



TRANSPORT IMPACT ASSESSMENT (TIA)


Proposed Multi-Dwelling Residential Development 27 East Esplanade, Manly

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1. INTRODUCTION

TRAFFIX has been commissioned by Manly Property Group No.2 Pty Ltd to undertake a transport impact assessment (TIA) in support of a development application (DA) relating to a multi-dwelling residential development at 27 East Esplanade, Manly. The development is located within the Northern Beaches Council (formerly Manly) Local Government Area (LGA) and has been assessed under that Council's controls.

This report documents the findings of our investigations and should be read in the context of the Statement of Environmental Effects (SEE) prepared separately. The development is a minor with less than 300 dwellings. As such, the DA will not require referral to the Transport for New South Wales (TfNSW) under the provisions of the State Environmental Planning Policy (Transport and Infrastructure) 2021.

The report is structured as follows:

- Section 2: Describes the site and its location
- Section 3: Documents existing traffic conditions
- Section 4: Describes the proposed development
- Section 5: Assesses the parking requirements
- Section 6: Assesses traffic impacts
- Section 7: Discusses access and internal design aspects
- Section 8: Presents the overall study conclusions

2. LOCATION AND SITE

The subject site at 27 East Esplanade, Manly and is located approximately 10.3 kilometres northeast of Sydney Central Business District (CBD). More specifically, it is located on the eastern side of East Esplanade, and approximately 30.9 metres south of Victoria Parade.

The site is rectangular in configuration and has a total site area of 519.8m². It has a western frontage of 15.2 metres to East Esplanade and a northern boundary of 31.9 metres and southern boundary of 34.3 metres to a residential property. The eastern boundary of 15.7 metres is shared with a neighbouring residential development.

Vehicular access to the site is currently provided via East Esplanade.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2**.



Figure 1: Location Plan



Figure 2: Site Plan

3. EXISTING TRAFFIC CONDITIONS

3.1 Road Network

The road hierarchy in the vicinity of the site is shown in **Figure 3** with the following roads of particular interest:

- Sydney Road: a TfNSW Main Road that traverses east-west between Whistler Street in the east and Ponsonby Parade in the west. It is subject to 50 km/h speed zoning and generally carries a single lane of traffic in both directions. Restricted on-street parking is generally permitted along both sides of the road.
- Belgrave Street: a TfNSW Main Road (MR 159) that runs in a north-south direction between Pittwater Road in the north and West Esplanade in the south. It is subject to 30km/h speed zoning and generally carries two (2) lanes of traffic in both directions. It generally permits on-street parking along both sides of the road.
- West Esplanade: a TfNSW Secondary Road (SR 2025) that runs in a west-east direction between East Esplanade in the east and Commonwealth Parade in the west. It is subject to 30 km/h speed zoning and generally carries a single lane of traffic in both directions. It generally permits on-street kerbside parking along the southern side of the road.
- East Esplanade: a local road that generally traverses in a north-south direction starting from West Esplanade in the north and Stuart Street in the south. It is subject to a '30km/h High Pedestrian Activity Area' speed zoning, carries a single lane of traffic in each direction and predominantly permits restricted kerbside parallel parking along the western side of the road.



Figure 3: Road Hierarchy

3.2 Public Transport

The existing public transport services that operate in the locality are shown in **Figure 4**.

Having regard to the standard bus travel, the Integrated Public Transport Service Planning Guidelines state that bus services influence the travel mode choices of sites within 400 metres (approximately 5 minutes' walk) of a bus stop. It is evident that the site benefits from excellent bus services with eight (8) bus stops located within 400-metres of the site. These services provide connections to Chatswood, Dee Why, Seaforth, and the Sydney CBD.

These bus services are summarised below in **Table 1**.

Table 1: Bus Information

Bus No.	Route	Frequency		
		Weekday	Saturday	Sunday & Public Holidays
141	Austlink to Manly Via Frenchs Forest & Seaforth	Every 1 hour	Every 1 hour	Every 1 hour
142	Allambie Heights to Manly	Every 20 minutes	Every 1 hour	Every 1 hour
144	Manly to Chatswood via St Leonards	Every 15 minutes	Every 10 minutes	Every 10 minutes
161	Manly to North Head (Loop Service)	Every 30 minutes	Every 30 minutes	Every 30 minutes
162	Seaforth to Manly	Every 20 minutes	Every 1 hour	Every 1 hour
166	Frenchs Forest to Manly via Dee Why Beach	Every 20 minutes	Every 20 minutes	Every 20 minutes
167	Warringah Mall to Manly via South Curl Curl	Every 20 minutes	Every 20 minutes	Every 20 minutes
199	Palm Beach to Manly via Mona Vale and Dee Why	Every 10 minutes	Every 10 minutes	Every 10 minutes

More information concerning all bus and train service information can be found on the Transport for NSW Info website: <https://www.transportnsw.info>.

In addition, the subject site is within 200 metres of Sydney Ferries Network at Manly Wharf. This also presented in **Figure 4**, with the services summarised below:

