HARTLAND
Lifestyle Estate

HARTLAND II ESTATE
REMAINDER OF THE FARM VAALE VALLEY 219
MOSSEL BAY

TRAFFIC IMPACT ASSESSMENT

NOVEMBER 2025

REVISION 0

ELEMENT
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TRAFFIC IMPACT ASSESSMENT

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ANNEXURES

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1. INTRODUCTION

1.1 Background

Element Consulting Engineers has been appointed by Hartland II to compile a Traffic Impact Assessment (TIA) for the proposed development of Hartland II Estate.

1.2 Locality and layout

The development is situated on Remainder of farm Vaale Valley 219, Mossel Bay, approximately 11km north of Mossel Bay and 34km west of George.

The farm is bound by Outeniquasbosch Estate (Farm 248 Oude Duinzigt) to the north-west, Monte Christo Residential Estate to the west, New Vintage Residential Estate (Portion 99 of Farm Hartenbosch 217) to the south-west, National Road 2 (N2) as well as the R102 (MR344) to the south-east and the Klein Brak River to the north-east.

Access is obtained from the MR344 (R102) on the south-eastern boundary.

The locality and layout of the development, in relation to the adjacent road network and developments, is indicated in the figure below.

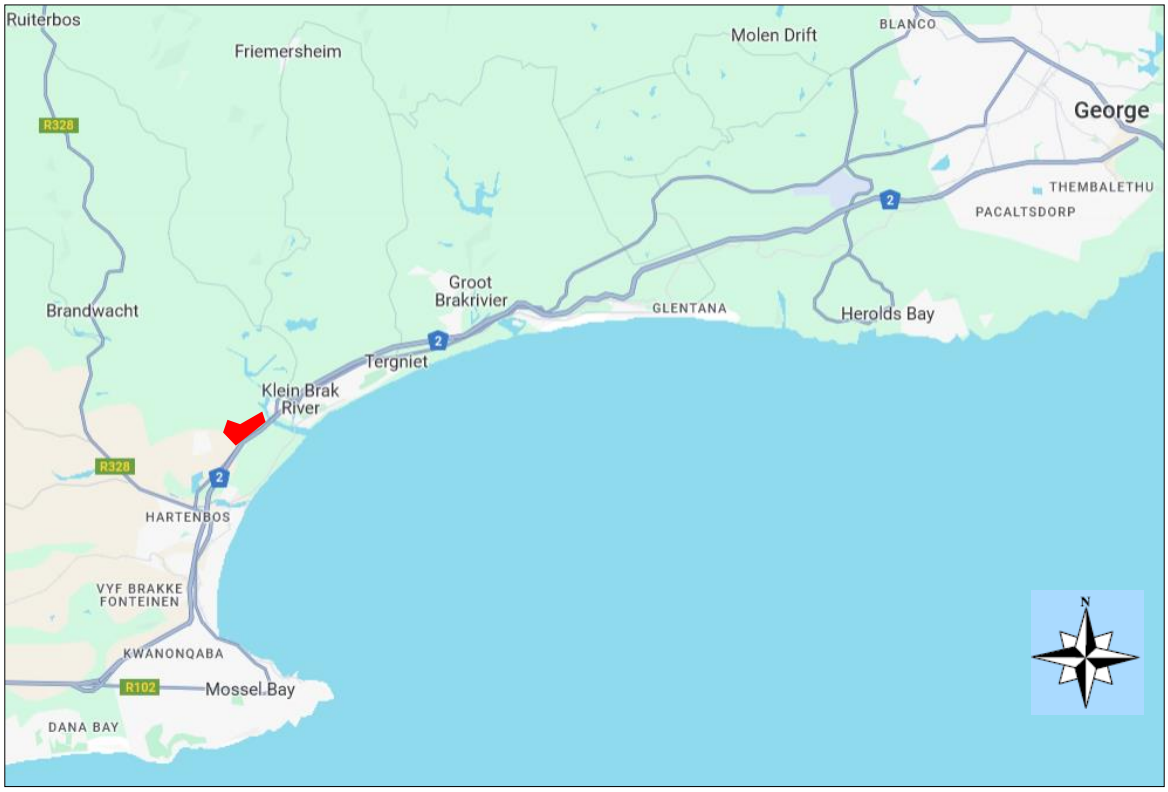

Figure 1: Locality plan

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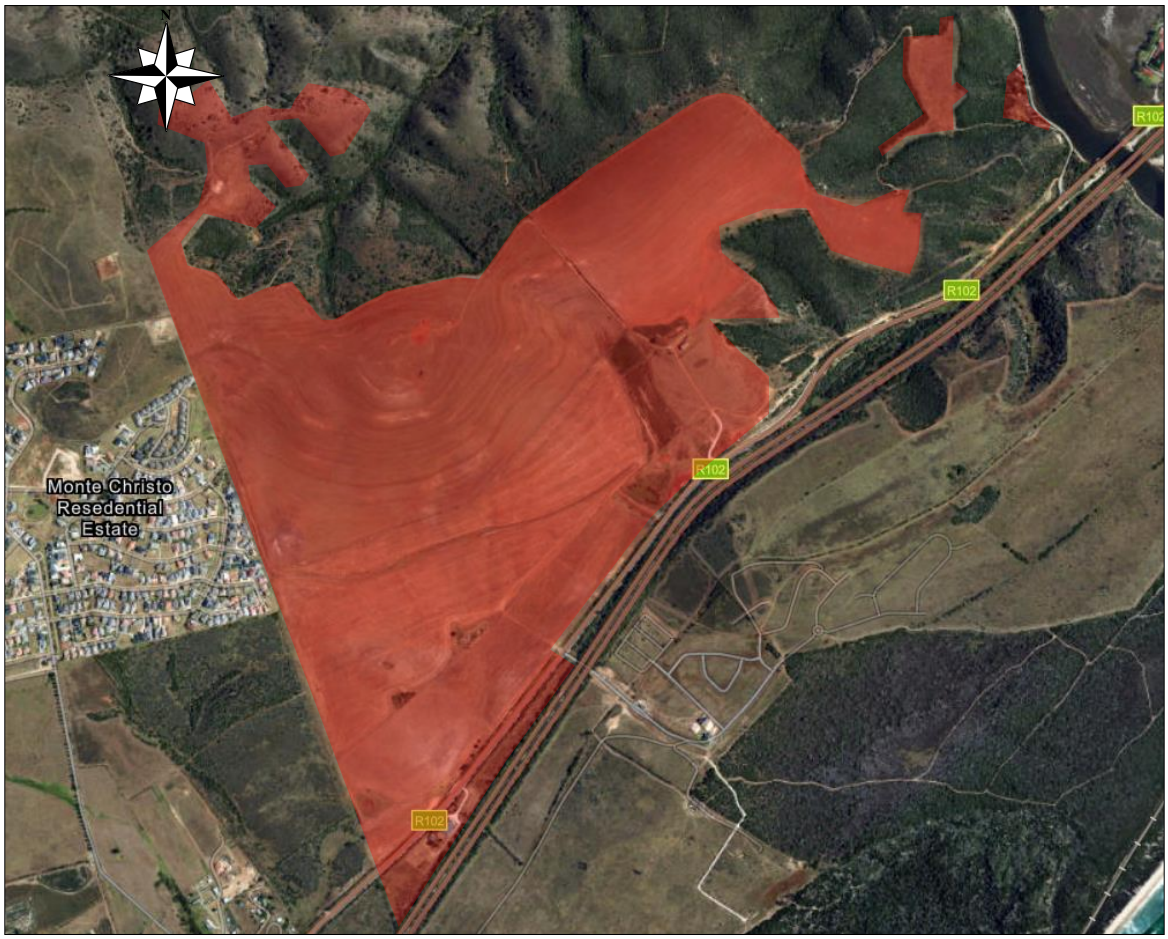

Figure 2: Layout plan

1.3 Proposed land use

The proposed development envisages the following:

North of the MR344 (R102):

- Hospital – 201 beds
- School – 1000 learners
- School hostel – 100 learners
- Tertiary Education Centre (College) – 450 students
- College hostel – 48 students

South of the MR344 (R102):

- Restaurant – 750m2
- Function area – 500m2
- Deli & bakery – 800m2
- Brewery – 500m2

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- Plant nursery – 1550m2
- Coffee shop – 200m2
- Animal clinic / care centre – 550m2
- Shooting range – 200m2
- Curio stalls – 700m2

1.4 Site Development Plan

A Site Development Plan (SDP) has been prepared and is presented in the following diagram and is attached to the report as addendum.

Figure 3: Site Development Plan (SDP) (north)

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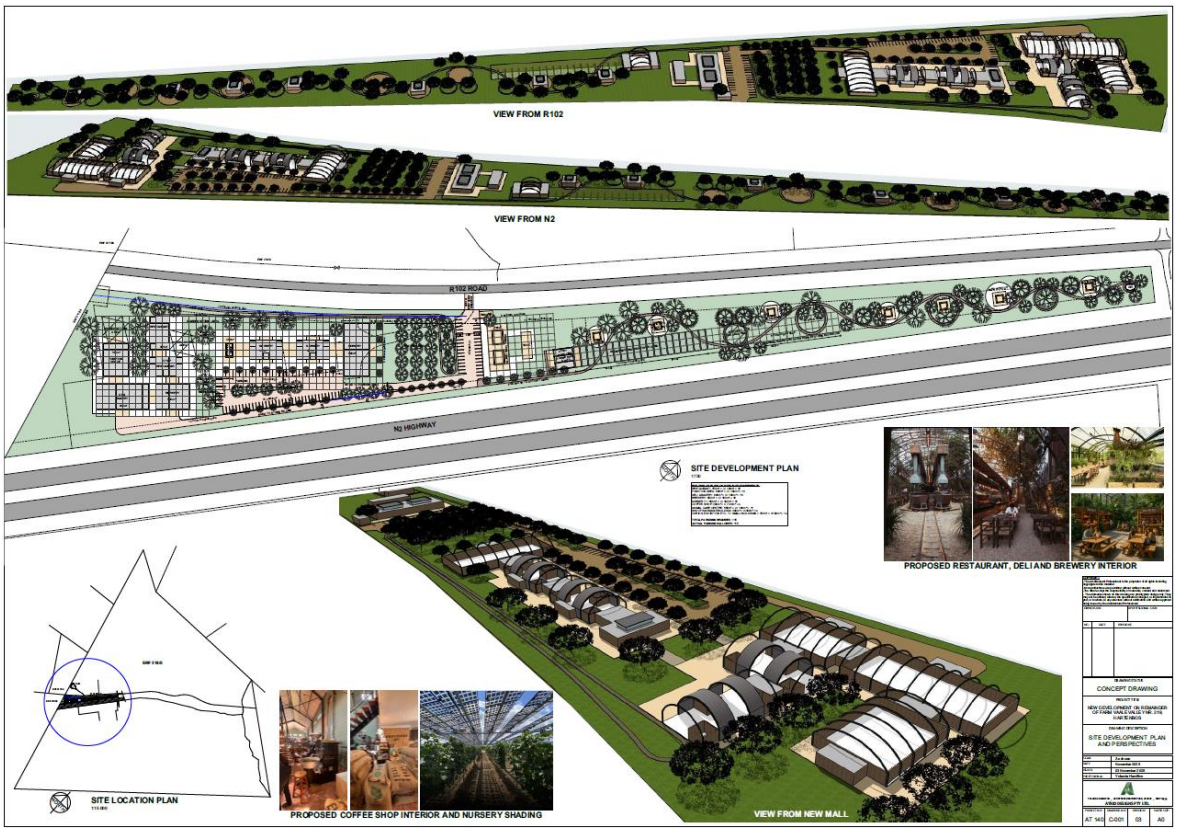

Figure 4: Site Development Plan (SDP) (south)

1.5 Purpose of the report

The purpose of this TIA is to assess the traffic impact of the proposed development on the adjacent road network.

1.6 Other approved development rights in close proximity

The following developments were considered in this report in order to assess the complete impact on the road network:

- Hartland Lifestyle Estate – Currently developed to 30% of approved rights.
- Garden Walk Shopping Centre – Currently under construction; opening March 2026.
- New Vintage Residential Estate – Development rights, commencement 2026

The TIA's of these developments were studied as input into this report.

The following developments are either fully built up and included in the background traffic or is included in the high background traffic growth rate for area:

- Hartenbos Landgoed
- Monte Cristo
- Outeniquasbosch

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1.7 Hartenbos-North Traffic Modelling Report

The Hartenbos-North Traffic Modelling Report (SMEC, 2024) was approved by Mossel Bay Municipality council in May 2024. The Traffic Modelling Report provides a 30-year master-plan for the Hartenbos-North area in terms of traffic growth and proposed road network improvements. Selected extracts from this Traffic Modelling Report will be presented in this TIA where relevant.

The 30-year road network improvements discussed in the Traffic Modelling Report is presented in the following two diagrams as extracts from the Traffic Modelling Report.

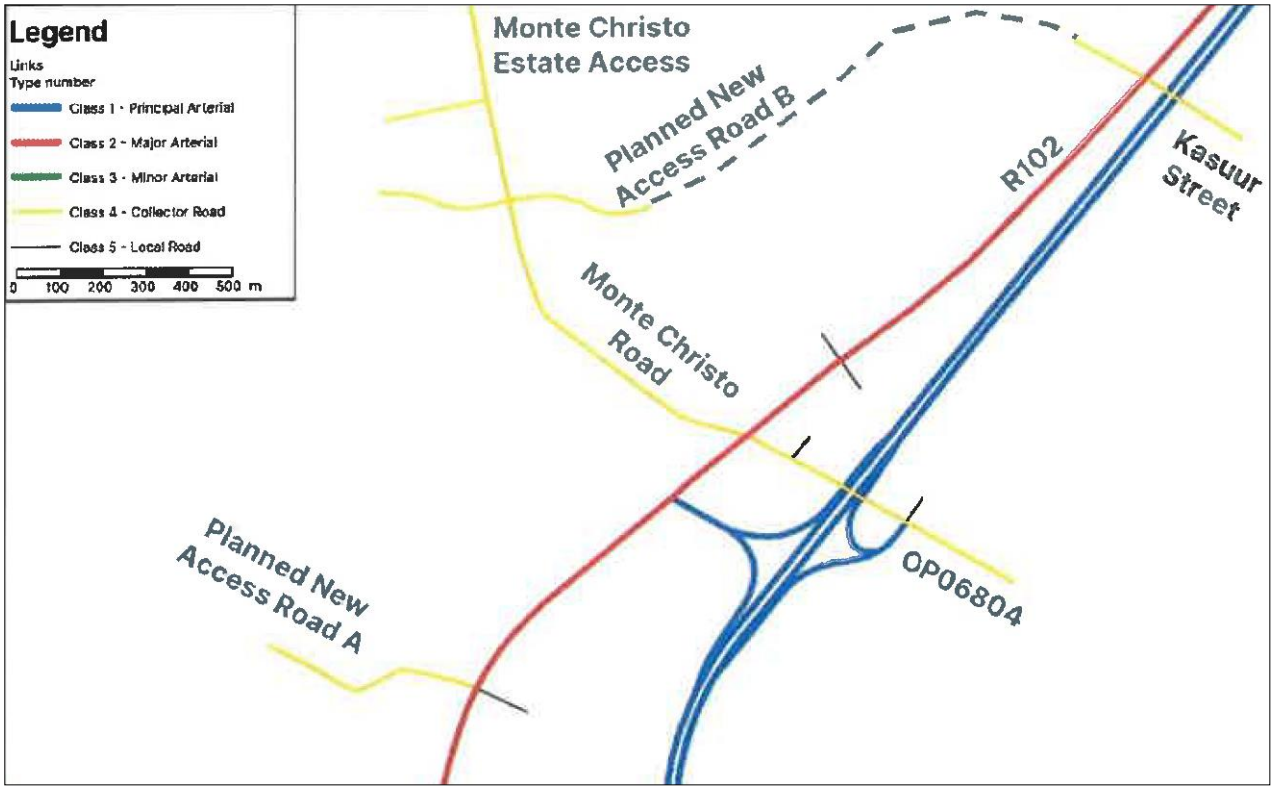

Figure 5: Concept Hartenbos-North 30-year road masterplan (SMEC, 2024)

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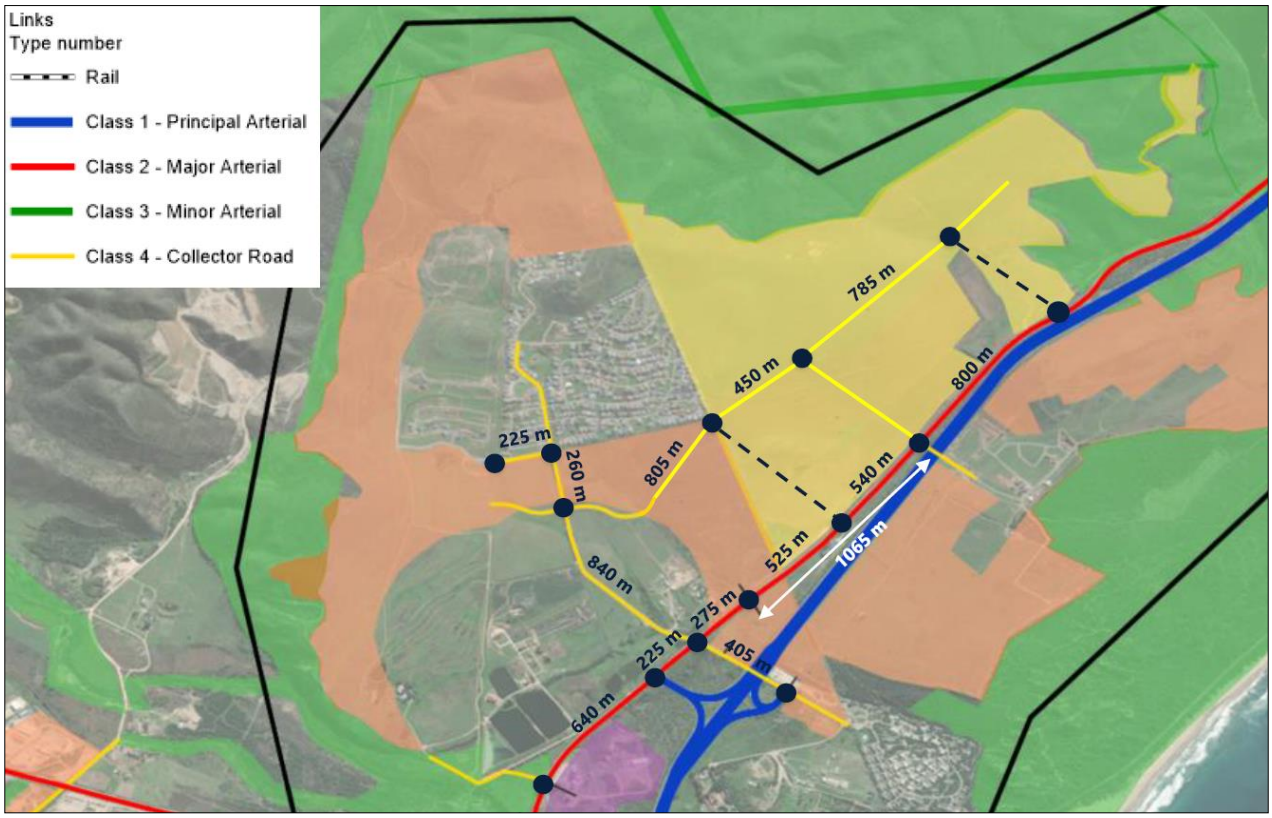

Figure 6: Concept Hartenbos-North 30-year road masterplan (SMEC, 2024)

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2. ACCESS ARRANGEMENTS

2.1 Access points

The primary access to the estate will be obtained from the MR344 (R102) at approximately chainage km2.763 opposite the existing formal Hartland Lifestyle Estate access (Kasuur Street) intersection.

Secondary access to the estate will be obtained from the MR344 (R102) at approximately chainage km2.223 opposite the existing plant nursery.

The two access points are depicted in the following diagram:

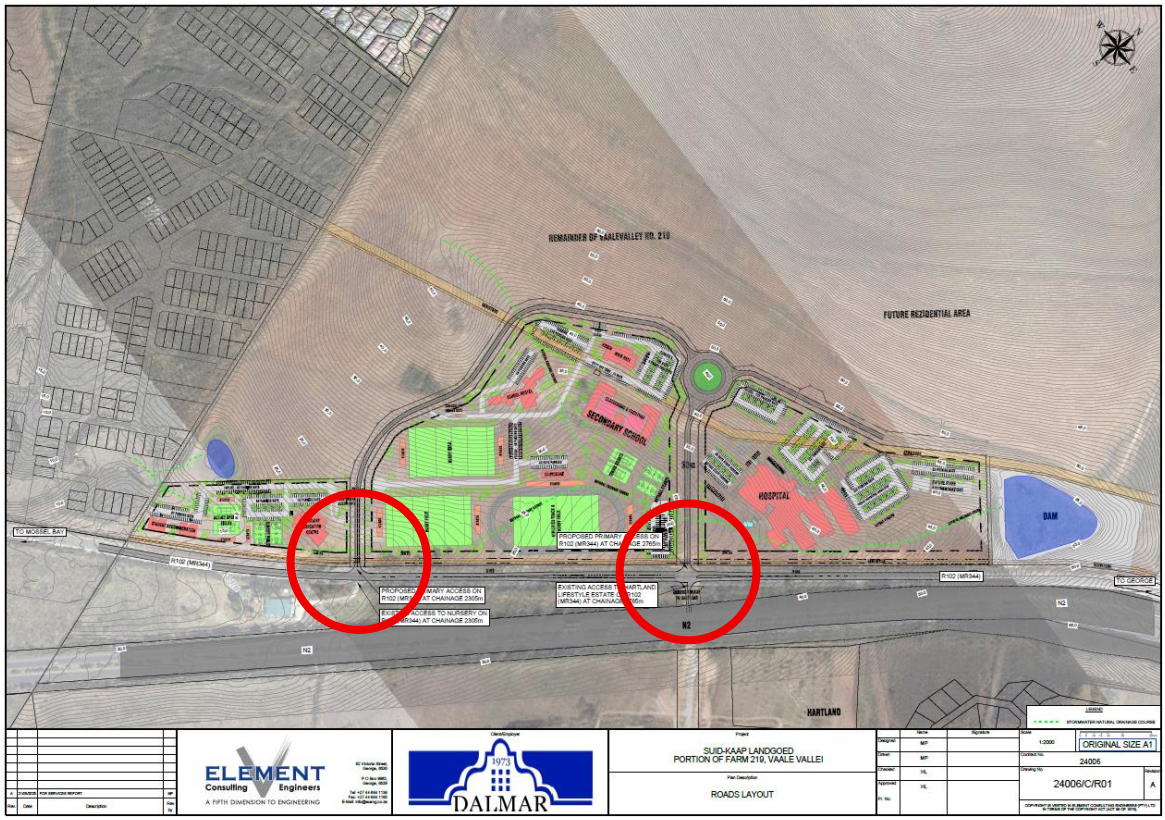

Figure 7: Access points onto MR344 (R102).

2.2 Sight distances

Sight distances at both accesses to the development are excellent in all directions in both the horizontal and vertical alignments.

2.3 Hartenbos-North Traffic Modelling Report

Both access points are aligned with the access points prescribed in the Hartenbos North Traffic Modelling Report.

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3. TRAFFIC VOLUMES

According to the TMH 16 Volume 1: South African Traffic Impact and Site Traffic Assessment Manual, the primary study area for a Traffic Impact Assessment shall be restricted to Class 4 and 5 roads in the vicinity of the development up to the first intersection(s) with Class 1 to 3 roads that can be reached from the development.

3.1 Study area

The study area includes the following intersections, all as per the Hartenbos-North Traffic Modelling Report:

Intersection 1: MR344(R102)/Kasuur Street: Access to Hartland II and Hartland
Intersection 2: MR344(R102): Secondary access to Hartland II and Plant Nursery
Intersection 3: MR344(R102): Access to Garden Walk and New Vintage
Intersection 4: MR344(R102)/Monte Christo Rd
Intersection 5: MR344(R102)/N2 interchange
Intersection 6: DR6804/N2 interchange/Hartland access

The intersections are depicted in the following diagram:

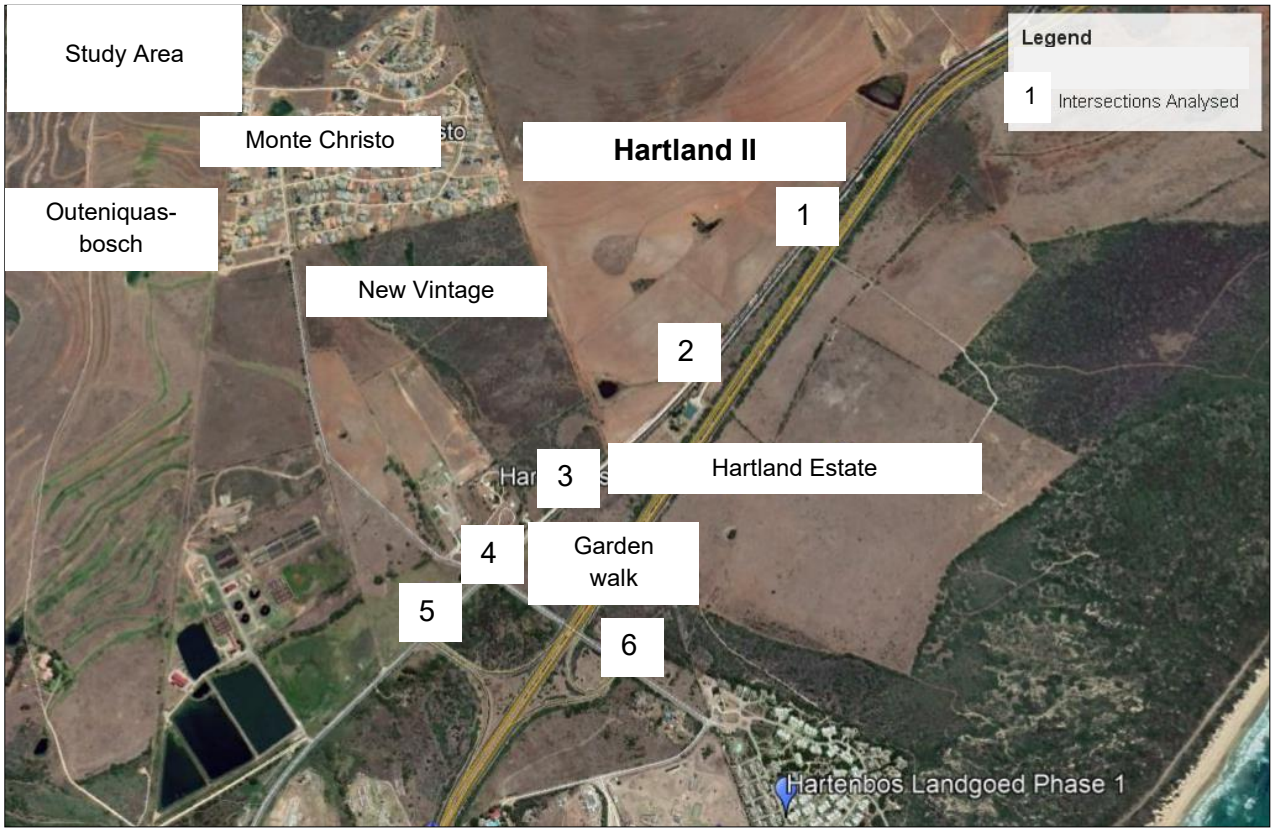

Figure 8: Study area

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3.2 Existing background 2025 traffic volumes

Peak hour traffic counts were conducted at the six (6) intersections of the study area. The day on which counts were conducted was a normal work and school day. No rain was present. The AM and PM peak hours were found to be between 07h15 to 08h15 and 16h45 to 17h45 respectively at the various intersections. Existing background 2025 traffic is indicated in the annexures.

3.3 Traffic growth rates

The TMH 17: South African Trip Data Manual recommends the following growth rate factors for different development areas:

Low growth areas	0 - 3%
Average growth areas	3 - 4%
Above average growth areas	4 - 6%
Fast growing areas	6 - 8%
Exceptionally high growth areas	> 8%

Figure 9: TMH17 Growth Rate Factors

The development forms part of a wider area identified for further development between Hartenbos and Klein Brak River and various approved development rights exist in the area. It is hence expected that the area will develop at an above average growth rate. In accordance with all of the above, the area is classified as an above average growth area according to the table above and a growth rate of 4% per annum will be applied.

3.4 Horizon year periods 2030 and 2035

Two horizon year periods of respectively 5 and 10 years will be used to determine the impact of the proposed Hartland II Estate on the surrounding road network. The resulting 2030 and 2035 future background traffic is indicated in the annexures.

3.5 Trip generation

The trip generation rates for the proposed development were determined in accordance with the TMH 17 South African Trip Data Manual as well as the Institute of Transportation Engineers' Trip Generation Manual.

The following trip generation rates were used to calculate trip generation during the peak hour of the adjacent street network:

<u>North of the MR344 (R102):</u>

Private Hospital (Code 612):
Rate of 1.45 trips per bed, directional split of 60:40 (AM) and 40:60 (PM).

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Private School (Code 536)
Rate of 0.8 trips per learner (AM) and 0.3 trips per learner (PM)
Directional split of 50:50 (AM) and 50:50 (PM).
A trip reduction factor of 0.9 will be applied for the school hostel provided on site.

Tertiary Education Centre (Code 550)
Rate of 0.2 trips per student (AM and PM)
Directional split of 80:20 (AM) and 30:70 (PM).
A trip reduction factor of 0.9 will be applied for the hostel provided on site.

The trip generation which will apply is shown in the table below:

TMH 17 Classification	Size	Unit	Peak Hour	Trip Reduction Factor	Trip Generation Rate	Split In	Split Out	Trips In	Trips Out	Trips Total
612	201	Beds	AM	1	1.45	60%	40%	175	117	291
Private Hospital	201	Beds	PM	1	1.45	40%	60%	117	175	291
536	1000	Learners	AM	0.9	0.75	50%	50%	338	338	675
Private School	1000	Learners	PM	0.9	0.3	50%	50%	135	135	270
550	450	Students	AM	0.9	0.2	80%	20%	65	16	81
Tertiary Education	450	Students	PM	0.9	0.2	30%	70%	24	57	81
Total Trips			AM					577	470	1047
			PM					276	367	642

Figure 10: Trip Generation (north)

South of the MR344 (R102):

Restaurant (Code 932)
Trading hours only from 09h00 to late, thus only PM peak hour trip generation
Rate of 8 trips per 100m2GLA (PM)
Directional split of 65:35 (PM).

Function area
The function area will only be used for special occasions which will occur outside the peak hour of the adjacent road network.

Deli and bakery
Trading hours only from 09h00 to 16h00, thus trip generation only outside of the peak hours of the adjacent road network.

Brewery (Code 140)
Rate of 0.6 trips per 100m2GLA

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Directional split of 80/20 (AM) and 20/80 (PM).

Plant nursery (Code 817)
Trading hours only from 09h00 to 17h00, thus only PM peak hour trip generation
Rate of 4.1 trips per 100m2GLA (PM)
Directional split of 30/70 (PM).

Coffee shop (Code 931)
Trading hours only from 07h00 to 15h00, thus only AM peak hour trip generation
Rate of 11.8 trips per 100m2GLA (AM)
Directional split of 65:35 (AM).

Animal clinic (care centre)
Rate of 1 trips per 100m2GLA (AM and PM))
Directional split of 50/50 (AM/PM).

Shooting range
Rate of 2 trips per 100m2GLA (AM and PM))
Directional split of 50/50 (AM/PM).

Curio stalls
Trading hours only from 09h00 to 16h00, thus trip generation only outside of the peak hours of the adjacent road network.

The trip generation which will apply is shown in the table below:

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TMH 17 Classification	Size	Unit	Peak Hour	Trip Reduction Factor	Trip Generation Rate	Split In	Split Out	Trips In	Trips Out	Trips Total
932	750	m2	AM	1						
Restaurant	750	m2	PM	1	0.08	65%	35%	39	21	60
140	500	m2	AM	1	0.006	80%	20%	2	1	3
Brewery	500	m2	PM	1	0.006	20%	80%	1	2	3
817	1550	m2	AM	1						
Plant Nursery	1550	m2	PM	1	0.041	30%	70%	19	44	64
931	200	m2	AM	1	0.118	65%	35%	15	8	24
Coffee Shop	200	m2	PM	1						
Animal Clinic / Care Centre	550	m2	AM	1	0.01	50%	50%	3	3	6
	550	m2	PM	1	0.01	50%	50%	3	3	6
Shooting Range	200	m2	AM	1	0.02	50%	50%	2	2	4
	200	m2	PM	1	0.02	50%	50%	2	2	4
Total Trips			AM					22	14	36
			PM					63	73	136

Figure 11: Trip Generation (south)

3.6 Trip distribution on regional road network

It is anticipated that traffic that will be generated by the development will be distributed along the regional road network as per the following diagram:

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Figure 12: Trip distribution on regional road network

3.7 Trip distribution

An origin-destination matrix was compiled in order to assess and estimate the peak hour trip distribution percentages on the immediate road network considering the two accesses and the regional trip distribution. The resulting trip distribution on the immediate road network and the intersections under consideration is presented in the annexures.

3.8 Development traffic

The resulting development traffic for the proposed development is presented in the annexures.

3.9 Future traffic of adjacent developments

The adjacent developments' traffic growth figures were considered as follows for the two future years, 2030 and 2035 respectively:

For the future year 2030:

- Hartland Lifestyle Estate – Developed up to 50% of development rights;
- Garden Walk Shopping Centre – Developed 100% of development rights;
- New Vintage Residential Estate – Developed up to 10% of development rights.

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For the future year 2035:

- Hartland Lifestyle Estate – Developed up to 100% of development rights;
- Garden Walk Shopping Centre – Developed 100% of development rights;
- New Vintage Residential Estate – Developed up to 100% of development rights.

3.10 Total future 2030 and 2035 traffic volumes

The total future 2030 and 2035 traffic volumes for the intersections under investigation is presented in the annexures.

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4. CAPACITY ANALYSIS

A capacity analysis was performed for the weekday AM and PM peak hours for the existing background 2025, future background 2030, total future 2030 and total future 2035 scenarios. The capacity analysis was performed using the Sidra Intersection 8.0 software to compare the traffic impact of the development against the background traffic.

The Sidra results for each intersection are discussed in the chapters below and the detailed Sidra results are included in the annexures.

4.1 Intersection 1: MR344 and Kasuur Street

4.1.1 Existing geometry

The existing intersection geometry has a dedicated right turn lane and dedicated through lane in the western approach, a shared through and left lane in the eastern approach, and a shared right and left lane in the southern approach. The intersection is stop controlled from the south. This geometry is shown in the figure below and was used to analyse the existing 2025 and background 2030 scenarios for the intersection.

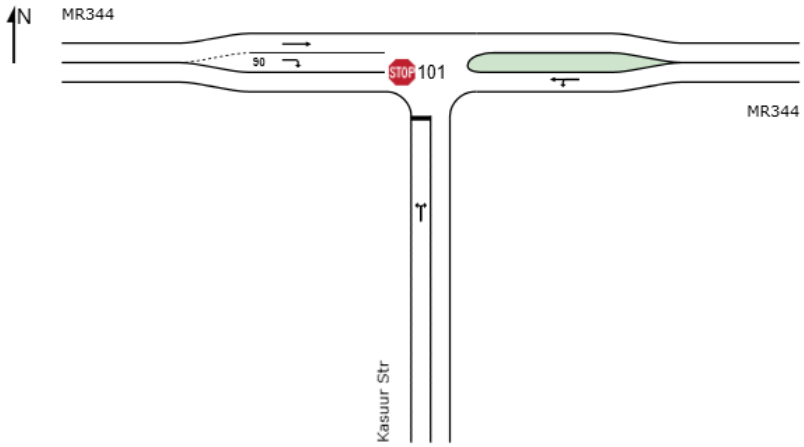

Figure 13: Existing geometry: MR 344 and Kasuur Street

4.1.2 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Background (2030)	AM	SC	2.6	A	0.056	S	L	8.4	A	0.054
							R	8.8	A	0.054
						E	L	5.5	A	0.056
							T	0.0	A	0.056
						W	T	0.0	A	0.040
							R	5.7	A	0.010
Background (2030)	PM	SC	2.5	A	0.050	S	L	8.3	A	0.027
							R	8.8	A	0.027
						E	L	5.5	A	0.050
							T	0.0	A	0.050
						W	T	0.0	A	0.035
							R	5.7	A	0.034

Figure 14: Background results of analysis: MR 344 and Kasuur Street

4.1.3 Development geometry

The development of Hartland II provides for a new northern leg to the intersection. The proposed geometry of this new intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a shared right and left lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach. The intersection is stop controlled from the sides (north and south). This geometry is shown in the figure below and was used to analyse the total 2030 and total 2035 scenarios for the intersection.

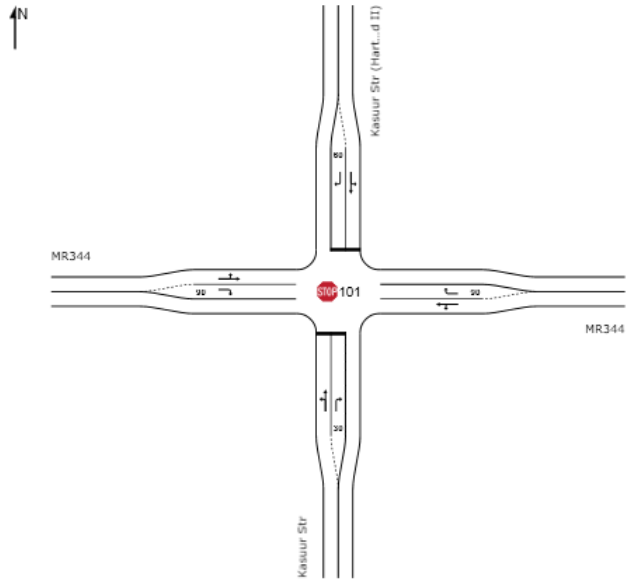

Figure 15: Development geometry: MR 344 and Kasuur Street

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4.1.4 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2030)	AM	TWSC	66.1	NA	1.789	S	L	9.9	A	0.468
							T	28.8	D	0.468
							R	17.3	C	0.094
						E	L	5.5	A	0.083
							T	0.0	A	0.083
							R	7.0	A	0.081
						N	L	8.6	A	0.157
							T	17.6	C	0.157
							R	397.3	F	1.789
						W	L	5.6	A	0.220
							T	0.0	A	0.220
							R	6.0	A	0.111
Total (2030)	PM	TWSC	57.8	NA	1.847	S	L	10.6	B	0.473
							T	29.6	D	0.473
							R	21.8	C	0.069
						E	L	5.6	A	0.127
							T	0.0	A	0.127
							R	6.5	A	0.035
						N	L	8.9	A	0.141
							T	20.1	C	0.141
							R	432.3	F	1.847
						W	L	5.6	A	0.166
							T	0.0	A	0.166
							R	6.4	A	0.191
Total (2035)	AM	TWSC	213.1	NA	4.667	S	L	15.3	C	0.742
							T	54.00	F	0.724
							R	24.02	C	0.228
						E	L	5.6	A	0.106
							T	0.0	A	0.106
							R	7.3	A	0.086
						N	L	8.9	A	0.194
							T	22.8	C	0.194
							R	1694.0	F	4.667
						W	L	5.6	A	0.251
							T	0.0	A	0.251
							R	6.2	B	0.168
Total (2035)	PM	TWSC	89.5	NA	2.594	S	L	10.8	B	0.397
							T	42.7	E	0.397
							R	39.9	E	0.223
						E	L	5.6	A	0.067
							T	0.0	A	0.067
							R	6.7	A	0.036
						N	L	9.1	A	0.210
							T	32.9	D	0.210
							R	767.5	F	2.594
						W	L	5.6	A	0.182
							T	0.0	A	0.182
							R	7.0	A	0.349

Figure 16: Total scenario results of analysis: MR 344 and Kasuur Street

The results of the analysis indicate that the northern right turn movement from the Hartland II development can not be accommodated through the intersection in any of the four future scenarios

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and that that movement will operate at a v/c ratio of significantly more than 1 and a LOS F for all four scenarios. A traffic signal will hence be required for this intersection.

4.1.5 Mitigation measures

The analysis indicates that the Hartland II development will trigger the requirement of a traffic signal at this intersection. A traffic signal at this intersection is in line with the Hartenbos-North Traffic Modelling Report (SMEC, 2024). The proposed geometry of this new signalised intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach. This geometry is shown in the figure below and was used to analyse the total 2030 and total 2035 scenarios for the signalised intersection.

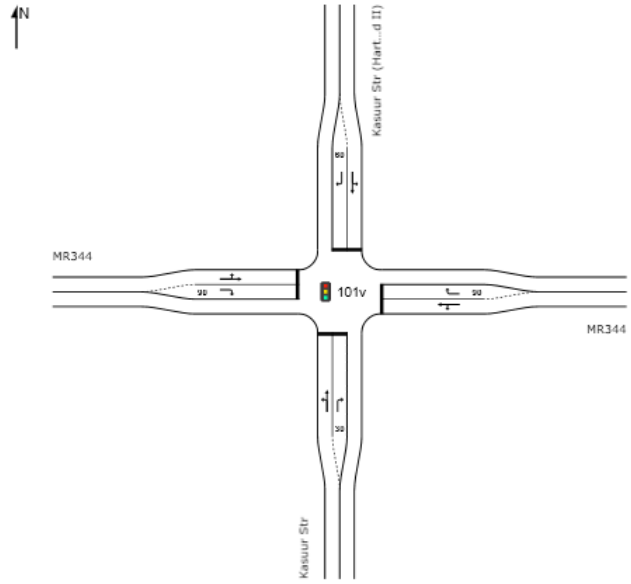

Figure 17: Signalised geometry: MR 344 and Kasuur Street

4.1.6 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2030)	AM	Traffic Signal	21.7	C	0.890	S	L	24.3	C	0.555
							T	18.8	B	0.555
							R	22.9	C	0.079
						E	L	13.1	B	0.322
							T	7.5	A	0.322
							R	15.2	B	0.092
						N	L	22.4	C	0.189
							T	16.9	B	0.189
							R	35.0	C	0.838
						W	L	13.2	B	0.347
							T	7.7	A	0.347
							R	33.9	C	0.890
Total (2030)	PM	Traffic Signal	15.9	B	0.739	S	L	17.2	B	0.685
							T	11.6	B	0.685
							R	13.9	B	0.034
						E	L	15.2	B	0.423
							T	9.7	A	0.423
							R	18.0	B	0.142
						N	L	14.3	B	0.151
							T	8.7	A	0.151
							R	21.2	C	0.674
						W	L	15.7	B	0.549
							T	10.2	B	0.549
							R	20.5	C	0.739
Total (2035)	AM	Traffic Signal	23.2	C	0.859	S	L	17.1	B	0.669
							T	11.50	B	0.669
							R	14.42	B	0.084
						E	L	20.8	C	0.353
							T	15.2	B	0.353
							R	32.3	C	0.586
						N	L	13.9	B	0.125
							T	8.4	A	0.125
							R	35.3	D	0.859
						W	L	28.9	C	0.829
							T	23.3	C	0.829
							R	28.9	C	0.745
Total (2035)	PM	Traffic Signal	21.7	C	0.890	S	L	24.3	C	0.555
							T	18.8	B	0.555
							R	22.9	C	0.079
						E	L	13.1	B	0.322
							T	7.5	A	0.322
							R	15.2	B	0.092
						N	L	22.4	C	0.189
							T	16.9	B	0.189
							R	35.0	C	0.838
						W	L	13.2	B	0.347
							T	7.7	A	0.347
							R	33.9	C	0.890

Figure 18: Total scenario results of analysis: MR 344 and Kasuur Street (signalised)

The results of the analysis conducted with traffic signals indicate that the intersection will operate at an acceptable LOS C (or better) for all four the peak hour scenarios.

