

Our Ref: 23084

14 February 2024

BlueCHP Limited
3A / 12 O'Sullivan Road
Leumeah NSW 2560

Attention: Gareth Bird

Dear Gareth

**RE: 15-17 LUPIN AVENUE AND 82 BELMORE STREET, FAIRFIELD EAST (DA 294.1/2023)
RESPONSE TO COUNCIL RFI**

Background

A Development Application (DA) has been submitted for a residential development comprising 39 apartments and a two-level basement car park at 15-17 Lupin Avenue and 82 Belmore Street, Fairfield East.

Fairfield City Council (Council) has provided an assessment of the DA submission, requesting further information to continue their consideration of the application. This letter reproduces the traffic and parking related matters with responses provided thereafter.

One Way Traffic Arrangement

The ramp to basement from street level and the internal ramps have not been designed to cater for simultaneous two-way traffic. This is considered to be inappropriate and results in confusion and queuing. The one-way traffic arrangement is therefore not considered orderly or appropriate. The Applicant shall amend the proposal and allow for 2-way traffic movement into and within the basement.

Australian Standards AS2890.1:2004 Clause 3.2.2. states that as a guide where there are more than 30 vehicle movements in a peak hour (in and out combined), driveways should allow for two vehicles to pass, i.e. a minimum width of 5.5m.

The development proposal comprises 39 apartments with the car park now comprising 37 car spaces as a result of some changes proposed within the car park to improve circulation. As

detailed in the Traffic Impact Assessment¹ that accompanied the DA submission (TTPP, 2023), the development proposal is expected to generate approximately 6-7 vehicle trips per hour during the weekday peak periods based on high-density residential flat building traffic generation rates provided in Transport for NSW's technical direction TDT 2013/04a. This is considerably less than the 30 vehicles per hour provided in AS2890.1 where two vehicle passing is required on a driveway.

The expected level of traffic generation equates to on average one vehicle every eight to 10 minutes. Being a residential development, traffic flows during the weekday peak periods are tidal flow in nature; that is, mostly outbound in the morning and inbound in the afternoon. Typical inbound and outbound splits adopted for residential developments is 80 percent in the peak direction. This means, the development could have six vehicles in the peak direction and one vehicle in the opposing direction during the weekday peak hours.

The likelihood of two-way interaction on the proposed two-way one lane ramps is low and yet it is proposed to be managed using stop/go signal system, convex mirrors and waiting bays on each parking aisle which provide compliant aisle widths. The northern circulation ramp has been widened to improve two-way circulation within the car park reducing the extent of the stop/go signal system required. Swept path analysis demonstrating that 85th and 99th percentile vehicles can pass in opposing directions on the entry ramp and subsequent parking aisles are attached to this letter. Therefore, given the low turnover of the car park and familiar users (i.e. residents) primarily using it, the proposed arrangement is considered acceptable.

Parking Space Dimensions

The plans provided in the traffic impact assessment depict that parking space 12 on basement 1 plan and parking spaces 10 on basement 2 plan have stairwells shown within the parking space. The parking spaces and aisle widths should be clear and unobstructed and in accordance to AS2890.1.

Updated swept path analysis is attached to this letter that clearly illustrate parking spaces and aisles are unobstructed by structure.

Gradient of Access Driveway

The gradient of the access driveway shall be in accordance with AS2890.1:2004. Sight lines can also be affected vertically as well as horizontally.

¹ TTPP, 15-17 Lupin Avenue and 82 Belmore Street, Fairfield East – In-fill Affordable Housing – Traffic Impact Assessment dated 23 May 2023

