TRAFFIC & PARKING ASSESSMENT

SENIORS LIVING COMMUNITY

LOT 602 DP 1277714
83 LAKEWOOD DRIVE, MERIMBULA

PREPARED FOR: JUSTICE FOX PROPERTY GROUP

OCTOBER 2022

22/043

TRAFFIC AND PARKING ASSESSMENT
JUSTICE FOX PROPERTY GROUP

SENIORS LIVING COMMUNITY
LOT 602 DP 1277714
83 LAKEWOOD DRIVE, MERIMBULA

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QUALITY ASSURANCE

This document has been prepared, checked and released in accordance with the Quality Control Standards established by Intersect Traffic Pty Ltd.

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This document has been authorised by

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1.0 INTRODUCTION

Intersect Traffic Pty Ltd was engaged by ELK Design on behalf of Justice Fox Property Group to prepare a Traffic and Parking Assessment Report for the construction of a multi-storey Seniors Living Facility on Lot 602 DP 1277714 – 83 Lakewood Drive, Merimbula to be known as Lakewood Lifestyle Village. All vehicular and pedestrian access to the development will be from Lakewood Drive.

The proposal involves the construction of 89 two bedroom units (100 m^2 GFA) within 2 separate buildings (linked by a pedestrian bridge) as well as recreational facilities (pool and bowling green), a porte cochere main entry, an at grade under cove and basement car parking area for residents and an at grade overflow and visitor car parking area at the rear of the site. Three separate vehicular access crossings to Lakewood Drive are proposed with separate entry and exit access crossings providing access to the main entry porte cochere and a separate combined entry / exit driveway providing access to the basement car park and overflow / visitor car park area at the rear of the development. The development plans are shown in ***Attachment A***.

This report is required to support a development application to Bega Valley Shire Council and presents the findings of the traffic and parking assessment including;

1. An outline of the existing situation in the vicinity of the site.
2. An assessment of the traffic impacts of the proposed development including the predicted traffic generation and its impact on existing road and intersection capacities.
3. Reviews parking, public transport, pedestrian, and cycle way requirements for the proposed development, including assessment against Council and Australian Standards.
4. Presentation of conclusions and recommendations.

2.0 SITE LOCATION

The subject site is shown in ***Figure 1*** below. It is located on the north-eastern side of Lakewood Drive approximately 700 metres south and west of Merimbula Drive. The site is located approximately 2 km west of the Merimbula CBD.

The site is formally titled as Lot 6 DP 1277714 – 271 Merimbula Drive & 83 Lakewood Drive, Merimbula and is currently zoned R3 – Medium Density Residential and C3 – Environmental management pursuant to the Bega Valley LEP (2013). ***Photographs 1 & 2*** below show existing conditions at the site including an informal vehicular access off Lakewood Drive.

Figure 1 – Site Location

Photograph 1 – Development site from Lakewood Drive

Photograph 2 – Existing informal vehicular access off Lakewood Drive

3.0 EXISTING ROAD NETWORK

3.1 Merimbula Drive

Merimbula Drive is a classified regional road (RR7637) which connects Merimbula and the Sapphire Coast Drive to the Princes Highway at Millangandi. As such the road is under the care and control of Bega Valley Shire Council who receives some funding assistance from Transport for NSW (TfNSW) for its maintenance. Near the site it is a two lane two way sealed urban road with sealed shoulders and gravel verges (see ***Photograph 3)***. Lane widths are in the order of 3.2 metres with variable sealed shoulders between 1 metre and 2 metres wide. A 60 km/h speed limit applies to this section of road and at the time of inspection it was observed to be in good condition.

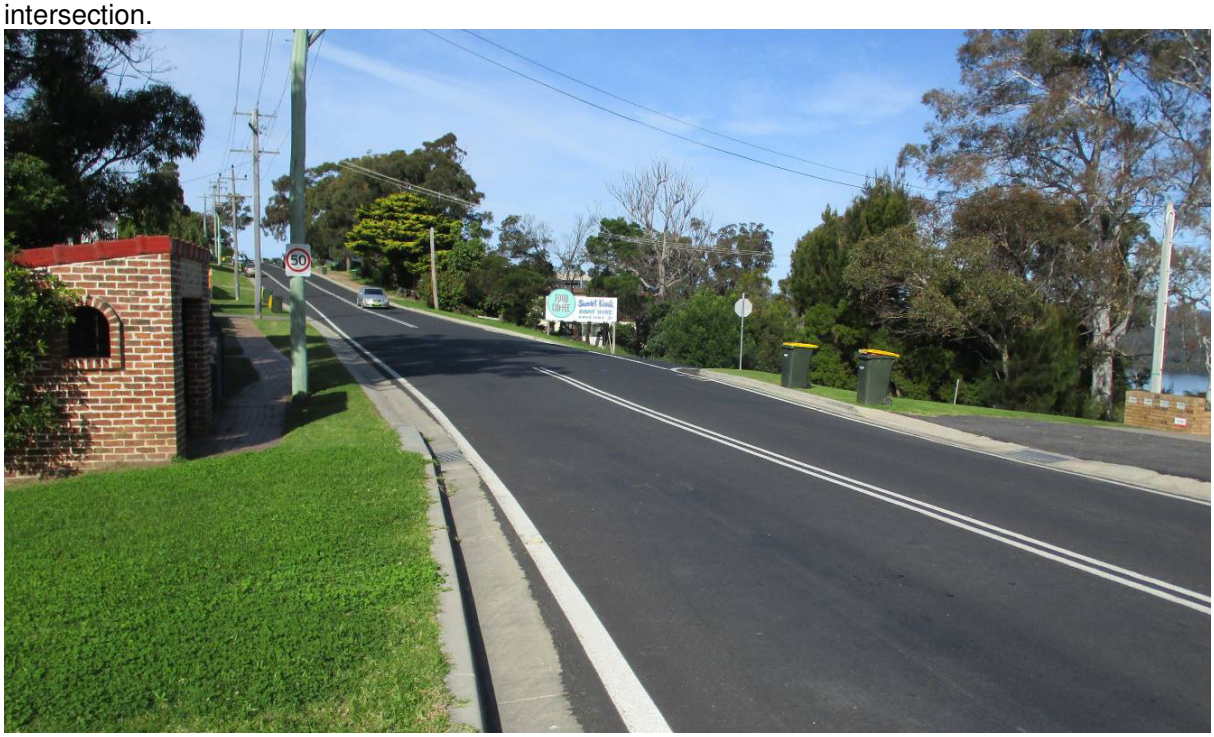
Under a functional road hierarchy Merimbula Drive functions as a sub-arterial road which connects Merimbula to other regions to the south..

Photograph 3 – Merimbula Drive in the vicinity of the site

3.2 Monaro Street

Monaro Street is a local urban collector road that collects and distributes local traffic from the western areas of Merimbula to Merimbula Drive and the local town centre. Near the site it is a two lane two way sealed urban road with kerb and gutter along its sides (see ***Photograph 4).*** The carriageway width of Monaro Street between kerbs is 8.5 metres which allows two travel lane widths of 3.2 metres (one in each direction) and a 2.1 metre wide parking / breakdown lane along the northern side of the road. The road is both centreline and edge line marked near Lakewood Drive. A 50 km/h speed limit applies to this section of road and at the time of inspection it was observed to be in good condition. Being a local road it is under the care and control of Bega Valley

Shire Council. It intersects with Merimbula Drive as a BAR / BAL priority controlled give way T-intersection.



Photograph 4 – Monaro Street in the vicinity of the site

3.3 Lakewood Drive

Lakewood Drive is a local urban street that provides vehicular access to properties along its length. It is a 1.4 km meandering no through road with a cul-de-sac turning head at its dead end adjacent to the development site. As a local road it is under the care and control of Bega Valley Shire Council. It is a sealed urban road with kerb and gutter along its edges and has a carriageway width of approximately 8.5 metres allowing a travel lane in each direction and some on-street car parking on one side only. A 50 km/h speed limit applies to this section of road and at the time of inspection Lakewood Drive was observed to be in good condition. ***Photograph 5*** below shows Lakewood Drive near the site. Lakewood Drive intersects with Monaro Street via a BAR / BAL priority controlled stop T-intersection. The approach of Lakewood Drive to Monaro Street is quite steep as shown in ***Photograph 6*** below which is why a stop sign has been placed at this intersection.

Photograph 5 – Lakewood Drive near the site

Photograph 6 – Lakewood Drive / Monaro Street intersection

4.0 ROAD NETWORK IMPROVEMENTS

There are no known major road network improvements planned for either the local or state road network near the site that would increase the capacity of the road network. However, maintenance works will be undertaken in accordance with Bega Valley Shire Council's annual works programme to maintain the condition of the local road network near the site.

5.0 TRAFFIC VOLUMES

To determine traffic volumes on the road network Intersect Traffic undertook intersection counts at the Monaro Street / Lakewood Drive and Merimbula Drive / Monaro Street intersections during AM and PM peak traffic periods on Thursday 26th May 2022 (PM peak) and Friday 27th May 2022 (AM peak). The Monaro Street / Lakewood Drive intersection count was a 1 hour count while the Merimbula Drive / Monaro Street count was a 30 minute count. The count results are provided in ***Attachment B***.

The existing mid-block peak traffic volumes adopted extracted from these counts are provided in ***Table 1*** below along with the predicted 2032 two-way mid-block traffic volumes calculated using a background traffic growth rate of 2 % per annum. These existing and likely future traffic volumes have been adopted in this assessment.

Table 1 – 2022 and 2032 two-way mid-block peak traffic volumes.

Road	Section	2022		2032 @ 2% p.a.	
		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
Merimbula Drive	north of Monaro Street	362	662	441	807
Merimbula Drive	south of Monaro Street	344	570	419	695
Monaro Street	north of Lakewood Drive	146	194	178	236
Monaro Street	south of Lakewood Drive	123	103	150	126
Lakewood Drive	west of Monaro Street	99	99	121	121

6.0 ROAD CAPACITY

The capacity of urban roads is generally determined by the capacity of intersections. Table 4.3 of the *RTA's Guide to Traffic Generating Developments* provides some guidance on mid block capacities for urban roads for a level of service (LoS) C. This table is reproduced below.

Table 4.3
Typical mid-block capacities for urban roads with interrupted flow

Type of Road	One-Way Mid-block Lane Capacity (pcu/hr)	
Median or inner lane:	Divided Road	1,000
	Undivided Road	900
Outer or kerb lane:	With Adjacent Parking Lane	900
	Clearway Conditions	900
	Occasional Parked Cars	600
4 lane undivided:	Occasional Parked Cars	1,500
	Clearway Conditions	1,800
4 lane divided:	Clearway Conditions	1,900

Source: - RTA's Guide to Traffic Generating Developments (2002)

Based on these tables it is considered that Merimbula Drive as a two-lane two-way road would have a two way mid-block road capacity of up to 1,800 vtph for a LOS C. Monaro Street and Lakewood Drive as local roads servicing predominantly residential development will also need to consider the environmental capacity thresholds of the road to ensure a suitable residential amenity for existing residents. The environmental capacity thresholds are contained in Table 4.6 of the RTA's Guide to Traffic Generating Developments reproduced below.

Table 4.6
Environmental capacity performance standards on residential streets

Road class	Road type	Maximum Speed (km/hr)	Maximum peak hour volume (veh/hr)
Local	Access way	25	100
	Street	40	200 environmental goal
			300 maximum
Collector	Street	50	300 environmental goal
			500 maximum

Note: Maximum speed relates to the appropriate design maximum speeds in new residential developments. In existing areas maximum speed relates to 85th percentile speed.

Source: - RTA's Guide to Traffic Generating Developments (2002)

Based on this table and noting Monaro Street as a collector street and Lakewood Drive as a local street the environmental capacity of these streets are 500 vtph and 300 vtph, respectively.

Given the existing traffic data collected in ***Section 5*** is less than the likely technical mid-block road capacity and environmental capacity of the local roads as determined above and as relevant to each road it is considered that the adjacent road network is currently operating within its two-way mid-block capacity and has scope to cater for additional traffic generated by new development in the area.

7.0 ALTERNATIVE TRANSPORT MODES

Sapphire Coast Buslines runs public transport bus services in the area. However none of the regular public transport services run within convenient walking distance of the site. However Service 705 / D881 is an on demand bus service which runs between Tura Beach and South Pambula, including Merimbula. Residents of the proposed development would be able to make use of this service during weekdays. However the service does not run on weekends or public holidays. School services however do operate around the site but would be unsuitable for use by residents of the development.

There are no constructed pedestrian footpaths near the site that benefits residents of the development. Flat grassed verges exist and pedestrians would be required to use these verges or the road pavement when trip making in the area. Similarly there were no observed on or off road cycle paths near the site and all cyclists would be required to share the travel or parking lanes on the road network with all other vehicles.