The traffic signal settings are attached to the report as addenda.

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4.2 Intersection 2: MR344 and Hartland II Access / Plant Nursery

4.2.1 Existing geometry

The existing geometry provides for a gravel access to the Plant Nursery in the south with a shared lane in both the western and eastern approaches of the MR344. The intersection is stop controlled from the south. The current intersection with the gravel nursery access has not been analysed as it essentially provides for freeflow conditions on the MR344 and hence a LOS A.

4.2.2 Development geometry

The development of Hartland II provides for a new northern leg to the intersection as well as the formalisation of the existing southern leg. The proposed geometry of this new intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach. The intersection is stop controlled from the sides (north and south). This geometry is shown in the figure below and was used to analyse the total 2030 and total 2035 scenarios for the intersection.

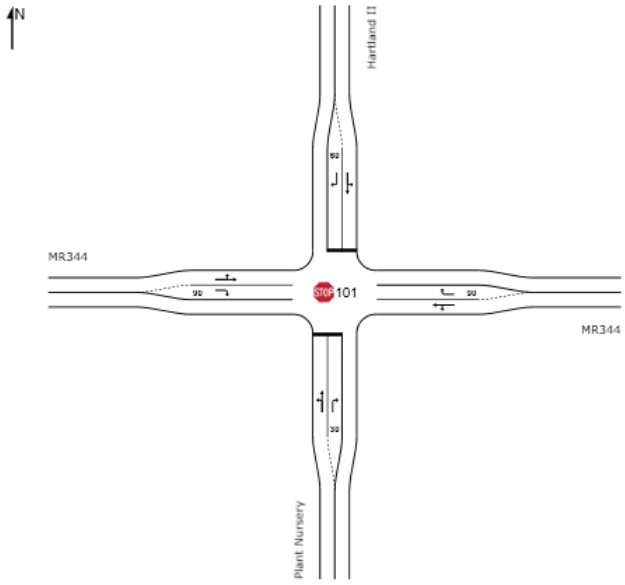

Figure 19: Development geometry: MR 344 and Hartland II / Plant Nursery

4.2.3 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2030)	AM	TWSC	19.6	NA	1.416	S	L	13.0	B	0.110
							T	53.8	F	0.110
							R	60.0	F	0.147
						E	L	5.6	A	0.340
							T	0.0	A	0.340
							R	8.3	A	0.061
						N	L	11.6	B	0.139
							T	50.5	F	0.139
							R	286.3	F	1.416
						W	L	5.6	A	0.329
							T	0.0	A	0.329
							R	8.4	A	0.017
Total (2030)	PM	TWSC	7.2	NA	0.774	S	L	11.4	B	0.126
							T	37.7	E	0.126
							R	45.4	E	0.222
						E	L	5.6	A	0.272
							T	0.0	A	0.272
							R	7.8	A	0.027
						N	L	11.6	B	0.109
							T	35.7	E	0.109
							R	85.4	F	0.774
						W	L	5.6	A	0.300
							T	0.0	A	0.300
							R	7.6	A	0.041
Total (2035)	AM	TWSC	89.6	NA	4.665	S	L	30.6	D	0.309
							T	152.8	F	0.309
							R	238.9	F	0.488
						E	L	5.6	A	0.462
							T	0.1	A	0.462
							R	9.5	A	0.075
						N	L	16.5	C	0.297
							T	134.9	F	0.297
							R	1754.4	F	4.665
						W	L	5.6	A	0.398
							T	0.1	A	0.398
							R	10.8	B	0.026
Total (2035)	PM	TWSC	33.1	NA	2.259	S	L	14.1	B	0.230
							T	88.7	F	0.230
							R	164.4	F	0.636
						E	L	5.6	A	0.347
							T	0.0	A	0.347
							R	9.6	A	0.038
						N	L	15.9	C	0.225
							T	82.6	F	0.225
							R	682.3	F	2.259
						W	L	5.6	A	0.414
							T	0.1	A	0.414
							R	8.6	A	0.051

Figure 20: Total scenario results of analysis: MR 344 and Hartland II / Plant Nursery

The results of the analysis indicate that the northern right turn movement from the Hartland II development can not be accommodated through the intersection in any of the four future scenarios and that that movement will operate at a v/c ratio of significantly more than 1 and a LOS F for all four scenarios. In addition, the southern approach right turn movement from the nursery will operate

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at a LOS F for the 2035 scenario for both peak hours. A traffic signal will hence be required for this intersection.

4.2.4 Mitigation measures

The analysis indicates that the Hartland II development will trigger the requirement of a traffic signal at this intersection. A traffic signal at this intersection is in line with the Hartenbos-North Traffic Modelling Report (SMEC, 2024). The proposed geometry of this new signalised intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach. This geometry is shown in the figure below and was used to analyse the total 2030 and total 2035 scenarios for the signalised intersection.

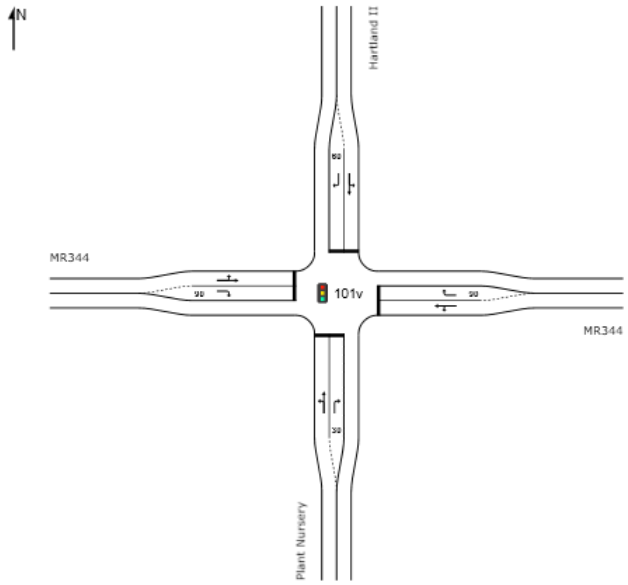

Figure 21: Signalised geometry: MR 344 and Hartland II / Plant Nursery

4.2.5 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2030)	AM	Traffic Signal	15.3	B	0.849	S	L	16.5	B	0.044
							T	11.0	B	0.044
							R	16.5	B	0.027
						E	L	20.6	C	0.849
							T	15.1	B	0.849
							R	19.2	B	0.204
						N	L	17.0	B	0.135
							T	11.4	B	0.135
							R	17.2	B	0.240
						W	L	19.1	B	0.821
							T	13.5	B	0.821
							R	19.7	B	0.058
Total (2030)	PM	Traffic Signal	11.6	B	0.745	S	L	17.0	B	0.143
							T	11.4	B	0.143
							R	16.6	B	0.062
						E	L	14.8	B	0.676
							T	9.2	A	0.676
							R	17.8	B	0.089
						N	L	16.9	B	0.112
							T	11.3	B	0.112
							R	17.2	B	0.202
						W	L	16.3	B	0.745
							T	10.7	B	0.745
							R	17.0	B	0.133
Total (2035)	AM	Traffic Signal	13.2	B	0.840	S	L	22.1	C	0.058
							T	16.6	B	0.058
							R	22.1	C	0.038
						E	L	19.7	B	0.840
							T	14.1	B	0.840
							R	18.4	B	0.189
						N	L	22.7	C	0.180
							T	17.2	B	0.180
							R	23.2	C	0.323
						W	L	14.1	B	0.723
							T	8.6	A	0.723
							R	21.5	C	0.064
Total (2035)	PM	Traffic Signal	10.4	B	0.747	S	L	22.7	C	0.191
							T	17.2	B	0.191
							R	22.3	C	0.085
						E	L	12.4	B	0.631
							T	6.9	A	0.631
							R	18.8	B	0.095
						N	L	22.6	C	0.150
							T	17.1	B	0.150
							R	24.0	C	0.279
						W	L	14.9	B	0.747
							T	9.3	A	0.747
							R	16.4	B	0.126

Figure 22: Total scenario results of analysis: MR 344 and Hartland II / Plant Nursery (signalised)

The results of the analysis conducted with traffic signals indicate that the intersection will operate at an acceptable LOS B for all four the peak hour scenarios.

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The traffic signal settings are attached to the report as addenda.

4.3 Intersection 3: MR344 and Garden Walk / New Vintage

4.3.1 Existing 2025 geometry

The existing geometry provides for a gravel access to the farms on both the southern and northern side. This current intersection has not been analysed as it essentially provides for freeflow conditions on the MR344 and hence a LOS A. The development currently taking place at this intersection (Garden Walk) is included and analysed in the next scenario.

4.3.2 Total 2030 geometry

For the 2030 total scenario, the Garden Walk shopping centre on the southern leg of this intersection will be in operation. It is also anticipated, as discussed earlier in the report, that for the 2030 total scenario, the development of New Vintage Residential Estate will be ongoing. This will provide for a northern leg to the intersection. The geometry of this intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach. The intersection is stop controlled from the side roads (north and south). This geometry is shown in the figure below and was used to analyse the total 2030 and total 2035 scenarios for the intersection.

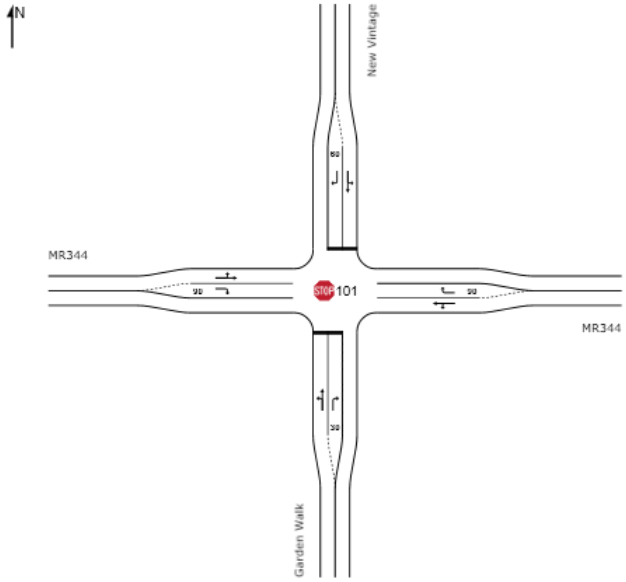

Figure 23: Development geometry: MR 344 and Garden Walk / New Vintage

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4.3.3 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2030)	AM	TWSC	1.9	NA	0.429	S	L	14.0	B	0.017
							T	55.6	F	0.017
							R	70.7	F	0.019
						E	L	5.6	A	0.384
							T	0.1	A	0.384
							R	8.0	A	0.002
						N	L	12.4	B	0.023
							T	57.1	F	0.023
							R	94.6	F	0.429
						W	L	5.6	A	0.323
							T	0.0	A	0.323
							R	8.9	A	0.001
Total (2030)	PM	TWSC	18.3	NA	1.509	S	L	15.4	C	0.585
							T	101.5	F	0.585
							R	354.5	F	1.509
						E	L	5.6	A	0.321
							T	0.0	A	0.321
							R	7.7	A	0.004
						N	L	11.5	B	0.023
							T	71.7	F	0.023
							R	240.5	F	0.433
						W	L	5.6	A	0.096
							T	0.0	A	0.296
							R	10.0	B	0.441

Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2035)	AM	TWSC	696.6	NA	14.592	S	L	19.6	C	0.053
							T	162.8	F	0.053
							R	212.9	F	0.065
						E	L	5.6	A	0.499
							T	0.1	A	0.499
							R	9.5	A	0.022
						N	L	14.3	B	0.152
							T	168.2	F	0.152
							R	6182.8	F	14.592
						W	L	5.6	A	0.409
							T	0.1	A	0.409
							R	11.5	B	0.002
Total (2035)	PM	TWSC	282.3	NA	15.439	S	L	23.4	C	0.788
							T	525.7	F	0.788
							R	1815.0	F	4.718
						E	L	5.6	A	0.378
							T	0.1	A	0.378
							R	12.1	B	0.087
						N	L	14.7	B	0.122
							T	256.1	F	0.122
							R	6668.8	F	15.439
						W	L	5.6	A	0.507
							T	0.1	A	0.507
							R	12.1	B	0.521

Figure 24: Results of analysis: MR 344 and Garden Walk / New Vintage

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The results of the analysis indicate that for the 2030 PM peak hour, both the right turn movements from north and south, can not be accommodated through the intersection and that the movement will operate at a v/c ratio of significantly more than 1 and a LOS F.

The results of the analysis indicate that for the 2035 AM and PM peak hours, both the right turn and through movements from north and south, can not be accommodated through the intersection and that these movements will operate at a v/c ratio of significantly more than 1 and a LOS F.

A traffic signal will hence be required for this intersection.

4.3.4 Mitigation measures

The analysis indicates that the total 2030 and 2035 scenarios will trigger the requirement of a traffic signal at this intersection. The proposed geometry of this new signalised intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach. This geometry is shown in the figure below and was used to analyse the total 2030 and total 2035 scenarios for the signalised intersection.

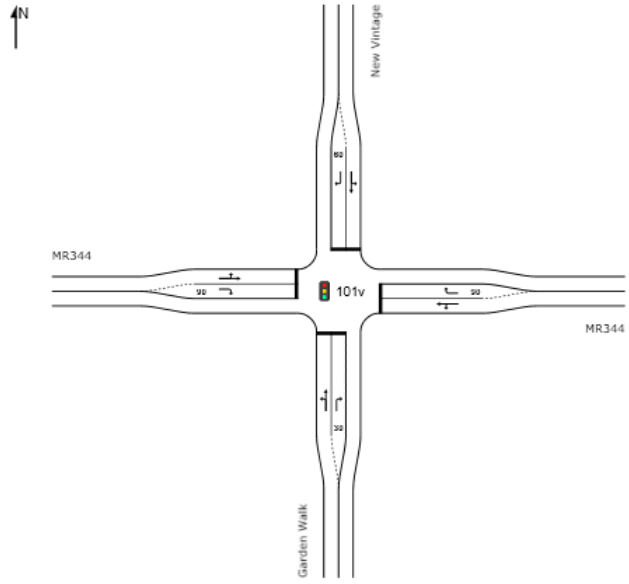

Figure 25: Signalised geometry: MR 344 and Garden Walk / New Vintage

4.3.5 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2030)	AM	Traffic Signal	7.7	B	0.698	S	L	21.6	C	0.007
							T	16.1	B	0.007
							R	21.4	C	0.003
						E	L	13.4	B	0.698
							T	7.9	A	0.698
							R	14.9	B	0.006
						N	L	21.9	C	0.019
							T	16.3	B	0.019
							R	22.2	C	0.077
						W	L	12.1	B	0.587
							T	6.6	A	0.587
							R	17.2	B	0.003
Total (2030)	PM	Traffic Signal	17.3	B	0.802	S	L	20.1	C	0.499
							T	14.5	B	0.499
							R	34.6	C	0.352
						E	L	26.7	C	0.802
							T	21.1	C	0.802
							R	17.3	B	0.011
						N	L	32.8	C	0.017
							T	27.2	C	0.017
							R	36.8	D	0.064
						W	L	11.2	B	0.454
							T	5.6	A	0.454
							R	20.3	C	0.743
Total (2035)	AM	Traffic Signal	14.0	B	0.832	S	L	24.9	C	0.006
							T	19.3	B	0.006
							R	25.8	C	0.004
						E	L	19.4	B	0.832
							T	13.8	B	0.832
							R	18.1	B	0.055
						N	L	26.1	C	0.163
							T	20.6	C	0.163
							R	31.8	C	0.7870
						W	L	12.9	B	0.682
							T	7.4	A	0.682
							R	22.5	C	0.005
Total (2035)	PM	Traffic Signal	23.6	C	0.899	S	L	22.4	C	0.522
							T	16.9	B	0.522
							R	36.0	D	0.296
						E	L	35.7	D	0.886
							T	30.2	C	0.886
							R	23.2	C	0.184
						N	L	34.4	C	0.075
							T	28.9	C	0.075
							R	47.3	D	0.819
						W	L	19.6	B	0.274
							T	6.0	A	0.562
							R	38.3	D	0.899

Figure 26: Total scenario results of analysis: MR 344 and Garden Walk / New Vintage (signalised)

The results of the analysis conducted with traffic signals indicate that the intersection will operate at an acceptable LOS B for the first three scenarios and at an acceptable LOS C for the 2035 PM peak hour scenario.

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The traffic signal settings are attached to the report as addenda.

4.4 Intersection 4: MR344 and Monte Cristo Road

4.4.1 Existing geometry

The existing intersection geometry has dedicated left, through and right lanes from both the eastern and western approaches. The northern and southern approaches have shared left and through lanes with dedicated right turn lanes. The intersection is side road stop controlled from the south and north. This geometry is shown in the figure below and was used to analyse the existing 2025, total 2030 and total 2035 scenarios for the intersection.

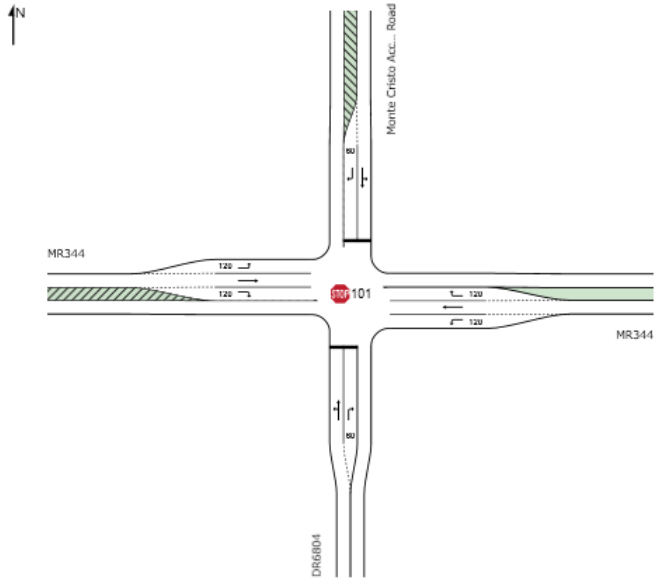

Figure 27: Existing Geometry: MR344 and Monte Cristo Road

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4.4.2 Analysis

The results of the analysis are shown in tabular format below:

Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Background (2030)	AM	TWSC	26.5	NA	1.245	S	L	9.6	A	0.521
							T	22.0	C	0.521
							R	15.2	C	0.010
						E	L	5.5	A	0.002
							T	0.0	A	0.063
							R	6.2	A	0.001
						N	L	8.5	A	0.184
							T	14.9	B	0.184
							R	188.3	F	1.245
						W	L	5.5	A	0.055
							T	0.0	A	0.047
							R	6.0	A	0.123
Total (2030)			698.3	NA	21.228	S	L	445.1	F	1.950
							T	545.2	F	1.950
							R	2264.1	F	5.881
						E	L	5.6	A	0.139
							T	0.0	A	0.219
							R	8.6	A	0.048
						N	L	822.1	F	2.698
							T	871.4	F	2.698
							R	9233.8	F	21.228
						W	L	5.5	A	0.055
							T	0.0	A	0.235
							R	12.5	B	0.477
Total (2035)			1896.4	NA	25.232	S	L	2296.6	F	6.062
							T	2358.0	F	6.062
							R	11009.7	F	25.232
						E	L	5.6	A	0.209
							T	0.0	A	0.333
							R	7.5	A	0.048
						N	L	5103.2	F	12.088
							T	5138.6	F	12.088
							R	10672.5	F	24.500
						W	L	5.5	A	0.064
							T	5.7	A	0.459
							R	159.7	F	1.294

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Background (2030)	PM	TWSC	14.9	NA	0.947	S	L	10.7	B	0.589
							T	33.0	D	0.589
							R	19.7	C	0.013
						E	L	5.5	A	0.006
							T	0.0	A	0.049
							R	6.4	A	0.001
						N	L	9.2	A	0.240
							T	20.3	C	0.240
							R	133.3	F	0.947
						W	L	5.5	A	0.066
							T	0.0	A	0.063
							R	6.0	A	0.233
Total (2030)			2778.3	NA	50.000	S	L	3381.5	F	8.453
							T	3449.2	F	8.453
							R	22128.3	F	50.000
						E	L	5.6	A	0.118
							T	0.0	A	0.291
							R	10.4	B	0.081
						N	L	6137.0	F	14.396
							T	2170.2	F	14.396
							R	4577.1	F	10.833
						W	L	5.5	A	0.063
							T	9.6	A	0.654
							R	266.4	F	1.556
Total (2035)			3919.8	NA	67.833	S	L	4647.7	F	11.285
							T	4691.1	F	11.285
							R	30127.4	F	67.833
						E	L	5.6	A	0.153
							T	0.0	A	0.349
							R	15.8	C	0.153
						N	L	7785.5	F	18.144
							T	7808.0	F	18.144
							R	5584.0	F	13.167
						W	L	5.5	A	0.077
							T	114.5	F	1.213
							R	968.2	F	3.126

Figure 28: Results of analysis: MR344 and Monte Cristo Road

The results of the analysis indicate that the intersection in its current format can not accommodate the total traffic demand for either the morning or afternoon peak hours for either the 2030 or 2035 scenarios and is totally oversaturated. This saturation can already be observed in both the AM and PM background 2030 scenarios and can in fact already be physically observed on site for the current 2025 AM and PM scenarios.

Mitigation measures would be required for the intersection.

4.4.3 Mitigation measures (2030 total scenario)

To accommodate the 2030 total scenario traffic demand through the intersection, traffic signals are required in conjunction with a geometric lane reconfiguration. The Hartenbos-North Traffic

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Modelling Report (SMEC, 2024) also concluded that a traffic signal is required at this intersection. The revised lane configuration changes the southern approach to a dedicated left turn lane, dedicated through lane and dedicated right turn lane, the western approach to a shared left and through lane, a dedicated through lane, and two dedicated right turn lanes and the eastern approach to a shared left and through lane, a dedicated through lane, and a dedicated right turn lane. This is required in order to accommodate the flows in the western right turn movement and the southern left turn movement while simultaneously allowing a southern left turn phase in conjunction with a right turn movement from the west. The geometry is shown in the figure below.

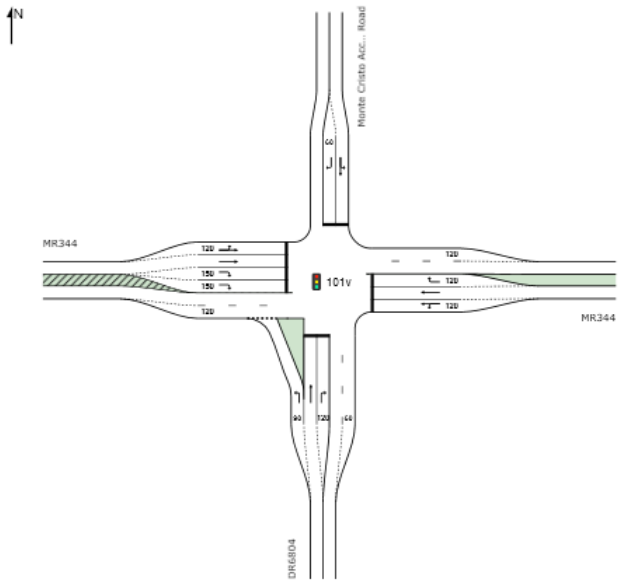

Figure 29: Total scenario 2030: MR344 and Monte Cristo Road

The results of the analysis conducted with traffic signals and the revised lane configuration, are indicated in the table below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2030)	AM	Traffic Signal	18.2	B	0.770	S	L	14.7	B	0.770
							T	28.2	C	0.146
							R	24.8	C	0.423
						E	L	21.3	C	0.449
							T	21.3	C	0.666
							R	25.3	C	0.127
						N	L	35.3	D	0.516
							T	29.8	C	0.516
							R	24.3	C	0.329
						W	L	20.8	C	0.256
							T	10.8	B	0.380
							R	17.6	B	0.503
Total (2030)	PM	Traffic Signal	37.0	D	0.895	S	L	14.6	B	0.434
							T	60.3	E	0.329
							R	54.6	D	0.859
						E	L	44.0	D	0.591
							T	51.0	D	0.877
							R	48.5	D	0.185
						N	L	75.3	E	0.875
							T	69.8	E	0.875
							R	41.4	D	0.159
						W	L	39.5	D	0.307
							T	14.5	B	0.456
							R	42.8	D	0.895

Figure 30: Results of analysis: Total scenario 2030: MR344 and Monte Cristo Road

The results of the analysis conducted with traffic signals and the revised lane configuration indicate that the intersection will operate at an acceptable LOS B and LOS D for the morning peak hour and afternoon peak hour respectively.

The traffic signal settings are attached to the report as addenda.

4.4.4 Mitigation measures (2035 total scenario)

To accommodate the 2035 total scenario traffic demand through the intersection, a further lane configuration upgrade will be required. This 2035 reconfiguration will entail the following: The revised lane configuration changes the southern approach to a double dedicated left turn lane, dedicated through lane and double dedicated right turn lane, the western approach to a dedicated left turn lane, a double dedicated through lane and a double dedicated right turn lane, the eastern approach to a dedicated left turn lane, a double dedicated through lane and a dedicated right turn lane.

For the 2035 total scenario, the section of MR344 between intersection 4 and 5 shall be upgraded to two through lanes in both directions as indicated on the diagram.

The geometry is shown in the figure below.

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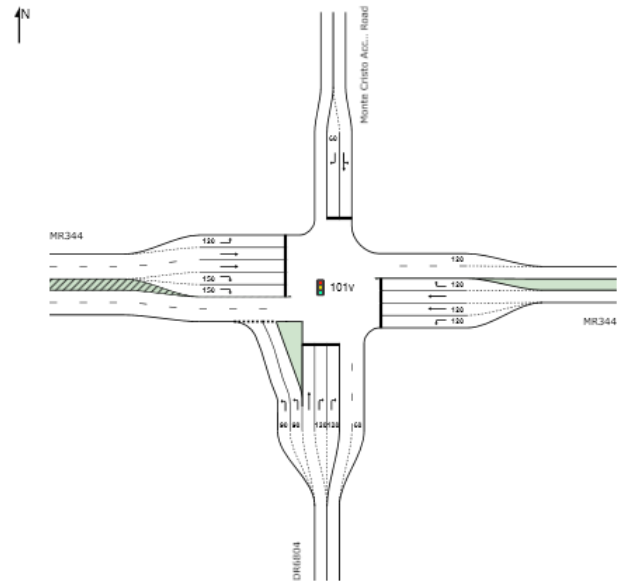

Figure 31: Total scenario 2035: MR344 and Monte Cristo Road

The results of the analysis conducted with traffic signals and the revised lane configuration, are indicated in the table below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2035)	AM	Traffic Signal	19.5	B	0.768	S	L	14.1	B	0.513
							T	28.5	C	0.210
							R	24.4	C	0.350
						E	L	19.6	B	0.502
							T	27.2	C	0.768
							R	28.7	C	0.150
						N	L	36.4	D	0.639
							T	30.8	C	0.639
							R	24.7	C	0.388
						W	L	17.3	B	0.152
							T	8.7	A	0.178
							R	18.6	B	0.669
Total (2035)	PM	Traffic Signal	42.2	D	0.994	S	L	13.6	B	0.350
							T	58.0	E	0.340
							R	68.0	E	0.994
						E	L	39.3	D	0.459
							T	72.3	E	0.951
							R	61.1	E	0.459
						N	L	74.6	E	0.884
							T	69.1	E	0.884
							R	46.9	D	0.261
						W	L	36.3	D	0.230
							T	9.1	A	0.394
							R	53.7	C	0.983

Figure 32: Results of analysis: Total scenario 2035: MR344 and Monte Cristo Road

The results of the analysis conducted with traffic signals and the revised lane configuration indicate that the intersection will operate at an acceptable LOS B and LOS D for the morning peak hour and afternoon peak hour respectively.

The traffic signal settings are attached to the report as addenda.

4.5 Intersection 5: N2 Western offramp and MR344

4.5.1 Existing geometry

The existing intersection geometry has a shared through and right lane in the western approach, a shared through and left lane in the eastern approach, and a shared left and right in the southern approach. The intersection is stop controlled from the south only. This geometry is shown in the figure below and was used to analyse the existing 2025, total 2030 and total 2035 scenarios for the intersection:

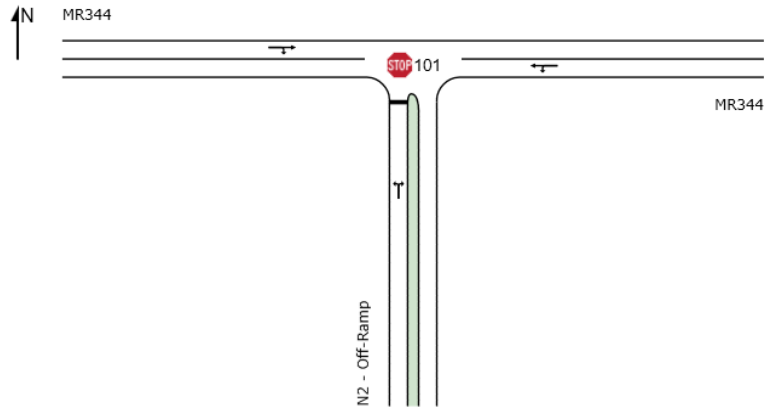

Figure 33: Existing Geometry: MR344 and N2 Western Off-Ramp

4.5.2 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Background (2030)	AM	SC	7.5	NA	0.602	S	L	18.7	C	0.602
							R	32.6	D	0.602
						E	L	5.6	A	0.363
							T	0.0	A	0.363
						W	T	6.8	A	0.562
							R	12.8	B	0.562
Total (2030)			2011.2	NA	10.580	S	L	8642.0	F	10.580
							R	8647.9	F	10.580
						E	L	5.7	A	0.645
							T	0.1	A	0.645
						W	T	728.6	F	1.788
							R	735.0	F	1.788
Total (2035)			36379.5	NA	112.236	S	L	100161.8	F	112.236
							R	100165.1	F	112.236
						E	L	7.0	A	0.960
							T	1.8	A	0.960
						W	T	59570.2	F	67.126
							R	59575.7	F	67.126
Background (2030)	PM	SC	14.4	NA	0.930	S	L	63.4	F	0.930
							R	95.4	F	0.930
						E	L	5.6	A	0.296
							T	0.0	A	0.296
						W	T	7.6	A	0.744
							R	14.0	B	0.744
Total (2030)			27663.9	NA	113.952	S	L	101701.2	F	113.952
							R	101704.0	F	113.952
						E	L	5.6	A	0.614
							T	0.1	A	0.614
						W	T	1177.0	F	2.296
							R	1183.5	F	2.296
Total (2035)			60881.4	NA	216.821	S	L	194267.5	F	216.821
							R	194268.8	F	216.821
						E	L	5.8	A	0.784
							T	0.3	A	0.784
						W	T	8387.8	F	10.309
							R	8393.5	F	10.309

Figure 34: Results of analysis: MR344 and N2 Western Off-Ramp

The results of the analysis clearly indicate that the intersection in its current format can not accommodate the total traffic demand for either the morning or afternoon peak hours for either of the 2030 or 2035 scenarios. The southern approach is significantly over capacity on all movements and is totally oversaturated. Mitigation measures would be required for the intersection.

4.5.3 Mitigation measures (2030 total scenario)

To accommodate the 2030 total scenario through the intersection, traffic signals are required in conjunction with a geometric upgrades. The Hartenbos-North Traffic Modelling Report (SMEC, 2024) also concluded that a traffic signal is required at this intersection. The geometric upgrades will be as follows: Dedicated double through lane and dedicated right turn lane from the west, a

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dedicated left turn lane and a dedicated double through lane on the east and a dedicated left turn lane and dedicated double right turn lane from the south. The geometry is shown in the figure below.

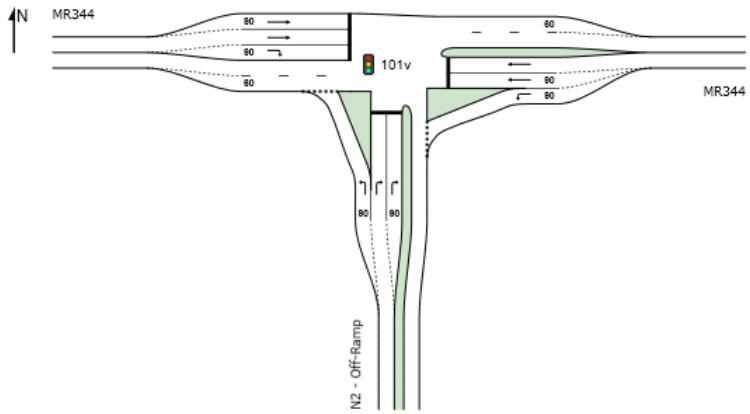

Figure 35: Proposed mitigation: Total 2030 scenario: MR 344 and N2 Western Off-Ramp

The results of the analysis conducted with traffic signals and the new lane configuration, are indicated in the table below:

Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2030)	AM	Traffic Signal	18.3	B	0.878	S	L	10.8	B	0.057
							R	31.4	C	0.854
						E	L	7.9	A	0.322
							T	22.3	C	0.878
						W	T	5.4	A	0.252
							R	20.3	C	0.798
Total (2030)	PM	Traffic Signal	38.8	D	0.950	S	L	12.0	B	0.059
							R	59.4	E	0.950
						E	L	13.2	B	0.355
							T	45.0	D	0.893
						W	T	14.5	B	0.487
							R	61.0	E	0.934

Figure 36: Results of analysis: Total signalised 2030 scenario: N2 Western Off-Ramp and MR 344

The results of the analysis conducted with traffic signals and the revised lane configuration indicate that the intersection will operate at an acceptable LOS B and LOS D for the morning peak hour and afternoon peak hour respectively.

The traffic signal settings are attached to the report as addenda.

4.5.4 Mitigation measures (2035 total scenario)

To accommodate the 2035 total scenario through the intersection, further geometric upgrades are required. The geometry for the 2035 scenario will be as follows: Dedicated double through lane

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and dedicated double right turn lane from the west, a dedicated left turn lane and a dedicated double through lane on the east and a dedicated left turn lane and dedicated double right turn lane from the south.

For the 2035 total scenario, the section of MR344 between intersection 4 and 5 shall be upgraded to two through lanes in both directions as indicated on the diagram.

The geometry is shown in the figure below.

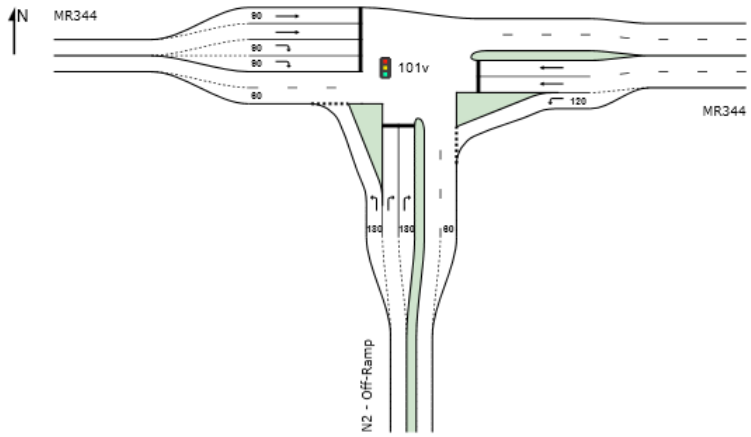

Figure 37: Proposed mitigation: Total 2035 scenario: MR 344 and N2 Western Off-Ramp

The results of the analysis conducted with traffic signals and the new lane configuration, are indicated in the table below:

Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2035)	AM	Traffic Signal	21.7	C	0.877	S	L	14.9	B	0.082
							R	43.6	D	0.865
						E	L	9.2	A	0.521
							T	22.7	C	0.877
						W	T	5.0	A	0.201
							R	29.0	C	0.853
Total (2035)	PM	Traffic Signal	41.8	D	0.987	S	L	16.3	B	0.078
							R	64.8	E	0.932
						E	L	11.3	B	0.412
							T	49.0	D	0.936
						W	T	14.3	B	0.445
							R	64.9	E	0.987

Figure 38: Results of analysis: Total signalised 2035 scenario: N2 Western Off-Ramp and MR 344

The results of the analysis conducted with traffic signals and the revised lane configuration indicate that the intersection will operate at an acceptable LOS C and LOS D for the morning peak hour and afternoon peak hour respectively.

The traffic signal settings are attached to the report as addenda.

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4.6 Intersection 6: N2 Eastern offramp and DR6804

4.6.1 Existing geometry

This existing large diameter traffic circle geometry has single approach and departure lanes in all directions except for the western approach and the northern departure which has a dedicated left turn lane for the large movement of traffic from the freeway. This geometry is shown in the figure below and was used to analyse the existing 2025, total 2030 and total 2035 scenarios for the intersection:

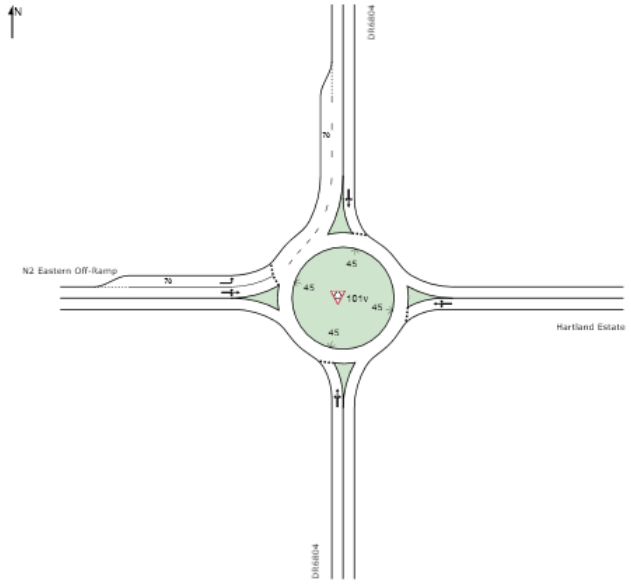

Figure 39: Existing Geometry: N2 Eastern Off-Ramp and DR6804

4.6.2 Analysis

The results of the analysis are shown in tabular format below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Background (2030)	AM	Traffic Circle	4.5	A	0.153	S	L	3.2	A	0.072
							T	2.3	A	0.072
							R	9.8	A	0.072
						E	L	3.4	A	0.002
							T	2.5	A	0.002
							R	10.0	A	0.002
						N	L	2.9	A	0.105
							T	2.1	A	0.105
							R	9.5	A	0.105
						W	L	3.2	A	0.153
							T	2.2	A	0.153
							R	9.7	A	0.153
Total (2030)			6.5	A	0.369	S	L	8.6	A	0.164
							T	7.7	A	0.164
							R	15.2	B	0.164
						E	L	5.1	A	0.369
							T	4.3	A	0.369
							R	11.8	B	0.369
						N	L	3.1	A	0.311
							T	2.2	A	0.311
							R	9.7	A	0.311
						W	L	4.1	A	0.270
							T	3.2	A	0.270
							R	10.7	B	0.270
Total (2035)			27.3	C	1.096	S	L	190.8	F	1.096
							T	189.9	F	1.096
							R	197.4	F	1.096
						E	L	33.6	C	0.960
							T	32.7	C	0.960
							R	40.2	D	0.960
						N	L	3.4	A	0.521
							T	2.6	A	0.521
							R	10.1	B	0.521
						W	L	5.8	A	0.479
							T	5.0	A	0.479
							R	12.5	B	0.479

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Background (2030)	PM	Traffic Circle	5.3	A	0.182	S	L	3.6	A	0.076
							T	2.7	A	0.076
							R	10.2	B	0.076
						E	L	4.0	A	0.002
							T	3.2	A	0.002
							R	10.7	B	0.002
						N	L	3.0	A	0.182
							T	2.1	A	0.182
							R	9.6	A	0.182
						W	L	3.1	A	0.154
							T	2.2	A	0.154
							R	9.7	A	0.154
Total (2030)			6.9	A	0.665	S	L	9.5	A	0.183
							T	8.7	A	0.183
							R	16.2	B	0.183
						E	L	8.7	A	0.298
							T	7.8	A	0.298
							R	15.3	B	0.298
						N	L	3.9	A	0.665
							T	3.0	A	0.665
							R	10.5	B	0.665
						W	L	3.6	A	0.331
							T	2.7	A	0.331
							R	10.2	B	0.331
Total (2035)			31.9	C	1.078	S	L	19.6	B	0.404
							T	18.7	B	0.404
							R	26.2	C	0.404
						E	L	34.3	C	0.837
							T	33.6	C	0.837
							R	41.1	D	0.837
						N	L	47.0	D	1.078
							T	46.2	D	1.078
							R	53.7	E	1.078
						W	L	4.3	A	0.519
							T	3.5	A	0.519
							R	11.0	B	0.519

Figure 40: Results of analysis: N2 Eastern Off-Ramp and DR6804

The results of the analysis conducted indicate that the traffic circle will operate at an acceptable LOS A for both the AM and PM peak hours for the 2030 total scenario.

The results of the analysis for the 2035 total scenario however concluded that the traffic circle will operate at a v/c of more than 1 for both the AM and PM peak hours and hence will require upgrading at approximately the 2035 calendar year, depending on the rate of development in the study area.

4.6.3 Mitigation measures: Total 2030 scenario

No mitigation measures are required for the 2030 total scenario.

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4.6.4 Mitigation measures: Total 2035 scenario

To accommodate the 2035 total scenario through the traffic circle, geometric upgrades will be required to the traffic circle. The geometry for the 2035 scenario will require an additional circulation lane to the inside of the existing lane and additional short approach lanes on the northern and eastern approaches. The geometry is shown in the figure below.

