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Adrian Tsz Hin TAM/PLAND

From: Rich Gold <[redacted]>
Sent: Wednesday, February 4, 2026 10:24 AM
To: William Shu Tai WONG/PLAND <wstwong@pland.gov.hk>
Subject: Re: Planning Application No. Y/NE-STK/7 - Submission of Further Information

Dear Mr. Wong,

The TIA report with RtC is uploaded to share drive. This TIA report and RtC is the same version uploaded on 28.1.2026. Thank you.

Regards,
Alan Poon

Comments from Transport Department dated 15.1.2026

Comments		Responses
It is noting that the proposed shuttle bus service is enhanced to mitigate the traffic implication.		-
a. In Paragraph 3.5.6 - The average headway of 7.5mins does not align with Table 3.5.2. Please update;		Noted and updated.
b. Due to the higher demand of shuttle bus service, please provide contingency Plan if the shuttle buses cannot perform boarding and alighting at Po Nga Road layby in order not to block the carriageway for normal traffic;		Temporary boarding and alighting activities of the shuttle bus along Ting Kok Road behind the existing bus stop outside Tai Po Government Office Building as illustrated in Figure 4.7 is proposed as a contingency plan in case the concerned layby is full. One of the two management staff serving near the layby (i.e. Staff No. 14 / 15) would lead the queuing passengers (28 at most) to walk towards Tai Po Government Office Building (walking time approx. 6 mins), while another staff would stay at the layby to assist the remaining passengers (if any). The total temporary stopping time of the shuttle bus at the proposed location outside Tai Po Government Office Building would be approx. 7 mins, as summarised in the timeline plan in Figure 4.7.
c. Figure 3.5 & 4.9 - due to the higher demand of shuttle bus service, the assessment on the adequacy of proposed queuing area at Po Nga Road is required.		Please be advised that queuing area assessment at Po Nga Road has been included already, the results indicate that the available queuing area of 60m^2 is sufficient for the anticipated 49 queuing passengers with required queuing area of 12m^2, as referred to Para. 4.11.2, Table 4.11.1 and Fig. 4.10 of the TIA report.
The traffic management measures for visitors and implementation of control measures regarding the nos. of visitors to/from the Proposed Development have not yet been included in TIA report.		The traffic management measures for visitors have been reviewed and further elaborated, as referred to Section 3.4 of the revised TIA report.

Comments		Responses
The traffic management plan, including the road and junction improvement works, shown in Figure 3.2 and Figure 4.5, and traffic management measures proposed by the applicant in TIA report should be submitted at subsequence stage for TD approval.		Noted.

Comments from Planning Department dated 15.1.2026

	Comments		Responses
10.	Traffic management measures proposed should be included into the TIA. Comments 1 and 2 above is relevant.		Noted. Traffic management measures have been reviewed, further elaborated and included into the TIA, as referred to Section 3.4 of the revised TIA report.
11.	Para 3.2.2 – Please clarify "3 nos. of right-of-way will be further provided…"		Please refer to updated Para 3.2.2 for details.

Goldrich Planners & Surveyors Ltd.

Planning Application for Proposed Columbarium Development at D.D. 41, Sha Tau Kok, New Territories

Traffic Impact Assessment Report

278273

3rd Submission | January 2026

Job number 278273

Ove Arup & Partners Hong Kong Ltd

[redacted]

ARUP

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1 INTRODUCTION

1.1 Background

1.1.1 The Applicant applies for planning approval to develop a columbarium at D.D. 41, Sha Tau Kok in New Territories (hereafter referred as the "Subject Site"). The Proposed Development (hereafter referred as the "Proposed Development") will provide a total of 6,495 niches. One urn will be provided in each niche.

1.1.2 Ove Arup & Partners (HK) Ltd. was commissioned to carry out a traffic impact assessment (TIA) to assess and identify the likely traffic impacts / hazards which may be induced by the Proposed Development and derives corresponding mitigation measure, if necessary, for the Proposed Development.

1.2 Study Tasks

1.2.1 The study tasks required to achieve the objectives are as follows:

- To investigate the implication of traffic impact from the Project such that the generation / attraction of both of vehicular and pedestrian traffic will be governed by the nos. of niches during the peak hours of festive periods
- To carry out traffic surveys at critical junctions to appreciate current traffic conditions during the peak hours of festive periods to understand the characteristics of niches induced traffic
- To examine the associated traffic impact and the feasibility of providing shuttle bus services running hover of selected MTR stations and the Site
- To assess future traffic conditions, taking into account of future traffic growth as well as the traffic generated / attracted by the Project and other planned/ committed developments, if any, to be built in advanced of the Project in the vicinity
- To recommend adequate traffic mitigation measure to alleviate any traffic problems induced by the Project, if necessary. And deliver recommendation for the Project from the traffic engineering point of view.
- To review the existing traffic situation of the surrounding road network during grave sweeping festive period
- To estimate the traffic generations/attractions to be induced by the Proposed Development during grave sweeping festive periods
- To recommend traffic and crowd management and control plans to be implemented during grave sweeping festive periods
- To assess the future traffic situation of the surrounding road network during grave sweeping festive periods
- To appraise the potential traffic impact of the Proposed Development on the surrounding road network during grave sweeping festive periods and recommend mitigating measures if deemed necessary

1.3 Report Structure

Chapter	Title	Aims
1	Introduction	Provide project background and scope of the Study
2	Existing Traffic Condition	Review and appreciate the existing traffic condition
3	The Site Development	Provide information of the Proposed Development
4	Traffic Impact Assessment	Illustrate the results of Traffic Impact Assessment
5	Summary & Conclusion	Summarize the findings of this Study

2 EXISTING TRAFFIC CONDITIONS

2.1 Locality and Accessibility of the Subject Site

2.1.1 The Subject Site is located at Sha Tau Kok near Tong To, which is bounded by Sha Tau Kok Road – Shek Chung Au to the southeast and assess road to Tong To Village to the southwest, as shown in **Figure 2.1**.

2.2 Existing Road Network

2.2.1 The Subject Site is served by a comprehensive road network to and from different districts as shown in **Figure 2.1**. Some major roads in the vicinity of the Subject Site are listed as follows:

- The Heung Yuen Wai Highway / Lung Shan Tunnel is a 11km long dual two-lane Rural Trunk Road which link up the Heung Yuen Wai Boundary Control Point with Fanling Highway, has been commissioned in May 2019.
- Sha Tau Kok Road is a primary distributor which connects Sha Tau Kok, Ping Che and Queen Hill's area with Fanling Town Centre. The section of Sha Tau Kok Road – Shek Chung Au, adjacent to the Subject Site, is a single 2-lane standard rural road.

2.3 Existing Road Improvement Works Under Construction

2.3.1 Road works under construction currently in the vicinity of the Application Site are identified as follows:

- Advance Site Formation and Engineering Infrastructure Works at Kwu Tung North (KTN) and Fanling North (FLN) New Development Area (NDA) – under CEDD project number 7747CL

  The project is part of the First Phase of the KTN and FLN NDA Development, which include (a) construction of an approximately 2 km long dual two-lane Fanling Bypass Eastern Section between Shek Wu San Tsuen North and Lung Yeuk Tau comprising viaduct, at-grade road and underpass sections, (b) construction of Lung Yeuk Tau Interchange connecting Fanling Bypass Eastern Section with existing Sha Tau Kok Road – Lung Yeuk Tau, (c) construction of an approximately 2 km long dual two-lane Fanling Bypass Eastern Section between Shung Him Tong and Kau Lung Hang mainly on viaducts with two long span overbridges across the existing East Rail Line and (d) construction of local roads for First Phase Development within the KTN and FLN NDA. The Fanling Bypass Eastern Section is anticipated to be completed in Mid-2025, while the remaining road works are anticipated to be completed in Early 2026.

  Advance Site Formation and Engineering Infrastructure Works at Kwu Tung North and Fanling North New Development Areas (https://www.cedd.gov.hk/eng/our-projects/major-projects/index-id-36.html)

2.3.2 The corresponding Gazette Plans are attached in **Appendix A**.

2.4 Existing Traffic Performance

2.4.1 To appreciate the existing traffic conditions, comprehensive classified traffic counts were conducted at the identified key junctions and road links within the Area of Influence (AOI) of the Subject Site. Locations of AOI, and surveyed junctions / road links are listed below and shown in **Figure 2.2** to **Figure 2.7**.

Identified Key Junctions:

J1 - Sha Tau Kok Road / Proposed Access Road to Subject Site (Priority)
J2 - Sha Tau Kok Road / Luk Keng Road (Priority)
J3 - Sha Tau Kok Road / Wo Keng Shan Road (Roundabout)
J4 - Sha Tau Kok Road / Ping Che Road (Roundabout)
J5 - Sha Tau Kok Road / Lau Shui Heung Road (Roundabout)
J6 - Sha Tau Kok Road / Lung Ma Road / San Wai Barracks (Roundabout)
J7 - Sha Tau Kok Road / Sui Wan Road (Signalised)
J8 - Sha Tau Kok Road / Ma Sik Road (Signalised)
J9 - Sha Tau Kok Road / Luen On Street (Signalised)
J10 - Sha Tau Kok Road / Fan Leng Lau Road / Lok Yip Road (Signalised)
J11 - Sha Tau Kok Road / Jockey Club Road (Roundabout)
J12 - Sha Tau Kok Road / San Wan Road / Fanling Station Road (Roundabout)
J13 - San Wan Road / Fanling Station Road (Signalised)
J14 - So Kwun Po Road / San Wan Road (Signalised)
J15 - So Kwun Po Road (Kai Leng) Roundabout (Roundabout)
J16 - So Kwun Po Road / Pak Wo Road (Signalised)
J17 - Pak Wo Road / Ching Hiu Road (Signalised)
J18 - Pak Wo Road / Po Kin Road / Po Wing Road (Signalised)
J19 - San Wan Road / Chi Cheong Road (Signalised)
J20 - Tai Po Tai Wo Road / Po Nga Road / Tai Po Road (Tai Wo) (Signalised)
J21 - Tai Po Tai Wo Road / Ting Tai Road / Kai Wo Road (Signalised)
J22 - Tai Po Tai Wo Road / Chui Lok Street (Signalised)
J23 - Tai Po Tai Wo Road / Ting Kok Road (Signalised)
J24 - Ting Kok Road / Po Nga Road / Kwong Fuk Road (Signalised)
J25 - Sha Tau Kok Road / Fanling Bypass (Roundabout)

Identified Key Road Links:

L1 - Sha Tau Kok Road - Shek Chung Au (Proposed Access Road to Subject Site - Luk Keng Road)
L2 - Sha Tau Kok Road - Wo Hang (Luk Keng Road - Huen Yuen Wai Highway Interchange)
L3 - Sha Tau Kok Road - Ma Mei Ha (Huen Yuen Wai Highway Interchange - Ping Che Road)
L4 - Sha Tau Kok Road - Lung Yeuk Tau (Lau Shui Heung Road - Lung Ma Road)
L5 - Sha Tau Kok Road - Lung Yeuk Tau (Sui Wan Road - Fanling Bypass)
L6 - Sha Tau Kok Road - Lung Yeuk Tau (Fanling Bypass - Ma Sik Road)
L7 - Sha Tau Kok Road - Lung Yeuk Tau (Luen On Street - Lok Yip Road)
L8 - Lung Shan Tunnel (Fanling Highway - Sha Tau Kok Road)
L9 - Fanling Highway (at the north of Lung Shan Tunnel Interchange)
L10 - Fanling Highway (at the south of Lung Shan Tunnel Interchange)

2.4.2 The traffic counts were undertaken at the key locations within the Study Area during 2025 Ching Ming Festive Period over the time period of 09:00 – 17:00.

2.4.3 The Ching Ming Festive Periods peak hour was found to be 11:30-12:30. The observed traffic flows during peak hour are presented in **Figure 2.8** to **Figure 2.9**.

2.4.4 Junction capacity analysis was carried out at the identified key junctions. Results of the capacity assessment are shown in **Table 2.4.1** below.

Table 2.4.1 2025 Ching Ming Festive Period Peak Hour Junction Performance

Junction		Junction Type	Performance (1)
J1	Sha Tau Kok Road / Proposed Access Road	Priority	N.A. (2)
J2	Sha Tau Kok Road / Luk Keng Road	Priority	0.12
J3	Sha Tau Kok Road / Wo Keng Shan Road	Roundabout	0.28
J4	Sha Tau Kok Road / Ping Che Road	Roundabout	0.24
J5	Sha Tau Kok Road / Lau Shui Heung Road	Roundabout	0.27
J6	Sha Tau Kok Road / Lung Ma Road / San Wai Barracks	Roundabout	0.33
J7	Sha Tau Kok Road / Sui Wan Road	Signalised	>100%
J8	Sha Tau Kok Road / Ma Sik Road	Signalised	60%
J9	Sha Tau Kok Road / Luen On Street	Signalised	>100%
J10	Sha Tau Kok Road / Fan Leng Lau Road / Lok Yip Road	Signalised	40%
J11	Sha Tau Kok Road / Jockey Club Road	Roundabout	0.39
J12	Sha Tau Kok Road / San Wan Road / Fanling Station Road	Roundabout	0.26
J13	San Wan Road / Fanling Station Road	Signalised	58%
J14	So Kwun Po Road / San Wan Road	Signalised	82%
J15	So Kwun Po Road (Kai Leng) Roundabout	Roundabout	0.35
J16	So Kwun Po Road / Pak Wo Road	Signalised	78%
J17	Pak Wo Road / Ching Hiu Road	Signalised	69%
J18	Pak Wo Road / Po Kin Road / Po Wing Road	Signalised	77%
J19	San Wan Road / Chi Cheong Road	Signalised	>100%
J20	Tai Po Tai Wo Road / Po Nga Road / Tai Po Road (Tai Wo)	Signalised	34%
J21	Tai Po Tai Wo Road / Ting Tai Road / Kai Wo Road	Signalised	60%
J22	Tai Po Tai Wo Road / Chui Lok Street	Signalised	93%
J23	Tai Po Tai Wo Road / Ting Kok Road	Signalised	70%
J24	Ting Kok Road / Po Nga Road / Kwong Fuk Road	Signalised	69%
J25	Sha Tau Kok Road / Fanling Bypass	Roundabout	N.A. (2)

Note:

(1) Figures shown represent "Reserved Capacity" (RC) in % for signalized junctions and "Design Flow Capacity" (DFC) ratio for priority junctions and roundabouts

(2) Non-existing junctions

2.4.5 Results of the analyses indicate that all identified key junctions are currently operating satisfactorily with spare capacity during peak hour on 2025 Ching Ming Festive Period.

2.4.6 Road link capacity analysis has also been carried out to examine the volume to capacity (V/C) ratio of the identified key road links. Results of the road link assessment are summarised in **Table 2.4.2**.

Table 2.4.2 2025 Ching Ming Festive Period Peak Hour Road Link Performance

Road Link		Type (1)	Configuration	Direction	Capacity (2) (pcu/hr)	Flows (pcu/hr)	V/C Ratio (3)
L1	Sha Tau Kok Road - Shek Chung Au (Proposed Access Road to Subject Site - Luk Keng Road)	RR	Single two-lane carriageway	Two-way	1,800	497	0.28
L2	Sha Tau Kok Road - Wo Hang (Luk Keng Road - Huen Yuen Wai Highway Interchange)	RR	Single two-lane carriageway	Two-way	1,800	609	0.34
L3	Sha Tau Kok Road - Ma Mei Ha (Huen Yuen Wai Highway Interchange - Ping Che Road)	RR	Single two-lane carriageway	Two-way	1,800	1,045	0.58
L4	Sha Tau Kok Road - Lung Yeuk Tau (Lau Shui Heung Road - Lung Ma Road)	RR	Dual two-lane carriageway	Eastbound	2,800	718	0.26
				Westbound	2,800	820	0.29
L5	Sha Tau Kok Road - Lung Yeuk Tau (Sui Wan Road - Fanling Bypass)	PD	Dual two-lane carriageway	Eastbound	2,800	1,019	0.36
				Westbound	2,800	1,167	0.42
L6	Sha Tau Kok Road - Lung Yeuk Tau (Fanling Bypass - Ma Sik Road)	PD	Dual two-lane carriageway	Eastbound	2,800	1,019	0.36
				Westbound	2,800	1,167	0.42
L7	Sha Tau Kok Road - Lung Yeuk Tau (Luen On Street - Lok Yip Road)	PD	Dual two-lane carriageway	Eastbound	2,800	741	0.26
				Westbound	2,800	985	0.35
L8	Lung Shan Tunnel (Fanling Highway - Sha Tau Kok Road)	RT	Dual two-lane carriageway	Northbound	3,000	954	0.32
				Southbound	3,000	785	0.26
L9	Fanling Highway (at the north of Lung Shan Tunnel Interchange)	EX	Dual four-lane carriageway	Northbound	8,200	5,809	0.71
				Southbound	8,200	6,232	0.76
L10	Fanling Highway (at the south of Lung Shan Tunnel Interchange)	EX	Dual four-lane carriageway	Northbound	8,200	6,064	0.74
				Southbound	8,200	6,318	0.77

Note:

(1) Abbreviation: EX – Expressway; PD – Primary Distributor; RR – Rural Road; RT – Rural Trunk Road
(2) Link Capacity is derived with reference to TPDM V2 Table 2.4.1.1
(3) A V/C ratio equal to or less than 1.0 is considered acceptable. A V/C ratio between 1.0 and 1.2 indicates a manageable degree of congestion.

2.4.7 Results of the analyses indicate that all identified key road links are currently operating satisfactorily with spare capacity during peak hours on 2025 Ching Ming Festive Period.

2.5 Existing Visitor Count

2.5.1 Visitor count has been arranged to observe peak hour person trips at various private columbarium sites in the New Territories during 2025 Ching Ming Festive Period. The results are shown in **Table 2.5.1**.

Table 2.5.1 Existing pedestrian count in various private columbarium sites in the New Territories during 2025 Ching Ming Festive Period

Location	No. of Niches (1)	Peak Hour Person Trips		
		In	Out	Total
Tsing Shan Tsuen, Tuen Mun	13,657	917	1,013	1,930
Ching Chung Sin Yuen, Tuen Mun	125,991	7,105	7,228	14,333
Po Fook Hill, Shatin	91,372	5,131	4,814	9,946
Lung Shan Temple, Fanling	17,629	1,378	1,331	2,708
Yuen Yuen Institute, Tsuen Wan	70,512	6,399	6,493	12,892
Fung Ying Sin Koon, Fanling	27,973	3,570	3,168	6,738

Note:

(1) Based on the no. of niches to be permitted under licence for each Columbarium published by The Private Columbaria Licensing Board

2.6 Existing Public Transport Service

2.6.1 As shown in **Figure 2.10**, the Subject Site is served by Franchised Bus Services and Green Minibus within 500m walking distance. The detailed operation information of the public transports available during opening hours of the Proposed Development as referred in **Section 3.4** is summarized in **Table 2.6.1**.

