Appendix C: Capacity Analysis Results

Note: A basic saturation flow of 1950 veh/hr/lane was used in all SIDRA runs, with a practical degree of saturation of 95%

A. Buffelsfontein Road / Victoria Drive

SIDRA ANALYSIS

1. 2017 Background Traffic AM

2. 2017 Background Traffic PM

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

5. 2022 Background Traffic (excluding development traffic) PM

6. Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

9. Existing Layout

10. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM – Upgrades

11. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM – Upgrades

12. Layout (Upgrades)

13. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

14. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

15. Upgraded Layout

16. 2027 Background Traffic (excluding development traffic) AM

17. 2027 Background Traffic (excluding development traffic) PM

18. Upgraded Layout

19. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

20. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

21. Upgraded Layout

22. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

23. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

24. Upgraded Layout

1. 2017 Background Traffic AM

MOVEMENT SUMMARY

🚦 Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2017 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 100 seconds (User-Given Phase Times)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Victoria Drive											
1	L2	19	0.0	0.490	39.7	LOS D	10.2	71.1	0.90	0.76	37.6
2	T1	224	0.0	0.490	34.1	LOS C	10.2	71.1	0.90	0.76	38.3
3	R2	158	0.0	0.628	48.4	LOS D	7.5	52.4	0.98	0.83	32.8
Approach		401	0.0	0.628	40.0	LOS D	10.2	71.1	0.93	0.78	35.9
East: Heugh Road											
4	L2	104	0.0	0.417	14.7	LOS B	11.1	78.0	0.52	0.52	43.8
5	T1	377	0.0	0.417	9.2	LOS A	11.1	78.0	0.52	0.52	50.5
6	R2	12	0.0	0.079	37.1	LOS D	0.5	3.3	0.78	0.70	35.1
Approach		493	0.0	0.417	11.0	LOS B	11.1	78.0	0.53	0.53	48.8
North: 10th Aveune											
7	L2	28	0.0	0.519	38.5	LOS D	7.6	53.2	0.87	0.72	31.8
8	T1	160	0.0	0.519	33.0	LOS C	7.6	53.2	0.87	0.72	32.0
9	R2	90	0.0	0.474	48.1	LOS D	4.1	29.0	0.95	0.78	26.7
Approach		278	0.0	0.519	38.4	LOS D	7.6	53.2	0.89	0.74	30.0
West: Buffelsfontein Road											
10	L2	82	0.0	0.845	22.9	LOS C	38.6	270.5	0.81	0.79	45.4
11	T1	918	0.0	0.845	17.4	LOS B	38.6	270.5	0.81	0.79	46.4
12	R2	30	0.0	0.063	18.3	LOS B	0.7	5.1	0.52	0.68	44.9
Approach		1030	0.0	0.845	17.8	LOS B	38.6	270.5	0.80	0.79	46.3
All Vehicles		2202	0.0	0.845	23.0	LOS C	38.6	270.5	0.77	0.72	42.3

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.

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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2017 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 100 seconds (User-Given Phase Times)

Phase Times specified by the user
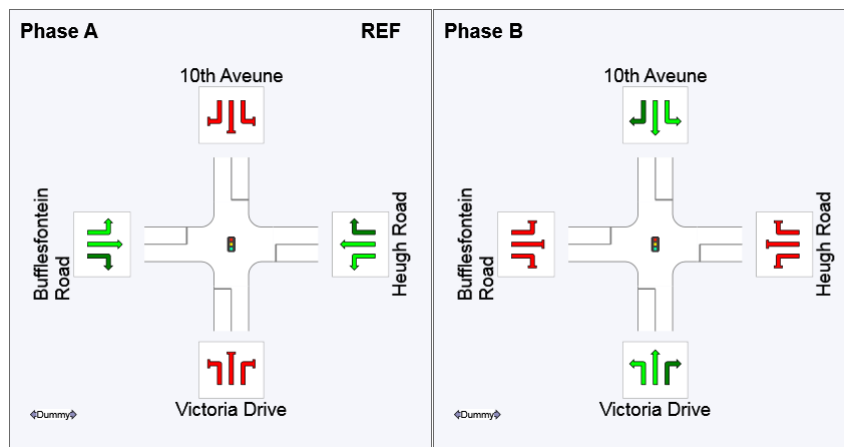**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	69
Green Time (sec)	64	26
Phase Time (sec)	69	31
Phase Split	69%	31%

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

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	🔴	Phase Transition Applied

2.   2017 Background Traffic PM

MOVEMENT SUMMARY

Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2017 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 100 seconds (User-Given Phase Times)

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: Victoria Drive											
1	L2	68	0.0	0.307	37.8	LOS D	5.9	41.5	0.85	0.73	37.5
2	T1	82	0.0	0.307	32.3	LOS C	5.9	41.5	0.85	0.73	38.2
3	R2	61	0.0	0.244	44.6	LOS D	2.6	18.4	0.90	0.76	33.9
Approach		211	0.0	0.307	37.6	LOS D	5.9	41.5	0.86	0.74	36.6
East: Heugh Road											
4	L2	101	0.0	0.762	18.7	LOS B	30.3	212.2	0.75	0.71	40.5
5	T1	811	0.0	0.762	13.2	LOS B	30.3	212.2	0.75	0.71	48.0
6	R2	12	0.0	0.025	17.5	LOS B	0.3	1.9	0.49	0.66	44.3
Approach		924	0.0	0.762	13.9	LOS B	30.3	212.2	0.75	0.71	47.3
North: 10th Aveune											
7	L2	14	0.0	0.609	38.6	LOS D	7.7	54.1	0.87	0.72	32.0
8	T1	177	0.0	0.609	33.0	LOS C	7.7	54.1	0.87	0.72	32.5
9	R2	149	0.0	0.765	50.2	LOS D	7.3	51.0	0.95	0.89	26.1
Approach		340	0.0	0.765	40.8	LOS D	7.7	54.1	0.90	0.79	29.3
West: Buffelsfontein Road											
10	L2	21	0.0	0.760	17.4	LOS B	12.1	84.7	0.51	0.50	48.9
11	T1	455	0.0	0.760	11.9	LOS B	12.1	84.7	0.51	0.50	50.0
12	R2	212	0.0	1.124	313.1	LOS F	35.4	247.7	1.00	1.93	9.6
Approach		688	0.0	1.124	104.9	LOS F	35.4	247.7	0.66	0.94	21.8
All Vehicles		2163	0.0	1.124	49.4	LOS D	35.4	247.7	0.76	0.80	31.1

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2017 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 100 seconds (User-Given Phase Times)

Phase Times specified by the user
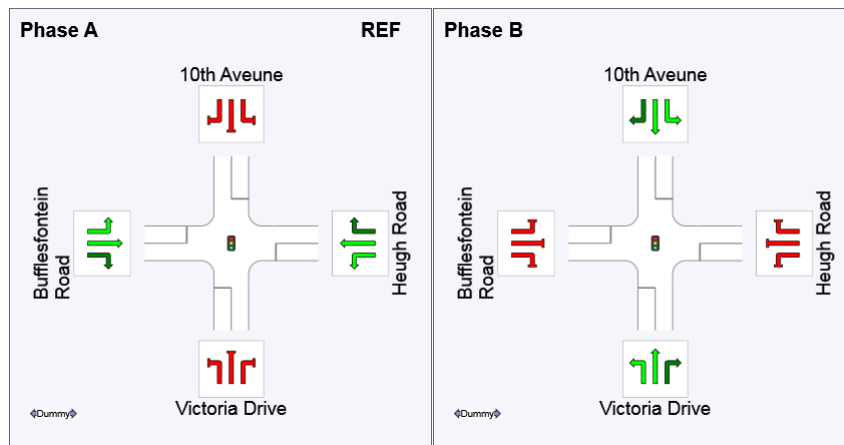**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	69
Green Time (sec)	64	26
Phase Time (sec)	69	31
Phase Split	69%	31%

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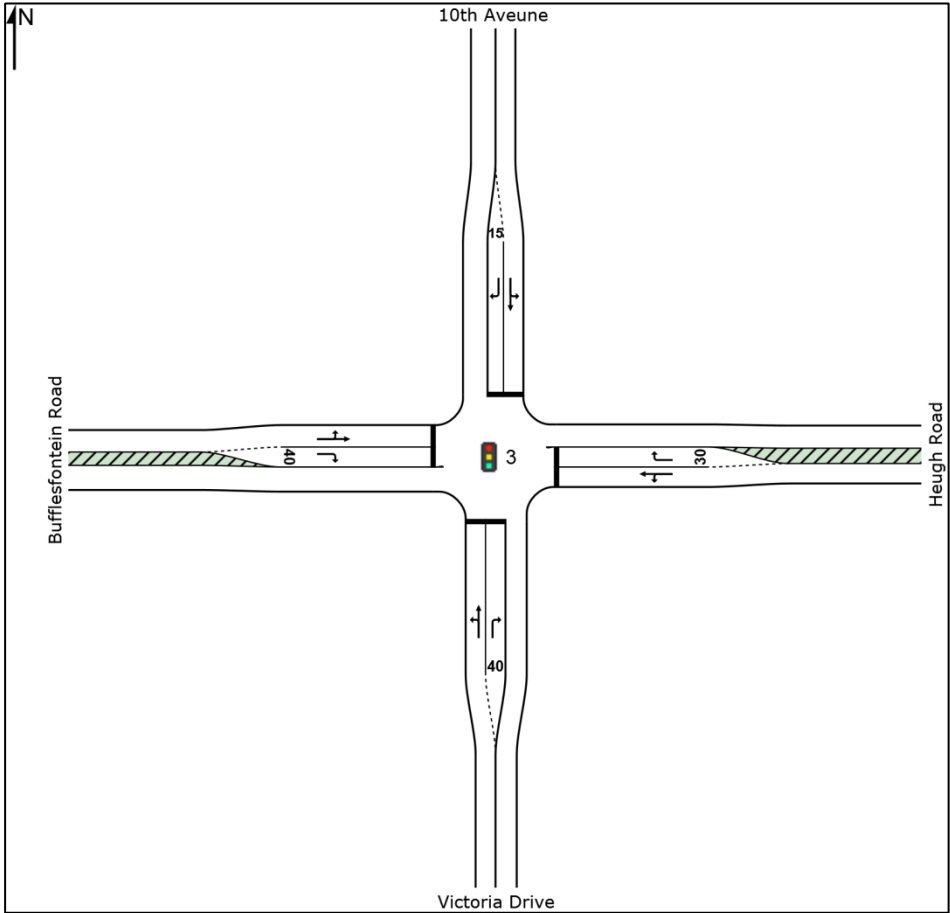

REF: Reference Phase
VAR: Variable Phase

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM
MOVEMENT SUMMARY

🚦 Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Victoria Drive											
1	L2	20	0.0	0.669	31.3	LOS C	7.4	52.1	0.98	0.85	41.1
2	T1	236	0.0	0.669	25.8	LOS C	7.4	52.1	0.98	0.85	41.9
3	R2	166	0.0	0.838	40.7	LOS D	5.7	39.9	1.00	1.00	35.2
Approach		422	0.0	0.838	31.9	LOS C	7.4	52.1	0.99	0.91	39.0
East: Heugh Road											
4	L2	109	0.0	0.421	11.5	LOS B	7.4	51.9	0.54	0.53	47.0
5	T1	397	0.0	0.421	5.9	LOS A	7.4	51.9	0.54	0.53	53.1
6	R2	13	0.0	0.075	27.1	LOS C	0.3	2.3	0.82	0.70	39.2
Approach		519	0.0	0.421	7.6	LOS A	7.4	51.9	0.54	0.54	51.7
North: 10th Aveune											
7	L2	29	0.0	0.607	30.0	LOS C	5.4	38.1	0.94	0.79	35.9
8	T1	168	0.0	0.607	24.4	LOS C	5.4	38.1	0.94	0.79	36.3
9	R2	94	0.0	0.586	37.1	LOS D	2.9	20.5	1.00	0.80	30.4
Approach		291	0.0	0.607	29.1	LOS C	5.4	38.1	0.96	0.79	34.1
West: Buffelsfontein Road											
10	L2	86	0.0	0.891	27.7	LOS C	35.0	245.0	0.87	1.00	42.8
11	T1	965	0.0	0.891	22.2	LOS C	35.0	245.0	0.87	1.00	43.7
12	R2	31	0.0	0.064	13.5	LOS B	0.5	3.2	0.52	0.68	47.8
Approach		1082	0.0	0.891	22.4	LOS C	35.0	245.0	0.86	0.99	43.8
All Vehicles		2314	0.0	0.891	21.7	LOS C	35.0	245.0	0.82	0.85	43.0

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	43
Green Time (sec)	38	12
Phase Time (sec)	43	17
Phase Split	72%	28%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.
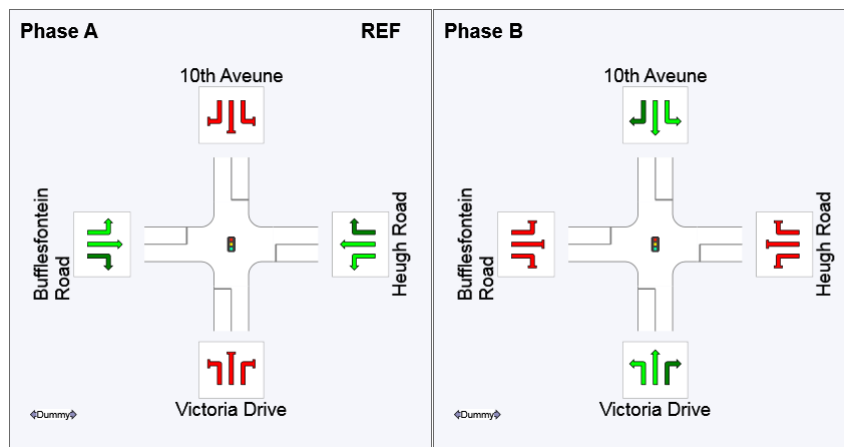
REF: Reference Phase
VAR: Variable Phase

5.   2022 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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: Victoria Drive											
1	L2	72	0.0	0.459	30.2	LOS C	4.3	30.3	0.94	0.77	40.7
2	T1	86	0.0	0.459	24.7	LOS C	4.3	30.3	0.94	0.77	41.5
3	R2	64	0.0	0.368	35.0	LOS C	1.9	13.3	0.97	0.75	37.3
Approach		222	0.0	0.459	29.5	LOS C	4.3	30.3	0.95	0.76	39.9
East: Heugh Road											
4	L2	106	0.0	0.786	15.6	LOS B	21.6	151.2	0.76	0.75	43.3
5	T1	852	0.0	0.786	10.1	LOS B	21.6	151.2	0.76	0.75	50.3
6	R2	13	0.0	0.025	12.7	LOS B	0.2	1.3	0.49	0.66	47.3
Approach		971	0.0	0.786	10.7	LOS B	21.6	151.2	0.76	0.75	49.7
North: 10th Aveune											
7	L2	15	0.0	0.753	33.6	LOS C	6.1	42.6	0.96	0.89	34.2
8	T1	187	0.0	0.753	28.0	LOS C	6.1	42.6	0.96	0.89	34.9
9	R2	157	0.0	0.967	64.4	LOS E	7.2	50.5	1.00	1.34	22.6
Approach		359	0.0	0.967	44.2	LOS D	7.2	50.5	0.98	1.09	28.1
West: Buffelsfontein Road											
10	L2	23	0.0	0.396	10.9	LOS B	6.9	48.4	0.51	0.46	53.6
11	T1	478	0.0	0.396	5.3	LOS A	6.9	48.4	0.51	0.46	55.0
12	R2	223	0.0	1.019	129.5	LOS F	17.9	125.2	1.00	1.75	18.9
Approach		724	0.0	1.019	43.8	LOS D	17.9	125.2	0.66	0.86	34.6
All Vehicles		2276	0.0	1.019	28.3	LOS C	21.6	151.2	0.78	0.84	39.1

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
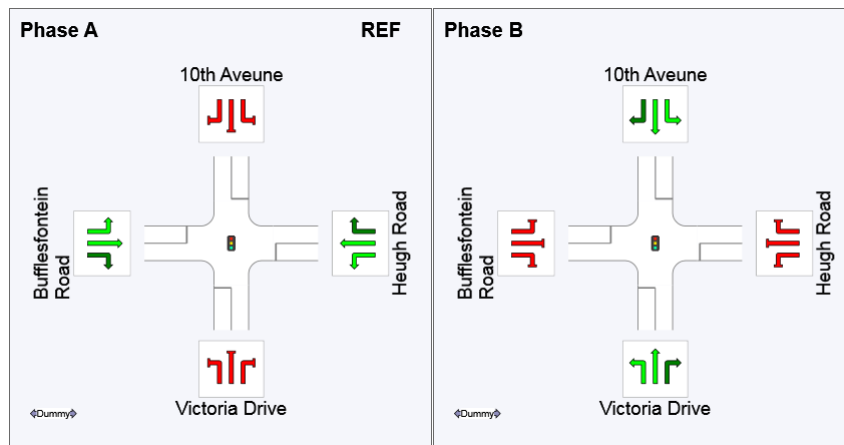**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	44
Green Time (sec)	39	11
Phase Time (sec)	44	16
Phase Split	73%	27%

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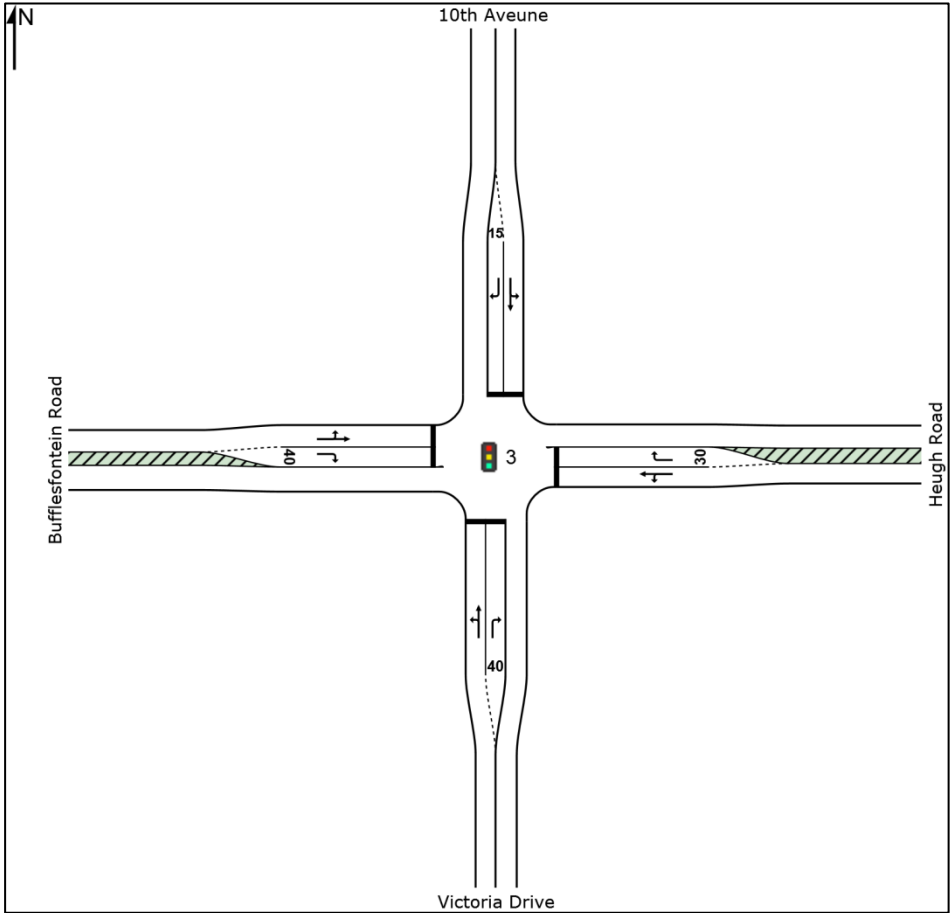and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

6.   Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

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: Victoria Drive											
1	L2	28	0.0	0.870	42.4	LOS D	13.9	97.1	0.99	1.06	36.6
2	T1	324	0.0	0.870	36.9	LOS D	13.9	97.1	0.99	1.06	31.4
3	R2	218	0.0	0.957	67.9	LOS E	11.4	80.1	1.00	1.27	26.7
Approach		570	0.0	0.957	49.0	LOS D	13.9	97.1	0.99	1.14	29.3
East: Heugh Road											
4	L2	186	0.0	0.522	13.6	LOS B	11.1	77.6	0.60	0.61	44.5
5	T1	397	0.0	0.522	8.1	LOS A	11.1	77.6	0.60	0.61	50.2
6	R2	13	0.0	0.089	33.7	LOS C	0.4	2.8	0.87	0.70	30.2
Approach		596	0.0	0.522	10.4	LOS B	11.1	77.6	0.61	0.61	48.2
North: 10th Aveune											
7	L2	29	0.0	0.471	30.6	LOS C	6.5	45.8	0.90	0.75	25.5
8	T1	189	0.0	0.471	25.1	LOS C	6.5	45.8	0.90	0.75	25.5
9	R2	94	0.0	0.666	43.1	LOS D	3.5	24.4	1.00	0.84	18.7
Approach		312	0.0	0.666	31.0	LOS C	6.5	45.8	0.93	0.78	22.9
West: Buffelsfontein Road											
10	L2	86	0.0	0.939	44.6	LOS D	50.0	350.2	0.91	1.17	29.9
11	T1	965	0.0	0.939	39.0	LOS D	50.0	350.2	0.91	1.17	35.2
12	R2	43	0.0	0.109	18.1	LOS B	0.9	6.2	0.61	0.71	45.1
Approach		1094	0.0	0.939	38.6	LOS D	50.0	350.2	0.90	1.16	35.2
All Vehicles		2572	0.0	0.957	33.5	LOS C	50.0	350.2	0.86	0.98	34.7

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	48
Green Time (sec)	43	17
Phase Time (sec)	48	22
Phase Split	69%	31%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.
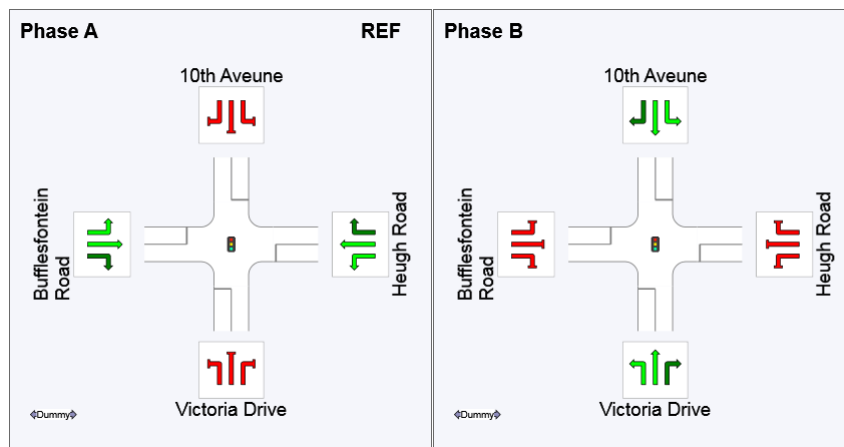
REF: Reference Phase
VAR: Variable Phase

8.   2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🚦 Site: 3 [Bufflesfontein / Heugh / 10th / Victoria - 2022 Future Traffic PM - Erf 1948]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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: Victoria Drive										
1	L2	108	0.0	0.672	32.3	LOS C	6.8	47.7	0.98	0.86	39.7
2	T1	123	0.0	0.672	26.7	LOS C	6.8	47.7	0.98	0.86	35.0
3	R2	101	0.0	0.765	40.4	LOS D	3.3	23.3	1.00	0.87	34.1
Approach		332	0.0	0.765	32.7	LOS C	6.8	47.7	0.99	0.86	36.3
East: Heugh Road										
4	L2	137	0.0	0.813	17.4	LOS B	24.3	170.0	0.79	0.80	39.5
5	T1	852	0.0	0.813	11.9	LOS B	24.3	170.0	0.79	0.80	48.0
6	R2	13	0.0	0.025	12.7	LOS B	0.2	1.3	0.49	0.66	42.6
Approach		1002	0.0	0.813	12.6	LOS B	24.3	170.0	0.78	0.80	47.1
North: 10th Aveune										
7	L2	15	0.0	1.010	102.7	LOS F	17.0	119.2	1.00	1.67	10.2
8	T1	246	0.0	1.010	97.2	LOS F	17.0	119.2	1.00	1.67	10.1
9	R2	157	0.0	1.233	460.8	LOS F	29.9	209.3	1.00	2.79	2.5
Approach		418	0.0	1.233	234.0	LOS F	29.9	209.3	1.00	2.09	4.7
West: Bufflesfontein Road										
10	L2	23	0.0	0.396	10.9	LOS B	6.9	48.4	0.51	0.46	50.9
11	T1	478	0.0	0.396	5.3	LOS A	6.9	48.4	0.51	0.46	54.6
12	R2	281	0.0	1.373	716.6	LOS F	73.7	516.1	1.00	4.19	4.6
Approach		782	0.0	1.373	261.1	LOS F	73.7	516.1	0.68	1.80	10.7
All Vehicles		2534	0.0	1.373	128.4	LOS F	73.7	516.1	0.82	1.33	15.8

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
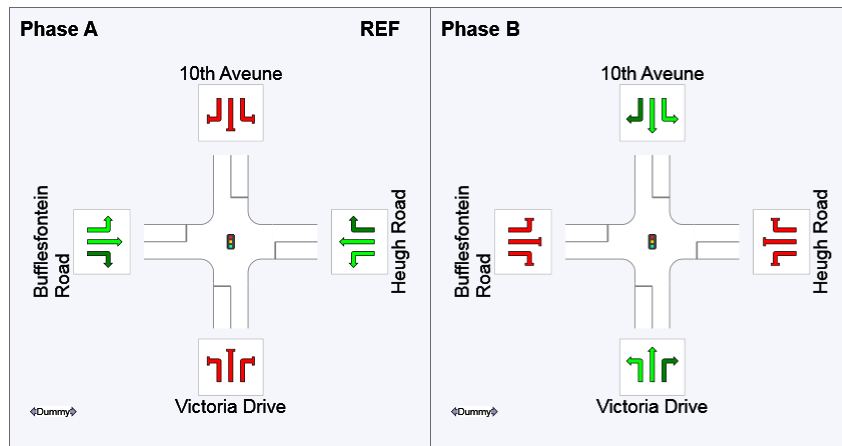**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	44
Green Time (sec)	39	11
Phase Time (sec)	44	16
Phase Split	73%	27%

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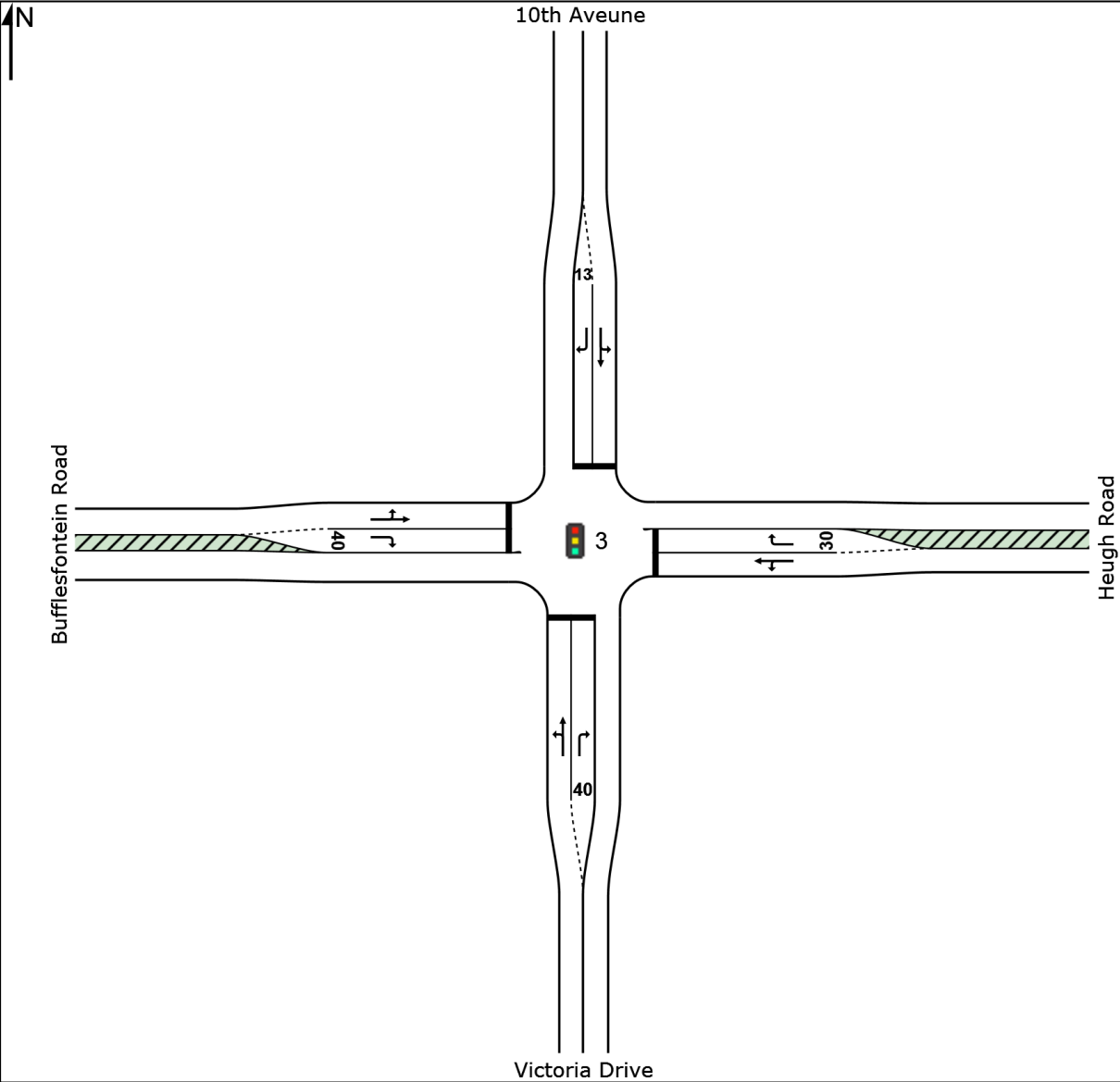

REF:Reference Phase
VAR: Variable Phase

Normal Movement		Permitted/Opposed	
Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane	
Stopped Movement		Turn On Red	
Other Movement Class (MC) Running		Undetected Movement	
Mixed Running & Stopped MCs		Continuous Movement	
Other Movement Class (MC) Stopped		Phase Transition Applied	

9. Existing Layout

10. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM – Upgrade

MOVEMENT SUMMARY

🚦 Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic AM - Erf 1948 - Upgrade]

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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: Victoria Drive											
1	L2	28	0.0	0.581	24.5	LOS C	8.9	62.1	0.89	0.76	44.6
2	T1	324	0.0	0.581	19.0	LOS B	8.9	62.1	0.89	0.76	40.8
3	R2	218	0.0	0.657	30.2	LOS C	6.3	44.1	0.96	0.86	38.4
Approach		570	0.0	0.657	23.6	LOS C	8.9	62.1	0.92	0.80	39.9
East: Heugh Road											
4	L2	186	0.0	0.294	14.5	LOS B	4.8	33.7	0.61	0.67	44.7
5	T1	397	0.0	0.294	8.9	LOS A	5.0	34.7	0.61	0.55	50.2
6	R2	13	0.0	0.062	24.3	LOS C	0.3	2.1	0.77	0.69	34.9
Approach		596	0.0	0.294	11.0	LOS B	5.0	34.7	0.61	0.59	48.2
North: 10th Aveune											
7	L2	29	0.0	0.361	23.0	LOS C	5.0	35.3	0.82	0.69	30.6
8	T1	189	0.0	0.361	17.4	LOS B	5.0	35.3	0.82	0.69	30.7
9	R2	94	0.0	0.391	31.2	LOS C	2.6	18.4	0.93	0.77	23.0
Approach		312	0.0	0.391	22.1	LOS C	5.0	35.3	0.85	0.71	27.8
West: Buffelsfontein Road											
10	L2	86	0.0	0.677	17.3	LOS B	14.9	104.3	0.80	0.73	44.7
11	T1	965	0.0	0.677	10.8	LOS B	14.9	104.3	0.74	0.66	50.0
12	R2	43	0.0	0.102	16.7	LOS B	0.8	5.4	0.62	0.70	46.0
Approach		1094	0.0	0.677	11.6	LOS B	14.9	104.3	0.74	0.67	49.4
All Vehicles		2572	0.0	0.677	15.4	LOS B	14.9	104.3	0.76	0.68	45.0

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.

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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic AM - Erf 1948 - Upgrade]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	36
Green Time (sec)	31	19
Phase Time (sec)	36	24
Phase Split	60%	40%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.
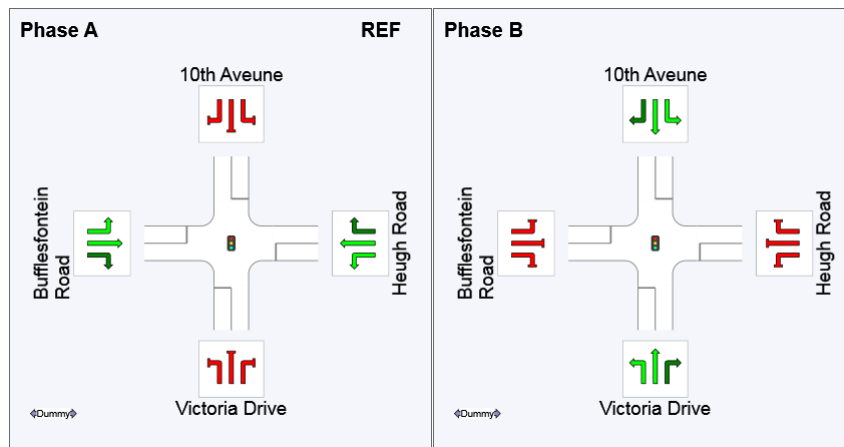
REF: Reference Phase
VAR: Variable Phase

11. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM – Upgrade

MOVEMENT SUMMARY

🚦 Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic PM - Erf 1948 - Upgrade]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Victoria Drive											
1	L2	108	0.0	0.462	26.0	LOS C	5.8	40.9	0.88	0.76	42.7
2	T1	123	0.0	0.462	20.5	LOS C	5.8	40.9	0.88	0.76	38.5
3	R2	101	0.0	0.421	31.4	LOS C	2.8	19.9	0.94	0.78	37.8
Approach		332	0.0	0.462	25.6	LOS C	5.8	40.9	0.90	0.77	39.7
East: Heugh Road											
4	L2	137	0.0	0.460	13.8	LOS B	8.5	59.6	0.63	0.61	43.3
5	T1	852	0.0	0.460	8.2	LOS A	8.5	59.7	0.63	0.58	51.0
6	R2	13	0.0	0.031	16.9	LOS B	0.2	1.6	0.61	0.67	39.6
Approach		1002	0.0	0.460	9.1	LOS A	8.5	59.7	0.63	0.58	50.1
North: 10th Aveune											
7	L2	15	0.0	0.511	26.3	LOS C	6.7	46.9	0.90	0.75	28.5
8	T1	246	0.0	0.511	20.8	LOS C	6.7	46.9	0.90	0.75	29.0
9	R2	157	0.0	0.609	32.7	LOS C	4.6	32.4	0.98	0.83	22.4
Approach		418	0.0	0.609	25.5	LOS C	6.7	46.9	0.93	0.78	26.1
West: Buffelsfontein Road											
10	L2	23	0.0	0.454	13.7	LOS B	8.6	60.2	0.63	0.56	48.1
11	T1	478	0.0	0.454	8.2	LOS A	8.6	60.2	0.63	0.56	52.1
12	R2	281	0.0	0.622	21.4	LOS C	4.7	32.9	0.79	0.81	43.4
Approach		782	0.0	0.622	13.1	LOS B	8.6	60.2	0.69	0.65	48.4
All Vehicles		2534	0.0	0.622	15.2	LOS B	8.6	60.2	0.73	0.66	44.8

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic PM - Erf 1948 - Upgrade]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
Phase Sequence: Two-Phase
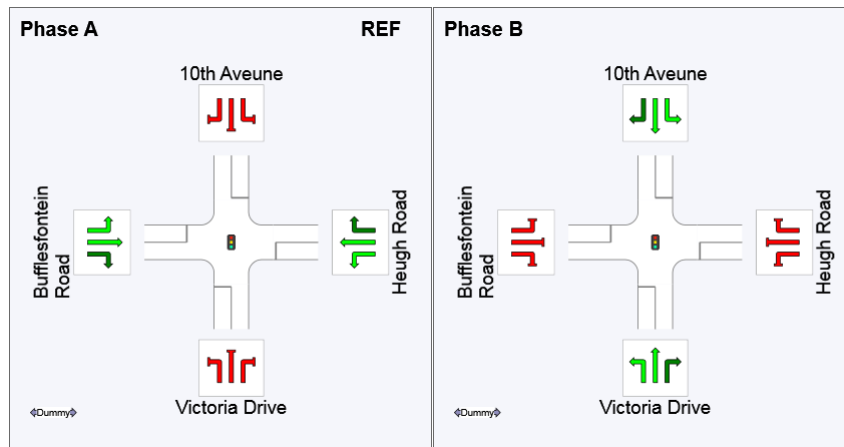**Reference Phase: Phase A**
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	39
Green Time (sec)	34	16
Phase Time (sec)	39	21
Phase Split	65%	35%

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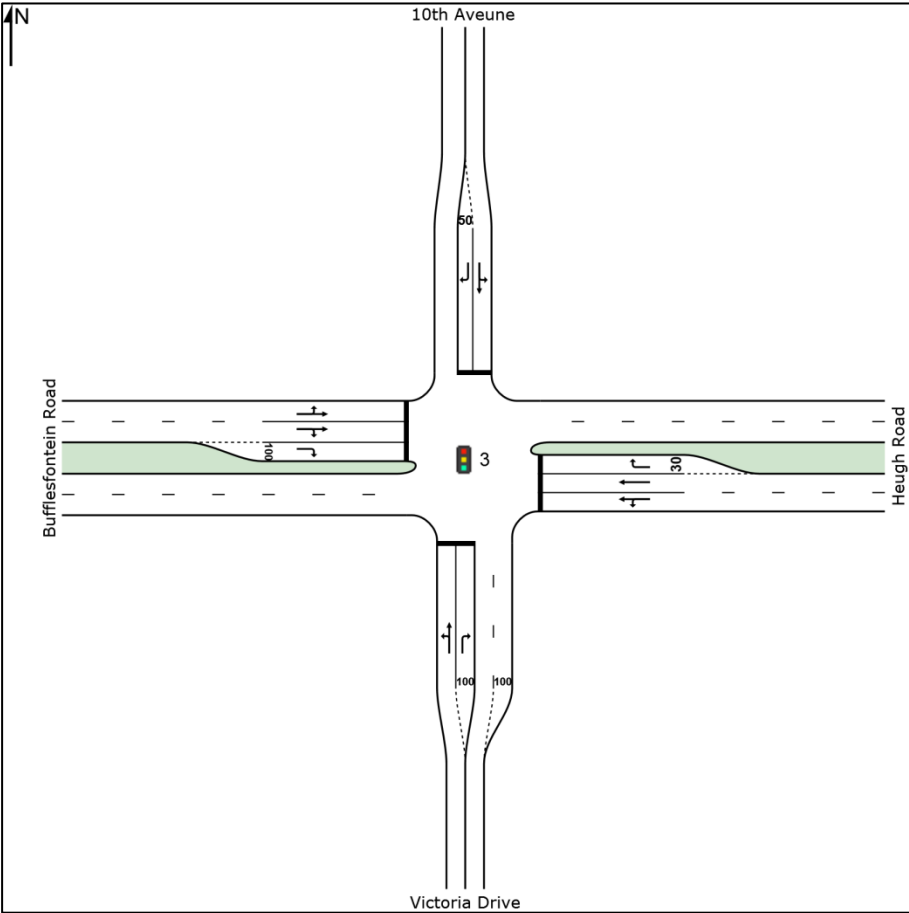

REF: Reference Phase
VAR: Variable Phase

12. Layout (Upgrades)

13. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🚦 Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Victoria Drive											
1	L2	40	0.0	0.703	23.4	LOS C	13.3	93.4	0.90	0.82	45.2
2	T1	475	0.0	0.703	17.9	LOS B	13.3	93.4	0.90	0.82	41.6
3	R2	306	0.0	0.779	31.6	LOS C	9.6	67.4	0.97	0.95	37.8
Approach		821	0.0	0.779	23.2	LOS C	13.3	93.4	0.93	0.87	40.0
East: Heugh Road											
4	L2	301	0.0	0.409	17.7	LOS B	6.9	48.0	0.72	0.76	43.0
5	T1	401	0.0	0.409	12.1	LOS B	7.2	50.1	0.72	0.63	48.0
6	R2	13	0.0	0.078	30.8	LOS C	0.4	2.5	0.89	0.69	31.6
Approach		715	0.0	0.409	14.8	LOS B	7.2	50.1	0.72	0.69	45.5
North: 10th Aveune											
7	L2	29	0.0	0.340	19.9	LOS B	5.3	36.8	0.75	0.65	33.2
8	T1	220	0.0	0.340	14.3	LOS B	5.3	36.8	0.75	0.65	33.7
9	R2	96	0.0	0.447	31.7	LOS C	2.7	19.1	0.94	0.78	22.8
Approach		345	0.0	0.447	19.7	LOS B	5.3	36.8	0.80	0.68	29.6
West: Buffelsfontein Road											
10	L2	89	0.0	0.794	24.2	LOS C	19.5	136.8	0.92	0.91	39.7
11	T1	985	0.0	0.794	16.2	LOS B	19.5	136.8	0.85	0.80	46.3
12	R2	71	0.0	0.228	21.9	LOS C	1.6	11.1	0.76	0.74	43.2
Approach		1145	0.0	0.794	17.2	LOS B	19.5	136.8	0.85	0.80	45.6
All Vehicles		3026	0.0	0.794	18.5	LOS B	19.5	136.8	0.83	0.78	42.9

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.

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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	32
Green Time (sec)	27	23
Phase Time (sec)	32	28
Phase Split	53%	47%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.
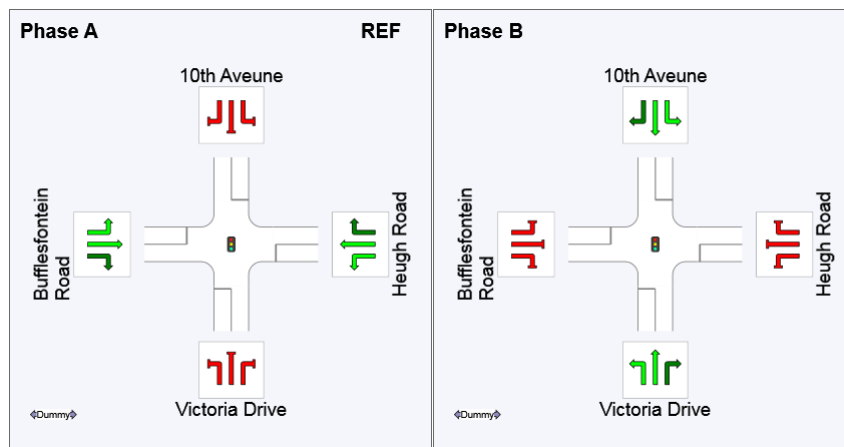
REF: Reference Phase
VAR: Variable Phase

14. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🚦 Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Victoria Drive											
1	L2	111	0.0	0.525	26.4	LOS C	6.8	47.5	0.90	0.78	42.6
2	T1	152	0.0	0.525	20.9	LOS C	6.8	47.5	0.90	0.78	38.4
3	R2	118	0.0	0.518	32.8	LOS C	3.4	24.0	0.97	0.79	37.2
Approach		381	0.0	0.525	26.2	LOS C	6.8	47.5	0.92	0.78	39.3
East: Heugh Road											
4	L2	204	0.0	0.499	14.1	LOS B	9.5	66.4	0.65	0.65	44.3
5	T1	864	0.0	0.499	8.5	LOS A	9.5	66.4	0.65	0.60	50.7
6	R2	13	0.0	0.031	16.9	LOS B	0.2	1.6	0.61	0.67	39.6
Approach		1081	0.0	0.499	9.6	LOS A	9.5	66.4	0.65	0.61	49.6
North: 10th Aveune											
7	L2	15	0.0	0.547	26.6	LOS C	7.3	50.8	0.91	0.76	28.3
8	T1	264	0.0	0.547	21.0	LOS C	7.3	50.8	0.91	0.76	28.9
9	R2	162	0.0	0.687	34.8	LOS C	5.0	35.1	1.00	0.87	21.5
Approach		441	0.0	0.687	26.3	LOS C	7.3	50.8	0.94	0.80	25.6
West: Buffelsfontein Road											
10	L2	24	0.0	0.464	13.8	LOS B	8.8	61.8	0.63	0.56	48.1
11	T1	487	0.0	0.464	8.3	LOS A	8.8	61.8	0.63	0.56	52.1
12	R2	296	0.0	0.718	24.9	LOS C	5.7	40.1	0.84	0.87	41.7
Approach		807	0.0	0.718	14.5	LOS B	8.8	61.8	0.71	0.68	47.4
All Vehicles		2710	0.0	0.718	16.1	LOS B	9.5	66.4	0.75	0.69	44.1

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2022 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
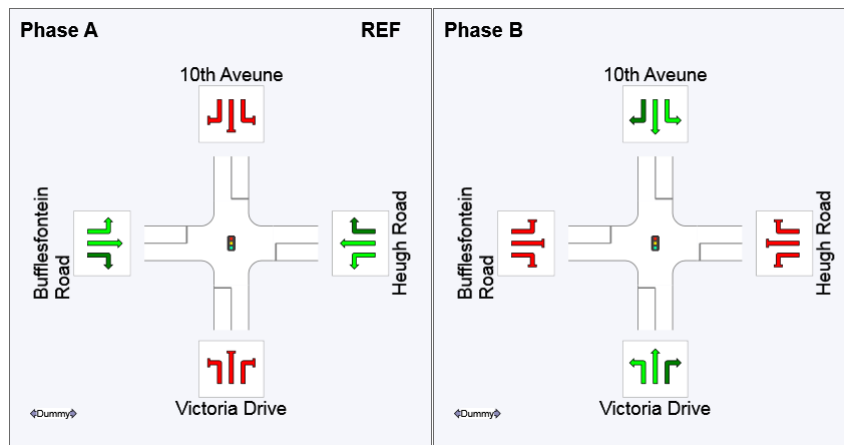**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	39
Green Time (sec)	34	16
Phase Time (sec)	39	21
Phase Split	65%	35%

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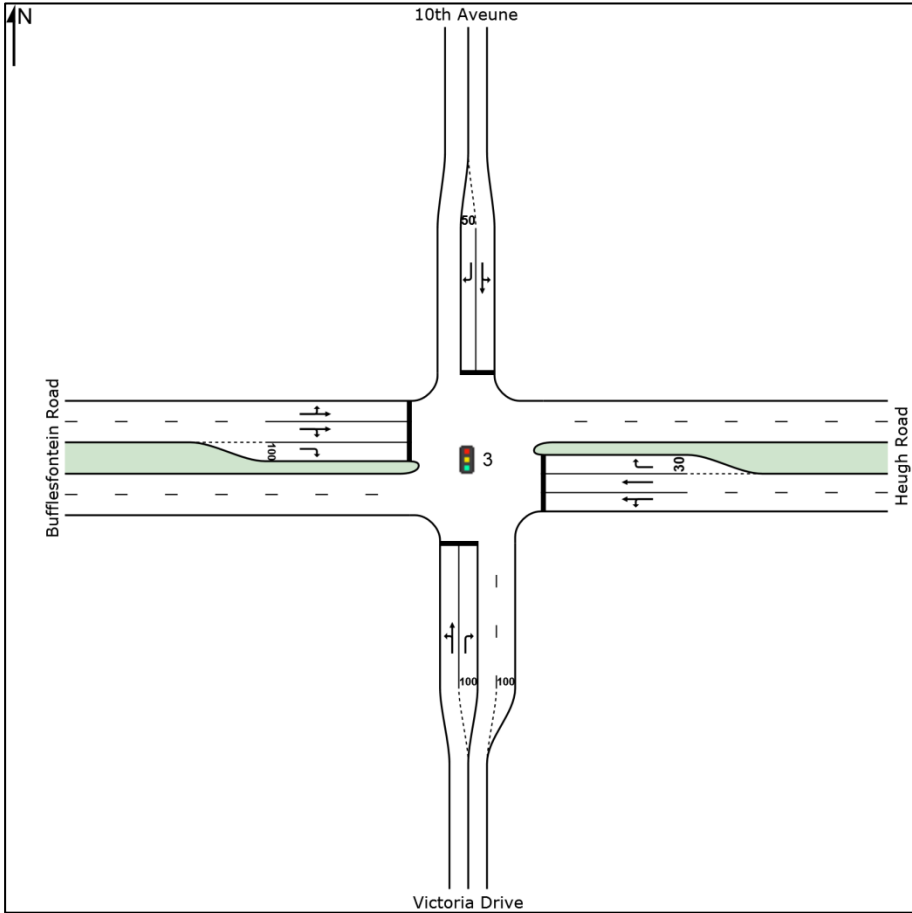and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

15. Upgraded Layout

16. 2027 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Victoria Drive											
1	L2	21	0.0	0.528	26.4	LOS C	6.9	48.6	0.90	0.76	43.6
2	T1	248	0.0	0.528	20.9	LOS C	6.9	48.6	0.90	0.76	39.6
3	R2	175	0.0	0.633	32.3	LOS C	5.2	36.1	0.97	0.84	37.5
Approach		444	0.0	0.633	25.6	LOS C	6.9	48.6	0.93	0.79	38.8
East: Heugh Road											
4	L2	115	0.0	0.243	12.6	LOS B	3.9	27.1	0.53	0.57	45.9
5	T1	417	0.0	0.243	7.0	LOS A	4.0	27.7	0.53	0.50	51.9
6	R2	14	0.0	0.063	21.8	LOS C	0.3	2.1	0.72	0.69	36.3
Approach		546	0.0	0.243	8.6	LOS A	4.0	27.7	0.54	0.52	50.4
North: 10th Aveune											
7	L2	30	0.0	0.407	25.6	LOS C	5.1	36.0	0.87	0.73	28.6
8	T1	177	0.0	0.407	20.1	LOS C	5.1	36.0	0.87	0.73	28.5
9	R2	99	0.0	0.422	32.2	LOS C	2.8	19.7	0.95	0.77	22.6
Approach		306	0.0	0.422	24.6	LOS C	5.1	36.0	0.89	0.74	26.2
West: Buffelsfontein Road											
10	L2	90	0.0	0.648	15.2	LOS B	14.4	100.7	0.74	0.68	46.4
11	T1	1014	0.0	0.648	8.9	LOS A	14.4	100.7	0.68	0.61	51.5
12	R2	33	0.0	0.067	14.1	LOS B	0.5	3.6	0.54	0.68	47.6
Approach		1137	0.0	0.648	9.5	LOS A	14.4	100.7	0.68	0.62	51.0
All Vehicles		2433	0.0	0.648	14.1	LOS B	14.4	100.7	0.72	0.64	46.0

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.

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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
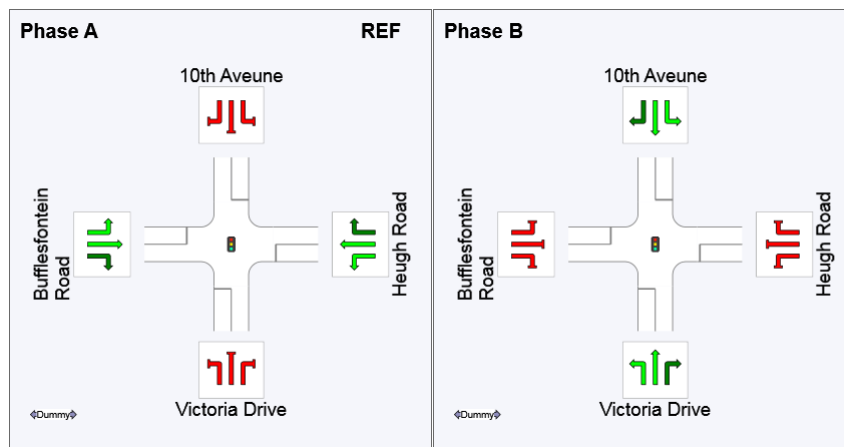**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	39
Green Time (sec)	34	16
Phase Time (sec)	39	21
Phase Split	65%	35%

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

REF: Reference Phase
VAR: Variable Phase

17. 2027 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Victoria Drive											
1	L2	75	0.0	0.330	25.2	LOS C	4.0	28.0	0.85	0.73	43.2
2	T1	90	0.0	0.330	19.6	LOS B	4.0	28.0	0.85	0.73	39.1
3	R2	68	0.0	0.249	29.4	LOS C	1.8	12.6	0.89	0.75	38.7
Approach		233	0.0	0.330	24.3	LOS C	4.0	28.0	0.86	0.73	40.4
East: Heugh Road											
4	L2	112	0.0	0.468	13.8	LOS B	8.8	61.3	0.63	0.61	43.0
5	T1	896	0.0	0.468	8.3	LOS A	8.8	61.3	0.63	0.58	51.1
6	R2	14	0.0	0.035	16.9	LOS B	0.2	1.7	0.61	0.67	39.6
Approach		1022	0.0	0.468	9.0	LOS A	8.8	61.3	0.63	0.58	50.3
North: 10th Aveune											
7	L2	16	0.0	0.416	25.7	LOS C	5.3	37.0	0.87	0.72	28.8
8	T1	196	0.0	0.416	20.1	LOS C	5.3	37.0	0.87	0.72	29.3
9	R2	165	0.0	0.541	30.1	LOS C	4.6	32.2	0.94	0.80	23.5
Approach		377	0.0	0.541	24.8	LOS C	5.3	37.0	0.90	0.76	26.4
West: Buffelsfontein Road											
10	L2	24	0.0	0.478	13.9	LOS B	9.2	64.5	0.64	0.57	48.0
11	T1	503	0.0	0.478	8.4	LOS A	9.2	64.5	0.64	0.57	52.0
12	R2	234	0.0	0.529	20.0	LOS C	3.6	24.9	0.76	0.78	44.2
Approach		761	0.0	0.529	12.1	LOS B	9.2	64.5	0.68	0.63	49.1
All Vehicles		2393	0.0	0.541	14.0	LOS B	9.2	64.5	0.71	0.64	45.8

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.

