



CARPARK, RAMP AND DRIVEWAY CERTIFICATION OF PROPOSED RESIDENTIAL DEVELOPMENT

15-17 Dent Street in Jamisontown

Prepared for: Bishi Constructions

A1615739N (Version 1d)

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1. INTRODUCTION

ML Traffic Engineers was commissioned by Bishi Constructions to prepare a car parking certification report of the proposed residential development at 15-17 Dent Street in Jamisontown.

The car park is on two basement levels with vehicle access and egress via Dent Street.

Reference is made to AS2890.1, AS2890.6 and Council's Development Control Plan for compliance.

2. DRIVEWAY AND RAMPS

The details of the ramp from the ground level to basement level 1 are as follows:

- The driveway/ramp is 6 metres wide between walls
- The minimum clearance above the ramp is 2.5 metres
- The gradients are as follows along the centreline from the inbound perspective for descriptive purposes:
 - Less than five percent for 5.5 metres
 - 12.5 percent for 2 metres
 - 25 percent for 10.9 metres
 - 12.5 percent for 2 metres

The details of the ramps within basement level 1 are as follows:

- The gradients are as follows along the centreline from the inbound perspective for descriptive purposes
 - 5 percent for 9.7 metres
 - 5 percent for 1 metre
 - 12.5 percent for 1 metre

The details of the ramp from basement level 1 to basement level 2 are as follows:

- The ramp is 6 metres wide between walls
- The gradients are as follows along the centreline from the inbound perspective for descriptive purposes:
 - 12.5 percent for 2 metres
 - 25 percent for 5.3 metres
 - 12.5 percent for 2 metres

The details of the ramps within basement level 2 are as follows:

- The gradients are as follows along the centreline from the inbound perspective for descriptive purposes

- 12.5 percent for 2 metres
- 5 percent for 7.2 metres
- Flat gradient around the corner
- 5 percent for 4.2 metres

3. CAR SPACES

The details of the car parking areas are as follows:

Basement Level 1

- The parking aisle is 5.95 metres wide at minimum
- The general 90-degree car spaces are 2.4 metres wide and 5.4 metres long
 - An additional 300mm clearance has been provided for car spaces adjacent to walls
- The disabled car space is 2.4 metres wide and 5.4 metres long
 - A shared zone of the same dimensions has been provided
 - A bollard setback of 850mm (+ or – 75 mm) has been provided
- Columns setback and length complies
- 4 bicycle spaces have been provided

Basement Level 2

- The parking aisle is 5.95 metres wide at minimum
- The general 90-degree car spaces are 2.4 metres wide and 5.4 metres long at minimum
 - An additional 300mm clearance has been provided for car spaces adjacent to walls
- The car wash bay is 2.4 metres wide at its narrowest and 5.4 metres long
- The disabled car spaces are 2.4 metres wide and 5.4 metres long
 - A shared zone of the same dimensions has been provided
 - A bollard setback of 850mm (+ or – 75 mm) has been provided
- Column setback and length complies
- 4 bicycle spaces have been provided

4. WASTE COLLECTION

Penrith city council has requested that waste collection is to be undertaken onsite with forward access and egress from the site. Swept Paths conducted with a 10.6m refuse collection vehicle show that a waste collection vehicle cannot leave the site in a forward manner.

Swept Paths have been performed using a 10.6m waste truck turning within the site as well as using a turntable within the basement level 1. Both movements show inadequate manoeuvrability. These swept paths are presented in Appendix A.

As shown, waste collection cannot occur onsite so it is recommended that waste is to be collected on street. This will have a minimal impact on the existing traffic conditions along Dent Street.

5. SWEPT PATHS

The following swept paths have been performed using a B85 vehicle to determine whether the turning movements show adequate manoeuvrability:

- Reverse inbound and forward outbound parking movements for R7 car space
- Forward inbound and reverse outbound parking movements for the car space opposite the ramp down to basement level 2
- Forward inbound and reverse outbound parking movements for R15 car space
- Reverse inbound and forward outbound parking movements for R21 car space

Swept paths show that all movements have adequate manoeuvrability

Swept paths are presented in Appendix A.

6. SIGHT DISTANCE

The car driver's sight distance requirement to enter the external road is stated in Figure 3.2 of AS2890.1.

The sight distance varies according to the speed of the external road. Dent Street has a speed limit of 50km/hr.

The minimum sight distance required is 45 metres. Site measurements showed that the minimum sight distance is met without permanent obstructions.