Table 2.6.1 Existing Public Transport Facilities

Route No.	Origin	Destination	Headway during opening hours of the Proposed Development (min.)
Franchised Bus Service			
78K	Sheung Shui (Tai Ping)	Sha Tau Kok	15-20
78S	Sheung Shui	Sha Tau Kok	Special Departure (1)
277A	Lam Tin Station	Sha Tau Kok	Normal Daily Operation 60 (2) Special Departure (Saturday & Holiday) Sha Tau Kok bound – 08:30 / 09:30 Lam Tin Station bound – 17:00 / 18:10
Green Minibus Service			
55K	Sheung Shui Station	Sha Tau Kok	4-20

Note:

(1) Sha Tau Kok bound – Monday to Friday: 09:30 / 11:45, Saturday & Holiday: 09:30 / 10:15 / 11:30; Sheung Shui bound – Monday to Friday: 15:15 / 16:55, Saturday & Holiday: 14:55 / 16:15 / 17:35

(2) Sha Tak Kok bound – only operates at 17:50-21:50 every day; Lam Tin Station bound – only operates at 07:10-11:10 on Monday to Friday and 09:10-13:10 on Saturday & Public Holiday respectively

2.6.2 In Summary, the Site has fair accessibility provided by public transport within 500m walking distance.

2.7 Transport Mode of Similar Columbarium Site

2.7.1 To better understand the split of transport mode of visitor who heading to private columbarium in New Territories during festive periods, transport mode survey has been conducted at columbarium sites similar to the Proposed Development.

2.7.2 Yuen Yuen Institute in Tsuen Wan has similar locality and choice of transport compared with the Proposed Development. Both of them are not situated within reasonable catchment area of MTR stations and therefore only directly accessible by road-based public transports but not MTR. Furthermore, both of them provide shuttle bus service for visitors to access the columbarium. Therefore, Yuen Yuen Institute is considered appropriate as reference.

2.7.3 In the consideration that there will be special traffic and transport arrangements to prohibit all vehicular traffic travelling between the section of Lo Wai Road from Lo Wai Pai Lau to Yuen Yuen Institute except franchised buses, taxis, public light buses (scheduled service New Territories Route No. 81), emergency vehicles and vehicles with valid closed road permitsduring the critical days of 2025 Ching Ming Festive Period (i.e. 29 and 30 March, 4, 5, 6 and 13 April 2025) implemented in Lo Wai, Tsuen Wan, modal split for visitors of Yuen Yuen Institute during the periods with and without the special traffic and transport arrangement are both surveyed and the result are tabulated in **Table 2.7.1**.

Table 2.7.1 Transport Mode for the Visitors of Yuen Yuen Institute during 2025 Ching Ming Festive Period

Survey Period	Trip Direction	Shuttle Bus	Public Transport (GMB / Franchised Bus)	Walk	PC	Taxi	Total
With special traffic and transport arrangement	Attraction	23%	49% (12% / 37%)	4%	2% (1)	21%	100%
	Generation	27%	52% (17% / 35%)	6%	2% (1)	13%	100%
Without special traffic and transport arrangement	Attraction	0% (2)	53% (53% / 0% (2))	3%	21%	23%	100%
	Generation	0% (2)	61% (61% / 0% (2))	4%	21%	14%	100%

Note:

(1) Passengers getting on / off private cars at the former Lo Wai Bus Terminus and walk to Yuen Yuen Institute direction are considered

(2) Shuttle Bus & Special Franchised Bus Service are only available during the implementation of special traffic and transport arrangement

3 THE PROPOSED DEVELOPMENT

3.1 Development Schedule

3.1.1 The Applicant intends to provide a total of 6,495 niches within the Proposed Development. One urn will be placed inside each niche.

3.1.2 The application is scheduled for completion in mid of Year 2030 and in full operation in the same year.

3.1.3 The master layout plan is presented in **Figure 3.1**.

3.2 Proposed Vehicular and Pedestrian Access Arrangement

3.2.1 The Subject Site is located at the north of Sha Tau Kok Road – Shek Chung Au near Tong To. Currently, there is a permitted vehicular access XYZ at the southern edge of the Subject Site, which is located at the existing bus layby along Sha Tau Kok Road Northbound, serving as the run-in of coach pick-up / drop-off zone of "Sha Tau Kok Farm". Besides, there is a single-track road extending from the aforementioned coach pick-up / drop-off zone passing through the Subject Site, serving as the Emergency Vehicular Access (EVA) of Tong To Village.

Proposed Access Road

3.2.2 In order to provide vehicular and pedestrian access to the Subject Site, the aforementioned single-track road is proposed to be extended, realigned and widened. A new standard single two-lane carriageway in width of minimum 7.3m with 2.5m-wide footpath on the eastern side is proposed to connect Sha Tau Kok Road – Shek Chung Au and the Subject Site ("Proposed Access Road") via the permitted vehicular access XYZ.

3.2.3 The Proposed Access Road would disconnect an existing single-track road section near the Entrance E with external road network. In order to maintain its accessibility, owner of "Sha Tau Kok Farm" has given consent to allow affected landowners / villagers to access the concerned single-track road section via another vehicular access of its coach pick-up / drop-off zone along access road to Tong To.

3.2.4 On the other hand, the Applicant has agreed to provide 3 nos. of EVA entrances along the Proposed Access Road, including the aforementioned single-track road section near the Entrance E and other two single-track road sections near the northern end of Car Park B, with minor realignment of all three concerned single-track road sections to suit the alignment of Proposed Access Road.

3.2.5 Control gates would be installed at the vehicular and pedestrian access along Sha Tau Kok Road as well as the aforementioned 3 nos. of EVA entrances, to prevent unauthorised access of both vehicles and visitors. The two gates at the vehicular and pedestrian access would keep opened during opening hours of the Proposed Development, while the gates at EVA entrances would keep closed all the time. There would be staff on standby 24-hour to open the gates whenever necessary.

Proposed Priority Junction of Sha Tau Kok Road / Proposed Access Road

3.2.6 In addition, transformation of the permitted vehicular access XYZ from run-in to two-way priority junction without affecting the existing bus stop "Tong To" (Sha Tau Kok bound) and adjacent Refuse Collection Point is proposed to cater for the anticipated traffic demand arising from the Proposed Development.

Proposed Cautionary Crossing Facilities

3.2.7 In order to ensure visitors arriving / leaving the Proposed Development by public transports cross Sha Tau Kok Road safely, a cautionary crossing with pedestrian refuge island at the east of the pair of existing bus stops "Tong To" is proposed.

Proposed footpath widening adjacent to existing bus stop (Sheung Shui bound)

3.2.8 Existing Sha Tau Kok Road westbound footpath is only 1.5m wide and is further narrowed down by street furniture and bus shelter for the section adjacent the existing bus stop "Tong To" (Sheung Shui bound), which is anticipated being occupied by the passengers arise from the Proposed Development waiting at the bus stop. Thus, widening of concerned footpath section to 3m is proposed by the Applicant's own cost of the Site to retain the existing 1.5m footpath width to ensure the safety of passengers and pedestrians.

3.2.9 The aforementioned four proposals (including minor realignment of the 3 nos. of single-track road sections as mentioned in Para. 3.2.3) would be detailly designed and constructed by the applicant's own cost.

3.2.10 The layout of the aforementioned four proposals and corresponding swept path analysis are illustrated in **Figure 3.2** and **Figure 3.3** respectively.

3.3 Proposed Internal Transport Facilities

3.3.1 **Figure 3.1** shows the proposed provision of internal transport facilities within the Proposed Development.

3.3.2 A 18m-long general pick-up / drop-off layby point for private cars / taxis will be provided near the canteen of the Proposed Development.

3.3.3 A separate 30m-long bus layby, which can accommodate 3 nos. of 28-seater minibuses for pick-up / drop-off of shuttle bus passengers concurrently will be provided in Car Park A.

3.3.4 A total of 62 nos. car parking spaces (including 2 nos. disabled parking) for visitors will be available in the Car Park A and Car Park B. Furthermore, 3 nos. of car parking spaces will be available for staffs near the office in Car Park A.

3.3.5 A waiting area will be provided in near the entrance of Proposed Development which allows at most 2 private cars waiting for entering the Car Park, in case there are private cars inside the car park not leaving on time while the private cars with permit under correct parking session attempt to enter the Proposed Development.

3.3.6 Adequacy of the internal transport facilities will be discussed in **Section 4.12** to **Section 4.14**.

3.4 Proposed Operational Management

3.4.1 The Proposed Development will be tentatively opened daily between 10:00 and 17:00 except New Year Day and the first three days of Lunar New Year. The opening hours will be tentatively extended between 08:00 and 18:00 during the Peak Grave Sweeping Days, including the day of Ching Ming / Chung Yeung Festival, and every Saturday, Sunday and Public Holiday two weeks before and after the Festivals.

3.4.2 **Figure 3.4** shows the Crowd Management Plan to be implemented by the Applicant within the Proposed Development. Together with 2 nos. of staff/ security guard to be deployed at the layby on Po Nga Road near Tai Wo MTR Station (refer to **Figure 3.5**), a minimum of 15 staff/ security guards will be deployed and the manpower deployment plan is summarized in **Table 3.4.1**.

Table 3.4.1 Manpower Deployment Plan during Peak Grave Sweeping Days

Staff	Location (1)	Duties
No. 1	Near Pedestrian Access	• Assist visitors accessing and leaving the Proposed Development at Pedestrian Access
No. 2	Near Entrance E	• Verify if visitors obtaining entry passes with appropriate timeslot • Record entry time of visitors and corresponding niche no. and report to manager (Staff No. 8)
Nos. 3, 4 & 5	Near Exit B, C & D	• Assist visitors to leave the columbarium zone • Assist visitors to cross the road to ensure road safety as well for staff no. 5 • Record leaving time of visitors and corresponding niche no. and report to manager (Staff No. 8)
No. 6	At Guard Room	• Verify if private cars obtaining parking permit • Regulate private cars, taxi and shuttle bus accessing and leaving the Proposed Development as well as the private cars inside the waiting spaces
No. 7	Near the general lay-by of private car & taxi	• Assist the visitors on the general lay-by of private cars & taxis
No. 8 (Manager)	At Administration Office	• Daily operational needs and First aid services • Coordinate the entry and leaving time for visitors and assign staff No. 11, 12 or 13 to notify the visitors who have not left yet 10 minutes before the end of their respective timeslot
No. 9	Near Entrance A	• Verify if visitors obtaining entry passes with appropriate timeslot • Record entry time of visitors and corresponding niche no. and report to manager (Staff No. 8) • Assist visitors to cross the road to ensure road safety
No. 10	At Shuttle Bus pick-up / drop-off area	• Regulate and manage passengers getting off the shuttle buses / queuing for shuttle bus services • Verify if leaving visitors obtaining boarding permits
Nos. 11, 12 & 13	Within the Columbarium zone	• Patrol the Columbarium zone to ensure visitor safety, clean environment, etc. • Notify visitors who have not left yet 10 minutes before the end of their respective timeslot
Nos. 14 & 15	Po Nga Road near Tai Wo MTR Station	• Regulate and control visitors queuing for shuttle bus services • Verify if shuttle bus visitors obtaining boarding permits

Note:

(1) Refer to **Figure 3.4** for locations of Staff Nos. 1 to 13; Refer to **Figure 3.5** locations of for Staff No. 14 to 15

3.4.3 The Proposed Development is a private property and only members and their family members with proof of membership are allowed to enter as stated in the House Rules included in the Sales Agreement of Niche. The sample of the Sale Agreement is presented in **Appendix B**.

3.4.4 For better crowd management and operation of the Proposed Development, all members need to register for entry at least two weeks in advance in a first-come-first serve basis. Each niche can register for up to four visitors each day with duration limited to one hour. When the visitor registration reaches its quota as mentioned in **Section 3.4.10**, other visitors have to register other available timeslots. There is no walk-in arrangement for visit, visitors without permit or with permit under other timeslots will be asked to leave immediately to avoid over-capacity of the Proposed Development.

3.4.5 Reservation of parking spaces is required when registering for entry as mentioned in **Section 3.4.5**. Each niche can apply for one parking permit each day with same timeslot as entry. When the parking space reservation reaches its quota as mentioned in **Section 3.4.11**, other vehicle owners have to reserve other available timeslots. There is no walk-in arrangement for the car park, private cars without permit or with permit under other parking timeslots will be asked to leave immediately to avoid influx of private cars.

3.4.6 Timeslot would be arranged on each 15-minute interval (i.e. 0800 – 0900 / 0815 – 0915, etc.) for both visitors and vehicles for better control. Staff No. 2 & 9 will verify if the visitors obtaining entry passes with appropriate timeslot. Non-verified visitors will be denied entry.

3.4.7 Staff No. 6 will coordinate with the private car drivers to park in the inner-most parking spaces first to facilitate orderly parking arrangement. The active management of the traffic control staff within the site could allow as many vehicles to enter the site orderly as possible, which would help reduce the chance of blocking at the entrance resulting tail-back at Sha Tau Kok Road and maintain smooth traffic circulation within the Proposed Development.

3.4.8 Staff No. 2 / 9, and Staff No. 3 / 4 / 5 will record the entry and leaving time of visitors respectively and report to manager (Staff No. 8), who is responsible for coordination. Once it is identified that any visitors have not left yet 10 minutes before the end of their respective timeslot, manager will assign Staff No. 11 / 12 / 13 to notify those visitors to finish the grave sweeping and leave at their earliest convenience.

3.4.9 As this TIA study in later chapters concludes that no adverse traffic impact would be imposed by the Proposed Development based on the anticipated 831 nos. of peak hour visitors as derived in **Table 4.1.2**, as such the quota of visitors would be 831 at any time on both normal days and peak grave sweeping days.

3.4.10 On the other hand, as there are 62 nos. of visitor car parking spaces (excluding staff car parking spaces and waiting spaces) for the Proposed Development, the quota for vehicles would hence be 62 at any time on both normal days and peak grave sweeping days.

3.4.11 **Figure 3.6** and **Figure 3.7** shows the pedestrian routes between the columbarium zone and the various transport facilities within as well as outside of the Proposed Development. **Figure 3.8** shows the pedestrian flow direction within the columbarium. As shown in the figures, each of the Entrances (A and E) and Exits

(B, C and D) will be manned by staff/ security guard to assist visitors to enter and exit in an orderly manner.

3.4.12 Given the remote location of the Subject Site, it is expected that most of the visitors will take transport services heading for the Proposed Development. As the pick-up/drop-off points and parking areas are all located within the Proposed Development, only visitor taking public transports will be entering and leaving the Proposed Development through the Pedestrian Access, which is not expected to be significant in terms of volume.

3.5 Proposed Shuttle Bus Service

3.5.1 Free Shuttle bus services by 28-seater minibuses will be provided during Peak Grave Sweeping Days by the Applicant's own cost for the members travelling between Tai Wo MTR Station and the Subject Site.

3.5.2 As shown in **Figure 3.5**, members have to queue and wait for the shuttle bus. The boarding & alighting point is proposed at the layby on Po Nga Road near Tai Wo MTR Station. Only visitor with boarding permit will be allowed to use the shuttle bus services. Application of the boarding permit (approaching and leaving permit in separate application) is required when registering for entry as mentioned in **Section 3.4.5**. Similarly, each niche can apply for up to eight boarding permits (four for approaching, four for leaving) each day. Management Staff and Security Guard will be deployed to register and regulate the queuing situation at the layby.

3.5.3 The planned route for this special shuttle bus service is shown in **Figure 3.9** and described as below:

<u>MTR Tai Wo Station to the Subject Site</u>

General layby on Po Nga Road → Po Nga Road → Ting Kok Road → Tai Po Tai Wo Road → Tolo Highway → Fanling Highway → Heung Yuen Wai Highway → Sha Tau Kok Road (Wo Hang) → Sha Tau Kok Road (Shek Chung Au) → Shuttle Bus layby of the Proposed Development

<u>The Subject Site to MTR Tai Wo Station</u>

Shuttle Bus layby of the Proposed Development → Sha Tau Kok Road (Shek Chung Au) → Sha Tau Kok Road (Wo Hang) → Heung Yuen Wai Highway → Fanling Highway → Tolo Highway →Tai Po Tai Wo Road → Po Nga Road → General layby on Po Nga Road

3.5.4 The estimated round-trip cycle time of this special bus route is 55 min as tabulated in **Table 3.5.1**.

Table 3.5.1 Round Trip Time of the Proposed Shuttle Bus Service

Events of the shuttle bus	Time Required (min)
Passengers Boarding at general layby on Po Nga Road (1)	3
Travelling from MTR Tai Wo Station to the Subject Site (2)	20
Passengers Alighting at the Subject Site (1)	3
Passengers Boarding at the Subject Site (1)	1.5
Travelling from the Subject Site to MTR Tai Wo Station (2)	15
Passengers Alighting at general layby on Po Nga Road (1)	1.5
Buffer time for unforeseen delay from traffic condition	5
Buffer time for unforeseen delay from boarding/alighting activities	5
Total Time for 1 round trip	**54**

Note:
(1) With reference to observed boarding / alighting durations of existing shuttle bus by 60-seater coach serving other Columbaria during 2025 Ching Ming Festive Period, with adjustment to fit in 28-seater minibus capacity
(2) The traveling time from Tai Wo Station to the Proposed Development is anticipated 5 minutes longer than the traveling time from the Proposed Development to Tai Wo Station considering that the shuttle bus route from Tai Wo Station to the Proposed Development will pass through more junctions in Tai Wo than the route for opposite direction (i.e. J21, J22, J23 & J24) as illustrated in **Figure 3.8**

3.5.5 The estimated passengers demand by public transport during Peak Grave Sweeping Days is 294 pax/hr as discussed in **Table 4.2.2**. Therefore, the associated requited shuttle bus trips and fleet size is proposed and summarised in **Table 3.5.2**.

Table 3.5.2 Operating Details of Proposed Shuttle Bus Service

Shuttle Bus Route	(A) Passenger Demand (pax/hr)	(B) Maximum Headway (1) (mins)	(C) Proposed Headway (2) (mins)	(D) Estimated Round Trip Time (mins)	(E) Proposed Fleet Size (= (D) / (C)
Tai Wo <> Subject Site	294	5 – 6	5	54	11

Note:
(1) Assuming Minibus Capacity is 28 passengers per vehicle
(2) More frequent headway is proposed to allow unforeseen demand of the shuttle bus service

3.5.6 The free shuttle bus services is proposed operating from 7:30 a.m. to 6:30 p.m. (i.e. 30 minutes before and after operation hour of the Proposed Development during Peak Grave Sweeping Days) with an average headway of 5 minutes.

4 TRAFFIC IMPACT ASSESSMENT

4.1 Pedestrian Trip Generation and Attraction Associated with the Proposed Development

4.1.1 In order to estimate the amount of visitor flow induced by the Proposed Development, references are made to the observed peak hour visitors at various private columbarium sites in the New Territories during 2025 Ching Ming Festive Period as discussed in **Section 2.5**. The number of niches of those columbaria and associated trip rates are shown in **Table 4.1.1**.

Table 4.1.1 Trip Rate of surveyed columbaria during 2025 Ching Ming Festive Period

Location	No. of Niches	Peak Hour Trip Rates (person/nich/hour)		
		In	Out	Total
Tsing Shan Tsuen, Tuen Mun	13,657	0.067	0.074	0.141
Ching Chung Sin Yuen, Tuen Mun	125,991	0.056	0.057	0.114
Po Fook Hill, Shatin	91,372	0.056	0.053	0.109
Lung Shan Temple, Fanling	17,629	0.078	0.075	0.154
Yuen Yuen Institute, Tsuen Wan	70,512	0.091	0.092	0.183
Fung Ying Sin Koon, Fanling	27,973	0.128	0.113	0.241
Adopted (Maximum of surveyed columbaria)		**0.128**	**0.113**	**0.241**

4.1.2 For conservative approach, the highest trip rate observed amongst the surveyed columbaria is adopted to estimate the peak hour pedestrian trip flows associated with the Proposed Development. The adopted trip rates and associated nos. of visitors are calculated and shown in **Table 4.1.2**.