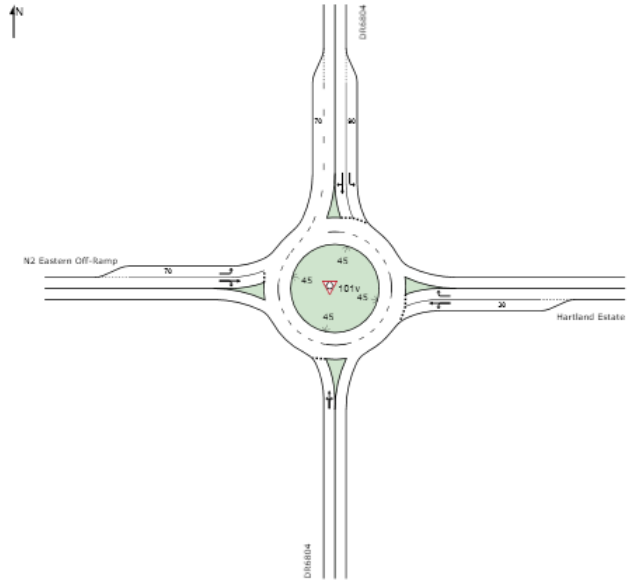

Figure 41: Proposed 2035 upgraded geometry: N2 Eastern Off-Ramp and DR6804

The results of the analysis, conducted with the upgraded traffic circle configuration, are indicated in the table below:

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Scenario	Peak Hour	Intersection Control	Intersection Avg Delay (s)	Intersection LOS	Intersection v/c	Critical Approach				
						Approach	Movement	Delay	LOS	v/c
Total (2035)	AM	Traffic Signal	7.6	A	0.515	S	L	13.0	B	0.362
							T	12.2	B	0.362
							R	19.7	B	0.362
						E	L	8.0	A	0.515
							T	7.1	A	0.515
							R	13.6	B	0.433
						N	L	3.3	A	0.159
							T	2.5	A	0.360
							R	10.0	A	0.360
						W	L	3.0	A	0.335
							T	4.4	A	0.125
							R	11.8	B	0.125
Total (2035)	PM	Traffic Signal	7.4	A	0.613	S	L	10.3	B	0.261
							T	9.5	A	0.261
							R	17.0	B	0.261
						E	L	12.7	B	0.436
							T	11.8	B	0.436
							R	18.2	B	0.378
						N	L	4.3	A	0.454
							T	3.7	A	0.613
							R	11.2	B	0.613
						W	L	3.0	A	0.435
							T	3.1	A	0.203
							R	10.5	B	0.203

Figure 42: Results of analysis: Upgraded intersection 2035: N2 Eastern Off-Ramp and DR6804

The results of the analysis conducted for the upgraded traffic circle for the 2035 total year indicate that the traffic circle will operate at an acceptable LOS A for both the AM and PM peak hours.

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5. SALIENT MATTERS

A number of salient issues are addressed below and shall also considered in parallel to all relevant approved documentation and applicable legislation:

5.1 Public transport

Off-street public transport stops (bus stops) to be provided for both directions at both accesses onto the MR344. It is also proposed that minibus-taxi turn-around facilities be provided at both access gates.

5.2 Emergency vehicle facilities

The necessary attention shall be provided to the design of emergency vehicle access, parking and other facilities at the medical development.

5.3 Non-motorised transport

Sufficient pedestrian walkways shall be provided on the SDP of the development, also linking to the public transport facilities on the MR344.

5.4 Parking

Sufficient parking, in line with all guidelines, shall be provided on the SDP of the development. Parking shall be provided for disabled persons at all public and/or commercial facilities.

5.5 School drop-off zones

Detailed attention shall be provided on the SDP to the peak hour drop-off circulation surrounding the school. The school shall be situated independently from other facilities in order for peak hour traffic to be handled as efficiently as possible. This is in order to attain the highest possible level of service in the surrounds of the school from a traffic engineering perspective. Drop off parking shall be specially designed to function as efficiently as possible in line with best practice guidelines and shall be designed by a competent traffic and transportation engineer.

5.6 Refuse removal

Refuse removal shall be performed by the Mossel Bay Municipality in accordance with a signed services agreement. Access for municipal refuse removal vehicles shall be properly designed into the SDP to the satisfaction and approval of the municipality.

5.7 Contractor’s Access

Contractor’s access shall be separate from the main access facilities.

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5.8 Cost apportionment for intersection upgrades

The Hartenbos-North Traffic Modelling Report (SMEC, 2024) was commissioned by the Mossel Bay Municipality to a.o. develop a cost apportionment model for the various intersection upgrades required in the Hartenbos-North study area. This Traffic Modelling Report was approved by council in May 2024. As such, the cost apportionment model and the role-out of the 30-year master-plan contained therein shall be implemented.

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6. CONCLUSIONS

The following conclusions can be made from the Traffic Impact Assessment (TIA) report for the proposed development of Hartland II Estate development:

1. The purpose of this TIA is to assess the traffic impact of the proposed development on the adjacent road network;
2. The locality and layout are presented in the report;
3. The proposed land use is presented in the report;
4. The TIA incorporates the Hartenbos-North Traffic Modelling Report (SMEC, 2024). The Hartenbos-North Traffic Modelling Report was approved by Mossel Bay Municipality council in May 2024. The Traffic Modelling Report provides a 30-year master-plan for the Hartenbos-North area in terms of traffic growth and proposed road network improvements.
5. A number of other approved development rights in close proximity to this development were considered in this TIA and are discussed in the report;
6. Primary access to the estate will be obtained from the MR344 (R102) at approximately chainage km2.763 opposite the existing formal Hartland Lifestyle Estate access (Kasuur Street) intersection. Secondary access s to the estate will be obtained from the MR344 (R102) at approximately chainage km2.223 opposite the existing plant nursery.
7. Sight distances at both accesses to the development are excellent in all directions in both the horizontal and vertical alignments.
8. Both access points are aligned with the access points prescribed in the Hartenbos North Traffic Modelling Report.
9. The study area includes the following intersections, all as per the Hartenbos-North Traffic Modelling Report:
    a. Intersection 1: MR344(R102)/Kasuur Street: Access to Hartland II and Hartland
    b. Intersection 2: MR344(R102): Secondary access to Hartland II and Plant Nursery
    c. Intersection 3: MR344(R102): Access to Garden Walk and New Vintage
    d. Intersection 4: MR344(R102)/Monte Christo Rd
    e. Intersection 5: MR344(R102)/N2 interchange
    f. Intersection 6: DR6804/N2 interchange/Hartland access
10. Traffic Volumes:
    a. Existing background 2025 traffic is indicated in the annexures.
    b. The development forms part of a wider area identified for further development between Hartenbos and Klein Brak River and various approved development rights exist in the area. It is hence expected that the area will develop at an above average growth rate. In accordance with all of the above, the area is classified as an above average growth area according to the table above and a growth rate of 4% per annum will be applied.
    c. Two horizon year periods of respectively 5 and 10 years will be used to determine the impact of the proposed Hartland II Estate on the surrounding road network. The resulting 2030 and 2035 future background traffic is indicated in the annexures.
    d. The trip generation rates for the proposed development were determined in accordance with the TMH 17 South African Trip Data Manual as well as the Institute of Transportation Engineers' Trip Generation Manual. Trip generation is presented in the report.

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e. An origin-destination matrix was compiled in order to assess and estimate the peak hour trip distribution percentages on the immediate road network considering the two estate accesses and the regional trip distribution. The trip distribution on the immediate road network and the intersections under consideration is presented in the annexures;
f. The development traffic for the proposed development is presented in the annexures;
g. The consideration of the adjacent developments' traffic growth figures is discussed and presented in the report for the two future scenarios, i.e. 2030 and 2035.
h. The total future traffic volumes for the intersections under investigation is presented in the annexures.

11. A capacity analysis was performed for the weekday AM and PM peak hours for the existing background 2025, future background 2030, total future 2030 and total future 2035 scenarios. The capacity analysis was performed using the Sidra Intersection 8.0 software to compare the traffic impact of the development against the background traffic. The Sidra results for each intersection are discussed in the report and the detailed Sidra results are included in the annexures. Mitigation measures were designed and analysed where the current intersection configuration could not accommodate the total future traffic conditions. The analysis concluded the following:
    a. Intersection 1 (MR344 and Kasuur Street):
        i. The existing intersection geometry has a dedicated right turn lane and dedicated through lane in the western approach, a shared through and left lane in the eastern approach, and a shared right and left lane in the southern approach. The intersection is stop controlled from the south.
        ii. The development of Hartland II provides for a new northern leg to the intersection. The proposed geometry of this new intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a shared right and left lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach. The intersection is stop controlled from the sides (north and south).
        iii. The results of the analysis indicate that the northern right turn movement from the Hartland II development can not be accommodated through the intersection in any of the four future scenarios and that that movement will operate at a v/c ratio of significantly more than 1 and a LOS F for all four scenarios.
        iv. The analysis indicates that the Hartland II development will trigger the requirement of a traffic signal at this intersection.
        v. A traffic signal at this intersection is in line with the Hartenbos-North Traffic Modelling Report (SMEC, 2024).
        vi. The proposed geometry of this new signalised intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach.
        vii. The results of the analysis conducted with traffic signals indicate that the intersection will operate at an acceptable LOS C (or better) for all four the peak hour scenarios.
        viii. The traffic signal settings are attached to the report as addenda.

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b. Intersection 2: MR344 and Hartland II Access / Plant Nursery
    i. The existing geometry provides for a gravel access to the Plant Nursery in the south with a shared lane in both the western and eastern approaches of the MR344. The intersection is stop controlled from the south. The current intersection with the gravel nursery access has not been analysed as it essentially provides for freeflow conditions on the MR344 and hence a LOS A;
    ii. The development of Hartland II provides for a new northern leg to the intersection as well as the formalisation of the existing southern leg. The proposed geometry of this new intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach.
    iii. The results of the analysis indicate that the northern right turn movement from the Hartland II development can not be accommodated through the intersection in any of the four future scenarios and that that movement will operate at a v/c ratio of significantly more than 1 and a LOS F for all four scenarios. In addition, the southern approach right turn movement from the nursery will operate at a LOS F for the 2035 scenario for both peak hours.
    iv. The analysis indicates that the Hartland II development will trigger the requirement of a traffic signal at this intersection.
    v. A traffic signal at this intersection is in line with the Hartenbos-North Traffic Modelling Report (SMEC, 2024).
    vi. The proposed geometry of this new signalised intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach.
    vii. The results of the analysis conducted with traffic signals indicate that the intersection will operate at an acceptable LOS B for all four the peak hour scenarios.
    viii. The traffic signal settings are attached to the report as addenda.
c. Intersection 3: MR344 and Garden Walk / New Vintage
    i. The existing geometry provides for a gravel access to the farms on both the southern and northern side. This current intersection has not been analysed as it essentially provides for freeflow conditions on the MR344 and hence a LOS A.
    ii. For the 2030 total scenario, the Garden Walk shopping centre on the southern leg of this intersection will be in operation. It is also anticipated, as discussed, that for the 2030 total scenario, the development of New Vintage Residential Estate will be ongoing. This will provide for a northern leg to the intersection.
    iii. The geometry of this intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern

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approach. The intersection is stop controlled from the side roads (north and south).

iv. The results of the analysis indicate that for the 2030 PM peak hour, both the right turn movements from north and south, can not be accommodated through the intersection and that the movement will operate at a v/c ratio of significantly more than 1 and a LOS F.

v. The results of the analysis indicate that for the 2035 AM and PM peak hours, both the right turn and through movements from north and south, can not be accommodated through the intersection and that these movements will operate at a v/c ratio of significantly more than 1 and a LOS F.

vi. The analysis indicates that the total 2030 and 2035 scenarios will trigger the requirement of a traffic signal at this intersection.

vii. The proposed geometry of this new signalised intersection has a dedicated right turn lane and shared through and left turn lane in the western approach, a dedicated right turn lane and shared through and left turn lane in the eastern approach, a dedicated right turn lane and shared through and left turn lane in the southern approach, and a dedicated right turn lane and shared through and left turn lane in the northern approach.

viii. The results of the analysis conducted with traffic signals indicate that the intersection will operate at an acceptable LOS B for the first three scenarios and at an acceptable LOS C for the 2035 PM peak hour scenario.

ix. The traffic signal settings are attached to the report as addenda.

d. Intersection 4 (MR344 and Monte Cristo Road):

i. The existing intersection geometry has dedicated left, through and right lanes from both the eastern and western approaches. The northern and southern approaches have shared left and through lanes with dedicated right turn lanes. The intersection is side road stop controlled from the south and north.

ii. The results of the analysis indicate that the intersection in its current format can not accommodate the total traffic demand for either the morning or afternoon peak hours for either the 2030 or 2035 scenarios and is totally oversaturated. This saturation can already be observed in both the AM and PM background 2030 scenarios and can in fact already be physically observed on site for the current 2025 AM and PM scenarios.

iii. To accommodate the 2030 total scenario traffic demand through the intersection, traffic signals are required in conjunction with a geometric lane reconfiguration.

iv. The Hartenbos-North Traffic Modelling Report (SMEC, 2024) also concluded that a traffic signal is required at this intersection.

v. The revised lane configuration for the 2030 scenario changes the southern approach to a dedicated left turn lane, dedicated through lane and dedicated right turn lane, the western approach to a shared left and through lane, a dedicated through lane, and two dedicated right turn lanes and the eastern approach to a shared left and through lane, a dedicated through lane, and a dedicated right turn lane.

vi. The results of the 2030 analysis conducted with traffic signals and the revised lane configuration indicate that the intersection will operate at an acceptable

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LOS B and LOS D for the 2030 morning peak hour and afternoon peak hour respectively.

vii. The traffic signal settings for the 2030 scenario are attached to the report as addenda.

viii. To accommodate the 2035 total scenario traffic demand through the intersection, a further lane configuration upgrade will be required. This 2035 reconfiguration will entail the following: The revised lane configuration changes the southern approach to a double dedicated left turn lane, dedicated through lane and double dedicated right turn lane, the western approach to a dedicated left turn lane, a double dedicated through lane and a double dedicated right turn lane, the eastern approach to a dedicated left turn lane, a double dedicated through lane and a dedicated right turn lane.

ix. For the 2035 total scenario, the section of MR344 between intersection 4 and 5 shall be upgraded to two through lanes in both directions.

x. The results of the 2035 analysis conducted with traffic signals and the revised lane configuration indicate that the intersection will operate at an acceptable LOS B and LOS D for the 2035 morning peak hour and afternoon peak hour respectively.

xi. The traffic signal settings for the 2035 scenario are attached to the report as addenda.

e. Intersection 5 (N2 Western offramp and MR344):

i. The existing intersection geometry has a shared through and right lane in the western approach, a shared through and left lane in the eastern approach, and a shared left and right in the southern approach. The intersection is stop controlled from the south only.

ii. The results of the analysis clearly indicate that the intersection in its current format can not accommodate the total traffic demand for either the morning or afternoon peak hours for either of the 2030 or 2035 scenarios. The southern approach is significantly over capacity on all movements and is totally oversaturated.

iii. To accommodate the 2030 total scenario through the intersection, traffic signals are required in conjunction with a geometric upgrades.

iv. The Hartenbos-North Traffic Modelling Report (SMEC, 2024) also concluded that a traffic signal is required at this intersection.

v. The geometric upgrades will be as follows: Dedicated double through lane and dedicated right turn lane from the west, a dedicated left turn lane and a dedicated double through lane on the east and a dedicated left turn lane and dedicated double right turn lane from the south.

vi. The results of the 2030 analysis conducted with traffic signals and the revised lane configuration indicate that the intersection will operate at an acceptable LOS B and LOS D for the morning peak hour and afternoon peak hour respectively.

vii. The traffic signal settings for the 2030 scenario are attached to the report as addenda.

viii. To accommodate the 2035 total scenario through the intersection, further geometric upgrades are required. The geometry for the 2035 scenario will be as follows: Dedicated double through lane and dedicated double right turn lane from

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the west, a dedicated left turn lane and a dedicated double through lane on the east and a dedicated left turn lane and dedicated double right turn lane from the south.

ix. For the 2035 total scenario, the section of MR344 between intersection 4 and 5 shall be upgraded to two through lanes in both directions as indicated on the diagram.

x. The results of the 2035 analysis conducted with traffic signals and the revised lane configuration indicate that the intersection will operate at an acceptable LOS C and LOS D for the morning peak hour and afternoon peak hour respectively.

xi. The traffic signal settings for the 2035 scenario are attached to the report as addenda.

f. Intersection 6 (N2 Eastern offramp and DR6804):

i. This existing large diameter traffic circle geometry has single approach and departure lanes in all directions except for the western approach and the northern departure which has a dedicated left turn lane for the large movement of traffic from the freeway.

ii. The results of the analysis conducted indicate that the traffic circle will operate at an acceptable LOS A for both the AM and PM peak hours for the 2030 total scenario.

iii. The results of the analysis for the 2035 total scenario however concluded that the traffic circle will operate at a v/c of more than 1 for both the AM and PM peak hours and hence will require upgrading at approximately the 2035 calendar year, depending on the rate of development in the study area.

iv. To accommodate the 2035 total scenario through the traffic circle, geometric upgrades will be required to the traffic circle. The geometry for the 2035 scenario will require an additional circulation lane to the inside of the existing lane and additional short approach lanes on the northern and eastern approaches.

v. The results of the analysis conducted for the upgraded traffic circle for the 2035 total year indicate that the traffic circle will operate at an acceptable LOS A for both the AM and PM peak hours.

12. Salient matters

a. Public transport: Off-street public transport stops (bus stops) to be provided for both directions at both accesses onto the MR344. It is also proposed that minibus-taxi turn-around facilities be provided at both access gates.

b. Emergency vehicle facilities: The necessary attention shall be provided to the design of emergency vehicle access, parking and other facilities at the medical development.

c. Non-motorised transport: Sufficient pedestrian walkways shall be provided on the SDP of the development, also linking to the public transport facilities on the MR344

d. Parking: Sufficient parking, in line with all guidelines, shall be provided on the SDP of the development. Parking shall be provided for disabled persons at all public and/or commercial facilities

e. School drop-off zones: Detailed attention shall be provided on the SDP to the peak hour drop-off circulation surrounding the school. The school shall be situated independently from other facilities in order for peak hour traffic to be handled as efficiently as possible. This is in order to attain the highest possible level of service in the surrounds of the school from a traffic engineering perspective. Drop off parking shall be specially

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designed to function as efficiently as possible in line with best practice guidelines and shall be designed by a competent traffic and transportation engineer.

f. Refuse removal: Refuse removal shall be performed by the Mossel Bay Municipality in accordance with a signed services agreement. Access for municipal refuse removal vehicles shall be properly designed into the SDP to the satisfaction and approval of the municipality
g. Contractor's Access: Contractor's access shall be separate from the main access facilities
h. Cost apportionment for intersection upgrades: The Hartenbos-North Traffic Modelling Report (SMEC, 2024) was commissioned by the Mossel Bay Municipality to a.o. develop a cost apportionment model for the various intersection upgrades required in the Hartenbos-North study area. This Traffic Modelling Report was approved by council in May 2024. As such, the cost apportionment model and the role-out of the 30-year master-plan contained therein shall be implemented.

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7. RECOMMENDATIONS

In line with the conclusions above, the following is recommended:

1. That the proposed development of Hartland II Estate development be approved from a traffic engineering perspective.
2. That all conclusions contained in the report be implemented in accordance with the relevant design standards and legislation and all designs be performed by a competent traffic and transportation engineer;
3. That all conclusions contained in the report be implemented in accordance with a phased programme, in line with the growth of the development (and adjacent developments), to be negotiated with the relevant authorities.

ANNEXURE A: SITE DEVELOPMENT PLAN

Rev.	Date	Description	Rev by
A	21/05/2025	FOR SERVICES REPORT	MP

ELEMENT Consulting Engineers
A FIFTH DIMENSION TO ENGINEERING

82 Victoria Street, George, 6530
P O Box 9962, George, 6529
Tel: +27 44 884 1138
Fax: +27 44 884 1185
E-Mail: info@eceng.co.za

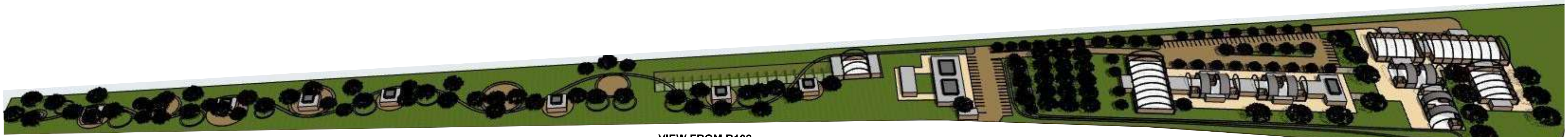
Client/Employer: DALMAR 1973

Project: SUID-KAAP LANDGOED
PORTION OF FARM 219, VAALE VALLEI

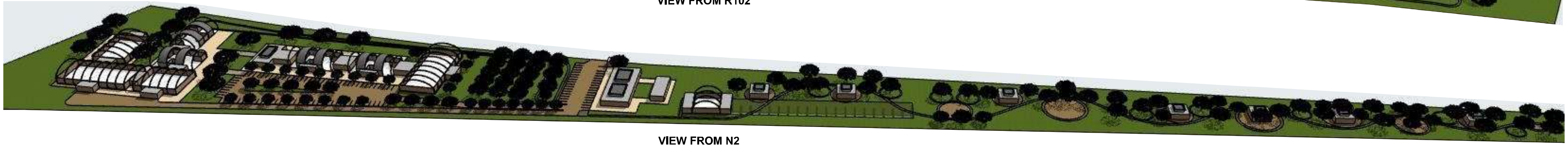
Plan Description: ROADS LAYOUT

	Name	Signature
Designed	MP	
Drawn	MP	
Checked	HL	
Approved	HL	
Pr. No.		

Scale: 1:2000
ORIGINAL SIZE A1
Contract No.: 24006
Drawing No.: 24006/C/R01
Revision: A



VIEW FROM R102



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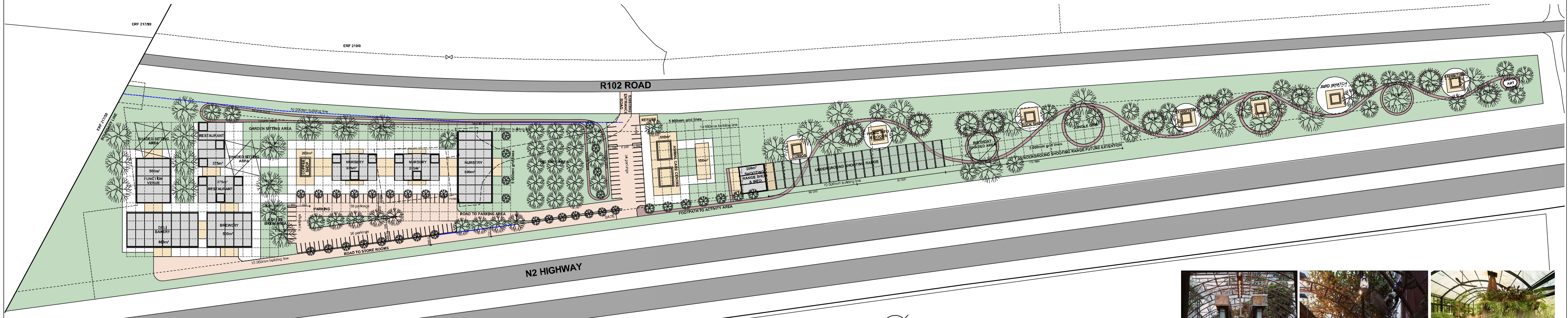


SITE DEVELOPMENT PLAN

1:750

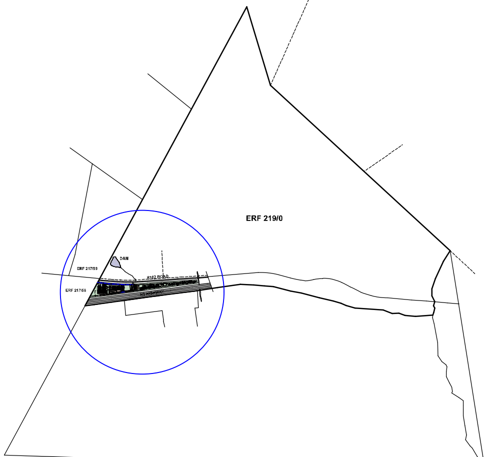
BUILDING AREAS PLUS PARKING REQUIREMENTS:
RESTAURANT: 750m² = 2 / 100m² = 15
FUNCTION AREA: 500m² = 2 / 100m² = 10
DELI & BAKERY: 800m² = 2 / 100m² = 16
BREWERY: 500m² = 2 / 100m² = 10
NURSERY: 1 550m² – 2 / 100m² – 31
COFFEE SHOP: 200m² = 2 / 100m² = 4
ANIMAL CARE CENTRE: 550m² = 2 / 100m² = 11
SHOOTING RANGE BUILDING: 200m² = 2/100m² = 4
CURIOS, EXHIBITION ETC. 7 x SMALL BUILDINGS = 700m² = 2/100m² = 14

TOTAL PARKINGS REQUIRED: 115
ACTUAL PARKINGS ALLOWED: 115

PROPOSED RESTAURANT, DELI AND BREWERY INTERIOR

SITE LOCATION PLAN

1:15 000



PROPOSED COFFEE SHOP INTERIOR AND NURSERY SHADING

VIEW FROM NEW MALL

OWNER SIGN	RPOFFESSIONAL SIGN

NO.	DATE	REVISIONS

DRAWING STATUS
CONCEPT DRAWING

PROJECT TITLE
NEW DEVELOPMENT ON REMAINDER OF FARM VAALE VALLEY NR. 219, HARTENBOS

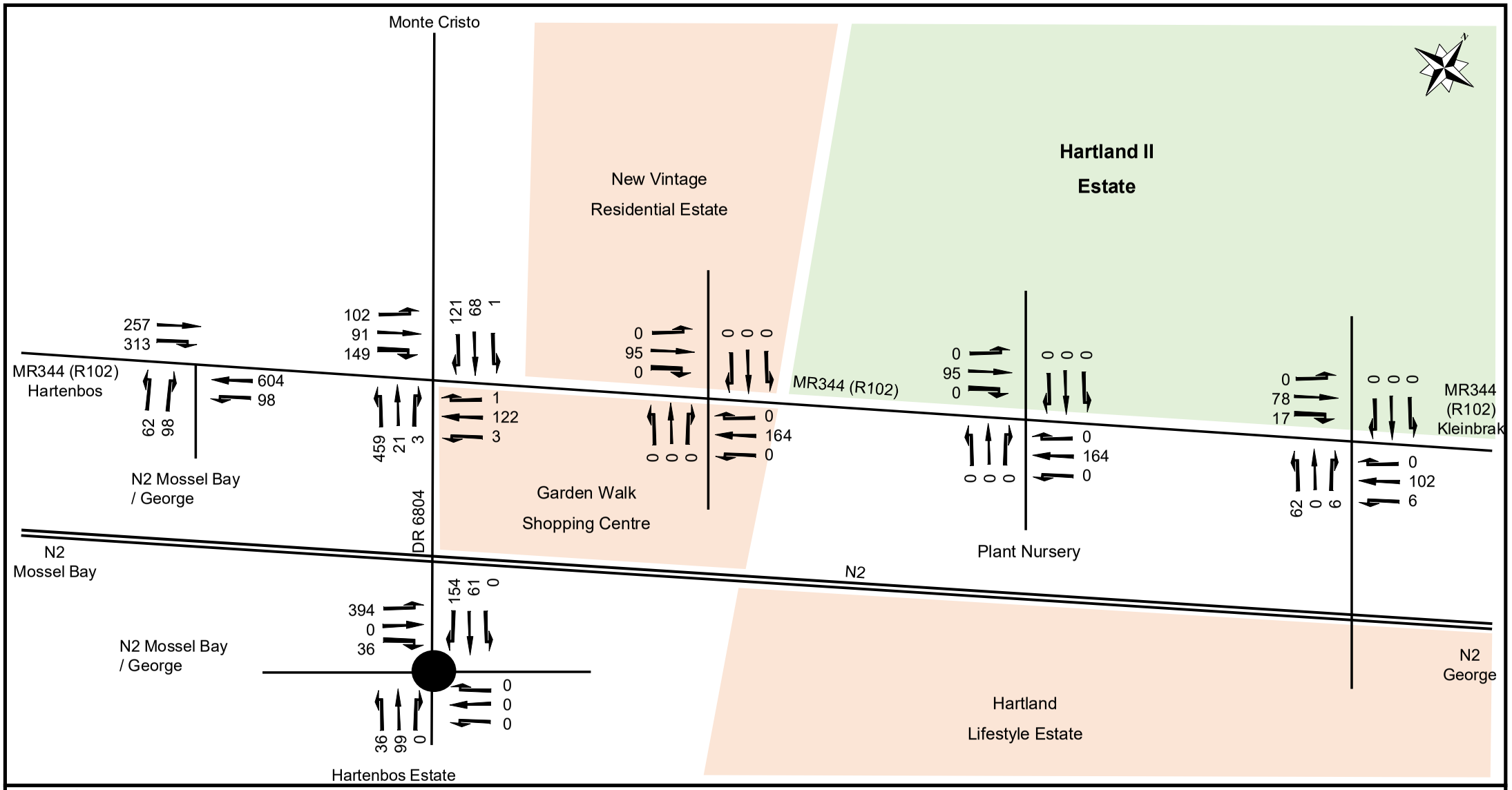
DRAWING DESCRIPTION
SITE DEVELOPMENT PLAN AND PERSPECTIVES

SCALE	As shown
DATE	November 2025
ISSUED	03 November 2025
PROFESSIONAL	Yolanda Hamilton

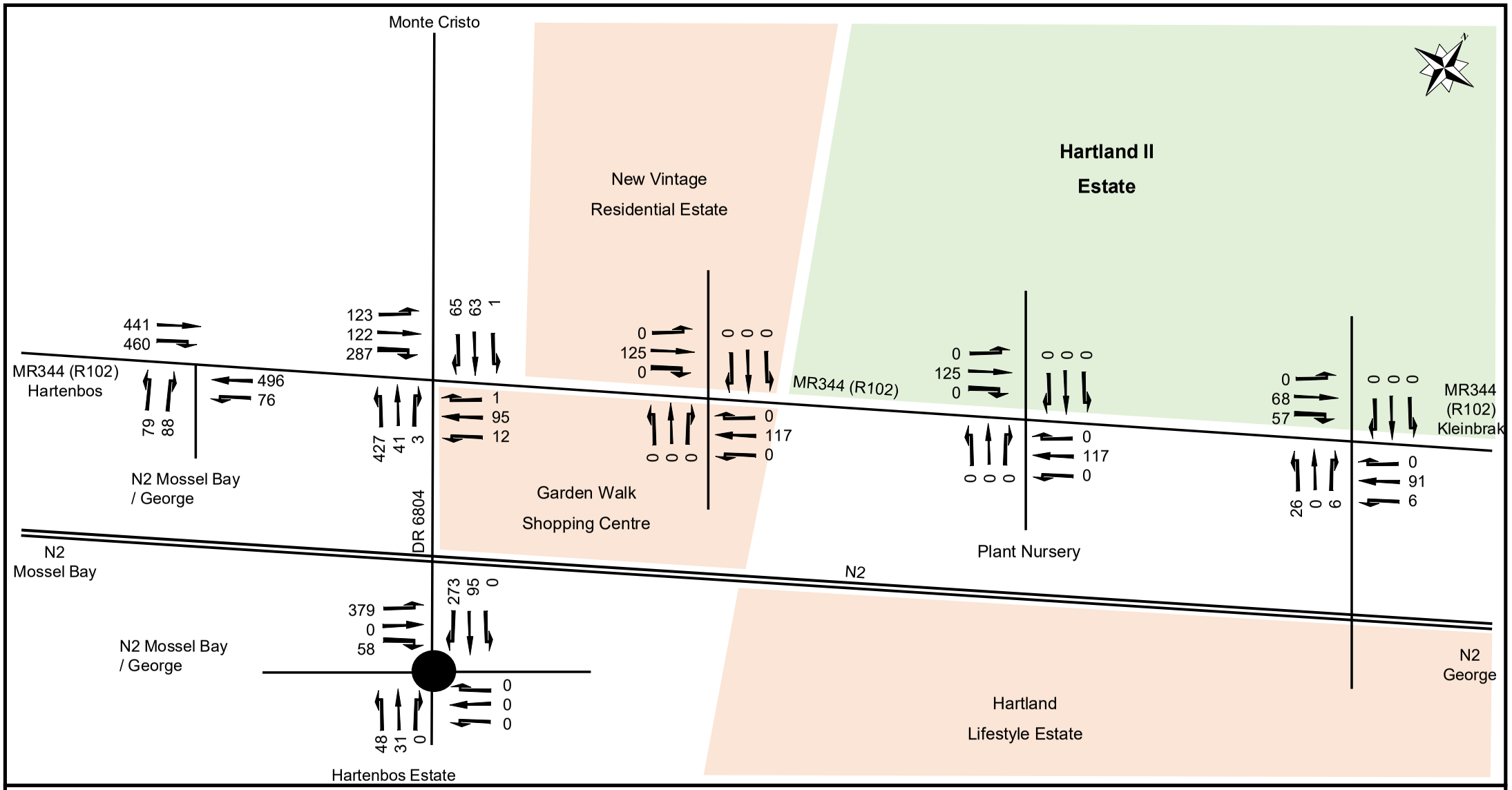
YOLANDA HAMILTON , ASH STREET, HEATHER PARK, GEORGE , PSAT 20994
ATRIO DESIGNS PTY LTD.

PROJECT NO:	DRAWING NO:	REVISION:	PAPER SIZE:
AT 140	C-001	03	A0

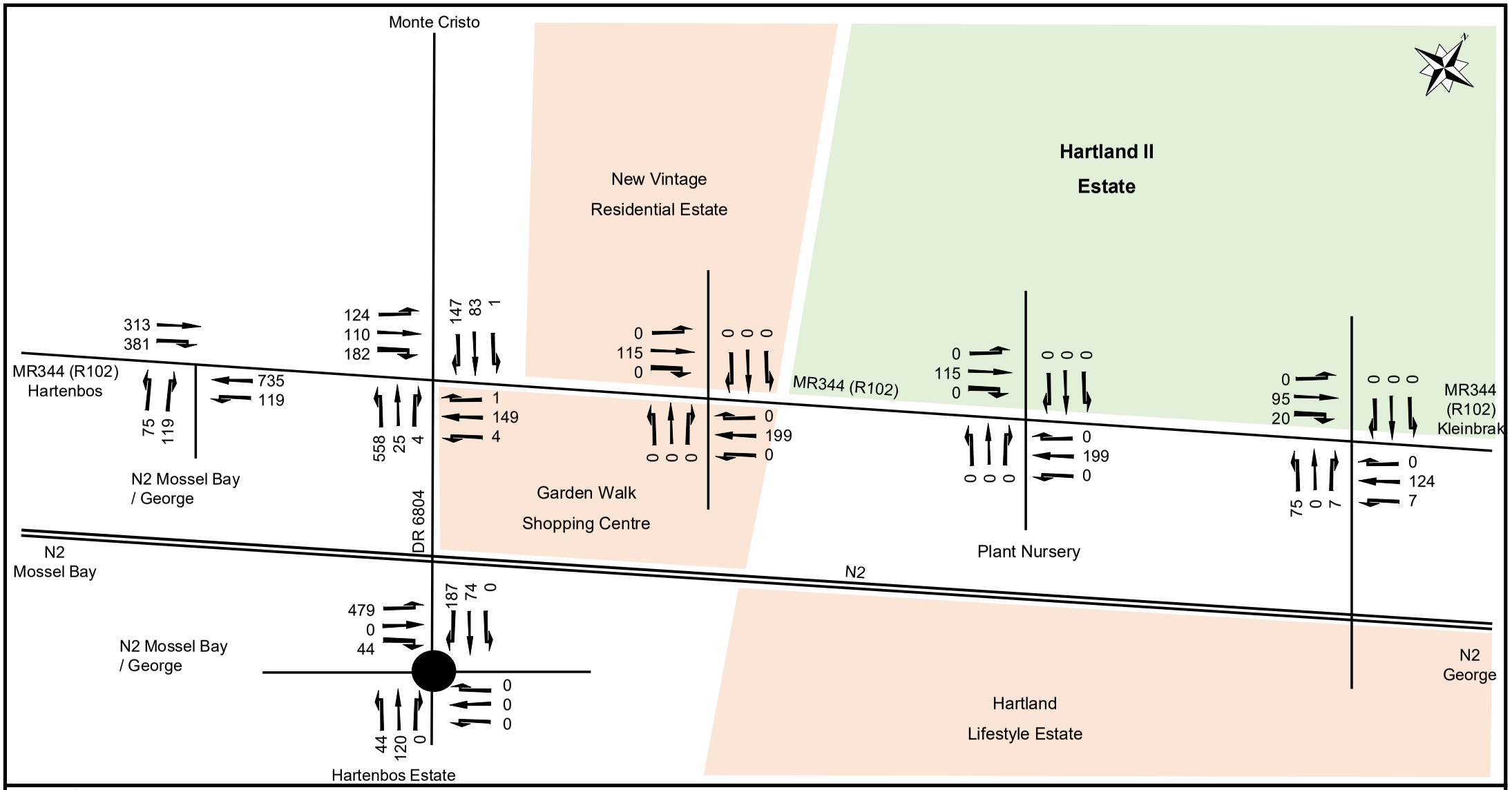
ANNEXURE B: TRAFFIC VOLUMES



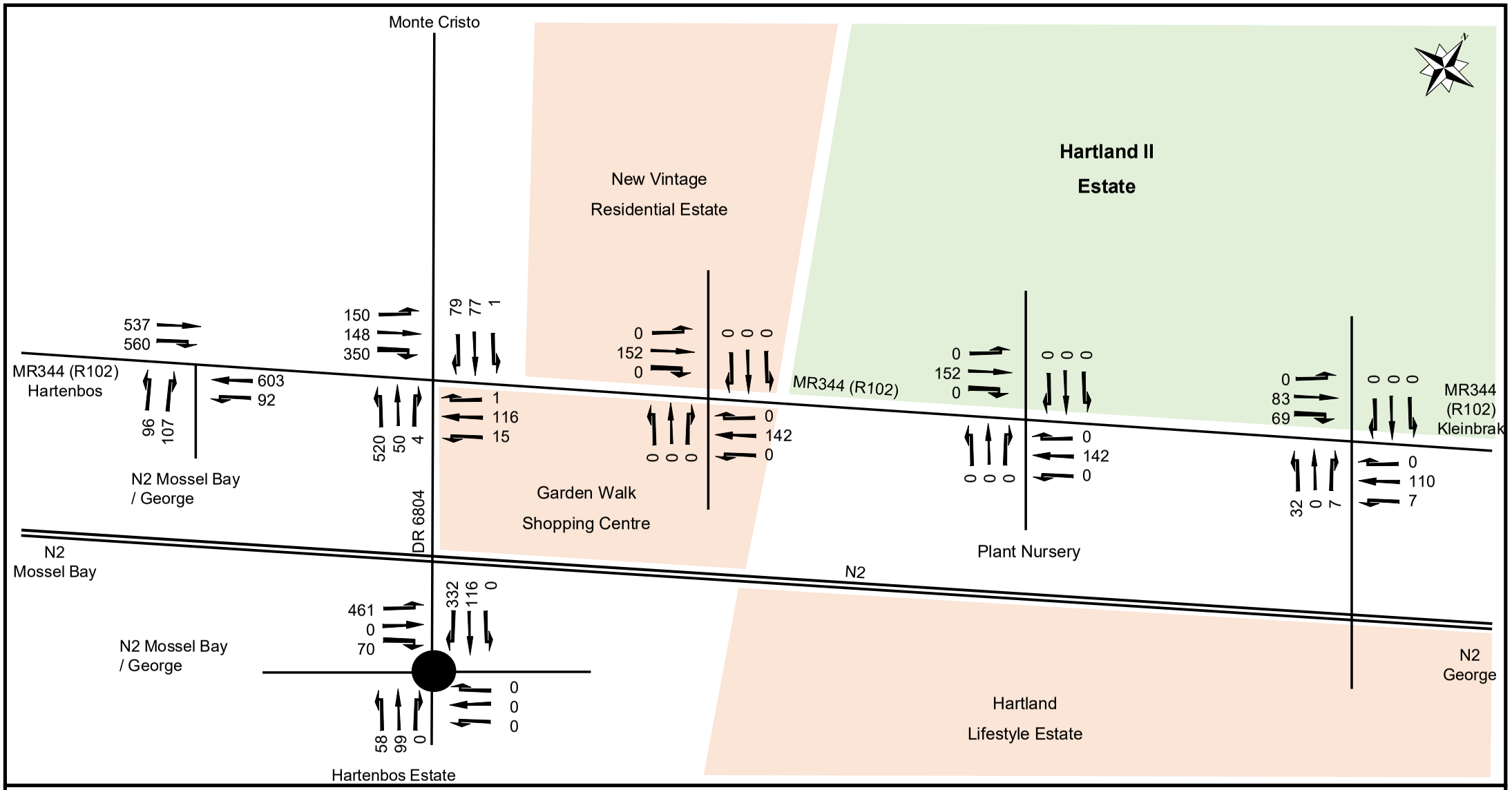
Hartland II: Background Traffic 2030 AM



Hartland II: Background Traffic 2030 PM



Hartland II: Background Traffic 2035 AM



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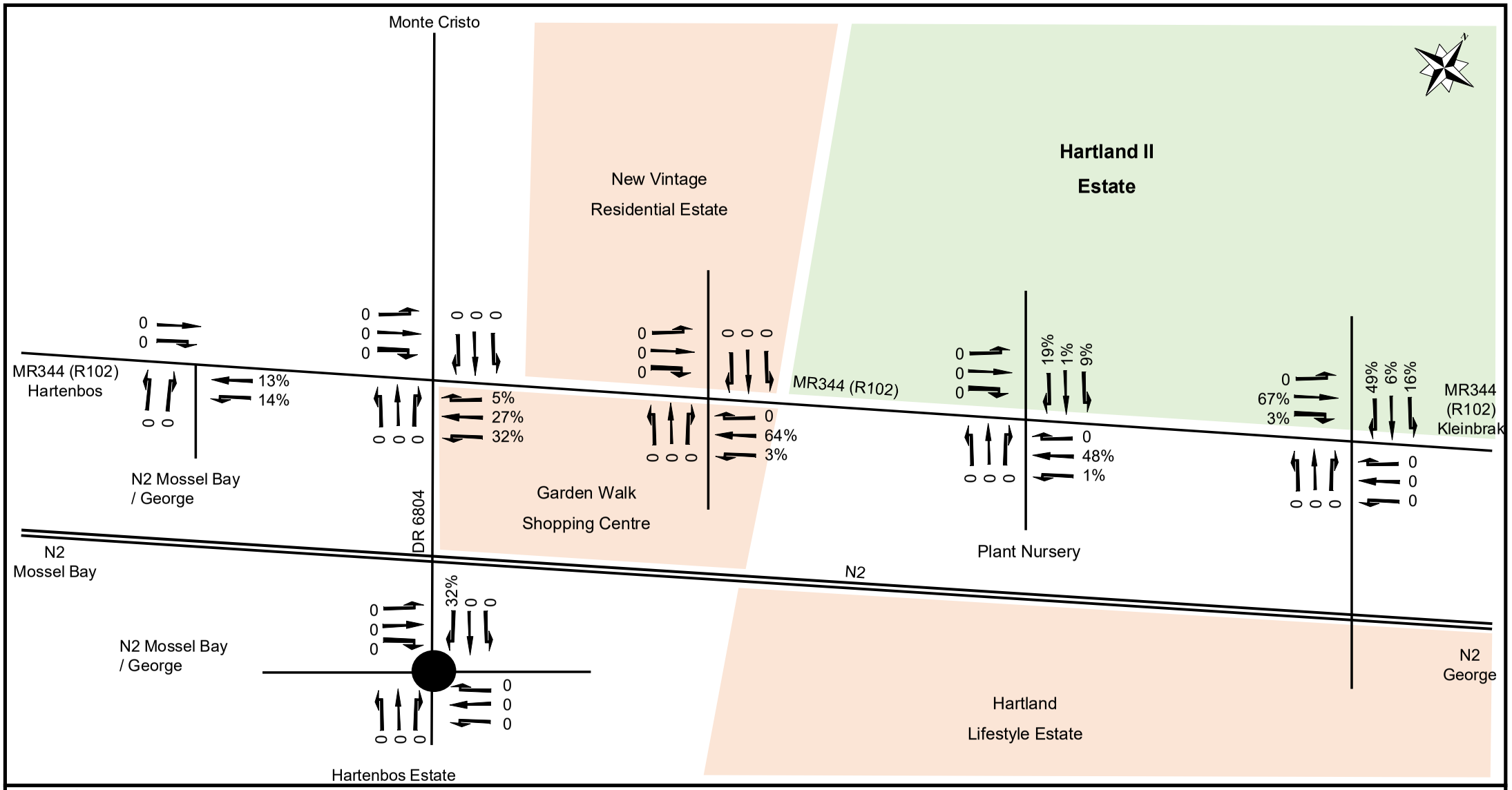
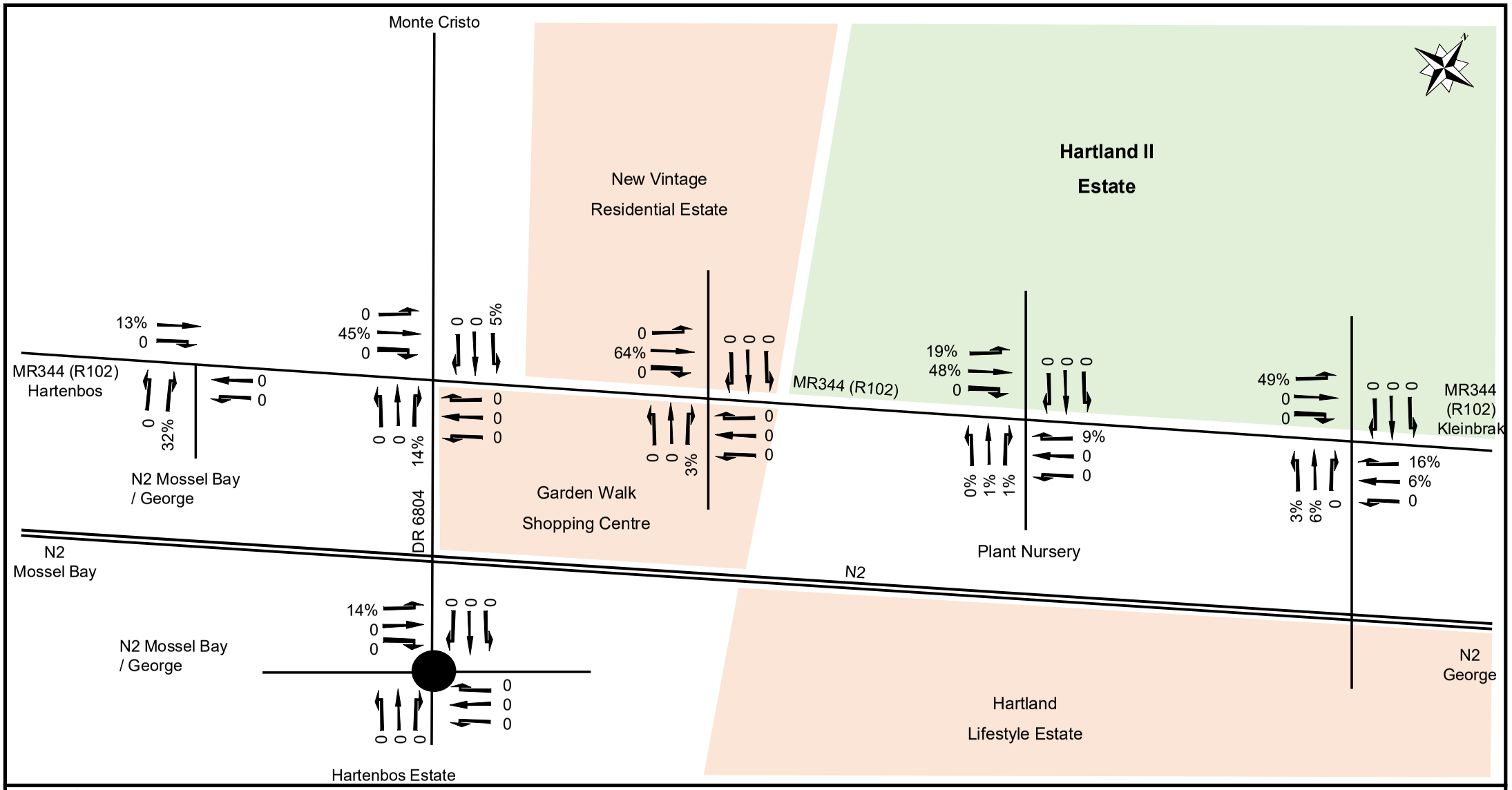
Hartland II: Background Traffic 2035 PM



