & travel times between GC Hwy & W Burleigh Rd, and for local residents • Impacts performance of state network to the north (GC Hwy / Burleigh St & GC Hwy / W Burleigh Rd) • Roundabout may impact existing direct property access	☑

NOTE: All options allow the opportunity to provide improvements to active transport connection and infrastructure through the Tabilban link corridor.

Appendix C: Aimsun Modelling Link Delay Diagrams

2021 AM Base

2021 PM Base

2024 AM Base

2024 PM Base

2026 AM Base

2026 PM Base

2041 AM Base

2041 PM Base

2021 AM Option A3

2021 PM Option A3

2024 AM Option A3
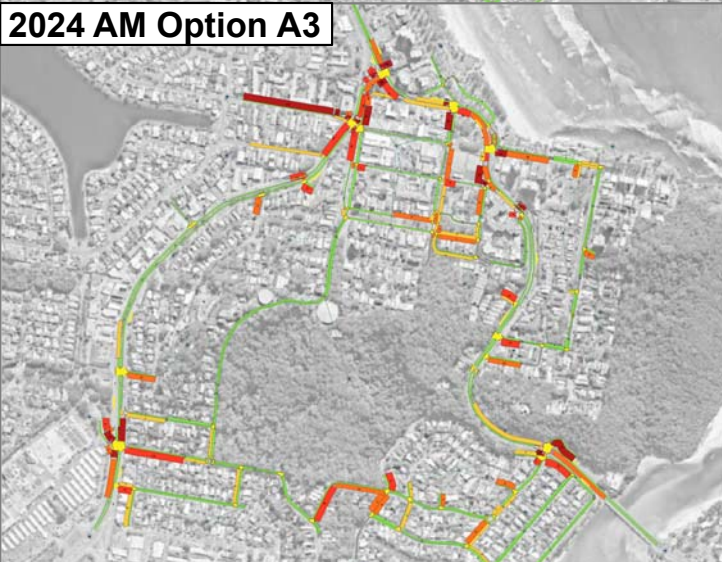
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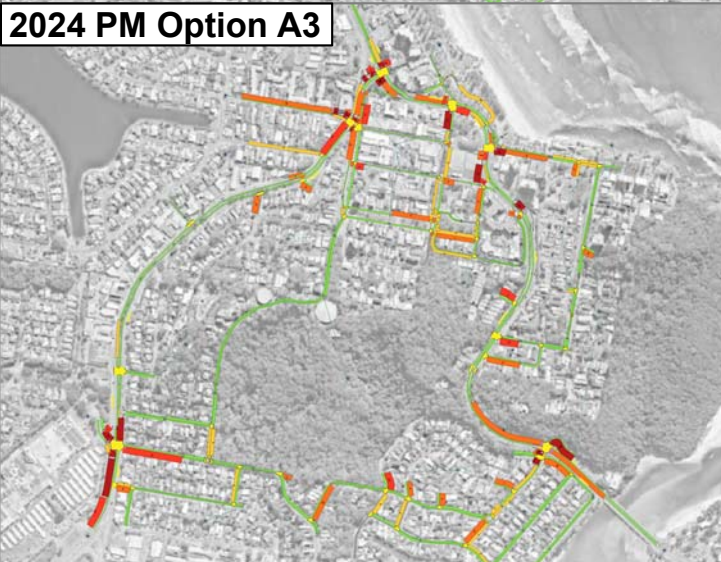
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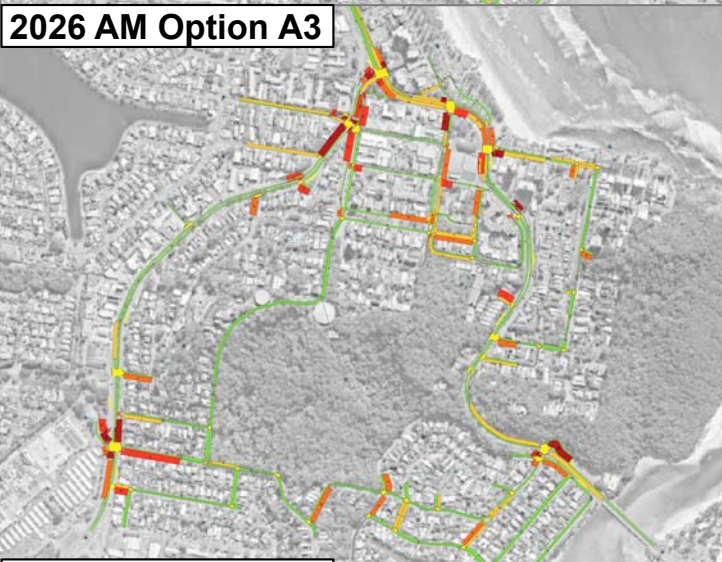
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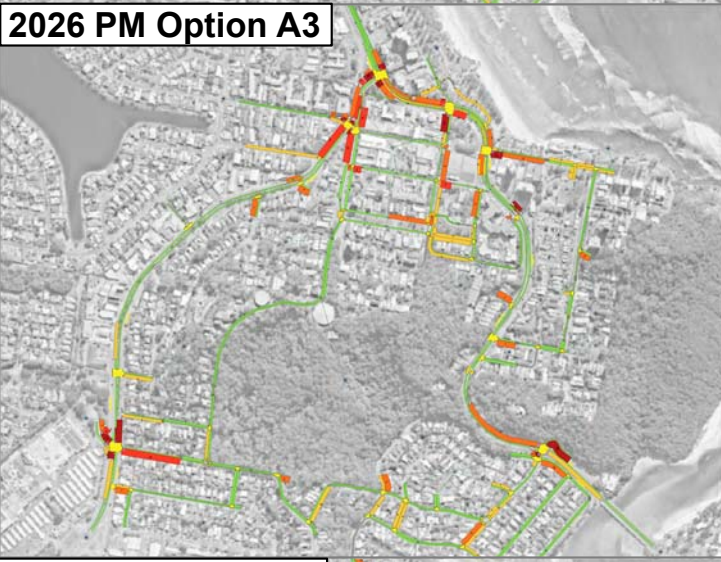
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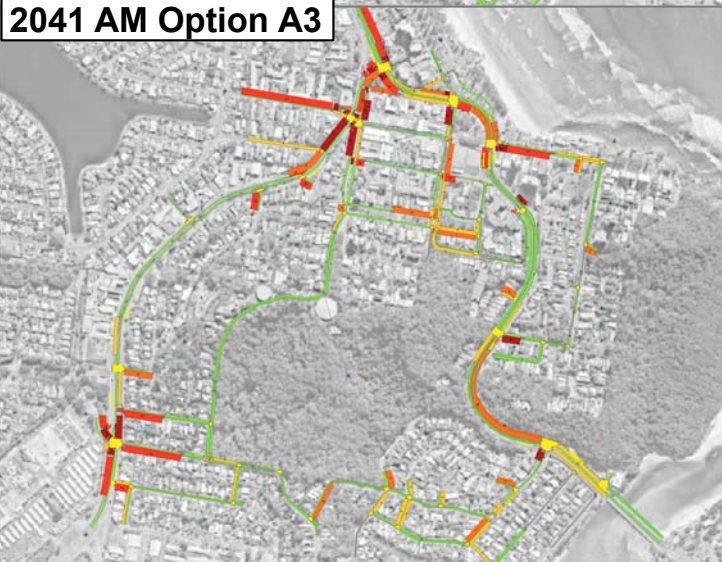
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2021 PM Option AX

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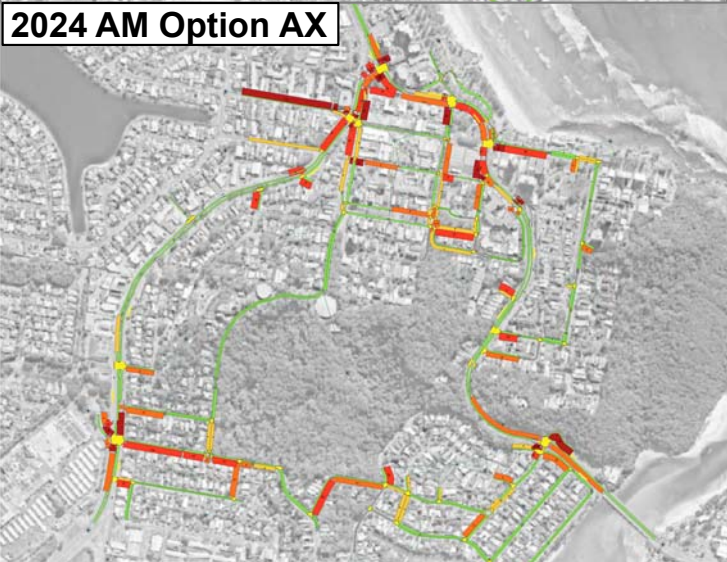
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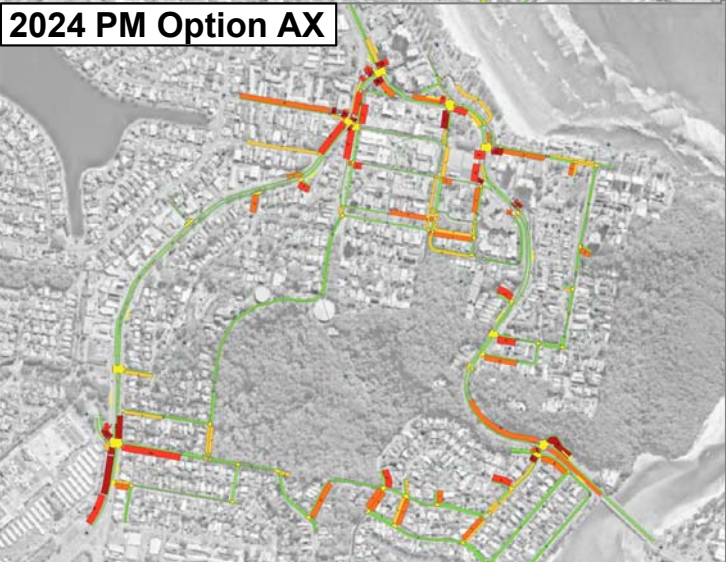
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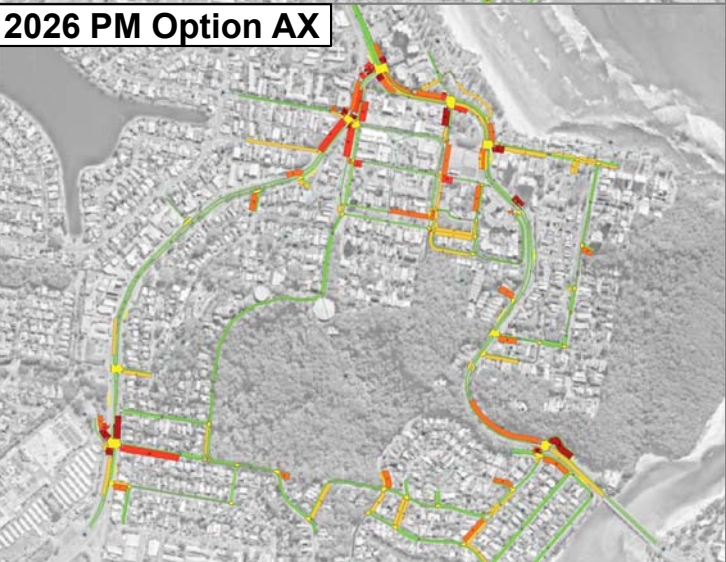
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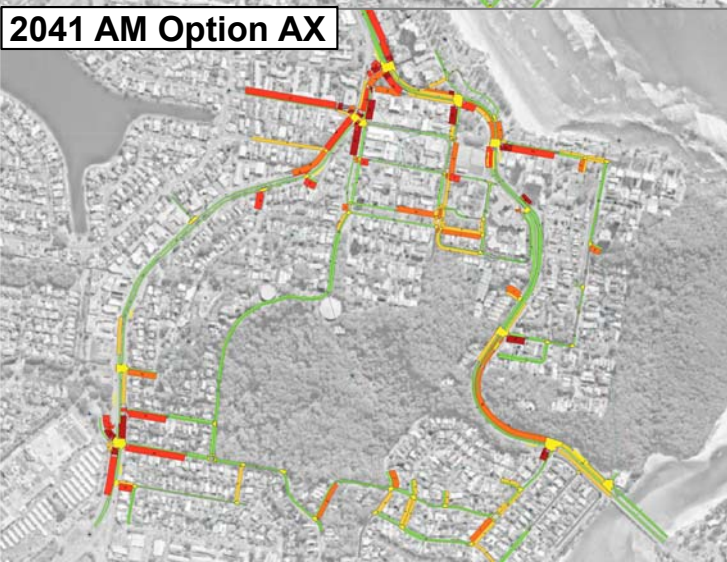
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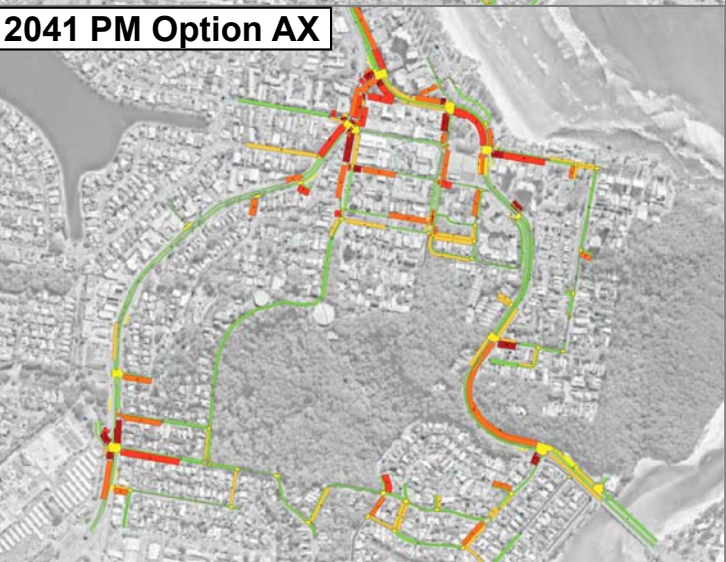
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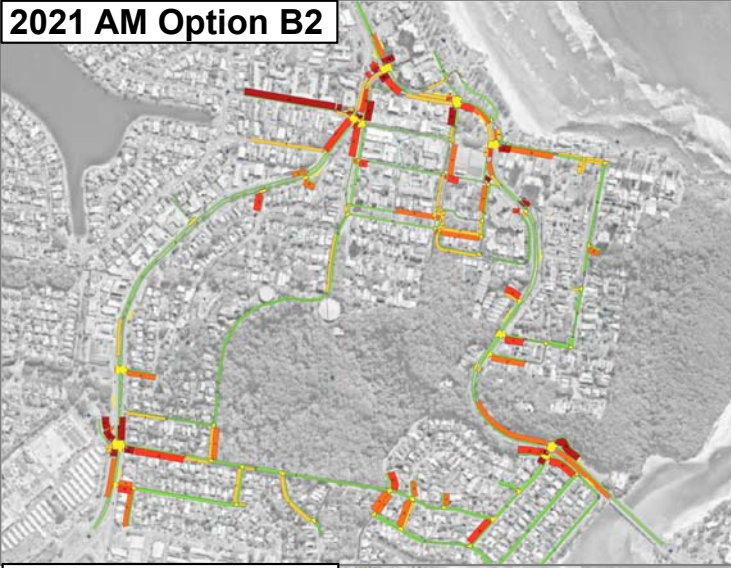
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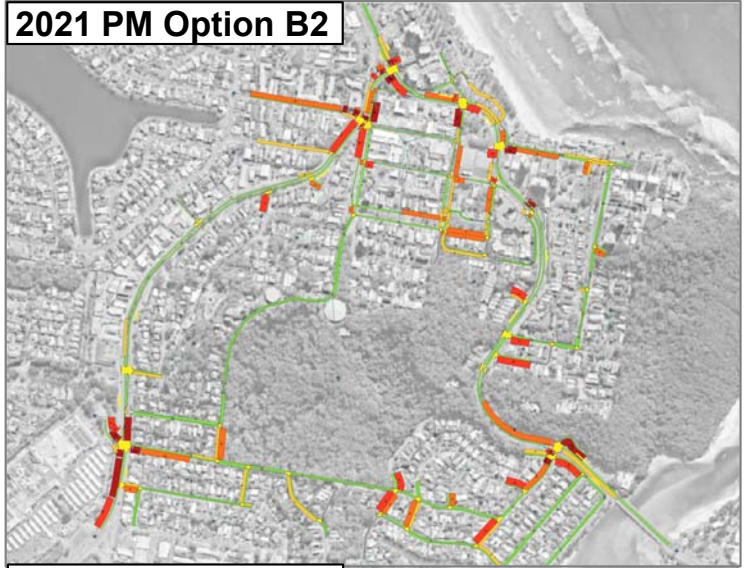
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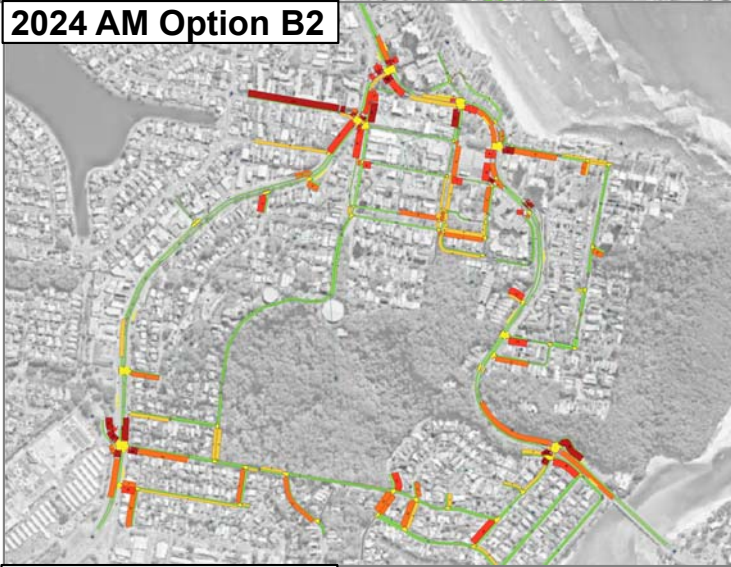
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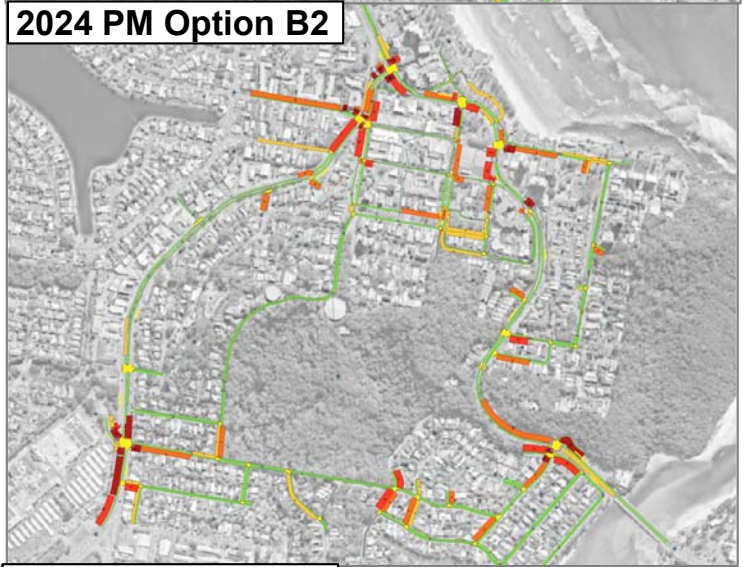
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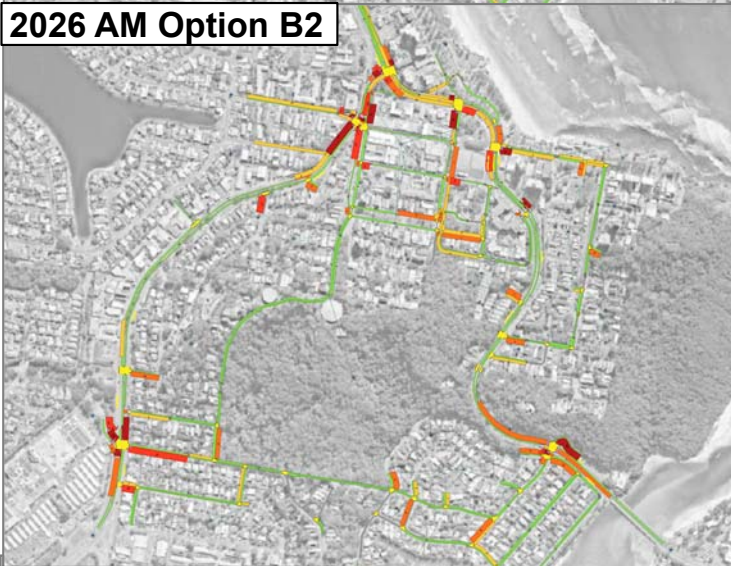
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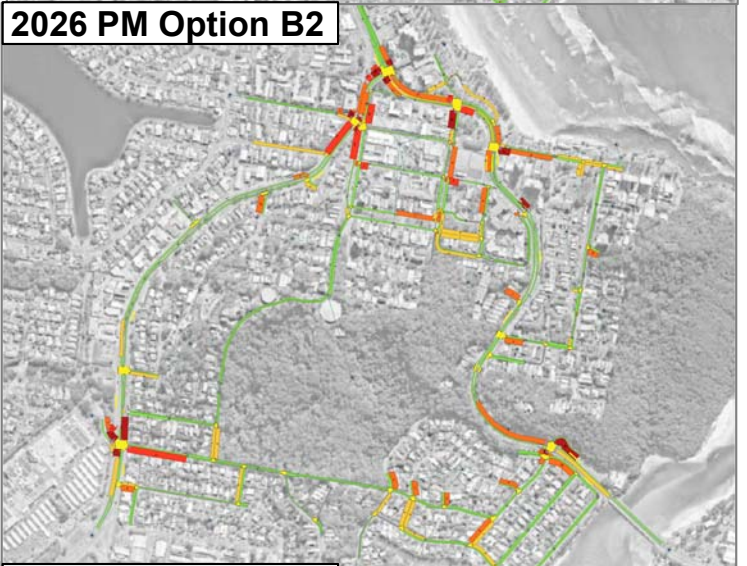
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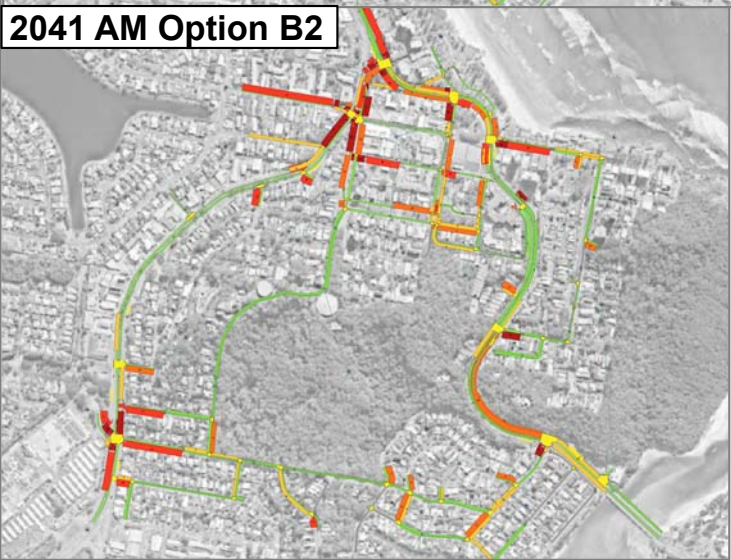
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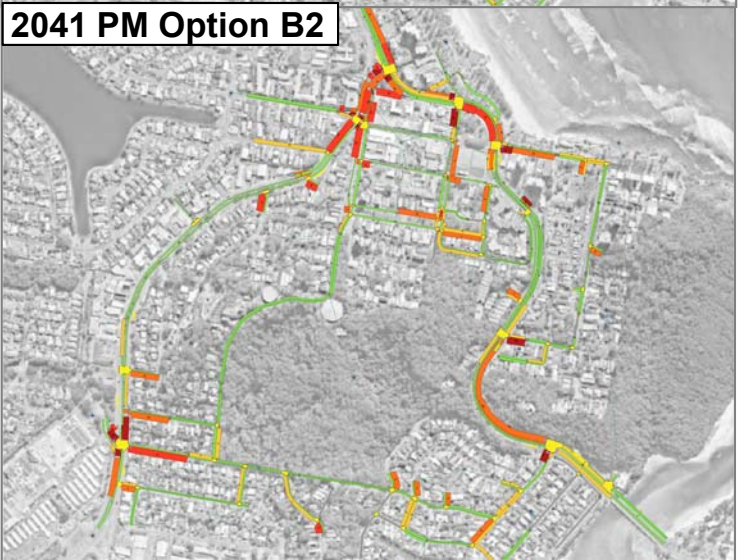
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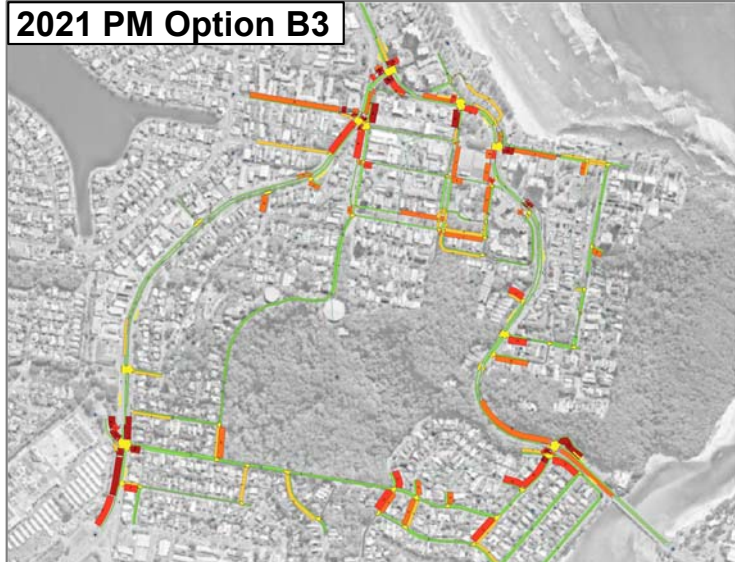
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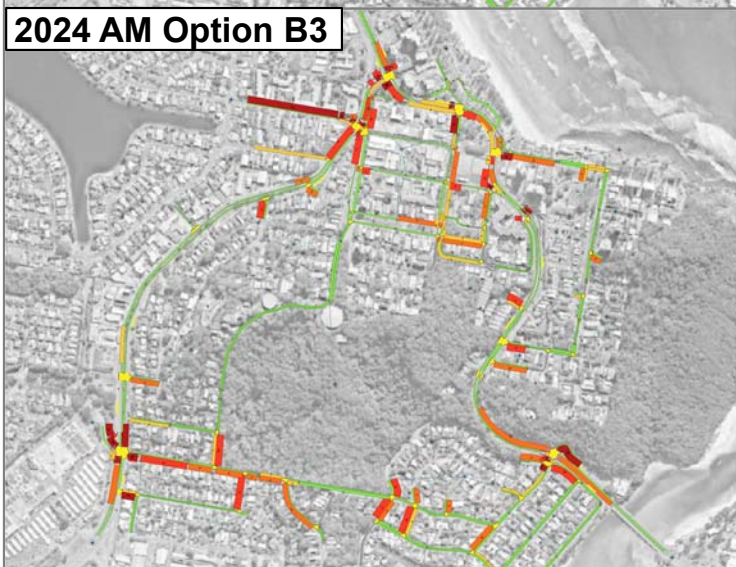
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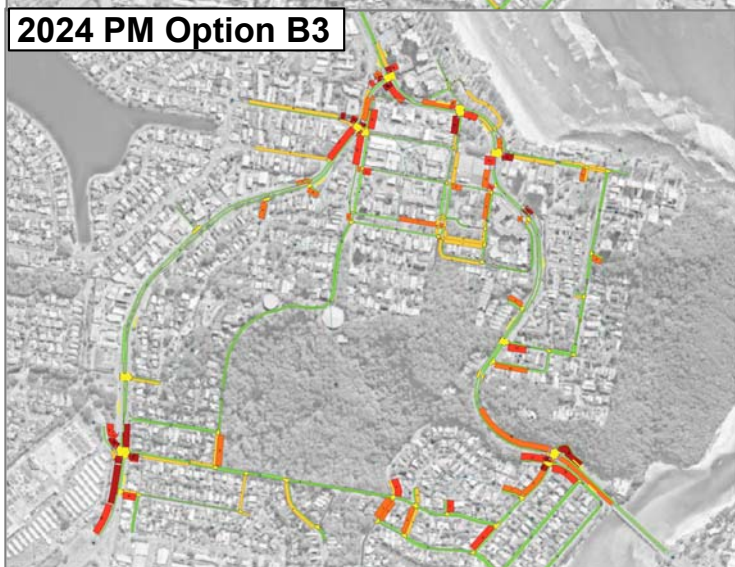
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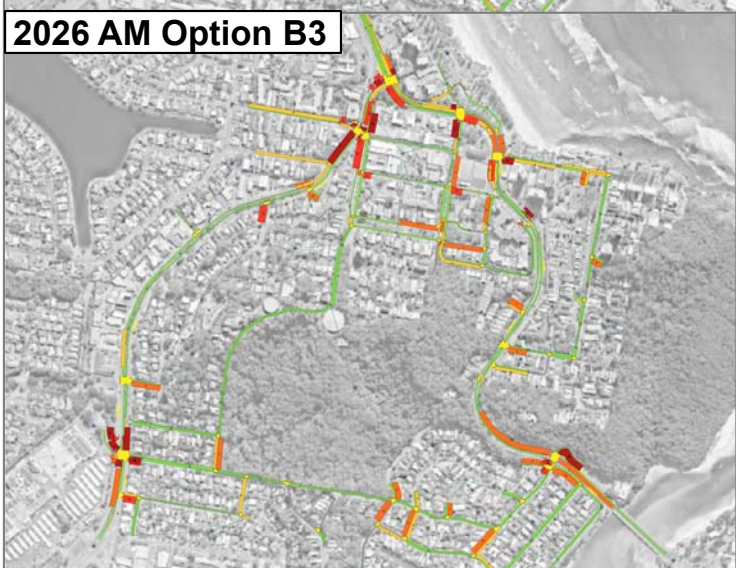
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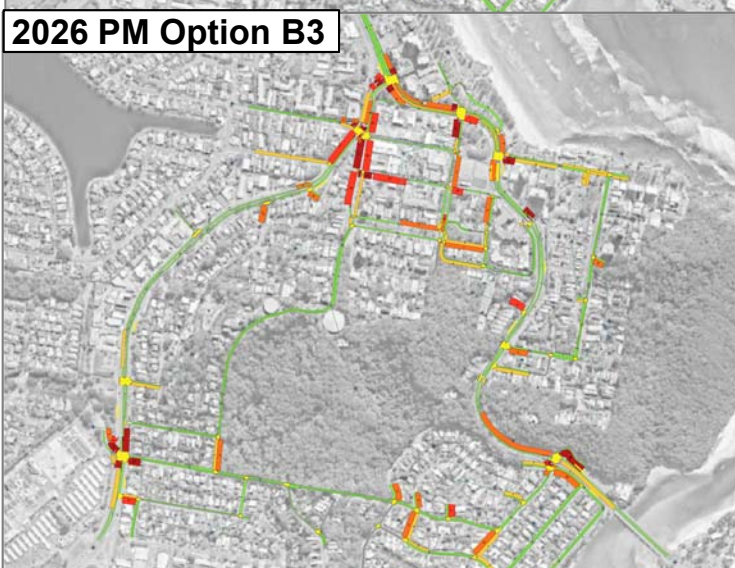
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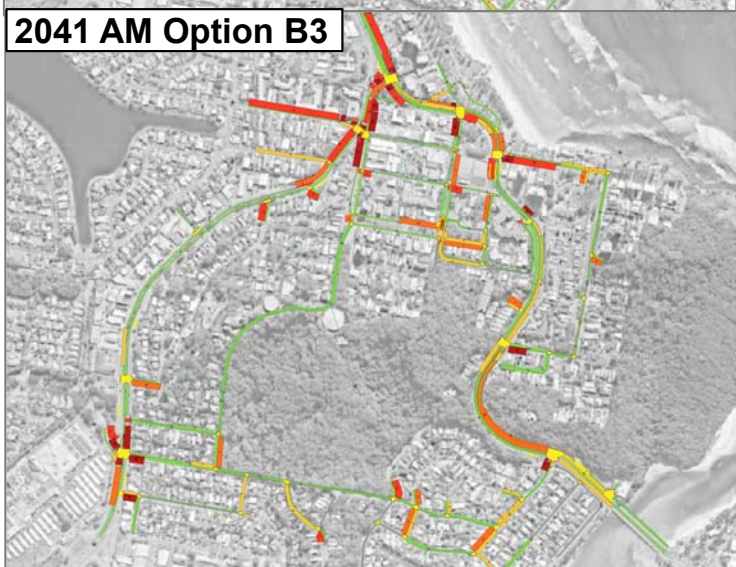
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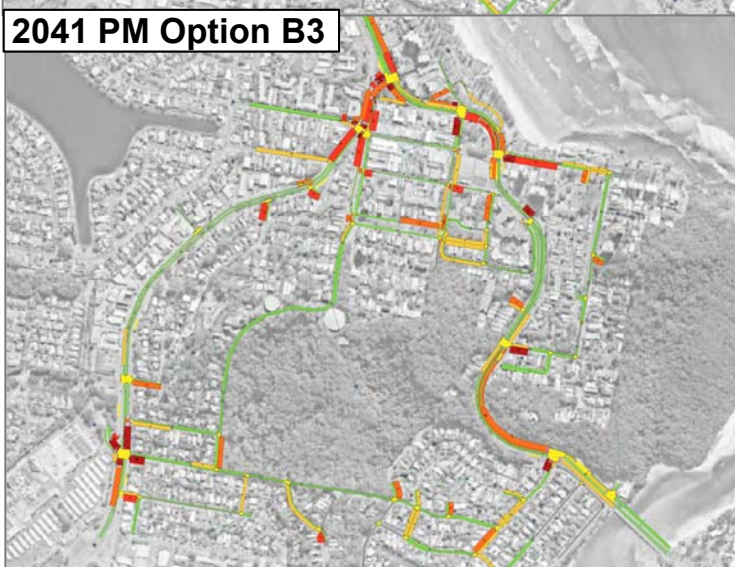
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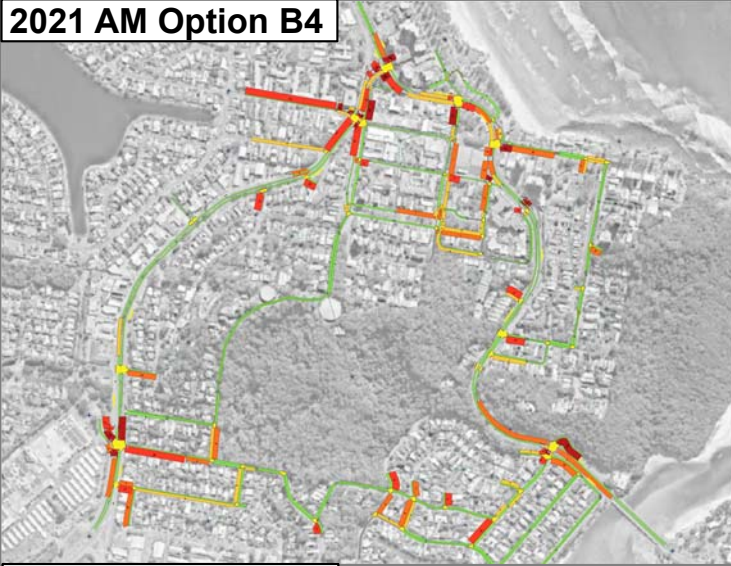
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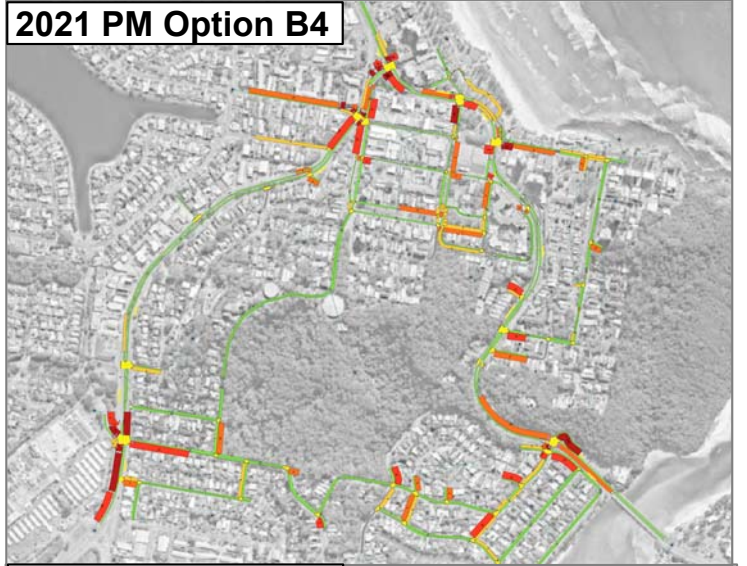
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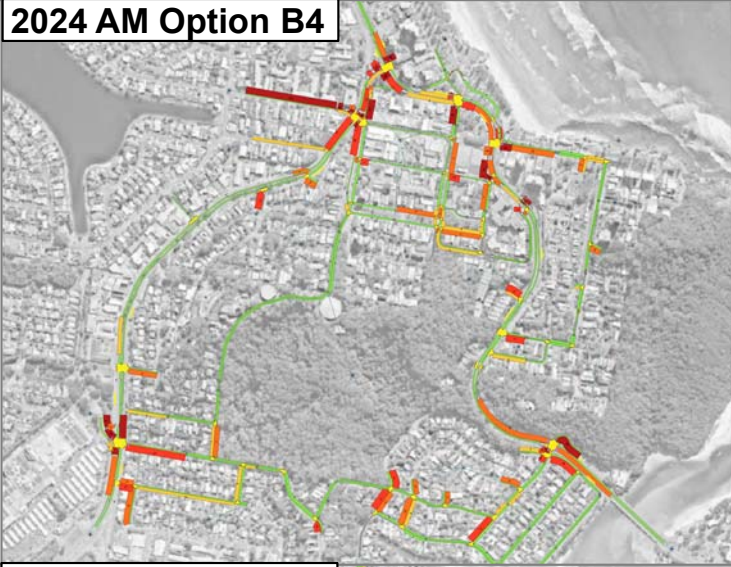
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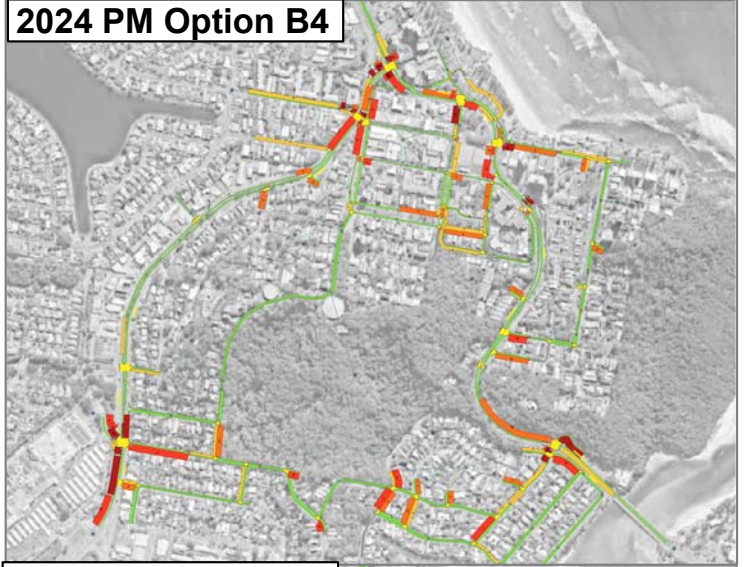
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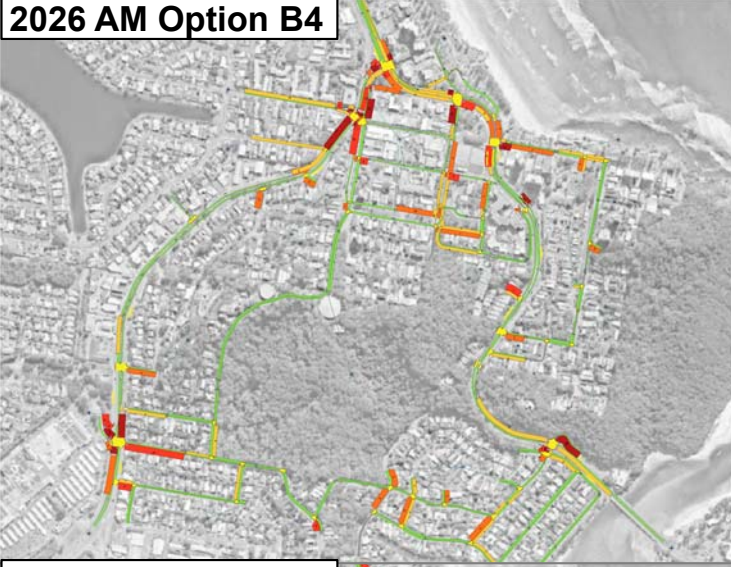
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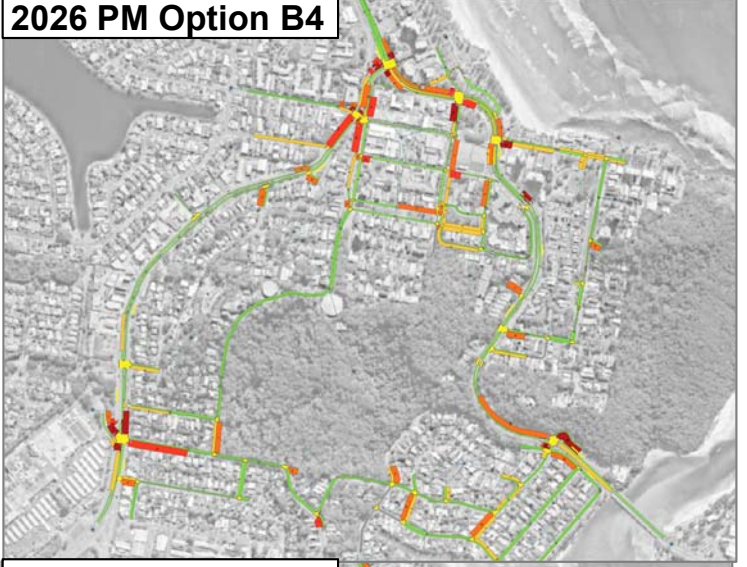
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2041 PM Option B4

