

Colston Budd Hunt & Kafes Pty Ltd

as Trustee for C & B Unit Trust
ABN 27 623 918 759

Our Ref: SK/9574/jj

3 November, 2015

Transport Planning
Town Planning
Retail Studies

Fabcot Pty Ltd
c/- Woolworths Limited
PO Box 8000
BAULKHAM HILLS NSW 2153

Attention: Marc Lucas
Email: MLucas3@woolworths.com.au

Dear Sir,

RE: NORTH SINGLETON SHOPPING CENTRE

1. As requested, we are writing in response to matters raised by Singleton Council regarding the above development. We previously prepared a traffic report⁽¹⁾ which was submitted with the development application.
2. In an email dated 28 October 2015, Singleton Council requested the following additional SIDRA modelling and information:
 1. *The SIDRA Summary Movement tables for all modelled intersections;*
 2. *The main access off Glass Parade is to be modelled using SIDRA to determine if the right turn lane length is suitable;*
 3. *An assessment of whether an auxiliary left turn lane into the site off Glass Parade at the main access is required;*
 4. *Council will require a bus stop in Glass Parade, preferably close to the internal pedestrian link and a suitable location needs to be investigated and suggested; and*
 5. *The configuration of the car park immediately inside the main access is considered by Council to be satisfactory. There are too many conflicting movements and the potential for queuing to occur across egress lanes and into Glass Parade due to a lack of queuing area. Please provide a better access configuration to minimise the risks of both internal and external queuing.*
3. We understand that parts 4 and 5 will be undertaken by others.

⁽¹⁾ "Traffic Report for Proposed Retail Development, Bridgman Road & Glass Parade, Singleton", June 2015, Colston Budd Hunt & Kafes Pty Ltd.

Suite 1801/Tower A, Zenith Centre, 821 Pacific Highway, Chatswood NSW 2067

P.O. Box 5186 West Chatswood NSW 1515 Tel: (02) 9411 2411 Fax: (02) 9411 2422

Directors - Geoff Budd - Lindsay Hunt - Stan Kafes - Tim Rogers - Joshua Hollis ACN 002 334 296

EMAIL: cbhk@cbhk.com.au

4. As set down in the traffic report, the following intersections have been modelled by SIDRA for the existing traffic and additional development traffic flows for the weekday afternoon and Saturday peak periods:
 - ❑ Bridgman Road/Glass Parade;
 - ❑ Bridgman Road/Gardner Circuit (north);
 - ❑ Bridgman Road/Gardner Circuit (south);
 - ❑ Glass Parade/Wattle Ponds Road;
 - ❑ Glass Parade/site access; and
 - ❑ Bridgman Road/site access.
5. Copies of the SIDRA summary movement tables for the above intersections and access driveways are attached. The SIDRA analysis found that the roundabout controlled intersections of Bridgman Road/Glass Parade and Glass Parade/Wattle Pond Road would operate with average delays, for the movement with the highest average delay, of less than 15 seconds per vehicle during peak periods. This represents level of service A/B, a good level of intersection operation.
6. The unsignalised intersections of Bridgman Road/Gardner Circuit (north) and Bridgman Road/Gardner Circuit (south) would operate with average delays for all movements through the intersections of less than 15 seconds per vehicle during peak periods. This represents level of service A/B, a good level of intersection operation.
7. The customer access driveways on Glass Parade and Bridgman Road (exit only) would operate with average delays for the highest delayed movement of less than 15 seconds per vehicle during peak periods. This represents level of service A/B, a good level of service.
8. With regards to the main access onto Glass Parade, the SIDRA analysis found that the 95% back of queue, for the right turn lane into the site, would be some 10 metres (equivalent to less than 2 vehicles) during peak periods. This queue length will comfortably be accommodated within the existing modified right turn lane of some 30 metres in length.
9. The SIDRA analysis also indicated that the left turn movement into the site from Glass Parade will comfortably be catered for by the existing traffic lane arrangements in Glass Parade. No auxiliary left turn lane is therefore required.

Colston Budd Hunt & Kafes Pty Ltd

10. We trust the above provides the information you require. Finally, if you should have any queries, please do not hesitate to contact us.

Yours faithfully,

COLSTON BUDD HUNT & KAFES PTY LTD

A handwritten signature in black ink, appearing to read "Stan Kafes". The signature is written in a cursive, flowing style with a large initial 'S'.

