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A Level 1 Contributor to B-BBEE

Date: 5 September 2024

Our Ref: UDS232/Reports/TIA/Draft

CK Rumboll & Partners

16 Rainer Street

MALMESBURY

7299

ATTENTION: Ms Zanelle Nortjè

Dear Madam,

APPLICATION FOR REZONING AND SUBDIVISION OF ERF RE/279, CLANWILLIAM: TRAFFIC IMPACT ASSESSMENT – DRAFT FOR INPUT

This company was appointed by *ASLA Devco (Pty) Ltd.* to prepare a Traffic Impact Assessment (TIA) for Clanwilliam's Integrated Residential Development Programme (IRDP) and Upgrading of Informal Settlements Programme (UISP) proposed on erf RE/279.

1 BACKGROUND AND LOCALITY

The proposed development comprises three (3) development areas, which do not overlay the full extent of the referred erf. They are situated in the southeast of Clanwilliam, within the urban edge. Development Area 1 (IRDP) is located south of Park Street and mostly east of Denne Street, while Development Area 3 (UISP) is located south/southeast of Development Area 1. Development Area 2 (IRDP) is located along the southern section of Ou Kaapse Way, opposite the *Clanwilliam Hills* development. See the attached ***Locality Plan***.

At present, Development Area 1 and 3 are vacant and primarily zoned as a Rural Community Zone. As per the *Cederberg Municipality Spatial Development Framework*, they fall predominantly within Clanwilliam's land use Development Zone I. It should be noted that Development Area 1 includes existing erven 143, 144, 147, 148, 359 and 1422.

Development Area 2 is situated in the south of land use Development Zone H and is presently occupied by informal housing units. The area has an approved subdivision (General Plan 1490/2010) with Single Residential Zone 1 and Open Space Zone 1 erven; however, this subdivision is to be amended as proposed in the attached ***Subdivision Plan***, dated July 2024 (IRDP: DRAFT 7; UISP: DRAFT 9) and prepared by *CK RUMBOLL & PARTNERS*.

2 PROPOSED DEVELOPMENT

2.1 Development Proposal

As mentioned, the proposed development refers to the Clanwilliam IRDP and UISP housing projects and consists of three (3) development areas shown in the attached ***Subdivision Plan***. Their sizes are as follows:

IRDP: 1. Development Area 1: ± 26.88 ha
2. Development Area 2: ± 2.51 ha

UISP: 3. Development Area 3: ± 19.77 ha

(Total: ± 49.16 ha)

The proposed zonings for the erven of each of these subdivided development areas and their respective sizes/capacities based on provided information, are as listed below.

1. – 130x Residential Zone 1 erven (mean erf size of ± 208 m^2)
   – 650x Residential Zone 2 erven: (mean erf size of ± 150 m^2)
   – 11x Open Space Zone 1 erven
   – 5x Community Zone 2 erven: Churches (± 7 380 m^2; 700 seats)
   – 1x Community Zone 1 erf: Crèche (± 3 650 m^2; 100 students)
   – 1x Community Zone 1 erf: School (± 1.51 ha; 500 students)
   – 1x Community Zone 1 erf: Community Centre (± 7 534 m^2; 800 seats)
   – 1x Community Zone 3 erf: Clinic (± 739 m^2; 443.4 m^2 GLA)
   – 3x Local Business Zone 2 erven (± 3 564 m^2; ± 1 782 m^2 GLA)
   – 1x Authority & Utility Zone erf: Reservoir (± 3 334 m^2)
   – 1x Authority & Utility Zone erf: Police Station (± 1 287 m^2, 772.2 m^2 GLA)
   – Transport Zone 2 erven

2. – 30x Residential Zone 1 erven (mean erf size of ± 208 m^2)
   – 42x Residential Zone 2 erven (mean erf size of ± 150 m^2)
   – 2x Open Space 1 erven

3. – 463x Residential Zone 2 erven (mean erf size of ± 120 m^2)
   – 3x Open Space 1erven
   – 2x Community Zone 2 erven: Churches (± 1 382 m^2; 130 seats)
   – 2x Community Zone 1 erf: Crèches (± 1 408 m^2; 40 students)
   – 1x Local Business Zone 2 erf (± 2 487 m^2; ± 1 244 m^2 GLA)
   – Transport Zone 2 erven

In total, the proposed subdivision of the combined development areas is as follows:

– 160x Residential Zone 1 erven (mean erf size of ± 208 m^2)
– 1 155x Residential Zone 2 erven (mean erf sizes of ± 120 m^2 and ± 150 m^2)
– 16x Open Space Zone 1 erven
– 5x Community Zone 1 erven: 1x Community Centre (800 seats), 3x Crèche (140 students) and 1x School (500 students)
– 7x Community Zone 2 erven: Churches (830 seats)
– 1x Community Zone 3 erf: Clinic (443.4 m^2 GLA)
– 4x Local Business Zone 2 erven (± 3 026 m^2 GLA)
– 2x Authority & Utility Zone erf: Police Station (± 772.2 m^2 GLA) and Reservoir (± 3 334 m^2)
– Transport Zone 2 erven

2.2 Access to the Property

The subject development areas currently obtain access via the residential streets leading to/from Ou Kaapse Way.

As shown in ***Figure 1*** and on the attached ***Subdivision Plan***, various future access points from/to the existing public road network are proposed. These are as listed below; the numbers coincide with those indicated in the referred figure.

1. Viooltjie Street 1
2. Viooltjie Street 2
3. Oranje Street
4. Park Street
5. Protea Street
6. Buitekant Street 1
7. Buitekant Street 2
8. Denne Street
9. Bloekom Street
10. Aqua-Marine Drive

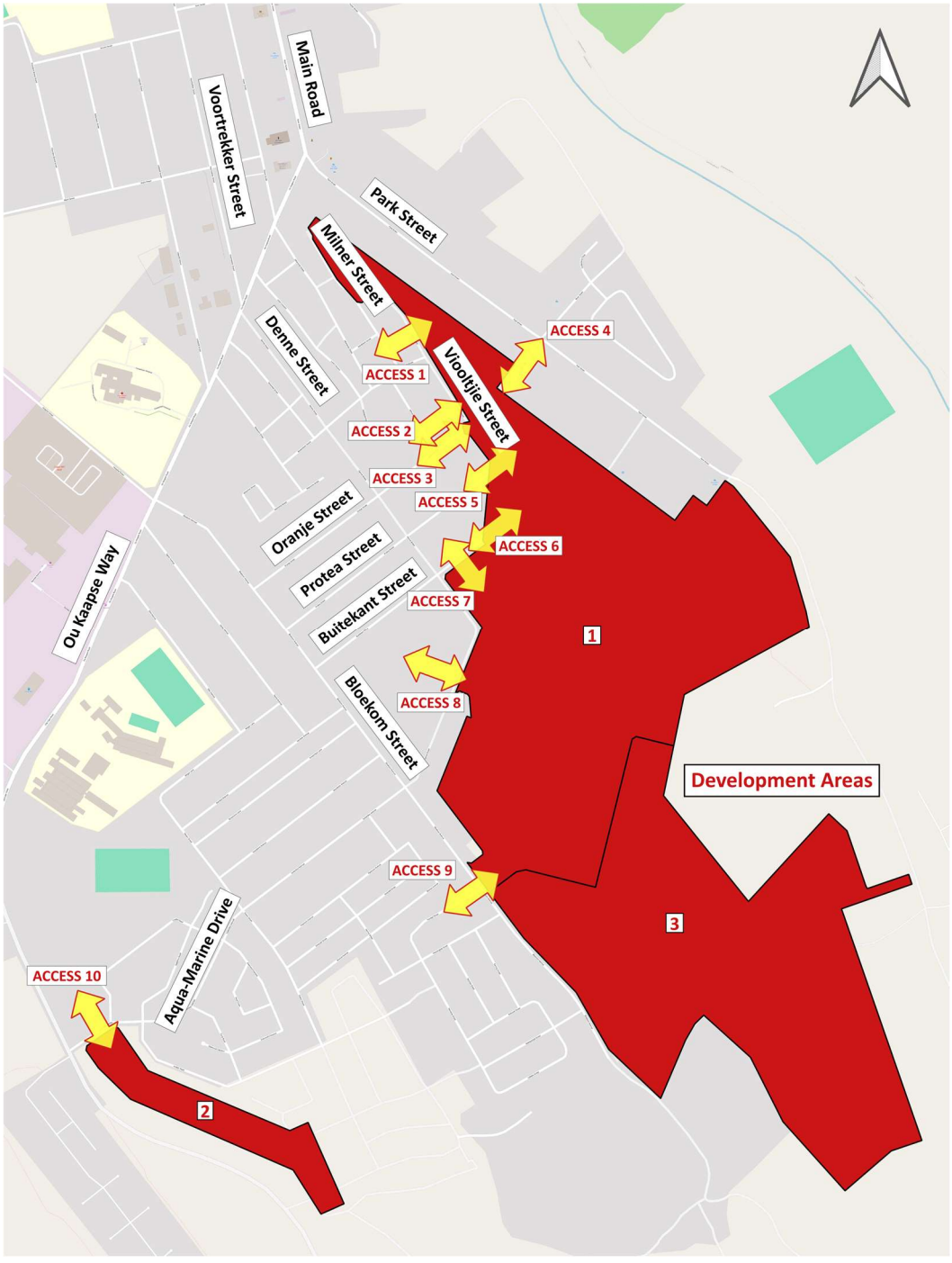


***Figure 1**: Access Points to/from Proposed Development*

Several of the Residential Zone 2 erven in the north of Development Area 1 will have direct access either to/from Milner Street or to/from Viooltjie Street.

Further details of the proposed accesses are presented in ***Section 4***.

3 TRAFFIC

3.1 Existing Traffic

Traffic counts were conducted at the below-listed intersections in the vicinity of the proposed development areas on Thursday, 14 March 2024 during the AM (06:00 to 09:00) and PM (15:30 to 18:30) peak periods. It should be noted that according to available information, the counting day/date falls outside of the area's agricultural (fruit) peak seasons.

1. Graafwater Way/Main Road

<u>Intersections with Ou Kaapse Way:</u>

2. Main Road/Park Street
3. Visser Street/Jakaranda Street
4. Voortrekker Street/Denne Street
5. Leipoldt Street/Waboom Street
6. De Villiers Street/Bloekom Street
7. Rooitee Street
8. Access gate to Cederberg Park
9. Deon Burger Way

Due to a technical difficulty on the day of the count, traffic volumes were not recorded for the Denne Street approach at Intersection 4.