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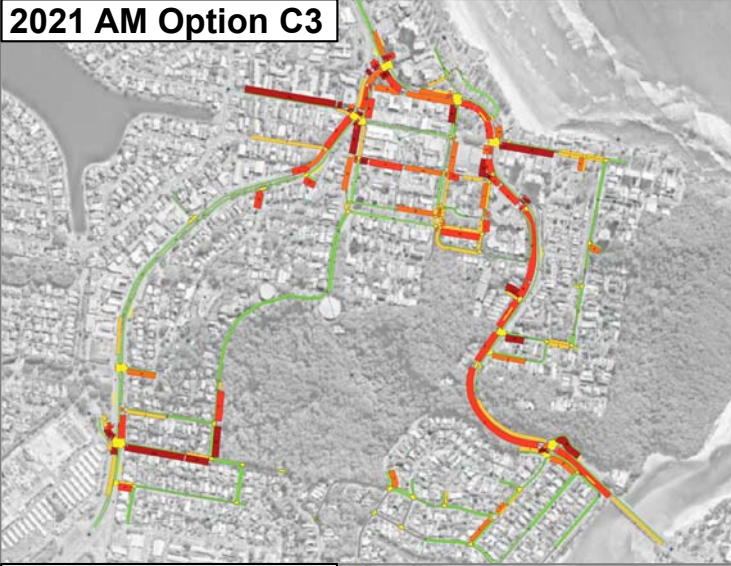
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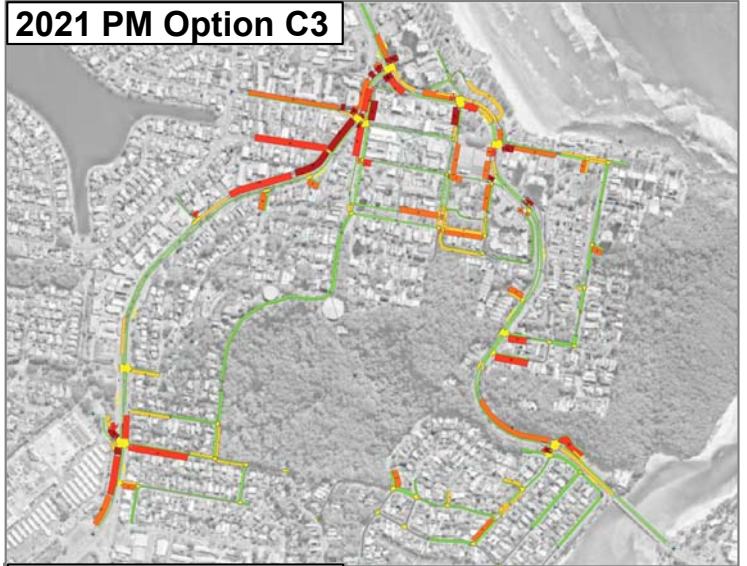
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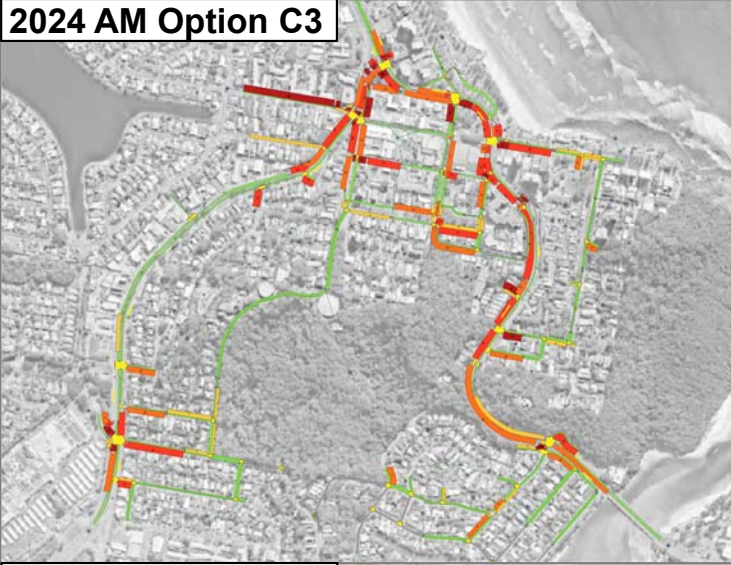
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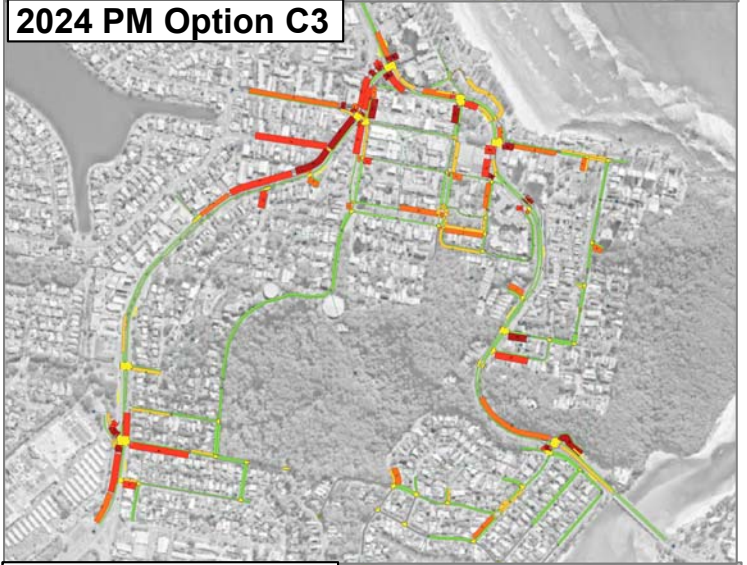
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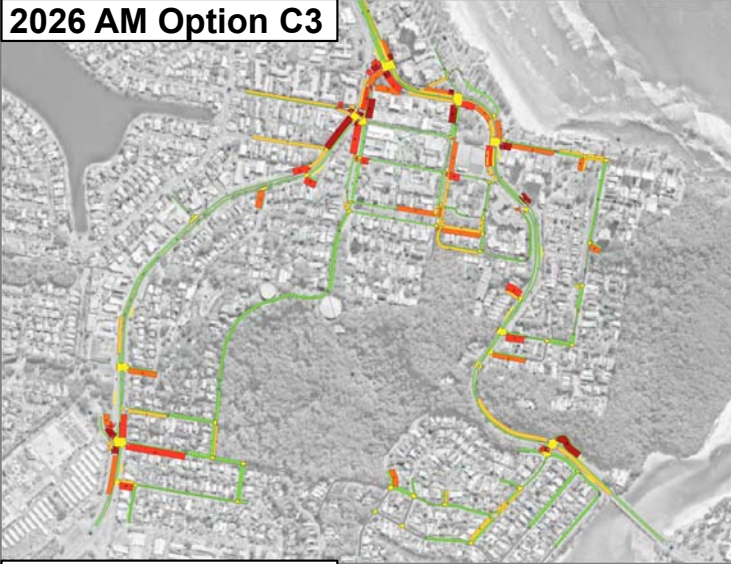
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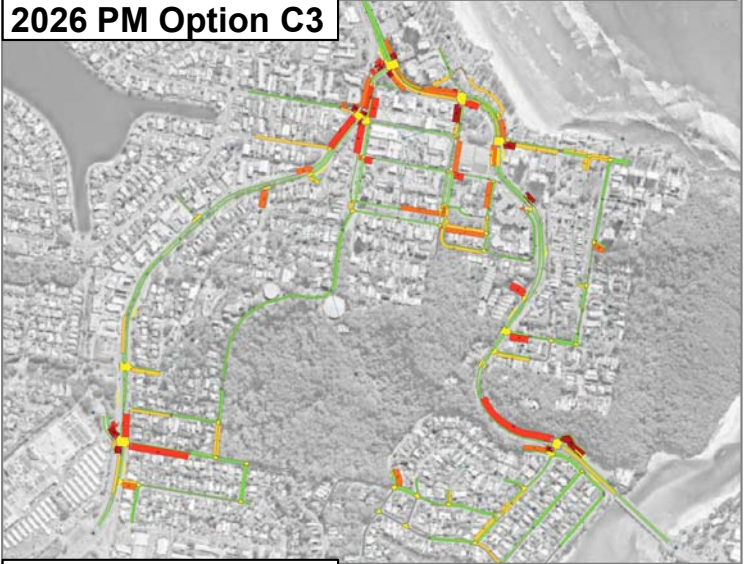
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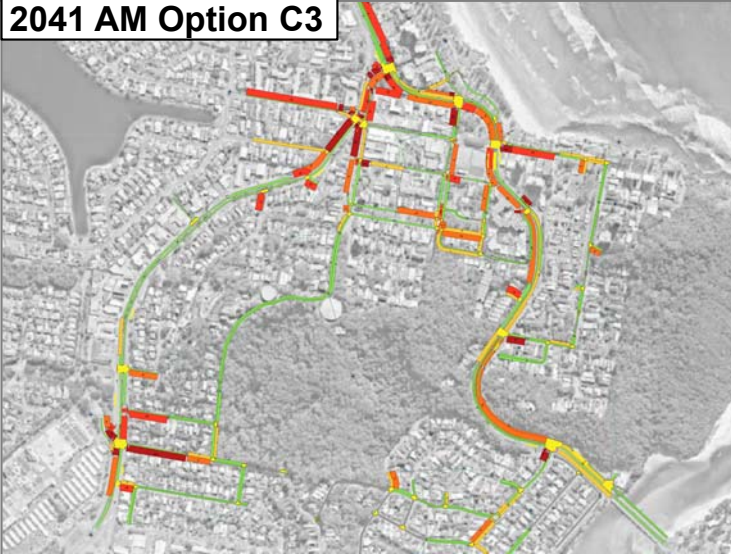
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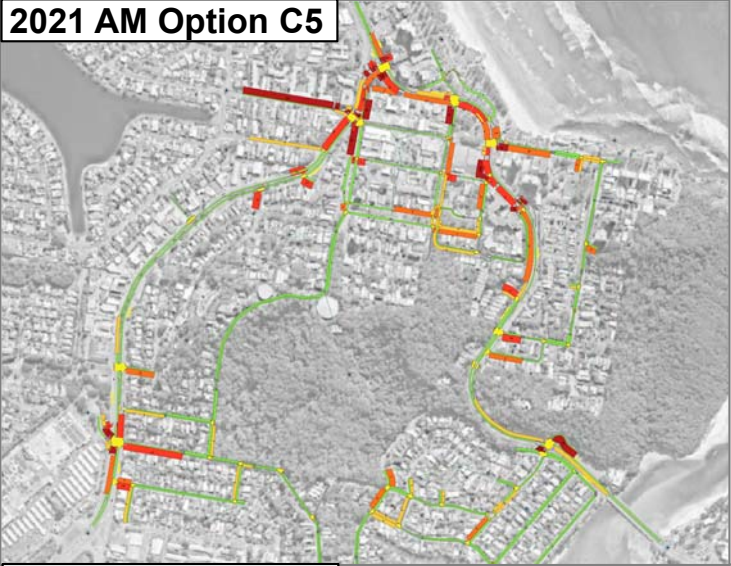
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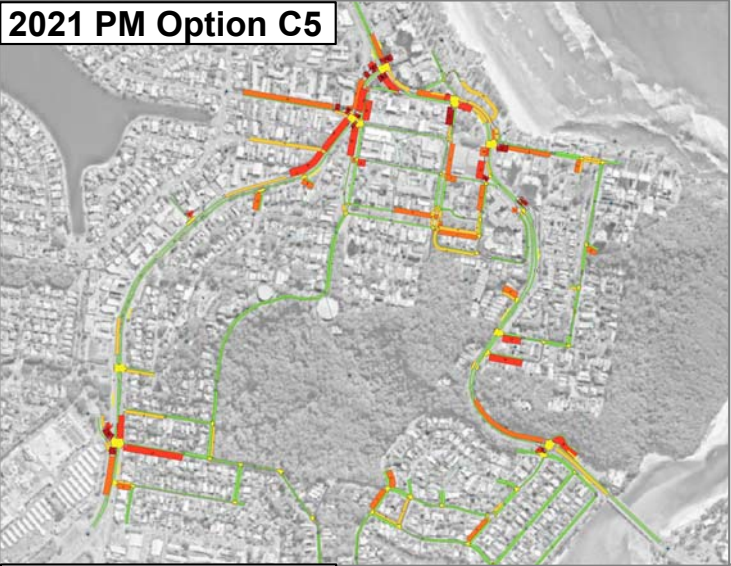
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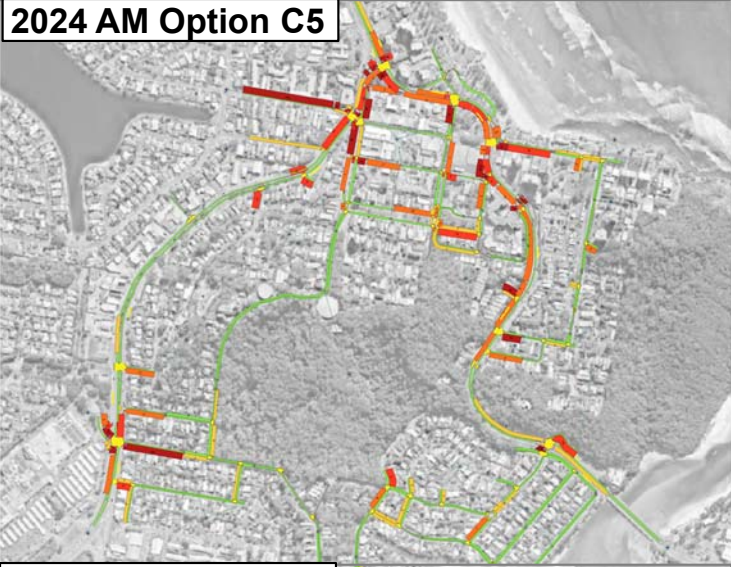
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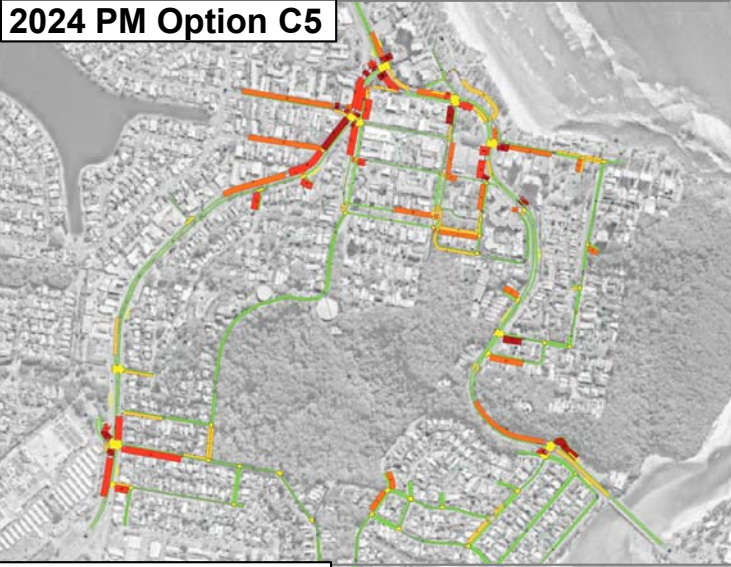
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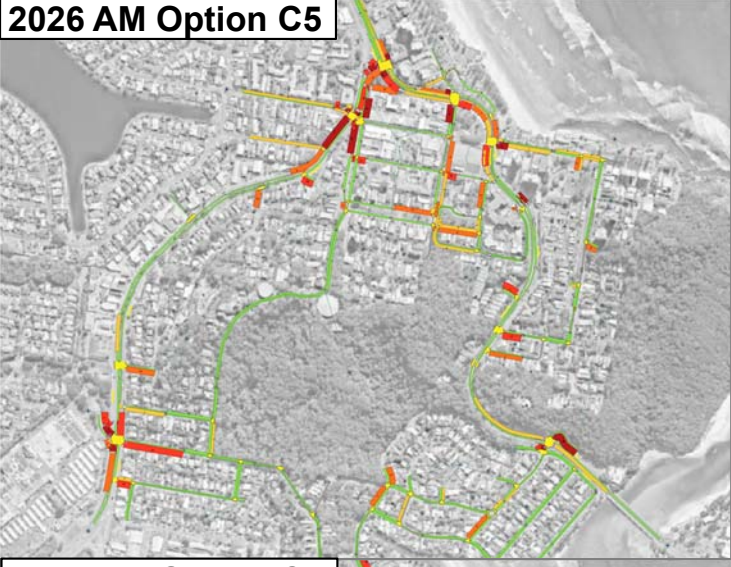
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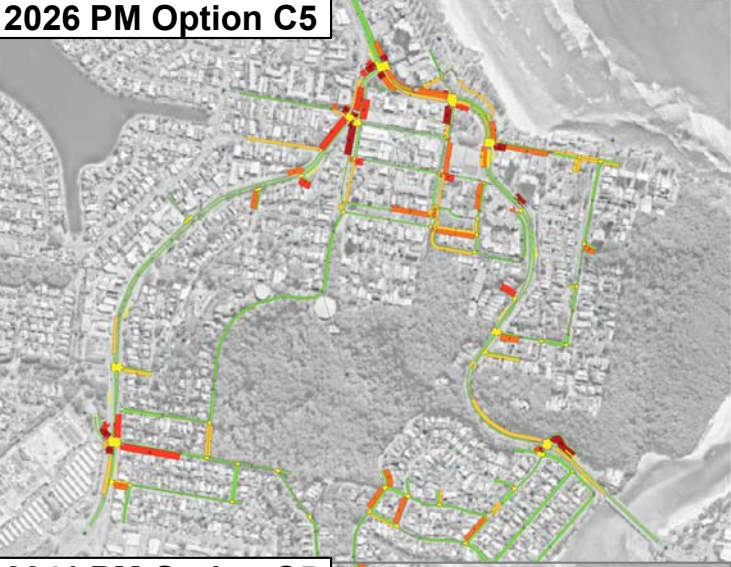
2041 AM Option C5

2041 PM Option C5

Appendix D: Public Consultation Material

CURRENT SITUATION: Tabilban Street route

Burleigh Lake

Gold Coast Highway route

Tabilban Street route

Bunyip Street route

BURLEIGH RIDGE PARK

BURLEIGH HEAD NATIONAL PARK

Tallebudgera Creek

Map labels: KESTR, TERN DR, EAGLE, ACA, BURLEIGH ST, KINGFISHER CR, ACANTHUS AV, WEST BURLEIGH RD, STEPHENS ST, WEST ST, STANLEY ST, JAMES ST, PARK AV, EWART ST, CONNOR ST, EWART ST, OCEAN ST, GOLD COAST HWY, GOODWIN TCE, NATHAN ST, JULIA ST NTH, HILL AV, ERA AV, EAST ST, WEST ST, HILL AV, BRAKE ST, HAYLE ST, SHORT ST, ALBERT ST, JULIA ST, VIEW ST, GEORGE ST WEST, MOUNT ST, GEORGE ST, BURRABEE ST, TIMBERTOP MEAD, WAIROO ST, PAGE PDE, GEORGE ST EAST, COTTON ST, PEGGS RD, RUDD ST, TABILBAN ST, BUNYIP ST, KOEL ST, RESERVE ST, DJERRAL AV, TAWARRI CR, GUYRA AV, TABILBAN ST, BEELYU ST, IKKINA RD, BULLIMAH AV, AWOONGA AV, MATILDA ST, BANJO ST, PARNOO AV, PINDARI AV, ELANORA DR, REEDY CREEK RD, FLEAY CT, OCEAN PDE, GOLD COAST HWY

- ✓ Used by 9,000 vehicles per day
- ✓ Over 60 per cent are through trips (not locals)
- ✓ 1.3 kilometres shorter
- ✓ 1 – 2 minutes faster during peak times

- ✗ Bunyip Street route impacted by through trips
- ✗ Delays experienced by some side streets and properties
- ✗ Limited safe active transport options
- ✗ Road safety concerns from residents

INSET MAP

PAGE PDE, WEST BURLEIGH RD, TABILBAN ST, BUNYIP ST, KOEL ST, MATILDA ST, BANJO ST, RESERVE ST, PINDARI AVE, PARNOO AVE, DJERRAL AV, TAWARRI CR, GUYRA AV, TABILBAN ST, ELANORA DR, IKKINA RD, BULLIMAH AV, AWOONGA AV, BEELYU ST, GOLD COAST HWY

Steep grades and curve
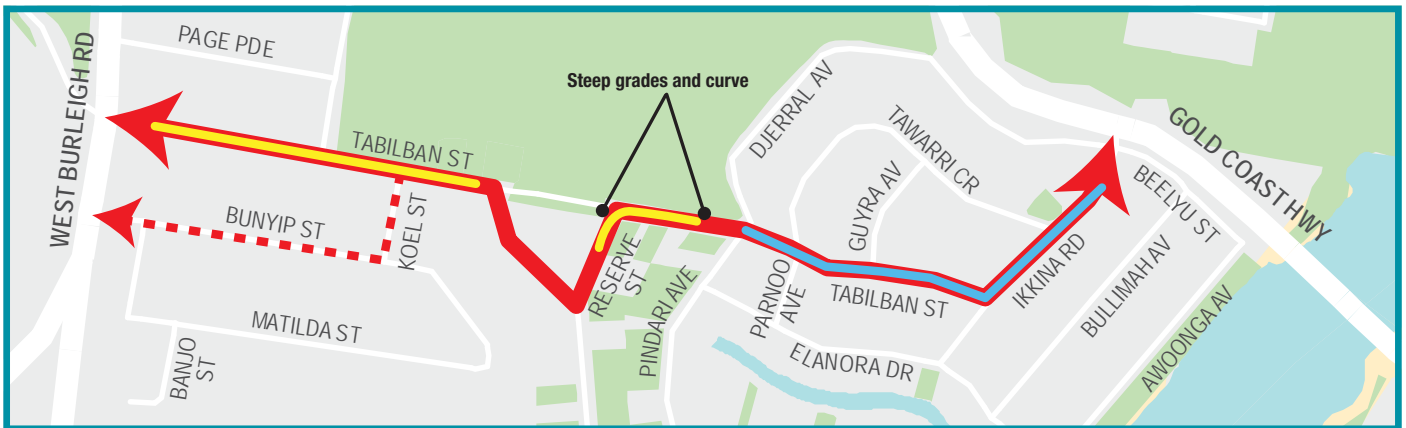
LEGEND
- ▬ Tabilban Street route
- ▬▬ Bunyip Street route
- ▬ Speed control devices
- ▬ Historical accident areas