Sight Distance requirements at Access Driveways

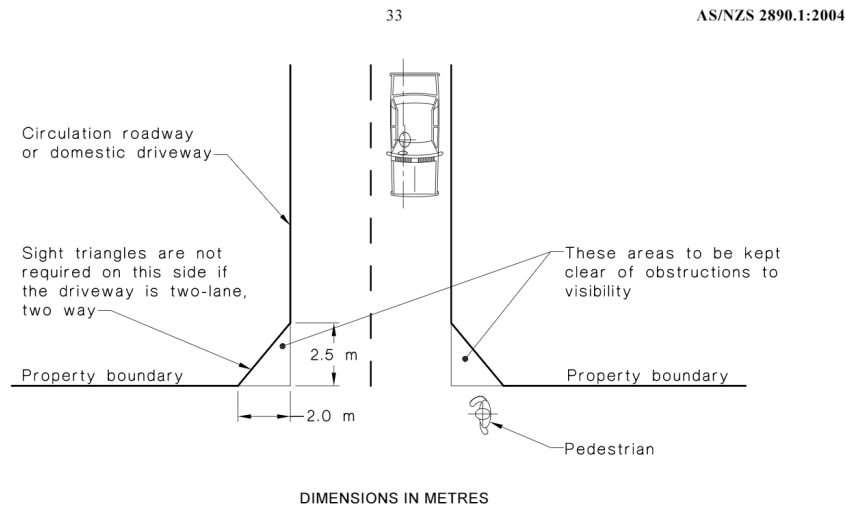
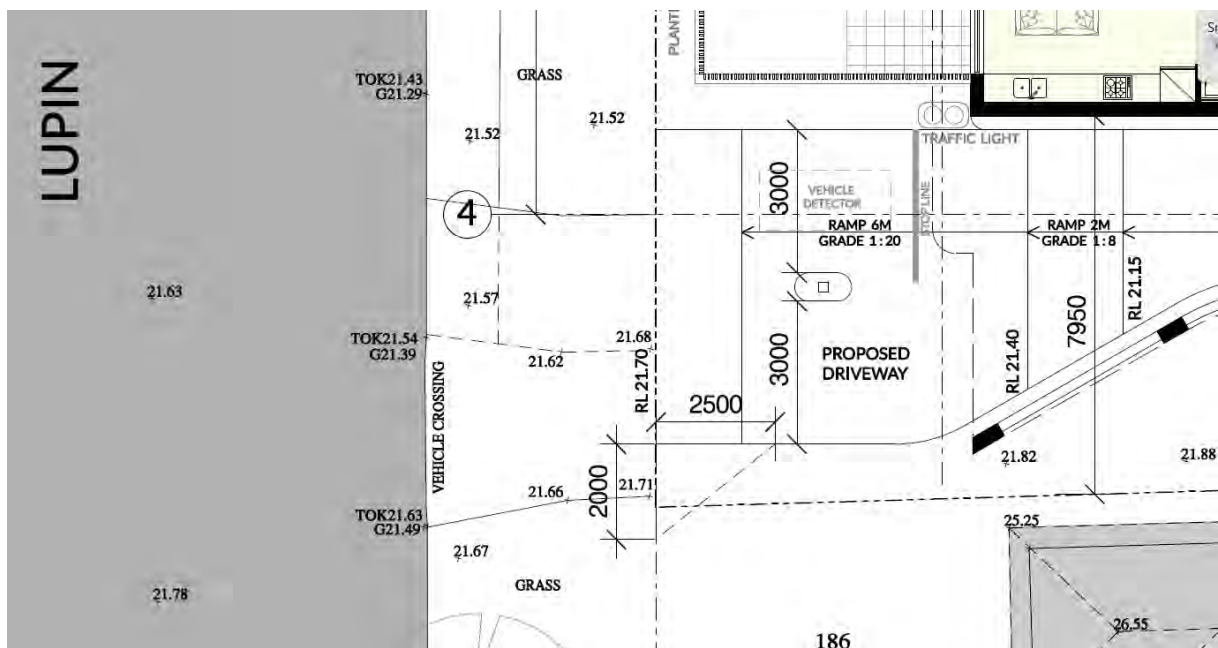


FIGURE 3.3 MINIMUM SIGHT LINES FOR PEDESTRIAN SAFETY

The sight triangle to the left of the driver is to be kept clear of obstructions to visibility as shown in figure 3.3 of AS2890.1:2004. This is required to ensure the motorist can sight to a pedestrian who may be a child or pram being pushed, this area should not include the neighbouring properties land.

The proposed gradients of the driveway are compliant with AS2890.1 is set back 1,325mm from property boundary to the south, resulting in the adjoining property fence encroaching into the required sight triangle as shown in Figure 1.

Figure 1: Proposed Driveway Layout



Source: Loucas Architects, drawing no. Pn-21020-A-1000 Issue C dated 4 May 2023

The existing property boundary fence is about 1.0m as shown in Figure 2.

Figure 2: Existing Adjoining Property Fence



Source: Google Street View (Image from October 2020)

AS2890.1 does not specify the minimum height of obstructions for pedestrian visibility. With sight line triangles provided to enable view of passing pedestrians, the existing fence provides this ability when considering that most pedestrians would be taller than 1.0m or walking with someone who is (i.e. children with their guardians). Therefore, the height of the existing fence is considered appropriate from a AS2890.1 sight line requirement compliance perspective.

It is noted that sight lines would improve with the proposed development as vehicles will be able to enter and exit the site in a forward direction, where comparatively, the existing site requires vehicles to reverse out of the site.

Any landscaping proposed between the driveway and property fence line should either not grow higher than the adjoining fence or regularly be trimmed to maintain the height.

Although not considered necessary, a convex mirror could be installed within the planter box immediately north of the proposed driveway to further aide sight lines between departing motorists and pedestrians approaching from the south.

Vehicle Manoeuvrability Assessment

It is difficult to determine where the walls and columns are located when reviewing the swept path diagrams. Furthermore, the swept paths for vehicles entering parking spaces have not been shown. It is also not clear how visitors will be able to turn around should visitor parking spaces be in use.

Updated swept path analysis is attached to this letter that should more clearly distinguish structure from parking spaces and swept paths.

Figure 3 of the analysis illustrates how visitors can turnaround if visitor parking is all occupied.

Figure 4 and Figure 6 of the analysis show entry and exit swept paths for parking space 01 at the southern end of both basement levels. A single parking space is now proposed at the southern end of basement 1 (as opposed to two spaces) to improve vehicle access to the space.

This change and the widened northern circulation ramps result in 37 parking spaces proposed which still satisfies the Housing SEPP and Council DCP requirements (i.e. minimum 31 spaces, including 10 visitor spaces).

Conclusion

Based on the above and the updated architectural plans, the development proposal can still be supported from a traffic and parking perspective.

We trust the above is to your satisfaction. Should you have any queries regarding the above or require further information, please do not hesitate to contact us on 8437 7800.