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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
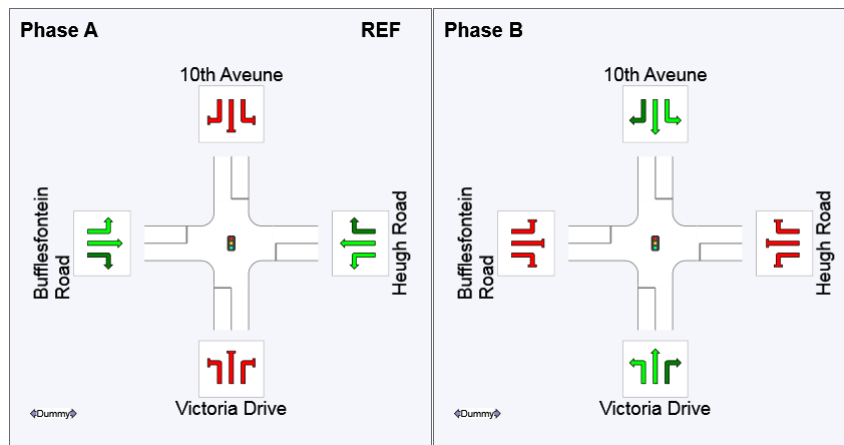**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	39
Green Time (sec)	34	16
Phase Time (sec)	39	21
Phase Split	65%	35%

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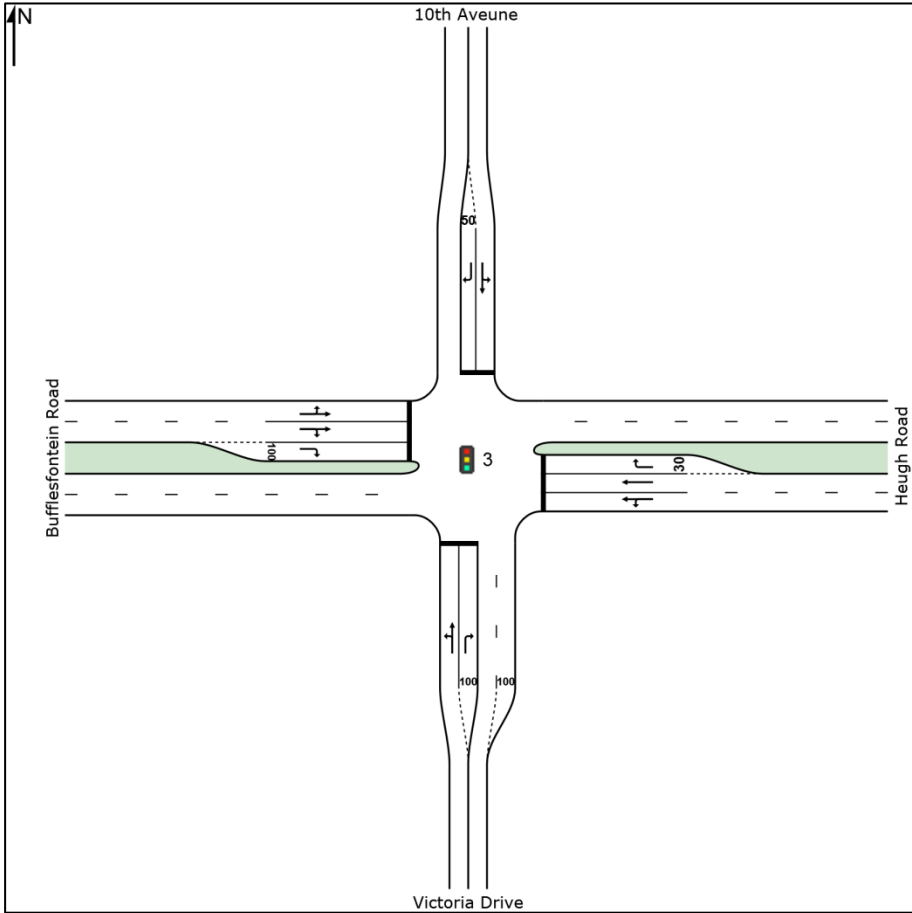and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

18. Upgraded Layout

19. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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: Victoria Drive											
1	L2	36	0.0	0.658	23.1	LOS C	11.5	80.8	0.89	0.78	45.4
2	T1	425	0.0	0.658	17.5	LOS B	11.5	80.8	0.89	0.78	41.8
3	R2	278	0.0	0.747	30.8	LOS C	8.5	59.3	0.97	0.92	38.1
Approach		739	0.0	0.747	22.8	LOS C	11.5	80.8	0.92	0.83	40.3
East: Heugh Road											
4	L2	269	0.0	0.384	16.9	LOS B	6.5	45.3	0.69	0.74	43.3
5	T1	417	0.0	0.384	11.3	LOS B	6.7	47.0	0.69	0.62	48.4
6	R2	14	0.0	0.083	29.9	LOS C	0.4	2.6	0.87	0.69	32.0
Approach		700	0.0	0.384	13.8	LOS B	6.7	47.0	0.70	0.66	46.1
North: 10th Aveune											
7	L2	30	0.0	0.356	20.7	LOS C	5.4	37.8	0.77	0.66	32.4
8	T1	219	0.0	0.356	15.2	LOS B	5.4	37.8	0.77	0.66	32.8
9	R2	99	0.0	0.432	31.5	LOS C	2.8	19.6	0.94	0.78	22.9
Approach		348	0.0	0.432	20.3	LOS C	5.4	37.8	0.82	0.69	29.1
West: Buffelsfontein Road											
10	L2	90	0.0	0.787	23.1	LOS C	19.6	137.1	0.91	0.89	40.4
11	T1	1014	0.0	0.787	15.3	LOS B	19.6	137.1	0.83	0.78	46.9
12	R2	57	0.0	0.172	20.0	LOS C	1.2	8.3	0.71	0.73	44.2
Approach		1161	0.0	0.787	16.1	LOS B	19.6	137.1	0.83	0.79	46.3
All Vehicles		2948	0.0	0.787	17.7	LOS B	19.6	137.1	0.82	0.76	43.4

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.

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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
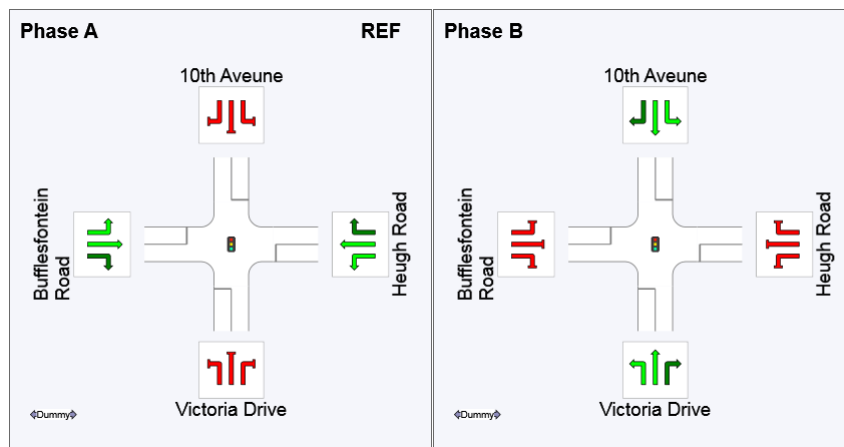**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	33
Green Time (sec)	28	22
Phase Time (sec)	33	27
Phase Split	55%	45%

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

REF: Reference Phase
VAR: Variable Phase

→ Normal Movement		→ Permitted/Opposed	
→ Slip/Bypass-Lane Movement		→ Opposed Slip/Bypass-Lane	
→ Stopped Movement		→ Turn On Red	
→ Other Movement Class (MC) Running		→ Undetected Movement	
→ Mixed Running & Stopped MCs		→ Continuous Movement	
→ Other Movement Class (MC) Stopped		● Phase Transition Applied	

20. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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: Victoria Drive											
1	L2	148	0.0	0.626	27.3	LOS C	8.4	58.8	0.93	0.81	42.1
2	T1	165	0.0	0.626	21.7	LOS C	8.4	58.8	0.93	0.81	37.7
3	R2	140	0.0	0.717	37.0	LOS D	4.5	31.3	1.00	0.88	35.6
Approach		453	0.0	0.717	28.3	LOS C	8.4	58.8	0.95	0.83	38.5
East: Heugh Road											
4	L2	174	0.0	0.500	14.1	LOS B	9.5	66.7	0.65	0.64	44.1
5	T1	896	0.0	0.500	8.5	LOS A	9.5	66.7	0.65	0.60	50.7
6	R2	14	0.0	0.035	16.9	LOS B	0.2	1.7	0.61	0.67	39.6
Approach		1084	0.0	0.500	9.5	LOS A	9.5	66.7	0.65	0.61	49.8
North: 10th Aveune											
7	L2	16	0.0	0.646	27.6	LOS C	9.0	62.8	0.94	0.81	27.7
8	T1	314	0.0	0.646	22.0	LOS C	9.0	62.8	0.94	0.81	28.3
9	R2	165	0.0	0.816	39.6	LOS D	5.6	39.2	1.00	0.98	19.9
Approach		495	0.0	0.816	28.1	LOS C	9.0	62.8	0.96	0.87	24.7
West: Buffelsfontein Road											
10	L2	24	0.0	0.478	13.9	LOS B	9.2	64.5	0.64	0.57	48.0
11	T1	503	0.0	0.478	8.4	LOS A	9.2	64.5	0.64	0.57	52.0
12	R2	350	0.0	0.850	33.2	LOS C	8.8	61.7	0.90	0.98	38.1
Approach		877	0.0	0.850	18.4	LOS B	9.2	64.5	0.74	0.74	45.0
All Vehicles		2909	0.0	0.850	18.3	LOS B	9.5	66.7	0.78	0.73	42.7

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
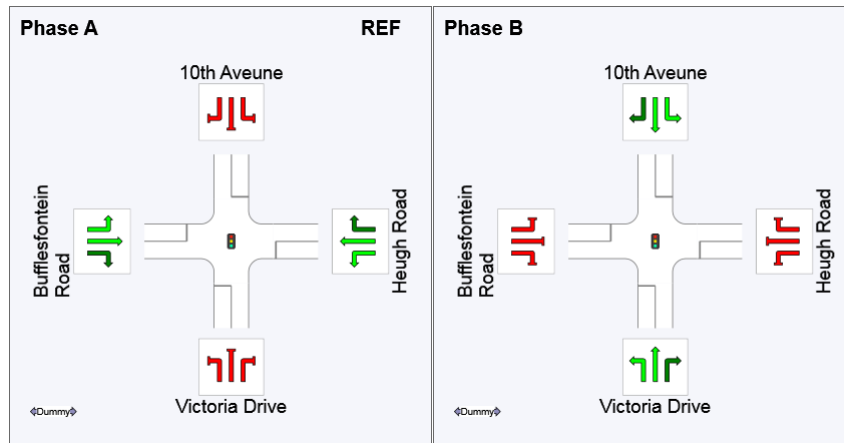**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	39
Green Time (sec)	34	16
Phase Time (sec)	39	21
Phase Split	65%	35%

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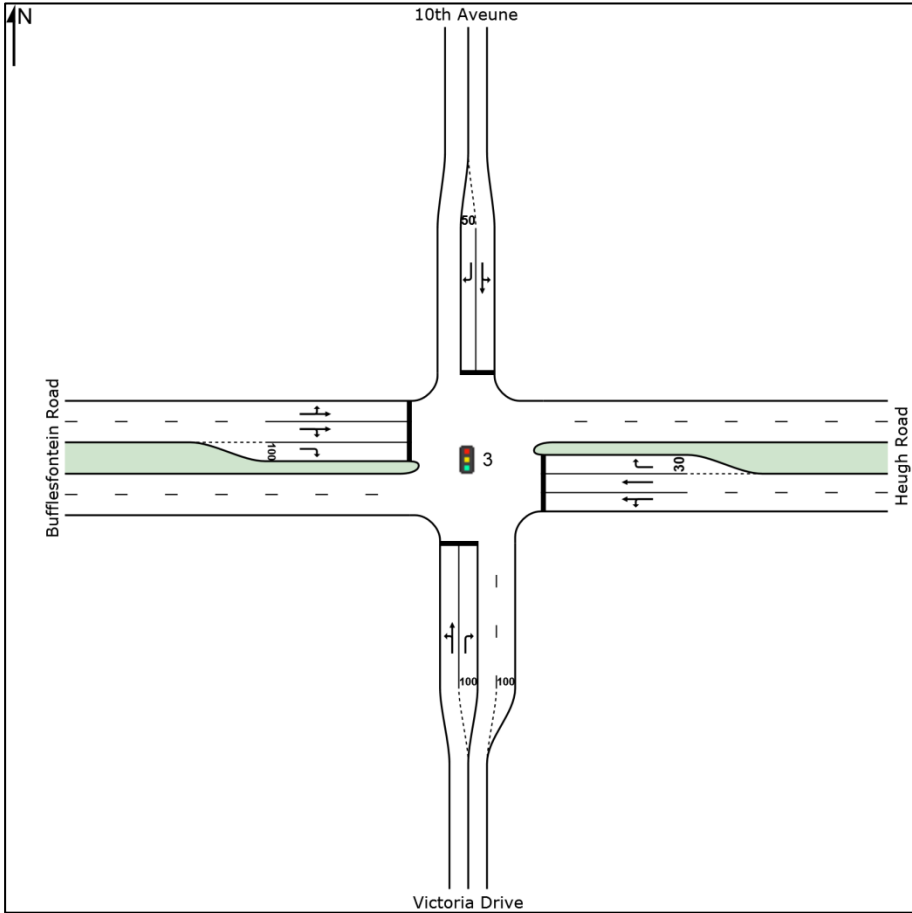and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

21. Upgraded Layout

22. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Victoria Drive											
1	L2	61	0.0	0.845	29.0	LOS C	27.7	193.9	0.94	0.97	42.3
2	T1	724	0.0	0.845	23.4	LOS C	27.7	193.9	0.94	0.97	38.0
3	R2	456	0.0	0.975	83.9	LOS F	30.4	212.6	1.00	1.36	23.8
Approach		1241	0.0	0.975	45.9	LOS D	30.4	212.6	0.96	1.11	30.4
East: Heugh Road											
4	L2	460	0.0	0.667	25.7	LOS C	13.4	93.5	0.89	0.84	38.9
5	T1	422	0.0	0.593	19.3	LOS B	11.7	82.1	0.86	0.74	43.4
6	R2	14	0.0	0.124	42.9	LOS D	0.5	3.5	0.99	0.67	26.9
Approach		896	0.0	0.667	22.9	LOS C	13.4	93.5	0.88	0.79	40.7
North: 10th Aveune											
7	L2	30	0.0	0.324	17.4	LOS B	6.3	44.0	0.65	0.58	35.6
8	T1	271	0.0	0.324	11.8	LOS B	6.3	44.0	0.65	0.58	36.6
9	R2	101	0.0	0.648	40.8	LOS D	3.7	25.8	1.00	0.85	19.5
Approach		402	0.0	0.648	19.5	LOS B	6.3	44.0	0.74	0.64	29.7
West: Bufflesfontein Road											
10	L2	93	0.0	1.010	105.4	LOS F	54.8	383.7	1.00	1.82	17.2
11	T1	1034	0.0	1.010	68.6	LOS E	54.8	383.7	0.94	1.40	26.9
12	R2	97	0.0	0.554	36.9	LOS D	3.3	23.3	0.96	0.81	36.7
Approach		1224	0.0	1.010	68.8	LOS E	54.8	383.7	0.95	1.38	26.7
All Vehicles		3763	0.0	1.010	45.1	LOS D	54.8	383.7	0.91	1.07	30.7

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.

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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45

Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
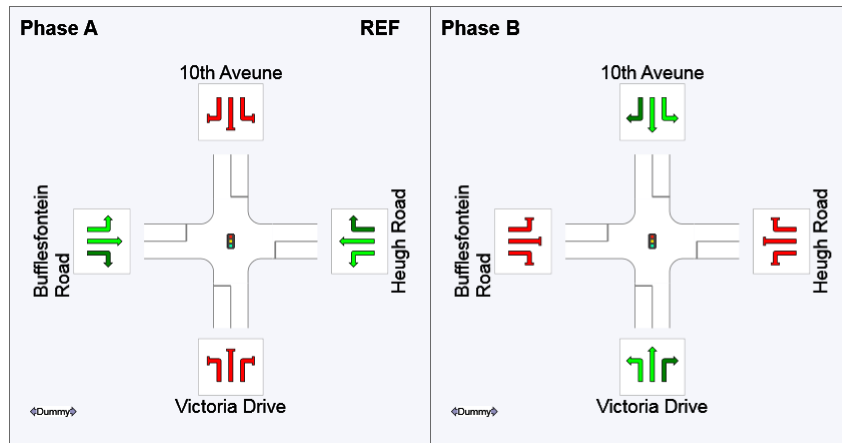**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	39
Green Time (sec)	34	16
Phase Time (sec)	39	21
Phase Split	65%	35%

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

REF: Reference Phase
VAR: Variable Phase

23. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Victoria Drive											
1	L2	153	0.0	0.749	30.2	LOS C	11.1	78.0	0.97	0.91	40.9
2	T1	223	0.0	0.749	24.7	LOS C	11.1	78.0	0.97	0.91	36.3
3	R2	174	0.0	1.008	94.2	LOS F	10.4	72.6	1.00	1.55	22.2
Approach		550	0.0	1.008	48.2	LOS D	11.1	78.0	0.98	1.11	30.7
East: Heugh Road											
4	L2	307	0.0	0.577	14.6	LOS B	11.6	81.4	0.69	0.71	44.2
5	T1	919	0.0	0.577	9.0	LOS A	11.6	81.4	0.69	0.64	50.1
6	R2	14	0.0	0.036	17.6	LOS B	0.3	1.8	0.63	0.67	39.1
Approach		1240	0.0	0.577	10.5	LOS B	11.6	81.4	0.69	0.66	48.7
North: 10th Aveune											
7	L2	16	0.0	0.719	29.2	LOS C	10.5	73.8	0.96	0.87	26.8
8	T1	351	0.0	0.719	23.6	LOS C	10.5	73.8	0.96	0.87	27.3
9	R2	175	0.0	1.071	183.6	LOS F	16.8	117.9	1.00	1.93	5.9
Approach		542	0.0	1.071	75.5	LOS E	16.8	117.9	0.98	1.22	12.5
West: Buffelsfontein Road											
10	L2	27	0.0	0.496	14.0	LOS B	9.7	67.9	0.65	0.58	47.8
11	T1	520	0.0	0.496	8.5	LOS A	9.7	67.9	0.65	0.58	51.9
12	R2	380	0.0	1.097	167.2	LOS F	31.0	216.9	0.95	1.84	15.8
Approach		927	0.0	1.097	73.7	LOS E	31.0	216.9	0.77	1.10	26.1
All Vehicles		3259	0.0	1.097	45.6	LOS D	31.0	216.9	0.81	0.95	29.9

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.
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.

PHASING SUMMARY

🚦 **Site: 3 [Buffelsfontein / Heugh / 10th / Victoria - 2027 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
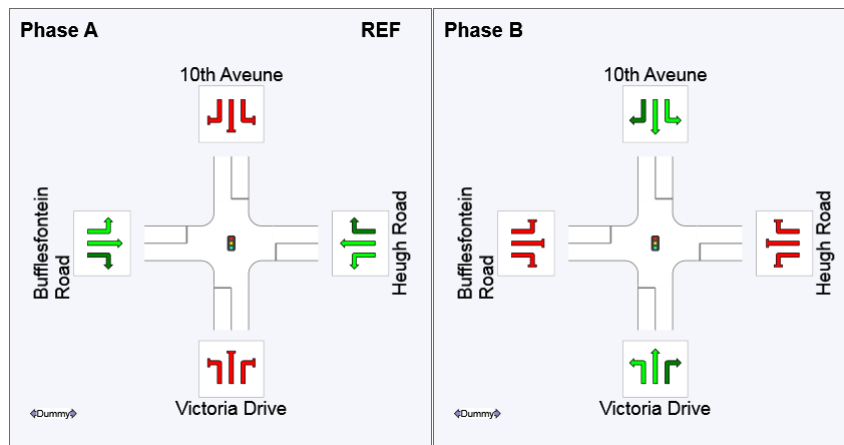**Phase Sequence: Two-Phase**
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Results

Phase	A	B
Phase Change Time (sec)	0	39
Green Time (sec)	34	16
Phase Time (sec)	39	21
Phase Split	65%	35%

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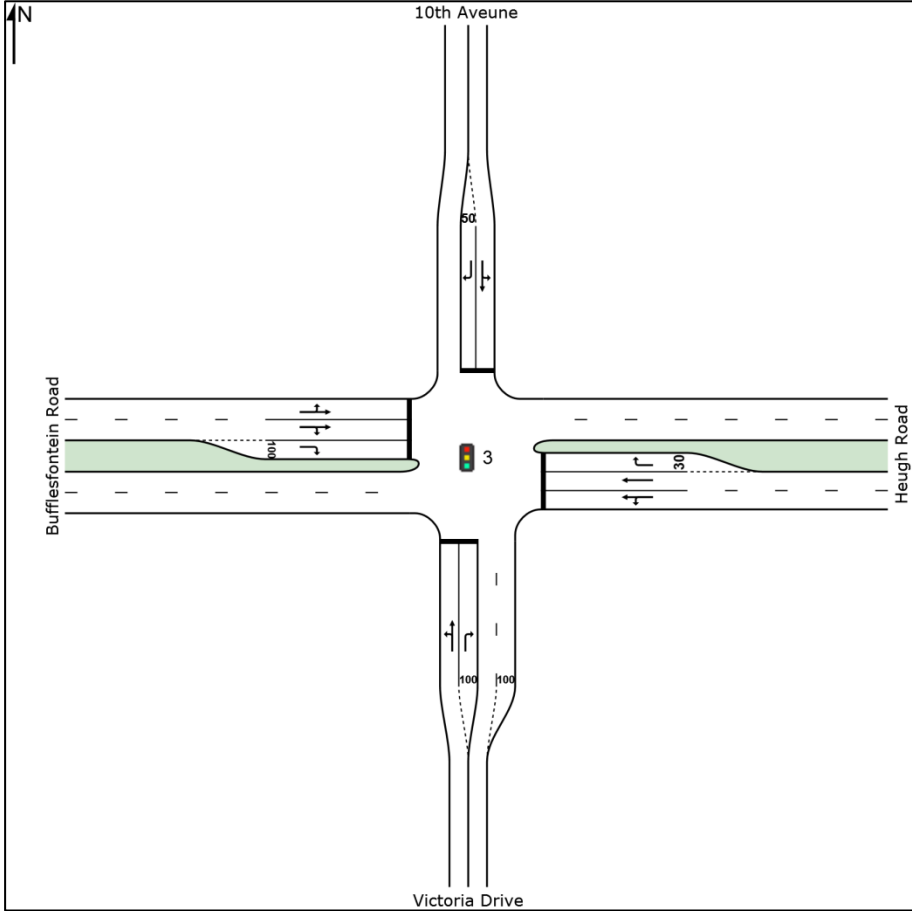and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

24. Upgraded Layout

B. Buffelsfontein Road / Titian Road

SIDRA ANALYSIS

1. 2017 Background Traffic AM

2. 2017 Background Traffic PM

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

5. 2022 Background Traffic (excluding development traffic) PM

6. Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

14. 2027 Background Traffic (excluding development traffic) PM

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

18. Existing Layout

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

21. Existing Layout

1. 2017 Background Traffic AM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2017 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Phase Times)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	47	0.0	0.101	42.6	LOS D	2.1	14.7	0.80	0.73	34.7
3	R2	195	0.0	0.630	56.8	LOS E	10.9	76.0	0.98	0.82	30.8
Approach		242	0.0	0.630	54.0	LOS D	10.9	76.0	0.95	0.80	31.5
East: Buffelsfontein Road											
4	L2	79	0.0	0.046	5.8	LOS A	0.2	1.4	0.09	0.60	52.6
5	T1	357	0.0	0.135	7.7	LOS A	3.7	26.1	0.39	0.33	52.5
Approach		436	0.0	0.135	7.3	LOS A	3.7	26.1	0.34	0.38	52.5
West: Buffelsfontein Road											
11	T1	1327	0.0	0.501	10.5	LOS B	19.1	133.6	0.54	0.49	48.5
12	R2	16	0.0	0.021	10.7	LOS B	0.3	1.8	0.30	0.63	46.9
Approach		1343	0.0	0.501	10.5	LOS B	19.1	133.6	0.54	0.49	48.5
All Vehicles		2021	0.0	0.630	15.1	LOS B	19.1	133.6	0.54	0.50	45.6

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.
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.

PHASING SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2017 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Phase Times)

Phase Times specified by the user
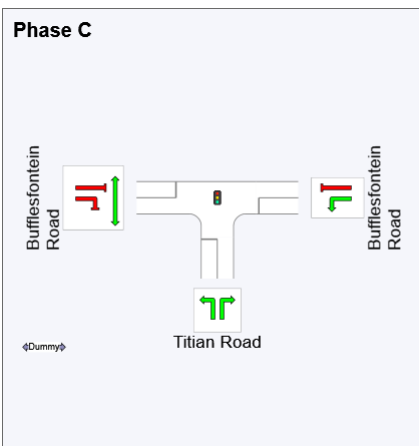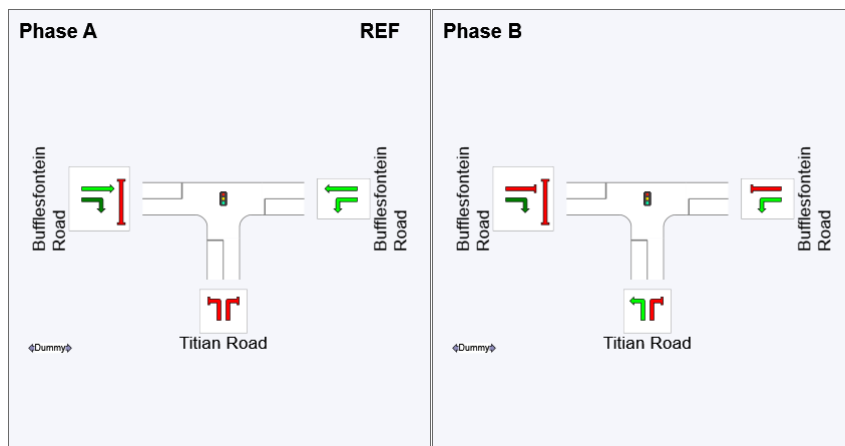**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	85	95
Green Time (sec)	80	5	20
Phase Time (sec)	85	10	25
Phase Split	71%	8%	21%

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

REF: Reference Phase
VAR: Variable Phase

  Normal Movement   Permitted/Opposed

➤	Slip/Bypass-Lane Movement	➤	Opposed Slip/Bypass-Lane
⊣	Stopped Movement	⊣	Turn On Red
➤	Other Movement Class (MC) Running	⇒	Undetected Movement
➤	Mixed Running & Stopped MCs	➤	Continuous Movement
⊣	Other Movement Class (MC) Stopped	●	Phase Transition Applied

2. 2017 Background Traffic PM

MOVEMENT SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2017 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Phase Times)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	38	0.0	0.082	42.4	LOS D	1.7	11.8	0.80	0.72	34.8
3	R2	87	0.0	0.281	53.3	LOS D	4.5	31.6	0.92	0.77	31.7
Approach		125	0.0	0.281	50.0	LOS D	4.5	31.6	0.88	0.75	32.6
East: Buffelsfontein Road											
4	L2	176	0.0	0.103	5.8	LOS A	0.5	3.3	0.10	0.60	52.6
5	T1	852	0.0	0.321	8.9	LOS A	10.3	72.3	0.46	0.40	51.5
Approach		1028	0.0	0.321	8.4	LOS A	10.3	72.3	0.39	0.44	51.7
West: Buffelsfontein Road											
11	T1	458	0.0	0.173	7.9	LOS A	4.9	34.4	0.40	0.34	50.9
12	R2	56	0.0	0.131	13.8	LOS B	1.2	8.6	0.39	0.67	44.4
Approach		514	0.0	0.173	8.5	LOS A	4.9	34.4	0.40	0.38	50.1
All Vehicles		1667	0.0	0.321	11.6	LOS B	10.3	72.3	0.43	0.44	48.7

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.

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.

PHASING SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2017 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Phase Times)

Phase Times specified by the user
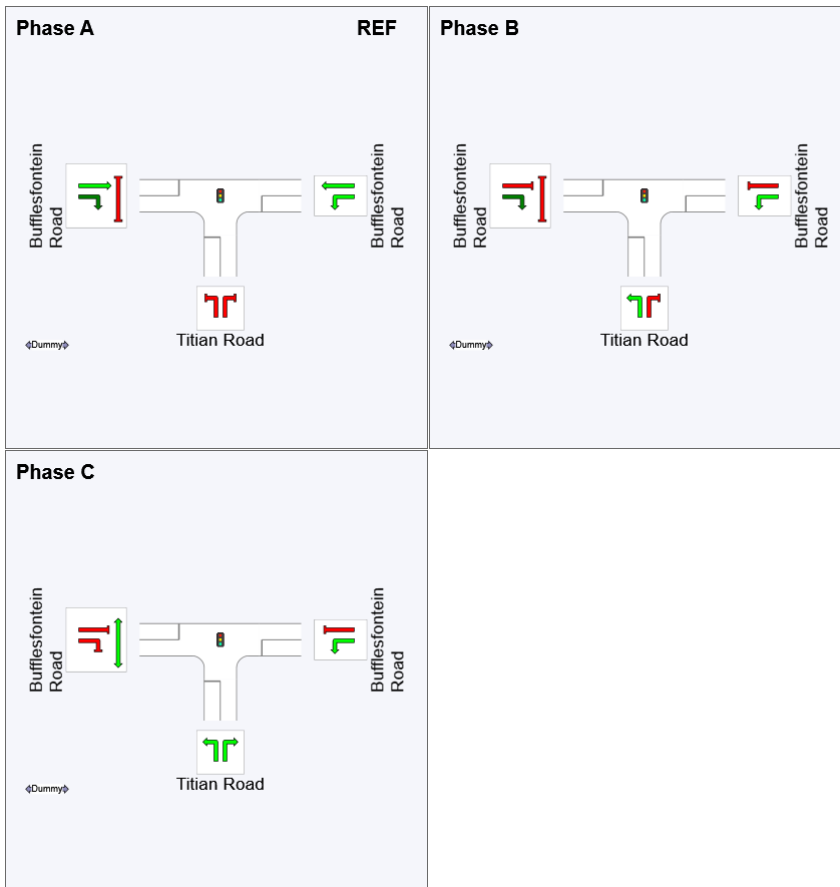**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	85	95
Green Time (sec)	80	5	20
Phase Time (sec)	85	10	25
Phase Split	71%	8%	21%

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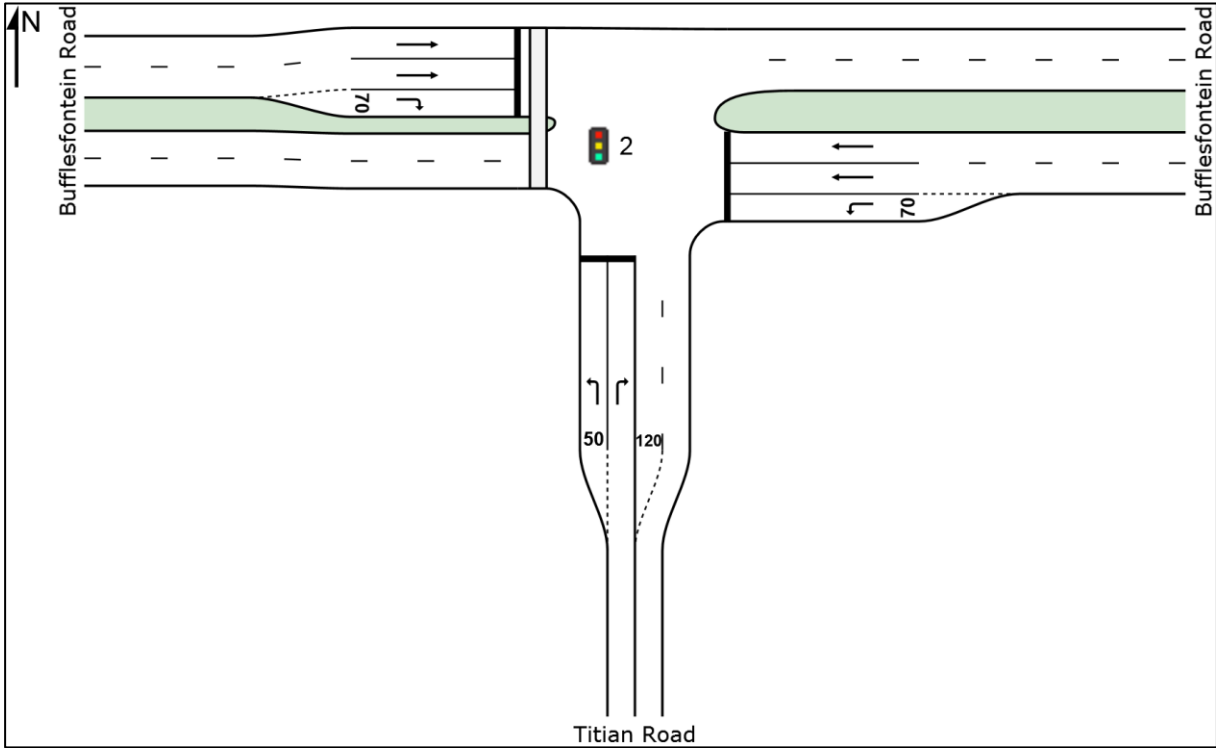and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	●	Phase Transition Applied

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2022 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	49	0.0	0.132	27.5	LOS C	1.2	8.5	0.86	0.73	40.6
3	R2	205	0.0	0.552	29.9	LOS C	5.7	39.6	0.95	0.80	39.7
Approach		254	0.0	0.552	29.5	LOS C	5.7	39.6	0.93	0.79	39.9
East: Buffelsfontein Road											
4	L2	83	0.0	0.054	6.0	LOS A	0.2	1.5	0.18	0.61	52.3
5	T1	375	0.0	0.149	4.8	LOS A	2.2	15.4	0.43	0.36	55.1
Approach		458	0.0	0.149	5.0	LOS A	2.2	15.4	0.38	0.40	54.6
West: Buffelsfontein Road											
11	T1	1395	0.0	0.553	6.7	LOS A	11.5	80.8	0.61	0.55	52.1
12	R2	17	0.0	0.028	10.8	LOS B	0.2	1.4	0.42	0.64	46.8
Approach		1412	0.0	0.553	6.7	LOS A	11.5	80.8	0.61	0.55	52.1
All Vehicles		2124	0.0	0.553	9.1	LOS A	11.5	80.8	0.60	0.54	50.3

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.
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.

PHASING SUMMARY

🚦 Site: 2 [Bufflesfontein / Titian - 2022 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
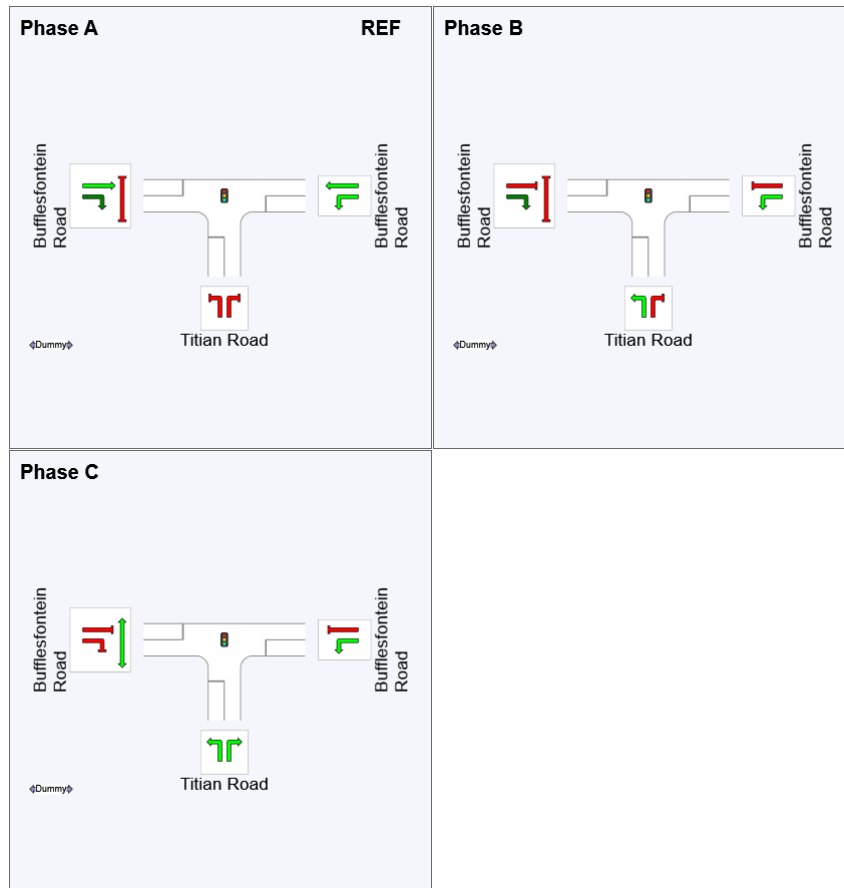**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	43	43
Green Time (sec)	38	***	12
Phase Time (sec)	43	0	17
Phase Split	72%	0%	28%

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

REF: Reference Phase
VAR: Variable Phase

➡	Normal Movement	➡	Permitted/Opposed
➡	Slip/Bypass-Lane Movement	➡	Opposed Slip/Bypass-Lane
⊐	Stopped Movement	⊐	Turn On Red
➡	Other Movement Class (MC) Running	➡	Undetected Movement
➡	Mixed Running & Stopped MCs	➡	Continuous Movement
⊐	Other Movement Class (MC) Stopped	●	Phase Transition Applied

5. 2022 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

Site: 2 [Buffelsfontein / Titian - 2022 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	40	0.0	0.144	30.5	LOS C	1.1	7.5	0.90	0.72	39.3
3	R2	91	0.0	0.327	31.5	LOS C	2.5	17.6	0.93	0.76	39.1
Approach		131	0.0	0.327	31.2	LOS C	2.5	17.6	0.92	0.75	39.1
East: Buffelsfontein Road											
4	L2	185	0.0	0.120	6.1	LOS A	0.5	3.7	0.20	0.62	52.2
5	T1	895	0.0	0.329	4.2	LOS A	5.3	37.3	0.44	0.38	55.7
Approach		1080	0.0	0.329	4.5	LOS A	5.3	37.3	0.40	0.42	55.1
West: Buffelsfontein Road											
11	T1	481	0.0	0.177	3.7	LOS A	2.5	17.6	0.38	0.32	55.4
12	R2	59	0.0	0.166	11.6	LOS B	0.8	5.6	0.47	0.69	46.2
Approach		540	0.0	0.177	4.5	LOS A	2.5	17.6	0.39	0.36	54.2
All Vehicles		1751	0.0	0.329	6.5	LOS A	5.3	37.3	0.43	0.43	52.9

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.

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.

PHASING SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2022 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	46	46
Green Time (sec)	41	***	9
Phase Time (sec)	46	0	14
Phase Split	77%	0%	23%

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

REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped	●	Phase Transition Applied

6. Existing Layout

7.   2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2022 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	49	0.0	0.132	27.5	LOS C	1.2	8.5	0.86	0.73	40.6
3	R2	205	0.0	0.552	29.9	LOS C	5.7	39.6	0.95	0.80	39.7
Approach		254	0.0	0.552	29.5	LOS C	5.7	39.6	0.93	0.79	39.9
East: Buffelsfontein Road											
4	L2	83	0.0	0.054	6.0	LOS A	0.2	1.5	0.18	0.61	52.3
5	T1	375	0.0	0.149	4.8	LOS A	2.2	15.4	0.43	0.36	55.1
Approach		458	0.0	0.149	5.0	LOS A	2.2	15.4	0.38	0.40	54.6
West: Buffelsfontein Road											
11	T1	1395	0.0	0.553	6.7	LOS A	11.5	80.8	0.61	0.55	52.1
12	R2	17	0.0	0.028	10.8	LOS B	0.2	1.4	0.42	0.64	46.8
Approach		1412	0.0	0.553	6.7	LOS A	11.5	80.8	0.61	0.55	52.1
All Vehicles		2124	0.0	0.553	9.1	LOS A	11.5	80.8	0.60	0.54	50.3

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.

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.

PHASING SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2022 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	43	43
Green Time (sec)	38	***	12
Phase Time (sec)	43	0	17
Phase Split	72%	0%	28%

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

REF: Reference Phase
VAR: Variable Phase

⟶ Normal Movement	⟶ Permitted/Opposed
⟶ Slip/Bypass-Lane Movement	⟶ Opposed Slip/Bypass-Lane
⊢ Stopped Movement	⊢ Turn On Red
⟶ Other Movement Class (MC) Running	⟶ Undetected Movement
⟶ Mixed Running & Stopped MCs	⟶ Continuous Movement
⊢ Other Movement Class (MC) Stopped	● Phase Transition Applied

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2022 Future Traffic PM - Erf 1948]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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: Titian Road											
1	L2	40	0.0	0.144	30.5	LOS C	1.1	7.5	0.90	0.72	39.3
3	R2	91	0.0	0.327	31.5	LOS C	2.5	17.6	0.93	0.76	39.1
Approach		131	0.0	0.327	31.2	LOS C	2.5	17.6	0.92	0.75	39.1
East: Buffelsfontein Road											
4	L2	185	0.0	0.120	6.1	LOS A	0.5	3.7	0.20	0.62	52.2
5	T1	895	0.0	0.329	4.2	LOS A	5.3	37.3	0.44	0.38	55.7
Approach		1080	0.0	0.329	4.5	LOS A	5.3	37.3	0.40	0.42	55.1
West: Buffelsfontein Road											
11	T1	481	0.0	0.177	3.7	LOS A	2.5	17.6	0.38	0.32	55.4
12	R2	59	0.0	0.166	11.6	LOS B	0.8	5.6	0.47	0.69	46.2
Approach		540	0.0	0.177	4.5	LOS A	2.5	17.6	0.39	0.36	54.2
All Vehicles		1751	0.0	0.329	6.5	LOS A	5.3	37.3	0.43	0.43	52.9

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.

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.

PHASING SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2022 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	46	46
Green Time (sec)	41	***	9
Phase Time (sec)	46	0	14
Phase Split	77%	0%	23%

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

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
⊢	Stopped Movement	⊢	Turn On Red
→	Other Movement Class (MC) Running	⇒	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
⊢	Other Movement Class (MC) Stopped	●	Phase Transition Applied

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2022 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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: Titian Road											
1	L2	58	0.0	0.134	25.7	LOS C	1.4	9.7	0.83	0.73	41.4
3	R2	238	0.0	0.549	28.3	LOS C	6.4	44.7	0.93	0.81	40.5
Approach		296	0.0	0.549	27.7	LOS C	6.4	44.7	0.91	0.79	40.6
East: Buffelsfontein Road											
4	L2	89	0.0	0.058	6.0	LOS A	0.2	1.6	0.18	0.61	52.3
5	T1	375	0.0	0.157	5.7	LOS A	2.4	16.9	0.47	0.39	54.3
Approach		464	0.0	0.157	5.7	LOS A	2.4	16.9	0.41	0.43	53.9
West: Buffelsfontein Road											
11	T1	1395	0.0	0.584	8.0	LOS A	12.6	88.4	0.66	0.59	50.9
12	R2	19	0.0	0.033	11.8	LOS B	0.2	1.7	0.46	0.65	46.0
Approach		1414	0.0	0.584	8.0	LOS A	12.6	88.4	0.66	0.60	50.8
All Vehicles		2174	0.0	0.584	10.2	LOS B	12.6	88.4	0.64	0.59	49.4

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.

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.

PHASING SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2022 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
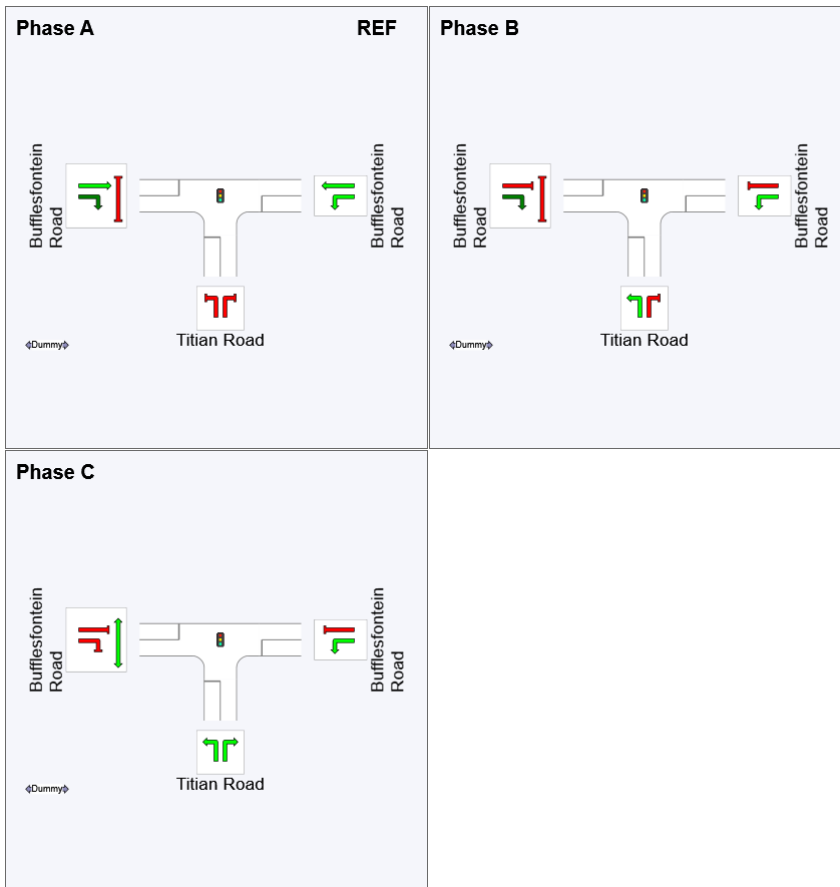**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	41	41
Green Time (sec)	36	***	14
Phase Time (sec)	41	0	19
Phase Split	68%	0%	32%

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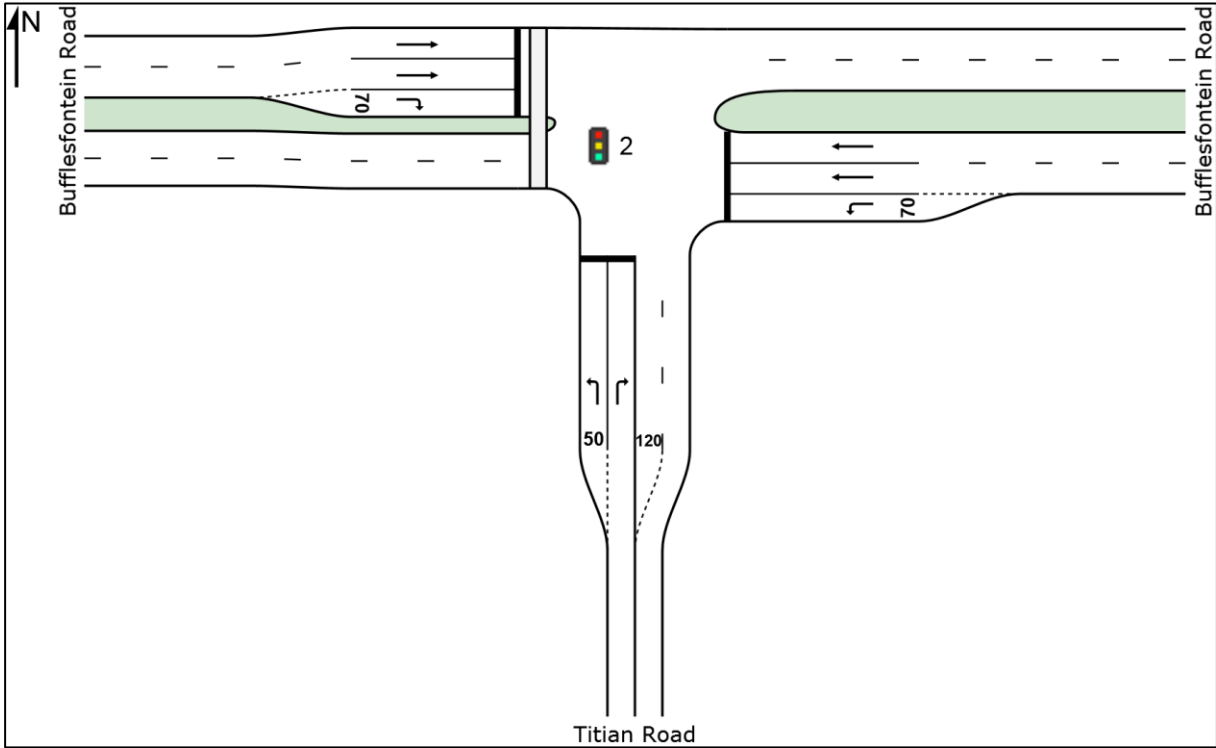and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

→ Normal Movement		→ Permitted/Opposed	
→ Slip/Bypass-Lane Movement		→ Opposed Slip/Bypass-Lane	
→ Stopped Movement		→ Turn On Red	
→ Other Movement Class (MC) Running		→ Undetected Movement	
→ Mixed Running & Stopped MCs		→ Continuous Movement	
→ Other Movement Class (MC) Stopped		● Phase Transition Applied	

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2022 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Titian Road											
1	L2	43	0.0	0.139	29.4	LOS C	1.1	7.8	0.89	0.72	39.7
3	R2	106	0.0	0.342	30.6	LOS C	2.9	20.2	0.92	0.77	39.4
Approach		149	0.0	0.342	30.3	LOS C	2.9	20.2	0.91	0.75	39.5
East: Buffelsfontein Road											
4	L2	202	0.0	0.131	6.1	LOS A	0.6	4.1	0.20	0.63	52.2
5	T1	895	0.0	0.337	4.6	LOS A	5.6	39.3	0.46	0.40	55.3
Approach		1097	0.0	0.337	4.9	LOS A	5.6	39.3	0.41	0.44	54.7
West: Buffelsfontein Road											
11	T1	481	0.0	0.181	4.1	LOS A	2.7	18.6	0.40	0.34	55.0
12	R2	64	0.0	0.187	12.2	LOS B	0.9	6.5	0.49	0.69	45.7
Approach		545	0.0	0.187	5.0	LOS A	2.7	18.6	0.41	0.38	53.7
All Vehicles		1791	0.0	0.342	7.0	LOS A	5.6	39.3	0.45	0.45	52.5

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.

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.