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OPTION A: Minor network improvements

Burleigh Lake

Gold Coast Highway route

Tabilban Street route

BURLEIGH RIDGE PARK

BURLEIGH HEAD NATIONAL PARK

Tallebudgera Creek

Outcomes:
- Used by 7,500 vehicles per day
- Through trip time slower, similar to Gold Coast Highway route
- Minimal impact to local traffic trip time

✅ Minimises environmental and koala impacts

✅ Traffic speeds slower and improved road safety

✅ East-west connections remain

✅ Reduces delays for some side streets and properties

✅ Removes Bunyip Street through route (eastbound)

❌ Tabilban Street route through traffic remains

❌ Limited access to Bunyip Street from the east

INSET MAP

Additional speed control / intersection treatments to slow traffic – slow point, chicane, speed humps, mini roundabout

Koel Street one-way to remove Bunyip Street through route

NO ENTRY

Roundabout to slow traffic and improve road safety
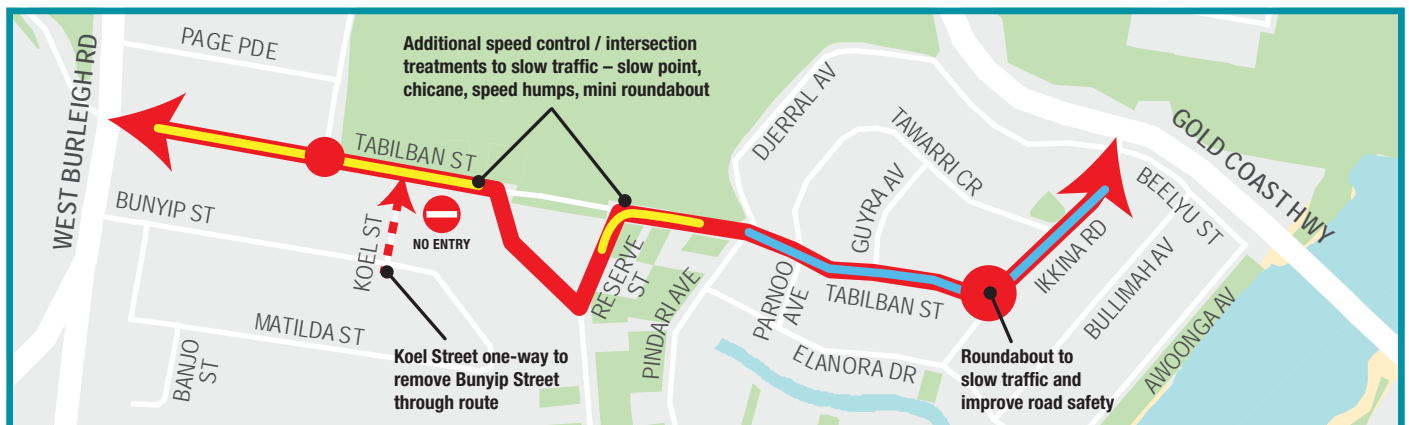
LEGEND
— Tabilban Street route
┈ Koel Street NEW one-way northbound
— EXISTING Speed control devices
— NEW Speed control devices

Road geometry may impact proposed solutions

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OPTION B: Provide Tabilban Street Link
(PETITION OPTION)

Burleigh Lake

Gold Coast Highway route

BURLEIGH ST
KINGFISHER CR
TERN
STEPHENS ST
GOLD COAST HWY
JAMES ST
ACANTHUS AV
WEST BURLEIGH RD
STANLEY ST
HILL AV
ERA AV
EAST ST
WEST ST
PARK AV
EWART ST
CONNOR ST
EWART ST
OCEAN ST
GOODWIN TCE
NATHAN ST
JULIA ST NTH
VIEW ST
GEORGE ST WEST
MOUNT ST
GEORGE ST
HILL AV
BRAKE ST
BURRABEE ST
HAYLE ST
SHORT ST
ALBERT ST
JULIA ST
TIMBERTOP MEAD
WAIROO ST
GEORGE ST EAST
PAGE PDE
COTTON ST
PEGGS RD
RUDD ST

BURLEIGH RIDGE PARK

BURLEIGH HEAD NATIONAL PARK

Tallebudgera Creek

Tabilban Street route

WEST BURLEIGH RD
TABILBAN ST
BUNYIP ST
KOEL ST
OCEAN PDE
RESERVE ST
DJERRAL AV
TAWARRI CR
GUYRA AV
PARNOO AV
TABILBAN ST
IKKINA RD
BEELYU ST
BULLIMAH AV
AWOONGA AV
MATILDA ST
BANJO ST
PINDARI AV
ELANORA DR
GOLD COAST HWY
FLEAY CT
REEDY CREEK RD
OCEAN PDE

Outcomes:
- Used by 13,000 vehicles per day
- Through trip time faster
- Local traffic trip time slower
- Gold Coast Highway route traffic improved

✓ Improves traffic on Gold Coast Highway route
✓ Improves road safety on Reserve Street
✓ East-west connection remains
✓ Removes Bunyip Street through route

✗ Significant environmental and koala impacts
✗ Tabilban Street route through traffic increased
✗ Traffic speed increased and overall road safety reduced
✗ Increased delays for some side streets and properties
✗ Limited access to Bunyip Street from the east
✗ High overall cost

INSET MAP

WEST BURLEIGH RD
TABILBAN ST
BUNYIP ST
KOEL ST
OCEAN PDE
RESERVE ST
PINDARI AV
BANJO ST
DJERRAL AV
PARNOO AVE
TABILBAN ST
ELANORA DR
IKKINA RD
BEELYU ST
BULLIMAH AV
AWOONGA AV
GOLD COAST HWY

Construct Tabilban Street extension

Rationalise existing speed controls

Left-turn slip lane to improve capacity

Ocean Parade gives way to through route

Reserve Street becomes a cul-de-sac

LEGEND
— Tabilban Street route
— RATIONALISE Speed control devices
— Tabilban Street NEW connection and pathway

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OPTION C: Local traffic only

Gold Coast Highway route

Tabilban Street route

Burleigh Lake

KESTR / TERN DR / EAGLE / ACA
BURLEIGH ST
KINGFISHER CR
STEPHENS ST
JAMES ST
ACANTHUS AV
WEST BURLEIGH RD
HILL AV / ERA AV
EAST ST
WEST ST
STANLEY ST
PARK AV
CONNOR ST
OCEAN ST
EWART ST
EWART ST
HILL AV
VIEW ST
GEORGE ST WEST
MOUNT ST
GEORGE ST
TIMBERTOP MEAD
WAIROO ST
PAGE PDE
TABILBAN ST
BUNYIP ST
KOEL ST
RESERVE ST
MATILDA ST
BANJO ST
FLEAY CT
REEDY CREEK RD
PINDARI AV
PARNOO AV
DJERRAL AV
TABILBAN ST
ELANORA DR
GUYRA AV
TAWARRI CR
IKKINA RD
BULLIMAH AV
BEELYU ST
AWOONGA AV
GOLD COAST HWY
BRAKE ST
BURRABEE ST
HAYLE ST
ALBERT ST
JULIA ST
SHORT ST
NATHAN ST
GOODWIN TCE
JULIA ST NTH
GEORGE ST EAST
COTTON ST
PEGGS RD
RUDD ST
OCEAN PDE

BURLEIGH RIDGE PARK

BURLEIGH HEAD NATIONAL PARK

Tallebudgera Creek
GOLD COAST HWY

Outcomes:

- Used by 3,000 vehicles per day
- No through trips occurring
- Local traffic trip time impacted
- Gold Coast Highway route significantly slower

✓ Minimises environmental and koala impacts

✓ Traffic speeds slower and improved road safety

✓ Local traffic only

✓ Reduces delays for some side streets and properties

✗ East-west connection removed

✗ Increased local traffic trip times

✗ Access for emergency service vehicles impacted

✗ Gold Coast Highway route significantly slower

✗ High costs due to upgrades required in Burleigh Village

INSET MAP

WEST BURLEIGH RD
TABILBAN ST
BUNYIP ST
KOEL ST
OCEAN PDE
RESERVE ST
PINDARI AVE
MATILDA ST
BANJO ST
FLEAY CT
PARNOO AVE
TABILBAN ST
ELANORA DR
GUYRA AV
TAWARRI CR
IKKINA RD
BULLIMAH AV
BEELYU ST
AWOONGA AV
GOLD COAST HWY
OCEAN PDE

Reserve Street and Tabilban Street end in cul-de-sacs

Local traffic connection

Roundabout to slow traffic and improve road safety
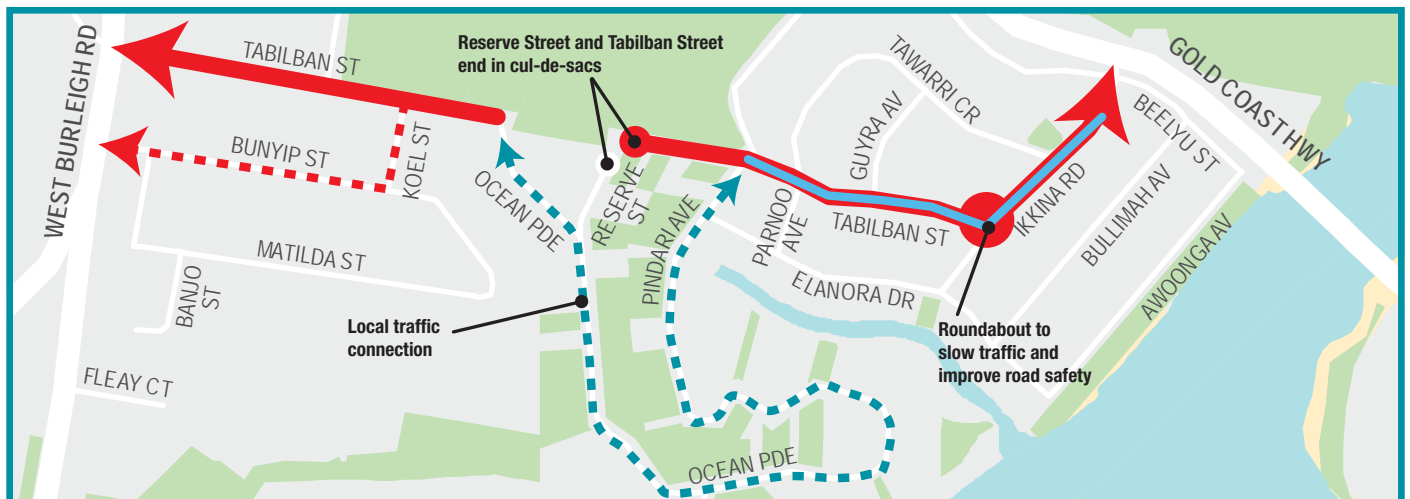
LEGEND

— Tabilban Street route
- - Koel Street to Bunyip Street route
-·- Ocean Parade LOCAL connection remains
— EXISTING Speed control devices

CITY OF GOLDCOAST.™

Appendix E: Multi-criteria Analysis (MCA) Results

Smarter Solutions - Multi-Criteria Assessment Tool

This Smarter Solutions Multi-Criteria Assessment (MCA) Tool provides a clear line-of-sight across the Department of Transport and Main Roads' (TMR) infrastructure planning and investment process, providing assurance that the Network Optimisation Framework is embedded in our decision-making.

The MCA Tool has been designed for use in selecting a preferred option, or ranking alternate options, where network optimisation solutions (NOS) are included within assessment processes. The MCA Tool applies a standardised consideration of NOS relative to large capital infrastructure, ensuring TMR is delivering the right infrastructure at the right time and aligning with government policy direction for investment as outlined in the Queensland Government's State Infrastructure Plan.

```
Start → Project Description → Define Options → Criteria Selection
                                                      ↓
Weighting Assignment ← Select Weighting Approach ←────┘
        ↓
Scoring → Sensitivity → Results
```
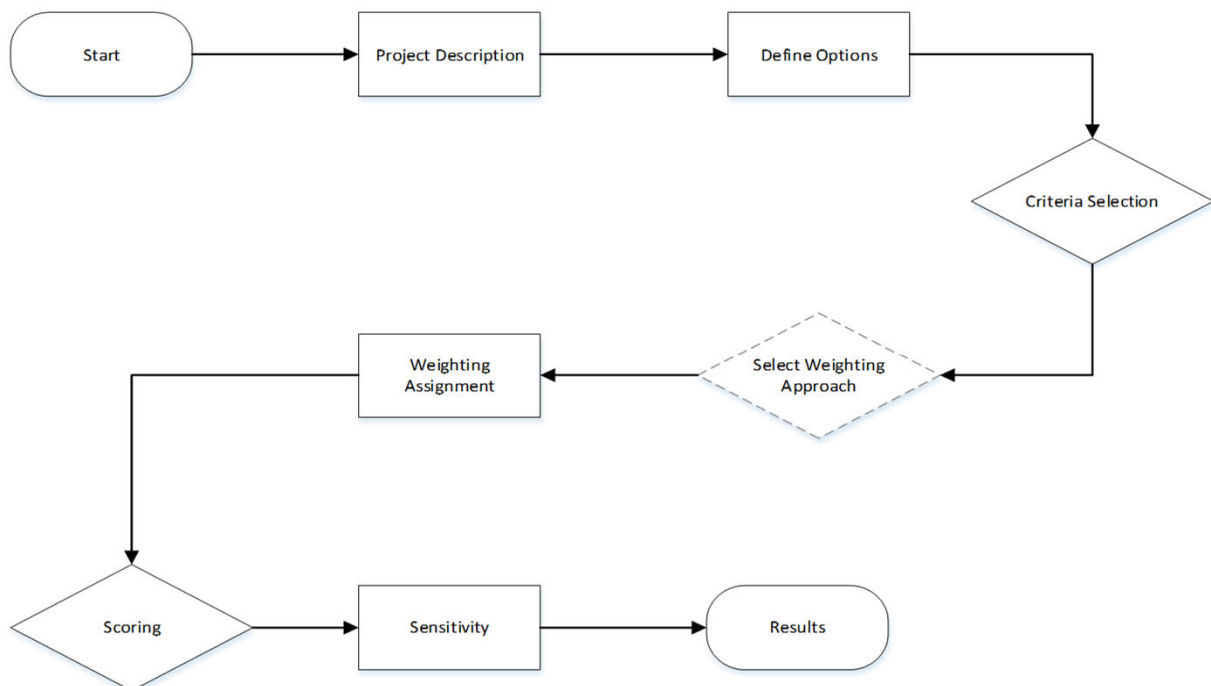
Project Description

The project must be clearly defined within the MCA to ensure that appropriate options are short-listed for evaluation and that the criteria selected for assessment reflect the nature of the service requirement or opportunity. Accordingly, the project should be defined in terms of:

Decision Context: What is the overarching service need or opportunity that this project response is sought to address?
What is the timeframe for required impacts?

The Koala Park Traffic Management Study was initiated to inform investigations into the Burleigh Heads / Koala Park area, with a key focus on the Tabilban Street / Ikkina Road corridor. The investigations came about through a petition received in 2021 requesting Council to consider closing Reserve Street to through traffic and construct the 'missing link' at Tabilban Street.

The corridor services the local residential catchments, however is experiencing increased through traffic using the route as a 'rat-run' to avoid the Gold Coast Highway-West Burleigh Road corridors and has led to several crashes, near misses, congestion and delays along the corridor.

The assessment has considered options across base (2021) short (2024), medium (2026) and long-term (2041) timeframes for consideration in Council's future budgeting allocations.

Network Context: What is the current transport infrastructure environment?
Is there any complimentary infrastructure investment occuring within close proximity?

Tabilban Street-Ikkina Road are lower order, Residential Collector streets currently carrying high volumes of traffic in excess of their typical environmental capacity.

A number of key infrastructure projects are planned (and/or currently underway) in the vicinity of the study area. These key pieces of transport infrastructure and their timing of delivery (at the time of completing this study) were included in the assessment as follows:

Gold Coast Light Rail Stage 3 (GCLR3) assumed operational by 2025;

Pacific Motorway Varsity Lakes to Tugun (M1 VL2T) assumed operational by 2025 (including widening 10km of the M1 from 2 to a minimum of 3 lanes in both directions, constructing a new two-way western service road between Tallebudgera and Palm Beach and a new bridge over Tallebudgera Creek connecting the new western service road, access to the service road and the M1 via Nineteenth Avenue);

Gold Coast Light Rail Stage 4 (GCLR4) assumed operational by 2041 design scenario.

Key Objectives: What is the key objective the Project is being implemented to achieve?

Capacity	☐
Performance	☑
Behaviour Change	☐
Safety	☑
Other	☑

What are the segmented objectives - ultimate, intermediate and immediate?
What are the corresponding timeframes for these objectives?

Improve safety and amenity for residents in the immediate term (by 2024) through managing short cut traffic. Implement measures to limit the volume of traffic ultimately using the through route (by 2041) considering external infrastructure investment (M1, light rail, etc.).

Define Options

	Clearly define the short-listed options identified to achieve the outcomes sought.

Ref	Option	Description
1	A3	Largely maintains current arrangement, includes improvements at Wairoo St (e.g. roundabout / chicane) and small roundabout at Tabilban St / Ikkina Rd, implements additional speed control devices along route and managed flows.
2	AX	Largely maintains current arrangement, Includes roundabouts provided at both Wairoo St and Tabilban St / Ikkina Rd, implements additional speed control devices along route, Implements one-way Koel St (northbound).
3	B2	Implements Tabilban St link connection, Closure of Reserve St (provided as a cul-de-sac at Tabilban St), Ocean Pde connection remains and gives-way to Tabilban St, Signal improvements at GC Hwy for left turns into Ikkina Rd, Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St, Reinstate default urban speed limit of 50km/h on through route.
4	B3	Implements Tabilban St link connection, Closure of Reserve St (provided as a cul-de-sac at Tabilban St), Ocean Pde connection remains and gives-way to Tabilban St, Signal improvements at GC Hwy for left turns into Ikkina Rd, Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St, Reinstate default urban speed limit of 50km/h on through route, Koel St one-way (northbound), Left turn slip lane from Tabilban St to West Burleigh Rd.
5	B4	Does not connect Tabilban link, promotes through traffic by other means, Maintains existing Reserve St & Ocean Pde connections to Tabilban St, Re-prioritises Ocean Pde / Reserve St intersection giving through route priority, Signal improvements at GC Hwy for left turns into Ikkina Rd, Removal of LATM traffic calming at Ikkina Rd (excl. ped crossing) and Tabilban St.
6	C3	Does not connect Tabilban St link, Closure of Ocean Pde (provided as a cul-de-sac at Tabilban St) completely severing east-west connection, Includes roundabout provided at Tabilban St / Ikkina Rd only.
7	C5	Does not connect Tabilban St link, Closure of Reserve St (provided as a cul-de-sac at Tabilban St), Includes roundabout provided at Tabilban St / Ikkina Rd only, maintains local east-west connection via Ocean Pde-Pindari Ave.

☐ **Has a NOS Option been selected?**

Preview of Selected Criterion

Category	Criterion	Indicator	Measure	Scoring Range				
				1	2	3	4	5
Economic Data	**Implementation Costs***	Estimated cost of construction and procurement (outturn estimate)	$	Scoring range of 1 to 5 is based on the maximum deviation from the average of all option's implementation costs. The lower the implementation cost, the higher the score.				
Traffic Performance and Integration	**Network Connectivity**	Impact on the directness of links and the density of connections in the network	Descriptive	Significant negative impact on network connectivity relative to Base Case	Moderate negative impact on network connectivity relative to Base Case	No impact on network connectivity relative to Base Case	Moderate positive impact on network connectivity relative to Base Case	Significant positive impact on network connectivity relative to Base Case
Traffic Performance and Integration	**Operating Conditions**	Change in the efficiency of operating conditions	Descriptive	Significant negative impact on operating conditions relative to Base Case	Moderate negative impact on operating conditions relative to Base Case	No impact on operating conditions relative to Base Case	Moderate positive impact on operating conditions relative to Base Case	Significant positive impact on operating conditions relative to Base Case
Traffic Performance and Integration	**Active transport – Cyclists/Pedestrians**	Impact on active transport users	Descriptive	Significant negative impact on active transport	Moderate negative impact on active transport	No impact on active transport	Moderate positive impact active transport	Significant positive impact on active transport
Traffic Performance and Integration	**Safety**	Impact on safety incl. accidents, injuries and casualities	# / pkt	Significant negative impact on safety relative to Base Case	Moderate negative impact on safety relative to Base Case	No impact on safety relative to Base Case	Moderate positive impact on safety relative to Base Case	Significant positive impact on safety relative to Base Case
Construction and Constructability	**Community Disruption**	Impact of construction on the local community, including visual amenity, safety risk, increased traffic and additional parking demand	Descriptive	Significant negative impact on local community	Moderate negative impact on local community	No impact on local community as a result of construction	N/A	N/A
Construction and Constructability	**Engineering / Constructability**	Potential engineering or construction challenges - during construction or across lifecycle	Descriptive	Significant evidence of potential engineering or construction challenges	Moderate evidence of potential engineering or construction challenges	No evidence of potential engineering or construction challenges	N/A	N/A

Preview of Selected Criterion

Category	Criterion	Indicator	Measure	Scoring Range				
				1	2	3	4	5
Environmental Impact	**Noise and Air Quality**	Impact on noise and air quality		Significant reduction in noise and air quality relative to Base Case	Moderate reduction in noise and air quality relative to Base Case	No change in noise and air quality relative to Base Case	Moderate increase in noise and air quality relative to Base Case	Significant increase in noise and air quality relative to Base Case
Environmental Impact	**Flora and fauna**	Impact on vegetation and / or sites of environmental importance	km2	Significant negative impact on vegetation and / or sites of environmental importance relative to Base Case	Moderate negative impact on vegetation and / or sites of environmental importance relative to Base Case	No impact on vegetation and / or sites of environmental importance relative to Base Case	Moderate positive impact on vegetation and / or sites of environmental importance relative to Base Case	Significant positive impact on vegetation or sites of environmental importance relative to Base Case
Social Factors	**Impact on property owners**	Impact to local land, property and businesses resulting from disruption during construction and operation	Quantity of affected properties	Additional properties affected relative to Base Case – impact across a corridor/route spatial area	Additional properties affected relative to Base Case – impact across a localised spatial area	N/A	N/A	No addition properties affected relative to Base Case

Weighting - Rank Methods

Category	Criterion	Criteria Ranking	Ranks to be assigned
Economic Data	Implementation Costs*	5	
Traffic Performance and Integration	Network Connectivity	6	
	Operating Conditions	2	
	Active transport – Cyclists/Pedestrians	7	
	Safety	1	
Construction and Constructability	Community Disruption	10	
	Engineering / Constructability	9	
Environmental Impact	Noise and Air Quality	8	
	Flora and fauna	4	
Social Factors	Impact on property owners	3	

Option Scoring

Category	Criteria	Select	Rank Sum	Base Case	A3	AX	B2	B3	B4	C3	C5
Economic Data	Implementation Costs*		11%	3	2	2	1	1	2	2	2
Traffic Performance and Integration	Network Connectivity		9%	3	3	3	4	5	3	1	2
	Operating Conditions		16%	3	4	2	5	4	5	1	1
	Active transport – Cyclists/Pedestrians		7%	3	3	3	2	2	3	4	4
	Safety		18%	3	4	4	2	1	2	4	4
Construction and Constructability	Community Disruption		2%	3	2	2	1	1	2	2	2
	Engineering / Constructability		4%	3	2	2	1	1	2	3	3
Environmental Impact	Noise and Air Quality		5%	3	3	3	2	1	2	5	4
	Flora and fauna		13%	3	4	4	1	1	3	4	4
Social Factors	Impact on property owners		15%	3	3	2	1	1	2	2	2

Sensitivity Analysis

Best Option	A3

Category	Criteria	Proportional Change in Criteria Weighting			
		-50%	-25%	25%	50%
Economic Data	Implementation Costs*	A3	A3	A3	A3
Traffic Performance and Integration	Network Connectivity	A3	A3	A3	A3
	Operating Conditions	A3	A3	A3	A3
	Active transport – Cyclists/Pedestrians	A3	A3	A3	A3
	Safety	A3	A3	A3	A3
Construction and Constructability	Community Disruption	A3	A3	A3	A3
	Engineering / Constructability	A3	A3	A3	A3
Environmental Impact	Noise and Air Quality	A3	A3	A3	A3
	Flora and fauna	A3	A3	A3	A3
Social Factors	Impact on property owners	A3	A3	A3	A3

Analysis

Project Decription

Decision Context:
The Koala Park Traffic Management Study was initiated to inform investigations into the Burleigh Heads / Koala Park area, with a key focus on the Tabilban Street / Ikkina Road corridor. The investigations came about through a petition received in 2021 requesting Council to consider closing Reserve Street to through traffic and construct the 'missing link' at Tabilban Street.

The corridor services the local residential catchments, however is experiencing increased through traffic using the route as a Tabilban Street-Ikkina Road are lower order, Residential Collector streets currently carrying high volumes of traffic in excess of their typical environmental capacity.

Network Context:
A number of key infrastructure projects are planned (and/or currently underway) in the vicinity of the study area. These key pieces of transport infrastructure and their timing of delivery (at the time of completing this study) were included in the

Key Objectives: Performanc   Safety   Other

Improve safety and amenity for residents in the immediate term (by 2024) through managing short cut traffic. Implement measures to limit the volume of traffic ultimately using the through route (by 2041) considering external infrastructure investment (M1, light rail, etc.).

Best Option

Overall	A3	
Economic Data	Base Case	Largely maintains current arrangement, includes improvements at Wairoo St (e.g. roundabout / chicane) and small roundabout at Tabilban St / Ikkina Rd, implements additional speed control devices along route and managed flows.
Traffic Performance and Integratio	A3	
Construction and Constructability	Base Case	
Environmental Impact	C3	
Social Factors	Base Case	

Summary of Option Scoring

Summary of Option Scoring	Base Case	A3	AX	B2	B3	B4	C3	C5
Score	3.00	3.31	2.84	2.24	1.93	2.78	2.71	2.75
Rank	2	1	3	7	8	4	6	5

Appendix F: Detailed SIDRA Outputs

SITE LAYOUT

🚦 Site: 1 [2021 AM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated

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

MOVEMENT SUMMARY

🚦 Site: 1 [2021 AM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	200	1	211	0.5	0.143	7.8	LOS A	2.5	17.6	0.23	0.62	0.23	45.0
2	T1	1001	41	1054	4.1	0.504	33.6	LOS C	16.3	118.2	0.71	0.62	0.71	34.5
3	R2	185	2	195	1.1	*0.645	60.8	LOS E	14.8	104.1	0.97	0.83	0.97	22.5
3u	U	37	0	39	0.0	0.645	62.3	LOS E	14.8	104.1	0.97	0.83	0.97	18.9
Approach		1423	44	1498	3.1	0.645	34.3	LOS C	16.3	118.2	0.69	0.65	0.69	32.5
East: Tabilban St (E)														
4	L2	129	0	136	0.0	*0.650	69.5	LOS E	9.2	64.3	1.00	0.82	1.03	20.4
5	T1	80	0	84	0.0	0.393	57.7	LOS E	7.3	50.8	0.94	0.76	0.94	24.0
6	R2	31	0	33	0.0	0.393	60.8	LOS E	7.3	50.8	0.94	0.76	0.94	27.1
Approach		240	0	253	0.0	0.650	64.5	LOS E	9.2	64.3	0.97	0.79	0.99	22.5
North: West Burleigh Rd (E)														
7	L2	5	0	5	0.0	0.005	22.2	LOS C	0.2	1.2	0.49	0.63	0.49	37.4
8	T1	1111	39	1169	3.5	*0.659	43.3	LOS D	23.8	171.9	0.91	0.79	0.91	30.6
9	R2	138	0	145	0.0	0.498	64.5	LOS E	9.2	64.4	0.96	0.80	0.96	25.6
Approach		1254	39	1320	3.1	0.659	45.5	LOS D	23.8	171.9	0.92	0.79	0.92	29.9
West: Dunlin Dr (W)														
10	L2	159	0	167	0.0	0.158	8.5	LOS A	2.3	16.2	0.27	0.59	0.27	48.2
11	T1	9	0	9	0.0	*0.646	62.0	LOS E	7.4	52.0	0.96	0.80	1.00	22.6
12	R2	268	3	282	1.1	0.646	66.0	LOS E	11.6	81.9	0.98	0.81	1.00	19.6
Approach		436	3	459	0.7	0.646	45.0	LOS D	11.6	81.9	0.72	0.73	0.73	27.0
All Vehicles		3353	86	3529	2.6	0.659	42.0	LOS D	23.8	171.9	0.80	0.73	0.80	29.7

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2021 PM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	189	0	199	0.0	0.130	7.2	LOS A	2.0	14.0	0.21	0.61	0.21	45.6
2	T1	889	9	936	1.0	0.349	26.2	LOS C	13.5	95.4	0.69	0.60	0.69	38.1
3	R2	478	0	503	0.0	*0.844	44.2	LOS D	31.2	218.5	0.84	0.88	0.92	26.1
3u	U	30	1	32	3.3	0.844	45.7	LOS D	31.2	218.5	0.84	0.88	0.92	23.0
Approach		1586	10	1669	0.6	0.844	29.7	LOS C	31.2	218.5	0.68	0.69	0.71	33.5
East: Tabilban St (E)														
4	L2	138	0	145	0.0	*0.856	80.4	LOS F	10.9	76.1	1.00	0.97	1.29	18.9
5	T1	87	0	92	0.0	0.436	60.9	LOS E	7.2	50.3	0.96	0.77	0.96	23.5
6	R2	20	0	21	0.0	0.436	64.0	LOS E	7.2	50.3	0.96	0.77	0.96	26.5
Approach		245	0	258	0.0	0.856	72.1	LOS E	10.9	76.1	0.98	0.88	1.15	21.1
North: West Burleigh Rd (E)														
7	L2	13	0	14	0.0	0.023	39.7	LOS D	0.6	4.4	0.71	0.67	0.71	31.7
8	T1	644	17	678	2.6	*0.825	67.8	LOS E	16.0	114.3	1.00	0.91	1.13	23.9
9	R2	85	0	89	0.0	0.355	65.7	LOS E	5.6	39.5	0.95	0.77	0.95	25.3
Approach		742	17	781	2.3	0.825	67.1	LOS E	16.0	114.3	0.99	0.89	1.10	24.3
West: Dunlin Dr (W)														
10	L2	212	0	223	0.0	0.216	7.6	LOS A	2.8	19.3	0.25	0.59	0.25	48.7
11	T1	48	0	51	0.0	*0.573	67.1	LOS E	5.7	40.1	0.98	0.77	0.99	22.1
12	R2	139	0	146	0.0	0.573	70.9	LOS E	7.4	51.9	1.00	0.78	1.00	18.9
Approach		399	0	420	0.0	0.573	36.8	LOS D	7.4	51.9	0.60	0.68	0.60	30.7
All Vehicles		2972	27	3128	0.9	0.856	43.5	LOS D	31.2	218.5	0.77	0.75	0.83	28.8

