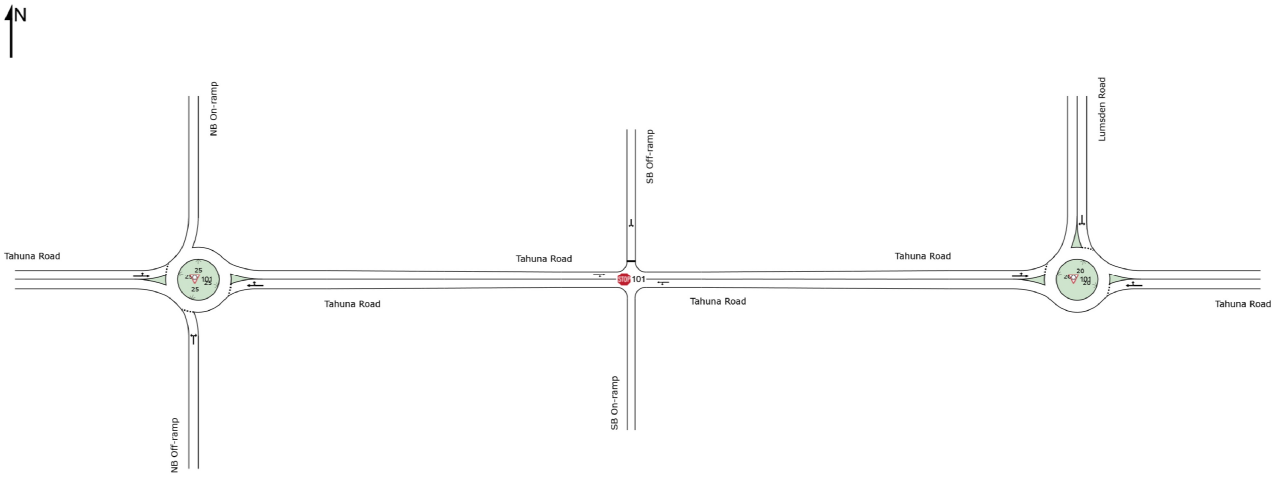
Appendix C – Sidra Intersection Summaries

Scenario 1 Sidra Results

NETWORK LAYOUT

Network: N101 [2031_AM Peak_No Upgrades]

New Network
Network Category: (None)



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
101	NA	SH1/ Tahuna Rd (West)_2031_AM Peak_No Upgrades
101	NA	SH1/ Tahuna Rd (East)_2031_AM Peak_No Upgrades
101	NA	Tahuna Rd/ Lumsden Rd_2031_AM Peak_No Upgrades

Organisation: BLOXAM, BURNETT & OLLIVER LTD | Created: Wednesday, 5 August 2020 5:35:25 PM
Project: K:\145860 Ohinewai Development\08 Sleepyhead Estate Rezoning ITA\Working File\Capacity Assessments\07 DFO Removal_2020 ITA\Assessment_External Network\Network Assessment_APL_2031.sip8

MOVEMENT SUMMARY

Site: 101 [SH1/ Tahuna Rd (West)_2031_AM Peak_No Upgrades]

Network: N101 [2031_AM Peak_No Upgrades]

Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: NB Off-ramp														
1	L2	34	0.0	34	0.0	0.403	3.9	LOS A	2.6	19.5	0.47	0.63	0.47	44.8
3	R2	445	10.0	445	10.0	0.403	8.9	LOS A	2.6	19.5	0.47	0.63	0.47	40.7
Approach		479	9.3	479	9.3	0.403	8.6	LOS A	2.6	19.5	0.47	0.63	0.47	41.2
East: Tahuna Road														
5	T1	24	0.0	24	0.0	0.125	2.4	LOS A	0.0	0.0	0.00	0.59	0.00	46.0
6	R2	192	5.0	192	5.0	0.125	7.4	LOS A	0.0	0.0	0.00	0.59	0.00	46.4
Approach		216	4.4	216	4.4	0.125	6.9	LOS A	0.0	0.0	0.00	0.59	0.00	46.4
West: Tahuna Road														
10	L2	11	0.0	11	0.0	0.062	6.0	LOS A	0.4	2.6	0.66	0.60	0.66	46.2
11	T1	42	0.0	42	0.0	0.062	5.8	LOS A	0.4	2.6	0.66	0.60	0.66	42.8
Approach		53	0.0	53	0.0	0.062	5.8	LOS A	0.4	2.6	0.66	0.60	0.66	43.9
All Vehicles		747	7.2	747	7.2	0.403	7.9	LOS A	2.6	19.5	0.35	0.62	0.35	42.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [SH1/ Tahuna Rd (East)_2031_AM Peak_No Upgrades]