Yours sincerely

A handwritten signature in black ink, appearing to read 'W Johnson'.

Wayne Johnson
Director

Encl.

Attachment One – Updated Architectural Plans

Attachment Two – Updated Swept Path Analysis

Attachment One

Updated Architecture Plans



ISSUE				REVISION DESCRIPTION	APP'D	DATE
A				ISSUE FOR CLIENT APPROVAL	TL	11/02/2022
B				ISSUE FOR CLIENT APPROVAL	TL	18/04/2023
C				ISSUE FOR COORDINATION	HE	04/05/2023
D				ISSUE FOR COORDINATION	HE	30/05/2023
E				ISSUE FOR DA	HE	14/07/2023
F				AMENDMENTS TO COUNCIL	HE	01/02/2024

Client:

Level 3, Suite 309, 7-9 Gibbons St,
Redfern NSW, Australia
Tel: (02) 8052 9600
Email: admin@loucasarc.com.au

Architect:

LOUCAS ARCHITECTS
ABN 92 626 290 122
Level 3, Suite 309, 7-9 Gibbons St,
Redfern NSW, Australia
Tel: (02) 8052 9600
Email: admin@loucasarc.com.au
Nominated Architect:
Jim Apostolou 7490

Project Details:

RESIDENTIAL DEVELOPMENT

Project Address:

**15-17 LUPIN AVE & 82 BELMORE ST,
FAIRFIELD**

Drawing Title:

GROUND FLOOR PLAN

Project Number:

Pn-21020

Drawing Number:

A-1000

Drawing Status:

AUTHORITY APPROVAL

Issue:

F

Scale: 1:100 @A1 1:200 @A3

Date Printed:

02/02/2024

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Email: admin@loucasarc.com.au
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Jim Apostolou 7490

LOUCAS
ARCHITECTS

Project Details:

RESIDENTIAL DEVELOPMENT

Project Address:

**15-17 LUPIN AVE & 82 BELMORE ST,
FAIRFIELD**

Drawing Title:

BASEMENT PLAN

Project Number:

Pn-21020

Drawing Number:

A-900

Drawing Status:

AUTHORITY APPROVAL

Issue:

F

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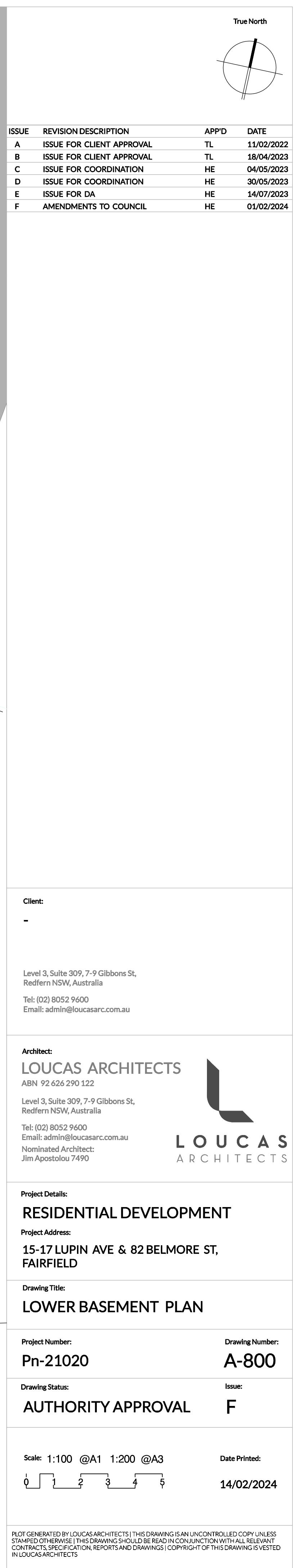
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14/02/2024

