

# REMAINDER FARM 1388 KUILSRIVIER (KALKFONTEIN)

## TRANSPORT IMPACT ASSESSMENT

### JANUARY 2025

**Liezl Stodart Pr Eng**

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## COVER PAGE

### Certification

It is herewith certified that this Transport Impact Assessment has been prepared according to the requirements of the South African Traffic Impact and Site Traffic Assessment Manual.



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### Application details:

- a) Municipality name: City of Cape Town
- b) Type of assessment: Transport Impact Assessment
- c) Particulars of the Site Development Plan: Rezoning and subdivision – Remainder Farm 1388, Kuilsrivier | ATLAS Town Planning | Plan: Erf1388 Kuilsrivier/Subdivision/Jan2025/1 | January 2025
- d) Erf numbers and farm names: Remainder Farm 1388, Kuilsrivier
- e) Client details: Sal Qureshi, Shining Oak Investments
- f) Date of report: January 2025
- g) Name and address of the Assessor: Liezl Stodart Pr Eng, PO Box 359, Villiersdorp, 6848

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A: Photographic record of existing transport facilities

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## 1. BACKGROUND

This transport impact assessment accompanies the application for the rezoning and subdivision of Remainder Farm 1388, Kuilsrivier. The site is located to the south of the Kalkfontein residential area, north of Stellenbosch Arterial and east of the R300. The Bet-El School for epileptici borders Rem Farm 1388 on the western side. The location is shown in **Figure 1, Annexure B**. The property is approximately 20,19ha in size and is zoned as Community Zone 2 and Agricultural. The development proposal is in line with the zoning of the surrounding area.

## 2. DEVELOPMENT PROPOSAL

The development will entail the rezoning of Remainder Farm 1388 and subdivision into 436 single residential erven, 44 group housing units, one business erf and supporting land uses. Access is proposed via the southward extension of Reuter Street. Provision is made for the possible future road link to Stellenbosch Arterial. The development proposal is shown in **Figure 2 (Rezoning and subdivision – Remainder Farm 1388, Kuilsrivier)**.

## 3. CONDITIONS OF APPROVAL FOR NEIGHBOURING DEVELOPMENTS

There are certain new road links, as well as road and intersection improvements that were set as conditions of approval for neighbouring developments and which will also be required for the Rem Farm 1388 development. The conditions of approval relating to transport infrastructure for the Hamilton Estate development (Ref T/CE 18/6/8/44, 31 March 2010), Highbury (Case ID 168739, 20 October 2011), and the City of Cape Town Kalkfontein Housing Project (Application No. 70155440, 11 August 2014), as well as the improvements recommended in the 2024 TIA for the next phase of Hamilton Estate are shown in **Figure 3, Annexure B**.

## 4. STUDY AREA

The TMH 16 Traffic Impact Study Manual indicates that the primary study area should cover access to the site and external roads that may be impacted by the development, up to a maximum distance of 1.5km from the site. The primary study area shall be restricted to Class 4 and 5 roads in the vicinity, up to the first high order road. At least one intersection should be included in the study area. In this case the following elements were included:

- Stellenbosch Arterial
- Nooiensfontein Road
- Old Nooiensfontein Road
- Highbury Road
- Reuter Street
- Intersections between these roads

## 5. EXISTING ROAD INFRASTRUCTURE

Information on transport infrastructure in the vicinity of the site was obtained through a site visit conducted in September 2024 and from the transport impact assessments for Highbury Park, the City of Cape Town Kalkfontein Housing Project and Hamilton Estate.

Stellenbosch Arterial is a dual carriageway with two lanes per direction and a median island. The road carries about 5300 vehicles in the morning peak hour and about 4800 in the afternoon peak hour. There are paved sidewalks on both sides of the road.

New Nooiensfontein Road is an undivided two-lane, two-way road classified as a Class 3 Minor Arterial. There is no direct property access off this road and intersections with other high order roads are signalised. There is a paved sidewalk along the western side of the road. The road carries approximately 2000 vehicles (two-way) in the morning peak hour.

Highbury Road is a Class 4 Collector Road, carrying approximately 800 vehicles (two-way) in the morning peak hour. It is an undivided two-lane, two-way road with paved sidewalks. The road currently only extends up to Chapel Street (just west of New Nooiensfontein Road), but the road will, in future, be extended across the Kuils River all the way to Reuter Street. The extension will run through Hamilton Estate west of the river and will necessitate the construction of a new bridge over the river.

Old Nooiensfontein Road runs parallel to New Nooiensfontein and then crosses the Kuilsrivier via a low bridge to link up with Takani Road. The road carries relatively low traffic volumes.

Minor Road 86 (OP0086) runs from Old Nooiensfontein Road south-westwards towards the R300. The north-eastern section gives access to the Bet-El School and is surfaced. The section south-west of the school turnoff is a gravel track and is in fact barricaded to prohibit traffic from using the road. See **Photo 7b** in the **Photo Pages, Annexure A**. The Provincial Roads Engineer has indicated that OP0086 is still a proclaimed road and that, should any development be planned on the land that is currently traversed by OP0086, the road needs to be deproclaimed and any property that currently takes access off OP0086 needs to be provided with alternative access. As shown in **Figure 1**, the Rem Farm 1388 development will be built over OP0086. An alternative route will, however, be provided via Old Nooiensfontein Road and Reuter Street.

Belhar Drive is a Class 3 Minor Arterial. It is an undivided two-lane, two-way road with a paved sidewalk on the northern side. The City of Cape Town Road Network Plan shows that Belhar Drive will eventually be extended over the R300 (no interchange) to link up with Erica Drive in Belhar. Belhar Drive carries approximately 750 vehicles (two-way) in the morning peak hour.

Reuter Street is an undivided two-lane, two-way road with a sidewalk along the western side. The road is classified as a Class 4 Collector and carries approximately 900 vehicles (two-way) in the morning peak hour. The formal road extends southwards to Verenigde Street, whereafter it becomes an informal gravel track. Although the extension of Reuter Street to the southern edge of Hamilton Estate Phase 1 was a condition of approval for the development, the construction could not take place due to the encroachment of informal structures into the road reserve. The encroachment issue has not been addressed yet.

The roads described are shown in the **Photo Pages** (Annexure A) and in **Figure 1** (Annexure B).

## 6. ROAD NETWORK PLANNING

The City of Cape Town's Road Network Plan shows that Belhar Drive will be extended over the R300 to link up with Erica Drive in the west. A half diamond interchange with an on- and offramp to the R300 North is also shown. There have also been discussions about providing an alternative access to the Kalkfontein area through the northward extension of Wesbank Main Road. This option has in principle support from City of Cape Town and Provincial Roads officials.

## 7. EXISTING TRAFFIC

Traffic counts were done at the Stellenbosch Arterial / New Nooiensfontein Road and Highbury Road / New Nooiensfontein Road intersections on Tuesday 30 July 2024. The counts were done on a weekday during the school term and the day of the counts can therefore be classified as a “normal” day. The counts were supervised by Nick Venter of NVTs. Traffic counts for the Reuter Street / Belhar Drive intersection was obtained from the 2022 Hamilton Estate TIA and were adjusted by 3% per year to estimate 2024 volumes. The traffic count details are summarised in **Table 1**.

**Table 1: Traffic count details**

Intersection	Morning peak hour	Afternoon peak hour	% Minibus taxis	% Buses	% Heavy vehicles
Stellenbosch Arterial / New Nooiensfontein	7:00 - 8:00	16:00 – 17:00	5%	<1%	4%
Highbury / New Nooiensfontein	7:00 - 8:00	16:00 - 17:00	5%	<1%	1%
Reuter St / Belhar Drive	6:15 – 7:15	15:00 – 16:00	15%	0%	2%

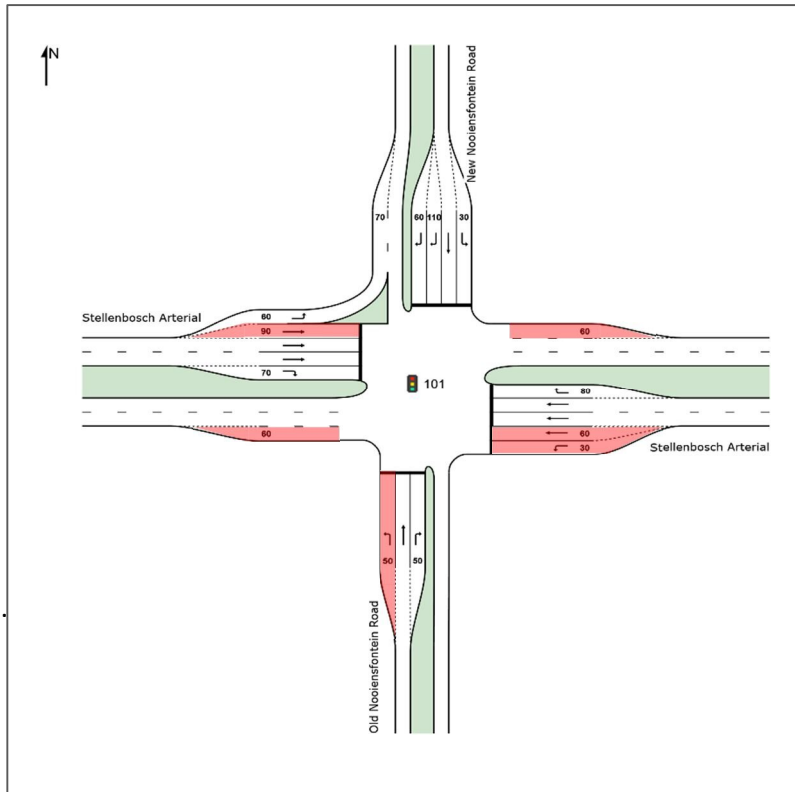
The intersections were analysed using SIDRA software. SIDRA calculates movement and intersection delays and assigns a service level based on the duration of the delay. A level of service A denotes an excellent service level with very little delay, whereas a level of service F represents very long delays and a breakdown in service. A level of service D is generally taken as the lowest acceptable standard. The results of the SIDRA analysis are summarised in **Table 2**. Existing (2024) traffic volumes and service levels are shown in **Figure 4**.