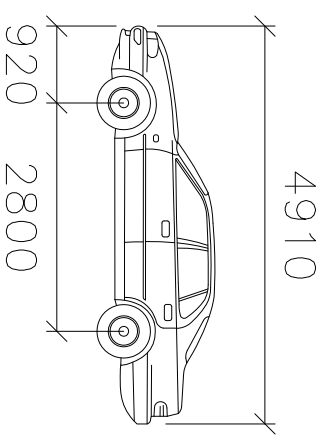
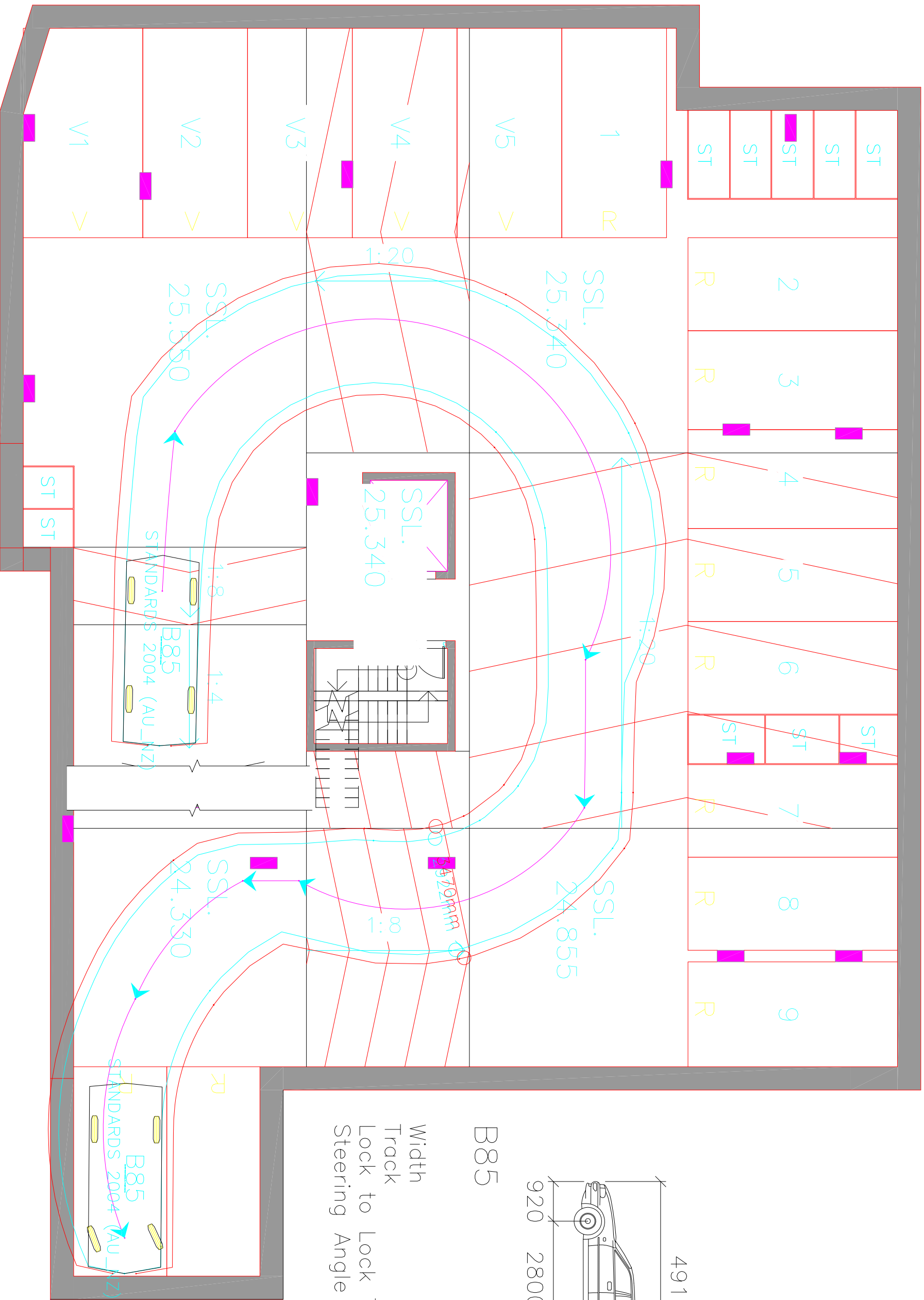
The pedestrian sight triangle (as set out in Figure 3.3) is met as well.

7. CONCLUSIONS AND RECOMMENDATIONS

The car parking area and driveway is generally compliant with Australian Standards and Council's DCP.