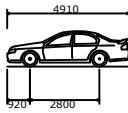
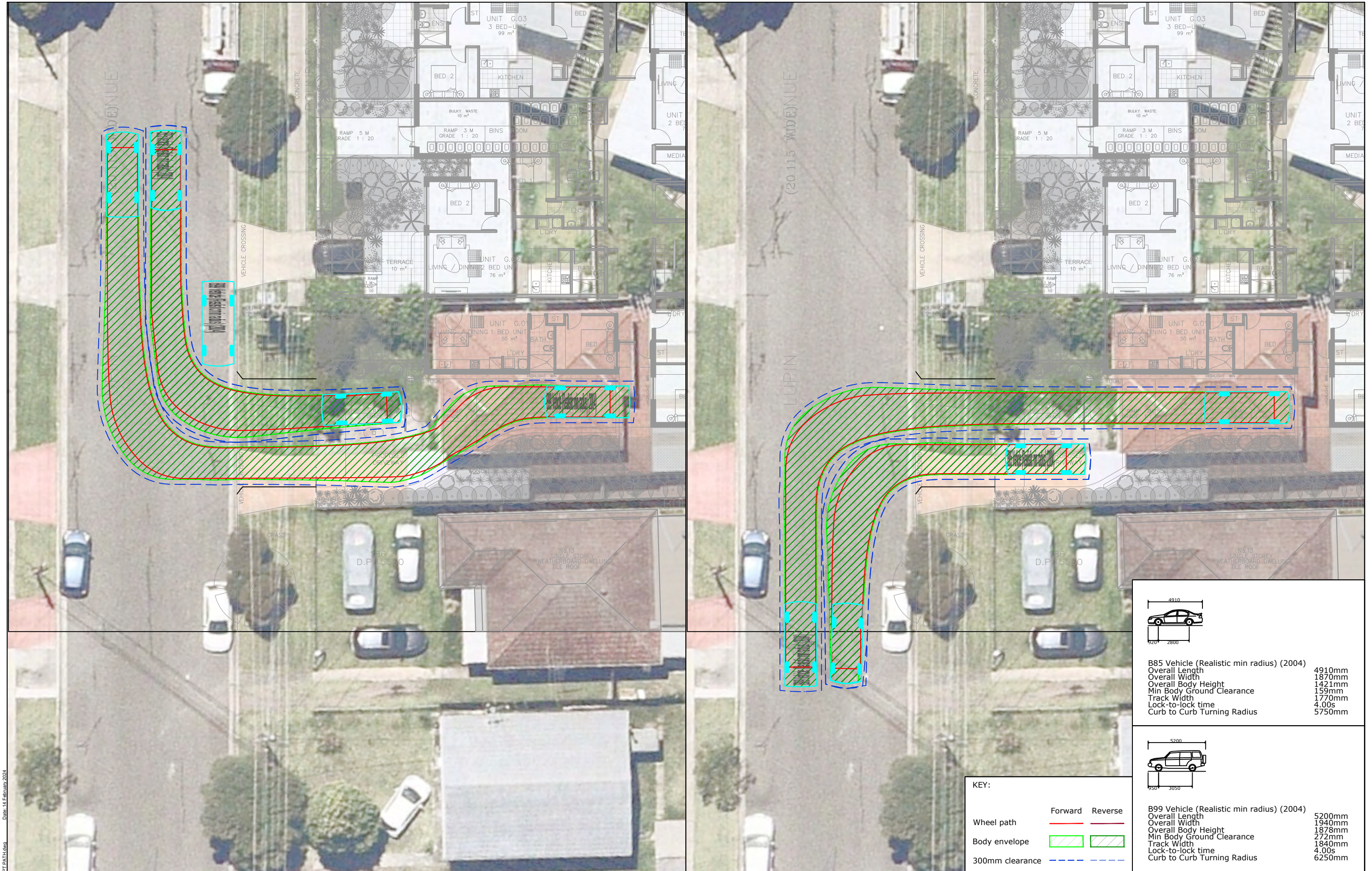
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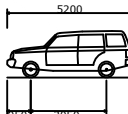


Attachment Two

Updated Swept Path Analysis



B85 Vehicle (Realistic min radius) (2004)
Overall Length 4910mm
Overall Width 1870mm
Overall Body Height 1421mm
Min Body Ground Clearance 159mm
Track Width 1770mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 5750mm