Network: N101 [2031_AM Peak_No Upgrades]

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Tahuna Road														
4	L2	414	10.0	414	10.0	0.341	5.7	LOS A	0.0	0.0	0.00	0.40	0.00	52.1
5	T1	192	10.0	192	10.0	0.341	0.0	LOS A	0.0	0.0	0.00	0.40	0.00	43.6
Approach		605	10.0	605	10.0	0.341	3.9	NA	0.0	0.0	0.00	0.40	0.00	51.1
North: SB Off-ramp														
7	L2	246	10.0	246	10.0	0.346	12.2	LOS B	1.7	13.1	0.59	1.03	0.70	44.4
9	R2	15	0.0	15	0.0	0.346	16.4	LOS C	1.7	13.1	0.59	1.03	0.70	44.4
Approach		261	9.4	261	9.4	0.346	12.4	LOS B	1.7	13.1	0.59	1.03	0.70	44.4
West: Tahuna Road														
11	T1	445	10.0	445	10.0	0.276	0.5	LOS A	0.5	3.7	0.12	0.05	0.13	53.6
12	R2	31	0.0	31	0.0	0.276	9.6	LOS A	0.5	3.7	0.12	0.05	0.13	54.9
Approach		476	9.4	476	9.4	0.276	1.1	NA	0.5	3.7	0.12	0.05	0.13	53.9
All Vehicles		1342	9.7	1342	9.7	0.346	4.5	NA	1.7	13.1	0.16	0.40	0.18	49.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Tahuna Rd/ Lumsden Rd_2031_AM Peak_No Upgrades]

Network: N101 [2031_AM Peak_No Upgrades]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

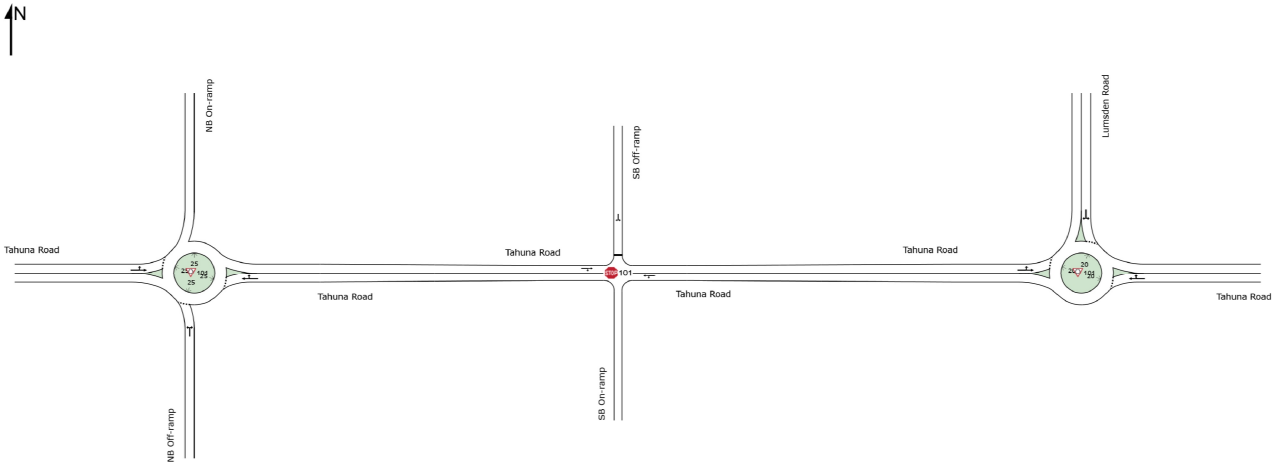
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Tahuna Road														
5	T1	405	5.0	405	5.0	0.386	4.2	LOS A	2.7	19.3	0.49	0.50	0.49	43.2
6	R2	51	0.0	51	0.0	0.386	8.6	LOS A	2.7	19.3	0.49	0.50	0.49	47.5
Approach		456	4.4	456	4.4	0.386	4.7	LOS A	2.7	19.3	0.49	0.50	0.49	44.0
North: Lumsden Road														
7	L2	11	0.0	11	0.0	0.183	3.7	LOS A	1.0	7.6	0.37	0.60	0.37	44.9
9	R2	201	10.0	201	10.0	0.183	8.3	LOS A	1.0	7.6	0.37	0.60	0.37	41.0
Approach		212	9.5	212	9.5	0.183	8.1	LOS A	1.0	7.6	0.37	0.60	0.37	41.4
West: Tahuna Road														
10	L2	521	10.0	521	10.0	0.472	3.2	LOS A	4.0	30.1	0.27	0.39	0.27	46.0
11	T1	171	0.0	171	0.0	0.472	3.1	LOS A	4.0	30.1	0.27	0.39	0.27	47.8
Approach		692	7.5	692	7.5	0.472	3.2	LOS A	4.0	30.1	0.27	0.39	0.27	46.4
All Vehicles		1359	6.8	1359	6.8	0.472	4.5	LOS A	4.0	30.1	0.36	0.46	0.36	44.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