The above-listed 9 locations and the peak hour volumes derived from these counts are shown in ***Figure 2*** attached. The observed AM and PM peak hours were 07:00 to 08:00 and 16:30 to 17:30, respectively.

3.2 Traffic Growth

To assess a future scenario, the existing weekday AM and PM peak hour traffic volumes were compounded for 5 years to obtain projected 2029 peak hour background volumes.

The *TMH17 South African Trip Data Manual* suggests 0 - 3% typical annual traffic growth rates for low growth areas and 3 - 4% annual rates for average growth areas. An annual growth rate of 2% was applied to all approaches at all studied intersections. Based on the land use proposals specified in the *Cederberg Municipality Spatial Development Framework* (2023) and information provided by the municipality, this growth rate is assumed to account for the potential growth in traffic in the vicinity within the 5-year horizon period.

Although the Western Cape Government's *Road Network Information System* (RNIS) contains traffic count data for Graafwater Way and Ou Kaapse Way, the count years (2019, 2015 and earlier) are deemed to be outdated and the data thus unbefitting for the purpose of this assessment.

Based on the above, the projected weekday 2029 peak hour background volumes are as depicted in ***Figure 3*** attached.

3.3 Trip Generation

The trip generation rates as published in the *TMH17* were applied to determine the number of potential new peak hour trip ends that could be generated by the proposed development areas. These rates, along with their inbound and outbound splits, are presented in ***Table 1*** for each development area and their respective land uses as specified in ***Section 2.1***.

The Single Dwelling Unit rate was applied for the Residential Zone 1 and 2 erven. The Places of Public Worship (Weekday) rate was applied for the Churches and Community Centre, while the Public Primary School, Pre-School (Day Care Centre) and Medical Clinic rates were applied for the School, Crèche and Clinic, respectively. The Business Centre (Park) rate was applied for the Local Business Zone 2 erven, while the Offices rate deemed most applicable for the police station.

***Table 1**: Applicable Weekday Peak Hour Trip Generation Rates*

Land Use	**AM Peak Hour Trips**		**PM Peak Hour Trips**	
	Total	**Split (IN/OUT)**	**Total**	**Split (IN/OUT)**
Single Dwelling Unit	1.0 per unit	25:75	1.0	70:30
Places of Public Worship (Weekday)	0.05 per seat	50:50	0.05	50:50
Public Primary School	0.85 per student	50:50	0.3	50:50
Pre-School (Day Care Centre)	1.0 per student	50:50	0.8	50:50
Medical Clinic	6.0 per 100 sqm GLA	60:40	6.0	40:60
Business Centre (Park)	1.5 per 100 sqm GLA	85:15	1.5	20:80
Offices	2.1 per 100 sqm GLA	85:15	2.1	20:80

The trip generation adjustment factors for *Low Vehicle Ownership, Very low vehicle ownership* as well as *Transit nodes or Corridors*, as also provided in the *TMH17*, are deemed to be applicable to the proposed development. The percentage reduction for each of the proposed land uses, and as considered applicable, is as given in ***Table 2***.

***Table 2**: Applicable Trip Generation Percentage Reductions*

Land Use	**Low vehicle ownership (P_{LV})**	**Very low vehicle ownership (P_{VLV})**	**Transit nodes or Corridors (P_T)**	**Combined* (P_C)**
Single Dwelling Unit	-	70%	15%	75%
Places of Public Worship (Weekday)	50%	-	15%	58%
Public Primary School	-	80%	15%	83%
Pre-School (Day Care Centre)	-	80%	-	80%
Medical Clinic	50%	-	15%	58%
Business Centre (Park)	20%	-	15%	32%
Offices	20%	-	15%	32%

*$P_C = 1 - \left[(1 - {}^{P_{LV}}/_{100}) \times (1 - {}^{P_{VLV}}/_{100}) \times (1 - {}^{P_T}/_{100})\right]$ as per the *TMH17*.

The trip generation rates and inbound/outbound splits in ***Table 1***, combined with the aforementioned adjustments, thus result in the potential additional peak hour trips given in ***Table 3***.

Table 3*: Potential New Peak Hour Trip Generation of the Proposed Development*

Land Use	**AM Peak Hour**			**PM Peak Hour**		
	Total	**IN**	**OUT**	**Total**	**IN**	**OUT**
Single Dwelling Unit - Total	335	84	251	335	235	100
Single Dwelling Unit – Development Area 1 and 3	*316*	*79*	*237*	*317*	*222*	*95*
Single Dwelling Unit – Development Area 2	*19*	*5*	*14*	*18*	*13*	*5*
Places of Public Worship (Weekday)	34	17	17	34	17	17
Public Primary School	72	36	36	26	13	13
Pre-School (Day Care Centre)	28	14	14	22	11	11
Medical Centre	12	7	5	12	5	7
Business Centre (Park)	31	26	5	31	6	25
Offices	11	9	2	11	2	9
Total	**523**	**193**	**330**	**471**	**289**	**182**

In summary, a total of 523 (193 inbound; 330 outbound) and 471 (289 inbound; 182 outbound) potential additional peak hour trip ends could be generated by the proposed development areas during the AM and PM peak hours, respectively. Based on a high-level, informal comparison (weighted by number of units/size/capacity), this calculated number of trip ends corresponds to existing volumes for the same land uses and similar population demographics in the area.

3.4 Trip Distribution

The total potential new trips generated by the proposed development areas (as per ***Table 3***) were proportionally distributed to/from the main streets intersecting Ou Kaapse Way as given in ***Table 4***.

***Table 4**: Trip Distribution applied to Potential New Peak Hour Trips of the Proposed Development (all areas) to/from Ou Kaapse Way*

Road Name	AM Peak Hour		PM Peak Hour	
	IN	OUT	IN	OUT
Park Street	9%	8%	8%	8%
Jakaranda Street	1%	1%	1%	1%
Denne Street	46%	51%	51%	48%
Bloekom Street	41%	36%	36%	40%
Aqua-Marine Drive	3%	4%	4%	3%
Total	100%	100%	100%	100%

At the above intersections with Ou Kaapse Way, the potential additional peak hour development trips were distributed based on the respective existing IN:OUT peak hour directional splits. However, as the proposed development trips produced and attracted from/to these intersections pass through other intersections, they were not redistributed to/from the development (i.e. eastern approaches) at these subsequent intersections.

With no traffic counts conducted at the Ou Kaapse Way/Aqua-Marine Drive intersection and based on the existing directional splits at Deon Burger Way, it was assumed that all IN and OUT trips at Aqua-Marine Drive are made from/to the north of Ou Kaapse Way (town centre direction). Furthermore, as mentioned in ***Section 3.1***, traffic volumes were not recorded for the Denne Street approach at Intersection 4. These volumes were thus interpolated based on the entry and exit volumes of the intersection's other approaches as well as those of the two adjacent intersections along Ou Kaapse Way. The same was done for the other intersections along Ou Kaapse Way at which no traffic counts were undertaken but via which the potential new trips generated by the proposed development areas are expected to travel.

The distributed peak hour trips that can potentially be generated by the proposed development areas are hence as indicated in ***Figure 4*** attached.

When these potential peak hour trips are distributed further through the road network and added to the projected 2029 background traffic volumes discussed in ***Section 3.2***, the respective total expected 2029 peak hour volumes are as shown in ***Figure 5*** attached.

3.5 Traffic Analysis

Traffic analyses were performed at both the link and intersection levels. At the intersection level and by means of the *Sidra Intersection 9.1* software, the analyses were performed for the three (3) studied intersections with the highest total expected 2029 peak hour traffic volumes. These are as listed below (numbering as used previously). Level of Service (LOS) A to D were considered acceptable, with D being critical.

1. Graafwater Way/Main Road
4. Ou Kaapse Way/Voortrekker Street/Denne Street
6. Ou Kaapse Way/De Villiers Street/Bloekom Street

The lane layouts of these analysed intersections are as described and shown below.

Graafwater Way/Main Road:

This is a four-legged intersection with stop control on Main Road and free-flow conditions along Graafwater Way. Each of the four approaches consists of a single shared lane. A short stop-controlled slip lane (± 10 m in length) is provided for left-turn movements on the southern approach. Refer to ***Figure 6***.



Figure 6*: Lane Layout at Graafwater Way/Main Road Intersection*

Ou Kaapse Way/Voortrekker Street/Denne Street:

This is a staggered four-legged all-way stop controlled intersection at present (refer to ***Figure 7***), with a single shared lane on each of the four approaches.

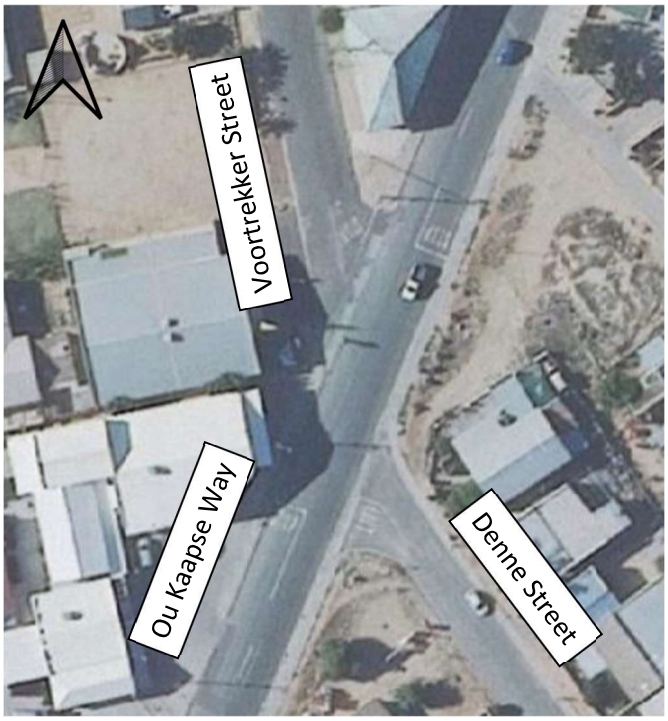


***Figure 7**: Lane Layout at Ou Kaapse Way/Voortrekker Street/Denne Street Intersection*

Ou Kaapse Way/De Villiers Street/Bloekom Street:

This is also a four-legged all-way stop controlled intersection, with a single shared lane on each of the four approaches (see ***Figure 8***).



***Figure 8**: Lane Layout at Ou Kaapse Way/De Villiers Street/Bloekom Street Intersection*

3.5.1 Analysis of Existing and Projected Peak Hour Volumes (without Proposed Development)

The existing 2024 and projected 2029 background link volumes (total two-way traffic) along the most traversed sections of Graafwater Way, Main Road and Ou Kaapse Way are as presented in ***Table 5*** below. These volumes lie well below the typical respective mid-block capacities for urban roads with interrupted traffic flow.