B99 Vehicle (Realistic min radius) (2004)
Overall Length 5200mm
Overall Width 1940mm
Overall Body Height 1878mm
Min Body Ground Clearance 272mm
Track Width 1840mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6250mm

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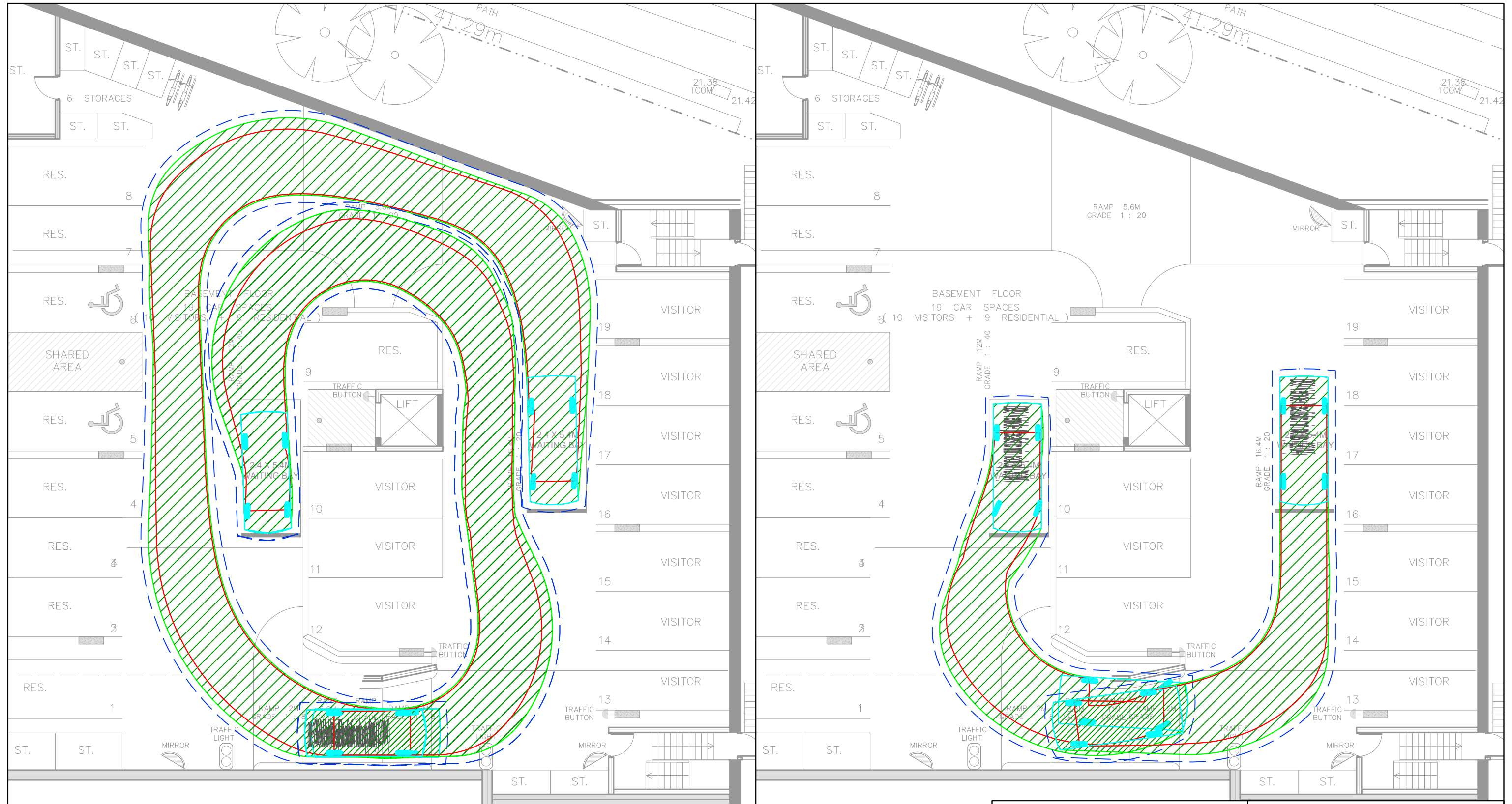
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Wheel path	—	—
Body envelope	—	—
300mm clearance	—	—