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	AVERAGE BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2024 AM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	211	1	222	0.5	0.145	7.1	LOS A	2.1	15.0	0.20	0.61	0.20	45.7
2	T1	1006	37	1059	3.7	0.414	24.2	LOS C	12.9	92.9	0.58	0.51	0.58	39.2
3	R2	227	5	239	2.2	*0.579	46.8	LOS D	15.5	111.2	0.86	0.82	0.86	25.4
3u	U	40	3	42	7.5	0.579	48.4	LOS D	15.5	111.2	0.86	0.82	0.86	22.0
Approach		1484	46	1562	3.1	0.579	25.9	LOS C	15.5	111.2	0.58	0.58	0.58	36.2
East: Tabilban St (E)														
4	L2	144	1	152	0.7	*0.583	65.0	LOS E	9.9	69.6	0.99	0.81	0.99	21.1
5	T1	82	3	86	3.7	0.319	53.4	LOS D	6.6	47.1	0.91	0.74	0.91	24.9
6	R2	23	0	24	0.0	0.319	56.5	LOS E	6.6	47.1	0.91	0.74	0.91	28.0
Approach		249	4	262	1.6	0.583	60.4	LOS E	9.9	69.6	0.95	0.78	0.95	23.0
North: West Burleigh Rd (E)														
7	L2	14	0	15	0.0	0.018	27.8	LOS C	0.5	3.8	0.58	0.66	0.58	35.4
8	T1	704	36	741	5.1	*0.591	52.7	LOS D	15.3	112.0	0.95	0.80	0.95	27.6
9	R2	74	1	78	1.4	0.423	71.3	LOS E	5.2	36.5	0.98	0.77	0.98	24.2
Approach		792	37	834	4.7	0.591	54.0	LOS D	15.3	112.0	0.95	0.79	0.95	27.4
West: Dunlin Dr (W)														
10	L2	213	2	224	0.9	0.233	8.0	LOS A	2.8	20.1	0.25	0.59	0.25	48.6
11	T1	57	0	60	0.0	*0.583	67.2	LOS E	5.7	40.5	0.98	0.77	0.99	22.1
12	R2	129	5	136	3.9	0.583	71.2	LOS E	7.4	53.2	1.00	0.79	1.00	18.7
Approach		399	7	420	1.8	0.583	36.9	LOS D	7.4	53.2	0.60	0.68	0.60	30.7
All Vehicles		2924	94	3078	3.2	0.591	37.9	LOS D	15.5	112.0	0.71	0.67	0.71	31.0

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2024 PM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	206	0	217	0.0	0.140	7.1	LOS A	2.1	14.6	0.20	0.61	0.20	45.7
2	T1	922	10	971	1.1	0.356	25.7	LOS C	13.9	98.3	0.69	0.60	0.69	38.3
3	R2	472	0	497	0.0	*0.864	48.1	LOS D	32.4	227.9	0.85	0.89	0.96	25.2
3u	U	31	3	33	9.7	0.864	49.7	LOS D	32.4	227.9	0.85	0.89	0.96	21.6
Approach		1631	13	1717	0.8	0.864	30.3	LOS C	32.4	227.9	0.67	0.69	0.71	33.3
East: Tabilban St (E)														
4	L2	144	1	152	0.7	*0.897	84.9	LOS F	11.8	82.8	1.00	1.02	1.39	18.3
5	T1	82	0	86	0.0	0.432	60.8	LOS E	7.1	49.8	0.96	0.77	0.96	23.5
6	R2	23	1	24	4.3	0.432	64.0	LOS E	7.1	49.8	0.96	0.77	0.96	26.5
Approach		249	2	262	0.8	0.897	75.0	LOS E	11.8	82.8	0.98	0.92	1.21	20.6
North: West Burleigh Rd (E)														
7	L2	14	1	15	7.1	0.026	39.8	LOS D	0.7	5.0	0.71	0.68	0.71	31.7
8	T1	704	12	741	1.7	*0.898	74.0	LOS E	18.6	132.3	1.00	0.99	1.24	22.7
9	R2	74	0	78	0.0	0.345	67.6	LOS E	5.0	34.9	0.96	0.77	0.96	25.0
Approach		792	13	834	1.6	0.898	72.8	LOS E	18.6	132.3	0.99	0.96	1.21	23.1
West: Dunlin Dr (W)														
10	L2	213	0	224	0.0	0.223	7.9	LOS A	2.9	20.5	0.26	0.59	0.26	48.5
11	T1	57	0	60	0.0	*0.886	79.9	LOS E	8.1	57.0	0.99	1.00	1.43	20.2
12	R2	219	2	231	0.9	0.886	82.9	LOS F	13.9	97.7	1.00	1.00	1.35	17.0
Approach		489	2	515	0.4	0.886	49.9	LOS D	13.9	97.7	0.68	0.82	0.88	26.2
All Vehicles		3161	30	3327	0.9	0.898	47.5	LOS D	32.4	227.9	0.78	0.79	0.90	27.6

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	AVERAGE BACK OF QUEUE Dist m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 AM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	169	2	178	1.2	0.119	7.4	LOS A	1.9	13.2	0.21	0.61	0.21	45.4
2	T1	1005	46	1058	4.6	0.476	30.6	LOS C	15.3	111.5	0.68	0.59	0.68	35.8
3	R2	189	8	199	4.2	*0.675	59.2	LOS E	15.0	107.9	0.96	0.83	0.96	22.8
3u	U	39	0	41	0.0	0.675	60.6	LOS E	15.0	107.9	0.96	0.83	0.96	19.2
Approach		1402	56	1476	4.0	0.675	32.5	LOS C	15.3	111.5	0.67	0.63	0.67	33.3
East: Tabilban St (E)														
4	L2	109	0	115	0.0	*0.676	73.0	LOS E	8.0	55.8	1.00	0.83	1.07	19.9
5	T1	62	0	65	0.0	0.581	62.4	LOS E	9.6	67.5	0.99	0.80	0.99	23.0
6	R2	78	0	82	0.0	0.581	65.5	LOS E	9.6	67.5	0.99	0.80	0.99	26.0
Approach		249	0	262	0.0	0.676	68.0	LOS E	9.6	67.5	0.99	0.81	1.02	22.6
North: West Burleigh Rd (E)														
7	L2	2	0	2	0.0	0.002	23.7	LOS C	0.1	0.5	0.51	0.61	0.51	36.8
8	T1	1126	45	1185	4.0	*0.669	43.5	LOS D	24.3	175.6	0.92	0.80	0.92	30.5
9	R2	129	0	136	0.0	0.487	65.3	LOS E	8.6	60.5	0.97	0.80	0.97	25.4
Approach		1257	45	1323	3.6	0.669	45.7	LOS D	24.3	175.6	0.92	0.80	0.92	29.9
West: Dunlin Dr (W)														
10	L2	82	0	86	0.0	0.085	8.8	LOS A	1.2	8.7	0.27	0.58	0.27	47.8
11	T1	26	0	27	0.0	*0.672	62.1	LOS E	9.6	67.3	0.97	0.82	1.01	22.7
12	R2	299	1	315	0.3	0.672	65.9	LOS E	12.8	89.6	0.99	0.83	1.01	19.7
Approach		407	1	428	0.2	0.672	54.1	LOS D	12.8	89.6	0.84	0.78	0.86	23.6
All Vehicles		3315	102	3489	3.1	0.676	42.8	LOS D	24.3	175.6	0.81	0.73	0.81	29.5

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 PM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	205	1	216	0.5	0.144	7.6	LOS A	2.4	17.2	0.23	0.61	0.23	45.2
2	T1	869	25	915	2.9	0.387	31.2	LOS C	14.4	103.6	0.75	0.65	0.75	35.5
3	R2	139	2	146	1.4	*0.493	57.2	LOS E	11.3	79.6	0.93	0.81	0.93	23.2
3u	U	39	0	41	0.0	0.493	58.6	LOS E	11.3	79.6	0.93	0.81	0.93	19.7
Approach		1252	28	1318	2.2	0.493	31.1	LOS C	14.4	103.6	0.69	0.67	0.69	33.8
East: Tabilban St (E)														
4	L2	32	0	34	0.0	0.215	69.5	LOS E	2.2	15.5	0.97	0.72	0.97	20.4
5	T1	98	0	103	0.0	*0.492	62.4	LOS E	7.7	54.8	0.98	0.78	0.98	23.3
6	R2	15	2	16	13.3	0.492	65.5	LOS E	7.7	54.8	0.98	0.78	0.98	26.2
Approach		145	2	153	1.4	0.492	64.3	LOS E	7.7	54.8	0.97	0.77	0.97	23.0
North: West Burleigh Rd (E)														
7	L2	12	0	13	0.0	0.013	23.3	LOS C	0.4	2.9	0.51	0.65	0.51	37.0
8	T1	908	44	956	4.8	*0.500	37.8	LOS D	15.5	112.8	0.76	0.65	0.76	32.6
9	R2	100	0	105	0.0	0.378	64.1	LOS E	6.6	46.0	0.95	0.78	0.95	25.7
Approach		1020	44	1074	4.3	0.500	40.2	LOS D	15.5	112.8	0.77	0.67	0.77	31.7
West: Dunlin Dr (W)														
10	L2	163	0	172	0.0	0.158	7.6	LOS A	2.1	14.6	0.24	0.58	0.24	48.7
11	T1	47	0	49	0.0	*0.498	60.6	LOS E	6.2	43.7	0.95	0.76	0.95	23.1
12	R2	178	0	187	0.0	0.498	64.6	LOS E	8.8	61.4	0.96	0.79	0.96	20.0
Approach		388	0	408	0.0	0.498	40.2	LOS D	8.8	61.4	0.66	0.70	0.66	28.9
All Vehicles		2805	74	2953	2.6	0.500	37.4	LOS D	15.5	112.8	0.73	0.68	0.73	31.4

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)

Pedestrian Movement Performance

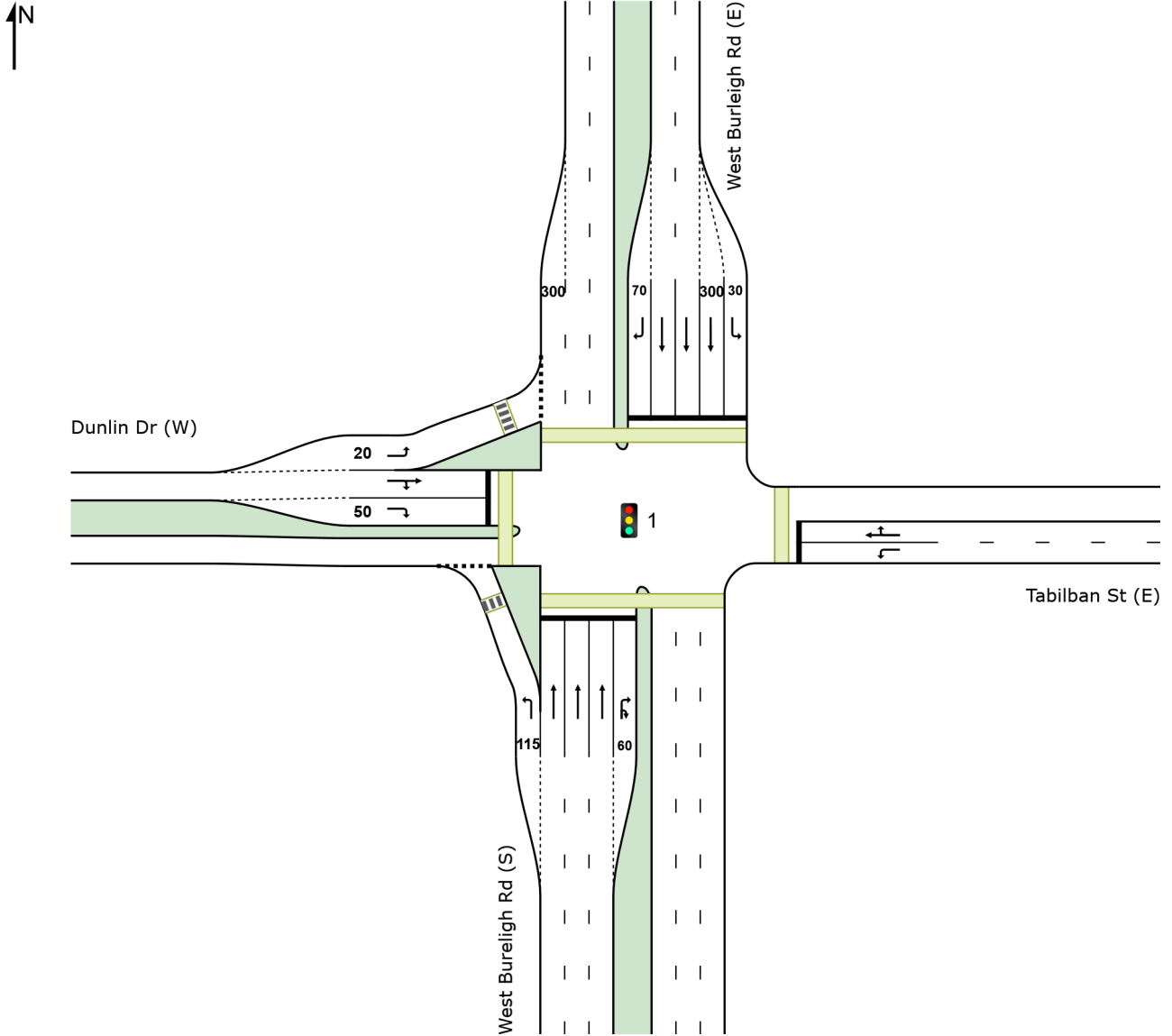| Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 AM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	226	2	238	0.9	0.156	7.1	LOS A	2.3	16.4	0.20	0.61	0.20	45.7
2	T1	915	36	963	3.9	0.371	22.8	LOS C	11.1	80.3	0.55	0.48	0.55	40.0
3	R2	278	13	293	4.7	*0.973	98.2	LOS F	29.6	216.6	0.97	1.06	1.46	17.1
3u	U	44	4	46	9.1	0.973	99.7	LOS F	29.6	216.6	0.97	1.06	1.46	13.3
Approach		1463	55	1540	3.8	0.973	37.0	LOS D	29.6	216.6	0.59	0.63	0.70	31.0
East: Tabilban St (E)														
4	L2	159	2	167	1.3	*0.995	113.0	LOS F	15.3	108.4	1.00	1.19	1.67	15.3
5	T1	62	0	65	0.0	0.794	68.2	LOS E	14.1	98.9	1.00	0.92	1.14	22.0
6	R2	128	0	135	0.0	0.794	71.3	LOS E	14.1	98.9	1.00	0.92	1.14	24.9
Approach		349	2	367	0.6	0.995	89.8	LOS F	15.3	108.4	1.00	1.04	1.38	19.6
North: West Burleigh Rd (E)														
7	L2	6	0	6	0.0	0.007	23.8	LOS C	0.2	1.5	0.52	0.63	0.52	36.8
8	T1	1677	36	1765	2.1	*0.975	86.7	LOS F	54.7	390.1	1.00	1.19	1.38	20.5
9	R2	92	1	97	1.1	0.368	65.0	LOS E	6.1	42.9	0.95	0.78	0.95	25.5
Approach		1775	37	1868	2.1	0.975	85.3	LOS F	54.7	390.1	1.00	1.17	1.35	20.8
West: Dunlin Dr (W)														
10	L2	62	4	65	6.5	0.070	8.5	LOS A	0.9	6.6	0.26	0.57	0.26	47.8
11	T1	25	0	26	0.0	*0.980	103.4	LOS F	16.4	116.0	1.00	1.16	1.60	17.3
12	R2	325	6	342	1.8	0.980	106.5	LOS F	16.4	116.0	1.00	1.15	1.60	14.2
Approach		412	10	434	2.4	0.980	91.5	LOS F	16.4	116.0	0.89	1.07	1.40	16.8
All Vehicles		3999	104	4209	2.6	0.995	68.7	LOS E	54.7	390.1	0.84	0.95	1.12	22.8

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 PM (Site Folder: Option 3Ai)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	186	0	196	0.0	0.127	7.1	LOS A	1.9	13.0	0.20	0.61	0.20	45.7
2	T1	1146	12	1206	1.0	0.482	28.8	LOS C	20.0	141.5	0.74	0.65	0.74	36.9
3	R2	157	3	165	1.9	*0.693	65.2	LOS E	13.8	98.9	0.99	0.84	1.02	21.7
3u	U	43	2	45	4.7	0.693	66.7	LOS E	13.8	98.9	0.99	0.84	1.02	17.9
Approach		1532	17	1613	1.1	0.693	31.0	LOS C	20.0	141.5	0.71	0.67	0.71	34.3
East: Tabilban St (E)														
4	L2	128	0	135	0.0	*0.688	71.3	LOS E	9.3	64.9	1.00	0.84	1.06	20.1
5	T1	77	0	81	0.0	0.449	59.2	LOS E	8.0	56.3	0.96	0.78	0.96	23.7
6	R2	43	1	45	2.3	0.449	62.4	LOS E	8.0	56.3	0.96	0.78	0.96	26.7
Approach		248	1	261	0.4	0.688	66.0	LOS E	9.3	64.9	0.98	0.81	1.01	22.4
North: West Burleigh Rd (E)														
7	L2	5	0	5	0.0	0.005	19.3	LOS B	0.2	1.1	0.45	0.62	0.45	38.5
8	T1	1363	35	1435	2.6	*0.693	36.2	LOS D	25.9	185.6	0.81	0.72	0.81	33.3
9	R2	85	3	89	3.5	0.494	71.9	LOS E	6.0	43.1	0.99	0.78	0.99	24.1
Approach		1453	38	1529	2.6	0.693	38.2	LOS D	25.9	185.6	0.82	0.72	0.82	32.5
West: Dunlin Dr (W)														
10	L2	155	0	163	0.0	0.179	10.3	LOS B	2.8	19.4	0.32	0.61	0.32	47.2
11	T1	73	0	77	0.0	*0.674	64.4	LOS E	7.4	51.7	0.97	0.81	1.04	22.6
12	R2	193	0	203	0.0	0.674	68.8	LOS E	11.2	78.4	0.99	0.83	1.03	19.2
Approach		421	0	443	0.0	0.674	46.5	LOS D	11.2	78.4	0.74	0.74	0.77	26.9
All Vehicles		3654	56	3846	1.5	0.693	38.0	LOS D	25.9	185.6	0.78	0.71	0.78	31.3

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2021 AM (Site Folder: Option 3Aii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	199	1	209	0.5	0.142	7.8	LOS A	2.5	17.4	0.23	0.62	0.23	45.0
2	T1	997	37	1049	3.7	0.510	34.6	LOS C	16.5	119.3	0.73	0.63	0.73	34.1
3	R2	187	5	197	2.7	*0.660	60.1	LOS E	15.0	107.1	0.97	0.83	0.97	22.6
3u	U	39	1	41	2.6	0.660	61.6	LOS E	15.0	107.1	0.97	0.83	0.97	19.0
Approach		1422	44	1497	3.1	0.660	34.9	LOS C	16.5	119.3	0.70	0.66	0.70	32.2
East: Tabilban St (E)														
4	L2	70	0	74	0.0	0.332	65.3	LOS E	4.7	32.9	0.96	0.76	0.96	21.1
5	T1	89	0	94	0.0	*0.658	59.9	LOS E	13.1	91.9	0.99	0.82	0.99	23.5
6	R2	103	0	108	0.0	0.658	63.0	LOS E	13.1	91.9	0.99	0.82	0.99	26.5
Approach		262	0	276	0.0	0.658	62.6	LOS E	13.1	91.9	0.98	0.81	0.98	24.1
North: West Burleigh Rd (E)														
7	L2	3	0	3	0.0	0.003	23.7	LOS C	0.1	0.7	0.51	0.62	0.51	36.8
8	T1	1004	39	1057	3.9	*0.647	46.0	LOS D	21.6	156.5	0.93	0.80	0.93	29.7
9	R2	125	0	132	0.0	0.496	66.2	LOS E	8.4	59.1	0.97	0.80	0.97	25.2
Approach		1132	39	1192	3.4	0.647	48.2	LOS D	21.6	156.5	0.93	0.80	0.93	29.1
West: Dunlin Dr (W)														
10	L2	115	0	121	0.0	0.120	9.7	LOS A	2.0	13.9	0.31	0.60	0.31	47.2
11	T1	55	0	58	0.0	*0.663	60.7	LOS E	9.0	63.1	0.96	0.81	1.00	23.0
12	R2	266	3	280	1.1	0.663	64.8	LOS E	12.9	90.8	0.98	0.82	1.00	19.9
Approach		436	3	459	0.7	0.663	49.7	LOS D	12.9	90.8	0.80	0.76	0.82	25.2
All Vehicles		3252	86	3423	2.6	0.663	43.7	LOS D	21.6	156.5	0.81	0.73	0.82	29.2

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	AVERAGE BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2021 PM (Site Folder: Option 3Aii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)
1	L2	189	0	199	0.0	0.130	7.2	LOS A	2.0	14.1	0.21	0.61	0.21	45.6
2	T1	950	9	1000	0.9	0.361	25.2	LOS C	14.2	100.4	0.68	0.59	0.68	38.6
3	R2	454	0	478	0.0	*0.811	39.6	LOS D	27.9	195.5	0.82	0.85	0.86	27.3
3u	U	35	1	37	2.9	0.811	41.1	LOS D	27.9	195.5	0.82	0.85	0.86	24.5
Approach		1628	10	1714	0.6	0.811	27.4	LOS C	27.9	195.5	0.67	0.67	0.68	34.7
East: Tabilban St (E)
4	L2	90	0	95	0.0	*0.806	80.7	LOS F	7.0	49.0	1.00	0.92	1.26	18.8
5	T1	88	0	93	0.0	0.612	66.2	LOS E	8.4	58.5	1.00	0.80	1.00	22.5
6	R2	30	0	32	0.0	0.612	69.3	LOS E	8.4	58.5	1.00	0.80	1.00	25.5
Approach		208	0	219	0.0	0.806	72.9	LOS E	8.4	58.5	1.00	0.85	1.12	21.3
North: West Burleigh Rd (E)
7	L2	5	0	5	0.0	0.009	41.6	LOS D	0.2	1.7	0.72	0.65	0.72	31.2
8	T1	646	17	680	2.6	*0.783	65.0	LOS E	15.4	110.5	1.00	0.88	1.08	24.5
9	R2	85	0	89	0.0	0.355	65.7	LOS E	5.6	39.5	0.95	0.77	0.95	25.3
Approach		736	17	775	2.3	0.783	65.0	LOS E	15.4	110.5	0.99	0.87	1.07	24.7
West: Dunlin Dr (W)
10	L2	142	0	149	0.0	0.149	7.9	LOS A	1.9	13.2	0.25	0.58	0.25	48.5
11	T1	117	0	123	0.0	*0.819	72.1	LOS E	8.7	60.6	0.99	0.93	1.25	21.5
12	R2	138	0	145	0.0	0.660	70.6	LOS E	9.8	68.8	1.00	0.82	1.03	18.8
Approach		397	0	418	0.0	0.819	48.6	LOS D	9.8	68.8	0.73	0.77	0.82	26.4
All Vehicles		2969	27	3125	0.9	0.819	42.8	LOS D	27.9	195.5	0.78	0.75	0.82	29.1

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	AVERAGE BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)

MOVEMENT SUMMARY

🚦 Site: 1 [2024 AM (Site Folder: Option 3Aii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	211	1	222	0.5	0.152	8.0	LOS A	2.8	19.6	0.24	0.62	0.24	44.8
2	T1	1005	38	1058	3.8	0.471	30.6	LOS C	15.2	109.7	0.67	0.59	0.67	35.9
3	R2	227	4	239	1.8	*0.769	56.5	LOS E	17.5	125.1	0.93	0.86	1.00	23.3
3u	U	40	3	42	7.5	0.769	58.0	LOS E	17.5	125.1	0.93	0.86	1.00	19.6
Approach		1483	46	1561	3.1	0.769	32.1	LOS C	17.5	125.1	0.66	0.64	0.67	33.3
East: Tabilban St (E)														
4	L2	112	1	118	0.9	0.649	71.5	LOS E	8.1	57.0	1.00	0.82	1.04	20.1
5	T1	88	3	93	3.4	*0.777	66.6	LOS E	14.3	101.5	1.00	0.91	1.11	22.3
6	R2	107	0	113	0.0	0.777	69.7	LOS E	14.3	101.5	1.00	0.91	1.11	25.3
Approach		307	4	323	1.3	0.777	69.4	LOS E	14.3	101.5	1.00	0.88	1.09	22.6
North: West Burleigh Rd (E)														
7	L2	5	0	5	0.0	0.006	26.5	LOS C	0.2	1.3	0.55	0.63	0.55	35.8
8	T1	1114	36	1173	3.2	*0.762	50.2	LOS D	25.9	186.3	0.97	0.86	0.99	28.4
9	R2	135	1	142	0.7	0.490	64.5	LOS E	9.0	63.4	0.96	0.80	0.96	25.6
Approach		1254	37	1320	3.0	0.762	51.7	LOS D	25.9	186.3	0.97	0.85	0.99	28.0
West: Dunlin Dr (W)														
10	L2	99	2	104	2.0	0.106	9.4	LOS A	1.6	11.7	0.30	0.59	0.30	47.4
11	T1	59	0	62	0.0	*0.790	68.1	LOS E	10.3	72.7	0.99	0.91	1.17	21.8
12	R2	270	5	284	1.9	0.790	71.8	LOS E	13.8	97.9	1.00	0.90	1.15	18.7
Approach		428	7	451	1.6	0.790	56.9	LOS E	13.8	97.9	0.83	0.83	0.95	23.3
All Vehicles		3472	94	3655	2.7	0.790	45.5	LOS D	25.9	186.3	0.82	0.76	0.86	28.5

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2024 PM (Site Folder: Option 3Aii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV veh/h	DEMAND FLOWS [Total] veh/h	HV %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	206	0	217	0.0	0.140	7.1	LOS A	2.1	14.6	0.20	0.61	0.20	45.7
2	T1	939	10	988	1.1	0.342	23.2	LOS C	13.4	95.0	0.65	0.57	0.65	39.8
3	R2	448	0	472	0.0	*0.778	35.3	LOS D	25.8	181.5	0.80	0.83	0.81	28.6
3u	U	38	3	40	7.9	0.778	36.9	LOS D	25.8	181.5	0.80	0.83	0.81	25.8
Approach		1631	13	1717	0.8	0.778	24.8	LOS C	25.8	181.5	0.64	0.65	0.64	35.9
East: Tabilban St (E)														
4	L2	80	0	84	0.0	*0.806	81.7	LOS F	6.3	43.8	1.00	0.93	1.28	18.7
5	T1	73	0	77	0.0	0.497	66.2	LOS E	6.2	44.1	0.99	0.78	0.99	22.6
6	R2	16	1	17	6.3	0.497	69.3	LOS E	6.2	44.1	0.99	0.78	0.99	25.5
Approach		169	1	178	0.6	0.806	73.8	LOS E	6.3	44.1	1.00	0.85	1.13	21.0
North: West Burleigh Rd (E)														
7	L2	4	0	4	0.0	0.008	41.5	LOS D	0.2	1.4	0.72	0.64	0.72	31.2
8	T1	676	14	712	2.1	*0.779	64.1	LOS E	16.0	114.2	1.00	0.88	1.07	24.8
9	R2	81	0	85	0.0	0.338	65.6	LOS E	5.4	37.5	0.95	0.77	0.95	25.4
Approach		761	14	801	1.8	0.779	64.1	LOS E	16.0	114.2	0.99	0.87	1.06	24.9
West: Dunlin Dr (W)														
10	L2	216	0	227	0.0	0.227	7.8	LOS A	2.9	20.0	0.25	0.59	0.25	48.7
11	T1	54	0	57	0.0	*0.580	67.2	LOS E	5.7	40.2	0.98	0.77	0.99	22.1
12	R2	133	2	140	1.5	0.580	71.1	LOS E	7.4	52.7	1.00	0.79	1.00	18.8
Approach		403	2	424	0.5	0.580	36.6	LOS D	7.4	52.7	0.60	0.68	0.60	30.8
All Vehicles		2964	30	3120	1.0	0.806	39.3	LOS D	25.8	181.5	0.74	0.72	0.77	30.3

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 AM (Site Folder: Option 3Aii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	169	2	178	1.2	0.120	7.6	LOS A	2.0	13.9	0.22	0.61	0.22	45.2
2	T1	973	46	1024	4.7	0.447	29.4	LOS C	14.1	102.7	0.66	0.57	0.66	36.4
3	R2	218	7	229	3.2	*0.720	55.0	LOS D	16.2	116.8	0.93	0.84	0.95	23.6
3u	U	37	1	39	2.7	0.720	56.4	LOS E	16.2	116.8	0.93	0.84	0.95	20.1
Approach		1397	56	1471	4.0	0.720	31.5	LOS C	16.2	116.8	0.65	0.62	0.66	33.6
East: Tabilban St (E)														
4	L2	93	0	98	0.0	*0.682	75.1	LOS E	6.9	48.3	1.00	0.83	1.09	19.6
5	T1	66	0	69	0.0	0.682	65.8	LOS E	10.5	73.5	1.00	0.84	1.04	22.4
6	R2	81	0	85	0.0	0.682	68.9	LOS E	10.5	73.5	1.00	0.84	1.04	25.4
Approach		240	0	253	0.0	0.682	70.5	LOS E	10.5	73.5	1.00	0.84	1.06	22.4
North: West Burleigh Rd (E)														
7	L2	2	0	2	0.0	0.002	26.4	LOS C	0.1	0.5	0.55	0.61	0.55	35.9
8	T1	1124	45	1183	4.0	*0.714	46.3	LOS D	24.9	180.6	0.94	0.82	0.94	29.6
9	R2	128	0	135	0.0	0.442	63.0	LOS E	8.4	58.8	0.95	0.79	0.95	25.9
Approach		1254	45	1320	3.6	0.714	48.0	LOS D	24.9	180.6	0.94	0.82	0.94	29.1
West: Dunlin Dr (W)														
10	L2	79	0	83	0.0	0.081	8.5	LOS A	1.1	8.0	0.27	0.58	0.27	48.0
11	T1	29	0	31	0.0	*0.712	64.2	LOS E	10.0	70.1	0.98	0.85	1.06	22.3
12	R2	299	1	315	0.3	0.712	67.9	LOS E	13.1	91.7	0.99	0.85	1.05	19.3
Approach		407	1	428	0.2	0.712	56.1	LOS E	13.1	91.7	0.85	0.80	0.90	23.1
All Vehicles		3298	102	3472	3.1	0.720	43.6	LOS D	24.9	180.6	0.81	0.73	0.83	29.2

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 PM (Site Folder: Option 3Aii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	204	1	215	0.5	0.143	7.6	LOS A	2.4	17.1	0.23	0.61	0.23	45.2
2	T1	846	25	891	3.0	0.371	30.3	LOS C	13.8	99.1	0.74	0.64	0.74	36.0
3	R2	164	2	173	1.2	*0.516	55.9	LOS E	12.6	89.2	0.92	0.82	0.92	23.4
3u	U	37	0	39	0.0	0.516	57.4	LOS E	12.6	89.2	0.92	0.82	0.92	20.0
Approach		1251	28	1317	2.2	0.516	30.8	LOS C	13.8	99.1	0.68	0.66	0.68	33.8
East: Tabilban St (E)														
4	L2	76	0	80	0.0	0.511	71.9	LOS E	5.4	38.0	1.00	0.77	1.00	20.1
5	T1	104	0	109	0.0	*0.513	62.6	LOS E	8.1	57.4	0.98	0.78	0.98	23.3
6	R2	14	2	15	14.3	0.513	65.7	LOS E	8.1	57.4	0.98	0.78	0.98	26.1
Approach		194	2	204	1.0	0.513	66.4	LOS E	8.1	57.4	0.99	0.78	0.99	22.2
North: West Burleigh Rd (E)														
7	L2	15	0	16	0.0	0.017	24.5	LOS C	0.5	3.7	0.53	0.66	0.53	36.5
8	T1	905	44	953	4.9	*0.522	40.0	LOS D	16.0	116.7	0.78	0.67	0.78	31.8
9	R2	95	0	100	0.0	0.377	65.0	LOS E	6.3	44.0	0.95	0.78	0.95	25.5
Approach		1015	44	1068	4.3	0.522	42.1	LOS D	16.0	116.7	0.80	0.68	0.80	31.1
West: Dunlin Dr (W)														
10	L2	157	0	165	0.0	0.152	7.4	LOS A	1.9	13.4	0.23	0.58	0.23	48.8
11	T1	53	0	56	0.0	*0.513	60.6	LOS E	6.4	44.7	0.95	0.76	0.95	23.1
12	R2	178	0	187	0.0	0.513	64.8	LOS E	9.1	63.4	0.97	0.79	0.97	20.0
Approach		388	0	408	0.0	0.513	41.0	LOS D	9.1	63.4	0.67	0.70	0.67	28.6
All Vehicles		2848	74	2998	2.6	0.522	38.6	LOS D	16.0	116.7	0.74	0.68	0.74	30.8