S. Kafes

Director

MOVEMENT SUMMARY

▽ Site: Fri PM (Ex): Bridgman Road - Gardner Circuit (North)

Fri PM Existing
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bridgman Road											
1	L2	90	0.0	0.048	5.5	LOS A	0.0	0.0	0.00	0.58	53.2
2	T1	95	0.0	0.049	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		185	0.0	0.049	2.7	NA	0.0	0.0	0.00	0.28	58.1
North: Bridgman Road											
8	T1	65	0.0	0.029	2.5	LOS A	0.2	1.2	0.21	0.27	70.6
9	R2	5	0.0	0.029	7.5	LOS A	0.2	1.2	0.28	0.26	72.9
Approach		70	0.0	0.029	2.9	NA	0.2	1.2	0.21	0.27	70.8
West: Gardner Circuit (North)											
10	L2	10	0.0	0.072	5.1	LOS A	0.3	1.8	0.25	0.54	69.6
12	R2	85	0.0	0.072	5.1	LOS A	0.3	1.8	0.25	0.54	51.6
Approach		95	0.0	0.072	5.1	LOS A	0.3	1.8	0.25	0.54	54.3
All Vehicles		350	0.0	0.072	3.4	NA	0.3	1.8	0.11	0.35	60.5

Level of Service (LOS) Method: Delay (RTA NSW).

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.

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MOVEMENT SUMMARY

▽ Site: Sat MD (Ex): Bridgman Road - Gardner Circuit (North)

Sat MD Existing
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bridgman Road											
1	L2	60	0.0	0.032	5.5	LOS A	0.0	0.0	0.00	0.58	53.2
2	T1	60	0.0	0.031	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		120	0.0	0.032	2.8	NA	0.0	0.0	0.00	0.29	58.0
North: Bridgman Road											
8	T1	70	0.0	0.031	2.3	LOS A	0.2	1.2	0.16	0.28	70.8
9	R2	5	0.0	0.031	7.2	LOS A	0.2	1.2	0.22	0.27	73.2
Approach		75	0.0	0.031	2.7	NA	0.2	1.2	0.17	0.28	70.9
West: Gardner Circuit (North)											
10	L2	10	0.0	0.059	5.0	LOS A	0.2	1.5	0.20	0.53	69.8
12	R2	70	0.0	0.059	5.0	LOS A	0.2	1.5	0.20	0.53	51.7
Approach		80	0.0	0.059	5.0	LOS A	0.2	1.5	0.20	0.53	54.9
All Vehicles		275	0.0	0.059	3.4	NA	0.2	1.5	0.10	0.36	61.8

Level of Service (LOS) Method: Delay (RTA NSW).

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.

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MOVEMENT SUMMARY

▽ Site: Fri PM (Ex+D): Bridgman Road - Gardner Circuit (North)

Fri PM Existing + Development
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bridgman Road											
1	L2	120	0.0	0.065	5.6	LOS A	0.0	0.0	0.00	0.58	53.2
2	T1	125	0.0	0.064	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		245	0.0	0.065	2.7	NA	0.0	0.0	0.00	0.28	58.1
North: Bridgman Road											
8	T1	95	0.0	0.041	2.7	LOS A	0.3	1.8	0.25	0.25	70.6
9	R2	5	0.0	0.041	7.8	LOS A	0.3	1.8	0.34	0.23	72.8
Approach		100	0.0	0.041	3.0	NA	0.3	1.8	0.26	0.25	70.7
West: Gardner Circuit (North)											
10	L2	10	0.0	0.100	5.4	LOS A	0.4	2.6	0.31	0.57	69.5
12	R2	115	0.0	0.100	5.4	LOS A	0.4	2.6	0.31	0.57	51.4
Approach		125	0.0	0.100	5.4	LOS A	0.4	2.6	0.31	0.57	53.5
All Vehicles		470	0.0	0.100	3.5	NA	0.4	2.6	0.14	0.35	60.6

Level of Service (LOS) Method: Delay (RTA NSW).

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.