PHASING SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2022 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
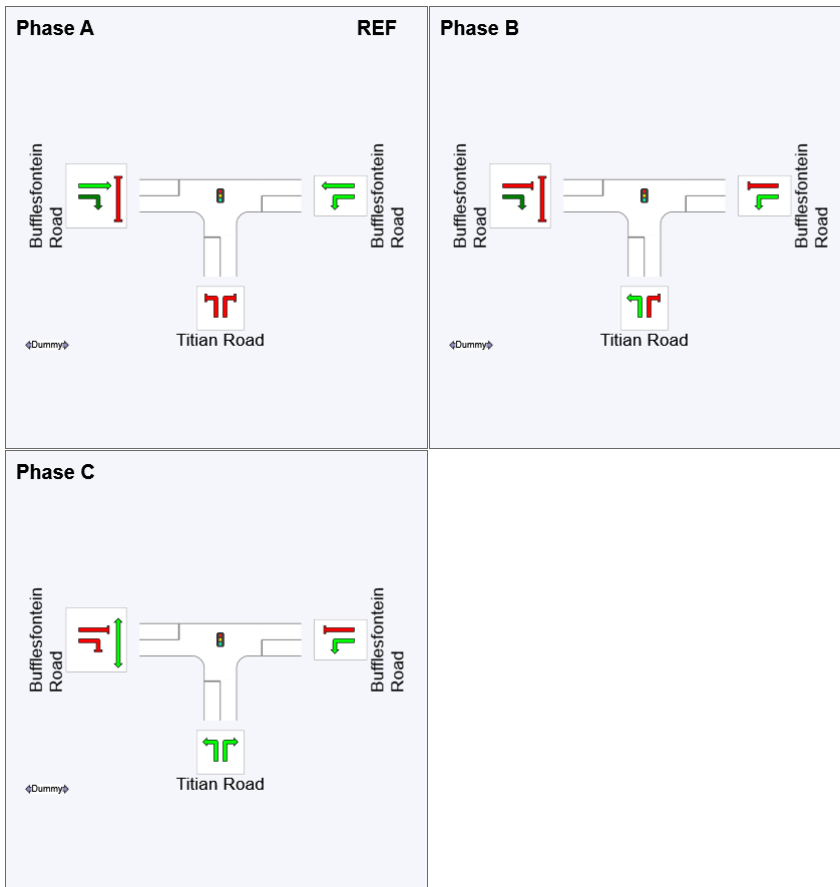**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	45	45
Green Time (sec)	40	***	10
Phase Time (sec)	45	0	15
Phase Split	75%	0%	25%

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

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
⊢	Stopped Movement	⊢	Turn On Red
→	Other Movement Class (MC) Running	⇒	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
⊢	Other Movement Class (MC) Stopped	●	Phase Transition Applied

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	52	0.0	0.140	27.5	LOS C	1.3	9.1	0.86	0.73	40.6
3	R2	215	0.0	0.579	30.1	LOS C	6.0	41.9	0.95	0.81	39.6
Approach		267	0.0	0.579	29.6	LOS C	6.0	41.9	0.94	0.79	39.8
East: Buffelsfontein Road											
4	L2	87	0.0	0.056	6.0	LOS A	0.2	1.6	0.18	0.61	52.3
5	T1	394	0.0	0.156	4.8	LOS A	2.3	16.3	0.43	0.36	55.1
Approach		481	0.0	0.156	5.0	LOS A	2.3	16.3	0.39	0.41	54.6
West: Buffelsfontein Road											
11	T1	1466	0.0	0.581	6.9	LOS A	12.5	87.4	0.63	0.56	51.9
12	R2	18	0.0	0.030	10.8	LOS B	0.2	1.5	0.42	0.65	46.8
Approach		1484	0.0	0.581	6.9	LOS A	12.5	87.4	0.62	0.56	51.9
All Vehicles		2232	0.0	0.581	9.2	LOS A	12.5	87.4	0.61	0.56	50.2

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.

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.

PHASING SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
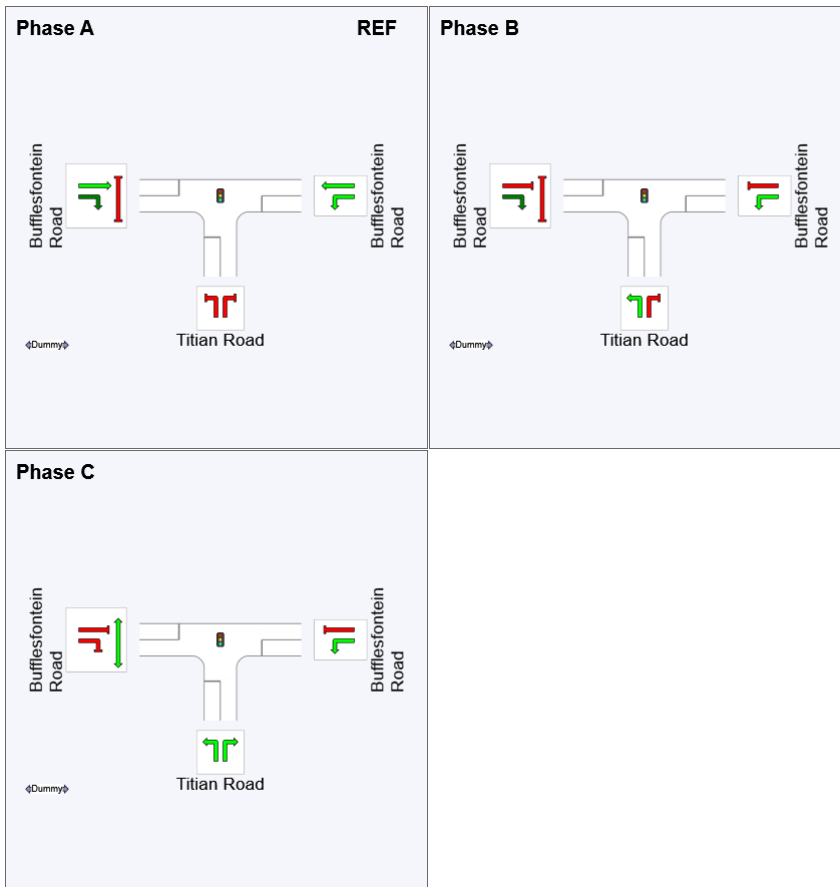**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	43	43
Green Time (sec)	38	***	12
Phase Time (sec)	43	0	17
Phase Split	72%	0%	28%

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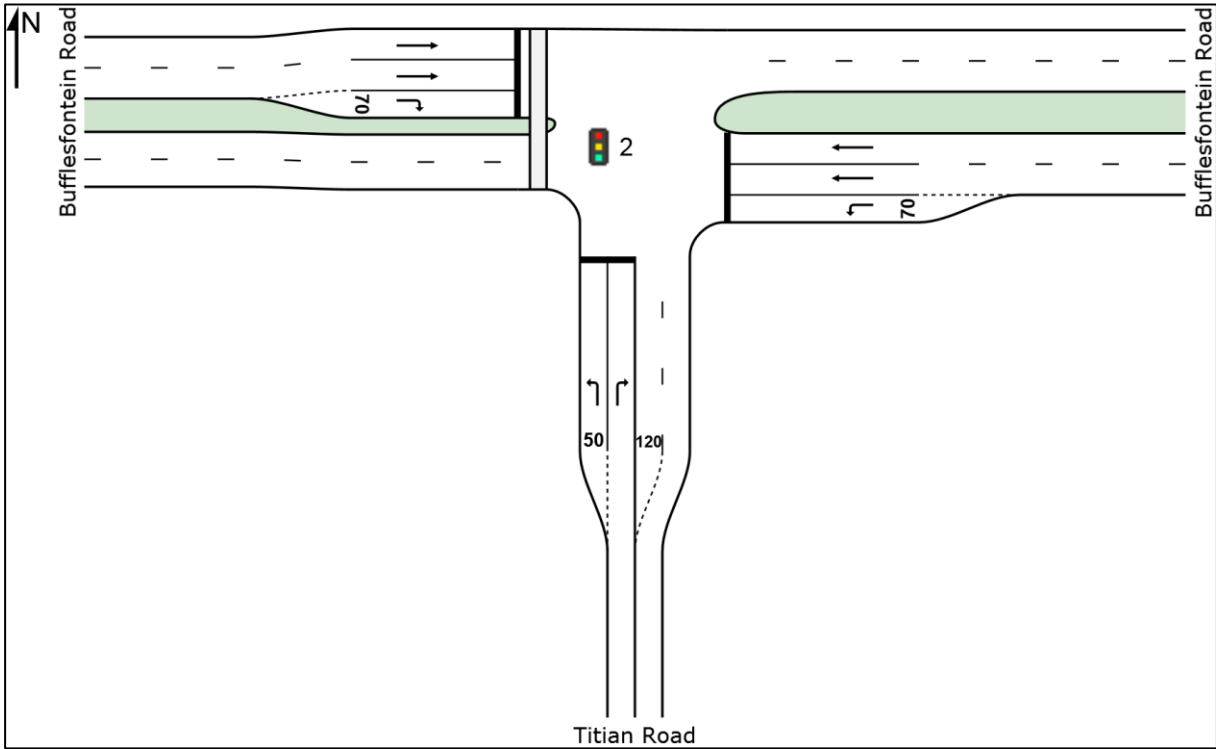and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	●	Phase Transition Applied

14. 2027 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	42	0.0	0.151	30.5	LOS C	1.1	7.8	0.90	0.72	39.2
3	R2	96	0.0	0.345	31.6	LOS C	2.7	18.6	0.94	0.76	39.0
Approach		138	0.0	0.345	31.3	LOS C	2.7	18.6	0.93	0.75	39.1
East: Buffelsfontein Road											
4	L2	195	0.0	0.126	6.1	LOS A	0.6	4.0	0.20	0.62	52.2
5	T1	941	0.0	0.346	4.2	LOS A	5.7	39.8	0.44	0.39	55.6
Approach		1136	0.0	0.346	4.5	LOS A	5.7	39.8	0.40	0.43	55.0
West: Buffelsfontein Road											
11	T1	506	0.0	0.186	3.7	LOS A	2.7	18.7	0.39	0.33	55.4
12	R2	62	0.0	0.184	11.7	LOS B	0.9	6.0	0.47	0.69	46.1
Approach		568	0.0	0.186	4.6	LOS A	2.7	18.7	0.40	0.37	54.2
All Vehicles		1842	0.0	0.346	6.5	LOS A	5.7	39.8	0.44	0.43	52.9

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.

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.

PHASING SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
Phase Sequence: Split Phasing
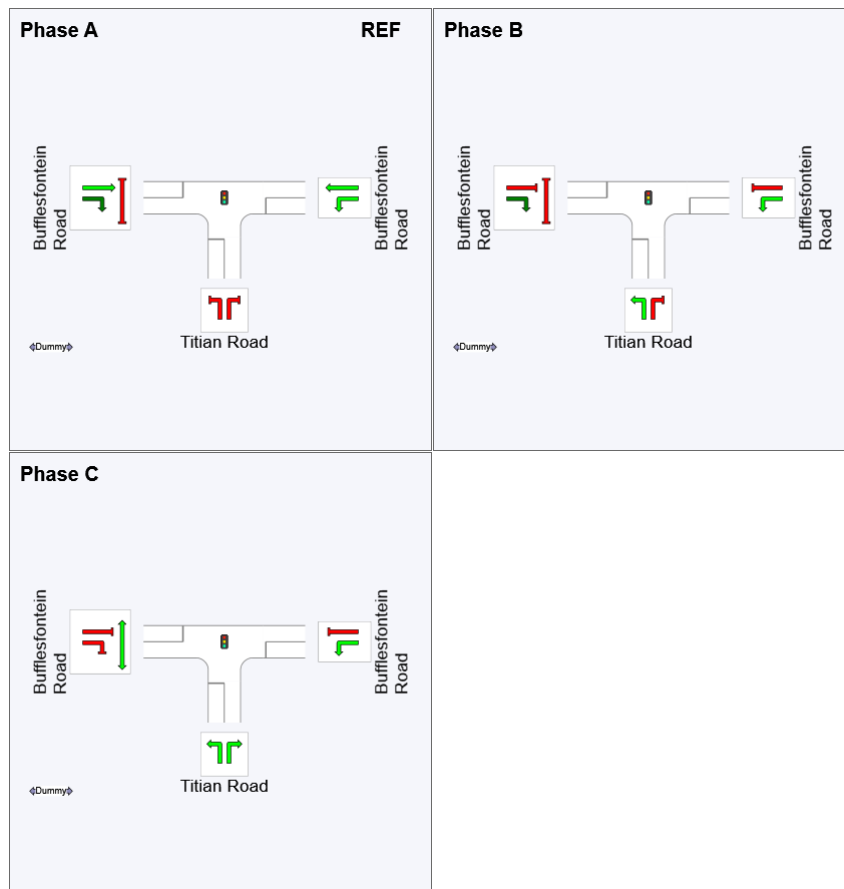**Reference Phase: Phase A**
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	46	46
Green Time (sec)	41	***	9
Phase Time (sec)	46	0	14
Phase Split	77%	0%	23%

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

REF: Reference Phase
VAR: Variable Phase

→ Normal Movement	→ Permitted/Opposed
→ Slip/Bypass-Lane Movement	→ Opposed Slip/Bypass-Lane
⊣ Stopped Movement	⊣ Turn On Red
⇒ Other Movement Class (MC) Running	⇒ Undetected Movement
→ Mixed Running & Stopped MCs	→ Continuous Movement
⊣ Other Movement Class (MC) Stopped	● Phase Transition Applied

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	52	0.0	0.140	27.5	LOS C	1.3	9.1	0.86	0.73	40.6
3	R2	215	0.0	0.579	30.1	LOS C	6.0	41.9	0.95	0.81	39.6
Approach		267	0.0	0.579	29.6	LOS C	6.0	41.9	0.94	0.79	39.8
East: Buffelsfontein Road											
4	L2	87	0.0	0.056	6.0	LOS A	0.2	1.6	0.18	0.61	52.3
5	T1	394	0.0	0.156	4.8	LOS A	2.3	16.3	0.43	0.36	55.1
Approach		481	0.0	0.156	5.0	LOS A	2.3	16.3	0.39	0.41	54.6
West: Buffelsfontein Road											
11	T1	1466	0.0	0.581	6.9	LOS A	12.5	87.4	0.63	0.56	51.9
12	R2	18	0.0	0.030	10.8	LOS B	0.2	1.5	0.42	0.65	46.8
Approach		1484	0.0	0.581	6.9	LOS A	12.5	87.4	0.62	0.56	51.9
All Vehicles		2232	0.0	0.581	9.2	LOS A	12.5	87.4	0.61	0.56	50.2

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.

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.

PHASING SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
Phase Sequence: Split Phasing
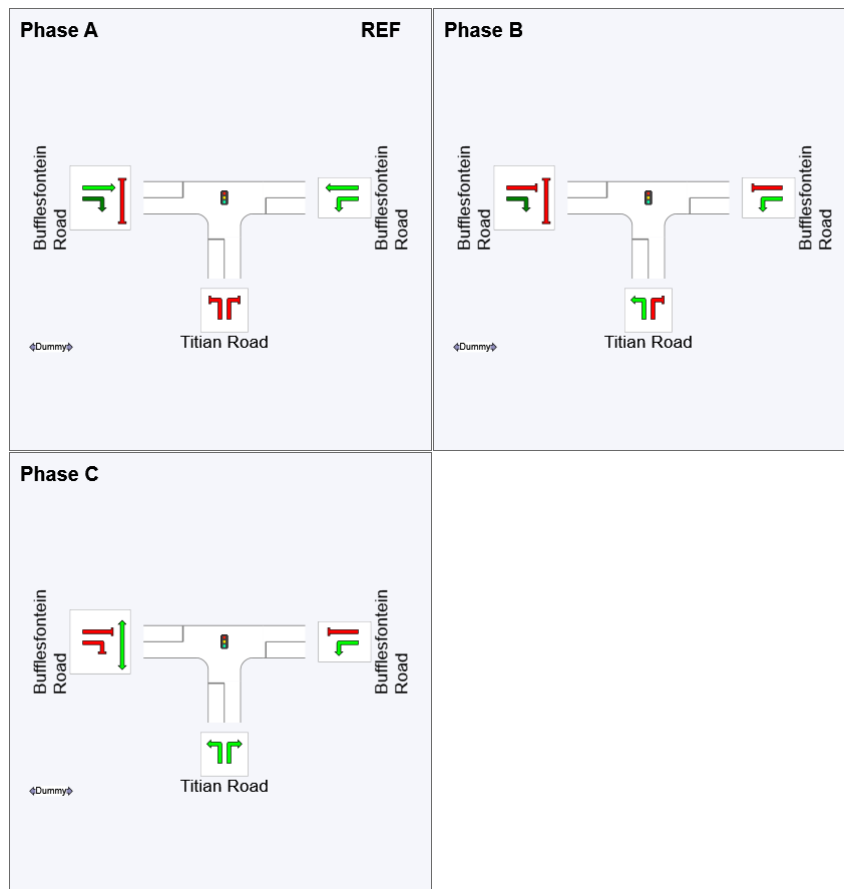**Reference Phase: Phase A**
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	43	43
Green Time (sec)	38	***	12
Phase Time (sec)	43	0	17
Phase Split	72%	0%	28%

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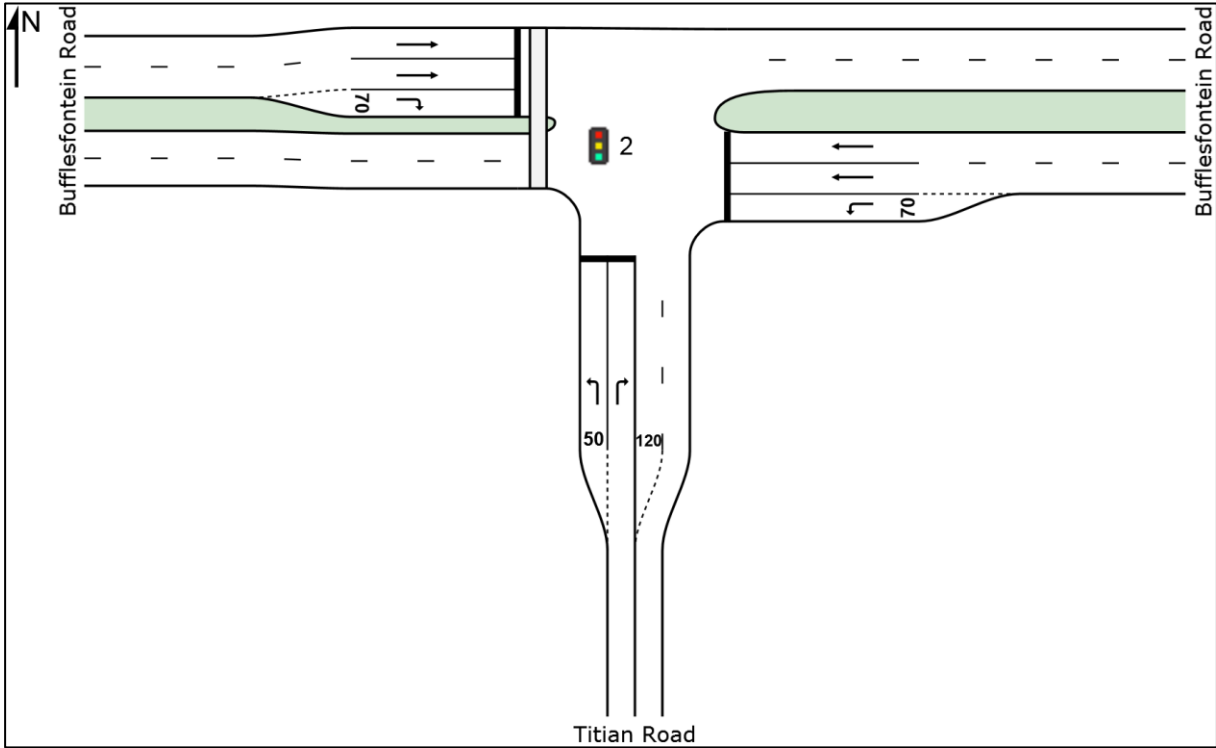and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

→ Normal Movement		→ Permitted/Opposed	
→ Slip/Bypass-Lane Movement		→ Opposed Slip/Bypass-Lane	
→ Stopped Movement		→ Turn On Red	
→ Other Movement Class (MC) Running		→ Undetected Movement	
→ Mixed Running & Stopped MCs		→ Continuous Movement	
→ Other Movement Class (MC) Stopped		● Phase Transition Applied	

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Future Traffic PM - Erf 1948]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	42	0.0	0.151	30.5	LOS C	1.1	7.8	0.90	0.72	39.2
3	R2	96	0.0	0.345	31.6	LOS C	2.7	18.6	0.94	0.76	39.0
Approach		138	0.0	0.345	31.3	LOS C	2.7	18.6	0.93	0.75	39.1
East: Buffelsfontein Road											
4	L2	195	0.0	0.126	6.1	LOS A	0.6	4.0	0.20	0.62	52.2
5	T1	941	0.0	0.346	4.2	LOS A	5.7	39.8	0.44	0.39	55.6
Approach		1136	0.0	0.346	4.5	LOS A	5.7	39.8	0.40	0.43	55.0
West: Buffelsfontein Road											
11	T1	506	0.0	0.186	3.7	LOS A	2.7	18.7	0.39	0.33	55.4
12	R2	62	0.0	0.184	11.7	LOS B	0.9	6.0	0.47	0.69	46.1
Approach		568	0.0	0.186	4.6	LOS A	2.7	18.7	0.40	0.37	54.2
All Vehicles		1842	0.0	0.346	6.5	LOS A	5.7	39.8	0.44	0.43	52.9

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.

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.

PHASING SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2027 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
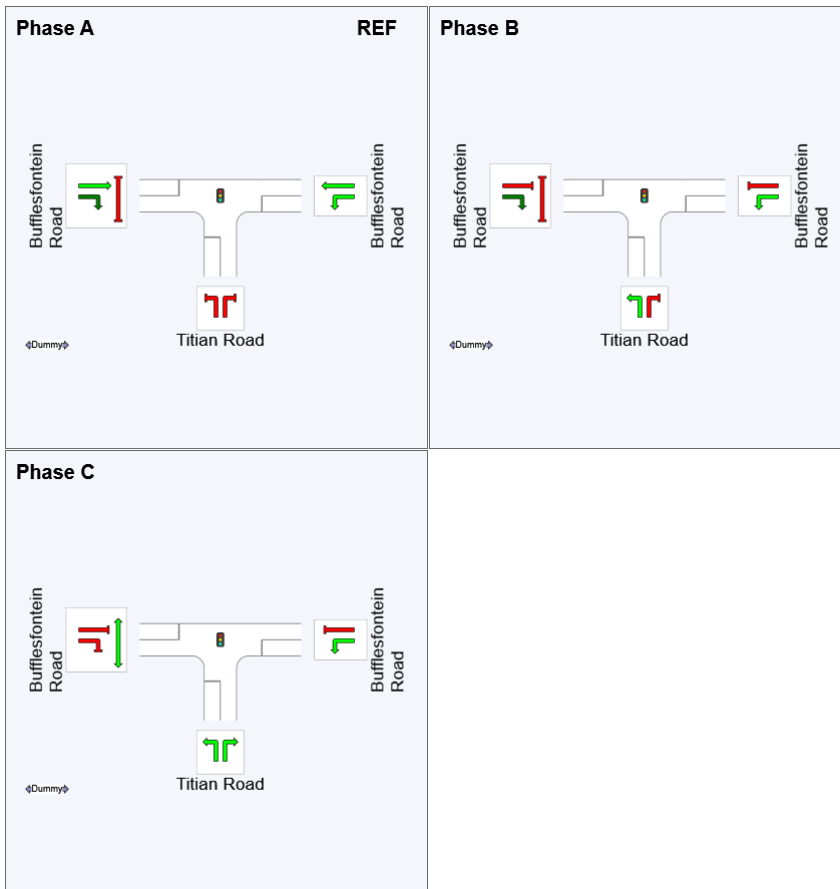**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	46	46
Green Time (sec)	41	***	9
Phase Time (sec)	46	0	14
Phase Split	77%	0%	23%

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

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→|	Stopped Movement	→|	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→|	Other Movement Class (MC) Stopped	●	Phase Transition Applied

18. Existing Layout

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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: Titian Road										
1	L2	60	0.0	0.138	25.7	LOS C	1.4	10.0	0.83	0.73	41.4
3	R2	248	0.0	0.572	28.4	LOS C	6.7	46.9	0.94	0.81	40.4
Approach		308	0.0	0.572	27.9	LOS C	6.7	46.9	0.91	0.80	40.6
East: Buffelsfontein Road										
4	L2	93	0.0	0.060	6.0	LOS A	0.2	1.7	0.18	0.62	52.3
5	T1	394	0.0	0.165	5.7	LOS A	2.5	17.8	0.47	0.39	54.3
Approach		487	0.0	0.165	5.8	LOS A	2.5	17.8	0.42	0.43	53.9
West: Buffelsfontein Road										
11	T1	1466	0.0	0.614	8.2	LOS A	13.6	95.5	0.68	0.61	50.6
12	R2	20	0.0	0.035	11.8	LOS B	0.3	1.8	0.46	0.65	46.0
Approach		1486	0.0	0.614	8.3	LOS A	13.6	95.5	0.68	0.61	50.6
All Vehicles		2281	0.0	0.614	10.4	LOS B	13.6	95.5	0.65	0.60	49.2

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.
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.

PHASING SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2027 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
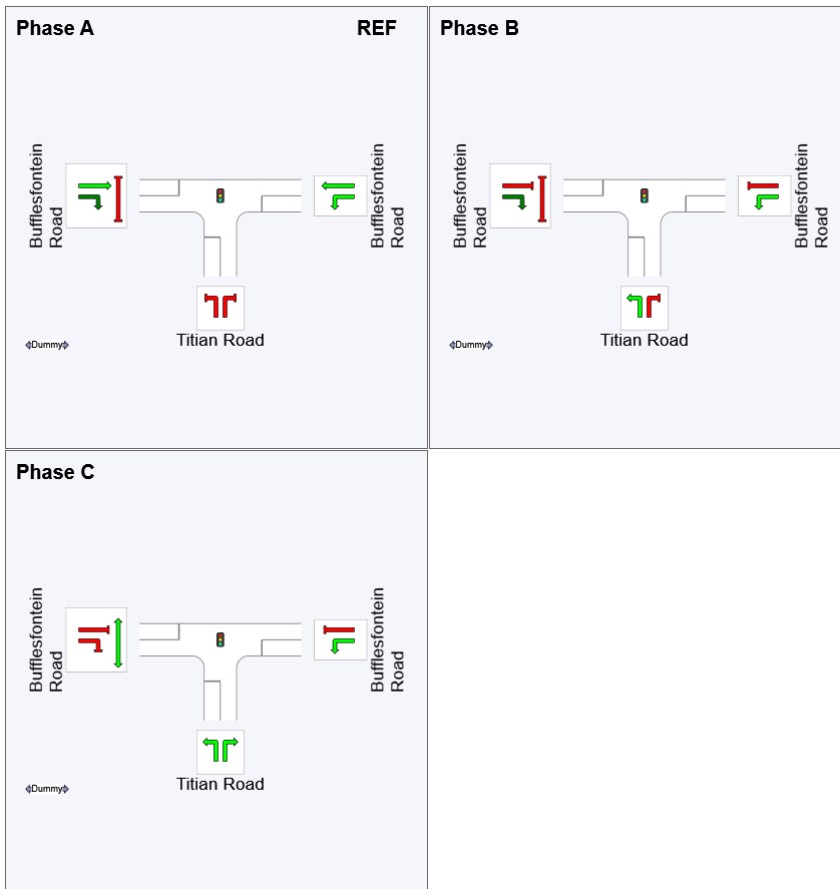**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	41	41
Green Time (sec)	36	***	14
Phase Time (sec)	41	0	19
Phase Split	68%	0%	32%

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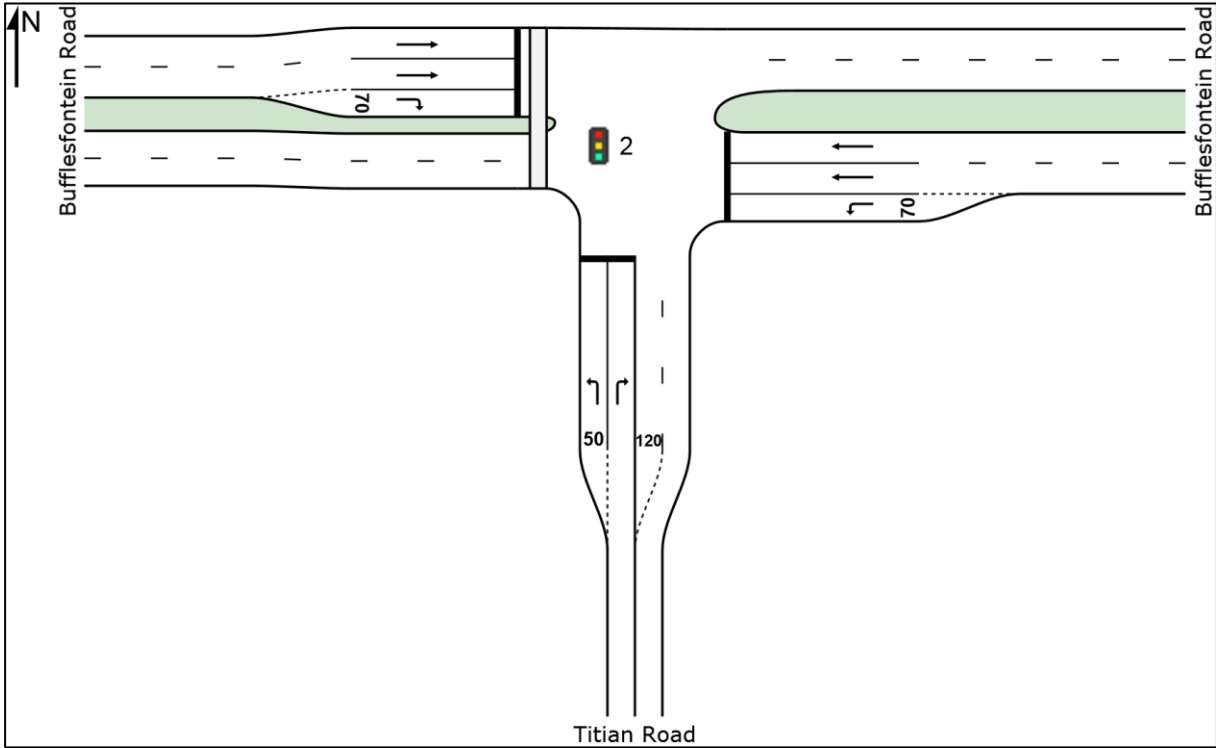and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
⊢	Stopped Movement	⊢	Turn On Red
→	Other Movement Class (MC) Running	⇒	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
⊢	Other Movement Class (MC) Stopped	●	Phase Transition Applied

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🚦 Site: 2 [Buffelsfontein / Titian - 2027 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Titian Road											
1	L2	49	0.0	0.144	28.5	LOS C	1.2	8.7	0.87	0.73	40.1
3	R2	126	0.0	0.370	29.8	LOS C	3.4	23.7	0.92	0.77	39.8
Approach		175	0.0	0.370	29.4	LOS C	3.4	23.7	0.91	0.76	39.9
East: Buffelsfontein Road											
4	L2	228	0.0	0.147	6.1	LOS A	0.7	4.7	0.20	0.63	52.2
5	T1	941	0.0	0.364	5.2	LOS A	6.3	44.1	0.49	0.43	54.8
Approach		1169	0.0	0.364	5.3	LOS A	6.3	44.1	0.43	0.47	54.2
West: Buffelsfontein Road											
11	T1	506	0.0	0.196	4.5	LOS A	3.0	20.7	0.43	0.36	54.5
12	R2	72	0.0	0.230	13.5	LOS B	1.2	8.1	0.54	0.71	44.7
Approach		578	0.0	0.230	5.6	LOS A	3.0	20.7	0.44	0.40	53.0
All Vehicles		1922	0.0	0.370	7.6	LOS A	6.3	44.1	0.48	0.48	51.9

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.

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.

PHASING SUMMARY

🚦 **Site: 2 [Buffelsfontein / Titian - 2027 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
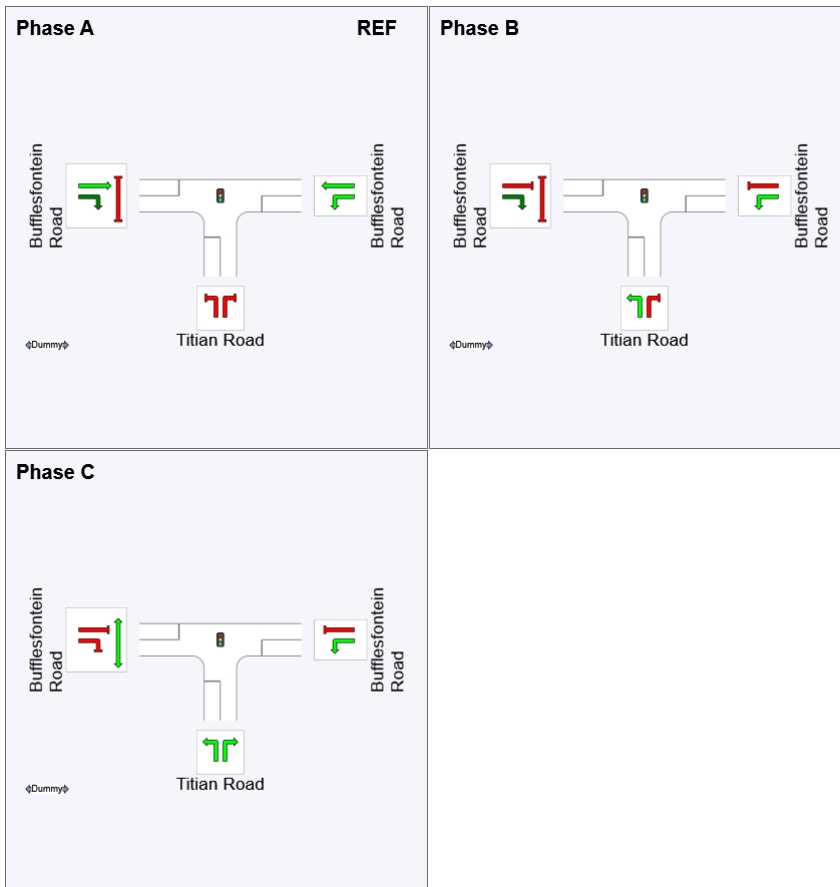**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Phase Change Time (sec)	0	44	44
Green Time (sec)	39	***	11
Phase Time (sec)	44	0	16
Phase Split	73%	0%	27%

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

REF: Reference Phase
VAR: Variable Phase

⟶	Normal Movement	⟶	Permitted/Opposed
⟶	Slip/Bypass-Lane Movement	⟶	Opposed Slip/Bypass-Lane
⊢	Stopped Movement	⊢	Turn On Red
⟶	Other Movement Class (MC) Running	⟶	Undetected Movement
⟶	Mixed Running & Stopped MCs	⟶	Continuous Movement
⊢	Other Movement Class (MC) Stopped	●	Phase Transition Applied

21. Existing Layout
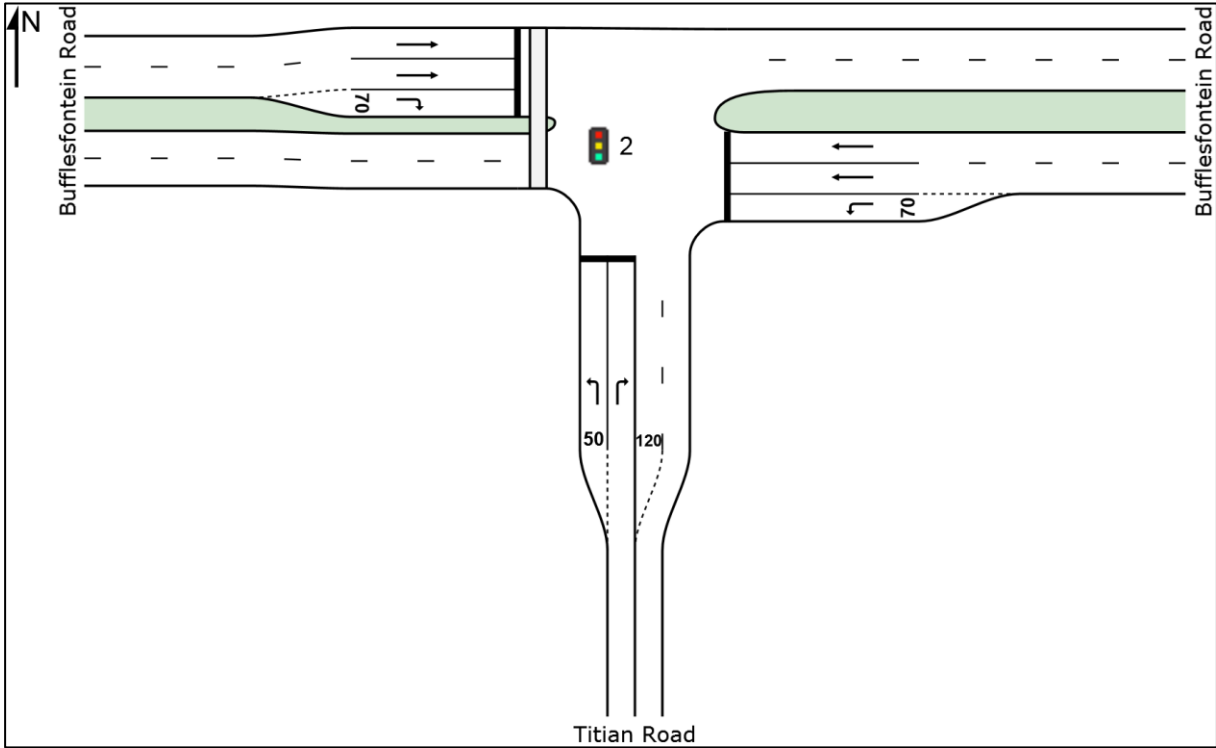
C. Buffelsfontein Road / 17th Avenue

SIDRA ANALYSIS

1. 2017 Background Traffic AM

2. 2017 Background Traffic PM

3. Existing Layout

4. 2017 Background Traffic AM - Upgrade

5. 2017 Background Traffic PM - Upgrade

6. Layout (Upgrade)

7. 2022 Background Traffic (excluding development traffic) AM

8. 2022 Background Traffic (excluding development traffic) PM

9. Upgraded Layout

10. 2022 Background Traffic (excluding development traffic) AM – Upgrade

11. 2022 Background Traffic (excluding development traffic) PM – Upgrade

12. Layout (Upgrade)

13. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

14. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

15. Upgraded Layout

16. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

17. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

18. Upgraded Layout

19. 2027 Background Traffic (excluding development traffic) AM

20. 2027 Background Traffic (excluding development traffic) PM

21. Upgraded Layout

22. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

23. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

24. Upgraded Layout

25. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

26. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

27. Upgraded Layout

1. 2017 Background Traffic AM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2017 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Phase Times)

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: Newcombe Ave											
1	L2	1	0.0	0.003	49.7	LOS D	0.0	0.3	0.85	0.60	32.6
2	T1	218	0.0	0.833	58.2	LOS E	13.3	93.2	0.99	0.96	30.8
3	R2	261	0.0	1.067	213.8	LOS F	34.2	239.2	1.00	1.56	13.1
Approach		480	0.0	1.067	142.8	LOS F	34.2	239.2	1.00	1.28	17.8
East: Buffelsfontein Road											
4	L2	63	0.0	0.051	9.4	LOS A	0.8	5.4	0.36	0.65	48.3
5	T1	261	0.0	0.174	17.0	LOS B	5.5	38.2	0.57	0.47	43.8
6	R2	165	0.0	0.585	37.3	LOS D	8.1	56.7	0.90	0.83	32.6
Approach		489	0.0	0.585	22.9	LOS C	8.1	56.7	0.65	0.61	39.7
North: 17th Ave											
7	L2	166	0.0	0.715	63.1	LOS E	9.9	69.0	1.00	0.85	29.1
8	T1	152	0.0	1.373	727.9	LOS F	94.1	658.4	1.00	3.24	4.6
9	R2	174	0.0	1.373	733.5	LOS F	94.1	658.4	1.00	3.24	4.5
Approach		492	0.0	1.373	505.6	LOS F	94.1	658.4	1.00	2.43	6.4
West: Buffelsfontein Road											
10	L2	371	0.0	0.300	14.3	LOS B	8.9	62.0	0.45	0.71	45.8
11	T1	951	0.0	0.511	20.9	LOS C	19.7	137.8	0.71	0.63	42.7
12	R2	23	0.0	0.040	19.4	LOS B	0.6	4.4	0.53	0.66	42.7
Approach		1345	0.0	0.511	19.1	LOS B	19.7	137.8	0.63	0.65	43.5
All Vehicles		2806	0.0	1.373	126.2	LOS F	94.1	658.4	0.76	1.06	17.7

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.
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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2017 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Phase Times)

Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	65	75	100
Green Time (sec)	60	5	20	15
Phase Time (sec)	65	10	25	20
Phase Split	54%	8%	21%	17%

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

REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped	●	Phase Transition Applied

2. 2017 Background Traffic PM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2017 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Phase Times)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Newcombe Ave											
1	L2	39	0.0	0.183	51.7	LOS D	2.0	13.7	0.89	0.72	32.0
2	T1	177	0.0	0.648	50.5	LOS D	9.7	68.0	0.97	0.80	32.9
3	R2	96	0.0	0.318	53.7	LOS D	5.0	35.2	0.92	0.77	31.6
Approach		312	0.0	0.648	51.6	LOS D	9.7	68.0	0.94	0.78	32.4
East: Buffelsfontein Road											
4	L2	167	0.0	0.135	9.7	LOS A	2.2	15.4	0.39	0.67	48.1
5	T1	703	0.0	0.469	19.8	LOS B	17.6	123.2	0.67	0.58	42.0
6	R2	302	0.0	0.476	22.7	LOS C	10.6	73.9	0.69	0.78	39.3
Approach		1172	0.0	0.476	19.1	LOS B	17.6	123.2	0.63	0.65	42.0
North: 17th Ave											
7	L2	180	0.0	0.775	65.1	LOS E	11.0	76.9	1.00	0.88	28.6
8	T1	256	0.0	2.610	2935.7	LOS F	350.9	2456.1	1.00	6.03	1.2
9	R2	362	0.0	2.610	2941.3	LOS F	350.9	2456.1	1.00	6.03	1.2
Approach		798	0.0	2.610	2290.7	LOS F	350.9	2456.1	1.00	4.87	1.5
West: Buffelsfontein Road											
10	L2	128	0.0	0.103	13.0	LOS B	2.6	18.3	0.38	0.67	46.7
11	T1	234	0.0	0.118	16.8	LOS B	3.6	24.9	0.56	0.46	45.3
12	R2	63	0.0	0.200	29.3	LOS C	2.4	16.7	0.70	0.74	37.6
Approach		425	0.0	0.200	17.5	LOS B	3.6	24.9	0.53	0.56	44.3
All Vehicles		2707	0.0	2.610	692.3	LOS F	350.9	2456.1	0.76	1.89	4.2

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.
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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2017 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Phase Times)

Phase Times specified by the user
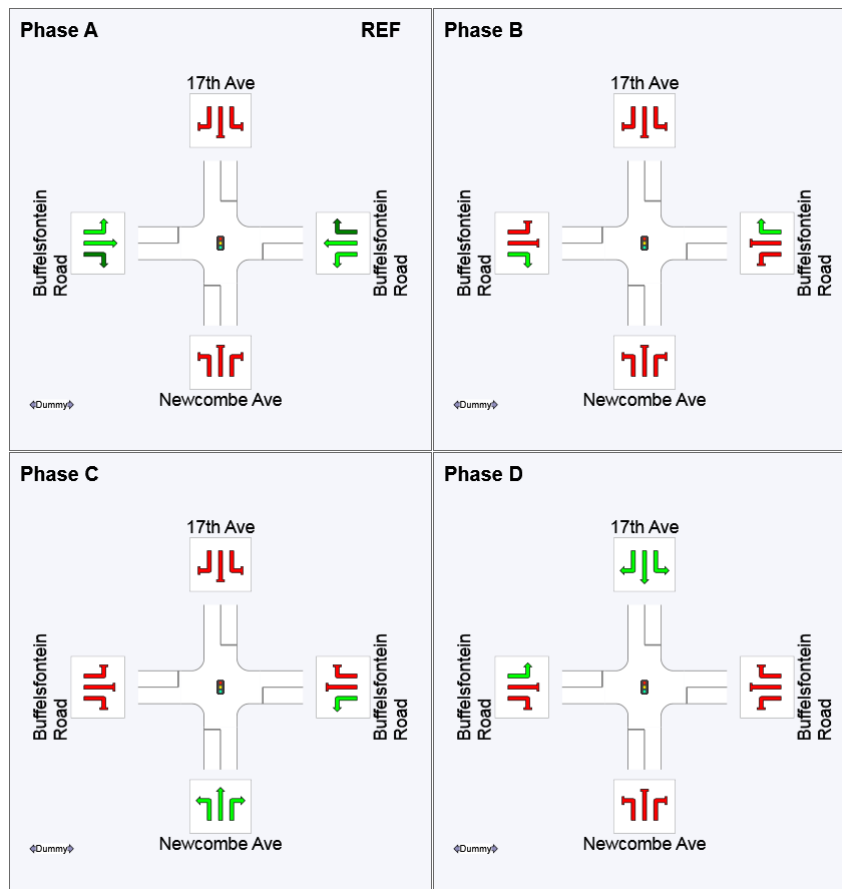**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	65	75	100
Green Time (sec)	60	5	20	15
Phase Time (sec)	65	10	25	20
Phase Split	54%	8%	21%	17%

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

REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped	●	Phase Transition Applied

3. Existing Layout

4. 2017 Background Traffic AM – Upgrade

MOVEMENT SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2017 Background Traffic AM - Upgrade]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Newcombe Ave											
1	L2	1	0.0	0.003	34.7	LOS C	0.0	0.2	0.84	0.59	37.6
2	T1	218	0.0	0.641	34.6	LOS C	8.3	57.9	0.98	0.82	38.4
3	R2	261	0.0	0.825	46.5	LOS D	11.2	78.7	1.00	0.96	33.8
Approach		480	0.0	0.825	41.0	LOS D	11.2	78.7	0.99	0.90	35.7
East: Buffelsfontein Road											
4	L2	63	0.0	0.071	12.1	LOS B	0.8	5.8	0.57	0.69	46.2
5	T1	261	0.0	0.291	22.9	LOS C	5.2	36.7	0.80	0.64	40.1
6	R2	165	0.0	0.642	40.0	LOS D	6.3	44.0	0.99	0.87	31.6
Approach		489	0.0	0.642	27.3	LOS C	6.3	44.0	0.83	0.73	37.3
North: 17th Ave											
7	L2	166	0.0	0.447	36.7	LOS D	5.9	41.1	0.93	0.79	36.8
8	T1	152	0.0	0.858	41.9	LOS D	14.5	101.4	1.00	1.03	34.6
9	R2	174	0.0	0.858	47.5	LOS D	14.5	101.4	1.00	1.03	34.3
Approach		492	0.0	0.858	42.1	LOS D	14.5	101.4	0.97	0.95	35.2
West: Buffelsfontein Road											
10	L2	371	0.0	0.355	15.8	LOS B	7.9	55.1	0.58	0.75	44.8
11	T1	951	0.0	0.866	37.4	LOS D	22.8	159.4	0.98	1.03	34.8
12	R2	23	0.0	0.053	23.3	LOS C	0.6	4.1	0.73	0.69	40.5
Approach		1345	0.0	0.866	31.2	LOS C	22.8	159.4	0.87	0.95	37.2
All Vehicles		2806	0.0	0.866	34.1	LOS C	22.8	159.4	0.90	0.90	36.5

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2017 Background Traffic AM - Upgrade]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	29	40	59
Green Time (sec)	24	6	14	16
Phase Time (sec)	29	11	19	21
Phase Split	36%	14%	24%	26%

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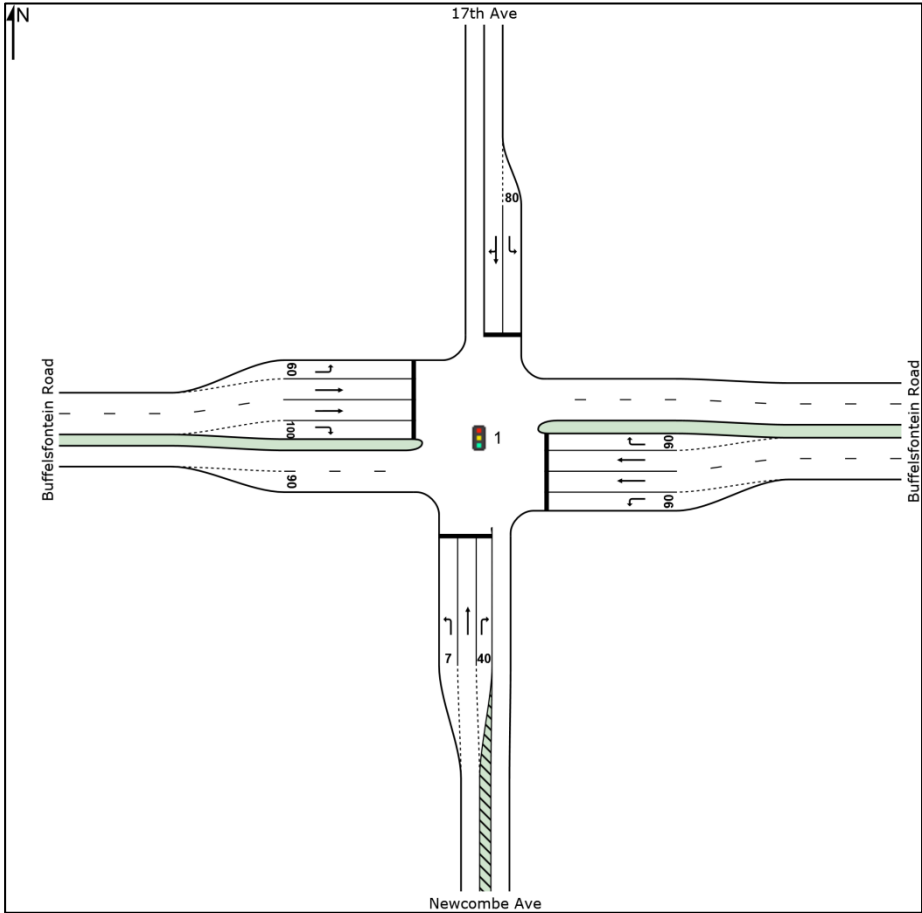

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	●	Phase Transition Applied

5. 2017 Background Traffic PM – Upgrade

MOVEMENT SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2017 Background Traffic PM - Upgrade]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Newcombe Ave											
1	L2	39	0.0	0.175	49.4	LOS D	1.8	12.3	0.93	0.73	32.6
2	T1	177	0.0	0.895	59.4	LOS E	10.0	70.3	1.00	1.07	30.5
3	R2	96	0.0	0.442	51.4	LOS D	4.5	31.7	0.97	0.78	32.3
Approach		312	0.0	0.895	55.7	LOS E	10.0	70.3	0.98	0.93	31.3
East: Buffelsfontein Road											
4	L2	167	0.0	0.243	20.3	LOS C	4.3	29.8	0.73	0.75	40.6
5	T1	703	0.0	0.939	54.1	LOS D	30.1	210.8	0.97	1.06	27.6
6	R2	302	0.0	0.792	44.4	LOS D	14.8	103.8	1.00	0.92	30.1
Approach		1172	0.0	0.939	46.8	LOS D	30.1	210.8	0.94	0.98	29.6
North: 17th Ave											
7	L2	180	0.0	0.262	29.1	LOS C	6.1	42.7	0.74	0.76	39.9
8	T1	256	0.0	0.966	74.0	LOS E	44.8	313.7	1.00	1.25	26.6
9	R2	362	0.0	0.966	79.6	LOS E	44.8	313.7	1.00	1.25	26.3
Approach		798	0.0	0.966	66.4	LOS E	44.8	313.7	0.94	1.14	28.6
West: Buffelsfontein Road											
10	L2	128	0.0	0.103	11.7	LOS B	2.2	15.1	0.38	0.67	47.6
11	T1	234	0.0	0.235	32.3	LOS C	4.6	32.0	0.84	0.67	36.9
12	R2	63	0.0	0.340	51.4	LOS D	3.0	21.0	0.97	0.71	29.6
Approach		425	0.0	0.340	28.9	LOS C	4.6	32.0	0.72	0.68	38.1
All Vehicles		2707	0.0	0.966	50.8	LOS D	44.8	313.7	0.91	0.98	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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2017 Background Traffic PM - Upgrade]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
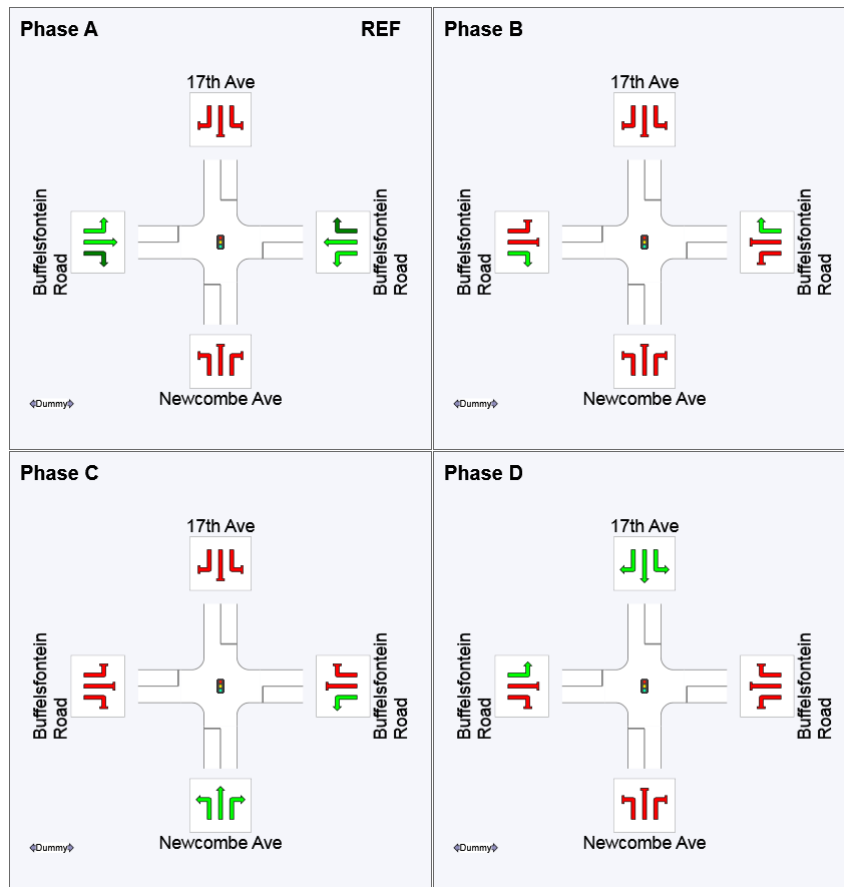**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	30	41	58
Green Time (sec)	25	6	12	37
Phase Time (sec)	30	11	17	42
Phase Split	30%	11%	17%	42%