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 AM (Site Folder: Option 3Aii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	226	2	238	0.9	0.156	7.1	LOS A	2.3	16.4	0.20	0.61	0.20	45.7
2	T1	918	36	966	3.9	0.379	23.6	LOS C	11.4	82.6	0.56	0.49	0.56	39.5
3	R2	278	12	293	4.3	*0.981	102.6	LOS F	29.9	218.8	0.98	1.08	1.50	16.7
3u	U	40	5	42	12.5	0.981	104.2	LOS F	29.9	218.8	0.98	1.08	1.50	12.8
Approach		1462	55	1539	3.8	0.981	38.3	LOS D	29.9	218.8	0.60	0.64	0.71	30.5
East: Tabilban St (E)														
4	L2	165	7	174	4.2	*0.979	105.8	LOS F	15.4	111.7	1.00	1.16	1.61	15.9
5	T1	61	0	64	0.0	0.742	65.1	LOS E	13.5	94.4	1.00	0.88	1.08	22.5
6	R2	126	0	133	0.0	0.742	68.2	LOS E	13.5	94.4	1.00	0.88	1.08	25.5
Approach		352	7	371	2.0	0.979	85.3	LOS F	15.4	111.7	1.00	1.01	1.33	20.1
North: West Burleigh Rd (E)														
7	L2	9	0	9	0.0	0.010	23.3	LOS C	0.3	2.2	0.51	0.64	0.51	37.0
8	T1	1671	27	1759	1.6	*0.971	84.7	LOS F	54.1	383.6	1.00	1.18	1.36	20.8
9	R2	96	1	101	1.0	0.384	65.1	LOS E	6.4	44.9	0.95	0.78	0.95	25.5
Approach		1776	28	1869	1.6	0.971	83.3	LOS F	54.1	383.6	0.99	1.16	1.34	21.1
West: Dunlin Dr (W)														
10	L2	60	4	63	6.7	0.068	8.5	LOS A	0.9	6.4	0.26	0.57	0.26	47.8
11	T1	27	0	28	0.0	*0.991	108.6	LOS F	16.9	119.9	1.00	1.19	1.64	16.8
12	R2	325	6	342	1.8	0.991	111.7	LOS F	16.9	119.9	1.00	1.17	1.64	13.7
Approach		412	10	434	2.4	0.991	96.4	LOS F	16.9	119.9	0.89	1.09	1.44	16.2
All Vehicles		4002	100	4213	2.5	0.991	68.4	LOS E	54.1	383.6	0.84	0.95	1.12	22.9

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 PM (Site Folder: Option 3Aii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	186	0	196	0.0	0.127	7.1	LOS A	1.9	13.0	0.20	0.61	0.20	45.7
2	T1	1129	12	1188	1.1	0.482	29.4	LOS C	19.9	140.5	0.75	0.66	0.75	36.5
3	R2	171	3	180	1.8	*0.709	64.9	LOS E	14.8	105.9	0.99	0.85	1.03	21.7
3u	U	43	2	45	4.7	0.709	66.4	LOS E	14.8	105.9	0.99	0.85	1.03	18.0
Approach		1529	17	1609	1.1	0.709	31.7	LOS C	19.9	140.5	0.72	0.68	0.72	33.9
East: Tabilban St (E)														
4	L2	141	1	148	0.7	*0.714	71.1	LOS E	10.3	72.2	1.00	0.85	1.08	20.2
5	T1	77	1	81	1.3	0.420	58.1	LOS E	7.7	54.6	0.95	0.77	0.95	23.9
6	R2	40	1	42	2.5	0.420	61.2	LOS E	7.7	54.6	0.95	0.77	0.95	26.9
Approach		258	3	272	1.2	0.714	65.7	LOS E	10.3	72.2	0.98	0.81	1.02	22.3
North: West Burleigh Rd (E)														
7	L2	10	1	11	10.0	0.011	19.5	LOS B	0.3	2.3	0.45	0.64	0.45	38.4
8	T1	1358	34	1429	2.5	*0.706	37.3	LOS D	26.4	188.9	0.82	0.73	0.82	32.8
9	R2	87	2	92	2.3	0.468	70.7	LOS E	6.1	43.2	0.98	0.78	0.98	24.3
Approach		1455	37	1532	2.5	0.706	39.1	LOS D	26.4	188.9	0.83	0.73	0.83	32.1
West: Dunlin Dr (W)														
10	L2	154	0	162	0.0	0.175	10.2	LOS B	2.7	19.1	0.32	0.61	0.32	47.2
11	T1	74	0	78	0.0	*0.717	66.6	LOS E	7.6	53.0	0.98	0.84	1.10	22.2
12	R2	193	0	203	0.0	0.717	70.8	LOS E	11.5	80.4	1.00	0.85	1.07	18.9
Approach		421	0	443	0.0	0.717	47.9	LOS D	11.5	80.4	0.74	0.76	0.80	26.5
All Vehicles		3663	57	3856	1.6	0.717	38.9	LOS D	26.4	188.9	0.78	0.72	0.80	31.0

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	AVERAGE BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2021 AM (Site Folder: Option 3Aiii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	199	1	209	0.5	0.142	7.8	LOS A	2.5	17.4	0.23	0.62	0.23	45.0
2	T1	998	38	1051	3.8	0.512	34.6	LOS C	16.6	119.9	0.73	0.63	0.73	34.1
3	R2	185	4	195	2.2	*0.640	60.0	LOS E	14.9	106.1	0.97	0.83	0.97	22.6
3u	U	40	1	42	2.5	0.640	61.5	LOS E	14.9	106.1	0.97	0.83	0.97	19.0
Approach		1422	44	1497	3.1	0.640	34.9	LOS C	16.6	119.9	0.70	0.66	0.70	32.2
East: Tabilban St (E)														
4	L2	52	0	55	0.0	0.247	64.4	LOS E	3.4	24.1	0.94	0.74	0.94	21.2
5	T1	87	0	92	0.0	*0.669	60.2	LOS E	13.4	93.8	0.99	0.83	1.00	23.4
6	R2	108	0	114	0.0	0.669	63.3	LOS E	13.4	93.8	0.99	0.83	1.00	26.4
Approach		247	0	260	0.0	0.669	62.4	LOS E	13.4	93.8	0.98	0.81	0.99	24.4
North: West Burleigh Rd (E)														
7	L2	2	0	2	0.0	0.002	23.7	LOS C	0.1	0.5	0.51	0.61	0.51	36.8
8	T1	1015	40	1068	3.9	*0.655	46.1	LOS D	22.0	159.0	0.93	0.80	0.93	29.6
9	R2	127	0	134	0.0	0.504	66.3	LOS E	8.6	60.1	0.97	0.80	0.97	25.2
Approach		1144	40	1204	3.5	0.655	48.3	LOS D	22.0	159.0	0.93	0.80	0.93	29.0
West: Dunlin Dr (W)														
10	L2	122	0	128	0.0	0.128	9.7	LOS A	2.1	14.9	0.31	0.60	0.31	47.2
11	T1	48	0	51	0.0	*0.659	60.5	LOS E	8.7	61.4	0.95	0.81	0.99	23.0
12	R2	269	3	283	1.1	0.659	64.6	LOS E	12.8	90.4	0.98	0.82	0.99	20.0
Approach		439	3	462	0.7	0.659	48.9	LOS D	12.8	90.4	0.79	0.76	0.80	25.5
All Vehicles		3252	87	3423	2.7	0.669	43.6	LOS D	22.0	159.0	0.81	0.73	0.82	29.2

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2021 PM (Site Folder: Option 3Aiii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	189	0	199	0.0	0.130	7.2	LOS A	2.0	14.0	0.21	0.61	0.21	45.6
2	T1	951	9	1001	0.9	0.382	27.3	LOS C	15.0	106.0	0.71	0.62	0.71	37.5
3	R2	460	1	484	0.2	*0.866	49.2	LOS D	32.0	224.6	0.85	0.89	0.97	24.9
3u	U	33	0	35	0.0	0.866	50.6	LOS D	32.0	224.6	0.85	0.89	0.97	21.7
Approach		1633	10	1719	0.6	0.866	31.6	LOS C	32.0	224.6	0.69	0.70	0.73	32.9
East: Tabilban St (E)														
4	L2	155	0	163	0.0	*0.833	77.2	LOS E	12.0	83.8	1.00	0.94	1.23	19.3
5	T1	87	0	92	0.0	0.433	59.0	LOS E	7.8	54.3	0.96	0.77	0.96	23.8
6	R2	30	0	32	0.0	0.433	62.1	LOS E	7.8	54.3	0.96	0.77	0.96	26.8
Approach		272	0	286	0.0	0.833	69.7	LOS E	12.0	83.8	0.98	0.87	1.11	21.5
North: West Burleigh Rd (E)														
7	L2	6	0	6	0.0	0.010	38.0	LOS D	0.3	2.0	0.69	0.65	0.69	32.2
8	T1	646	17	680	2.6	*0.823	67.7	LOS E	15.9	113.8	1.00	0.91	1.13	24.0
9	R2	85	0	89	0.0	0.375	66.9	LOS E	5.7	39.9	0.96	0.77	0.96	25.1
Approach		737	17	776	2.3	0.823	67.4	LOS E	15.9	113.8	0.99	0.89	1.11	24.2
West: Dunlin Dr (W)														
10	L2	167	0	176	0.0	0.176	8.0	LOS A	2.3	16.0	0.26	0.59	0.26	48.5
11	T1	94	0	99	0.0	*0.748	70.4	LOS E	7.0	48.7	0.99	0.87	1.16	21.8
12	R2	139	0	146	0.0	0.748	74.7	LOS E	10.1	70.9	1.00	0.87	1.12	18.2
Approach		400	0	421	0.0	0.748	45.8	LOS D	10.1	70.9	0.69	0.75	0.77	27.4
All Vehicles		3042	27	3202	0.9	0.866	45.6	LOS D	32.0	224.6	0.79	0.77	0.86	28.2

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2024 AM (Site Folder: Option 3Aiii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	211	1	222	0.5	0.152	8.0	LOS A	2.8	19.6	0.25	0.62	0.25	44.8
2	T1	1009	39	1062	3.9	0.474	30.7	LOS C	15.3	110.7	0.68	0.59	0.68	35.9
3	R2	223	3	235	1.3	*0.773	57.6	LOS E	17.4	124.2	0.93	0.87	1.01	23.1
3u	U	40	3	42	7.5	0.773	59.1	LOS E	17.4	124.2	0.93	0.87	1.01	19.3
Approach		1483	46	1561	3.1	0.773	32.3	LOS C	17.4	124.2	0.66	0.64	0.67	33.2
East: Tabilban St (E)														
4	L2	70	0	74	0.0	0.376	67.7	LOS E	4.8	33.7	0.97	0.76	0.97	20.7
5	T1	89	3	94	3.4	*0.743	64.3	LOS E	14.1	99.8	1.00	0.88	1.08	22.7
6	R2	107	0	113	0.0	0.743	67.4	LOS E	14.1	99.8	1.00	0.88	1.08	25.7
Approach		266	3	280	1.1	0.743	66.4	LOS E	14.1	99.8	0.99	0.85	1.05	23.5
North: West Burleigh Rd (E)														
7	L2	6	0	6	0.0	0.007	25.4	LOS C	0.2	1.5	0.54	0.64	0.54	36.2
8	T1	1130	36	1189	3.2	*0.754	49.0	LOS D	26.0	187.0	0.96	0.85	0.98	28.7
9	R2	134	1	141	0.7	0.486	64.4	LOS E	8.9	62.8	0.96	0.80	0.96	25.6
Approach		1270	37	1337	2.9	0.754	50.5	LOS D	26.0	187.0	0.96	0.84	0.97	28.4
West: Dunlin Dr (W)														
10	L2	137	2	144	1.5	0.147	9.6	LOS A	2.4	16.7	0.31	0.60	0.31	47.3
11	T1	21	0	22	0.0	*0.750	67.0	LOS E	8.3	58.8	0.98	0.87	1.13	21.9
12	R2	270	5	284	1.9	0.750	70.9	LOS E	12.7	90.2	0.99	0.87	1.11	18.8
Approach		428	7	451	1.6	0.750	51.1	LOS D	12.7	90.2	0.77	0.78	0.85	25.0
All Vehicles		3447	93	3628	2.7	0.773	44.0	LOS D	26.0	187.0	0.81	0.75	0.84	29.1

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2024 PM (Site Folder: Option 3Aiii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES [HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS [HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE [Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	206	0	217	0.0	0.139	7.1	LOS A	2.1	14.6	0.20	0.61	0.20	45.7
2	T1	893	11	940	1.2	0.321	22.2	LOS C	12.5	88.3	0.64	0.55	0.64	40.3
3	R2	475	0	500	0.0	*0.778	34.5	LOS C	26.4	185.7	0.79	0.83	0.80	28.8
3u	U	28	2	29	7.1	0.778	36.0	LOS D	26.4	185.7	0.79	0.83	0.80	26.2
Approach		1602	13	1686	0.8	0.778	24.2	LOS C	26.4	185.7	0.63	0.65	0.63	36.1
East: Tabilban St (E)														
4	L2	64	1	67	1.6	0.745	81.0	LOS F	5.0	35.2	1.00	0.87	1.21	18.8
5	T1	74	0	78	0.0	*0.541	67.5	LOS E	6.4	45.2	1.00	0.78	1.00	22.4
6	R2	16	1	17	6.3	0.541	70.7	LOS E	6.4	45.2	1.00	0.78	1.00	25.3
Approach		154	2	162	1.3	0.745	73.5	LOS E	6.4	45.2	1.00	0.82	1.09	21.2
North: West Burleigh Rd (E)														
7	L2	3	0	3	0.0	0.006	42.2	LOS D	0.1	1.0	0.73	0.63	0.73	31.0
8	T1	679	14	715	2.1	*0.782	64.2	LOS E	16.1	114.8	1.00	0.88	1.08	24.7
9	R2	79	0	83	0.0	0.330	65.5	LOS E	5.2	36.6	0.95	0.77	0.95	25.4
Approach		761	14	801	1.8	0.782	64.2	LOS E	16.1	114.8	0.99	0.87	1.06	24.8
West: Dunlin Dr (W)														
10	L2	207	0	218	0.0	0.214	7.4	LOS A	2.6	18.0	0.24	0.58	0.24	48.8
11	T1	62	0	65	0.0	*0.595	67.3	LOS E	5.8	40.9	0.98	0.78	1.00	22.1
12	R2	129	2	136	1.6	0.595	71.3	LOS E	7.6	54.2	1.00	0.79	1.00	18.8
Approach		398	2	419	0.5	0.595	37.5	LOS D	7.6	54.2	0.60	0.68	0.61	30.4
All Vehicles		2915	31	3068	1.1	0.782	39.0	LOS D	26.4	185.7	0.74	0.72	0.76	30.4

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	AVERAGE BACK OF QUEUE [Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 AM (Site Folder: Option 3Aiii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	169	2	178	1.2	0.119	7.6	LOS A	2.0	13.9	0.22	0.61	0.22	45.2
2	T1	970	46	1021	4.7	0.437	28.5	LOS C	13.7	100.1	0.64	0.56	0.64	36.9
3	R2	223	8	235	3.6	*0.716	53.9	LOS D	16.3	117.2	0.92	0.84	0.94	23.9
3u	U	36	0	38	0.0	0.716	55.3	LOS E	16.3	117.2	0.92	0.84	0.94	20.5
Approach		1398	56	1472	4.0	0.716	30.7	LOS C	16.3	117.2	0.64	0.62	0.65	34.0
East: Tabilban St (E)														
4	L2	56	0	59	0.0	0.410	72.2	LOS E	4.0	27.9	0.99	0.76	0.99	20.0
5	T1	74	0	78	0.0	*0.742	67.6	LOS E	11.7	81.8	1.00	0.88	1.10	22.2
6	R2	86	0	91	0.0	0.742	70.7	LOS E	11.7	81.8	1.00	0.88	1.10	25.1
Approach		216	0	227	0.0	0.742	70.0	LOS E	11.7	81.8	1.00	0.85	1.07	22.9
North: West Burleigh Rd (E)														
7	L2	2	0	2	0.0	0.002	26.9	LOS C	0.1	0.5	0.56	0.61	0.56	35.7
8	T1	1123	44	1182	3.9	*0.730	47.4	LOS D	25.2	182.0	0.95	0.83	0.95	29.2
9	R2	121	0	127	0.0	0.436	63.8	LOS E	8.0	55.9	0.95	0.79	0.95	25.8
Approach		1246	44	1312	3.5	0.730	48.9	LOS D	25.2	182.0	0.95	0.83	0.95	28.8
West: Dunlin Dr (W)														
10	L2	80	0	84	0.0	0.083	8.5	LOS A	1.2	8.2	0.27	0.58	0.27	48.0
11	T1	29	0	31	0.0	*0.714	64.2	LOS E	10.0	70.0	0.98	0.85	1.06	22.3
12	R2	299	1	315	0.3	0.714	67.9	LOS E	13.1	91.8	0.99	0.85	1.05	19.3
Approach		408	1	429	0.2	0.714	56.0	LOS E	13.1	91.8	0.85	0.80	0.90	23.2
All Vehicles		3268	101	3440	3.1	0.742	43.4	LOS D	25.2	182.0	0.81	0.73	0.82	29.3

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 PM (Site Folder: Option 3Aiii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)
1	L2	205	1	216	0.5	0.144	7.6	LOS A	2.4	17.2	0.23	0.61	0.23	45.2
2	T1	842	24	886	2.9	0.369	30.3	LOS C	13.7	98.5	0.74	0.64	0.74	36.0
3	R2	166	3	175	1.8	*0.529	56.1	LOS E	12.9	91.7	0.93	0.82	0.93	23.4
3u	U	39	0	41	0.0	0.529	57.6	LOS E	12.9	91.7	0.93	0.82	0.93	19.9
Approach		1252	28	1318	2.2	0.529	30.8	LOS C	13.7	98.5	0.69	0.66	0.69	33.8
East: Tabilban St (E)
4	L2	78	1	82	1.3	*0.529	72.0	LOS E	5.6	39.5	1.00	0.77	1.00	20.0
5	T1	102	0	107	0.0	0.509	62.5	LOS E	8.0	56.9	0.98	0.78	0.98	23.3
6	R2	15	2	16	13.3	0.509	65.7	LOS E	8.0	56.9	0.98	0.78	0.98	26.1
Approach		195	3	205	1.5	0.529	66.6	LOS E	8.0	56.9	0.99	0.78	0.99	22.2
North: West Burleigh Rd (E)
7	L2	18	0	19	0.0	0.021	24.5	LOS C	0.6	4.5	0.53	0.66	0.53	36.5
8	T1	900	43	947	4.8	*0.520	40.0	LOS D	15.9	116.0	0.78	0.67	0.78	31.8
9	R2	95	0	100	0.0	0.377	65.0	LOS E	6.3	44.0	0.95	0.78	0.95	25.5
Approach		1013	43	1066	4.2	0.520	42.0	LOS D	15.9	116.0	0.79	0.68	0.79	31.1
West: Dunlin Dr (W)
10	L2	157	0	165	0.0	0.152	7.4	LOS A	1.9	13.4	0.23	0.58	0.23	48.8
11	T1	53	0	56	0.0	*0.513	60.6	LOS E	6.4	44.7	0.95	0.76	0.95	23.1
12	R2	178	0	187	0.0	0.513	64.8	LOS E	9.1	63.4	0.97	0.79	0.97	20.0
Approach		388	0	408	0.0	0.513	41.0	LOS D	9.1	63.4	0.67	0.70	0.67	28.6
All Vehicles		2848	74	2998	2.6	0.529	38.7	LOS D	15.9	116.0	0.74	0.68	0.74	30.8

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)

MOVEMENT SUMMARY

🚦 Site: 1 [2041 AM (Site Folder: Option 3Aiii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	227	2	239	0.9	0.156	7.0	LOS A	2.2	15.6	0.20	0.61	0.20	45.8
2	T1	918	36	966	3.9	0.367	21.9	LOS C	10.9	78.7	0.54	0.47	0.54	40.5
3	R2	275	13	289	4.7	*0.966	95.3	LOS F	28.9	211.2	0.97	1.05	1.44	17.5
3u	U	44	4	46	9.1	0.966	96.8	LOS F	28.9	211.2	0.97	1.05	1.44	13.6
Approach		1464	55	1541	3.8	0.966	35.6	LOS D	28.9	211.2	0.58	0.62	0.68	31.5
East: Tabilban St (E)														
4	L2	139	8	146	5.8	*0.972	103.6	LOS F	12.7	93.5	1.00	1.15	1.62	16.1
5	T1	61	0	64	0.0	0.833	71.5	LOS E	14.5	101.3	1.00	0.97	1.20	21.5
6	R2	128	0	135	0.0	0.833	74.6	LOS E	14.5	101.3	1.00	0.97	1.20	24.4
Approach		328	8	345	2.4	0.972	86.3	LOS F	14.5	101.3	1.00	1.04	1.38	20.2
North: West Burleigh Rd (E)														
7	L2	8	0	8	0.0	0.009	23.8	LOS C	0.3	2.0	0.52	0.64	0.52	36.8
8	T1	1646	35	1733	2.1	*0.937	70.4	LOS E	48.5	345.8	1.00	1.10	1.26	23.4
9	R2	89	1	94	1.1	0.356	64.8	LOS E	5.9	41.5	0.95	0.78	0.95	25.5
Approach		1743	36	1835	2.1	0.937	69.9	LOS E	48.5	345.8	1.00	1.08	1.24	23.6
West: Dunlin Dr (W)														
10	L2	61	4	64	6.6	0.069	8.5	LOS A	0.9	6.5	0.26	0.57	0.26	47.8
11	T1	26	0	27	0.0	*0.986	106.1	LOS F	16.6	117.7	1.00	1.18	1.62	17.1
12	R2	325	6	342	1.8	0.986	109.1	LOS F	16.6	117.7	1.00	1.16	1.62	13.9
Approach		412	10	434	2.4	0.986	94.0	LOS F	16.6	117.7	0.89	1.08	1.42	16.5
All Vehicles		3947	109	4155	2.8	0.986	61.1	LOS E	48.5	345.8	0.83	0.90	1.06	24.4

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 PM (Site Folder: Option 3Aiii)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	186	0	196	0.0	0.127	7.1	LOS A	1.9	13.0	0.20	0.61	0.20	45.7
2	T1	1135	12	1195	1.1	0.485	29.5	LOS C	20.1	141.7	0.75	0.66	0.75	36.5
3	R2	167	3	176	1.8	*0.696	64.5	LOS E	14.5	103.3	0.99	0.85	1.02	21.8
3u	U	43	2	45	4.7	0.696	66.0	LOS E	14.5	103.3	0.99	0.85	1.02	18.0
Approach		1531	17	1612	1.1	0.696	31.6	LOS C	20.1	141.7	0.72	0.68	0.72	33.9
East: Tabilban St (E)														
4	L2	148	3	156	2.0	*0.712	70.2	LOS E	10.7	76.3	1.00	0.85	1.07	20.3
5	T1	77	1	81	1.3	0.384	56.8	LOS E	7.3	51.6	0.94	0.76	0.94	24.2
6	R2	35	1	37	2.9	0.384	59.9	LOS E	7.3	51.6	0.94	0.76	0.94	27.2
Approach		260	5	274	1.9	0.712	64.9	LOS E	10.7	76.3	0.97	0.81	1.01	22.4
North: West Burleigh Rd (E)														
7	L2	6	1	6	16.7	0.007	19.6	LOS B	0.2	1.5	0.45	0.63	0.45	38.4
8	T1	1346	31	1417	2.3	*0.711	38.3	LOS D	26.4	188.6	0.83	0.74	0.83	32.4
9	R2	85	2	89	2.4	0.490	71.9	LOS E	6.0	42.6	0.99	0.78	0.99	24.1
Approach		1437	34	1513	2.4	0.711	40.2	LOS D	26.4	188.6	0.84	0.74	0.84	31.7
West: Dunlin Dr (W)														
10	L2	153	0	161	0.0	0.175	9.9	LOS A	2.6	18.4	0.31	0.60	0.31	47.4
11	T1	75	0	79	0.0	*0.720	66.6	LOS E	7.6	53.2	0.98	0.85	1.10	22.2
12	R2	193	0	203	0.0	0.720	70.9	LOS E	11.5	80.8	1.00	0.85	1.08	18.8
Approach		421	0	443	0.0	0.720	48.0	LOS D	11.5	80.8	0.74	0.76	0.80	26.5
All Vehicles		3649	56	3841	1.5	0.720	39.2	LOS D	26.4	188.6	0.79	0.72	0.80	30.8

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

Site: 1 [2021 AM (Site Folder: Option 3Aiv)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	200	1	211	0.5	0.142	7.8	LOS A	2.5	17.6	0.23	0.62	0.23	45.0
2	T1	998	38	1051	3.8	0.489	32.6	LOS C	15.8	114.2	0.70	0.61	0.70	35.0
3	R2	186	4	196	2.2	*0.639	60.0	LOS E	14.9	106.1	0.97	0.83	0.97	22.6
3u	U	39	1	41	2.6	0.639	61.5	LOS E	14.9	106.1	0.97	0.83	0.97	19.0
Approach		1423	44	1498	3.1	0.639	33.5	LOS C	15.8	114.2	0.68	0.64	0.68	32.8
East: Tabilban St (E)														
4	L2	109	0	115	0.0	*0.549	68.2	LOS E	7.6	53.3	0.99	0.79	0.99	20.6
5	T1	83	0	87	0.0	0.623	60.3	LOS E	11.9	83.2	0.99	0.81	0.99	23.4
6	R2	91	0	96	0.0	0.623	63.4	LOS E	11.9	83.2	0.99	0.81	0.99	26.4
Approach		283	0	298	0.0	0.623	64.3	LOS E	11.9	83.2	0.99	0.81	0.99	23.4
North: West Burleigh Rd (E)														
7	L2	3	0	3	0.0	0.003	23.7	LOS C	0.1	0.7	0.51	0.62	0.51	36.8
8	T1	1025	39	1079	3.8	*0.648	45.2	LOS D	22.1	159.6	0.92	0.80	0.92	29.9
9	R2	131	0	138	0.0	0.547	67.7	LOS E	9.0	62.8	0.98	0.80	0.98	24.9
Approach		1159	39	1220	3.4	0.648	47.7	LOS D	22.1	159.6	0.93	0.80	0.93	29.2
West: Dunlin Dr (W)														
10	L2	129	0	136	0.0	0.135	9.3	LOS A	2.1	14.9	0.30	0.60	0.30	47.5
11	T1	41	0	43	0.0	*0.645	60.1	LOS E	8.4	59.0	0.95	0.80	0.98	23.1
12	R2	269	3	283	1.1	0.645	64.4	LOS E	12.6	89.0	0.98	0.81	0.99	20.0
Approach		439	3	462	0.7	0.645	47.8	LOS D	12.6	89.0	0.78	0.75	0.78	25.9
All Vehicles		3304	86	3478	2.6	0.648	43.0	LOS D	22.1	159.6	0.80	0.73	0.81	29.4

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 **Site: 1 [2021 PM (Site Folder: Option 3Aiv)]**

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	189	0	199	0.0	0.129	7.2	LOS A	2.0	14.1	0.21	0.61	0.21	45.6
2	T1	931	10	980	1.1	0.344	23.7	LOS C	13.5	95.4	0.66	0.57	0.66	39.5
3	R2	461	0	485	0.0	*0.801	37.9	LOS D	27.5	192.5	0.81	0.84	0.84	27.8
3u	U	34	0	36	0.0	0.801	39.3	LOS D	27.5	192.5	0.81	0.84	0.84	25.3
Approach		1615	10	1700	0.6	0.801	26.2	LOS C	27.5	192.5	0.65	0.66	0.66	35.3
East: Tabilban St (E)														
4	L2	73	0	77	0.0	0.736	79.5	LOS E	5.6	39.2	1.00	0.87	1.18	19.0
5	T1	88	0	93	0.0	*0.546	66.6	LOS E	7.0	48.9	1.00	0.78	1.00	22.6
6	R2	11	0	12	0.0	0.546	69.7	LOS E	7.0	48.9	1.00	0.78	1.00	25.5
Approach		172	0	181	0.0	0.736	72.3	LOS E	7.0	48.9	1.00	0.82	1.07	21.2
North: West Burleigh Rd (E)														
7	L2	3	0	3	0.0	0.006	42.2	LOS D	0.1	1.0	0.73	0.63	0.73	31.0
8	T1	652	17	686	2.6	*0.789	65.3	LOS E	15.6	111.7	1.00	0.89	1.09	24.5
9	R2	84	0	88	0.0	0.370	66.8	LOS E	5.6	39.4	0.96	0.77	0.96	25.1
Approach		739	17	778	2.3	0.789	65.4	LOS E	15.6	111.7	0.99	0.87	1.07	24.6
West: Dunlin Dr (W)														
10	L2	135	0	142	0.0	0.140	7.3	LOS A	1.6	10.9	0.22	0.57	0.22	49.0
11	T1	118	0	124	0.0	*0.813	71.7	LOS E	8.7	60.9	0.99	0.92	1.24	21.6
12	R2	131	0	138	0.0	0.627	70.0	LOS E	9.2	64.7	1.00	0.81	1.01	18.9
Approach		384	0	404	0.0	0.813	48.5	LOS D	9.2	64.7	0.72	0.76	0.80	26.4
All Vehicles		2910	27	3063	0.9	0.813	41.8	LOS D	27.5	192.5	0.77	0.74	0.81	29.4

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2024 AM (Site Folder: Option 3Aiv)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	211	1	222	0.5	0.152	8.0	LOS A	2.8	19.6	0.25	0.62	0.25	44.8
2	T1	993	39	1045	3.9	0.465	30.5	LOS C	14.9	107.7	0.67	0.58	0.67	35.9
3	R2	239	3	252	1.3	*0.769	54.8	LOS D	18.0	128.4	0.92	0.86	0.98	23.7
3u	U	40	3	42	7.5	0.769	56.4	LOS E	18.0	128.4	0.92	0.86	0.98	20.0
Approach		1483	46	1561	3.1	0.769	31.9	LOS C	18.0	128.4	0.66	0.64	0.67	33.3
East: Tabilban St (E)														
4	L2	135	0	142	0.0	*0.777	75.0	LOS E	10.2	71.1	1.00	0.89	1.16	19.6
5	T1	87	3	92	3.4	0.696	63.6	LOS E	12.4	87.9	1.00	0.85	1.04	22.8
6	R2	88	0	93	0.0	0.696	66.7	LOS E	12.4	87.9	1.00	0.85	1.04	25.8
Approach		310	3	326	1.0	0.777	69.4	LOS E	12.4	87.9	1.00	0.87	1.09	22.3
North: West Burleigh Rd (E)														
7	L2	1	0	1	0.0	0.001	26.9	LOS C	0.0	0.3	0.56	0.60	0.56	35.7
8	T1	1133	37	1193	3.3	*0.793	53.0	LOS D	27.2	195.7	0.98	0.90	1.04	27.6
9	R2	137	2	144	1.5	0.478	63.5	LOS E	9.1	64.2	0.96	0.80	0.96	25.8
Approach		1271	39	1338	3.1	0.793	54.1	LOS D	27.2	195.7	0.98	0.89	1.03	27.3
West: Dunlin Dr (W)														
10	L2	123	2	129	1.6	0.129	9.0	LOS A	1.9	13.8	0.29	0.59	0.29	47.7
11	T1	35	0	37	0.0	*0.781	68.5	LOS E	9.0	64.0	0.98	0.90	1.17	21.7
12	R2	270	5	284	1.9	0.781	72.3	LOS E	13.3	94.5	0.99	0.89	1.14	18.6
Approach		428	7	451	1.6	0.781	53.8	LOS D	13.3	94.5	0.79	0.81	0.90	24.2
All Vehicles		3492	95	3676	2.7	0.793	46.0	LOS D	27.2	195.7	0.82	0.77	0.87	28.4