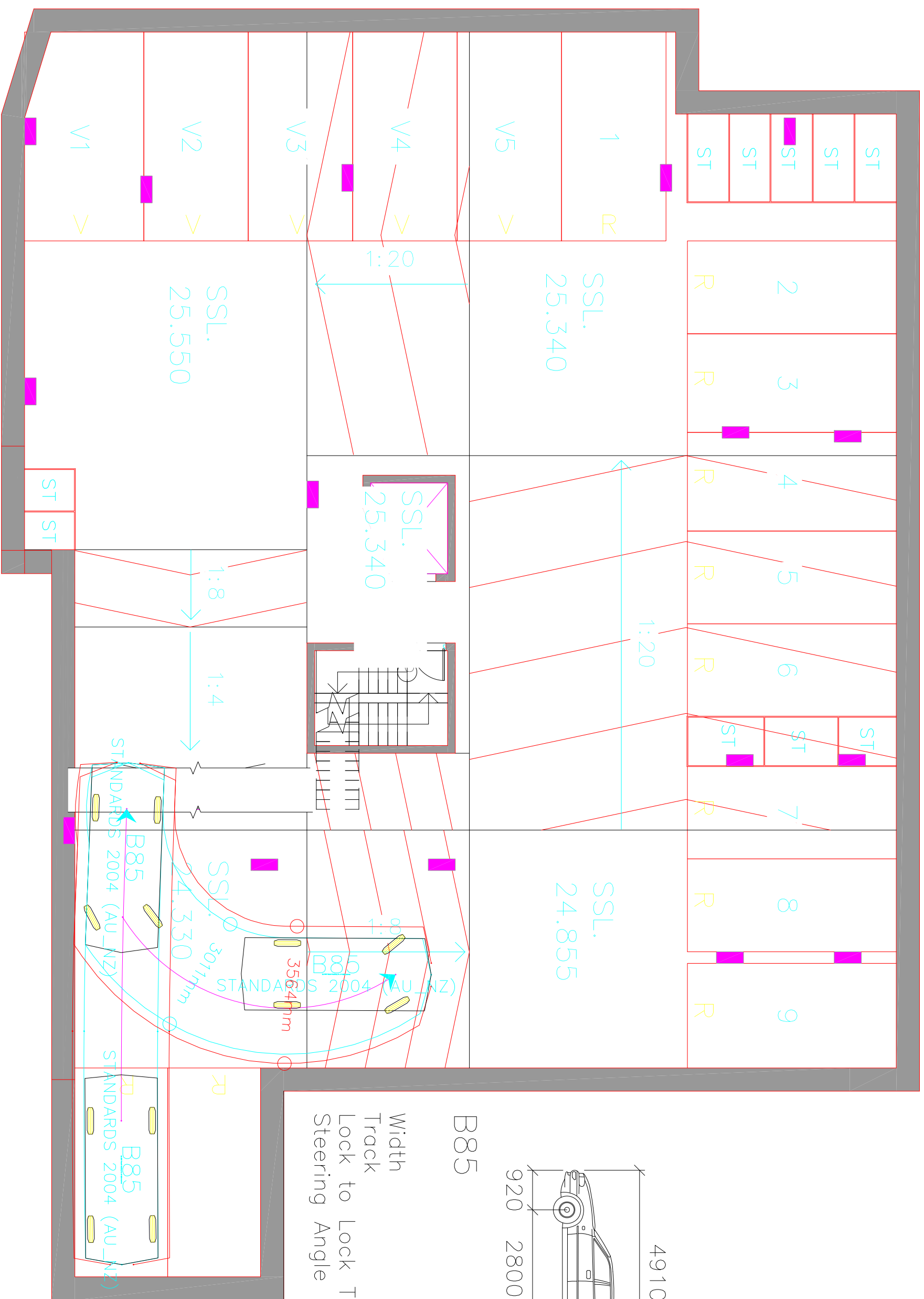
APPENDIX A – SWEPT PATHS

Forward Inbound car space opposite ramp



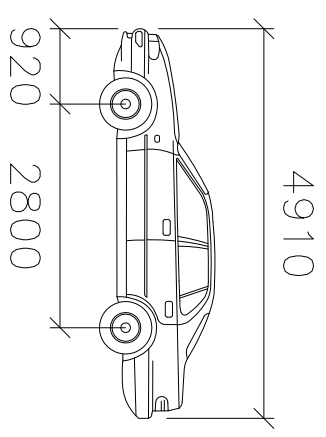
B85

- Width : 1870 mm
- Track : 1770 mm
- Lock to Lock Time : 6.0
- Steering Angle : 34.1



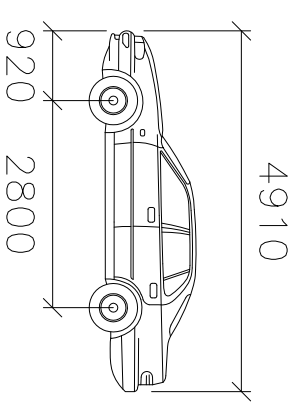
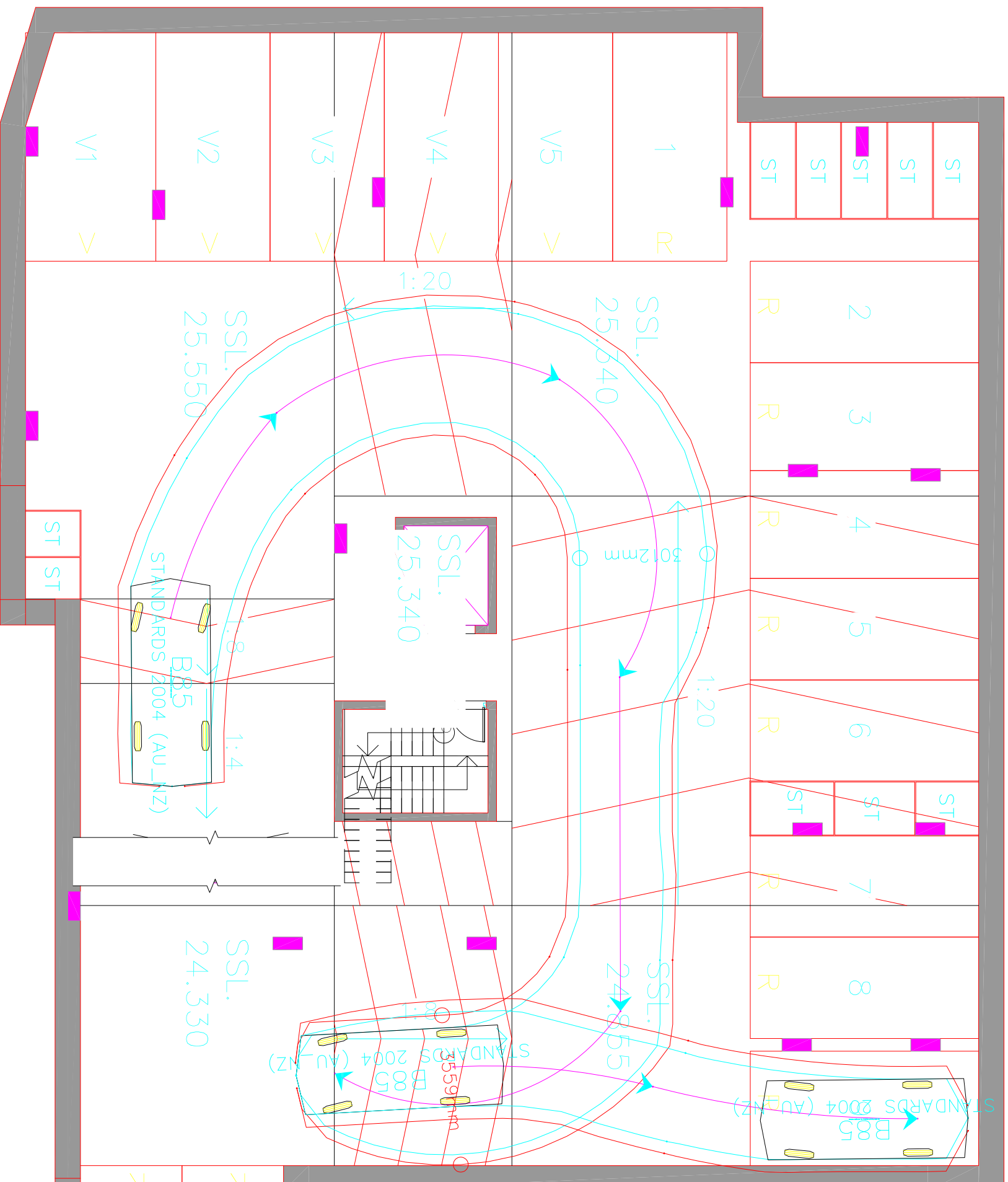
B85