8.0 DEVELOPMENT PROPOSAL

The proposed development is the construction of a multi-storey seniors living complex to be known as Lakewood Lifestyle Village on Lot 602 DP 1277714, 83 Lakewood Drive, Merimbula. The development plans are shown in ***Attachment A***. Specifically the proposal seeks to undertake the following works;

- Eighty nine (89) two (2) bedroom Independent Living Units (ILU's) within two buildings over four (4) levels;
- Two separate rooftop terraces and a rooftop multi-use function room for common use;
- A main foyer and lift lobby with office administration area;
- Recreational facilities including a pool and bowling greens with small clubhouse.
- Maintenance and storage areas including a waste room;
- 91 on-site resident car parks (all accessible spaces) in a basement level and ground level car park under the main building and 45 on-site visitor and overflow parking spaces in an at-grade car park at the rear of the site development.
- 5 on-site visitor car parks including 2 accessible spaces accessed directly off Lakewood Drive as a perpendicular parking area near the main building entrance; and
- Three new proposed vehicle accesses off Lakewood Drive including a combined entry / exit driveway to the car parking areas at the western end of the site frontage and separate entry and exit driveways servicing a porte cochere at the main building entry approximately midway along the Lakewood Drive frontage.

All vehicular and pedestrian access to the site is from Lakewood Drive. The development operator will also provide a shuttle bus (minibus) for the use of residents for access to retail, commercial, medical and other facilities in the Merimbula town centre.

9.0 TRAFFIC GENERATION

The *RTA's Guide to Traffic Generating Development's* and *RMS Technical Direction TDT 2013/04 dated May 2013* provide specific advice on the traffic generation potential of various land uses.

In regard to this development the relevant land uses and traffic generation rates would be as follows;

- *Housing for Seniors – Weekday daily vehicle trips = 2.1 per dwelling, Weekday peak hour vehicle trips = 0.4 per dwelling. Note morning peak does not generally coincide with the morning peak.*

Note the recreational facilities, outdoor terraces, clubhouse and function room provided in the development are for the use only of the ILU residents therefore are ancillary to the rest of the development and do not generate additional traffic.

It is also noted that the critical peak hour period for assessment due to the type of land use and the current peak traffic volumes will be the PM peak.

On this basis the following peak hour traffic generation calculations can be made for the proposed development, noting traffic impact assessment is based on peak hour traffic volumes;

Daily vehicle trips = 89 units x 2.1 = 187 vtpd.
AM & PM peak hour trips = 89 units x 0.4 = 36 vtph.

10.0 TRIP DISTRIBUTION

Before carrying out any traffic assessment the additional peak hour traffic generated by the development needs to be distributed through the adjoining road network. This involves making a number of assumptions as to distribution patterns to and from the complex. Key assumptions made were based on the current traffic distribution on the local road network as recorded in the traffic counts undertaken near the site and described in ***Section 5***;

- All traffic utilises Lakewood Drive to access the site.
- In the PM peak traffic is distributed 30% outbound and 70% inbound which is mirrored in the AM peak.
- At the Monaro Street / Lakewood Drive intersection 60% of traffic has an origin / destination north towards Merimbula Drive and 40 % has an origin / destination to the south towards the Merimbula town centre; and
- At the Merimbula Drive / Monaro Street intersection 65% of traffic has an origin / destination north towards the Princess Highway and 35 % has an origin / destination to the south towards the Merimbula town centre.

The resulting predicted AM & PM peak hour trip distributions for the additional traffic generated by the development has therefore been determined as shown below in ***Figure 2.***

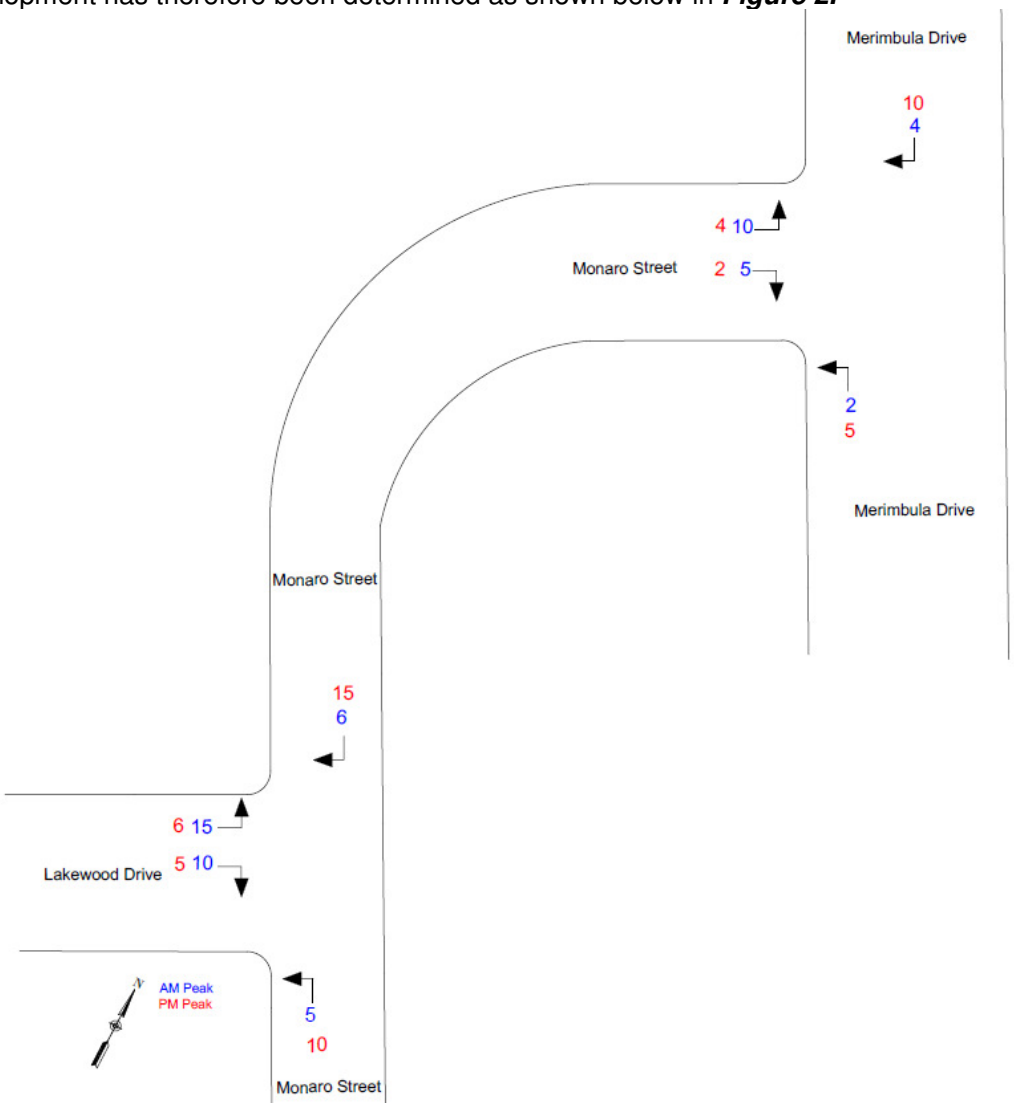


Figure 2 – Development Traffic Trip Distribution

11.0 TRAFFIC IMPACTS OF DEVELOPMENT

11.1 Road Network Capacity

It has previously been shown in ***Section 6*** of this report that the local road network is currently operating within its technical two-way mid-block capacity.

The proposed development will result in the following peak hour additional two way traffic flows within the local road network in the AM and PM peak periods.

- Merimbula Drive (north of Monaro Street) – 14 vtph;
- Merimbula Drive (south of Monaro Street) – 7 vtph;
- Monaro Street (between Lakewood Drive and Merimbula Drive) – 21 vtph;
- Monaro Street (south of Lakewood Drive) – 15 vtph; and
- Lakewood Drive (west of Monaro Street) – 36 vtph.

The addition of this additional traffic generated by the development will not result in the capacity thresholds for these roads being reached, even with background traffic growth through to 2032. This is demonstrated in ***Table 2*** below.

Table 2 – Two-way mid-block capacity assessment.

Road	Section	Capacity	2022		2032 @ 1.5% p.a.		Development traffic	
		vtph	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)	AM	PM
Merimbula Drive	north of Monaro Street	1800	376	676	455	821	14	14
Merimbula Drive	south of Monaro Street	1800	351	577	419	695	7	7
Monaro Street	north of Lakewood Drive	500	167	215	178	236	21	21
Monaro Street	south of Lakewood Drive	500	138	118	150	126	15	15
Lakewood Drive	west of Monaro Street	300	135	135	157	157	36	36

It is concluded that the local road network has sufficient spare two way mid-block capacity to cater for the proposed development.

11.2 Intersection Capacity

The intersections likely to be most affected by this development are;

- Monaro Street / Lakewood Drive priority controlled stop T-intersection; and
- Merimbula Drive / Monaro Street priority controlled give way T-intersection.

Post development traffic volumes on these roads during the critical PM peak period are as follows;

- Merimbula Drive – 676 vtph
- Monaro Street – 215 vtph; and
- Lakewood Drive – 135 vtph.

During traffic counts both intersections appeared to operate with uninterrupted flow conditions and using the following table sourced from *Austroads Guide to Traffic Management – Part 6 – Intersections, Interchanges and Crossings (2007)* for which it is noted the Guide states in terms of intersection analysis;

The following table may be used as an initial guide to determine the need for a detailed traffic analysis in accordance with the procedure provided in Part 3 of the Guide to Traffic Management. When the volumes at an intersection are less than those shown, a detailed analysis to demonstrate that adequate capacity is available is unlikely to be necessary. Furthermore, flaring of the approaches is unlikely to be needed based on capacity. However, separate lanes for left or right-turning vehicles may be desirable on the major road for safety reasons.

Major road type[1]	Major road flow (vph)[2]	Minor road flow (vph)[3]
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Source: - Austroads Guide to Traffic Management – Part 6 – Intersections, Interchanges and Crossings (2007)

Based on the post development traffic volumes listed above and this table it can be concluded that as traffic volumes on the Monaro Street / Lakewood Drive intersection post development through to 2032 remain below the threshold limits contained in the table, the intersection will continue to operate with uninterrupted flow conditions through to and beyond 2032. Therefore no further intersection analysis is required for this intersection and it can be concluded the proposed development does not adversely impact on the operation and efficiency of this intersection.

To determine the impact of the development traffic on the Merimbula Drive / Monaro Street intersection, as post development traffic flows do not remain below the thresholds listed in the above table requires the intersection to be modelled using the Sidra Intersection modelling program. This micro-analytical program identifies "Level of Service" (LoS) criteria for intersection analysis which range from LoS A to LoS F, with a LoS F deemed an intersection 'failure' with delays in excess of 70 seconds. Assessment is then based on the level of service requirements of TfNSW shown below;

Table 4.2
Level of service criteria for intersections

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	< 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode

Source: - RTA's Guide to Traffic Generating Developments (2002).

Modelling was carried out for the AM and PM peak periods for both the post development (2022) and for ten years background traffic growth at 2 % per annum (2032) scenarios. Traffic data used was as collected by Intersect Traffic and described in ***Section 5***. The intersection was modelled as per its current layout.

The results of the modelling are shown in ***Table 3*** for the worst movement results while the Sidra Movement Summary Tables for each scenario modelled are provided in ***Attachment C.***

Table 3– Sidra Results – Merimbula Drive / Monaro Street priority controlled stop T - intersection.

Modelled Peak	Degree of Saturation (v/c)	Worst Average Delay (s)	Worst Level of Service	95% back of queue length (cars)
2022 AM	0.087	7.2	A	0.2
2022 PM	0.162	9.1	A	0.6
2022 AM + development	0.088	7.2	A	0.2
2022 PM + development	0.168	9.3	A	0.6
2032 AM + development	0.108	7.8	A	0.3
2032 PM + development	0.209	10.7	A	0.9

The modelling shows that the intersection continues to operate satisfactorily post development with the degree of saturation, average delays, LoS and back of queue lengths well within the acceptable intersection performance criteria set by TfNSW. Therefore it can be concluded the proposed development does not adversely impact on the operation and efficiency of any intersection on the local road network.

11.3 Access

Access to the development is proposed via a combined entry / exit driveway approximately 6 metres wide, constructed to Bega Valley Shire Council requirements, off Lakewood Drive at the western end of the site to the proposed on-site car parking areas. Separate entry and exit driveways approximately 3 metres wide are also proposed to service a porte cochere set down and pick up area at the main entrance to the development.

In regard to the porte cochere the driveways are considered suitable for one way flow to a short term parking area therefore with separate entry and exit driveways 3 metres wide would comply with the requirements of Australian Standard *AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking.*

The main vehicular access to the car parking areas on the site services up to 136 car spaces for mainly Class 1 and Class 1A long term parking of a local road therefore under Table 3.1 of Australian Standard *AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking* the access is required to be a Category 2 facility which is a combined entry / exit driveway 6 to 9 metres wide. Therefore the proposed driveway complies with the requirements of the Australian Standard.