Table 5*: Existing and Projected 2029 Link Volumes*

Road section	AM		PM	
	2024	2029	2024	2029
Graafwater Way – west of Main Road	431	476	401	444
Main Road – north of Ou Kaapse Way/Park Street	471	519	481	533
Ou Kaapse Way – between Leipoldt Street/Waboom Street and De Villiers Street/Bloekom Street (AM) and south of De Villiers Street/Bloekom Street (PM)	466	514	474	523

It can hence be concluded that no capacity upgrades are required to accommodate the existing 2024 or projected 2029 background traffic on Graafwater Way, Main Road and Ou Kaapse Way.

On Main Road, however, it is known that the parking manoeuvres of vehicles moving in or out of the existing parallel parking bays, as well as the unloading of delivery vehicles/trucks (mainly for Spar) and high heavy-vehicle volumes during the peak seasons, cause delays to the road's through traffic at present and will thus continue to do so in the future, even without the proposed development. To reduce the through traffic on Main Road, particularly heavy-vehicle through traffic, the *Cederberg Municipality Local Integrated Transport Plan 2020 – 2025* identified the provision of a potential bypass road from the entrance of the town (Graafwater Way) to the industrial area (i.e. bypassing Main Road and most of the northern section of Ou Kaapse Way) as part of Clanwilliam's needs assessment. This bypass is in its planning stages, but an implementation date is not yet known.

<u>Graafwater Way/Main Road intersection:</u>

According to the *Sidra* analyses, acceptable LOS B and above are experienced on all movements of this intersection during the existing 2024 and future 2029 peak hours.

It can thus be concluded that no upgrades are required at the Graafwater Way/Main Road intersection to accommodate the projected 2029 background peak hour traffic.

<u>Ou Kaapse Way/Voortrekker Street/Denne Street intersection:</u>

According to the *Sidra* analyses, this all-way stop controlled intersection experiences unacceptable LOS F on all movements from Denne Street as well as critical LOS D on all movements from Voortrekker Street during the existing 2024 and future 2029 peak hours. On Denne Street, the average queue lengths are only ± 1 vehicle, though, which is not clearly suggestive of an intersection upgrade. Acceptable LOS B and above occur on the Ou Kaapse Way approaches.

It can thus be concluded that to accommodate the projected 2029 peak hour background traffic, no upgrades are suggested at the Ou Kaapse Way/Voortrekker Street/Denne Street intersection.

Ou Kaapse Way/De Villiers Street/Bloekom Street intersection:

According to the *Sidra* analyses, this all-way stop controlled intersection experiences unacceptable LOS E on all movements from Bloekom Street during the existing 2024 and future 2029 AM peak hours. Acceptable LOS C and above occur on the other three approaches during the existing 2024 AM peak hour, while critical LOS D and above occur on these other approaches during the future 2029 AM peak hour. During the existing 2024 and future 2029 PM peak hours, critical but acceptable LOS D and above are experienced on all movements of the intersection.

As for the Ou Kaapse Way/Voortrekker Street/Denne Street intersection, the average queue lengths of the intersection are short (maximum ± 2 vehicles) and not clearly suggestive of an intersection upgrade.

Therefore, it can be concluded that no capacity upgrades are deemed necessary to accommodate the projected 2029 background traffic at the Ou Kaapse Way/De Villiers Street/Bloekom Street intersection.

3.5.2 Analysis of Total Expected Peak Hour Volumes (with Proposed Development)

The existing total expected peak hour link volumes (total two-way traffic) along the most traversed sections of Graafwater Way, Main Road and Ou Kaapse Way are as presented in ***Table 6*** below. The comments that no capacity upgrades are required on the relevant road segments during the background peak hours remain valid for the total expected 2029 peak hour link volumes (i.e. with the proposed development).

Table 6*: Total Expected 2029 Link Volumes*

Road section	2029 (with development)	
	AM	PM
Graafwater Way – east of Main Road	585	553
Main Road – north of Ou Kaapse Way/Park Street	701	713
Ou Kaapse Way – between Leipoldt Street/Waboom Street and De Villiers Street/Bloekom Street	676	698

According to the *Sidra* analyses, the Graafwater Way/Main Road intersection will continue to experience acceptable LOS B and above (with minimal increases in queue lengths and delays) on all movements with the development traffic during the future 2029 peak hours.

Average queue lengths at both the Ou Kaapse Way/Voortrekker Street/Denne Street intersection and Ou Kaapse Way/De Villiers Street/Bloekom Street intersection are expected to increase to ± 3 vehicles (i.e. increase of 2 vehicles) with the proposed development, which is still not considered fully suggestive of an intersection upgrade.

It can thus be concluded that no upgrades are recommended at the analysed key intersections to accommodate their total expected 2029 peak hour traffic.

4 GEOMETRY

As previously mentioned, access to the proposed development areas will be obtained from several existing local access roads. These are all single carriageways (i.e. 1 lane per direction), classified as Class

5 local streets and with road widths ranging from ± 4.0 to 7.5 m. Denne Street and Park Street have the greatest road widths along their surfaced sections. Also based on its location, Denne Street should thus serve as the main feeder road to Development Area 1. Milner Street, Viooltjie Street, Aandblom Street as well as sections of Waterblom Street, Buitekant Street, Denne Street and Ou Kaapse Way (south) are currently unsurfaced. As also identified under the transport needs assessment in the *Cederberg Municipality Local Integrated Transport Plan 2020 – 2025*, it is advised that these streets, located in the vicinity of the development areas, be surfaced in the future (i.e. as part of the development construction).

For the new proposed local streets in the development areas, a road reserve of 10 m (typical for Class 5B local residential streets, according to the *TRH26 South African Road Classification and Access Management Manual*) is shown on the ***Subdivision Plan*** for the residential areas, while 16 m (typical for Class 5B local commercial streets with on-street parking) is indicated for each of the single main roads in Development Area 1 and Development Area 3. The intersections that form the access points to the development areas as well as those within the new local street network will be sign-controlled (i.e. stop or yield). Further elements of the streets, such as cross sections, right of way, kerb radii and sight distances are not included on the ***Subdivision Plan***. These are expected to be specified in the final road designs and will require separate assessment and approval based on the applicable standards.

It is advised that sidewalks of at least 1.5 m be provided inside the road reserves of the new main streets/routes. Since each proposed access to the development areas will be a public street, i.e. not controlled by way of access-boom/gate, stacking is not anticipated at these points. However, for the non-residential (i.e. local business and community) erven, access control types need to be confirmed, and stacking lengths must be evaluated where relevant.

Based on the information received, refuse removal will be carried out by the municipality via kerbside collection, as is current practice in the surrounding area.

5 PARKING

The attached ***Subdivision Plan*** does not contain details related to parking. The future parking layouts are expected to be addressed during each erf's building plan application process.

The provided parking areas and spaces should comply with the requirements set out in the latest *Cederberg Zoning Scheme*. It should be noted that the Zoning Scheme does not require off-street parking bays for the proposed Single Residential 2 erven, as their mean sizes are less than 250m².

6 PUBLIC- AND NON-MOTORISED TRANSPORT

At present, Clanwilliam's formal minibus taxi rank with 8 demarcated bays is situated on the corner of Mark Street and Visser Street (see ***Figure 9***). According to the *Cederberg Municipality Local Integrated Transport Plan 2020 – 2025*, this rank is not in use, however, due to its unpractical location. Instead, minibus taxis operate from the front of Spar on Main Road. Both local trips (routes within 60 km of Clanwilliam) and long-distance trips (to/from locations further than 60 km) are provided. The relocation of Clanwilliam's rank has been identified as a prioritised project in the municipality's transport plan, and a new site has been proposed along Ou Kaapse Way on its eastern side opposite Rooitee Street and north of Sederberg Primary School, as also indicated in ***Figure 9***. Details of this 'transport hub' are yet to be confirmed, but according to available information it is planned to include facilities for a bus service. While no detailed information is available for this bus service, it is planned to traverse Bloekom Street. The bus service will include learner transport to/from the new proposed school in Development Area 1. Appropriate bus stops and turning facilities need to be provided.