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MOVEMENT SUMMARY

▽ Site: Sat MD (Ex+D): Bridgman Road - Gardner Circuit (North)

Sat MD Existing + Development
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bridgman Road											
1	L2	90	0.0	0.048	5.5	LOS A	0.0	0.0	0.00	0.58	53.2
2	T1	90	0.0	0.046	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		180	0.0	0.048	2.8	NA	0.0	0.0	0.00	0.29	58.0
North: Bridgman Road											
8	T1	100	0.0	0.043	2.5	LOS A	0.3	1.8	0.21	0.26	70.7
9	R2	5	0.0	0.043	7.5	LOS A	0.3	1.8	0.28	0.25	73.0
Approach		105	0.0	0.043	2.8	NA	0.3	1.8	0.22	0.26	70.8
West: Gardner Circuit (North)											
10	L2	10	0.0	0.085	5.2	LOS A	0.3	2.2	0.27	0.55	69.6
12	R2	100	0.0	0.085	5.2	LOS A	0.3	2.2	0.27	0.55	51.5
Approach		110	0.0	0.085	5.2	LOS A	0.3	2.2	0.27	0.55	53.8
All Vehicles		395	0.0	0.085	3.5	NA	0.3	2.2	0.13	0.35	61.5

Level of Service (LOS) Method: Delay (RTA NSW).

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.

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MOVEMENT SUMMARY

▽ Site: Fri PM (Ex): Bridgman Road - Gardner Circuit (South)

Fri PM Existing
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bridgman Road											
1	L2	120	0.0	0.065	5.5	LOS A	0.0	0.0	0.00	0.58	53.3
2	T1	310	0.0	0.159	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		430	0.0	0.159	1.6	NA	0.0	0.0	0.00	0.16	58.0
North: Bridgman Road											
8	T1	200	0.0	0.112	1.7	LOS A	0.8	5.7	0.38	0.09	57.6
9	R2	30	0.0	0.112	7.7	LOS A	0.8	5.7	0.49	0.12	48.3
Approach		230	0.0	0.112	2.5	NA	0.8	5.7	0.39	0.09	56.8
West: Gardner Circuit (South)											
10	L2	25	0.0	0.121	6.6	LOS A	0.4	3.1	0.45	0.68	43.9
12	R2	90	0.0	0.121	6.6	LOS A	0.4	3.1	0.45	0.68	49.9
Approach		115	0.0	0.121	6.6	LOS A	0.4	3.1	0.45	0.68	49.0
All Vehicles		775	0.0	0.159	2.6	NA	0.8	5.7	0.18	0.22	56.2

Level of Service (LOS) Method: Delay (RTA NSW).

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.

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MOVEMENT SUMMARY

▽ Site: Sat MD (Ex): Bridgman Road - Gardner Circuit (South)

Sat MD Existing
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
South: Bridgman Road											
1	L2	90	0.0	0.048	5.5	LOS A	0.0	0.0	0.00	0.58	53.3
2	T1	200	0.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		290	0.0	0.103	1.7	NA	0.0	0.0	0.00	0.18	57.7
North: Bridgman Road											
8	T1	200	0.0	0.096	1.0	LOS A	0.7	4.7	0.31	0.04	58.3
9	R2	15	0.0	0.096	6.8	LOS A	0.7	4.7	0.39	0.05	49.5
Approach		215	0.0	0.096	1.4	NA	0.7	4.7	0.32	0.04	57.9
West: Gardner Circuit (South)											
10	L2	15	0.0	0.097	6.0	LOS A	0.4	2.5	0.39	0.62	44.4
12	R2	90	0.0	0.097	6.0	LOS A	0.4	2.5	0.39	0.62	50.2
Approach		105	0.0	0.097	6.0	LOS A	0.4	2.5	0.39	0.62	49.7
All Vehicles		610	0.0	0.103	2.4	NA	0.7	4.7	0.18	0.21	56.3

Level of Service (LOS) Method: Delay (RTA NSW).

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.

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MOVEMENT SUMMARY

▽ Site: Fri PM (Ex+D): Bridgman Road - Gardner Circuit (South)