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2024 PM (Site Folder: Option 3Aiv)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	206	0	217	0.0	0.139	7.1	LOS A	2.1	14.6	0.20	0.61	0.20	45.7
2	T1	902	10	949	1.1	0.324	22.3	LOS C	12.6	89.2	0.64	0.55	0.64	40.3
3	R2	465	0	489	0.0	*0.789	36.2	LOS D	27.0	189.7	0.80	0.84	0.82	28.3
3u	U	33	3	35	9.1	0.789	37.8	LOS D	27.0	189.7	0.80	0.84	0.82	25.4
Approach		1606	13	1691	0.8	0.789	24.7	LOS C	27.0	189.7	0.63	0.65	0.64	35.9
East: Tabilban St (E)														
4	L2	66	1	69	1.5	0.768	81.6	LOS F	5.1	36.5	1.00	0.89	1.24	18.7
5	T1	75	0	79	0.0	*0.547	67.6	LOS E	6.5	45.7	1.00	0.78	1.00	22.4
6	R2	16	1	17	6.3	0.547	70.7	LOS E	6.5	45.7	1.00	0.78	1.00	25.3
Approach		157	2	165	1.3	0.768	73.8	LOS E	6.5	45.7	1.00	0.83	1.10	21.1
North: West Burleigh Rd (E)														
7	L2	3	0	3	0.0	0.006	41.5	LOS D	0.1	1.0	0.72	0.63	0.72	31.2
8	T1	697	13	734	1.9	*0.767	62.8	LOS E	16.3	116.0	0.99	0.87	1.06	25.1
9	R2	78	0	82	0.0	0.326	65.4	LOS E	5.2	36.1	0.95	0.77	0.95	25.4
Approach		778	13	819	1.7	0.767	63.0	LOS E	16.3	116.0	0.99	0.86	1.04	25.1
West: Dunlin Dr (W)														
10	L2	223	0	235	0.0	0.231	7.5	LOS A	2.8	19.8	0.24	0.59	0.24	48.8
11	T1	47	0	49	0.0	*0.552	67.0	LOS E	5.6	39.1	0.98	0.76	0.98	22.1
12	R2	133	2	140	1.5	0.552	70.8	LOS E	7.1	50.0	0.99	0.78	0.99	18.8
Approach		403	2	424	0.5	0.552	35.4	LOS D	7.1	50.0	0.58	0.67	0.58	31.3
All Vehicles		2944	30	3099	1.0	0.789	38.9	LOS D	27.0	189.7	0.74	0.72	0.76	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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	AVERAGE BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 AM (Site Folder: Option 3Aiv)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	169	2	178	1.2	0.119	7.6	LOS A	2.0	13.9	0.22	0.61	0.22	45.2
2	T1	971	47	1022	4.8	0.431	27.5	LOS C	13.5	98.2	0.63	0.55	0.63	37.4
3	R2	220	6	232	2.7	*0.698	53.3	LOS D	16.0	114.8	0.92	0.83	0.93	24.0
3u	U	37	1	39	2.7	0.698	54.7	LOS D	16.0	114.8	0.92	0.83	0.93	20.5
Approach		1397	56	1471	4.0	0.698	29.9	LOS C	16.0	114.8	0.63	0.61	0.63	34.3
East: Tabilban St (E)														
4	L2	81	0	85	0.0	*0.653	75.7	LOS E	6.0	42.1	1.00	0.81	1.07	19.5
5	T1	71	0	75	0.0	0.729	68.0	LOS E	10.8	75.6	1.00	0.87	1.09	22.1
6	R2	77	0	81	0.0	0.729	71.1	LOS E	10.8	75.6	1.00	0.87	1.09	25.0
Approach		229	0	241	0.0	0.729	71.8	LOS E	10.8	75.6	1.00	0.85	1.08	22.2
North: West Burleigh Rd (E)														
7	L2	8	0	8	0.0	0.010	27.1	LOS C	0.3	2.1	0.56	0.64	0.56	35.6
8	T1	1123	42	1182	3.7	*0.715	46.3	LOS D	25.0	180.8	0.94	0.82	0.94	29.6
9	R2	123	0	129	0.0	0.444	63.9	LOS E	8.1	56.9	0.95	0.79	0.95	25.7
Approach		1254	42	1320	3.3	0.715	47.9	LOS D	25.0	180.8	0.94	0.82	0.94	29.1
West: Dunlin Dr (W)														
10	L2	79	0	83	0.0	0.081	8.3	LOS A	1.1	7.8	0.26	0.58	0.26	48.2
11	T1	29	0	31	0.0	*0.713	64.2	LOS E	10.0	70.1	0.98	0.85	1.06	22.3
12	R2	299	1	315	0.3	0.713	67.9	LOS E	13.1	91.7	0.99	0.85	1.05	19.3
Approach		407	1	428	0.2	0.713	56.1	LOS E	13.1	91.7	0.85	0.80	0.90	23.1
All Vehicles		3287	99	3460	3.0	0.729	42.9	LOS D	25.0	180.8	0.80	0.73	0.82	29.4

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 PM (Site Folder: Option 3Aiv)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	205	1	216	0.5	0.144	7.4	LOS A	2.3	16.4	0.22	0.61	0.22	45.4
2	T1	851	24	896	2.8	0.379	31.1	LOS C	14.1	101.0	0.75	0.64	0.75	35.6
3	R2	156	3	164	1.9	*0.524	56.9	LOS E	12.4	88.1	0.93	0.82	0.93	23.2
3u	U	40	0	42	0.0	0.524	58.3	LOS E	12.4	88.1	0.93	0.82	0.93	19.7
Approach		1252	28	1318	2.2	0.524	31.3	LOS C	14.1	101.0	0.69	0.67	0.69	33.6
East: Tabilban St (E)														
4	L2	94	0	99	0.0	*0.505	68.8	LOS E	6.6	46.0	0.99	0.78	0.99	20.5
5	T1	101	0	106	0.0	0.409	58.8	LOS E	7.3	51.6	0.95	0.76	0.95	24.0
6	R2	9	2	9	22.2	0.409	62.0	LOS E	7.3	51.6	0.95	0.76	0.95	26.8
Approach		204	2	215	1.0	0.505	63.5	LOS E	7.3	51.6	0.97	0.77	0.97	22.5
North: West Burleigh Rd (E)														
7	L2	16	0	17	0.0	0.018	23.4	LOS C	0.6	3.9	0.52	0.66	0.52	36.9
8	T1	913	44	961	4.8	*0.539	41.2	LOS D	16.5	120.1	0.80	0.69	0.80	31.3
9	R2	96	0	101	0.0	0.401	66.2	LOS E	6.4	45.0	0.96	0.78	0.96	25.3
Approach		1025	44	1079	4.3	0.539	43.3	LOS D	16.5	120.1	0.81	0.70	0.81	30.7
West: Dunlin Dr (W)														
10	L2	157	0	165	0.0	0.152	7.4	LOS A	1.9	13.4	0.23	0.58	0.23	48.8
11	T1	53	0	56	0.0	*0.540	61.8	LOS E	6.5	45.2	0.96	0.76	0.96	22.9
12	R2	178	0	187	0.0	0.540	65.9	LOS E	9.1	64.0	0.98	0.79	0.98	19.7
Approach		388	0	408	0.0	0.540	41.7	LOS D	9.1	64.0	0.67	0.70	0.67	28.4
All Vehicles		2869	74	3020	2.6	0.540	39.3	LOS D	16.5	120.1	0.75	0.69	0.75	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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 AM (Site Folder: Option 3Aiv)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	226	2	238	0.9	0.156	7.1	LOS A	2.3	16.4	0.20	0.61	0.20	45.7
2	T1	922	36	971	3.9	0.380	23.6	LOS C	11.5	83.0	0.56	0.49	0.56	39.5
3	R2	273	13	287	4.8	*0.975	99.9	LOS F	29.2	213.7	0.97	1.07	1.48	17.0
3u	U	42	4	44	9.5	0.975	101.4	LOS F	29.2	213.7	0.97	1.07	1.48	13.1
Approach		1463	55	1540	3.8	0.975	37.5	LOS D	29.2	213.7	0.60	0.63	0.71	30.8
East: Tabilban St (E)														
4	L2	141	6	148	4.3	*0.976	104.9	LOS F	13.0	94.3	1.00	1.16	1.63	16.0
5	T1	60	0	63	0.0	0.825	70.9	LOS E	14.2	99.6	1.00	0.96	1.19	21.6
6	R2	127	0	134	0.0	0.825	74.0	LOS E	14.2	99.6	1.00	0.96	1.19	24.5
Approach		328	6	345	1.8	0.976	86.7	LOS F	14.2	99.6	1.00	1.04	1.38	20.1
North: West Burleigh Rd (E)														
7	L2	9	0	9	0.0	0.010	24.4	LOS C	0.3	2.2	0.53	0.64	0.53	36.6
8	T1	1681	35	1769	2.1	*0.980	89.0	LOS F	55.7	396.9	1.00	1.20	1.39	20.2
9	R2	96	1	101	1.0	0.384	65.1	LOS E	6.4	44.9	0.95	0.78	0.95	25.5
Approach		1786	36	1880	2.0	0.980	87.3	LOS F	55.7	396.9	1.00	1.18	1.36	20.5
West: Dunlin Dr (W)														
10	L2	63	4	66	6.3	0.071	8.7	LOS A	0.9	7.0	0.27	0.58	0.27	47.6
11	T1	24	0	25	0.0	*0.969	99.2	LOS F	14.6	103.6	1.00	1.15	1.59	17.7
12	R2	325	6	342	1.8	0.969	101.9	LOS F	17.0	121.0	1.00	1.14	1.57	14.6
Approach		412	10	434	2.4	0.969	87.5	LOS F	17.0	121.0	0.89	1.05	1.37	17.3
All Vehicles		3989	107	4199	2.7	0.980	69.0	LOS E	55.7	396.9	0.84	0.95	1.12	22.8

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 PM (Site Folder: Option 3Aiv)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	186	0	196	0.0	0.127	7.2	LOS A	2.0	13.7	0.20	0.61	0.20	45.6
2	T1	1151	14	1212	1.2	0.495	29.6	LOS C	20.6	145.5	0.76	0.66	0.76	36.5
3	R2	149	1	157	0.7	*0.690	66.0	LOS E	13.3	94.6	0.99	0.84	1.02	21.5
3u	U	43	2	45	4.7	0.690	67.5	LOS E	13.3	94.6	0.99	0.84	1.02	17.8
Approach		1529	17	1609	1.1	0.690	31.5	LOS C	20.6	145.5	0.72	0.68	0.72	34.1
East: Tabilban St (E)														
4	L2	121	2	127	1.7	*0.658	70.7	LOS E	8.7	61.8	1.00	0.82	1.04	20.2
5	T1	75	0	79	0.0	0.396	58.7	LOS E	7.0	49.3	0.95	0.76	0.95	23.8
6	R2	31	1	33	3.2	0.396	61.8	LOS E	7.0	49.3	0.95	0.76	0.95	26.9
Approach		227	3	239	1.3	0.658	65.5	LOS E	8.7	61.8	0.98	0.79	1.00	22.3
North: West Burleigh Rd (E)														
7	L2	4	0	4	0.0	0.004	18.9	LOS B	0.1	0.8	0.44	0.62	0.44	38.7
8	T1	1363	32	1435	2.3	*0.680	35.1	LOS D	25.5	182.0	0.79	0.70	0.79	33.7
9	R2	90	3	95	3.3	0.487	70.9	LOS E	6.3	45.2	0.99	0.78	0.99	24.3
Approach		1457	35	1534	2.4	0.680	37.2	LOS D	25.5	182.0	0.81	0.71	0.81	32.9
West: Dunlin Dr (W)														
10	L2	154	0	162	0.0	0.175	10.3	LOS B	2.7	19.1	0.32	0.61	0.32	47.2
11	T1	74	0	78	0.0	*0.677	64.5	LOS E	7.4	52.0	0.97	0.82	1.04	22.5
12	R2	193	0	203	0.0	0.677	68.8	LOS E	11.3	78.8	0.99	0.83	1.03	19.2
Approach		421	0	443	0.0	0.677	46.7	LOS D	11.3	78.8	0.74	0.74	0.77	26.8
All Vehicles		3634	55	3825	1.5	0.690	37.7	LOS D	25.5	182.0	0.77	0.70	0.78	31.5

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2021 AM (Site Folder: Option 3Av)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	199	1	209	0.5	0.142	7.8	LOS A	2.5	17.5	0.23	0.62	0.23	45.0
2	T1	1001	41	1054	4.1	0.515	34.6	LOS C	16.7	120.9	0.73	0.63	0.73	34.0
3	R2	182	1	192	0.5	*0.648	60.9	LOS E	14.8	104.2	0.97	0.83	0.97	22.5
3u	U	40	1	42	2.5	0.648	62.4	LOS E	14.8	104.2	0.97	0.83	0.97	18.8
Approach		1422	44	1497	3.1	0.648	35.0	LOS D	16.7	120.9	0.70	0.66	0.70	32.2
East: Tabilban St (E)														
4	L2	81	0	85	0.0	0.384	65.8	LOS E	5.5	38.4	0.96	0.77	0.96	21.0
5	T1	86	0	91	0.0	*0.659	59.9	LOS E	13.1	92.0	0.99	0.82	0.99	23.4
6	R2	106	0	112	0.0	0.659	63.0	LOS E	13.1	92.0	0.99	0.82	0.99	26.5
Approach		273	0	287	0.0	0.659	62.9	LOS E	13.1	92.0	0.98	0.81	0.98	24.0
North: West Burleigh Rd (E)														
7	L2	4	0	4	0.0	0.004	23.2	LOS C	0.1	1.0	0.51	0.62	0.51	37.0
8	T1	1032	40	1086	3.9	*0.653	45.3	LOS D	22.3	161.1	0.92	0.80	0.92	29.9
9	R2	129	0	136	0.0	0.512	66.4	LOS E	8.7	61.1	0.97	0.80	0.97	25.2
Approach		1165	40	1226	3.4	0.653	47.6	LOS D	22.3	161.1	0.93	0.80	0.93	29.3
West: Dunlin Dr (W)														
10	L2	113	0	119	0.0	0.119	9.7	LOS A	2.0	13.7	0.31	0.60	0.31	47.2
11	T1	56	0	59	0.0	*0.670	60.8	LOS E	9.1	64.2	0.96	0.81	1.00	23.0
12	R2	268	3	282	1.1	0.670	64.9	LOS E	13.0	91.5	0.98	0.82	1.00	19.9
Approach		437	3	460	0.7	0.670	50.1	LOS D	13.0	91.5	0.81	0.76	0.82	25.1
All Vehicles		3297	87	3471	2.6	0.670	43.8	LOS D	22.3	161.1	0.82	0.74	0.82	29.2

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2021 PM (Site Folder: Option 3Av)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	189	0	199	0.0	0.129	7.2	LOS A	2.0	14.1	0.21	0.61	0.21	45.6
2	T1	950	9	1000	0.9	0.350	23.8	LOS C	13.8	97.6	0.66	0.58	0.66	39.4
3	R2	442	1	465	0.2	*0.772	34.9	LOS C	25.4	178.0	0.79	0.83	0.80	28.7
3u	U	41	0	43	0.0	0.772	36.3	LOS D	25.4	178.0	0.79	0.83	0.80	26.4
Approach		1622	10	1707	0.6	0.772	25.2	LOS C	25.4	178.0	0.65	0.65	0.65	35.8
East: Tabilban St (E)														
4	L2	10	0	11	0.0	0.115	75.0	LOS E	0.7	5.0	0.98	0.67	0.98	19.6
5	T1	84	0	88	0.0	*0.577	67.8	LOS E	6.9	48.4	1.00	0.78	1.00	22.3
6	R2	13	0	14	0.0	0.577	70.9	LOS E	6.9	48.4	1.00	0.78	1.00	25.3
Approach		107	0	113	0.0	0.577	68.8	LOS E	6.9	48.4	1.00	0.77	1.00	22.5
North: West Burleigh Rd (E)														
7	L2	9	0	9	0.0	0.017	42.5	LOS D	0.4	3.1	0.73	0.66	0.73	31.0
8	T1	651	17	685	2.6	*0.756	63.2	LOS E	15.3	109.5	0.99	0.86	1.05	25.0
9	R2	87	0	92	0.0	0.345	64.7	LOS E	5.7	40.1	0.95	0.77	0.95	25.6
Approach		747	17	786	2.3	0.756	63.1	LOS E	15.3	109.5	0.98	0.85	1.03	25.1
West: Dunlin Dr (W)														
10	L2	157	0	165	0.0	0.162	7.4	LOS A	1.8	12.9	0.23	0.57	0.23	48.9
11	T1	102	0	107	0.0	*0.749	69.4	LOS E	7.3	51.3	0.99	0.87	1.15	21.9
12	R2	137	0	144	0.0	0.699	72.4	LOS E	9.9	69.5	1.00	0.84	1.07	18.5
Approach		396	0	417	0.0	0.749	45.9	LOS D	9.9	69.5	0.69	0.74	0.76	27.3
All Vehicles		2872	27	3023	0.9	0.772	39.5	LOS D	25.4	178.0	0.75	0.72	0.78	30.3

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)											
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)											
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)											

MOVEMENT SUMMARY

🚦 Site: 1 [2024 AM (Site Folder: Option 3Av)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	211	1	222	0.5	0.152	8.0	LOS A	2.8	19.6	0.25	0.62	0.25	44.8
2	T1	1005	38	1058	3.8	0.471	30.6	LOS C	15.2	109.7	0.67	0.59	0.67	35.9
3	R2	227	4	239	1.8	*0.769	56.5	LOS E	17.5	125.1	0.93	0.86	1.00	23.3
3u	U	40	3	42	7.5	0.769	58.0	LOS E	17.5	125.1	0.93	0.86	1.00	19.6
Approach		1483	46	1561	3.1	0.769	32.1	LOS C	17.5	125.1	0.66	0.64	0.67	33.3
East: Tabilban St (E)														
4	L2	145	0	153	0.0	*0.779	74.3	LOS E	10.9	76.1	1.00	0.90	1.16	19.7
5	T1	88	0	93	0.0	0.759	64.9	LOS E	14.6	102.3	1.00	0.89	1.09	22.6
6	R2	114	0	120	0.0	0.759	68.0	LOS E	14.6	102.3	1.00	0.89	1.09	25.6
Approach		347	0	365	0.0	0.779	69.8	LOS E	14.6	102.3	1.00	0.89	1.12	22.4
North: West Burleigh Rd (E)														
7	L2	2	0	2	0.0	0.002	25.3	LOS C	0.1	0.5	0.54	0.61	0.54	36.3
8	T1	1117	37	1176	3.3	*0.743	48.5	LOS D	25.3	182.5	0.96	0.84	0.97	28.9
9	R2	134	3	141	2.2	0.470	63.4	LOS E	8.8	63.1	0.95	0.80	0.95	25.8
Approach		1253	40	1319	3.2	0.743	50.1	LOS D	25.3	182.5	0.96	0.83	0.96	28.5
West: Dunlin Dr (W)														
10	L2	143	2	151	1.4	0.153	9.6	LOS A	2.5	17.5	0.31	0.60	0.31	47.3
11	T1	15	0	16	0.0	*0.781	69.4	LOS E	8.2	58.5	0.98	0.90	1.19	21.5
12	R2	270	5	284	1.9	0.781	73.1	LOS E	12.7	90.4	0.99	0.89	1.15	18.4
Approach		428	7	451	1.6	0.781	51.8	LOS D	12.7	90.4	0.76	0.80	0.87	24.9
All Vehicles		3511	93	3696	2.6	0.781	44.6	LOS D	25.3	182.5	0.81	0.75	0.84	28.8

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2024 PM (Site Folder: Option 3Av)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	207	0	218	0.0	0.140	7.1	LOS A	2.1	14.7	0.20	0.61	0.20	45.7
2	T1	930	10	979	1.1	0.334	22.4	LOS C	13.1	92.6	0.64	0.56	0.64	40.2
3	R2	456	0	480	0.0	*0.779	35.4	LOS D	26.0	183.0	0.80	0.83	0.81	28.5
3u	U	33	3	35	9.1	0.779	37.0	LOS D	26.0	183.0	0.80	0.83	0.81	25.7
Approach		1626	13	1712	0.8	0.779	24.4	LOS C	26.0	183.0	0.63	0.65	0.64	36.1
East: Tabilban St (E)														
4	L2	67	0	71	0.0	0.772	81.6	LOS F	5.2	36.5	1.00	0.89	1.24	18.7
5	T1	73	0	77	0.0	*0.521	67.4	LOS E	6.1	43.5	1.00	0.78	1.00	22.4
6	R2	13	2	14	15.4	0.521	70.6	LOS E	6.1	43.5	1.00	0.78	1.00	25.2
Approach		153	2	161	1.3	0.772	73.9	LOS E	6.1	43.5	1.00	0.83	1.10	21.0
North: West Burleigh Rd (E)														
7	L2	6	0	6	0.0	0.011	41.6	LOS D	0.3	2.1	0.72	0.65	0.72	31.2
8	T1	691	14	727	2.0	*0.762	62.6	LOS E	16.2	115.2	0.99	0.87	1.05	25.1
9	R2	81	0	85	0.0	0.338	65.6	LOS E	5.4	37.5	0.95	0.77	0.95	25.4
Approach		778	14	819	1.8	0.762	62.8	LOS E	16.2	115.2	0.99	0.86	1.04	25.2
West: Dunlin Dr (W)														
10	L2	201	0	212	0.0	0.209	7.5	LOS A	2.5	17.4	0.24	0.58	0.24	48.9
11	T1	68	0	72	0.0	*0.633	67.8	LOS E	6.0	42.1	0.99	0.79	1.04	22.1
12	R2	132	2	139	1.5	0.633	71.9	LOS E	8.2	58.2	1.00	0.81	1.03	18.6
Approach		401	2	422	0.5	0.633	38.9	LOS D	8.2	58.2	0.62	0.69	0.63	29.8
All Vehicles		2958	31	3114	1.0	0.779	39.0	LOS D	26.0	183.0	0.74	0.72	0.77	30.4

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	[Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 AM (Site Folder: Option 3Av)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	169	2	178	1.2	0.119	7.4	LOS A	1.9	13.2	0.21	0.61	0.21	45.4
2	T1	978	46	1029	4.7	0.441	28.5	LOS C	13.9	101.2	0.64	0.56	0.64	36.9
3	R2	215	7	226	3.3	*0.717	55.7	LOS E	16.0	115.2	0.93	0.84	0.96	23.5
3u	U	35	1	37	2.9	0.717	57.2	LOS E	16.0	115.2	0.93	0.84	0.96	19.9
Approach		1397	56	1471	4.0	0.717	30.9	LOS C	16.0	115.2	0.64	0.62	0.65	33.9
East: Tabilban St (E)														
4	L2	28	0	29	0.0	0.205	70.6	LOS E	1.9	13.6	0.97	0.72	0.97	20.3
5	T1	65	0	68	0.0	*0.673	65.6	LOS E	10.3	72.3	1.00	0.84	1.04	22.5
6	R2	80	0	84	0.0	0.673	68.7	LOS E	10.3	72.3	1.00	0.84	1.04	25.4
Approach		173	0	182	0.0	0.673	67.9	LOS E	10.3	72.3	1.00	0.82	1.03	23.6
North: West Burleigh Rd (E)														
7	L2	1	0	1	0.0	0.001	25.7	LOS C	0.0	0.3	0.54	0.60	0.54	36.1
8	T1	1133	44	1193	3.9	*0.703	45.4	LOS D	24.9	180.4	0.94	0.82	0.94	29.9
9	R2	126	0	133	0.0	0.454	64.0	LOS E	8.3	58.4	0.96	0.79	0.96	25.7
Approach		1260	44	1326	3.5	0.703	47.3	LOS D	24.9	180.4	0.94	0.81	0.94	29.3
West: Dunlin Dr (W)														
10	L2	79	0	83	0.0	0.081	8.5	LOS A	1.2	8.1	0.27	0.58	0.27	48.0
11	T1	29	0	31	0.0	*0.712	64.2	LOS E	10.0	70.1	0.98	0.85	1.06	22.3
12	R2	299	1	315	0.3	0.712	67.9	LOS E	13.1	91.7	0.99	0.85	1.05	19.3
Approach		407	1	428	0.2	0.712	56.1	LOS E	13.1	91.7	0.85	0.80	0.90	23.1
All Vehicles		3237	101	3407	3.1	0.717	42.4	LOS D	24.9	180.4	0.80	0.73	0.81	29.7

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2026 PM (Site Folder: Option 3Av)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	203	1	214	0.5	0.142	7.6	LOS A	2.4	17.0	0.23	0.61	0.23	45.2
2	T1	870	25	916	2.9	0.388	31.2	LOS C	14.5	103.7	0.75	0.65	0.75	35.5
3	R2	140	2	147	1.4	*0.488	57.1	LOS E	11.2	79.0	0.92	0.81	0.92	23.2
3u	U	37	0	39	0.0	0.488	58.6	LOS E	11.2	79.0	0.92	0.81	0.92	19.7
Approach		1250	28	1316	2.2	0.488	31.1	LOS C	14.5	103.7	0.69	0.67	0.69	33.8
East: Tabilban St (E)														
4	L2	45	0	47	0.0	0.330	71.6	LOS E	3.2	22.2	0.98	0.74	0.98	20.1
5	T1	96	0	101	0.0	*0.497	63.3	LOS E	7.4	52.8	0.98	0.78	0.98	23.1
6	R2	12	2	13	16.7	0.497	66.5	LOS E	7.4	52.8	0.98	0.78	0.98	26.0
Approach		153	2	161	1.3	0.497	66.0	LOS E	7.4	52.8	0.98	0.77	0.98	22.5
North: West Burleigh Rd (E)														
7	L2	13	0	14	0.0	0.015	23.9	LOS C	0.5	3.2	0.52	0.65	0.52	36.8
8	T1	909	44	957	4.8	*0.501	37.8	LOS D	15.5	113.0	0.76	0.65	0.76	32.6
9	R2	102	0	107	0.0	0.385	64.2	LOS E	6.7	47.0	0.95	0.78	0.95	25.7
Approach		1024	44	1078	4.3	0.501	40.3	LOS D	15.5	113.0	0.77	0.67	0.77	31.7
West: Dunlin Dr (W)														
10	L2	157	0	165	0.0	0.151	7.4	LOS A	1.9	13.4	0.23	0.58	0.23	48.8
11	T1	53	0	56	0.0	*0.487	59.6	LOS E	6.3	44.4	0.94	0.76	0.94	23.3
12	R2	178	0	187	0.0	0.487	63.7	LOS E	8.9	62.5	0.96	0.79	0.96	20.2
Approach		388	0	408	0.0	0.487	40.3	LOS D	8.9	62.5	0.66	0.70	0.66	28.8
All Vehicles		2815	74	2963	2.6	0.501	37.6	LOS D	15.5	113.0	0.73	0.68	0.73	31.3

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 AM (Site Folder: Option 3Av)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	226	2	238	0.9	0.155	7.1	LOS A	2.3	16.4	0.20	0.61	0.20	45.7
2	T1	935	37	984	4.0	0.380	22.9	LOS C	11.4	82.6	0.55	0.48	0.55	39.9
3	R2	263	12	277	4.6	*0.949	88.6	LOS F	26.4	192.8	0.97	1.03	1.39	18.3
3u	U	41	4	43	9.8	0.949	90.1	LOS F	26.4	192.8	0.97	1.03	1.39	14.3
Approach		1465	55	1542	3.8	0.949	34.1	LOS C	26.4	192.8	0.59	0.61	0.67	32.2
East: Tabilban St (E)														
4	L2	127	1	134	0.8	*0.936	92.6	LOS F	10.9	76.6	1.00	1.09	1.51	17.4
5	T1	61	0	64	0.0	0.901	79.6	LOS E	15.8	110.5	1.00	1.07	1.35	20.3
6	R2	132	0	139	0.0	0.901	82.7	LOS F	15.8	110.5	1.00	1.07	1.35	23.1
Approach		320	1	337	0.3	0.936	86.0	LOS F	15.8	110.5	1.00	1.07	1.41	20.3
North: West Burleigh Rd (E)														
7	L2	12	0	13	0.0	0.014	24.4	LOS C	0.4	3.0	0.53	0.65	0.53	36.6
8	T1	1677	38	1765	2.3	*0.959	78.5	LOS E	52.5	374.3	1.00	1.15	1.32	21.9
9	R2	94	1	99	1.1	0.376	65.0	LOS E	6.2	43.9	0.95	0.78	0.95	25.5
Approach		1783	39	1877	2.2	0.959	77.4	LOS E	52.5	374.3	0.99	1.12	1.29	22.1
West: Dunlin Dr (W)														
10	L2	66	4	69	6.1	0.075	8.7	LOS A	1.0	7.3	0.27	0.58	0.27	47.6
11	T1	21	0	22	0.0	*0.964	97.3	LOS F	14.2	100.8	1.00	1.14	1.58	17.9
12	R2	325	6	342	1.8	0.964	100.0	LOS F	16.8	119.5	1.00	1.13	1.55	14.8
Approach		412	10	434	2.4	0.964	85.3	LOS F	16.8	119.5	0.88	1.04	1.35	17.7
All Vehicles		3980	105	4189	2.6	0.964	63.0	LOS E	52.5	374.3	0.83	0.92	1.08	24.1

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

MOVEMENT SUMMARY

🚦 Site: 1 [2041 PM (Site Folder: Option 3Av)]

West Bureligh Road / Tabilban Street / Dunlin Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated   Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: West Bureligh Rd (S)														
1	L2	186	0	196	0.0	0.128	7.2	LOS A	2.0	13.7	0.21	0.61	0.21	45.6
2	T1	1147	14	1207	1.2	0.501	30.3	LOS C	20.7	146.7	0.76	0.67	0.76	36.1
3	R2	156	1	164	0.6	*0.685	64.9	LOS E	13.7	97.2	0.99	0.84	1.01	21.7
3u	U	43	2	45	4.7	0.685	66.4	LOS E	13.7	97.2	0.99	0.84	1.01	17.9
Approach		1532	17	1613	1.1	0.685	32.1	LOS C	20.7	146.7	0.73	0.68	0.73	33.8
East: Tabilban St (E)														
4	L2	133	2	140	1.5	*0.677	70.2	LOS E	9.6	67.8	1.00	0.83	1.05	20.3
5	T1	75	1	79	1.3	0.417	58.0	LOS E	7.6	54.1	0.95	0.77	0.95	23.9
6	R2	41	1	43	2.4	0.417	61.1	LOS E	7.6	54.1	0.95	0.77	0.95	26.9
Approach		249	4	262	1.6	0.677	65.0	LOS E	9.6	67.8	0.98	0.80	1.00	22.5
North: West Burleigh Rd (E)														
7	L2	7	0	7	0.0	0.007	19.4	LOS B	0.2	1.5	0.45	0.63	0.45	38.5
8	T1	1367	33	1439	2.4	*0.710	37.3	LOS D	26.6	190.4	0.83	0.73	0.83	32.8
9	R2	90	2	95	2.2	0.484	70.8	LOS E	6.3	44.7	0.99	0.78	0.99	24.3
Approach		1464	35	1541	2.4	0.710	39.3	LOS D	26.6	190.4	0.83	0.73	0.83	32.1
West: Dunlin Dr (W)														
10	L2	154	0	162	0.0	0.175	10.3	LOS B	2.7	19.1	0.32	0.61	0.32	47.2
11	T1	74	0	78	0.0	*0.677	64.5	LOS E	7.4	52.0	0.97	0.82	1.04	22.5
12	R2	193	0	203	0.0	0.677	68.8	LOS E	11.3	78.8	0.99	0.83	1.03	19.2
Approach		421	0	443	0.0	0.677	46.6	LOS D	11.3	78.8	0.74	0.74	0.77	26.8
All Vehicles		3666	56	3859	1.5	0.710	38.9	LOS D	26.6	190.4	0.79	0.72	0.79	31.0

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)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped] ped	AVERAGE BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: West Bureligh Rd (S)												
P1	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	240.0	228.5	0.95
East: Tabilban St (E)												
P2	Full	20	21	64.2	LOS F	0.1	0.1	0.96	0.96	228.0	213.0	0.93
North: West Burleigh Rd (E)												