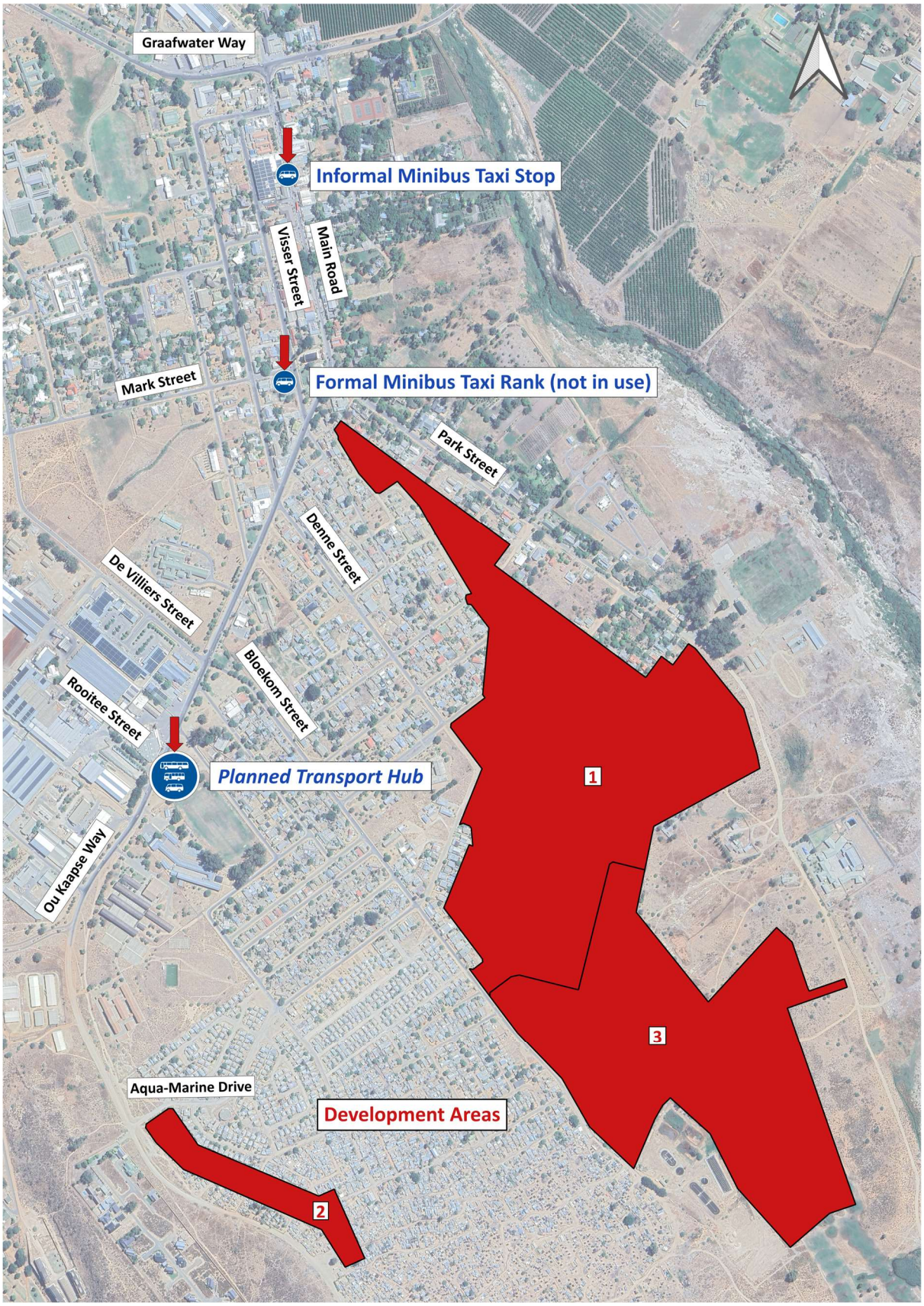


***Figure 9**: Public Transport Facilities in Clanwilliam*

As observed on site and as per the *West Coast District Integrated Transport Plan 2015 – 2020*, existing *"sidewalks consist of a mix of gravel, cement, paving, asphalt, paving blocks and in most instances grass with no access provision for disabled users"*. Thus, as previously mentioned in ***Section 4***, sidewalks (incorporating Universal Design principles) ought to be provided within the road reserves of the new proposed main streets; they are to tie in with the existing and planned pedestrian facilities and/or routes as per the *Cederberg Municipality Local Integrated Transport Plan 2020 – 2025*.

Further formal public- or non-motorised transport facilities are not deemed necessary for the proposed development areas.

7 CONCLUSIONS

The following can be concluded/summarised from the report:

1) This TIS accompanies the Application for Rezoning and Subdivision of Erf RE279, Clanwilliam.
2) The proposed development areas constitute Clanwilliam's Integrated Residential Development Programme (IRDP) and Upgrading of Informal Settlements Programme (UISP).
3) The total proposed subdivision includes 160x Residential Zone 1 erven, 1 155x Residential Zone 2 erven, 5x Community Zone 1 erven (1x Community Centre – 800 seats, 3x Crèche – 140 students, and 1x School – 500 students), 7x Community Zone 2 erven (Churches – 830 seats), 1x Community Zone 3 erf (Clinic – 443.4 m^2 GLA), 4x Local Business Zone 2 erven (± 3 026 m^2 GLA) and 1x Authority & Utility Zone erf (Police Station – ± 772.2 m^2 GLA).
4) The subject development areas are currently accessible via the residential streets leading to/from Ou Kaapse Way. Several additional and/or upgraded access points from/to the existing public road network are proposed for the future.
5) Traffic counts were conducted at 9 intersections in the vicinity of the proposed development areas on Thursday, 14 March 2024 during the AM (06:00 to 09:00) and PM (15:30 to 18:30) peak periods.
6) The proposed development has the potential to generate 523 AM peak hour trips (193 in, 330 out) and 471 PM peak hour trips (289 in, 182 out). These trips were distributed to/from the main streets intersecting Ou Kaapse Way.
7) Traffic analyses were performed for the most traversed sections of Graafwater Way, Main Road and Ou Kaapse Way as well as the three intersections with the highest total expected 2029 peak hour traffic volumes (Graafwater Way/Main Road, Ou Kaapse Way/Voortrekker Street/Denne Street, and Ou Kaapse Way/De Villiers Street/Bloekom Street). No upgrades are considered necessary to accommodate the total expected 2029 peak hour traffic. Nonetheless, mention is made of the potential benefits of the planned bypass road from the entrance of the town (Graafwater Way) to the industrial area (i.e. bypassing Main Road and most of the northern section of Ou Kaapse Way), which was identified as a need in the *Cederberg Municipality Local Integrated Transport Plan 2020 – 2025*.
8) For the new proposed local streets in the development areas, a road reserve of 10 m (typical for Class 5B local residential streets) is proposed for the residential areas, while 16 m (typical for Class 5B local commercial streets with on-street parking) is proposed for the main roads in Development Area 1 and Development Area 3.
9) The development areas' new/upgraded intersections are to be sign-controlled (i.e. stop or yield).
10) Further elements of the new streets, such as cross sections, right of way, kerb radii and sight distances are expected to be specified in the final road designs and will require separate assessment and approval based on the applicable standards.
11) Based on the information received, refuse removal will be carried out by the municipality via kerbside collection, as is current practice in the surrounding area.
12) The future parking layouts are expected to be addressed during each erf's building plan application process and should comply with the requirements set out in the latest [.

13) Due to its unpractical location, Clanwilliam's existing formal minibus taxi rank (situated on the corner of Mark Street and Visser Street) is not in use at present. Instead, minibus taxis operate from the front of Spar on Main Road. The relocation of Clanwilliam's rank has been identified as a prioritised project in the municipality's transport plan, and a new site has been proposed along the eastern side of Ou Kaapse Way opposite Rooitee Street. Appropriate taxi/bus stops and turning facilities need to be provided where applicable.
14) Sidewalks of at least 1.5 m should be provided inside the road reserves of the new main streets to tie in with the existing and planned pedestrian facilities and/or routes.
15) Further formal public- or non-motorised transport facilities are not deemed necessary for the proposed development areas.

8 RECOMMENDATIONS

From the discussions provided in this report, it is recommended that the proposed development (Clanwilliam IRDP and UISP), indicated on the attached ***Subdivision Plan***, be supported from a traffic impact perspective.

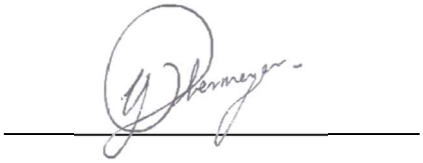
We trust that the Traffic Impact Assessment will be to your satisfaction and will gladly provide any additional information required on request.

Please take note of the following included attachments:

Locality Plan
Subdivision Plan
Figure 2: Existing 2024 AM and PM Peak Hour Traffic Volumes
Figure 3: Projected 2029 AM and PM Peak Hour Background Traffic Volumes
Figure 4: Distribution of Potential AM and PM Peak Hour Development Trips
Figure 5: Total Expected 2029 AM and PM Peak Hour Traffic Volumes

Yours faithfully,





Compiled by: Dominique ter Huurne
(PhD (Civil Eng), MPhil)

Yolandi Obermeyer (BEng)

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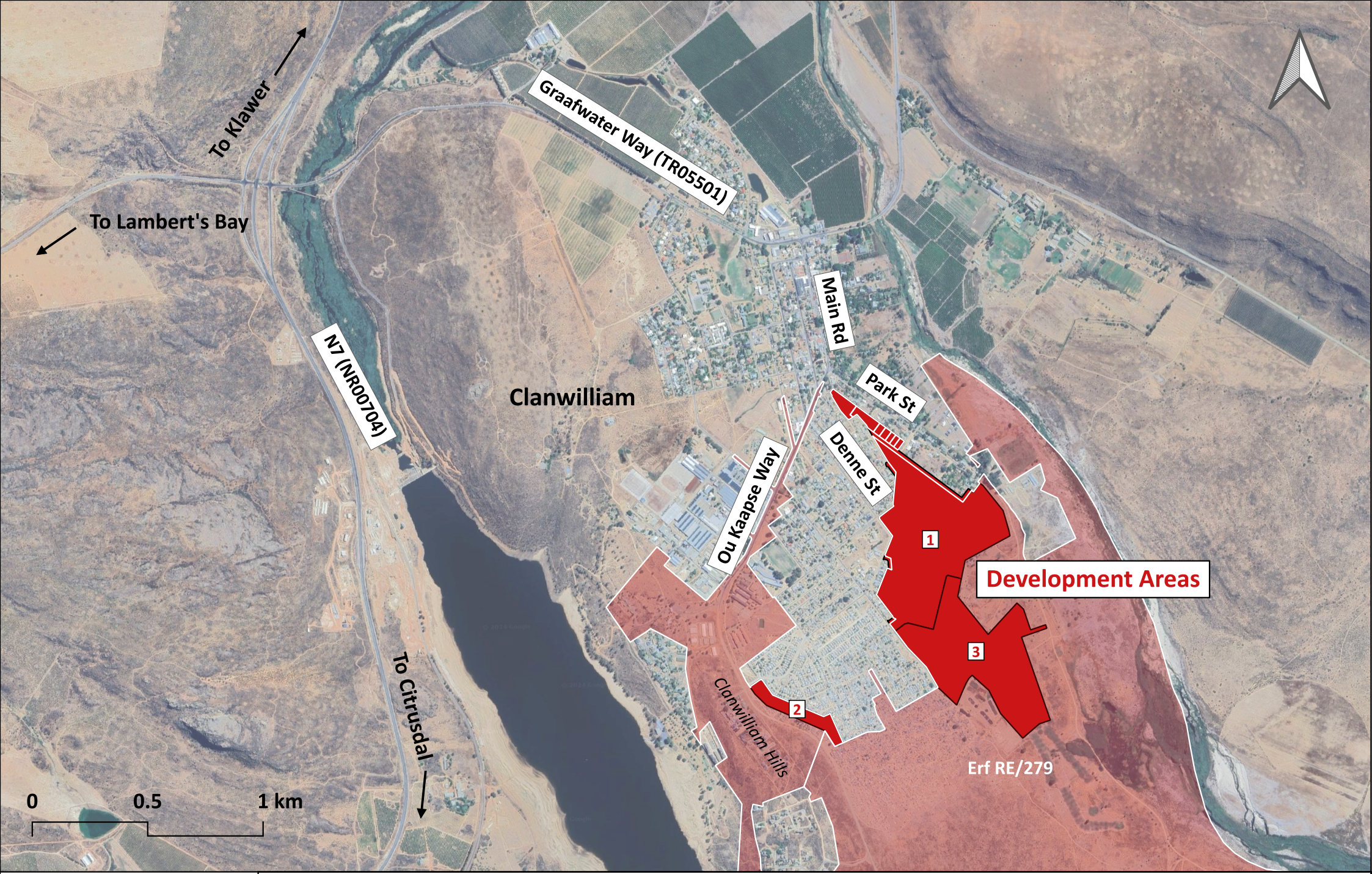