Under Figure 3.2 of Australian Standard *AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking* available vehicular sight distance from the access is required to be a minimum of 45 metres. As the driveway is located within a cul-de-sac turning area only sight distance to the east is required to comply and by observation on-site the available sight distance is likely to be in the order of 50 metres therefore it is considered the driveway would comply with this requirement of the Australian Standard. Pedestrian sight distance at the access in accordance with the Australian Standard can also be assured as no fencing is proposed around the site and there are no obstructions on the boundary.

As no security gates are proposed at the boundary there is sufficient queuing within the driveways to ensure no vehicles will queue back onto Lakewood Drive.

It is concluded that the proposed vehicular access to the on-site car parking is compliant with Australian Standard *AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking* and therefore satisfactory for the development.

11.4 On-site Parking

With regard to on-site parking the proposal should comply with *State Environmental Planning Policy (Housing) 2021 – Part 5 – Housing for Seniors and people with a disability.*

In regard to independent living units SEPP (Housing) has the following on-site car parking requirements;

(j) for a development application made by, or made by a person jointly with, a social housing provider—at least 1 parking space for every 5 dwellings,
(k) if paragraph (j) does not apply—at least 0.5 parking spaces for each bedroom.

Therefore the required on-site car parking within the development can be calculated as follows noting the operator is not a social housing provider.

Required on-site car parking = 89 units x 2 bedrooms per unit x 0.5 spaces per bedroom
= 89 car spaces.

From a review of the plans the proposal provides 141 on-site car spaces the majority of which have been designed as accessible spaces. Therefore it can be concluded the proposal provides sufficient on-site car parking to meet the requirements of SEPP(Housing) 2021. Having reviewed the plans and noting accessible parking has been provided for all spaces within the resident parking the car park design is considered to comply with the Australian Standard *AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking* with regard to space size, aisle width and manoeuvring areas. Therefore it is considered use of the car parking areas will be convenient and suitably safe for residents and visitors.

It is noted that the 5 space visitor parking bay off Lakewood Drive near the main building entrance will require a reversing movement onto Lakewood Drive for vehicles exiting the site. However as the site is at the end of Lakewood Drive near the cul-de-sac turning head traffic volumes in this part of Lakewood Drive are both very low and will be slow moving so a reverse movement out of the parking bays at this location would be suitably safe.

Overall it is concluded sufficient and suitable on-site car parking has been provided within the development to meet the requirements of Australian Standards and SEPP (Housing) 2021.

11.5 Servicing

Servicing of the development will be undertaken from the main driveway within the site with vehicles entering the site before turning around in T-head turning area at the end of the driveway and exiting in a forward direction. Servicing will then be at kerbside in the driveway in an area near the waste room shown on the site plan. Servicing will include waste collection and some food and beverage deliveries for the clubhouse.

It is concluded that the proposed servicing arrangements for the development are satisfactory.

11.6 Construction Traffic

The construction of the development will result in additional traffic entering and exiting the site. It is estimated that during the peak construction periods up to 30 construction employees will be on-site at any one time. If a car occupancy rate of 1.2 is assumed for employee traffic this would result in an AM and PM peak traffic flow to the site of in the order of 25 vtph. This of course will also increase the peak parking demand at the site by a similar number during construction.

Material deliveries will add to this traffic with peak materials delivery traffic expected during the pouring of concrete slabs early on in the construction period. With a large pour and a fleet of

concrete trucks sourced from nearby it is likely that a further 10 vtph could occur during the AM peak period as a result of this construction activity. Therefore overall it is estimated that the peak construction traffic generation resulting from the construction of the development will be in the order of 35 vtph during the AM peak or 25 vtph in the PM peak

This assessment has already determined that the additional post development traffic generation from the site is in the order of up to 36 vtph and that this will not adversely impact on the capacity of the local road network. As this is more than the likely construction traffic generation from the site it would also be reasonable to assume then that the construction traffic associated with the new development will not adversely impact on the local road network.

Construction traffic is a short term traffic impact that is best managed through the preparation of a construction traffic management plan prepared and implemented prior to commencement of construction activities. This plan may seek to minimise the impacts of construction activities by designating travel routes, access points, construction employee parking areas, material delivery procedures and times etc. This plan is best prepared, implemented and enforced by the head contractor. It is recommended that a construction traffic management plan be prepared and implemented prior to the commencement of construction activities with particular attention being paid to provide off street construction employee parking whether on-site or remote from the site with a suitable shuttle service being provided.

12.0 PEDESTRIAN FACILITIES

As there is little in the way of nearby commercial developments and no existing pedestrian infrastructure in the area it is unlikely that the development will generate any significant external pedestrian traffic. Therefore it is considered there is no nexus for the provision of external pedestrian facilities.

Internally an excellent internal pedestrian footpath network is to be provided connecting and directing residents to all parts of the development including the recreational facilities, car parking and administration areas. This network has been assessed as suitable for the development.

13.0 ALTERNATIVE TRANSPORT MODE FACILITIES

As the available public transport services are limited in the area (on demand service is available on weekdays) there is little likelihood that the development will result in an increased demand for public transport. However the Village operator will be providing a mini-bus for exclusive use of residents to shuttle them to the relevant retail, commercial and health facilities in Merimbula.

The development is not likely to significantly increase bicycle traffic to the site and would not warrant additional specific external bicycle infrastructure.

14.0 CONCLUSIONS

This traffic impact assessment for a multi-storey Seniors Living Facility on Lot 602 DP 1277714 – 83 Lakewood Drive, Merimbula to be known as Lakewood Lifestyle Village has determined the following;

- The existing local road network around the site is operating well below its technical and environmental two-way mid-block capacity, as relevant. Therefore the local road network has spare capacity to cater for additional development in the area.
- It is expected that the additional traffic generated by the development in the AM and PM peak periods will be a maximum of 36 vtph.
- The local road network has sufficient spare two-way mid-block capacity to cater for the additional development traffic generated by the proposal and other developments in the area without the need for any road upgrading works.
- The Monaro Street / Lakewood Drive intersection will continue to operate with uninterrupted flow conditions post development and through to at least 2032.
- SIDRA INTERSECTION modelling of the Merimbula Drive / Monaro Street intersection has shown that the proposed development does not adversely impact on the operation of the intersection both post development and through to at least 2032.
- The proposed vehicular access to the on-site car parking is compliant with Australian Standard *AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking* and therefore satisfactory for the development.
- That sufficient and suitable on-site car parking has been incorporated into the development such that the development is compliant with *State Environmental Planning Policy SEPP (Housing) 2021* and Australian Standard *AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking.*
- Servicing arrangements for the development are satisfactory with all servicing occurring on-site as kerbside within the proposed access driveway.
- Construction traffic generated by the development will be similar or less than the additional traffic generated by the operation of the development. Therefore as this assessment determined the operational traffic will not adversely impact on the local road network it is also reasonable to conclude that the construction traffic associated with the new development will not adversely impact on the local road network.
- It is recommended that a construction traffic management plan be prepared and implemented prior to commencement of construction activities on the site to ensure the impacts of the construction activities on the internal traffic flows are minimised during construction.
- There is no nexus for the provision of external pedestrian facilities near the site while an excellent internal pedestrian network linking all components of the development has been provided in the development.
- As existing public transport services are limited it is not expected that the development will generate any significant increase in public transport demand. Further the operator of the Lifestyle Village will provide a mini-bus for the exclusive use of residents to shuttle them to the retail, commercial and medical facilities in Merimbula.
- The development will not significantly increase bicycle traffic to the site and would not warrant additional specific external bicycle infrastructure being provided.

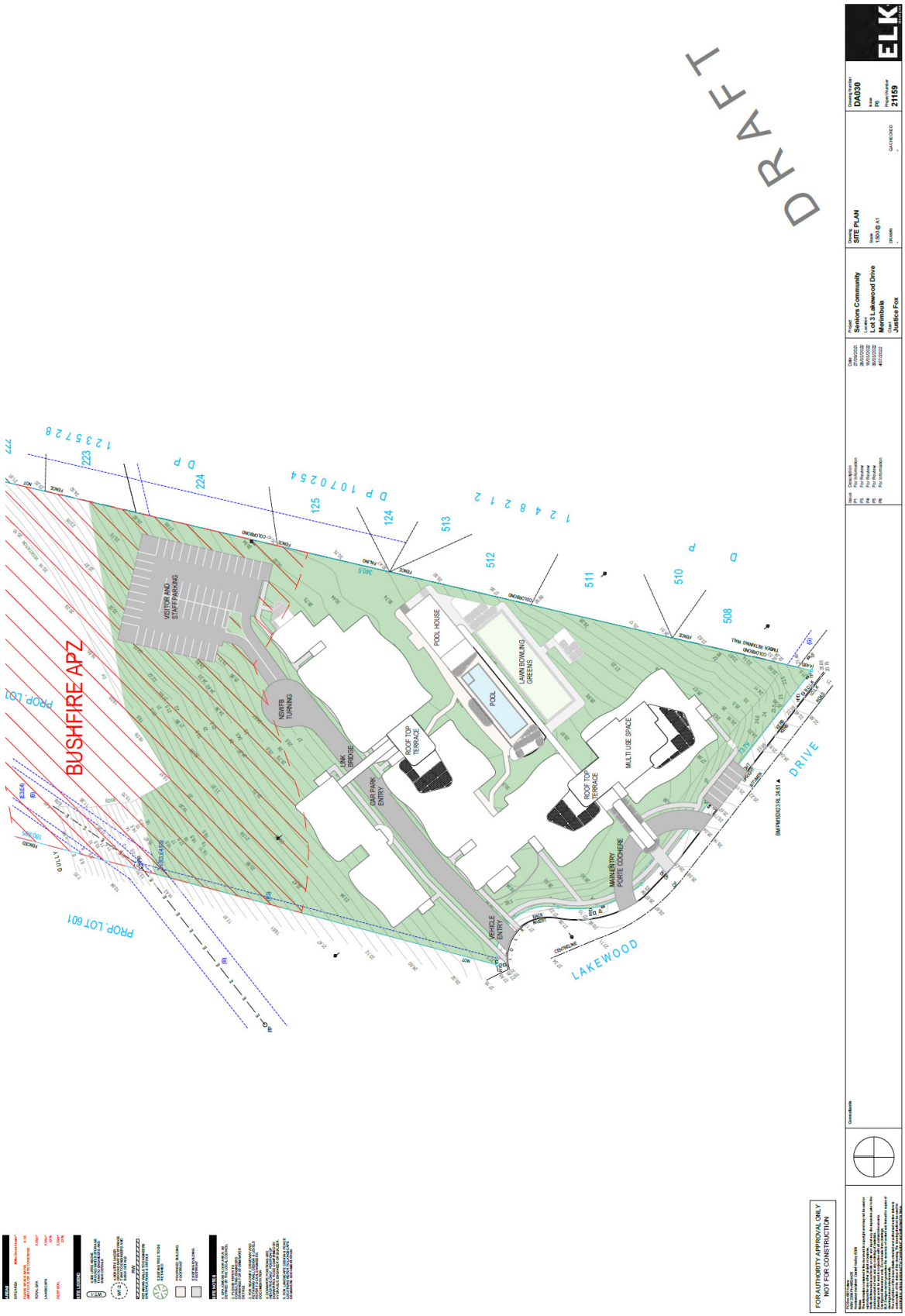
15.0 RECOMMENDATION

Having carried out this traffic impact assessment for a multi-storey Seniors Living Facility on Lot 602 DP 1277714 – 83 Lakewood Drive, Merimbula to be known as Lakewood Lifestyle Village it is recommended that the proposal can be supported from a traffic and parking impact perspective as it will not adversely impact on the local road network and complies with all relevant Bega Valley Shire Council, Australian Standard and SEPP(Housing) 2021 requirements.