SITE LAYOUT

▽ **Site: 2 [2021 AM (Site Folder: Option 3Ai)]**

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

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

MOVEMENT SUMMARY

▽ Site: 2 [2021 AM (Site Folder: Option 3Ai)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	213	0	224	0.0	0.161	2.9	LOS A	0.9	6.4	0.12	0.38	0.12	37.1
6	R2	1	0	1	0.0	0.161	5.4	LOS A	0.9	6.4	0.12	0.38	0.12	43.1
Approach		214	0	225	0.0	0.161	2.9	LOS A	0.9	6.4	0.12	0.38	0.12	37.2
North: Wairoo St (N)														
7	L2	1	0	1	0.0	0.023	5.6	LOS A	0.1	0.8	0.34	0.60	0.34	40.8
9	R2	22	0	23	0.0	0.023	7.4	LOS A	0.1	0.8	0.34	0.60	0.34	41.3
Approach		23	0	24	0.0	0.023	7.4	LOS A	0.1	0.8	0.34	0.60	0.34	41.3
West: Tabilban St (W)														
10	L2	19	0	20	0.0	0.127	3.6	LOS A	0.6	4.0	0.01	0.40	0.01	43.1
11	T1	179	2	188	1.1	0.127	2.7	LOS A	0.6	4.0	0.01	0.40	0.01	37.5
Approach		198	2	208	1.0	0.127	2.8	LOS A	0.6	4.0	0.01	0.40	0.01	38.2
All Vehicles		435	2	458	0.5	0.161	3.1	LOS A	0.9	6.4	0.08	0.40	0.08	38.0

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

MOVEMENT SUMMARY

▽ Site: 2 [2021 PM (Site Folder: Option 3Ai)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	219	0	231	0.0	0.168	2.9	LOS A	1.0	7.2	0.13	0.38	0.13	37.1
6	R2	4	1	4	25.0	0.168	5.6	LOS A	1.0	7.2	0.13	0.38	0.13	42.6
Approach		223	1	235	0.4	0.168	2.9	LOS A	1.0	7.2	0.13	0.38	0.13	37.2
North: Wairoo St (N)														
7	L2	10	0	11	0.0	0.039	7.4	LOS A	0.2	1.6	0.54	0.63	0.54	40.1
9	R2	22	0	23	0.0	0.039	9.2	LOS A	0.2	1.6	0.54	0.63	0.54	40.5
Approach		32	0	34	0.0	0.039	8.7	LOS A	0.2	1.6	0.54	0.63	0.54	40.4
West: Tabilban St (W)														
10	L2	99	0	104	0.0	0.346	3.6	LOS A	2.0	14.1	0.04	0.40	0.04	43.0
11	T1	435	0	458	0.0	0.346	2.8	LOS A	2.0	14.1	0.04	0.40	0.04	37.3
Approach		534	0	562	0.0	0.346	2.9	LOS A	2.0	14.1	0.04	0.40	0.04	38.7
All Vehicles		789	1	831	0.1	0.346	3.1	LOS A	2.0	14.1	0.09	0.41	0.09	38.4

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

MOVEMENT SUMMARY

▽ Site: 2 [2024 AM (Site Folder: Option 3Ai)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	182	1	192	0.5	0.155	3.1	LOS A	0.9	6.1	0.22	0.40	0.22	36.7
6	R2	1	0	1	0.0	0.155	5.6	LOS A	0.9	6.1	0.22	0.40	0.22	42.8
Approach		183	1	193	0.5	0.155	3.1	LOS A	0.9	6.1	0.22	0.40	0.22	36.8
North: Wairoo St (N)														
7	L2	3	0	3	0.0	0.061	5.8	LOS A	0.3	2.3	0.37	0.61	0.37	40.8
9	R2	55	3	58	5.5	0.061	7.7	LOS A	0.3	2.3	0.37	0.61	0.37	41.2
Approach		58	3	61	5.2	0.061	7.6	LOS A	0.3	2.3	0.37	0.61	0.37	41.2
West: Tabilban St (W)														
10	L2	36	5	38	13.9	0.152	3.7	LOS A	0.7	5.2	0.01	0.40	0.01	42.8
11	T1	200	0	211	0.0	0.152	2.7	LOS A	0.7	5.2	0.01	0.40	0.01	37.5
Approach		236	5	248	2.1	0.152	2.9	LOS A	0.7	5.2	0.01	0.40	0.01	38.6
All Vehicles		477	9	502	1.9	0.155	3.5	LOS A	0.9	6.1	0.14	0.43	0.14	38.4

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2024 PM (Site Folder: Option 3Ai)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	221	0	233	0.0	0.168	2.8	LOS A	1.0	7.2	0.13	0.38	0.13	37.1
6	R2	5	0	5	0.0	0.168	5.4	LOS A	1.0	7.2	0.13	0.38	0.13	43.1
Approach		226	0	238	0.0	0.168	2.9	LOS A	1.0	7.2	0.13	0.38	0.13	37.3
North: Wairoo St (N)														
7	L2	9	0	9	0.0	0.035	7.3	LOS A	0.2	1.5	0.53	0.63	0.53	40.1
9	R2	20	1	21	5.0	0.035	9.3	LOS A	0.2	1.5	0.53	0.63	0.53	40.5
Approach		29	1	31	3.4	0.035	8.6	LOS A	0.2	1.5	0.53	0.63	0.53	40.4
West: Tabilban St (W)														
10	L2	111	0	117	0.0	0.347	3.6	LOS A	2.0	14.1	0.05	0.40	0.05	43.0
11	T1	422	0	444	0.0	0.347	2.8	LOS A	2.0	14.1	0.05	0.40	0.05	37.3
Approach		533	0	561	0.0	0.347	2.9	LOS A	2.0	14.1	0.05	0.40	0.05	38.9
All Vehicles		788	1	829	0.1	0.347	3.1	LOS A	2.0	14.1	0.09	0.41	0.09	38.5

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2026 AM (Site Folder: Option 3Ai)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Vehicle Movement Performance														
East: Tabilban St (E)														
5	T1	201	0	212	0.0	0.165	3.0	LOS A	0.9	6.4	0.18	0.39	0.18	36.9
6	R2	3	0	3	0.0	0.165	5.5	LOS A	0.9	6.4	0.18	0.39	0.18	42.9
Approach		204	0	215	0.0	0.165	3.0	LOS A	0.9	6.4	0.18	0.39	0.18	37.0
North: Wairoo St (N)														
7	L2	5	0	5	0.0	0.046	5.3	LOS A	0.2	1.6	0.29	0.60	0.29	41.0
9	R2	43	0	45	0.0	0.046	7.2	LOS A	0.2	1.6	0.29	0.60	0.29	41.5
Approach		48	0	51	0.0	0.046	7.0	LOS A	0.2	1.6	0.29	0.60	0.29	41.5
West: Tabilban St (W)														
10	L2	84	7	88	8.3	0.143	3.6	LOS A	0.7	4.8	0.03	0.43	0.03	42.8
11	T1	130	1	137	0.8	0.143	2.8	LOS A	0.7	4.8	0.03	0.43	0.03	37.2
Approach		214	8	225	3.7	0.143	3.1	LOS A	0.7	4.8	0.03	0.43	0.03	39.9
All Vehicles		466	8	491	1.7	0.165	3.5	LOS A	0.9	6.4	0.12	0.43	0.12	39.0

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

MOVEMENT SUMMARY

▽ Site: 2 [2026 PM (Site Folder: Option 3Ai)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	173	0	182	0.0	0.136	2.9	LOS A	0.8	5.3	0.13	0.38	0.13	37.1
6	R2	2	1	2	50.0	0.136	5.8	LOS A	0.8	5.3	0.13	0.38	0.13	42.1
Approach		175	1	184	0.6	0.136	2.9	LOS A	0.8	5.3	0.13	0.38	0.13	37.2
North: Wairoo St (N)														
7	L2	9	0	9	0.0	0.034	5.7	LOS A	0.2	1.2	0.36	0.59	0.36	41.0
9	R2	25	0	26	0.0	0.034	7.6	LOS A	0.2	1.2	0.36	0.59	0.36	41.5
Approach		34	0	36	0.0	0.034	7.1	LOS A	0.2	1.2	0.36	0.59	0.36	41.4
West: Tabilban St (W)														
10	L2	47	0	49	0.0	0.162	3.6	LOS A	0.8	5.3	0.02	0.41	0.02	43.1
11	T1	202	0	213	0.0	0.162	2.7	LOS A	0.8	5.3	0.02	0.41	0.02	37.4
Approach		249	0	262	0.0	0.162	2.9	LOS A	0.8	5.3	0.02	0.41	0.02	38.8
All Vehicles		458	1	482	0.2	0.162	3.2	LOS A	0.8	5.3	0.09	0.41	0.09	38.5

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

MOVEMENT SUMMARY

▽ **Site: 2 [2041 AM (Site Folder: Option 3Ai)]**

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	191	0	201	0.0	0.190	3.8	LOS A	1.0	7.3	0.37	0.47	0.37	36.1
6	R2	2	0	2	0.0	0.190	6.3	LOS A	1.0	7.3	0.37	0.47	0.37	42.4
Approach		193	0	203	0.0	0.190	3.8	LOS A	1.0	7.3	0.37	0.47	0.37	36.2
North: Wairoo St (N)														
7	L2	23	8	24	34.8	0.160	5.6	LOS A	0.9	6.5	0.26	0.60	0.26	40.8
9	R2	151	2	159	1.3	0.160	7.0	LOS A	0.9	6.5	0.26	0.60	0.26	41.6
Approach		174	10	183	5.7	0.160	6.8	LOS A	0.9	6.5	0.26	0.60	0.26	41.5
West: Tabilban St (W)														
10	L2	213	11	224	5.2	0.198	3.6	LOS A	1.0	7.6	0.02	0.46	0.02	42.7
11	T1	89	1	94	1.1	0.198	2.8	LOS A	1.0	7.6	0.02	0.46	0.02	37.0
Approach		302	12	318	4.0	0.198	3.3	LOS A	1.0	7.6	0.02	0.46	0.02	41.4
All Vehicles		669	22	704	3.3	0.198	4.4	LOS A	1.0	7.6	0.19	0.50	0.19	40.2

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2041 PM (Site Folder: Option 3Ai)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES [HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS [HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE [Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	66	0	69	0.0	0.063	3.3	LOS A	0.3	2.3	0.28	0.42	0.28	36.5
6	R2	1	0	1	0.0	0.063	5.8	LOS A	0.3	2.3	0.28	0.42	0.28	42.6
Approach		67	0	71	0.0	0.063	3.4	LOS A	0.3	2.3	0.28	0.42	0.28	36.6
North: Wairoo St (N)														
7	L2	14	0	15	0.0	0.115	5.8	LOS A	0.6	4.5	0.38	0.62	0.38	40.8
9	R2	98	4	103	4.1	0.115	7.7	LOS A	0.6	4.5	0.38	0.62	0.38	41.3
Approach		112	4	118	3.6	0.115	7.5	LOS A	0.6	4.5	0.38	0.62	0.38	41.2
West: Tabilban St (W)														
10	L2	199	1	209	0.5	0.250	3.6	LOS A	1.3	9.5	0.02	0.44	0.02	42.9
11	T1	194	0	204	0.0	0.250	2.7	LOS A	1.3	9.5	0.02	0.44	0.02	37.2
Approach		393	1	414	0.3	0.250	3.2	LOS A	1.3	9.5	0.02	0.44	0.02	40.6
All Vehicles		572	5	602	0.9	0.250	4.0	LOS A	1.3	9.5	0.12	0.47	0.12	40.4

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

MOVEMENT SUMMARY

▽ Site: 2 [2021 AM (Site Folder: Option 3Aii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	225	0	237	0.0	0.174	2.9	LOS A	1.0	7.1	0.13	0.38	0.13	37.0
6	R2	6	0	6	0.0	0.174	5.4	LOS A	1.0	7.1	0.13	0.38	0.13	43.1
Approach		231	0	243	0.0	0.174	2.9	LOS A	1.0	7.1	0.13	0.38	0.13	37.3
North: Wairoo St (N)														
7	L2	4	0	4	0.0	0.029	5.8	LOS A	0.1	1.0	0.38	0.60	0.38	40.9
9	R2	24	0	25	0.0	0.029	7.7	LOS A	0.1	1.0	0.38	0.60	0.38	41.3
Approach		28	0	29	0.0	0.029	7.4	LOS A	0.1	1.0	0.38	0.60	0.38	41.3
West: Tabilban St (W)														
10	L2	22	4	23	18.2	0.166	3.7	LOS A	0.8	5.5	0.04	0.39	0.04	42.7
11	T1	221	1	233	0.5	0.166	2.8	LOS A	0.8	5.5	0.04	0.39	0.04	37.4
Approach		243	5	256	2.1	0.166	2.9	LOS A	0.8	5.5	0.04	0.39	0.04	38.1
All Vehicles		502	5	528	1.0	0.174	3.1	LOS A	1.0	7.1	0.10	0.40	0.10	38.0

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2021 PM (Site Folder: Option 3Aii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
East: Tabilban St (E)														
5	T1	168	0	177	0.0	0.134	2.9	LOS A	0.8	5.6	0.15	0.38	0.15	37.0
6	R2	4	0	4	0.0	0.134	5.4	LOS A	0.8	5.6	0.15	0.38	0.15	43.0
Approach		172	0	181	0.0	0.134	2.9	LOS A	0.8	5.6	0.15	0.38	0.15	37.2
North: Wairoo St (N)														
7	L2	18	0	19	0.0	0.057	8.0	LOS A	0.3	2.4	0.58	0.65	0.58	39.8
9	R2	27	0	28	0.0	0.057	9.8	LOS A	0.3	2.4	0.58	0.65	0.58	40.2
Approach		45	0	47	0.0	0.057	9.1	LOS A	0.3	2.4	0.58	0.65	0.58	40.1
West: Tabilban St (W)														
10	L2	71	1	75	1.4	0.365	3.6	LOS A	2.2	15.4	0.04	0.40	0.04	43.0
11	T1	494	0	520	0.0	0.365	2.8	LOS A	2.2	15.4	0.04	0.40	0.04	37.4
Approach		565	1	595	0.2	0.365	2.9	LOS A	2.2	15.4	0.04	0.40	0.04	38.3
All Vehicles		782	1	823	0.1	0.365	3.2	LOS A	2.2	15.4	0.10	0.41	0.10	38.3

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

MOVEMENT SUMMARY

▽ Site: 2 [2024 AM (Site Folder: Option 3Aii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	280	0	295	0.0	0.213	2.9	LOS A	1.3	9.1	0.14	0.38	0.14	37.0
6	R2	4	0	4	0.0	0.213	5.4	LOS A	1.3	9.1	0.14	0.38	0.14	43.1
Approach		284	0	299	0.0	0.213	2.9	LOS A	1.3	9.1	0.14	0.38	0.14	37.1
North: Wairoo St (N)														
7	L2	4	0	4	0.0	0.032	6.0	LOS A	0.2	1.2	0.40	0.61	0.40	40.7
9	R2	26	0	27	0.0	0.032	7.9	LOS A	0.2	1.2	0.40	0.61	0.40	41.2
Approach		30	0	32	0.0	0.032	7.6	LOS A	0.2	1.2	0.40	0.61	0.40	41.1
West: Tabilban St (W)														
10	L2	37	4	39	10.8	0.191	3.6	LOS A	0.9	6.5	0.03	0.40	0.03	42.8
11	T1	250	1	263	0.4	0.191	2.8	LOS A	0.9	6.5	0.03	0.40	0.03	37.4
Approach		287	5	302	1.7	0.191	2.9	LOS A	0.9	6.5	0.03	0.40	0.03	38.4
All Vehicles		601	5	633	0.8	0.213	3.1	LOS A	1.3	9.1	0.10	0.40	0.10	38.0

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2024 PM (Site Folder: Option 3Aii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	143	0	151	0.0	0.112	2.8	LOS A	0.6	4.5	0.11	0.38	0.11	37.1
6	R2	5	0	5	0.0	0.112	5.3	LOS A	0.6	4.5	0.11	0.38	0.11	43.1
Approach		148	0	156	0.0	0.112	2.9	LOS A	0.6	4.5	0.11	0.38	0.11	37.4
North: Wairoo St (N)														
7	L2	18	0	19	0.0	0.041	7.0	LOS A	0.2	1.6	0.51	0.62	0.51	40.5
9	R2	17	0	18	0.0	0.041	8.9	LOS A	0.2	1.6	0.51	0.62	0.51	41.0
Approach		35	0	37	0.0	0.041	7.9	LOS A	0.2	1.6	0.51	0.62	0.51	40.7
West: Tabilban St (W)														
10	L2	111	1	117	0.9	0.328	3.6	LOS A	1.8	12.9	0.04	0.41	0.04	43.0
11	T1	392	0	413	0.0	0.328	2.8	LOS A	1.8	12.9	0.04	0.41	0.04	37.3
Approach		503	1	529	0.2	0.328	2.9	LOS A	1.8	12.9	0.04	0.41	0.04	39.0
All Vehicles		686	1	722	0.1	0.328	3.2	LOS A	1.8	12.9	0.08	0.41	0.08	38.8

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2026 AM (Site Folder: Option 3Aii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	187	0	197	0.0	0.155	3.0	LOS A	0.9	6.0	0.19	0.39	0.19	36.8
6	R2	1	0	1	0.0	0.155	5.5	LOS A	0.9	6.0	0.19	0.39	0.19	42.9
Approach		188	0	198	0.0	0.155	3.0	LOS A	0.9	6.0	0.19	0.39	0.19	36.9
North: Wairoo St (N)														
7	L2	8	0	8	0.0	0.054	5.4	LOS A	0.3	1.9	0.30	0.60	0.30	41.0
9	R2	48	0	51	0.0	0.054	7.2	LOS A	0.3	1.9	0.30	0.60	0.30	41.5
Approach		56	0	59	0.0	0.054	7.0	LOS A	0.3	1.9	0.30	0.60	0.30	41.5
West: Tabilban St (W)														
10	L2	110	4	116	3.6	0.158	3.6	LOS A	0.8	5.4	0.01	0.44	0.01	42.9
11	T1	136	1	143	0.7	0.158	2.7	LOS A	0.8	5.4	0.01	0.44	0.01	37.2
Approach		246	5	259	2.0	0.158	3.1	LOS A	0.8	5.4	0.01	0.44	0.01	40.3
All Vehicles		490	5	516	1.0	0.158	3.5	LOS A	0.9	6.0	0.12	0.44	0.12	39.3

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2026 PM (Site Folder: Option 3Aii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	148	0	156	0.0	0.122	3.0	LOS A	0.7	4.6	0.17	0.39	0.17	36.9
6	R2	1	0	1	0.0	0.122	5.5	LOS A	0.7	4.6	0.17	0.39	0.17	43.0
Approach		149	0	157	0.0	0.122	3.0	LOS A	0.7	4.6	0.17	0.39	0.17	37.0
North: Wairoo St (N)														
7	L2	8	0	8	0.0	0.048	5.6	LOS A	0.2	1.7	0.34	0.60	0.34	41.0
9	R2	40	0	42	0.0	0.048	7.4	LOS A	0.2	1.7	0.34	0.60	0.34	41.5
Approach		48	0	51	0.0	0.048	7.1	LOS A	0.2	1.7	0.34	0.60	0.34	41.4
West: Tabilban St (W)														
10	L2	55	1	58	1.8	0.147	3.6	LOS A	0.7	4.8	0.01	0.41	0.01	43.0
11	T1	175	0	184	0.0	0.147	2.7	LOS A	0.7	4.8	0.01	0.41	0.01	37.4
Approach		230	1	242	0.4	0.147	2.9	LOS A	0.7	4.8	0.01	0.41	0.01	39.2
All Vehicles		427	1	449	0.2	0.147	3.4	LOS A	0.7	4.8	0.11	0.42	0.11	38.8

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

MOVEMENT SUMMARY

▽ Site: 2 [2041 AM (Site Folder: Option 3Aii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES [HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS [HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE [Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	183	0	193	0.0	0.186	3.9	LOS A	1.0	7.1	0.39	0.48	0.39	36.1
6	R2	2	0	2	0.0	0.186	6.4	LOS A	1.0	7.1	0.39	0.48	0.39	42.3
Approach		185	0	195	0.0	0.186	3.9	LOS A	1.0	7.1	0.39	0.48	0.39	36.2
North: Wairoo St (N)														
7	L2	26	0	27	0.0	0.171	5.2	LOS A	1.0	6.8	0.28	0.60	0.28	41.1
9	R2	164	0	173	0.0	0.171	7.1	LOS A	1.0	6.8	0.28	0.60	0.28	41.6
Approach		190	0	200	0.0	0.171	6.8	LOS A	1.0	6.8	0.28	0.60	0.28	41.5
West: Tabilban St (W)														
10	L2	207	4	218	1.9	0.199	3.6	LOS A	1.1	7.5	0.02	0.46	0.02	42.7
11	T1	100	1	105	1.0	0.199	2.8	LOS A	1.1	7.5	0.02	0.46	0.02	37.0
Approach		307	5	323	1.6	0.199	3.3	LOS A	1.1	7.5	0.02	0.46	0.02	41.3
All Vehicles		682	5	718	0.7	0.199	4.4	LOS A	1.1	7.5	0.19	0.50	0.19	40.3

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

MOVEMENT SUMMARY

▽ **Site: 2 [2041 PM (Site Folder: Option 3Aii)]**

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Tabilban St (E)														
5	T1	180	0	189	0.0	0.160	3.2	LOS A	0.9	6.2	0.25	0.41	0.25	36.6
6	R2	4	0	4	0.0	0.160	5.7	LOS A	0.9	6.2	0.25	0.41	0.25	42.7
Approach		184	0	194	0.0	0.160	3.2	LOS A	0.9	6.2	0.25	0.41	0.25	36.8
North: Wairoo St (N)														
7	L2	13	0	14	0.0	0.084	5.6	LOS A	0.4	3.1	0.34	0.61	0.34	41.0
9	R2	72	0	76	0.0	0.084	7.5	LOS A	0.4	3.1	0.34	0.61	0.34	41.4
Approach		85	0	89	0.0	0.084	7.2	LOS A	0.4	3.1	0.34	0.61	0.34	41.4
West: Tabilban St (W)														
10	L2	81	1	85	1.2	0.166	3.6	LOS A	0.8	5.7	0.03	0.42	0.03	42.9
11	T1	170	0	179	0.0	0.166	2.8	LOS A	0.8	5.7	0.03	0.42	0.03	37.2
Approach		251	1	264	0.4	0.166	3.0	LOS A	0.8	5.7	0.03	0.42	0.03	39.6
All Vehicles		520	1	547	0.2	0.166	3.8	LOS A	0.9	6.2	0.16	0.45	0.16	39.1

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2021 AM (Site Folder: Option 3Aiii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	210	0	221	0.0	0.162	2.9	LOS A	0.9	6.5	0.13	0.38	0.13	37.1
6	R2	4	0	4	0.0	0.162	5.4	LOS A	0.9	6.5	0.13	0.38	0.13	43.1
Approach		214	0	225	0.0	0.162	2.9	LOS A	0.9	6.5	0.13	0.38	0.13	37.2
North: Wairoo St (N)														
7	L2	2	0	2	0.0	0.027	5.8	LOS A	0.1	1.0	0.37	0.60	0.37	40.8
9	R2	24	0	25	0.0	0.027	7.6	LOS A	0.1	1.0	0.37	0.60	0.37	41.3
Approach		26	0	27	0.0	0.027	7.5	LOS A	0.1	1.0	0.37	0.60	0.37	41.3
West: Tabilban St (W)														
10	L2	21	3	22	14.3	0.157	3.7	LOS A	0.7	5.1	0.03	0.39	0.03	42.8
11	T1	213	1	224	0.5	0.157	2.8	LOS A	0.7	5.1	0.03	0.39	0.03	37.4
Approach		234	4	246	1.7	0.157	2.8	LOS A	0.7	5.1	0.03	0.39	0.03	38.1
All Vehicles		474	4	499	0.8	0.162	3.1	LOS A	0.9	6.5	0.10	0.40	0.10	38.0

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2021 PM (Site Folder: Option 3Aiii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	241	0	254	0.0	0.182	2.9	LOS A	1.1	8.0	0.13	0.38	0.13	37.1
6	R2	3	0	3	0.0	0.182	5.4	LOS A	1.1	8.0	0.13	0.38	0.13	43.1
Approach		244	0	257	0.0	0.182	2.9	LOS A	1.1	8.0	0.13	0.38	0.13	37.2
North: Wairoo St (N)														
7	L2	16	0	17	0.0	0.048	7.9	LOS A	0.3	2.0	0.58	0.64	0.58	39.9
9	R2	22	0	23	0.0	0.048	9.8	LOS A	0.3	2.0	0.58	0.64	0.58	40.3
Approach		38	0	40	0.0	0.048	9.0	LOS A	0.3	2.0	0.58	0.64	0.58	40.1
West: Tabilban St (W)														
10	L2	65	1	68	1.5	0.356	3.6	LOS A	2.1	14.7	0.03	0.40	0.03	43.0
11	T1	490	0	516	0.0	0.356	2.8	LOS A	2.1	14.7	0.03	0.40	0.03	37.4
Approach		555	1	584	0.2	0.356	2.9	LOS A	2.1	14.7	0.03	0.40	0.03	38.3
All Vehicles		837	1	881	0.1	0.356	3.1	LOS A	2.1	14.7	0.09	0.40	0.09	38.1

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2024 AM (Site Folder: Option 3Aiii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	239	0	252	0.0	0.185	2.9	LOS A	1.1	7.6	0.14	0.38	0.14	37.0
6	R2	3	0	3	0.0	0.185	5.4	LOS A	1.1	7.6	0.14	0.38	0.14	43.1
Approach		242	0	255	0.0	0.185	2.9	LOS A	1.1	7.6	0.14	0.38	0.14	37.1
North: Wairoo St (N)														
7	L2	3	0	3	0.0	0.031	5.8	LOS A	0.2	1.2	0.38	0.60	0.38	40.8
9	R2	26	3	27	11.5	0.031	7.9	LOS A	0.2	1.2	0.38	0.60	0.38	41.2
Approach		29	3	31	10.3	0.031	7.7	LOS A	0.2	1.2	0.38	0.60	0.38	41.1
West: Tabilban St (W)														
10	L2	32	3	34	9.4	0.161	3.6	LOS A	0.8	5.3	0.03	0.40	0.03	42.9
11	T1	212	0	223	0.0	0.161	2.8	LOS A	0.8	5.3	0.03	0.40	0.03	37.4
Approach		244	3	257	1.2	0.161	2.9	LOS A	0.8	5.3	0.03	0.40	0.03	38.4
All Vehicles		515	6	542	1.2	0.185	3.2	LOS A	1.1	7.6	0.10	0.40	0.10	38.1

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

MOVEMENT SUMMARY

▽ Site: 2 [2024 PM (Site Folder: Option 3Aiii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	126	0	133	0.0	0.102	2.8	LOS A	0.6	4.0	0.12	0.39	0.12	37.1
6	R2	5	0	5	0.0	0.102	5.4	LOS A	0.6	4.0	0.12	0.39	0.12	43.1
Approach		131	0	138	0.0	0.102	2.9	LOS A	0.6	4.0	0.12	0.39	0.12	37.4
North: Wairoo St (N)														
7	L2	17	0	18	0.0	0.045	7.1	LOS A	0.3	1.9	0.52	0.63	0.52	40.3
9	R2	20	2	21	10.0	0.045	9.3	LOS A	0.3	1.9	0.52	0.63	0.52	40.7
Approach		37	2	39	5.4	0.045	8.3	LOS A	0.3	1.9	0.52	0.63	0.52	40.6
West: Tabilban St (W)														
10	L2	132	0	139	0.0	0.348	3.6	LOS A	2.0	14.1	0.05	0.41	0.05	43.0
11	T1	403	0	424	0.0	0.348	2.8	LOS A	2.0	14.1	0.05	0.41	0.05	37.2
Approach		535	0	563	0.0	0.348	3.0	LOS A	2.0	14.1	0.05	0.41	0.05	39.1
All Vehicles		703	2	740	0.3	0.348	3.2	LOS A	2.0	14.1	0.08	0.42	0.08	38.9

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2026 AM (Site Folder: Option 3Aiii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	163	0	172	0.0	0.137	3.0	LOS A	0.7	5.2	0.19	0.39	0.19	36.8
6	R2	1	0	1	0.0	0.137	5.5	LOS A	0.7	5.2	0.19	0.39	0.19	42.9
Approach		164	0	173	0.0	0.137	3.0	LOS A	0.7	5.2	0.19	0.39	0.19	36.9
North: Wairoo St (N)														
7	L2	7	1	7	14.3	0.054	5.6	LOS A	0.3	2.0	0.30	0.60	0.30	40.9
9	R2	49	0	52	0.0	0.054	7.2	LOS A	0.3	2.0	0.30	0.60	0.30	41.5
Approach		56	1	59	1.8	0.054	7.0	LOS A	0.3	2.0	0.30	0.60	0.30	41.4
West: Tabilban St (W)														
10	L2	116	7	122	6.0	0.163	3.6	LOS A	0.8	5.6	0.01	0.44	0.01	42.8
11	T1	135	1	142	0.7	0.163	2.7	LOS A	0.8	5.6	0.01	0.44	0.01	37.2
Approach		251	8	264	3.2	0.163	3.1	LOS A	0.8	5.6	0.01	0.44	0.01	40.3
All Vehicles		471	9	496	1.9	0.163	3.6	LOS A	0.8	5.6	0.11	0.44	0.11	39.5

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

MOVEMENT SUMMARY

▽ Site: 2 [2026 PM (Site Folder: Option 3Aiii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	153	2	161	1.3	0.125	2.9	LOS A	0.7	4.8	0.16	0.38	0.16	37.0
6	R2	1	0	1	0.0	0.125	5.4	LOS A	0.7	4.8	0.16	0.38	0.16	43.0
Approach		154	2	162	1.3	0.125	3.0	LOS A	0.7	4.8	0.16	0.38	0.16	37.0
North: Wairoo St (N)														
7	L2	8	0	8	0.0	0.042	5.5	LOS A	0.2	1.5	0.33	0.59	0.33	41.0
9	R2	34	1	36	2.9	0.042	7.5	LOS A	0.2	1.5	0.33	0.59	0.33	41.5
Approach		42	1	44	2.4	0.042	7.1	LOS A	0.2	1.5	0.33	0.59	0.33	41.4
West: Tabilban St (W)														
10	L2	63	2	66	3.2	0.148	3.6	LOS A	0.7	4.9	0.01	0.42	0.01	43.0
11	T1	168	1	177	0.6	0.148	2.7	LOS A	0.7	4.9	0.01	0.42	0.01	37.3
Approach		231	3	243	1.3	0.148	3.0	LOS A	0.7	4.9	0.01	0.42	0.01	39.4
All Vehicles		427	6	449	1.4	0.148	3.4	LOS A	0.7	4.9	0.10	0.42	0.10	38.9

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2041 AM (Site Folder: Option 3Aiii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Tabilban St (E)														
5	T1	163	0	172	0.0	0.166	3.8	LOS A	0.9	6.2	0.38	0.47	0.38	36.1
6	R2	2	0	2	0.0	0.166	6.3	LOS A	0.9	6.2	0.38	0.47	0.38	42.4
Approach		165	0	174	0.0	0.166	3.9	LOS A	0.9	6.2	0.38	0.47	0.38	36.2
North: Wairoo St (N)														
7	L2	21	3	22	14.3	0.165	5.4	LOS A	0.9	6.8	0.27	0.60	0.27	41.0
9	R2	159	8	167	5.0	0.165	7.1	LOS A	0.9	6.8	0.27	0.60	0.27	41.5
Approach		180	11	189	6.1	0.165	6.9	LOS A	0.9	6.8	0.27	0.60	0.27	41.5
West: Tabilban St (W)														
10	L2	211	11	222	5.2	0.198	3.6	LOS A	1.0	7.6	0.02	0.46	0.02	42.7
11	T1	91	1	96	1.1	0.198	2.8	LOS A	1.0	7.6	0.02	0.46	0.02	37.0
Approach		302	12	318	4.0	0.198	3.3	LOS A	1.0	7.6	0.02	0.46	0.02	41.4
All Vehicles		647	23	681	3.6	0.198	4.5	LOS A	1.0	7.6	0.18	0.50	0.18	40.4