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

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	⇒	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	●	Phase Transition Applied

6. Layout (Upgrade)

7.   2022 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

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: Newcombe Ave										
1	L2	1	0.0	0.003	34.7	LOS C	0.0	0.2	0.84	0.59	37.6
2	T1	229	0.0	0.673	35.2	LOS D	8.8	61.7	0.99	0.84	38.2
3	R2	274	0.0	0.893	53.1	LOS D	12.9	90.6	1.00	1.06	31.8
Approach		504	0.0	0.893	44.9	LOS D	12.9	90.6	0.99	0.96	34.4
East: Buffelsfontein Road										
4	L2	66	0.0	0.075	12.1	LOS B	0.9	6.1	0.57	0.69	46.2
5	T1	274	0.0	0.305	23.0	LOS C	5.5	38.7	0.80	0.65	40.0
6	R2	174	0.0	0.736	44.5	LOS D	6.8	47.9	1.00	0.95	30.0
Approach		514	0.0	0.736	28.9	LOS C	6.8	47.9	0.84	0.75	36.5
North: 17th Ave										
7	L2	175	0.0	0.471	36.9	LOS D	6.2	43.6	0.93	0.80	36.7
8	T1	160	0.0	0.903	47.8	LOS D	16.6	115.9	1.00	1.13	32.8
9	R2	183	0.0	0.903	53.4	LOS D	16.6	115.9	1.00	1.13	32.5
Approach		518	0.0	0.903	46.1	LOS D	16.6	115.9	0.98	1.02	33.9
West: Buffelsfontein Road										
10	L2	390	0.0	0.373	15.9	LOS B	8.4	58.7	0.59	0.75	44.7
11	T1	999	0.0	0.900	42.7	LOS D	25.6	179.3	0.99	1.12	32.8
12	R2	25	0.0	0.058	23.4	LOS C	0.6	4.5	0.73	0.69	40.5
Approach		1414	0.0	0.900	35.0	LOS C	25.6	179.3	0.87	1.01	35.6
All Vehicles		2950	0.0	0.903	37.6	LOS D	25.6	179.3	0.91	0.96	35.1

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.
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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
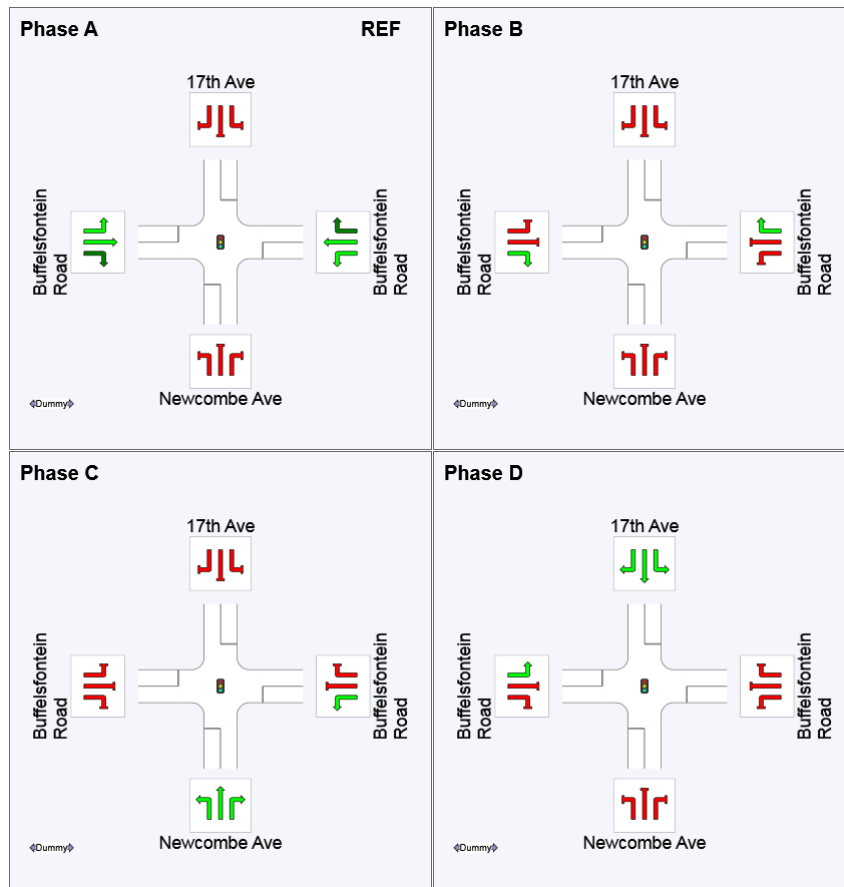**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	29	40	59
Green Time (sec)	24	6	14	16
Phase Time (sec)	29	11	19	21
Phase Split	36%	14%	24%	26%

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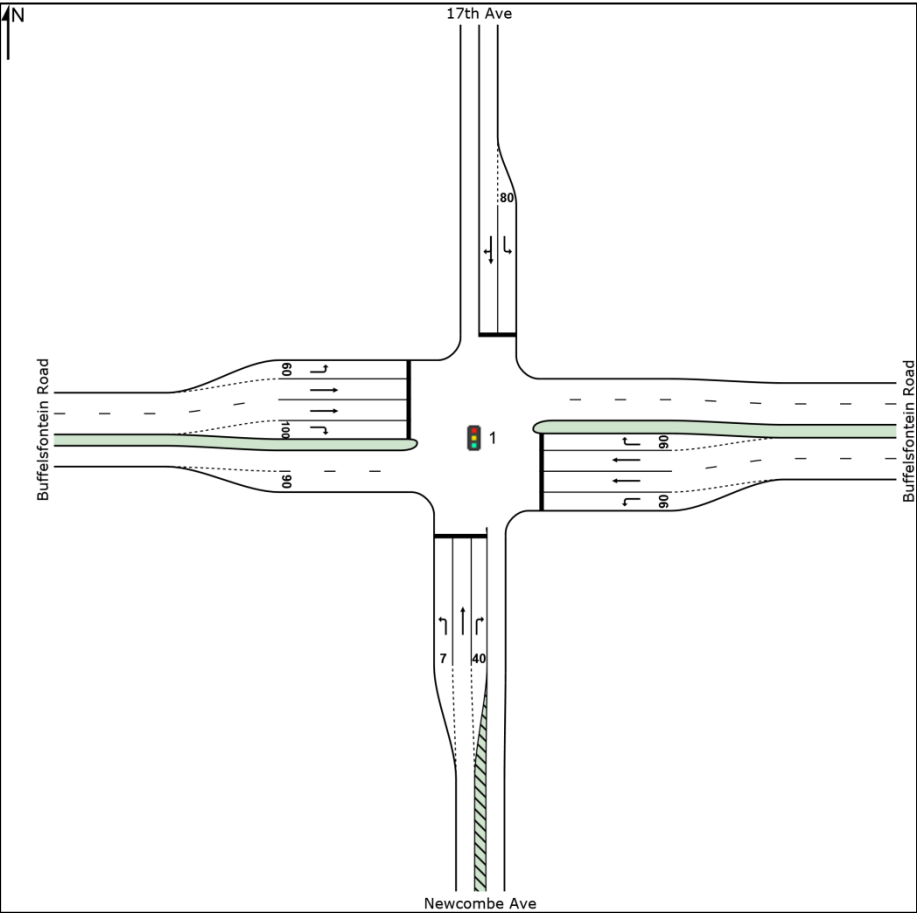

REF: Reference Phase
VAR: Variable Phase

➤	Normal Movement	➤	Permitted/Opposed
➤	Slip/Bypass-Lane Movement	➤	Opposed Slip/Bypass-Lane
⊐	Stopped Movement	⊐	Turn On Red
➤	Other Movement Class (MC) Running	➤	Undetected Movement
➤	Mixed Running & Stopped MCs	➤	Continuous Movement
⊐	Other Movement Class (MC) Stopped	●	Phase Transition Applied

8.   2022 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Newcombe Ave											
1	L2	41	0.0	0.359	58.3	LOS E	2.2	15.5	0.94	0.73	30.2
2	T1	187	0.0	0.981	101.6	LOS F	15.6	109.2	1.00	1.29	22.6
3	R2	101	0.0	0.479	60.8	LOS E	5.7	40.0	0.98	0.78	29.8
Approach		329	0.0	0.981	83.7	LOS F	15.6	109.2	0.99	1.06	25.3
East: Buffelsfontein Road											
4	L2	176	0.0	0.242	23.0	LOS C	5.4	37.9	0.71	0.75	39.1
5	T1	739	0.0	1.000	89.1	LOS F	45.7	319.8	0.96	1.22	20.5
6	R2	317	0.0	0.836	55.1	LOS E	19.5	136.6	1.00	0.94	26.9
Approach		1232	0.0	1.000	70.9	LOS E	45.7	319.8	0.94	1.08	23.5
North: 17th Ave											
7	L2	189	0.0	0.260	31.9	LOS C	7.4	51.9	0.72	0.76	38.7
8	T1	269	0.0	0.999	109.7	LOS F	62.5	437.4	1.00	1.34	21.1
9	R2	381	0.0	0.999	115.3	LOS F	62.5	437.4	1.00	1.34	21.0
Approach		839	0.0	0.999	94.7	LOS F	62.5	437.4	0.94	1.21	23.4
West: Buffelsfontein Road											
10	L2	134	0.0	0.102	11.3	LOS B	2.4	16.8	0.33	0.66	47.9
11	T1	246	0.0	0.225	36.0	LOS D	5.5	38.8	0.81	0.66	35.3
12	R2	66	0.0	0.415	62.7	LOS E	3.9	27.0	0.98	0.73	26.8
Approach		446	0.0	0.415	32.5	LOS C	5.5	38.8	0.69	0.67	36.5
All Vehicles		2846	0.0	1.000	73.4	LOS E	62.5	437.4	0.90	1.05	25.1

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.
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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
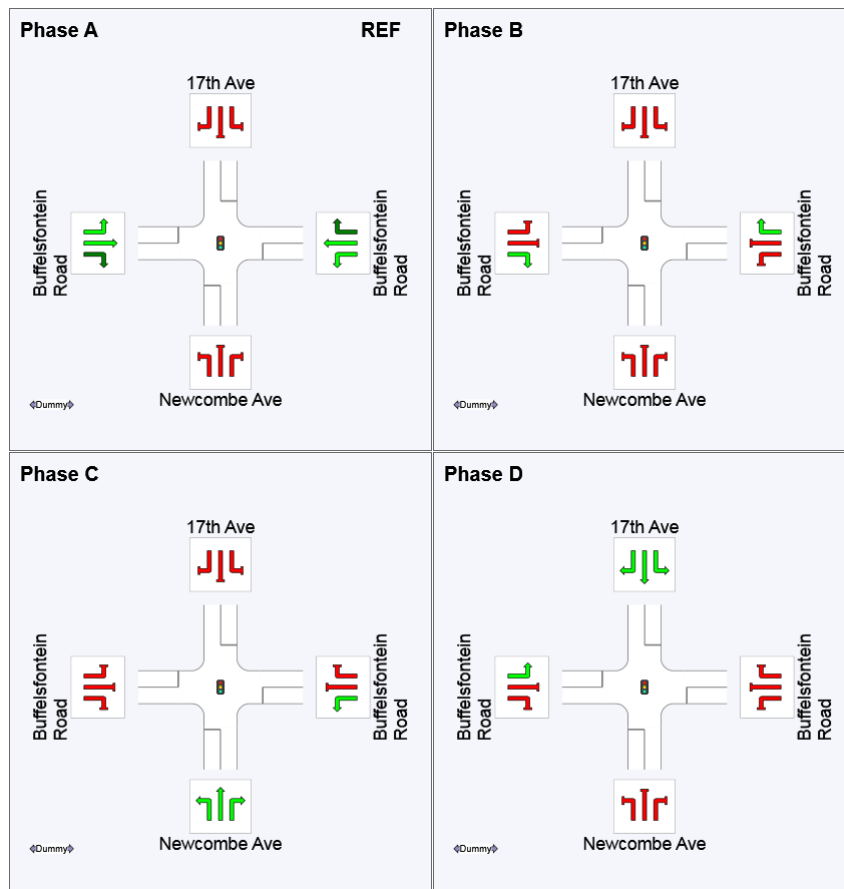**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	38	49	68
Green Time (sec)	33	6	14	47
Phase Time (sec)	38	11	19	52
Phase Split	32%	9%	16%	43%

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

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	●	Phase Transition Applied

9. Upgraded Layout

10. 2022 Background Traffic (excluding development traffic) AM – Upgrade

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Background Traffic AM - Upgrade]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Newcombe Ave											
1	L2	1	0.0	0.318	33.0	LOS C	3.5	24.6	0.91	0.72	38.7
2	T1	229	0.0	0.318	27.5	LOS C	3.5	24.6	0.91	0.72	41.5
3	R2	274	0.0	0.816	41.0	LOS D	10.3	72.4	1.00	0.96	31.8
Approach		504	0.0	0.816	34.9	LOS C	10.3	72.4	0.96	0.85	36.2
East: Buffelsfontein Road											
4	L2	66	0.0	0.071	10.5	LOS B	0.6	4.5	0.54	0.68	43.5
5	T1	274	0.0	0.219	19.2	LOS B	3.5	24.4	0.78	0.62	37.7
6	R2	174	0.0	0.604	33.8	LOS C	5.6	39.5	0.98	0.84	28.8
Approach		514	0.0	0.604	23.1	LOS C	5.6	39.5	0.81	0.70	34.6
North: 17th Ave											
7	L2	175	0.0	0.733	40.9	LOS D	6.4	44.5	1.00	0.88	31.5
8	T1	160	0.0	0.638	33.6	LOS C	5.6	39.0	1.00	0.83	38.8
9	R2	183	0.0	0.766	41.9	LOS D	6.8	47.4	1.00	0.92	33.2
Approach		518	0.0	0.766	39.0	LOS D	6.8	47.4	1.00	0.88	34.4
West: Buffelsfontein Road											
10	L2	390	0.0	0.408	16.8	LOS B	8.2	57.5	0.66	0.77	42.0
11	T1	999	0.0	0.798	27.7	LOS C	17.4	121.9	0.98	0.94	35.1
12	R2	25	0.0	0.051	18.7	LOS B	0.5	3.6	0.68	0.68	40.9
Approach		1414	0.0	0.798	24.5	LOS C	17.4	121.9	0.88	0.89	37.0
All Vehicles		2950	0.0	0.816	28.6	LOS C	17.4	121.9	0.90	0.85	35.9

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Background Traffic AM - Upgrade]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
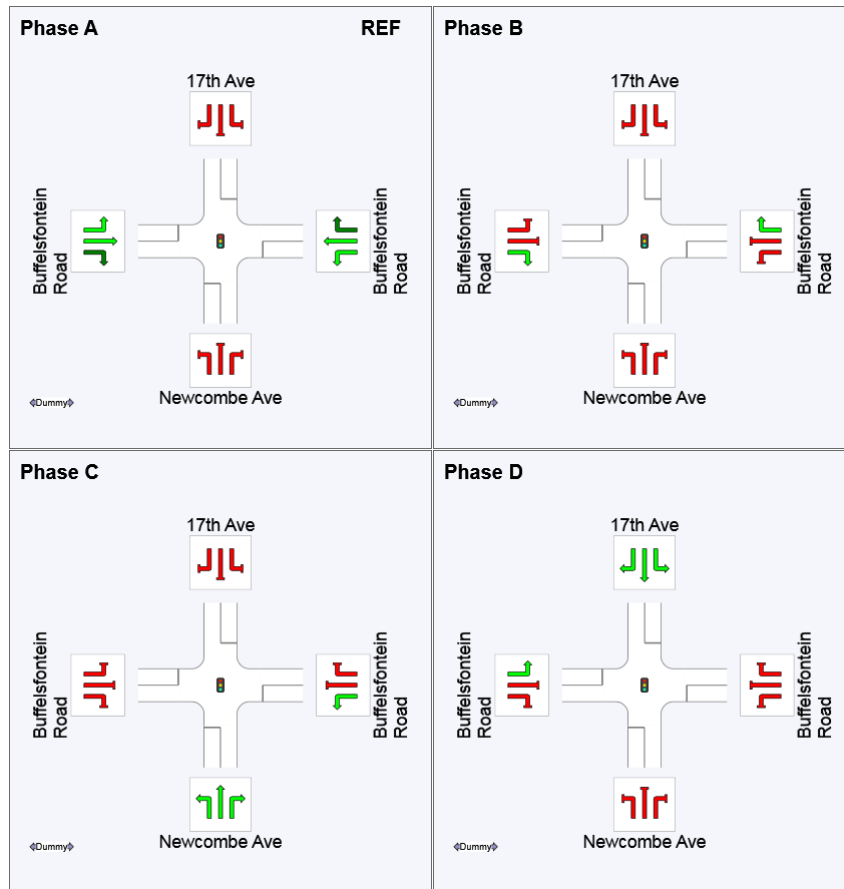**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	27	38	56
Green Time (sec)	22	6	13	9
Phase Time (sec)	27	11	18	14
Phase Split	39%	16%	26%	20%

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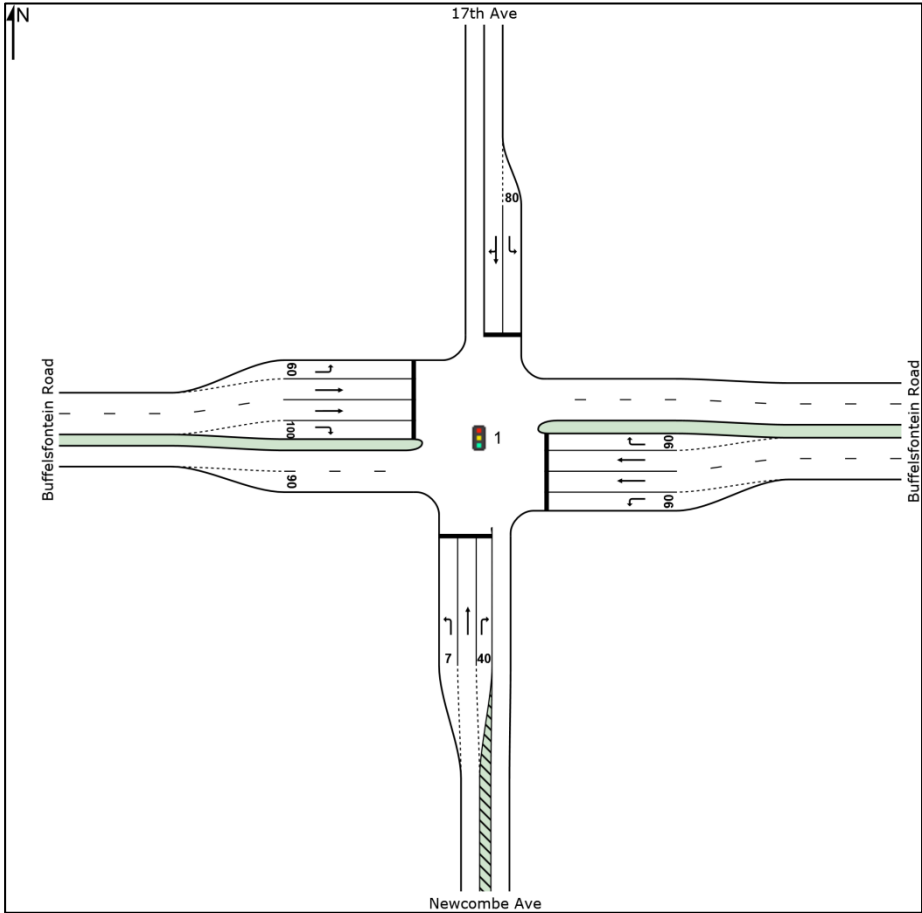

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	●	Phase Transition Applied

11. 2022 Background Traffic (excluding development traffic) PM – Upgrade

MOVEMENT SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Background Traffic PM - Upgrade]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Newcombe Ave											
1	L2	41	0.0	0.393	39.9	LOS D	4.1	29.0	0.95	0.76	34.9
2	T1	187	0.0	0.393	34.4	LOS C	4.2	29.5	0.95	0.75	38.2
3	R2	101	0.0	0.372	39.9	LOS D	3.7	25.9	0.94	0.77	32.2
Approach		329	0.0	0.393	36.8	LOS D	4.2	29.5	0.95	0.76	36.0
East: Buffelsfontein Road											
4	L2	176	0.0	0.237	15.3	LOS B	3.1	21.7	0.70	0.74	39.4
5	T1	739	0.0	0.743	32.1	LOS C	14.1	98.9	0.98	0.89	30.1
6	R2	317	0.0	0.764	34.5	LOS C	12.1	84.7	0.99	0.91	28.5
Approach		1232	0.0	0.764	30.3	LOS C	14.1	98.9	0.94	0.87	30.7
North: 17th Ave											
7	L2	189	0.0	0.370	31.2	LOS C	6.1	42.4	0.85	0.79	35.4
8	T1	269	0.0	0.562	26.7	LOS C	9.0	62.9	0.89	0.75	41.8
9	R2	381	0.0	0.746	36.6	LOS D	14.5	101.5	0.97	0.89	35.1
Approach		839	0.0	0.746	32.2	LOS C	14.5	101.5	0.92	0.82	37.3
West: Buffelsfontein Road											
10	L2	134	0.0	0.123	13.3	LOS B	2.3	16.1	0.47	0.69	44.5
11	T1	246	0.0	0.247	26.2	LOS C	3.9	27.2	0.84	0.67	35.9
12	R2	66	0.0	0.254	35.5	LOS D	2.3	16.1	0.92	0.75	32.3
Approach		446	0.0	0.254	23.7	LOS C	3.9	27.2	0.74	0.69	37.6
All Vehicles		2846	0.0	0.764	30.6	LOS C	14.5	101.5	0.90	0.82	34.7

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.
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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Background Traffic PM - Upgrade]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
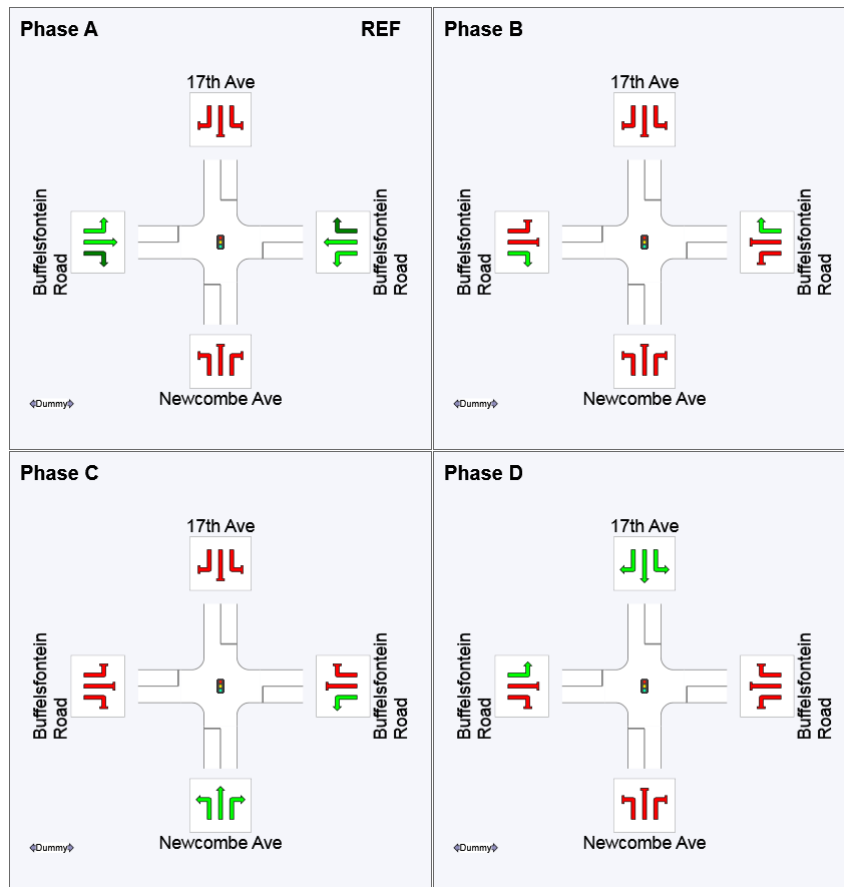**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	25	36	53
Green Time (sec)	20	6	12	22
Phase Time (sec)	25	11	17	27
Phase Split	31%	14%	21%	34%

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

REF: Reference Phase
VAR: Variable Phase

➤	Normal Movement	➤	Permitted/Opposed
➤	Slip/Bypass-Lane Movement	➤	Opposed Slip/Bypass-Lane
⊐	Stopped Movement	⊐	Turn On Red
➤	Other Movement Class (MC) Running	⇒	Undetected Movement
➤	Mixed Running & Stopped MCs	➤	Continuous Movement
⊐	Other Movement Class (MC) Stopped	●	Phase Transition Applied

12. Layout (Upgrade)

13. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

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: Newcombe Ave											
1	L2	1	0.0	0.318	33.0	LOS C	3.5	24.6	0.91	0.72	38.7
2	T1	229	0.0	0.318	27.5	LOS C	3.5	24.6	0.91	0.72	41.5
3	R2	274	0.0	0.816	41.0	LOS D	10.3	72.4	1.00	0.96	31.8
Approach		504	0.0	0.816	34.9	LOS C	10.3	72.4	0.96	0.85	36.2
East: Buffelsfontein Road											
4	L2	66	0.0	0.071	10.5	LOS B	0.6	4.5	0.54	0.68	43.5
5	T1	274	0.0	0.219	19.2	LOS B	3.5	24.4	0.78	0.62	37.7
6	R2	174	0.0	0.604	33.8	LOS C	5.6	39.5	0.98	0.84	28.8
Approach		514	0.0	0.604	23.1	LOS C	5.6	39.5	0.81	0.70	34.6
North: 17th Ave											
7	L2	175	0.0	0.733	40.9	LOS D	6.4	44.5	1.00	0.88	31.5
8	T1	160	0.0	0.638	33.6	LOS C	5.6	39.0	1.00	0.83	38.8
9	R2	183	0.0	0.766	41.9	LOS D	6.8	47.4	1.00	0.92	33.2
Approach		518	0.0	0.766	39.0	LOS D	6.8	47.4	1.00	0.88	34.4
West: Buffelsfontein Road											
10	L2	390	0.0	0.408	16.8	LOS B	8.2	57.5	0.66	0.77	42.0
11	T1	999	0.0	0.798	27.7	LOS C	17.4	121.9	0.98	0.94	35.1
12	R2	25	0.0	0.051	18.7	LOS B	0.5	3.6	0.68	0.68	40.9
Approach		1414	0.0	0.798	24.5	LOS C	17.4	121.9	0.88	0.89	37.0
All Vehicles		2950	0.0	0.816	28.6	LOS C	17.4	121.9	0.90	0.85	35.9

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
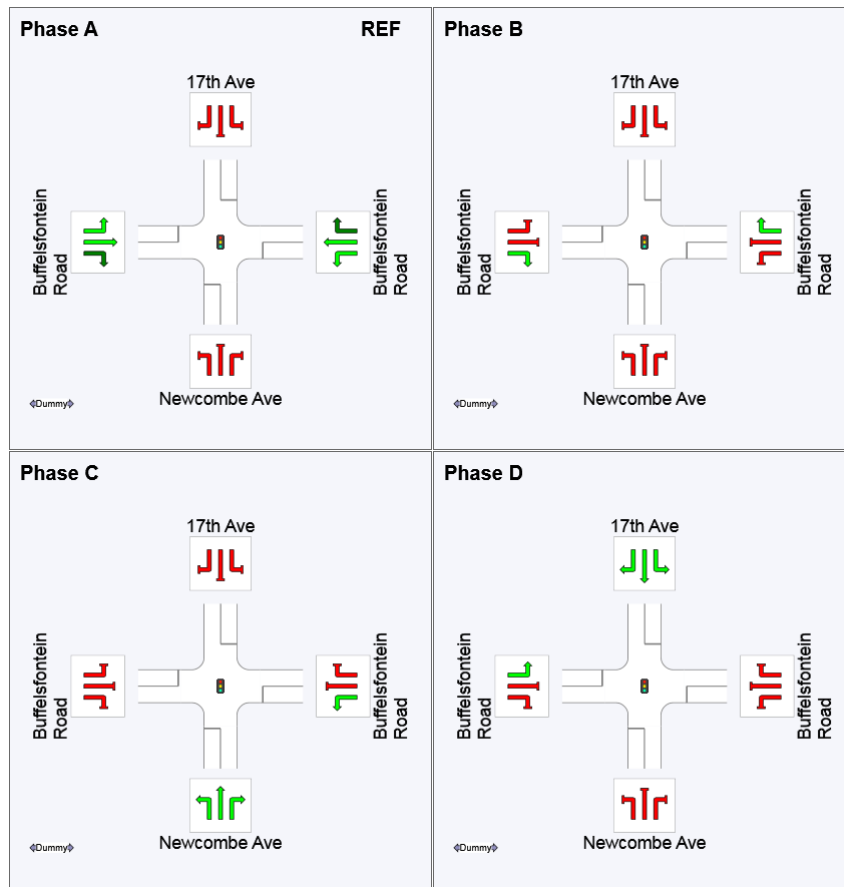**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	27	38	56
Green Time (sec)	22	6	13	9
Phase Time (sec)	27	11	18	14
Phase Split	39%	16%	26%	20%

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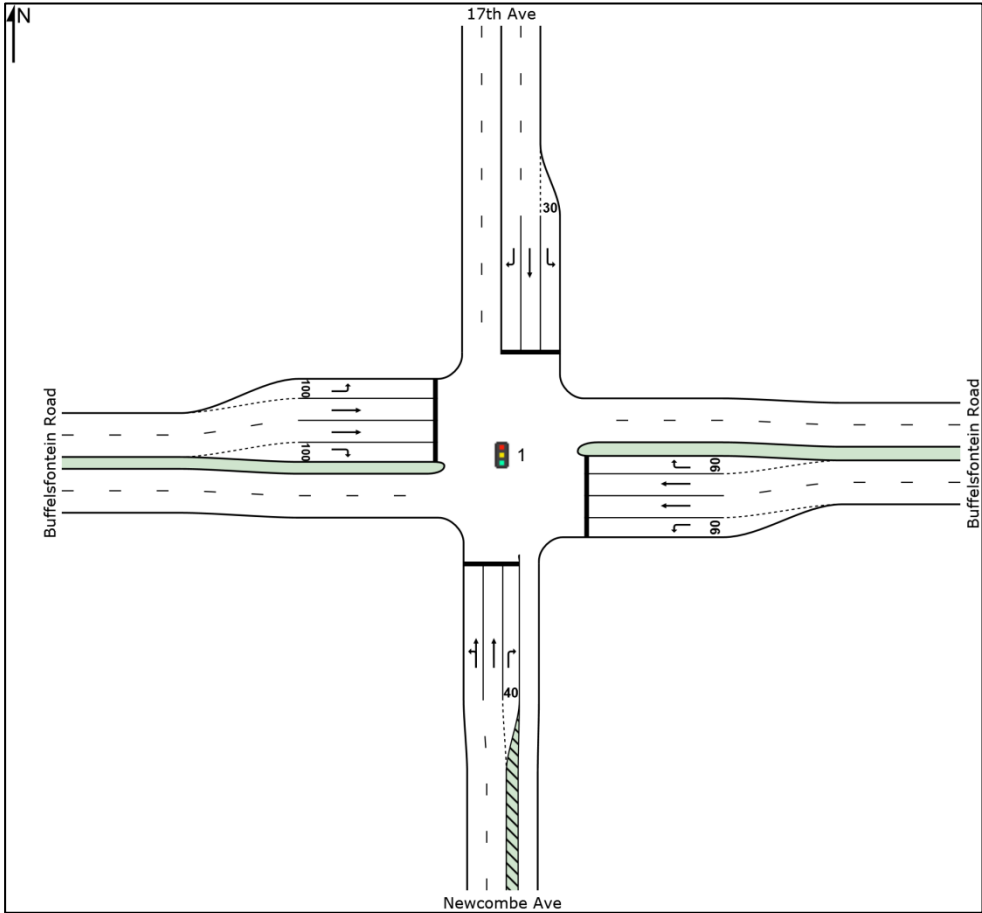

REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped	●	Phase Transition Applied

14. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Future Traffic PM - Erf 1948]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

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: Newcombe Ave											
1	L2	41	0.0	0.147	38.3	LOS D	1.4	10.0	0.90	0.73	34.1
2	T1	187	0.0	0.639	36.4	LOS D	7.2	50.7	0.99	0.83	37.7
3	R2	101	0.0	0.372	39.9	LOS D	3.7	25.9	0.94	0.77	32.2
Approach		329	0.0	0.639	37.7	LOS D	7.2	50.7	0.96	0.80	35.7
East: Buffelsfontein Road											
4	L2	176	0.0	0.237	15.3	LOS B	3.1	21.7	0.70	0.74	39.4
5	T1	739	0.0	0.743	32.1	LOS C	14.1	98.9	0.98	0.89	30.1
6	R2	317	0.0	0.764	34.5	LOS C	12.1	84.7	0.99	0.91	28.5
Approach		1232	0.0	0.764	30.3	LOS C	14.1	98.9	0.94	0.87	30.7
North: 17th Ave											
7	L2	189	0.0	0.370	31.2	LOS C	6.1	42.4	0.85	0.79	35.4
8	T1	269	0.0	0.562	26.7	LOS C	9.0	62.9	0.89	0.75	41.8
9	R2	381	0.0	0.746	36.6	LOS D	14.5	101.5	0.97	0.89	35.1
Approach		839	0.0	0.746	32.2	LOS C	14.5	101.5	0.92	0.82	37.3
West: Buffelsfontein Road											
10	L2	134	0.0	0.123	13.3	LOS B	2.3	16.1	0.47	0.69	44.5
11	T1	246	0.0	0.247	26.2	LOS C	3.9	27.2	0.84	0.67	35.9
12	R2	66	0.0	0.254	35.5	LOS D	2.3	16.1	0.92	0.75	32.3
Approach		446	0.0	0.254	23.7	LOS C	3.9	27.2	0.74	0.69	37.6
All Vehicles		2846	0.0	0.764	30.7	LOS C	14.5	101.5	0.91	0.82	34.7

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
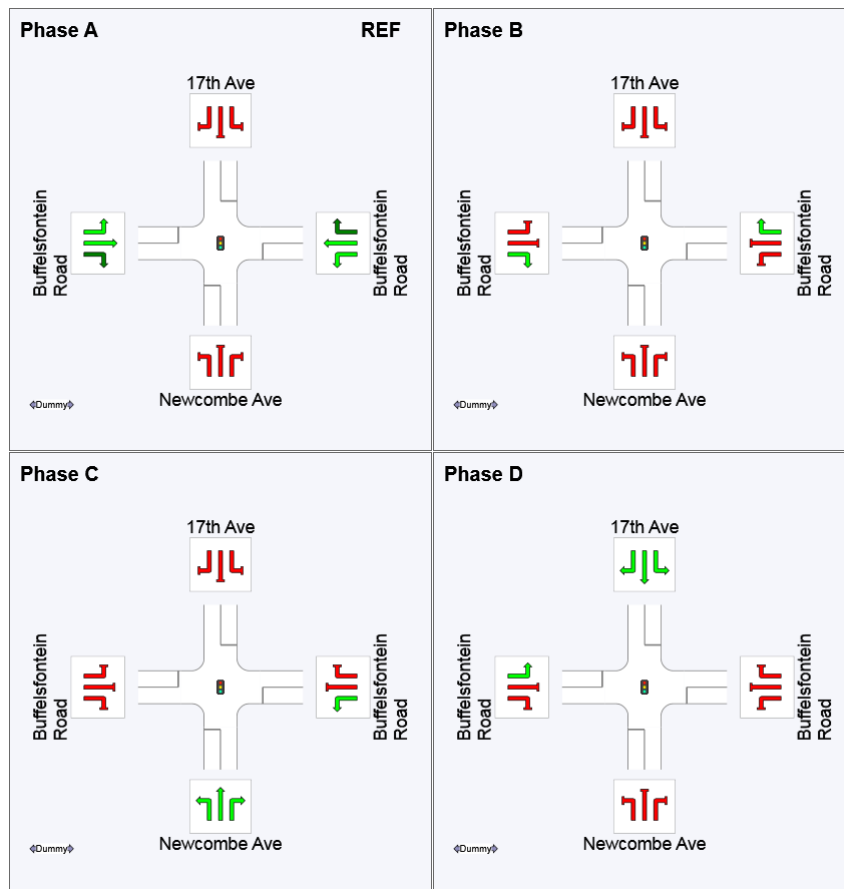**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	25	36	53
Green Time (sec)	20	6	12	22
Phase Time (sec)	25	11	17	27
Phase Split	31%	14%	21%	34%

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

REF: Reference Phase
VAR: Variable Phase

➡	Normal Movement	➡	Permitted/Opposed
➡	Slip/Bypass-Lane Movement	➡	Opposed Slip/Bypass-Lane
⊣	Stopped Movement	⊣	Turn On Red
➡	Other Movement Class (MC) Running	⇢	Undetected Movement
➡	Mixed Running & Stopped MCs	➡	Continuous Movement
⊣	Other Movement Class (MC) Stopped	●	Phase Transition Applied

15. Upgraded Layout

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

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: Newcombe Ave											
1	L2	1	0.0	0.342	33.2	LOS C	3.8	26.7	0.91	0.72	38.6
2	T1	247	0.0	0.342	27.6	LOS C	3.8	26.7	0.91	0.72	41.4
3	R2	274	0.0	0.816	41.0	LOS D	10.3	72.4	1.00	0.96	31.8
Approach		522	0.0	0.816	34.7	LOS C	10.3	72.4	0.96	0.85	36.3
East: Buffelsfontein Road											
4	L2	66	0.0	0.071	10.5	LOS B	0.6	4.5	0.54	0.68	43.5
5	T1	274	0.0	0.219	19.2	LOS B	3.5	24.4	0.78	0.62	37.7
6	R2	182	0.0	0.632	34.5	LOS C	5.9	41.6	0.98	0.86	28.5
Approach		522	0.0	0.632	23.4	LOS C	5.9	41.6	0.82	0.71	34.4
North: 17th Ave											
7	L2	177	0.0	0.741	41.1	LOS D	6.5	45.2	1.00	0.89	31.4
8	T1	165	0.0	0.658	33.8	LOS C	5.8	40.5	1.00	0.84	38.7
9	R2	183	0.0	0.766	41.9	LOS D	6.8	47.4	1.00	0.92	33.2
Approach		525	0.0	0.766	39.1	LOS D	6.8	47.4	1.00	0.88	34.4
West: Buffelsfontein Road											
10	L2	390	0.0	0.408	16.8	LOS B	8.2	57.5	0.66	0.77	42.0
11	T1	999	0.0	0.798	27.7	LOS C	17.4	121.9	0.98	0.94	35.1
12	R2	25	0.0	0.051	18.7	LOS B	0.5	3.6	0.68	0.68	40.9
Approach		1414	0.0	0.798	24.5	LOS C	17.4	121.9	0.88	0.89	37.0
All Vehicles		2983	0.0	0.816	28.7	LOS C	17.4	121.9	0.91	0.85	35.9

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
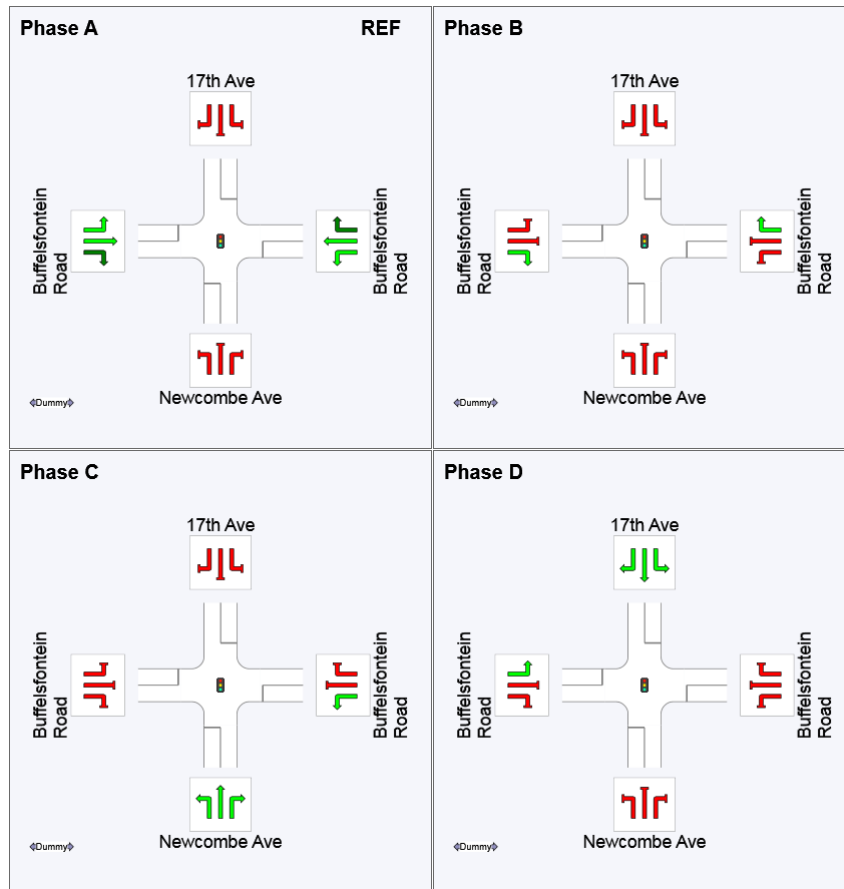**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	27	38	56
Green Time (sec)	22	6	13	9
Phase Time (sec)	27	11	18	14
Phase Split	39%	16%	26%	20%

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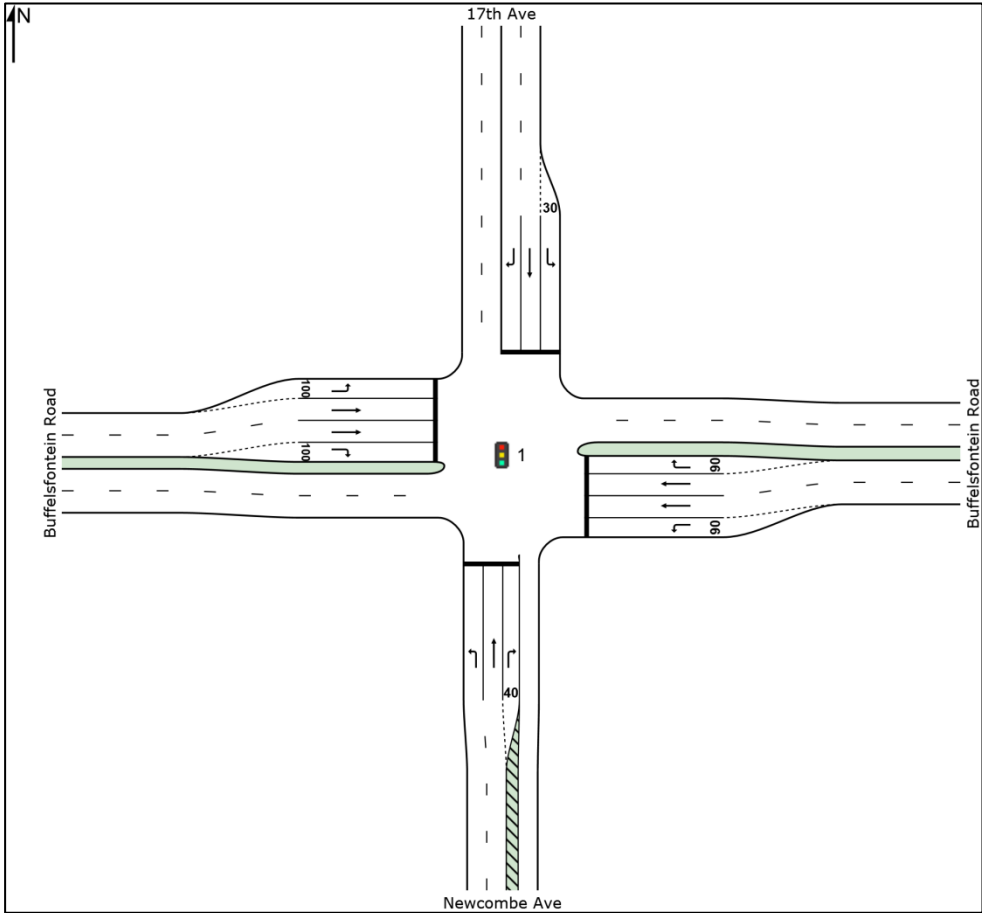and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	●	Phase Transition Applied

17. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

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: Newcombe Ave											
1	L2	41	0.0	0.147	38.3	LOS D	1.4	10.0	0.90	0.73	34.1
2	T1	195	0.0	0.667	36.8	LOS D	7.6	53.4	0.99	0.84	37.5
3	R2	101	0.0	0.372	39.9	LOS D	3.7	25.9	0.94	0.77	32.2
Approach		337	0.0	0.667	37.9	LOS D	7.6	53.4	0.97	0.81	35.6
East: Buffelsfontein Road											
4	L2	176	0.0	0.237	15.3	LOS B	3.1	21.7	0.70	0.74	39.4
5	T1	739	0.0	0.743	32.1	LOS C	14.1	98.9	0.98	0.89	30.1
6	R2	321	0.0	0.773	35.0	LOS D	12.4	86.7	1.00	0.92	28.3
Approach		1236	0.0	0.773	30.5	LOS C	14.1	98.9	0.94	0.88	30.6
North: 17th Ave											
7	L2	194	0.0	0.380	31.2	LOS C	6.2	43.6	0.86	0.79	35.3
8	T1	282	0.0	0.607	26.9	LOS C	9.5	66.5	0.90	0.76	41.7
9	R2	381	0.0	0.746	36.6	LOS D	14.5	101.5	0.97	0.89	35.1
Approach		857	0.0	0.746	32.2	LOS C	14.5	101.5	0.92	0.82	37.4
West: Buffelsfontein Road											
10	L2	134	0.0	0.123	13.3	LOS B	2.3	16.1	0.47	0.69	44.5
11	T1	246	0.0	0.247	26.2	LOS C	3.9	27.2	0.84	0.67	35.9
12	R2	66	0.0	0.254	35.5	LOS D	2.3	16.1	0.92	0.75	32.3
Approach		446	0.0	0.254	23.7	LOS C	3.9	27.2	0.74	0.69	37.6
All Vehicles		2876	0.0	0.773	30.8	LOS C	14.5	101.5	0.91	0.82	34.7

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2022 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
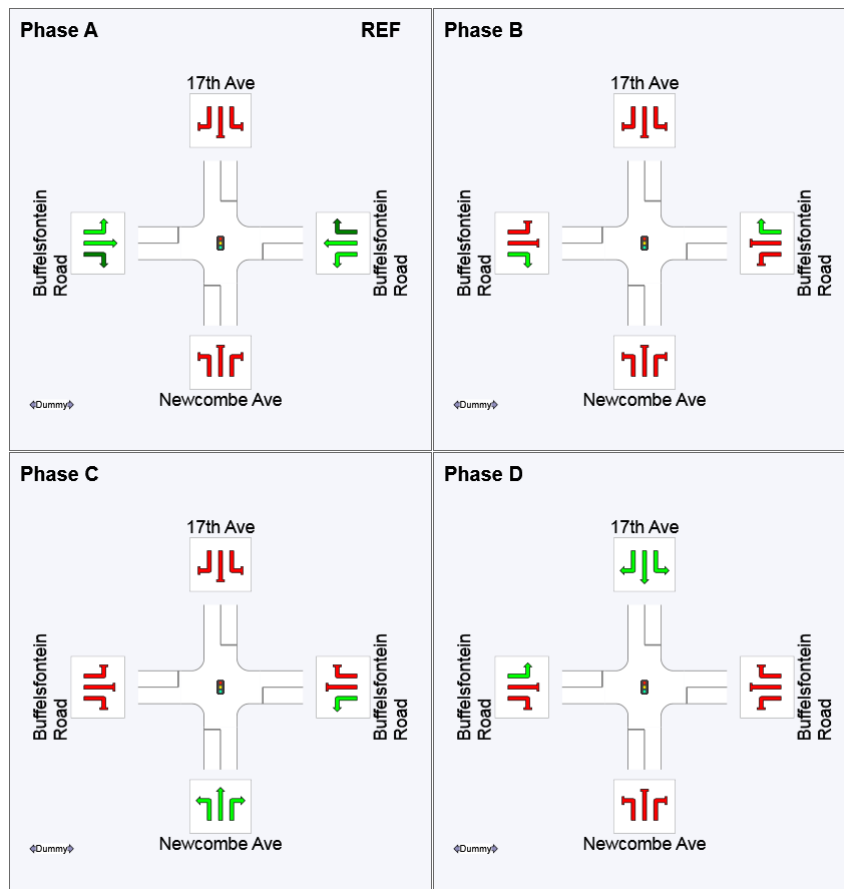**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	25	36	53
Green Time (sec)	20	6	12	22
Phase Time (sec)	25	11	17	27
Phase Split	31%	14%	21%	34%

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

REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped	●	Phase Transition Applied

18. Upgraded Layout

19. 2027 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Newcombe Ave											
1	L2	1	0.0	0.334	33.1	LOS C	3.7	26.0	0.91	0.72	38.7
2	T1	241	0.0	0.334	27.6	LOS C	3.7	26.0	0.91	0.72	41.4
3	R2	288	0.0	0.857	44.0	LOS D	11.4	80.1	1.00	1.02	30.8
Approach		530	0.0	0.857	36.5	LOS D	11.4	80.1	0.96	0.88	35.5
East: Buffelsfontein Road											
4	L2	70	0.0	0.075	10.6	LOS B	0.7	4.8	0.54	0.68	43.5
5	T1	288	0.0	0.230	19.3	LOS B	3.7	25.7	0.78	0.63	37.6
6	R2	183	0.0	0.653	35.7	LOS D	6.0	42.1	0.99	0.88	28.0
Approach		541	0.0	0.653	23.7	LOS C	6.0	42.1	0.82	0.72	34.2
North: 17th Ave											
7	L2	184	0.0	0.771	41.9	LOS D	6.8	47.8	1.00	0.91	31.2
8	T1	168	0.0	0.670	34.0	LOS C	5.9	41.5	1.00	0.85	38.6
9	R2	193	0.0	0.808	43.4	LOS D	7.3	51.4	1.00	0.96	32.7
Approach		545	0.0	0.808	40.0	LOS D	7.3	51.4	1.00	0.91	34.0
West: Buffelsfontein Road											
10	L2	410	0.0	0.429	17.0	LOS B	8.8	61.3	0.67	0.77	41.9
11	T1	1050	0.0	0.839	30.6	LOS C	19.5	136.6	1.00	1.01	33.6
12	R2	26	0.0	0.053	18.7	LOS B	0.5	3.7	0.68	0.68	40.9
Approach		1486	0.0	0.839	26.6	LOS C	19.5	136.6	0.90	0.94	35.8
All Vehicles		3102	0.0	0.857	30.1	LOS C	19.5	136.6	0.91	0.89	35.2

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
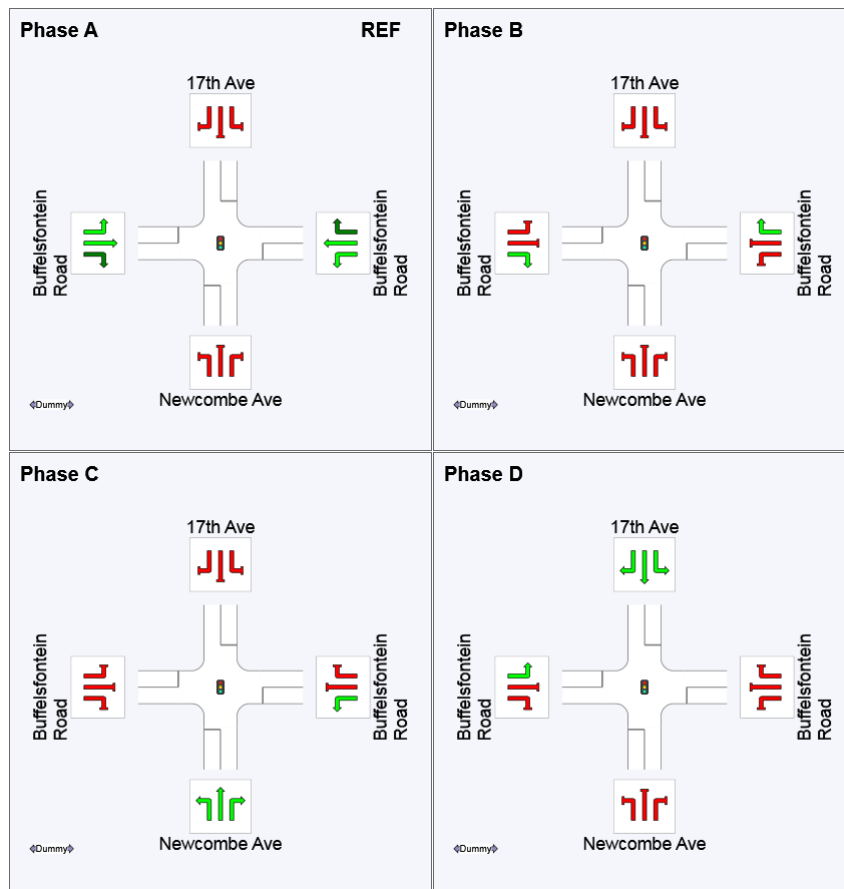**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	27	38	56
Green Time (sec)	22	6	13	9
Phase Time (sec)	27	11	18	14
Phase Split	39%	16%	26%	20%