Width	: 1870	mm
Track	: 1770	
Lock to Lock Time	: 6.0	
Steering Angle	: 34.1	



Reverse Outbound car space opposite ramp

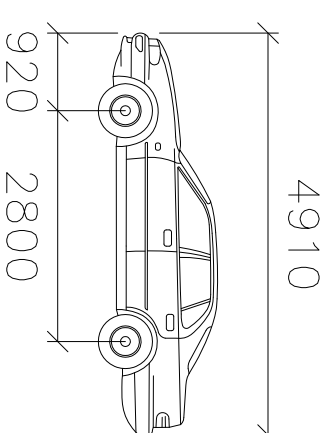
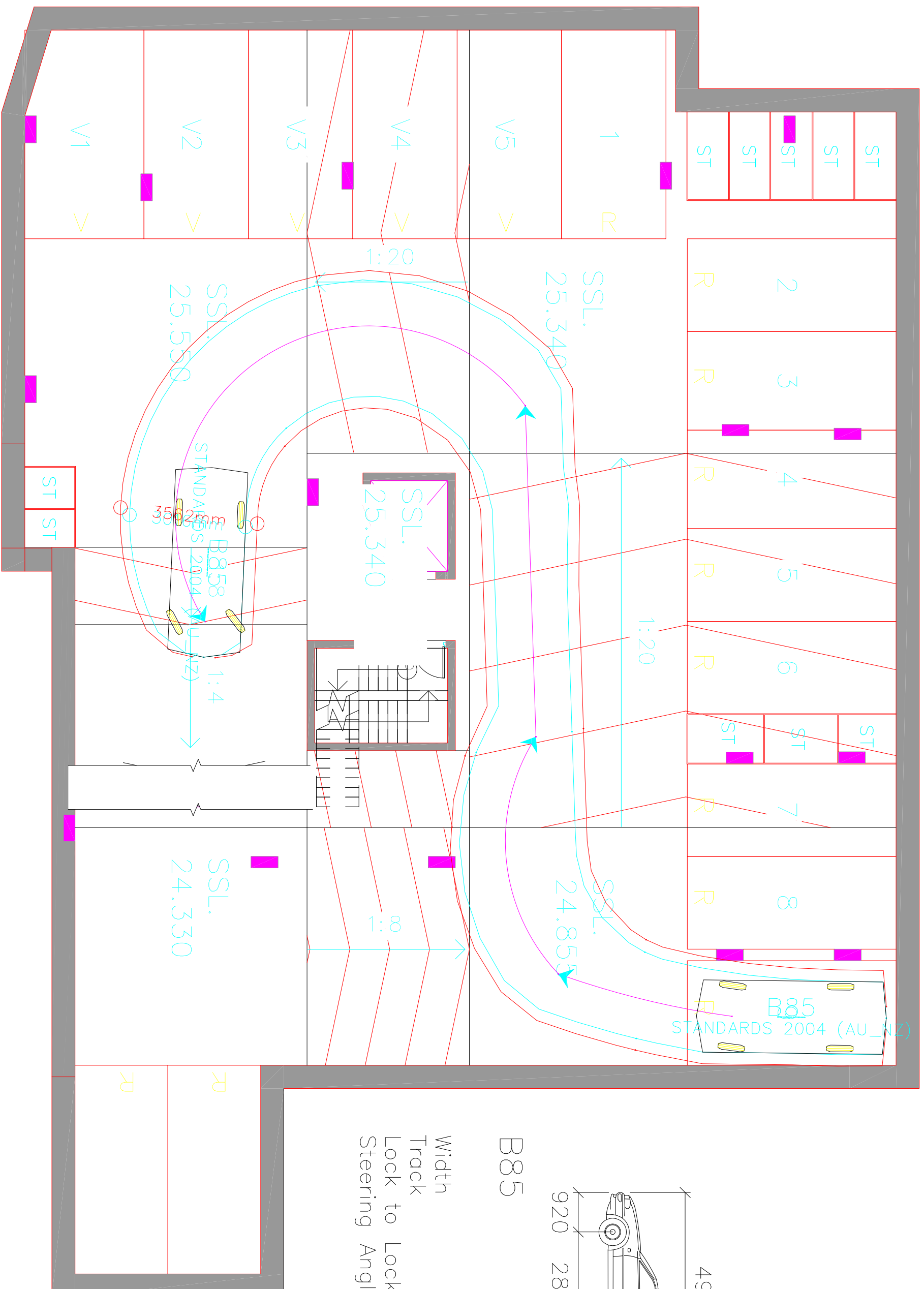
Reverse Inbound R9



B85

- Width : 1870 mm
- Track : 1770
- Lock to Lock Time : 6.0
- Steering Angle : 34.1

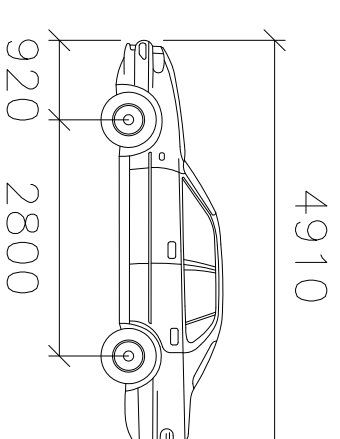
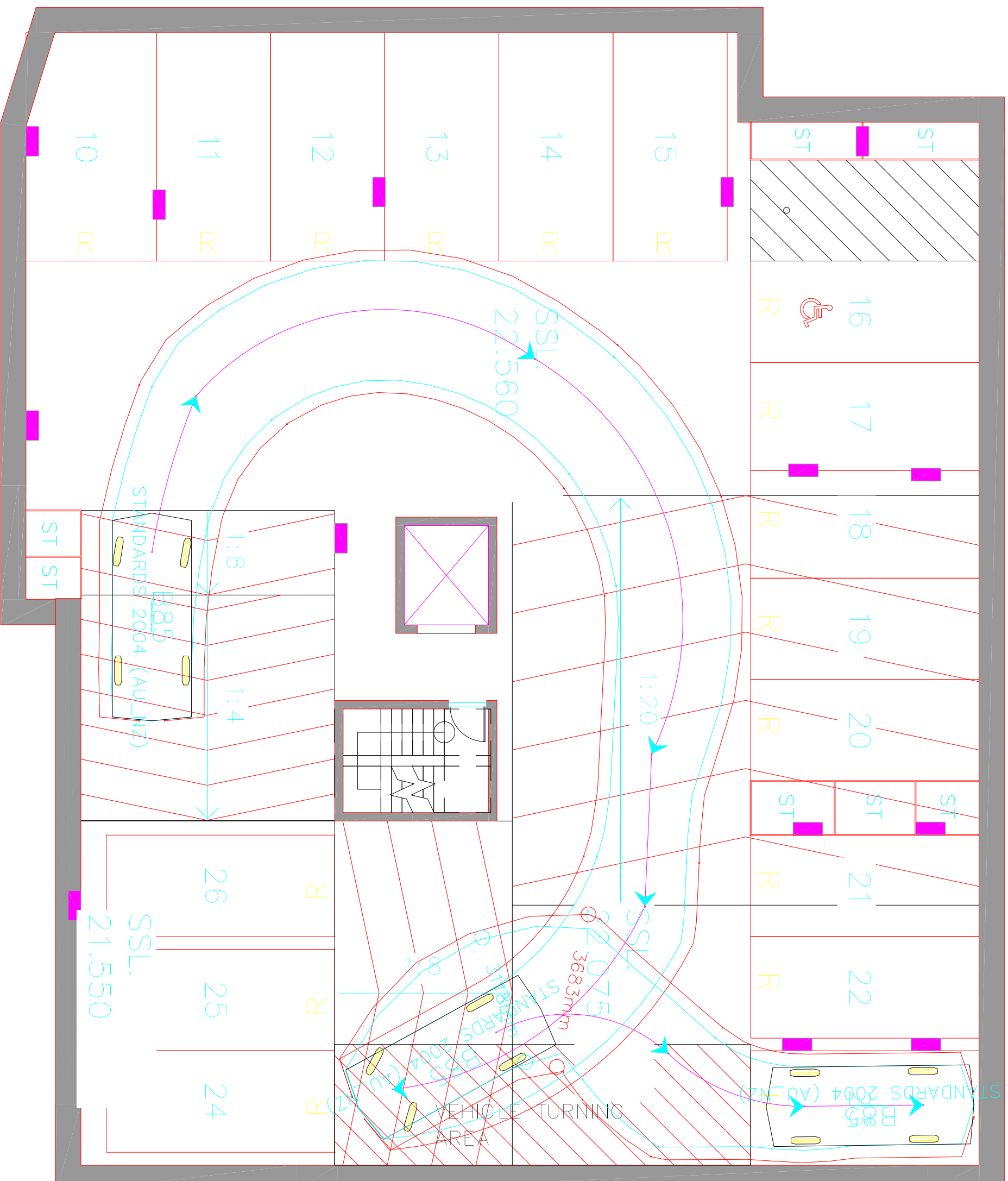
Forward Outbound R9