Hartland II: Trip Distribution: Outbound



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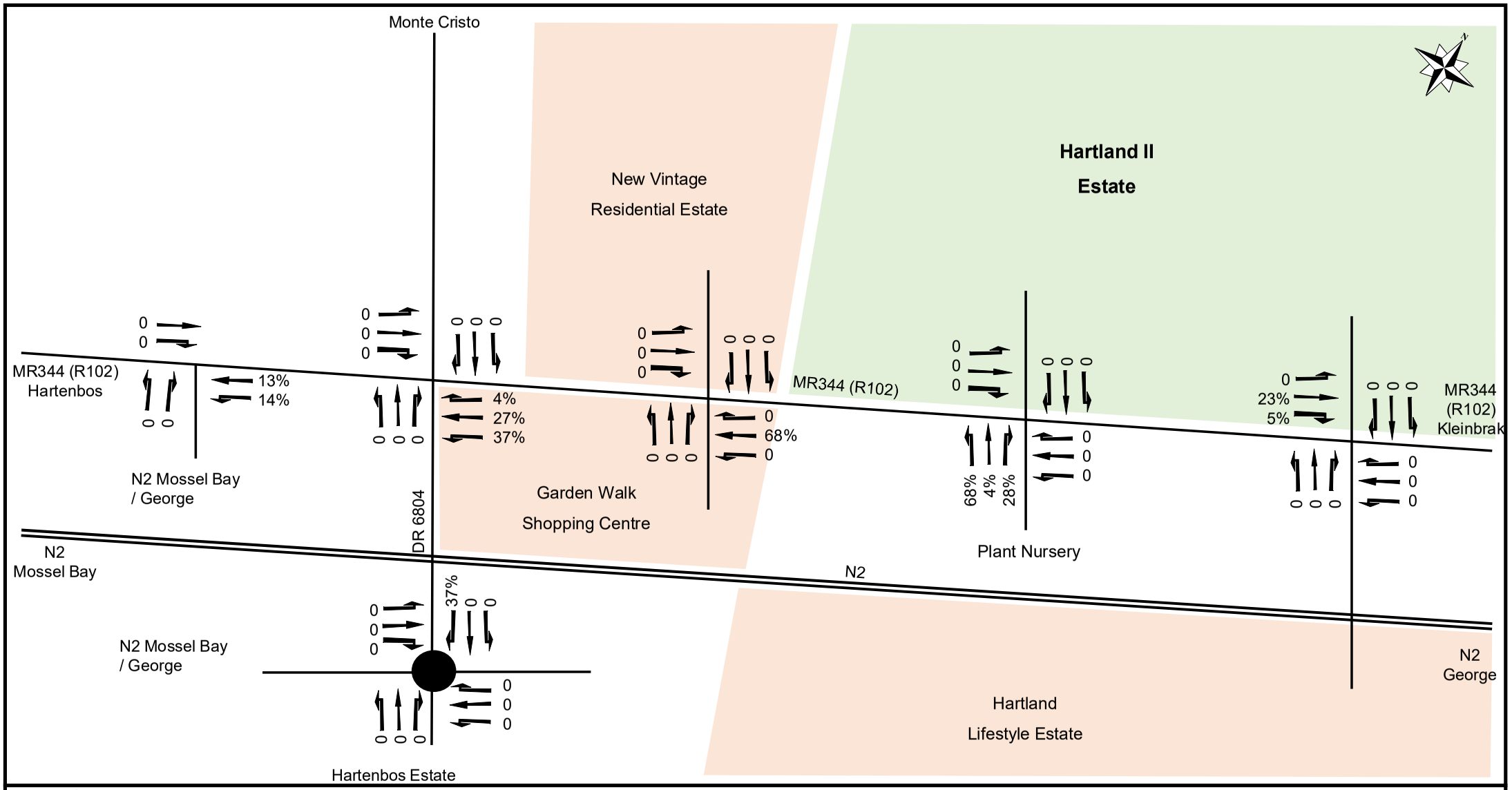
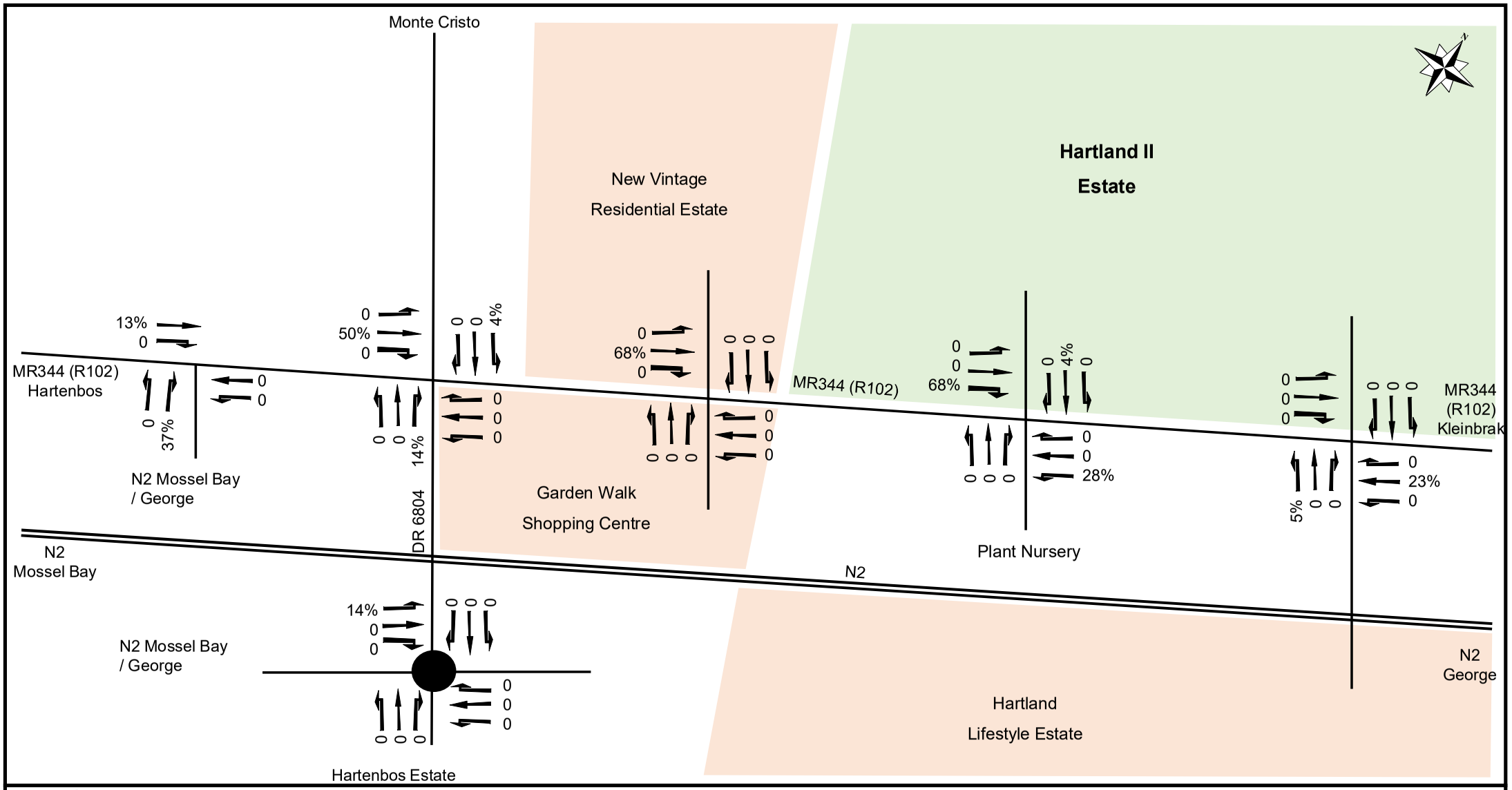
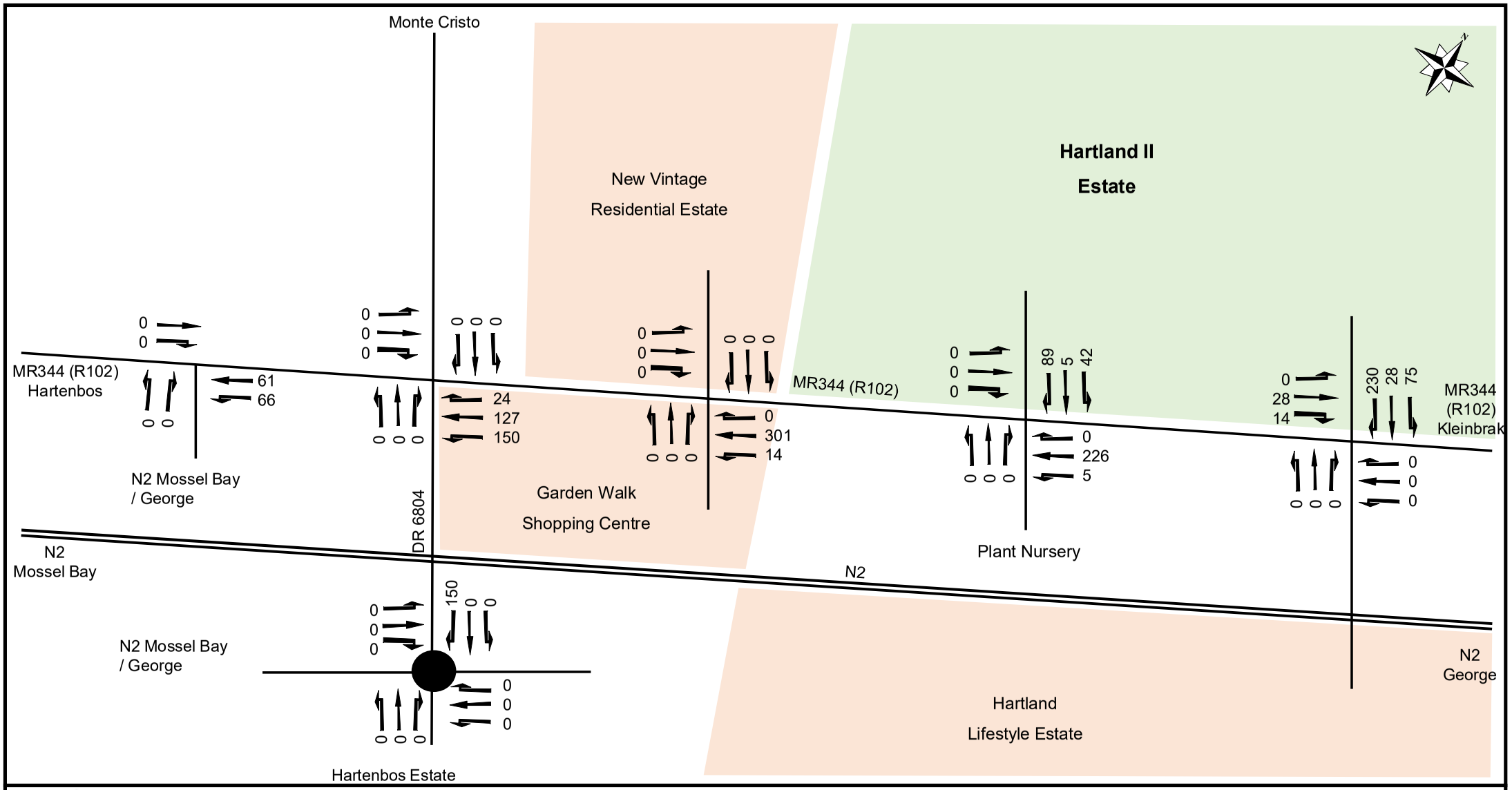


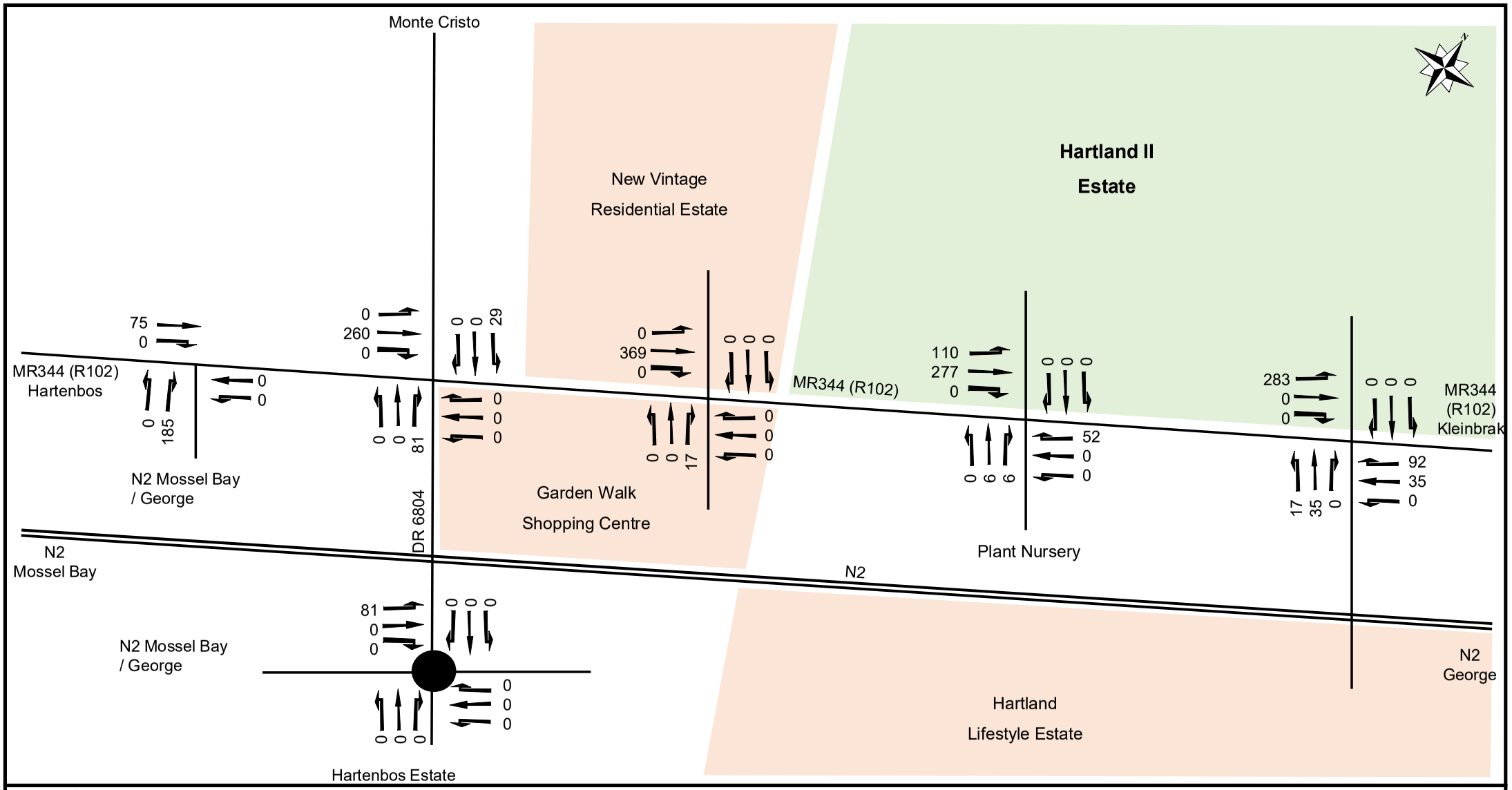
Hartland II (South): Trip Distribution: Outbound



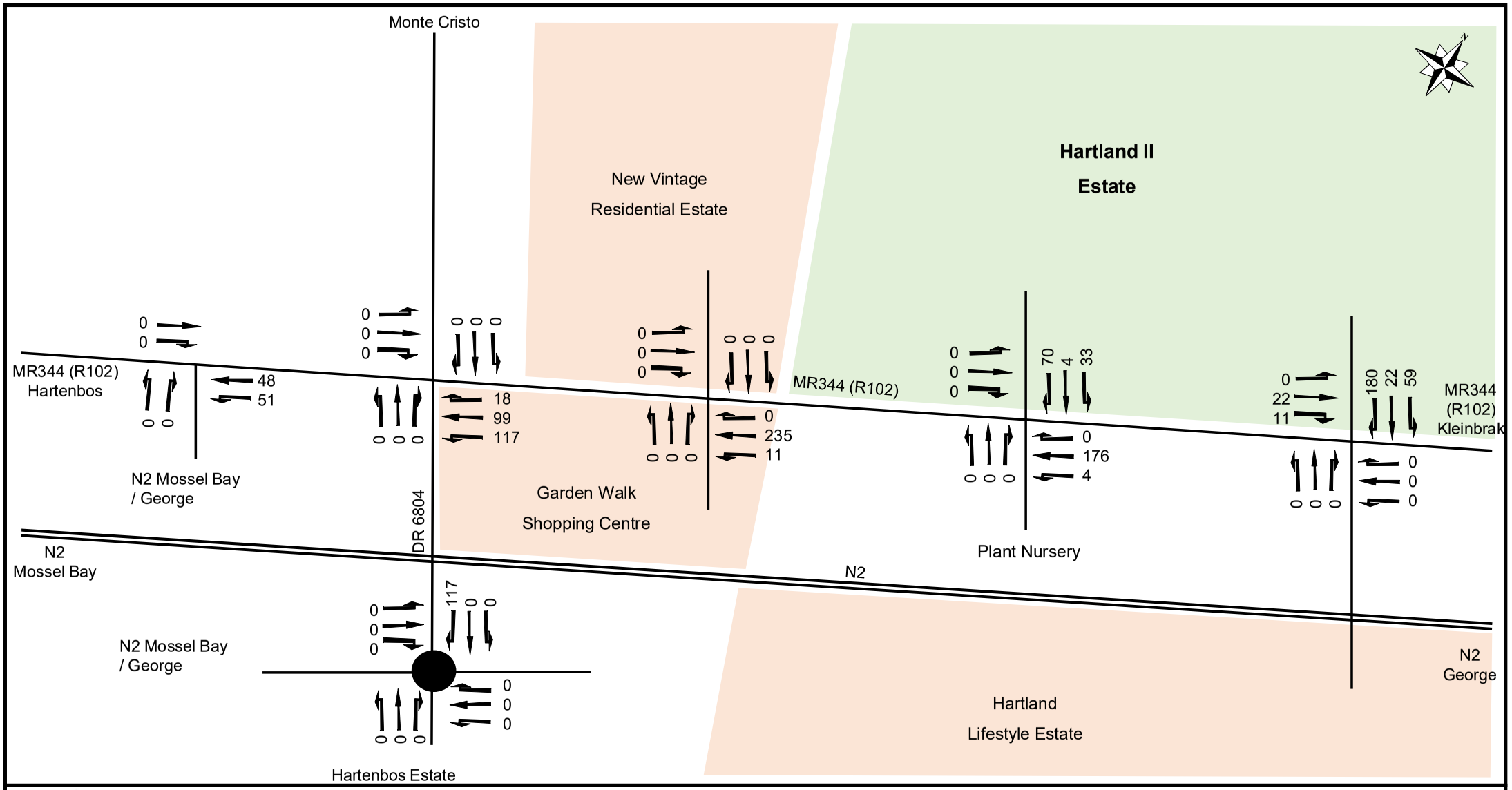
Hartland II (South): Trip Distribution: Inbound



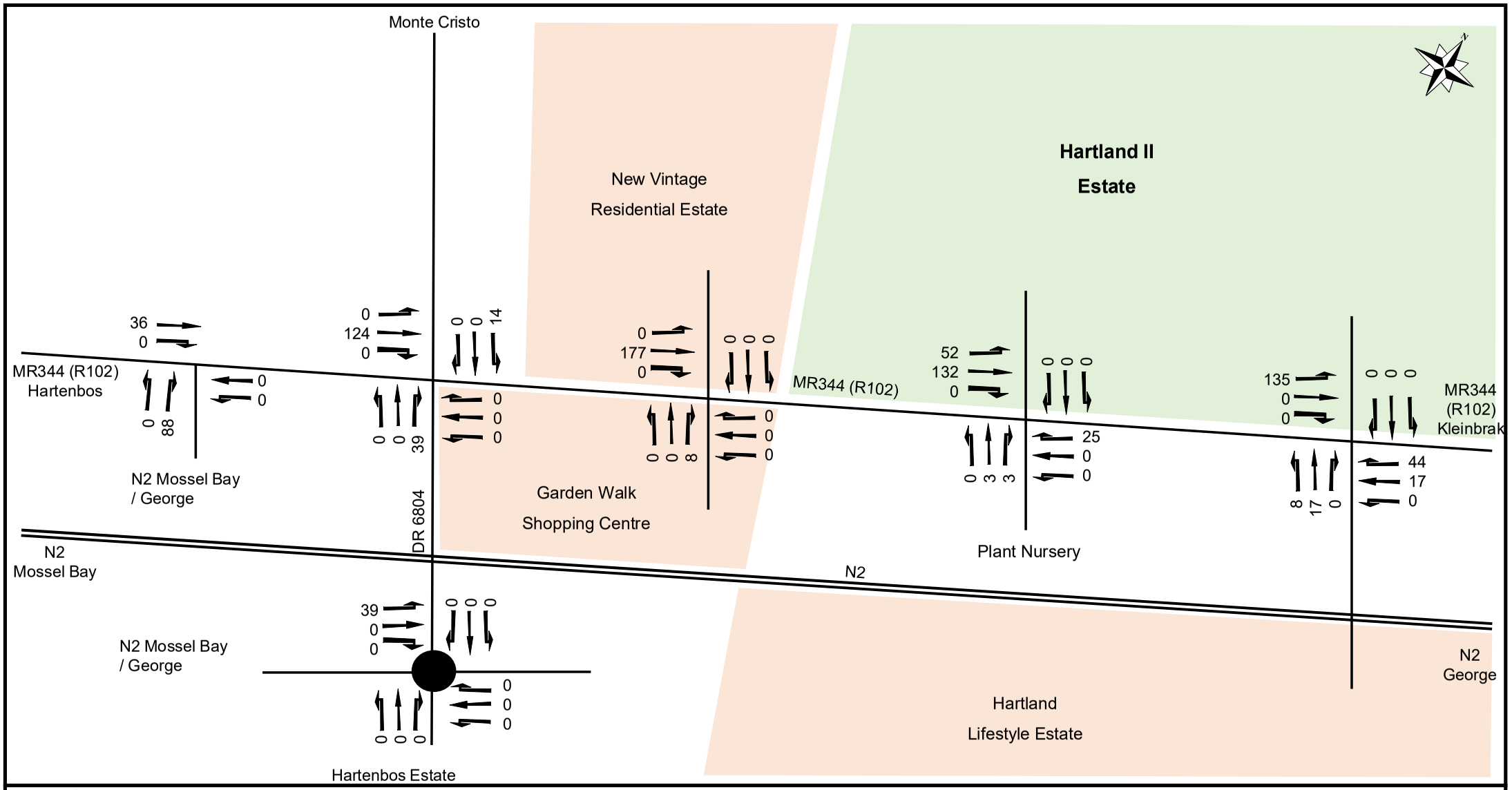
Hartland II: Trip Generation: AM (Outbound)



Hartland II: Trip Generation: AM (Inbound)



Hartland II: Trip Generation: PM (Outbound)



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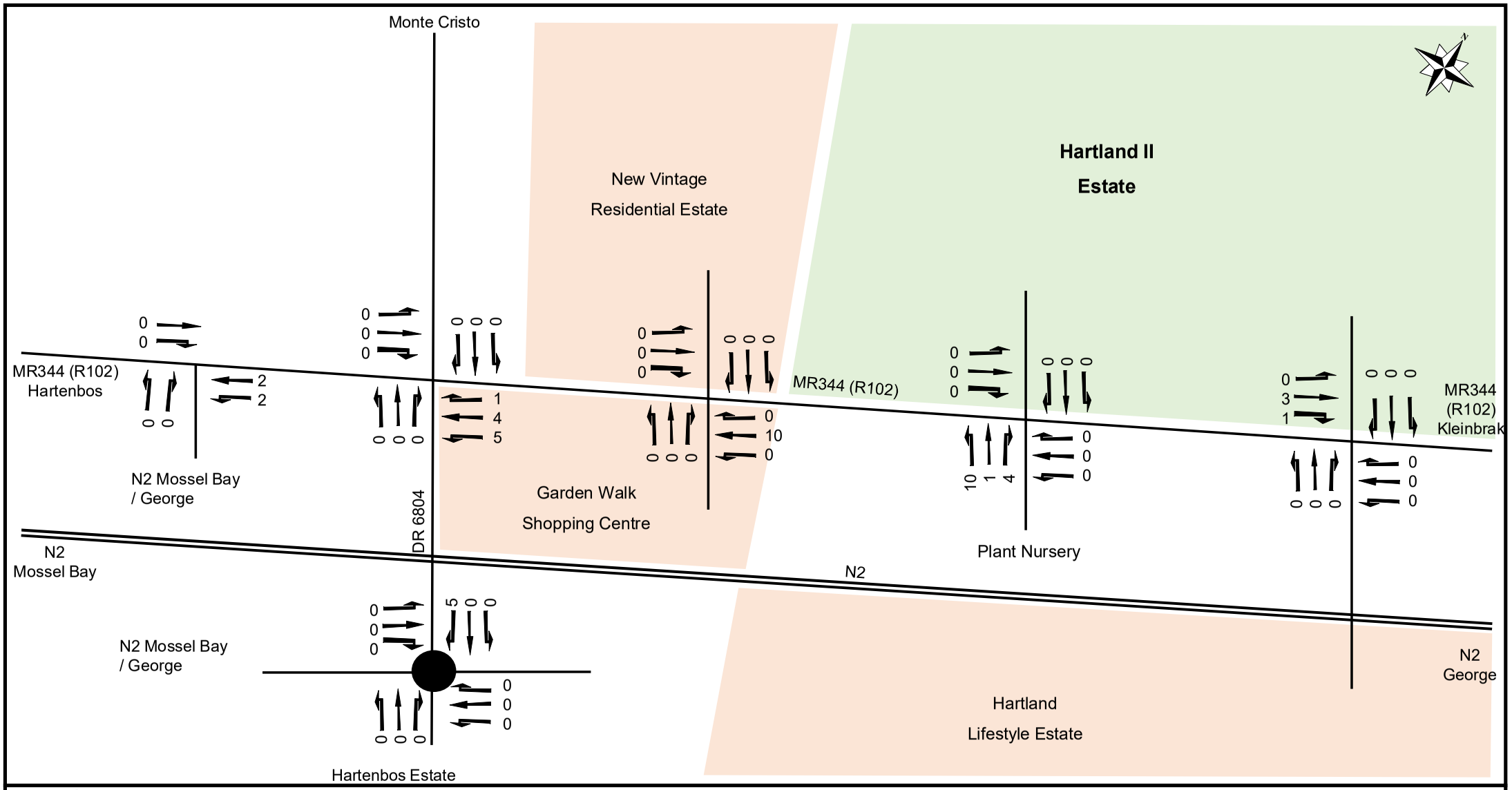

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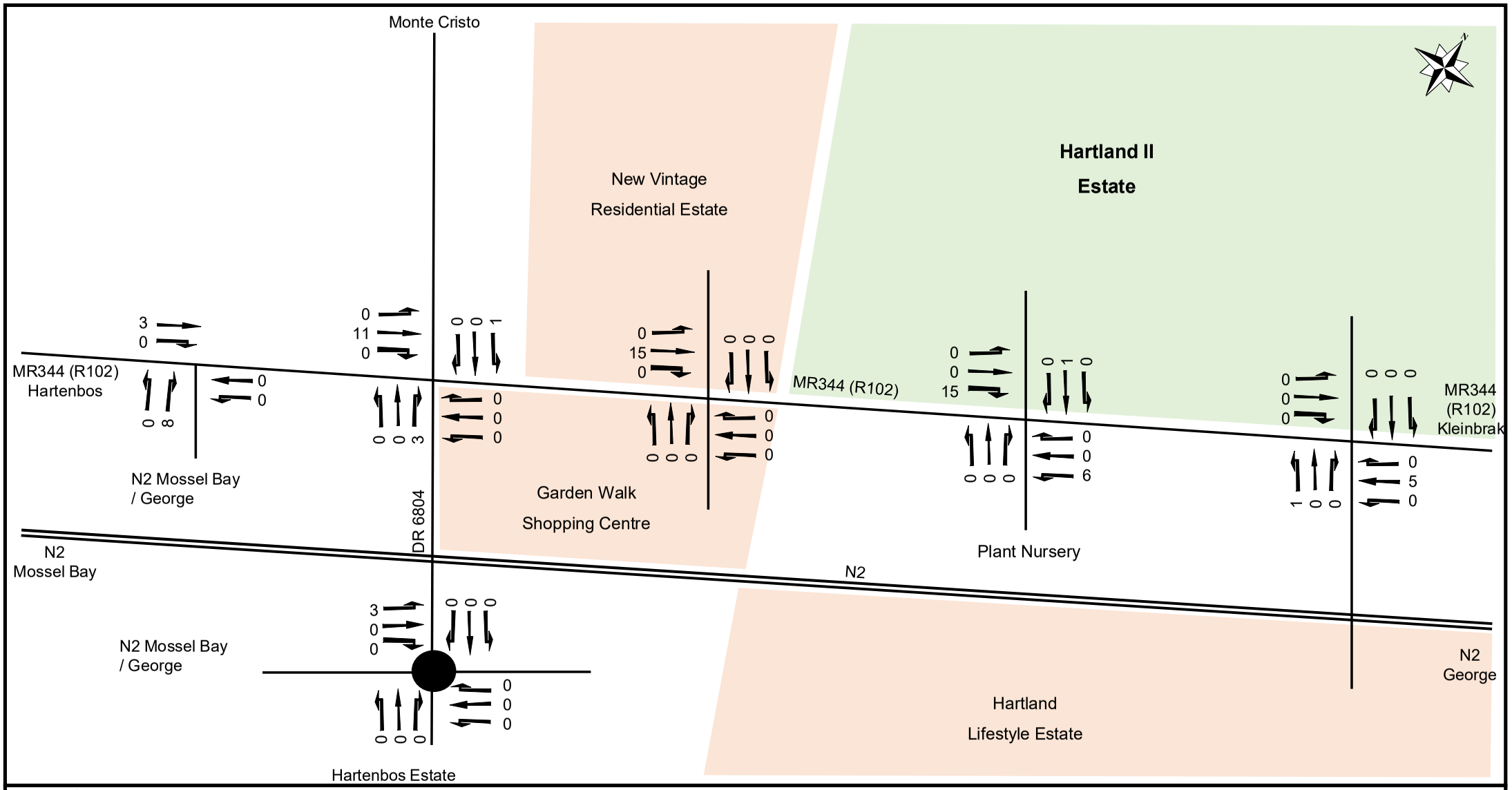

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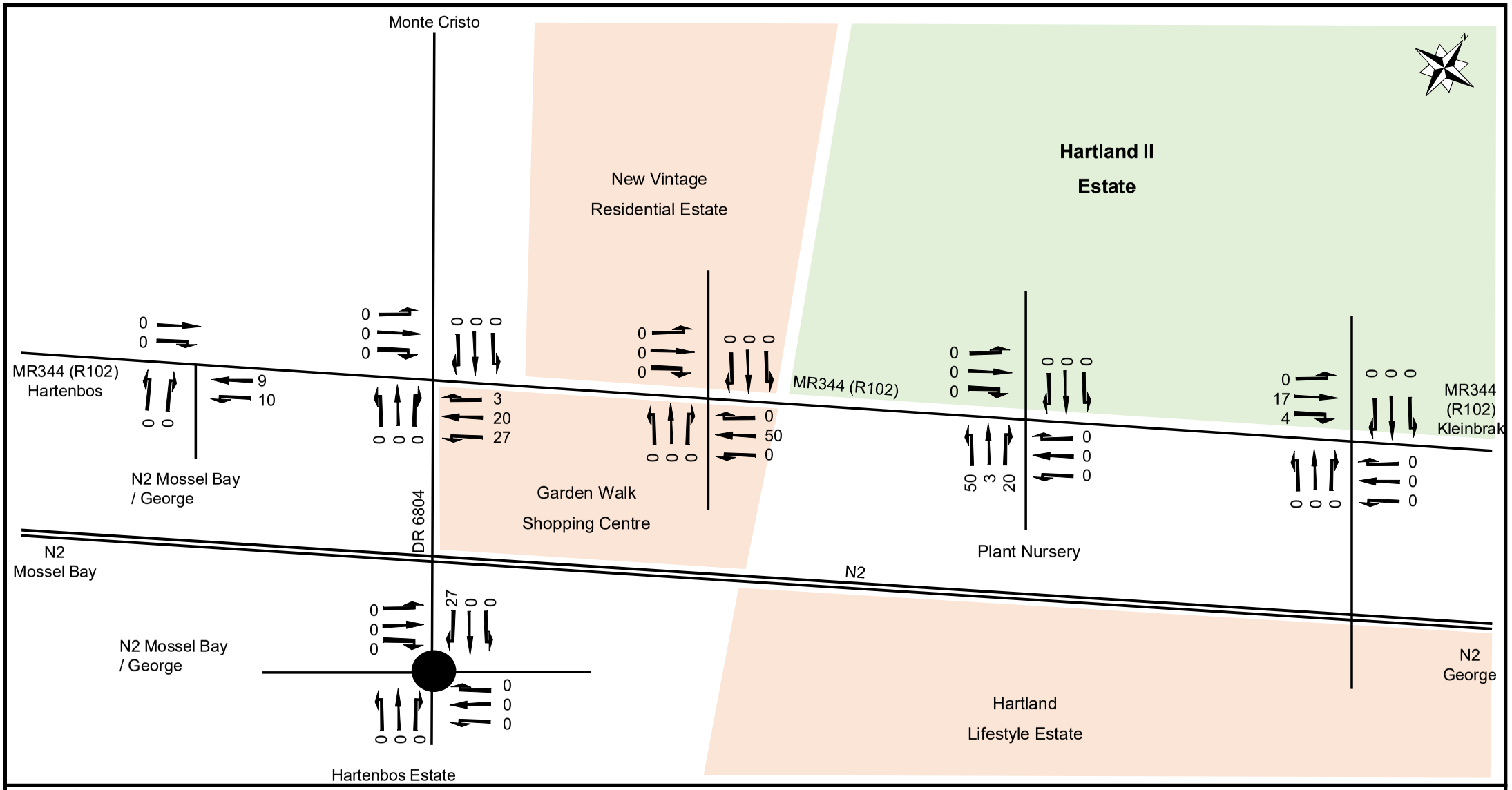

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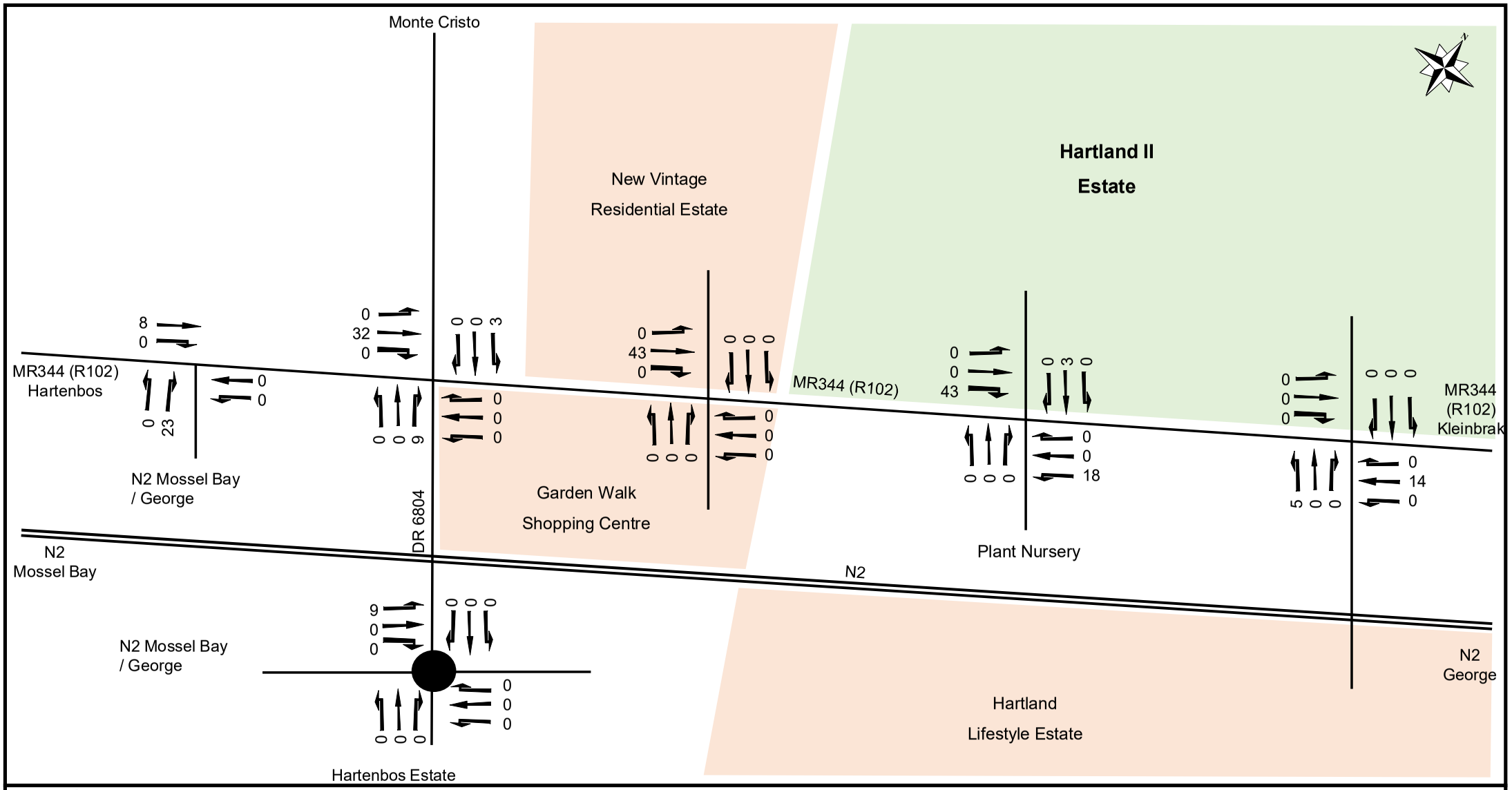