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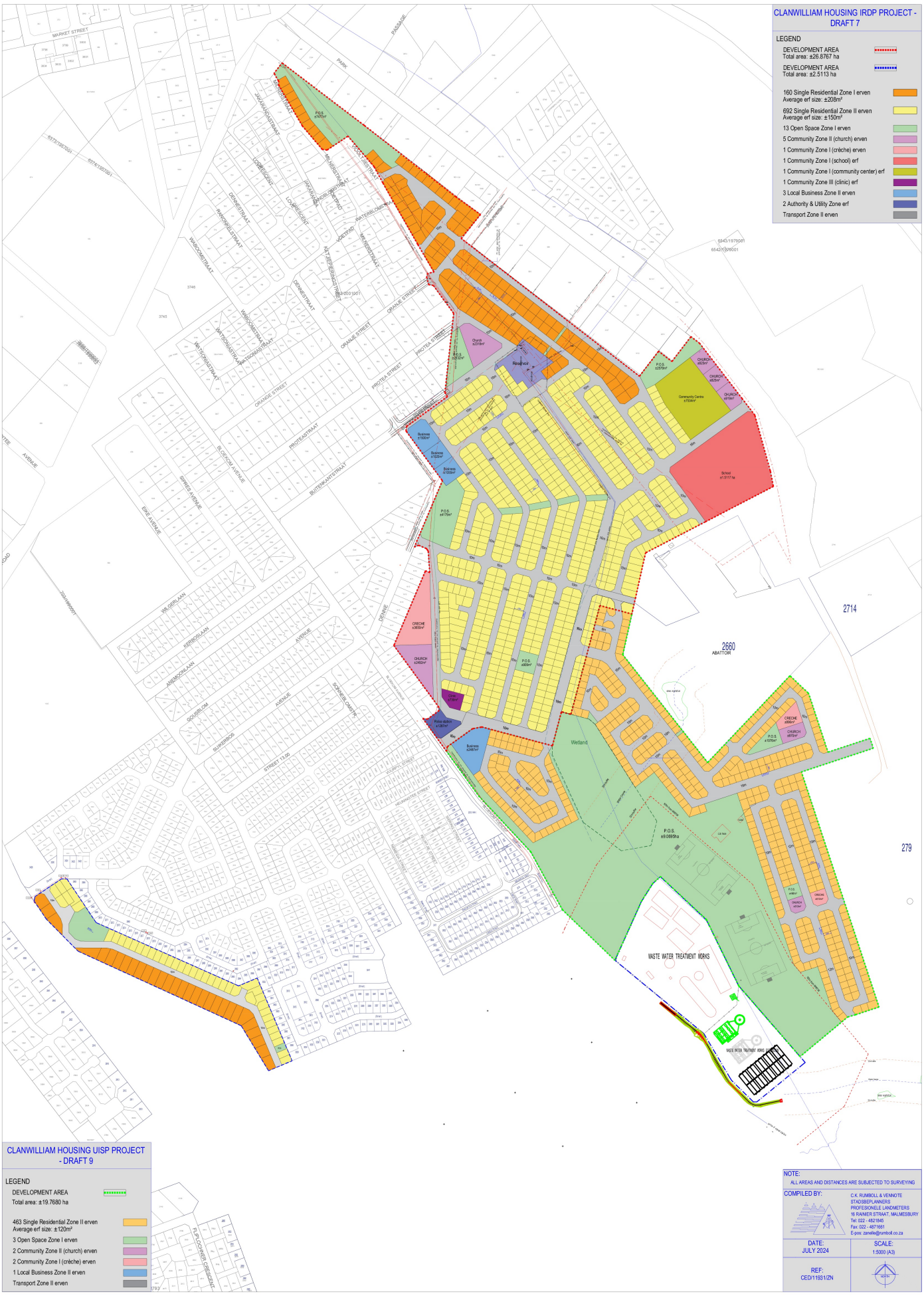
Locality Plan



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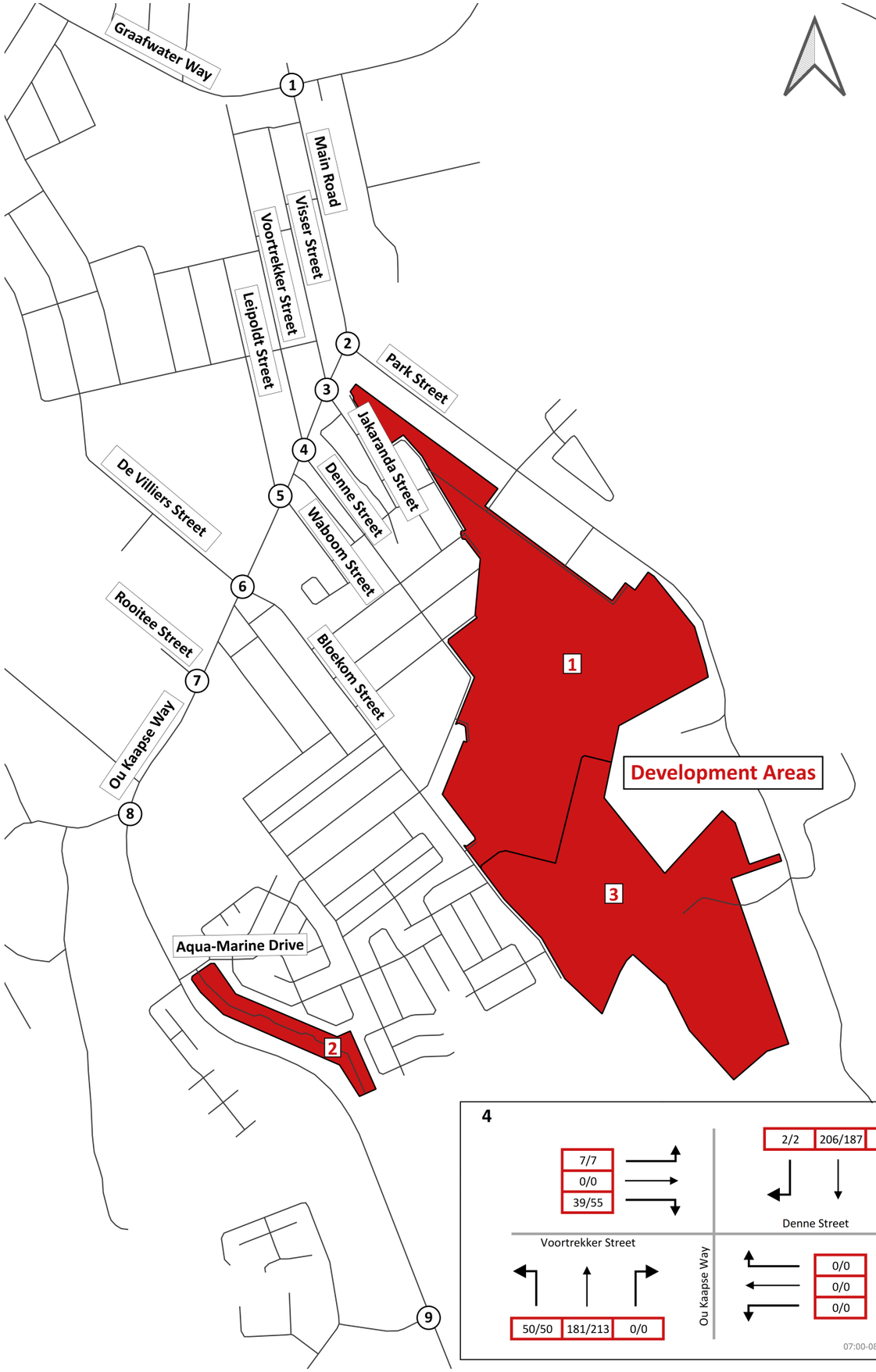
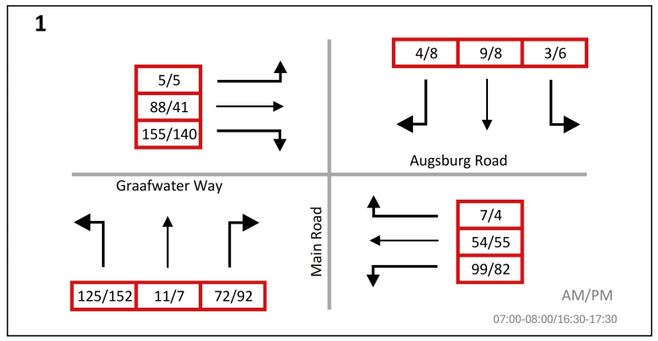
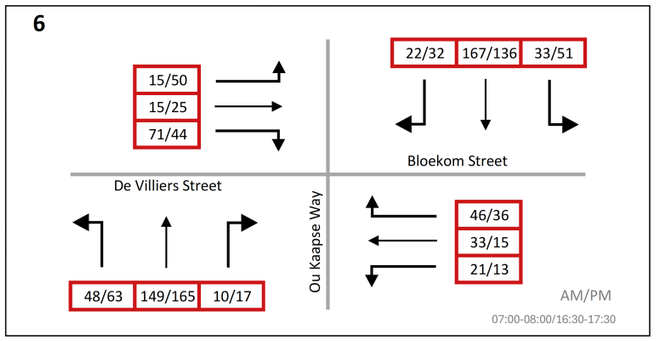
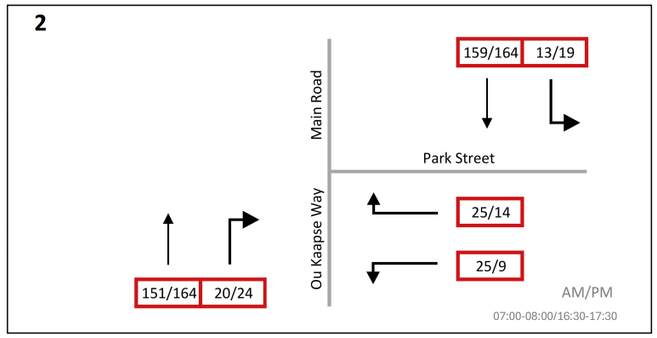
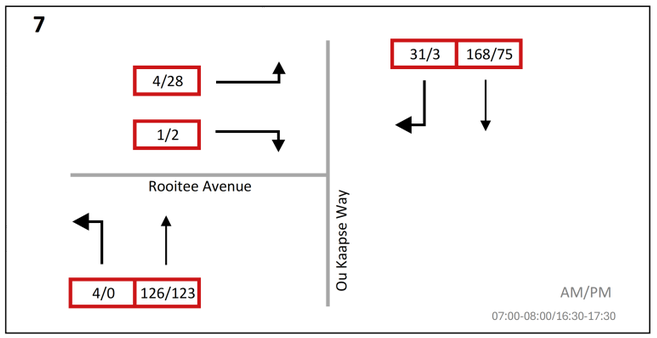
Subdivision Plan