Fri PM Existing + Development
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
South: Bridgman Road											
1	L2	120	0.0	0.065	5.5	LOS A	0.0	0.0	0.00	0.58	53.3
2	T1	410	0.0	0.210	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		530	0.0	0.210	1.3	NA	0.0	0.0	0.00	0.13	58.3
North: Bridgman Road											
8	T1	300	0.0	0.189	2.5	LOS A	1.5	10.6	0.44	0.13	56.8
9	R2	60	0.0	0.189	8.8	LOS A	1.5	10.6	0.59	0.17	46.6
Approach		360	0.0	0.189	3.5	NA	1.5	10.6	0.46	0.13	55.6
West: Gardner Circuit (South)											
10	L2	55	0.0	0.184	7.6	LOS A	0.7	4.7	0.52	0.75	42.8
12	R2	90	0.0	0.184	7.6	LOS A	0.7	4.7	0.52	0.75	49.1
Approach		145	0.0	0.184	7.6	LOS A	0.7	4.7	0.52	0.75	47.4
All Vehicles		1035	0.0	0.210	2.9	NA	1.5	10.6	0.23	0.22	55.8

Level of Service (LOS) Method: Delay (RTA NSW).

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.

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MOVEMENT SUMMARY

▽ Site: Sat MD (Ex+D): Bridgman Road - Gardner Circuit (South)

Sat MD Existing + Development
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
South: Bridgman Road											
1	L2	90	0.0	0.048	5.5	LOS A	0.0	0.0	0.00	0.58	53.3
2	T1	300	0.0	0.154	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		390	0.0	0.154	1.3	NA	0.0	0.0	0.00	0.13	58.3
North: Bridgman Road											
8	T1	300	0.0	0.166	1.6	LOS A	1.3	8.8	0.38	0.09	57.6
9	R2	45	0.0	0.166	7.6	LOS A	1.3	8.8	0.49	0.12	48.3
Approach		345	0.0	0.166	2.4	NA	1.3	8.8	0.39	0.09	56.8
West: Gardner Circuit (South)											
10	L2	45	0.0	0.149	6.8	LOS A	0.5	3.8	0.46	0.69	43.6
12	R2	90	0.0	0.149	6.8	LOS A	0.5	3.8	0.46	0.69	49.7
Approach		135	0.0	0.149	6.8	LOS A	0.5	3.8	0.46	0.69	48.3
All Vehicles		870	0.0	0.166	2.6	NA	1.3	8.8	0.23	0.20	56.1

Level of Service (LOS) Method: Delay (RTA NSW).

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.

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MOVEMENT SUMMARY

 Site: Fri PM (Ex): Bridgman Road - Glass Parade

Fri PM Existing
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
South: Bridgman Road											
2	T1	165	0.0	0.210	4.2	LOS A	1.3	8.8	0.11	0.53	54.9
3	R2	165	0.0	0.210	8.8	LOS A	1.3	8.8	0.11	0.53	49.0
3u	U	1	0.0	0.210	10.9	LOS A	1.3	8.8	0.11	0.53	52.3
Approach		331	0.0	0.210	6.5	LOS A	1.3	8.8	0.11	0.53	52.2
East: Glass Parade											
4	L2	100	0.0	0.068	3.6	LOS A	0.4	2.5	0.28	0.43	48.1
6	R2	20	0.0	0.020	8.1	LOS A	0.1	0.7	0.31	0.57	50.9
Approach		120	0.0	0.068	4.3	LOS A	0.4	2.5	0.28	0.46	48.8
North: Bridgman Road											
7	L2	20	0.0	0.124	4.7	LOS A	0.6	4.4	0.33	0.46	52.1
8	T1	130	0.0	0.124	4.9	LOS A	0.6	4.4	0.33	0.46	55.6
9u	U	1	0.0	0.124	11.6	LOS A	0.6	4.4	0.33	0.46	57.6
Approach		151	0.0	0.124	4.9	LOS A	0.6	4.4	0.33	0.46	55.0
All Vehicles		602	0.0	0.210	5.7	LOS A	1.3	8.8	0.20	0.50	52.3

Level of Service (LOS) Method: Delay (RTA NSW).

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: Sat MD (Ex): Bridgman Road - Glass Parade