- Manly to Circular Quay

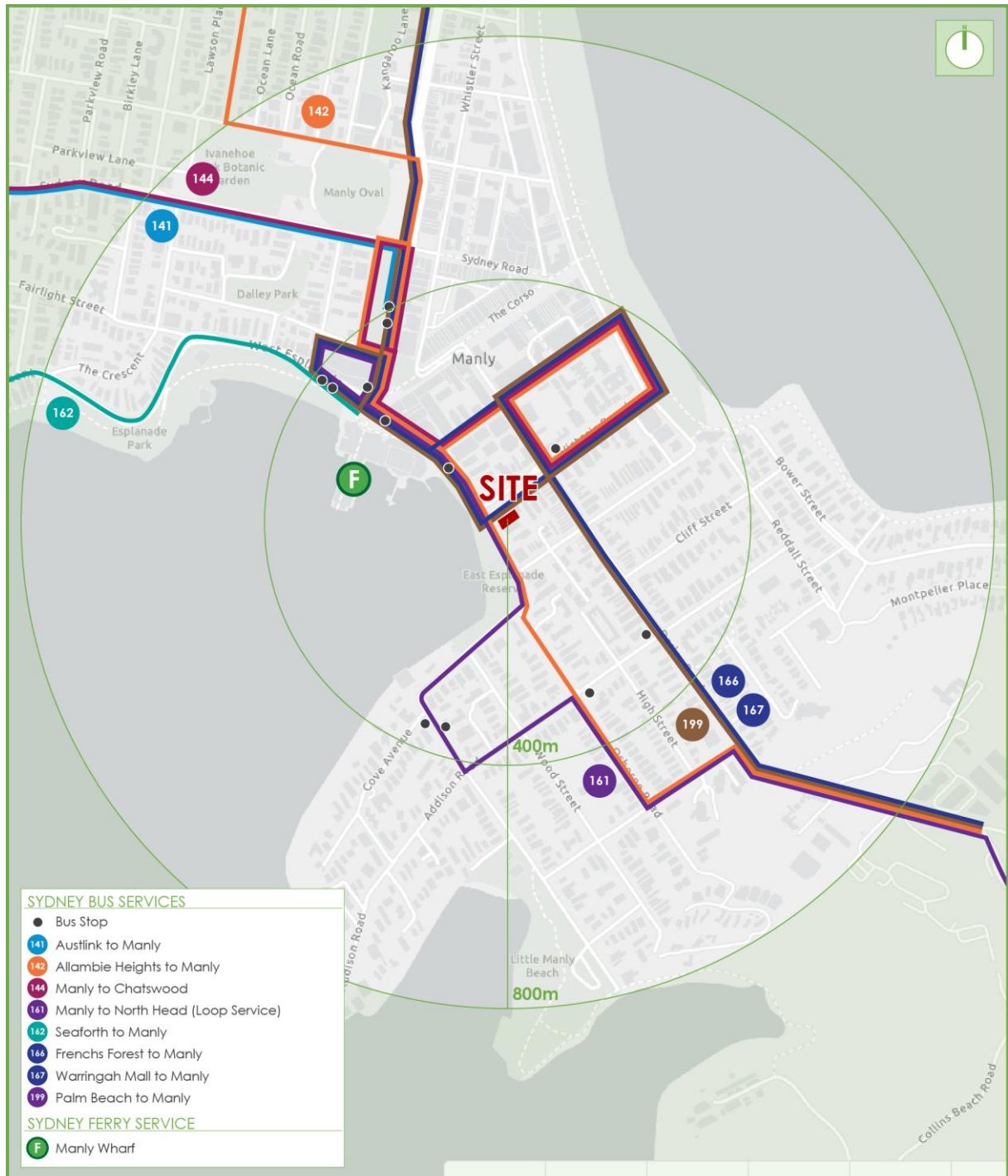


Figure 4: Public Transport

4. DESCRIPTION OF PROPOSED DEVELOPMENT

A detailed description of the proposed development is provided in the Statement of Environmental Effects prepared separately. In summary, the development for which approval is now sought comprises the following components:

- Construction of a multi-dwelling residential development comprising:
 - 1 x one-bedroom apartment;
 - 1 x two-bedroom apartment;
 - 6 x three-bedroom apartments;
 - A rooftop amenity area facilitating a swimming pool and lounge.
- Provision of a new vehicular access onto East Esplanade via a new car lift at the northwest corner of the site, with turntables installed at each basement level.
- Provision of 18 car parking spaces within 3 basement levels.

The parking and traffic impacts arising from the development are discussed in **Section 5** and **Section 6**. Reference should be made to the plans submitted separately to Council which are presented at reduced scale in **Appendix A**.

5. PARKING REQUIREMENTS

5.1 Car Parking

Even though the Manly Council was amalgamated into the Northern Beaches Council in 2016, the NSW Government actively allows each former Council's Local Environmental Plan (LEP) to resume until a new consolidated LEP is adopted. Notwithstanding, the Northern Beaches Council is preparing a consolidated LEP to cover all areas (formerly Manly, Pittwater, Warringah), but as of September 2025, it has not yet been adopted.

As such, reference is made to The Manly Development Control Plan (DCP) 2013, *Schedule 3 – Parking and Access, Part A1 Parking Rates and Requirements for Vehicles* which stipulate the minimum parking requirements provision which is applicable to the proposed development with the rates shown in **Table 2**:

Table 2: Manly DCP Parking Rates and Provision

Type	Area / Units	Minimum Parking Rate	Minimum Spaces Required	Spaces Provided
1 Bed	1	1 resident parking space for each dwelling (irrespective of number of bedrooms), plus 0.2 resident parking spaces for each 2-bedroom dwelling, plus 0.5 resident parking space for each 3 (or more) bedroom dwelling.	1	16
2 Bed	1		1.2 (2)	
3+ Bed	6		9	
Residential Visitor	8	0.25 visitor parking space for each dwelling	1.5 (2)	2
Totals			14	18

It is evident from **Table 1** that the proposed development requires a minimum of 14 car parking spaces and under Council's DCP. In response, the development provides a total of 18 car parking spaces comprising 16 spaces for residents and two (2) spaces for visitors shared with a car wash bay and an accessible parking. Accordingly, the proposed car parking provision satisfies the requirements of Council's DCP and is considered acceptable.

5.2 Accessible Parking

The Manly DCP stipulates that accessible parking spaces must be provided in all residential developments in accordance with AS2890.6 (2022) and the Building Code of Australia (BCA).

In response, the development provides the provision of one (1) adaptable parking space, satisfying the requirements of the Building Code of Australia. Reference should be made to the Accessibility Consultants report.

5.3 Motorcycle Parking

The Manly DCP does not stipulate any specific motorcycle parking provision. In response, the development provides no motorcycle parking, satisfying the requirements of the Council DCP and is considered acceptable.

5.4 Bicycle Parking

The Manly DCP stipulates that bicycle parking is required for residential dwelling within a secure storage area capable of accommodating at least two (2) adult sized bicycles. In response, the development provides eight (8) bicycle parking spaces, satisfying the requirements of the Council DCP.

5.5 Car Wash Bay

The Manly DCP does not stipulate any specific car wash bays provision. In response, the development provides one (1) car wash bay shared with a visitor space, superior to the requirements of the Council DCP.