B85

Width	: 1870	mm
Track	: 1770	
Lock to Lock Time	: 6.0	
Steering Angle	: 34.1	

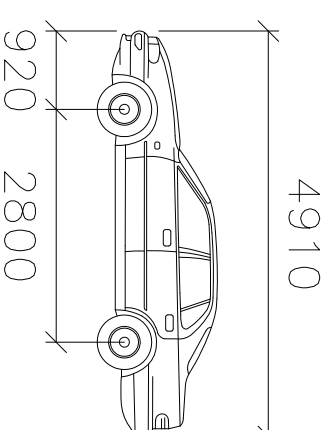
Reverse Inbound R23



B85

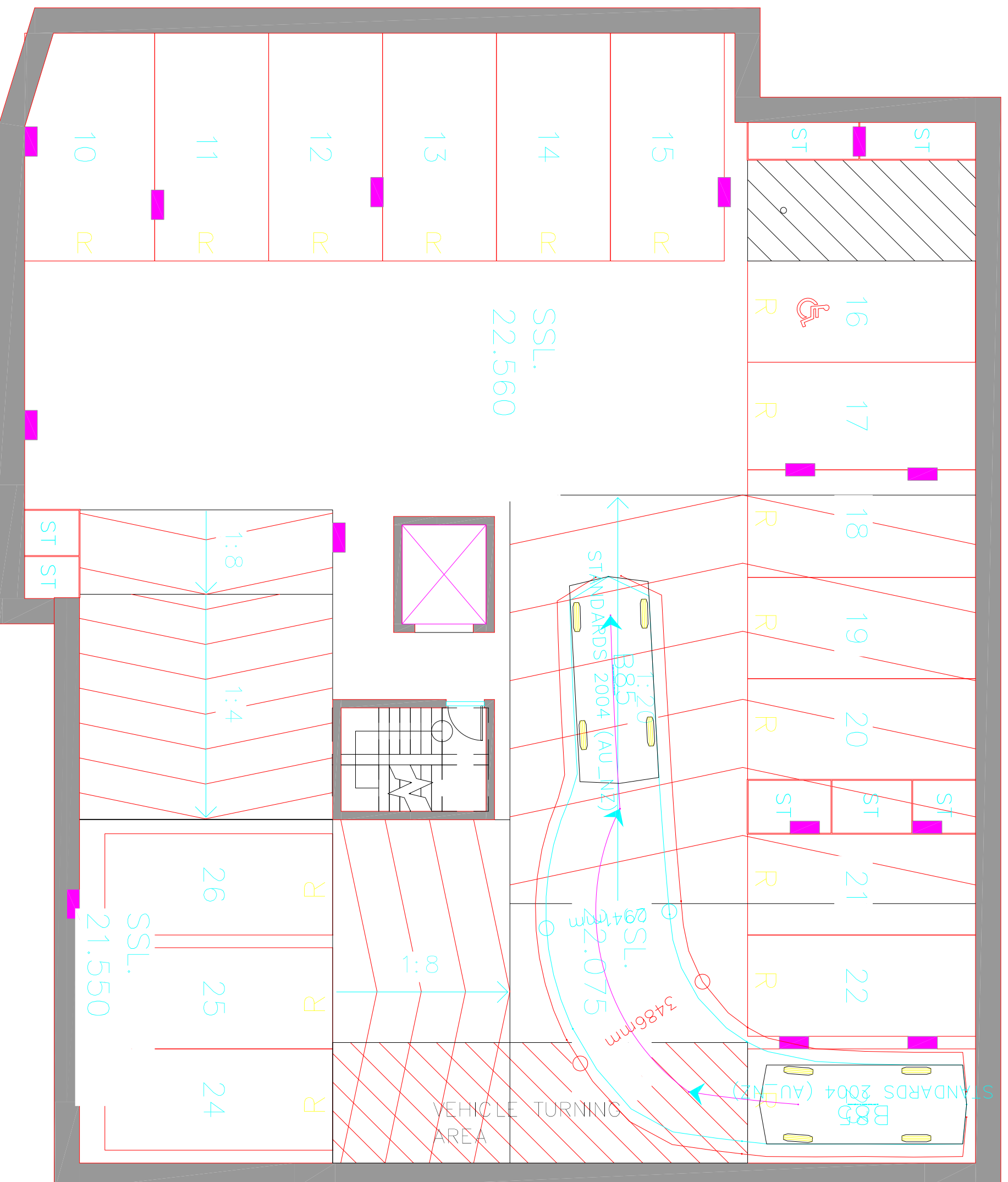
- Width : 1870 mm
- Track : 1770 mm
- Lock to Lock Time : 6.0
- Steering Angle : 34.1