Table 4.1.2 Adopted Trip Rate and Anticipated Peak Hour Number of Visitors

	Trip Rate / niches /hr		No. of Visitors / hr	
Number of niches = 6,495	In	Out	In	Out
	0.128	0.113	831	734

4.1.3 As indicated in the table above, it is anticipated that there will be **831 visitor/hr (In)** approaching to the Subject Site and **734 visitor/hr (Out)** leaving from the Subject Site during Peak Grave Sweeping Days. These nos. of visitors will be adopted to the subsequent assessment use.

4.2 Vehicular Trip Generation and Attraction Associated with the Proposed Development

4.2.1 To estimate the amount of traffic of different transport modes to be induced by the Proposed Development, reference has been made to the observed modal split of visitor accessing / leaving Yuen Yeun Institute during 2025 Ching Ming Festive Period as mentioned in **Table 2.7.1**.

4.2.2 In the consideration that shuttle bus and franchised bus services would not be provided for Yuen Yuen Institute before the implementation of special traffic and transport arrangement, modal split of Yuen Yuen Institute during the period with special traffic and transport arrangement is considered more appropriate in general to be referenced in the perspective of available transport modes, with further adjustment as following:

- Due to the locality of the Subject Site, it is assumed that no visitors will access / leave on foot, corresponding amounts of visitors will be assigned to shuttle buses and public transports proportionally.
- Most of the taxi passengers surveyed from Yuen Yuen Institute were taking taxi from / to MTR stations / major bus stops nearby only but not their origins / destinations. As such, due to a much longer traveling distance between the Subject Site and major transport node nearby, such as Fanling Station, compared to that between Yuen Yuen Institute and Tsuen Wan Station, it is assumed that there will be fewer passengers taking taxi and corresponding amounts of visitors will be assigned to shuttle buses and public transports proportionally.
- It is anticipated that there will not be special traffic and transport arrangement in Sha Tau Kok area due to the operation of the Proposed Development during Peak Grave Sweeping Days, such that the modal splits of private car during the period without special traffic and transport arrangement should be followed instead. It is assumed that such proportion of private car passengers would be compensated by original shuttle buses and public transports passengers.
- In view of the low carrying capacity of GMB service which may lead to a much longer queuing time compared to franchised bus, it is assumed that the potential visitors taking GMB will choose to take franchised bus instead to access / leave the Subject Site.
- Public transport for Yuen Yuen Institute (i.e. KMB 32P) provides a direct journey with only one en-route stop and it is observed that there would only be negligible non-Yuen Yuen Institute visitors taking KMB 32P, which makes its boarding condition and journey time being competitive compared to its shuttle bus service. By contrast, KMB 78K has been the major public transports serving local residents of Kwan Tei, Ping Che and Sha Tau Kok with significant existing occupancy and considerable number of en-route stops, its boarding condition is unfavoured and its journey time between Sheung Shui / Fanling and bus stop outside the Subject Site (i.e. Tong To) is much longer than the proposed shuttle bus services, it is hence assumed that part of potential franchised bus passengers would be attracted to take shuttle bus instead.

4.2.3 As above-mentioned, the visitor transport modes of the Proposed Development are estimated and tabulated in **Table 4.2.1**.

Table 4.2.1 Adopted Modal Split of the visitors induced by the Proposed Development during Peak Grave Sweeping Days

Trip Direction	Shuttle Bus	Public Transport (GMB / Franchised Bus)	Walk	PC	Taxi	Total
Attraction	35%	25% (0% / 25%)	0%	20%	20%	100%
Generation	40%	30% (0% / 30%)	0%	20%	10%	100%

4.2.4 Based on the above adopted modal split and the estimated nos. of visitors during peak hour as discussed in **Section 4.1**, the nos. of passengers and vehicles of different transport modes during the peak hour of Peak Grave Sweeping Days is summarised in **Table 4.2.2**.

Table 4.2.2 Number of Passengers and Vehicles induced by the Proposed Development

Transport Mode	Attraction Model Split	Generation Model Split	Occupancy Rate	Peak Grave Sweeping Days			
				Nos. of Passenger/hr		Nos. of Vehicle/hr	
				In	Out	In	Out
Shuttle Bus	35%	40%	28 (1)	291	294	12 (1)	12 (1)
GMB	0%	0%	-	-	-	-	-
Franchised Bus	25%	30%	120	208	220	3 (2)	3 (2)
PC	20%	20%	3 (3)	166	147	56	49
TAXI	20%	10%	3 (3)	166	73	56	25
Total				**831**	**734**	**127**	**89**

Note:
(1) Based on the proposed trips of shuttle services by 28-seater minibuses as discussed in Section 3.5
(2) Based on the proposed enhancement of franchised bus route KMB 78K as discussed in Section 4.9
(3) From "2021 Population Census" published by Census and Statistics Department, the overall household size in Hong Kong is 2.7 persons. Therefore, average car occupancy for visitors with 3 persons is adopted

4.2.5 Based on the above calculation, the corresponding number of vehicles of each transport mode generated from the Proposed Development during Peak Grave Sweeping Days in PCU unit is shown in **Table 4.2.3**.

Table 4.2.3 Number of Vehicles and PCUs induced by the Proposed Development

Transport Mode	PCU Factor	Peak Grave Sweeping Days			
		veh/hr		pcu/hr	
		In	Out	In	Out
Shuttle Bus	1.5	12	12	18	18
GMB	1.5	0	0	0	0
Franchised Bus	2.5	3	3	8	8
PC	1	56	49	56	49
Taxi	1	56	25	56	25
Total		**127**	**89**	**138**	**100**

4.2.6 The obtained traffic flow in PCU unit will be distributed into the road network for subsequent assessment use in design scenarios.

4.3 Future Traffic Growth

4.3.1 The Proposed Development is targeted for completion in Year 2030. In order to assess the traffic impact of the development-related traffic on the adjacent road network, Year 2033 (i.e., 3 years after completion) is adopted as the design year of the study.

4.3.2 In order to assess the future traffic impacts associated with the Proposed Development in design year 2033, the latest available 2019-based Base District Traffic Model (BDTM) no. NTE1 which covers Northeast New Territories area (purchased from Transport Department) has been adopted for developing the traffic forecast. The BDTM covers models of validated year 2019, design years 2026 and 2031.

4.3.3 Additional traffic counts were further undertaken during morning peak periods typical weekday at the same locations as the traffic counts during 2025 Ching Ming Festive Period as discussed in Section 2.4. By comparing the surveyed peak traffic flow during 2025 Ching Ming Festive Period and typical weekday, a festival conversion factor is derived. By applying the festival conversion factor to the year 2031 BDTM weekday AM peak traffic flow, year 2031 Ching Ming Festive Period peak traffic flow is obtained.

4.3.4 Considering the BDTM is only validated to year 2019, it has been further validated to the base year 2025 traffic condition, taking account the existing developments, traffic aids, junction layouts and method-of-control (MOC) in the Study Area. In the model revalidation process, the trip matrices of base year BDTM have been refined and adjusted to match with 2025 traffic count data through the typical matrix estimation process. The refinement and adjustment were then carried forward to update the design year 2031 Ching Ming Festive Period trip matrices.

4.3.5 Considering that the adjusted BDTM is only projected up to year 2031, a growth factor approach is adopted to further project the 2031 Ching Ming Festive Period trip matrices to the Design Year 2033.

4.3.6 Reference was made to the population and employment data from "2021-based Territorial Population and Employment Data Matrix" (TPEDM) published by Planning Department, annual average daily traffic (AADT) at counting stations within the AOI of the Proposed Development from Annual Traffic Census (ATC) published by Transport Department, and the Hong Kong Population Projection published by Census and Statistics Department.

4.3.7 For TPEDM, as there is no open data regarding population and employment beyond year 2031, there is no corresponding growth rate from 2031 to 2033. In addition, the major population growth in the AOI of Proposed Development, i.e., "Kwu Tung North / Fanling North New Development Areas (KTN / FLN NDA)", which will be under full intake before 2031, have been included in the planned / committed developments already as discussed in **Section 4.4**, hence TPEDM is considered inappropriate to be referenced.

4.3.8 Nevertheless, derivation of the growth factor by ATC and Hong Kong Population Projection for North District and Tai Po District respectively will be discussed from **Section 4.3.9** to **Section 4.3.13**.

Growth Rate of North District

4.3.9 The AADT at counting stations within the AOI of the Proposed Development in North District from ATC 2023 are summarized in **Table 4.3.1** below.

Table 4.3.1 Annual Average Growth Rate of North District by ATC

Station No.	AADT					Average Annual Growth Rate from 2019 to 2023
	2019	2020	2021	2022	2023	
5860	6,570	6,300	5,970	4,900	5,010	-6.55%
5660	33,630	23,740	22,980	22,280	22,810	-9.25%
5623	22,200	17,080	18,530	17,710	18,820	-4.05%
5622	22,950	18,260	19,410	18,550	19,720	-3.72%
5824	29,170	27,760	30,230	32,230	34,250	+4.1%
5453	20,320	17,680	18,380	17,830	18,250	-2.65%
6041	14,400	13,810	14,360	14,420	14,570	+0.29%
5244	13,220	12,680	13,180	12,780	13,900	+1.26%
5874	27,930	26,590	26,000	23,150	24,600	-3.12%
5685	16,650	15,600	15,640	15,160	15,520	-1.74%
5423	51,830	58,760	61,620	58,890	62,580	+4.82%
5697	13,440	13,070	13,440	13,030	13,340	-0.19%
5041	13,540	13,840	16,870	16,400	20,630	+11.1%
5461	95,760	92,630	97,150	92,840	98,660	+0.75%
6084	110,310	105,020	110,130	100,940	114,310	+0.89%
TOTAL	**491,920**	**462,820**	**483,890**	**461,110**	**496,970**	**+0.26%**

4.3.10 The projected population from "Hong Kong Population Projections 2022 – 2046" are summarized in **Table 4.3.2** below.

Table 4.3.2 Annual Average Growth Rate by Hong Kong Population Projections

Year	2021	2032	2033	Annual Average Growth Rate from 2031 to 2033
Population (Thousands)	7,820.2	7,862.1	7,903.6	**+0.53%**

4.3.11 The ATC data in **Table 4.3.1** indicates a growth of traffic with +0.26% p.a. The Hong Kong Population Projections data in **Table 4.3.2** indicates a growth of population with +0.53% p.a. For conservative purpose, the annual growth rate of 1% p.a. was adopted to derive the vehicular traffic forecast in North District for year 2031-2033.

Growth Rate of Tai Po District

4.3.12 Similar to North District, the AADT at counting stations within the AOI of the Proposed Development in North District from ATC 2023 are summarized in **Table 4.3.3** below.

Table 4.3.3 Annual Average Growth Rate of Tai Po District by ATC

Station No.	AADT					Average Annual Growth Rate from 2019 to 2023
	2019	2020	2021	2022	2023	
5621	35,320	33,590	35,610	34,030	36,160	+0.6%
6064	21,170	20,160	21,140	20,220	22,300	+1.3%
6621	14,790	14,810	15,210	12,960	12,550	-4.02%
TOTAL	**71,280**	**68,560**	**71,960**	**67,210**	**71,010**	**-0.09%**

4.3.13 The ATC data in **Table 4.3.3** indicates a growth of traffic with -0.09% p.a. Combining the growth of population with +0.53% p.a. by Hong Kong Population Projections data as derived in **Table 4.3.2**, the annual growth rate of 1% p.a. was also adopted to derive the vehicular traffic forecast in Tai Po District for year 2031-2033 for conservative purpose.

4.4 Planned/ Committed Developments in the Vicinity

4.4.1 In addition to the development flow, the traffic generated and attracted by adjacent major planned / committed developments which would anticipatedly induce traffic implication on the identified key junctions / road links have been taken into account for the traffic forecast.

4.4.2 Under the 2019-based BDTM, the major planned / committed developments incorporated in 2031 BDTM trip matrices are listed in **Table 4.4.1**.

Table 4.4.1 Planned / Committed Developments in the Vicinity under 2019-based BDTM

District	Type of Development		Ref. Index in BDTM
North	Public Housing	Various Lots in D.D. 51, D.D. 83, D.D. 95 and D.D. 96 and Adjoining Government Land in Fanling North and Kwu Tung North, New Territories (Partial KTN / FLN NDA)	P18-5-2
		Sheung Shui Areas 4 and 30	HN10 & HN11
		Ching Ho Estate Extension (Phase 4)	HN21
		Po Shek Wu Road	HN12
		Pak Wo Road (A/FSS/254)	B19-5-5
		Queen's Hill Extension	HN37
		Fanling Area 49	HN22
	Private Housing	Ling Hill (Y/FSS/18)	P19-5-8
		CDA site Hang Tau Tai Po, Kwu Tung South (Y/NE-KTS/13)	P19-5-9 & P19-5-11
		CDA site to the west of Hang Tau Road, Kwu Tung South (Y/NE-KTS/15)	P19-5-3
Tai Po	Public Housing	Tai Po Area 9	HN4
		Chung Nga Road West	HN28

4.4.3 Apart from the major planned / committed developments incorporated in the 2031 BDTM trip matrices, the following major planned / committed developments with tentative intake year in / before 2031 have been further incorporated into the traffic forecast and summarized in **Table 4.4.2**.

Table 4.4.2 Other Planned / Committed Developments in the Vicinity

District	Type of Development		Tentative Intake Year	Remark
North	Public Housing	KTN / FLN NDA (Those not included in BDTM)	Full intake before 2031	-
		Partial Development of Fanling Golf Course	2029	-
		Sheung Shui Areas 4 and 30	2025/26	-
		Ching Ho Estate Extension (Phase 4)	2023/24	-
		Jockey Club Road	2025	-
		Po Shek Wu Road	2026/27	-
		Fanling Area 48	2027/28	-
		Ching Hiu Road	2029/30	-
		Choi Shun Street	2030/31	-
		Fanling Area 17 Site A	2020/31	-
		Tai Tau Leng	2032/33	-
		San Wan Road	2027/28	-
		Pak Wo Road (A/FSS/254)	TBC	-
		Queen's Hill Extension	2030/31	-
		Transitional Housing Project at Ping Che Road, Ta Kwu Ling (Former Sing Ping School)	2024	-
	Private Housing	Fanling Area 40 (Y/FSS/13)	TBC	-
		Sheung Shui Lot 2 RP (Oi Yuen) (Y/FSS/19)	2028	-
		Fanling Area 17 Sites B1 and B2 (RNTPC Paper No. 9/21)	2030/31	-
		Ling Hill (Y/FSS/18)	2029	-
		Yin Kong CDA (Y/KTN/2)	2026	-
		"CDA(1)" Lot 2579 in D.D. 92, Kam Hang Road (A/NE-KTS/506)	2027	-
		"CDA(2)" Kam Hang Road, Kwu Tung South (Y/NE-KTS/14)	2025	-
		CDA site Hang Tau Tai Po, Kwu Tung South (Y/NE-KTS/13)	TBC	-

District	Type of Development		Tentative Intake Year	Remark
		CDA site to the west of Hang Tau Road, Kwu Tung South (Y/NE-KTS/15)	2027	-
	Others	North District Hospital Extension	2028	-
		New Territories East Cultural Centre	2027/28	-
		Community Health Centre cum Social Welfare Facilities at Pak Wo Road	2023/24	-
		Social Welfare Facility (RCHE) and Flat (A/FSS/288)	TBC	-
		Kong Nga Po Police Training Facilities	2026/27	-
		Wo Hop Shek Cemetery for Phases 2 and 3 Columbarium Development	2025-26	-
Tai Po	**Public Housing**	Tai Hang	2027/28	-
	Transitional Housing	"Lok Sin Village"in Wong Yue Tan, Plover Cove, Tai Po	2024	-
		"Good House" Shuen Wan, off Ting Kok Road, Tai Po (Former Shuen Wan Eu Tong Sen School)	2024	-
	Private Housing	Land Share Pilot Scheme No. 003 at She Shan Road / Lam Kam Road	Public portion 2033 – 2034 Private portion 2031 - 2033	-
	Others	Rezoning from "O" to "Government, Institution or Community (3)" to regularize an existing religious and columbarium uses (Y/TP/36)	-	-
		Proposed football-cum-rugby pitch/underground public vehicle park in Area 33, Tai Po	2028/29	-
		Proposed Community Health Centre at the former Tai Po Jockey Club Swimming Pool at On Pong Road	2031	No development parameter available (1)
		Proposed golf course at the ex-Shuen Wan Landfill Site ("Other Specified Uses" annotated "Golf Course" zone on the Tai Po OZP)	2027	No development parameter available (2)

Note:
(1) With the consideration of the scale and stand-alone building, in-house data of traffic generation/ attraction of Tin Shui Wai (Tin Yip Road) Community Health Centre was adopted
(2) With the consideration that there has been a golf course under operation in the same site before 2022, in-house data of traffic generation/ attraction of that golf course was adopted

4.5 Planned/ Committed Junction Improvement Schemes in the Vicinity

4.5.1 As North District is undergoing numerous planned large-scale developments, transportation infrastructures have been planned and anticipated to be completed before the completion of the Proposed Development. Associated Road/Junction Improvement works which would anticipatedly induce traffic implication on the identified key junctions/ road links have been taken into account for the traffic forecast and summarised in **Table 4.5.1**.

Table 4.5.1 Planned/ Committed Junction Improvement Schemes in the Vicinity

Description		Proposed by Project	Tentative Completion Year
Transports Infrastructures	***CEDD Project Number 7835CL*** - Construction Fanling Bypass Western Section - Construction Fanling Bypass Eastern Section - Widening of Fanling Highways between Chau Tau and Po Shek Wu Interchange from dual-three lane to dual-four lane - Provision of Po Shek Wu Road Flyover linking Po Shek Wu Road (Po Wan Road – Choi Yuen Road) and Fanling Highway (Kwu Tung Section) WB - Construction of local roads for Remaining Phase Development within the KTN/ FLN NDA area	KTN/ FLN NDA	Before 2031
Junction Improvement Schemes	***Sha Tau Kok Road / Jockey Club Road (J11)*** - Local widening of Sha Tau Kok Road southbound and Jockey Club Road westbound	FLN Area 17	2031

4.6 Assessment Scenarios

4.6.1 To evaluate the associated traffic impact likely to be induced by the Proposed Development, two scenarios were analysed and compared. Scenario 1 (i.e. Year 2033 Reference Scenario) assumed that the Proposed Development is not in place, while Scenario 2 (i.e. Year 2033 Design Scenario) assumed that the Proposed Development is in place.

Scenario 1

Year 2033 Reference Scenario

= Adjusted Year 2033 BDTM Ching Ming Festive Period traffic flow × corresponding growth factor during the period of year 2031-2033
Plus trip generations and attraction of other major planned/committed developments in the vicinity not incorporated in 2019-based BDTM

Scenario 2

Year 2033 Design Scenario

= Year 2033 Reference Scenario
Plus trip generations and attraction of the Proposed Development

4.6.2 The forecasted traffic flows for the above two scenarios are presented in **Figures 4.1** to **Figure 4.2** and **Figure 4.3** to **Figure 4.4** respectively.

4.7 Junction and Link Capacity Assessment

Junction Capacity Assessment

4.7.1 Junction capacity assessment was carried out at the identified key junctions for Year 2033 Reference and Design Scenarios. Assessment results are summarized in **Table 4.7.1** below.