5.6 Refuse Collection and Servicing

The Manly DCP does not stipulate any specific loading bay provision for refuse collection and servicing. It is understood that refuse collection will be undertaken on-street via East Esplanade as per the existing arrangement.

6. TRAFFIC AND TRANSPORT IMPACTS

6.1 Trip Generation

The subject site is currently a multi-dwelling residential development consisting of six (6) apartments. The proposed development consists of eight (8) apartments. Therefore, a net increase of two (2) residential apartments.

The TfNSW Guide to Transport Impact Assessment, TS 00085, Version 1.1 (GTIA) provides trip generation rates for medium-density residential developments. The average Sydney weekday peak trip rates have been adopted for assessing the traffic generating potential of the subject development.

The relevant trip rates are as follows:

- 0.39 vehicle trips per unit during the morning peak hour; and
- 0.37 vehicle trips per unit during the evening peak hour.

Application of these trip rates to the net change of two (2) residential units, and adopting an 80:20 split, results in the following predicted trip generation volumes:

- 1 vehicle trip per hour (0 in, 1 out) during the morning peak hour; and
- 1 vehicle trip per hour (0 in, 1 out) during the evening peak hour.

6.2 Traffic Impacts

Given the above traffic generation, it can be concluded that the negligible traffic generation of the development is considered supportable from a traffic planning perspective with no external improvements to the network required.

7. ACCESS AND INTERNAL DESIGN ASPECTS

7.1 Site Vehicular Access and Queueing

The proposed development incorporates a total of 18 off-street car parking spaces with access from East Esplanade. In accordance with AS2890.1 (2004), the proposed development requires a Category 1 vehicular access driveway, being a combined entry and exit driveway of 3.0 to 5.5 metres. In response, the development provides a driveway width of 3.0 metres, thereby sufficiently complying with the minimum requirements of AS2890.1 (2004). Swept path analysis has been undertaken with a B99 design vehicle that demonstrates satisfactory vehicle movements as shown in **Appendix B**.

In accordance with AS2890.1 (2004), a queueing analysis has been undertaken to identify the number and probability of vehicles accessing the site. The queueing analysis demonstrated that with the three (3) basement levels of car parking (including 18 car parking spaces), the development is required to accommodate a total of one (1) vehicle in the system in order to accommodate the 98th percentile queue concluding that there is less than a 1% chance that two (2) vehicles would require use of the vehicular access at any given time.

Given the results of the queueing analysis undertaken, it can be concluded that the proposed development is not required to provide a waiting bay at the vehicular access and complies with Clause 3.5 of AS2890.1 (2004). The detailed results of the queueing analysis are presented in **Appendix C**.

Finally, it is understood that the car lift mechanism has been proposed and designed so that at the default setting, the car lift will always be waiting on the ground floor, allowing inbound vehicles access the priority of entry to the car park from East Esplanade.

7.2 Internal Design

The internal car park complies with the requirements of AS 2890.1 (2004), and the following characteristics are noteworthy:

- All standard car parking spaces have been designed in accordance with User Class 1A being for residential parking. These spaces are provided with a minimum space length of 5.4m, a minimum width of 2.4m and a minimum aisle width of 5.8m.
- All spaces located adjacent to obstructions of greater than 150mm in height are provided with an additional width of 300mm.
- Dead-end aisles are provided with the required 1.0m aisle extension in accordance with **Figure 2.3** of AS2890.1 (2004).
- A minimum clear head height of 2.2 metres is to be provided for all trafficable areas.
- All columns are located outside of the parking space design envelope as shown in Figure 5.2 of AS2890.1 (2004).
- All vehicle turntables on each basement levels have been designed to accommodate internal manoeuvres of B99 vehicles.
- Swept path analysis of all critical movements has been undertaken to confirm the geometry and compliance with the relevant standards. The swept path analysis is shown in **Appendix B**.
- Visual splay has been provided at the access driveway in accordance with Figure 3.3 of AS 2890.1 (2004).

7.3 Summary

In summary, the internal configuration of the car park has been designed in accordance with AS 2890.1 (2004). It is however envisaged that a condition of consent would be imposed requiring compliance with these standards and as such any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

8. CONCLUSIONS

In summary:

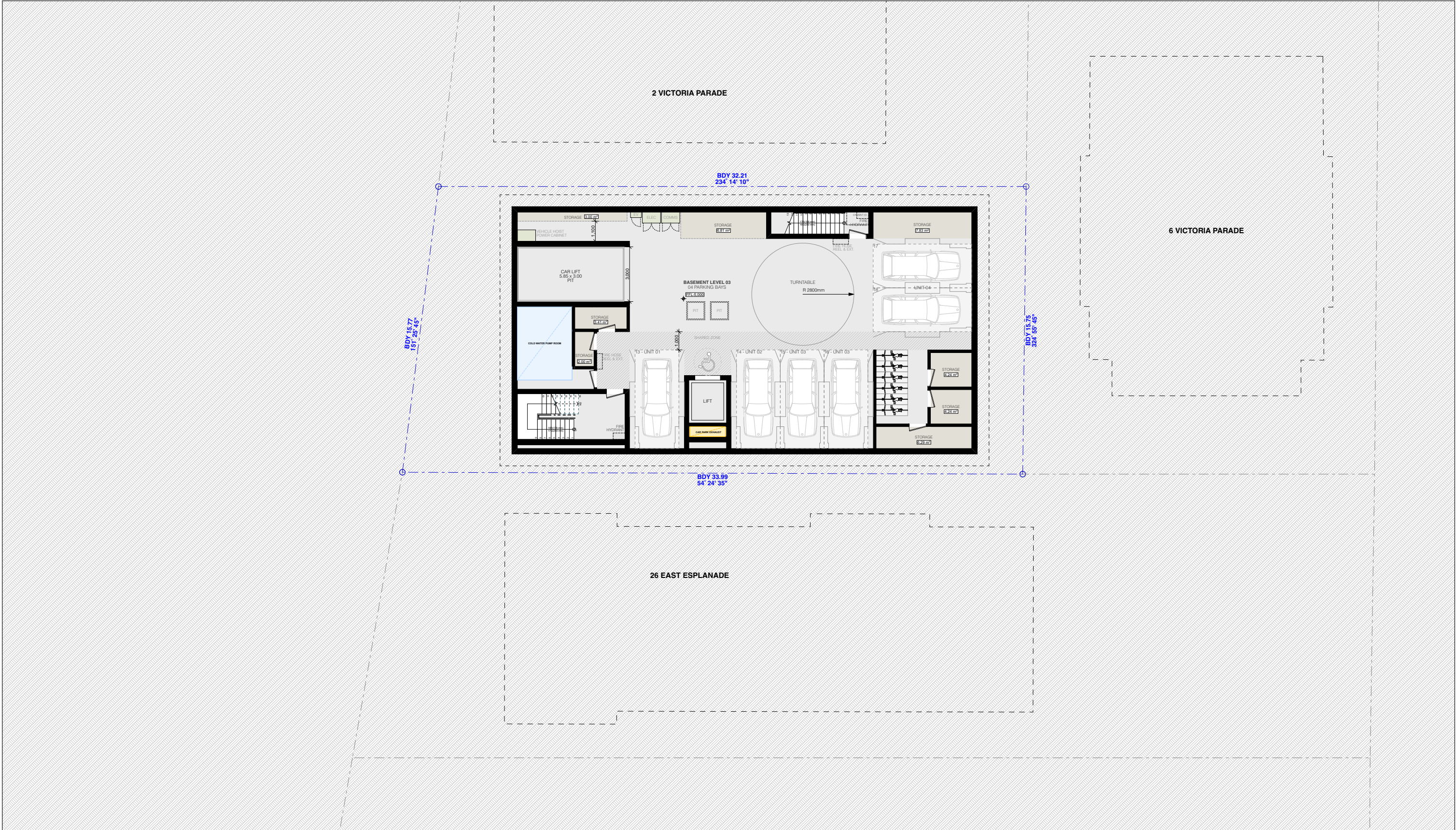
- The proposal seeks approval to construct a multi-dwelling residential development at 27 East Esplanade, Manly containing eight (8) apartments and three (3) level of basement car parking accommodating 18 vehicles.
- The subject site is well connected to the public transport network with reliable access to regular bus and rail services. These, along with existing pedestrian and cycle links, ensure the site is ideally situated for a high-density residential development as it provides a good opportunity to encourage future tenants / visitors to use sustainable transport modes.
- The proposed development provides 18 parking spaces, including 16 residential parking spaces and two (2) residential visitor parking spaces which complies with the requirements of Manly Council DCP (2013). As such, all normal parking demands will be readily accommodated on-site.
- The traffic generation arising from the development has been assessed and equates to a net increase of one (1) vehicle trip per hour during the morning and evening peak periods. As such, no external improvements are required to facilitate the proposed development. The traffic impacts of the development are therefore considered acceptable.
- The basement car park has been assessed to comply with the requirements of AS 2890.1 (2004).

This transport impact assessment therefore demonstrates that the subject application is supportable on traffic planning grounds. TRAFFIX anticipates an ongoing involvement during the development approval process.