**Table 2: Levels of service with existing (2024) traffic volumes**

Intersection	Control measure	Morning peak hour		Afternoon peak hour	
		Intersection service level	Average intersection delay (s)	Intersection service level	Average intersection delay (s)
Stellenbosch Arterial / New Nooiensfontein	Signals – 2024 layout	F	134	F	85
	<a href="#">Diagram 1</a>	D	46	D	48
Highbury / New Nooiensfontein	Signals	C	26	C	29
Reuter St / Belhar Drive	3-way stop	A	9	A	9

Despite an additional lane having been added on the northern New Nooiensfontein Road approach of the Stellenbosch Arterial / New Nooiensfontein Road intersection in 2016, service levels at this intersection are still poor. Service levels can be improved to acceptable levels by providing the additional lanes shown in **Diagram 1**.

**Diagram 1: Stellenbosch Arterial / New Nooiensfontein Road intersection layout required to accommodate 2024 traffic volumes**



## 8. REM FARM 1388 DEVELOPMENT: PHASE 1

It is anticipated that the Rem Farm 1388 development will be completed in phases over the next ten years. Two scenarios were analysed in this assessment: The year 2029 with 50% of the development completed, and the year 2034 with the full development completed. The first instance is discussed in this paragraph.

### 8.1. Year 2029 background traffic demand estimation

Background traffic demand is constituted of two components: percentage growth and traffic build-up from other developments. An annual traffic growth rate of 3% was used to calculate percentage growth, as recommended for average growth areas in the TMH17 Trip Data Manual. Trips from the remaining phases of the Hamilton Estate development on Remainder Erf 22180 Kuilsrivier were also taken into account. The affected intersections were analysed with 2029 background traffic volumes. The results of the analysis are summarised in **Table 3** and shown in **Figure 5**, Appendix B.

**Table 3: Levels of service with Year 2029 background traffic volumes**

Intersection	Control measure	Morning peak hour		Afternoon peak hour	
		Intersection service level	Average intersection delay (s)	Intersection service level	Average intersection delay (s)
Stellenbosch Arterial / New Nooiensfontein	Diagram 1 layout	F	100	F	109
Highbury / New Nooiensfontein	Signals	C	28	C	33
Reuter St / Belhar Drive	3-way stop	A	9	A	9

The Reuter Street / Belhar Drive and Highbury Road / New Nooiensfontein Road intersections are expected to continue operating at acceptable service levels with 2029 volumes, with no improvements required. The capacity of the Stellenbosch Arterial / New Nooiensfontein Road intersection with the layout shown in **Diagram 1** will be exceeded by 2029. Stellenbosch Arterial carries the highest traffic volumes, but excessive delays are caused by the nearly 1000 vehicles turning right from New Nooiensfontein Road North onto Stellenbosch Arterial. This points to the need for an alternative egress out of the Kalkfontein area. As mentioned in paragraph 6, the northward extension of Wesbank Main Road and the westward extension of Belhar Drive will help to get traffic in and out of Kalkfontein.

## 8.2. Phase 1 development trips

The trip generation rates recommended COTO TMH17 Trip Data Manual were used to calculate the trip generation potential of the Rem Farm 1388 development. The recommended afternoon peak hour rate for shopping centres is unrealistically high for the type of retail outlets found in low cost housing areas and therefore the morning peak hour rate was used. The adjustment factors for low vehicle ownership were applied to all land uses, and the factor for mixed use was applied to the commercial erf. The development's trip generation potential is summarised in **Table 4** on the following page.

**Table 4: Rem Farm 1388 Kalkfontein: PHASE 1 trip generation potential**

Land use	Units / GLA	Trip gen rate	Adj factor (low veh own)	Adj factor (mixed use)	Nett TGR	% In	% Out	Total	In	Out
<b>Morning peak hour</b>										
Single residential	218 units	1	40%		0,6	0,25	0,75	131	33	98
General business	1015 m <sup>2</sup>	3,6	30%	10%	2,52	0,65	0,35	26	17	9
Group housing	22 units	0,85	40%		0,51	0,25	0,75	11	3	8
<b>Morning peak hour total</b>								<b>168</b>	<b>52</b>	<b>115</b>

Afternoon peak hour										
Single residential	219 units	1	40%		0,6	0,7	0,25	131	92	33
General business	1015 m <sup>2</sup>	3,6	30%	10%	2,52	0,5	0,5	26	13	13
Group housing	22 units	0,85	40%		0,51	0,7	0,3	11	8	3
<b>Afternoon peak hour total</b>								<b>168</b>	<b>112</b>	<b>49</b>

It was assumed that the first half of the development would be finished before the completion of the Highbury Road Extension link and the construction of the new bridge over the Kuils River. For the 2029 scenario, the majority of trips were therefore distributed via Reuter Street. The 2029 trip distribution is shown in **Figure 6**.

### 8.3. Phase 1 traffic impact

Trips generated by the first half of the Rem Farm 1388 development were added to Year 2029 background traffic volumes and the affected intersections were analysed with the increased traffic volumes in order to determine the development's traffic impact. Total traffic volumes and service levels are shown in **Figure 7**. A summary of the analysis results is given in **Table 5**.

**Table 5: Levels of service with Total 2029 traffic volumes**

Intersection	Control measure	Morning peak hour		Afternoon peak hour	
		Intersection service level	Average intersection delay (s)	Intersection service level	Average intersection delay (s)
Stellenbosch Arterial / New Nooiensfontein	Diagram 1 layout	F	89	F	110
Highbury / New Nooiensfontein	Signals	C	28	C	33
Reuter St / Belhar Drive	3-way stop	A	9	A	10

Rem Farm 1388 Phase 1 will add very few trips to the Stellenbosch Arterial / New Nooiensfontein Road intersection and will have a negligible impact at this intersection. The New Nooiensfontein Road / Highbury Road intersection will continue to operate at acceptable service levels, as will the Belhar Drive / Reuter Street intersection. From the comparison of pre- and post-development service levels, it can be concluded that Rem Farm 1388 Phase 1 will have a low traffic impact.

## 9. FULL DEVELOPMENT

### 9.1. Year 2034 background traffic demand estimation

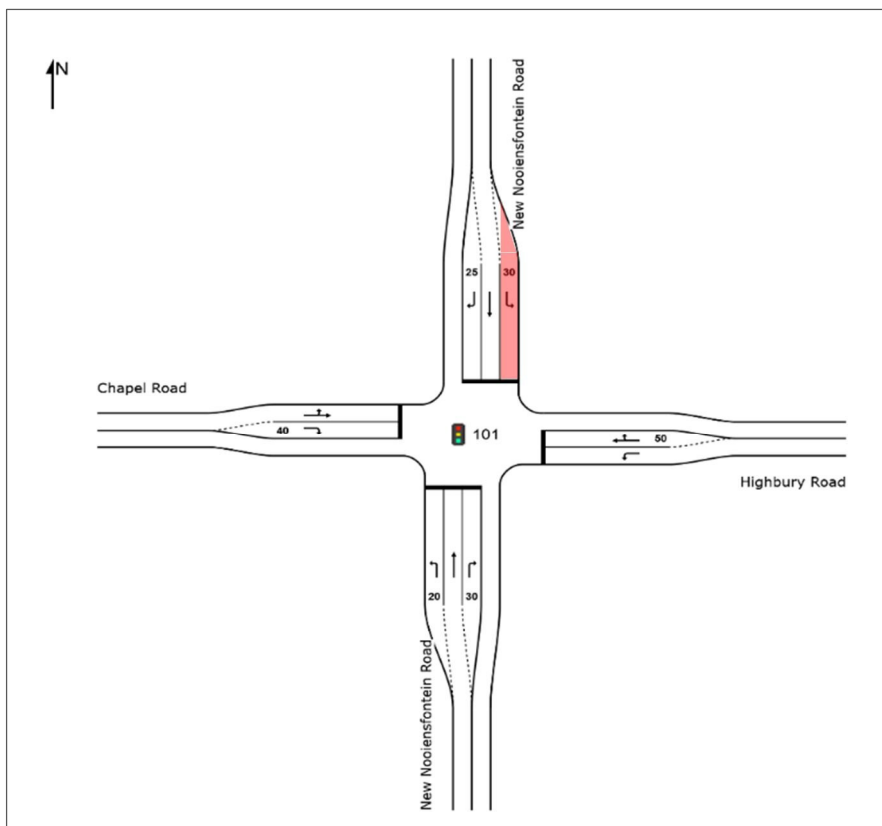
Year 2029 traffic volumes were increased by 3% per year to 2034 and added to Hamilton Estate trips to obtain 2034 background traffic volumes. Relevant intersections were analysed with the 2034 volumes. Year 2034 background traffic volumes and service levels are shown in **Figure 8**. A summary of the analysis results is given in **Table 6**.

**Table 6: Levels of service with Year 2034 background traffic volumes**

Intersection	Control measure	Morning peak hour		Afternoon peak hour	
		Intersection service level	Average intersection delay (s)	Intersection service level	Average intersection delay (s)
Stellenbosch Arterial / New Nooiensfontein	Diagram 1 layout	F	134	F	85
Highbury / New Nooiensfontein	Current layout	D	37	F	99
	Diagram 2 layout	C	34	C	33
Reuter St / Belhar Drive	3-way stop	A	9	A	10

Delays at the Stellenbosch Arterial / New Nooiensfontein Road intersection will increase even further if no alternative route out of Kalkfontein has been provided by 2034. All movements will operate at acceptable service levels with the layout shown in **Diagram 2**. The Belhar Drive / Reuter Street intersection will continue to operate at good service levels.