JR Garry BE (Civil), Masters of Traffic
Director
Intersect Traffic Pty Ltd

ATTACHMENT A

Development Plans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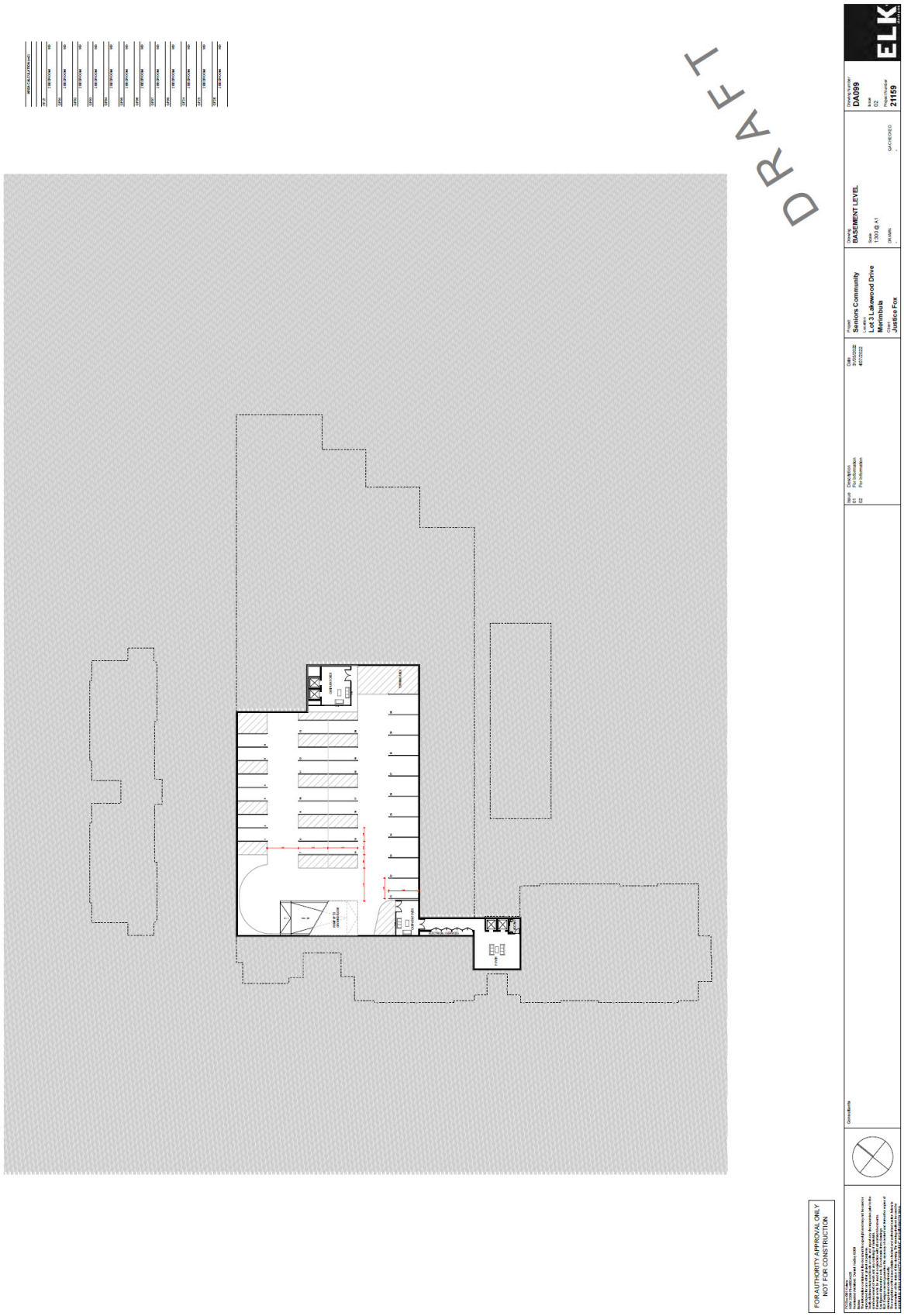
BUSHFIRE APZ
PROP. LOT 601
VISITOR AND STAFF PARKING
NSWFB TURNING
LINK BRIDGE
DAR PARK ENTRY
POOL HOUSE
POOL
LAWN BOWLING GREENS
ROOF TOP TERRACE
ROOF TOP TERRACE
MULTI USE SPACE
MAIN ENTRY PORTE COCHERE
VEHICLE ENTRY
LAKEWOOD DRIVE
FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION
Project
Seniors Community
Location
Lot 1 Lakewood Drive
Merimbula
Client
Jarice Fox
Drawing
SITE PLAN
Drawing Number
DA030
Project Number
21159
ELK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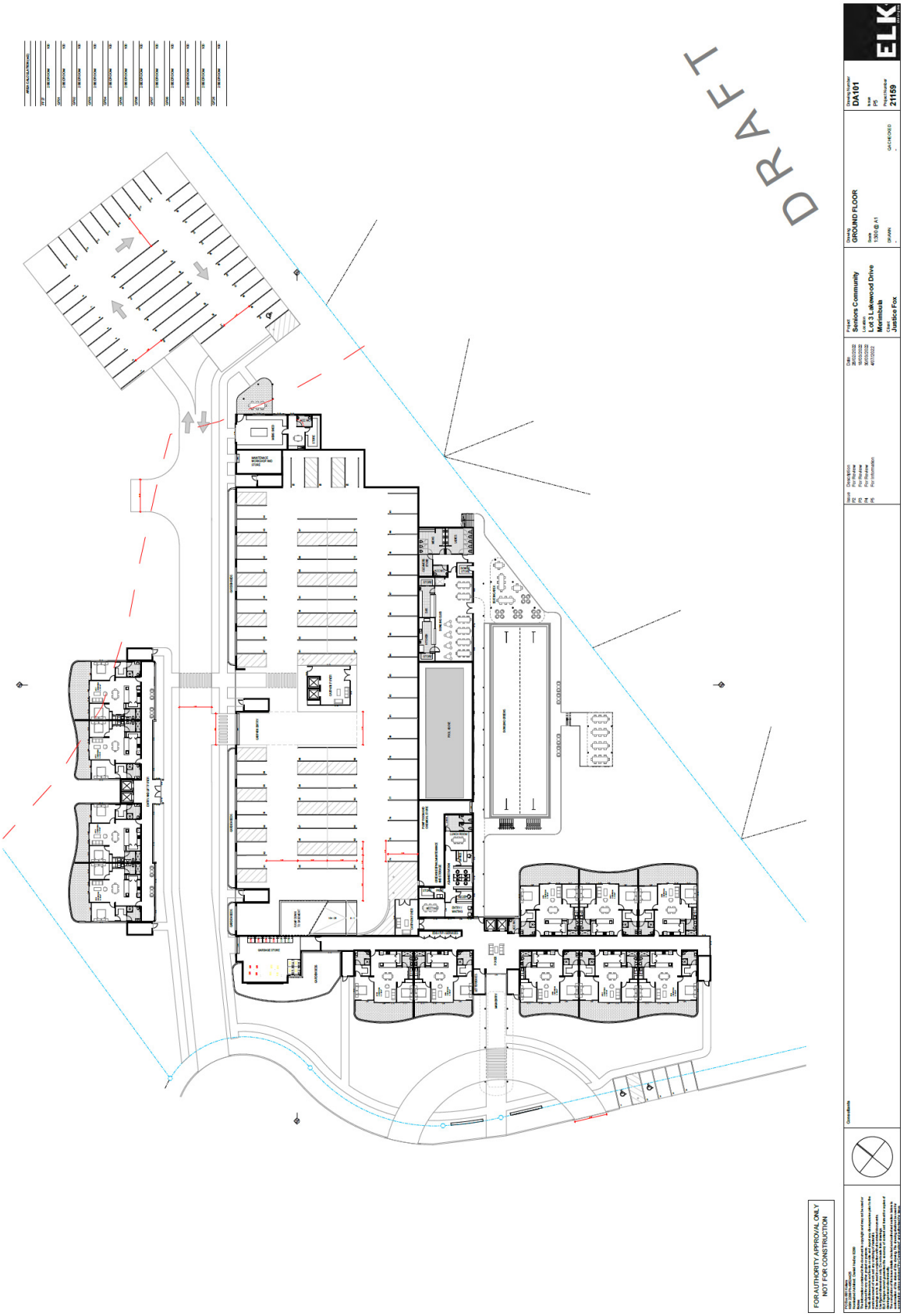
NOT FOR CONSTRUCTION
Seniors Community
Lot 3 Lakewood Drive
Merimbula
Justice Fox
BASEMENT LEVEL
DA099
21159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Project number
21159
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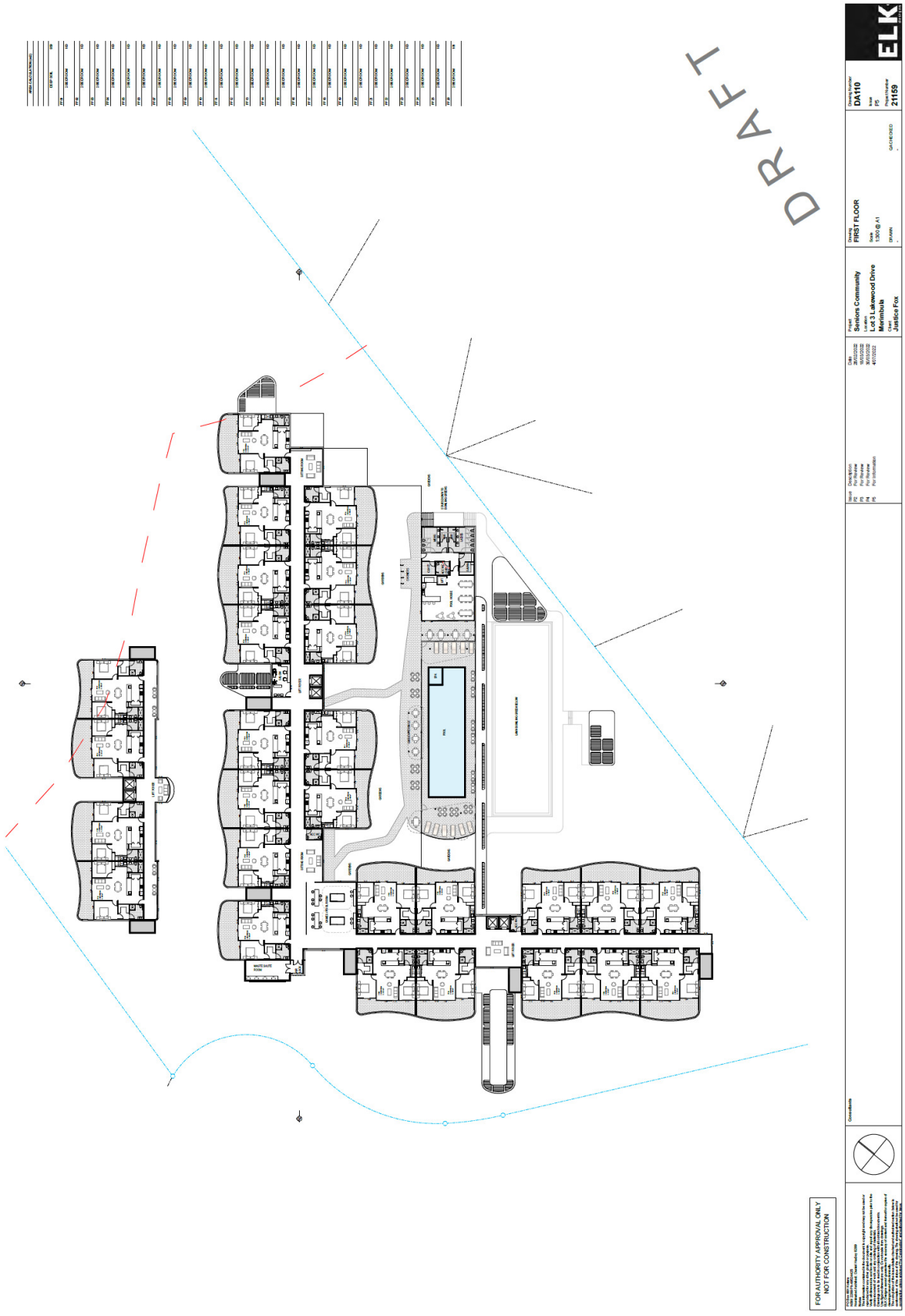
Project
Seniors Community
Lot 3 Lakewood Drive
Merimbula
Client
Justice Fox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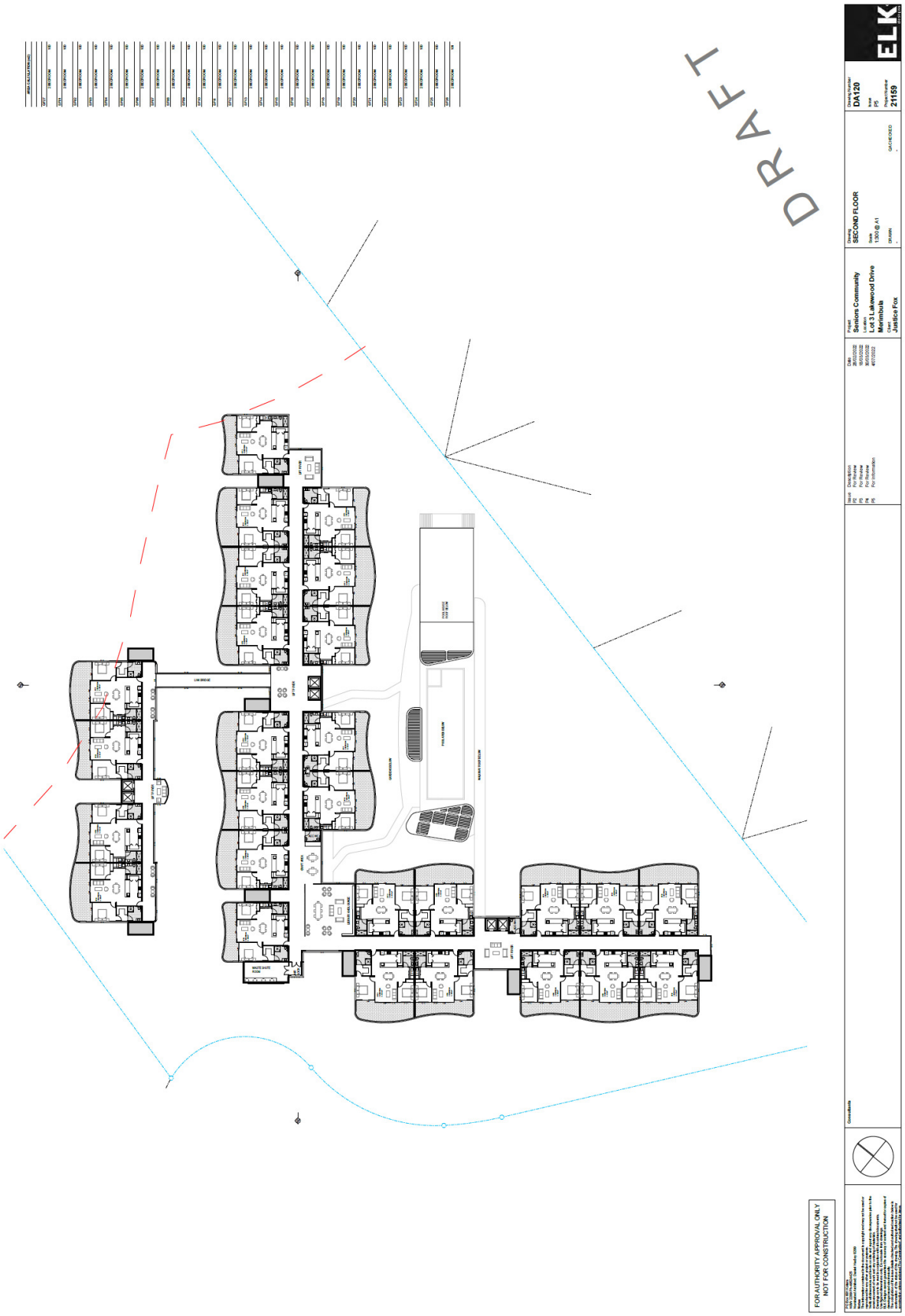
Seniors Community
Lot 1 Lakewood Drive
Merimbula
Justice Fox
21159
ELK
FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION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Project Number