NETWORK LAYOUT

Network: N101 [2031_PM Peak_No Upgrades]

New Network
Network Category: (None)



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
101	NA	SH1/ Tahuna Rd (West)_2031_PM Peak_No Upgrades
101	NA	SH1/ Tahuna Rd (East)_2031_PM Peak_No Upgrades
101	NA	Tahuna Rd/ Lumsden Rd_2031_PM Peak_No Upgrades

Organisation: BLOXAM, BURNETT & OLLIVER LTD | Created: Wednesday, 5 August 2020 5:35:27 PM
Project: K:\145860 Ohinewai Development\08 Sleepyhead Estate Rezoning ITA\Working File\Capacity Assessments\07 DFO Removal_2020 ITA\Assessment_External Network\Network Assessment_APL_2031.sip8

MOVEMENT SUMMARY

Site: 101 [SH1/ Tahuna Rd (West)_2031_PM Peak_No Upgrades]

Network: N101 [2031_PM Peak_No Upgrades]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: NB Off-ramp														
1	L2	13	0.0	13	0.0	0.444	5.4	LOS A	2.9	21.8	0.64	0.75	0.64	44.3
3	R2	428	10.0	428	10.0	0.444	10.5	LOS B	2.9	21.8	0.64	0.75	0.64	39.9
Approach		441	9.7	441	9.7	0.444	10.4	LOS B	2.9	21.8	0.64	0.75	0.64	40.1
East: Tahuna Road														
5	T1	47	0.0	47	0.0	0.241	2.4	LOS A	0.0	0.0	0.00	0.58	0.00	46.0
6	R2	361	10.0	361	10.0	0.241	7.5	LOS A	0.0	0.0	0.00	0.58	0.00	46.4
Approach		408	8.8	408	8.8	0.241	6.9	LOS A	0.0	0.0	0.00	0.58	0.00	46.3
West: Tahuna Road														
10	L2	9	0.0	9	0.0	0.063	7.4	LOS A	0.4	2.8	0.75	0.66	0.75	45.7
11	T1	36	0.0	36	0.0	0.063	7.3	LOS A	0.4	2.8	0.75	0.66	0.75	42.0
Approach		45	0.0	45	0.0	0.063	7.3	LOS A	0.4	2.8	0.75	0.66	0.75	43.2
All Vehicles		895	8.8	895	8.8	0.444	8.6	LOS A	2.9	21.8	0.36	0.67	0.36	43.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [SH1/ Tahuna Rd (East)_2031_PM Peak_No Upgrades]

Network: N101 [2031_PM Peak_No Upgrades]

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Tahuna Road														
4	L2	661	10.0	661	10.0	0.576	5.7	LOS A	0.0	0.0	0.00	0.38	0.00	52.3
5	T1	361	10.0	361	10.0	0.576	0.0	LOS A	0.0	0.0	0.00	0.38	0.00	44.2
Approach		1022	10.0	1022	10.0	0.576	3.7	NA	0.0	0.0	0.00	0.38	0.00	51.1
North: SB Off-ramp														
7	L2	342	10.0	342	10.0	0.438	12.7	LOS B	2.7	20.2	0.61	1.07	0.82	44.1
9	R2	6	0.0	6	0.0	0.438	20.9	LOS C	2.7	20.2	0.61	1.07	0.82	44.1
Approach		348	9.8	348	9.8	0.438	12.9	LOS B	2.7	20.2	0.61	1.07	0.82	44.1
West: Tahuna Road														
11	T1	428	10.0	428	10.0	0.269	1.3	LOS A	0.7	5.1	0.13	0.02	0.16	50.1
12	R2	15	0.0	15	0.0	0.269	17.7	LOS C	0.7	5.1	0.13	0.02	0.16	54.0
Approach		443	9.7	443	9.7	0.269	1.8	NA	0.7	5.1	0.13	0.02	0.16	50.6
All Vehicles		1814	9.9	1814	9.9	0.576	5.0	NA	2.7	20.2	0.15	0.43	0.20	49.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Tahuna Rd/ Lumsden Rd_2031_PM Peak_No Upgrades]