**Diagram 2: Layout required at New Nooiensfontein Road / Highbury Road intersection for 2034 background traffic volumes**



## 9.2. Development trips

The full Rem Farm 1388 development's trip generation potential is summarised in **Table 7** below. For the full development (2034), trips were distributed via Reuter Street and Old Nooiensfontein Road / Highbury Road Extension. The trip distribution is shown in **Figure 9**.

**Table 7: Full Rem Farm 1388 Kalkfontein trip generation potential**

Land use	Units / GLA	Trip gen rate	Adj factor (low veh own)	Adj factor (mixed use)	Nett TGR	% In	% Out	Total	In	Out
<b>Morning peak hour</b>										
Single residential	436 units	1	40%		0,6	0,25	0,75	262	65	196
General business	2030 m <sup>2</sup>	3,6	30%	10%	2,52	0,65	0,35	51	33	18
Group housing	44 units	0,85	40%		0,51	0,25	0,75	22	6	17
<b>Morning peak hour total</b>								<b>366</b>	<b>104</b>	<b>231</b>
<b>Afternoon peak hour</b>										
Single residential	436 units	1	40%		0,6	0,7	0,25	262	183	65
General business	2030 m <sup>2</sup>	3,6	30%	10%	2,52	0,5	0,5	51	26	26
Group housing	44 units	0,85	40%		0,51	0,7	0,3	22	16	7
<b>Afternoon peak hour total</b>								<b>335</b>	<b>224</b>	<b>98</b>

## 9.3. Impact of full Rem Farm 1388 development

Trips from the full development were added to 2034 background traffic volumes and analysed to determine the traffic impact. The analysis results are summarised in **Table 8**. Total 2034 traffic volumes and service levels are shown in **Figure 10**.

**Table 8: Levels of service with total traffic volumes**

Intersection	Control measure	Morning peak hour		Afternoon peak hour	
		Intersection service level	Average intersection delay (s)	Intersection service level	Average intersection delay (s)
Stellenbosch Arterial / New Nooiensfontein	Diagram 1 layout	F	224	F	217
Highbury / New Nooiensfontein	Diagram 2 layout	D	48	D	44
Reuter St / Belhar Drive	3-way stop	A	9	A	10

The Farm 1388 development will increase traffic volumes at the Stellenbosch Arterial / New Nooiensfontein Road intersection by only 3%, but due to the already poor service levels delays

will increase even further. An alternative route out of Kalkfontein will be crucial by 2034. The upgraded Highbury Road / New Nooiensfontein Road intersection and the Reuter Street / Belhar Drive intersection will continue to operate at acceptable service levels.

The westward extension of Highbury Road and the upgrading of the Old Nooiensfontein Road bridge over the Kuils River needs to be completed before the completion of the Rem Farm 1388. Development contributions from the Rem Farm 1388 can be added to the DC's from Hamilton Estate to fund these improvements.

It can be concluded that the Rem Farm 1388 development will have a moderate traffic impact.

## **10. ACCESS, INTERNAL ROAD LAYOUT AND PARKING**

The development will obtain access via the south-westward extension of Reuter Street. This road will run through the development and will terminate at the southern property boundary, from where it can be extended towards the R300 in future, if required. This road will have a 16-metre wide reserve, the same as the section up to Belhar Drive. All other internal roads will have 8-metre wide reserves.

Reuter Street Extension should have a surfaced width of 6,8 metres and the lower order internal roads should have surfaced widths of 5,5 metres (5 metres for dead end streets). The Rezoning and Subdivision Plan shows that splays will be provided at all street corners and that turning space will be provided at the ends of dead-end streets.

## **11. PUBLIC AND NON-MOTORISED TRANSPORT**

Minibus taxis make up a large percentage of the vehicles going to and from Kalkfontein and many pedestrians were noticed during the site visit. It is recommended that embayments for public transport vehicles should be provided along Reuter Street Extension. Sidewalks should be provided along at least one side of Reuter Street Extension.

## **12. CONCLUSIONS**

It can be concluded that the proposed residential development on Rem Farm 1388 Kalkfontein will have a moderate traffic impact. Other conclusions drawn from the study are summarised below.

- The site is located to the south of the Kalkfontein residential area, north of Stellenbosch Arterial and east of the R300. The Bet-El School for epileptici borders Rem Farm 1388 on the western side;
- The development will entail the rezoning of Remainder Farm 1388 and subdivision into 436 single residential erven, 44 group housing units, one business erf and supporting land uses;
- Access will be obtained via the southward extension of Reuter Street;
- There are certain new road links, as well as road and intersection improvements that were set as conditions of approval for neighbouring developments and which will also be required for the Rem Farm 1388 development;

- Minor Road 86 (OP0086) is a gravel track that runs from Old Nooiensfontein Road south-westwards towards the R300 and the Rem Farm 1388 development will be built over the road. OP0086 is still a proclaimed provincial minor road;
- An alternative route will be provided via Old Nooiensfontein Road and Reuter Street to the area that currently obtains access via OP0086;
- The City of Cape Town's Road Network Plan shows that Belhar Drive will be extended over the R300 to link up with Erica Drive in the west;
- There have been discussions with City of Cape Town and Provincial Roads officials about providing an alternative access to the Kalkfontein area through the northward extension of Wesbank Main Road. Allowance is made for the southward extension of Reuter Street through Rem Farm 1388 to link with that road in future;
- Despite an additional lane having been added on the northern New Nooiensfontein Road approach of the Stellenbosch Arterial / New Nooiensfontein Road intersection in 2016, service levels at this intersection are still unacceptable (LOS F);
- It is anticipated that 50% of Rem Farm 1388 will be developed by 2029 and 100% by 2034;
- Rem Farm 1388 Phase 1 will have a low traffic impact and no infrastructure improvements will be required;
- The full development will generate 335 trips (104 in, 231 out) in the morning peak hour and 335 trips (224 in, 98 out) in the afternoon peak hour;
- The Highbury Road / New Nooiensfontein Road intersection will have to be upgraded to accommodate Year 2034 background traffic volumes;
- The development will generate a considerable number of public and non-motorised transport trips.

#### 14. RECOMMENDATIONS

The recommendations made in the Rem Farm 1388 transport impact assessment are summarised below.

- OP0086 will have to be deproclaimed and any property that currently takes access off OP0086 will have to be provided with alternative access;
- Reuter Street Extension should have a surfaced width of 6,8 metres and the lower order internal roads should have surfaced widths of 5,5 metres (5 metres for dead end streets);
- Embayments for public transport vehicles should be provided along Reuter Street Extension;
- Sidewalks should be provided along at least one side of Reuter Street Extension;
- Current (2024) service levels at the Stellenbosch Arterial / New Nooiensfontein Road intersection can be improved by adding more lanes as shown in **Diagram 1**;
- The capacity of the Stellenbosch Arterial / New Nooiensfontein Road intersection with the Diagram 1 layout will be exceeded by 2029. This points to the need for an alternative egress out of the Kalkfontein area. The northward extension of Wesbank

Main Road and the westward extension of Belhar Drive needs to be provided to serve this purpose;

- The capacity of the New Nooiensfontein Road / Highbury Road intersection will be exceeded by 2034 and a third lane will have to be added on the northern approach to reduce delays. See **Diagram 2**;
  - The westward extension of Highbury Road and the upgrading of the Old Nooiensfontein Road bridge over the Kuils River needs to be completed before the completion of the Rem Farm 1388. Development contributions from the Rem Farm 1388 can be added to the DC's from Hamilton Estate to fund these improvements.
-