Forward Outbound R23

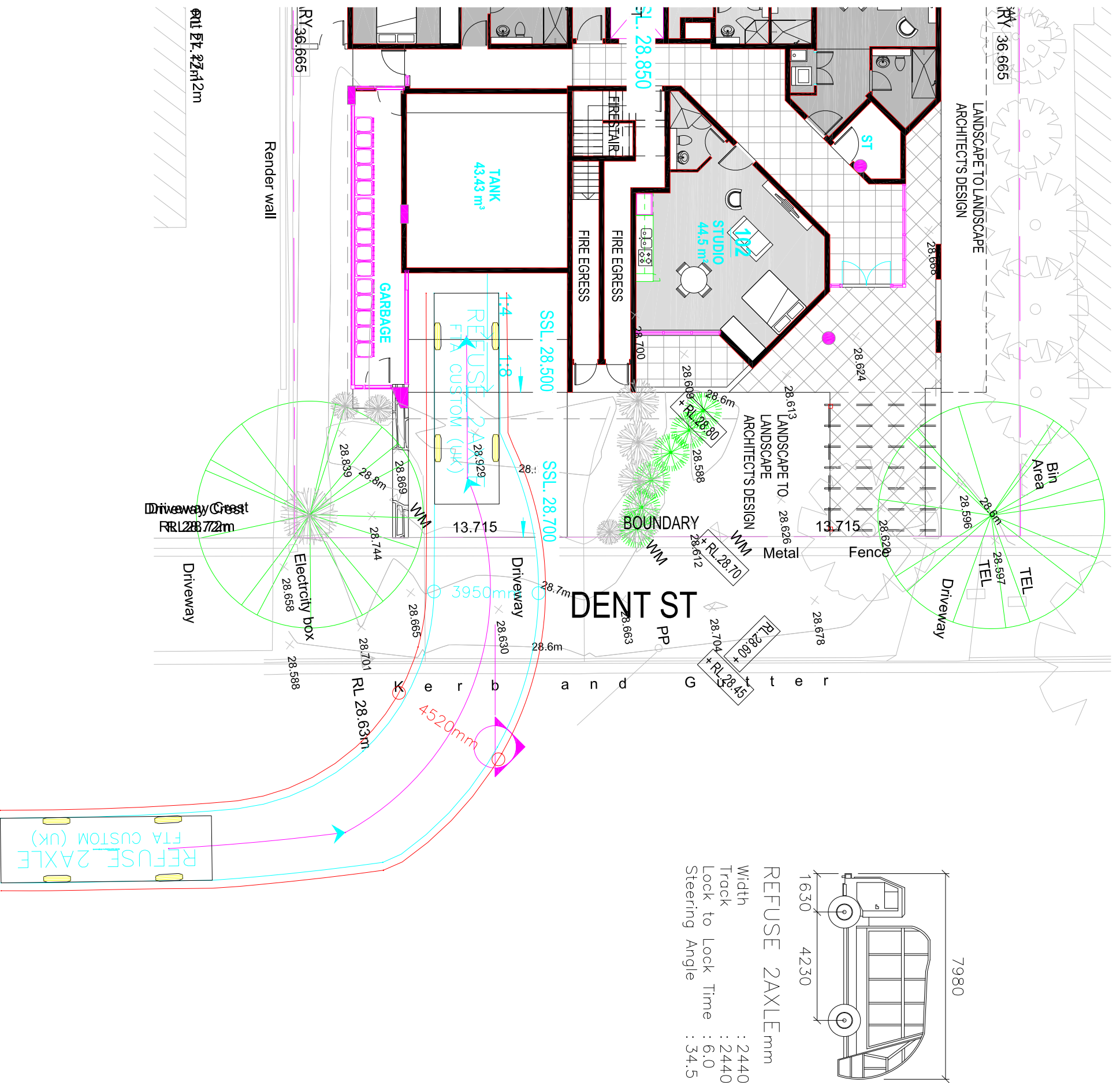


B85

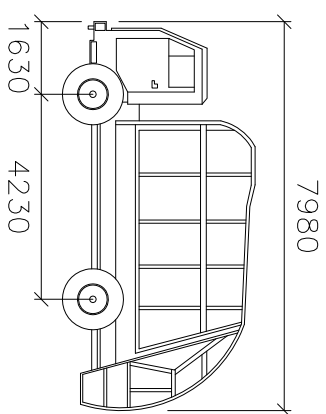
Width	: 1870
Track	: 1770
Lock to Lock Time	: 6.0
Steering Angle	: 34.1