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	AM	WJ	14/02/24



PROJECT	15-17 LUPIN AVENUE, FAIRFIELD EAST
TITLE	SWEPT PATH ANALYSIS - DRIVEWAY AS2890.1 4.91m B85 VEHICLE & 5.2m B99 VEHICLE

DWG No.	23084CAD004
FIGURE 1	
DATE STAMP	14 FEBRUARY 2024
PROJECT No.	23084
SCALE	Custom @A3
REV.	A



KEY:

Wheel path	Forward	Reverse
Body envelope		
300mm clearance		

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm

B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	AM	WJ	14/02/24



PROJECT

15-17 LUPIN AVENUE, FAIRFIELD EAST

TITLE

SWEPT PATH ANALYSIS - UPPER BASEMENT CIRCULATION
AS2890.1 4.91m B85 VEHICLE & 5.2m B99 VEHICLE

DWG No.

23084CAD004
FIGURE 2

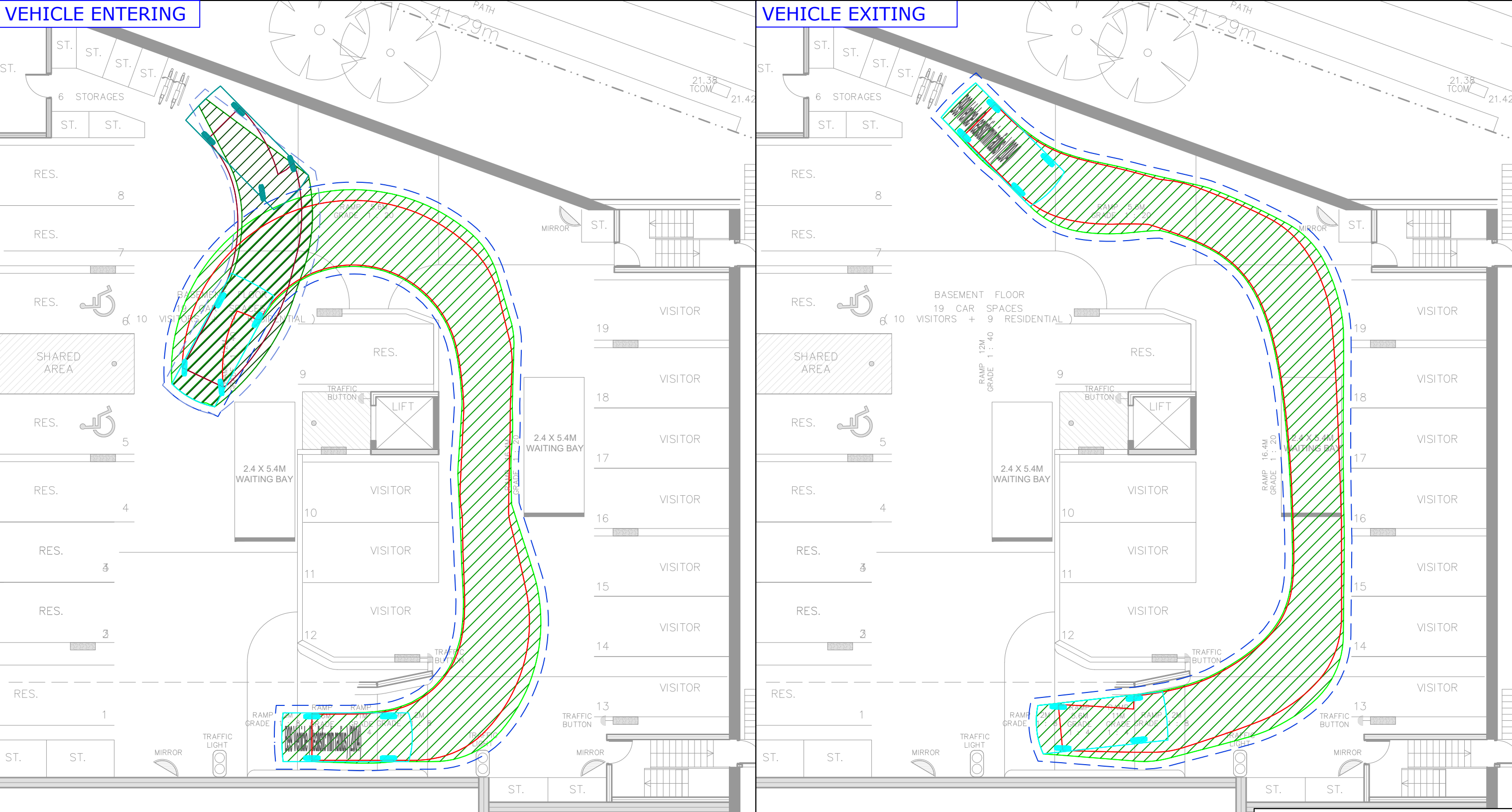
DATE STAMP

14 FEBRUARY 2024

PROJECT No.	SCALE	REV.
23084	1:150 @A3	A

VEHICLE ENTERING

VEHICLE EXITING



KEY:

Wheel path	Forward	Reverse
Body envelope		
300mm clearance		

B99 Vehicle (Realistic min radius) (2004)
Overall Length 5200mm
Overall Width 1940mm
Overall Body Height 1878mm
Min Body Ground Clearance 272mm
Track Width 1840mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6250mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	AM	WJ	14/02/24

PROJECT

15-17 LUPIN AVENUE, FAIRFIELD EAST

TITLE

SWEPT PATH ANALYSIS - UPPER BASEMENT CIRCULATION WHEN VISITOR PARKING IS FULL
AS2890.1 5.2m B99 VEHICLE

DWG No.