**ANNEXURE A: PHOTOGRAPHIC RECORD OF EXISTING TRANSPORT FACILITIES**

**1. Southern end of Reuter Street surfaced section (at Verenegde Street)**

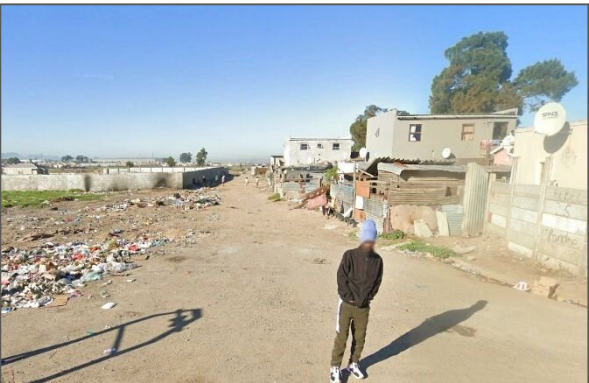
1a) Looking north along Reuter Street



1b) Looking east along Verenegde Street



1c) Looking south along Reuter St gravel section

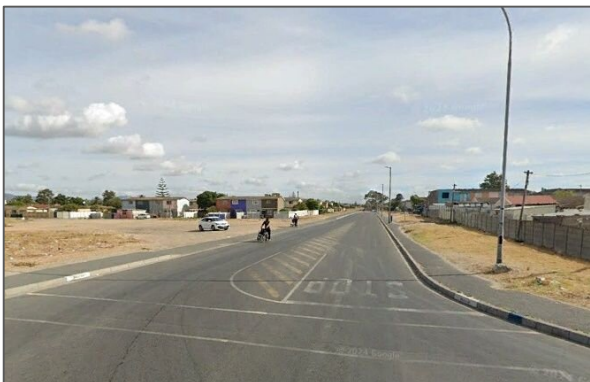


1d) Looking west along Verenegde Street



**2. Reuter Street / Belhar Drive intersection**

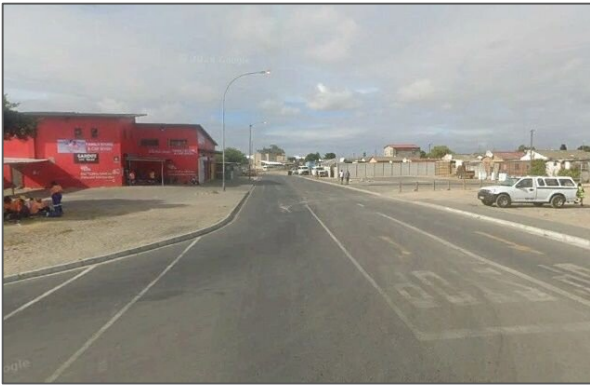
2a) Looking north along Reuter Street



2b) Looking east along Belhar Drive



2c) Looking south along Reuter Street



**3. New Nooiensfontein Road / Highbury Road intersection**

3a) Looking north-east along New Nooiensfontein



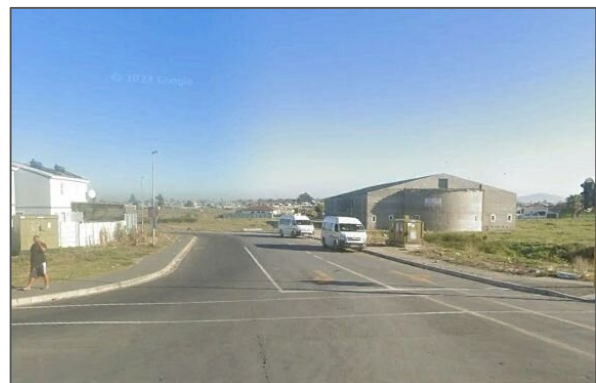
3b) Looking south-east along Highbury Road



3c) Looking south-west along New Nooiensfontein

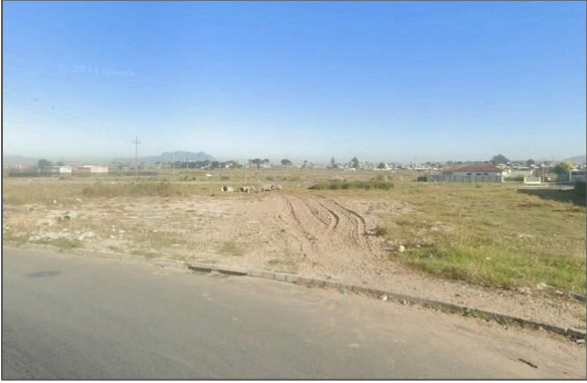


3d) Looking north-west along Highbury Road



#### 4. Highbury Road and Chapel Road

4a) Looking towards Old Nooiensfontein Road from north-western end of Highbury Road

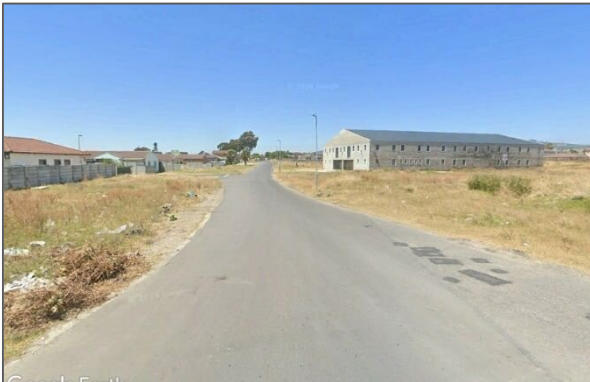


4b) Gravel track between Chapel Road and Old Nooiensfontein Road viewed from Chapel Road



#### 5. Old Nooiensfontein Road / Old Nooiensfontein Road

5a) Looking north-east along Old Nooiensfontein



5b) Gravel track from Old Nooiensfontein to Highbury Road (looking east)



5c) Gravel track from Old Nooiensfontein to Chapel Road (looking south)



5d) Looking south-west towards Kuils River



**ANNEXURE A: PHOTOGRAPHIC RECORD OF EXISTING TRANSPORT FACILITIES**

**1. Southern end of Reuter Street surfaced section (at Verenigde Street)**

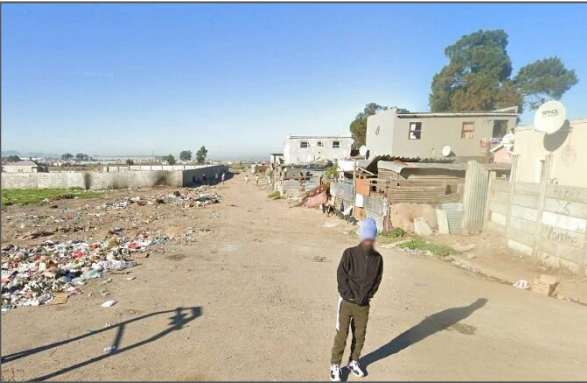
1a) Looking north along Reuter Street



1b) Looking east along Verenigde Street



1c) Looking south along Reuter St gravel section



1d) Looking west along Verenigde Street



**2. Reuter Street / Belhar Drive intersection**

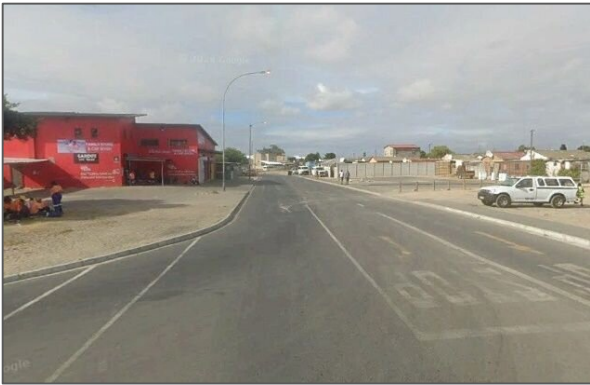
2a) Looking north along Reuter Street



2b) Looking east along Belhar Drive



2c) Looking south along Reuter Street



**3. New Nooiensfontein Road / Highbury Road intersection**

3a) Looking north-east along New Nooiensfontein



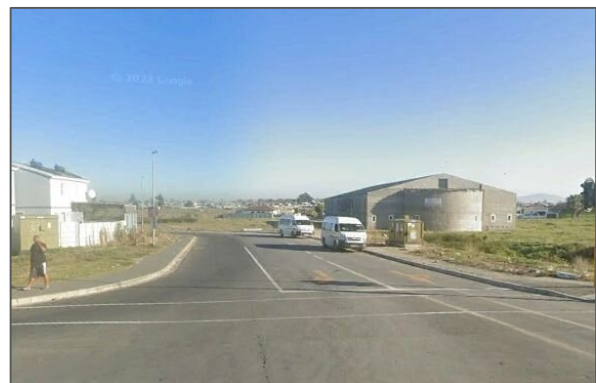
3b) Looking south-east along Highbury Road



3c) Looking south-west along New Nooiensfontein

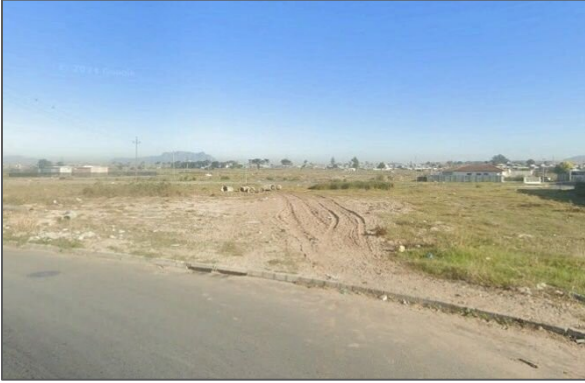


3d) Looking north-west along Highbury Road



#### 4. Highbury Road and Chapel Road

4a) Looking towards Old Nooiensfontein Road from north-western end of Highbury Road

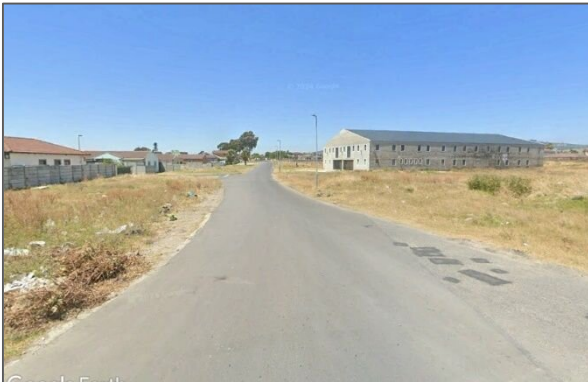


4b) Gravel track between Chapel Road and Old Nooiensfontein Road viewed from Chapel Road



#### 5. Old Nooiensfontein Road / Old Nooiensfontein Road

5a) Looking north-east along Old Nooiensfontein



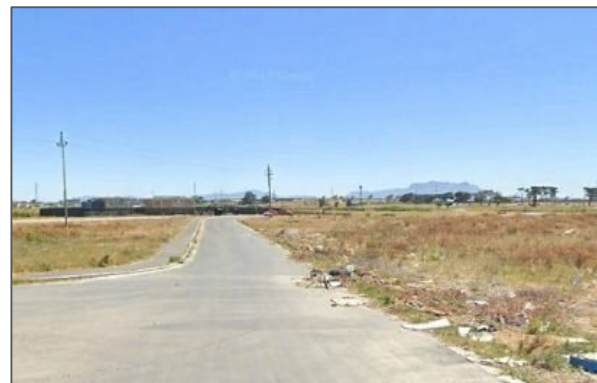
5b) Gravel track from Old Nooiensfontein to Highbury Road (looking east)



5c) Gravel track from Old Nooiensfontein to Chapel Road (looking south)



5d) Looking south-west towards Kuils River



**6. Old Nooiensfontein Road / Minor Road 86 (OP0086)**

6a) Looking south-east along Old Nooiensfontein towards Kuils River bridge



6b) Looking south-west along Bet-El school access road (OP0086)