Sat MD Existing
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bridgman Road											
2	T1	105	0.0	0.140	4.2	LOS A	0.8	5.4	0.09	0.54	54.9
3	R2	115	0.0	0.140	8.8	LOS A	0.8	5.4	0.09	0.54	49.0
Approach		220	0.0	0.140	6.6	LOS A	0.8	5.4	0.09	0.54	52.1
East: Glass Parade											
4	L2	90	0.0	0.060	3.5	LOS A	0.3	2.2	0.26	0.43	48.2
6	R2	15	0.0	0.015	8.0	LOS A	0.1	0.5	0.30	0.57	50.9
Approach		105	0.0	0.060	4.2	LOS A	0.3	2.2	0.27	0.45	48.8
North: Bridgman Road											
7	L2	15	0.0	0.111	4.4	LOS A	0.6	3.9	0.27	0.44	52.3
8	T1	125	0.0	0.111	4.6	LOS A	0.6	3.9	0.27	0.44	55.8
9u	U	1	0.0	0.111	11.3	LOS A	0.6	3.9	0.27	0.44	57.8
Approach		141	0.0	0.111	4.7	LOS A	0.6	3.9	0.27	0.44	55.4
All Vehicles		466	0.0	0.140	5.5	LOS A	0.8	5.4	0.18	0.49	52.4

Level of Service (LOS) Method: Delay (RTA NSW).

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: Fri PM (Ex+D): Bridgman Road - Glass Parade

Fri PM Existing + Development
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bridgman Road											
2	T1	145	0.0	0.337	4.7	LOS A	2.3	15.9	0.32	0.58	53.6
3	R2	315	0.0	0.337	9.3	LOS A	2.3	15.9	0.32	0.58	47.7
3u	U	1	0.0	0.337	11.4	LOS A	2.3	15.9	0.32	0.58	50.1
Approach		461	0.0	0.337	7.8	LOS A	2.3	15.9	0.32	0.58	49.8
East: Glass Parade											
4	L2	200	0.0	0.139	3.7	LOS A	0.8	5.7	0.34	0.46	47.9
6	R2	100	0.0	0.087	8.1	LOS A	0.5	3.3	0.35	0.59	50.8
Approach		300	0.0	0.139	5.2	LOS A	0.8	5.7	0.35	0.50	49.2
North: Bridgman Road											
7	L2	100	0.0	0.244	5.6	LOS A	1.4	10.1	0.52	0.59	51.7
8	T1	160	0.0	0.244	5.8	LOS A	1.4	10.1	0.52	0.59	54.9
9u	U	1	0.0	0.244	12.5	LOS A	1.4	10.1	0.52	0.59	57.2
Approach		261	0.0	0.244	5.8	LOS A	1.4	10.1	0.52	0.59	53.5
All Vehicles		1022	0.0	0.337	6.5	LOS A	2.3	15.9	0.38	0.56	50.7

Level of Service (LOS) Method: Delay (RTA NSW).

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: Sat MD (Ex+D): Bridgman Road - Glass Parade

Sat MD Existing + Development
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
South: Bridgman Road											
2	T1	85	0.0	0.258	4.6	LOS A	1.6	11.1	0.29	0.58	53.5
3	R2	265	0.0	0.258	9.2	LOS A	1.6	11.1	0.29	0.58	47.6
Approach		350	0.0	0.258	8.1	LOS A	1.6	11.1	0.29	0.58	49.2
East: Glass Parade											
4	L2	190	0.0	0.131	3.7	LOS A	0.8	5.3	0.33	0.46	48.0
6	R2	95	0.0	0.082	8.0	LOS A	0.4	3.0	0.34	0.59	50.8
Approach		285	0.0	0.131	5.1	LOS A	0.8	5.3	0.33	0.50	49.2
North: Bridgman Road											
7	L2	95	0.0	0.225	5.3	LOS A	1.3	9.1	0.47	0.55	51.8
8	T1	155	0.0	0.225	5.5	LOS A	1.3	9.1	0.47	0.55	55.1
9u	U	1	0.0	0.225	12.2	LOS A	1.3	9.1	0.47	0.55	57.3
Approach		251	0.0	0.225	5.5	LOS A	1.3	9.1	0.47	0.55	53.7
All Vehicles		886	0.0	0.258	6.4	LOS A	1.6	11.1	0.35	0.55	50.6

Level of Service (LOS) Method: Delay (RTA NSW).