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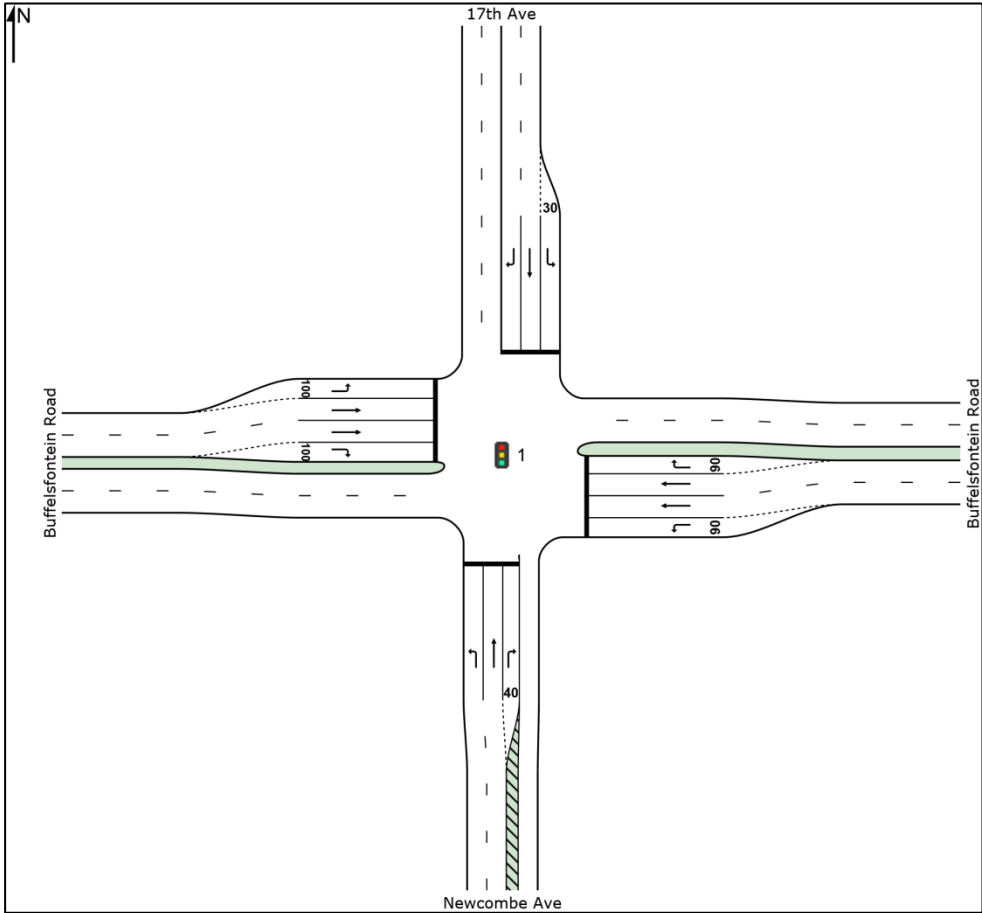

REF: Reference Phase
VAR: Variable Phase

➡	Normal Movement	➡	Permitted/Opposed
➡	Slip/Bypass-Lane Movement	➡	Opposed Slip/Bypass-Lane
⊢	Stopped Movement	⊢	Turn On Red
➡	Other Movement Class (MC) Running	⟶	Undetected Movement
➡	Mixed Running & Stopped MCs	➡	Continuous Movement
⊢	Other Movement Class (MC) Stopped	●	Phase Transition Applied

20. 2027 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

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: Newcombe Ave											
1	L2	43	0.0	0.154	38.4	LOS D	1.5	10.5	0.90	0.73	34.0
2	T1	196	0.0	0.670	36.9	LOS D	7.7	53.8	1.00	0.85	37.5
3	R2	106	0.0	0.391	40.1	LOS D	3.9	27.3	0.95	0.77	32.1
Approach		345	0.0	0.670	38.0	LOS D	7.7	53.8	0.97	0.81	35.5
East: Buffelsfontein Road											
4	L2	185	0.0	0.257	15.6	LOS B	3.3	23.0	0.72	0.75	39.1
5	T1	776	0.0	0.821	36.6	LOS D	16.2	113.1	1.00	0.98	28.2
6	R2	334	0.0	0.798	37.5	LOS D	13.0	91.2	1.00	0.97	27.3
Approach		1295	0.0	0.821	33.9	LOS C	16.2	113.1	0.96	0.94	29.1
North: 17th Ave											
7	L2	198	0.0	0.388	31.3	LOS C	6.4	44.7	0.86	0.79	35.3
8	T1	283	0.0	0.612	26.9	LOS C	9.5	66.7	0.90	0.76	41.7
9	R2	400	0.0	0.783	38.3	LOS D	15.8	110.7	0.98	0.92	34.5
Approach		881	0.0	0.783	33.1	LOS C	15.8	110.7	0.93	0.84	37.0
West: Buffelsfontein Road											
10	L2	141	0.0	0.132	13.9	LOS B	2.5	17.5	0.49	0.70	44.1
11	T1	258	0.0	0.273	27.2	LOS C	4.2	29.2	0.86	0.69	35.3
12	R2	70	0.0	0.260	36.5	LOS D	2.5	17.4	0.92	0.74	31.9
Approach		469	0.0	0.273	24.6	LOS C	4.2	29.2	0.76	0.70	37.1
All Vehicles		2990	0.0	0.821	32.7	LOS C	16.2	113.1	0.92	0.86	33.8

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
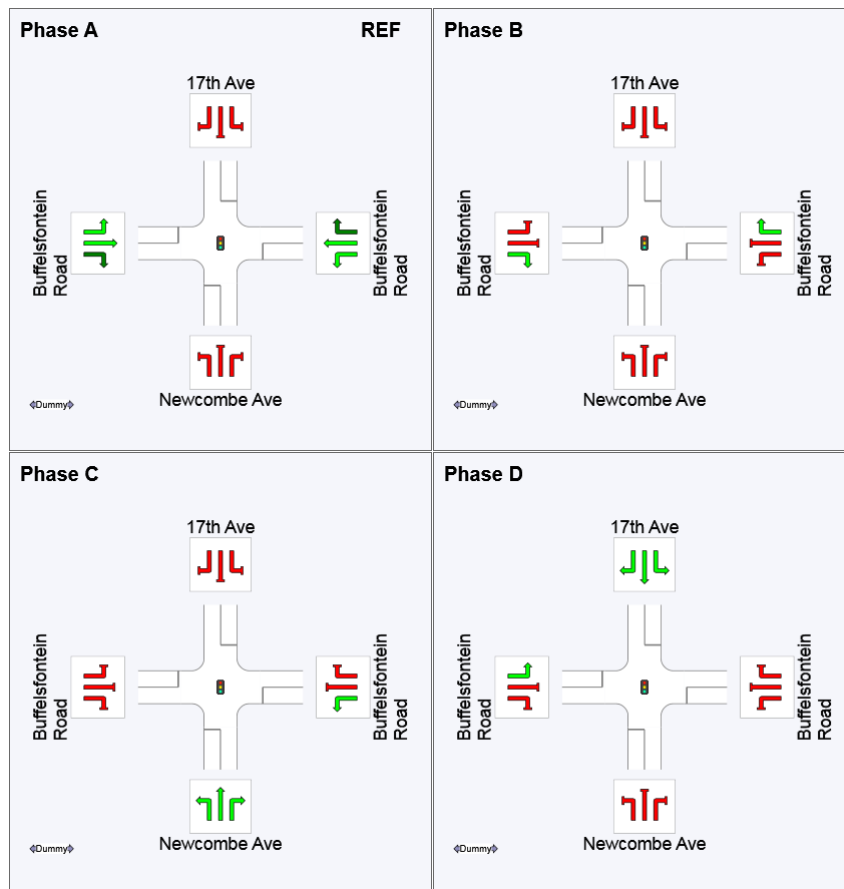**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	24	36	53
Green Time (sec)	19	7	12	22
Phase Time (sec)	24	12	17	27
Phase Split		30%	15%	21%	34%

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

REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
→	Other Movement Class (MC) Running	⇒	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
	Other Movement Class (MC) Stopped	●	Phase Transition Applied

21. Upgraded Layout

22. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

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: Newcombe Ave											
1	L2	1	0.0	0.334	33.1	LOS C	3.7	26.0	0.91	0.72	38.7
2	T1	241	0.0	0.334	27.6	LOS C	3.7	26.0	0.91	0.72	41.4
3	R2	288	0.0	0.857	44.0	LOS D	11.4	80.1	1.00	1.02	30.8
Approach		530	0.0	0.857	36.5	LOS D	11.4	80.1	0.96	0.88	35.5
East: Buffelsfontein Road											
4	L2	70	0.0	0.075	10.6	LOS B	0.7	4.8	0.54	0.68	43.5
5	T1	288	0.0	0.230	19.3	LOS B	3.7	25.7	0.78	0.63	37.6
6	R2	183	0.0	0.653	35.7	LOS D	6.0	42.1	0.99	0.88	28.0
Approach		541	0.0	0.653	23.7	LOS C	6.0	42.1	0.82	0.72	34.2
North: 17th Ave											
7	L2	184	0.0	0.771	41.9	LOS D	6.8	47.8	1.00	0.91	31.2
8	T1	168	0.0	0.670	34.0	LOS C	5.9	41.5	1.00	0.85	38.6
9	R2	193	0.0	0.808	43.4	LOS D	7.3	51.4	1.00	0.96	32.7
Approach		545	0.0	0.808	40.0	LOS D	7.3	51.4	1.00	0.91	34.0
West: Buffelsfontein Road											
10	L2	410	0.0	0.429	17.0	LOS B	8.8	61.3	0.67	0.77	41.9
11	T1	1050	0.0	0.839	30.6	LOS C	19.5	136.6	1.00	1.01	33.6
12	R2	26	0.0	0.053	18.7	LOS B	0.5	3.7	0.68	0.68	40.9
Approach		1486	0.0	0.839	26.6	LOS C	19.5	136.6	0.90	0.94	35.8
All Vehicles		3102	0.0	0.857	30.1	LOS C	19.5	136.6	0.91	0.89	35.2

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.

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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
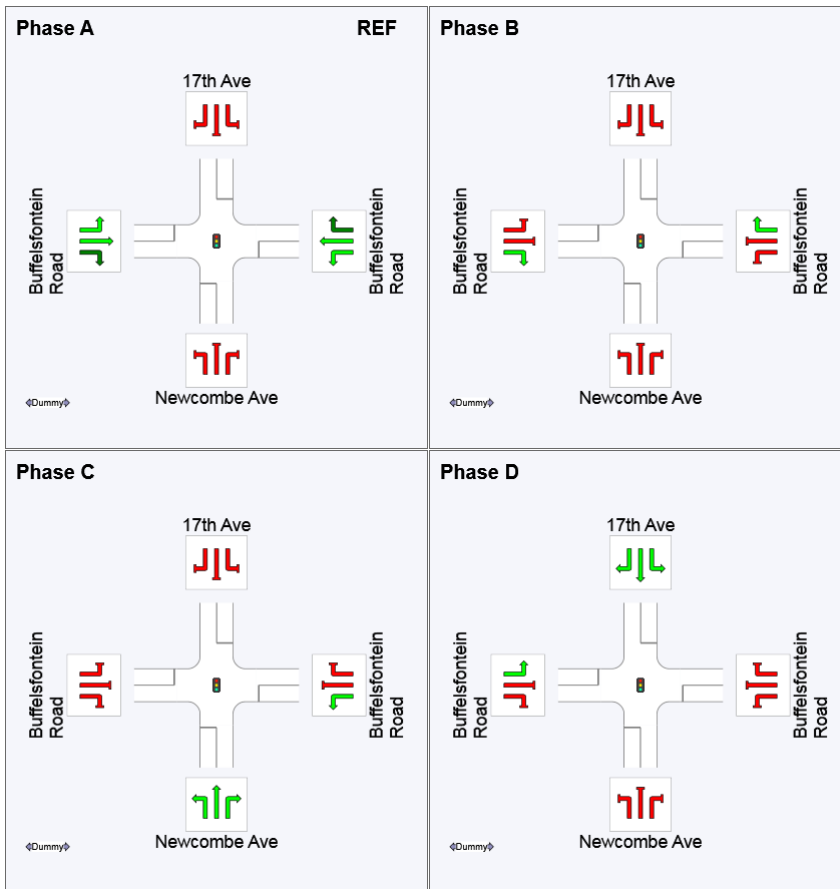**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	27	38	56
Green Time (sec)	22	6	13	9
Phase Time (sec)	27	11	18	14
Phase Split	39%	16%	26%	20%

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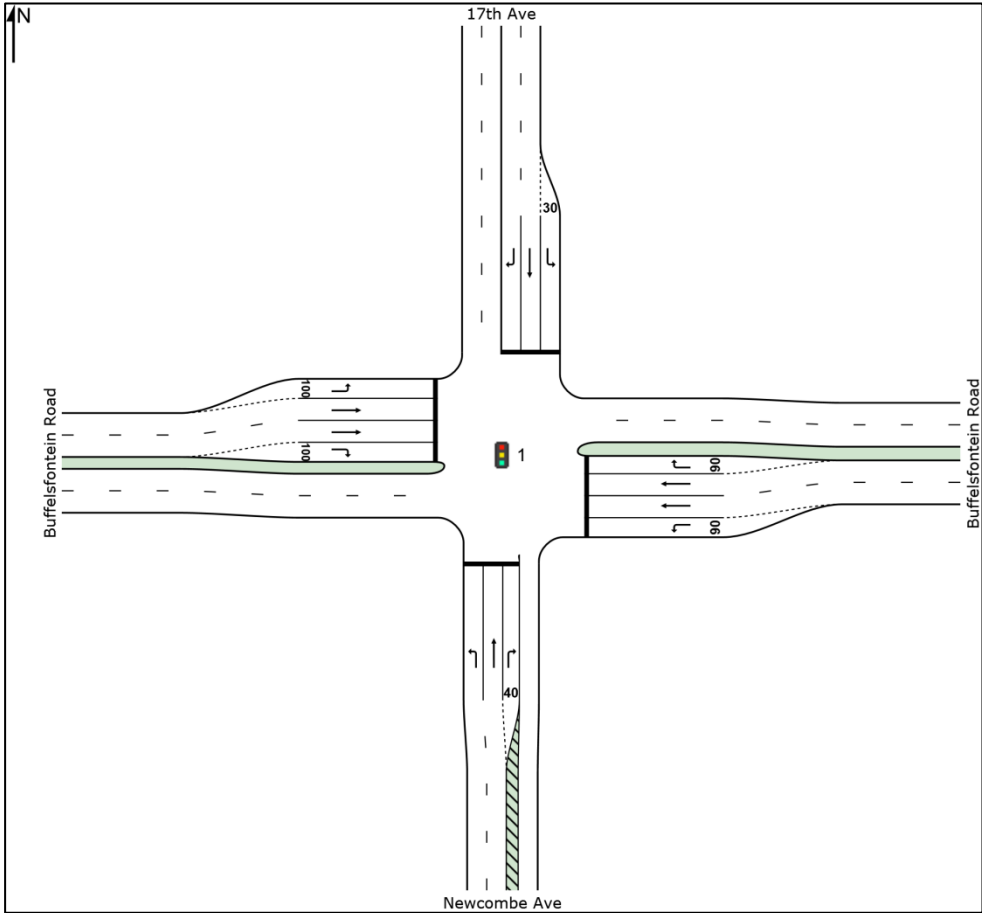and Phase Frequency values (user-specified or implied) less than 100%.

REF: Reference Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
→	Stopped Movement	→	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
→	Other Movement Class (MC) Stopped	●	Phase Transition Applied

23. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Future Traffic PM - Erf 1948]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Newcombe Ave											
1	L2	43	0.0	0.154	38.4	LOS D	1.5	10.5	0.90	0.73	34.0
2	T1	196	0.0	0.670	36.9	LOS D	7.7	53.8	1.00	0.85	37.5
3	R2	106	0.0	0.391	40.1	LOS D	3.9	27.3	0.95	0.77	32.1
Approach		345	0.0	0.670	38.0	LOS D	7.7	53.8	0.97	0.81	35.5
East: Buffelsfontein Road											
4	L2	185	0.0	0.257	15.6	LOS B	3.3	23.0	0.72	0.75	39.1
5	T1	776	0.0	0.821	36.6	LOS D	16.2	113.1	1.00	0.98	28.2
6	R2	334	0.0	0.798	37.5	LOS D	13.0	91.2	1.00	0.97	27.3
Approach		1295	0.0	0.821	33.9	LOS C	16.2	113.1	0.96	0.94	29.1
North: 17th Ave											
7	L2	198	0.0	0.388	31.3	LOS C	6.4	44.7	0.86	0.79	35.3
8	T1	283	0.0	0.612	26.9	LOS C	9.5	66.7	0.90	0.76	41.7
9	R2	400	0.0	0.783	38.3	LOS D	15.8	110.7	0.98	0.92	34.5
Approach		881	0.0	0.783	33.1	LOS C	15.8	110.7	0.93	0.84	37.0
West: Buffelsfontein Road											
10	L2	141	0.0	0.132	13.9	LOS B	2.5	17.5	0.49	0.70	44.1
11	T1	258	0.0	0.273	27.2	LOS C	4.2	29.2	0.86	0.69	35.3
12	R2	70	0.0	0.260	36.5	LOS D	2.5	17.4	0.92	0.74	31.9
Approach		469	0.0	0.273	24.6	LOS C	4.2	29.2	0.76	0.70	37.1
All Vehicles		2990	0.0	0.821	32.7	LOS C	16.2	113.1	0.92	0.86	33.8

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.
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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
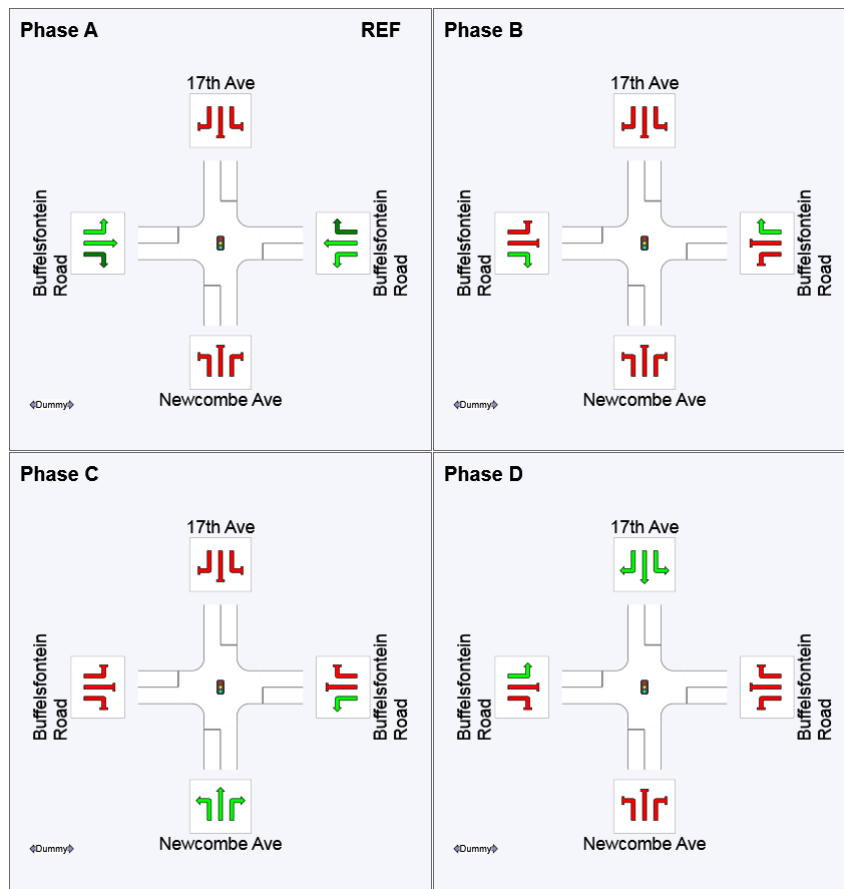**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	24	36	53
Green Time (sec)	19	7	12	22
Phase Time (sec)	24	12	17	27
Phase Split	30%	15%	21%	34%

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

REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped	●	Phase Transition Applied

24. Upgraded Layout

25. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

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
Movement Performance - Vehicles											
South: Newcombe Ave											
1	L2	1	0.0	0.359	33.3	LOS C	4.0	28.1	0.92	0.73	38.6
2	T1	259	0.0	0.359	27.7	LOS C	4.0	28.1	0.92	0.73	41.3
3	R2	288	0.0	0.857	44.0	LOS D	11.4	80.1	1.00	1.02	30.8
Approach		548	0.0	0.857	36.3	LOS D	11.4	80.1	0.96	0.88	35.7
East: Buffelsfontein Road											
4	L2	70	0.0	0.075	10.6	LOS B	0.7	4.8	0.54	0.68	43.5
5	T1	288	0.0	0.230	19.3	LOS B	3.7	25.7	0.78	0.63	37.6
6	R2	191	0.0	0.682	36.4	LOS D	6.3	44.3	0.99	0.90	27.7
Approach		549	0.0	0.682	24.1	LOS C	6.3	44.3	0.82	0.73	34.0
North: 17th Ave											
7	L2	186	0.0	0.779	42.2	LOS D	6.9	48.6	1.00	0.92	31.1
8	T1	173	0.0	0.690	34.4	LOS C	6.1	43.0	1.00	0.86	38.5
9	R2	193	0.0	0.808	43.4	LOS D	7.3	51.4	1.00	0.96	32.7
Approach		552	0.0	0.808	40.2	LOS D	7.3	51.4	1.00	0.91	34.0
West: Buffelsfontein Road											
10	L2	410	0.0	0.429	17.0	LOS B	8.8	61.3	0.67	0.77	41.9
11	T1	1050	0.0	0.839	30.6	LOS C	19.5	136.6	1.00	1.01	33.6
12	R2	26	0.0	0.053	18.7	LOS B	0.5	3.7	0.68	0.68	40.9
Approach		1486	0.0	0.839	26.6	LOS C	19.5	136.6	0.90	0.94	35.8
All Vehicles		3135	0.0	0.857	30.2	LOS C	19.5	136.6	0.91	0.89	35.1

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.
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.

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
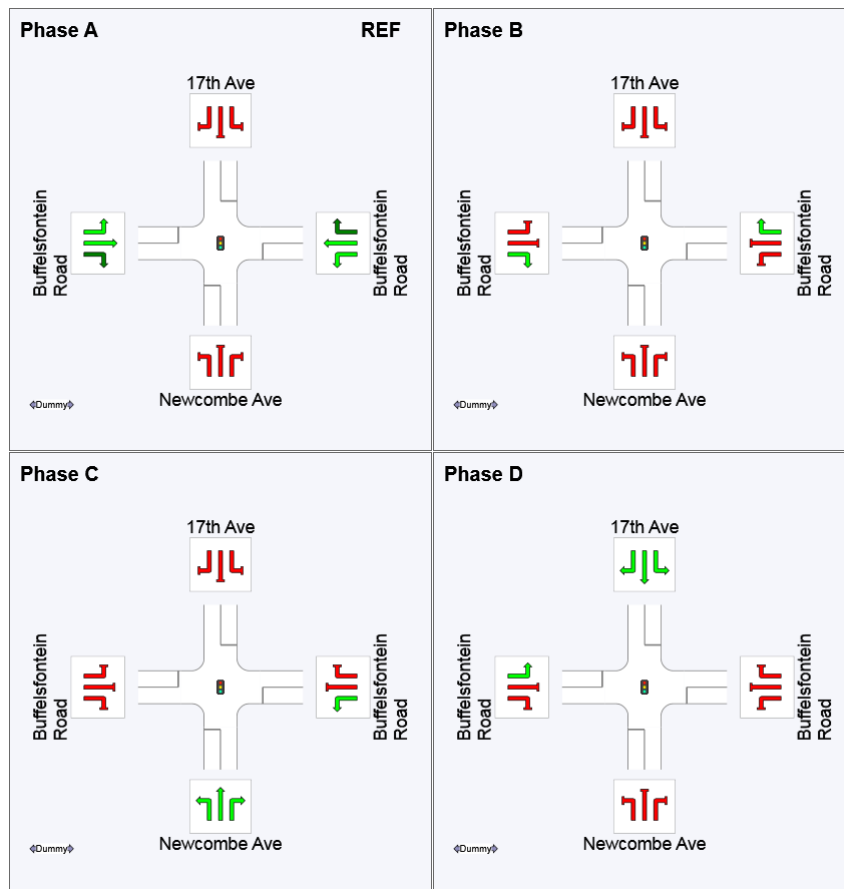**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	27	38	56
Green Time (sec)	22	6	13	9
Phase Time (sec)	27	11	18	14
Phase Split	39%	16%	26%	20%

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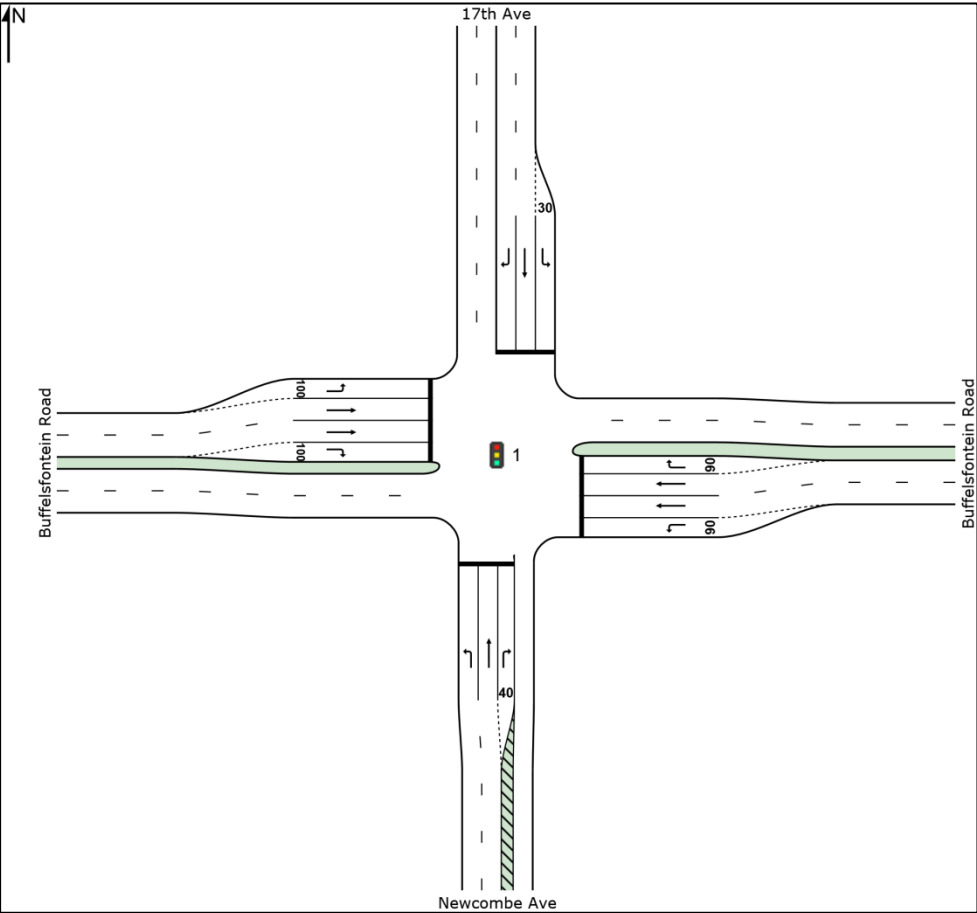

REF: Reference   Phase
VAR: Variable Phase

→	Normal Movement	→	Permitted/Opposed
→	Slip/Bypass-Lane Movement	→	Opposed Slip/Bypass-Lane
⊢	Stopped Movement	⊢	Turn On Red
→	Other Movement Class (MC) Running	→	Undetected Movement
→	Mixed Running & Stopped MCs	→	Continuous Movement
⊢	Other Movement Class (MC) Stopped	●	Phase Transition Applied

26. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🚦 Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Newcombe Ave											
1	L2	43	0.0	0.154	38.4	LOS D	1.5	10.5	0.90	0.73	34.0
2	T1	212	0.0	0.725	38.1	LOS D	8.5	59.7	1.00	0.88	37.1
3	R2	106	0.0	0.391	40.1	LOS D	3.9	27.3	0.95	0.77	32.1
Approach		361	0.0	0.725	38.7	LOS D	8.5	59.7	0.97	0.83	35.4
East: Buffelsfontein Road											
4	L2	185	0.0	0.257	15.6	LOS B	3.3	23.0	0.72	0.75	39.1
5	T1	776	0.0	0.821	36.6	LOS D	16.2	113.1	1.00	0.98	28.2
6	R2	341	0.0	0.815	38.9	LOS D	13.5	94.8	1.00	0.99	26.8
Approach		1302	0.0	0.821	34.2	LOS C	16.2	113.1	0.96	0.95	28.9
North: 17th Ave											
7	L2	208	0.0	0.407	31.5	LOS C	6.7	47.2	0.86	0.79	35.2
8	T1	310	0.0	0.703	28.6	LOS C	11.0	76.7	0.92	0.81	41.0
9	R2	400	0.0	0.783	38.3	LOS D	15.8	110.7	0.98	0.92	34.5
Approach		918	0.0	0.783	33.5	LOS C	15.8	110.7	0.93	0.85	36.8
West: Buffelsfontein Road											
10	L2	141	0.0	0.132	13.9	LOS B	2.5	17.5	0.49	0.70	44.1
11	T1	258	0.0	0.273	27.2	LOS C	4.2	29.2	0.86	0.69	35.3
12	R2	70	0.0	0.260	36.5	LOS D	2.5	17.4	0.92	0.74	31.9
Approach		469	0.0	0.273	24.6	LOS C	4.2	29.2	0.76	0.70	37.1
All Vehicles		3050	0.0	0.821	33.0	LOS C	16.2	113.1	0.92	0.87	33.7

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

PHASING SUMMARY

🚦 **Site: 1 [Buffelsfontein / 17th Ave / Newcombe Ave - 2027 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Phase Times determined by the program
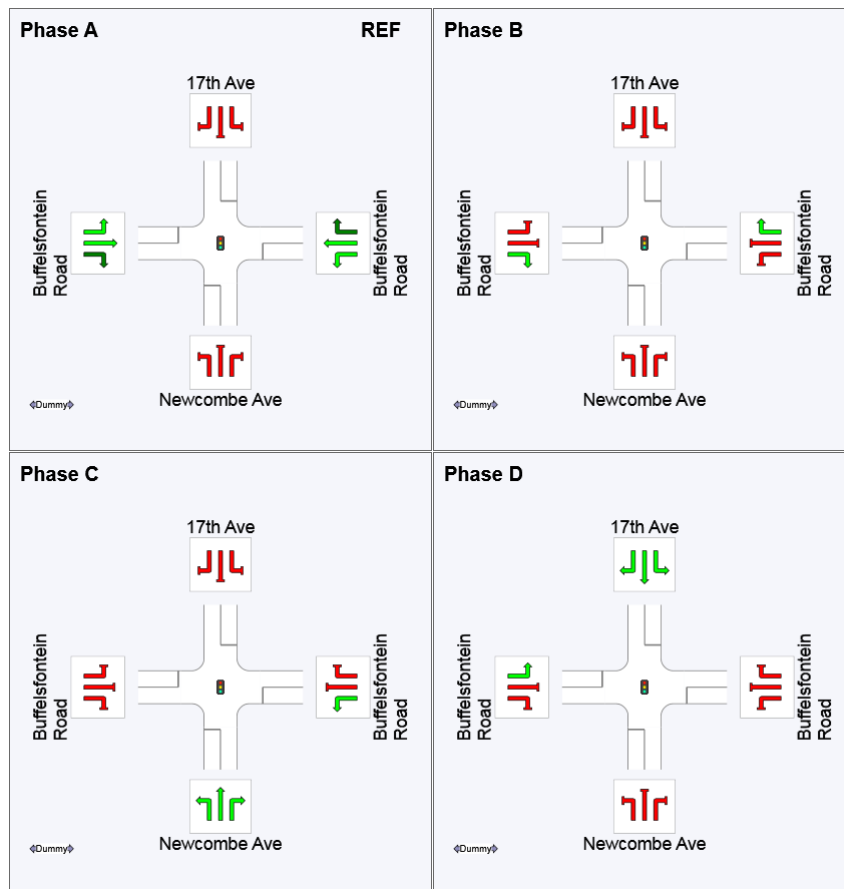**Phase Sequence: Split Phasing**
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Phase Change Time (sec)	0	24	36	53
Green Time (sec)	19	7	12	22
Phase Time (sec)	24	12	17	27
Phase Split	30%	15%	21%	34%

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

REF: Reference Phase
VAR: Variable Phase

→ Normal Movement	→ Permitted/Opposed
→ Slip/Bypass-Lane Movement	→ Opposed Slip/Bypass-Lane
→ Stopped Movement	→ Turn On Red
→ Other Movement Class (MC) Running	→ Undetected Movement
→ Mixed Running & Stopped MCs	→ Continuous Movement
→ Other Movement Class (MC) Stopped	● Phase Transition Applied

27. Upgraded Layout
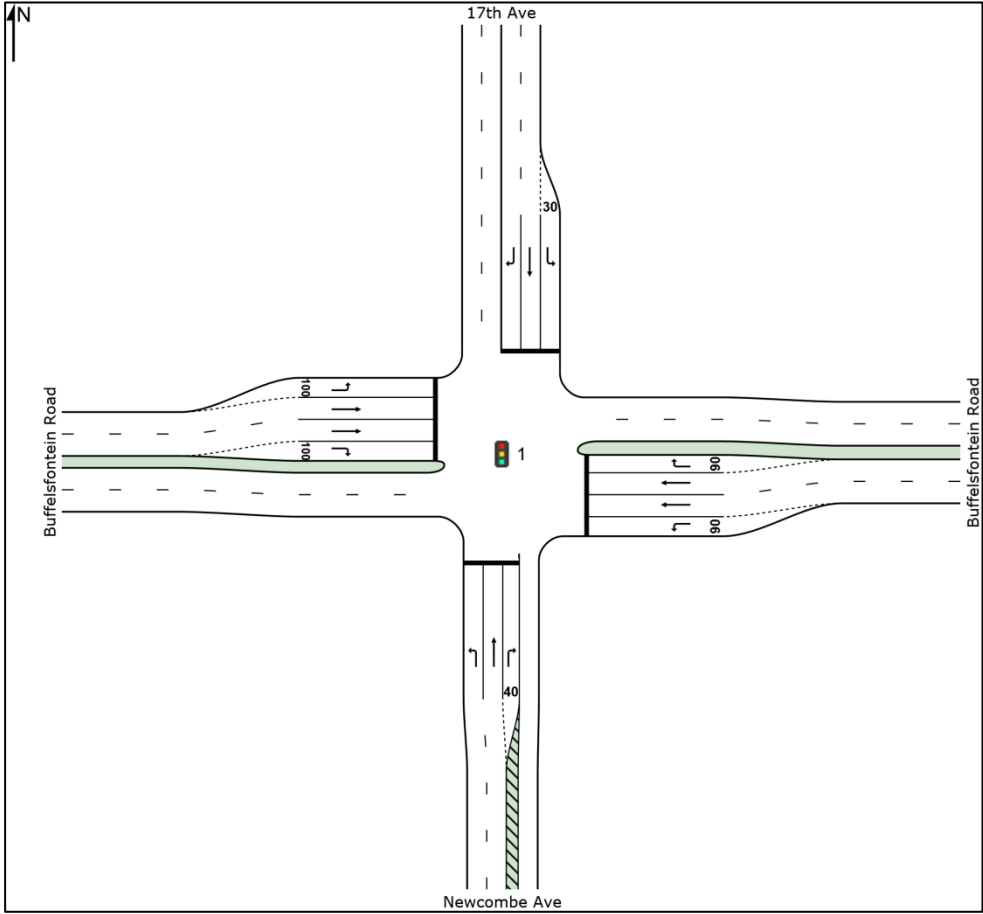
D. Victoria Drive / Glendore Road

SIDRA ANALYSIS

1. 2017 Background Traffic AM

2. 2017 Background Traffic PM

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

5. 2022 Background Traffic (excluding development traffic) PM

6. Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

14. 2027 Background Traffic (excluding development traffic) PM

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

18. Existing Layout

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

21. Existing Layout

1. 2017 Background Traffic AM

MOVEMENT SUMMARY

Site: 6 [Glendore / Victoria - 2017 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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
Movement Performance - Vehicles											
East: Victoria Drive											
5	T1	53	0.0	0.058	0.4	LOS A	0.3	1.8	0.24	0.27	56.7
6	R2	48	0.0	0.058	6.0	LOS A	0.3	1.8	0.24	0.27	54.8
Approach		101	0.0	0.058	3.0	NA	0.3	1.8	0.24	0.27	55.8
North: Glendore Road											
7	L2	232	0.0	0.471	9.3	LOS A	3.0	21.3	0.40	0.91	51.1
9	R2	259	0.0	0.471	10.0	LOS A	3.0	21.3	0.40	0.91	50.8
Approach		491	0.0	0.471	9.7	LOS A	3.0	21.3	0.40	0.91	51.0
West: Victoria Drive											
10	L2	22	0.0	0.083	5.5	LOS A	0.0	0.0	0.00	0.08	57.7
11	T1	144	0.0	0.083	0.0	LOS A	0.0	0.0	0.00	0.08	59.3
Approach		166	0.0	0.083	0.7	NA	0.0	0.0	0.00	0.08	59.1
All Vehicles		758	0.0	0.471	6.8	NA	3.0	21.3	0.29	0.64	53.2

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.

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.

2. 2017 Background Traffic PM

MOVEMENT SUMMARY

🛑 Site: 6 [Glendore / Victoria - 2017 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	92	0.0	0.113	0.4	LOS A	0.5	3.8	0.25	0.31	56.4
6	R2	104	0.0	0.113	6.0	LOS A	0.5	3.8	0.25	0.31	54.5
Approach		196	0.0	0.113	3.4	NA	0.5	3.8	0.25	0.31	55.4
North: Glendore Road											
7	L2	41	0.0	0.072	8.2	LOS A	0.3	1.8	0.15	0.93	51.5
9	R2	36	0.0	0.072	9.1	LOS A	0.3	1.8	0.15	0.93	51.2
Approach		77	0.0	0.072	8.6	LOS A	0.3	1.8	0.15	0.93	51.3
West: Victoria Drive											
10	L2	104	0.0	0.080	5.5	LOS A	0.0	0.0	0.00	0.39	55.1
11	T1	52	0.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.39	56.6
Approach		156	0.0	0.080	3.7	NA	0.0	0.0	0.00	0.39	55.6
All Vehicles		429	0.0	0.113	4.4	NA	0.5	3.8	0.14	0.45	54.7

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.

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.

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🛑 Site: 6 [Glendore / Victoria - 2022 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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: Victoria Drive											
5	T1	56	0.0	0.061	0.4	LOS A	0.3	1.9	0.24	0.27	56.7
6	R2	50	0.0	0.061	6.0	LOS A	0.3	1.9	0.24	0.27	54.8
Approach		106	0.0	0.061	3.0	NA	0.3	1.9	0.24	0.27	55.8
North: Glendore Road											
7	L2	243	0.0	0.500	9.5	LOS A	3.5	24.8	0.43	0.92	50.9
9	R2	272	0.0	0.500	10.3	LOS B	3.5	24.8	0.43	0.92	50.6
Approach		515	0.0	0.500	10.0	LOS A	3.5	24.8	0.43	0.92	50.8
West: Victoria Drive											
10	L2	24	0.0	0.087	5.5	LOS A	0.0	0.0	0.00	0.08	57.7
11	T1	151	0.0	0.087	0.0	LOS A	0.0	0.0	0.00	0.08	59.2
Approach		175	0.0	0.087	0.8	NA	0.0	0.0	0.00	0.08	59.0
All Vehicles		796	0.0	0.500	7.0	NA	3.5	24.8	0.31	0.65	53.0

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.

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.

5.   2022 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

🛑 Site: 6 [Glendore / Victoria - 2022 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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
Movement Performance - Vehicles											
East: Victoria Drive											
5	T1	96	0.0	0.119	0.4	LOS A	0.6	4.0	0.26	0.31	56.3
6	R2	109	0.0	0.119	6.0	LOS A	0.6	4.0	0.26	0.31	54.5
Approach		205	0.0	0.119	3.4	NA	0.6	4.0	0.26	0.31	55.3
North: Glendore Road											
7	L2	43	0.0	0.076	8.2	LOS A	0.3	1.9	0.15	0.93	51.5
9	R2	38	0.0	0.076	9.2	LOS A	0.3	1.9	0.15	0.93	51.1
Approach		81	0.0	0.076	8.7	LOS A	0.3	1.9	0.15	0.93	51.3
West: Victoria Drive											
10	L2	109	0.0	0.084	5.5	LOS A	0.0	0.0	0.00	0.39	55.1
11	T1	55	0.0	0.084	0.0	LOS A	0.0	0.0	0.00	0.39	56.6
Approach		164	0.0	0.084	3.7	NA	0.0	0.0	0.00	0.39	55.6
All Vehicles		450	0.0	0.119	4.5	NA	0.6	4.0	0.15	0.45	54.7

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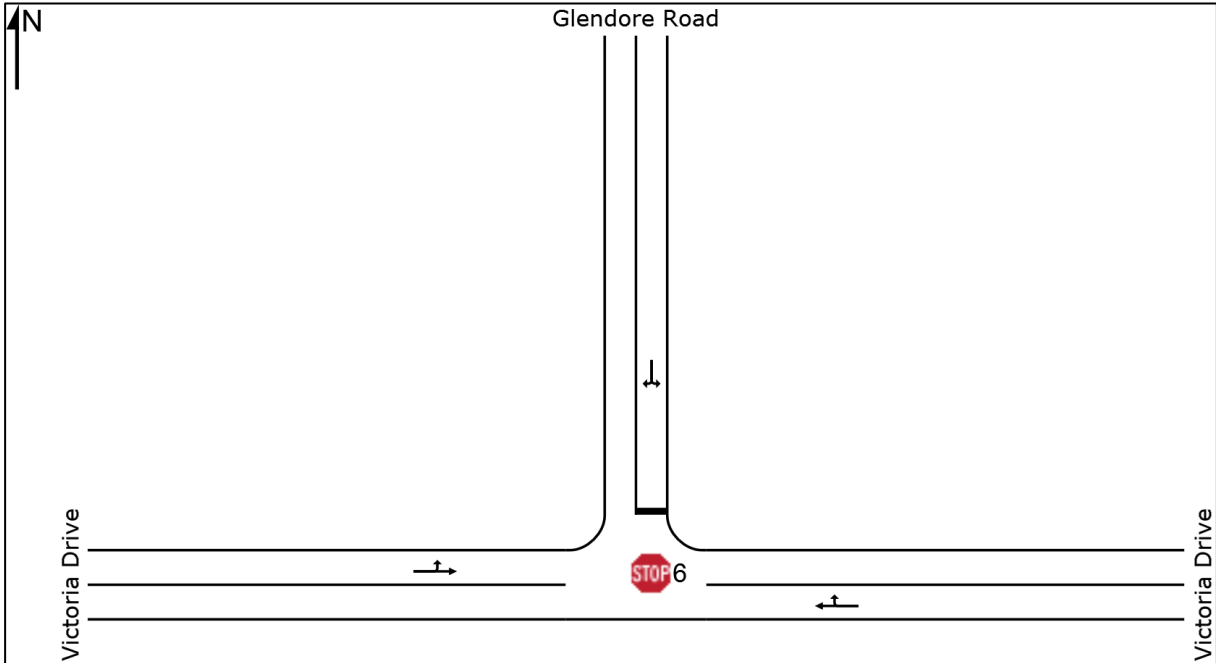
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

6. Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🛑 Site: 6 [Glendore / Victoria - 2022 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	85	0.0	0.099	0.5	LOS A	0.5	3.2	0.27	0.29	56.4
6	R2	84	0.0	0.099	6.1	LOS A	0.5	3.2	0.27	0.29	54.6
Approach		169	0.0	0.099	3.3	NA	0.5	3.2	0.27	0.29	55.5
North: Glendore Road											
7	L2	272	0.0	0.555	10.2	LOS B	4.6	32.0	0.48	0.97	50.3
9	R2	272	0.0	0.555	11.7	LOS B	4.6	32.0	0.48	0.97	50.0
Approach		544	0.0	0.555	11.0	LOS B	4.6	32.0	0.48	0.97	50.1
West: Victoria Drive											
10	L2	24	0.0	0.097	5.5	LOS A	0.0	0.0	0.00	0.07	57.7
11	T1	170	0.0	0.097	0.0	LOS A	0.0	0.0	0.00	0.07	59.3
Approach		194	0.0	0.097	0.7	NA	0.0	0.0	0.00	0.07	59.1
All Vehicles		907	0.0	0.555	7.3	NA	4.6	32.0	0.34	0.65	52.8

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.

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.

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🛑 **Site: 6 [Glendore / Victoria - 2022 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Stop (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: Victoria Drive											
5	T1	117	0.0	0.150	0.6	LOS A	0.7	5.2	0.30	0.32	56.2
6	R2	136	0.0	0.150	6.2	LOS A	0.7	5.2	0.30	0.32	54.3
Approach		253	0.0	0.150	3.6	NA	0.7	5.2	0.30	0.32	55.2
North: Glendore Road											
7	L2	68	0.0	0.101	8.4	LOS A	0.4	2.7	0.21	0.91	51.4
9	R2	38	0.0	0.101	9.8	LOS A	0.4	2.7	0.21	0.91	51.1
Approach		106	0.0	0.101	8.9	LOS A	0.4	2.7	0.21	0.91	51.3
West: Victoria Drive											
10	L2	109	0.0	0.102	5.6	LOS A	0.0	0.0	0.00	0.32	55.7
11	T1	92	0.0	0.102	0.0	LOS A	0.0	0.0	0.00	0.32	57.2
Approach		201	0.0	0.102	3.0	NA	0.0	0.0	0.00	0.32	56.3
All Vehicles		560	0.0	0.150	4.4	NA	0.7	5.2	0.18	0.43	54.8

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.

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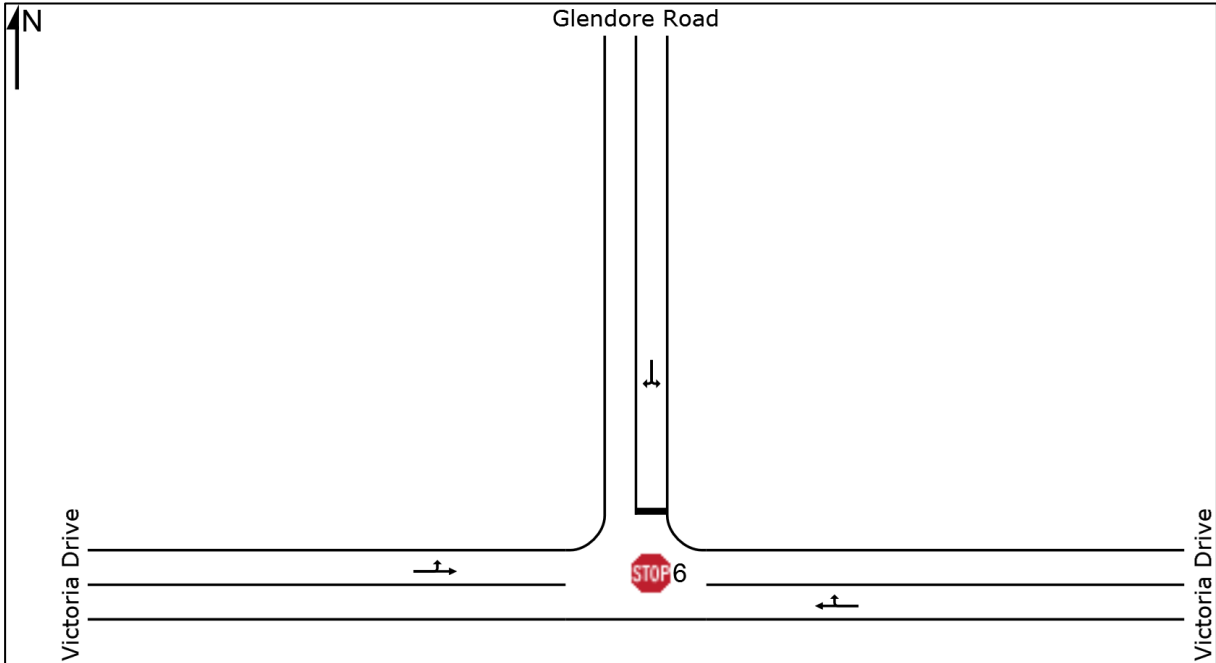
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🛑 **Site: 6 [Glendore / Victoria - 2022 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	107	0.0	0.126	0.5	LOS A	0.6	4.2	0.29	0.30	56.4
6	R2	108	0.0	0.126	6.2	LOS A	0.6	4.2	0.29	0.30	54.5
Approach		215	0.0	0.126	3.4	NA	0.6	4.2	0.29	0.30	55.4
North: Glendore Road											
7	L2	286	0.0	0.590	10.6	LOS B	5.2	36.5	0.51	1.00	49.9
9	R2	272	0.0	0.590	12.8	LOS B	5.2	36.5	0.51	1.00	49.5
Approach		558	0.0	0.590	11.7	LOS B	5.2	36.5	0.51	1.00	49.7
West: Victoria Drive											
10	L2	24	0.0	0.101	5.5	LOS A	0.0	0.0	0.00	0.07	57.7
11	T1	179	0.0	0.101	0.0	LOS A	0.0	0.0	0.00	0.07	59.3
Approach		203	0.0	0.101	0.7	NA	0.0	0.0	0.00	0.07	59.1
All Vehicles		976	0.0	0.590	7.6	NA	5.2	36.5	0.35	0.65	52.6

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.

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.

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 Site: 6 [Glendore / Victoria - 2022 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Stop (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: Victoria Drive											
5	T1	126	0.0	0.163	0.6	LOS A	0.8	5.7	0.32	0.32	56.1
6	R2	146	0.0	0.163	6.3	LOS A	0.8	5.7	0.32	0.32	54.3
Approach		272	0.0	0.163	3.7	NA	0.8	5.7	0.32	0.32	55.1
North: Glendore Road											
7	L2	91	0.0	0.121	8.4	LOS A	0.5	3.3	0.23	0.91	51.4
9	R2	38	0.0	0.121	10.1	LOS B	0.5	3.3	0.23	0.91	51.1
Approach		129	0.0	0.121	8.9	LOS A	0.5	3.3	0.23	0.91	51.3
West: Victoria Drive											
10	L2	109	0.0	0.110	5.6	LOS A	0.0	0.0	0.00	0.30	55.9
11	T1	108	0.0	0.110	0.0	LOS A	0.0	0.0	0.00	0.30	57.4
Approach		217	0.0	0.110	2.8	NA	0.0	0.0	0.00	0.30	56.6
All Vehicles		618	0.0	0.163	4.5	NA	0.8	5.7	0.19	0.44	54.8

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.