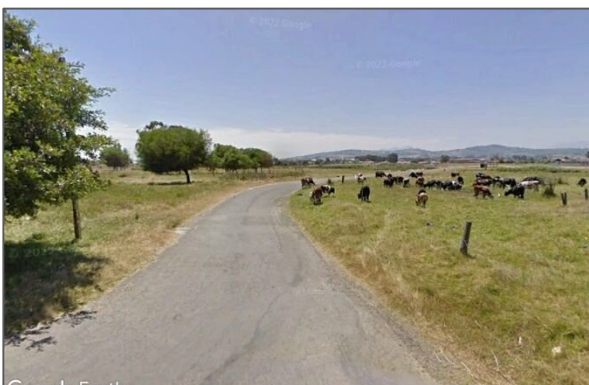


6c) Looking north-west towards Kalkfontein residential area

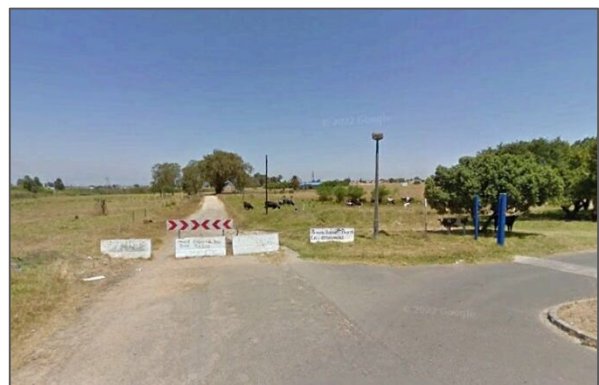


**7. Minor Road 86 (OP0086) / Bet-El School access**

7a) Looking north-east along OP0086



7b) Looking south-west along OP0086 (road closed)



7c) Looking north-west at Bet-El School entrance



## **ANNEXURE B: DRAWINGS**

Figure 1: Remainder Farm 1388 Kalkfontei Locality Plan

Figure 2: Rezoning and subdivision – Remainder Farm 1388, Kuilsrivier | ATLAS Town Planning | Plan:  
Erf1388 Kuilsrivier/Subdivision/Jan2025 | January 2025

Figure 3: Road infrastructure improvement projects, Kalkfontein

Figure 4: Existing 2024 traffic volumes and service levels

Figure 5: Year 2029 background traffic volumes and service levels

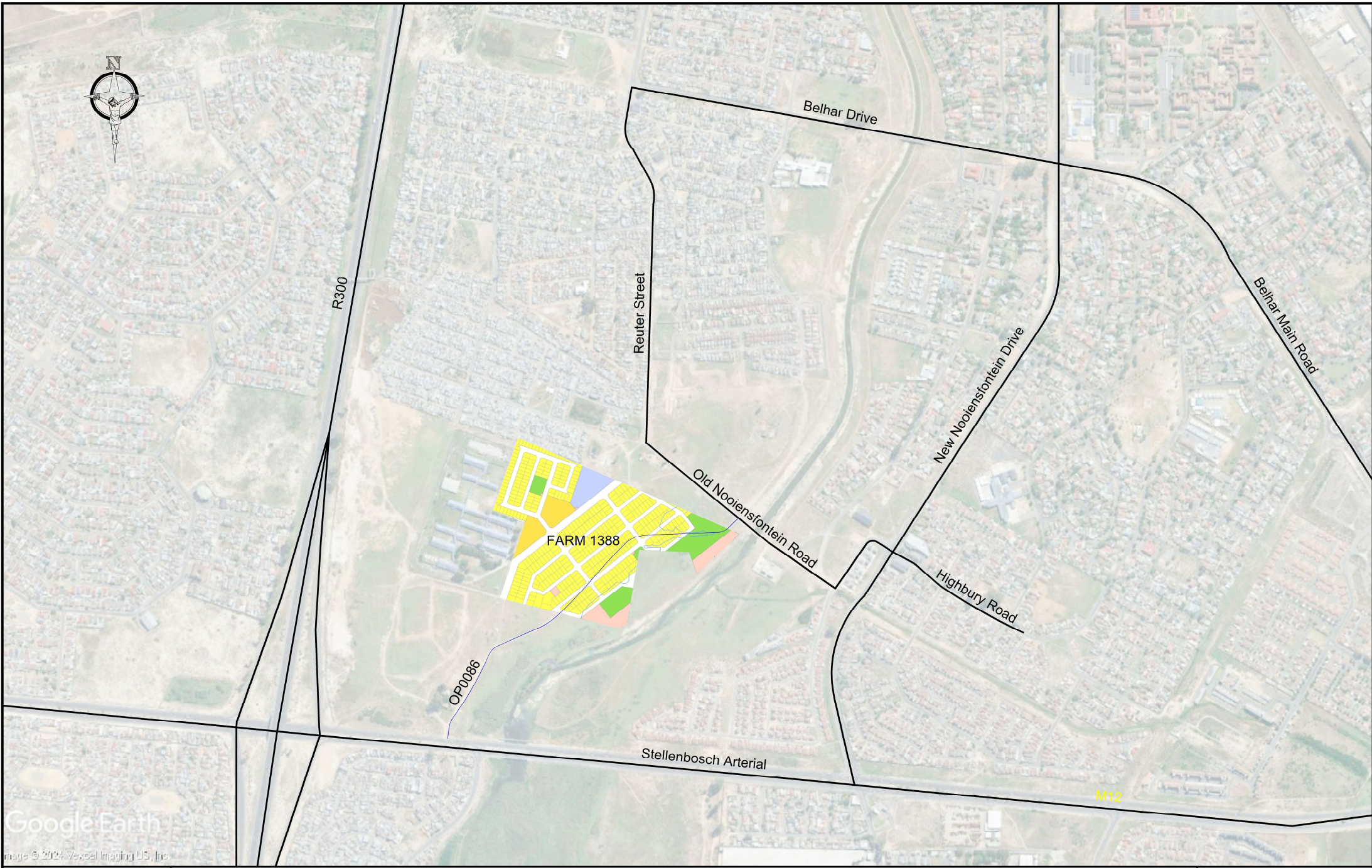
Figure 6: Distribution of Rem Farm 1388 Phase 1 trips

Figure 7: Total 2029 traffic volumes and service levels

Figure 8: Year 2034 background traffic volumes and service levels

Figure 9: Distribution of Rem Farm 1388 trips (full development)

Figure 10: Total 2034 traffic volumes and service levels

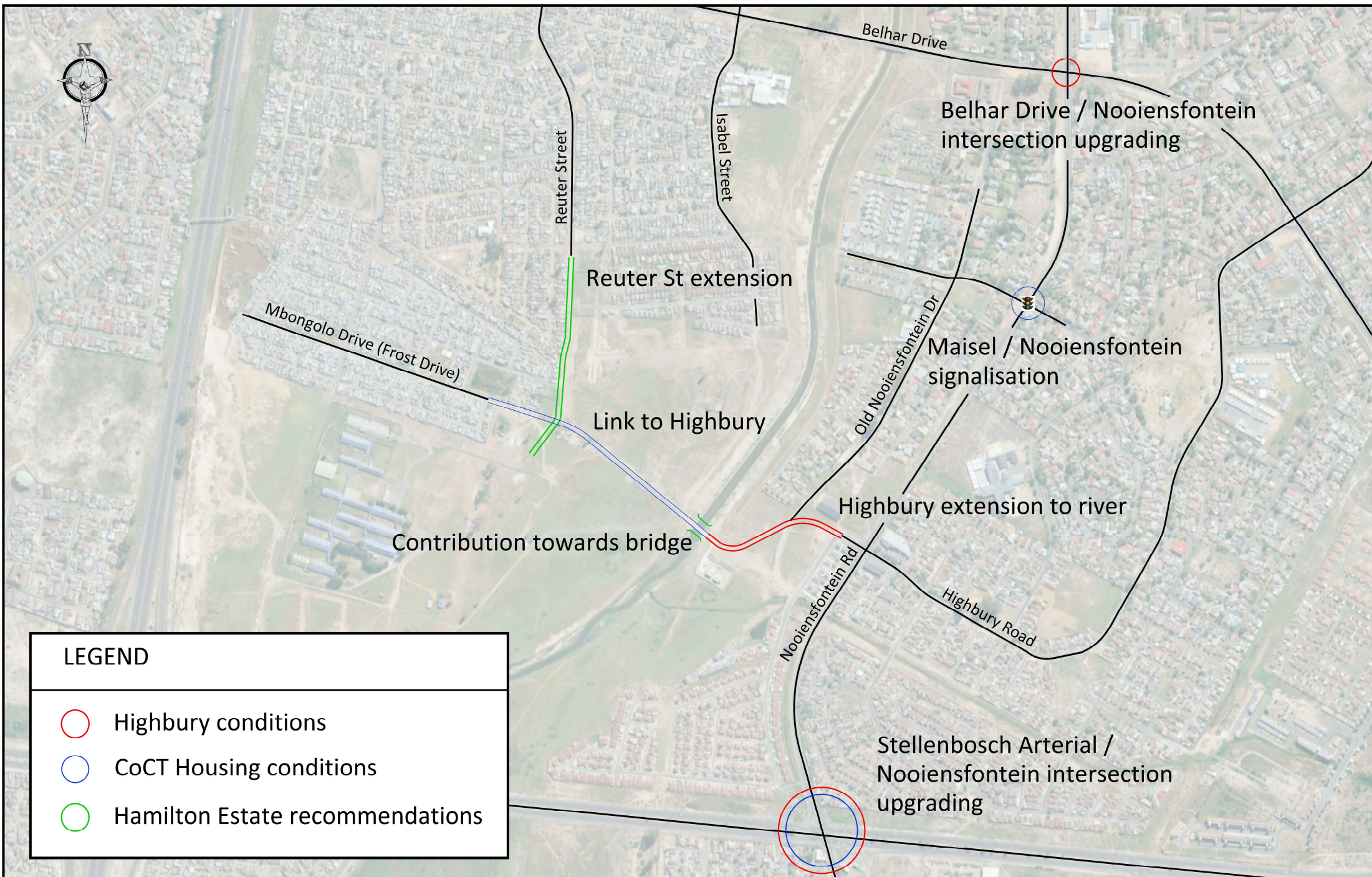


Google Earth  
Image © 2024 Vexel Imaging US, Inc.