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: Fri PM (Ex): Glass Parade - Wattle Ponds Road

Fri PM Existing
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
South: Wattle Ponds Road											
1	L2	20	0.0	0.024	3.3	LOS A	0.1	0.8	0.26	0.43	45.7
2	T1	5	0.0	0.024	3.3	LOS A	0.1	0.8	0.26	0.43	47.9
3	R2	5	0.0	0.024	7.8	LOS A	0.1	0.8	0.26	0.43	46.4
Approach		30	0.0	0.024	4.1	LOS A	0.1	0.8	0.26	0.43	46.3
East: Glass Parade											
4	L2	15	0.0	0.066	3.2	LOS A	0.3	2.2	0.23	0.41	43.8
5	T1	55	0.0	0.066	3.2	LOS A	0.3	2.2	0.23	0.41	47.7
6	R2	15	0.0	0.066	7.7	LOS A	0.3	2.2	0.23	0.41	48.3
Approach		85	0.0	0.066	4.0	LOS A	0.3	2.2	0.23	0.41	47.4
North: Wattle Ponds Road											
7	L2	10	0.0	0.051	3.3	LOS A	0.2	1.7	0.24	0.55	45.6
8	T1	5	0.0	0.051	3.2	LOS A	0.2	1.7	0.24	0.55	46.2
9	R2	50	0.0	0.051	7.7	LOS A	0.2	1.7	0.24	0.55	47.4
Approach		65	0.0	0.051	6.7	LOS A	0.2	1.7	0.24	0.55	47.1
West: Glass Parade											
10	L2	85	0.0	0.123	2.9	LOS A	0.6	4.4	0.11	0.41	47.8
11	T1	65	0.0	0.123	2.9	LOS A	0.6	4.4	0.11	0.41	48.1
12	R2	35	0.0	0.123	7.4	LOS A	0.6	4.4	0.11	0.41	48.1
Approach		185	0.0	0.123	3.8	LOS A	0.6	4.4	0.11	0.41	47.9
All Vehicles		365	0.0	0.123	4.4	LOS A	0.6	4.4	0.17	0.44	47.5

Level of Service (LOS) Method: Delay (RTA NSW).

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: Sat MD (Ex): Glass Parade - Wattle Ponds Road

Sat MD Existing
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Wattle Ponds Road											
1	L2	15	0.0	0.019	3.2	LOS A	0.1	0.6	0.23	0.43	45.7
2	T1	5	0.0	0.019	3.2	LOS A	0.1	0.6	0.23	0.43	47.9
3	R2	5	0.0	0.019	7.7	LOS A	0.1	0.6	0.23	0.43	46.4
Approach		25	0.0	0.019	4.1	LOS A	0.1	0.6	0.23	0.43	46.4
East: Glass Parade											
4	L2	10	0.0	0.043	3.2	LOS A	0.2	1.4	0.22	0.38	44.2
5	T1	40	0.0	0.043	3.2	LOS A	0.2	1.4	0.22	0.38	47.9
6	R2	5	0.0	0.043	7.7	LOS A	0.2	1.4	0.22	0.38	48.5
Approach		55	0.0	0.043	3.6	LOS A	0.2	1.4	0.22	0.38	47.6
North: Wattle Ponds Road											
7	L2	5	0.0	0.046	3.2	LOS A	0.2	1.5	0.21	0.55	45.5
8	T1	5	0.0	0.046	3.1	LOS A	0.2	1.5	0.21	0.55	46.1
9	R2	50	0.0	0.046	7.6	LOS A	0.2	1.5	0.21	0.55	47.3
Approach		60	0.0	0.046	6.9	LOS A	0.2	1.5	0.21	0.55	47.1
West: Glass Parade											
10	L2	55	0.0	0.085	2.9	LOS A	0.4	3.0	0.08	0.44	47.7
11	T1	40	0.0	0.085	2.8	LOS A	0.4	3.0	0.08	0.44	48.0
12	R2	35	0.0	0.085	7.3	LOS A	0.4	3.0	0.08	0.44	47.9
Approach		130	0.0	0.085	4.1	LOS A	0.4	3.0	0.08	0.44	47.8
All Vehicles		270	0.0	0.085	4.6	LOS A	0.4	3.0	0.15	0.45	47.5

Level of Service (LOS) Method: Delay (RTA NSW).