Table 4.7.1 Year 2033 Junction Performance during Peak Grave Sweeping Days

Junction		Junction Type	Performance (1)	
			Reference	Design
J1	Sha Tau Kok Road / Proposed Access Road	Priority	N.A.	0.27
J2	Sha Tau Kok Road / Luk Keng Road	Priority	0.25	0.27
J3	Sha Tau Kok Road / Slip Road of Heung Yuen Wai Highway / Wo Keng Shan Road	Roundabout	0.43	0.48
J4	Sha Tau Kok Road / Ping Che Road	Roundabout	0.43	0.44
J5	Sha Tau Kok Road / Lau Shui Heung Road	Roundabout	0.41	0.43
J6	Sha Tau Kok Road / Lung Ma Road / San Wai Barracks	Roundabout	0.49	0.51
J7	Sha Tau Kok Road / Sui Wan Road	Signalised	30%	29%
J8	Sha Tau Kok Road / Ma Sik Road	- (2)	-	-
J9	Sha Tau Kok Road / Luen On Street	Signalised	61%	54%
J10	Sha Tau Kok Road / Fan Leng Lau Road / Lok Yip Road	Signalised	35%	34%
J11	Sha Tau Kok Road / Jockey Club Road (3)	Roundabout	0.51	0.53
J12	Sha Tau Kok Road / San Wan Road / Fanling Station Road	Roundabout	0.38	0.41
J13	San Wan Road / Fanling Station Road	Signalised	23%	21%
J14	So Kwun Po Road / San Wan Road	Signalised	38%	37%
J15	So Kwun Po Road (Kai Leng) Roundabout	Roundabout	0.65	0.65
J16	So Kwun Po Road / Pak Wo Road	Signalised	35%	35%
J17	Pak Wo Road / Ching Hiu Road	Signalised	27%	26%
J18	Pak Wo Road / Po Kin Road / Po Wing Road	Signalised	35%	34%
J19	San Wan Road / Chi Cheong Road	Signalised	46%	42%
J20	Tai Po Tai Wo Road / Po Nga Road / Tai Po Road (Tai Wo)	Signalised	-5%	-5%
J21	Tai Po Tai Wo Road / Ting Tai Road / Kai Wo Road	Signalised	20%	20%
J22	Tai Po Tai Wo Road / Chui Lok Street	Signalised	40%	40%
J23	Tai Po Tai Wo Road / Ting Kok Road	Signalised	30%	28%
J24	Ting Kok Road / Po Nga Road / Kwong Fuk Road	Signalised	19%	17%
J25	Sha Tau Kok Road / Fanling Bypass	Roundabout	0.48	0.50

Note:
(1) Figures shown represent "Reserve Capacity" (RC) in % for the signal junctions, and "design flow/capacity" (DFC) ratio for roundabout junction.
(2) Sha Tau Kok Road / Ma Sik Road will be under freeflow condition upon the operation of Fanling Bypass
(3) With junction improvement schemes as discussed in **Section 4.5** taken into account

4.7.2 The above results revealed that all the identified key junctions would operate within capacity under both Reference Scenario and Design Scenario during Peak Grave Sweeping Days in Year 2033, except J20.

4.7.3 Considered the junction capacity for J20 – Tai Po Tai Wo Road / Po Nga Road would be overloaded under both Reference and Design Scenario during Peak Grave Sweeping Days in Year 2033, improvement proposal has been explored in order to improve its performance, with details as below:

- Under existing lane arrangement, left-turn traffic from Tai Po Tai Wo Road NB to Tai Po Road (Tai Wo) WB will be segregated from mainstream straight traffic right before the junction with queuing spaces available for at most 1 no. vehicle only. It hence proposes local widening of Tai Po Tai Wo Road NB beyond the existing directional sign to provide approx. 30m long flare lane exclusive for left-turn traffic.
- There are two lanes for left turn traffic from Po Nga Road WB to Tai Po Tai Wo Road SB currently with kerb radius of approx. 10m only, which is not desirable for concurrent left-turn manoeuvring by heavy vehicles. It is hence proposed to enlarge the kerb radius to approx. 20m to facilitate smoother concurrent left-turn manoeuvring from both lanes.
- The existing MOC arrangement for Tai Po Road (Tai Wo) EB with left-turn split phase is not aligned with its lane arrangement, which may mislead the straight traffic under the stage of left-turn split phase. Given that one left-turn lane is sufficient already by corresponding junction calculation, it is proposed to install channelising island and segregate signal display with middle lane rearrangement to allow straight traffic only but not shared with left-turn traffic.
- Under existing MOC arrangement, green time for mainstream straight traffic along Tai Po Tai Wo Road is under two different stages, which greatly limits the junction performance. In order to optimise the green time allocation, it is proposed to discharge straight traffic in same stage, while there will be split phase for right-turn traffic in same next stage.

4.7.4 The proposed junction and MOC modification are presented in **Figure 4.5**. The junction improvement works will be designed and constructed by the applicant at his own cost.

4.7.5 With the proposed improvement scheme, J20 has been reassessed, and the corresponding junction performance is summarized in **Table 4.7.2** below.

Table 4.7.2 Year 2033 Junction Performance - with Junction Improvement

Junction		Type	2033 Performance (1)			
			Without junction improvement		With junction improvement	
			Reference	Design	Reference	Design
J20	Tai Po Tai Wo Road / Po Nga Road	Signalized	-5%	-5%	9%	9%

Note:
(1) Figures shown represent "Reserve Capacity" (RC) in % for the signal junctions, and "design flow/capacity" (DFC) ratio for roundabout junction.

4.7.6 With the proposed improvement scheme, it is anticipated that the performance of J20 would be enhanced and operated within capacity and would be more or less the same under both Reference and Design scenarios in Year 2033, it could hence be concluded that the traffic implication to J20 associated with the Proposed Development is negligible with the proposed improvement scheme.

Link Capacity Assessment

4.7.7 Similarly, Link capacity assessment was carried out at the identified key road links for Year 2033 Reference and Design Scenarios. Assessment results are summarized in **Table 4.7.3** below.

Table 4.7.3 Year 2033 Road Link Performance during Peak Grave Sweeping Days

Road Link		Type (1)	Configuration	Direction	Capacity (2) (pcu/hr)	Reference		Design	
						Flows (pcu/hr)	V/C Ratio(3)	Flows (pcu/hr)	V/C Ratio(3)
L1	Sha Tau Kok Road - Shek Chung Au (Proposed Access Road to Subject Site - Luk Keng Road)	RR	Single two-lane carriageway	Two-way	1,800	962	0.53	1,198	0.67
L2	Sha Tau Kok Road - Wo Hang (Luk Keng Road - Huen Yuen Wai Highway Interchange)	RR	Single two-lane carriageway	Two-way	1,800	1,175	0.65	1,411	0.78
L3	Sha Tau Kok Road - Ma Mei Ha (Huen Yuen Wai Highway Interchange - Ping Che Road)	RR	Single two-lane carriageway	Two-way	1,800	1,379	0.77	1,476	0.82
L4	Sha Tau Kok Road - Lung Yeuk Tau (Lau Shui Heung Road - Lung Ma Road)	RR	Dual two-lane carriageway	Eastbound	2,800	1,128	0.40	1,192	0.43
				Westbound	2,800	1,180	0.42	1,213	0.43
L5	Sha Tau Kok Road - Lung Yeuk Tau (Sui Wan Road - Fanling Bypass)	PD	Dual two-lane carriageway	Eastbound	2,800	1,527	0.55	1,591	0.57
				Westbound	2,800	1,804	0.64	1,837	0.66
L6	Sha Tau Kok Road - Lung Yeuk Tau (Fanling Bypass - Ma Sik Road)	PD	Dual two-lane carriageway	Eastbound	2,800	1,129	0.40	1,193	0.43
				Westbound	2,800	1,209	0.43	1,242	0.44
L7	Sha Tau Kok Road - Lung Yeuk Tau (Luen On Street - Lok Yip Road)	PD	Dual two-lane carriageway	Eastbound	2,800	886	0.32	934	0.33
				Westbound	2,800	988	0.35	1,009	0.36

L8	Lung Shan Tunnel (Fanling Highway - Sha Tau Kok Road)	RT	Dual two-lane carriageway	Northbound	3,000	1,232	0.41	1,305	0.43
				Southbound	3,000	1,014	0.34	1,080	0.36
L9	Fanling Highway (at the north of Lung Shan Tunnel Interchange)	EX	Dual four-lane carriageway	Northbound	8,200	7,189	0.88	7,217	0.88
				Southbound	8,200	7,722	0.94	7,746	0.94
L10	Fanling Highway (at the south of Lung Shan Tunnel Interchange)	EX	Dual four-lane carriageway	Northbound	8,200	7,519	0.92	7,564	0.92
				Southbound	8,200	7,834	0.96	7,876	0.96

Note:

(1) Abbreviation: EX – Expressway; PD – Primary Distributor; RR – Rural Road; RT – Rural Trunk Road
(2) Link Capacity is derived with reference to TPDM V2 Table 2.4.1.1
(3) A V/C ratio equal to or less than 1.0 is considered acceptable. A V/C ratio between 1.0 and 1.2 indicates a manageable degree of congestion.

4.7.8 The above results revealed that all the identified key road links would operate within capacity under both Reference Scenario and Design Scenario during Peak Grave Sweeping Days in Year 2033.

4.8 Layby Utilization Assessment

4.8.1 To better understand the current situation of the approx. 40m long general layby on Po Nga Road near Tai Wo MTR Station, and with the assumption of minimum manoeuvring length of a 28-seater minibus drive in and out the layby being 14m, utilization survey was conducted during 2025 Ching Ming Festive Period from 09:00 to 17:00.

4.8.2 In the utilization survey, the arrival time, departure time and type of vehicle are recorded to obtain the stacking time and length of the vehicle. The average utilization length and rate, as well as nos. of times with utilization length >26m is shown in the **Table 4.8.1**. The details of the layby utilisation are illustrated in **Figure 4.6**.

Table 4.8.1 Utilization Rate of Po Nga Road General Layby during 2025 Ching Ming Festive Period

Time	Total Length (m)	Average Utilization Length (m)	Average Utilization Rate (%)	Times with Utilization Length >26m (mins)
09:00-10:00	40	18	44%	3
10:00-11:00		17	43%	4
11:00-12:00		14	34%	2
12:00-13:00		13	34%	3
13:00-14:00		16	39%	3
14:00-15:00		14	35%	3
15:00-16:00		13	33%	2
16:00-17:00		10	26%	1

4.8.3 As shown in **Table 4.8.1**, during 2025 Ching Ming Festive Period, the observed average layby utilization is all below 26m in length. On the other hand, there were only 21 minutes with the layby utilization length greater than 26m among surveyed 8 hours. It is hence considered that the probability of the shuttle bus unable to stop properly inside the layby without blocking the bypass traffic is very unlikely (i.e. <5%).

4.8.4 In case shuttle buses cannot perform boarding and alighting at Po Nga Road layby in abnormal situation, temporary boarding and alighting activities of the shuttle bus along Ting Kok Road behind the existing bus stop outside Tai Po Government Office Building as illustrated in **Figure 4.7** is proposed as a contingency plan in order not to block the carriageway for normal traffic. One of the two management staffs serving near the layby (i.e. Staff No. 14 / 15) would lead the queuing passengers (28 at most) to walk towards Tai Po Government Office Building (walking time approx. 6 mins), while another staff would stay at the layby to assist the remaining passengers (if any).

4.8.5 The total temporary stopping time of the shuttle bus at the proposed location outside Tai Po Government Office Building would be approx. 7 mins, as summarised in the timeline plan in **Figure 4.7**.

4.9 Public Transport Assessment

4.9.1 The Special Transport and Traffic Arrangements implemented in Fanling as advised by respective Traffic Notices are reviewed and concluded that there is no change to the public transport services available during opening hours of the Proposed Development, i.e. KMB 78K, 78S, 277A and GMB 55K.

4.9.2 As referred to **Table 2.6.1**, there are only three morning services and three afternoon services to Sha Tau Kok bound and Sheung Shui bound respectively for KMB 78S during Saturday and Holiday. Similarly, there are only two morning services to Sha Tau Kok bound for KMB 277A during Saturday and Holiday, with no service afterwards until 17:50. As there is no KMB 277A and KMB 78S service during most of the opening hours of the Proposed Development during Peak Grave Sweeping Days, it is thus assumed that the visitors of the Proposed Development will not be served by KMB 277A and KMB 78S for conservative approach. On the other hand, as discussed in **Section 4.2.2**, it is assumed that GMB 55K will not cope with the additional passenger demand due to the low carrying capacity. Hence, KMB 78K would be the only available public transport for assessment purpose. In reality, franchised bus / GMB company could further review the service hours and frequency, if necessary, to cope with the passenger demand arising from the Proposed Development.

4.9.3 To identify if there are sufficient spare capacity to cope with the additional demand, the occupancy of KMB 78K at the bus stop “Sheung Shui Terminus”, “Fanling Station” and “Tong To” are summarised from **Table 4.9.1** to **Table 4.9.3** respectively.

Table 4.9.1 Bus Occupancy at Bus Stop "Sheung Shui Terminus" during 2025 Ching Ming Festive Period

Hour	Sha Tau Kok Bound							Sheung Shui Bound						
	No. of Bus Trip	Total Capacity (1)	Passenger on bus before stopping (a)	Alighting Passenger (b)	Boarding Passenger (c)	Total Passenger (2)	Occupancy	No. of Bus Trip	Total Capacity (1)	Passenger on bus before stopping (a)	Alighting Passenger (b)	Boarding Passenger (c)	Total Passenger (2)	Occupancy
0700 – 0800	3	360	4	0	13	17	5%	3	360	50	42	1	50	14%
0800 – 0900	3	360	5	1	10	14	4%	4	480	109	95	0	109	23%
0900 – 1000	4	480	10	0	28	38	8%	3	360	110	64	1	110	31%
1000 – 1100	3	360	7	0	15	22	6%	3	360	95	55	0	95	26%
1100 – 1200	4	480	4	0	43	47	10%	3	360	130	76	1	130	36%
1200 – 1300	3	360	8	0	25	33	9%	3	360	60	51	0	60	17%
1300 – 1400	3	360	21	0	14	35	10%	3	360	85	64	1	85	24%
1400 – 1500	3	360	20	5	16	31	9%	4	480	90	70	0	90	19%
1500 – 1600	3	360	10	2	13	21	6%	3	360	95	71	1	95	26%
1600 – 1700	3	360	6	0	27	33	9%	3	360	100	84	0	100	28%
1700 – 1800	4	480	17	2	43	58	12%	3	360	100	91	2	100	28%
1800 – 1900	*Assuming no visitor will take 78K to the Proposed Development after 6pm as it is closed at 6pm*							4	480	163	151	1	163	34%

Note:
(1) Assumed Bus Capacity is 120 passengers per vehicle
(2) Larger value of nos. of passengers on bus before stopping (i.e.(a)) and after stopping (i.e.(a)-(b)+(c)) is adopted

Table 4.9.2 Bus Occupancy at Bus Stop "Fanling Station" during 2025 Ching Ming Festive Period

Hour	Sha Tau Kok Bound							Sheung Shui Bound						
	No. of Bus Trip	Total Capacity (1)	Passenger on bus before stopping (a)	Alighting Passenger (b)	Boarding Passenger (c)	Total Passenger (2)	Occupancy	No. of Bus Trip	Total Capacity (1)	Passenger on bus before stopping (a)	Alighting Passenger (b)	Boarding Passenger (c)	Total Passenger (2)	Occupancy
0700 – 0800	3	360	16	1	25	40	11%	3	360	36	20	4	36	10%
0800 – 0900	3	360	26	2	34	58	16%	4	480	75	45	3	75	16%
0900 – 1000	4	480	53	0	50	103	21%	3	360	95	61	5	95	26%
1000 – 1100	3	360	30	0	66	96	27%	3	360	125	64	1	125	35%
1100 – 1200	4	480	48	0	73	**121**	25%	3	360	155	87	5	155	43%
1200 – 1300	3	360	36	0	60	96	27%	3	360	105	47	2	105	29%
1300 – 1400	3	360	45	4	57	98	27%	3	360	125	73	6	125	35%
1400 – 1500	3	360	24	0	39	63	18%	4	480	180	102	1	**180**	38%
1500 – 1600	3	360	30	2	46	74	21%	3	360	130	57	3	130	36%
1600 – 1700	3	360	31	4	30	57	16%	3	360	165	104	1	165	46%
1700 – 1800	4	480	42	3	53	92	19%	3	360	153	98	1	153	43%
1800 – 1900	*Assuming no visitor will take 78K to the Proposed Development after 6pm as it is closed at 6pm*							4	480	118	57	4	118	25%

Note:
(1) Assumed Bus Capacity is 120 passengers per vehicle
(2) Larger value of nos. of passengers on bus before stopping (i.e.(a)) and after stopping (i.e.(a)-(b)+(c)) is adopted

Table 4.9.3 Bus Occupancy at Bus Stop "Tong To" during 2025 Ching Ming Festive Period

Hour	Sha Tau Kok Bound							Sheung Shui Bound						
	No. of Bus Trip	Total Capacity (1)	Passenger on bus before stopping (a)	Alighting Passenger (b)	Boarding Passenger (c)	Total Passenger (2)	Occupancy	No. of Bus Trip	Total Capacity (1)	Passenger on bus before stopping (a)	Alighting Passenger (b)	Boarding Passenger (c)	Total Passenger (2)	Occupancy
0700 – 0800	3	360	29	3	2	29	8%	3	360	40	3	1	38	11%
0800 – 0900	3	360	48	9	1	48	13%	4	480	39	2	8	45	9%
0900 – 1000	4	480	47	11	1	47	10%	3	360	24	3	1	24	7%
1000 – 1100	3	360	52	21	3	52	14%	3	360	43	11	2	43	12%
1100 – 1200	4	480	80	13	2	69	14%	3	360	63	0	14	77	21%
1200 – 1300	3	360	38	9	0	38	11%	3	360	32	0	17	49	14%
1300 – 1400	3	360	34	13	0	34	9%	3	360	32	0	5	37	10%
1400 – 1500	3	360	18	3	0	18	5%	4	480	34	0	19	53	11%
1500 – 1600	3	360	22	1	0	22	6%	3	360	24	0	9	33	9%
1600 – 1700	3	360	12	0	0	12	3%	3	360	27	0	7	34	9%
1700 – 1800	4	480	32	2	1	32	7%	3	360	32	0	4	36	10%
1800 – 1900	*Assuming no visitor will take 78K to the Proposed Development after 6pm as it is closed at 6pm*							4	480	42	1	3	44	9%

Note:
(1) Assumed Bus Capacity is 120 passengers per vehicle
(2) Larger value of nos. of passengers on bus before stopping (i.e.(a)) and after stopping (i.e.(a)-(b)+(c)) is adopted

4.9.4 To establish the demand growth rate of KMB 78K at design year 2033, reference is made to several sources of information including "2021-based TPEDM" for year 2025 to 2031, and "Hong Kong Population Projections 2022 – 2046" for year 2031 to 2033 which has been derived in **Table 4.3.2**, while the population and employment data of North District in the 2021-based TPEDM are summarised in **Table 4.9.4**.