APPENDIX A

Reduced Plans

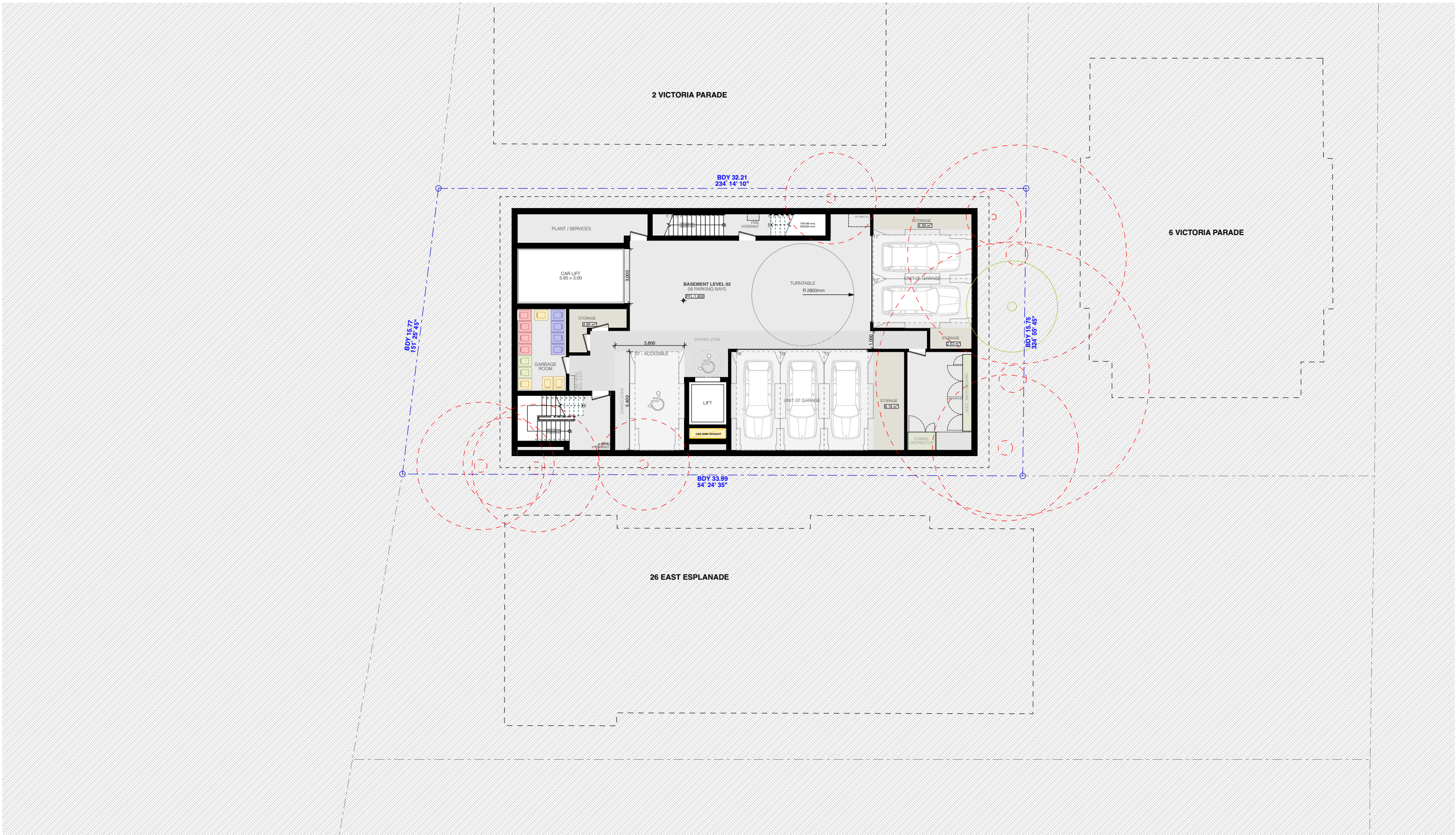
LVL 03 BASEMENT PLAN



DEVELOPMENT APPLICATION

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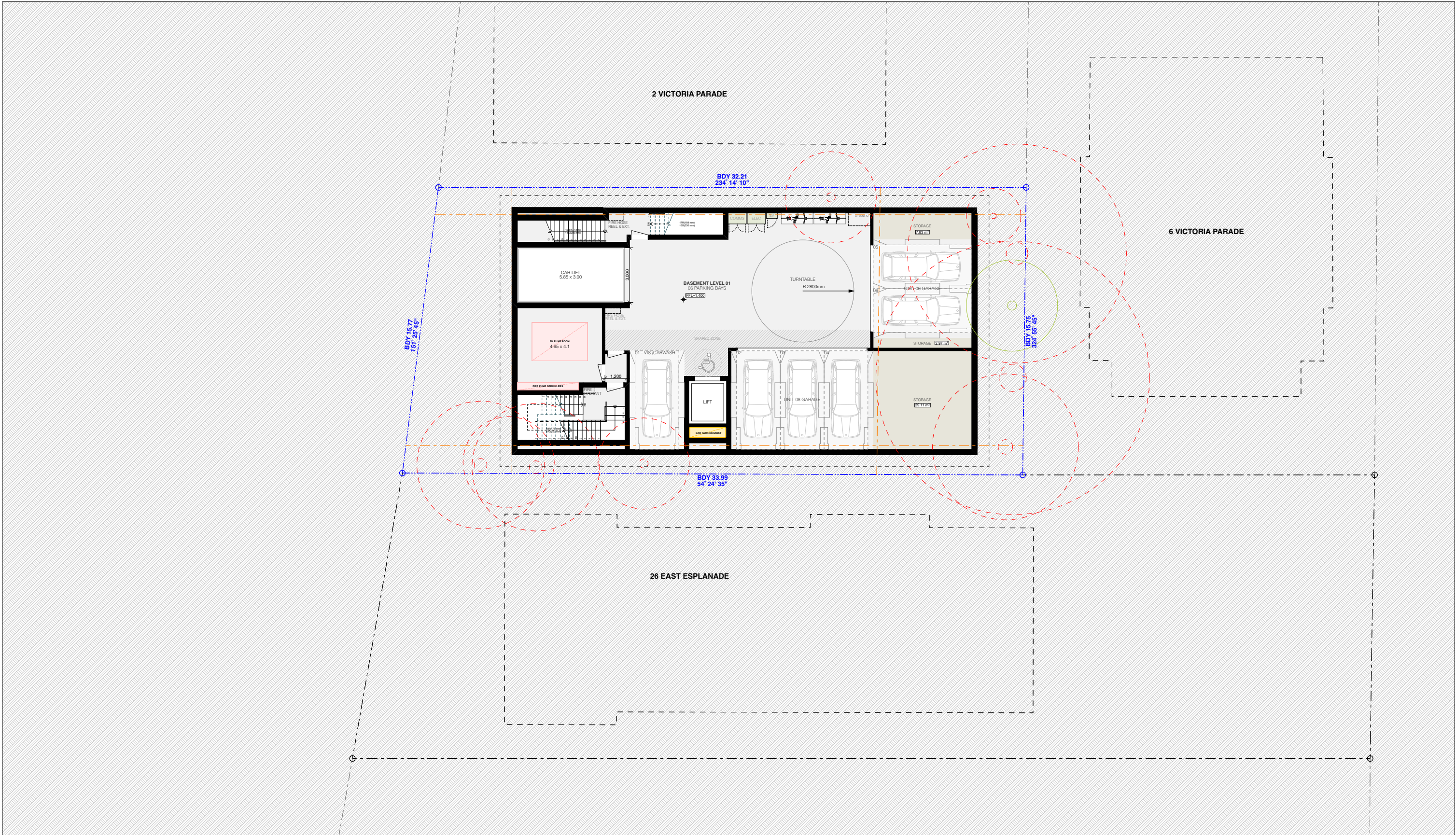
LVL 02 BASEMENT PLAN