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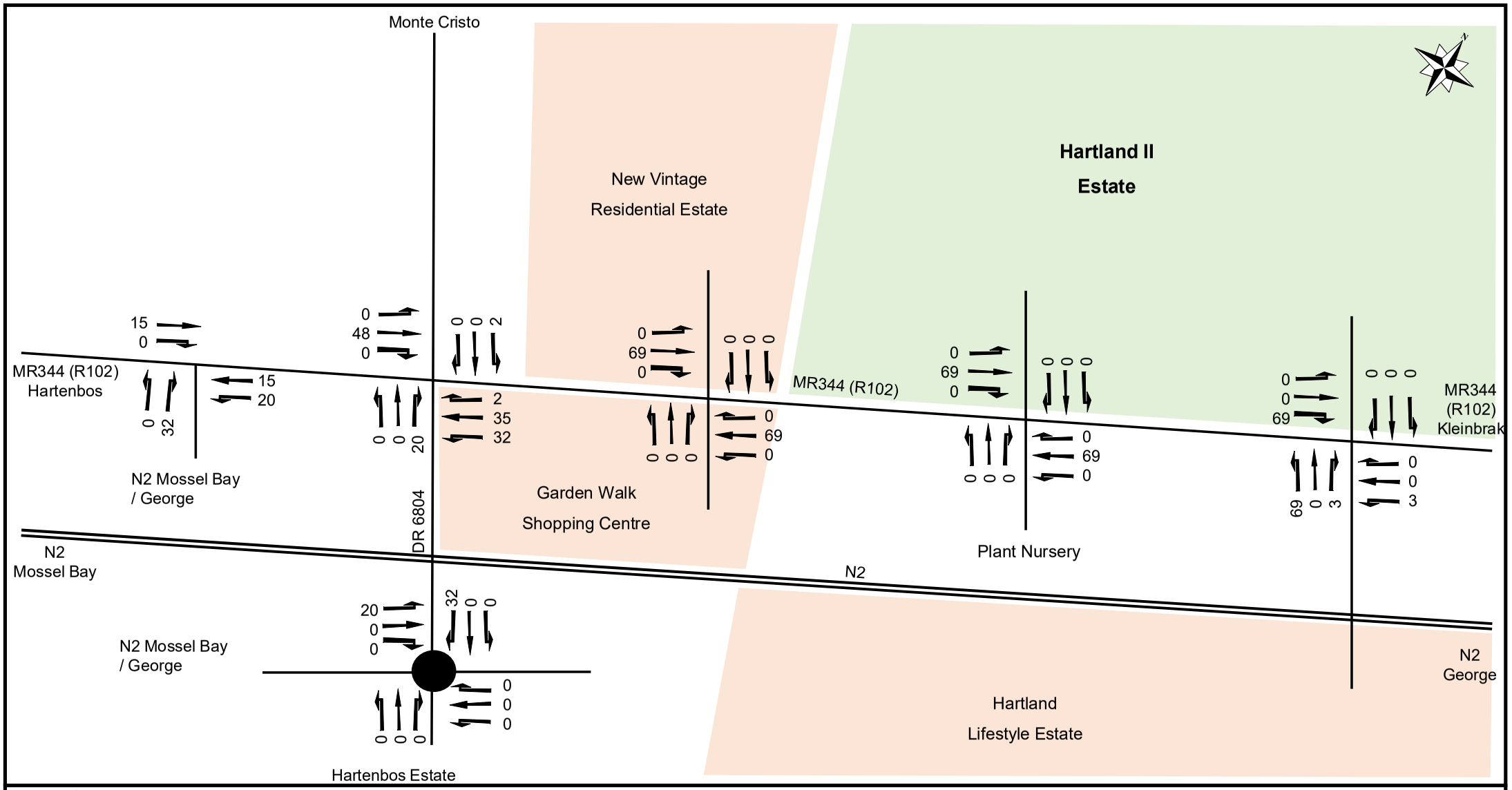
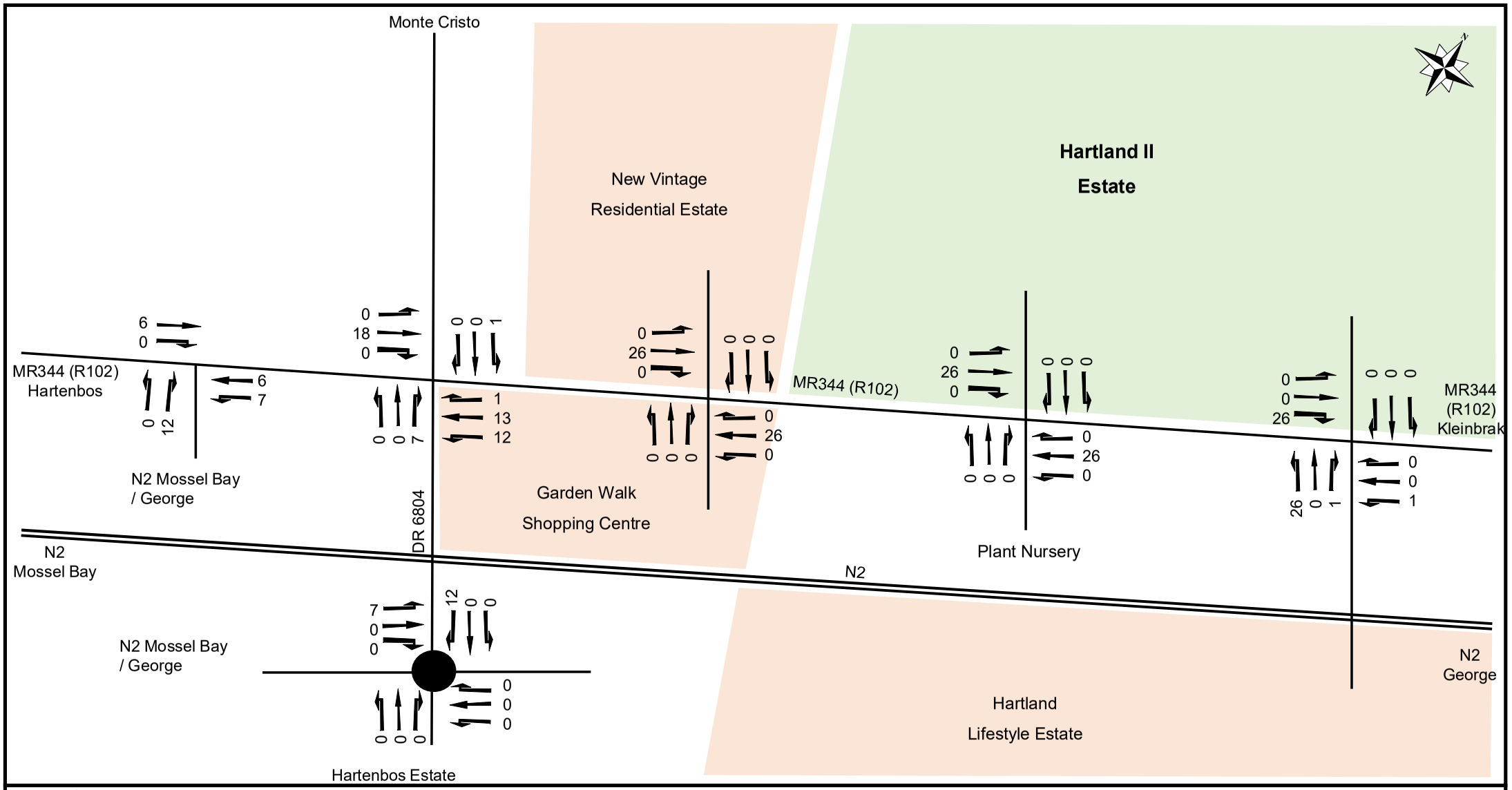
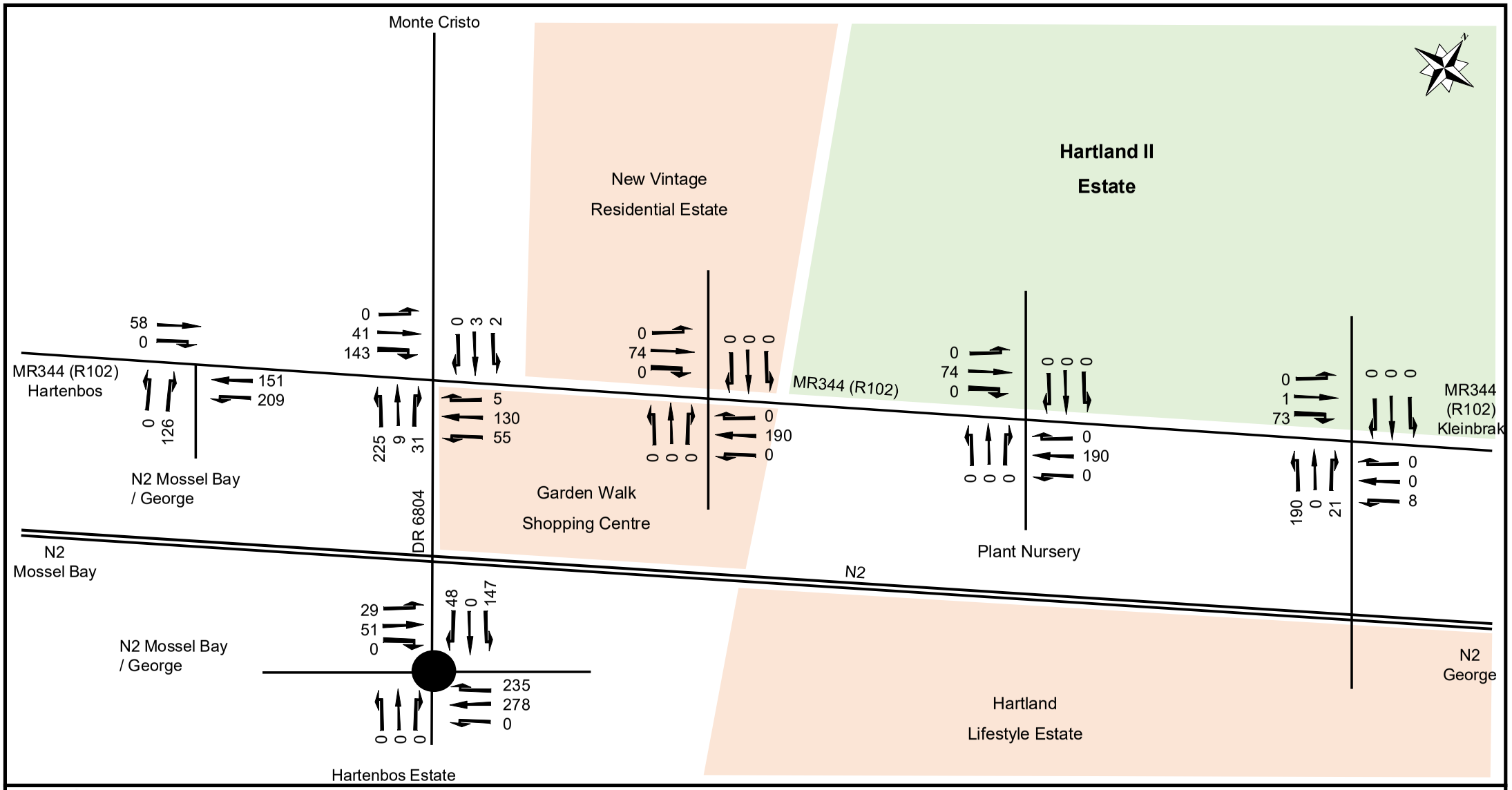


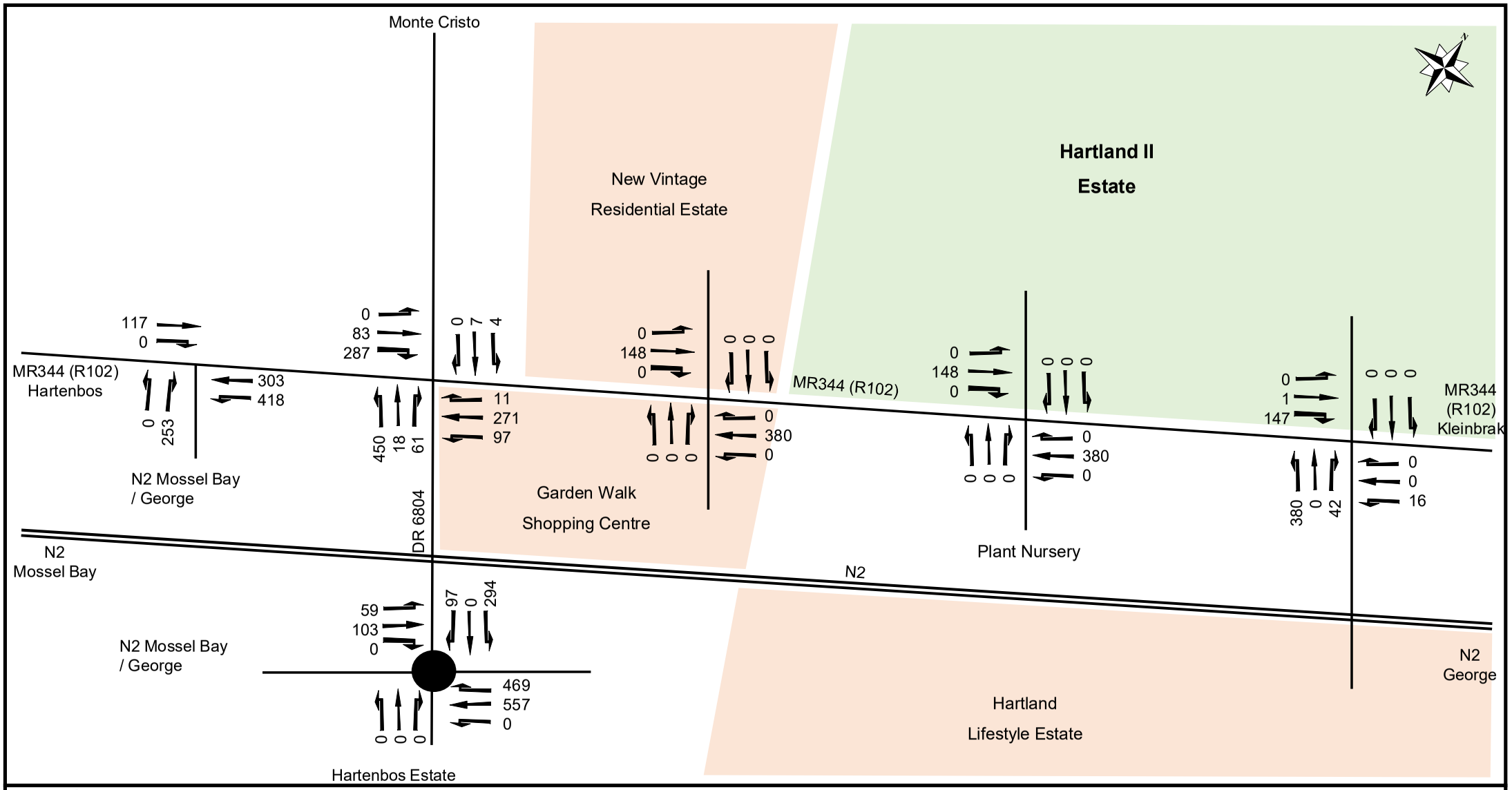
Hartland Primary School AM (2030 and 2035)



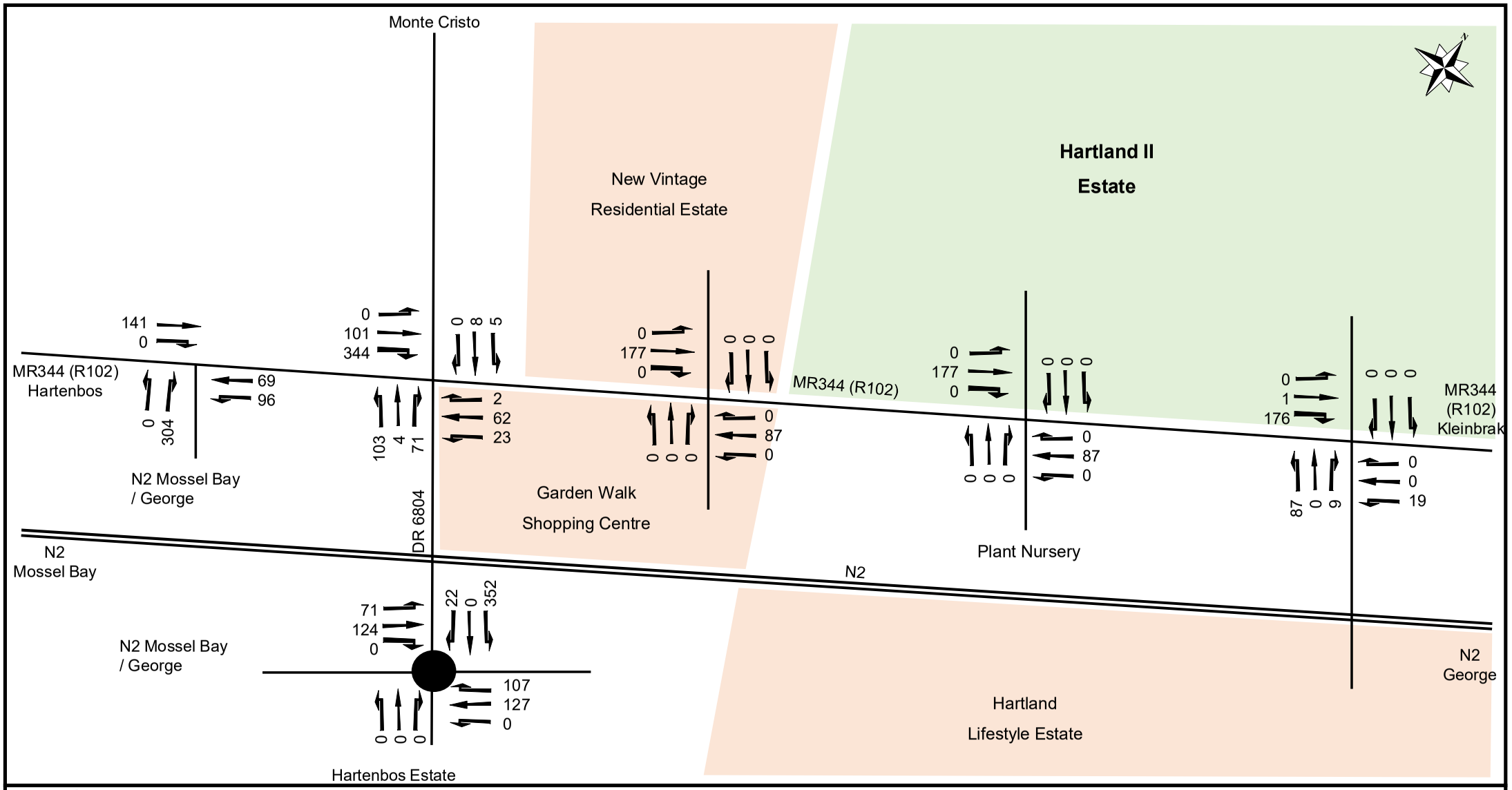
Hartland Primary School PM (2030 and 2035)



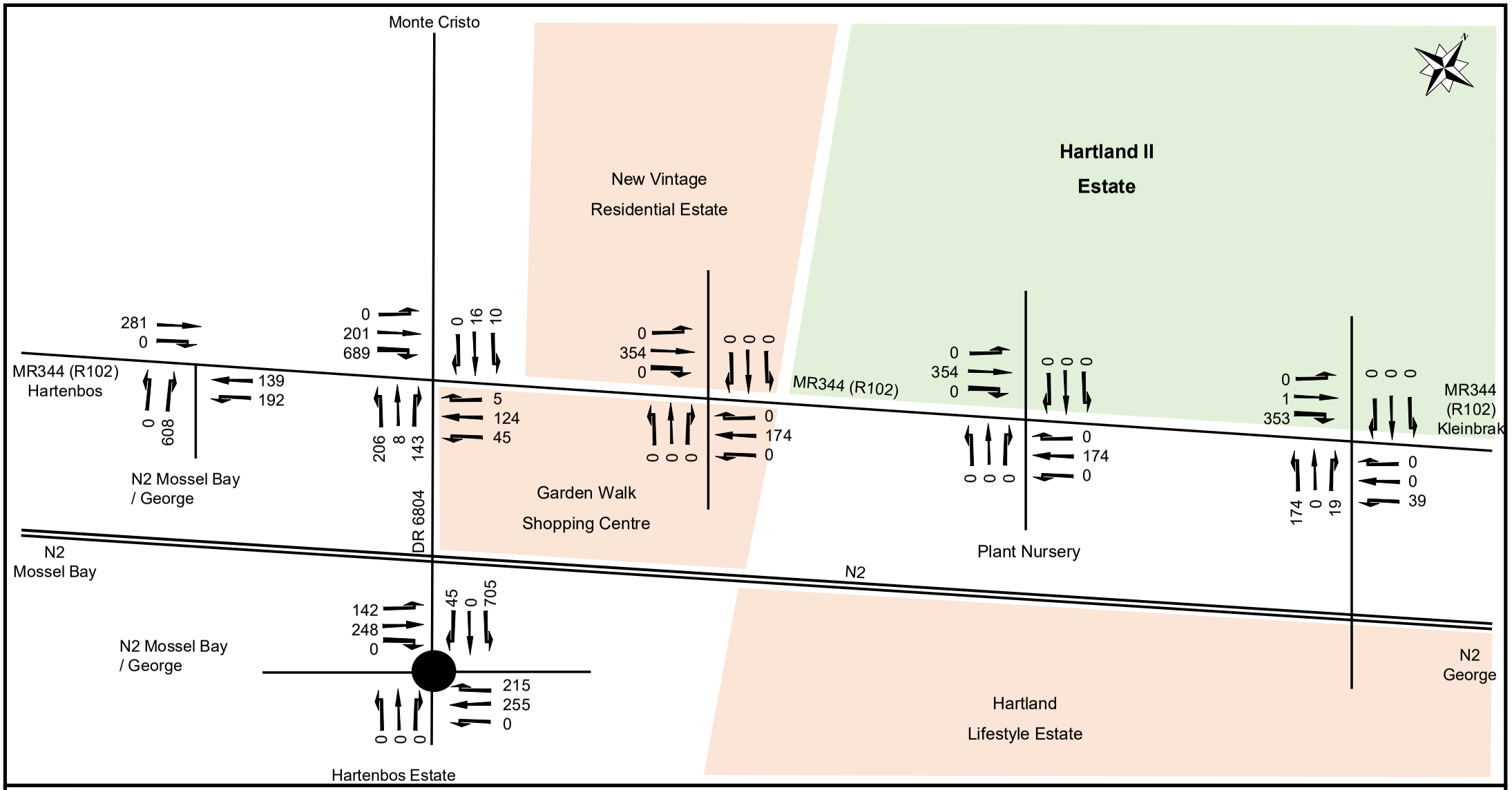
Hartland 2030 AM (50%) (Excl. Primary School)



Hartland 2035 AM (100%) (Excl. Primary School)



Hartland 2030 PM (50%) (Excl. Primary School)



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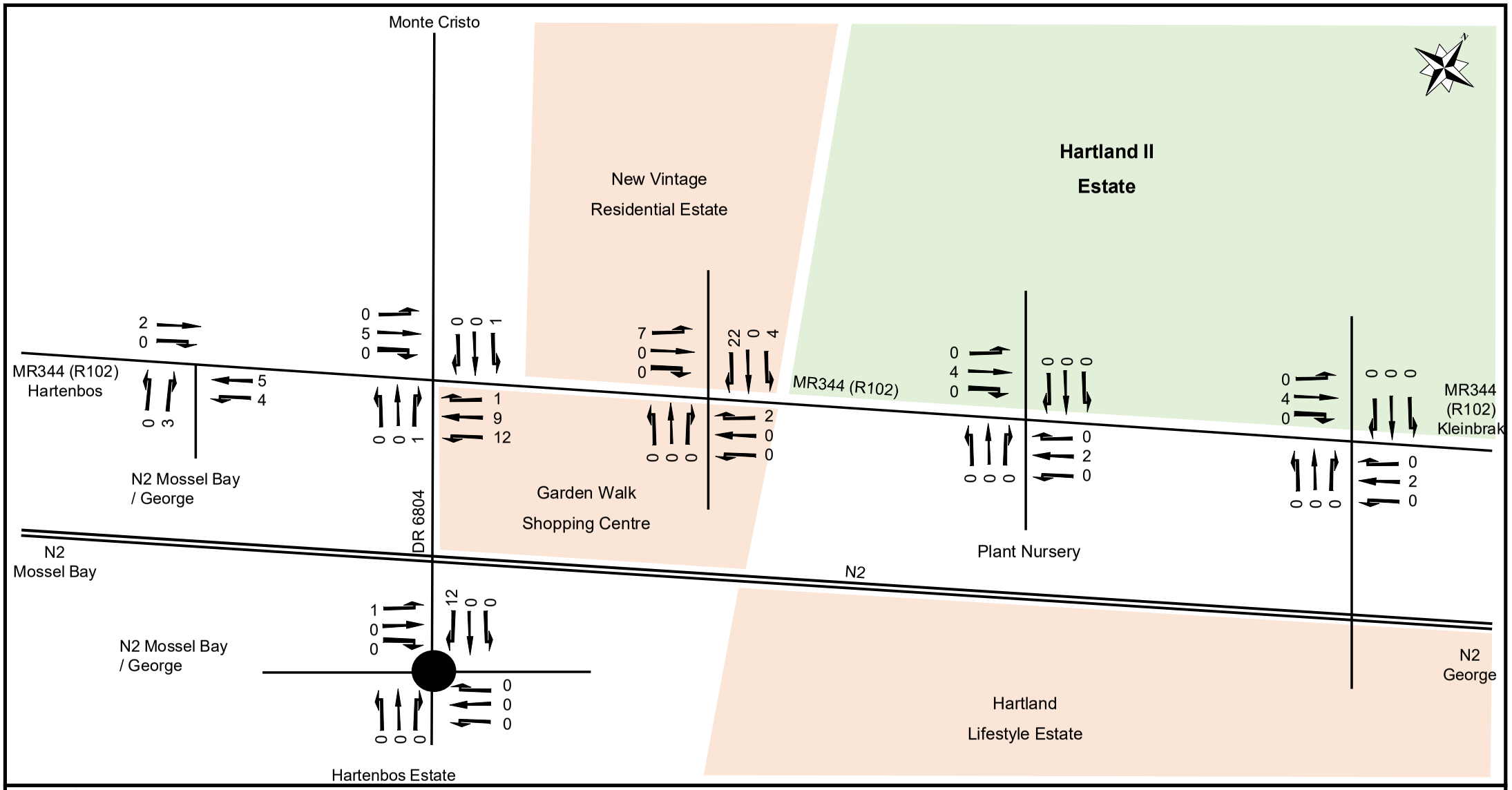
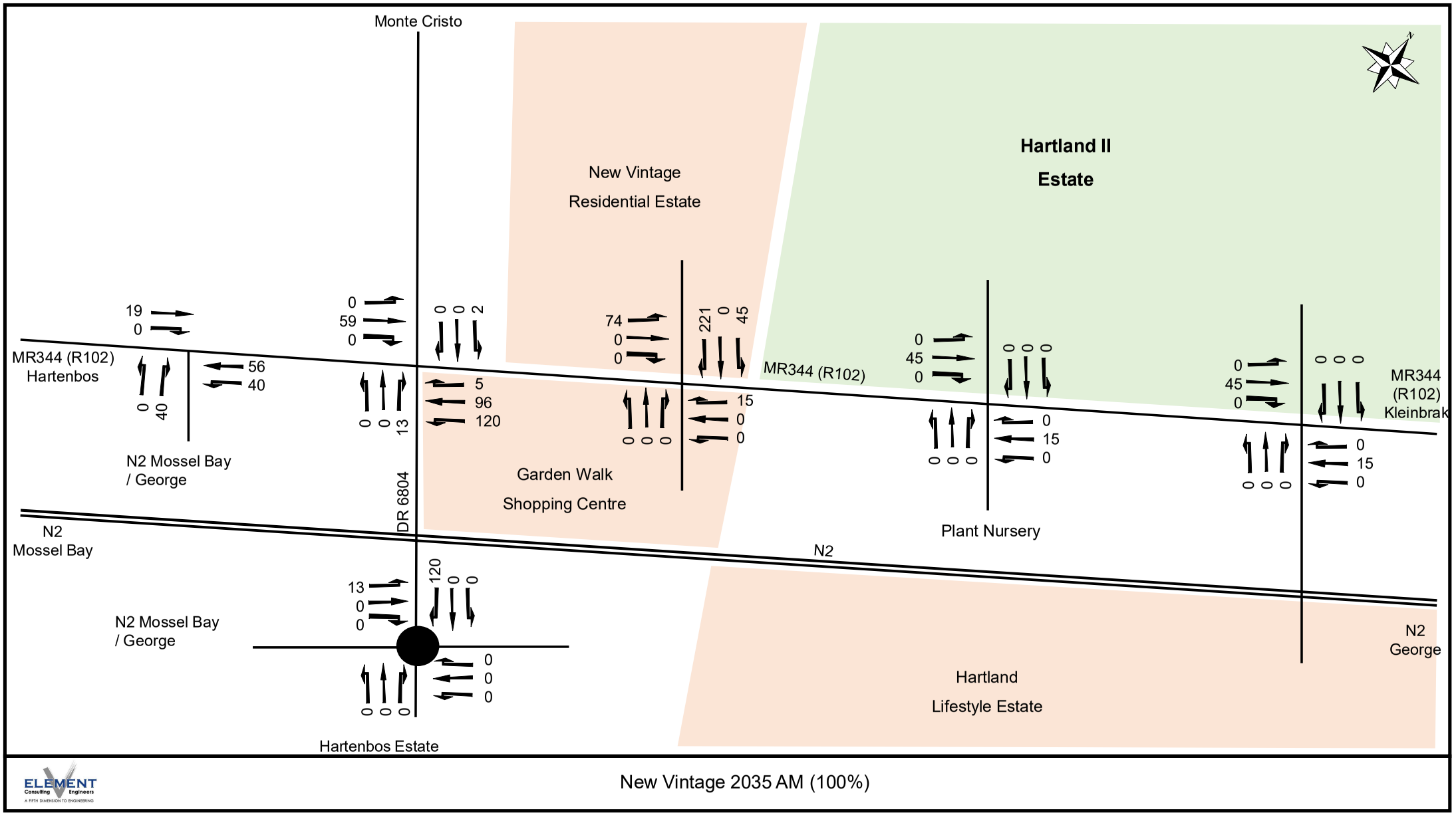
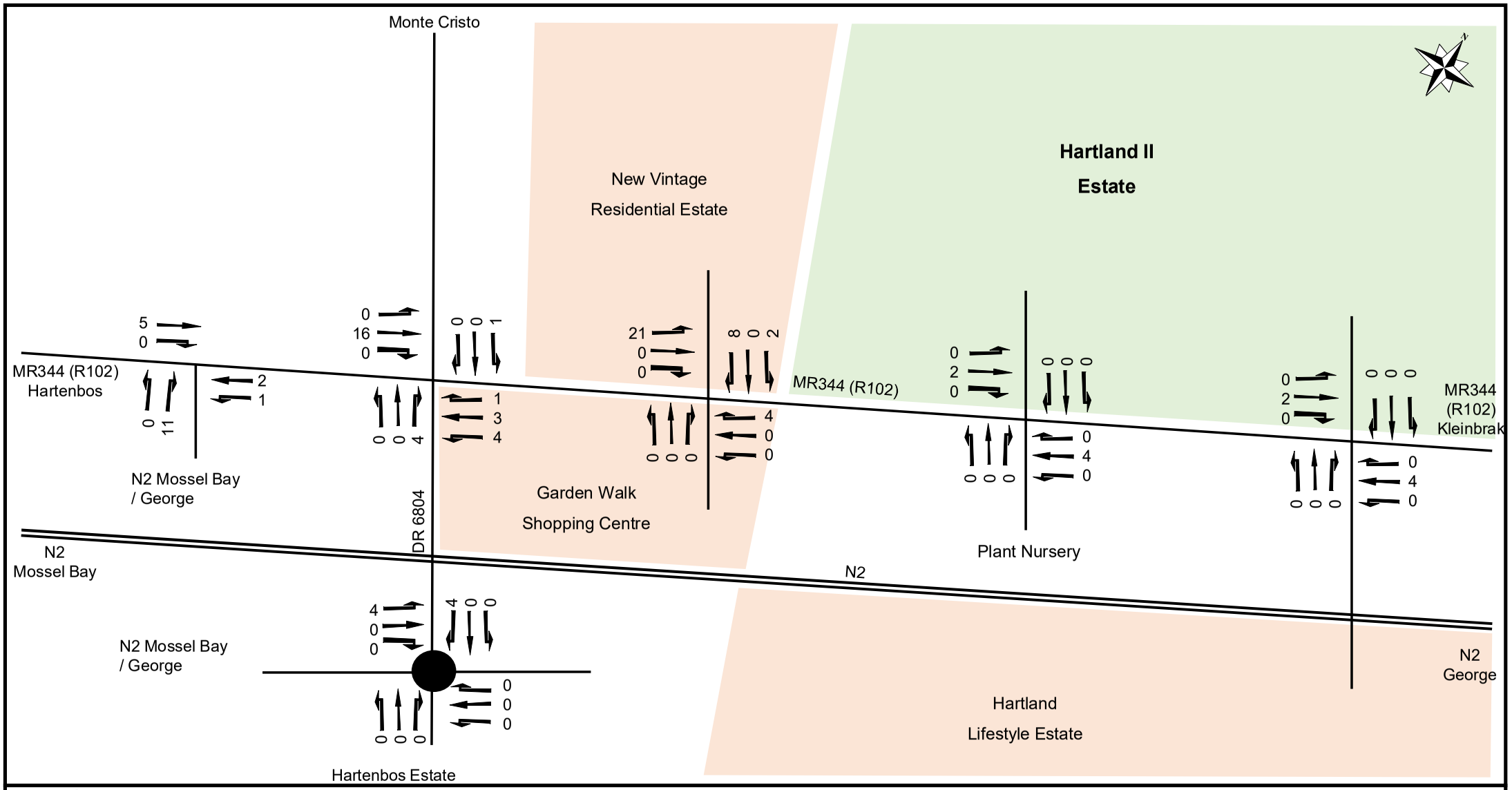


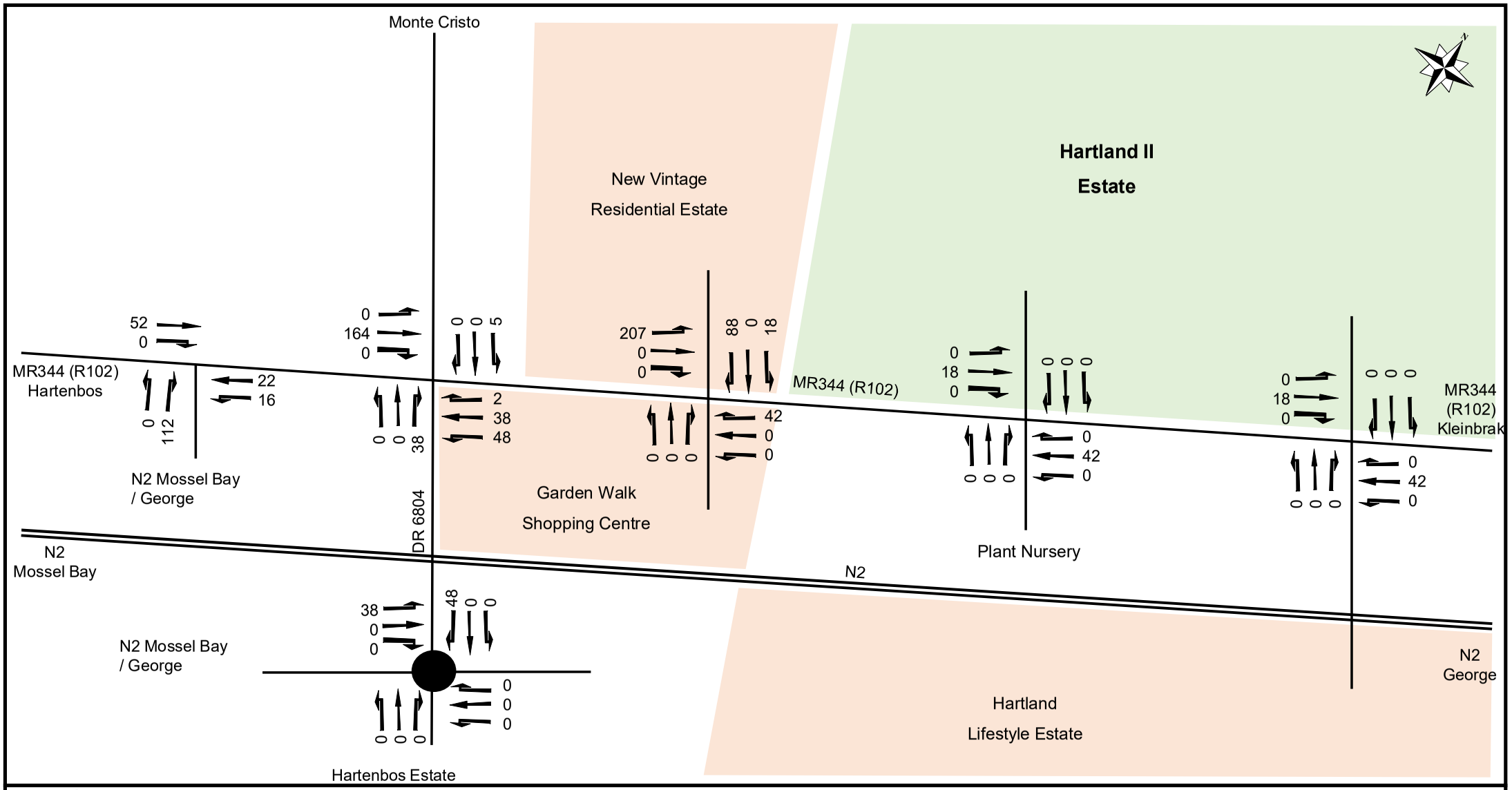
New Vintage 2030 AM (10%)



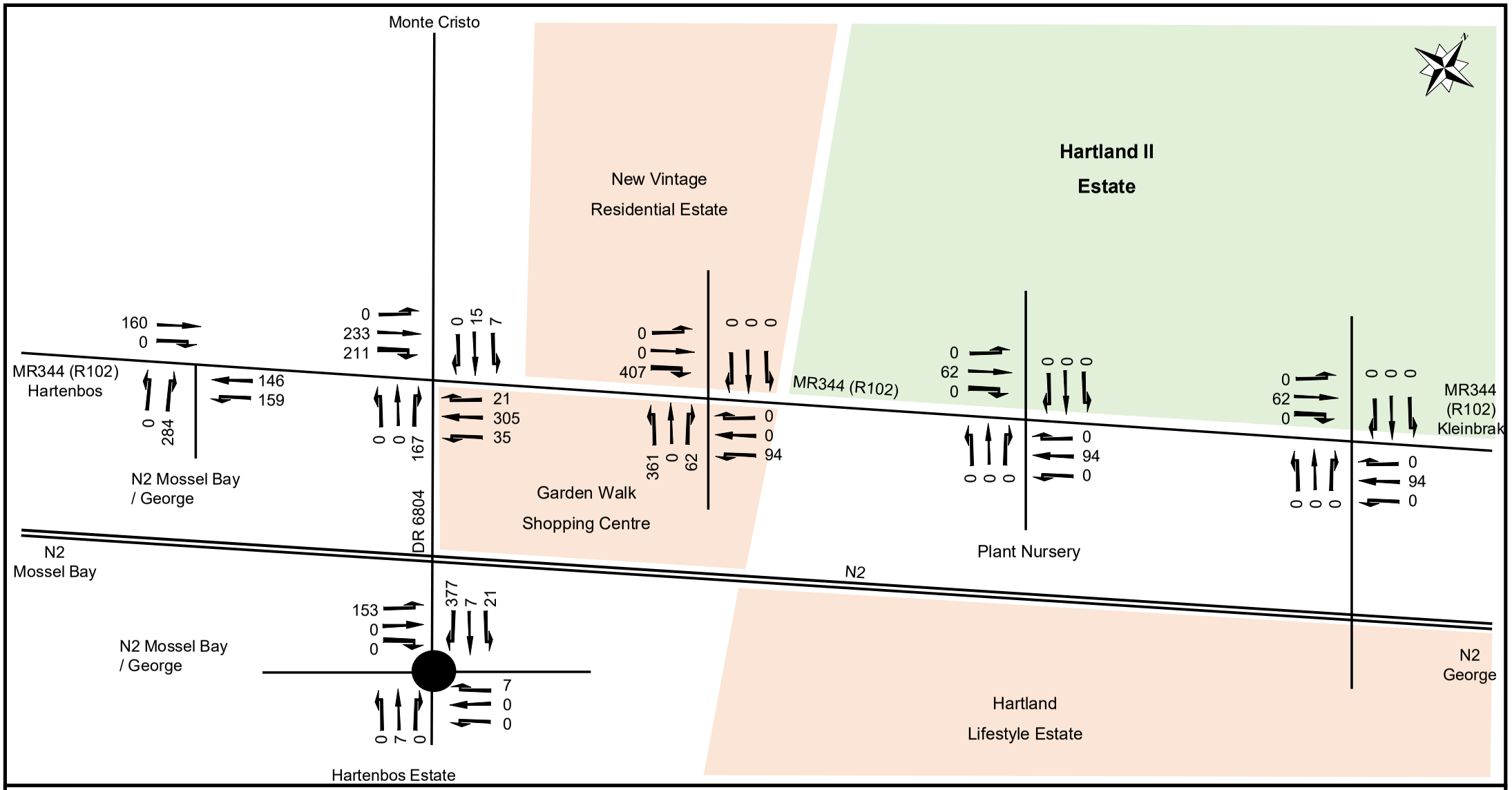
New Vintage 2035 AM (100%)