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E-mail: liezlstodart@gmail.com

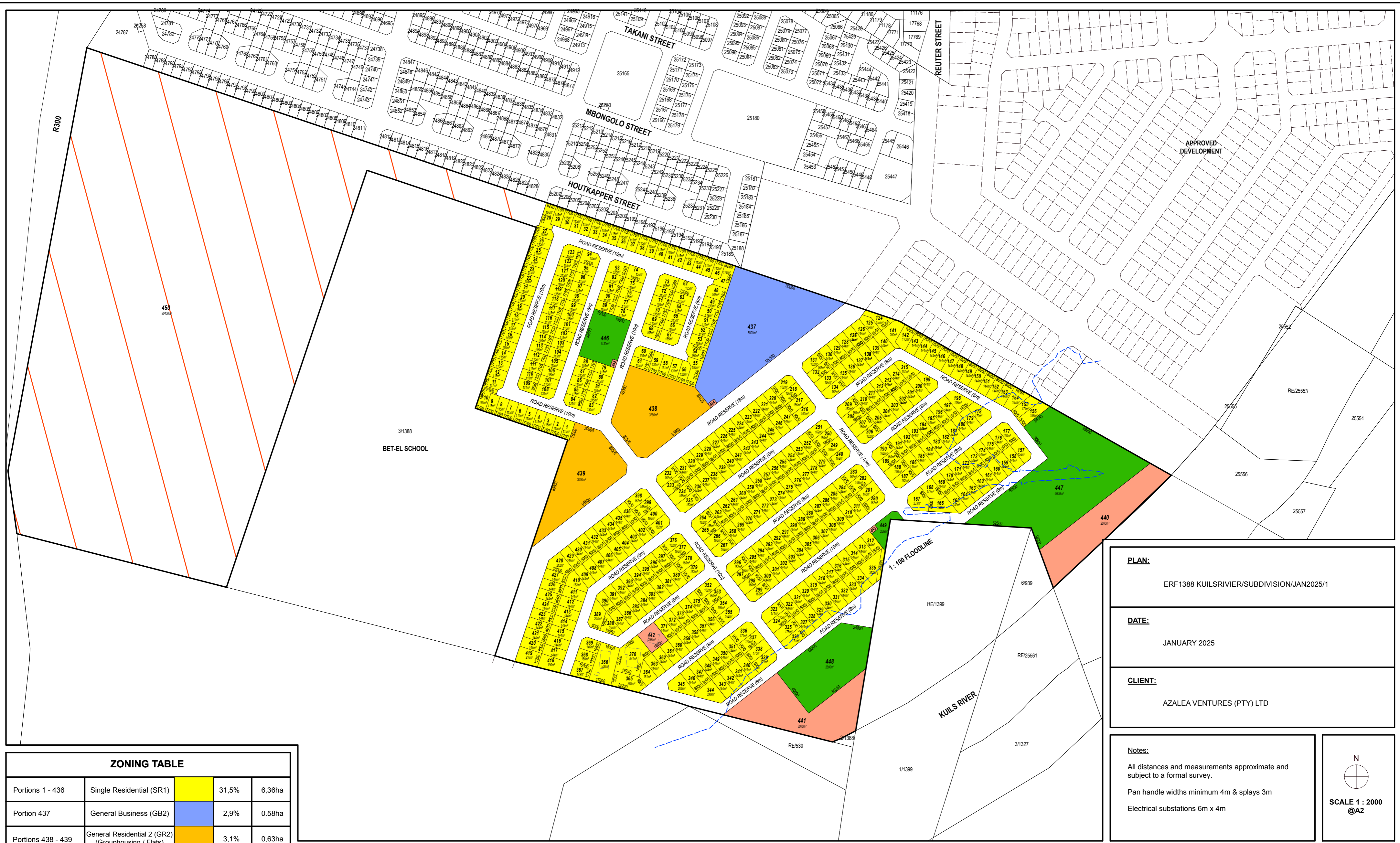
**REMAINDER FARM 1388, KALKFONTEIN  
LOCALITY PLAN**

**FIGURE 1**  
2024-12-12



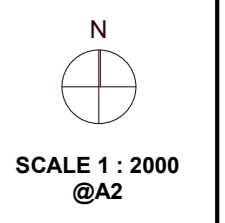
**LEGEND**

- Highbury conditions
- CoCT Housing conditions
- Hamilton Estate recommendations



<b>PLAN:</b>	ERF1388 KUILSRIVIER/SUBDIVISION/JAN2025/1
<b>DATE:</b>	JANUARY 2025
<b>CLIENT:</b>	AZALEA VENTURES (PTY) LTD

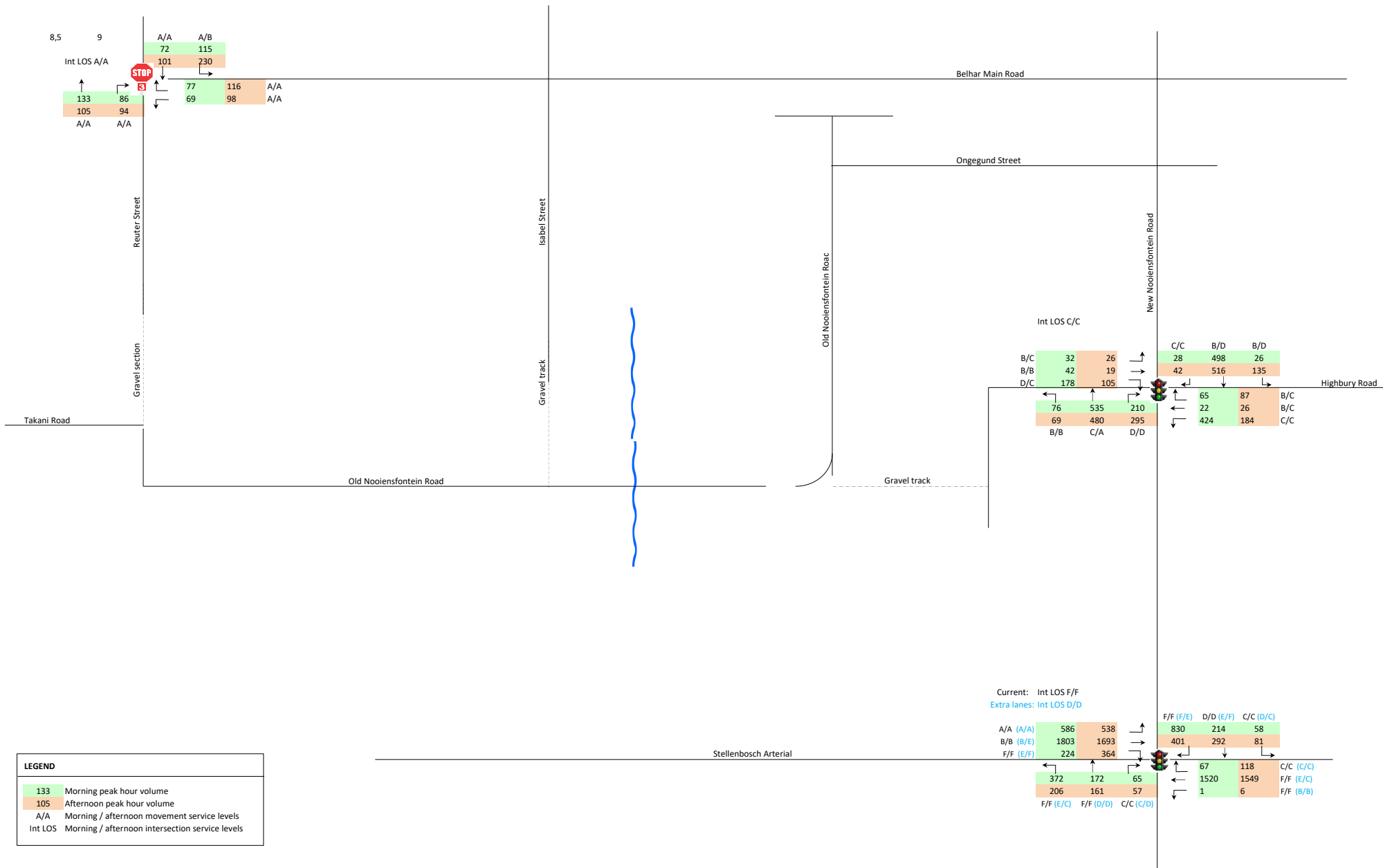
**Notes:**  
 All distances and measurements approximate and subject to a formal survey.  
 Pan handle widths minimum 4m & splays 3m  
 Electrical substations 6m x 4m