21159
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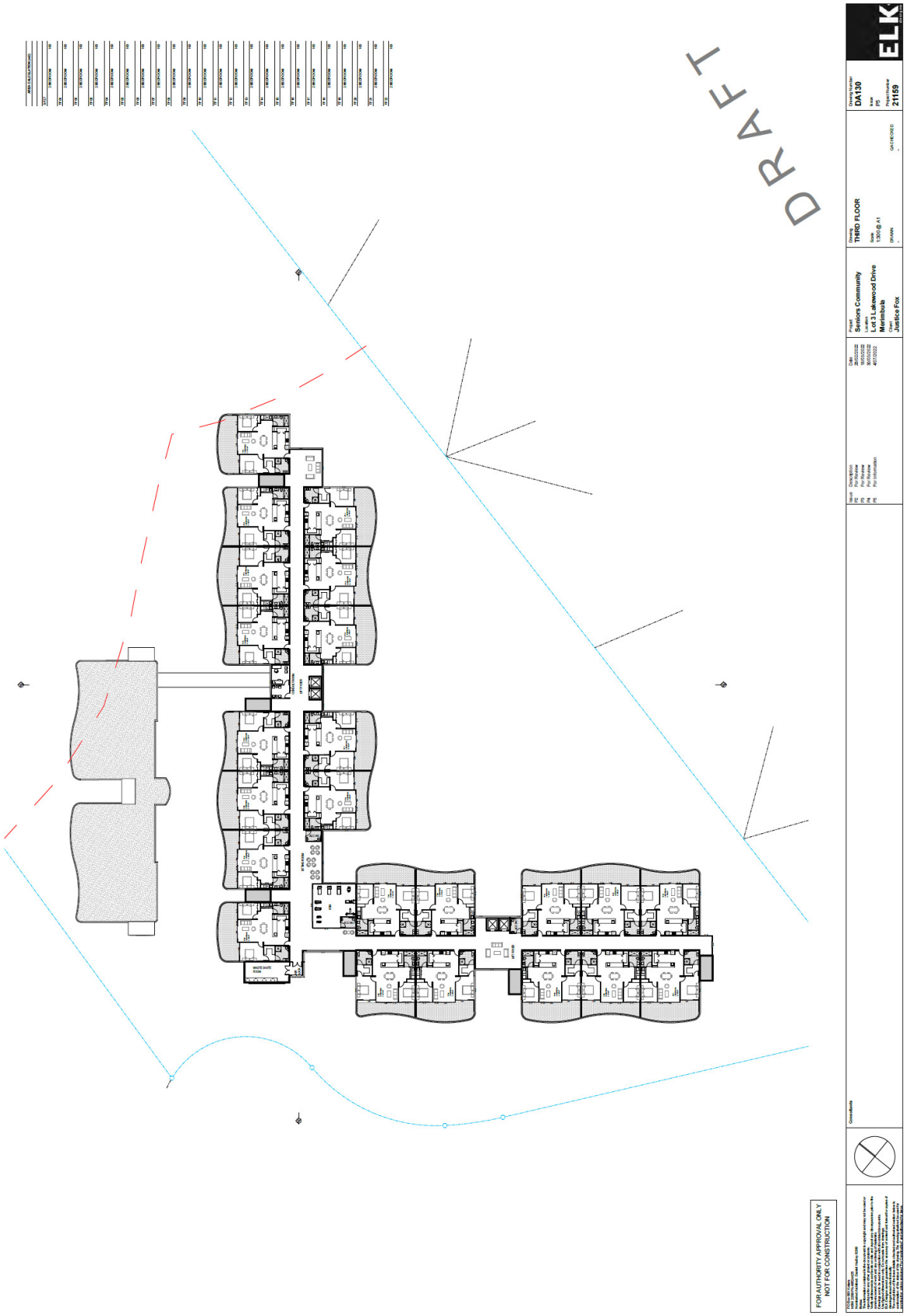
Scale
1:300 @ A1
DRAWN
CHECKED
Project
Seniors Community
Lot 3 Lakewood Drive
Merimbula
Client
Jubilee Fox
Date
30/03/2022
30/03/2022
30/03/2022
4/07/2022
Issue Description
P2 For Review
P3 For Review
P4 For Review
P5 For Information
Consultants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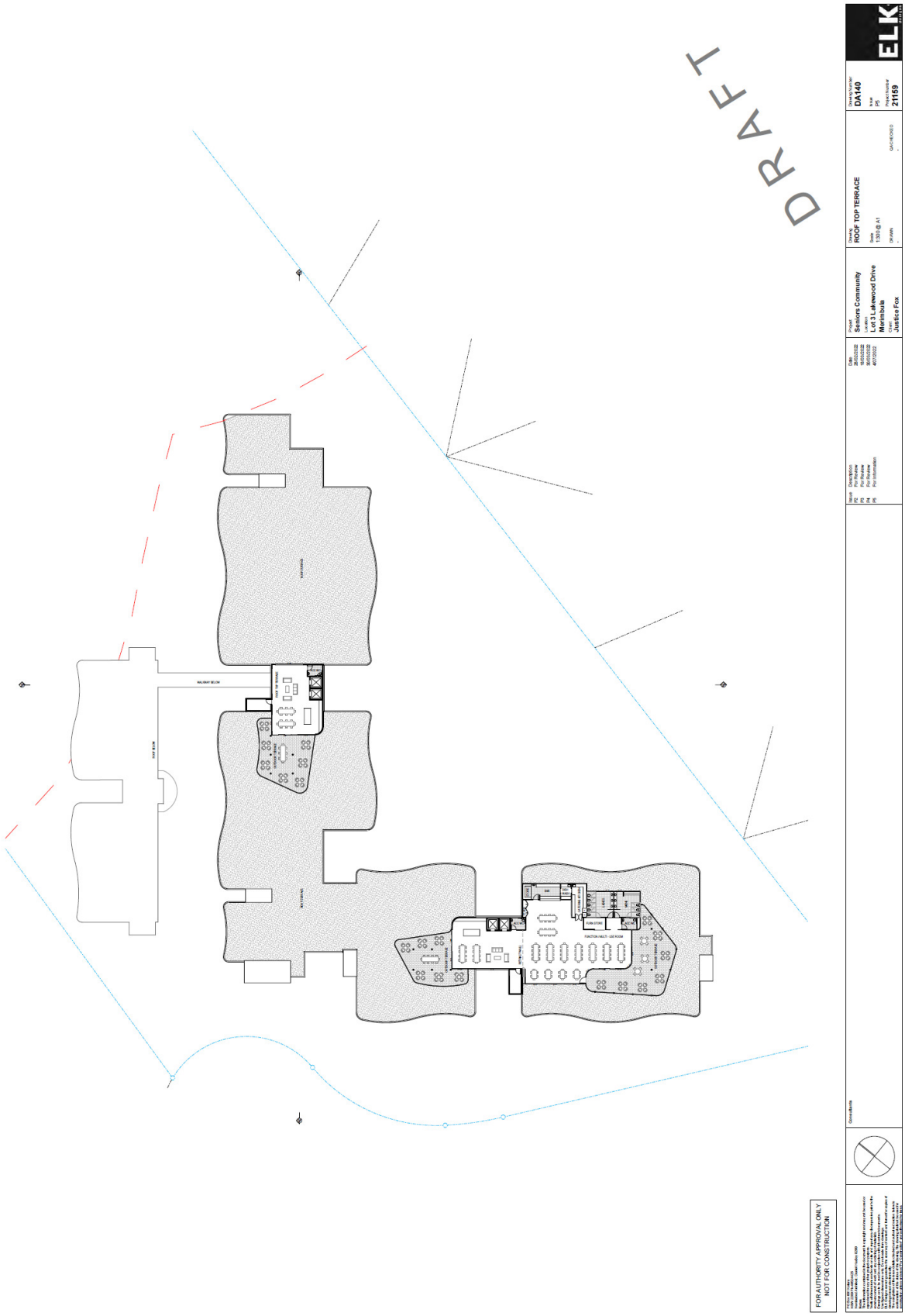
THIRD FLOOR
Seniors Community
Lot 3 Lakewood Drive
Merimbula
Justice Fox
DA130
21159
ELK
FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION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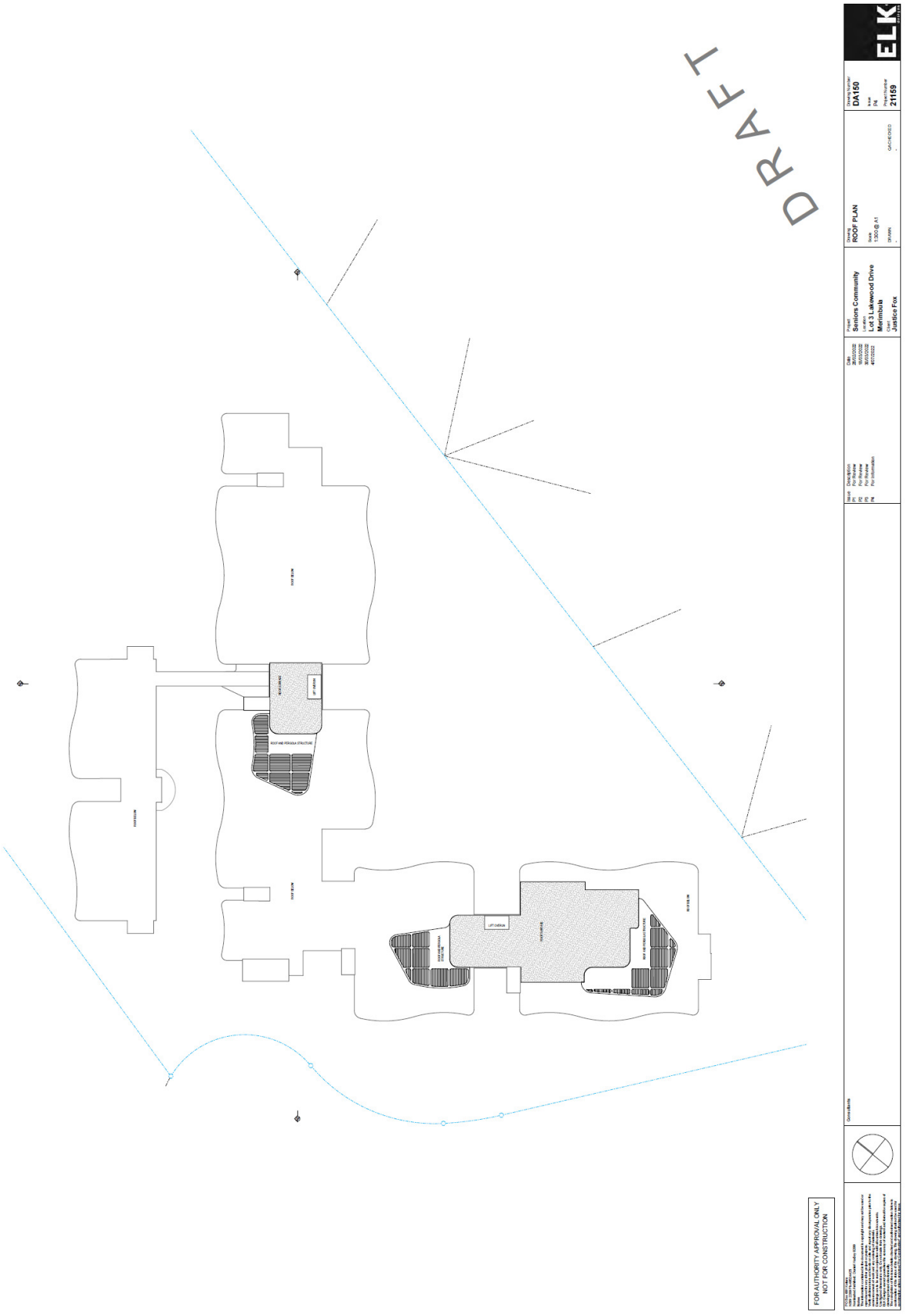
ROOF TOP TERRACE
DA140
Seniors Community
Lot 3 Lakewood Drive
Merimbula
Justice Fox
21159
FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION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FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION
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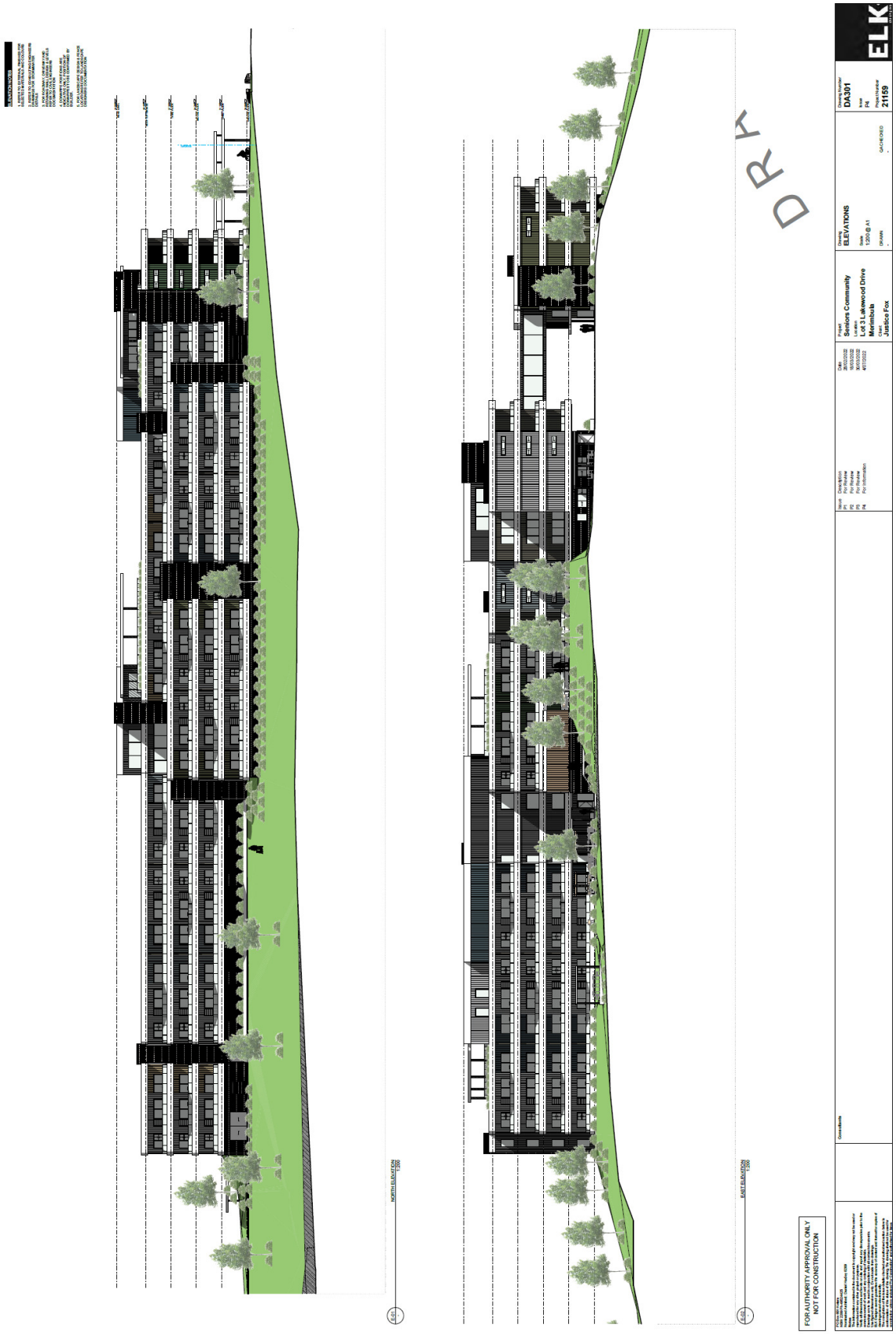
Scale A4
Project Number 21159
Drawing ROOF PLAN
Scale 1:300 @ A1
DRAWN
CHECKED
Project Seniors Community
Lot 3 Lakewood Drive
Merimbula
Client Justice Fox
Date 30/03/2022
Description
P1 For Review
P2 For Review
P3 For Review
P4 For Submission
Consultants
ELK