DEVELOPMENT APPLICATION

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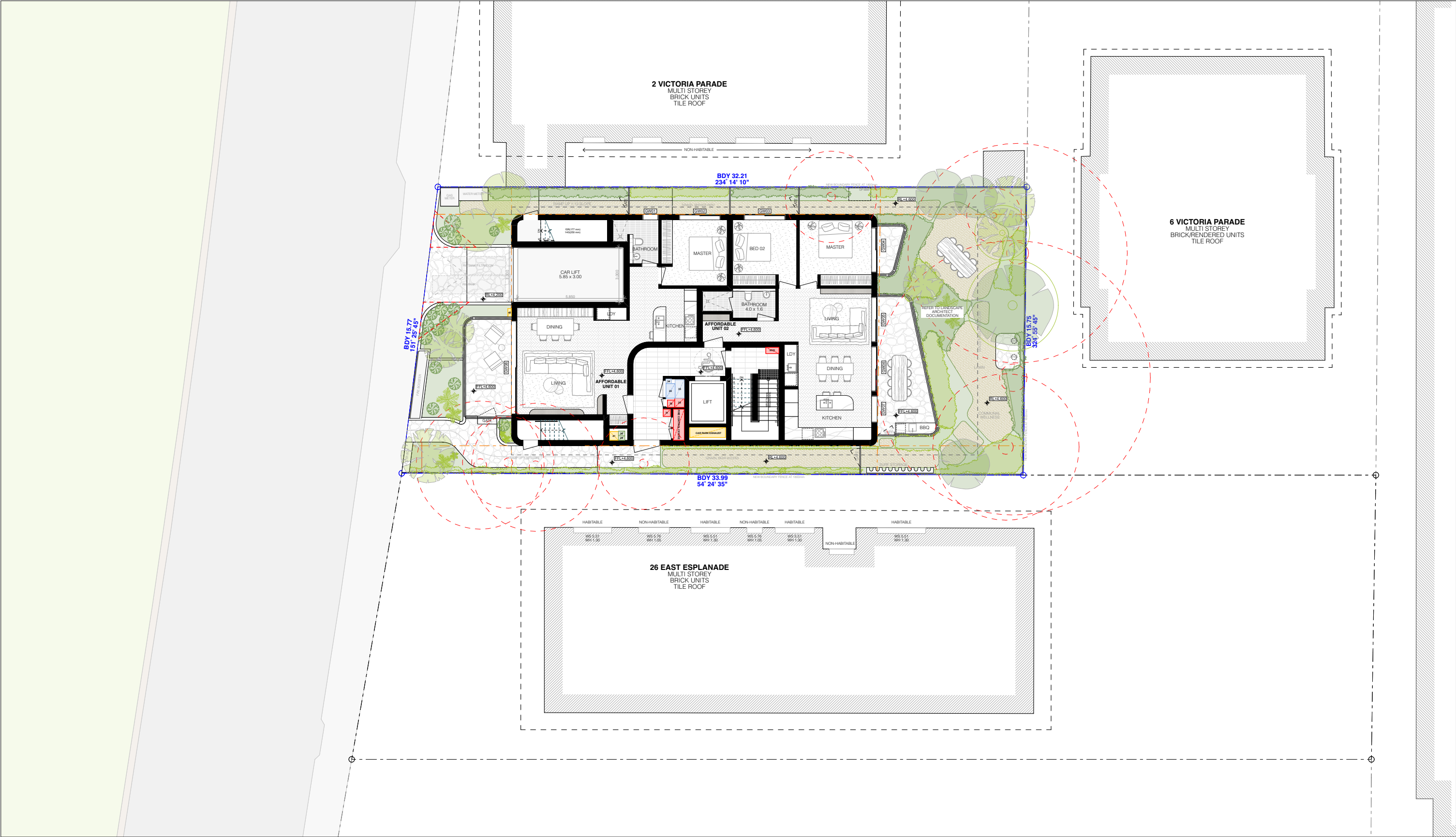
LVL 01 BASEMENT PLAN