Table 4.9.4 Population and Employment Data of North District by 2021-based TPEDM

Year	2021	2026	2031	Annual Average Growth Rate
Population	309,650	352,000	435,550	3.47%
Employment	84,150	104,050	144,850	5.58%
TOTAL	**393,800**	**456,050**	**580,400**	**3.95%**

4.9.5 **Table 4.9.4** indicates the annual growth of population and employment in North District is +3.95% p.a. from year 2025 to 2031. For conservative purpose, the annual growth rate of 3.95% p.a. from year 2025 to 2031, and 1% p.a. from year 2031 to 2033 was adopted to derive the passenger demand forecast of KMB 78K.

4.9.6 As indicated from **Table 4.9.1** to **Table 4.9.3**, the highest nos. of passengers of KMB 78K for Sha Tau Kok bound and Sheung Shui bound was 121 pax/hr and 180 pax/hr respectively which were both recorded at Fanling MTR Station bus stop between 1100 – 1200 and 1400 – 1500 respectively. By adopting the growth rate of +3.95% p.a. from year 2025 to 2031 and 1% p.a. from year 2031 to 2033 into the observed highest nos. of passengers during 2025 Ching Ming Festive Period, the estimated passengers demand during 2033 Ching Ming Festive Period were summarised in **Table 4.9.5**.

Table 4.9.5 Estimated Demand of KMB 78K during 2033 Ching Ming Festive Period

Direction	2025 Observed Peak KMB 78K Passenger Demand (pax/hr)	2033 Reference Peak KMB 78K Passenger Demand (pax/hr)	Additional KMB 78K demand by Proposed Development (1) (pax/hr)	2033 Design Peak KMB 78K Passenger Demand (pax/hr)
Sha Tau Kok	121	156	208	364
Sheung Shui	180	232	220	452

Note

(1) Based on the estimated nos. of passengers by franchised bus in **Table 4.2.2**

4.9.7 Based on the above table, there will be insufficient spare capacity for the KMB 78K under existing headway of 3 to 4 bus trips/hr with capacity of 360 to 480 pax/hr. Furthermore, "Guidelines on Service Improvement and Reduction in Bus Route Planning Programme" states that if the occupancy rate of any bus route reaches 60% during any busiest one hour of the off-peak period, frequency enhancement shall be considered to better cope with the passenger demand and provide a pleasant travelling environment for passengers. Hence, it is proposed to enhance the service by shortening the frequency from 15 – 20 minutes to 8 – 12 minutes (i.e. average 10 minutes, 6 bus trips/hr) during Peak Grave Sweeping Days, with corresponding occupancy under the proposed enhancement summarised in **Table 4.9.6**.

Table 4.9.6 Bus Occupancy with Proposed Enhancement of KMB 78K during 2033 Ching Ming Festive Period

Direction	Proposed No. of Bus Trips (bus trips/hr)	Total Capacity (1) (pax/hr)	2033 Design Peak KMB 78K Passenger Demand (pax/hr)	Occupancy
Sha Tau Kok	6	720	364	51%
Sheung Shui	6	720	452	63%

Note:

(1) Assumed Bus Capacity is 120 passengers per vehicle

4.9.8 With the proposed frequency enhancement of KMB 78K, it is anticipated that there will be sufficient spare capacities to accommodate the additional KMB 78K demand induced by the Proposed Development during Peak Grave Sweeping Days.

4.10 Critical Footpath Assessment

4.10.1 Taken into account the pedestrian flow induced by the Proposed Development, Level of Services (LOS) assessment of the concerned footpaths has been conducted. LOS assessment of the pedestrian footpath was carried out based on the definition presented in the Highway Capacity Manual 2000. **Table 4.10.1** shows the various LOS 'quantifies' in terms of pedestrian flow rates.

Table 4.10.1 Level of Service (LOS) for Sidewalks

LOS	Flow rate for Walkway (ped/min/m)	Description
A	≤ 16	Free Circulation
B	≤ 23	Minor pedestrian conflicts
C	≤ 33	Some restrictions in walking speed and ability to pass others
D	≤ 49	Restricted and reduced walking speed for most pedestrians
E	≤ 75	Restricted and reduced walking speed for all pedestrians
F	> 75	Shuffling pedestrian movement

4.10.2 For the purpose of this assessment, a LOS of "C" or above would be considered acceptable for existing links. At a LOS of "D" or worse, it is determined that mitigation measures or improvement schemes should be considered to archive a LOS of "C" or better.

4.10.3 Based on the forecast hourly visitors flows by different modes as indicated in **Table 4.2.2**, the pedestrian routes indicated in **Figure 3.5** to **Figure 3.7** and the nos. of niches within each zone, the Level of Service (LOS) of the critical footpaths are assessed and the results are presented in **Table 4.10.2** and **Figure 4.8** to **Figure 4.9**.

Table 4.10.2 LOS of Critical Footpaths during Peak Grave Sweeping Days

Link ID.	Effective Width (1)	Observed Peak 15-minute Ped. Flow in 2025 Ching Ming Festive Period	2033 Reference Peak 15-minute Ped. Flow (2)	Peak 15-minute Flow by Proposed Development	2033 Design Peak 15-minute Ped. Flow	Peak Minute Flows per Meter (ped/min/m)	LOS
P1	1	12	15	55	70	5	A
P2	1	5	6	52	58	4	A
P3	2	-	-	107	107	4	A
P4	1.5	-	-	57	57	3	A
P5	1.5	-	-	26	26	2	A
P6	1	-	-	67	67	5	A
P7	1	-	-	157	157	11	A
P8	1	-	-	90	90	4	A
P9	1.5	-	-	131	131	6	A
P10	1.5	-	-	95	95	4	A
P11	2	-	-	119	119	4	A
P12	1.3	131	168	73	241	13	A
P13	2.1	345	444	33	477	16	A

Note:

(1) Effective width for P1 – P3, P11 – P13 = Actual width minus 0.5m for kerbside
Effective width for P4, P5, P9, P10 = Actual Width minus 0.5m shy zone at niche side
Effective width for P6 – P8 = Actual width minus 0.5m shy zone at both niche sides
Effective width for P14 = Actual width between cycle parking zone and column of shelter

(2) Based on the annual growth rate of 3.95% p.a. from year 2025 to 2031, and 1% p.a. from year 2031 to 2033 as discussed in **Section 4.9.5**

4.10.4 The results indicate that LOS A would be achieved at all the critical footpaths during Peak Grave Sweeping Days in year 2033.

4.11 Passengers Queuing Assessment

4.11.1 In order to ensure there is sufficient queuing area for proposed shuttle buses and KMB 78K during Peak Grave Sweeping Days due to the additional passengers from the Proposed Development, queuing area analysis is conducted for critical pick-up point, including bus stops "Sheung Shui Terminus" and "Fanling Station" for KMB 78K (Sha Tau Kok bound), Po Nga Road general layby, bus stop "Tong To" (Sheung Shui bound) and internal pick-up / drop-off point of shuttle bus within the Subject Site.

4.11.2 For the boarding passengers of the proposed shuttle bus approaching the Subject Site, it is assumed that the arrival rate of passengers to Po Nga Road general layby is based on the headway of East Rail Line. According to MTR website, the headway of East Rail Line during Saturday and Holiday is 3.8 – 8 mins. Under the proposed headway of the proposed shuttle bus service with 5 minutes as discussed in **Section 3.5**, it is anticipated that the maximum queue would be the nos. of passengers for two trains with headway of 5 minutes which equals to 291/(60/5)*2 = 49 passengers, assuming boarding passengers to be evenly spread out for each train in an hour.

4.11.3 On the other hand, it is assumed that hourly boarding passengers of KMB 78K approaching the Proposed Development at Sheung Shui Terminus and Fanling Station is proportional to observed hourly boarding passengers at these two bus stops during 2025 Ching Ming Festive period. For conservative assessment purpose, it is further assumed that all 208 nos. of passengers arising from the Proposed Development hourly will be on board at these two bus stops only.

4.11.4 As indicated in **Table 4.9.1** and **Table 4.9.2**, hourly boarding passengers of KMB 78K (Sha Tau Kok bound) at Sheung Shui Terminus and Fanling Station during the same hour that highest nos. of hourly passengers being recorded (i.e. 1100 – 1200) are 43 and 73 respectively. Accordingly, the anticipated hourly boarding passengers of KMB 78K (Sha Tau Kok bound) at Sheung Shui Terminus and Fanling Station arising from the Proposed Development will be 208*43/(43+73) = 77 passengers and 208*73/(43+73) = 131 passengers respectively.

4.11.5 Similar to the proposed shuttle bus, it is assumed that the arrival rate of passengers at Sheung Shui Terminus and Fanling Station is based on the headway of East Rail Line and boarding passengers will evenly spread out for each train in an hour. Under the proposed headway enhancement of KMB 78K with 8 – 12 minutes as discussed in **Section 4.9**, it is anticipated that the maximum queue at Sheung Shui Terminus and Fanling Station would be the nos. of passengers for two trains with headway of 8 minutes which equals to 77/(60/8)*2 = 21 passengers and 131/(60/8)*2 = 35 passengers respectively.

4.11.6 For the boarding passengers leaving the Proposed Development, it is observed that the visitors will leave the columbaria evenly in general based on the survey in 2025 Ching Ming Festive Period. As a result, the maximum queue will be the waiting passenger before the next proposed shuttle bus / KMB 78K arrives, which equals to 294/60*5 = 25 passengers and 220/60*12 = 44 passengers respectively.

4.11.7 Based on the estimated maximum queue above, queuing area assessment for critical pick-up points are summarised in **Table 4.11.1**, while the corresponding available queuing area of are illustrated in **Figure 4.10** and **Figure 4.11**.

Table 4.11.1 Queuing area assessment for critical pick-up points

Pick-up point		Observed max. queue in 2025 Ching Ming Festive Period (pax)	2033 Reference Queue (1) (pax)	Estimated max. queue from the Proposed Development (pax)	2033 Design Max. Queue (pax)	Min. required queuing area (m^2) (2)	Available queuing area (m^2)
Shuttle Bus	Po Nga Rd general layby	-	-	49	49	12	60
	Subject Site	-	-	25	25	6	70
KMB 78K	"Tong To" (Sheung Shui bound)	6	9	44	53	13	36 (4)
	"Sheung Shui Teminus" (Sha Tau Kok bound)	15	20	21	41	10	16 (5)
	"Fanling Station" (Sha Tau Kok bound)	33	43	35	78	19	20 (5)

Note:

(1) Based on the annual growth rate of 3.95% p.a. from year 2025 to 2031, and 1% p.a. from year 2031 to 2033 as discussed in **Section 4.9.5**

(2) According to TPDM Vol. 9 Ch. 2.7 Para. 2.7.14.16, theoretical capacities of the queue zones are based on a crush capacity of 5 persons per 1.2m square grid

(4) With the implementation of the proposed footpath widening as discussed in **Section 3.2.6**

(5) Derived from existing queuing marking for KMB 78K (Sha Tau Kok bound)

4.11.8 As indicated above, the available queuing area is sufficient to the required queuing length for all key pick-up points during Peak Grave Sweeping Days in year 2033.

4.12 Adequacy of Internal Pick-up / Drop-off Facilities of Private Cars and Taxis

4.12.1 As shown in **Figure 3.1**, the general pick-up / drop-off layby point for private cars / taxis is 18m long, which would be sufficient for 3 nos. of private cars / taxis for pick-up / drop-off activities. Based on an average drop-off or pick-up time of approximately 1-2 minutes per vehicle (on average 1.5 minutes per vehicle), each space can cope with approximately 40 nos. of vehicles per hour, and hence the proposed layby would allow 120 nos. of vehicles for pick-up / drop-off activities in 1 hour, which is sufficient to accommodate the anticipated peak hour demand of 56 and 25 nos. of taxis for dropping-off and picking-up passengers respectively as derived in **Table 4.2.2**.

4.12.2 Furthermore, it is anticipated most of the private-car-trip associated with the Proposed Development would be drive-in trip. Demand of pick-up / drop-off activities of private car passengers without the need of parking are anticipated immaterial. With the spare capacity of 39 nos. vehicles per hour for the general pick-up / drop-off layby point for private cars / taxis as discussed above, it is considered that the pick-up / drop-off facilities are also adequate to cater for the demand of private cars.

4.13 Adequacy of Internal Pick-up/ Drop-off Facilities of Proposed Shuttle Bus

4.13.1 As discussed in **Section 3.5**, with the proposed headway of 7.5 minutes and the anticipated passenger boarding / alighting duration of 4.5 minutes for the proposed shuttle bus services, it is anticipated that the shuttle bus would have arrived, finished pick-up / drop-off activities and left the Subject Site already before the next shuttle bus arrives, such that the probability of two or more shuttle buses picking-up / dropping-off at the same time is very unlikely. With the proposed 30m-long layby which can accommodating 3 nos. of 28-seater minibus picking-up / dropping-off passengers at the same time, it is considered that the pick-up / drop-off facilities are adequate to cater for the demand of proposed shuttle buses.

4.14 Adequacy of Internal Car Parking Provision

4.14.1 As indicated in **Table 4.2.2**, it is anticipated that 56 nos. of private cars would access the Proposed Development during the peak hour of Peak Grave Sweeping Days. Based on on-site observations, the visiting time for niche within columbarium is generally less than one hour. Furthermore, as discussed in **Section 3.4.7**, parking space reservation is required during Peak Grave Sweeping Days to ensure the parking vehicles at particular time would not exceed the available parking spaces. It is hence anticipated that the car park of the Proposed Development with 62 nos. of parking spaces will be sufficient to cater for the parking demand.

4.15 Private Car Queuing Assessment for Checkpoint

4.15.1 Due to the manual checking at the Checkpoint where Staff No. 3 would regulate private cars with permits entering the Proposed Development as discussed in **Section 3.4**, single-server queuing model (M/M/1) is adopted to evaluate the associated queues induced and to check that there will be sufficient area to handle the peak hour traffic attraction without inducing tail-back to Sha Tau Kok Road.

4.15.2 The probability that n vehicles queue at checkpoint can be derived by below formulas:

$$e = \frac{\lambda}{\mu}$$

$$P(n) = \frac{1}{\sum_{n=0}^{N-1} \frac{e^n}{n!} + \frac{e^N}{N!(1-\frac{e}{N})}} \qquad \text{for n = 0}$$

$$P(n) = \frac{e^n}{n!} P(0) \qquad \text{for } 0 < n \leq N$$

where: λ = Peak 15-minutes arrival rate = 56 * 1.2 / 4 = 17 veh / 15-min

μ = Average servicing time

= 1veh / 15sec = 60 veh / 15-min

e = λ / μ = 17 / 60 = 0.28

P(n) = Probability of n vehicles in the system

n = Number of vehicles in the system

N = Number of checkpoint = 1

- Probability of checkpoint available,

$$P(0) = \frac{1}{\frac{0.28^0}{0!} + \frac{0.28^1}{1!\,(1 - \frac{0.28}{1})}} = 0.72$$

- Probability of checkpoint in use,

$$P(1) = \frac{0.28^1}{1!}(0.72) = 0.2016$$

- Probability of checkpoint in use and 1 vehicle in the queue,

$$P(2) = \frac{0.28^2}{1!}(0.72) = 0.05645$$

- Probability of checkpoint in use and more than 1 no. vehicle in the queue

$$1 - P(0) - P(1) - P(2)$$

$$= 1 - 0.72 - 0.20 - 0.056 = 0.02195$$

4.15.3 The analysis shows that at 95% confidence interval, the probability of Checkpoint in use and forming traffic queue with more than 1 no. private car queuing at the Checkpoint is unlikely.

4.15.4 Considering the waiting area inside Car Park A which allows at most 2 private cars waiting for entering the visitor car park as discussed in **Section 3.4** and illustrated in **Figure 3.1**, it is anticipated that the private cars could enter the Proposed Development without blocking the ingress of the proposed shuttle bus and without inducing any queue in Sha Tau Kok Road.

5 SUMMARY & CONCLUSION

5.1 Summary

5.1.1 The Applicant applies for planning approval to develop a columbarium at D.D. 41, Sha Tau Kok in New Territories (hereafter referred as the "Subject Site"). The Proposed Development (hereafter referred as the "Proposed Development") will provide a total of 6,495 niches. One urn will be provided in each niche.

5.1.2 Ove Arup & Partners (HK) Ltd. was commissioned to carry out a traffic impact assessment (TIA) to assess and identify the likely traffic impacts / hazards which may be induced by the Project and derives corresponding mitigation measure, if necessary for the Project.

5.1.3 The application is scheduled for completion in mid of year 2030 and in full operation in the same year. Conservatively, Year 2033 (3 years after commencement) is adopted for the assessment years of the study.

5.1.4 Comprehensive Traffic Surveys including traffic count, visitor count, modal split count and etc. have been carried out in 2025 Ching Ming Festive Period in order to collect the most updated traffic data.

5.1.5 In order to assess the future traffic impacts associated with the Proposed Development in year 2033, the latest available 2019-based Base District Traffic Model (BDTM) no. NTE1 which covers Northeast New Territories area (purchased from Transport Department) has been adopted for developing the traffic forecast. The BDTM covers models of validated year 2019, design years 2026 and 2031. The design year 2031 BDTM trip matrices have been refined and adjusted to match with 2025 traffic count data through the typical matrix estimation process, taking account the existing developments, traffic aids, junction layouts and method of control in the Study Area. Considering that the adjusted BDTM is only projected up to year 2031, a growth factor approach is adopted to further project the 2031 Ching Ming Festive Period trip matrices to the Design Year 2033.

5.1.6 Traffic impact assessment scenarios were set up to evaluate the associated traffic impact likely to be induced by the Proposed Development. Scenario 1 is the Reference Scenario (without the Proposed Development) in Year 2033. Scenario 2 is the Design Scenario (with the Proposed Development) in 2033.

5.1.7 The results of junction assessment revealed that all identified key junctions would operate within capacity with the Proposed Development during Peak Grave Sweeping Days in Year 2033, except J20.

5.1.8 J20 – Tai Po Tai Wo Road / Po Nga Road would be overloaded under both Reference Scenario and Design Scenario during Peak Grave Sweeping Days in Year 2033. Improvement proposal has been explored in order to improve its performance. With the proposed improvement scheme of J20, it is anticipated that the implication to the road network with the Proposed Development would be minimal.

5.1.9 The results of road link assessment revealed that all identified key road links would operate within capacity with the Proposed Development in Year 2033.

5.1.10 Shuttle bus service by 28-seater minibus has been proposed during Peak Grave Sweeping Days. Assessment on shuttle bus service indicates that the capacity of the

proposed shuttle bus service can cater for the anticipated passenger demand by the Proposed Development, and the proposed pick-up / drop-off point at Po Nga Road general layby near Tai Wo Station has sufficient capacity to allow proper pick-up / drop-off activities.

5.1.11 Assessment on the impact of public transport services indicates that the additional passenger demand by the Proposed Development would not impose adverse impact on the existing public transport services with the proposed service enhancement of KMB 78K by increasing headway from 15 – 20 minutes to 6 – 9 minutes during Peak Grave Sweeping Days.

5.1.12 Pedestrian impact assessment indicates that the pedestrian flow induced by the Proposed Development would not impose adverse impact within the Proposed Development and in the vicinity of the Proposed Development.

5.1.13 Passenger Queuing assessment indicates that the available queuing area for all critical pick-up points is sufficient to cater for the demand induce by the Proposed Development.

5.1.14 Assessment on parking provision and pick-up / drop-off facilities provision indicates that the provision of parking spaces and pick-up/drop-off facilities within the Proposed Development could cater the demand induced by the Proposed Development.

5.2 Conclusion

5.2.1 With the above findings, it can be concluded that the Proposed Development would not impose adverse traffic impact on the surrounding road network and pedestrian walking condition in the vicinity of the Site, and thus is feasible in the traffic engineering point of view.