Network: N101 [2031_PM Peak_No Upgrades]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Tahuna Road														
5	T1	198	0.0	198	0.0	0.442	10.5	LOS B	3.7	26.3	0.99	1.00	1.07	38.9
6	R2	26	10.0	26	10.0	0.442	15.5	LOS B	3.7	26.3	0.99	1.00	1.07	44.5
Approach		224	1.2	224	1.2	0.442	11.1	LOS B	3.7	26.3	0.99	1.00	1.07	39.9
North: Lumsden Road														
7	L2	22	0.0	22	0.0	0.887	18.0	LOS B	19.2	145.3	1.00	1.31	1.78	38.5
9	R2	822	10.0	822	10.0	0.887	22.9	LOS C	19.2	145.3	1.00	1.31	1.78	31.8
Approach		844	9.7	844	9.7	0.887	22.8	LOS C	19.2	145.3	1.00	1.31	1.78	32.1
West: Tahuna Road														
10	L2	336	10.0	336	10.0	0.493	3.1	LOS A	5.2	37.8	0.23	0.35	0.23	46.1
11	T1	435	0.0	435	0.0	0.493	3.0	LOS A	5.2	37.8	0.23	0.35	0.23	47.9
Approach		771	4.4	771	4.4	0.493	3.0	LOS A	5.2	37.8	0.23	0.35	0.23	47.1
All Vehicles		1839	6.4	1839	6.4	0.887	13.1	LOS B	19.2	145.3	0.68	0.87	1.05	38.7

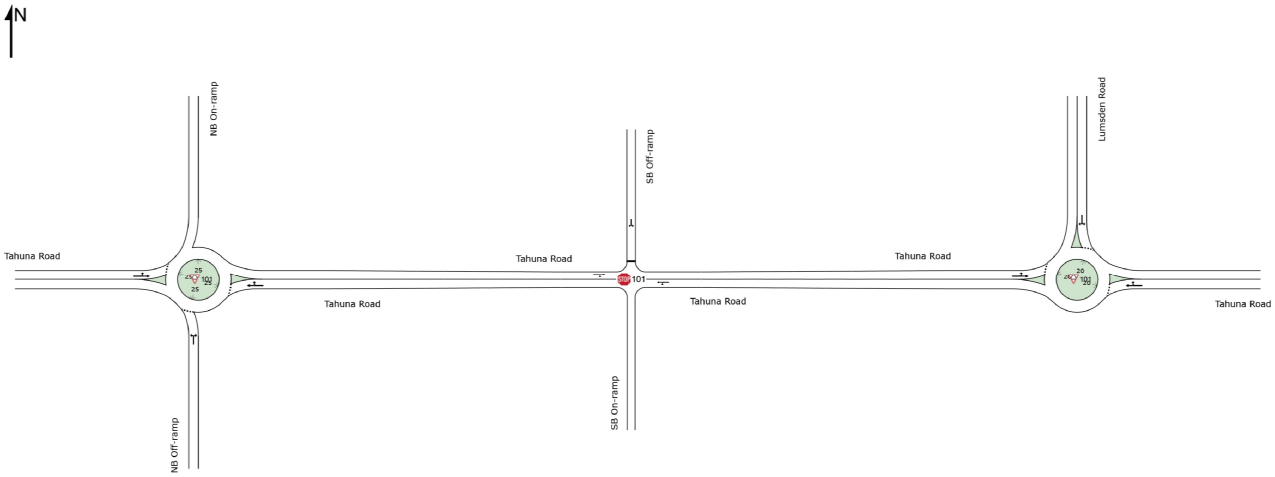
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Scenario 2 Sidra Results