MAIN ENTRY AND PORTE COCHERE
VEHICLE ENTRY AND CARPARK
WEST ELEVATION
SOUTH ELEVATION
FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION
ELEVATIONS
DA300
21159
Seniors Community
Lot 3 Lakewood Drive
Merimbula
Jessica Fox
ELK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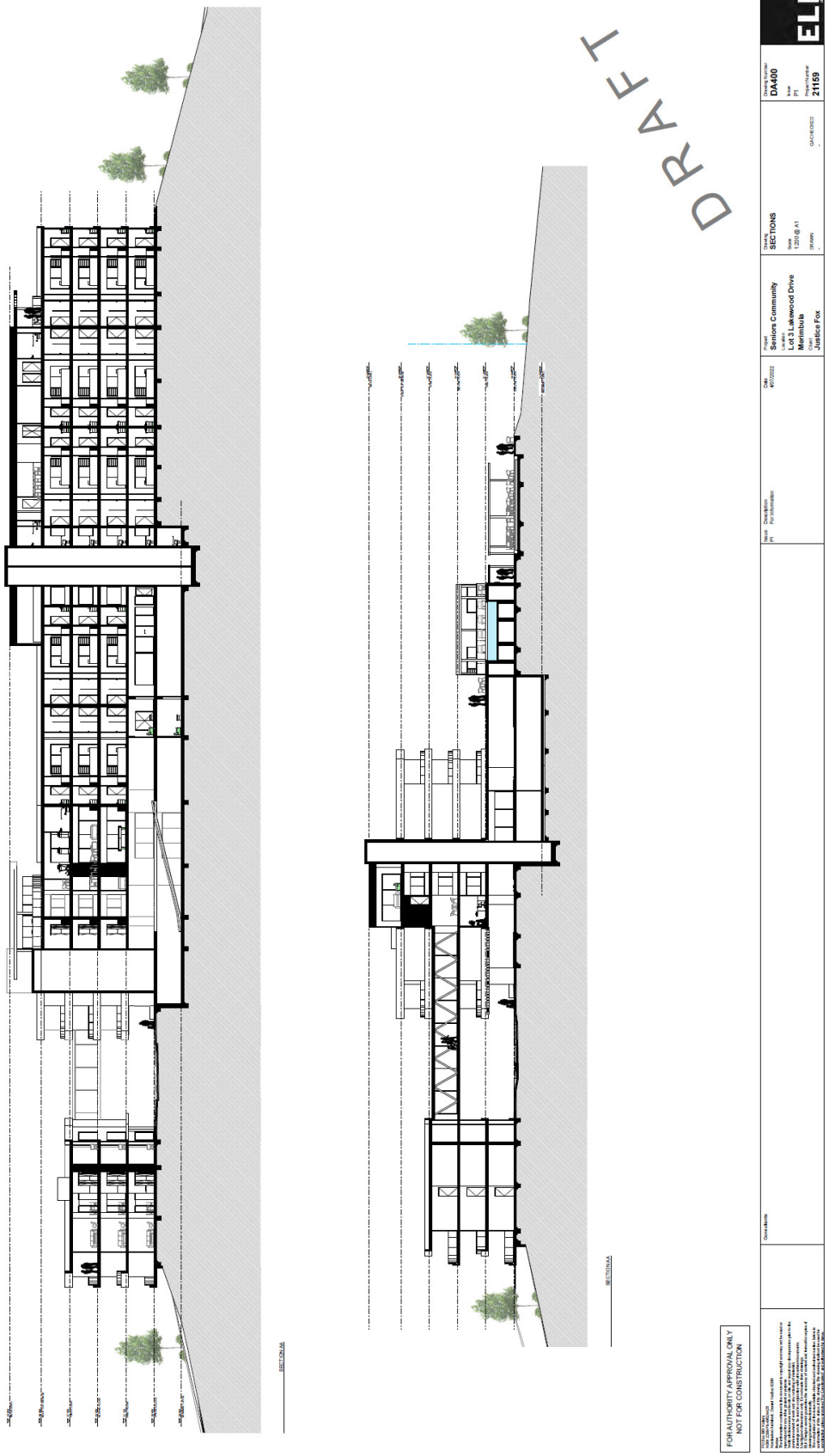
FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION
ELEVATIONS
Seniors Community
Lot 3 Lakewood Drive
Merimbula
DA301
21159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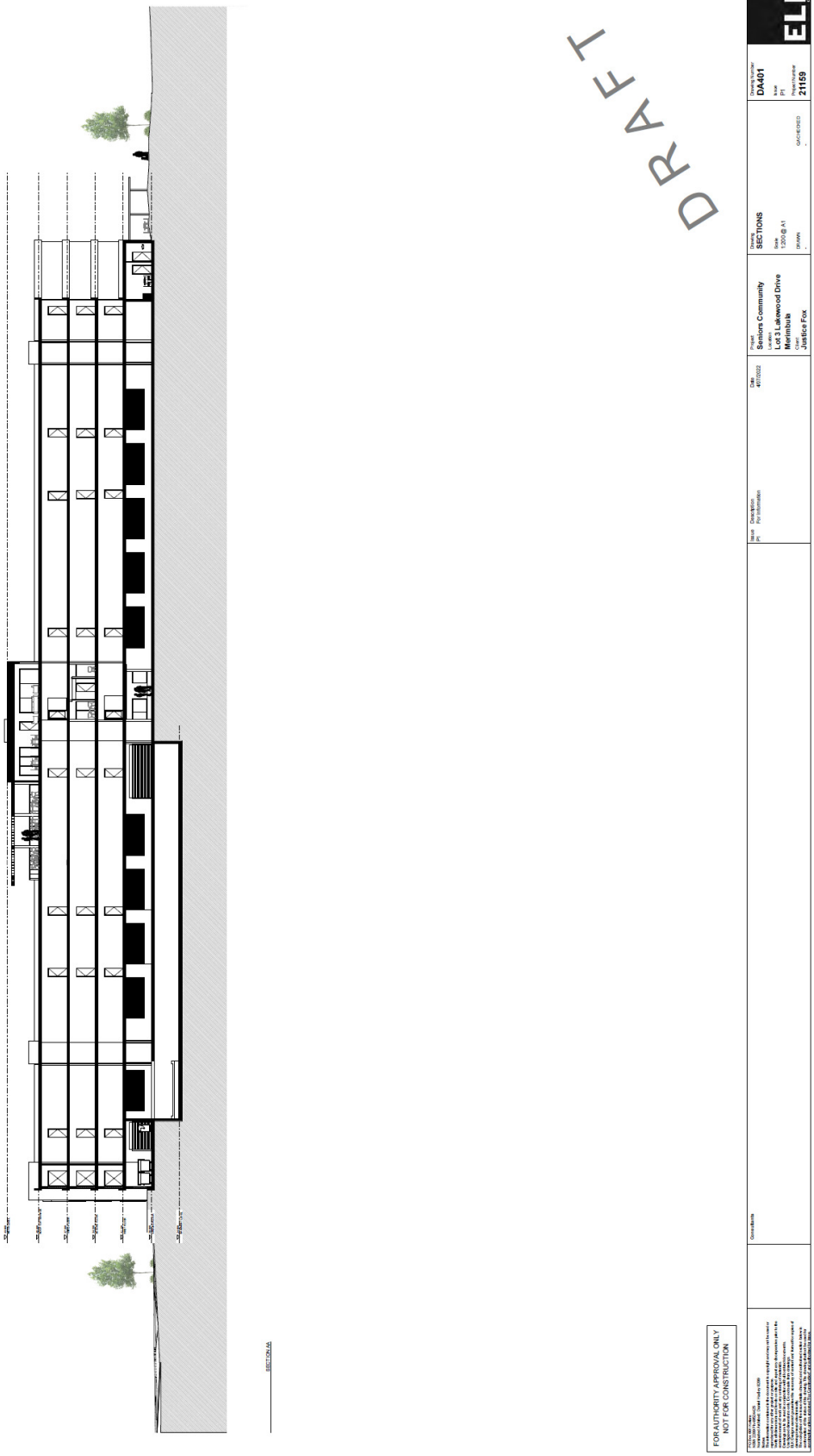
SECTION AA
SECTION BB
FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION
Project
Seniors Community
Location
Lot 1
83 Lakewood Drive
Merimbula
Client
Justice Fox
Drawing
SECTIONS
Scale
1:200 @ A1
DRAWN
Drawing Number
DA400
Issue
P1
Project Number
21159
ELK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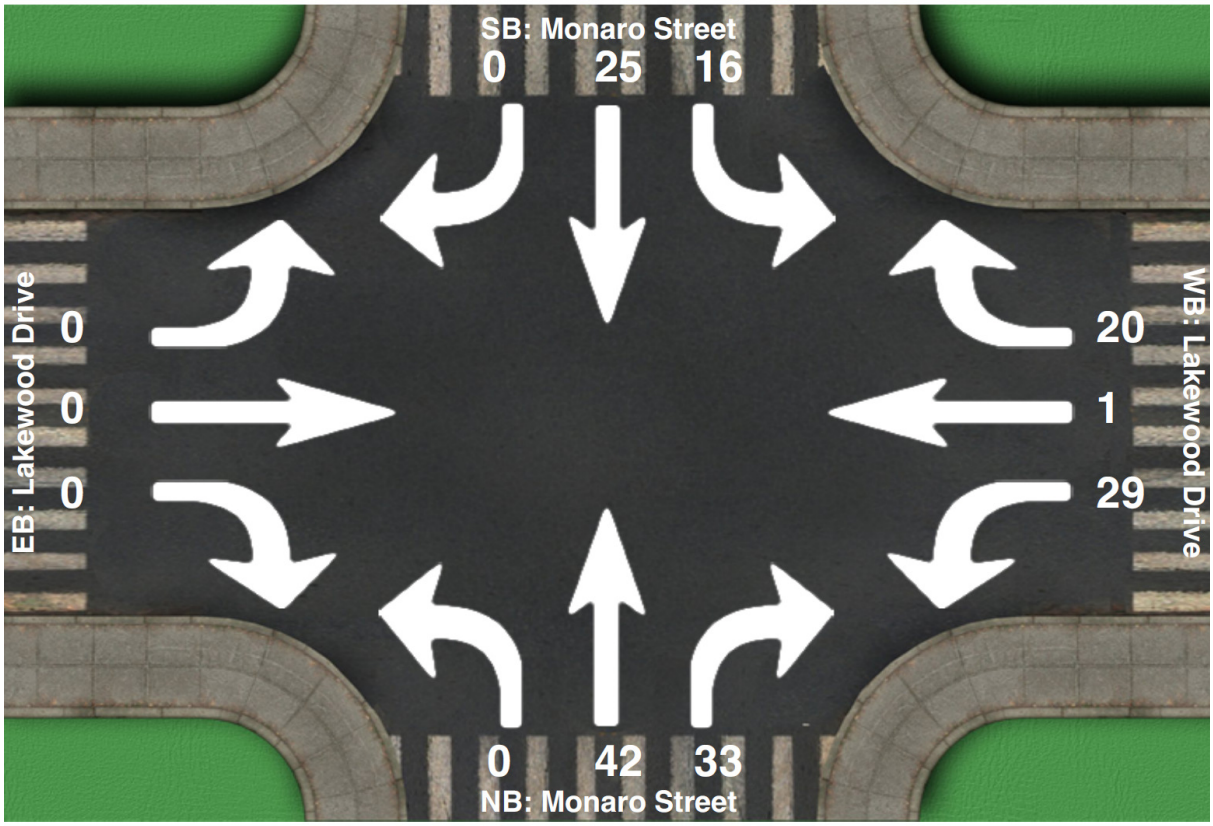
SECTION AA
FOR AUTHORITY APPROVAL ONLY
NOT FOR CONSTRUCTION
Seniors Community
Lot 3 Lakewood Drive
Merimbula
Justice Fox
SECTIONS
DA401
21159
ELK