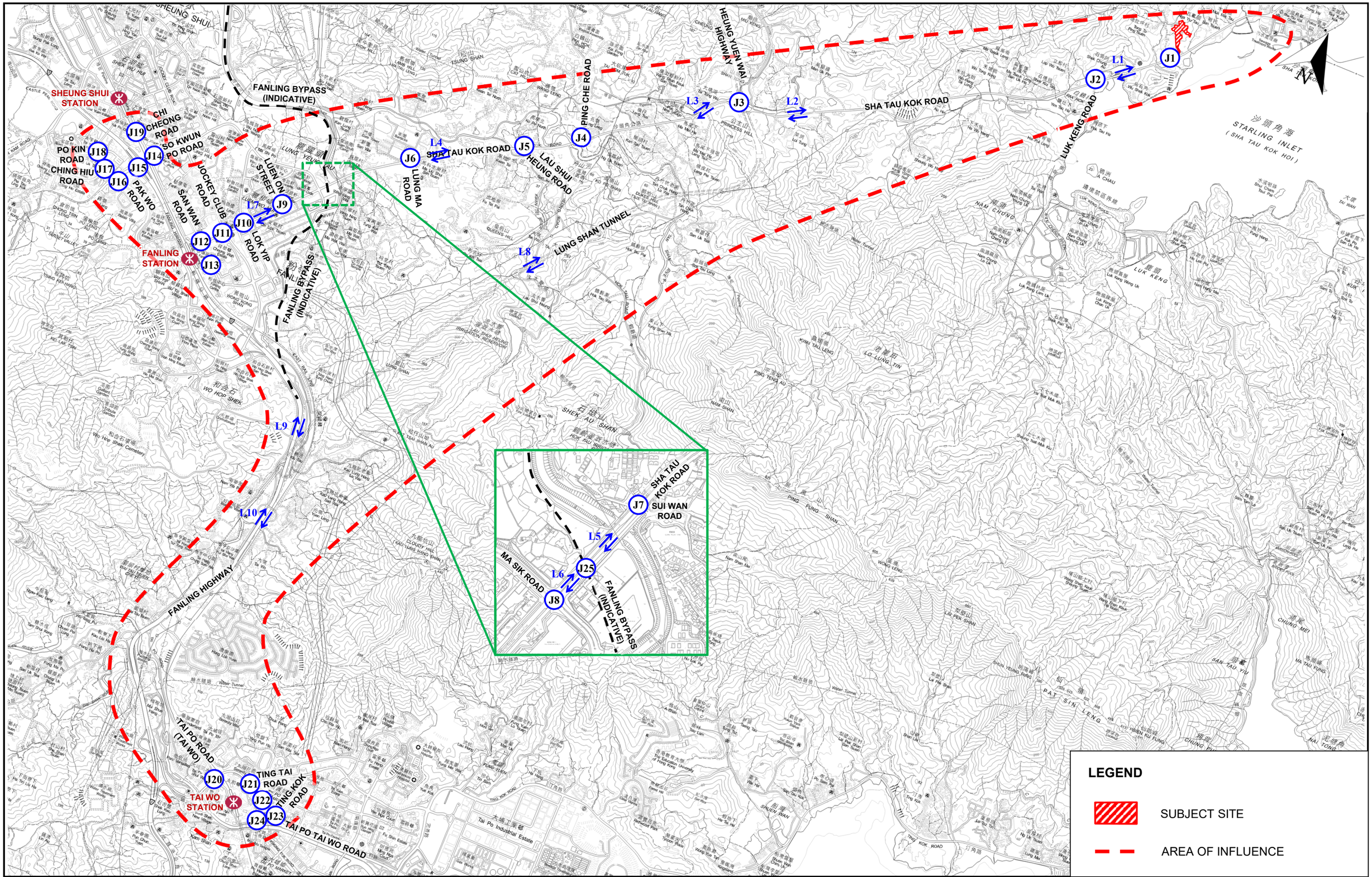
Figures

Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 2.1

Date	Scale	Drawing Title
1/2026	N.T.S	**LOCATION OF SUBJECT SITE**
Drawn	Job No.	
CKTY	278273	

ARUP

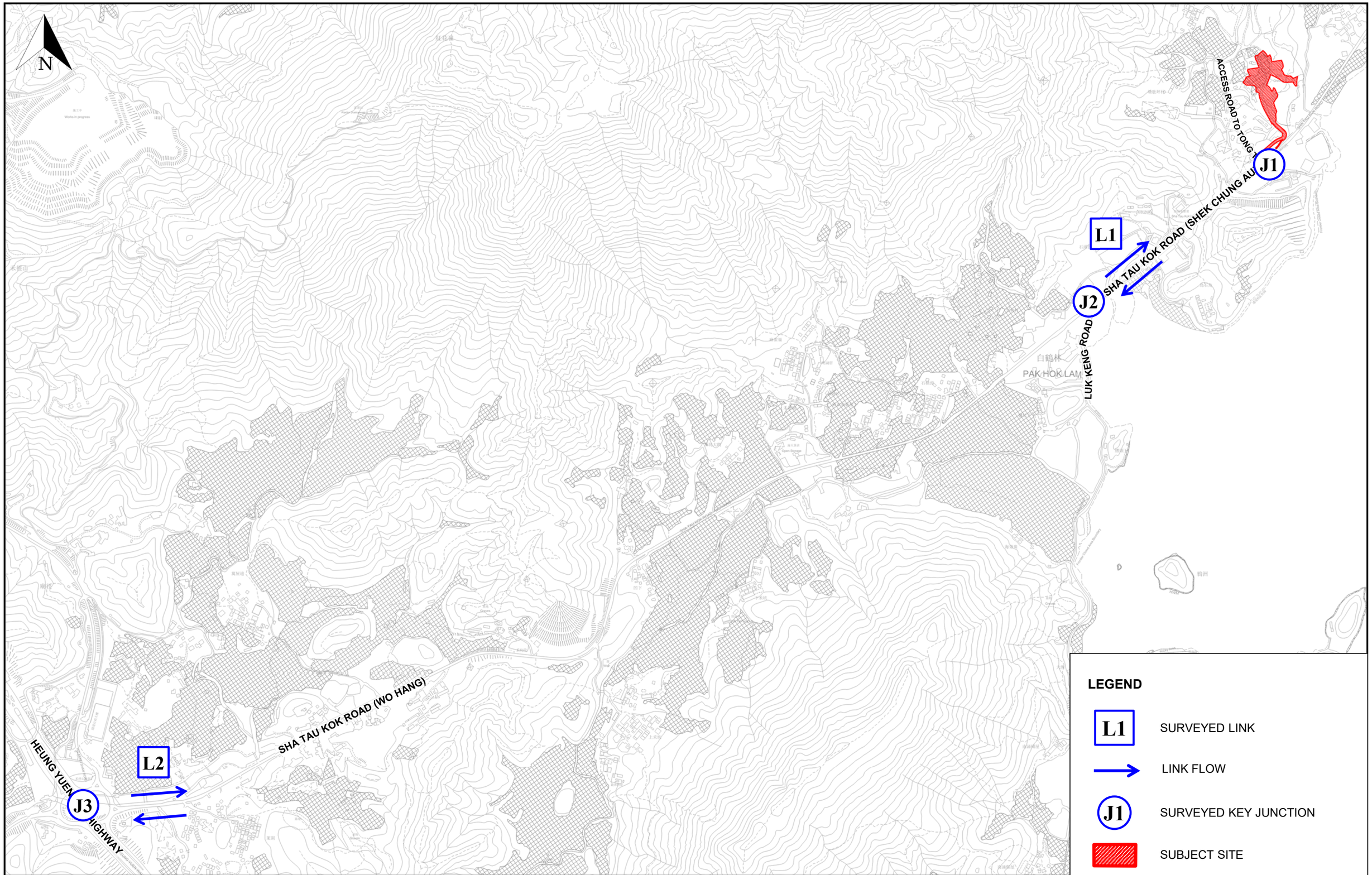


Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 2.2

Date	Scale	Drawing Title
1/2026	N.T.S	**AREA OF INFLUENCE (AOI)**
Drawn	Job No.	
CKTY	278273	

ARUP

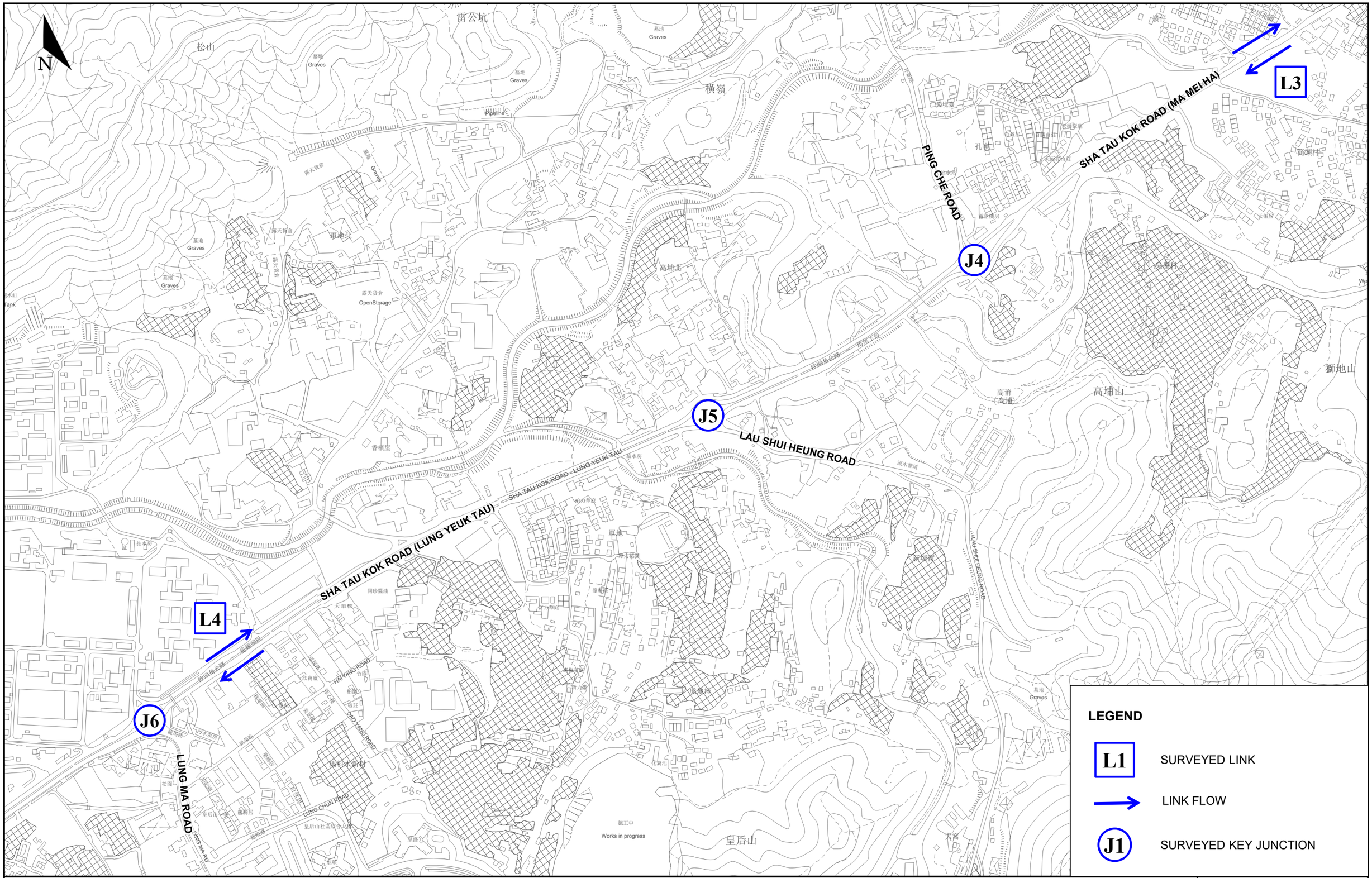


Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 2.3

Date	Scale	Drawing Title
1/2026	N.T.S	**LOCATION OF SURVEYED JUNCTIONS AND LINKS IN THE VICINITY OF PROPOSED DEVELOPMENT (1)**
Drawn	Job No.	
CKTY	278273	

ARUP



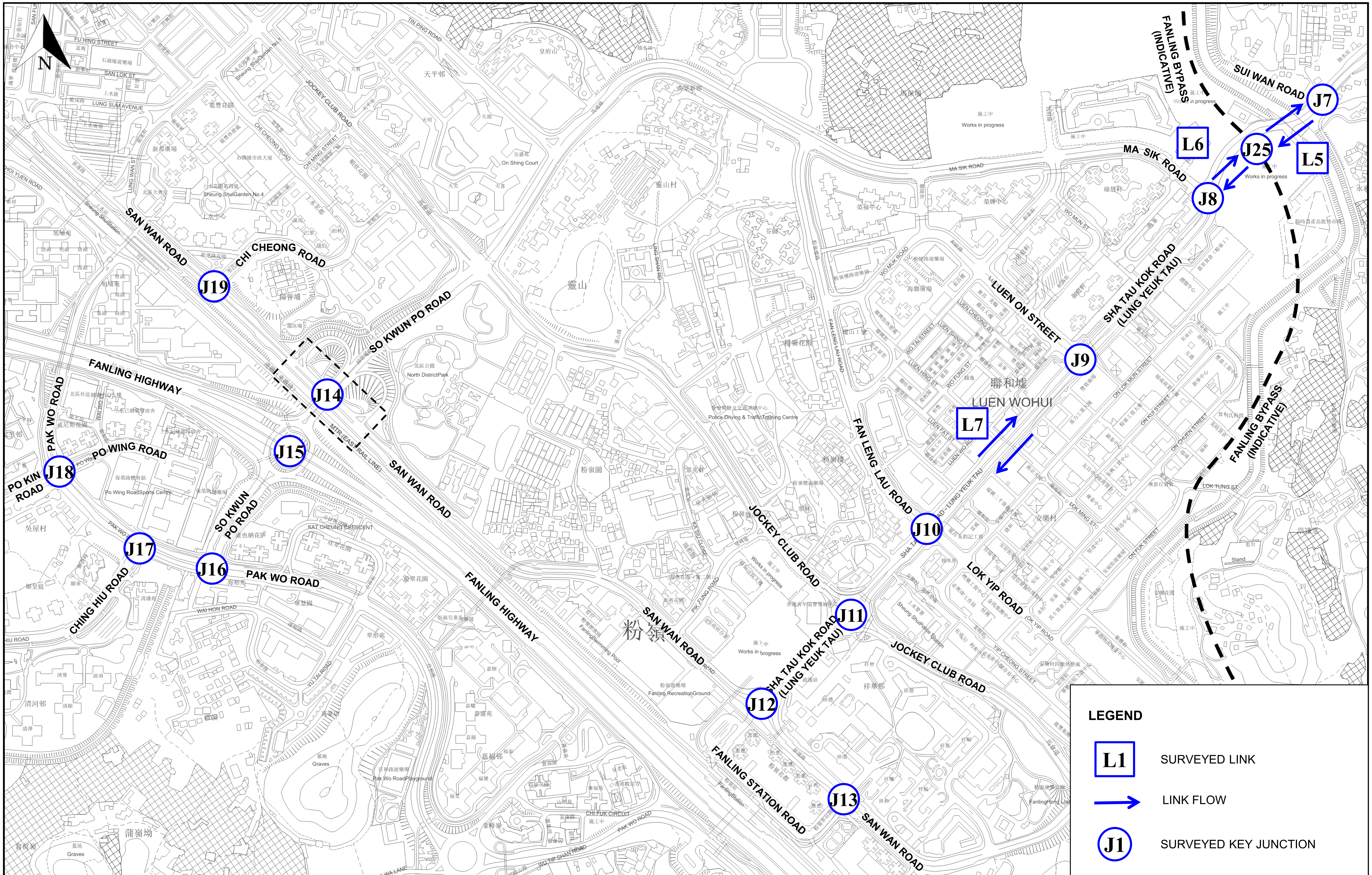
Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 2.4

Date	Scale
1/2026	N.T.S
Drawn	Job No.
CKTY	278273

Drawing Title
LOCATION OF SURVEYED JUNCTIONS AND LINKS IN THE VICINITY OF PROPOSED DEVELOPMENT (2)

ARUP

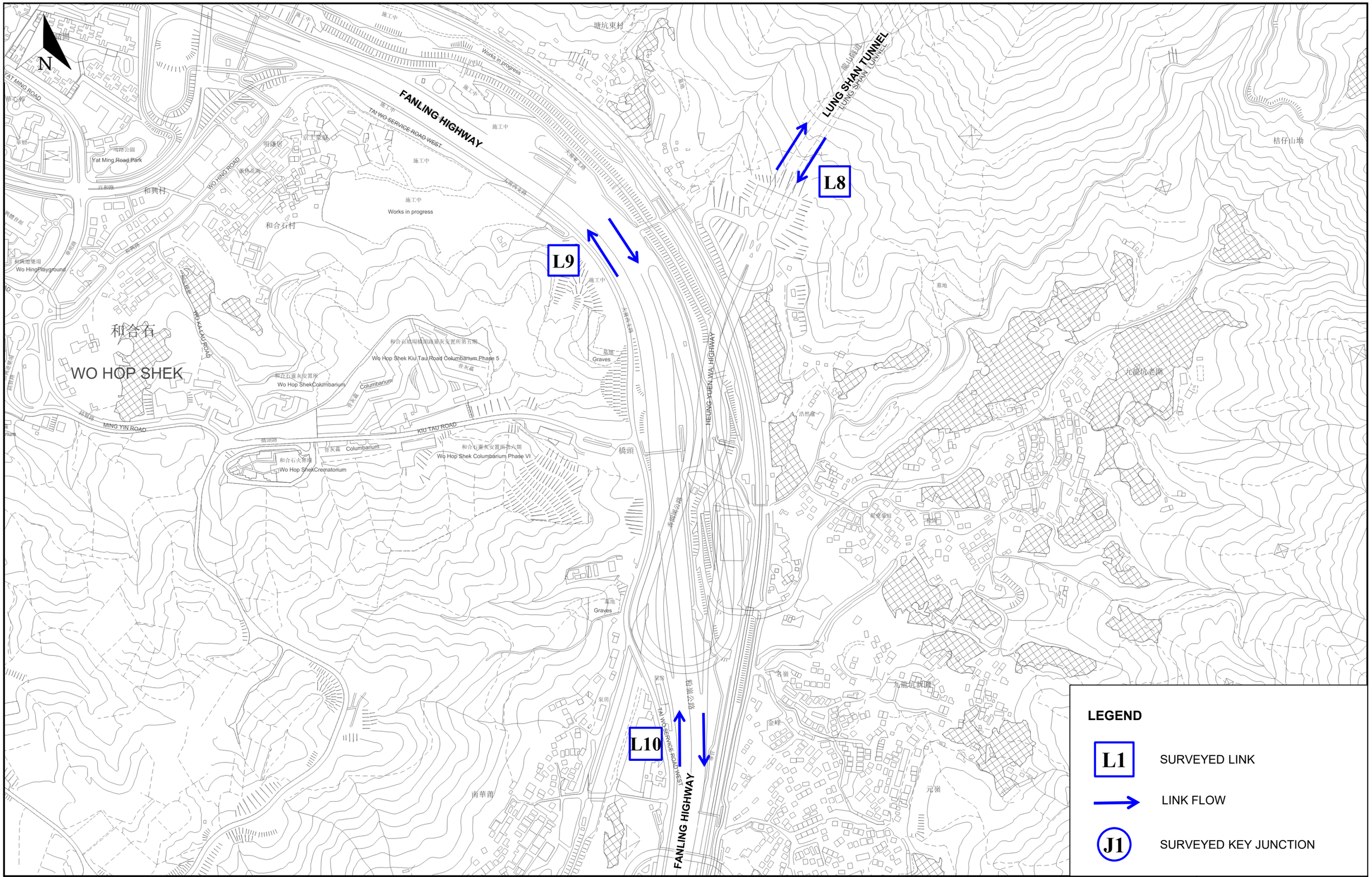


Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 2.5

Date	Scale	Drawing Title
1/2026	N.T.S	**LOCATION OF SURVEYED JUNCTIONS AND LINKS IN THE VICINITY OF PROPOSED DEVELOPMENT (3)**
Drawn: CKTY	Job No.: 278273	