23084CAD004
FIGURE 3

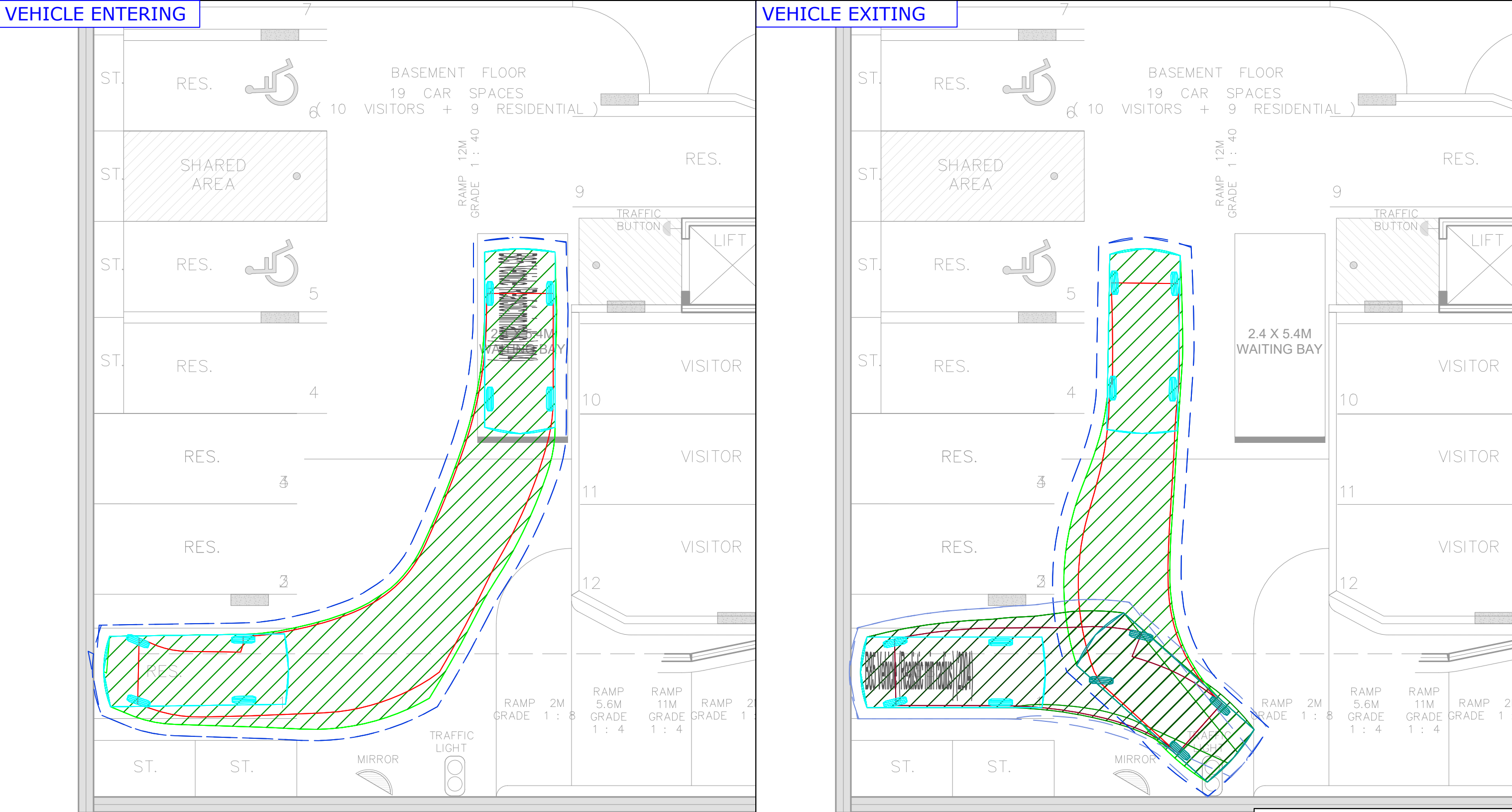
DATE STAMP

14 FEBRUARY 2024

PROJECT No.	SCALE	REV.
23084	1:150 @A3	A

VEHICLE ENTERING

VEHICLE EXITING



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	AM	WJ	14/02/24

PROJECT

15-17 LUPIN AVENUE, FAIRFIELD EAST

TITLE

SWEPT PATH ANALYSIS - UPPER BASEMENT CAR SPACE 1
AS2890.1 4.91m B85 VEHICLE

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

B85 Vehicle (Realistic min radius) (2004)

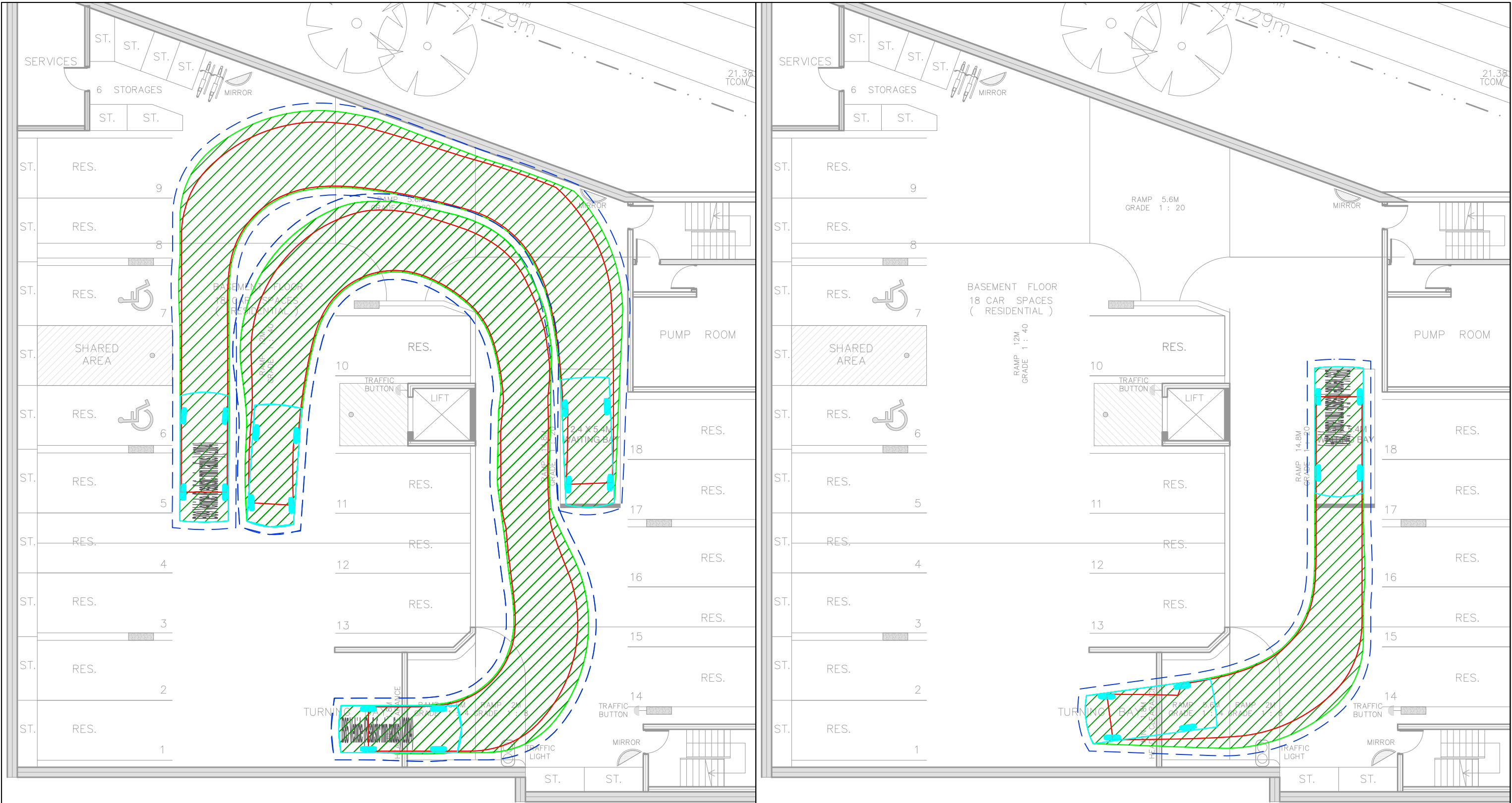
Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm