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: Fri PM (Ex+D): Glass Parade - Wattle Ponds Road

Fri PM Existing + Development
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
South: Wattle Ponds Road											
1	L2	50	0.0	0.050	3.7	LOS A	0.2	1.7	0.34	0.46	45.7
2	T1	5	0.0	0.050	3.6	LOS A	0.2	1.7	0.34	0.46	47.9
3	R2	5	0.0	0.050	8.1	LOS A	0.2	1.7	0.34	0.46	46.4
Approach		60	0.0	0.050	4.0	LOS A	0.2	1.7	0.34	0.46	46.0
East: Glass Parade											
4	L2	15	0.0	0.098	3.5	LOS A	0.5	3.5	0.32	0.43	43.4
5	T1	90	0.0	0.098	3.5	LOS A	0.5	3.5	0.32	0.43	47.4
6	R2	15	0.0	0.098	8.0	LOS A	0.5	3.5	0.32	0.43	48.1
Approach		120	0.0	0.098	4.1	LOS A	0.5	3.5	0.32	0.43	47.2
North: Wattle Ponds Road											
7	L2	10	0.0	0.082	3.6	LOS A	0.4	2.8	0.32	0.58	45.2
8	T1	5	0.0	0.082	3.6	LOS A	0.4	2.8	0.32	0.58	45.7
9	R2	85	0.0	0.082	8.1	LOS A	0.4	2.8	0.32	0.58	47.0
Approach		100	0.0	0.082	7.4	LOS A	0.4	2.8	0.32	0.58	46.8
West: Glass Parade											
10	L2	120	0.0	0.185	2.9	LOS A	1.0	7.2	0.12	0.42	47.7
11	T1	100	0.0	0.185	2.9	LOS A	1.0	7.2	0.12	0.42	48.0
12	R2	65	0.0	0.185	7.4	LOS A	1.0	7.2	0.12	0.42	47.9
Approach		285	0.0	0.185	3.9	LOS A	1.0	7.2	0.12	0.42	47.8
All Vehicles		565	0.0	0.185	4.6	LOS A	1.0	7.2	0.22	0.45	47.3

Level of Service (LOS) Method: Delay (RTA NSW).

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 (Akcelik M3D).

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

MOVEMENT SUMMARY

 Site: Sat MD (Ex+D): Glass Parade - Wattle Ponds Road

Sat MD Existing + Development
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Wattle Ponds Road											
1	L2	45	0.0	0.045	3.5	LOS A	0.2	1.5	0.31	0.45	45.8
2	T1	5	0.0	0.045	3.5	LOS A	0.2	1.5	0.31	0.45	48.0
3	R2	5	0.0	0.045	8.0	LOS A	0.2	1.5	0.31	0.45	46.5
Approach		55	0.0	0.045	3.9	LOS A	0.2	1.5	0.31	0.45	46.1
East: Glass Parade											
4	L2	10	0.0	0.074	3.5	LOS A	0.4	2.5	0.31	0.40	43.7
5	T1	75	0.0	0.074	3.5	LOS A	0.4	2.5	0.31	0.40	47.7
6	R2	5	0.0	0.074	8.0	LOS A	0.4	2.5	0.31	0.40	48.3
Approach		90	0.0	0.074	3.7	LOS A	0.4	2.5	0.31	0.40	47.4
North: Wattle Ponds Road											
7	L2	5	0.0	0.077	3.5	LOS A	0.4	2.6	0.29	0.58	45.2
8	T1	5	0.0	0.077	3.4	LOS A	0.4	2.6	0.29	0.58	45.7
9	R2	85	0.0	0.077	7.9	LOS A	0.4	2.6	0.29	0.58	47.0
Approach		95	0.0	0.077	7.5	LOS A	0.4	2.6	0.29	0.58	46.9
West: Glass Parade											
10	L2	90	0.0	0.146	2.9	LOS A	0.8	5.5	0.08	0.44	47.7
11	T1	75	0.0	0.146	2.8	LOS A	0.8	5.5	0.08	0.44	47.9
12	R2	65	0.0	0.146	7.3	LOS A	0.8	5.5	0.08	0.44	47.8
Approach		230	0.0	0.146	4.1	LOS A	0.8	5.5	0.08	0.44	47.8
All Vehicles		470	0.0	0.146	4.7	LOS A	0.8	5.5	0.20	0.46	47.3

Level of Service (LOS) Method: Delay (RTA NSW).

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 (Akcelik M3D).