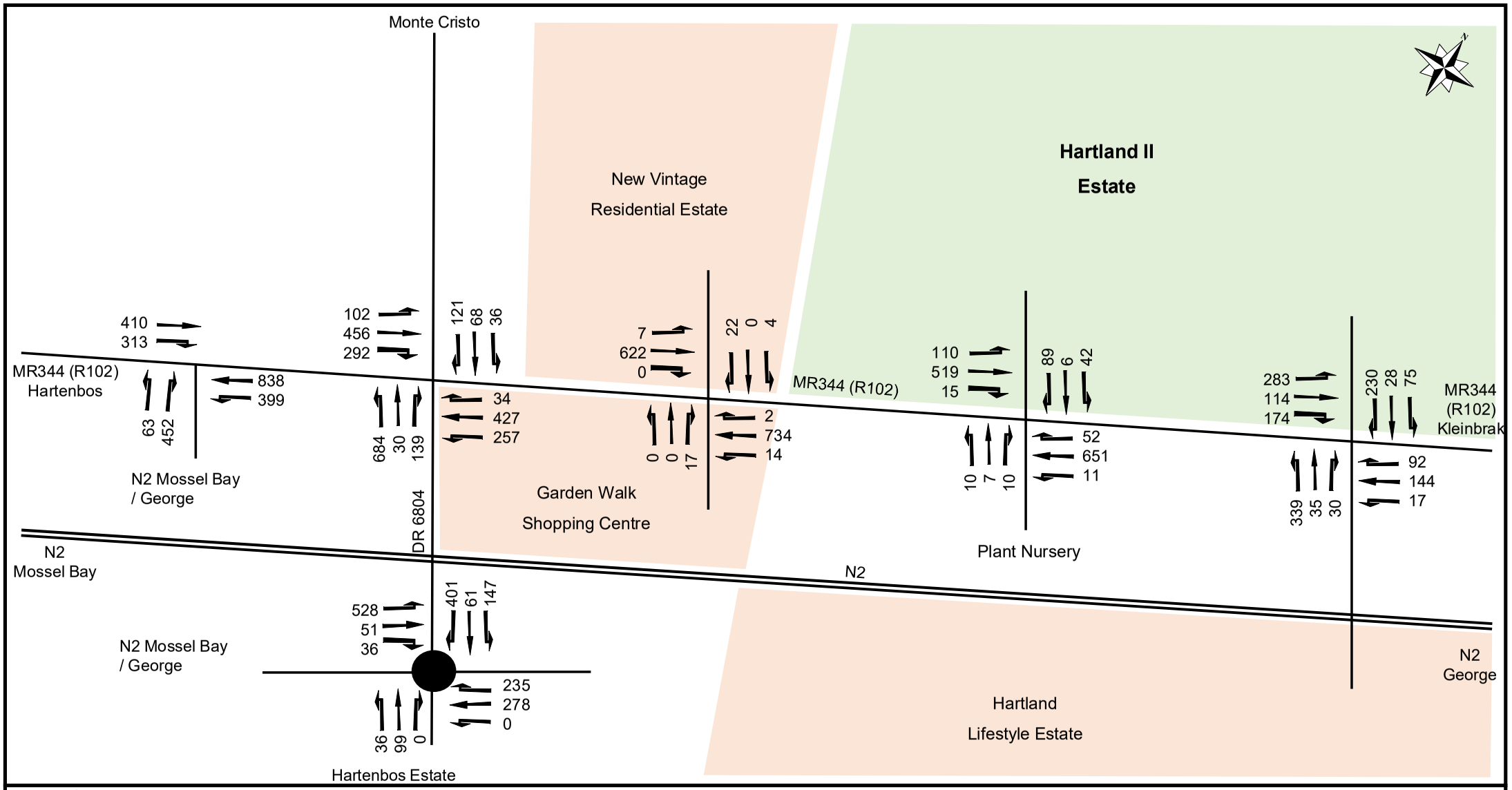
New Vintage 2030 PM (10%)



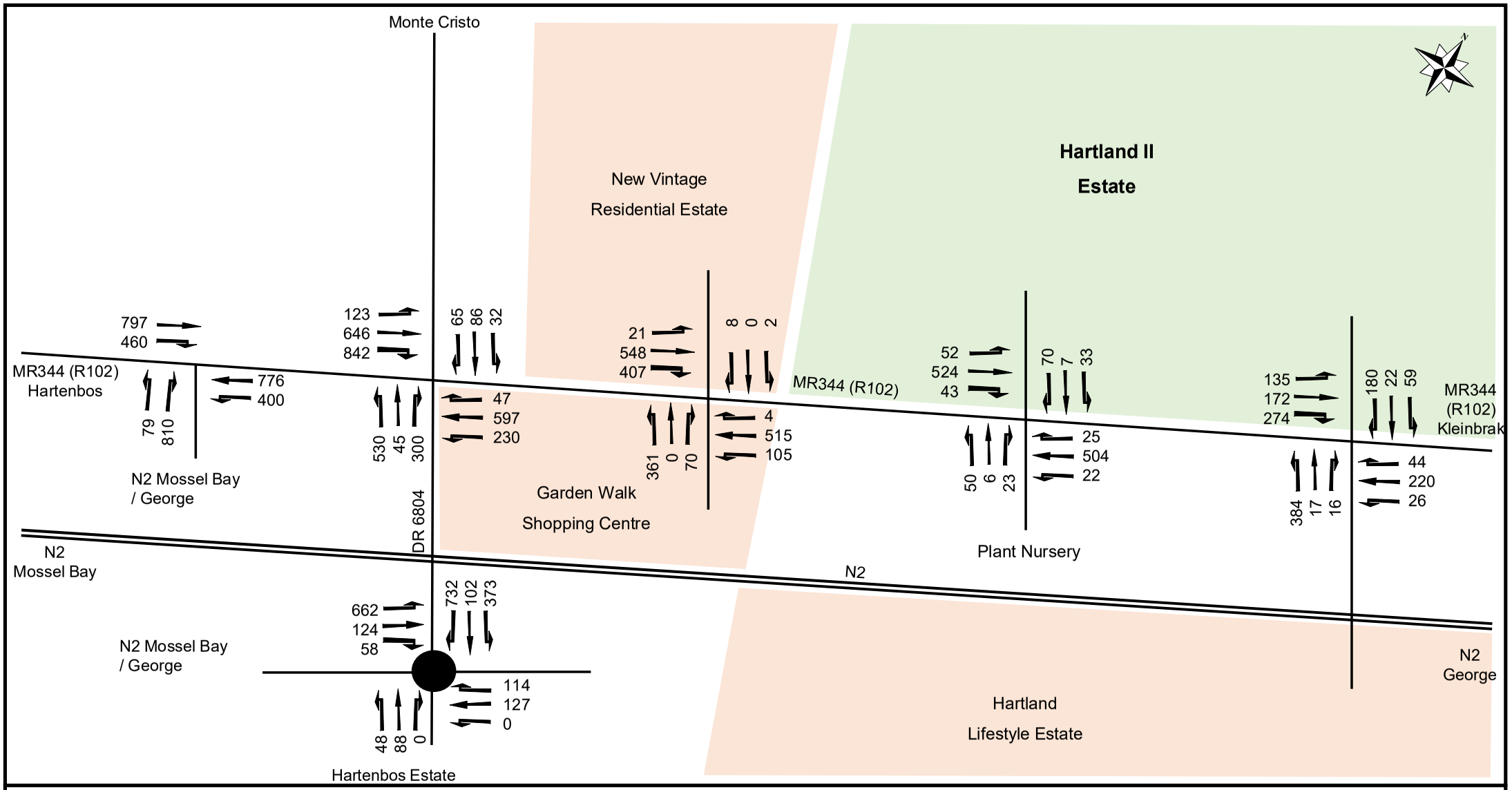
New Vintage 2035 PM (100%)



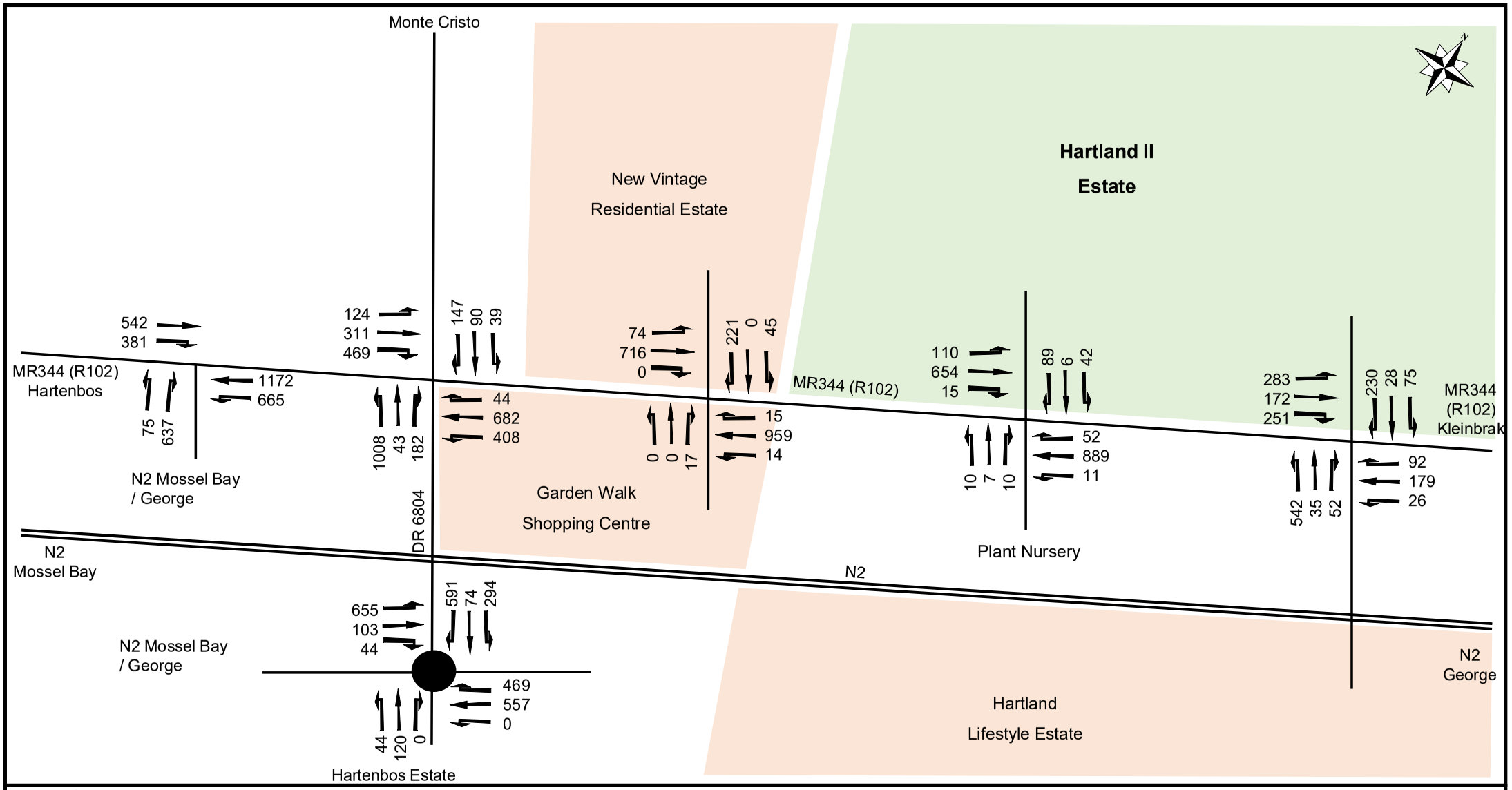
Garden Walk Traffic 2030 PM and 2035 PM



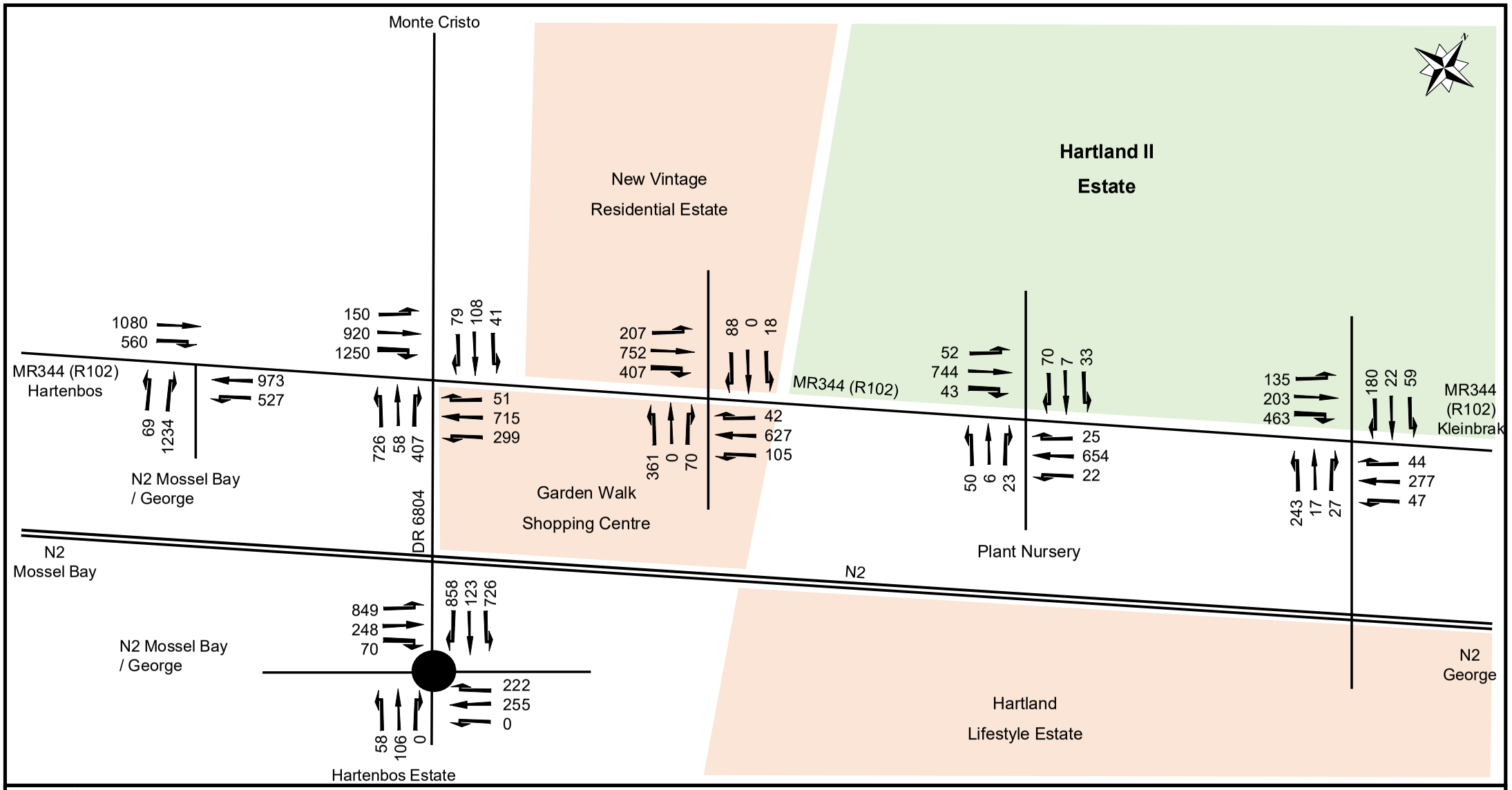
Hartland II: Ultimate Scenario Peak Hour 2030 AM (With adjacent developments)



Hartland II: Ultimate Scenario Peak Hour 2030 PM (With adjacent developments)



Hartland II: Ultimate Scenario Peak Hour 2035 AM (With adjacent developments)



Hartland II: Ultimate Scenario Peak Hour 2035 PM (With adjacent developments)

ANNEXURE C: SIDRA ANALYSIS

MOVEMENT SUMMARY

Site: 101 [Int1 Backgr 2030 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	62	0.0	0.054	8.4	LOS A	0.2	1.5	0.21	0.88	0.21	51.8
3	R2	6	0.0	0.054	8.8	LOS A	0.2	1.5	0.21	0.88	0.21	51.3
Approach		68	0.0	0.054	8.4	LOS A	0.2	1.5	0.21	0.88	0.21	51.7
East: MR344												
4	L2	6	0.0	0.056	5.5	LOS A	0.0	0.0	0.00	0.03	0.00	58.1
5	T1	102	0.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.7
Approach		108	0.0	0.056	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.6
West: MR344												
11	T1	78	0.0	0.040	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	17	0.0	0.010	5.7	LOS A	0.0	0.3	0.21	0.55	0.21	52.6
Approach		95	0.0	0.040	1.0	NA	0.0	0.3	0.04	0.10	0.04	58.5
All Vehicles		271	0.0	0.056	2.6	NA	0.2	1.5	0.07	0.27	0.07	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.

MOVEMENT SUMMARY

Site: 101 [Int1 Backgr 2030 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	26	0.0	0.027	8.3	LOS A	0.1	0.7	0.20	0.88	0.20	51.7
3	R2	6	0.0	0.027	8.8	LOS A	0.1	0.7	0.20	0.88	0.20	51.2
Approach		32	0.0	0.027	8.4	LOS A	0.1	0.7	0.20	0.88	0.20	51.6
East: MR344												
4	L2	6	0.0	0.050	5.5	LOS A	0.0	0.0	0.00	0.04	0.00	58.0
5	T1	91	0.0	0.050	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.7
Approach		97	0.0	0.050	0.3	NA	0.0	0.0	0.00	0.04	0.00	59.6
West: MR344												
11	T1	68	0.0	0.035	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	57	0.0	0.034	5.7	LOS A	0.2	1.1	0.20	0.56	0.20	52.6
Approach		125	0.0	0.035	2.6	NA	0.2	1.1	0.09	0.25	0.09	56.4
All Vehicles		254	0.0	0.050	2.5	NA	0.2	1.1	0.07	0.25	0.07	56.9

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.

MOVEMENT SUMMARY

Site: 101 [Int1 Ultimate 2030 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	339	0.0	0.468	9.9	LOS A	3.2	22.2	0.39	0.91	0.48	49.7
2	T1	37	0.0	0.468	28.8	LOS D	3.2	22.2	0.39	0.91	0.48	49.6
3	R2	30	0.0	0.094	17.3	LOS C	0.3	2.3	0.67	1.00	0.67	46.3
Approach		406	0.0	0.468	12.2	LOS B	3.2	22.2	0.41	0.92	0.49	49.4
East: MR344												
4	L2	17	0.0	0.083	5.5	LOS A	0.0	0.0	0.00	0.06	0.00	57.8
5	T1	144	0.0	0.083	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.4
6	R2	97	0.0	0.081	7.0	LOS A	0.3	2.4	0.46	0.65	0.46	52.0
Approach		258	0.0	0.083	3.0	NA	0.3	2.4	0.17	0.28	0.17	56.3
North: Kasuur Str (Hartland II)												
7	L2	79	0.0	0.157	8.6	LOS A	0.6	4.3	0.30	0.90	0.30	50.0
8	T1	29	0.0	0.157	17.6	LOS C	0.6	4.3	0.30	0.90	0.30	49.9
9	R2	242	0.0	1.789	397.3	LOS F	41.1	287.8	1.00	2.64	7.64	7.7
Approach		351	0.0	1.789	277.8	LOS F	41.1	287.8	0.78	2.10	5.37	10.5
West: MR344												
10	L2	298	0.0	0.220	5.6	LOS A	0.0	0.0	0.00	0.42	0.00	54.8
11	T1	114	0.0	0.220	0.0	LOS A	0.0	0.0	0.00	0.42	0.00	56.3
12	R2	174	0.0	0.111	6.0	LOS A	0.5	3.7	0.28	0.56	0.28	52.6
Approach		586	0.0	0.220	4.6	NA	0.5	3.7	0.08	0.47	0.08	54.4
All Vehicles		1600	0.0	1.789	66.1	NA	41.1	287.8	0.33	0.91	1.36	28.0

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.

MOVEMENT SUMMARY

Site: 101 [Int1 Ultimate 2030 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	384	0.0	0.473	10.6	LOS B	3.2	22.5	0.48	0.95	0.60	50.1
2	T1	18	0.0	0.473	29.6	LOS D	3.2	22.5	0.48	0.95	0.60	49.9
3	R2	16	0.0	0.069	21.8	LOS C	0.2	1.6	0.76	1.00	0.76	43.9
Approach		418	0.0	0.473	11.8	LOS B	3.2	22.5	0.49	0.95	0.61	49.8
East: MR344												
4	L2	26	0.0	0.127	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	57.8
5	T1	220	0.0	0.127	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.4
6	R2	46	0.0	0.035	6.5	LOS A	0.1	1.0	0.39	0.59	0.39	52.3
Approach		292	0.0	0.127	1.5	NA	0.1	1.0	0.06	0.15	0.06	58.0
North: Kasuur Str (Hartland II)												
7	L2	62	0.0	0.141	8.9	LOS A	0.5	3.7	0.40	0.89	0.40	49.6
8	T1	23	0.0	0.141	20.1	LOS C	0.5	3.7	0.40	0.89	0.40	49.5
9	R2	189	0.0	1.847	432.3	LOS F	34.4	240.7	1.00	2.35	6.63	7.1
Approach		275	0.0	1.847	301.8	LOS F	34.4	240.7	0.81	1.90	4.69	9.7
West: MR344												
10	L2	142	0.0	0.166	5.6	LOS A	0.0	0.0	0.00	0.27	0.00	56.1
11	T1	172	0.0	0.166	0.0	LOS A	0.0	0.0	0.00	0.27	0.00	57.6
12	R2	274	0.0	0.191	6.4	LOS A	0.9	6.5	0.38	0.61	0.38	52.3
Approach		588	0.0	0.191	4.3	NA	0.9	6.5	0.18	0.43	0.18	54.7
All Vehicles		1573	0.0	1.847	57.8	NA	34.4	240.7	0.35	0.77	1.06	30.0

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.

MOVEMENT SUMMARY

Site: 101 [Int1 Ultimate 2035 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	542	0.0	0.742	15.3	LOS C	11.5	80.4	0.57	1.10	1.16	46.2
2	T1	37	0.0	0.742	54.0	LOS F	11.5	80.4	0.57	1.10	1.16	46.1
3	R2	52	0.0	0.228	24.0	LOS C	0.8	5.8	0.79	1.02	0.86	42.8
Approach		631	0.0	0.742	18.2	LOS C	11.5	80.4	0.59	1.09	1.14	45.9
East: MR344												
4	L2	26	0.0	0.106	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	57.7
5	T1	179	0.0	0.106	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	59.3
6	R2	97	0.0	0.086	7.3	LOS A	0.4	2.6	0.49	0.68	0.49	51.9
Approach		302	0.0	0.106	2.8	NA	0.4	2.6	0.16	0.27	0.16	56.6
North: Kasuur Str (Hartland II)												
7	L2	79	0.0	0.194	8.9	LOS A	0.7	5.1	0.42	0.89	0.42	49.1
8	T1	29	0.0	0.194	22.8	LOS C	0.7	5.1	0.42	0.89	0.42	49.0
9	R2	242	0.0	4.667	1694.0	LOS F	73.5	514.2	1.00	2.19	6.28	2.0
Approach		351	0.0	4.667	1173.9	LOS F	73.5	514.2	0.82	1.79	4.47	2.9
West: MR344												
10	L2	298	0.0	0.251	5.6	LOS A	0.0	0.0	0.00	0.37	0.00	55.2
11	T1	172	0.0	0.251	0.0	LOS A	0.0	0.0	0.00	0.37	0.00	56.7
12	R2	251	0.0	0.168	6.2	LOS A	0.8	5.7	0.34	0.59	0.34	52.4
Approach		721	0.0	0.251	4.5	NA	0.8	5.7	0.12	0.45	0.12	54.5
All Vehicles		2004	0.0	4.667	213.1	NA	73.5	514.2	0.39	0.86	1.21	13.0

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.

MOVEMENT SUMMARY

Site: 101 [Int1 Ultimate 2035 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	243	0.0	0.397	10.8	LOS B	2.1	15.0	0.52	0.97	0.66	49.0
2	T1	18	0.0	0.397	42.7	LOS E	2.1	15.0	0.52	0.97	0.66	48.9
3	R2	27	0.0	0.223	39.9	LOS E	0.7	5.1	0.89	1.02	0.96	36.2
Approach		288	0.0	0.397	15.5	LOS C	2.1	15.0	0.56	0.98	0.68	47.5
East: MR344												
4	L2	47	0.0	0.167	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	57.6
5	T1	277	0.0	0.167	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	59.2
6	R2	46	0.0	0.036	6.7	LOS A	0.2	1.1	0.41	0.60	0.41	52.2
Approach		370	0.0	0.167	1.6	NA	0.2	1.1	0.05	0.15	0.05	58.0
North: Kasuur Str (Hartland II)												
7	L2	62	0.0	0.210	9.1	LOS A	0.7	5.2	0.51	0.89	0.51	47.4
8	T1	23	0.0	0.210	32.9	LOS D	0.7	5.2	0.51	0.89	0.51	47.3
9	R2	189	0.0	2.594	767.5	LOS F	45.1	315.6	1.00	2.30	6.58	4.2
Approach		275	0.0	2.594	534.1	LOS F	45.1	315.6	0.85	1.86	4.70	5.9
West: MR344												
10	L2	142	0.0	0.182	5.6	LOS A	0.0	0.0	0.00	0.24	0.00	56.3
11	T1	203	0.0	0.182	0.0	LOS A	0.0	0.0	0.00	0.24	0.00	57.8
12	R2	463	0.0	0.349	7.0	LOS A	1.9	13.2	0.49	0.67	0.49	52.0
Approach		808	0.0	0.349	5.0	NA	1.9	13.2	0.28	0.49	0.28	54.1
All Vehicles		1741	0.0	2.594	89.5	NA	45.1	315.6	0.37	0.71	1.00	23.5

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.

MOVEMENT SUMMARY

Site: 101v [Int1 Ultimate 2030 AM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	243	0.0	0.555	24.3	LOS C	5.8	40.9	0.93	0.81	0.93	42.2
2	T1	18	0.0	0.555	18.8	LOS B	5.8	40.9	0.93	0.81	0.93	43.1
3	R2	27	0.0	0.079	22.9	LOS C	0.5	3.8	0.82	0.70	0.82	42.6
Approach		288	0.0	0.555	23.9	LOS C	5.8	40.9	0.92	0.80	0.92	42.3
East: MR344												
4	L2	47	0.0	0.322	13.1	LOS B	4.6	32.3	0.61	0.56	0.61	51.5
5	T1	277	0.0	0.322	7.5	LOS A	4.6	32.3	0.61	0.56	0.61	52.8
6	R2	46	0.0	0.092	15.2	LOS B	0.7	4.9	0.63	0.70	0.63	46.8
Approach		370	0.0	0.322	9.2	LOS A	4.6	32.3	0.62	0.57	0.62	51.8
North: Kasuur Str (Hartland II)												
7	L2	62	0.0	0.189	22.4	LOS C	1.7	12.0	0.83	0.72	0.83	43.7
8	T1	23	0.0	0.189	16.9	LOS B	1.7	12.0	0.83	0.72	0.83	44.7
9	R2	189	0.0	0.838	35.0	LOS C	5.5	38.6	1.00	0.99	1.48	37.3
Approach		275	0.0	0.838	30.6	LOS C	5.5	38.6	0.95	0.90	1.28	39.1
West: MR344												
10	L2	142	0.0	0.347	13.2	LOS B	5.0	35.0	0.62	0.63	0.62	50.4
11	T1	203	0.0	0.347	7.7	LOS A	5.0	35.0	0.62	0.63	0.62	51.6
12	R2	463	0.0	0.890	33.9	LOS C	15.1	105.7	0.99	1.06	1.46	37.7
Approach		808	0.0	0.890	23.7	LOS C	15.1	105.7	0.83	0.88	1.10	42.5
All Vehicles		1741	0.0	0.890	21.7	LOS C	15.1	105.7	0.82	0.80	1.00	43.5

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.

MOVEMENT SUMMARY

Site: 101v [Int1 Ultimate 2030 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 30 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	384	0.0	0.685	17.2	LOS B	5.9	41.2	0.93	0.89	1.08	45.9
2	T1	18	0.0	0.685	11.6	LOS B	5.9	41.2	0.93	0.89	1.08	46.9
3	R2	16	0.0	0.034	13.9	LOS B	0.2	1.2	0.73	0.67	0.73	47.6
Approach		418	0.0	0.685	16.8	LOS B	5.9	41.2	0.93	0.88	1.06	46.0
East: MR344												
4	L2	26	0.0	0.423	15.2	LOS B	3.1	21.5	0.85	0.70	0.85	50.1
5	T1	220	0.0	0.423	9.7	LOS A	3.1	21.5	0.85	0.70	0.85	51.3
6	R2	46	0.0	0.142	18.0	LOS B	0.6	4.4	0.88	0.72	0.88	45.2
Approach		292	0.0	0.423	11.5	LOS B	3.1	21.5	0.85	0.71	0.85	50.2
North: Kasuur Str (Hartland II)												
7	L2	62	0.0	0.151	14.3	LOS B	1.0	6.8	0.77	0.69	0.77	48.5
8	T1	23	0.0	0.151	8.7	LOS A	1.0	6.8	0.77	0.69	0.77	49.6
9	R2	189	0.0	0.674	21.2	LOS C	3.1	21.4	1.00	0.87	1.23	43.5
Approach		275	0.0	0.674	18.6	LOS B	3.1	21.4	0.93	0.81	1.08	45.0
West: MR344												
10	L2	142	0.0	0.549	15.7	LOS B	4.1	28.9	0.89	0.77	0.89	48.5
11	T1	172	0.0	0.549	10.2	LOS B	4.1	28.9	0.89	0.77	0.89	49.7
12	R2	274	0.0	0.739	20.5	LOS C	4.5	31.4	0.99	0.93	1.29	43.8
Approach		588	0.0	0.739	16.3	LOS B	4.5	31.4	0.93	0.84	1.08	46.5
All Vehicles		1573	0.0	0.739	15.9	LOS B	5.9	41.2	0.91	0.82	1.03	46.7

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.

MOVEMENT SUMMARY

Site: 101v [Int1 Ultimate 2035 AM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	542	0.0	0.669	17.1	LOS B	11.2	78.1	0.82	0.82	0.83	46.1
2	T1	37	0.0	0.669	11.5	LOS B	11.2	78.1	0.82	0.82	0.83	47.1
3	R2	52	0.0	0.084	14.4	LOS B	0.8	5.3	0.61	0.70	0.61	47.2
Approach		631	0.0	0.669	16.5	LOS B	11.2	78.1	0.80	0.81	0.81	46.2
East: MR344												
4	L2	26	0.0	0.353	20.8	LOS C	4.0	28.3	0.83	0.69	0.83	46.5
5	T1	179	0.0	0.353	15.2	LOS B	4.0	28.3	0.83	0.69	0.83	47.5
6	R2	97	0.0	0.586	32.3	LOS C	2.6	17.9	1.00	0.80	1.11	38.4
Approach		302	0.0	0.586	21.2	LOS C	4.0	28.3	0.88	0.72	0.92	44.1
North: Kasuur Str (Hartland II)												
7	L2	79	0.0	0.125	13.9	LOS B	1.5	10.7	0.60	0.65	0.60	48.7
8	T1	29	0.0	0.125	8.4	LOS A	1.5	10.7	0.60	0.65	0.60	49.8
9	R2	242	0.0	0.859	35.3	LOS D	7.5	52.2	1.00	1.04	1.52	37.2
Approach		351	0.0	0.859	28.2	LOS C	7.5	52.2	0.88	0.92	1.23	40.2
West: MR344												
10	L2	298	0.0	0.829	28.9	LOS C	12.9	90.1	0.99	1.01	1.27	40.8
11	T1	172	0.0	0.829	23.3	LOS C	12.9	90.1	0.99	1.01	1.27	41.6
12	R2	251	0.0	0.745	28.9	LOS C	6.6	46.0	0.99	0.91	1.21	39.8
Approach		721	0.0	0.829	27.6	LOS C	12.9	90.1	0.99	0.98	1.25	40.7
All Vehicles		2004	0.0	0.859	23.2	LOS C	12.9	90.1	0.90	0.88	1.06	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.

MOVEMENT SUMMARY

Site: 101v [Int1 Ultimate 2035 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Kasuur Str												
1	L2	243	0.0	0.555	24.3	LOS C	5.8	40.9	0.93	0.81	0.93	42.2
2	T1	18	0.0	0.555	18.8	LOS B	5.8	40.9	0.93	0.81	0.93	43.1
3	R2	27	0.0	0.079	22.9	LOS C	0.5	3.8	0.82	0.70	0.82	42.6
Approach		288	0.0	0.555	23.9	LOS C	5.8	40.9	0.92	0.80	0.92	42.3
East: MR344												
4	L2	47	0.0	0.322	13.1	LOS B	4.6	32.3	0.61	0.56	0.61	51.5
5	T1	277	0.0	0.322	7.5	LOS A	4.6	32.3	0.61	0.56	0.61	52.8
6	R2	46	0.0	0.092	15.2	LOS B	0.7	4.9	0.63	0.70	0.63	46.8
Approach		370	0.0	0.322	9.2	LOS A	4.6	32.3	0.62	0.57	0.62	51.8
North: Kasuur Str (Hartland II)												
7	L2	62	0.0	0.189	22.4	LOS C	1.7	12.0	0.83	0.72	0.83	43.7
8	T1	23	0.0	0.189	16.9	LOS B	1.7	12.0	0.83	0.72	0.83	44.7
9	R2	189	0.0	0.838	35.0	LOS C	5.5	38.6	1.00	0.99	1.48	37.3
Approach		275	0.0	0.838	30.6	LOS C	5.5	38.6	0.95	0.90	1.28	39.1
West: MR344												
10	L2	142	0.0	0.347	13.2	LOS B	5.0	35.0	0.62	0.63	0.62	50.4
11	T1	203	0.0	0.347	7.7	LOS A	5.0	35.0	0.62	0.63	0.62	51.6
12	R2	463	0.0	0.890	33.9	LOS C	15.1	105.7	0.99	1.06	1.46	37.7
Approach		808	0.0	0.890	23.7	LOS C	15.1	105.7	0.83	0.88	1.10	42.5
All Vehicles		1741	0.0	0.890	21.7	LOS C	15.1	105.7	0.82	0.80	1.00	43.5

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.

MOVEMENT SUMMARY

Site: 101 [Int2 Ultimate 2030 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Plant Nursery												
1	L2	10	0.0	0.110	13.0	LOS B	0.3	2.4	0.84	1.00	0.84	40.3
2	T1	7	0.0	0.110	52.8	LOS F	0.3	2.4	0.84	1.00	0.84	40.2
3	R2	10	0.0	0.147	60.0	LOS F	0.4	3.0	0.93	1.00	0.94	30.2
Approach		27	0.0	0.147	40.9	LOS E	0.4	3.0	0.87	1.00	0.88	35.9
East: MR344												
4	L2	11	0.0	0.340	5.6	LOS A	0.0	0.0	0.00	0.01	0.00	58.2
5	T1	651	0.0	0.340	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
6	R2	55	0.0	0.061	8.3	LOS A	0.2	1.7	0.56	0.73	0.56	51.3
Approach		717	0.0	0.340	0.8	NA	0.2	1.7	0.04	0.07	0.04	59.1
North: Hartland II												
7	L2	44	0.0	0.139	11.6	LOS B	0.5	3.2	0.64	0.98	0.64	47.0
8	T1	6	0.0	0.139	50.5	LOS F	0.5	3.2	0.64	0.98	0.64	46.9
9	R2	94	0.0	1.416	286.3	LOS F	14.0	97.8	1.00	1.67	3.89	10.0
Approach		144	0.0	1.416	191.8	LOS F	14.0	97.8	0.87	1.43	2.75	13.8
West: MR344												
10	L2	116	0.0	0.329	5.6	LOS A	0.0	0.0	0.00	0.11	0.00	57.4
11	T1	519	0.0	0.329	0.0	LOS A	0.0	0.0	0.00	0.11	0.00	58.9
12	R2	15	0.0	0.017	8.4	LOS A	0.1	0.5	0.56	0.69	0.56	51.3
Approach		650	0.0	0.329	1.2	NA	0.1	0.5	0.01	0.12	0.01	58.5
All Vehicles		1538	0.0	1.416	19.6	NA	14.0	97.8	0.12	0.23	0.30	44.6

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.

MOVEMENT SUMMARY

Site: 101 [Int2 Ultimate 2030 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Plant Nursery												
1	L2	50	0.0	0.126	11.4	LOS B	0.4	3.0	0.60	0.97	0.60	48.2
2	T1	6	0.0	0.126	37.7	LOS E	0.4	3.0	0.60	0.97	0.60	48.1
3	R2	23	0.0	0.222	45.4	LOS E	0.7	4.9	0.91	1.02	0.97	34.3
Approach		79	0.0	0.222	23.4	LOS C	0.7	4.9	0.69	0.98	0.71	43.2
East: MR344												
4	L2	22	0.0	0.272	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	58.1
5	T1	504	0.0	0.272	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.7
6	R2	26	0.0	0.027	7.8	LOS A	0.1	0.8	0.53	0.67	0.53	51.6
Approach		552	0.0	0.272	0.6	NA	0.1	0.8	0.03	0.06	0.03	59.2
North: Hartland II												
7	L2	35	0.0	0.109	11.6	LOS B	0.4	2.6	0.63	0.97	0.63	47.4
8	T1	7	0.0	0.109	35.7	LOS E	0.4	2.6	0.63	0.97	0.63	47.3
9	R2	74	0.0	0.774	85.4	LOS F	3.5	24.5	0.97	1.19	1.75	24.9
Approach		116	0.0	0.774	60.1	LOS F	3.5	24.5	0.85	1.11	1.35	30.1
West: MR344												
10	L2	55	0.0	0.300	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	57.8
11	T1	524	0.0	0.300	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.4
12	R2	43	0.0	0.041	7.6	LOS A	0.2	1.2	0.51	0.67	0.51	51.8
Approach		622	0.0	0.300	1.0	NA	0.2	1.2	0.04	0.10	0.04	58.7
All Vehicles		1369	0.0	0.774	7.2	NA	3.5	24.5	0.14	0.22	0.18	53.5

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.

MOVEMENT SUMMARY

Site: 101 [Int2 Ultimate 2035 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Plant Nursery												
1	L2	10	0.0	0.309	30.6	LOS D	0.9	6.3	0.95	1.02	1.06	25.5
2	T1	7	0.0	0.309	152.8	LOS F	0.9	6.3	0.95	1.02	1.06	25.5
3	R2	10	0.0	0.488	238.9	LOS F	1.3	9.4	0.99	1.03	1.12	12.2
Approach		27	0.0	0.488	139.6	LOS F	1.3	9.4	0.97	1.03	1.08	18.2
East: MR344												
4	L2	11	0.0	0.462	5.6	LOS A	0.0	0.0	0.00	0.01	0.00	58.2
5	T1	889	0.0	0.462	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
6	R2	55	0.0	0.075	9.5	LOS A	0.3	2.0	0.61	0.81	0.61	50.5
Approach		955	0.0	0.462	0.7	NA	0.3	2.0	0.04	0.05	0.04	59.1
North: Hartland II												
7	L2	44	0.0	0.297	16.5	LOS C	1.0	6.8	0.83	1.04	0.97	39.7
8	T1	6	0.0	0.297	134.9	LOS F	1.0	6.8	0.83	1.04	0.97	39.6
9	R2	94	0.0	4.665	1754.4	LOS F	35.3	247.3	1.00	1.50	3.34	1.9
Approach		144	0.0	4.665	1150.7	LOS F	35.3	247.3	0.94	1.34	2.51	2.8
West: MR344												
10	L2	116	0.0	0.398	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	57.5
11	T1	654	0.0	0.398	0.1	LOS A	0.0	0.0	0.00	0.09	0.00	59.1
12	R2	15	0.0	0.026	10.8	LOS B	0.1	0.7	0.68	0.81	0.68	49.6
Approach		785	0.0	0.398	1.1	NA	0.1	0.7	0.01	0.10	0.01	58.6
All Vehicles		1911	0.0	4.665	89.6	NA	35.3	247.3	0.11	0.18	0.23	23.2

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.

MOVEMENT SUMMARY

Site: 101 [Int2 Ultimate 2035 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Plant Nursery												
1	L2	50	0.0	0.230	14.1	LOS B	0.8	5.3	0.77	1.02	0.83	43.8
2	T1	6	0.0	0.230	88.7	LOS F	0.8	5.3	0.77	1.02	0.83	43.7
3	R2	23	0.0	0.636	164.4	LOS F	2.0	14.0	0.98	1.06	1.27	16.2
Approach		79	0.0	0.636	63.6	LOS F	2.0	14.0	0.83	1.03	0.96	29.3
East: MR344												
4	L2	22	0.0	0.347	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	58.1
5	T1	654	0.0	0.347	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.7
6	R2	26	0.0	0.038	9.6	LOS A	0.1	1.0	0.62	0.78	0.62	50.4
Approach		702	0.0	0.347	0.6	NA	0.1	1.0	0.02	0.05	0.02	59.3
North: Hartland II												
7	L2	35	0.0	0.225	15.9	LOS C	0.7	5.0	0.83	1.02	0.90	41.3
8	T1	7	0.0	0.225	82.6	LOS F	0.7	5.0	0.83	1.02	0.90	41.2
9	R2	74	0.0	2.259	682.3	LOS F	19.4	136.1	1.00	1.58	3.64	4.5
Approach		116	0.0	2.259	444.2	LOS F	19.4	136.1	0.94	1.37	2.64	6.7
West: MR344												
10	L2	55	0.0	0.414	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.9
11	T1	744	0.0	0.414	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
12	R2	43	0.0	0.051	8.6	LOS A	0.2	1.4	0.58	0.74	0.58	51.1
Approach		842	0.0	0.414	0.9	NA	0.2	1.4	0.03	0.08	0.03	58.9
All Vehicles		1739	0.0	2.259	33.1	NA	19.4	136.1	0.12	0.20	0.24	37.7

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

MOVEMENT SUMMARY

Site: 101v [Int2 Ultimate 2030 AM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 30 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Plant Nursery												
1	L2	10	0.0	0.044	16.5	LOS B	0.2	1.5	0.83	0.63	0.83	47.6
2	T1	7	0.0	0.044	11.0	LOS B	0.2	1.5	0.83	0.63	0.83	48.7
3	R2	10	0.0	0.027	16.5	LOS B	0.1	0.9	0.83	0.66	0.83	46.0
Approach		27	0.0	0.044	15.0	LOS B	0.2	1.5	0.83	0.64	0.83	47.3
East: MR344												
4	L2	11	0.0	0.849	20.6	LOS C	12.0	83.8	0.97	1.06	1.39	47.0
5	T1	651	0.0	0.849	15.1	LOS B	12.0	83.8	0.97	1.06	1.39	48.0
6	R2	55	0.0	0.204	19.2	LOS B	0.8	5.5	0.92	0.73	0.92	44.5
Approach		717	0.0	0.849	15.5	LOS B	12.0	83.8	0.97	1.04	1.35	47.7
North: Hartland II												
7	L2	44	0.0	0.135	17.0	LOS B	0.7	4.6	0.85	0.71	0.85	46.3
8	T1	6	0.0	0.135	11.4	LOS B	0.7	4.6	0.85	0.71	0.85	47.4
9	R2	94	0.0	0.240	17.2	LOS B	1.2	8.7	0.88	0.75	0.88	45.6
Approach		144	0.0	0.240	16.9	LOS B	1.2	8.7	0.87	0.73	0.87	45.9
West: MR344												
10	L2	116	0.0	0.821	19.1	LOS B	10.8	75.5	0.95	1.01	1.29	47.4
11	T1	519	0.0	0.821	13.5	LOS B	10.8	75.5	0.95	1.01	1.29	48.4
12	R2	15	0.0	0.058	19.7	LOS B	0.2	1.5	0.93	0.67	0.93	44.2
Approach		650	0.0	0.821	14.7	LOS B	10.8	75.5	0.95	1.00	1.28	48.1
All Vehicles		1538	0.0	0.849	15.3	LOS B	12.0	83.8	0.95	0.99	1.27	47.7

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.