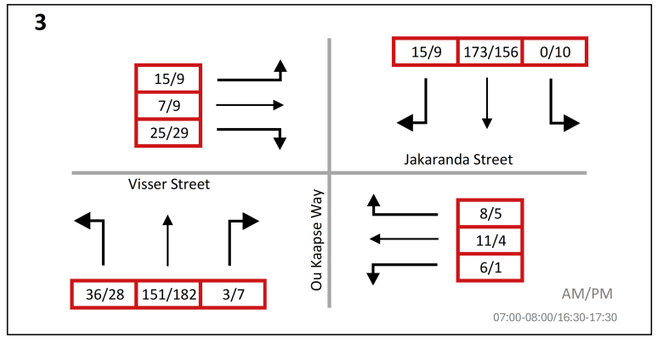


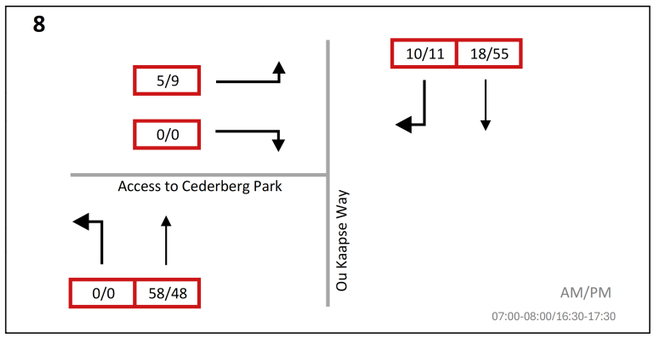


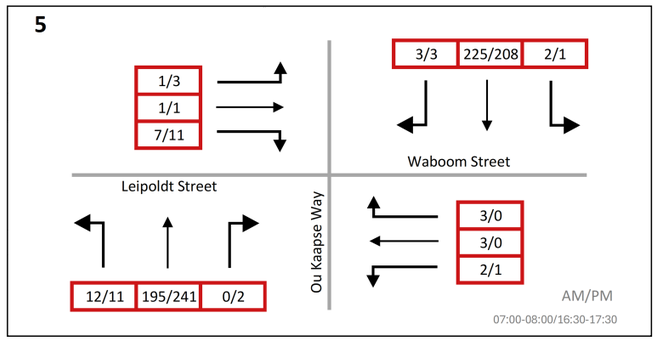












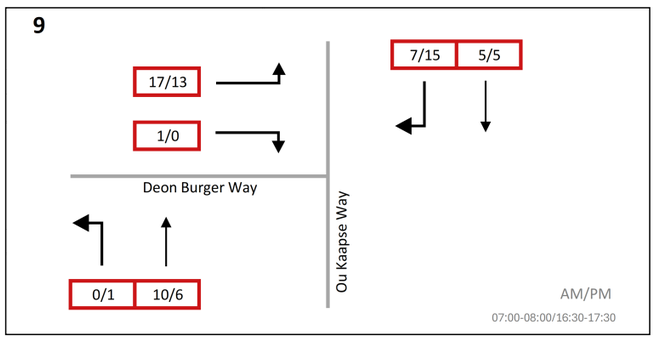


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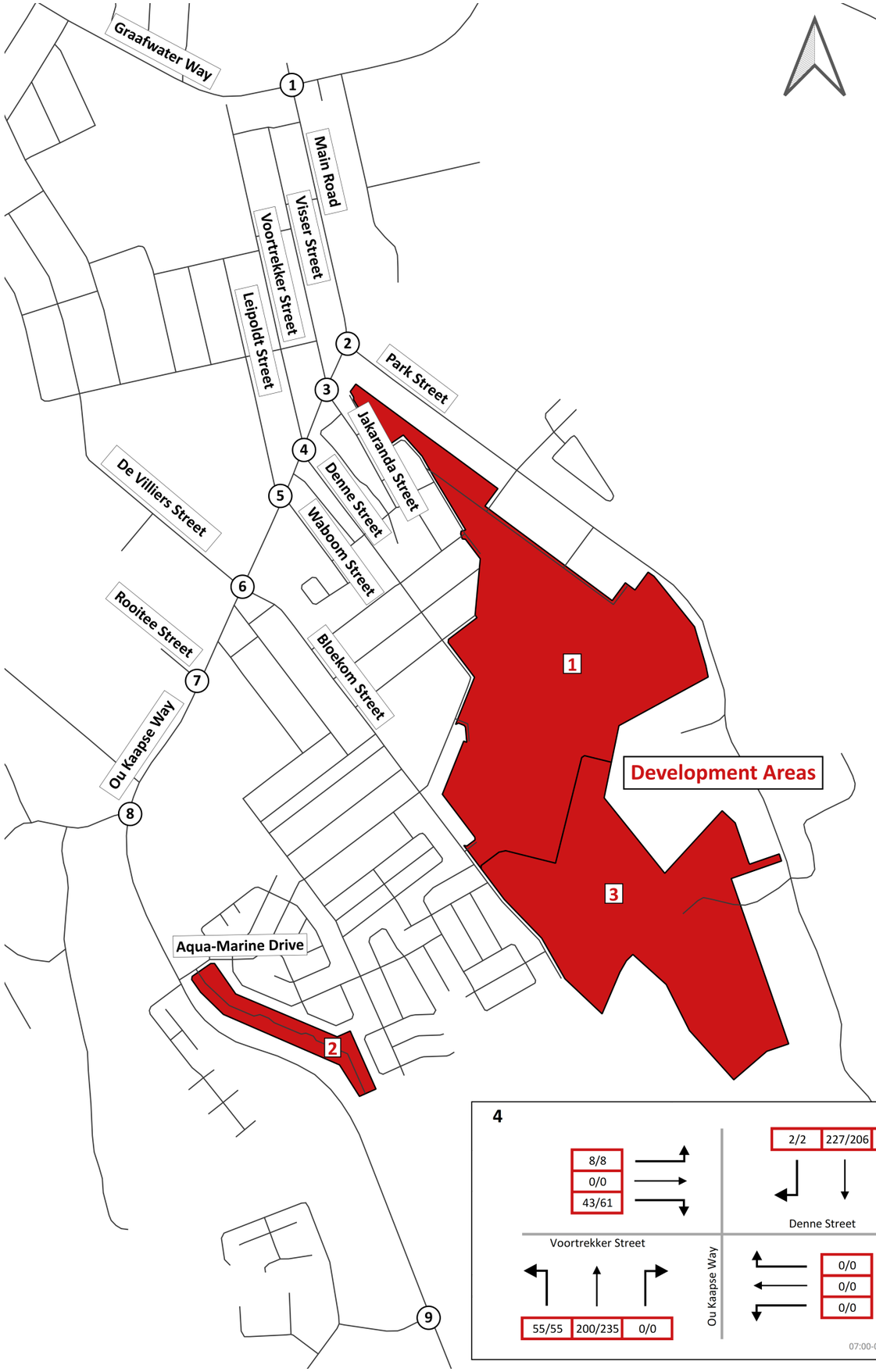
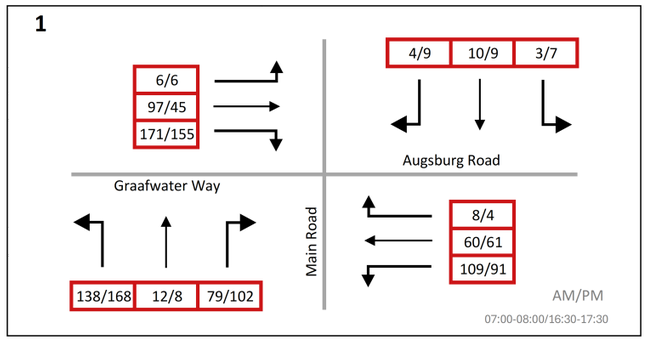
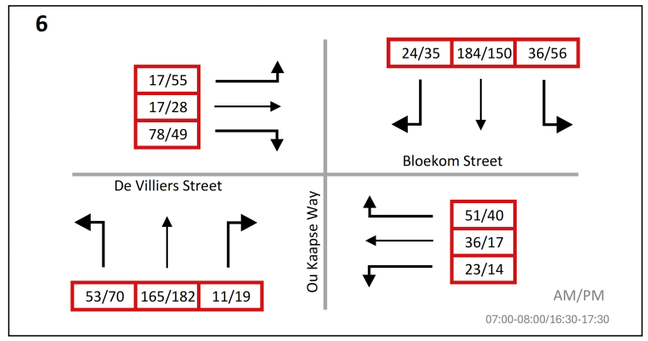
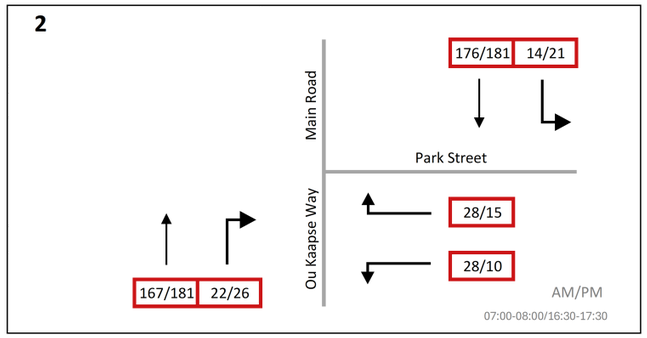
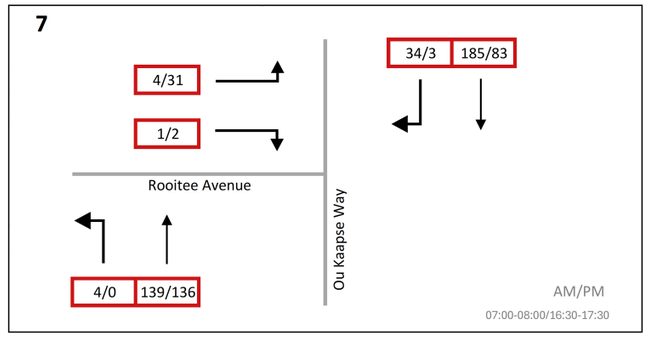
Figure 2: Existing AM and PM Peak Hour Traffic Volumes