NETWORK LAYOUT

Network: N101 [2041_AM Peak_No Upgrades]

New Network
Network Category: (None)



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
101	NA	SH1/ Tahuna Rd (West)_2041_AM Peak_No Upgrades
101	NA	SH1/ Tahuna Rd (East)_2041_AM Peak_No Upgrades
101	NA	Tahuna Rd/ Lumsden Rd_2041_AM Peak_No Upgrades

Organisation: BLOXAM, BURNETT & OLLIVER LTD | Created: Wednesday, 5 August 2020 5:35:52 PM
Project: K:\145860 Ohinewai Development\08 Sleepyhead Estate Rezoning ITA\Working File\Capacity Assessments\07 DFO Removal_2020 ITA\Assessment_External Network\Network Assessment_APL_2041.sip8

MOVEMENT SUMMARY

Site: 101 [SH1/ Tahuna Rd (West)_2041_AM Peak_No Upgrades]

Network: N101 [2041_AM Peak_No Upgrades]

Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: NB Off-ramp														
1	L2	34	0.0	34	0.0	0.396	4.9	LOS A	2.5	19.1	0.46	0.66	0.46	51.0
3	R2	440	10.0	440	10.0	0.396	10.5	LOS B	2.5	19.1	0.46	0.66	0.46	45.6
Approach		474	9.3	474	9.3	0.396	10.1	LOS B	2.5	19.1	0.46	0.66	0.46	46.2
East: Tahuna Road														
5	T1	24	0.0	24	0.0	0.121	3.8	LOS A	0.0	0.0	0.00	0.63	0.00	51.5
6	R2	181	10.0	181	10.0	0.121	9.1	LOS A	0.0	0.0	0.00	0.63	0.00	51.2
Approach		205	8.8	205	8.8	0.121	8.4	LOS A	0.0	0.0	0.00	0.63	0.00	51.2
West: Tahuna Road														
10	L2	11	0.0	11	0.0	0.062	7.0	LOS A	0.4	2.5	0.66	0.62	0.66	53.0
11	T1	42	0.0	42	0.0	0.062	7.1	LOS A	0.4	2.5	0.66	0.62	0.66	48.4
Approach		53	0.0	53	0.0	0.062	7.1	LOS A	0.4	2.5	0.66	0.62	0.66	49.8
All Vehicles		732	8.5	732	8.5	0.396	9.4	LOS A	2.5	19.1	0.35	0.65	0.35	47.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [SH1/ Tahuna Rd (East)_2041_AM Peak_No Upgrades]

Network: N101 [2041_AM Peak_No Upgrades]

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Tahuna Road														
4	L2	427	10.0	427	10.0	0.344	5.7	LOS A	0.0	0.0	0.00	0.41	0.00	52.0
5	T1	181	10.0	181	10.0	0.344	0.0	LOS A	0.0	0.0	0.00	0.41	0.00	43.3
Approach		608	10.0	608	10.0	0.344	4.0	NA	0.0	0.0	0.00	0.41	0.00	51.0
North: SB Off-ramp														
7	L2	268	10.0	268	10.0	0.421	13.6	LOS B	2.4	18.2	0.63	1.08	0.85	43.1
9	R2	15	0.0	15	0.0	0.421	16.5	LOS C	2.4	18.2	0.63	1.08	0.85	43.1
Approach		283	9.5	283	9.5	0.421	13.8	LOS B	2.4	18.2	0.63	1.08	0.85	43.1
West: Tahuna Road														
11	T1	440	10.0	440	10.0	0.247	0.1	LOS A	0.1	0.9	0.03	0.01	0.03	58.2
12	R2	7	0.0	7	0.0	0.247	9.5	LOS A	0.1	0.9	0.03	0.01	0.03	55.9
Approach		447	9.8	447	9.8	0.247	0.3	NA	0.1	0.9	0.03	0.01	0.03	58.1
All Vehicles		1339	9.8	1339	9.8	0.421	4.8	NA	2.4	18.2	0.14	0.42	0.19	49.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Tahuna Rd/ Lumsden Rd_2041_AM Peak_No Upgrades]

Network: N101 [2041_AM Peak_No Upgrades]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