DWG No. 23084CAD004

FIGURE 4

DATE STAMP 14 FEBRUARY 2024

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REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	AM	WJ	14/02/24

PROJECT

TITLE

15-17 LUPIN AVENUE, FAIRFIELD EAST

SWEPT PATH ANALYSIS - UPPER BASEMENT CIRCULATION
AS2890.1 4.91m B85 VEHICLE & 5.2m B99 VEHICLE

DWG No. 23084CAD004
FIGURE 5

DATE STAMP
14 FEBRUARY 2024

PROJECT No. 23084

SCALE 1:150 @A3

REV. A

B85 Vehicle (Realistic min radius) (2004)
Overall Length 4910mm
Overall Width 1870mm
Overall Body Height 1421mm
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KEY:

Wheel path

Body envelope

300mm clearance

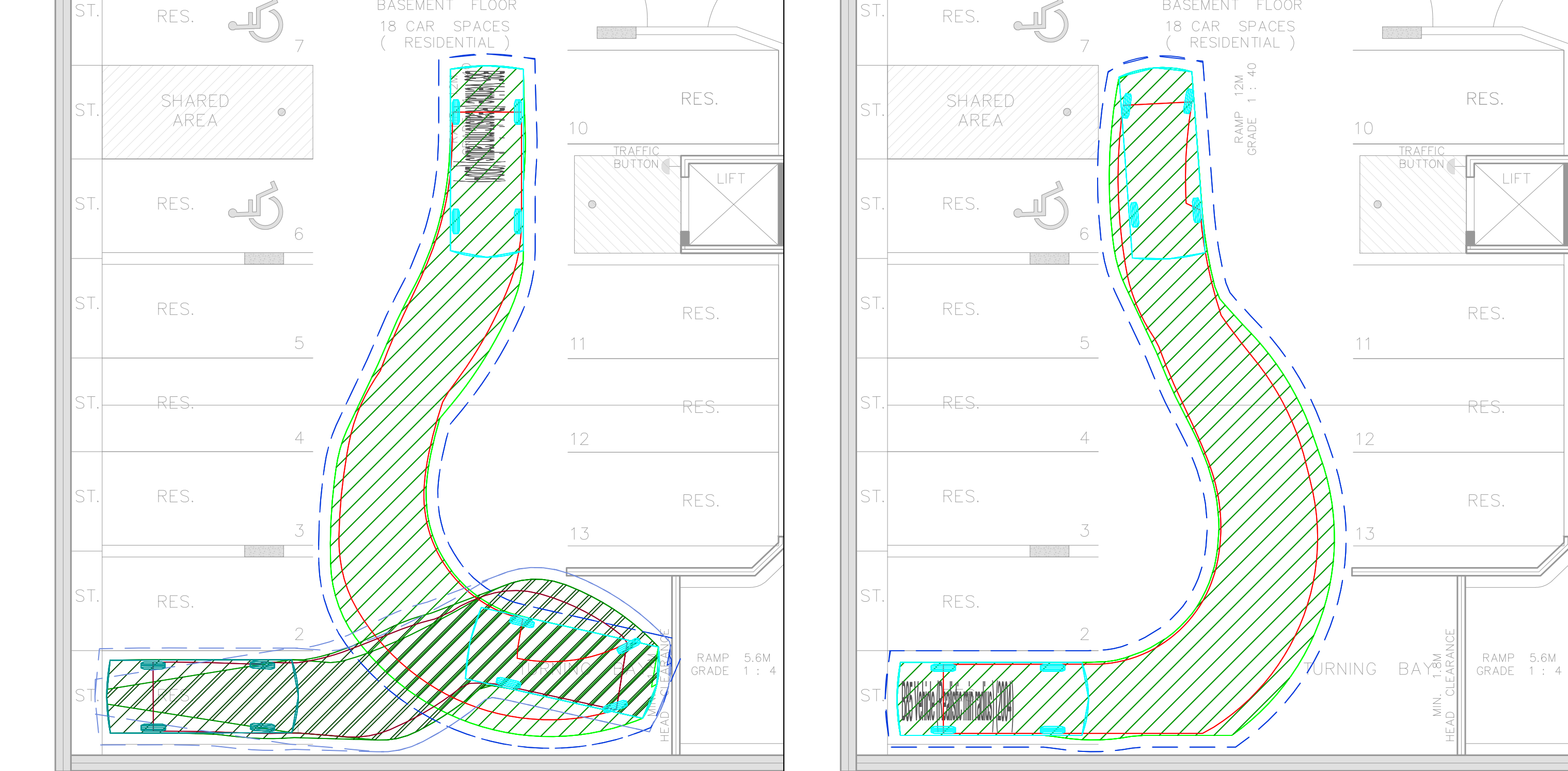
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VEHICLE ENTERING

VEHICLE EXITING



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	AM	WJ	14/02/24

PROJECT

15-17 LUPIN AVENUE, FAIRFIELD EAST

TITLE

SWEPT PATH ANALYSIS - UPPER BASEMENT CAR SPACE 1
AS2890.1 4.91m B85 VEHICLE

KEY:

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Wheel path		
Body envelope		
300mm clearance		

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DWG No. 23084CAD004

FIGURE 6

DATE STAMP 14 FEBRUARY 2024

PROJECT No. 23084	SCALE 1:100 @A3	REV. A
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