ATTACHMENT B
TRAFFIC DATA

Intersection Peak Hour

Location: Monaro Street at Lakewood Drive, Merimbula
GPS Coordinates: Lat=-36.889486, Lon=149.897616
Date: 2022-05-26
Day of week: Thursday
Weather:
Analyst: Jeff



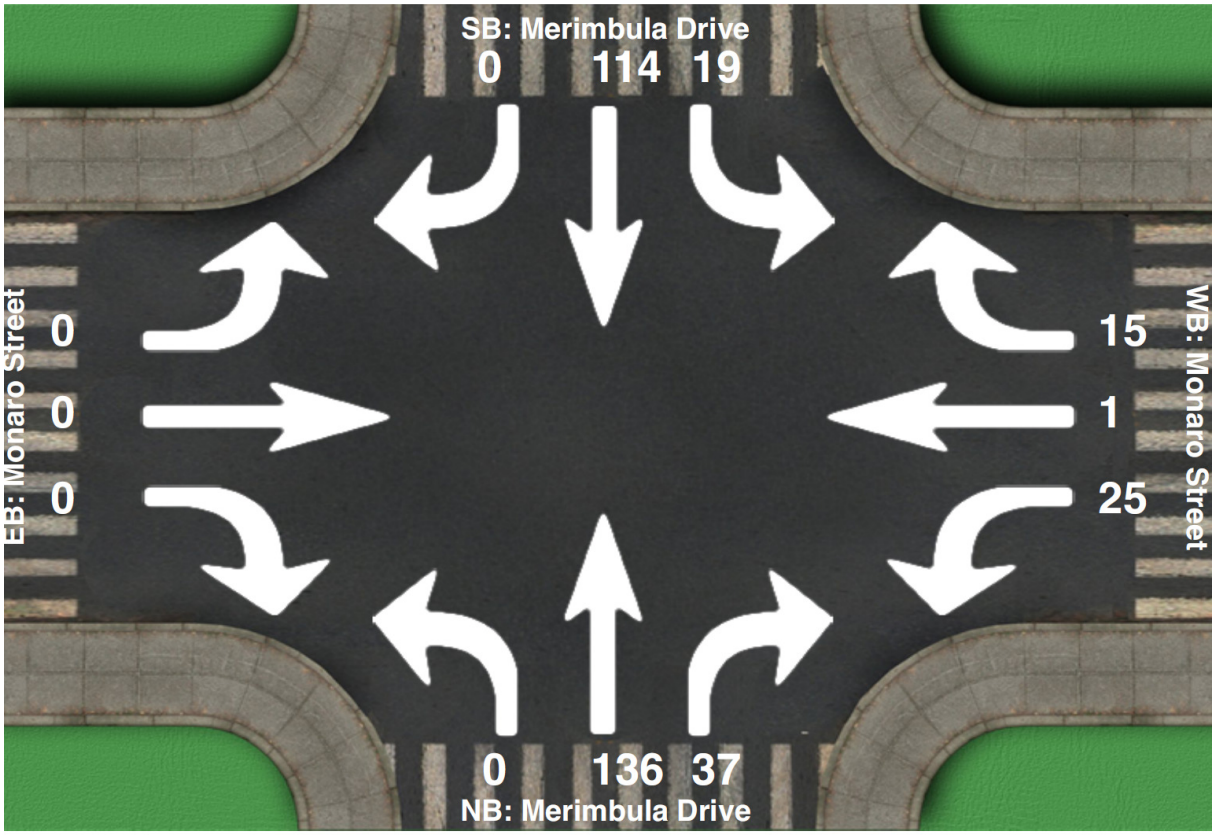
Intersection Peak Hour

15:00 - 16:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	16	25	0	29	1	20	0	42	33	0	0	0	166
Factor	0.67	0.62	0.00	0.72	0.25	0.71	0.00	0.75	0.59	0.00	0.00	0.00	0.77
Approach Factor	0.73			0.83			0.72			0.00			

Intersection Count Summary

Location: Merimbula Drive at Monaro Street, Merimbula
GPS Coordinates: Lat=-36.887196, Lon=149.897190
Date: 2022-05-26
Day of week: Thursday
Weather:
Analyst: Jeff



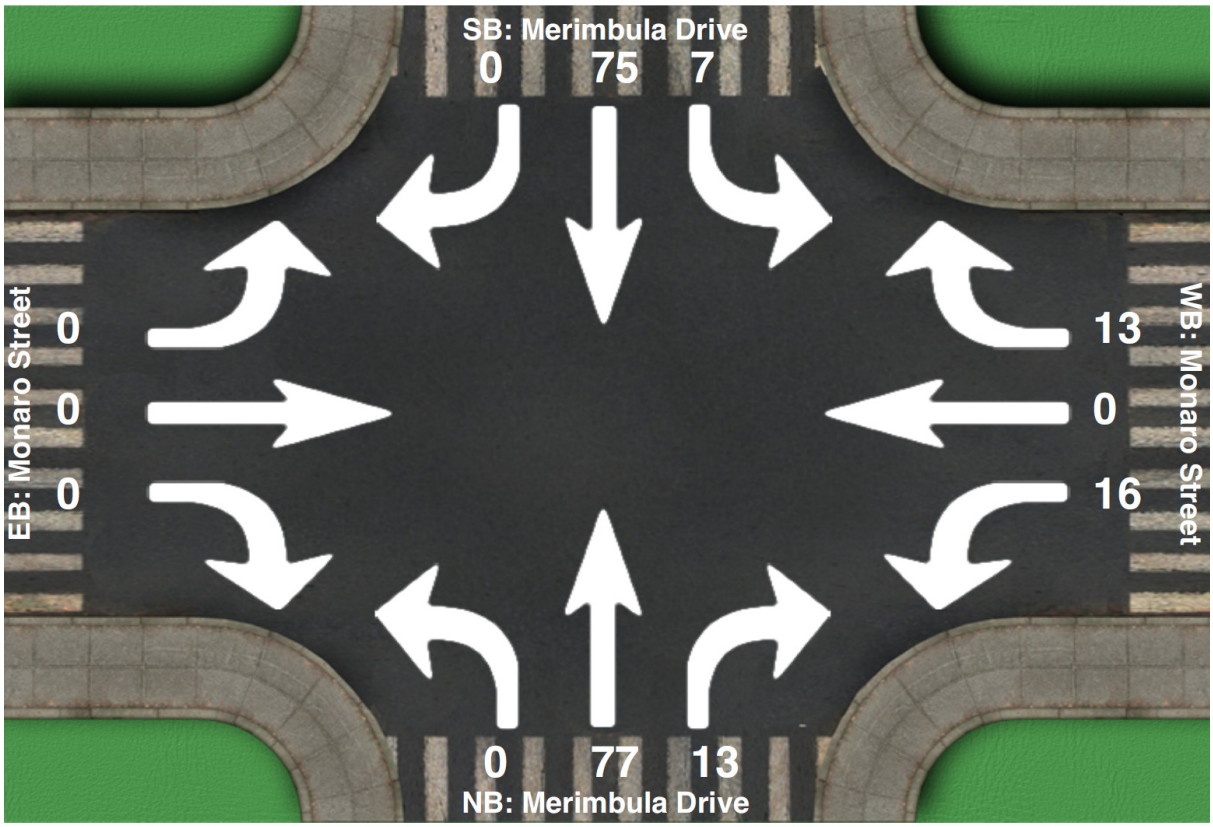
Intersection Count Summary

16:04 - 16:34

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	19	114	0	25	1	15	0	136	37	0	0	0	347

Intersection Count Summary

Location: Merimbula Drive at Monaro Street, Merimbula
GPS Coordinates: Lat=-36.887899, Lon=149.897153
Date: 2022-05-27
Day of week: Friday
Weather:
Analyst: Jeff