MOVEMENT SUMMARY

Site: 101v [Int2 Ultimate 2030 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 30 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Plant Nursery												
1	L2	50	0.0	0.143	17.0	LOS B	0.7	5.1	0.86	0.71	0.86	46.3
2	T1	6	0.0	0.143	11.4	LOS B	0.7	5.1	0.86	0.71	0.86	47.3
3	R2	23	0.0	0.062	16.6	LOS B	0.3	2.0	0.84	0.69	0.84	45.9
Approach		79	0.0	0.143	16.4	LOS B	0.7	5.1	0.85	0.70	0.85	46.3
East: MR344												
4	L2	22	0.0	0.676	14.8	LOS B	7.1	49.5	0.88	0.81	0.97	50.7
5	T1	504	0.0	0.676	9.2	LOS A	7.1	49.5	0.88	0.81	0.97	51.9
6	R2	26	0.0	0.089	17.8	LOS B	0.4	2.5	0.87	0.70	0.87	45.2
Approach		552	0.0	0.676	9.9	LOS A	7.1	49.5	0.88	0.80	0.96	51.5
North: Hartland II												
7	L2	35	0.0	0.112	16.9	LOS B	0.5	3.8	0.85	0.70	0.85	46.5
8	T1	7	0.0	0.112	11.3	LOS B	0.5	3.8	0.85	0.70	0.85	47.6
9	R2	74	0.0	0.202	17.2	LOS B	1.0	6.8	0.87	0.74	0.87	45.6
Approach		116	0.0	0.202	16.7	LOS B	1.0	6.8	0.86	0.72	0.86	46.0
West: MR344												
10	L2	55	0.0	0.745	16.3	LOS B	8.6	60.0	0.91	0.89	1.10	49.5
11	T1	524	0.0	0.745	10.7	LOS B	8.6	60.0	0.91	0.89	1.10	50.6
12	R2	43	0.0	0.133	17.0	LOS B	0.6	3.9	0.85	0.72	0.85	45.7
Approach		622	0.0	0.745	11.7	LOS B	8.6	60.0	0.91	0.88	1.08	50.2
All Vehicles		1369	0.0	0.745	11.6	LOS B	8.6	60.0	0.89	0.82	1.00	50.1

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.

MOVEMENT SUMMARY

Site: 101v [Int2 Ultimate 2035 AM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Plant Nursery												
1	L2	10	0.0	0.058	22.1	LOS C	0.3	2.1	0.88	0.65	0.88	44.4
2	T1	7	0.0	0.058	16.6	LOS B	0.3	2.1	0.88	0.65	0.88	45.3
3	R2	10	0.0	0.038	22.1	LOS C	0.2	1.2	0.88	0.66	0.88	43.0
Approach		27	0.0	0.058	20.6	LOS C	0.3	2.1	0.88	0.66	0.88	44.1
East: MR344												
4	L2	11	0.0	0.840	19.7	LOS B	19.1	133.5	0.90	0.97	1.13	47.6
5	T1	889	0.0	0.840	14.1	LOS B	19.1	133.5	0.90	0.97	1.13	48.6
6	R2	55	0.0	0.189	18.4	LOS B	0.9	6.2	0.80	0.73	0.80	44.9
Approach		955	0.0	0.840	14.4	LOS B	19.1	133.5	0.89	0.95	1.12	48.4
North: Hartland II												
7	L2	44	0.0	0.180	22.7	LOS C	0.9	6.5	0.91	0.72	0.91	43.2
8	T1	6	0.0	0.180	17.2	LOS B	0.9	6.5	0.91	0.72	0.91	44.1
9	R2	94	0.0	0.323	23.2	LOS C	1.8	12.4	0.93	0.76	0.93	42.4
Approach		144	0.0	0.323	22.8	LOS C	1.8	12.4	0.92	0.74	0.92	42.7
West: MR344												
10	L2	116	0.0	0.723	14.1	LOS B	12.3	86.3	0.80	0.78	0.86	50.7
11	T1	654	0.0	0.723	8.6	LOS A	12.3	86.3	0.80	0.78	0.86	52.0
12	R2	15	0.0	0.064	21.5	LOS C	0.3	1.8	0.86	0.68	0.86	43.3
Approach		785	0.0	0.723	9.6	LOS A	12.3	86.3	0.80	0.77	0.86	51.6
All Vehicles		1911	0.0	0.840	13.2	LOS B	19.1	133.5	0.86	0.86	0.99	49.1

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.

MOVEMENT SUMMARY

Site: 101v [Int2 Ultimate 2035 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Plant Nursery												
1	L2	50	0.0	0.191	22.7	LOS C	1.0	7.2	0.91	0.72	0.91	43.1
2	T1	6	0.0	0.191	17.2	LOS B	1.0	7.2	0.91	0.72	0.91	44.0
3	R2	23	0.0	0.085	22.3	LOS C	0.4	2.9	0.89	0.69	0.89	42.9
Approach		79	0.0	0.191	22.2	LOS C	1.0	7.2	0.90	0.72	0.90	43.1
East: MR344												
4	L2	22	0.0	0.631	12.4	LOS B	9.3	65.3	0.74	0.66	0.74	52.5
5	T1	654	0.0	0.631	6.9	LOS A	9.3	65.3	0.74	0.66	0.74	53.8
6	R2	26	0.0	0.095	18.8	LOS B	0.4	3.0	0.80	0.71	0.80	44.7
Approach		702	0.0	0.631	7.5	LOS A	9.3	65.3	0.74	0.66	0.74	53.3
North: Hartland II												
7	L2	35	0.0	0.150	22.6	LOS C	0.8	5.4	0.90	0.71	0.90	43.4
8	T1	7	0.0	0.150	17.1	LOS B	0.8	5.4	0.90	0.71	0.90	44.3
9	R2	74	0.0	0.279	24.0	LOS C	1.4	9.9	0.94	0.74	0.94	42.0
Approach		116	0.0	0.279	23.2	LOS C	1.4	9.9	0.93	0.73	0.93	42.6
West: MR344												
10	L2	55	0.0	0.747	14.9	LOS B	13.4	94.1	0.82	0.80	0.91	50.5
11	T1	744	0.0	0.747	9.3	LOS A	13.4	94.1	0.82	0.80	0.91	51.7
12	R2	43	0.0	0.126	16.4	LOS B	0.6	4.4	0.73	0.72	0.73	46.0
Approach		842	0.0	0.747	10.1	LOS B	13.4	94.1	0.82	0.80	0.90	51.3
All Vehicles		1739	0.0	0.747	10.4	LOS B	13.4	94.1	0.80	0.73	0.84	51.0

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.

MOVEMENT SUMMARY

Site: 101 [Int3 Ultimate 2030 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Garden Walk												
1	L2	1	0.0	0.017	14.0	LOS B	0.0	0.3	0.87	0.96	0.87	38.0
2	T1	1	0.0	0.017	55.6	LOS F	0.0	0.3	0.87	0.96	0.87	37.9
3	R2	1	0.0	0.019	70.7	LOS F	0.1	0.4	0.94	1.00	0.94	27.7
Approach		3	0.0	0.019	46.9	LOS E	0.1	0.4	0.90	0.97	0.90	33.9
East: MR344												
4	L2	14	0.0	0.384	5.6	LOS A	0.0	0.0	0.00	0.01	0.00	58.2
5	T1	734	0.0	0.384	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
6	R2	2	0.0	0.002	8.0	LOS A	0.0	0.1	0.55	0.60	0.55	51.5
Approach		750	0.0	0.384	0.2	NA	0.0	0.1	0.00	0.01	0.00	59.7
North: New Vintage												
7	L2	4	0.0	0.023	12.4	LOS B	0.1	0.5	0.75	0.92	0.75	44.3
8	T1	1	0.0	0.023	57.1	LOS F	0.1	0.5	0.75	0.92	0.75	44.2
9	R2	23	0.0	0.429	94.6	LOS F	1.3	9.3	0.96	1.04	1.14	23.5
Approach		28	0.0	0.429	81.1	LOS F	1.3	9.3	0.92	1.02	1.07	25.7
West: MR344												
10	L2	7	0.0	0.323	5.6	LOS A	0.0	0.0	0.00	0.01	0.00	58.2
11	T1	622	0.0	0.323	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.9
12	R2	1	0.0	0.001	8.9	LOS A	0.0	0.0	0.59	0.61	0.59	50.9
Approach		630	0.0	0.323	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.8
All Vehicles		1412	0.0	0.429	1.9	NA	1.3	9.3	0.02	0.03	0.02	58.1

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.

MOVEMENT SUMMARY

Site: 101 [Int3 Ultimate 2030 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Garden Walk												
1	L2	361	0.0	0.585	15.4	LOS C	3.9	27.4	0.69	1.16	1.17	47.6
2	T1	1	0.0	0.585	101.5	LOS F	3.9	27.4	0.69	1.16	1.17	47.5
3	R2	70	0.0	1.509	354.5	LOS F	12.5	87.4	1.00	1.54	3.40	8.2
Approach		432	0.0	1.509	70.5	LOS F	12.5	87.4	0.74	1.22	1.54	26.8
East: MR344												
4	L2	105	0.0	0.321	5.6	LOS A	0.0	0.0	0.00	0.10	0.00	57.4
5	T1	515	0.0	0.321	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	59.0
6	R2	4	0.0	0.004	7.7	LOS A	0.0	0.1	0.52	0.60	0.52	51.8
Approach		624	0.0	0.321	1.0	NA	0.0	0.1	0.00	0.10	0.00	58.7
North: New Vintage												
7	L2	2	0.0	0.023	11.5	LOS B	0.1	0.5	0.82	0.90	0.82	39.5
8	T1	1	0.0	0.023	71.7	LOS F	0.1	0.5	0.82	0.90	0.82	39.4
9	R2	8	0.0	0.433	240.5	LOS F	1.2	8.2	0.99	1.02	1.09	12.1
Approach		12	0.0	0.433	183.5	LOS F	1.2	8.2	0.94	0.99	1.02	14.9
West: MR344												
10	L2	22	0.0	0.296	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	58.1
11	T1	548	0.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.7
12	R2	407	0.0	0.441	10.0	LOS B	2.8	19.5	0.67	0.95	0.93	50.1
Approach		977	0.0	0.441	4.3	NA	2.8	19.5	0.28	0.41	0.39	55.3
All Vehicles		2045	0.0	1.509	18.3	NA	12.5	87.4	0.30	0.49	0.52	45.2

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.

MOVEMENT SUMMARY

Site: 101 [Int3 Ultimate 2035 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Garden Walk												
1	L2	1	0.0	0.053	19.6	LOS C	0.1	1.0	0.96	1.00	0.96	23.8
2	T1	1	0.0	0.053	162.8	LOS F	0.1	1.0	0.96	1.00	0.96	23.7
3	R2	1	0.0	0.065	212.9	LOS F	0.2	1.1	0.98	1.00	0.98	13.3
Approach		3	0.0	0.065	132.3	LOS F	0.2	1.1	0.97	1.00	0.97	18.9
East: MR344												
4	L2	14	0.0	0.499	5.6	LOS A	0.0	0.0	0.00	0.01	0.00	58.2
5	T1	959	0.0	0.499	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
6	R2	16	0.0	0.022	9.5	LOS A	0.1	0.6	0.61	0.75	0.61	50.4
Approach		989	0.0	0.499	0.3	NA	0.1	0.6	0.01	0.02	0.01	59.6
North: New Vintage												
7	L2	47	0.0	0.152	14.3	LOS B	0.5	3.3	0.72	1.00	0.72	46.4
8	T1	1	0.0	0.152	168.2	LOS F	0.5	3.3	0.72	1.00	0.72	46.3
9	R2	233	0.0	14.592	6182.8	LOS F	104.7	733.1	1.00	1.47	3.21	0.6
Approach		281	0.0	14.592	5120.6	LOS F	104.7	733.1	0.95	1.39	2.78	0.7
West: MR344												
10	L2	78	0.0	0.409	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	57.8
11	T1	716	0.0	0.409	0.1	LOS A	0.0	0.0	0.00	0.06	0.00	59.4
12	R2	1	0.0	0.002	11.5	LOS B	0.0	0.0	0.72	0.69	0.72	49.1
Approach		795	0.0	0.409	0.6	NA	0.0	0.0	0.00	0.06	0.00	59.2
All Vehicles		2068	0.0	14.592	696.6	NA	104.7	733.1	0.14	0.22	0.38	4.7

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.

MOVEMENT SUMMARY

Site: 101 [Int3 Ultimate 2035 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Garden Walk												
1	L2	361	0.0	0.788	23.4	LOS C	6.6	45.9	0.84	1.38	2.11	42.7
2	T1	1	0.0	0.788	525.7	LOS F	6.6	45.9	0.84	1.38	2.11	42.6
3	R2	70	0.0	4.718	1815.0	LOS F	29.3	205.4	1.00	1.38	2.79	1.8
Approach		432	0.0	4.718	314.9	LOS F	29.3	205.4	0.87	1.38	2.22	9.0
East: MR344												
4	L2	105	0.0	0.378	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	57.6
5	T1	627	0.0	0.378	0.1	LOS A	0.0	0.0	0.00	0.09	0.00	59.1
6	R2	44	0.0	0.087	12.1	LOS B	0.3	2.2	0.74	0.89	0.74	48.7
Approach		776	0.0	0.378	1.5	NA	0.3	2.2	0.04	0.13	0.04	58.2
North: New Vintage												
7	L2	19	0.0	0.122	14.7	LOS B	0.3	2.4	0.82	1.00	0.82	41.4
8	T1	1	0.0	0.122	256.1	LOS F	0.3	2.4	0.82	1.00	0.82	41.3
9	R2	93	0.0	15.439	6668.8	LOS F	62.0	433.8	1.00	1.19	1.94	0.5
Approach		113	0.0	15.439	5489.5	LOS F	62.0	433.8	0.97	1.16	1.74	0.6
West: MR344												
10	L2	218	0.0	0.507	5.6	LOS A	0.0	0.0	0.00	0.13	0.00	57.1
11	T1	752	0.0	0.507	0.1	LOS A	0.0	0.0	0.00	0.13	0.00	58.6
12	R2	407	0.0	0.521	12.1	LOS B	3.4	23.9	0.73	1.03	1.16	48.7
Approach		1377	0.0	0.521	4.5	NA	3.4	23.9	0.22	0.40	0.34	55.1
All Vehicles		2698	0.0	15.439	282.3	NA	62.0	433.8	0.30	0.51	0.62	10.0

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.

MOVEMENT SUMMARY

Site: 101v [Int3 Ultimate 2030 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Garden Walk												
1	L2	361	0.0	0.499	20.1	LOS C	8.0	55.7	0.79	0.80	0.79	44.2
2	T1	1	0.0	0.499	14.5	LOS B	8.0	55.7	0.79	0.80	0.79	45.1
3	R2	70	0.0	0.352	34.6	LOS C	2.1	14.4	0.97	0.75	0.97	37.4
Approach		432	0.0	0.499	22.4	LOS C	8.0	55.7	0.82	0.79	0.82	43.0
East: MR344												
4	L2	105	0.0	0.802	26.7	LOS C	18.2	127.5	0.95	0.93	1.08	43.1
5	T1	515	0.0	0.802	21.1	LOS C	18.2	127.5	0.95	0.93	1.08	44.0
6	R2	4	0.0	0.011	17.3	LOS B	0.1	0.5	0.62	0.64	0.62	45.5
Approach		624	0.0	0.802	22.0	LOS C	18.2	127.5	0.94	0.93	1.08	43.9
North: New Vintage												
7	L2	2	0.0	0.017	32.8	LOS C	0.1	0.6	0.92	0.61	0.92	39.1
8	T1	1	0.0	0.017	27.2	LOS C	0.1	0.6	0.92	0.61	0.92	39.8
9	R2	8	0.0	0.064	36.8	LOS D	0.3	1.8	0.98	0.65	0.98	36.6
Approach		12	0.0	0.064	35.2	LOS D	0.3	1.8	0.96	0.64	0.96	37.3
West: MR344												
10	L2	22	0.0	0.454	11.2	LOS B	8.3	58.1	0.53	0.49	0.53	53.4
11	T1	548	0.0	0.454	5.6	LOS A	8.3	58.1	0.53	0.49	0.53	54.7
12	R2	407	0.0	0.743	20.3	LOS C	7.4	52.0	0.96	0.91	1.14	43.9
Approach		977	0.0	0.743	11.9	LOS B	8.3	58.1	0.71	0.66	0.79	49.6
All Vehicles		2045	0.0	0.802	17.3	LOS B	18.2	127.5	0.81	0.77	0.88	46.2

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.

MOVEMENT SUMMARY

Site: 101v [Int3 Ultimate 2035 AM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Garden Walk												
1	L2	1	0.0	0.006	24.9	LOS C	0.0	0.3	0.86	0.57	0.86	43.2
2	T1	1	0.0	0.006	19.3	LOS B	0.0	0.3	0.86	0.57	0.86	44.0
3	R2	1	0.0	0.004	25.8	LOS C	0.0	0.2	0.88	0.59	0.88	41.2
Approach		3	0.0	0.006	23.3	LOS C	0.0	0.3	0.86	0.57	0.86	42.8
East: MR344												
4	L2	14	0.0	0.832	19.4	LOS B	23.2	162.7	0.86	0.90	1.01	47.7
5	T1	959	0.0	0.832	13.8	LOS B	23.2	162.7	0.86	0.90	1.01	48.8
6	R2	16	0.0	0.055	18.1	LOS B	0.3	1.9	0.70	0.69	0.70	45.1
Approach		989	0.0	0.832	14.0	LOS B	23.2	162.7	0.86	0.90	1.01	48.7
North: New Vintage												
7	L2	47	0.0	0.163	26.1	LOS C	1.1	7.5	0.90	0.73	0.90	41.2
8	T1	1	0.0	0.163	20.6	LOS C	1.1	7.5	0.90	0.73	0.90	42.1
9	R2	233	0.0	0.787	31.8	LOS C	6.4	44.5	1.00	0.94	1.31	38.6
Approach		281	0.0	0.787	30.8	LOS C	6.4	44.5	0.98	0.90	1.24	39.0
West: MR344												
10	L2	78	0.0	0.682	12.9	LOS B	13.3	93.0	0.73	0.67	0.73	51.8
11	T1	716	0.0	0.682	7.4	LOS A	13.3	93.0	0.73	0.67	0.73	53.1
12	R2	1	0.0	0.005	22.5	LOS C	0.0	0.1	0.80	0.60	0.80	42.7
Approach		795	0.0	0.682	7.9	LOS A	13.3	93.0	0.73	0.67	0.73	52.9
All Vehicles		2068	0.0	0.832	14.0	LOS B	23.2	162.7	0.83	0.81	0.93	48.6

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.

MOVEMENT SUMMARY

Site: 101v [Int3 Ultimate 2035 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Garden Walk												
1	L2	361	0.0	0.522	22.4	LOS C	9.2	64.6	0.79	0.80	0.79	43.0
2	T1	1	0.0	0.522	16.9	LOS B	9.2	64.6	0.79	0.80	0.79	43.9
3	R2	70	0.0	0.296	36.0	LOS D	2.3	15.8	0.93	0.76	0.93	36.9
Approach		432	0.0	0.522	24.6	LOS C	9.2	64.6	0.81	0.79	0.81	41.9
East: MR344												
4	L2	105	0.0	0.886	35.7	LOS D	28.7	200.6	0.99	1.06	1.23	39.0
5	T1	627	0.0	0.886	30.2	LOS C	28.7	200.6	0.99	1.06	1.23	39.8
6	R2	44	0.0	0.184	23.2	LOS C	1.1	7.7	0.72	0.73	0.72	42.4
Approach		776	0.0	0.886	30.5	LOS C	28.7	200.6	0.97	1.04	1.20	39.8
North: New Vintage												
7	L2	19	0.0	0.075	34.4	LOS C	0.6	4.3	0.90	0.69	0.90	37.8
8	T1	1	0.0	0.075	28.9	LOS C	0.6	4.3	0.90	0.69	0.90	38.5
9	R2	93	0.0	0.819	47.3	LOS D	3.6	25.2	1.00	0.88	1.41	33.3
Approach		113	0.0	0.819	45.0	LOS D	3.6	25.2	0.98	0.85	1.32	34.0
West: MR344												
10	L2	218	0.0	0.274	19.6	LOS B	4.8	33.9	0.69	0.75	0.69	44.5
11	T1	752	0.0	0.562	6.0	LOS A	13.1	91.5	0.55	0.50	0.55	54.6
12	R2	407	0.0	0.899	38.3	LOS D	12.5	87.2	1.00	1.05	1.56	36.1
Approach		1377	0.0	0.899	17.7	LOS B	13.1	91.5	0.71	0.70	0.87	46.0
All Vehicles		2698	0.0	0.899	23.6	LOS C	28.7	200.6	0.81	0.82	0.97	42.8

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.

MOVEMENT SUMMARY

Site: 101 [Int4 Backgr 2030 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	483	0.0	0.521	9.6	LOS A	3.8	26.9	0.39	0.88	0.44	50.8
2	T1	22	0.0	0.521	22.0	LOS C	3.8	26.9	0.39	0.88	0.44	50.8
3	R2	3	0.0	0.010	15.2	LOS C	0.0	0.2	0.55	0.88	0.55	47.8
Approach		508	0.0	0.521	10.2	LOS B	3.8	26.9	0.39	0.88	0.44	50.8
East: MR344												
4	L2	3	0.0	0.002	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	128	0.0	0.063	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	1	0.0	0.001	6.2	LOS A	0.0	0.0	0.29	0.52	0.29	52.5
Approach		133	0.0	0.063	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.8
North: Monte Cristo Access Road												
7	L2	1	0.0	0.184	8.5	LOS A	0.7	4.7	0.56	1.00	0.56	48.0
8	T1	72	0.0	0.184	14.9	LOS B	0.7	4.7	0.56	1.00	0.56	48.0
9	R2	127	0.0	1.245	188.3	LOS F	13.9	97.3	1.00	1.76	4.18	14.3
Approach		200	0.0	1.245	125.3	LOS F	13.9	97.3	0.84	1.48	2.87	19.1
West: MR344												
10	L2	107	0.0	0.055	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
11	T1	96	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	157	0.0	0.123	6.0	LOS A	0.5	3.7	0.25	0.57	0.25	52.7
Approach		360	0.0	0.123	4.3	NA	0.5	3.7	0.11	0.42	0.11	54.7
All Vehicles		1201	0.0	1.245	26.5	NA	13.9	97.3	0.34	0.75	0.70	41.0

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.

MOVEMENT SUMMARY

Site: 101 [Int4 Backgr 2030 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	449	0.0	0.589	10.7	LOS B	6.0	41.8	0.35	0.92	0.49	49.0
2	T1	43	0.0	0.589	33.0	LOS D	6.0	41.8	0.35	0.92	0.49	49.0
3	R2	3	0.0	0.013	19.7	LOS C	0.0	0.3	0.67	0.93	0.67	45.2
Approach		496	0.0	0.589	12.7	LOS B	6.0	41.8	0.35	0.92	0.49	49.0
East: MR344												
4	L2	13	0.0	0.006	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	100	0.0	0.049	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	1	0.0	0.001	6.4	LOS A	0.0	0.0	0.33	0.53	0.33	52.4
Approach		114	0.0	0.049	0.7	NA	0.0	0.0	0.00	0.07	0.00	59.1
North: Monte Cristo Access Road												
7	L2	1	0.0	0.240	9.2	LOS A	0.9	6.3	0.70	1.01	0.77	45.0
8	T1	66	0.0	0.240	20.3	LOS C	0.9	6.3	0.70	1.01	0.77	45.0
9	R2	68	0.0	0.947	133.3	LOS F	5.0	35.0	0.99	1.29	2.25	18.9
Approach		136	0.0	0.947	77.2	LOS F	5.0	35.0	0.85	1.15	1.51	26.5
West: MR344												
10	L2	129	0.0	0.066	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
11	T1	128	0.0	0.063	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	302	0.0	0.233	6.0	LOS A	1.1	7.7	0.25	0.57	0.25	52.6
Approach		560	0.0	0.233	4.5	NA	1.1	7.7	0.14	0.44	0.14	54.4
All Vehicles		1305	0.0	0.947	14.9	NA	6.0	41.8	0.28	0.66	0.40	47.5

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.

MOVEMENT SUMMARY

Site: 101 [Int4 Ultimate 2030 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	720	0.0	1.950	445.1	LOS F	128.5	899.3	1.00	5.58	14.33	7.1
2	T1	32	0.0	1.950	545.2	LOS F	128.5	899.3	1.00	5.58	14.33	7.1
3	R2	146	0.0	5.881	2264.1	LOS F	53.5	374.8	1.00	1.65	4.01	1.5
Approach		898	0.0	5.881	745.1	LOS F	128.5	899.3	1.00	4.94	12.65	4.4
East: MR344												
4	L2	271	0.0	0.139	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	449	0.0	0.219	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	36	0.0	0.048	8.6	LOS A	0.2	1.2	0.53	0.72	0.53	51.1
Approach		756	0.0	0.219	2.4	NA	0.2	1.2	0.03	0.24	0.03	57.1
North: Monte Cristo Access Road												
7	L2	38	0.0	2.698	822.1	LOS F	29.6	207.0	1.00	1.94	4.64	3.8
8	T1	72	0.0	2.698	871.4	LOS F	29.6	207.0	1.00	1.94	4.64	3.8
9	R2	127	0.0	21.228	9233.8	LOS F	85.0	595.1	1.00	1.19	1.98	0.4
Approach		237	0.0	21.228	5360.6	LOS F	85.0	595.1	1.00	1.54	3.21	0.6
West: MR344												
10	L2	107	0.0	0.055	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
11	T1	480	0.0	0.235	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	307	0.0	0.477	12.5	LOS B	2.8	19.4	0.70	0.99	1.05	48.5
Approach		895	0.0	0.477	5.0	NA	2.8	19.4	0.24	0.41	0.36	54.7
All Vehicles		2785	0.0	21.228	698.3	NA	128.5	899.3	0.49	1.92	4.47	4.6

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.

MOVEMENT SUMMARY

Site: 101 [Int4 Ultimate 2030 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	530	0.0	8.453	3381.5	LOS F	181.1	1267.8	1.00	3.61	9.68	1.0
2	T1	45	0.0	8.453	3449.2	LOS F	181.1	1267.8	1.00	3.61	9.68	1.0
3	R2	300	0.0	50.000	22128.3	LOS F	197.3	1380.9	1.00	1.20	2.05	0.2
Approach		875	0.0	50.000	9812.4	LOS F	197.3	1380.9	1.00	2.79	7.06	0.4
East: MR344												
4	L2	230	0.0	0.118	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	597	0.0	0.291	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	47	0.0	0.081	10.4	LOS B	0.3	2.0	0.62	0.83	0.62	49.8
Approach		874	0.0	0.291	2.0	NA	0.3	2.0	0.03	0.20	0.03	57.5
North: Monte Cristo Access Road												
7	L2	32	0.0	14.396	6137.0	LOS F	65.7	459.7	1.00	1.30	2.33	0.6
8	T1	86	0.0	14.396	6170.2	LOS F	65.7	459.7	1.00	1.30	2.33	0.6
9	R2	65	0.0	10.833	4577.1	LOS F	39.9	279.5	1.00	1.20	2.04	0.7
Approach		183	0.0	14.396	5598.6	LOS F	65.7	459.7	1.00	1.26	2.23	0.6
West: MR344												
10	L2	123	0.0	0.063	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
11	T1	646	0.0	0.654	9.6	LOS A	7.0	48.9	0.76	0.00	1.40	51.8
12	R2	842	0.0	1.556	266.4	LOS F	105.3	737.0	1.00	5.11	14.78	11.0
Approach		1611	0.0	1.556	143.5	NA	105.3	737.0	0.83	2.71	8.28	17.6
All Vehicles		3543	0.0	50.000	2778.3	NA	197.3	1380.9	0.68	2.03	5.63	1.3

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.

MOVEMENT SUMMARY

Site: 101 [Int4 Ultimate 2035 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	1008	0.0	6.062	2292.6	LOS F	295.0	2064.7	1.00	5.59	16.91	1.5
2	T1	43	0.0	6.062	2358.0	LOS F	295.0	2064.7	1.00	5.59	16.91	1.5
3	R2	182	0.0	25.232	11009.7	LOS F	113.5	794.3	1.00	1.23	2.12	0.3
Approach		1233	0.0	25.232	3581.6	LOS F	295.0	2064.7	1.00	4.95	14.73	1.0
East: MR344												
4	L2	408	0.0	0.209	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	682	0.0	0.333	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	44	0.0	0.048	7.5	LOS A	0.2	1.3	0.46	0.66	0.46	51.9
Approach		1134	0.0	0.333	2.3	NA	0.2	1.3	0.02	0.23	0.02	57.2
North: Monte Cristo Access Road												
7	L2	39	0.0	12.088	5103.2	LOS F	66.1	463.0	1.00	1.41	2.56	0.7
8	T1	90	0.0	12.088	5138.6	LOS F	66.1	463.0	1.00	1.41	2.56	0.7
9	R2	147	0.0	24.500	10672.5	LOS F	92.5	647.5	1.00	1.21	2.10	0.3
Approach		276	0.0	24.500	8081.0	LOS F	92.5	647.5	1.00	1.30	2.31	0.4
West: MR344												
10	L2	124	0.0	0.064	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
11	T1	311	0.0	0.459	5.7	LOS A	3.2	22.1	0.79	0.00	0.93	54.8
12	R2	469	0.0	1.294	159.7	LOS F	42.2	295.3	1.00	3.20	9.18	16.2
Approach		904	0.0	1.294	85.6	NA	42.2	295.3	0.79	1.74	5.08	24.5
All Vehicles		3547	0.0	25.232	1896.4	NA	295.0	2064.7	0.63	2.34	6.60	1.8

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.

MOVEMENT SUMMARY

Site: 101 [Int4 Ultimate 2035 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	726	0.0	11.285	4647.7	LOS F	249.4	1746.1	1.00	3.83	11.16	0.8
2	T1	58	0.0	11.285	4691.1	LOS F	249.4	1746.1	1.00	3.83	11.16	0.8
3	R2	407	0.0	67.833	30127.4	LOS F	250.2	1751.7	1.00	1.22	2.20	0.1
Approach		1191	0.0	67.833	13357.0	LOS F	250.2	1751.7	1.00	2.94	8.10	0.3
East: MR344												
4	L2	299	0.0	0.153	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
5	T1	715	0.0	0.349	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	51	0.0	0.153	15.8	LOS C	0.5	3.6	0.80	0.92	0.80	46.4
Approach		1065	0.0	0.349	2.3	NA	0.5	3.6	0.04	0.21	0.04	57.2
North: Monte Cristo Access Road												
7	L2	41	0.0	18.144	7785.5	LOS F	78.2	547.4	1.00	1.32	2.55	0.4
8	T1	108	0.0	18.144	7808.0	LOS F	78.2	547.4	1.00	1.32	2.55	0.4
9	R2	79	0.0	13.167	5584.0	LOS F	45.9	321.6	1.00	1.21	2.19	0.6
Approach		228	0.0	18.144	7033.3	LOS F	78.2	547.4	1.00	1.28	2.42	0.5
West: MR344												
10	L2	150	0.0	0.077	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	53.6
11	T1	920	0.0	1.213	114.5	LOS F	66.6	466.1	1.00	0.00	7.97	20.6
12	R2	1250	0.0	3.126	968.2	LOS F	279.7	1958.1	1.00	7.12	23.24	3.5
Approach		2320	0.0	3.126	567.4	NA	279.7	1958.1	0.94	3.87	15.68	5.7
All Vehicles		4804	0.0	67.833	3919.8	NA	279.7	1958.1	0.76	2.70	9.70	0.9

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.

MOVEMENT SUMMARY

Site: 101v [Int4 Total 2030 AM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Practical Cycle Time)
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 120.0 %

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	684	0.0	0.770	14.7	LOS B	13.5	94.3	0.80	0.86	0.88	47.9
2	T1	30	0.0	0.146	28.2	LOS C	0.9	6.0	0.94	0.68	0.94	41.1
3	R2	139	0.0	0.423	24.8	LOS C	3.3	23.3	0.94	0.77	0.94	42.0
Approach		853	0.0	0.770	16.8	LOS B	13.5	94.3	0.82	0.84	0.89	46.6
East: MR344												
4	L2	257	0.0	0.449	21.3	LOS C	7.2	50.6	0.81	0.77	0.81	44.1
5	T1	427	0.0	0.666	21.3	LOS C	10.0	69.8	0.93	0.82	0.96	44.1
6	R2	34	0.0	0.127	25.3	LOS C	0.8	5.7	0.81	0.72	0.81	41.6
Approach		718	0.0	0.666	21.5	LOS C	10.0	69.8	0.88	0.80	0.89	44.0
North: Monte Cristo Access Road												
7	L2	36	0.0	0.516	35.3	LOS D	3.1	21.9	0.99	0.77	1.00	38.8
8	T1	68	0.0	0.516	29.8	LOS C	3.1	21.9	0.99	0.77	1.00	39.5
9	R2	121	0.0	0.329	24.3	LOS C	2.9	20.1	0.89	0.76	0.89	42.3
Approach		225	0.0	0.516	27.7	LOS C	3.1	21.9	0.94	0.76	0.94	40.8
West: MR344												
10	L2	102	0.0	0.256	20.8	LOS C	3.6	25.1	0.75	0.70	0.75	45.0
11	T1	456	0.0	0.380	10.8	LOS B	7.1	49.5	0.67	0.59	0.67	50.7
12	R2	292	0.0	0.503	17.6	LOS B	3.7	26.1	0.88	0.77	0.88	45.7
Approach		850	0.0	0.503	14.3	LOS B	7.1	49.5	0.75	0.67	0.75	48.2
All Vehicles		2646	0.0	0.770	18.2	LOS B	13.5	94.3	0.83	0.77	0.85	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.

MOVEMENT SUMMARY

Site: 101v [Int4 Total 2030 PM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 80.0 %

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	530	0.0	0.434	14.6	LOS B	13.6	95.5	0.54	0.72	0.54	47.9
2	T1	45	0.0	0.329	60.3	LOS E	2.6	18.4	0.99	0.73	0.99	30.3
3	R2	300	0.0	0.859	54.6	LOS D	17.0	118.8	1.00	0.92	1.20	31.3
Approach		875	0.0	0.859	30.6	LOS C	17.0	118.8	0.72	0.79	0.79	39.5
East: MR344												
4	L2	230	0.0	0.591	44.0	LOS D	17.3	121.1	0.91	0.82	0.91	34.9
5	T1	597	0.0	0.877	51.0	LOS D	30.1	210.7	0.98	0.96	1.11	32.5
6	R2	47	0.0	0.185	48.5	LOS D	2.3	16.2	0.86	0.75	0.86	32.9
Approach		874	0.0	0.877	49.1	LOS D	30.1	210.7	0.96	0.91	1.04	33.1
North: Monte Cristo Access Road												
7	L2	32	0.0	0.875	75.3	LOS E	7.7	54.2	1.00	0.93	1.35	27.4
8	T1	86	0.0	0.875	69.8	LOS E	7.7	54.2	1.00	0.93	1.35	27.7
9	R2	65	0.0	0.159	41.4	LOS D	2.9	20.2	0.86	0.74	0.86	35.4
Approach		183	0.0	0.875	60.7	LOS E	7.7	54.2	0.95	0.86	1.17	30.0
West: MR344												
10	L2	123	0.0	0.307	39.5	LOS D	8.2	57.7	0.81	0.75	0.81	36.5
11	T1	646	0.0	0.456	14.5	LOS B	17.6	122.9	0.59	0.53	0.59	48.3
12	R2	842	0.0	0.895	42.8	LOS D	34.2	239.7	0.94	0.95	1.19	34.8
Approach		1611	0.0	0.895	31.2	LOS C	34.2	239.7	0.79	0.77	0.92	39.4
All Vehicles		3543	0.0	0.895	37.0	LOS D	34.2	239.7	0.82	0.81	0.93	37.1

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.

MOVEMENT SUMMARY

Site: 101v [Int4 Total 2035 AM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Practical Cycle Time)
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 80.0 %

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	1008	0.0	0.513	14.1	LOS B	8.3	58.3	0.71	0.79	0.77	48.2
2	T1	43	0.0	0.210	28.5	LOS C	1.2	8.6	0.95	0.70	0.95	41.0
3	R2	182	0.0	0.350	24.4	LOS C	2.5	17.8	0.93	0.75	0.93	42.4
Approach		1233	0.0	0.513	16.1	LOS B	8.3	58.3	0.75	0.78	0.80	47.0
East: MR344												
4	L2	408	0.0	0.502	19.6	LOS B	8.9	62.6	0.79	0.80	0.79	44.4
5	T1	682	0.0	0.768	27.2	LOS C	10.4	73.0	1.00	0.93	1.16	41.6
6	R2	44	0.0	0.150	28.7	LOS C	1.1	7.9	0.87	0.73	0.87	40.0
Approach		1134	0.0	0.768	24.5	LOS C	10.4	73.0	0.92	0.87	1.02	42.5
North: Monte Cristo Access Road												
7	L2	39	0.0	0.639	36.4	LOS D	4.0	27.9	1.00	0.83	1.12	38.5
8	T1	90	0.0	0.639	30.8	LOS C	4.0	27.9	1.00	0.83	1.12	39.2
9	R2	147	0.0	0.388	24.7	LOS C	3.5	24.8	0.92	0.77	0.92	42.3
Approach		276	0.0	0.639	28.4	LOS C	4.0	27.9	0.96	0.80	1.01	40.7
West: MR344												
10	L2	124	0.0	0.152	17.3	LOS B	2.3	15.9	0.66	0.73	0.66	45.7
11	T1	311	0.0	0.178	8.7	LOS A	2.9	20.5	0.57	0.47	0.57	52.5
12	R2	469	0.0	0.669	18.6	LOS B	6.4	44.8	0.92	0.81	0.95	45.7
Approach		904	0.0	0.669	15.0	LOS B	6.4	44.8	0.76	0.68	0.78	47.8
All Vehicles		3547	0.0	0.768	19.5	LOS B	10.4	73.0	0.82	0.79	0.88	45.1

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.

MOVEMENT SUMMARY

Site: 101v [Int4 Total 2035 PM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 100.0 %

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	726	0.0	0.350	13.6	LOS B	8.6	60.1	0.47	0.69	0.47	48.5
2	T1	58	0.0	0.340	58.0	LOS E	3.3	23.3	0.98	0.74	0.98	30.9
3	R2	407	0.0	0.994	68.0	LOS E	16.3	114.4	1.00	0.95	1.34	28.2
Approach		1191	0.0	0.994	34.4	LOS C	16.3	114.4	0.68	0.78	0.79	38.1
East: MR344												
4	L2	299	0.0	0.459	39.3	LOS D	13.7	96.0	0.84	0.81	0.84	35.9
5	T1	715	0.0	0.951	72.3	LOS E	25.3	177.0	1.00	1.08	1.34	27.6
6	R2	51	0.0	0.459	61.1	LOS E	3.0	20.7	0.97	0.77	0.97	29.5
Approach		1065	0.0	0.951	62.5	LOS E	25.3	177.0	0.95	0.99	1.18	29.6
North: Monte Cristo Access Road												
7	L2	41	0.0	0.884	74.6	LOS E	9.8	68.5	1.00	0.96	1.33	27.5
8	T1	108	0.0	0.884	69.1	LOS E	9.8	68.5	1.00	0.96	1.33	27.9
9	R2	79	0.0	0.261	46.9	LOS D	3.8	26.8	0.92	0.75	0.92	33.7
Approach		228	0.0	0.884	62.4	LOS E	9.8	68.5	0.97	0.88	1.19	29.6
West: MR344												
10	L2	150	0.0	0.230	36.3	LOS D	6.3	44.0	0.76	0.76	0.76	36.9
11	T1	920	0.0	0.394	9.1	LOS A	13.9	97.6	0.47	0.42	0.47	52.3
12	R2	1250	0.0	0.983	53.7	LOS D	63.5	444.8	0.91	1.00	1.25	31.8
Approach		2320	0.0	0.983	34.9	LOS C	63.5	444.8	0.73	0.75	0.91	38.1
All Vehicles		4804	0.0	0.994	42.2	LOS D	63.5	444.8	0.78	0.82	0.95	35.3

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.

MOVEMENT SUMMARY

Site: 101 [Int5 Backgr 2030 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	65	0.0	0.602	18.7	LOS C	2.7	19.1	0.86	1.16	1.44	41.4
3	R2	103	0.0	0.602	32.6	LOS D	2.7	19.1	0.86	1.16	1.44	41.1
Approach		168	0.0	0.602	27.2	LOS D	2.7	19.1	0.86	1.16	1.44	41.2
East: MR344												
4	L2	103	0.0	0.363	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	57.6
5	T1	636	0.0	0.363	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	59.2
Approach		739	0.0	0.363	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.9
West: MR344												
11	T1	271	0.0	0.562	6.8	LOS A	5.6	38.9	0.80	0.60	1.34	51.4
12	R2	329	0.0	0.562	12.8	LOS B	5.6	38.9	0.80	0.60	1.34	49.8
Approach		600	0.0	0.562	10.1	NA	5.6	38.9	0.80	0.60	1.34	50.5
All Vehicles		1507	0.0	0.602	7.5	NA	5.6	38.9	0.41	0.41	0.70	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.