ARUP



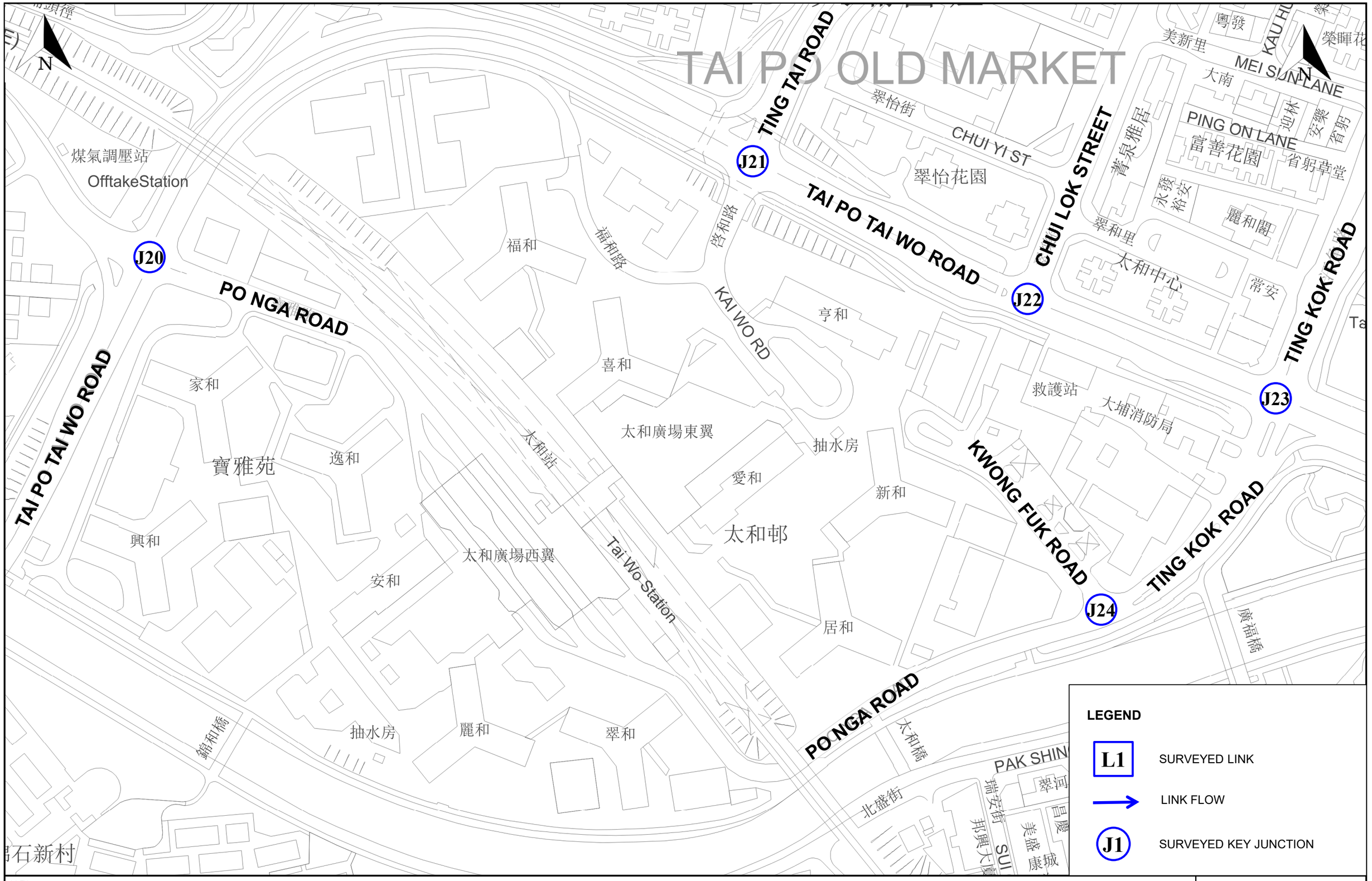
Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 2.6

Date	Scale
1/2026	N.T.S
Drawn	Job No.
CKTY	278273

Drawing Title
LOCATION OF SURVEYED JUNCTIONS AND LINKS IN THE VICINITY OF PROPOSED DEVELOPMENT (4)

ARUP



Job Title
SHA TAU KOK COLUMBARIUM PROJECT

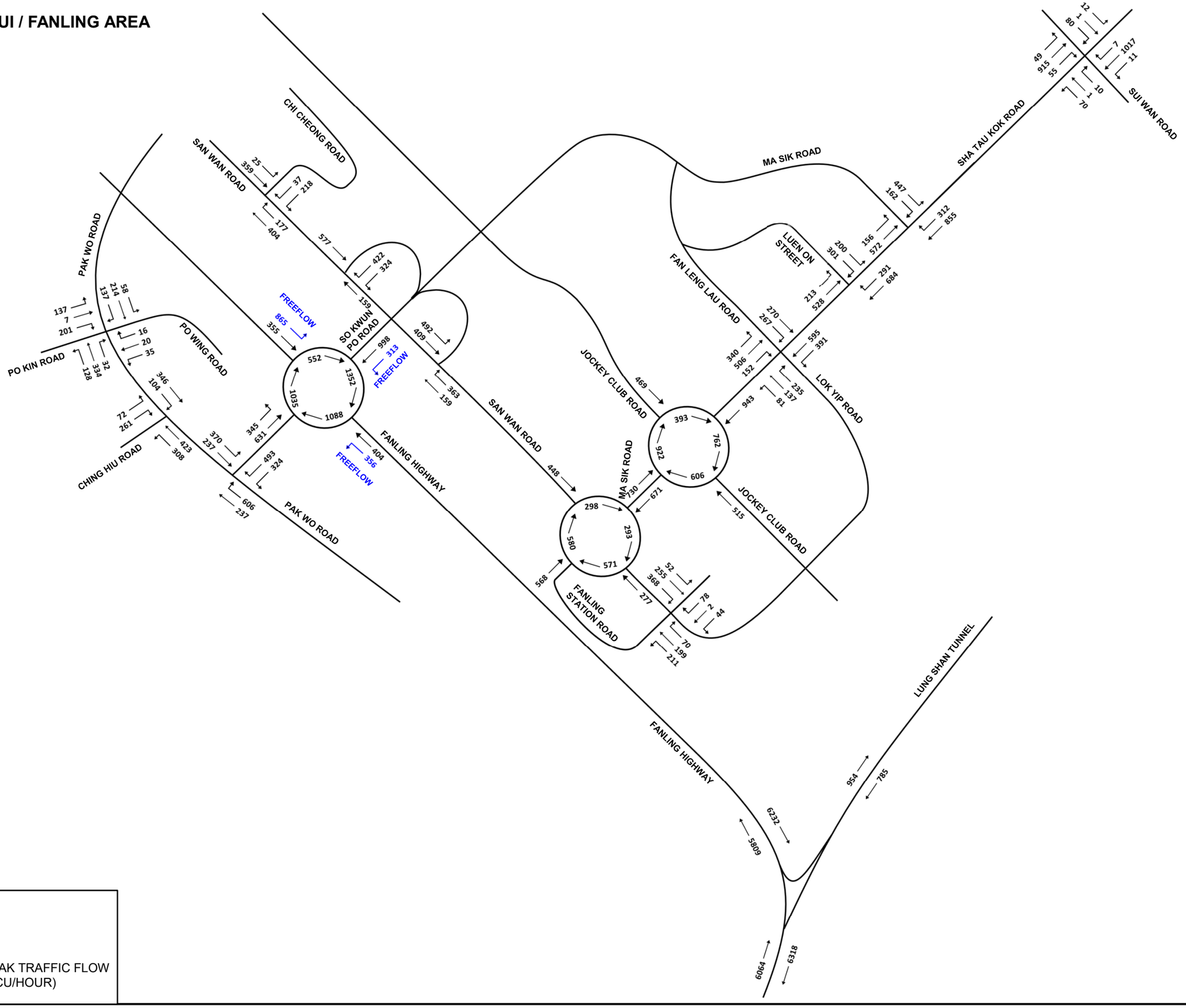
FIGURE 2.7

Date	Scale
1/2026	N.T.S
Drawn	Job No.
CKTY	278273

Drawing Title
LOCATION OF SURVEYED JUNCTIONS AND LINKS IN THE VICINITY OF PROPOSED DEVELOPMENT (5)

ARUP

SHEUNG SHUI / FANLING AREA

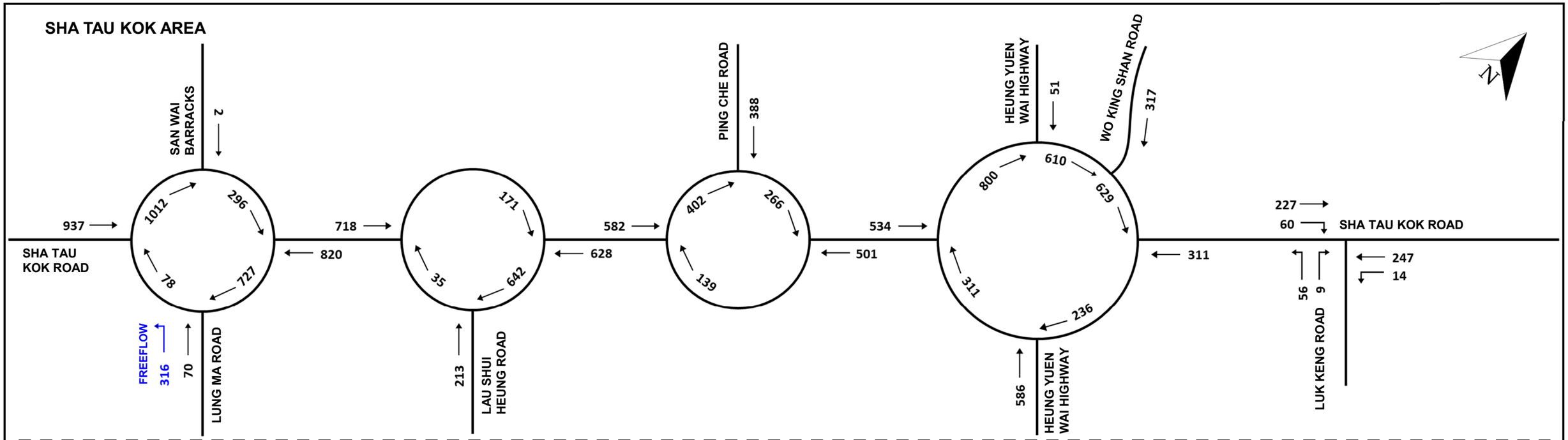


LEGEND

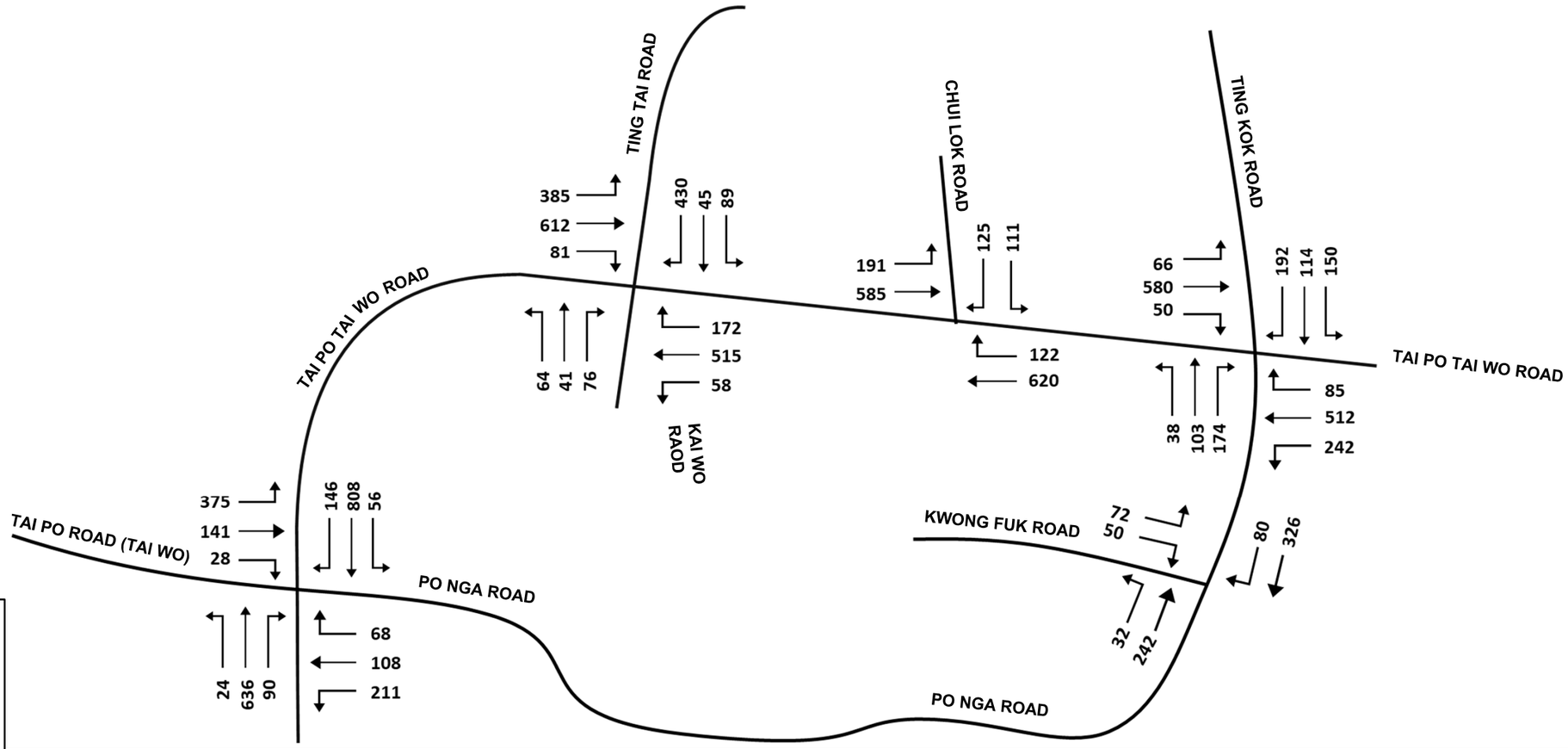
100 → PEAK TRAFFIC FLOW (PCU/HOUR)

Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**		**FIGURE 2.8**
Date: 1/2026	Scale: N.T.S	Drawing Title: **YEAR 2025 CHING MING FESTIVE PERIOD TRAFFIC FLOW (1)**
Drawn: CKTY	Job No.: 278273	ARUP

SHA TAU KOK AREA



TAI WO AREA



LEGEND

100 — PEAK TRAFFIC FLOW (PCU/HOUR)

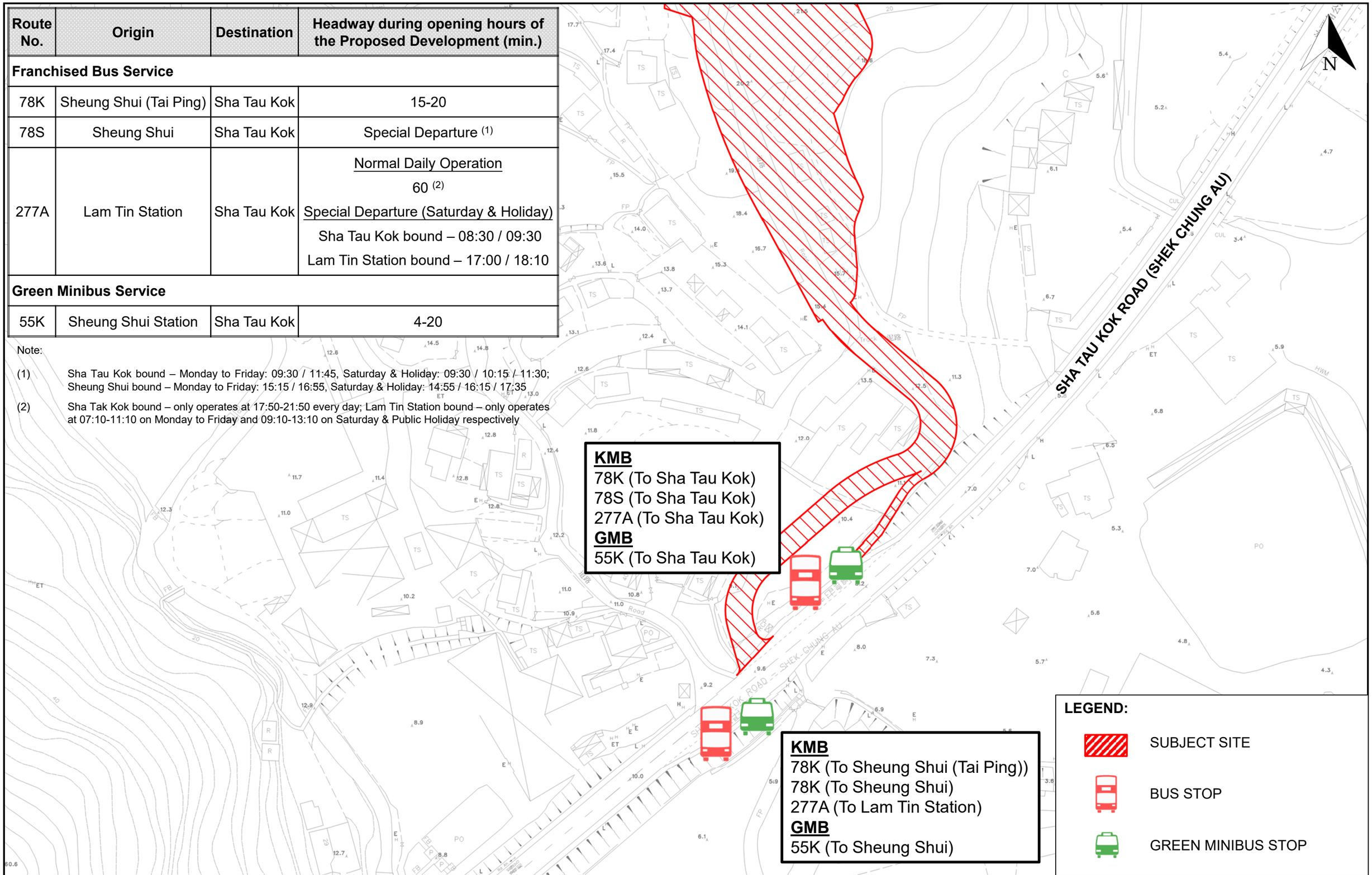
Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**		**FIGURE 2.9**
Date: 1/2026	Scale: N.T.S	Drawing Title: **YEAR 2025 CHING MING FESTIVE PERIOD TRAFFIC FLOW (2)**
Drawn: CKTY	Job No.: 278273	ARUP