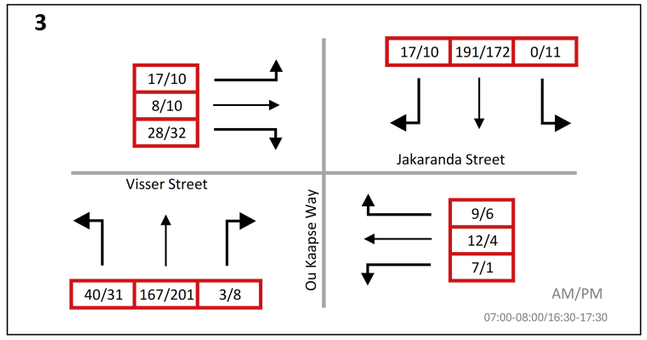


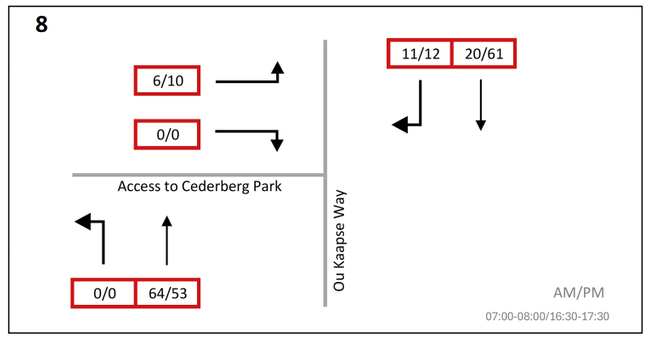


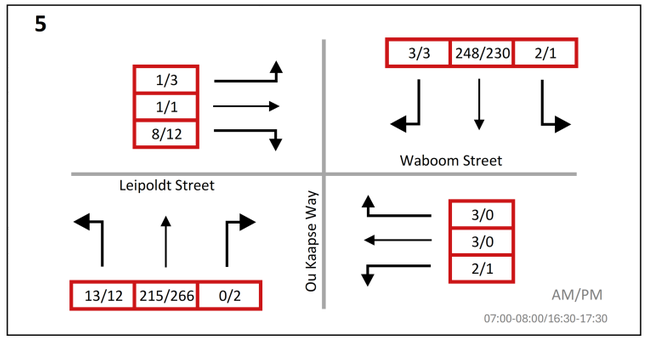












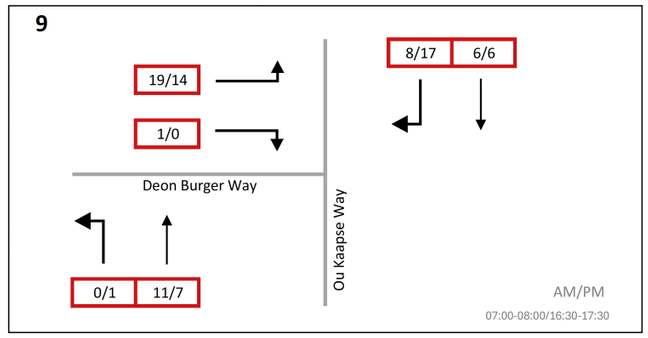


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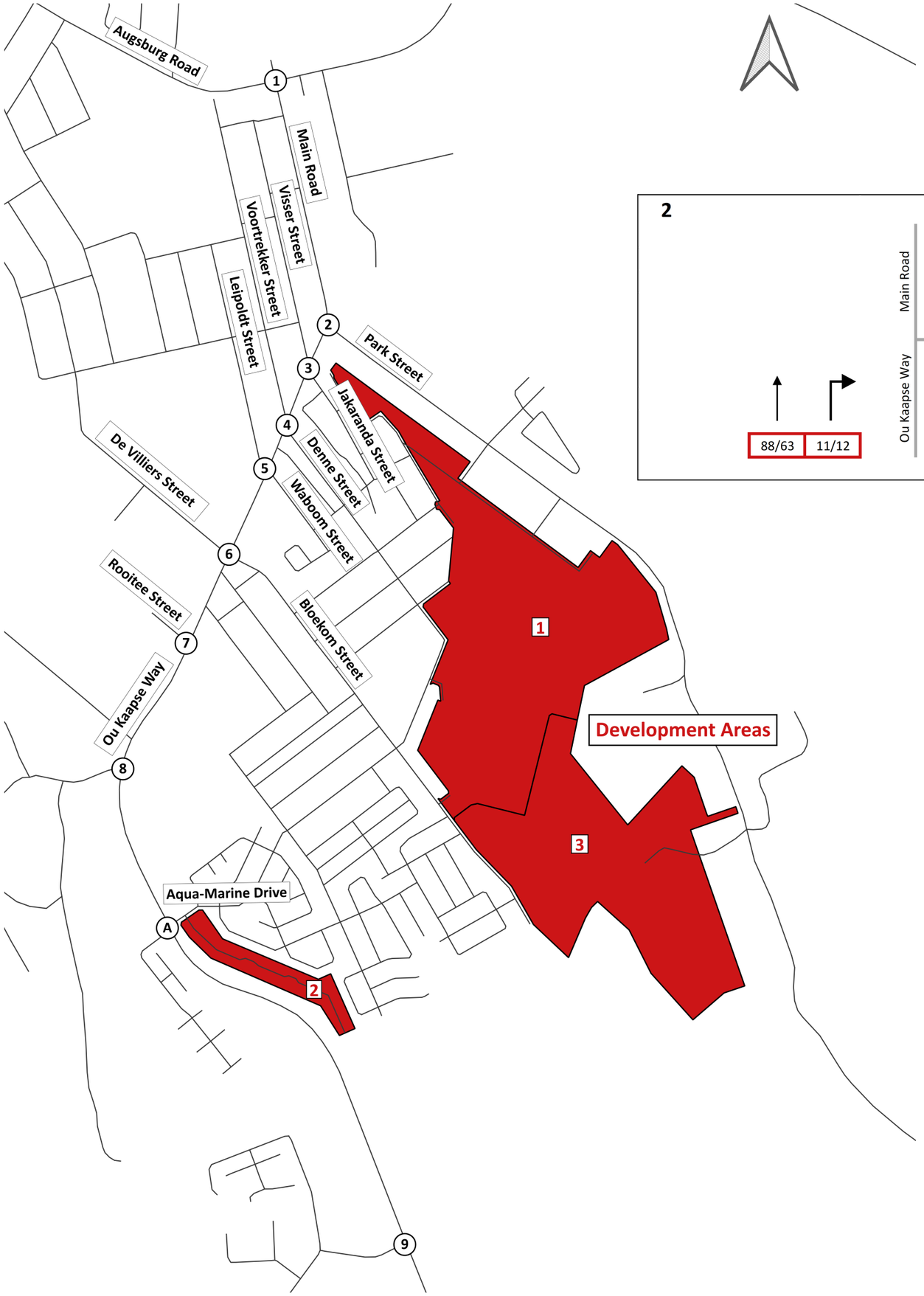
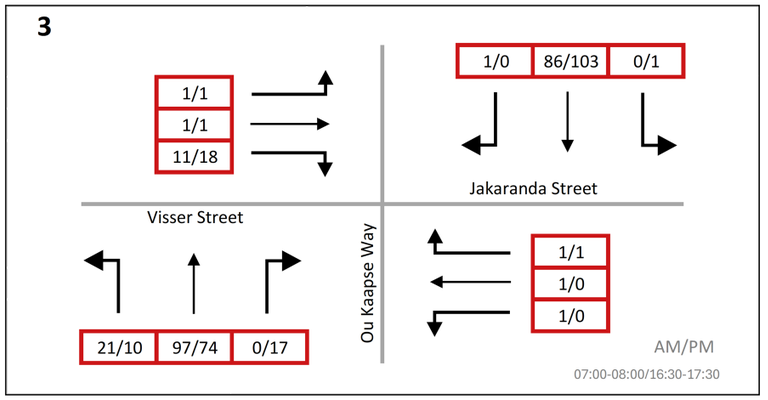
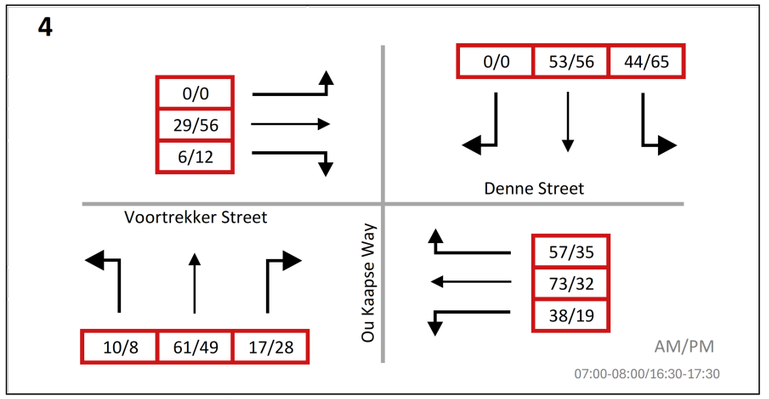
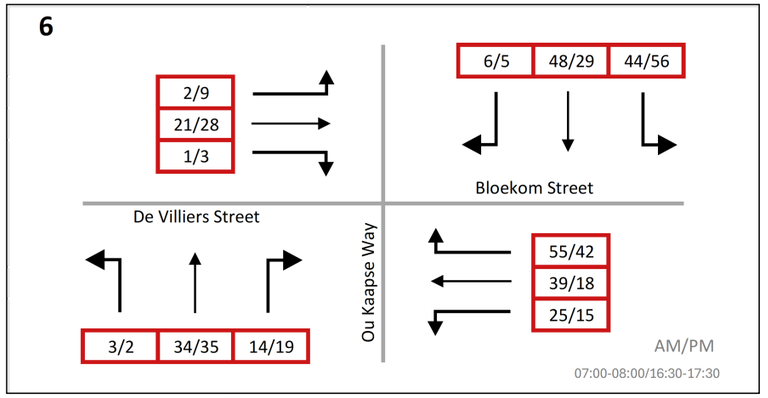
Figure 3: Projected 2029 AM and PM Peak Hour Background Traffic Volumes