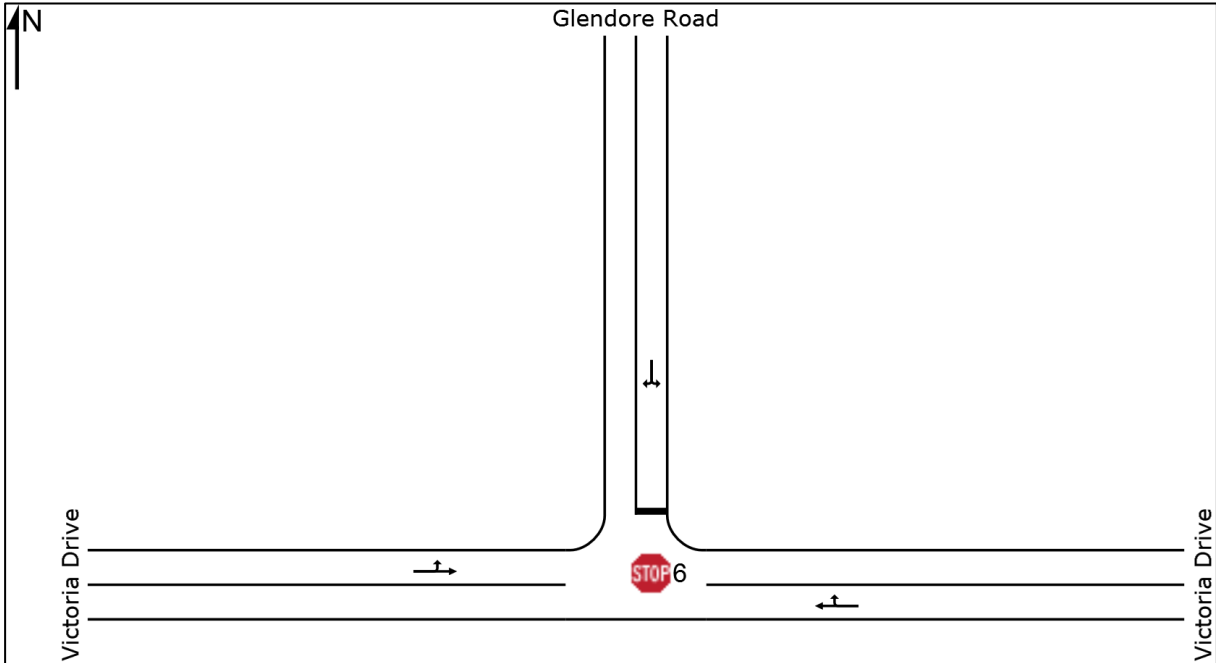Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🛑 **Site: 6 [Glendore / Victoria - 2027 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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: Victoria Drive											
5	T1	59	0.0	0.065	0.4	LOS A	0.3	2.0	0.25	0.27	56.6
6	R2	53	0.0	0.065	6.1	LOS A	0.3	2.0	0.25	0.27	54.8
Approach		112	0.0	0.065	3.1	NA	0.3	2.0	0.25	0.27	55.7
North: Glendore Road											
7	L2	256	0.0	0.533	9.9	LOS A	4.2	29.1	0.45	0.94	50.7
9	R2	286	0.0	0.533	10.8	LOS B	4.2	29.1	0.45	0.94	50.4
Approach		542	0.0	0.533	10.3	LOS B	4.2	29.1	0.45	0.94	50.5
West: Victoria Drive											
10	L2	25	0.0	0.092	5.5	LOS A	0.0	0.0	0.00	0.08	57.7
11	T1	159	0.0	0.092	0.0	LOS A	0.0	0.0	0.00	0.08	59.2
Approach		184	0.0	0.092	0.8	NA	0.0	0.0	0.00	0.08	59.0
All Vehicles		838	0.0	0.533	7.3	NA	4.2	29.1	0.33	0.66	52.9

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.

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.

14. 2027 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

🛑 **Site: 6 [Glendore / Victoria - 2027 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	101	0.0	0.126	0.5	LOS A	0.6	4.2	0.27	0.31	56.3
6	R2	115	0.0	0.126	6.1	LOS A	0.6	4.2	0.27	0.31	54.5
Approach		216	0.0	0.126	3.4	NA	0.6	4.2	0.27	0.31	55.3
North: Glendore Road											
7	L2	45	0.0	0.080	8.2	LOS A	0.3	2.0	0.16	0.93	51.4
9	R2	39	0.0	0.080	9.3	LOS A	0.3	2.0	0.16	0.93	51.1
Approach		84	0.0	0.080	8.7	LOS A	0.3	2.0	0.16	0.93	51.3
West: Victoria Drive											
10	L2	115	0.0	0.088	5.5	LOS A	0.0	0.0	0.00	0.39	55.1
11	T1	57	0.0	0.088	0.0	LOS A	0.0	0.0	0.00	0.39	56.5
Approach		172	0.0	0.088	3.7	NA	0.0	0.0	0.00	0.39	55.6
All Vehicles		472	0.0	0.126	4.5	NA	0.6	4.2	0.15	0.45	54.6

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.

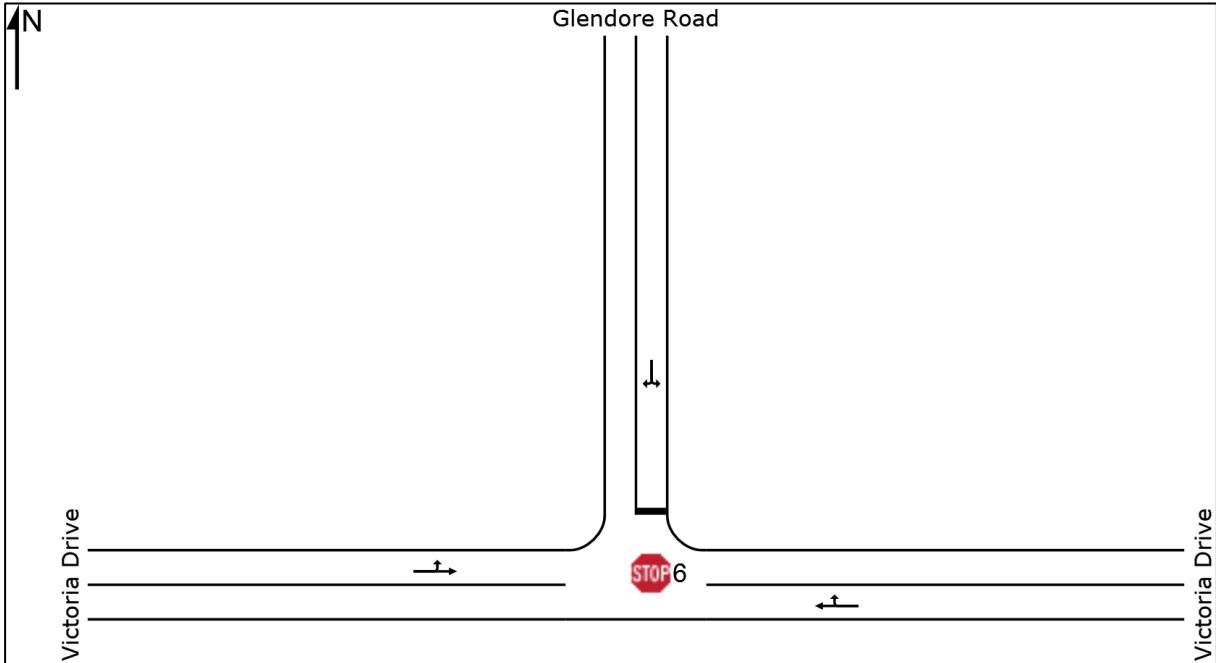Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

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.

15. Existing Layout

Glendore Road

Victoria Drive

STOP 6

Victoria Drive

N

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🛑 **Site: 6 [Glendore / Victoria - 2027 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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
Movement Performance - Vehicles											
East: Victoria Drive											
5	T1	118	0.0	0.141	0.6	LOS A	0.7	4.8	0.31	0.30	56.3
6	R2	120	0.0	0.141	6.3	LOS A	0.7	4.8	0.31	0.30	54.5
Approach		238	0.0	0.141	3.5	NA	0.7	4.8	0.31	0.30	55.4
North: Glendore Road											
7	L2	314	0.0	0.654	11.5	LOS B	6.7	46.6	0.56	1.05	49.2
9	R2	286	0.0	0.654	14.2	LOS B	6.7	46.6	0.56	1.05	48.9
Approach		600	0.0	0.654	12.8	LOS B	6.7	46.6	0.56	1.05	49.0
West: Victoria Drive											
10	L2	25	0.0	0.110	5.6	LOS A	0.0	0.0	0.00	0.07	57.8
11	T1	196	0.0	0.110	0.0	LOS A	0.0	0.0	0.00	0.07	59.4
Approach		221	0.0	0.110	0.6	NA	0.0	0.0	0.00	0.07	59.2
All Vehicles		1059	0.0	0.654	8.2	NA	6.7	46.6	0.39	0.68	52.2

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.

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.

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🛑 **Site: 6 [Glendore / Victoria - 2027 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	122	0.0	0.157	0.6	LOS A	0.8	5.5	0.31	0.32	56.1
6	R2	141	0.0	0.157	6.2	LOS A	0.8	5.5	0.31	0.32	54.3
Approach		263	0.0	0.157	3.6	NA	0.8	5.5	0.31	0.32	55.1
North: Glendore Road											
7	L2	70	0.0	0.105	8.4	LOS A	0.4	2.8	0.21	0.91	51.4
9	R2	39	0.0	0.105	9.9	LOS A	0.4	2.8	0.21	0.91	51.0
Approach		109	0.0	0.105	8.9	LOS A	0.4	2.8	0.21	0.91	51.3
West: Victoria Drive											
10	L2	115	0.0	0.107	5.6	LOS A	0.0	0.0	0.00	0.32	55.7
11	T1	95	0.0	0.107	0.0	LOS A	0.0	0.0	0.00	0.32	57.1
Approach		210	0.0	0.107	3.0	NA	0.0	0.0	0.00	0.32	56.3
All Vehicles		582	0.0	0.157	4.4	NA	0.8	5.5	0.18	0.43	54.8

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.

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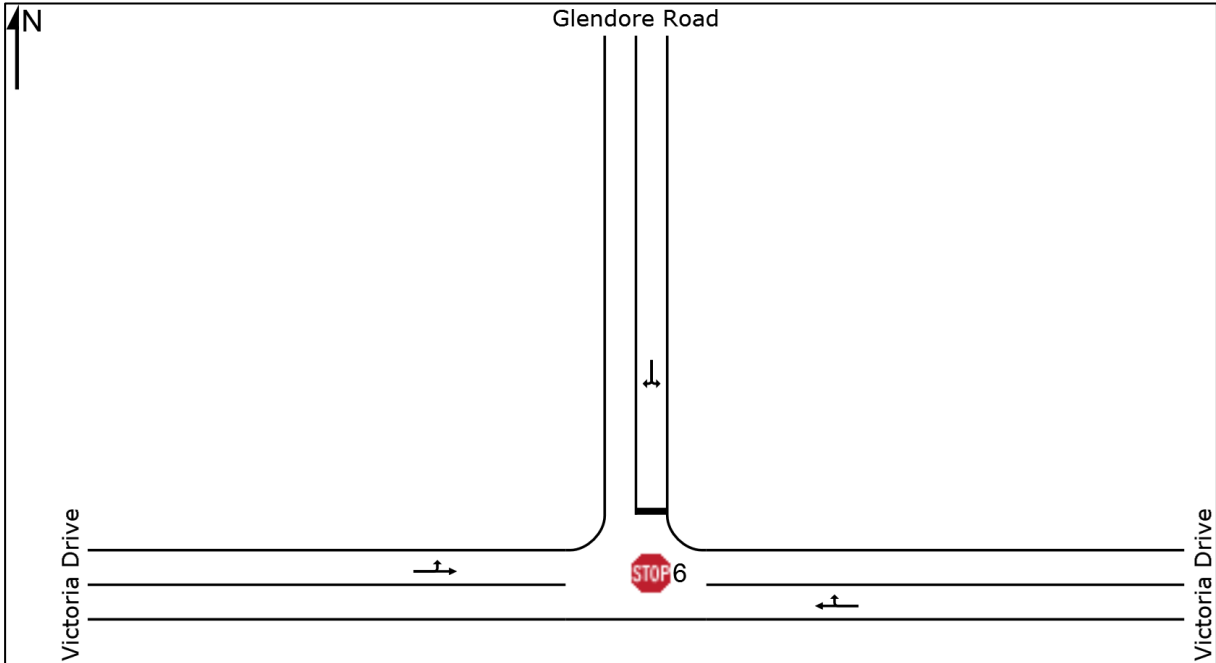
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

18. Existing Layout

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🛑 Site: 6 [Glendore / Victoria - 2027 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	139	0.0	0.169	0.7	LOS A	0.8	5.9	0.32	0.31	56.2
6	R2	144	0.0	0.169	6.3	LOS A	0.8	5.9	0.32	0.31	54.4
Approach		283	0.0	0.169	3.5	NA	0.8	5.9	0.32	0.31	55.3
North: Glendore Road											
7	L2	328	0.0	0.695	12.2	LOS B	7.7	53.6	0.59	1.09	48.5
9	R2	286	0.0	0.695	15.8	LOS C	7.7	53.6	0.59	1.09	48.2
Approach		614	0.0	0.695	13.9	LOS B	7.7	53.6	0.59	1.09	48.4
West: Victoria Drive											
10	L2	25	0.0	0.114	5.6	LOS A	0.0	0.0	0.00	0.06	57.8
11	T1	205	0.0	0.114	0.0	LOS A	0.0	0.0	0.00	0.06	59.4
Approach		230	0.0	0.114	0.6	NA	0.0	0.0	0.00	0.06	59.2
All Vehicles		1127	0.0	0.695	8.6	NA	7.7	53.6	0.40	0.68	51.9

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.

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.

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 **Site: 6 [Glendore / Victoria - 2027 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Stop (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: Victoria Drive											
5	T1	162	0.0	0.218	0.9	LOS A	1.2	8.2	0.38	0.34	55.9
6	R2	189	0.0	0.218	6.6	LOS A	1.2	8.2	0.38	0.34	54.1
Approach		351	0.0	0.218	4.0	NA	1.2	8.2	0.38	0.34	54.9
North: Glendore Road											
7	L2	142	0.0	0.178	8.7	LOS A	0.7	5.0	0.31	0.90	51.2
9	R2	39	0.0	0.178	11.5	LOS B	0.7	5.0	0.31	0.90	50.9
Approach		181	0.0	0.178	9.3	LOS A	0.7	5.0	0.31	0.90	51.2
West: Victoria Drive											
10	L2	115	0.0	0.141	5.6	LOS A	0.0	0.0	0.00	0.24	56.3
11	T1	165	0.0	0.141	0.0	LOS A	0.0	0.0	0.00	0.24	57.8
Approach		280	0.0	0.141	2.3	NA	0.0	0.0	0.00	0.24	57.2
All Vehicles		812	0.0	0.218	4.6	NA	1.2	8.2	0.23	0.43	54.8

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.

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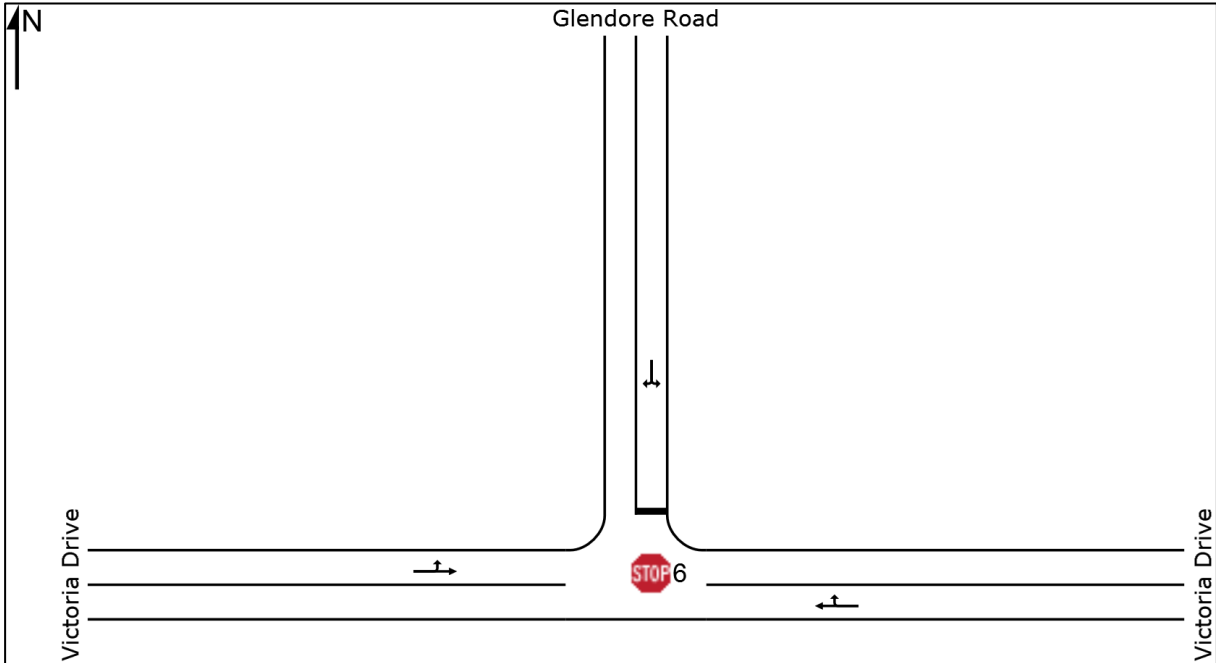
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

21. Existing Layout

E. Glendore Road / Beethoven Avenue

SIDRA ANALYSIS

1. 2017 Background Traffic AM

2. 2017 Background Traffic PM

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

5. 2022 Background Traffic (excluding development traffic) PM

6. Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

14. 2027 Background Traffic (excluding development traffic) PM

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

18. Existing Layout

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

21. Existing Layout

1.   2017 Background Traffic AM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2017 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Glendore Road											
5	T1	85	0.0	0.054	0.4	LOS A	0.1	0.8	0.15	0.07	58.7
6	R2	11	0.0	0.054	7.6	LOS A	0.1	0.8	0.15	0.07	56.6
Approach		96	0.0	0.054	1.3	NA	0.1	0.8	0.15	0.07	58.5
North: Beethoven Avenue											
7	L2	9	0.0	0.032	7.4	LOS A	0.1	0.7	0.48	0.69	51.8
9	R2	16	0.0	0.032	8.3	LOS A	0.1	0.7	0.48	0.69	51.3
Approach		25	0.0	0.032	8.0	LOS A	0.1	0.7	0.48	0.69	51.4
West: Glendore Road											
10	L2	32	0.0	0.267	5.6	LOS A	0.0	0.0	0.00	0.04	58.0
11	T1	495	0.0	0.267	0.0	LOS A	0.0	0.0	0.00	0.04	59.6
Approach		527	0.0	0.267	0.4	NA	0.0	0.0	0.00	0.04	59.5
All Vehicles		648	0.0	0.267	0.8	NA	0.1	0.8	0.04	0.07	59.0

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.
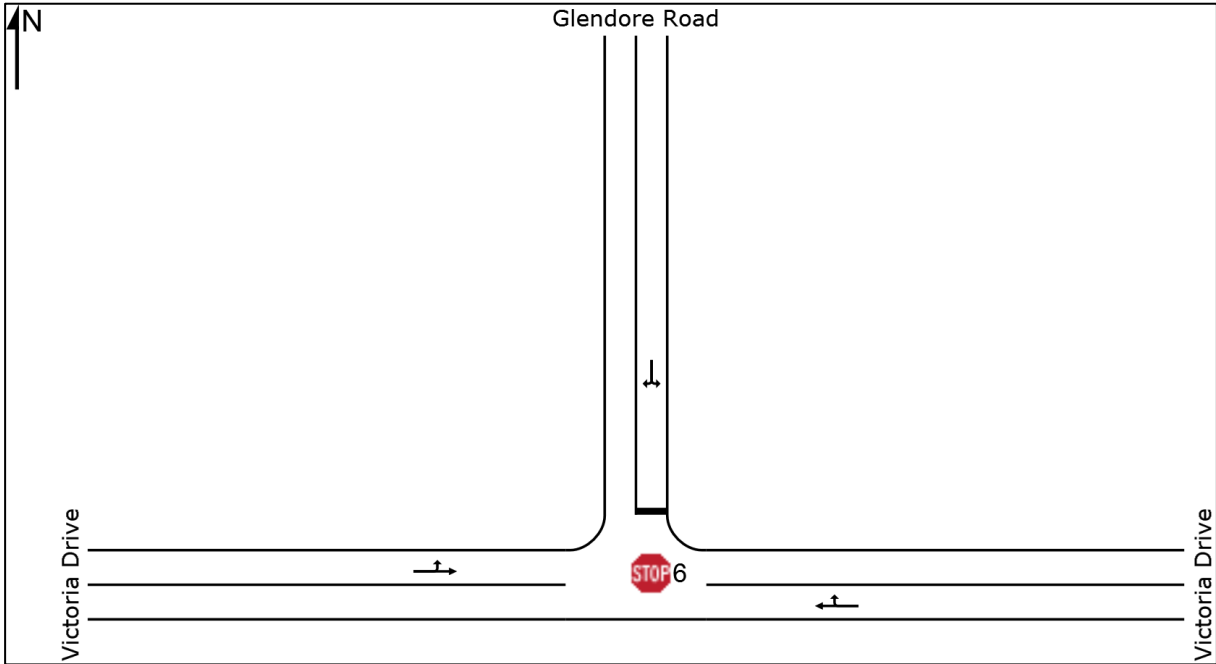NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

2. 2017 Background Traffic PM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2017 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
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: Glendore Road											
5	T1	214	0.0	0.119	0.0	LOS A	0.1	0.9	0.04	0.05	59.4
6	R2	18	0.0	0.119	5.7	LOS A	0.1	0.9	0.04	0.05	57.2
Approach		232	0.0	0.119	0.5	NA	0.1	0.9	0.04	0.05	59.2
North: Beethoven Avenue											
7	L2	9	0.0	0.024	5.8	LOS A	0.1	0.6	0.21	0.58	53.0
9	R2	18	0.0	0.024	6.6	LOS A	0.1	0.6	0.21	0.58	52.5
Approach		27	0.0	0.024	6.3	LOS A	0.1	0.6	0.21	0.58	52.6
West: Glendore Road											
10	L2	10	0.0	0.046	5.5	LOS A	0.0	0.0	0.00	0.07	57.8
11	T1	81	0.0	0.046	0.0	LOS A	0.0	0.0	0.00	0.07	59.4
Approach		91	0.0	0.046	0.6	NA	0.0	0.0	0.00	0.07	59.2
All Vehicles		350	0.0	0.119	1.0	NA	0.1	0.9	0.04	0.09	58.7

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.
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.

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2022 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

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: Glendore Road											
5	T1	89	0.0	0.057	0.5	LOS A	0.1	0.9	0.17	0.08	58.7
6	R2	12	0.0	0.057	7.8	LOS A	0.1	0.9	0.17	0.08	56.5
Approach		101	0.0	0.057	1.4	NA	0.1	0.9	0.17	0.08	58.4
North: Beethoven Avenue											
7	L2	10	0.0	0.036	7.5	LOS A	0.1	0.8	0.49	0.71	51.6
9	R2	17	0.0	0.036	8.5	LOS A	0.1	0.8	0.49	0.71	51.1
Approach		27	0.0	0.036	8.2	LOS A	0.1	0.8	0.49	0.71	51.3
West: Glendore Road											
10	L2	33	0.0	0.280	5.6	LOS A	0.0	0.0	0.00	0.04	58.0
11	T1	520	0.0	0.280	0.0	LOS A	0.0	0.0	0.00	0.04	59.6
Approach		553	0.0	0.280	0.4	NA	0.0	0.0	0.00	0.04	59.5
All Vehicles		681	0.0	0.280	0.8	NA	0.1	0.9	0.04	0.07	59.0

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.

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.

5. 2022 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2022 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Glendore Road											
5	T1	225	0.0	0.126	0.0	LOS A	0.1	0.9	0.04	0.05	59.4
6	R2	19	0.0	0.126	5.8	LOS A	0.1	0.9	0.04	0.05	57.2
Approach		244	0.0	0.126	0.5	NA	0.1	0.9	0.04	0.05	59.2
North: Beethoven Avenue											
7	L2	10	0.0	0.027	5.8	LOS A	0.1	0.6	0.22	0.58	53.0
9	R2	19	0.0	0.027	6.7	LOS A	0.1	0.6	0.22	0.58	52.4
Approach		29	0.0	0.027	6.4	LOS A	0.1	0.6	0.22	0.58	52.6
West: Glendore Road											
10	L2	11	0.0	0.049	5.5	LOS A	0.0	0.0	0.00	0.07	57.8
11	T1	85	0.0	0.049	0.0	LOS A	0.0	0.0	0.00	0.07	59.4
Approach		96	0.0	0.049	0.6	NA	0.0	0.0	0.00	0.07	59.2
All Vehicles		369	0.0	0.126	1.0	NA	0.1	0.9	0.04	0.09	58.6

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.
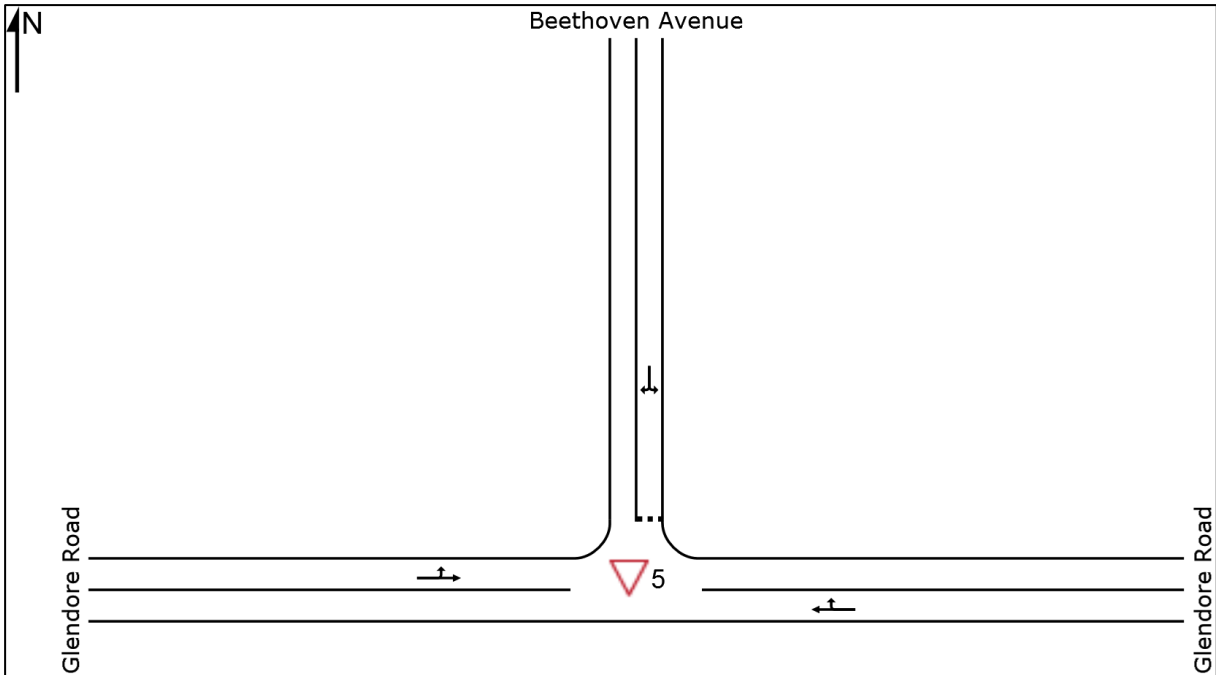NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6. Existing Layout

7.   2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

▽ Site: 5 [Glendore / Beethoven - 2022 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
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: Glendore Road											
5	T1	110	0.0	0.081	0.9	LOS A	0.3	1.8	0.25	0.12	57.9
6	R2	24	0.0	0.081	8.0	LOS A	0.3	1.8	0.25	0.12	55.8
Approach		134	0.0	0.081	2.2	NA	0.3	1.8	0.25	0.12	57.6
North: Beethoven Avenue											
7	L2	10	0.0	0.038	7.7	LOS A	0.1	0.9	0.51	0.73	51.3
9	R2	17	0.0	0.038	9.0	LOS A	0.1	0.9	0.51	0.73	50.9
Approach		27	0.0	0.038	8.5	LOS A	0.1	0.9	0.51	0.73	51.0
West: Glendore Road											
10	L2	33	0.0	0.295	5.6	LOS A	0.0	0.0	0.00	0.03	58.0
11	T1	549	0.0	0.295	0.0	LOS A	0.0	0.0	0.00	0.03	59.6
Approach		582	0.0	0.295	0.3	NA	0.0	0.0	0.00	0.03	59.5
All Vehicles		743	0.0	0.295	1.0	NA	0.3	1.8	0.06	0.07	58.8

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.
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.

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2022 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

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
Movement Performance - Vehicles											
East: Glendore Road											
5	T1	242	0.0	0.136	0.0	LOS A	0.2	1.1	0.05	0.05	59.4
6	R2	22	0.0	0.136	5.9	LOS A	0.2	1.1	0.05	0.05	57.1
Approach		264	0.0	0.136	0.5	NA	0.2	1.1	0.05	0.05	59.2
North: Beethoven Avenue											
7	L2	10	0.0	0.028	5.8	LOS A	0.1	0.6	0.25	0.59	52.8
9	R2	19	0.0	0.028	6.9	LOS A	0.1	0.6	0.25	0.59	52.3
Approach		29	0.0	0.028	6.5	LOS A	0.1	0.6	0.25	0.59	52.5
West: Glendore Road											
10	L2	11	0.0	0.061	5.5	LOS A	0.0	0.0	0.00	0.05	57.9
11	T1	110	0.0	0.061	0.0	LOS A	0.0	0.0	0.00	0.05	59.5
Approach		121	0.0	0.061	0.5	NA	0.0	0.0	0.00	0.05	59.3
All Vehicles		414	0.0	0.136	0.9	NA	0.2	1.1	0.05	0.09	58.7

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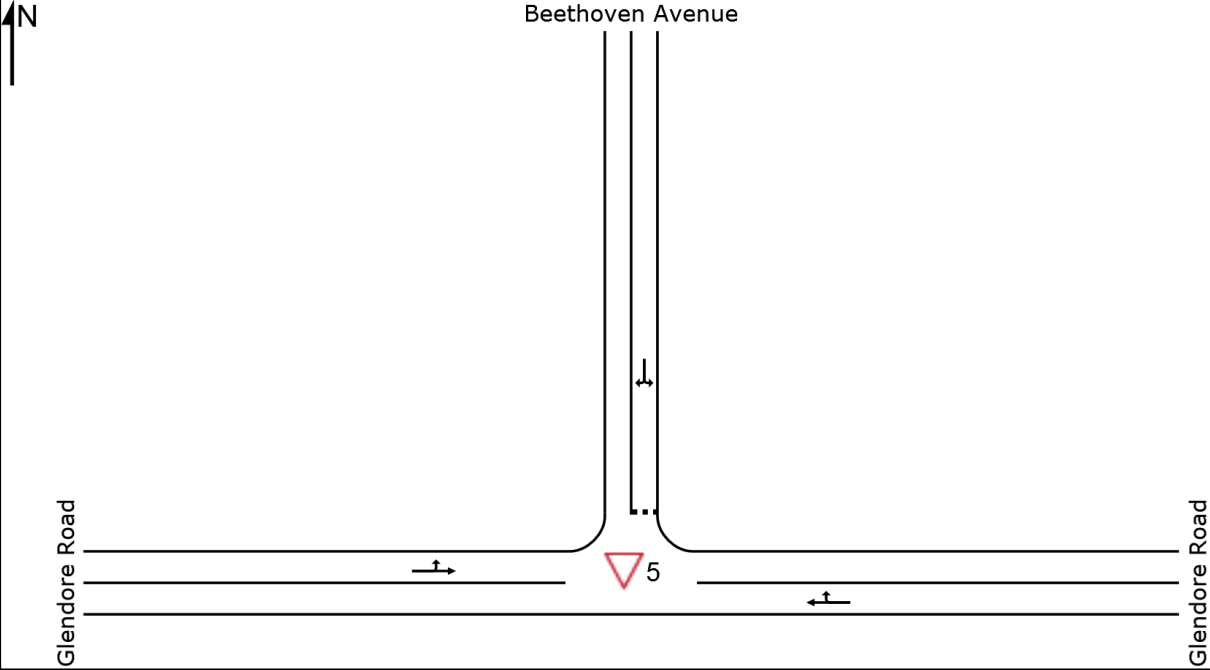Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard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

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2022 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

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: Glendore Road											
5	T1	124	0.0	0.099	1.1	LOS A	0.4	2.6	0.30	0.15	57.5
6	R2	34	0.0	0.099	8.2	LOS A	0.4	2.6	0.30	0.15	55.4
Approach		158	0.0	0.099	2.6	NA	0.4	2.6	0.30	0.15	57.0
North: Beethoven Avenue											
7	L2	10	0.0	0.040	7.8	LOS A	0.1	0.9	0.52	0.74	51.2
9	R2	17	0.0	0.040	9.4	LOS A	0.1	0.9	0.52	0.74	50.7
Approach		27	0.0	0.040	8.8	LOS A	0.1	0.9	0.52	0.74	50.9
West: Glendore Road											
10	L2	33	0.0	0.302	5.6	LOS A	0.0	0.0	0.00	0.03	58.0
11	T1	563	0.0	0.302	0.0	LOS A	0.0	0.0	0.00	0.03	59.6
Approach		596	0.0	0.302	0.3	NA	0.0	0.0	0.00	0.03	59.5
All Vehicles		781	0.0	0.302	1.1	NA	0.4	2.6	0.08	0.08	58.7

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.

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.

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2022 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

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: Glendore Road											
5	T1	249	0.0	0.147	0.1	LOS A	0.2	1.6	0.07	0.07	59.1
6	R2	32	0.0	0.147	5.9	LOS A	0.2	1.6	0.07	0.07	56.9
Approach		281	0.0	0.147	0.8	NA	0.2	1.6	0.07	0.07	58.8
North: Beethoven Avenue											
7	L2	10	0.0	0.029	5.9	LOS A	0.1	0.7	0.28	0.60	52.7
9	R2	19	0.0	0.029	7.1	LOS A	0.1	0.7	0.28	0.60	52.2
Approach		29	0.0	0.029	6.7	LOS A	0.1	0.7	0.28	0.60	52.4
West: Glendore Road											
10	L2	11	0.0	0.074	5.5	LOS A	0.0	0.0	0.00	0.05	58.0
11	T1	135	0.0	0.074	0.0	LOS A	0.0	0.0	0.00	0.05	59.6
Approach		146	0.0	0.074	0.4	NA	0.0	0.0	0.00	0.05	59.5
All Vehicles		456	0.0	0.147	1.0	NA	0.2	1.6	0.06	0.10	58.6

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.
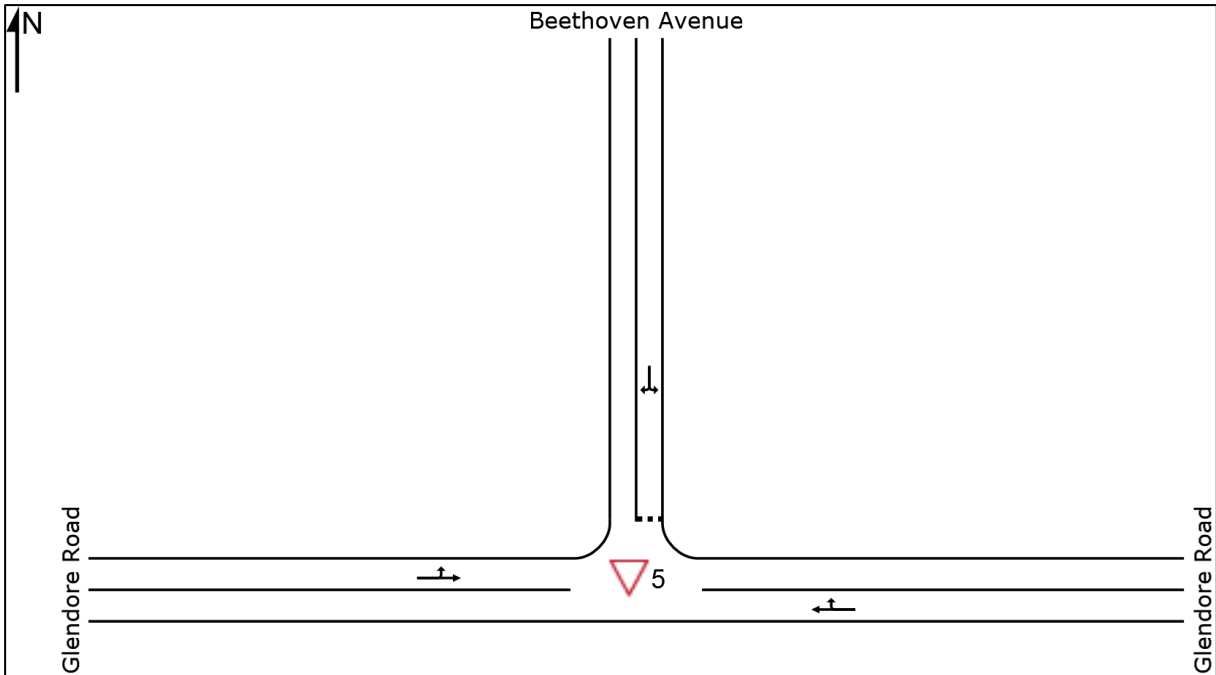NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2027 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

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: Glendore Road											
5	T1	12	0.0	0.103	2.5	LOS A	0.5	3.2	0.55	0.66	53.5
6	R2	94	0.0	0.103	8.0	LOS A	0.5	3.2	0.55	0.66	51.7
Approach		106	0.0	0.103	7.4	NA	0.5	3.2	0.55	0.66	51.9
North: Beethoven Avenue											
7	L2	10	0.0	0.039	7.7	LOS A	0.1	0.9	0.50	0.72	51.4
9	R2	18	0.0	0.039	8.8	LOS A	0.1	0.9	0.50	0.72	50.9
Approach		28	0.0	0.039	8.4	LOS A	0.1	0.9	0.50	0.72	51.1
West: Glendore Road											
10	L2	35	0.0	0.295	5.6	LOS A	0.0	0.0	0.00	0.04	58.0
11	T1	547	0.0	0.295	0.0	LOS A	0.0	0.0	0.00	0.04	59.6
Approach		582	0.0	0.295	0.4	NA	0.0	0.0	0.00	0.04	59.5
All Vehicles		716	0.0	0.295	1.7	NA	0.5	3.2	0.10	0.16	57.9

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.

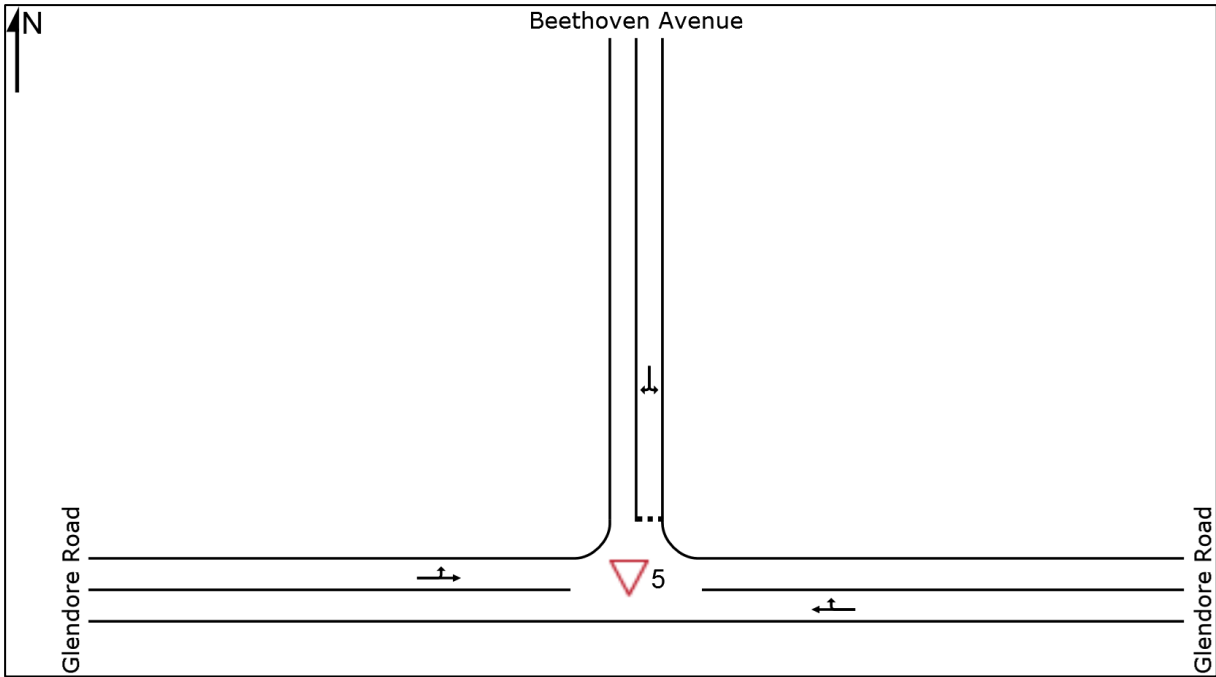Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

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.

14. 2027 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2027 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

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: Glendore Road											
5	T1	237	0.0	0.132	0.0	LOS A	0.1	1.0	0.04	0.05	59.4
6	R2	20	0.0	0.132	5.8	LOS A	0.1	1.0	0.04	0.05	57.2
Approach		257	0.0	0.132	0.5	NA	0.1	1.0	0.04	0.05	59.2
North: Beethoven Avenue											
7	L2	10	0.0	0.028	5.8	LOS A	0.1	0.7	0.23	0.59	52.9
9	R2	20	0.0	0.028	6.8	LOS A	0.1	0.7	0.23	0.59	52.4
Approach		30	0.0	0.028	6.4	LOS A	0.1	0.7	0.23	0.59	52.6
West: Glendore Road											
10	L2	11	0.0	0.051	5.5	LOS A	0.0	0.0	0.00	0.07	57.8
11	T1	89	0.0	0.051	0.0	LOS A	0.0	0.0	0.00	0.07	59.4
Approach		100	0.0	0.051	0.6	NA	0.0	0.0	0.00	0.07	59.2
All Vehicles		387	0.0	0.132	1.0	NA	0.1	1.0	0.04	0.09	58.7

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.

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.

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2027 Future Traffic AM - Erf 1948]**

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Glendore Road											
5	T1	135	0.0	0.111	1.3	LOS A	0.4	3.1	0.33	0.16	57.3
6	R2	38	0.0	0.111	8.6	LOS A	0.4	3.1	0.33	0.16	55.2
Approach		173	0.0	0.111	2.9	NA	0.4	3.1	0.33	0.16	56.8
North: Beethoven Avenue											
7	L2	10	0.0	0.044	8.1	LOS A	0.1	1.0	0.55	0.77	50.8
9	R2	18	0.0	0.044	9.9	LOS A	0.1	1.0	0.55	0.77	50.4
Approach		28	0.0	0.044	9.3	LOS A	0.1	1.0	0.55	0.77	50.5
West: Glendore Road											
10	L2	35	0.0	0.324	5.6	LOS A	0.0	0.0	0.00	0.03	58.0
11	T1	604	0.0	0.324	0.0	LOS A	0.0	0.0	0.00	0.03	59.6
Approach		639	0.0	0.324	0.3	NA	0.0	0.0	0.00	0.03	59.5
All Vehicles		840	0.0	0.324	1.2	NA	0.4	3.1	0.09	0.08	58.6

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.

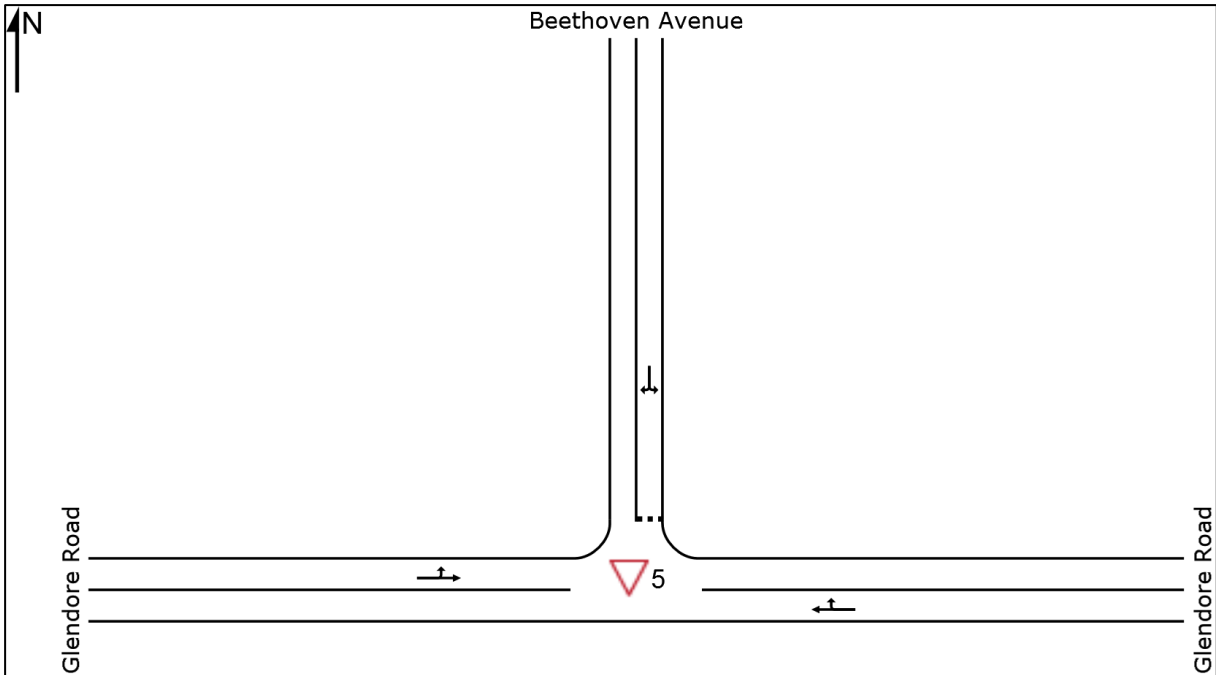Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

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.

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2027 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Glendore Road											
5	T1	254	0.0	0.153	0.1	LOS A	0.3	1.9	0.08	0.08	59.0
6	R2	37	0.0	0.153	6.0	LOS A	0.3	1.9	0.08	0.08	56.8
Approach		291	0.0	0.153	0.8	NA	0.3	1.9	0.08	0.08	58.7
North: Beethoven Avenue											
7	L2	10	0.0	0.030	5.9	LOS A	0.1	0.7	0.29	0.61	52.7
9	R2	20	0.0	0.030	7.2	LOS A	0.1	0.7	0.29	0.61	52.1
Approach		30	0.0	0.030	6.8	LOS A	0.1	0.7	0.29	0.61	52.3
West: Glendore Road											
10	L2	11	0.0	0.076	5.5	LOS A	0.0	0.0	0.00	0.04	58.0
11	T1	139	0.0	0.076	0.0	LOS A	0.0	0.0	0.00	0.04	59.6
Approach		150	0.0	0.076	0.4	NA	0.0	0.0	0.00	0.04	59.5
All Vehicles		471	0.0	0.153	1.1	NA	0.3	1.9	0.07	0.10	58.5

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.
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.

18. Existing Layout

Diagram of a T-intersection. Beethoven Avenue runs vertically (north-south) at the top centre. Glendore Road runs horizontally (east-west) on both the left and right sides. A give-way marker labelled "5" is shown at the junction. An "N" north arrow is in the top-left corner.

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2027 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

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: Glendore Road											
5	T1	150	0.0	0.130	1.5	LOS A	0.6	3.9	0.36	0.17	57.0
6	R2	47	0.0	0.130	8.7	LOS A	0.6	3.9	0.36	0.17	54.9
Approach		197	0.0	0.130	3.2	NA	0.6	3.9	0.36	0.17	56.5
North: Beethoven Avenue											
7	L2	10	0.0	0.046	8.2	LOS A	0.1	1.0	0.57	0.79	50.6
9	R2	18	0.0	0.046	10.3	LOS B	0.1	1.0	0.57	0.79	50.2
Approach		28	0.0	0.046	9.5	LOS A	0.1	1.0	0.57	0.79	50.3
West: Glendore Road											
10	L2	35	0.0	0.331	5.6	LOS A	0.0	0.0	0.00	0.03	58.0
11	T1	618	0.0	0.331	0.0	LOS A	0.0	0.0	0.00	0.03	59.6
Approach		653	0.0	0.331	0.3	NA	0.0	0.0	0.00	0.03	59.5
All Vehicles		878	0.0	0.331	1.3	NA	0.6	3.9	0.10	0.09	58.5

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.
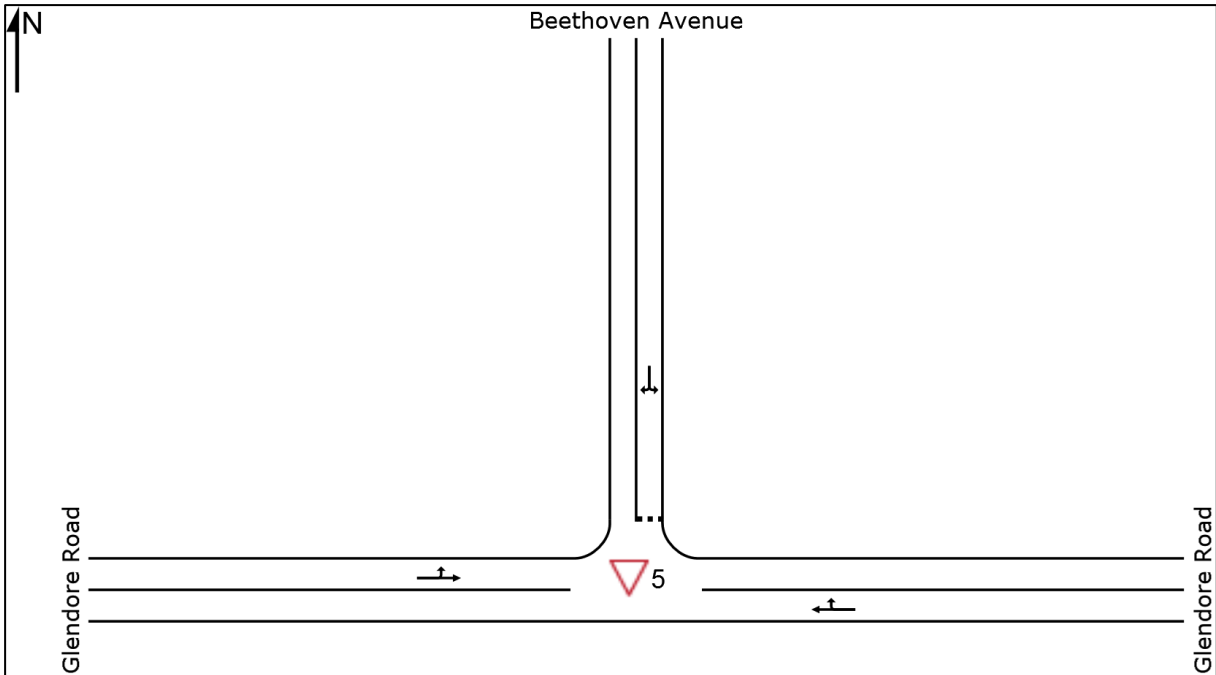NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

▽ **Site: 5 [Glendore / Beethoven - 2027 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

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
Movement Performance - Vehicles											
East: Glendore Road											
5	T1	284	0.0	0.176	0.2	LOS A	0.4	2.5	0.11	0.09	58.8
6	R2	47	0.0	0.176	6.2	LOS A	0.4	2.5	0.11	0.09	56.6
Approach		331	0.0	0.176	1.0	NA	0.4	2.5	0.11	0.09	58.5
North: Beethoven Avenue											
7	L2	10	0.0	0.033	6.1	LOS A	0.1	0.8	0.35	0.63	52.4
9	R2	20	0.0	0.033	7.7	LOS A	0.1	0.8	0.35	0.63	51.9
Approach		30	0.0	0.033	7.2	LOS A	0.1	0.8	0.35	0.63	52.0
West: Glendore Road											
10	L2	11	0.0	0.101	5.5	LOS A	0.0	0.0	0.00	0.03	58.1
11	T1	189	0.0	0.101	0.0	LOS A	0.0	0.0	0.00	0.03	59.7
Approach		200	0.0	0.101	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		561	0.0	0.176	1.1	NA	0.4	2.5	0.08	0.10	58.5

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.
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.