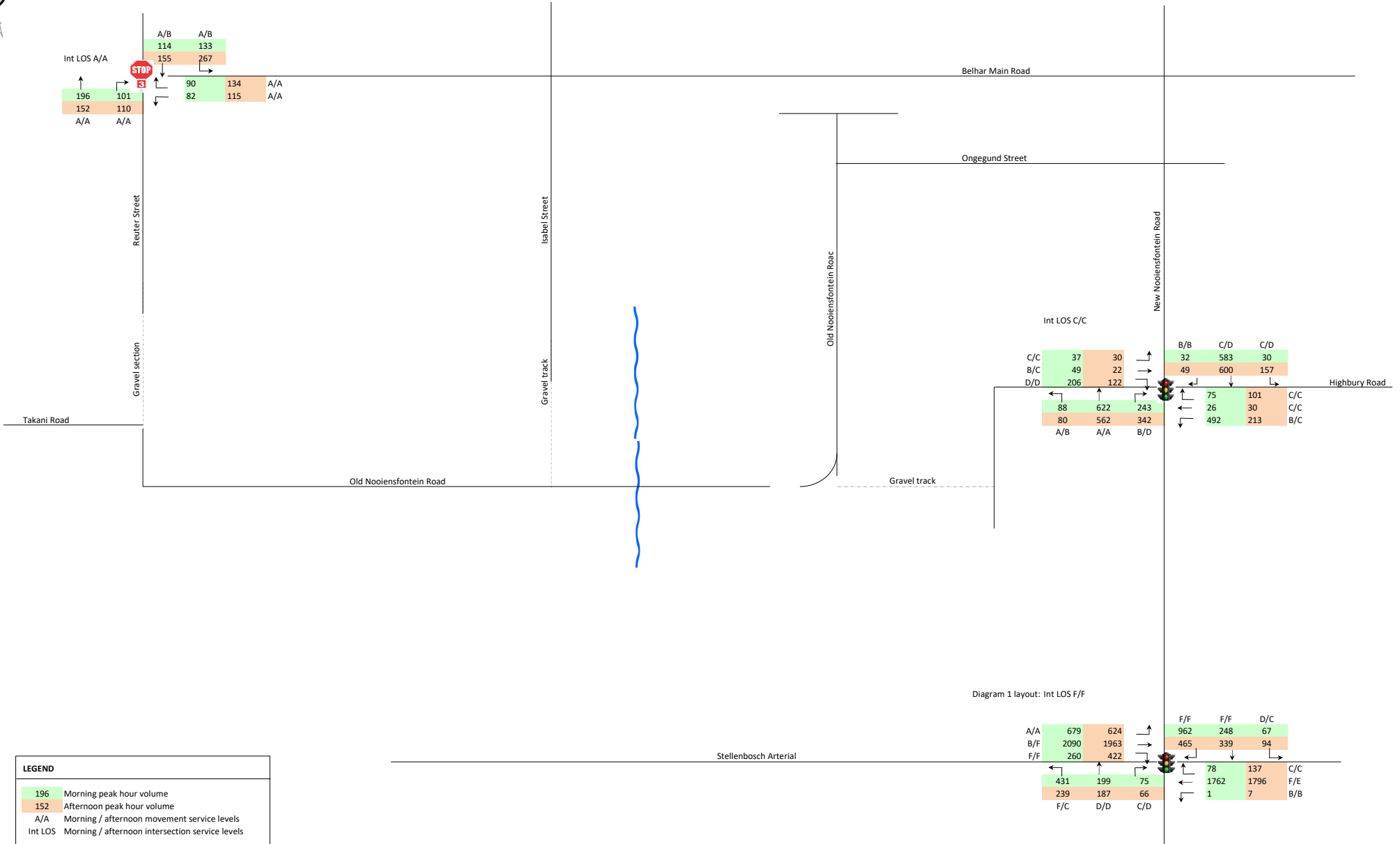


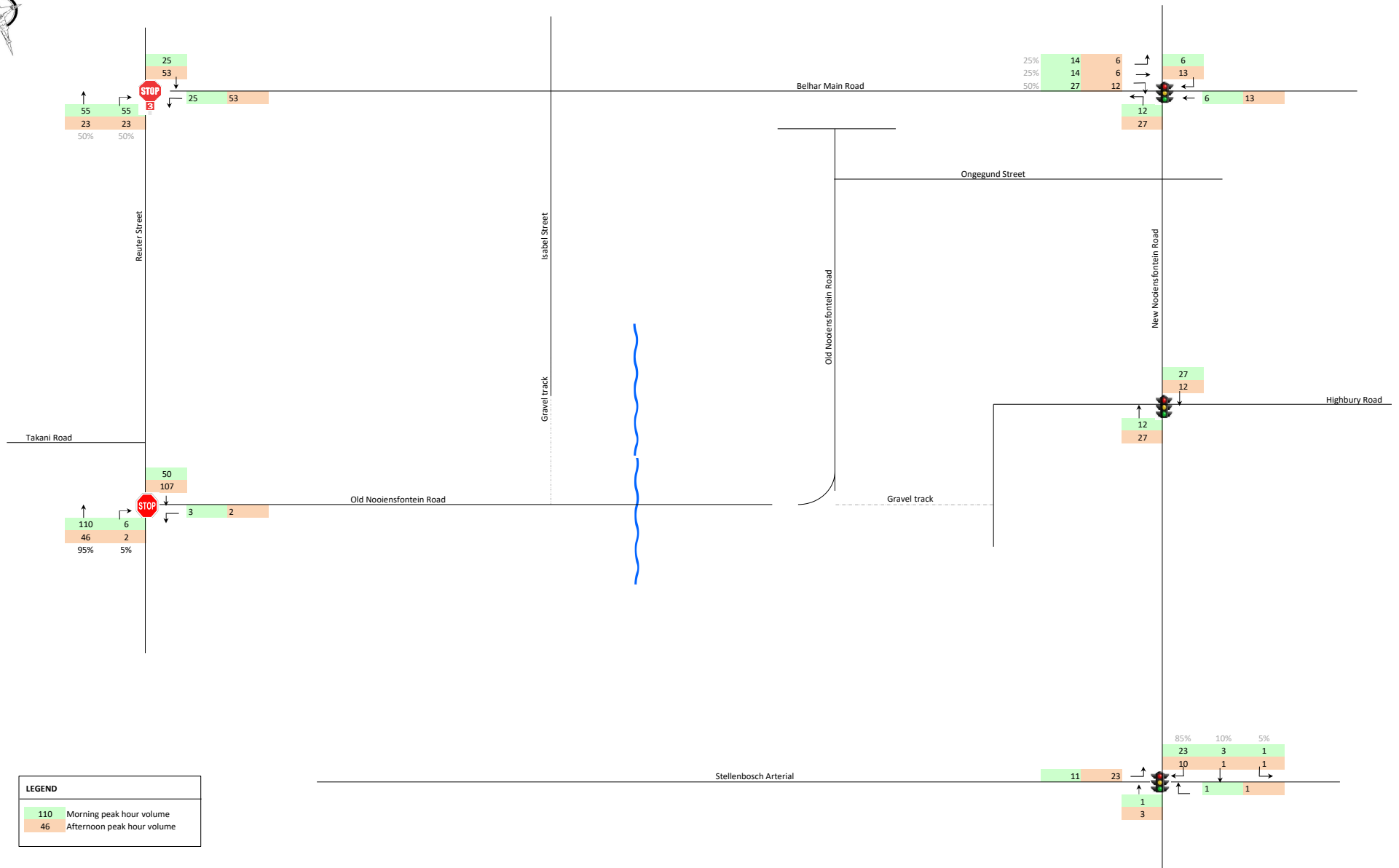
ZONING TABLE				
Portions 1 - 436	Single Residential (SR1)		31,5%	6,36ha
Portion 437	General Business (GB2)		2,9%	0,58ha
Portions 438 - 439	General Residential 2 (GR2) (Grouphousing / Flats)		3,1%	0,63ha
Portions 440 - 445	Utility Zone (UT)		3,1%	0,62ha
Portions 446 - 449	Open Space (OS2)		5,4%	1,08ha
Portion 450	Subdivisional Area (Residential & ancillary uses)		39,8%	8,04ha
Remainder	Transport Zone (TR2)		14,2%	2,88ha
<b>Total</b>			<b>100%</b>	<b>20,19ha</b>

## REZONING AND SUBDIVISION - REMAINDER FARM 1388, KUILSRIVIER

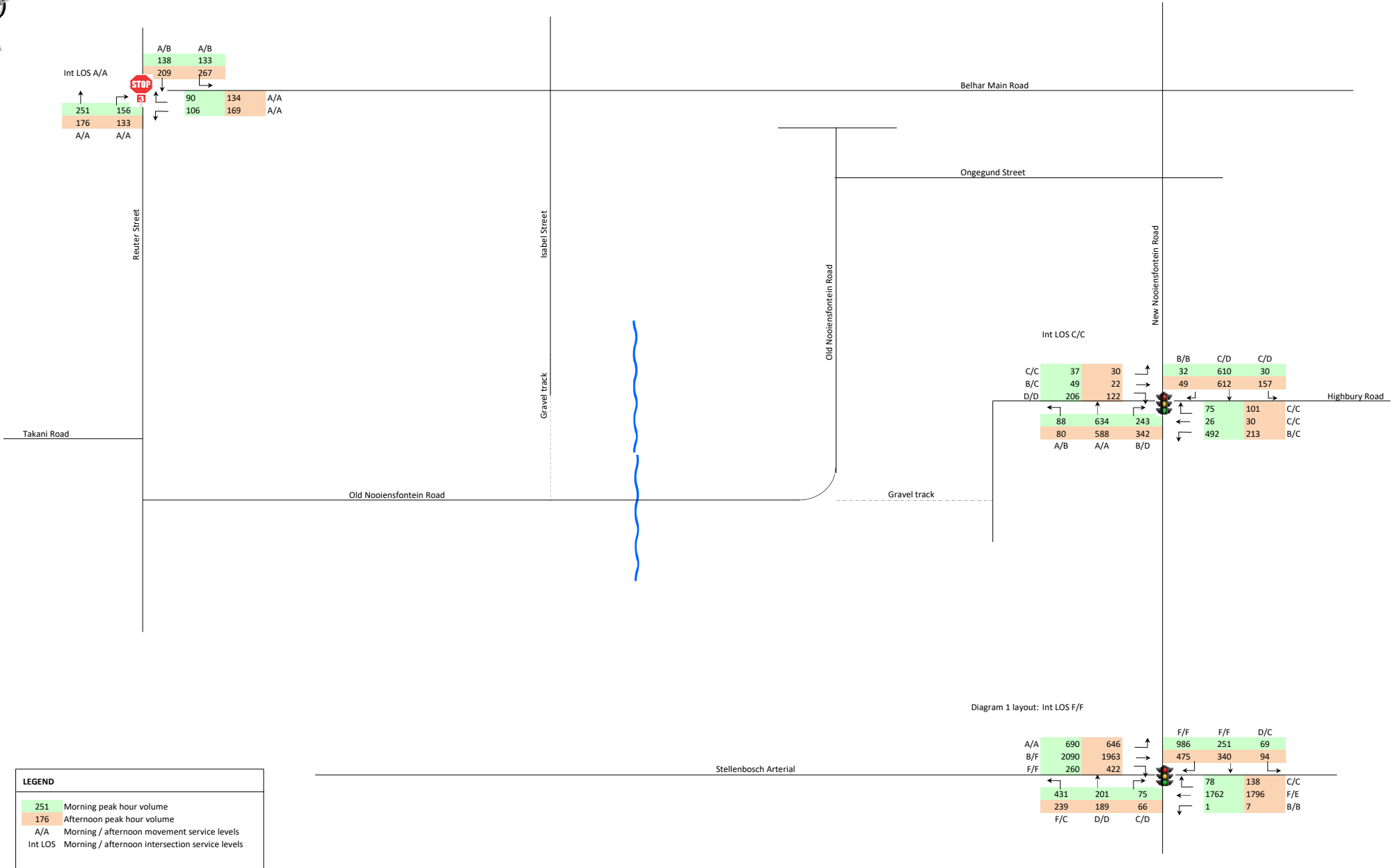
**ATLAS**  
 Town Planning  
 P.O. BOX 380, KUILSRIVIER, 7579 (021) 8017446