MOVEMENT SUMMARY

Site: 101 [Int5 Backgr 2030 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	83	0.0	0.930	63.4	LOS F	7.7	53.8	0.91	1.70	3.37	25.9
3	R2	93	0.0	0.930	95.4	LOS F	7.7	53.8	0.91	1.70	3.37	25.7
Approach		176	0.0	0.930	80.3	LOS F	7.7	53.8	0.91	1.70	3.37	25.8
East: MR344												
4	L2	80	0.0	0.296	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	57.6
5	T1	522	0.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	59.2
Approach		602	0.0	0.296	0.8	NA	0.0	0.0	0.00	0.08	0.00	59.0
West: MR344												
11	T1	464	0.0	0.744	7.6	LOS A	11.8	82.7	0.88	0.66	1.85	50.9
12	R2	484	0.0	0.744	14.0	LOS B	11.8	82.7	0.88	0.66	1.85	49.2
Approach		948	0.0	0.744	10.9	NA	11.8	82.7	0.88	0.66	1.85	50.0
All Vehicles		1726	0.0	0.930	14.4	NA	11.8	82.7	0.57	0.56	1.36	48.0

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.

MOVEMENT SUMMARY

Site: 101v [Int3 Ultimate 2030 AM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Garden Walk												
1	L2	1	0.0	0.007	21.6	LOS C	0.0	0.2	0.87	0.57	0.87	44.9
2	T1	1	0.0	0.007	16.1	LOS B	0.0	0.2	0.87	0.57	0.87	45.9
3	R2	1	0.0	0.003	21.4	LOS C	0.0	0.1	0.87	0.58	0.87	43.3
Approach		3	0.0	0.007	19.6	LOS B	0.0	0.2	0.87	0.57	0.87	44.7
East: MR344												
4	L2	14	0.0	0.698	13.4	LOS B	11.4	79.7	0.78	0.73	0.82	51.7
5	T1	734	0.0	0.698	7.9	LOS A	11.4	79.7	0.78	0.73	0.82	53.0
6	R2	2	0.0	0.006	14.9	LOS B	0.0	0.2	0.67	0.62	0.67	47.0
Approach		750	0.0	0.698	8.0	LOS A	11.4	79.7	0.78	0.73	0.82	53.0
North: New Vintage												
7	L2	4	0.0	0.019	21.9	LOS C	0.1	0.6	0.87	0.62	0.87	43.8
8	T1	1	0.0	0.019	16.3	LOS B	0.1	0.6	0.87	0.62	0.87	44.8
9	R2	23	0.0	0.077	22.2	LOS C	0.4	2.9	0.89	0.69	0.89	42.9
Approach		28	0.0	0.077	21.9	LOS C	0.4	2.9	0.89	0.68	0.89	43.1
West: MR344												
10	L2	7	0.0	0.587	12.1	LOS B	8.4	58.6	0.71	0.63	0.71	52.7
11	T1	622	0.0	0.587	6.6	LOS A	8.4	58.6	0.71	0.63	0.71	54.1
12	R2	1	0.0	0.003	17.2	LOS B	0.0	0.1	0.74	0.60	0.74	45.6
Approach		630	0.0	0.587	6.7	LOS A	8.4	58.6	0.71	0.63	0.71	54.0
All Vehicles		1412	0.0	0.698	7.7	LOS A	11.4	79.7	0.75	0.68	0.77	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.
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.

MOVEMENT SUMMARY

Site: 101 [Int5 Total 2030 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	65	0.0	10.580	8642.0	LOS F	332.4	2326.8	1.00	3.93	14.32	0.4
3	R2	476	0.0	10.580	8647.9	LOS F	332.4	2326.8	1.00	3.93	14.32	0.4
Approach		541	0.0	10.580	8647.2	LOS F	332.4	2326.8	1.00	3.93	14.32	0.4
East: MR344												
4	L2	420	0.0	0.645	5.7	LOS A	0.0	0.0	0.00	0.19	0.00	56.5
5	T1	882	0.0	0.645	0.1	LOS A	0.0	0.0	0.00	0.19	0.00	58.0
Approach		1302	0.0	0.645	1.9	NA	0.0	0.0	0.00	0.19	0.00	57.5
West: MR344												
11	T1	432	0.0	1.788	728.6	LOS F	223.6	1565.3	1.00	2.58	21.45	4.5
12	R2	329	0.0	1.788	735.0	LOS F	223.6	1565.3	1.00	2.58	21.45	4.5
Approach		761	0.0	1.788	731.4	NA	223.6	1565.3	1.00	2.58	21.45	4.5
All Vehicles		2604	0.0	10.580	2011.2	NA	332.4	2326.8	0.50	1.67	9.24	1.7

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.

MOVEMENT SUMMARY

Site: 101 [Int5 Total 2030 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	83	0.0	113.952	101701.2	LOS F	828.4	5798.6	1.00	1.57	3.75	0.0
3	R2	853	0.0	113.952	101704.0	LOS F	828.4	5798.6	1.00	1.57	3.75	0.0
Approach		936	0.0	113.952	101703.7	LOS F	828.4	5798.6	1.00	1.57	3.75	0.0
East: MR344												
4	L2	421	0.0	0.614	5.6	LOS A	0.0	0.0	0.00	0.20	0.00	56.5
5	T1	817	0.0	0.614	0.1	LOS A	0.0	0.0	0.00	0.20	0.00	58.0
Approach		1238	0.0	0.614	2.0	NA	0.0	0.0	0.00	0.20	0.00	57.4
West: MR344												
11	T1	839	0.0	2.296	1177.0	LOS F	484.7	3392.7	1.00	3.09	30.84	2.9
12	R2	484	0.0	2.296	1183.5	LOS F	484.7	3392.7	1.00	3.09	30.84	2.9
Approach		1323	0.0	2.296	1179.4	NA	484.7	3392.7	1.00	3.09	30.84	2.9
All Vehicles		3497	0.0	113.952	27663.9	NA	828.4	5798.6	0.65	1.66	12.67	0.1

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.

MOVEMENT SUMMARY

Site: 101 [Int5 Total 2035 AM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	79	0.0	112.236	100161.8	LOS F	690.3	4831.8	1.00	1.48	3.43	0.0
3	R2	671	0.0	112.236	100165.1	LOS F	690.3	4831.8	1.00	1.48	3.43	0.0
Approach		749	0.0	112.236	100164.7	LOS F	690.3	4831.8	1.00	1.48	3.43	0.0
East: MR344												
4	L2	700	0.0	0.960	7.0	LOS A	0.0	0.0	0.00	0.21	0.00	54.0
5	T1	1234	0.0	0.960	1.8	LOS A	0.0	0.0	0.00	0.21	0.00	55.1
Approach		1934	0.0	0.960	3.7	NA	0.0	0.0	0.00	0.21	0.00	54.7
West: MR344												
11	T1	571	0.0	67.126	59570.2	LOS F	938.3	6567.9	1.00	0.58	3.09	0.1
12	R2	401	0.0	67.126	59575.7	LOS F	938.3	6567.9	1.00	0.58	3.09	0.1
Approach		972	0.0	67.126	59572.5	NA	938.3	6567.9	1.00	0.58	3.09	0.1
All Vehicles		3655	0.0	112.236	36379.5	NA	938.3	6567.9	0.47	0.57	1.52	0.1

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.

MOVEMENT SUMMARY

Site: 101 [Int5 Total 2035 PM]

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

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	101	0.0	216.821	194267.5	LOS F	942.1	6594.6	1.00	1.49	3.56	0.0
3	R2	1299	0.0	216.821	194268.8	LOS F	942.1	6594.6	1.00	1.49	3.56	0.0
Approach		1400	0.0	216.821	194268.7	LOS F	942.1	6594.6	1.00	1.49	3.56	0.0
East: MR344												
4	L2	555	0.0	0.784	5.8	LOS A	0.0	0.0	0.00	0.21	0.00	56.2
5	T1	1024	0.0	0.784	0.3	LOS A	0.0	0.0	0.00	0.21	0.00	57.6
Approach		1579	0.0	0.784	2.2	NA	0.0	0.0	0.00	0.21	0.00	57.1
West: MR344												
11	T1	1137	0.0	10.309	8387.8	LOS F	1046.8	7327.4	1.00	1.45	15.88	0.4
12	R2	589	0.0	10.309	8393.5	LOS F	1046.8	7327.4	1.00	1.45	15.88	0.4
Approach		1726	0.0	10.309	8389.8	NA	1046.8	7327.4	1.00	1.45	15.88	0.4
All Vehicles		4705	0.0	216.821	60881.4	NA	1046.8	7327.4	0.66	1.05	6.89	0.1

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.

MOVEMENT SUMMARY

Site: 101v [Int5 Total 2030 AM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	62	0.0	0.057	10.8	LOS B	0.7	4.7	0.55	0.65	0.55	50.3
3	R2	452	0.0	0.854	31.4	LOS C	9.4	66.1	0.98	0.93	1.27	38.9
Approach		514	0.0	0.854	28.9	LOS C	9.4	66.1	0.92	0.90	1.18	40.0
East: MR344												
4	L2	399	0.0	0.322	7.9	LOS A	2.4	17.1	0.45	0.68	0.45	52.5
5	T1	838	0.0	0.878	22.3	LOS C	18.1	126.4	0.94	0.97	1.19	43.9
Approach		1237	0.0	0.878	17.6	LOS B	18.1	126.4	0.78	0.87	0.96	46.4
West: MR344												
11	T1	410	0.0	0.252	5.4	LOS A	3.6	25.3	0.51	0.42	0.51	55.1
12	R2	313	0.0	0.798	20.3	LOS C	4.9	34.1	1.00	0.91	1.27	44.3
Approach		723	0.0	0.798	11.8	LOS B	4.9	34.1	0.72	0.64	0.84	49.8
All Vehicles		2474	0.0	0.878	18.3	LOS B	18.1	126.4	0.79	0.81	0.97	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.

MOVEMENT SUMMARY

Site: 101v [Int5 Total 2030 PM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	79	0.0	0.059	12.0	LOS B	1.5	10.8	0.38	0.64	0.38	49.5
3	R2	810	0.0	0.950	59.4	LOS E	38.9	272.4	0.95	0.94	1.14	30.0
Approach		889	0.0	0.950	55.2	LOS E	38.9	272.4	0.90	0.91	1.07	31.1
East: MR344												
4	L2	400	0.0	0.355	13.2	LOS B	6.6	46.2	0.49	0.72	0.56	48.8
5	T1	776	0.0	0.893	45.0	LOS D	33.9	237.2	0.93	0.90	1.05	34.5
Approach		1176	0.0	0.893	34.2	LOS C	33.9	237.2	0.78	0.84	0.88	38.4
West: MR344												
11	T1	797	0.0	0.487	14.5	LOS B	19.5	136.2	0.59	0.52	0.59	48.5
12	R2	460	0.0	0.934	61.0	LOS E	26.5	185.5	1.00	1.05	1.44	29.7
Approach		1257	0.0	0.934	31.5	LOS C	26.5	185.5	0.74	0.72	0.90	39.4
All Vehicles		3322	0.0	0.950	38.8	LOS D	38.9	272.4	0.79	0.81	0.94	36.4

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.

MOVEMENT SUMMARY

Site: 101v [Int5 Total 2035 AM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	75	0.0	0.082	14.9	LOS B	1.3	9.4	0.59	0.68	0.59	47.7
3	R2	637	0.0	0.865	43.6	LOS D	12.4	87.0	1.00	0.98	1.33	34.5
Approach		712	0.0	0.865	40.6	LOS D	12.4	87.0	0.96	0.94	1.25	35.6
East: MR344												
4	L2	665	0.0	0.521	9.2	LOS A	7.1	49.9	0.52	0.72	0.53	51.5
5	T1	1172	0.0	0.877	22.7	LOS C	31.7	221.8	0.89	0.90	1.02	43.8
Approach		1837	0.0	0.877	17.8	LOS B	31.7	221.8	0.75	0.84	0.85	46.3
West: MR344												
11	T1	542	0.0	0.201	5.0	LOS A	3.6	25.3	0.42	0.36	0.42	55.4
12	R2	381	0.0	0.853	29.0	LOS C	7.3	50.9	0.97	0.92	1.28	40.1
Approach		923	0.0	0.853	14.9	LOS B	7.3	50.9	0.65	0.59	0.78	47.9
All Vehicles		3472	0.0	0.877	21.7	LOS C	31.7	221.8	0.77	0.79	0.91	44.0

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.

MOVEMENT SUMMARY

Site: 101v [Int5 Total 2035 PM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: N2 - Off-Ramp												
1	L2	96	0.0	0.078	16.3	LOS B	2.4	17.0	0.47	0.65	0.47	46.9
3	R2	1234	0.0	0.932	64.8	LOS E	41.7	292.1	1.00	0.98	1.22	28.8
Approach		1330	0.0	0.932	61.3	LOS E	41.7	292.1	0.96	0.96	1.17	29.6
East: MR344												
4	L2	527	0.0	0.412	11.3	LOS B	7.8	54.8	0.42	0.71	0.50	50.1
5	T1	973	0.0	0.936	49.0	LOS D	47.8	334.5	0.94	0.96	1.09	33.3
Approach		1500	0.0	0.936	35.8	LOS D	47.8	334.5	0.76	0.87	0.88	37.8
West: MR344												
11	T1	1080	0.0	0.445	14.3	LOS B	17.2	120.3	0.60	0.53	0.60	48.6
12	R2	560	0.0	0.987	64.9	LOS E	26.8	187.7	0.97	1.01	1.44	28.8
Approach		1640	0.0	0.987	31.6	LOS C	26.8	187.7	0.73	0.70	0.89	39.4
All Vehicles		4470	0.0	0.987	41.8	LOS D	47.8	334.5	0.81	0.83	0.97	35.4

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.

MOVEMENT SUMMARY

Site: 101v [Int6 Circle Backgr 2030 AM]

Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	36	0.0	0.072	3.2	LOS A	0.4	2.7	0.27	0.30	0.27	56.8
2	T1	99	0.0	0.072	2.3	LOS A	0.4	2.7	0.27	0.30	0.27	59.1
3	R2	1	0.0	0.072	9.8	LOS A	0.4	2.7	0.27	0.30	0.27	60.1
Approach		136	0.0	0.072	2.6	LOS A	0.4	2.7	0.27	0.30	0.27	58.4
East: Hartland Estate												
4	L2	1	0.0	0.002	3.4	LOS A	0.0	0.1	0.34	0.42	0.34	54.8
5	T1	1	0.0	0.002	2.5	LOS A	0.0	0.1	0.34	0.42	0.34	56.9
6	R2	1	0.0	0.002	10.0	LOS B	0.0	0.1	0.34	0.42	0.34	57.8
Approach		3	0.0	0.002	5.3	LOS A	0.0	0.1	0.34	0.42	0.34	56.5
North: DR6804												
7	L2	1	0.0	0.105	2.9	LOS A	0.6	4.1	0.13	0.54	0.13	53.8
8	T1	61	0.0	0.105	2.1	LOS A	0.6	4.1	0.13	0.54	0.13	55.7
9	R2	154	0.0	0.105	9.5	LOS A	0.6	4.1	0.13	0.54	0.13	56.6
Approach		216	0.0	0.105	7.4	LOS A	0.6	4.1	0.13	0.54	0.13	56.4
West: N2 Eastern Off-Ramp												
10	L2	394	0.0	0.153	3.2	LOS A	0.9	6.4	0.23	0.41	0.23	56.2
11	T1	1	0.0	0.153	2.2	LOS A	0.9	6.4	0.24	0.42	0.24	58.2
12	R2	36	0.0	0.153	9.7	LOS A	0.9	6.4	0.24	0.42	0.24	59.2
Approach		431	0.0	0.153	3.7	LOS A	0.9	6.4	0.23	0.41	0.23	56.4
All Vehicles		786	0.0	0.153	4.5	LOS A	0.9	6.4	0.21	0.43	0.21	56.7

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

MOVEMENT SUMMARY

Site: 101v [Int6 Circle Backgr 2030 PM]

Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	48	0.0	0.076	3.6	LOS A	0.4	3.1	0.39	0.36	0.39	56.2
2	T1	81	0.0	0.076	2.7	LOS A	0.4	3.1	0.39	0.36	0.39	58.4
3	R2	1	0.0	0.076	10.2	LOS B	0.4	3.1	0.39	0.36	0.39	59.4
Approach		130	0.0	0.076	3.1	LOS A	0.4	3.1	0.39	0.36	0.39	57.5
East: Hartland Estate												
4	L2	1	0.0	0.002	4.0	LOS A	0.0	0.1	0.49	0.44	0.49	54.3
5	T1	1	0.0	0.002	3.2	LOS A	0.0	0.1	0.49	0.44	0.49	56.3
6	R2	1	0.0	0.002	10.7	LOS B	0.0	0.1	0.49	0.44	0.49	57.2
Approach		3	0.0	0.002	6.0	LOS A	0.0	0.1	0.49	0.44	0.49	55.9
North: DR6804												
7	L2	1	0.0	0.182	3.0	LOS A	1.1	7.5	0.17	0.54	0.17	53.5
8	T1	95	0.0	0.182	2.1	LOS A	1.1	7.5	0.17	0.54	0.17	55.4
9	R2	273	0.0	0.182	9.6	LOS A	1.1	7.5	0.17	0.54	0.17	56.3
Approach		369	0.0	0.182	7.7	LOS A	1.1	7.5	0.17	0.54	0.17	56.1
West: N2 Eastern Off-Ramp												
10	L2	379	0.0	0.154	3.1	LOS A	1.0	6.7	0.22	0.41	0.22	56.0
11	T1	1	0.0	0.154	2.2	LOS A	1.0	6.7	0.22	0.43	0.22	57.9
12	R2	58	0.0	0.154	9.7	LOS A	1.0	6.7	0.22	0.43	0.22	58.9
Approach		438	0.0	0.154	4.0	LOS A	1.0	6.7	0.22	0.41	0.22	56.4
All Vehicles		940	0.0	0.182	5.3	LOS A	1.1	7.5	0.22	0.46	0.22	56.4

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

MOVEMENT SUMMARY

Site: 101v [Int6 Circle Total 2030 AM]

Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	36	0.0	0.164	8.6	LOS A	1.3	9.4	0.89	0.75	0.89	53.4
2	T1	99	0.0	0.164	7.7	LOS A	1.3	9.4	0.89	0.75	0.89	55.4
3	R2	1	0.0	0.164	15.2	LOS B	1.3	9.4	0.89	0.75	0.89	56.3
Approach		136	0.0	0.164	8.0	LOS A	1.3	9.4	0.89	0.75	0.89	54.8
East: Hartland Estate												
4	L2	1	0.0	0.369	5.1	LOS A	2.9	20.4	0.68	0.61	0.68	53.0
5	T1	278	0.0	0.369	4.3	LOS A	2.9	20.4	0.68	0.61	0.68	54.9
6	R2	235	0.0	0.369	11.8	LOS B	2.9	20.4	0.68	0.61	0.68	55.7
Approach		514	0.0	0.369	7.7	LOS A	2.9	20.4	0.68	0.61	0.68	55.3
North: DR6804												
7	L2	147	0.0	0.311	3.1	LOS A	2.4	16.5	0.28	0.53	0.28	53.4
8	T1	61	0.0	0.311	2.2	LOS A	2.4	16.5	0.28	0.53	0.28	55.3
9	R2	401	0.0	0.311	9.7	LOS A	2.4	16.5	0.28	0.53	0.28	56.2
Approach		609	0.0	0.311	7.4	LOS A	2.4	16.5	0.28	0.53	0.28	55.4
West: N2 Eastern Off-Ramp												
10	L2	528	0.0	0.270	4.1	LOS A	2.0	14.1	0.53	0.51	0.53	55.1
11	T1	51	0.0	0.270	3.2	LOS A	2.0	14.1	0.54	0.52	0.54	57.1
12	R2	36	0.0	0.270	10.7	LOS B	2.0	14.1	0.54	0.52	0.54	58.1
Approach		615	0.0	0.270	4.4	LOS A	2.0	14.1	0.53	0.51	0.53	55.5
All Vehicles		1874	0.0	0.369	6.5	LOS A	2.9	20.4	0.52	0.56	0.52	55.4

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

MOVEMENT SUMMARY

Site: 101v [Int6 Circle Total 2030 PM]

Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	48	0.0	0.183	9.5	LOS A	1.5	10.8	0.94	0.79	0.94	52.7
2	T1	88	0.0	0.183	8.7	LOS A	1.5	10.8	0.94	0.79	0.94	54.6
3	R2	1	0.0	0.183	16.2	LOS B	1.5	10.8	0.94	0.79	0.94	55.5
Approach		137	0.0	0.183	9.0	LOS A	1.5	10.8	0.94	0.79	0.94	54.0
East: Hartland Estate												
4	L2	1	0.0	0.298	8.7	LOS A	2.6	18.4	0.95	0.83	0.95	51.1
5	T1	127	0.0	0.298	7.8	LOS A	2.6	18.4	0.95	0.83	0.95	52.9
6	R2	114	0.0	0.298	15.3	LOS B	2.6	18.4	0.95	0.83	0.95	53.7
Approach		242	0.0	0.298	11.3	LOS B	2.6	18.4	0.95	0.83	0.95	53.2
North: DR6804												
7	L2	373	0.0	0.665	3.9	LOS A	7.4	51.9	0.56	0.57	0.56	52.7
8	T1	102	0.0	0.665	3.0	LOS A	7.4	51.9	0.56	0.57	0.56	54.6
9	R2	732	0.0	0.665	10.5	LOS B	7.4	51.9	0.56	0.57	0.56	55.5
Approach		1207	0.0	0.665	7.8	LOS A	7.4	51.9	0.56	0.57	0.56	54.5
West: N2 Eastern Off-Ramp												
10	L2	662	0.0	0.331	3.6	LOS A	2.6	18.0	0.42	0.44	0.42	55.6
11	T1	124	0.0	0.331	2.7	LOS A	2.6	18.0	0.44	0.45	0.44	57.5
12	R2	58	0.0	0.331	10.2	LOS B	2.6	18.0	0.44	0.45	0.44	58.5
Approach		844	0.0	0.331	3.9	LOS A	2.6	18.0	0.42	0.44	0.42	56.0
All Vehicles		2430	0.0	0.665	6.9	LOS A	7.4	51.9	0.57	0.56	0.57	54.9

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

MOVEMENT SUMMARY

Site: 101v [Int6 Circle Total 2035 AM]

Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	44	0.0	1.096	190.8	LOS F	17.1	119.8	1.00	1.59	3.01	14.7
2	T1	120	0.0	1.096	189.9	LOS F	17.1	119.8	1.00	1.59	3.01	14.8
3	R2	1	0.0	1.096	197.4	LOS F	17.1	119.8	1.00	1.59	3.01	14.9
Approach		165	0.0	1.096	190.2	LOS F	17.1	119.8	1.00	1.59	3.01	14.8
East: Hartland Estate												
4	L2	1	0.0	0.960	33.6	LOS C	33.1	231.4	1.00	1.67	2.69	38.6
5	T1	557	0.0	0.960	32.7	LOS C	33.1	231.4	1.00	1.67	2.69	39.6
6	R2	469	0.0	0.960	40.2	LOS D	33.1	231.4	1.00	1.67	2.69	40.0
Approach		1027	0.0	0.960	36.2	LOS D	33.1	231.4	1.00	1.67	2.69	39.8
North: DR6804												
7	L2	294	0.0	0.521	3.4	LOS A	5.4	37.8	0.49	0.54	0.49	52.9
8	T1	74	0.0	0.521	2.6	LOS A	5.4	37.8	0.49	0.54	0.49	54.8
9	R2	591	0.0	0.521	10.1	LOS B	5.4	37.8	0.49	0.54	0.49	55.7
Approach		959	0.0	0.521	7.5	LOS A	5.4	37.8	0.49	0.54	0.49	54.7
West: N2 Eastern Off-Ramp												
10	L2	655	0.0	0.479	5.8	LOS A	4.6	32.5	0.84	0.70	0.84	53.9
11	T1	103	0.0	0.479	5.0	LOS A	4.6	32.5	0.89	0.73	0.89	55.7
12	R2	44	0.0	0.479	12.5	LOS B	4.6	32.5	0.89	0.73	0.89	56.6
Approach		802	0.0	0.479	6.1	LOS A	4.6	32.5	0.85	0.71	0.85	54.2
All Vehicles		2953	0.0	1.096	27.3	LOS C	33.1	231.4	0.79	1.04	1.49	42.6

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

MOVEMENT SUMMARY

Site: 101v [Int6 Circle Total 2035 PM]

Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	48	0.0	0.404	19.6	LOS B	3.8	26.7	1.00	0.96	1.04	46.2
2	T1	106	0.0	0.404	18.7	LOS B	3.8	26.7	1.00	0.96	1.04	47.7
3	R2	1	0.0	0.404	26.2	LOS C	3.8	26.7	1.00	0.96	1.04	48.4
Approach		155	0.0	0.404	19.0	LOS B	3.8	26.7	1.00	0.96	1.04	47.3
East: Hartland Estate												
4	L2	1	0.0	0.837	34.4	LOS C	15.8	110.8	1.00	1.37	1.97	38.2
5	T1	255	0.0	0.837	33.6	LOS C	15.8	110.8	1.00	1.37	1.97	39.2
6	R2	222	0.0	0.837	41.1	LOS D	15.8	110.8	1.00	1.37	1.97	39.7
Approach		478	0.0	0.837	37.1	LOS D	15.8	110.8	1.00	1.37	1.97	39.4
North: DR6804												
7	L2	726	0.0	1.078	47.0	LOS D	72.9	510.1	1.00	1.88	3.02	33.6
8	T1	123	0.0	1.078	46.2	LOS D	72.9	510.1	1.00	1.88	3.02	34.3
9	R2	858	0.0	1.078	53.7	LOS E	72.9	510.1	1.00	1.88	3.02	34.7
Approach		1707	0.0	1.078	50.3	LOS E	72.9	510.1	1.00	1.88	3.02	34.2
West: N2 Eastern Off-Ramp												
10	L2	849	0.0	0.519	4.3	LOS A	4.9	34.6	0.62	0.53	0.62	54.8
11	T1	248	0.0	0.519	3.5	LOS A	4.9	34.6	0.68	0.54	0.68	56.5
12	R2	70	0.0	0.519	11.0	LOS B	4.9	34.6	0.68	0.54	0.68	57.5
Approach		1167	0.0	0.519	4.5	LOS A	4.9	34.6	0.64	0.53	0.64	55.3
All Vehicles		3507	0.0	1.078	31.9	LOS C	72.9	510.1	0.88	1.32	2.00	40.4

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

MOVEMENT SUMMARY

Site: 101v [Int6 Circle Total 2035 AM Doubling]

Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	44	0.0	0.362	13.0	LOS B	2.6	17.9	0.98	1.00	1.04	50.3
2	T1	120	0.0	0.362	12.2	LOS B	2.6	17.9	0.98	1.00	1.04	52.1
3	R2	1	0.0	0.362	19.7	LOS B	2.6	17.9	0.98	1.00	1.04	52.9
Approach		165	0.0	0.362	12.5	LOS B	2.6	17.9	0.98	1.00	1.04	51.6
East: Hartland Estate												
4	L2	1	0.0	0.515	8.0	LOS A	5.1	35.8	0.91	0.83	0.98	53.5
5	T1	557	0.0	0.515	7.1	LOS A	5.1	35.8	0.91	0.83	0.98	55.5
6	R2	469	0.0	0.433	13.6	LOS B	3.8	26.6	0.87	0.81	0.87	52.1
Approach		1027	0.0	0.515	10.1	LOS B	5.1	35.8	0.89	0.82	0.93	53.8
North: DR6804												
7	L2	294	0.0	0.159	3.3	LOS A	1.1	7.8	0.34	0.41	0.34	56.1
8	T1	74	0.0	0.360	2.5	LOS A	3.0	21.1	0.40	0.57	0.40	53.7
9	R2	591	0.0	0.360	10.0	LOS A	3.0	21.1	0.40	0.57	0.40	54.5
Approach		959	0.0	0.360	7.3	LOS A	3.0	21.1	0.38	0.52	0.38	54.9
West: N2 Eastern Off-Ramp												
10	L2	655	0.0	0.335	3.0	LOS A	0.0	0.0	0.00	0.38	0.00	57.5
11	T1	103	0.0	0.125	4.4	LOS A	1.0	6.9	0.73	0.57	0.73	55.3
12	R2	44	0.0	0.125	11.8	LOS B	1.0	6.9	0.73	0.57	0.73	56.2
Approach		802	0.0	0.335	3.6	LOS A	1.0	6.9	0.13	0.41	0.13	57.1
All Vehicles		2953	0.0	0.515	7.6	LOS A	5.1	35.8	0.53	0.62	0.54	54.9

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

MOVEMENT SUMMARY

Site: 101v [Int6 Circle Total 2035 PM Doubling]

Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: DR6804												
1	L2	48	0.0	0.261	10.3	LOS B	1.9	13.1	0.94	0.91	0.94	52.2
2	T1	106	0.0	0.261	9.5	LOS A	1.9	13.1	0.94	0.91	0.94	54.0
3	R2	1	0.0	0.261	17.0	LOS B	1.9	13.1	0.94	0.91	0.94	54.9
Approach		155	0.0	0.261	9.8	LOS A	1.9	13.1	0.94	0.91	0.94	53.5
East: Hartland Estate												
4	L2	1	0.0	0.436	12.7	LOS B	4.3	29.9	1.00	0.94	1.06	50.8
5	T1	255	0.0	0.436	11.8	LOS B	4.3	29.9	1.00	0.94	1.06	52.6
6	R2	222	0.0	0.378	18.2	LOS B	3.5	24.7	1.00	0.90	1.00	49.3
Approach		478	0.0	0.436	14.8	LOS B	4.3	29.9	1.00	0.92	1.03	51.0
North: DR6804												
7	L2	726	0.0	0.454	4.3	LOS A	4.0	27.7	0.62	0.56	0.62	55.0
8	T1	123	0.0	0.613	3.7	LOS A	6.2	43.4	0.70	0.66	0.70	52.8
9	R2	858	0.0	0.613	11.2	LOS B	6.2	43.4	0.70	0.66	0.70	53.6
Approach		1707	0.0	0.613	7.7	LOS A	6.2	43.4	0.67	0.61	0.67	54.1
West: N2 Eastern Off-Ramp												
10	L2	849	0.0	0.435	3.0	LOS A	0.0	0.0	0.00	0.38	0.00	57.5
11	T1	248	0.0	0.203	3.1	LOS A	1.5	10.6	0.54	0.43	0.54	56.7
12	R2	70	0.0	0.203	10.5	LOS B	1.5	10.6	0.54	0.43	0.54	57.6
Approach		1167	0.0	0.435	3.5	LOS A	1.5	10.6	0.15	0.39	0.15	57.3
All Vehicles		3507	0.0	0.613	7.4	LOS A	6.2	43.4	0.55	0.60	0.56	54.6

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

ANNEXURE D: TRAFFIC SIGNAL SETTINGS

PHASING SUMMARY

Site: 101v [Int1 Ultimate 2030 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 30 seconds (Site Practical Cycle Time)

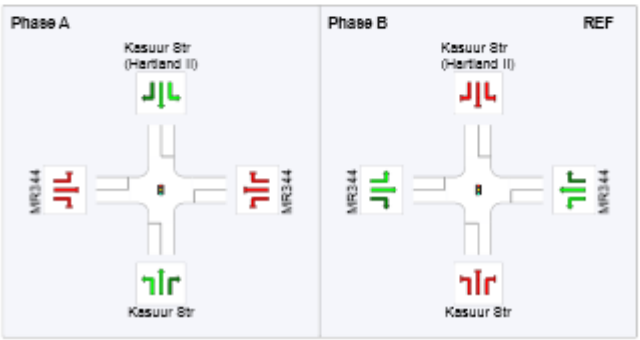
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase B
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	15	0
Green Time (sec)	9	9
Phase Time (sec)	15	15
Phase Split	50%	50%

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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int1 Ultimate 2035 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

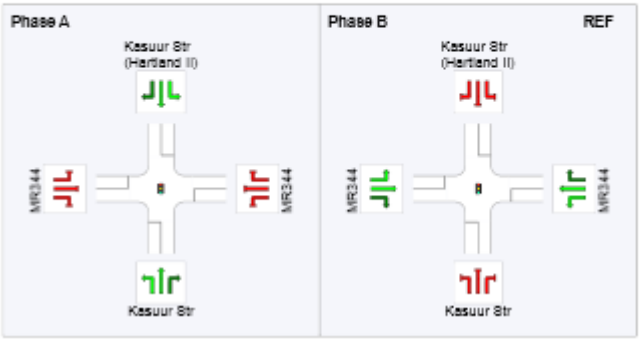
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase B
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	32	0
Green Time (sec)	12	26
Phase Time (sec)	18	32
Phase Split	36%	64%

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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int2 Ultimate 2030 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 30 seconds (Site Practical Cycle Time)

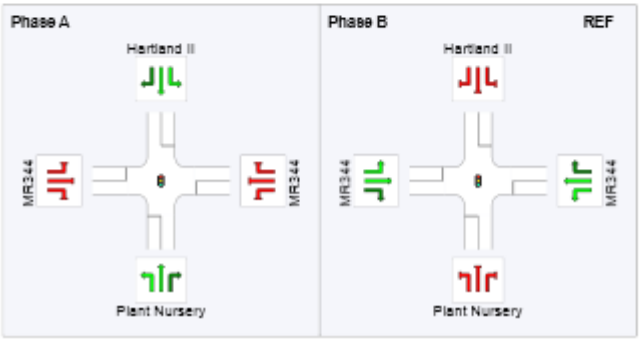
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase B
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	18	0
Green Time (sec)	6	12
Phase Time (sec)	12	18
Phase Split	40%	60%

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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int2 Ultimate 2035 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

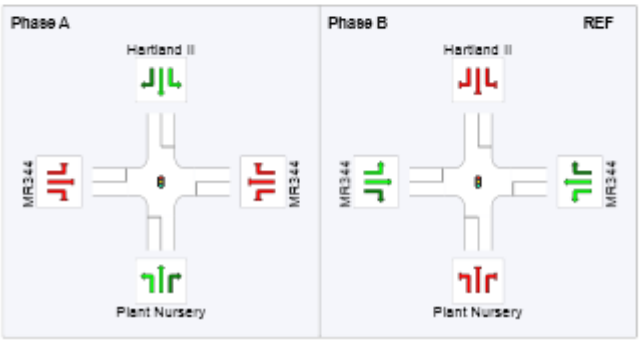
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase B
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	28	0
Green Time (sec)	6	22
Phase Time (sec)	12	28
Phase Split	30%	70%

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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int3 Ultimate 2030 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Practical Cycle Time)

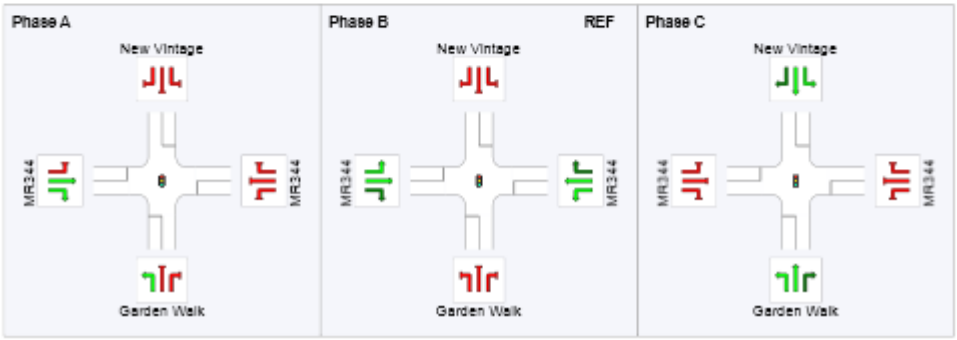
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase B
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	42	0	30
Green Time (sec)	12	24	6
Phase Time (sec)	18	30	12
Phase Split	30%	50%	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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int3 Ultimate 2035 PM Signals]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Site Practical Cycle Time)

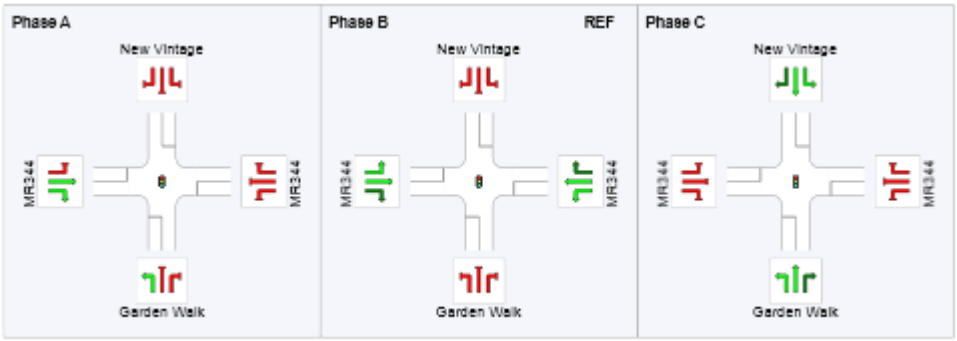
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase B
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	52	0	36
Green Time (sec)	12	30	10
Phase Time (sec)	18	36	16
Phase Split	26%	51%	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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int4 Total 2030 PM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 80.0 %

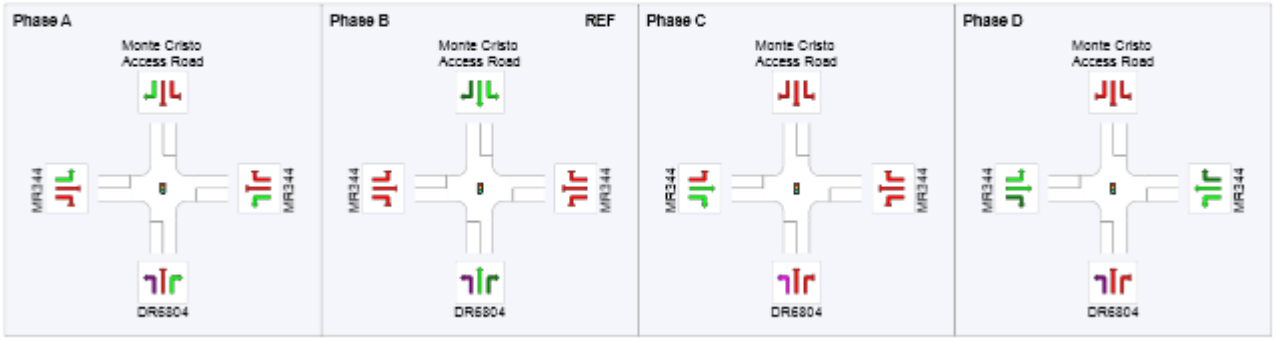
Timings based on settings in the Site Phasing & Timing dialog (Demand & Sensitivity Analysis overrides)
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase B
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	95	0	14	57
Green Time (sec)	19	8	37	32
Phase Time (sec)	25	14	43	38
Phase Split	21%	12%	36%	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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int4 Total 2035 PM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)
Sensitivity Analysis (Critical Gap & Follow-up Headway): Results for Parameter Scale = 100.0 %

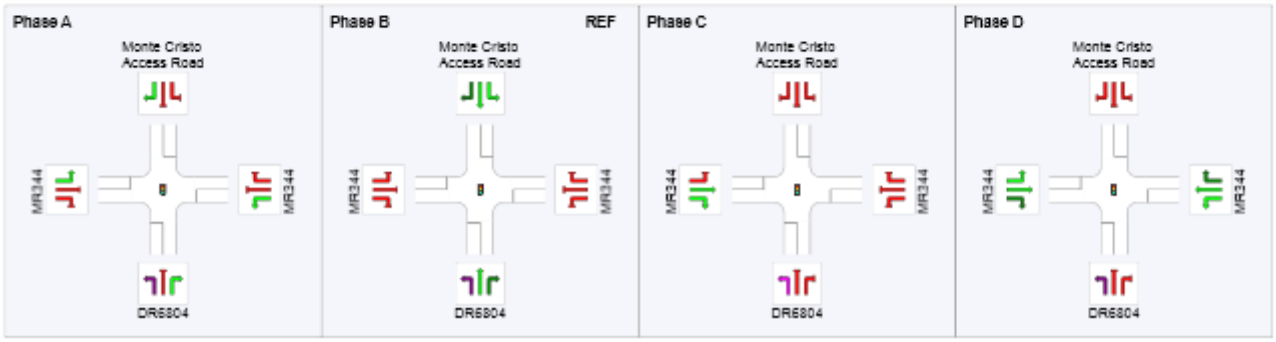
Timings based on settings in the Site Phasing & Timing dialog (Demand & Sensitivity Analysis overrides)
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase B
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	102	0	16	74
Green Time (sec)	12	10	52	22
Phase Time (sec)	18	16	58	28
Phase Split	15%	13%	48%	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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int5 Total 2030 PM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)

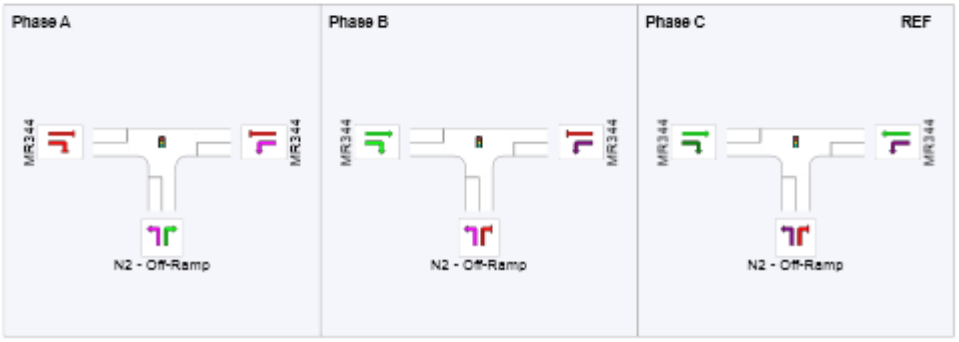
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase C
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	46	90	0
Green Time (sec)	38	24	40
Phase Time (sec)	44	30	46
Phase Split	37%	25%	38%

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%.

Output Phase Sequence



PHASING SUMMARY

Site: 101v [Int5 Total 2035 PM Signal]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Opposed Turns
Reference Phase: Phase C
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	50	93	0
Green Time (sec)	37	21	44
Phase Time (sec)	43	27	50
Phase Split	36%	23%	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%.

Output Phase Sequence