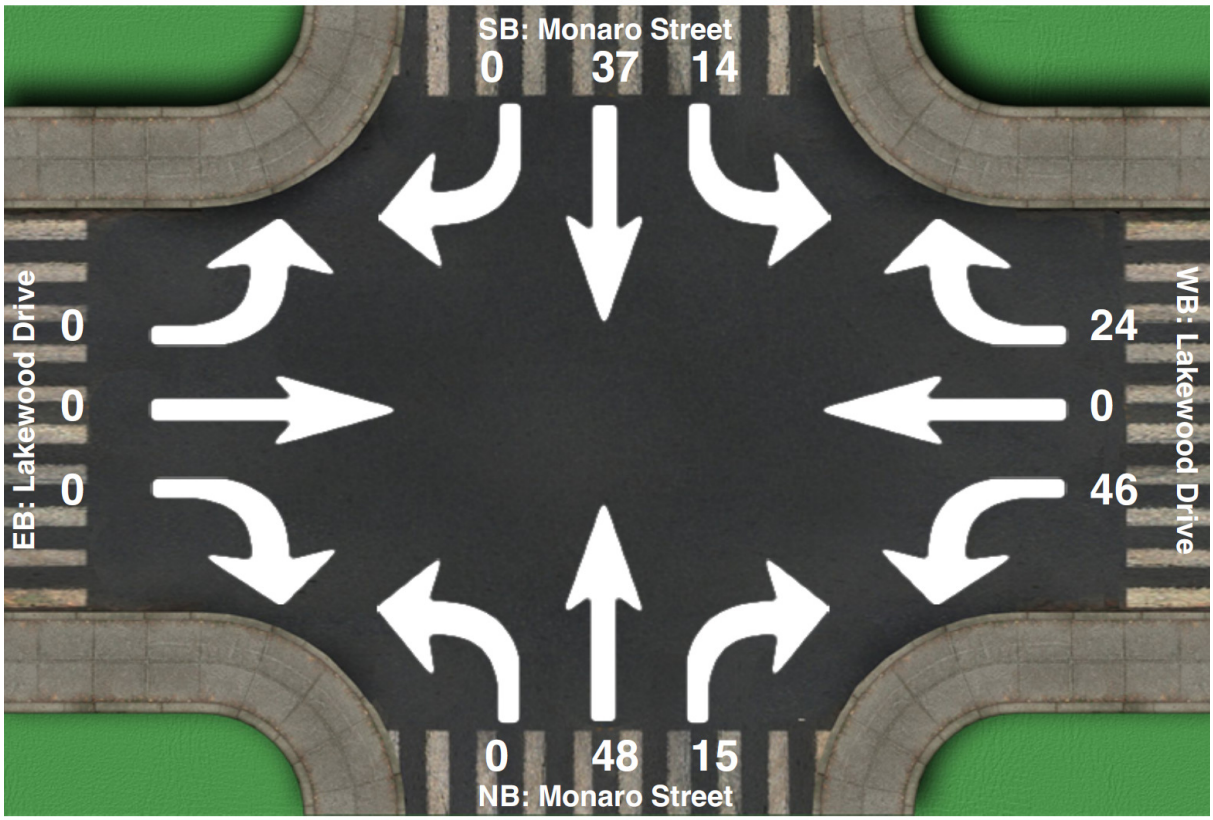
Intersection Count Summary

07:27 - 07:56

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	7	75	0	16	0	13	0	77	13	0	0	0	201

Intersection Peak Hour

Location: Monaro Street at Lakewood Drive, Merimbula
GPS Coordinates: Lat=-36.889275, Lon=149.897509
Date: 2022-05-27
Day of week: Friday
Weather:
Analyst: Jeff



Intersection Peak Hour

08:00 - 09:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	14	37	0	46	0	24	0	48	15	0	0	0	184
Factor	0.50	0.62	0.00	0.64	0.00	0.75	0.00	0.75	0.62	0.00	0.00	0.00	0.73
Approach Factor	0.58			0.70			0.83			0.00			

ATTACHMENT C
SIDRA MOVEMENT SUMMARY TABLES

MOVEMENT SUMMARY

Site: 101 [2022AM (Site Folder: General)]

Merimbula Drive / Morano Street, Merimbula
May 2022 counts
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/30min]	HV] %	DEMAND FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Merimbula Drive														
1	L2	7	5.0	14	5.0	0.087	5.6	LOS A	0.0	0.0	0.00	0.05	0.00	57.6
2	T1	75	5.0	150	5.0	0.087	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.5
Approach		82	5.0	164	5.0	0.087	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
North: Merimbula Drive														
8	T1	77	5.0	154	5.0	0.080	0.2	LOS A	0.2	1.3	0.09	0.08	0.09	58.9
9	R2	13	5.0	26	5.0	0.080	6.1	LOS A	0.2	1.3	0.12	0.11	0.12	56.5
Approach		90	5.0	180	5.0	0.080	1.0	NA	0.2	1.3	0.09	0.09	0.09	58.5
West: Monaro Street														
10	L2	16	5.0	32	5.0	0.023	6.1	LOS A	0.1	0.7	0.24	0.54	0.24	52.6
12	R2	13	5.0	26	5.0	0.027	7.2	LOS A	0.1	0.8	0.43	0.62	0.43	51.7
Approach		29	5.0	58	5.0	0.027	6.6	LOS A	0.1	0.8	0.33	0.58	0.33	52.2
All Vehicles		201	5.0	402	5.0	0.087	1.6	NA	0.2	1.3	0.09	0.14	0.09	57.8

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 8 July 2022 9:10:00 AM
Project: C:\Work Documents\Projects\2022\22.043 - Merimbula SL\Sidra\Merimbula_Monaro.sip9

MOVEMENT SUMMARY

Site: 101 [2022PM (Site Folder: General)]

Merimbula Drive / Morano Street, Merimbula
May 2022 counts
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/30min]	HV] %	DEMAND FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Merimbula Drive														
1	L2	19	5.0	38	5.0	0.142	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	57.3
2	T1	114	5.0	228	5.0	0.142	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	59.2
Approach		133	5.0	266	5.0	0.142	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.9
North: Merimbula Drive														
8	T1	136	5.0	272	5.0	0.162	0.5	LOS A	0.6	4.2	0.17	0.12	0.17	58.2
9	R2	37	5.0	74	5.0	0.162	6.7	LOS A	0.6	4.2	0.24	0.17	0.24	55.6
Approach		173	5.0	346	5.0	0.162	1.8	NA	0.6	4.2	0.19	0.13	0.19	57.6
West: Monaro Street														
10	L2	25	5.0	50	5.0	0.039	6.4	LOS A	0.2	1.1	0.31	0.57	0.31	52.4
12	R2	16	5.0	32	5.0	0.046	9.1	LOS A	0.2	1.3	0.56	0.73	0.56	50.3
Approach		41	5.0	82	5.0	0.046	7.4	LOS A	0.2	1.3	0.41	0.63	0.41	51.6
All Vehicles		347	5.0	694	5.0	0.162	2.1	NA	0.6	4.2	0.14	0.17	0.14	57.3

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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 [2022AM + development (Site Folder: General)]

Merimbula Drive / Morano Street, Merimbula
May 2022 counts
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/30min]	HV] %	DEMAND FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Merimbula Drive														
1	L2	8	5.0	16	5.0	0.088	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	57.6
2	T1	75	5.0	150	5.0	0.088	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.4
Approach		83	5.0	166	5.0	0.088	0.6	NA	0.0	0.0	0.00	0.06	0.00	59.3
North: Merimbula Drive														
8	T1	77	5.0	154	5.0	0.083	0.2	LOS A	0.2	1.5	0.10	0.09	0.10	58.8
9	R2	15	5.0	30	5.0	0.083	6.1	LOS A	0.2	1.5	0.13	0.12	0.13	56.3
Approach		92	5.0	184	5.0	0.083	1.2	NA	0.2	1.5	0.10	0.10	0.10	58.3
West: Monaro Street														
10	L2	21	5.0	42	5.0	0.030	6.1	LOS A	0.1	0.9	0.25	0.55	0.25	52.6
12	R2	16	5.0	32	5.0	0.033	7.2	LOS A	0.1	1.0	0.43	0.63	0.43	51.6
Approach		37	5.0	74	5.0	0.033	6.6	LOS A	0.1	1.0	0.33	0.58	0.33	52.2
All Vehicles		212	5.0	424	5.0	0.088	1.9	NA	0.2	1.5	0.10	0.17	0.10	57.5

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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 [2022PM + development (Site Folder: General)]

Merimbula Drive / Morano Street, Merimbula
May 2022 counts
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/30min]	HV] %	DEMAND FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Merimbula Drive														
1	L2	22	5.0	44	5.0	0.145	5.6	LOS A	0.0	0.0	0.00	0.10	0.00	57.2
2	T1	114	5.0	228	5.0	0.145	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	59.1
Approach		136	5.0	272	5.0	0.145	0.9	NA	0.0	0.0	0.00	0.10	0.00	58.8
North: Merimbula Drive														
8	T1	136	5.0	272	5.0	0.168	0.5	LOS A	0.6	4.7	0.19	0.13	0.19	58.1
9	R2	42	5.0	84	5.0	0.168	6.7	LOS A	0.6	4.7	0.26	0.19	0.26	55.4
Approach		178	5.0	356	5.0	0.168	2.0	NA	0.6	4.7	0.21	0.15	0.21	57.4
West: Monaro Street														
10	L2	27	5.0	54	5.0	0.042	6.4	LOS A	0.2	1.2	0.31	0.57	0.31	52.4
12	R2	17	5.0	34	5.0	0.050	9.3	LOS A	0.2	1.4	0.57	0.74	0.57	50.2
Approach		44	5.0	88	5.0	0.050	7.5	LOS A	0.2	1.4	0.41	0.64	0.41	51.5
All Vehicles		358	5.0	716	5.0	0.168	2.3	NA	0.6	4.7	0.15	0.19	0.15	57.1

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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 [2032AM + development (Site Folder: General)]

Merimbula Drive / Morano Street, Merimbula
May 2022 counts
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/30min]	HV] %	DEMAND FLOWS [Total veh/h]	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh]	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Merimbula Drive														
1	L2	8	5.0	20	5.0	0.108	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	57.6
2	T1	75	5.0	183	5.0	0.108	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.4
Approach		83	5.0	202	5.0	0.108	0.6	NA	0.0	0.0	0.00	0.06	0.00	59.2
North: Merimbula Drive														
8	T1	77	5.0	188	5.0	0.101	0.2	LOS A	0.3	1.9	0.11	0.09	0.11	58.7
9	R2	15	5.0	37	5.0	0.101	6.3	LOS A	0.3	1.9	0.15	0.12	0.15	56.2
Approach		92	5.0	224	5.0	0.101	1.2	NA	0.3	1.9	0.12	0.10	0.12	58.3
West: Monaro Street														
10	L2	21	5.0	51	5.0	0.038	6.2	LOS A	0.1	1.1	0.28	0.56	0.28	52.5
12	R2	16	5.0	39	5.0	0.045	7.8	LOS A	0.2	1.3	0.48	0.66	0.48	51.2
Approach		37	5.0	90	5.0	0.045	6.9	LOS A	0.2	1.3	0.37	0.60	0.37	52.0
All Vehicles		212	5.0	517	5.0	0.108	2.0	NA	0.3	1.9	0.12	0.17	0.12	57.4

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [2032PM + development (Site Folder: General)]

Merimbula Drive / Morano Street, Merimbula
May 2022 counts
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/30min	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Merimbula Drive														
1	L2	22	5.0	54	5.0	0.177	5.6	LOS A	0.0	0.0	0.00	0.10	0.00	57.2
2	T1	114	5.0	278	5.0	0.177	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	59.0
Approach		136	5.0	332	5.0	0.177	1.0	NA	0.0	0.0	0.00	0.10	0.00	58.7
North: Merimbula Drive														
8	T1	136	5.0	332	5.0	0.209	0.7	LOS A	0.9	6.3	0.22	0.14	0.22	58.0
9	R2	42	5.0	102	5.0	0.209	7.1	LOS A	0.9	6.3	0.31	0.19	0.31	55.2
Approach		178	5.0	434	5.0	0.209	2.2	NA	0.9	6.3	0.24	0.15	0.24	57.3
West: Monaro Street														
10	L2	27	5.0	66	5.0	0.054	6.6	LOS A	0.2	1.5	0.35	0.59	0.35	52.3
12	R2	17	5.0	41	5.0	0.073	10.7	LOS A	0.3	2.1	0.62	0.81	0.62	49.2
Approach		44	5.0	107	5.0	0.073	8.2	LOS A	0.3	2.1	0.46	0.68	0.46	51.1
All Vehicles		358	5.0	873	5.0	0.209	2.5	NA	0.9	6.3	0.18	0.20	0.18	57.0

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