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

MOVEMENT SUMMARY

▽ Site: 2 [2041 PM (Site Folder: Option 3Aiii)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	176	1	185	0.6	0.161	3.3	LOS A	0.9	6.3	0.28	0.42	0.28	36.5
6	R2	3	0	3	0.0	0.161	5.8	LOS A	0.9	6.3	0.28	0.42	0.28	42.6
Approach		179	1	188	0.6	0.161	3.3	LOS A	0.9	6.3	0.28	0.42	0.28	36.6
North: Wairoo St (N)														
7	L2	17	0	18	0.0	0.104	5.6	LOS A	0.6	4.0	0.35	0.61	0.35	41.0
9	R2	87	3	92	3.4	0.104	7.5	LOS A	0.6	4.0	0.35	0.61	0.35	41.4
Approach		104	3	109	2.9	0.104	7.2	LOS A	0.6	4.0	0.35	0.61	0.35	41.3
West: Tabilban St (W)														
10	L2	76	2	80	2.6	0.161	3.6	LOS A	0.8	5.6	0.03	0.42	0.03	42.9
11	T1	168	1	177	0.6	0.161	2.8	LOS A	0.8	5.6	0.03	0.42	0.03	37.3
Approach		244	3	257	1.2	0.161	3.0	LOS A	0.8	5.6	0.03	0.42	0.03	39.5
All Vehicles		527	7	555	1.3	0.161	4.0	LOS A	0.9	6.3	0.18	0.46	0.18	39.1

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

MOVEMENT SUMMARY

▽ Site: 2 [2021 AM (Site Folder: Option 3Aiv)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	246	0	259	0.0	0.189	2.9	LOS A	1.1	7.8	0.13	0.38	0.13	37.0
6	R2	6	0	6	0.0	0.189	5.4	LOS A	1.1	7.8	0.13	0.38	0.13	43.1
Approach		252	0	265	0.0	0.189	2.9	LOS A	1.1	7.8	0.13	0.38	0.13	37.2
North: Wairoo St (N)														
7	L2	3	0	3	0.0	0.028	5.7	LOS A	0.1	1.0	0.37	0.60	0.37	40.9
9	R2	24	0	25	0.0	0.028	7.6	LOS A	0.1	1.0	0.37	0.60	0.37	41.3
Approach		27	0	28	0.0	0.028	7.4	LOS A	0.1	1.0	0.37	0.60	0.37	41.3
West: Tabilban St (W)														
10	L2	22	3	23	13.6	0.157	3.7	LOS A	0.7	5.2	0.04	0.39	0.04	42.8
11	T1	208	1	219	0.5	0.157	2.8	LOS A	0.7	5.2	0.04	0.39	0.04	37.4
Approach		230	4	242	1.7	0.157	2.9	LOS A	0.7	5.2	0.04	0.39	0.04	38.1
All Vehicles		509	4	536	0.8	0.189	3.1	LOS A	1.1	7.8	0.10	0.40	0.10	37.9

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

MOVEMENT SUMMARY

▽ Site: 2 [2021 PM (Site Folder: Option 3Aiv)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	141	0	148	0.0	0.116	2.9	LOS A	0.7	4.7	0.15	0.39	0.15	37.0
6	R2	4	0	4	0.0	0.116	5.4	LOS A	0.7	4.7	0.15	0.39	0.15	43.0
Approach		145	0	153	0.0	0.116	3.0	LOS A	0.7	4.7	0.15	0.39	0.15	37.2
North: Wairoo St (N)														
7	L2	10	0	11	0.0	0.050	7.8	LOS A	0.3	2.1	0.57	0.65	0.57	39.7
9	R2	30	0	32	0.0	0.050	9.7	LOS A	0.3	2.1	0.57	0.65	0.57	40.2
Approach		40	0	42	0.0	0.050	9.2	LOS A	0.3	2.1	0.57	0.65	0.57	40.1
West: Tabilban St (W)														
10	L2	94	0	99	0.0	0.370	3.6	LOS A	2.2	15.7	0.04	0.40	0.04	43.0
11	T1	480	0	505	0.0	0.370	2.8	LOS A	2.2	15.7	0.04	0.40	0.04	37.3
Approach		574	0	604	0.0	0.370	2.9	LOS A	2.2	15.7	0.04	0.40	0.04	38.6
All Vehicles		759	0	799	0.0	0.370	3.2	LOS A	2.2	15.7	0.09	0.41	0.09	38.5

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2024 AM (Site Folder: Option 3Aiv)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	282	0	297	0.0	0.215	2.9	LOS A	1.3	9.2	0.15	0.38	0.15	37.0
6	R2	2	0	2	0.0	0.215	5.4	LOS A	1.3	9.2	0.15	0.38	0.15	43.0
Approach		284	0	299	0.0	0.215	2.9	LOS A	1.3	9.2	0.15	0.38	0.15	37.1
North: Wairoo St (N)														
7	L2	4	0	4	0.0	0.034	5.8	LOS A	0.2	1.3	0.39	0.60	0.39	40.8
9	R2	27	3	28	11.1	0.034	7.9	LOS A	0.2	1.3	0.39	0.60	0.39	41.2
Approach		31	3	33	9.7	0.034	7.7	LOS A	0.2	1.3	0.39	0.60	0.39	41.1
West: Tabilban St (W)														
10	L2	49	3	52	6.1	0.176	3.6	LOS A	0.8	5.9	0.02	0.41	0.02	43.0
11	T1	222	0	234	0.0	0.176	2.7	LOS A	0.8	5.9	0.02	0.41	0.02	37.4
Approach		271	3	285	1.1	0.176	2.9	LOS A	0.8	5.9	0.02	0.41	0.02	38.8
All Vehicles		586	6	617	1.0	0.215	3.2	LOS A	1.3	9.2	0.10	0.40	0.10	38.2

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2024 PM (Site Folder: Option 3Aiv)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	121	0	127	0.0	0.098	2.9	LOS A	0.6	3.9	0.12	0.39	0.12	37.0
6	R2	5	0	5	0.0	0.098	5.4	LOS A	0.6	3.9	0.12	0.39	0.12	43.1
Approach		126	0	133	0.0	0.098	3.0	LOS A	0.6	3.9	0.12	0.39	0.12	37.4
North: Wairoo St (N)														
7	L2	7	0	7	0.0	0.034	6.9	LOS A	0.2	1.4	0.50	0.62	0.50	40.2
9	R2	21	2	22	9.5	0.034	9.0	LOS A	0.2	1.4	0.50	0.62	0.50	40.6
Approach		28	2	29	7.1	0.034	8.5	LOS A	0.2	1.4	0.50	0.62	0.50	40.5
West: Tabilban St (W)														
10	L2	132	0	139	0.0	0.333	3.6	LOS A	1.9	13.2	0.04	0.41	0.04	43.0
11	T1	379	0	399	0.0	0.333	2.8	LOS A	1.9	13.2	0.04	0.41	0.04	37.2
Approach		511	0	538	0.0	0.333	3.0	LOS A	1.9	13.2	0.04	0.41	0.04	39.2
All Vehicles		665	2	700	0.3	0.333	3.2	LOS A	1.9	13.2	0.08	0.41	0.08	39.0

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2026 AM (Site Folder: Option 3Aiv)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
East: Tabilban St (E)														
5	T1	173	0	182	0.0	0.143	3.0	LOS A	0.8	5.5	0.19	0.39	0.19	36.9
6	R2	1	0	1	0.0	0.143	5.5	LOS A	0.8	5.5	0.19	0.39	0.19	42.9
Approach		174	0	183	0.0	0.143	3.0	LOS A	0.8	5.5	0.19	0.39	0.19	36.9
North: Wairoo St (N)														
7	L2	9	3	9	33.3	0.054	5.9	LOS A	0.3	2.0	0.30	0.60	0.30	40.8
9	R2	46	0	48	0.0	0.054	7.2	LOS A	0.3	2.0	0.30	0.60	0.30	41.5
Approach		55	3	58	5.5	0.054	7.0	LOS A	0.3	2.0	0.30	0.60	0.30	41.4
West: Tabilban St (W)														
10	L2	113	6	119	5.3	0.160	3.6	LOS A	0.8	5.4	0.01	0.44	0.01	42.8
11	T1	135	0	142	0.0	0.160	2.7	LOS A	0.8	5.4	0.01	0.44	0.01	37.2
Approach		248	6	261	2.4	0.160	3.1	LOS A	0.8	5.4	0.01	0.44	0.01	40.3
All Vehicles		477	9	502	1.9	0.160	3.5	LOS A	0.8	5.5	0.11	0.44	0.11	39.4

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2026 PM (Site Folder: Option 3Aiv)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
Vehicle Movement Performance														
East: Tabilban St (E)														
5	T1	162	2	171	1.2	0.132	2.9	LOS A	0.7	5.1	0.16	0.38	0.16	37.0
6	R2	1	0	1	0.0	0.132	5.5	LOS A	0.7	5.1	0.16	0.38	0.16	43.0
Approach		163	2	172	1.2	0.132	3.0	LOS A	0.7	5.1	0.16	0.38	0.16	37.0
North: Wairoo St (N)														
7	L2	8	0	8	0.0	0.044	5.6	LOS A	0.2	1.6	0.33	0.60	0.33	41.0
9	R2	36	0	38	0.0	0.044	7.4	LOS A	0.2	1.6	0.33	0.60	0.33	41.5
Approach		44	0	46	0.0	0.044	7.1	LOS A	0.2	1.6	0.33	0.60	0.33	41.4
West: Tabilban St (W)														
10	L2	50	2	53	4.0	0.142	3.6	LOS A	0.7	4.7	0.01	0.41	0.01	43.0
11	T1	171	1	180	0.6	0.142	2.7	LOS A	0.7	4.7	0.01	0.41	0.01	37.4
Approach		221	3	233	1.4	0.142	2.9	LOS A	0.7	4.7	0.01	0.41	0.01	39.1
All Vehicles		428	5	451	1.2	0.142	3.4	LOS A	0.7	5.1	0.10	0.42	0.10	38.7

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

MOVEMENT SUMMARY

▽ Site: 2 [2041 AM (Site Folder: Option 3Aiv)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	173	0	182	0.0	0.174	3.8	LOS A	0.9	6.6	0.37	0.47	0.37	36.2
6	R2	2	0	2	0.0	0.174	6.3	LOS A	0.9	6.6	0.37	0.47	0.37	42.4
Approach		175	0	184	0.0	0.174	3.8	LOS A	0.9	6.6	0.37	0.47	0.37	36.3
North: Wairoo St (N)														
7	L2	24	4	25	16.7	0.161	5.4	LOS A	0.9	6.6	0.27	0.60	0.27	41.0
9	R2	151	6	159	4.0	0.161	7.1	LOS A	0.9	6.6	0.27	0.60	0.27	41.5
Approach		175	10	184	5.7	0.161	6.8	LOS A	0.9	6.6	0.27	0.60	0.27	41.5
West: Tabilban St (W)														
10	L2	206	11	217	5.3	0.196	3.6	LOS A	1.0	7.5	0.02	0.46	0.02	42.7
11	T1	93	1	98	1.1	0.196	2.8	LOS A	1.0	7.5	0.02	0.46	0.02	37.0
Approach		299	12	315	4.0	0.196	3.3	LOS A	1.0	7.5	0.02	0.46	0.02	41.3
All Vehicles		649	22	683	3.4	0.196	4.4	LOS A	1.0	7.5	0.18	0.50	0.18	40.3

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2041 PM (Site Folder: Option 3Aiv)]

Tabilban Street / Wairoo Street
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	166	1	175	0.6	0.143	3.1	LOS A	0.8	5.5	0.22	0.40	0.22	36.7
6	R2	2	0	2	0.0	0.143	5.6	LOS A	0.8	5.5	0.22	0.40	0.22	42.8
Approach		168	1	177	0.6	0.143	3.1	LOS A	0.8	5.5	0.22	0.40	0.22	36.8
North: Wairoo St (N)														
7	L2	14	0	15	0.0	0.071	5.6	LOS A	0.4	2.7	0.34	0.60	0.34	41.0
9	R2	57	2	60	3.5	0.071	7.5	LOS A	0.4	2.7	0.34	0.60	0.34	41.5
Approach		71	2	75	2.8	0.071	7.1	LOS A	0.4	2.7	0.34	0.60	0.34	41.4
West: Tabilban St (W)														
10	L2	57	0	60	0.0	0.146	3.6	LOS A	0.7	4.9	0.02	0.41	0.02	43.0
11	T1	168	1	177	0.6	0.146	2.8	LOS A	0.7	4.9	0.02	0.41	0.02	37.3
Approach		225	1	237	0.4	0.146	3.0	LOS A	0.7	4.9	0.02	0.41	0.02	39.2
All Vehicles		464	4	488	0.9	0.146	3.7	LOS A	0.8	5.5	0.14	0.44	0.14	38.9

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

Roundabout LOS Method: SIDRA Roundabout LOS.

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.

Roundabout Capacity Model: SIDRA Standard.

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.
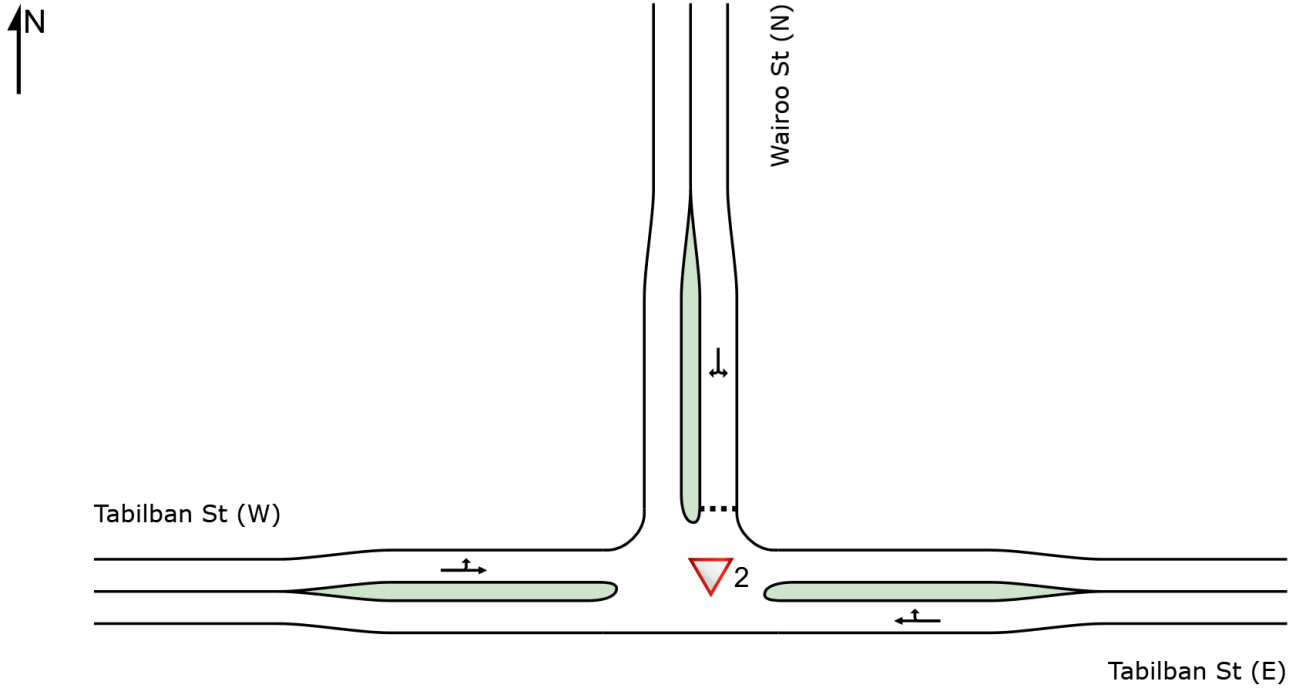
SITE LAYOUT

▽ Site: 2 [2021 AM (Site Folder: Option 3Av)]

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

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

MOVEMENT SUMMARY

▽ **Site: 2 [2021 AM (Site Folder: Option 3Av)]**

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	249	0	262	0.0	0.136	0.0	LOS A	0.0	0.3	0.02	0.01	0.02	39.9
6	R2	4	0	4	0.0	0.136	5.5	LOS A	0.0	0.3	0.02	0.01	0.02	39.8
Approach		253	0	266	0.0	0.136	0.1	NA	0.0	0.3	0.02	0.01	0.02	39.9
North: Wairoo St (N)														
7	L2	2	0	2	0.0	0.026	5.3	LOS A	0.1	0.6	0.40	0.62	0.40	42.1
9	R2	19	0	20	0.0	0.026	6.6	LOS A	0.1	0.6	0.40	0.62	0.40	41.6
Approach		21	0	22	0.0	0.026	6.4	LOS A	0.1	0.6	0.40	0.62	0.40	41.7
West: Tabilban St (W)														
10	L2	18	0	19	0.0	0.130	3.4	LOS A	0.0	0.0	0.00	0.03	0.00	40.0
11	T1	223	1	235	0.4	0.130	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	39.7
Approach		241	1	254	0.4	0.130	0.3	NA	0.0	0.0	0.00	0.03	0.00	39.7
All Vehicles		515	1	542	0.2	0.136	0.4	NA	0.1	0.6	0.02	0.05	0.02	39.9

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.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2021 PM (Site Folder: Option 3Av)]

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	[HV] veh/h	DEMAND FLOWS [Total] veh/h	[HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	[Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	81	0	85	0.0	0.046	0.2	LOS A	0.0	0.3	0.06	0.02	0.06	39.7
6	R2	3	0	3	0.0	0.046	7.0	LOS A	0.0	0.3	0.06	0.02	0.06	39.7
Approach		84	0	88	0.0	0.046	0.4	NA	0.0	0.3	0.06	0.02	0.06	39.7
North: Wairoo St (N)														
7	L2	5	0	5	0.0	0.041	6.5	LOS A	0.1	1.0	0.48	0.68	0.48	41.5
9	R2	24	0	25	0.0	0.041	7.5	LOS A	0.1	1.0	0.48	0.68	0.48	41.1
Approach		29	0	31	0.0	0.041	7.3	LOS A	0.1	1.0	0.48	0.68	0.48	41.1
West: Tabilban St (W)														
10	L2	58	1	61	1.7	0.296	3.5	LOS A	0.0	0.0	0.00	0.05	0.00	39.9
11	T1	492	0	518	0.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	39.5
Approach		550	1	579	0.2	0.296	0.4	NA	0.0	0.0	0.00	0.05	0.00	39.6
All Vehicles		663	1	698	0.2	0.296	0.7	NA	0.1	1.0	0.03	0.07	0.03	39.7

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.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2024 AM (Site Folder: Option 3Av)]

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	HV] veh/h	DEMAND FLOWS [Total] veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	324	0	341	0.0	0.176	0.0	LOS A	0.0	0.3	0.01	0.01	0.01	39.9
6	R2	4	0	4	0.0	0.176	5.6	LOS A	0.0	0.3	0.01	0.01	0.01	39.8
Approach		328	0	345	0.0	0.176	0.1	NA	0.0	0.3	0.01	0.01	0.01	39.9
North: Wairoo St (N)														
7	L2	3	0	3	0.0	0.036	5.2	LOS A	0.1	0.8	0.42	0.64	0.42	41.8
9	R2	24	0	25	0.0	0.036	7.0	LOS A	0.1	0.8	0.42	0.64	0.42	41.4
Approach		27	0	28	0.0	0.036	6.8	LOS A	0.1	0.8	0.42	0.64	0.42	41.4
West: Tabilban St (W)														
10	L2	37	4	39	10.8	0.130	3.5	LOS A	0.0	0.0	0.00	0.07	0.00	39.8
11	T1	202	0	213	0.0	0.130	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	39.5
Approach		239	4	252	1.7	0.130	0.6	NA	0.0	0.0	0.00	0.07	0.00	39.5
All Vehicles		594	4	625	0.7	0.176	0.6	NA	0.1	0.8	0.03	0.06	0.03	39.9

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.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2024 PM (Site Folder: Option 3Av)]

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Tabilban St (E)														
5	T1	130	0	137	0.0	0.075	0.2	LOS A	0.1	0.5	0.06	0.02	0.06	39.7
6	R2	5	0	5	0.0	0.075	6.9	LOS A	0.1	0.5	0.06	0.02	0.06	39.7
Approach		135	0	142	0.0	0.075	0.4	NA	0.1	0.5	0.06	0.02	0.06	39.7
North: Wairoo St (N)														
7	L2	9	0	9	0.0	0.035	6.1	LOS A	0.1	0.9	0.47	0.65	0.47	41.6
9	R2	16	2	17	12.5	0.035	7.9	LOS A	0.1	0.9	0.47	0.65	0.47	41.1
Approach		25	2	26	8.0	0.035	7.3	LOS A	0.1	0.9	0.47	0.65	0.47	41.2
West: Tabilban St (W)														
10	L2	108	0	114	0.0	0.284	3.4	LOS A	0.0	0.0	0.00	0.10	0.00	39.7
11	T1	418	0	440	0.0	0.284	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	39.2
Approach		526	0	554	0.0	0.284	0.7	NA	0.0	0.0	0.00	0.10	0.00	39.3
All Vehicles		686	2	722	0.3	0.284	0.9	NA	0.1	0.9	0.03	0.10	0.03	39.5

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.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2026 AM (Site Folder: Option 3Av)]

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
East: Tabilban St (E)														
5	T1	131	0	138	0.0	0.072	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	39.9
6	R2	2	0	2	0.0	0.072	5.4	LOS A	0.0	0.1	0.01	0.01	0.01	39.8
Approach		133	0	140	0.0	0.072	0.1	NA	0.0	0.1	0.01	0.01	0.01	39.9
North: Wairoo St (N)														
7	L2	6	1	6	16.7	0.047	5.2	LOS A	0.2	1.1	0.31	0.58	0.31	42.5
9	R2	39	0	41	0.0	0.047	5.8	LOS A	0.2	1.1	0.31	0.58	0.31	42.1
Approach		45	1	47	2.2	0.047	5.7	LOS A	0.2	1.1	0.31	0.58	0.31	42.2
West: Tabilban St (W)														
10	L2	109	7	115	6.4	0.135	3.5	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
11	T1	133	0	140	0.0	0.135	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	38.4
Approach		242	7	255	2.9	0.135	1.6	NA	0.0	0.0	0.00	0.21	0.00	38.9
All Vehicles		420	8	442	1.9	0.135	1.5	NA	0.2	1.1	0.04	0.18	0.04	39.6

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.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2026 PM (Site Folder: Option 3Av)]

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total] veh/h	HV] veh/h	[Total] veh/h	HV] %	v/c	sec		[Veh.] veh	Dist] m				km/h
East: Tabilban St (E)														
5	T1	115	2	121	1.7	0.063	0.0	LOS A	0.0	0.1	0.01	0.00	0.01	40.0
6	R2	1	0	1	0.0	0.063	5.3	LOS A	0.0	0.1	0.01	0.00	0.01	39.8
Approach		116	2	122	1.7	0.063	0.1	NA	0.0	0.1	0.01	0.00	0.01	40.0
North: Wairoo St (N)														
7	L2	5	0	5	0.0	0.038	5.1	LOS A	0.1	0.9	0.31	0.57	0.31	42.6
9	R2	32	0	34	0.0	0.038	5.7	LOS A	0.1	0.9	0.31	0.57	0.31	42.1
Approach		37	0	39	0.0	0.038	5.6	LOS A	0.1	0.9	0.31	0.57	0.31	42.2
West: Tabilban St (W)														
10	L2	36	1	38	2.8	0.112	3.4	LOS A	0.0	0.0	0.00	0.08	0.00	39.8
11	T1	170	1	179	0.6	0.112	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	39.4
Approach		206	2	217	1.0	0.112	0.6	NA	0.0	0.0	0.00	0.08	0.00	39.5
All Vehicles		359	4	378	1.1	0.112	0.9	NA	0.1	0.9	0.03	0.11	0.03	40.0

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.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2041 AM (Site Folder: Option 3Av)]

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

Mov ID	Turn	INPUT VOLUMES [Total] veh/h	INPUT VOLUMES [HV] veh/h	DEMAND FLOWS [Total] veh/h	DEMAND FLOWS [HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh.] veh	95% BACK OF QUEUE [Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Tabilban St (E)														
5	T1	152	0	160	0.0	0.083	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	39.9
6	R2	2	0	2	0.0	0.083	5.7	LOS A	0.0	0.1	0.01	0.01	0.01	39.8
Approach		154	0	162	0.0	0.083	0.1	NA	0.0	0.1	0.01	0.01	0.01	39.9
North: Wairoo St (N)														
7	L2	14	8	15	57.1	0.196	5.7	LOS A	0.7	5.4	0.36	0.64	0.36	42.0
9	R2	163	1	172	0.6	0.196	6.2	LOS A	0.7	5.4	0.36	0.64	0.36	41.9
Approach		177	9	186	5.1	0.196	6.2	LOS A	0.7	5.4	0.36	0.64	0.36	41.9
West: Tabilban St (W)														
10	L2	185	10	195	5.4	0.164	3.5	LOS A	0.0	0.0	0.00	0.29	0.00	38.9
11	T1	104	1	109	1.0	0.164	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	37.8
Approach		289	11	304	3.8	0.164	2.2	NA	0.0	0.0	0.00	0.29	0.00	38.6
All Vehicles		620	20	653	3.2	0.196	2.8	NA	0.7	5.4	0.11	0.32	0.11	39.9

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.

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.

MOVEMENT SUMMARY

▽ Site: 2 [2041 PM (Site Folder: Option 3Av)]

Tabilban Street / Wairoo Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
East: Tabilban St (E)														
5	T1	170	1	179	0.6	0.093	0.0	LOS A	0.0	0.2	0.02	0.01	0.02	39.9
6	R2	3	0	3	0.0	0.093	5.4	LOS A	0.0	0.2	0.02	0.01	0.02	39.8
Approach		173	1	182	0.6	0.093	0.1	NA	0.0	0.2	0.02	0.01	0.02	39.9
North: Wairoo St (N)														
7	L2	13	0	14	0.0	0.098	5.1	LOS A	0.3	2.5	0.36	0.61	0.36	42.4
9	R2	75	3	79	4.0	0.098	6.2	LOS A	0.3	2.5	0.36	0.61	0.36	41.9
Approach		88	3	93	3.4	0.098	6.1	LOS A	0.3	2.5	0.36	0.61	0.36	41.9
West: Tabilban St (W)														
10	L2	64	0	67	0.0	0.128	3.4	LOS A	0.0	0.0	0.00	0.13	0.00	39.6
11	T1	171	1	180	0.6	0.128	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	39.0
Approach		235	1	247	0.4	0.128	0.9	NA	0.0	0.0	0.00	0.13	0.00	39.2
All Vehicles		496	5	522	1.0	0.128	1.6	NA	0.3	2.5	0.07	0.17	0.07	40.1

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.

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.
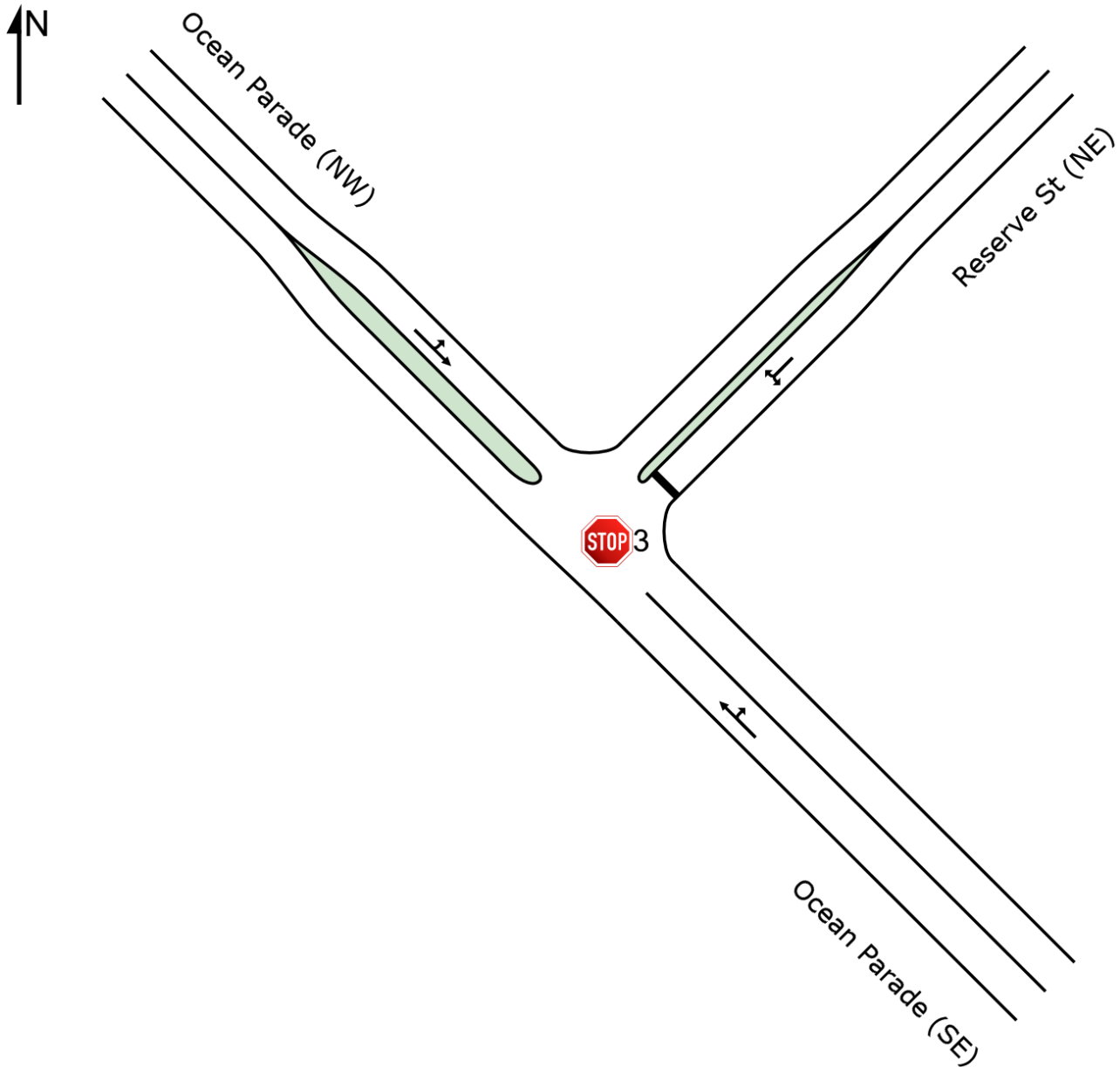
SITE LAYOUT

🛑 **Site: 3 [2021 AM (Site Folder: Option 3Ai)]**

Reserve Street / Ocean Parade
Site Category: (None)
Stop (Two-Way)

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

MOVEMENT SUMMARY

🛑 Site: 3 [2021 AM (Site Folder: Option 3Ai)]

Reserve Street / Ocean Parade
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
SouthEast: Ocean Parade (SE)														
5	T1	43	0	45	0.0	0.023	1.2	LOS A	0.0	0.1	0.02	0.23	0.02	43.8
6	R2	1	0	1	0.0	0.023	5.1	LOS A	0.0	0.1	0.02	0.23	0.02	43.7
Approach		44	0	46	0.0	0.023	1.3	NA	0.0	0.1	0.02	0.23	0.02	43.8
NorthEast: Reserve St (NE)														
7	L2	1	0	1	0.0	0.550	7.2	LOS A	4.1	28.4	0.39	0.90	0.44	40.5
9	R2	529	0	557	0.0	0.550	8.0	LOS A	4.1	28.4	0.39	0.90	0.44	36.9
Approach		530	0	558	0.0	0.550	8.0	LOS A	4.1	28.4	0.39	0.90	0.44	36.9
NorthWest: Ocean Parade (NW)														
10	L2	166	0	175	0.0	0.099	3.4	LOS A	0.0	0.0	0.00	0.43	0.00	38.8
11	T1	10	0	11	0.0	0.099	0.0	LOS A	0.0	0.0	0.00	0.43	0.00	38.6
Approach		176	0	185	0.0	0.099	3.2	NA	0.0	0.0	0.00	0.43	0.00	38.7
All Vehicles		750	0	789	0.0	0.550	6.5	NA	4.1	28.4	0.28	0.75	0.31	37.7

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.

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.