7.98m Garbage Truck Inbound

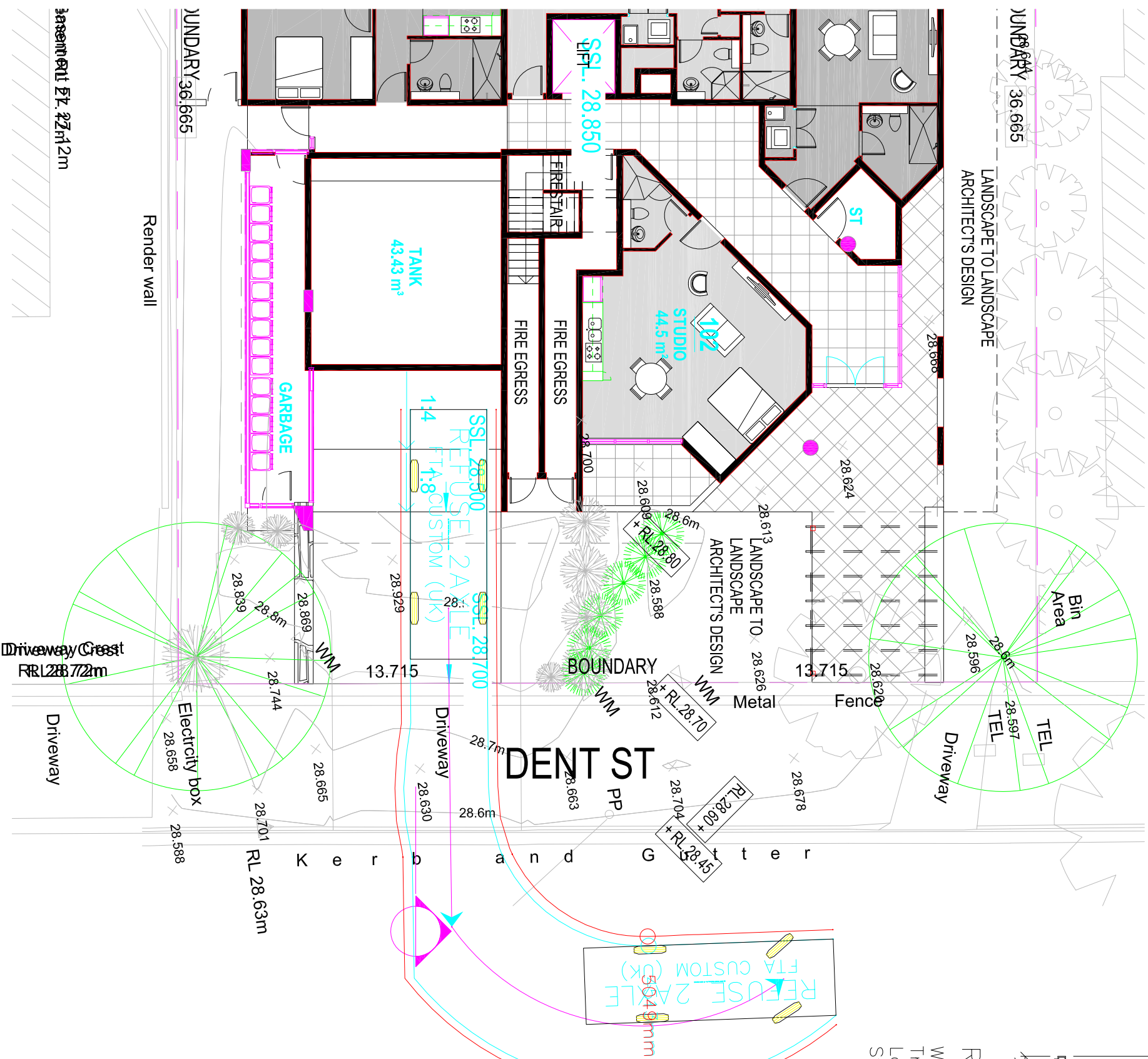


7.98m Garbage Truck Outbound



REFUSE 2AXLEmm

- Width : 2440
- Track : 2440
- Lock to Lock Time : 6.0
- Steering Angle : 34.5



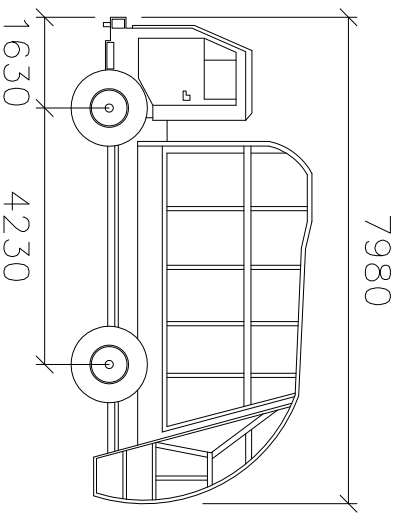
JUNDARY 36.665

Render wall

Driveway

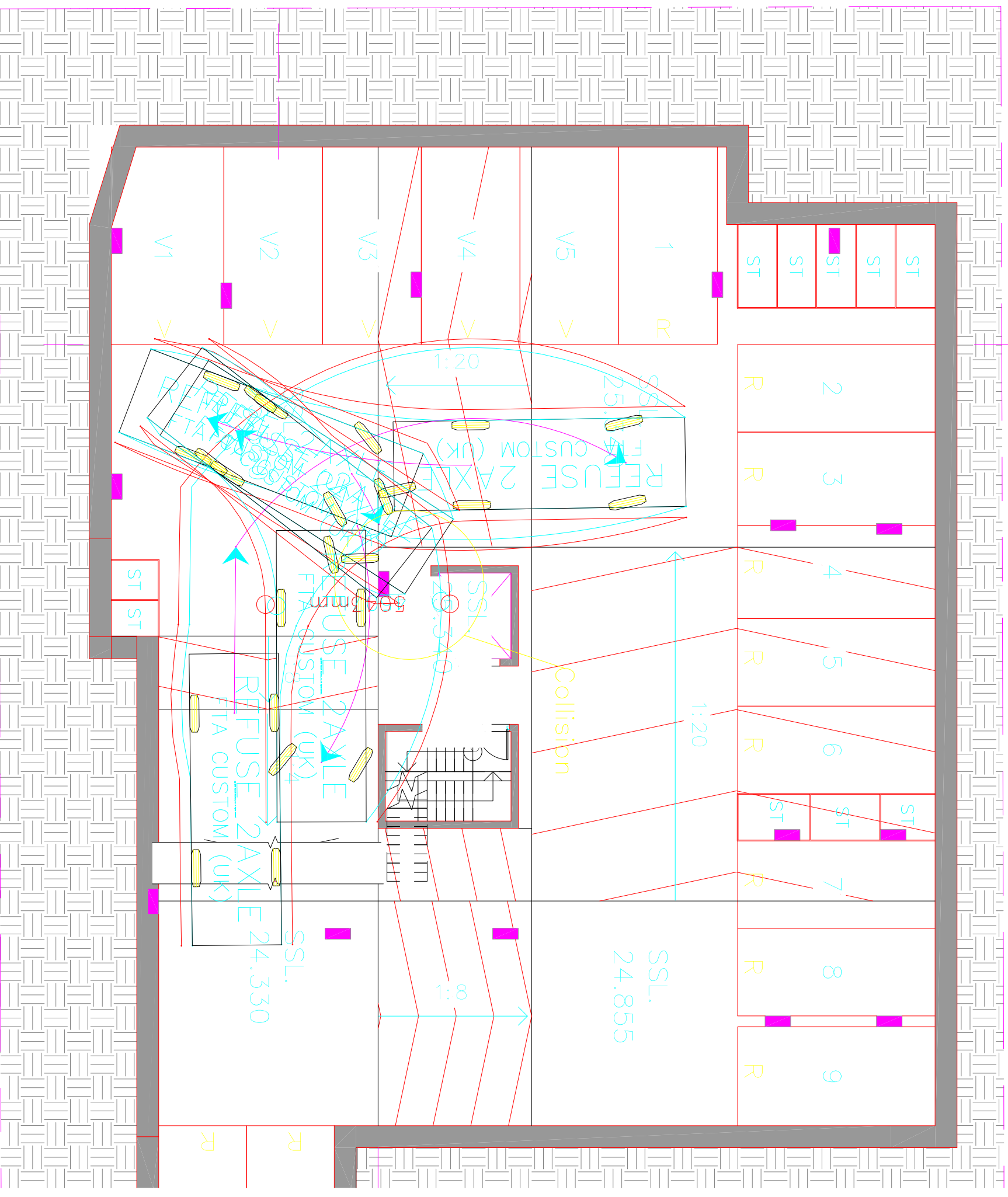
Driveway Crest