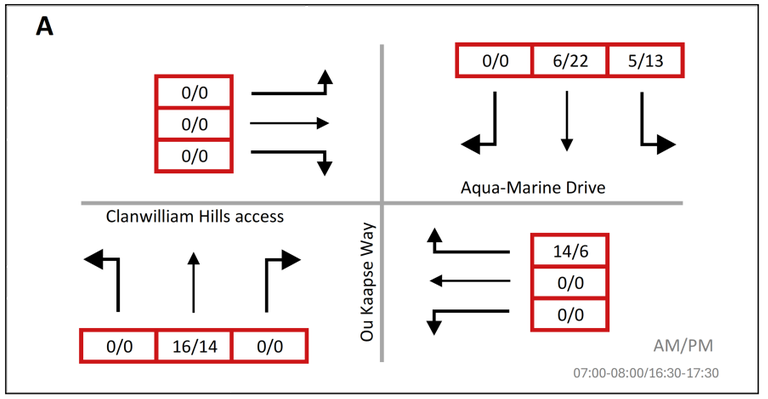


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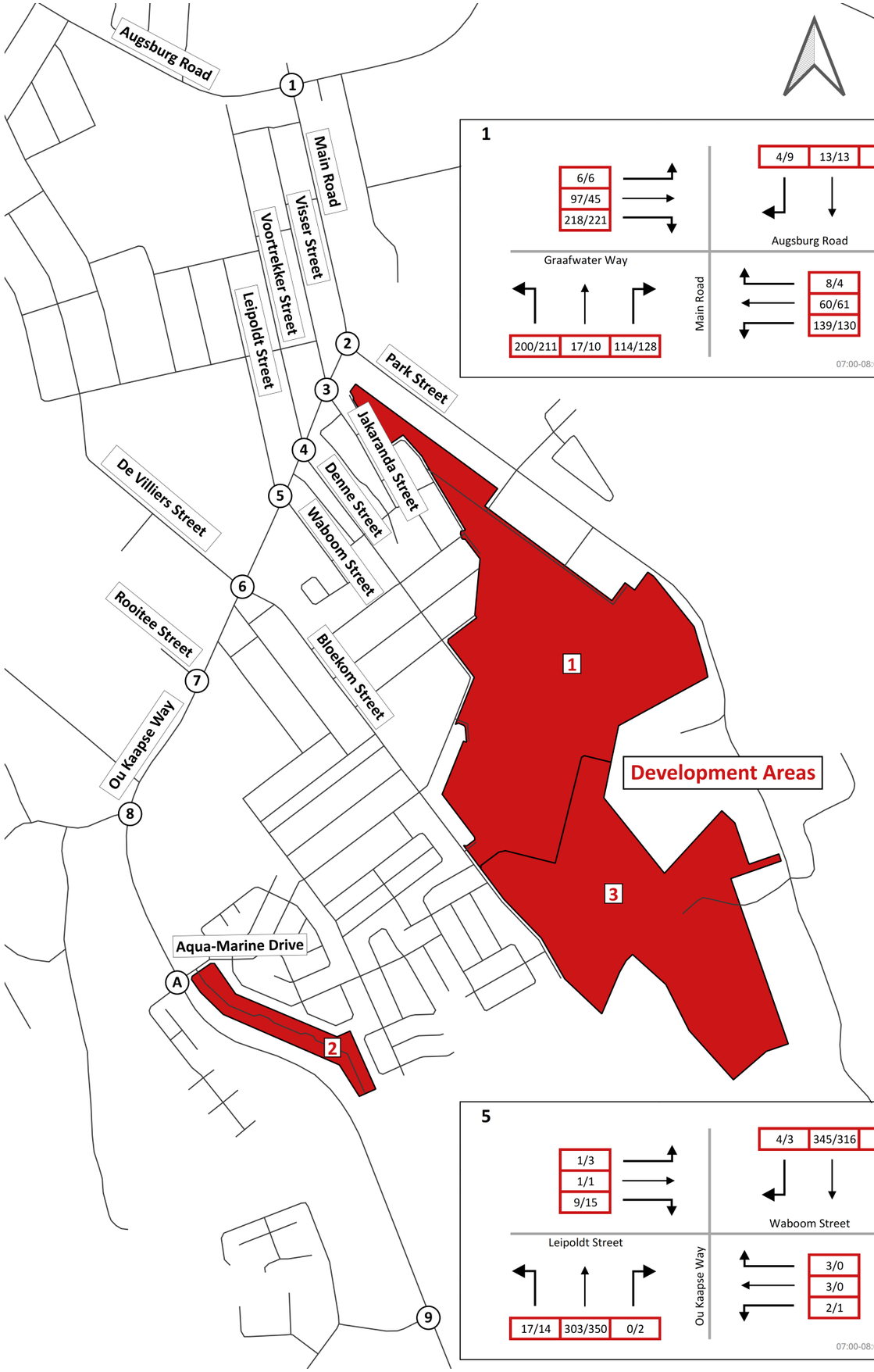
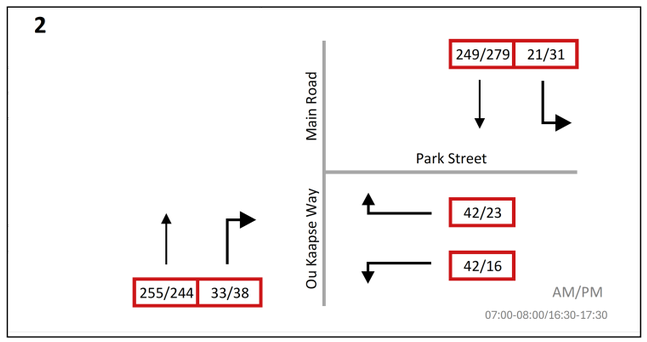
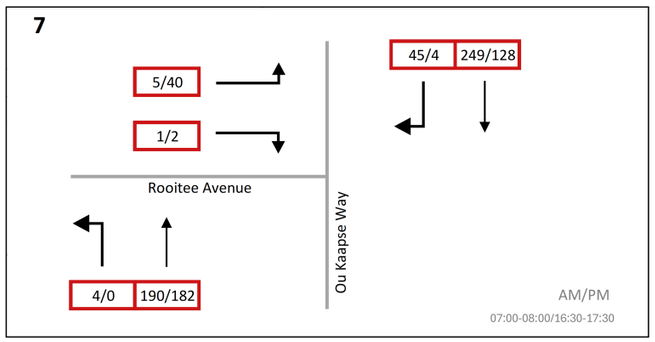
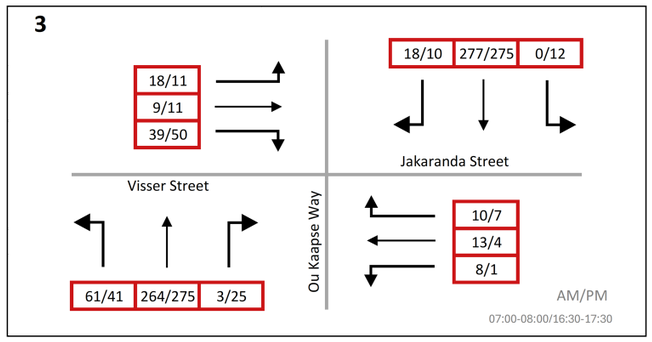
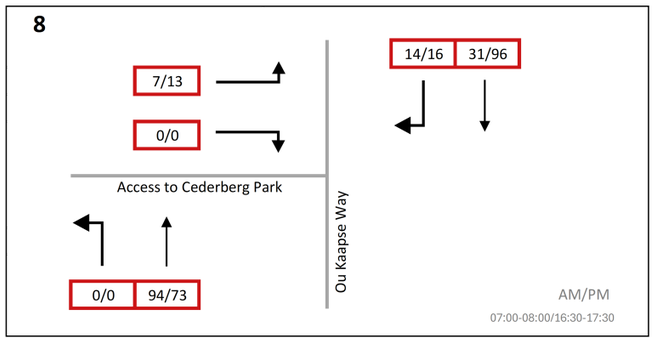
Figure 4: Distribution of Potential AM and PM Peak Hour Development Trips

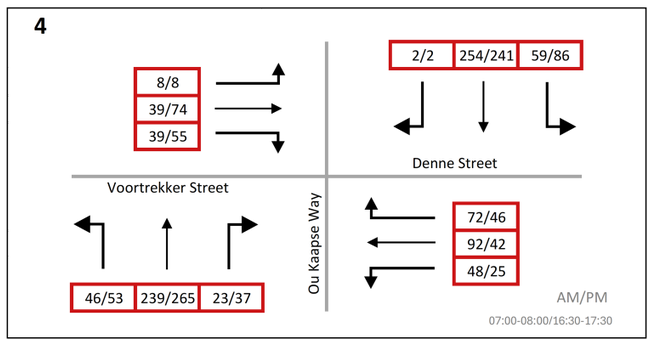


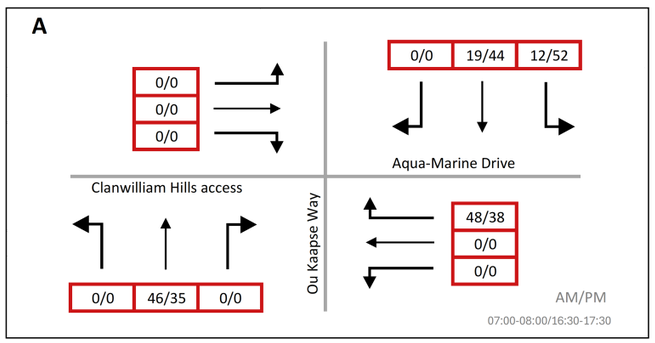


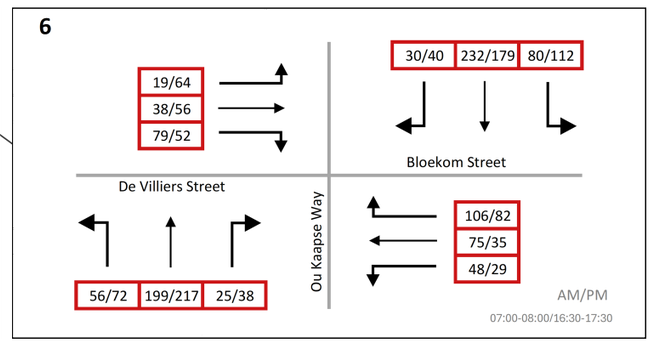












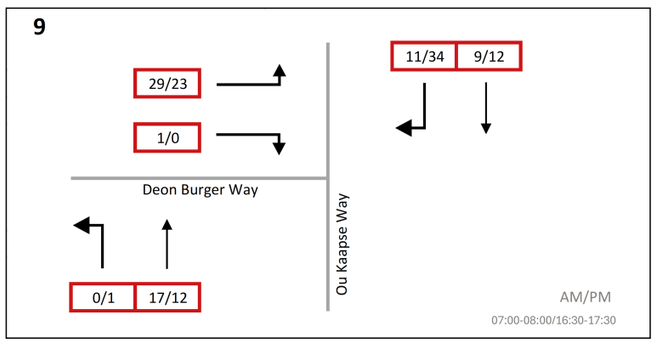


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Figure 5: Total Expected 2029 AM and PM Peak Hour Traffic Volumes