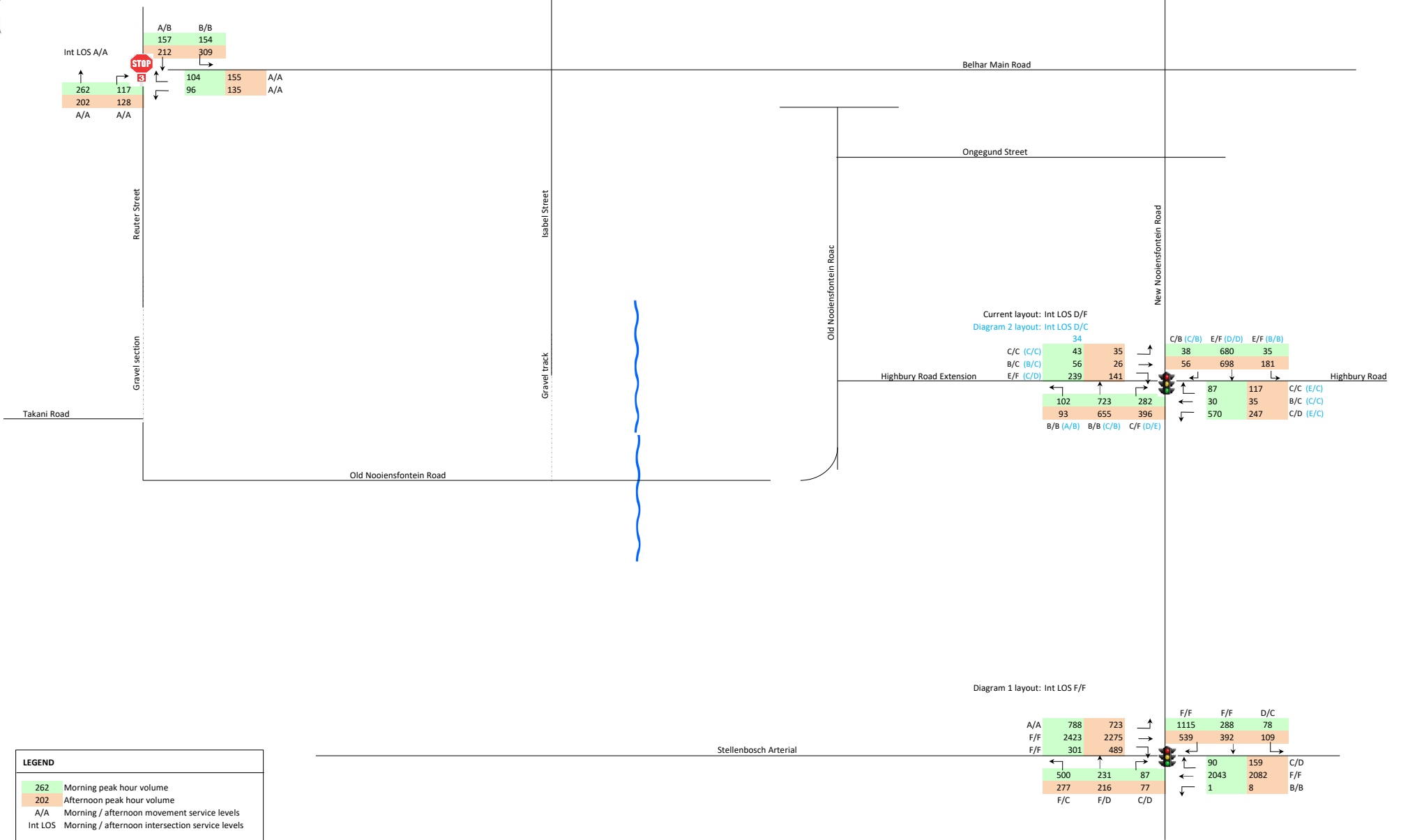






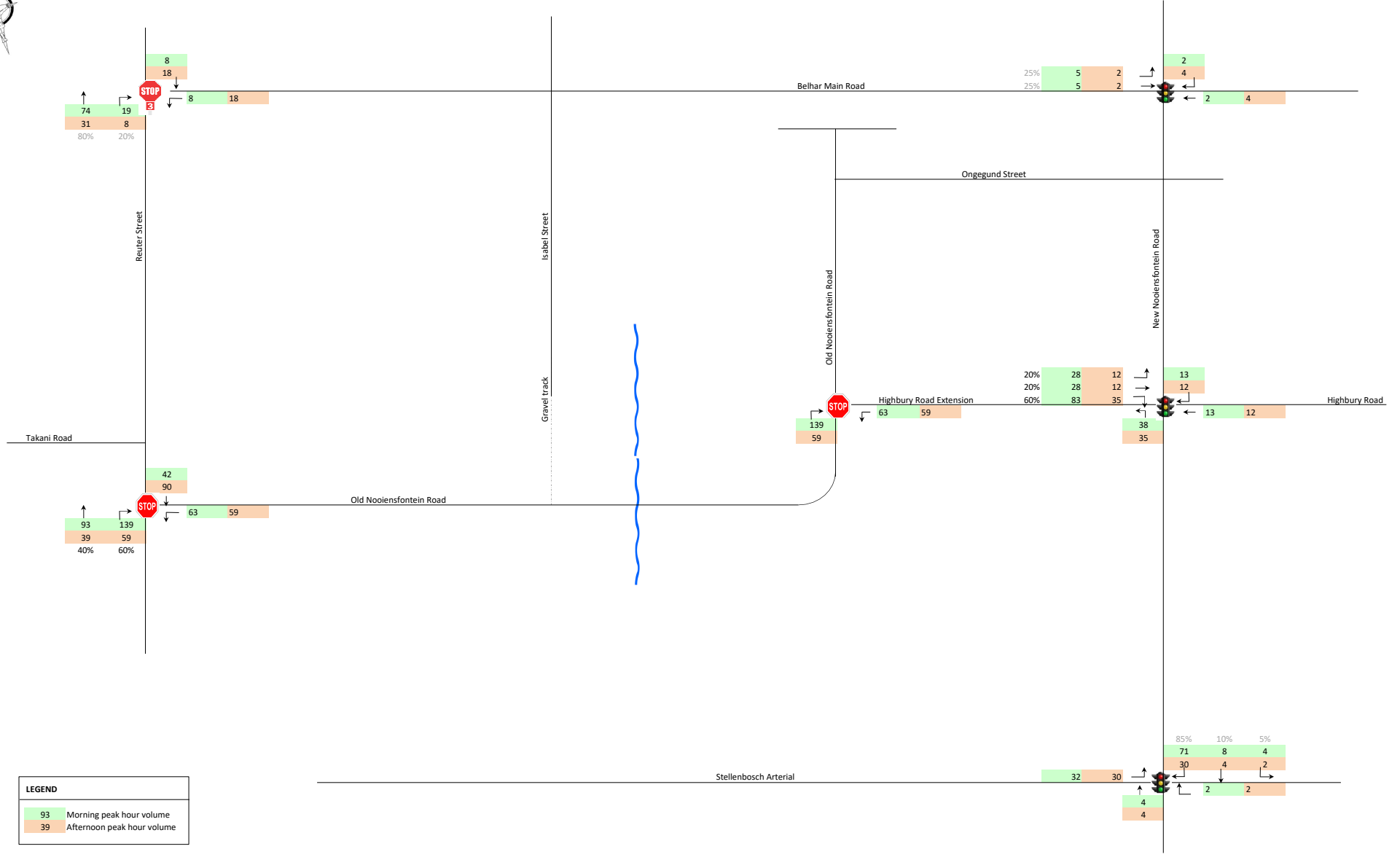
LEGEND	
110	Morning peak hour volume
46	Afternoon peak hour volume





YEAR 2034 BACKGROUND TRAFFIC VOLUMES AND SERVICE LEVELS

FIGURE 8  
2024-12-12



LEGEND	
93	Morning peak hour volume
39	Afternoon peak hour volume