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

MOVEMENT SUMMARY

▽ Site: Sat MD (Ex + D): Glass Parade - Site Access

Sat MD Existing + Development
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
East: Glass Parade East											
5	T1	111	5.0	0.059	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	105	0.0	0.085	6.9	LOS A	0.4	2.6	0.44	0.64	52.1
Approach		216	2.6	0.085	3.4	NA	0.4	2.6	0.22	0.31	55.9
North: Site Access North											
7	L2	105	0.0	0.072	6.0	LOS A	0.3	2.1	0.24	0.55	52.9
9	R2	189	0.0	0.279	9.4	LOS A	1.2	8.7	0.57	0.82	50.2
Approach		295	0.0	0.279	8.2	LOS A	1.2	8.7	0.45	0.73	51.1
West: Glass Parade West											
10	L2	242	0.0	0.203	5.6	LOS A	0.0	0.0	0.00	0.38	55.2
11	T1	137	5.0	0.203	0.0	LOS A	0.0	0.0	0.00	0.38	56.6
Approach		379	1.8	0.203	3.6	NA	0.0	0.0	0.00	0.38	55.7
All Vehicles		889	1.4	0.279	5.0	NA	1.2	8.7	0.20	0.48	54.1

Level of Service (LOS) Method: Delay (HCM 2000).

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.

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Project: G:\Traffic\SIDRA 6.0\9574 Singleton Supermarket\Glass Parade - Site Access.sip6

MOVEMENT SUMMARY

▽ Site: Fri PM (Ex + D): Glass Parade - Site Access

Fri PM Existing + Development
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
East: Glass Parade East											
5	T1	126	5.0	0.067	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	105	0.0	0.091	7.2	LOS A	0.4	2.7	0.48	0.67	52.0
Approach		232	2.7	0.091	3.3	NA	0.4	2.7	0.22	0.30	56.1
North: Site Access North											
7	L2	105	0.0	0.077	6.2	LOS A	0.3	2.2	0.29	0.57	52.7
9	R2	189	0.0	0.310	10.6	LOS B	1.5	10.2	0.61	0.88	49.4
Approach		295	0.0	0.310	9.0	LOS A	1.5	10.2	0.50	0.77	50.5
West: Glass Parade West											
10	L2	242	0.0	0.233	5.6	LOS A	0.0	0.0	0.00	0.33	55.5
11	T1	195	5.0	0.233	0.0	LOS A	0.0	0.0	0.00	0.33	57.0
Approach		437	2.2	0.233	3.1	NA	0.0	0.0	0.00	0.33	56.2
All Vehicles		963	1.7	0.310	5.0	NA	1.5	10.2	0.20	0.46	54.3

Level of Service (LOS) Method: Delay (HCM 2000).

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.

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Organisation: COLSTON BUDD HUNT & KAFES PTY LTD | Processed: Tuesday, 3 November 2015 8:42:09 AM

Project: G:\Traffic\SIDRA 6.0\9574 Singleton Supermarket\Glass Parade - Site Access.sip6

MOVEMENT SUMMARY

▽ Site: Fri PM (Ex + D): Bridgman Road - Site Access

Fri PM Existing + Development
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Site Access East											
1	L2	53	0.0	0.037	6.0	LOS A	0.1	1.0	0.25	0.55	52.8
Approach		53	0.0	0.037	6.0	LOS A	0.1	1.0	0.25	0.55	52.8
East: Bridgman Road North											
5	T1	158	0.0	0.081	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		158	0.0	0.081	0.0	NA	0.0	0.0	0.00	0.00	60.0
West: Bridgman Road South											
11	T1	195	0.0	0.100	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		195	0.0	0.100	0.0	NA	0.0	0.0	0.00	0.00	60.0
All Vehicles		405	0.0	0.100	0.8	NA	0.1	1.0	0.03	0.07	58.9

Level of Service (LOS) Method: Delay (HCM 2000).

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: Sat MD (Ex + D): Bridgman Road - Site Access

Sat MD Existing + Development
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand 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 per veh	Average Speed km/h
South: Site Access East											
1	L2	53	0.0	0.036	6.0	LOS A	0.1	1.0	0.24	0.55	52.9
Approach		53	0.0	0.036	6.0	LOS A	0.1	1.0	0.24	0.55	52.9
East: Bridgman Road North											
5	T1	147	0.0	0.076	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		147	0.0	0.076	0.0	NA	0.0	0.0	0.00	0.00	60.0
West: Bridgman Road South											
11	T1	126	0.0	0.065	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		126	0.0	0.065	0.0	NA	0.0	0.0	0.00	0.00	60.0
All Vehicles		326	0.0	0.076	1.0	NA	0.1	1.0	0.04	0.09	58.7

Level of Service (LOS) Method: Delay (HCM 2000).

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.