DEVELOPMENT APPLICATION

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GROUND FLOOR PLAN



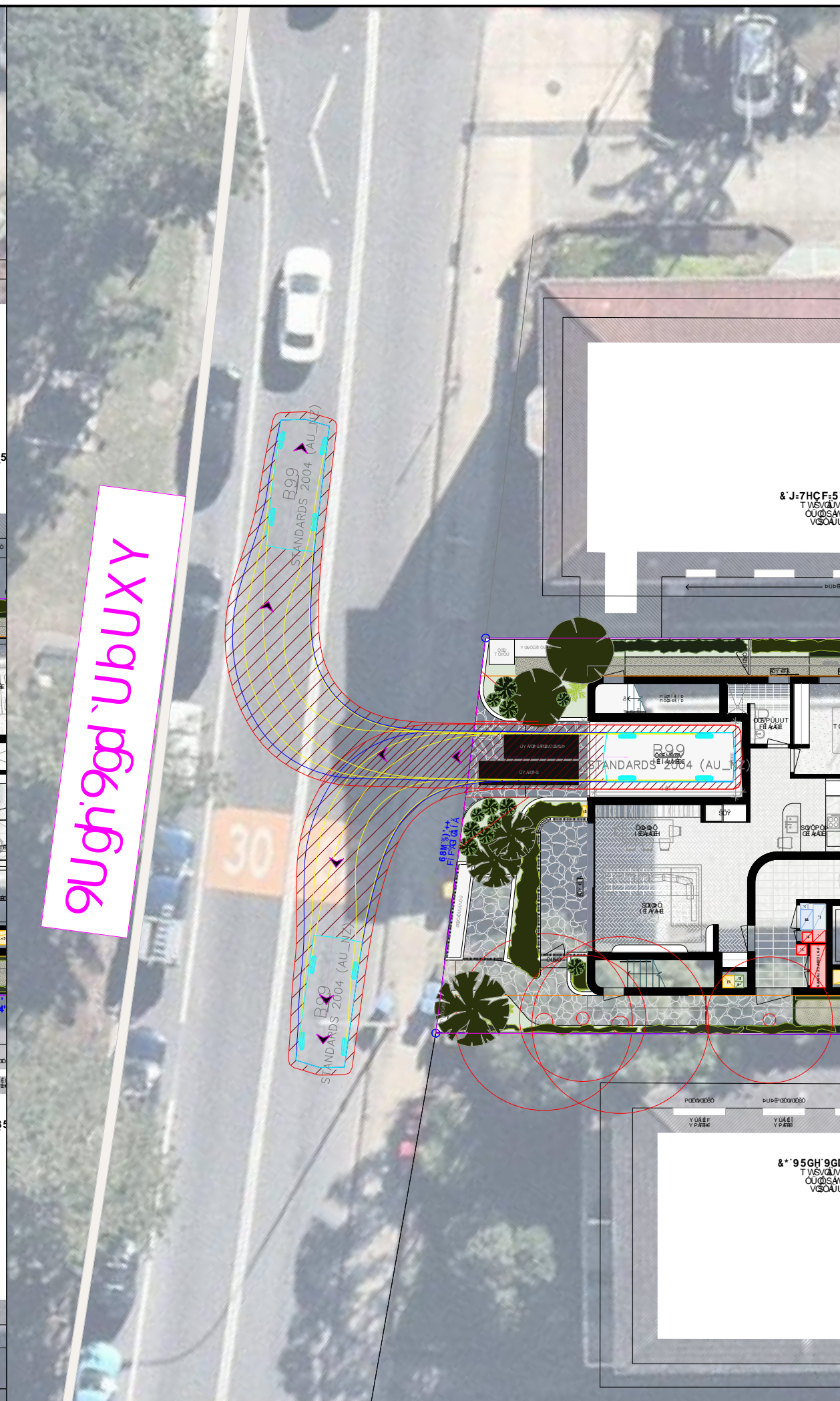
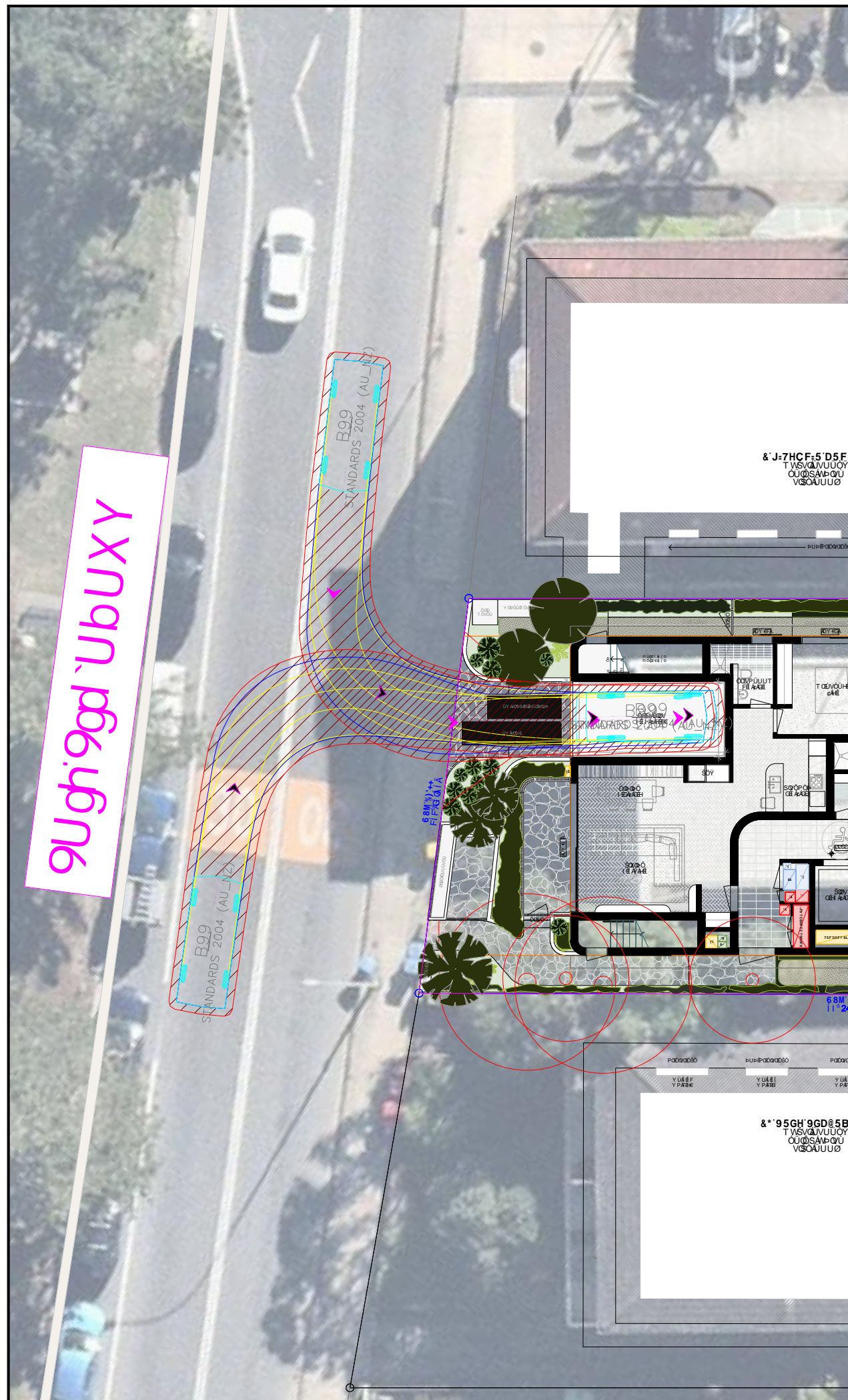
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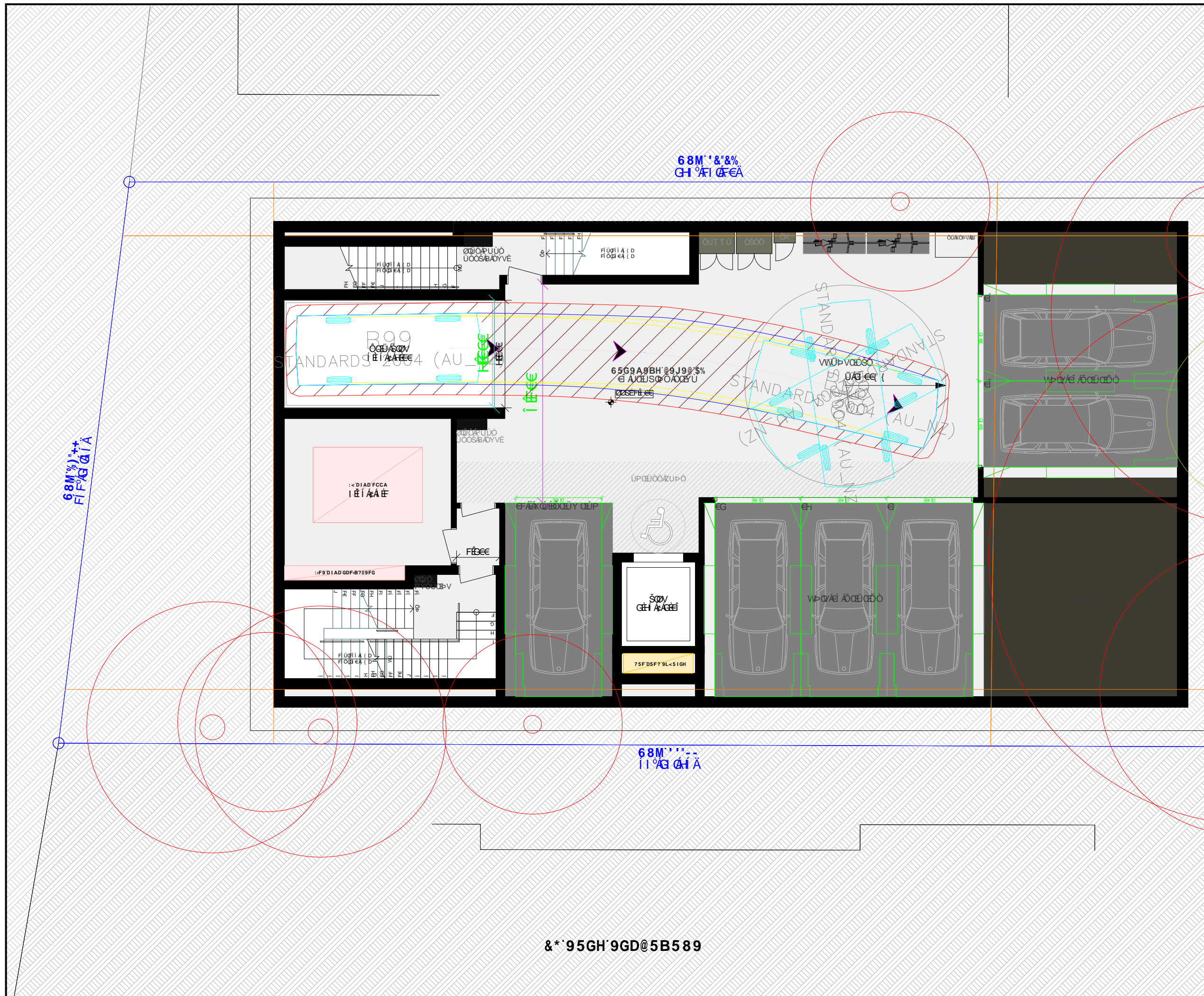
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P1	PRELIMINARY	17-07-2025	CLAUSE 9.1.4 MATERIAL & FORMS CONSTRUCTIONS	CLAUSE 12.17 HANDRAILS	TO COMPLY WITH BASIX COMMITMENTS AS PER BASIX CERTIFICATE AND STAMPED PLANS	HEATING:	EXISTING	MHNDU	GROUND FLOOR PLAN	1:100, 1:200 @A3	DS	MD
P2	PRELIMINARY	30-07-2025	CLAUSE 12.21 OPERATION OF LATCH	CLAUSE 12.21 OPERATION OF LATCH	TO COMPLY WITH BASIX COMMITMENTS AS PER BASIX CERTIFICATE AND STAMPED PLANS	HEATING:	EXISTING	MHNDU	GROUND FLOOR PLAN	1:100, 1:200 @A3	DS	MD
P3	PRELIMINARY	20-08-2025	CLAUSE 12.22 GENERAL BUILDING ACCESS REQUIREMENTS	CLAUSE 12.22 GENERAL BUILDING ACCESS REQUIREMENTS	TO COMPLY WITH BASIX COMMITMENTS AS PER BASIX CERTIFICATE AND STAMPED PLANS	HEATING:	EXISTING	MHNDU	GROUND FLOOR PLAN	1:100, 1:200 @A3	DS	MD
P4	PRELIMINARY	05-09-2025	CLAUSE 12.23 PARTS OF BUILDING TO BE ACCESSIBLE	CLAUSE 12.23 PARTS OF BUILDING TO BE ACCESSIBLE	TO COMPLY WITH BASIX COMMITMENTS AS PER BASIX CERTIFICATE AND STAMPED PLANS	HEATING:	EXISTING	MHNDU	GROUND FLOOR PLAN	1:100, 1:200 @A3	DS	MD
P5	PRELIMINARY	24-09-2025	CLAUSE 12.24 IDENTIFICATION OF ACCESSIBLE FACILITIES	CLAUSE 12.24 IDENTIFICATION OF ACCESSIBLE FACILITIES	TO COMPLY WITH BASIX COMMITMENTS AS PER BASIX CERTIFICATE AND STAMPED PLANS	HEATING:	EXISTING	MHNDU	GROUND FLOOR PLAN	1:100, 1:200 @A3	DS	MD