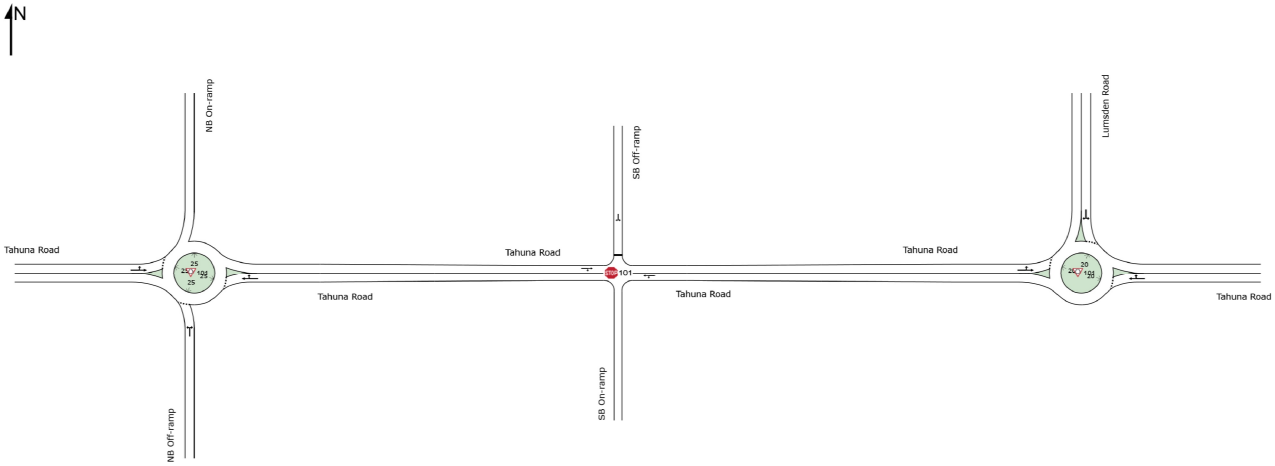
Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Tahuna Road														
5	T1	402	0.0	402	0.0	0.381	4.1	LOS A	2.6	18.6	0.50	0.50	0.50	43.2
6	R2	51	10.0	51	10.0	0.381	8.8	LOS A	2.6	18.6	0.50	0.50	0.50	47.4
Approach		453	1.1	453	1.1	0.381	4.6	LOS A	2.6	18.6	0.50	0.50	0.50	44.0
North: Lumsden Road														
7	L2	11	0.0	11	0.0	0.192	3.8	LOS A	1.1	8.1	0.39	0.61	0.39	44.8
9	R2	206	10.0	206	10.0	0.192	8.4	LOS A	1.1	8.1	0.39	0.61	0.39	40.9
Approach		217	9.5	217	9.5	0.192	8.2	LOS A	1.1	8.1	0.39	0.61	0.39	41.3
West: Tahuna Road														
10	L2	522	10.0	522	10.0	0.486	3.3	LOS A	4.3	31.8	0.29	0.39	0.29	45.9
11	T1	187	0.0	187	0.0	0.486	3.1	LOS A	4.3	31.8	0.29	0.39	0.29	47.7
Approach		709	7.4	709	7.4	0.486	3.2	LOS A	4.3	31.8	0.29	0.39	0.29	46.4
All Vehicles		1379	5.6	1379	5.6	0.486	4.5	LOS A	4.3	31.8	0.37	0.46	0.37	44.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

NETWORK LAYOUT

Network: N101 [2041_PM Peak_No Upgrades]

New Network
Network Category: (None)



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
101	NA	SH1/ Tahuna Rd (West)_2041_PM Peak_No Upgrades
101	NA	SH1/ Tahuna Rd (East)_2041_PM Peak_No Upgrades
101	NA	Tahuna Rd/ Lumsden Rd_2041_PM Peak_No Upgrades

Organisation: BLOXAM, BURNETT & OLLIVER LTD | Created: Wednesday, 5 August 2020 5:35:54 PM
Project: K:\145860 Ohinewai Development\08 Sleepyhead Estate Rezoning ITA\Working File\Capacity Assessments\07 DFO Removal_2020 ITA\Assessment_External Network\Network Assessment_APL_2041.sip8

MOVEMENT SUMMARY

Site: 101 [SH1/ Tahuna Rd (West)_2041_PM Peak_No Upgrades]