21. Existing Layout

F.   Beethoven Avenue / Schubert Road

SIDRA ANALYSIS

1. 2017 Background Traffic AM

2. 2017 Background Traffic PM

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

5. 2022 Background Traffic (excluding development traffic) PM

6. Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

14. 2027 Background Traffic (excluding development traffic) PM

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

18. Existing Layout

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

21. Existing Layout

1. 2017 Background Traffic AM

MOVEMENT SUMMARY

🛑 Site: 1 [Schubert / Beethoven - 2017 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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: Beethoven Avenue											
5	T1	2	0.0	0.016	0.2	LOS A	0.1	0.5	0.16	0.52	54.8
6	R2	26	0.0	0.016	5.7	LOS A	0.1	0.5	0.16	0.52	52.9
Approach		28	0.0	0.016	5.3	NA	0.1	0.5	0.16	0.52	53.0
North: Schubert Road											
7	L2	9	0.0	0.047	8.0	LOS A	0.2	1.1	0.01	0.99	51.9
9	R2	45	0.0	0.047	7.7	LOS A	0.2	1.1	0.01	0.99	51.4
Approach		54	0.0	0.047	7.7	LOS A	0.2	1.1	0.01	0.99	51.5
West: Beethoven Avenue											
10	L2	70	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.57	53.7
11	T1	1	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.57	55.1
Approach		71	0.0	0.039	5.5	NA	0.0	0.0	0.00	0.57	53.7
All Vehicles		153	0.0	0.047	6.2	NA	0.2	1.1	0.03	0.71	52.8

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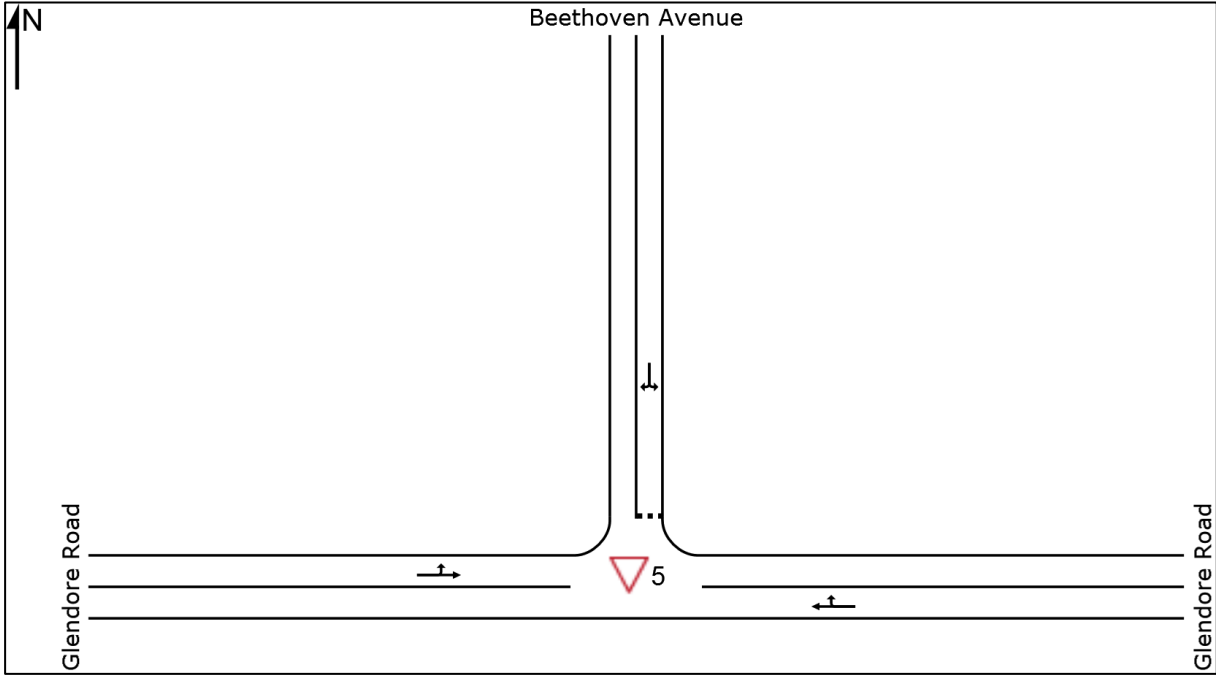Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard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

2. 2017 Background Traffic PM

MOVEMENT SUMMARY

🛑 **Site: 1 [Schubert / Beethoven - 2017 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Beethoven Avenue											
5	T1	2	0.0	0.012	0.1	LOS A	0.1	0.4	0.10	0.52	55.1
6	R2	19	0.0	0.012	5.6	LOS A	0.1	0.4	0.10	0.52	53.1
Approach		21	0.0	0.012	5.1	NA	0.1	0.4	0.10	0.52	53.3
North: Schubert Road											
7	L2	35	0.0	0.082	8.0	LOS A	0.3	2.1	0.03	0.98	52.0
9	R2	64	0.0	0.082	7.6	LOS A	0.3	2.1	0.03	0.98	51.4
Approach		99	0.0	0.082	7.7	LOS A	0.3	2.1	0.03	0.98	51.6
West: Beethoven Avenue											
10	L2	30	0.0	0.018	5.5	LOS A	0.0	0.0	0.00	0.51	54.1
11	T1	4	0.0	0.018	0.0	LOS A	0.0	0.0	0.00	0.51	55.5
Approach		34	0.0	0.018	4.9	NA	0.0	0.0	0.00	0.51	54.3
All Vehicles		154	0.0	0.082	6.7	NA	0.3	2.1	0.03	0.81	52.4

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.
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.

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🛑 **Site: 1 [Schubert / Beethoven - 2022 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Beethoven Avenue											
5	T1	2	0.0	0.018	0.2	LOS A	0.1	0.6	0.17	0.53	54.8
6	R2	28	0.0	0.018	5.7	LOS A	0.1	0.6	0.17	0.53	52.8
Approach		30	0.0	0.018	5.4	NA	0.1	0.6	0.17	0.53	52.9
North: Schubert Road											
7	L2	10	0.0	0.053	8.0	LOS A	0.2	1.3	0.01	0.99	51.9
9	R2	50	0.0	0.053	7.7	LOS A	0.2	1.3	0.01	0.99	51.4
Approach		60	0.0	0.053	7.8	LOS A	0.2	1.3	0.01	0.99	51.5
West: Beethoven Avenue											
10	L2	78	0.0	0.043	5.5	LOS A	0.0	0.0	0.00	0.57	53.7
11	T1	1	0.0	0.043	0.0	LOS A	0.0	0.0	0.00	0.57	55.1
Approach		79	0.0	0.043	5.5	NA	0.0	0.0	0.00	0.57	53.7
All Vehicles		169	0.0	0.053	6.3	NA	0.2	1.3	0.04	0.71	52.7

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.

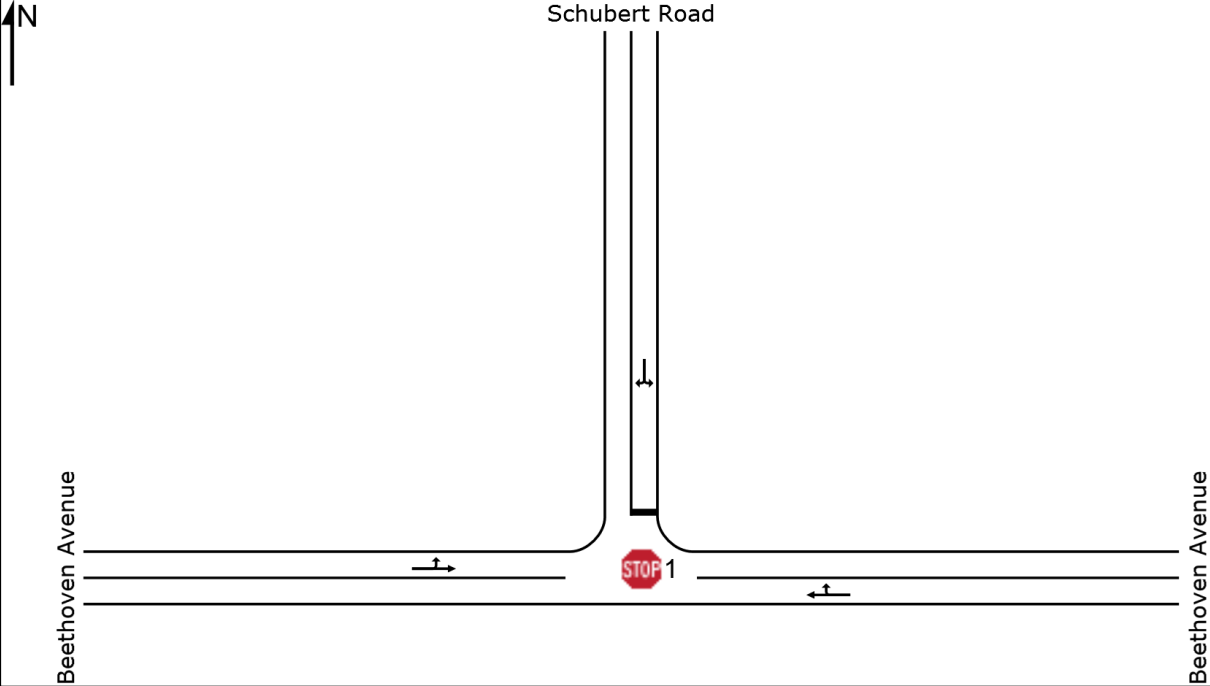Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

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.

5. 2022 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

🛑 **Site: 1 [Schubert / Beethoven - 2022 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Beethoven Avenue											
5	T1	2	0.0	0.013	0.1	LOS A	0.1	0.4	0.11	0.52	55.1
6	R2	21	0.0	0.013	5.6	LOS A	0.1	0.4	0.11	0.52	53.1
Approach		23	0.0	0.013	5.1	NA	0.1	0.4	0.11	0.52	53.2
North: Schubert Road											
7	L2	38	0.0	0.090	8.0	LOS A	0.3	2.3	0.04	0.97	52.0
9	R2	71	0.0	0.090	7.6	LOS A	0.3	2.3	0.04	0.97	51.4
Approach		109	0.0	0.090	7.8	LOS A	0.3	2.3	0.04	0.97	51.6
West: Beethoven Avenue											
10	L2	33	0.0	0.021	5.5	LOS A	0.0	0.0	0.00	0.50	54.2
11	T1	5	0.0	0.021	0.0	LOS A	0.0	0.0	0.00	0.50	55.6
Approach		38	0.0	0.021	4.8	NA	0.0	0.0	0.00	0.50	54.4
All Vehicles		170	0.0	0.090	6.7	NA	0.3	2.3	0.04	0.81	52.4

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.
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.

6. Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🛑 Site: 1 [Schubert / Beethoven - 2022 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Stop (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: Beethoven Avenue											
5	T1	2	0.0	0.018	0.2	LOS A	0.1	0.6	0.17	0.53	54.8
6	R2	28	0.0	0.018	5.7	LOS A	0.1	0.6	0.17	0.53	52.8
Approach		30	0.0	0.018	5.4	NA	0.1	0.6	0.17	0.53	52.9
North: Schubert Road											
7	L2	10	0.0	0.053	8.0	LOS A	0.2	1.3	0.01	0.99	51.9
9	R2	50	0.0	0.053	7.7	LOS A	0.2	1.3	0.01	0.99	51.4
Approach		60	0.0	0.053	7.8	LOS A	0.2	1.3	0.01	0.99	51.5
West: Beethoven Avenue											
10	L2	78	0.0	0.043	5.5	LOS A	0.0	0.0	0.00	0.57	53.7
11	T1	1	0.0	0.043	0.0	LOS A	0.0	0.0	0.00	0.57	55.1
Approach		79	0.0	0.043	5.5	NA	0.0	0.0	0.00	0.57	53.7
All Vehicles		169	0.0	0.053	6.3	NA	0.2	1.3	0.04	0.71	52.7

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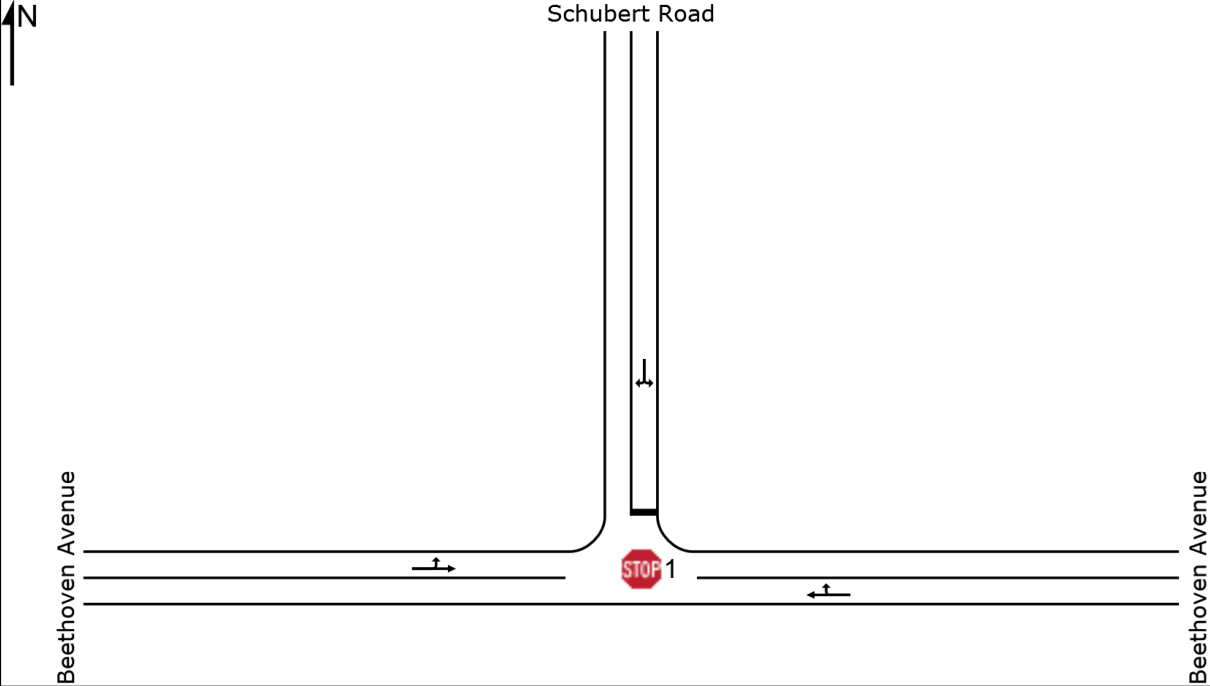Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard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

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🛑 **Site: 1 [Schubert / Beethoven - 2022 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Stop (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: Beethoven Avenue											
5	T1	2	0.0	0.013	0.1	LOS A	0.1	0.4	0.11	0.52	55.1
6	R2	21	0.0	0.013	5.6	LOS A	0.1	0.4	0.11	0.52	53.1
Approach		23	0.0	0.013	5.1	NA	0.1	0.4	0.11	0.52	53.2
North: Schubert Road											
7	L2	38	0.0	0.090	8.0	LOS A	0.3	2.3	0.04	0.97	52.0
9	R2	71	0.0	0.090	7.6	LOS A	0.3	2.3	0.04	0.97	51.4
Approach		109	0.0	0.090	7.8	LOS A	0.3	2.3	0.04	0.97	51.6
West: Beethoven Avenue											
10	L2	33	0.0	0.021	5.5	LOS A	0.0	0.0	0.00	0.50	54.2
11	T1	5	0.0	0.021	0.0	LOS A	0.0	0.0	0.00	0.50	55.6
Approach		38	0.0	0.021	4.8	NA	0.0	0.0	0.00	0.50	54.4
All Vehicles		170	0.0	0.090	6.7	NA	0.3	2.3	0.04	0.81	52.4

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.
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.

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🛑 Site: 1 [Schubert / Beethoven - 2022 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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
Movement Performance - Vehicles											
East: Beethoven Avenue											
5	T1	9	0.0	0.056	0.2	LOS A	0.3	1.8	0.19	0.52	54.9
6	R2	86	0.0	0.056	5.8	LOS A	0.3	1.8	0.19	0.52	52.9
Approach		95	0.0	0.056	5.2	NA	0.3	1.8	0.19	0.52	53.1
North: Schubert Road											
7	L2	24	0.0	0.063	8.1	LOS A	0.2	1.6	0.05	0.97	51.8
9	R2	47	0.0	0.063	8.0	LOS A	0.2	1.6	0.05	0.97	51.2
Approach		71	0.0	0.063	8.0	LOS A	0.2	1.6	0.05	0.97	51.4
West: Beethoven Avenue											
10	L2	74	0.0	0.046	5.5	LOS A	0.0	0.0	0.00	0.51	54.1
11	T1	10	0.0	0.046	0.0	LOS A	0.0	0.0	0.00	0.51	55.5
Approach		84	0.0	0.046	4.9	NA	0.0	0.0	0.00	0.51	54.3
All Vehicles		250	0.0	0.063	5.9	NA	0.3	1.8	0.09	0.64	53.0

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.

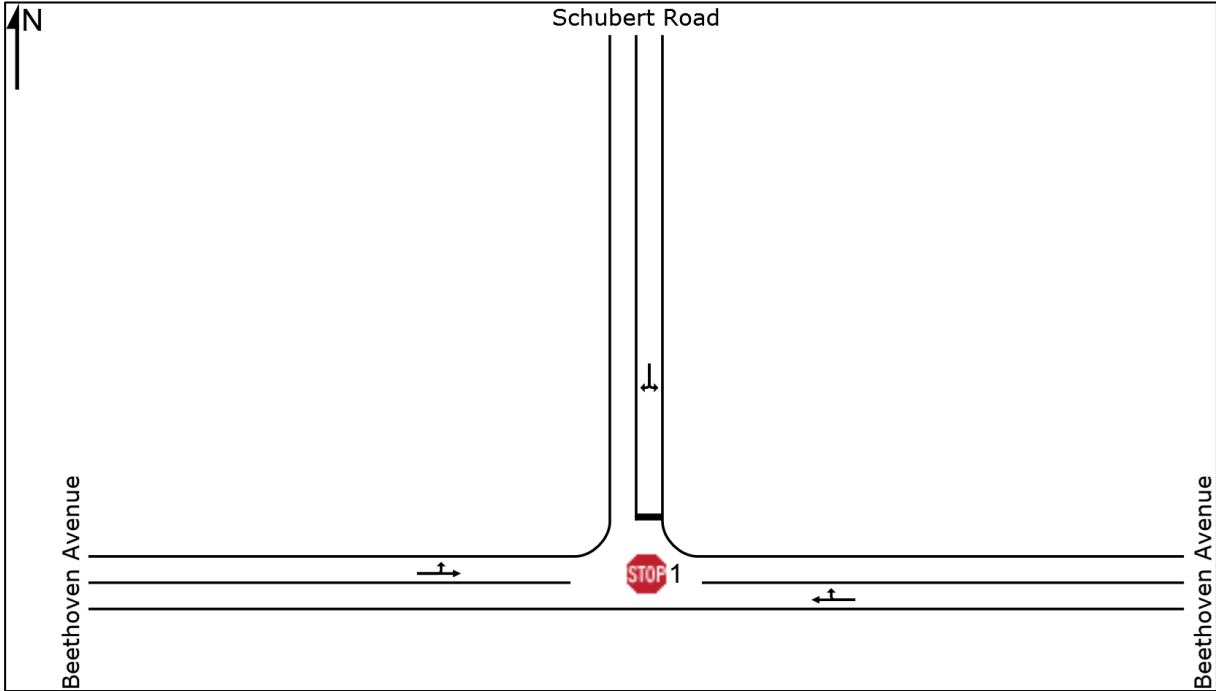Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

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.

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 Site: 1 [Schubert / Beethoven - 2022 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

Movement Performance - Vehicles										
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV				Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Beethoven Avenue											
5	T1	5	0.0	0.030	0.2	LOS A	0.1	1.0	0.15	0.51	55.0
6	R2	47	0.0	0.030	5.7	LOS A	0.1	1.0	0.15	0.51	53.0
Approach		52	0.0	0.030	5.1	NA	0.1	1.0	0.15	0.51	53.2
North: Schubert Road											
7	L2	72	0.0	0.115	8.1	LOS A	0.4	3.1	0.11	0.93	51.9
9	R2	68	0.0	0.115	7.8	LOS A	0.4	3.1	0.11	0.93	51.3
Approach		140	0.0	0.115	8.0	LOS A	0.4	3.1	0.11	0.93	51.6
West: Beethoven Avenue											
10	L2	31	0.0	0.032	5.5	LOS A	0.0	0.0	0.00	0.31	55.8
11	T1	28	0.0	0.032	0.0	LOS A	0.0	0.0	0.00	0.31	57.3
Approach		59	0.0	0.032	2.9	NA	0.0	0.0	0.00	0.31	56.5
All Vehicles		251	0.0	0.115	6.2	NA	0.4	3.1	0.09	0.70	53.0

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.

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.

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

🛑 **Site: 1 [Schubert / Beethoven - 2027 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Beethoven Avenue											
5	T1	2	0.0	0.018	0.2	LOS A	0.1	0.6	0.17	0.53	54.8
6	R2	28	0.0	0.018	5.7	LOS A	0.1	0.6	0.17	0.53	52.8
Approach		30	0.0	0.018	5.4	NA	0.1	0.6	0.17	0.53	52.9
North: Schubert Road											
7	L2	10	0.0	0.053	8.0	LOS A	0.2	1.3	0.01	0.99	51.9
9	R2	50	0.0	0.053	7.7	LOS A	0.2	1.3	0.01	0.99	51.4
Approach		60	0.0	0.053	7.8	LOS A	0.2	1.3	0.01	0.99	51.5
West: Beethoven Avenue											
10	L2	78	0.0	0.043	5.5	LOS A	0.0	0.0	0.00	0.57	53.7
11	T1	1	0.0	0.043	0.0	LOS A	0.0	0.0	0.00	0.57	55.1
Approach		79	0.0	0.043	5.5	NA	0.0	0.0	0.00	0.57	53.7
All Vehicles		169	0.0	0.053	6.3	NA	0.2	1.3	0.04	0.71	52.7

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.

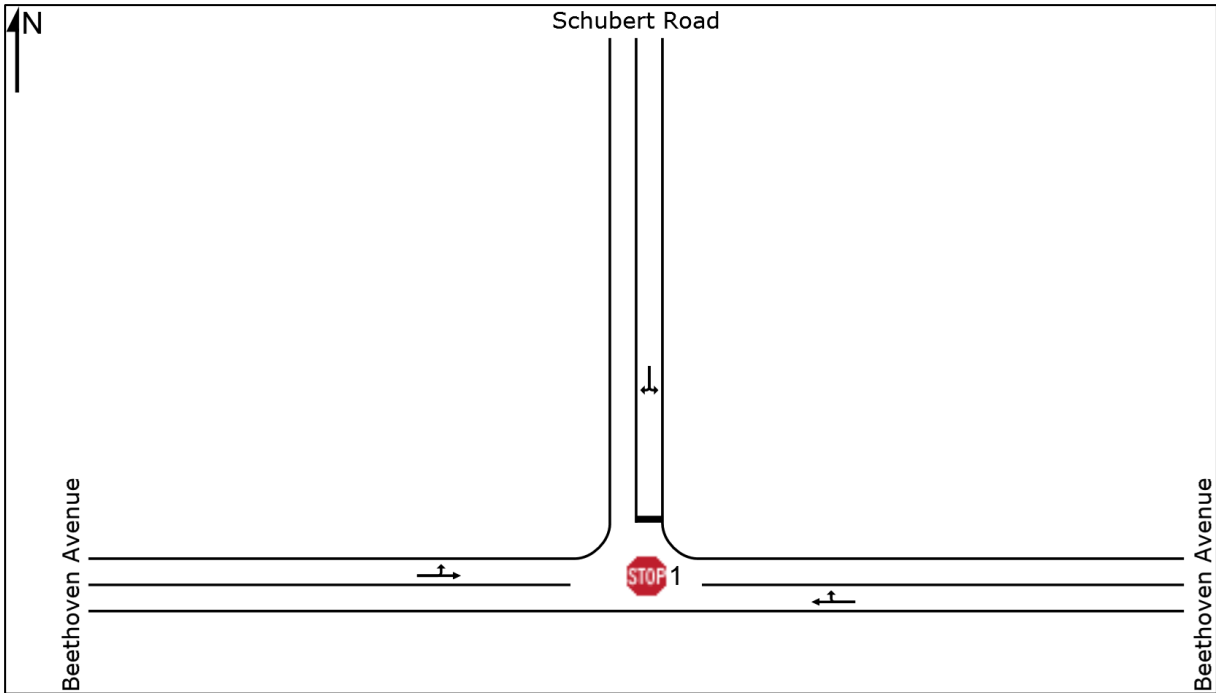Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

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.

14. 2027 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

⬢ **Site: 1 [Schubert / Beethoven - 2027 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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
Movement Performance - Vehicles											
East: Beethoven Avenue											
5	T1	2	0.0	0.013	0.1	LOS A	0.1	0.4	0.11	0.52	55.1
6	R2	21	0.0	0.013	5.6	LOS A	0.1	0.4	0.11	0.52	53.1
Approach		23	0.0	0.013	5.1	NA	0.1	0.4	0.11	0.52	53.2
North: Schubert Road											
7	L2	71	0.0	0.084	8.0	LOS A	0.3	2.3	0.03	0.98	51.9
9	R2	38	0.0	0.084	7.6	LOS A	0.3	2.3	0.03	0.98	51.3
Approach		109	0.0	0.084	7.9	LOS A	0.3	2.3	0.03	0.98	51.7
West: Beethoven Avenue											
10	L2	33	0.0	0.021	5.5	LOS A	0.0	0.0	0.00	0.50	54.2
11	T1	5	0.0	0.021	0.0	LOS A	0.0	0.0	0.00	0.50	55.6
Approach		38	0.0	0.021	4.8	NA	0.0	0.0	0.00	0.50	54.4
All Vehicles		170	0.0	0.084	6.8	NA	0.3	2.3	0.03	0.81	52.5

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.
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.

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🛑 Site: 1 [Schubert / Beethoven - 2027 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Beethoven Avenue											
5	T1	2	0.0	0.018	0.2	LOS A	0.1	0.6	0.17	0.53	54.8
6	R2	28	0.0	0.018	5.7	LOS A	0.1	0.6	0.17	0.53	52.8
Approach		30	0.0	0.018	5.4	NA	0.1	0.6	0.17	0.53	52.9
North: Schubert Road											
7	L2	10	0.0	0.053	8.0	LOS A	0.2	1.3	0.01	0.99	51.9
9	R2	50	0.0	0.053	7.7	LOS A	0.2	1.3	0.01	0.99	51.4
Approach		60	0.0	0.053	7.8	LOS A	0.2	1.3	0.01	0.99	51.5
West: Beethoven Avenue											
10	L2	78	0.0	0.043	5.5	LOS A	0.0	0.0	0.00	0.57	53.7
11	T1	1	0.0	0.043	0.0	LOS A	0.0	0.0	0.00	0.57	55.1
Approach		79	0.0	0.043	5.5	NA	0.0	0.0	0.00	0.57	53.7
All Vehicles		169	0.0	0.053	6.3	NA	0.2	1.3	0.04	0.71	52.7

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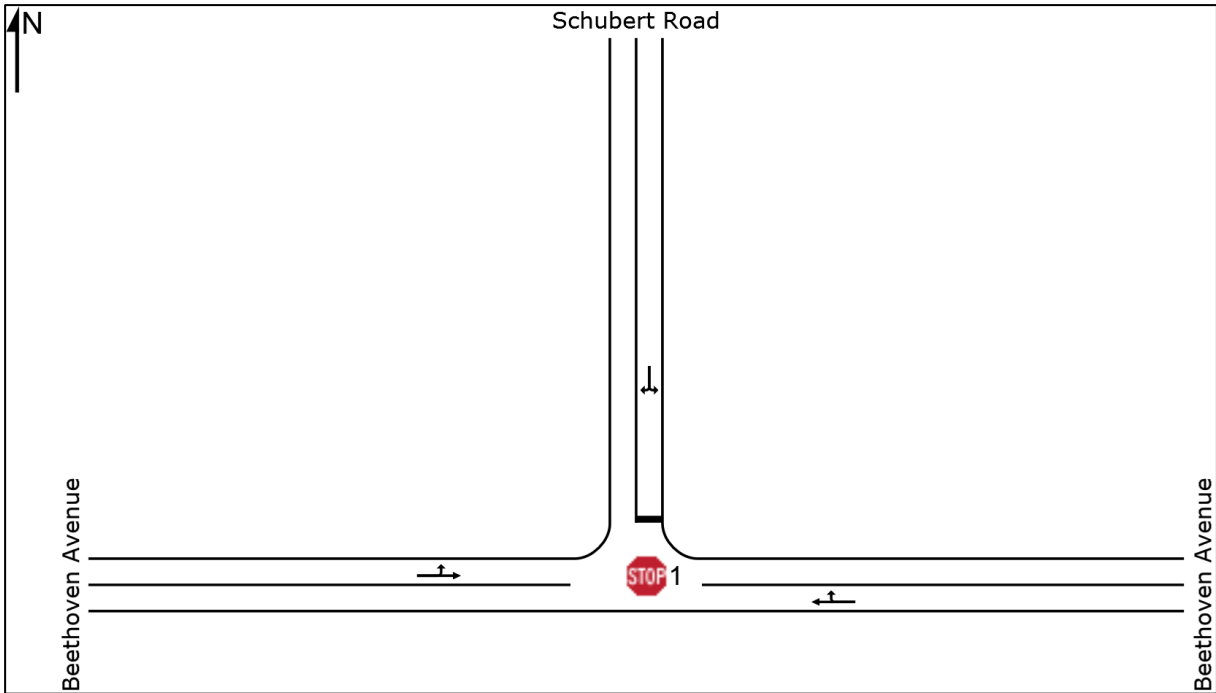Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard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

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🛑 **Site: 1 [Schubert / Beethoven - 2027 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Beethoven Avenue											
5	T1	2	0.0	0.013	0.1	LOS A	0.1	0.4	0.11	0.52	55.1
6	R2	21	0.0	0.013	5.6	LOS A	0.1	0.4	0.11	0.52	53.1
Approach		23	0.0	0.013	5.1	NA	0.1	0.4	0.11	0.52	53.2
North: Schubert Road											
7	L2	71	0.0	0.084	8.0	LOS A	0.3	2.3	0.03	0.98	51.9
9	R2	38	0.0	0.084	7.6	LOS A	0.3	2.3	0.03	0.98	51.3
Approach		109	0.0	0.084	7.9	LOS A	0.3	2.3	0.03	0.98	51.7
West: Beethoven Avenue											
10	L2	33	0.0	0.021	5.5	LOS A	0.0	0.0	0.00	0.50	54.2
11	T1	5	0.0	0.021	0.0	LOS A	0.0	0.0	0.00	0.50	55.6
Approach		38	0.0	0.021	4.8	NA	0.0	0.0	0.00	0.50	54.4
All Vehicles		170	0.0	0.084	6.8	NA	0.3	2.3	0.03	0.81	52.5

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.
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.

18. Existing Layout

MOVEMENT SUMMARY

🛑 **Site: 1 [Schubert / Beethoven - 2027 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
Stop (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: Beethoven Avenue											
5	T1	9	0.0	0.058	0.3	LOS A	0.3	1.9	0.19	0.52	54.9
6	R2	88	0.0	0.058	5.8	LOS A	0.3	1.9	0.19	0.52	52.9
Approach		97	0.0	0.058	5.3	NA	0.3	1.9	0.19	0.52	53.1
North: Schubert Road											
7	L2	24	0.0	0.066	8.1	LOS A	0.2	1.6	0.06	0.96	51.8
9	R2	50	0.0	0.066	8.1	LOS A	0.2	1.6	0.06	0.96	51.2
Approach		74	0.0	0.066	8.1	LOS A	0.2	1.6	0.06	0.96	51.4
West: Beethoven Avenue											
10	L2	78	0.0	0.048	5.5	LOS A	0.0	0.0	0.00	0.51	54.2
11	T1	11	0.0	0.048	0.0	LOS A	0.0	0.0	0.00	0.51	55.6
Approach		89	0.0	0.048	4.9	NA	0.0	0.0	0.00	0.51	54.3
All Vehicles		260	0.0	0.066	5.9	NA	0.3	1.9	0.09	0.64	53.0

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.
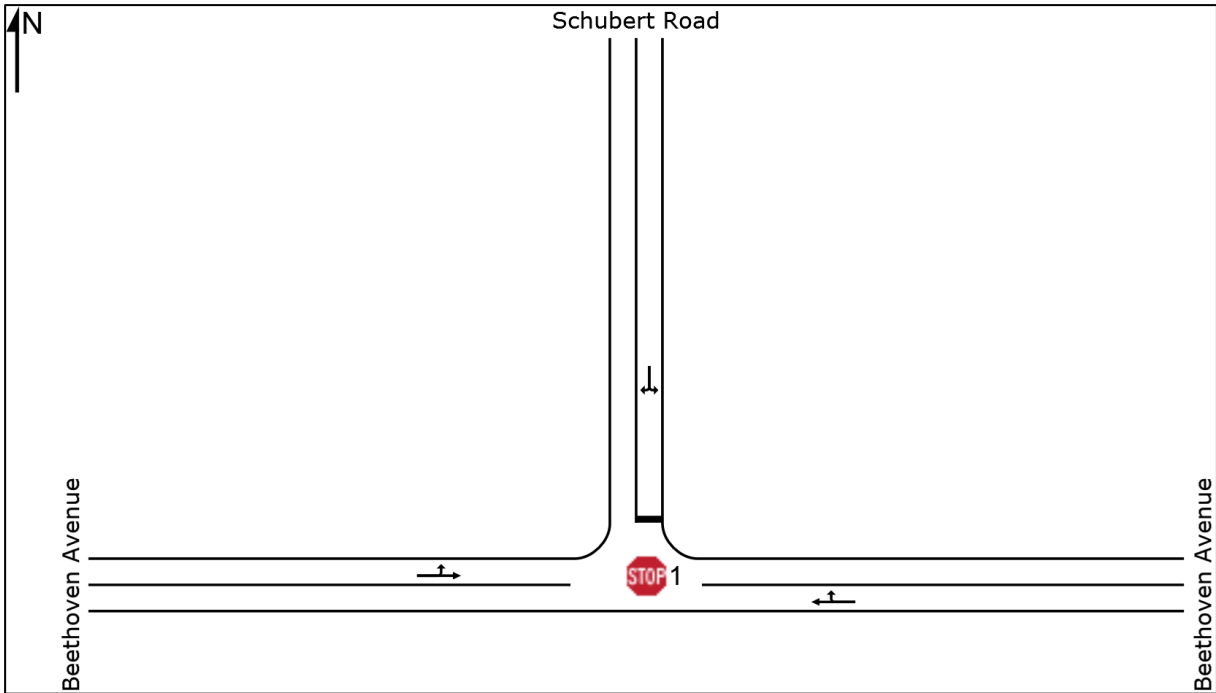NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 **Site: 1 [Schubert / Beethoven - 2027 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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: Beethoven Avenue											
5	T1	8	0.0	0.049	0.2	LOS A	0.2	1.6	0.18	0.51	54.9
6	R2	75	0.0	0.049	5.8	LOS A	0.2	1.6	0.18	0.51	52.9
Approach		83	0.0	0.049	5.2	NA	0.2	1.6	0.18	0.51	53.1
North: Schubert Road											
7	L2	109	0.0	0.150	8.2	LOS A	0.6	4.2	0.16	0.91	51.8
9	R2	71	0.0	0.150	8.2	LOS A	0.6	4.2	0.16	0.91	51.3
Approach		180	0.0	0.150	8.2	LOS A	0.6	4.2	0.16	0.91	51.6
West: Beethoven Avenue											
10	L2	33	0.0	0.045	5.5	LOS A	0.0	0.0	0.00	0.23	56.4
11	T1	51	0.0	0.045	0.0	LOS A	0.0	0.0	0.00	0.23	57.9
Approach		84	0.0	0.045	2.2	NA	0.0	0.0	0.00	0.23	57.3
All Vehicles		347	0.0	0.150	6.0	NA	0.6	4.2	0.12	0.65	53.2

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.
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.

21. Existing Layout

G. Titian Road / Sibelius Street

SIDRA ANALYSIS

1. 2017 Background Traffic AM

2. 2017 Background Traffic PM

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

5. 2022 Background Traffic (excluding development traffic) PM

6. Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

14. 2027 Background Traffic (excluding development traffic) PM

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

18. Existing Layout

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

21. Existing Layout

1. 2017 Background Traffic AM

MOVEMENT SUMMARY

▽ Site: 4 [Titian / Sibelius - 2017 Background Traffic AM]

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

Movement Performance - Vehicles										
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV				Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Sibelius Street											
5	T1	46	0.0	0.103	0.4	LOS A	0.5	3.5	0.24	0.42	55.5
6	R2	126	0.0	0.103	5.9	LOS A	0.5	3.5	0.24	0.42	53.6
Approach		172	0.0	0.103	4.4	NA	0.5	3.5	0.24	0.42	54.1
North: Titian Road											
7	L2	28	0.0	0.031	5.6	LOS A	0.1	0.8	0.06	0.57	53.4
9	R2	14	0.0	0.031	6.3	LOS A	0.1	0.8	0.06	0.57	52.9
Approach		42	0.0	0.031	5.8	LOS A	0.1	0.8	0.06	0.57	53.2
West: Sibelius Street											
10	L2	103	0.0	0.068	5.5	LOS A	0.0	0.0	0.00	0.48	54.4
11	T1	23	0.0	0.068	0.0	LOS A	0.0	0.0	0.00	0.48	55.8
Approach		126	0.0	0.068	4.5	NA	0.0	0.0	0.00	0.48	54.7
All Vehicles		340	0.0	0.103	4.6	NA	0.5	3.5	0.13	0.46	54.2

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.
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.

2. 2017 Background Traffic PM

MOVEMENT SUMMARY

▽ Site: 4 [Titian / Sibelius - 2017 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
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: Sibelius Street											
5	T1	31	0.0	0.039	0.2	LOS A	0.2	1.2	0.17	0.31	56.6
6	R2	38	0.0	0.039	5.7	LOS A	0.2	1.2	0.17	0.31	54.6
Approach		69	0.0	0.039	3.2	NA	0.2	1.2	0.17	0.31	55.5
North: Titian Road											
7	L2	95	0.0	0.096	5.7	LOS A	0.4	2.6	0.14	0.56	53.2
9	R2	41	0.0	0.096	6.0	LOS A	0.4	2.6	0.14	0.56	52.7
Approach		136	0.0	0.096	5.8	LOS A	0.4	2.6	0.14	0.56	53.1
West: Sibelius Street											
10	L2	38	0.0	0.047	5.5	LOS A	0.0	0.0	0.00	0.25	56.3
11	T1	52	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.25	57.8
Approach		90	0.0	0.047	2.3	NA	0.0	0.0	0.00	0.25	57.1
All Vehicles		295	0.0	0.096	4.1	NA	0.4	2.6	0.10	0.41	54.8

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.
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.

3. Existing Layout

4. 2022 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

▽ **Site: 4 [Titian / Sibelius - 2022 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
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: Sibelius Street											
5	T1	48	0.0	0.109	0.4	LOS A	0.5	3.7	0.25	0.42	55.5
6	R2	133	0.0	0.109	5.9	LOS A	0.5	3.7	0.25	0.42	53.6
Approach		181	0.0	0.109	4.4	NA	0.5	3.7	0.25	0.42	54.1
North: Titian Road											
7	L2	29	0.0	0.033	5.6	LOS A	0.1	0.8	0.07	0.57	53.4
9	R2	15	0.0	0.033	6.4	LOS A	0.1	0.8	0.07	0.57	52.9
Approach		44	0.0	0.033	5.9	LOS A	0.1	0.8	0.07	0.57	53.2
West: Sibelius Street											
10	L2	108	0.0	0.071	5.5	LOS A	0.0	0.0	0.00	0.47	54.4
11	T1	25	0.0	0.071	0.0	LOS A	0.0	0.0	0.00	0.47	55.9
Approach		133	0.0	0.071	4.5	NA	0.0	0.0	0.00	0.47	54.7
All Vehicles		358	0.0	0.109	4.6	NA	0.5	3.7	0.13	0.46	54.2

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.

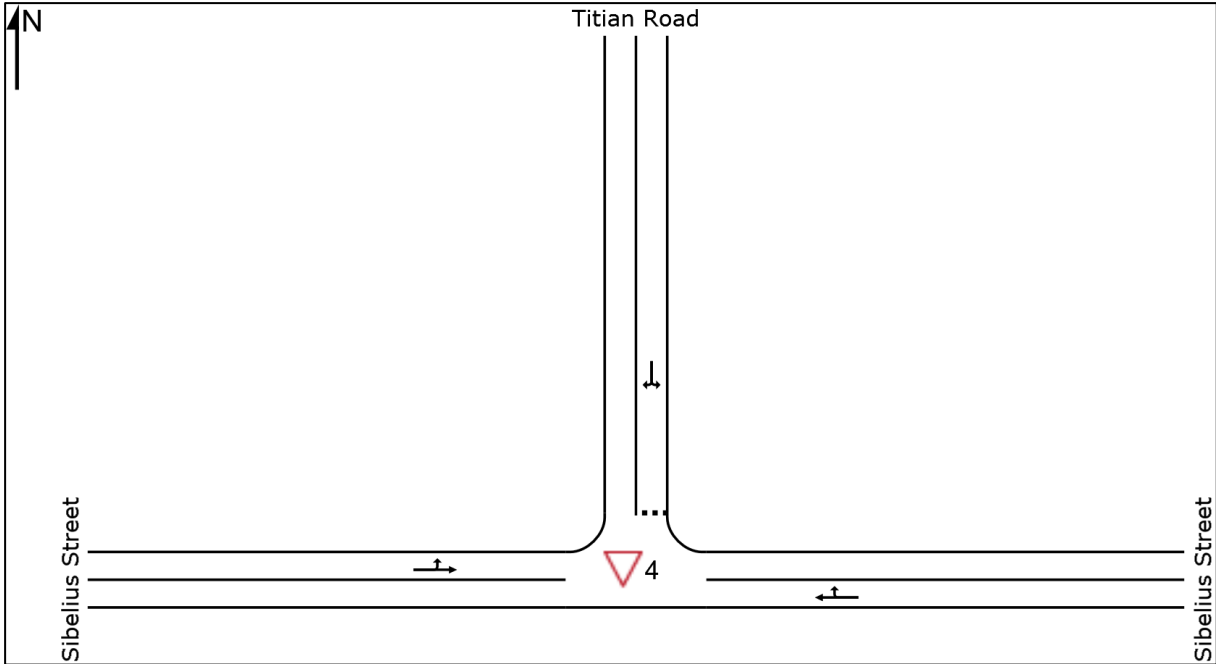Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

5. 2022 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

▽ Site: 4 [Titian / Sibelius - 2022 Background Traffic PM]

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

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
Movement Performance - Vehicles											
East: Sibelius Street											
5	T1	32	0.0	0.041	0.2	LOS A	0.2	1.3	0.18	0.31	56.5
6	R2	40	0.0	0.041	5.7	LOS A	0.2	1.3	0.18	0.31	54.5
Approach		72	0.0	0.041	3.3	NA	0.2	1.3	0.18	0.31	55.4
North: Titian Road											
7	L2	100	0.0	0.102	5.7	LOS A	0.4	2.8	0.14	0.56	53.2
9	R2	43	0.0	0.102	6.0	LOS A	0.4	2.8	0.14	0.56	52.7
Approach		143	0.0	0.102	5.8	LOS A	0.4	2.8	0.14	0.56	53.1
West: Sibelius Street											
10	L2	40	0.0	0.050	5.5	LOS A	0.0	0.0	0.00	0.25	56.3
11	T1	55	0.0	0.050	0.0	LOS A	0.0	0.0	0.00	0.25	57.8
Approach		95	0.0	0.050	2.3	NA	0.0	0.0	0.00	0.25	57.1
All Vehicles		310	0.0	0.102	4.1	NA	0.4	2.8	0.11	0.41	54.8

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.

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.

6.   Existing Layout

7. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

▽ Site: 4 [Titian / Sibelius - 2022 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Sibelius Street											
5	T1	48	0.0	0.109	0.4	LOS A	0.5	3.7	0.25	0.42	55.5
6	R2	133	0.0	0.109	5.9	LOS A	0.5	3.7	0.25	0.42	53.6
Approach		181	0.0	0.109	4.4	NA	0.5	3.7	0.25	0.42	54.1
North: Titian Road											
7	L2	29	0.0	0.033	5.6	LOS A	0.1	0.8	0.07	0.57	53.4
9	R2	15	0.0	0.033	6.4	LOS A	0.1	0.8	0.07	0.57	52.9
Approach		44	0.0	0.033	5.9	LOS A	0.1	0.8	0.07	0.57	53.2
West: Sibelius Street											
10	L2	108	0.0	0.071	5.5	LOS A	0.0	0.0	0.00	0.47	54.4
11	T1	25	0.0	0.071	0.0	LOS A	0.0	0.0	0.00	0.47	55.9
Approach		133	0.0	0.071	4.5	NA	0.0	0.0	0.00	0.47	54.7
All Vehicles		358	0.0	0.109	4.6	NA	0.5	3.7	0.13	0.46	54.2

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.

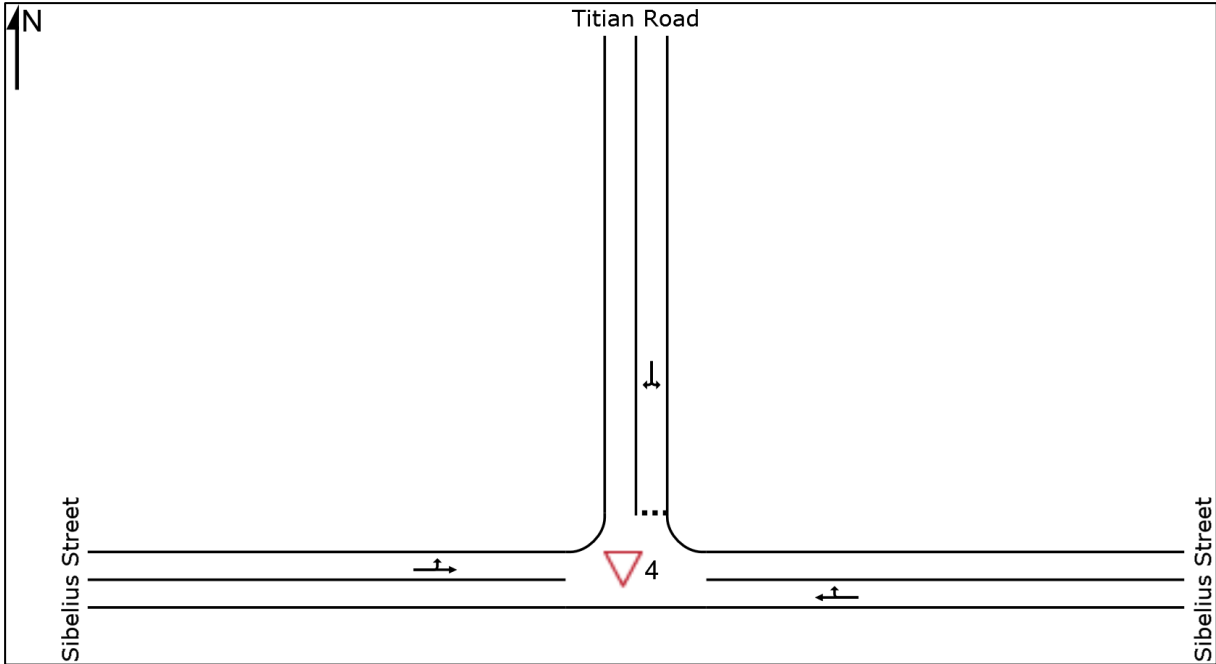Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

8. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

▽ **Site: 4 [Titian / Sibelius - 2022 Future Traffic PM - Erf 1948]**

Afternoon Peak: 16:45 - 17:45
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: Sibelius Street											
5	T1	32	0.0	0.041	0.2	LOS A	0.2	1.3	0.18	0.31	56.5
6	R2	40	0.0	0.041	5.7	LOS A	0.2	1.3	0.18	0.31	54.5
Approach		72	0.0	0.041	3.3	NA	0.2	1.3	0.18	0.31	55.4
North: Titian Road											
7	L2	100	0.0	0.102	5.7	LOS A	0.4	2.8	0.14	0.56	53.2
9	R2	43	0.0	0.102	6.0	LOS A	0.4	2.8	0.14	0.56	52.7
Approach		143	0.0	0.102	5.8	LOS A	0.4	2.8	0.14	0.56	53.1
West: Sibelius Street											
10	L2	40	0.0	0.050	5.5	LOS A	0.0	0.0	0.00	0.25	56.3
11	T1	55	0.0	0.050	0.0	LOS A	0.0	0.0	0.00	0.25	57.8
Approach		95	0.0	0.050	2.3	NA	0.0	0.0	0.00	0.25	57.1
All Vehicles		310	0.0	0.102	4.1	NA	0.4	2.8	0.11	0.41	54.8

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.

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.

9. Existing Layout

10. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

▽ Site: 4 [Titian / Sibelius - 2022 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Giveway / Yield (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Sibelius Street											
5	T1	66	0.0	0.145	0.4	LOS A	0.7	5.1	0.26	0.42	55.5
6	R2	175	0.0	0.145	5.9	LOS A	0.7	5.1	0.26	0.42	53.6
Approach		241	0.0	0.145	4.4	NA	0.7	5.1	0.26	0.42	54.1
North: Titian Road											
7	L2	38	0.0	0.039	5.6	LOS A	0.1	1.0	0.07	0.57	53.3
9	R2	15	0.0	0.039	6.7	LOS A	0.1	1.0	0.07	0.57	52.8
Approach		53	0.0	0.039	5.9	LOS A	0.1	1.0	0.07	0.57	53.2
West: Sibelius Street											
10	L2	108	0.0	0.074	5.5	LOS A	0.0	0.0	0.00	0.46	54.6
11	T1	30	0.0	0.074	0.0	LOS A	0.0	0.0	0.00	0.46	56.0
Approach		138	0.0	0.074	4.3	NA	0.0	0.0	0.00	0.46	54.9
All Vehicles		432	0.0	0.145	4.6	NA	0.7	5.1	0.16	0.45	54.2

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.

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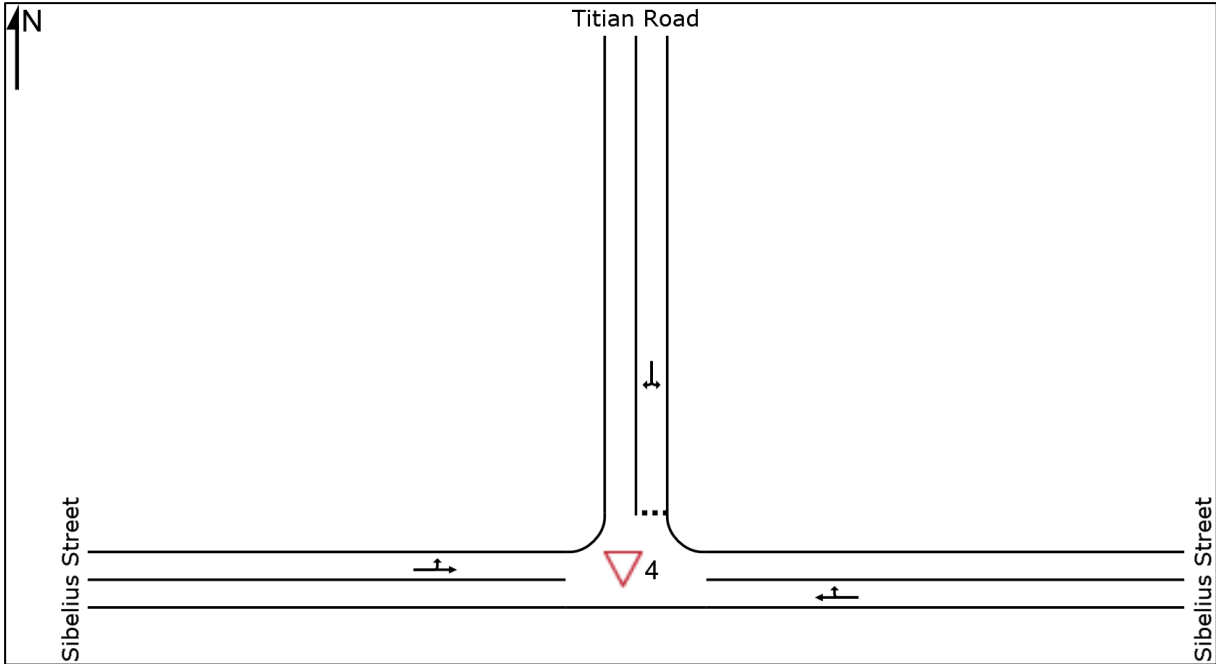
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

11. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

▽ **Site: 4 [Titian / Sibelius - 2022 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Sibelius Street											
5	T1	40	0.0	0.057	0.3	LOS A	0.3	1.8	0.20	0.34	56.3
6	R2	59	0.0	0.057	5.8	LOS A	0.3	1.8	0.20	0.34	54.3
Approach		99	0.0	0.057	3.5	NA	0.3	1.8	0.20	0.34	55.1
North: Titian Road											
7	L2	121	0.0	0.117	5.8	LOS A	0.5	3.3	0.16	0.56	53.1
9	R2	43	0.0	0.117	6.2	LOS A	0.5	3.3	0.16	0.56	52.7
Approach		164	0.0	0.117	5.9	LOS A	0.5	3.3	0.16	0.56	53.0
West: Sibelius Street											
10	L2	40	0.0	0.057	5.5	LOS A	0.0	0.0	0.00	0.22	56.5
11	T1	68	0.0	0.057	0.0	LOS A	0.0	0.0	0.00	0.22	58.0
Approach		108	0.0	0.057	2.1	NA	0.0	0.0	0.00	0.22	57.5
All Vehicles		371	0.0	0.117	4.1	NA	0.5	3.3	0.13	0.40	54.8

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.

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.

12. Existing Layout

13. 2027 Background Traffic (excluding development traffic) AM

MOVEMENT SUMMARY

▽ **Site: 4 [Titian / Sibelius - 2027 Background Traffic AM]**

Morning Peak AM: 06:45 - 07:45
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: Sibelius Street											
5	T1	51	0.0	0.115	0.4	LOS A	0.6	4.0	0.26	0.42	55.4
6	R2	140	0.0	0.115	5.9	LOS A	0.6	4.0	0.26	0.42	53.5
Approach		191	0.0	0.115	4.4	NA	0.6	4.0	0.26	0.42	54.0
North: Titian Road											
7	L2	30	0.0	0.035	5.6	LOS A	0.1	0.9	0.07	0.57	53.3
9	R2	16	0.0	0.035	6.5	LOS A	0.1	0.9	0.07	0.57	52.8
Approach		46	0.0	0.035	5.9	LOS A	0.1	0.9	0.07	0.57	53.2
West: Sibelius Street											
10	L2	114	0.0	0.075	5.5	LOS A	0.0	0.0	0.00	0.47	54.4
11	T1	26	0.0	0.075	0.0	LOS A	0.0	0.0	0.00	0.47	55.8
Approach		140	0.0	0.075	4.5	NA	0.0	0.0	0.00	0.47	54.7
All Vehicles		377	0.0	0.115	4.7	NA	0.6	4.0	0.14	0.46	54.2

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.