7.98m Garbage Truck Forward Exit

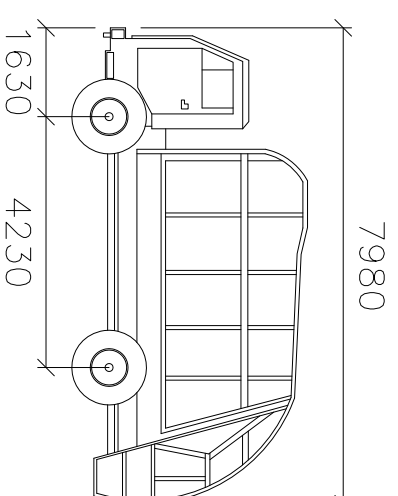
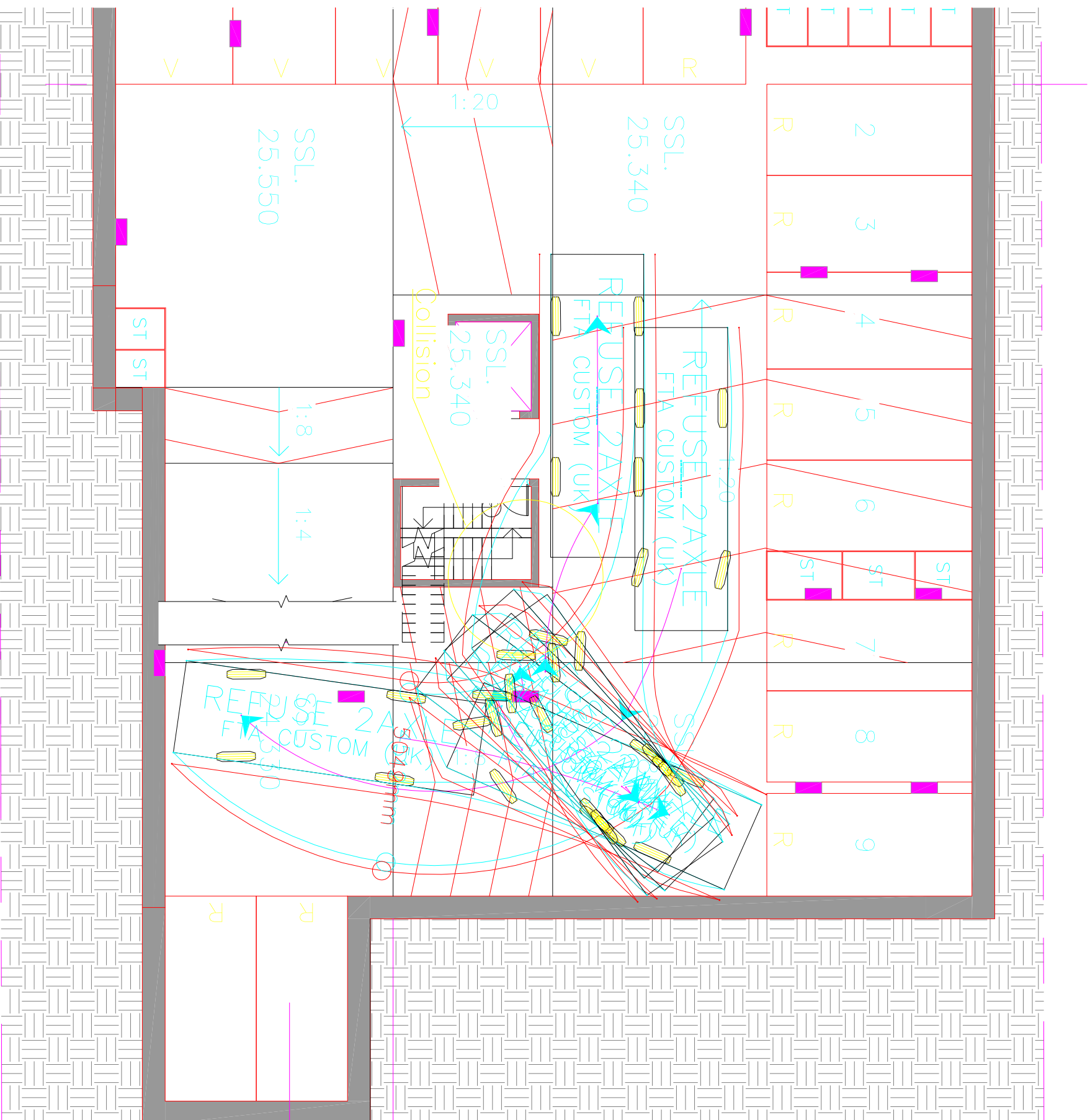


REFUSE 2AXLEmm

Width : 2440
Track : 2440
Lock to Lock Time : 6.0
Steering Angle : 34.5



7.98m Garbage Truck Forward Exit



REFUSE 2AXLEmm

Width	: 2440
Track	: 2440
Lock to Lock Time	: 6.0
Steering Angle	: 34.5