Network: N101 [2041_PM Peak_No Upgrades]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: NB Off-ramp														
1	L2	13	0.0	13	0.0	0.469	7.0	LOS A	3.2	24.1	0.68	0.80	0.70	49.9
3	R2	439	10.0	439	10.0	0.469	12.7	LOS B	3.2	24.1	0.68	0.80	0.70	43.8
Approach		452	9.7	452	9.7	0.469	12.5	LOS B	3.2	24.1	0.68	0.80	0.70	44.1
East: Tahuna Road														
5	T1	47	0.0	47	0.0	0.266	3.8	LOS A	0.0	0.0	0.00	0.64	0.00	51.4
6	R2	403	10.0	403	10.0	0.266	9.1	LOS A	0.0	0.0	0.00	0.64	0.00	51.1
Approach		451	8.9	451	8.9	0.266	8.5	LOS A	0.0	0.0	0.00	0.64	0.00	51.1
West: Tahuna Road														
10	L2	9	0.0	9	0.0	0.067	9.2	LOS A	0.4	3.0	0.78	0.71	0.78	51.8
11	T1	36	0.0	36	0.0	0.067	9.3	LOS A	0.4	3.0	0.78	0.71	0.78	46.5
Approach		45	0.0	45	0.0	0.067	9.3	LOS A	0.4	3.0	0.78	0.71	0.78	48.2
All Vehicles		947	8.9	947	8.9	0.469	10.4	LOS B	3.2	24.1	0.36	0.72	0.37	47.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [SH1/ Tahuna Rd (East)_2041_PM Peak_No Upgrades]

Network: N101 [2041_PM Peak_No Upgrades]

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Tahuna Road														
4	L2	655	10.0	655	10.0	0.595	5.7	LOS A	0.0	0.0	0.00	0.36	0.00	52.4
5	T1	403	10.0	403	10.0	0.595	0.0	LOS A	0.0	0.0	0.00	0.36	0.00	44.7
Approach		1058	10.0	1058	10.0	0.595	3.5	NA	0.0	0.0	0.00	0.36	0.00	51.2
North: SB Off-ramp														
7	L2	345	10.0	345	10.0	0.518	14.7	LOS B	3.5	26.7	0.67	1.13	1.02	42.2
9	R2	6	0.0	6	0.0	0.518	23.9	LOS C	3.5	26.7	0.67	1.13	1.02	42.2
Approach		352	9.8	352	9.8	0.518	14.8	LOS B	3.5	26.7	0.67	1.13	1.02	42.2
West: Tahuna Road														
11	T1	439	10.0	439	10.0	0.279	1.5	LOS A	0.8	5.9	0.14	0.02	0.17	49.1
12	R2	15	0.0	15	0.0	0.279	19.1	LOS C	0.8	5.9	0.14	0.02	0.17	53.7
Approach		454	9.7	454	9.7	0.279	2.1	NA	0.8	5.9	0.14	0.02	0.17	49.6
All Vehicles		1863	9.9	1863	9.9	0.595	5.3	NA	3.5	26.7	0.16	0.43	0.24	48.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Tahuna Rd/ Lumsden Rd_2041_PM Peak_No Upgrades]

Network: N101 [2041_PM Peak_No Upgrades]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Tahuna Road														
5	T1	241	0.0	241	0.0	0.521	12.2	LOS B	4.8	33.8	1.00	1.07	1.18	37.7
6	R2	26	10.0	26	10.0	0.521	17.2	LOS B	4.8	33.8	1.00	1.07	1.18	43.7
Approach		267	1.0	267	1.0	0.521	12.7	LOS B	4.8	33.8	1.00	1.07	1.18	38.6
North: Lumsden Road														
7	L2	22	0.0	22	0.0	0.890	18.7	LOS B	19.5	148.1	1.00	1.34	1.83	38.2
9	R2	817	10.0	817	10.0	0.890	23.7	LOS C	19.5	148.1	1.00	1.34	1.83	31.4
Approach		839	9.7	839	9.7	0.890	23.5	LOS C	19.5	148.1	1.00	1.34	1.83	31.7
West: Tahuna Road														
10	L2	338	10.0	338	10.0	0.501	3.1	LOS A	5.4	38.9	0.23	0.34	0.23	46.1
11	T1	445	0.0	445	0.0	0.501	3.0	LOS A	5.4	38.9	0.23	0.34	0.23	47.8
Approach		783	4.3	783	4.3	0.501	3.0	LOS A	5.4	38.9	0.23	0.34	0.23	47.1
All Vehicles		1889	6.3	1889	6.3	0.890	13.5	LOS B	19.5	148.1	0.68	0.89	1.08	38.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.