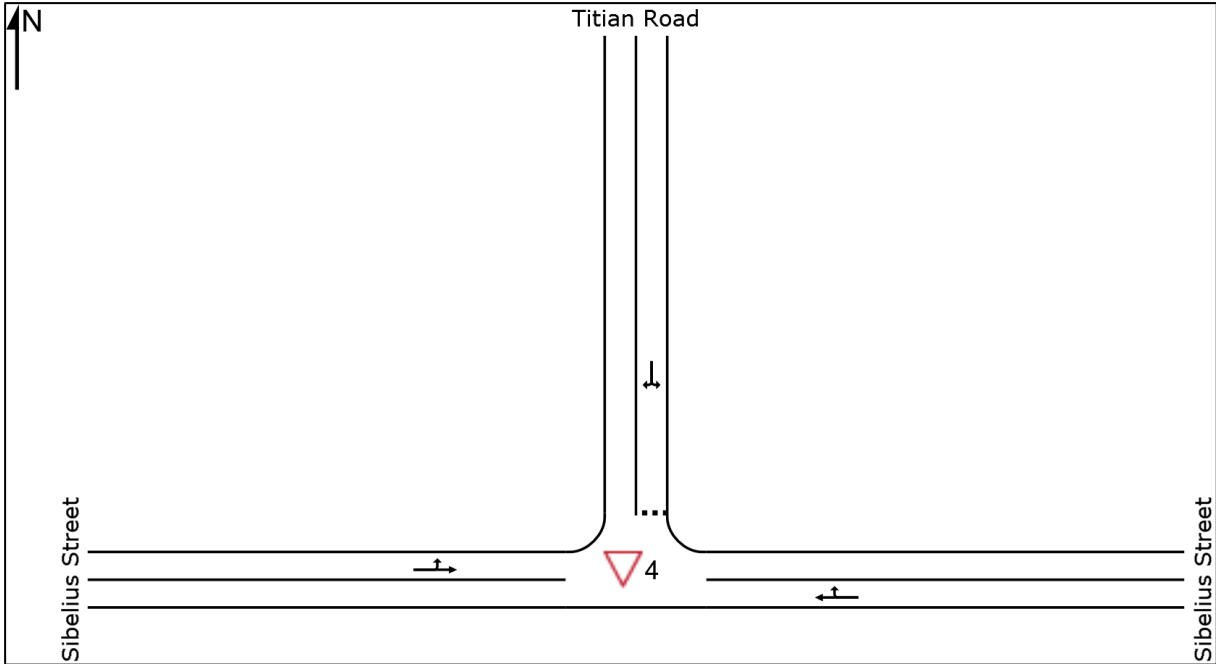Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

14. 2027 Background Traffic (excluding development traffic) PM

MOVEMENT SUMMARY

▽ **Site: 4 [Titian / Sibelius - 2027 Background Traffic PM]**

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		Vehicles veh	Distance m		per veh	km/h
East: Sibelius Street												
5	T1	34	0.0	0.043	0.2	LOS A	0.2	1.3	0.18	0.31	56.5
6	R2	42	0.0	0.043	5.7	LOS A	0.2	1.3	0.18	0.31	54.5
Approach		76	0.0	0.043	3.3	NA	0.2	1.3	0.18	0.31	55.4
North: Titian Road												
7	L2	105	0.0	0.107	5.7	LOS A	0.4	3.0	0.15	0.56	53.2
9	R2	45	0.0	0.107	6.0	LOS A	0.4	3.0	0.15	0.56	52.7
Approach		150	0.0	0.107	5.8	LOS A	0.4	3.0	0.15	0.56	53.0
West: Sibelius Street												
10	L2	42	0.0	0.052	5.5	LOS A	0.0	0.0	0.00	0.25	56.2
11	T1	57	0.0	0.052	0.0	LOS A	0.0	0.0	0.00	0.25	57.8
Approach		99	0.0	0.052	2.4	NA	0.0	0.0	0.00	0.25	57.1
All Vehicles		325	0.0	0.107	4.2	NA	0.4	3.0	0.11	0.41	54.8

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.

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.

15. Existing Layout

16. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

▽ Site: 4 [Titian / Sibelius - 2027 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
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: Sibelius Street											
5	T1	51	0.0	0.115	0.4	LOS A	0.6	4.0	0.26	0.42	55.4
6	R2	140	0.0	0.115	5.9	LOS A	0.6	4.0	0.26	0.42	53.5
Approach		191	0.0	0.115	4.4	NA	0.6	4.0	0.26	0.42	54.0
North: Titian Road											
7	L2	30	0.0	0.035	5.6	LOS A	0.1	0.9	0.07	0.57	53.3
9	R2	16	0.0	0.035	6.5	LOS A	0.1	0.9	0.07	0.57	52.8
Approach		46	0.0	0.035	5.9	LOS A	0.1	0.9	0.07	0.57	53.2
West: Sibelius Street											
10	L2	114	0.0	0.075	5.5	LOS A	0.0	0.0	0.00	0.47	54.4
11	T1	26	0.0	0.075	0.0	LOS A	0.0	0.0	0.00	0.47	55.8
Approach		140	0.0	0.075	4.5	NA	0.0	0.0	0.00	0.47	54.7
All Vehicles		377	0.0	0.115	4.7	NA	0.6	4.0	0.14	0.46	54.2

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.

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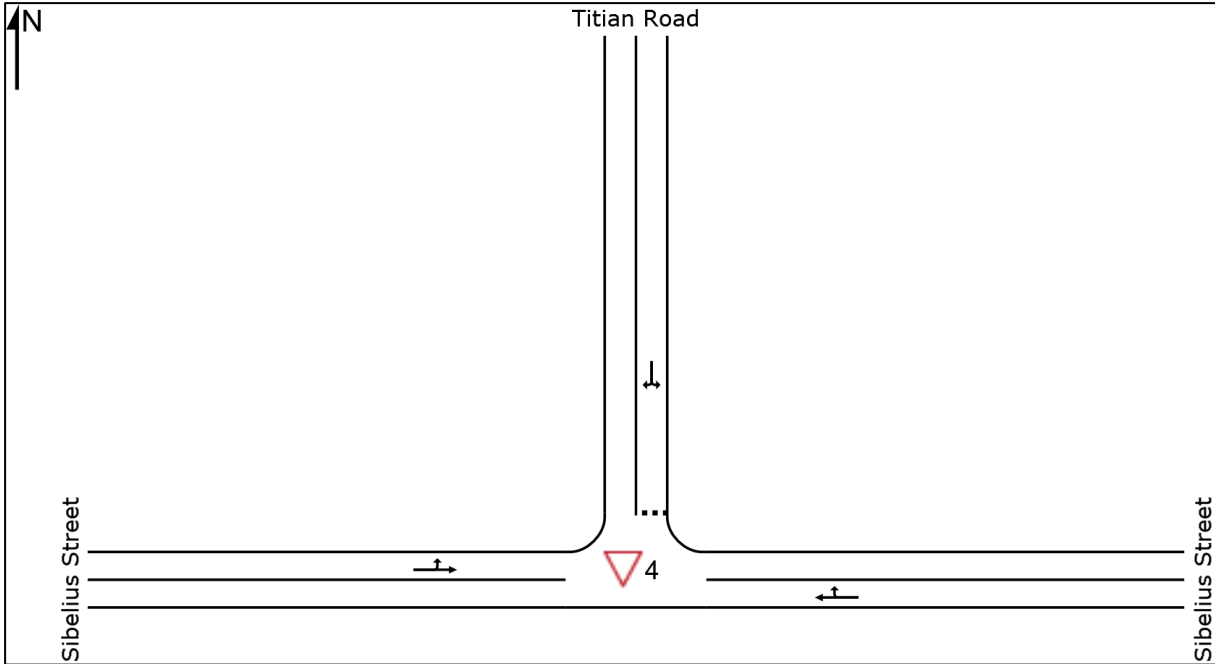
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

17. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

▽ Site: 4 [Titian / Sibelius - 2027 Future Traffic PM - Erf 1948]

Afternoon Peak: 16:45 - 17:45
Giveway / Yield (Two-Way)

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
Movement Performance - Vehicles											
East: Sibelius Street											
5	T1	34	0.0	0.043	0.2	LOS A	0.2	1.3	0.18	0.31	56.5
6	R2	42	0.0	0.043	5.7	LOS A	0.2	1.3	0.18	0.31	54.5
Approach		76	0.0	0.043	3.3	NA	0.2	1.3	0.18	0.31	55.4
North: Titian Road											
7	L2	105	0.0	0.107	5.7	LOS A	0.4	3.0	0.15	0.56	53.2
9	R2	45	0.0	0.107	6.0	LOS A	0.4	3.0	0.15	0.56	52.7
Approach		150	0.0	0.107	5.8	LOS A	0.4	3.0	0.15	0.56	53.0
West: Sibelius Street											
10	L2	42	0.0	0.052	5.5	LOS A	0.0	0.0	0.00	0.25	56.2
11	T1	57	0.0	0.052	0.0	LOS A	0.0	0.0	0.00	0.25	57.8
Approach		99	0.0	0.052	2.4	NA	0.0	0.0	0.00	0.25	57.1
All Vehicles		325	0.0	0.107	4.2	NA	0.4	3.0	0.11	0.41	54.8

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.

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.

18. Existing Layout

19. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

▽ **Site: 4 [Titian / Sibelius - 2027 Future Traffic AM - Erf 11305]**

Morning Peak AM: 06:45 - 07:45
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: Sibelius Street											
5	T1	68	0.0	0.151	0.5	LOS A	0.8	5.3	0.27	0.42	55.4
6	R2	181	0.0	0.151	5.9	LOS A	0.8	5.3	0.27	0.42	53.5
Approach		249	0.0	0.151	4.4	NA	0.8	5.3	0.27	0.42	54.0
North: Titian Road											
7	L2	39	0.0	0.041	5.6	LOS A	0.2	1.1	0.08	0.57	53.3
9	R2	16	0.0	0.041	6.8	LOS A	0.2	1.1	0.08	0.57	52.8
Approach		55	0.0	0.041	6.0	LOS A	0.2	1.1	0.08	0.57	53.2
West: Sibelius Street											
10	L2	114	0.0	0.078	5.5	LOS A	0.0	0.0	0.00	0.46	54.6
11	T1	31	0.0	0.078	0.0	LOS A	0.0	0.0	0.00	0.46	56.0
Approach		145	0.0	0.078	4.4	NA	0.0	0.0	0.00	0.46	54.9
All Vehicles		449	0.0	0.151	4.6	NA	0.8	5.3	0.16	0.45	54.2

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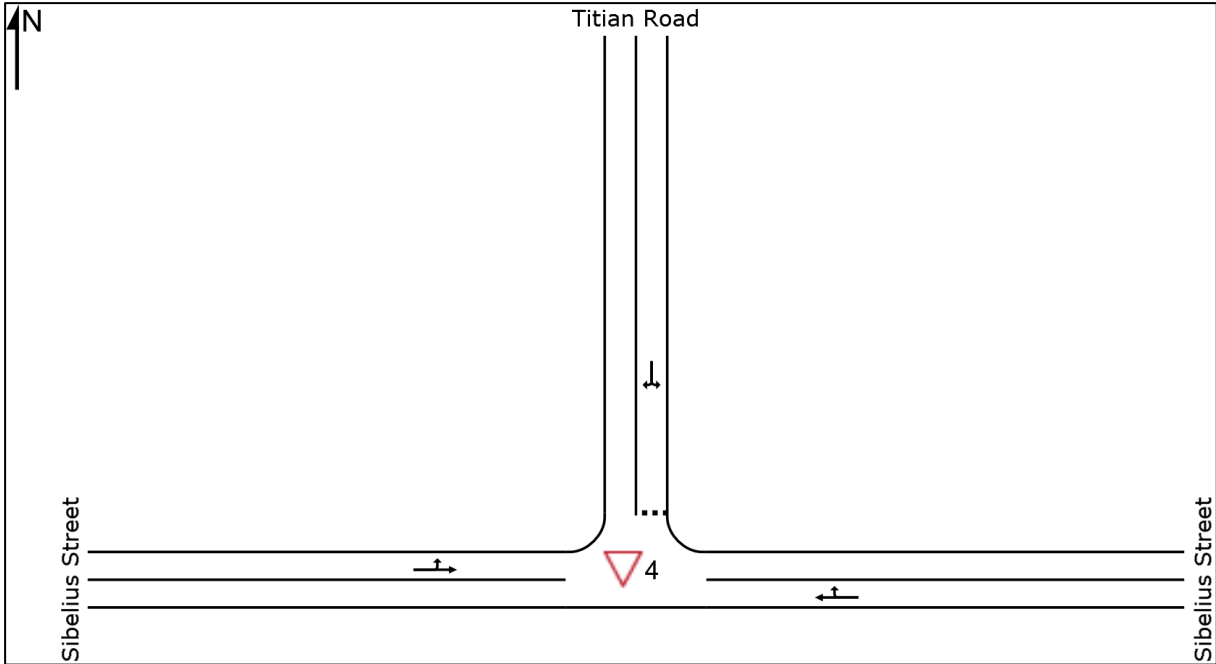Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard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

20. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

▽ Site: 4 [Titian / Sibelius - 2027 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
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: Sibelius Street											
5	T1	50	0.0	0.076	0.3	LOS A	0.4	2.5	0.23	0.35	56.1
6	R2	79	0.0	0.076	5.8	LOS A	0.4	2.5	0.23	0.35	54.1
Approach		129	0.0	0.076	3.7	NA	0.4	2.5	0.23	0.35	54.9
North: Titian Road											
7	L2	148	0.0	0.140	5.8	LOS A	0.6	4.0	0.19	0.56	53.1
9	R2	45	0.0	0.140	6.4	LOS A	0.6	4.0	0.19	0.56	52.6
Approach		193	0.0	0.140	5.9	LOS A	0.6	4.0	0.19	0.56	52.9
West: Sibelius Street											
10	L2	42	0.0	0.066	5.5	LOS A	0.0	0.0	0.00	0.20	56.7
11	T1	84	0.0	0.066	0.0	LOS A	0.0	0.0	0.00	0.20	58.2
Approach		126	0.0	0.066	1.9	NA	0.0	0.0	0.00	0.20	57.7
All Vehicles		448	0.0	0.140	4.2	NA	0.6	4.0	0.15	0.40	54.8

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.

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.

21. Existing Layout

H. Victoria Drive / Access 1 (Erf 1948)

SIDRA ANALYSIS

1. 2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

2. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

3. Proposed Layout

4. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

5. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

6. Proposed Layout

7. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

8. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

9. Proposed Layout

10. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

11. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

12. Proposed Layout

1.   2022 Future Traffic (including 50% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🛑 Site: 8 [Victoria / Access 1 - 2022 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
Movement Performance - Vehicles											
South: Access 1											
1	L2	63	0.0	0.357	9.1	LOS A	1.8	12.7	0.33	0.97	48.4
3	R2	148	0.0	0.357	15.4	LOS C	1.8	12.7	0.33	0.97	48.0
Approach		211	0.0	0.357	13.5	LOS B	1.8	12.7	0.33	0.97	48.1
East: Victoria Drive											
4	L2	100	0.0	0.081	5.5	LOS A	0.0	0.0	0.00	0.37	55.3
5	T1	59	0.0	0.081	0.0	LOS A	0.0	0.0	0.00	0.37	56.7
Approach		159	0.0	0.081	3.5	NA	0.0	0.0	0.00	0.37	55.8
West: Victoria Drive											
11	T1	442	0.0	0.219	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R2	48	0.0	0.031	5.9	LOS A	0.1	1.0	0.26	0.56	52.5
Approach		490	0.0	0.219	0.6	NA	0.1	1.0	0.03	0.05	59.1
All Vehicles		860	0.0	0.357	4.3	NA	1.8	12.7	0.09	0.34	55.4

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.

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.

2. 2022 Future Traffic (including 50% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🛑 Site: 6 [Victoria / Access 1 - 2022 Future Traffic PM - Erf 1948]

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Access 1											
1	L2	47	0.0	0.253	9.3	LOS A	1.0	7.3	0.54	0.96	49.6
3	R2	110	0.0	0.253	13.3	LOS B	1.0	7.3	0.54	0.96	49.3
Approach		157	0.0	0.253	12.1	LOS B	1.0	7.3	0.54	0.96	49.4
East: Victoria Drive											
4	L2	148	0.0	0.202	5.6	LOS A	0.0	0.0	0.00	0.22	56.5
5	T1	253	0.0	0.202	0.0	LOS A	0.0	0.0	0.00	0.22	58.0
Approach		401	0.0	0.202	2.1	NA	0.0	0.0	0.00	0.22	57.4
West: Victoria Drive											
11	T1	161	0.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R2	63	0.0	0.052	6.9	LOS A	0.2	1.5	0.45	0.64	52.0
Approach		224	0.0	0.080	1.9	NA	0.2	1.5	0.13	0.18	57.5
All Vehicles		782	0.0	0.253	4.0	NA	1.0	7.3	0.14	0.36	55.6

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.

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.

3. Proposed Layout

4. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🛑 Site: 8 [Victoria / Access 1 - 2022 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

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: Access 1											
1	L2	63	0.0	0.450	10.9	LOS B	2.5	17.2	0.55	1.02	46.3
3	R2	148	0.0	0.450	20.1	LOS C	2.5	17.2	0.55	1.02	46.0
Approach		211	0.0	0.450	17.3	LOS C	2.5	17.2	0.55	1.02	46.1
East: Victoria Drive											
4	L2	110	0.0	0.131	5.6	LOS A	0.0	0.0	0.00	0.25	56.2
5	T1	150	0.0	0.131	0.0	LOS A	0.0	0.0	0.00	0.25	57.7
Approach		260	0.0	0.131	2.4	NA	0.0	0.0	0.00	0.25	57.1
West: Victoria Drive											
11	T1	499	0.0	0.247	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
12	R2	48	0.0	0.034	6.3	LOS A	0.1	1.0	0.35	0.58	52.3
Approach		547	0.0	0.247	0.6	NA	0.1	1.0	0.03	0.05	59.2
All Vehicles		1018	0.0	0.450	4.5	NA	2.5	17.2	0.13	0.30	55.4

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.

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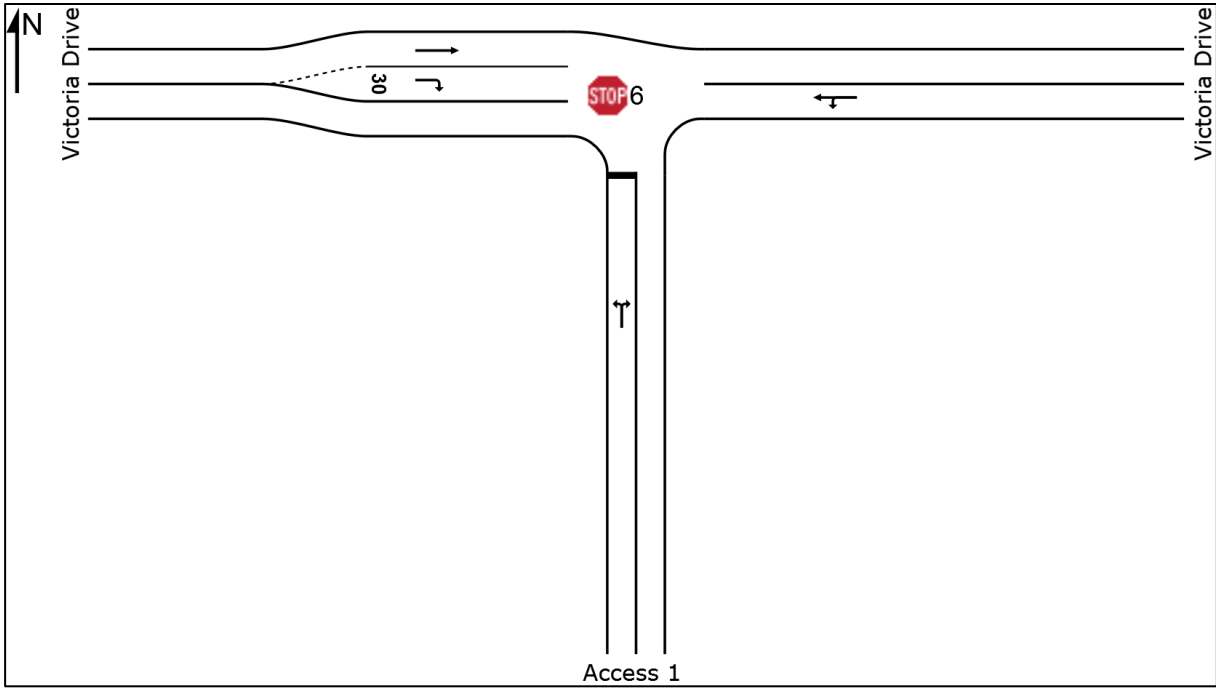
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

5. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 Site: 6 [Victoria / Access 1 - 2022 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Stop (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: Access 1											
1	L2	47	0.0	0.255	9.4	LOS A	1.1	7.4	0.55	0.96	49.6
3	R2	110	0.0	0.255	13.3	LOS B	1.1	7.4	0.55	0.96	49.2
Approach		157	0.0	0.255	12.2	LOS B	1.1	7.4	0.55	0.96	49.3
East: Victoria Drive											
4	L2	148	0.0	0.211	5.6	LOS A	0.0	0.0	0.00	0.21	56.6
5	T1	272	0.0	0.211	0.0	LOS A	0.0	0.0	0.00	0.21	58.1
Approach		420	0.0	0.211	2.0	NA	0.0	0.0	0.00	0.21	57.5
West: Victoria Drive											
11	T1	144	0.0	0.071	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R2	63	0.0	0.053	7.0	LOS A	0.2	1.6	0.46	0.64	52.0
Approach		207	0.0	0.071	2.1	NA	0.2	1.6	0.14	0.20	57.3
All Vehicles		784	0.0	0.255	4.1	NA	1.1	7.4	0.15	0.36	55.6

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.

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.

6. Proposed Layout

7. 2027 Future Traffic (including 100% development traffic) – Erf 1948 AM

MOVEMENT SUMMARY

🛑 Site: 8 [Victoria / Access 1 - 2027 Future Traffic AM - Erf 1948]

Morning Peak AM: 06:45 - 07:45
Stop (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: Access 1											
1	L2	126	0.0	0.861	25.4	LOS D	13.1	91.7	0.19	1.12	37.9
3	R2	295	0.0	0.861	37.8	LOS E	13.1	91.7	0.19	1.12	37.7
Approach		421	0.0	0.861	34.1	LOS D	13.1	91.7	0.19	1.12	37.8
East: Victoria Drive											
4	L2	220	0.0	0.123	5.6	LOS A	0.0	0.0	0.00	0.54	53.9
5	T1	18	0.0	0.123	0.0	LOS A	0.0	0.0	0.00	0.54	55.3
Approach		238	0.0	0.123	5.1	NA	0.0	0.0	0.00	0.54	54.0
West: Victoria Drive											
11	T1	510	0.0	0.252	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
12	R2	95	0.0	0.066	6.2	LOS A	0.3	2.1	0.34	0.59	52.3
Approach		605	0.0	0.252	1.0	NA	0.3	2.1	0.05	0.09	58.6
All Vehicles		1264	0.0	0.861	12.8	NA	13.1	91.7	0.09	0.52	48.8

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.

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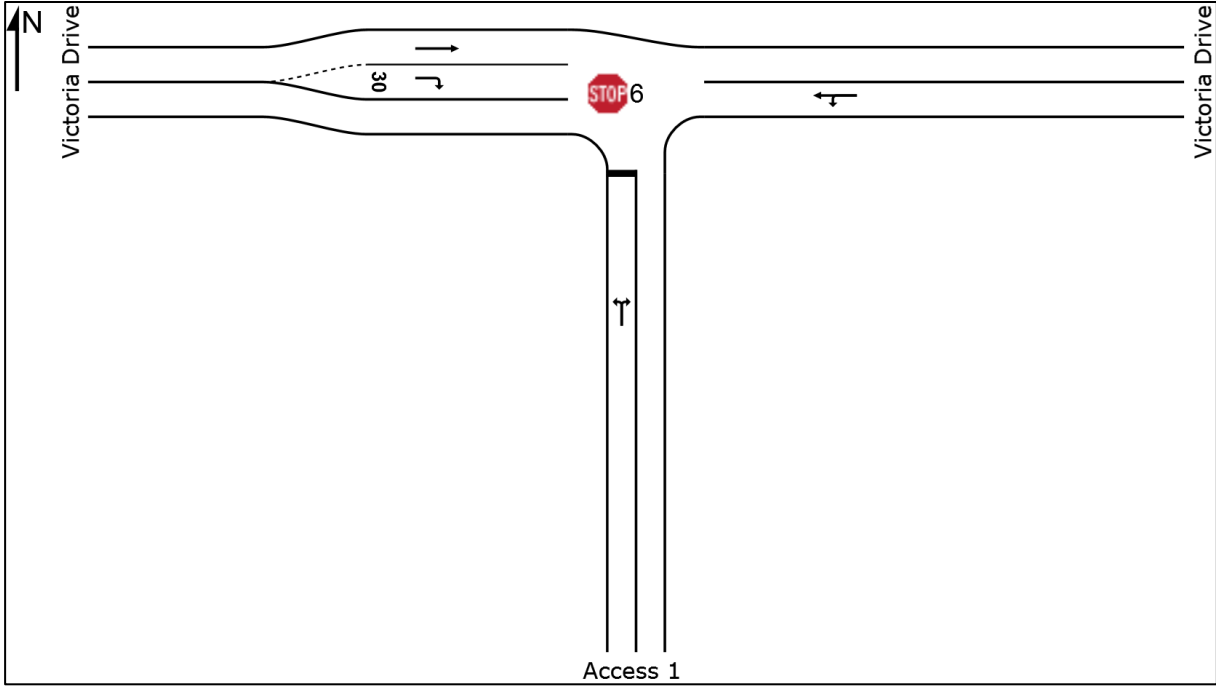
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

8. 2027 Future Traffic (including 100% development traffic) – Erf 1948 PM

MOVEMENT SUMMARY

🛑 Site: 6 [Victoria / Access 1 - 2027 Future Traffic PM - Erf 1948]

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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: Access 1											
1	L2	47	0.0	0.258	9.4	LOS A	1.1	7.6	0.55	0.96	49.5
3	R2	110	0.0	0.258	13.6	LOS B	1.1	7.6	0.55	0.96	49.1
Approach		157	0.0	0.258	12.3	LOS B	1.1	7.6	0.55	0.96	49.2
East: Victoria Drive											
4	L2	148	0.0	0.207	5.6	LOS A	0.0	0.0	0.00	0.21	56.5
5	T1	263	0.0	0.207	0.0	LOS A	0.0	0.0	0.00	0.21	58.1
Approach		411	0.0	0.207	2.0	NA	0.0	0.0	0.00	0.21	57.5
West: Victoria Drive											
11	T1	166	0.0	0.082	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R2	63	0.0	0.052	6.9	LOS A	0.2	1.6	0.45	0.64	52.0
Approach		229	0.0	0.082	1.9	NA	0.2	1.6	0.12	0.18	57.5
All Vehicles		797	0.0	0.258	4.0	NA	1.1	7.6	0.14	0.35	55.7

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.

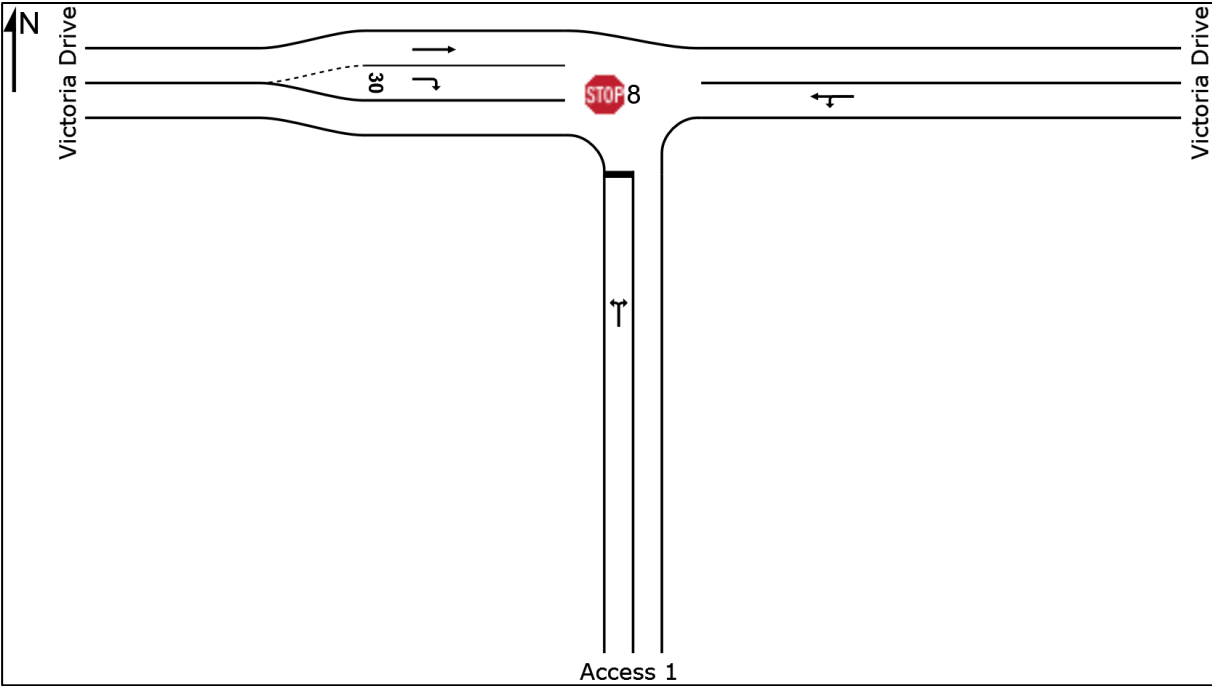Minor Road Approach LOS values are based on average delay for all vehicle movements.

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.

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.

9. Proposed Layout

10. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🛑 Site: 8 [Victoria / Access 1 - 2027 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Access 1											
1	L2	126	0.0	1.216	419.4	LOS F	108.5	759.5	1.00	5.20	7.3
3	R2	295	0.0	1.216	441.8	LOS F	108.5	759.5	1.00	5.20	7.3
Approach		421	0.0	1.216	435.1	LOS F	108.5	759.5	1.00	5.20	7.3
East: Victoria Drive											
4	L2	220	0.0	0.168	5.6	LOS A	0.0	0.0	0.00	0.39	55.1
5	T1	109	0.0	0.168	0.0	LOS A	0.0	0.0	0.00	0.39	56.5
Approach		329	0.0	0.168	3.7	NA	0.0	0.0	0.00	0.39	55.6
West: Victoria Drive											
11	T1	623	0.0	0.308	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
12	R2	95	0.0	0.072	6.6	LOS A	0.3	2.2	0.41	0.62	52.1
Approach		718	0.0	0.308	0.9	NA	0.3	2.2	0.05	0.08	58.8
All Vehicles		1468	0.0	1.216	126.1	NA	108.5	759.5	0.31	1.62	19.3

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.
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.

11. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 Site: 6 [Victoria / Access 1 - 2027 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Stop (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: Access 1											
1	L2	94	0.0	0.752	19.6	LOS C	6.5	45.2	0.81	1.35	41.4
3	R2	220	0.0	0.752	30.5	LOS D	6.5	45.2	0.81	1.35	41.1
Approach		314	0.0	0.752	27.2	LOS D	6.5	45.2	0.81	1.35	41.2
East: Victoria Drive											
4	L2	296	0.0	0.327	5.6	LOS A	0.0	0.0	0.00	0.27	56.0
5	T1	351	0.0	0.327	0.0	LOS A	0.0	0.0	0.00	0.27	57.5
Approach		647	0.0	0.327	2.6	NA	0.0	0.0	0.00	0.27	56.8
West: Victoria Drive											
11	T1	196	0.0	0.097	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R2	126	0.0	0.142	8.6	LOS A	0.6	4.1	0.59	0.79	50.9
Approach		322	0.0	0.142	3.4	NA	0.6	4.1	0.23	0.31	56.1
All Vehicles		1283	0.0	0.752	8.8	NA	6.5	45.2	0.26	0.55	51.8

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.
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.

12. Proposed Layout
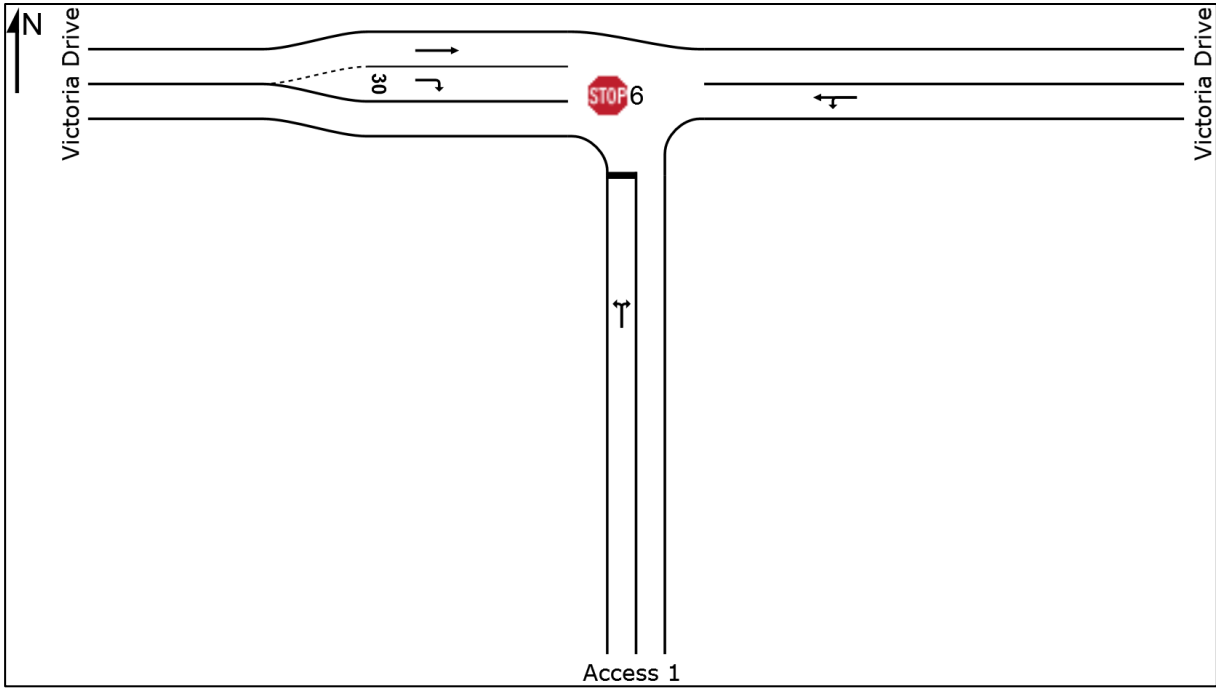
I. Victoria Drive / Access 2 (Erf 11305)

SIDRA ANALYSIS

1. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

2. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

3. Proposed Layout

4. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

5. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

6. Proposed Layout

1. **2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM**

MOVEMENT SUMMARY

🛑 Site: 9 [Victoria / Access 1 - 2022 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Stop (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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	167	0.0	0.083	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	54	0.0	0.048	7.2	LOS A	0.2	1.4	0.48	0.66	51.9
Approach		221	0.0	0.083	1.8	NA	0.2	1.4	0.12	0.16	57.8
North: Access 2											
7	L2	104	0.0	0.223	10.4	LOS B	0.9	6.2	0.57	0.96	49.8
9	R2	45	0.0	0.223	15.3	LOS C	0.9	6.2	0.57	0.96	49.5
Approach		149	0.0	0.223	11.9	LOS B	0.9	6.2	0.57	0.96	49.7
West: Victoria Drive											
10	L2	23	0.0	0.231	5.6	LOS A	0.0	0.0	0.00	0.03	58.1
11	T1	442	0.0	0.231	0.0	LOS A	0.0	0.0	0.00	0.03	59.7
Approach		465	0.0	0.231	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		835	0.0	0.231	2.8	NA	0.9	6.2	0.13	0.23	57.1

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.

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.

2. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 Site: 9 [Victoria / Access 1 - 2022 Future Traffic PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Stop (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: Victoria Drive											
5	T1	224	0.0	0.111	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	95	0.0	0.063	6.1	LOS A	0.3	2.0	0.31	0.57	52.4
Approach		319	0.0	0.111	1.8	NA	0.3	2.0	0.09	0.17	57.5
North: Access 2											
7	L2	49	0.0	0.075	8.6	LOS A	0.3	2.0	0.32	0.88	51.1
9	R2	20	0.0	0.075	11.8	LOS B	0.3	2.0	0.32	0.88	50.7
Approach		69	0.0	0.075	9.5	LOS A	0.3	2.0	0.32	0.88	51.0
West: Victoria Drive											
10	L2	41	0.0	0.100	5.5	LOS A	0.0	0.0	0.00	0.12	57.3
11	T1	159	0.0	0.100	0.0	LOS A	0.0	0.0	0.00	0.12	58.9
Approach		200	0.0	0.100	1.1	NA	0.0	0.0	0.00	0.12	58.6
All Vehicles		588	0.0	0.111	2.5	NA	0.3	2.0	0.09	0.24	57.0

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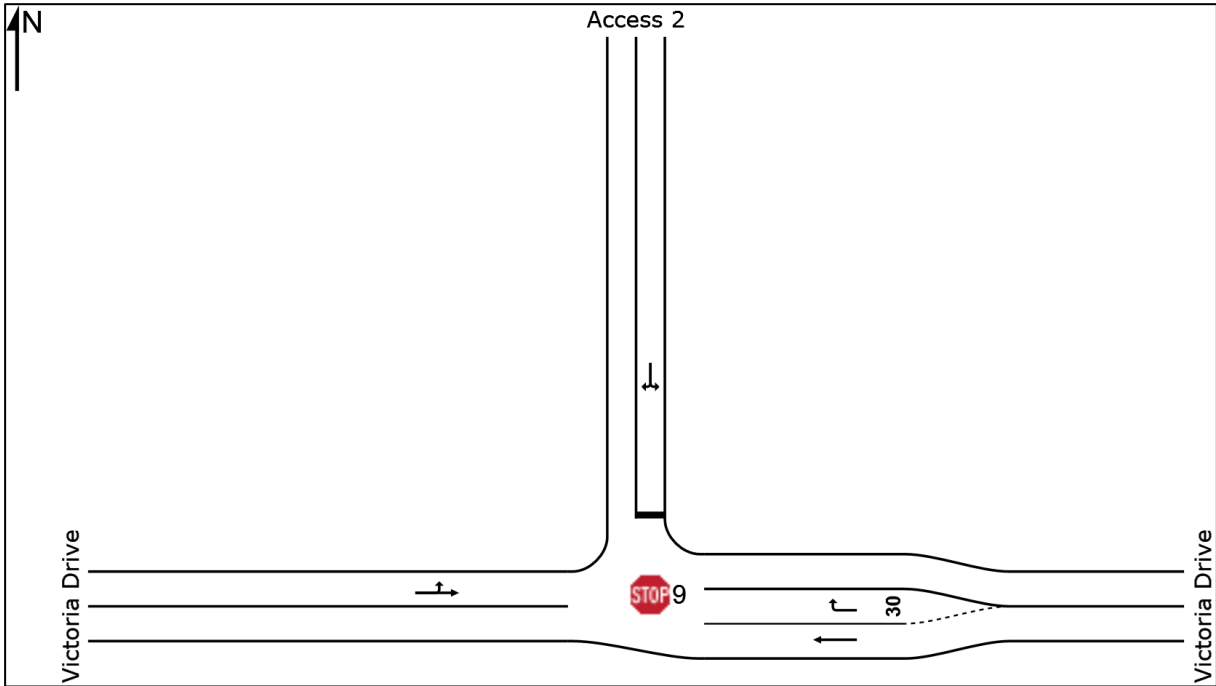Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard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

3. Proposed Layout

4. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🛑 Site: 9 [Victoria / Access 1 - 2027 Future Traffic AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Stop (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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	235	0.0	0.116	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	54	0.0	0.052	7.6	LOS A	0.2	1.5	0.52	0.69	51.6
Approach		289	0.0	0.116	1.4	NA	0.2	1.5	0.10	0.13	58.2
North: Access 2											
7	L2	208	0.0	0.525	13.9	LOS B	3.3	22.8	0.70	1.14	47.0
9	R2	90	0.0	0.525	22.6	LOS C	3.3	22.8	0.70	1.14	46.7
Approach		298	0.0	0.525	16.5	LOS C	3.3	22.8	0.70	1.14	46.9
West: Victoria Drive											
10	L2	23	0.0	0.264	5.6	LOS A	0.0	0.0	0.00	0.03	58.1
11	T1	510	0.0	0.264	0.0	LOS A	0.0	0.0	0.00	0.03	59.7
Approach		533	0.0	0.264	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		1120	0.0	0.525	4.9	NA	3.3	22.8	0.21	0.35	55.3

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.
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.

5. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 **Site: 9 [Victoria / Access 1 - 2027 Future Traffic PM - Erf 11305]**

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Victoria Drive											
5	T1	255	0.0	0.126	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	190	0.0	0.141	6.6	LOS A	0.7	4.6	0.41	0.63	52.1
Approach		445	0.0	0.141	2.8	NA	0.7	4.6	0.18	0.27	56.3
North: Access 2											
7	L2	97	0.0	0.181	9.0	LOS A	0.7	5.1	0.43	0.90	50.3
9	R2	41	0.0	0.181	15.3	LOS C	0.7	5.1	0.43	0.90	50.0
Approach		138	0.0	0.181	10.9	LOS B	0.7	5.1	0.43	0.90	50.2
West: Victoria Drive											
10	L2	82	0.0	0.154	5.6	LOS A	0.0	0.0	0.00	0.16	57.0
11	T1	225	0.0	0.154	0.0	LOS A	0.0	0.0	0.00	0.16	58.5
Approach		307	0.0	0.154	1.5	NA	0.0	0.0	0.00	0.16	58.1
All Vehicles		890	0.0	0.181	3.6	NA	0.7	5.1	0.15	0.33	55.9

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.
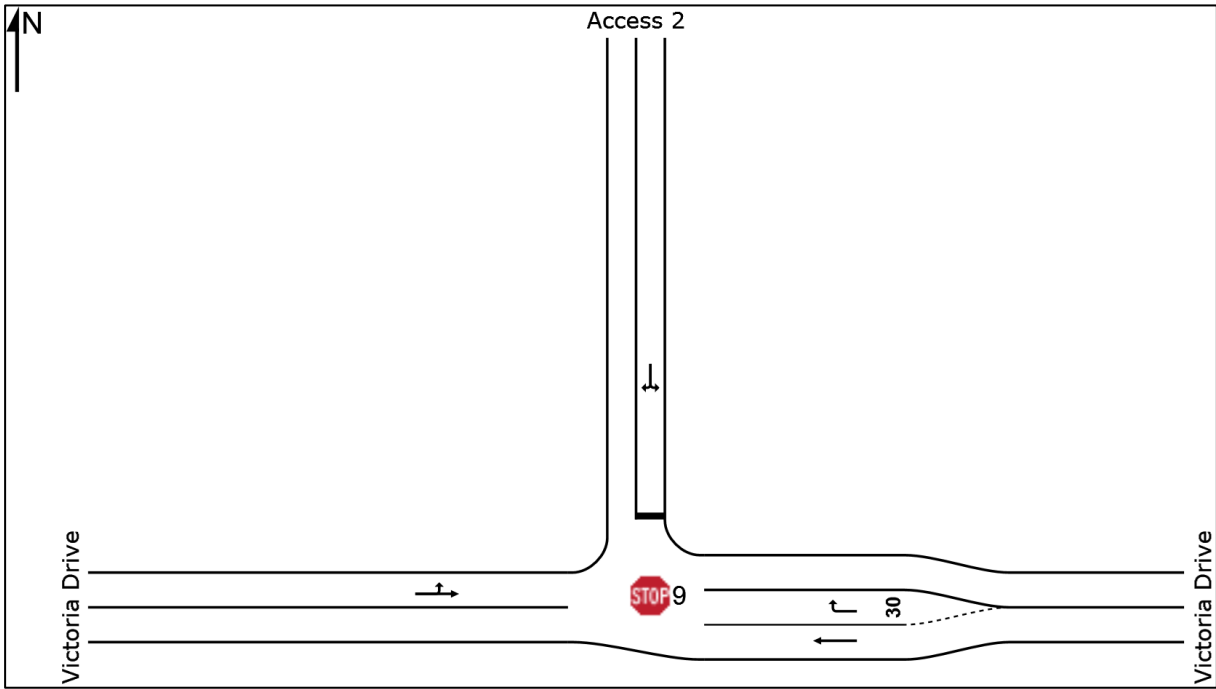NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

6. Proposed Layout

J. Beethoven Avenue / Access 3 (Erf 11305)

SIDRA ANALYSIS

1. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

2. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

3. Existing Layout

4. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

5. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

6. Existing Layout

1. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🛑 Site: 10 [Beethoven / Access 3 2022 FT AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Stop (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: Access Road											
1	L2	66	0.0	0.048	8.1	LOS A	0.2	1.3	0.10	0.93	51.8
3	R2	1	0.0	0.048	7.7	LOS A	0.2	1.3	0.10	0.93	51.3
Approach		67	0.0	0.048	8.1	LOS A	0.2	1.3	0.10	0.93	51.7
East: Beethoven Avenue											
4	L2	1	0.0	0.015	5.5	LOS A	0.0	0.0	0.00	0.02	58.2
5	T1	28	0.0	0.015	0.0	LOS A	0.0	0.0	0.00	0.02	59.8
Approach		29	0.0	0.015	0.2	NA	0.0	0.0	0.00	0.02	59.8
West: Beethoven Avenue											
11	T1	10	0.0	0.019	0.1	LOS A	0.1	0.6	0.09	0.40	56.1
12	R2	24	0.0	0.019	5.5	LOS A	0.1	0.6	0.09	0.40	54.2
Approach		34	0.0	0.019	3.9	NA	0.1	0.6	0.09	0.40	54.7
All Vehicles		130	0.0	0.048	5.2	NA	0.2	1.3	0.07	0.59	54.1

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.

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.

2. 2022 Future Traffic (including 50% of Erf 1948 and 50% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 Site: 10 [Beethoven / Access 3 2022 FT PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Stop (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: Access Road											
1	L2	30	0.0	0.022	8.1	LOS A	0.1	0.6	0.08	0.94	51.8
3	R2	1	0.0	0.022	8.0	LOS A	0.1	0.6	0.08	0.94	51.3
Approach		31	0.0	0.022	8.1	LOS A	0.1	0.6	0.08	0.94	51.7
East: Beethoven Avenue											
4	L2	1	0.0	0.012	5.5	LOS A	0.0	0.0	0.00	0.02	58.1
5	T1	23	0.0	0.012	0.0	LOS A	0.0	0.0	0.00	0.02	59.8
Approach		24	0.0	0.012	0.2	NA	0.0	0.0	0.00	0.02	59.7
West: Beethoven Avenue											
11	T1	41	0.0	0.055	0.1	LOS A	0.2	1.7	0.08	0.34	56.7
12	R2	59	0.0	0.055	5.5	LOS A	0.2	1.7	0.08	0.34	54.7
Approach		100	0.0	0.055	3.3	NA	0.2	1.7	0.08	0.34	55.5
All Vehicles		155	0.0	0.055	3.8	NA	0.2	1.7	0.07	0.41	55.3

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.

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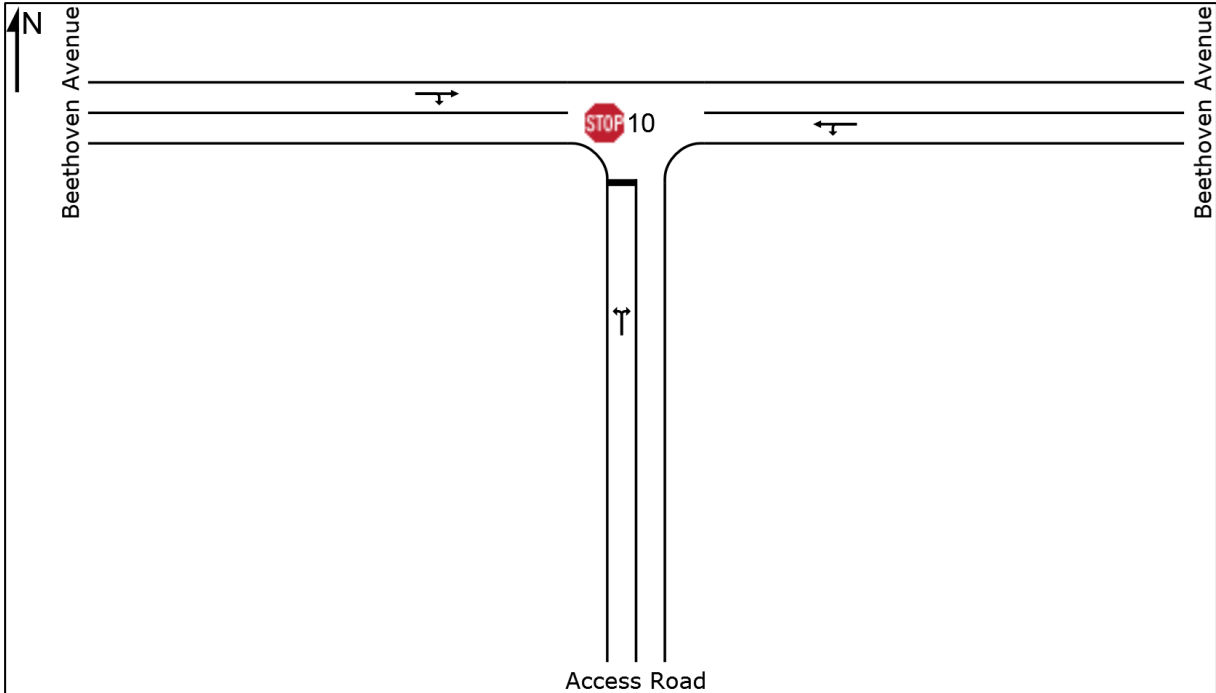
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.

3. Existing Layout

4. 2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 AM

MOVEMENT SUMMARY

🛑 Site: 10 [Beethoven / Access 3 2027 FT AM - Erf 11305]

Morning Peak AM: 06:45 - 07:45
Stop (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: Access Road											
1	L2	132	0.0	0.095	8.1	LOS A	0.4	2.8	0.10	0.93	51.8
3	R2	1	0.0	0.095	7.9	LOS A	0.4	2.8	0.10	0.93	51.3
Approach		133	0.0	0.095	8.1	LOS A	0.4	2.8	0.10	0.93	51.7
East: Beethoven Avenue											
4	L2	1	0.0	0.016	5.5	LOS A	0.0	0.0	0.00	0.02	58.2
5	T1	30	0.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.02	59.8
Approach		31	0.0	0.016	0.2	NA	0.0	0.0	0.00	0.02	59.8
West: Beethoven Avenue											
11	T1	11	0.0	0.033	0.1	LOS A	0.2	1.1	0.10	0.46	55.6
12	R2	48	0.0	0.033	5.5	LOS A	0.2	1.1	0.10	0.46	53.7
Approach		59	0.0	0.033	4.5	NA	0.2	1.1	0.10	0.46	54.0
All Vehicles		223	0.0	0.095	6.1	NA	0.4	2.8	0.09	0.68	53.3

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.

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.

5.   2027 Future Traffic (including 100% of Erf 1948 and 100% development traffic) – Erf 11305 PM

MOVEMENT SUMMARY

🛑 Site: 10 [Beethoven / Access 3 2027 FT PM - Erf 11305]

Afternoon Peak: 16:45 - 17:45
Stop (Two-Way)

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: Access Road											
1	L2	60	0.0	0.044	8.1	LOS A	0.2	1.2	0.08	0.94	51.8
3	R2	1	0.0	0.044	8.3	LOS A	0.2	1.2	0.08	0.94	51.3
Approach		61	0.0	0.044	8.1	LOS A	0.2	1.2	0.08	0.94	51.7
East: Beethoven Avenue											
4	L2	1	0.0	0.013	5.5	LOS A	0.0	0.0	0.00	0.02	58.2
5	T1	24	0.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.02	59.8
Approach		25	0.0	0.013	0.2	NA	0.0	0.0	0.00	0.02	59.7
West: Beethoven Avenue											
11	T1	43	0.0	0.089	0.1	LOS A	0.4	3.0	0.09	0.42	56.0
12	R2	117	0.0	0.089	5.5	LOS A	0.4	3.0	0.09	0.42	54.1
Approach		160	0.0	0.089	4.1	NA	0.4	3.0	0.09	0.42	54.6
All Vehicles		246	0.0	0.089	4.7	NA	0.4	3.0	0.08	0.51	54.3

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.
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.

6. Existing Layout