APPENDIX B

Swept Path Analysis

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APPENDIX C

Queueing Analysis

25.251 - 27 East Esplanade, Manly - Queuing Calculations

Average Travel Distance			
Basement Level	No Cars/ Motorcycles	Assumed Vert Distance from G (m)	Weighted Distance Factor
G	0	0	
1	6	3.2	19.2
2	6	6.4	38.4
3	6	9.6	57.6
Total	18		115.2
		Average	6.4

Vehicle Arrivals (veh/hr)	2
Travel Speed (m/sec)	0.15
Load & Exit Time (sec) (assumed)	10
Door Opening Time (sec) (assumed)	10
Average Travel Time (sec)	42.6666667
Total Average Time (sec)	125.333333

Queuing Theory Factors	
average arrival rate (r)	2.00 *r=(veh/hr)
average service rate (s)	28.72 *s=3600/(Total Average Time)
utilisation factor (p)	0.06963 *p=r/s
mean queue (E(m))	0.00521 *E(m)=(p/(1-p))-p

Probability of Vehicles in System (P(n))		*P(n)=(1-p)p^n
No. Vehicles in System (n)	Probability (%)	Percentile Queue min. 98% under AS2890.1
0	93.0%	93.0%
1	6.5%	99.5%
2	0.5%	100.0%
3	0.0%	
4	0.0%	

Vehicle Arrivals: Total traffic generation of the development will be 3 veh/hr during peak periods

The critical peak for on-street queuing is in the PM, which is expected to result in the order of 2 vehicle arrivals, when an 80/20 split is adopted.

Results: The results of the queuing analysis demonstrates that with 3 basement levels of car parking (incl. 18 spaces) the development is required to accommodate a total of 1 vehicle in the system in order to accommodate the 98th percentile queue, as required under Clause 3.5 of AS 2890.1 (2004).

Hence, the development does not require a waiting bay at the access driveway.