Route No.	Origin	Destination	Headway during opening hours of the Proposed Development (min.)
Franchised Bus Service			
78K	Sheung Shui (Tai Ping)	Sha Tau Kok	15-20
78S	Sheung Shui	Sha Tau Kok	Special Departure (1)
277A	Lam Tin Station	Sha Tau Kok	Normal Daily Operation 60 (2) Special Departure (Saturday & Holiday) Sha Tau Kok bound – 08:30 / 09:30 Lam Tin Station bound – 17:00 / 18:10
Green Minibus Service			
55K	Sheung Shui Station	Sha Tau Kok	4-20

Note:

(1) Sha Tau Kok bound – Monday to Friday: 09:30 / 11:45, Saturday & Holiday: 09:30 / 10:15 / 11:30; Sheung Shui bound – Monday to Friday: 15:15 / 16:55, Saturday & Holiday: 14:55 / 16:15 / 17:35

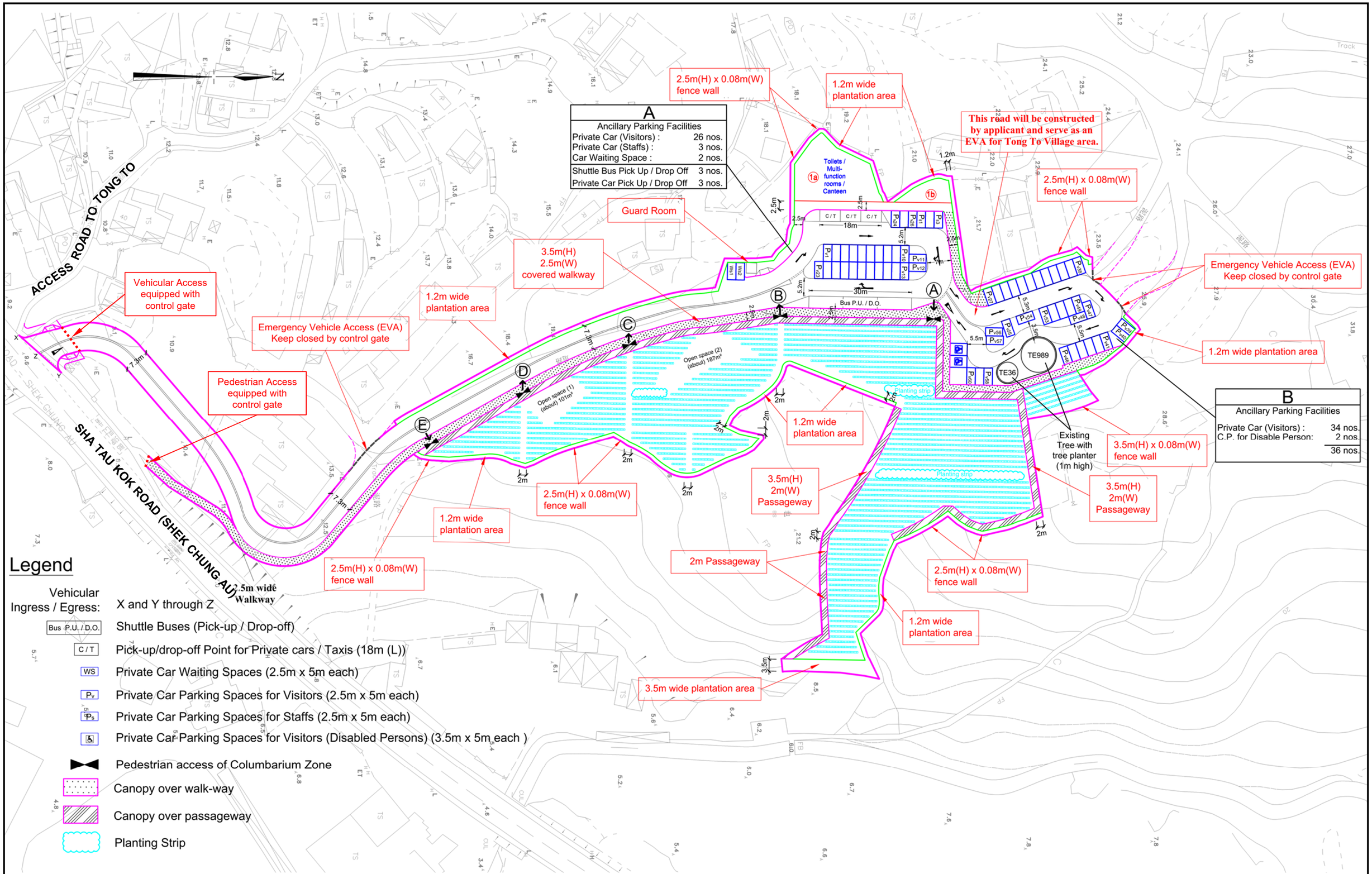
(2) Sha Tak Kok bound – only operates at 17:50-21:50 every day; Lam Tin Station bound – only operates at 07:10-11:10 on Monday to Friday and 09:10-13:10 on Saturday & Public Holiday respectively



Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 2.10

Date	Scale	Drawing Title
1/2026	N.T.S	**EXISTING PUBLIC TRANSPORT FACILITIES AVAILABLE DURING THE OPENING HOURS OF THE PROPOSED DEVELOPMENT**
Drawn	Job No.	
CKTY	278273	ARUP



Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 3.1

Date	Scale	Drawing Title
1/2026	N.T.S	**MASTER LAYOUT PLAN OF THE PROPOSED DEVELOPMENT**
Drawn	Job No.	
CKTY	278273	ARUP

Proposed transformation of existing run-in of the coach pick-up/drop-off zone of “Sha Tau Kok Farm” to a two-way priority junction

Access of disconnected single-track road section via “Sha Tau Kok Farm” consented by its owner

EVA entrance (with minor realignment shown in pink dotted line) keep closed by control gate

ACCESS ROAD TO TONG TO

SHA TAU KOK ROAD (SHEK CHUNG AU)

1.5m

1.5m

Control Gate would keep opened during opening hours

Proposed footpath widening

Proposed cautionary crossing with refuge island

LEGEND:

EXISTING COACH PICK-UP/DROP-OFF ZONE OF “SHA TAU KOK FARM”

EXISTING SINGLE-TRACK ROAD (EVA) OF TONG TO VILLAGE

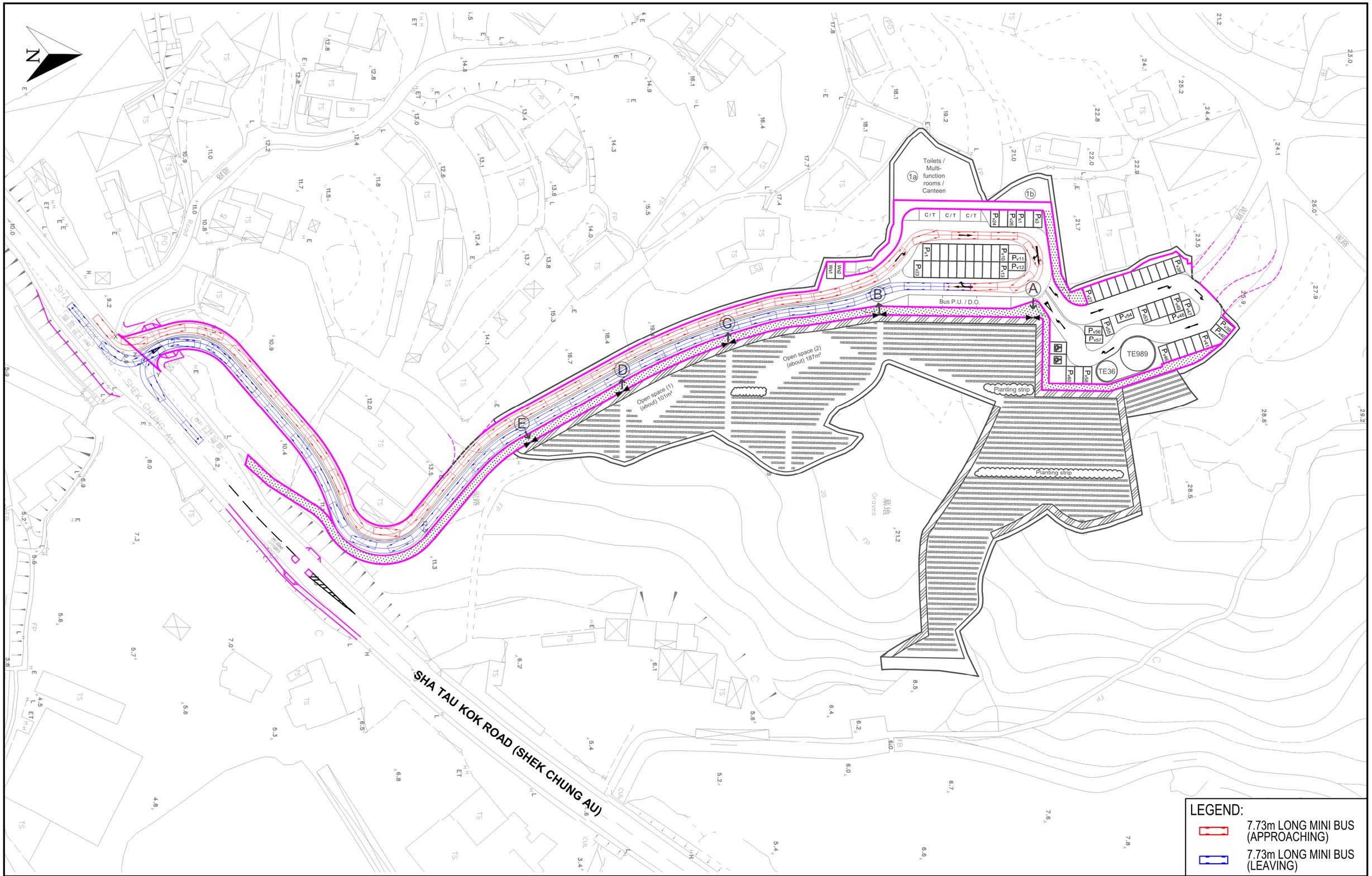
Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 3.2

Date	Scale
1/2026	N.T.S
Drawn	Job No.
CKTY	278273

Drawing Title
PROPOSED ACCESS ROAD OF THE SUBJECT SITE & ASSOCIATED IMPROVEMENT WORKS

ARUP

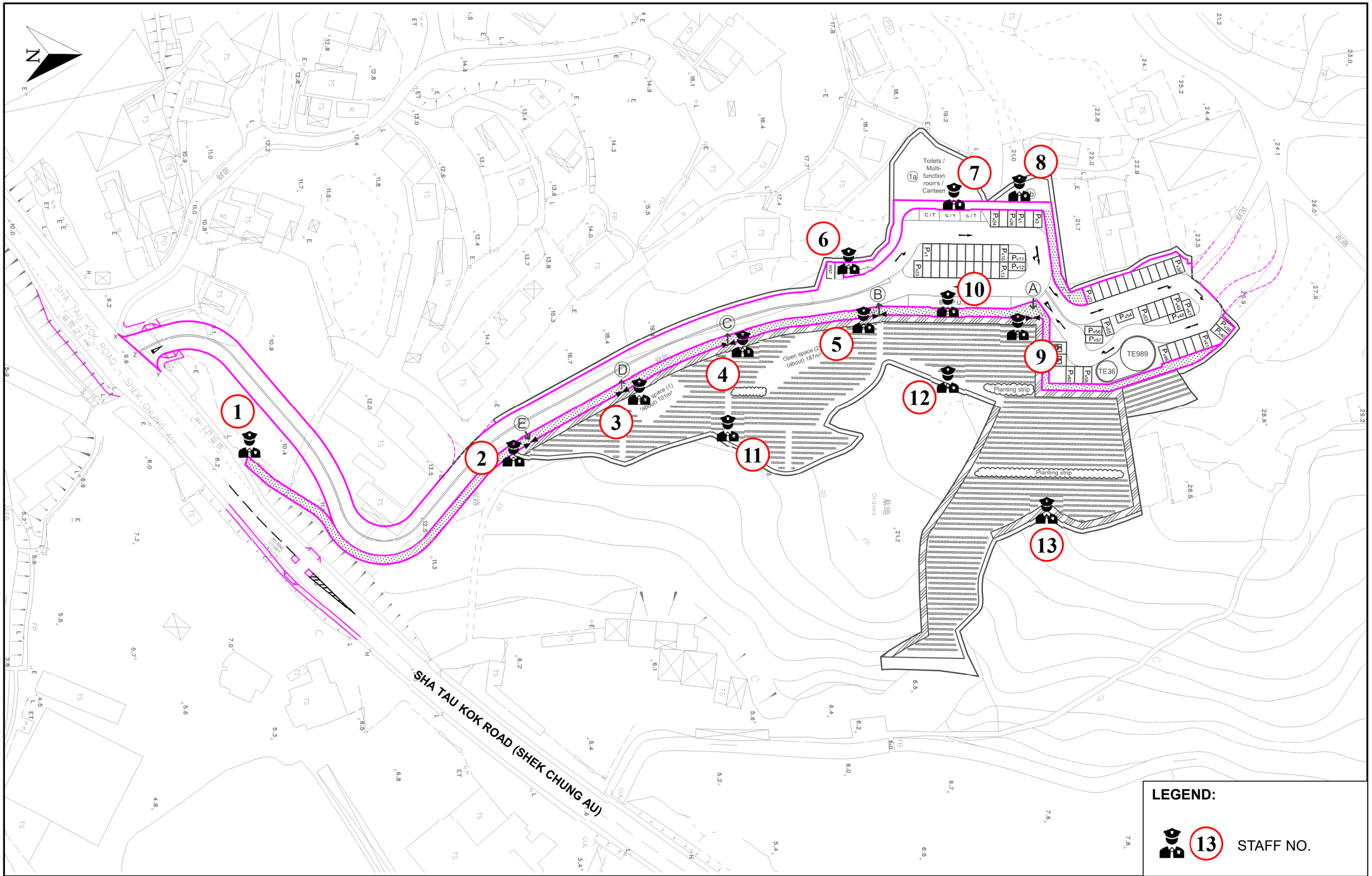


Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 3.3

Date	Scale	Drawing Title
1/2026	N.T.S	**SWEPT PATH ANALYSIS OF THE PROPOSED ACCESS ROAD AND PRIORITY JUNCTION**
Drawn	Job No.	
CKTY	278273	

ARUP



Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**			**FIGURE 3.4**
Date: 1/2026	Scale: N.T.S	Drawing Title: **PROPOSED CROWD MANAGEMENT PLAN**	ARUP
Drawn: CKTY	Job No.: 278273		

太和廣場
Tai Wo Plaza

Tai Wo Station Exit A

太和體育館
Tai Wo Indoor Recreation Centre

14

15

Escalator

Staircase

太和站
Tai Wo Station

平台

(Platform under)

(下層巴士總站)
(Bus Terminus under)

(下層月台)

西翼

Podium

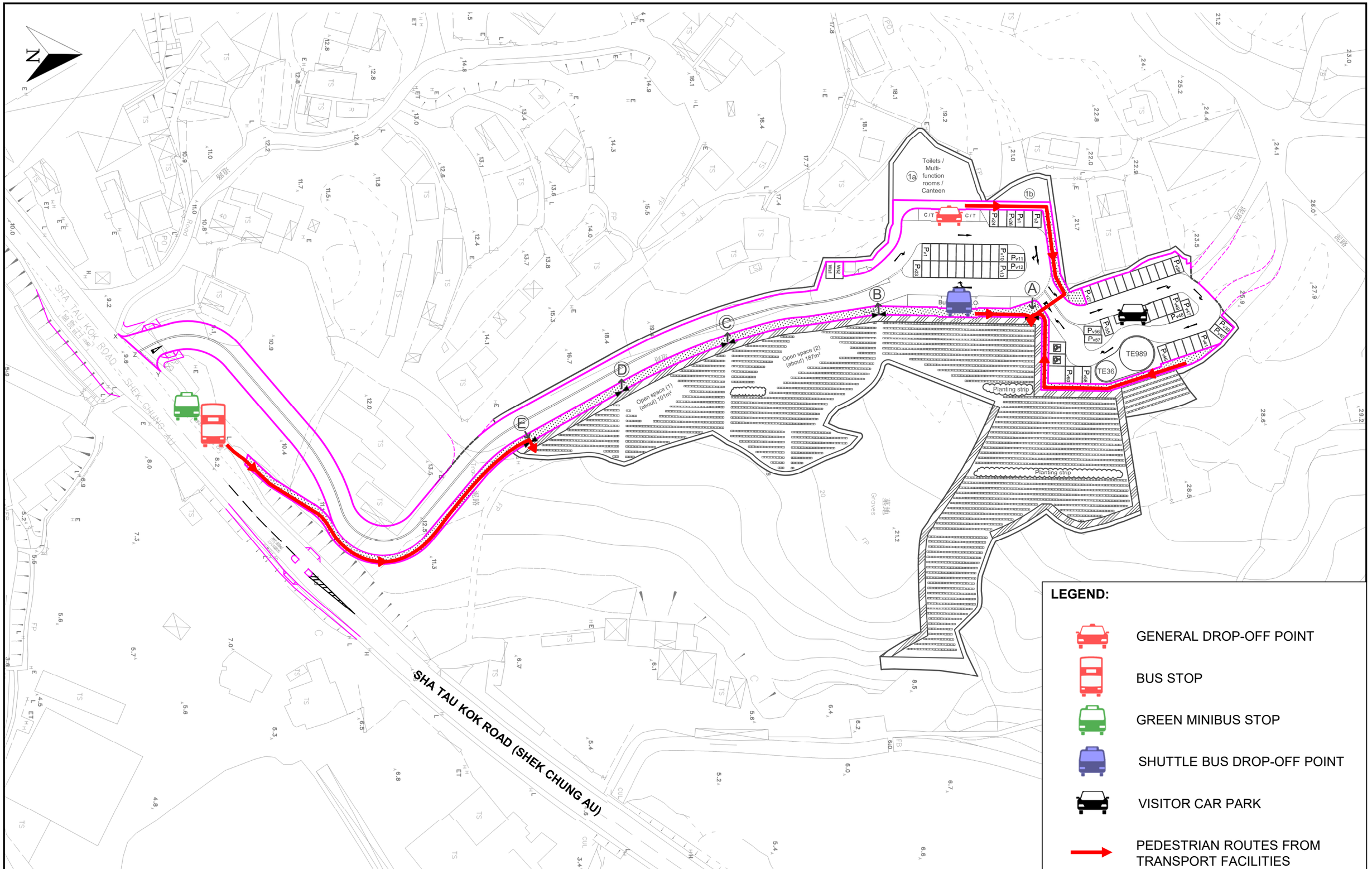
RCP

House

LEGEND

- MTR STATION
- 14 STAFF NO.
- PASSENGER CIRCULATION FROM MTR TAI WO STATION
- PROPOSED QUEUNG AREA
- STRUCTURE / COLUMN (INDICATIVE)

Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**		**FIGURE 3.5**
Date: 1/2026	Scale: N.T.S	Drawing Title: **PROPOSED SHUTTLE BUS PICK-UP / DROP-OFF AT LAYBY NEAR TAI WO MTR STATION**
Drawn: CKTY	Job No.: 278273	ARUP

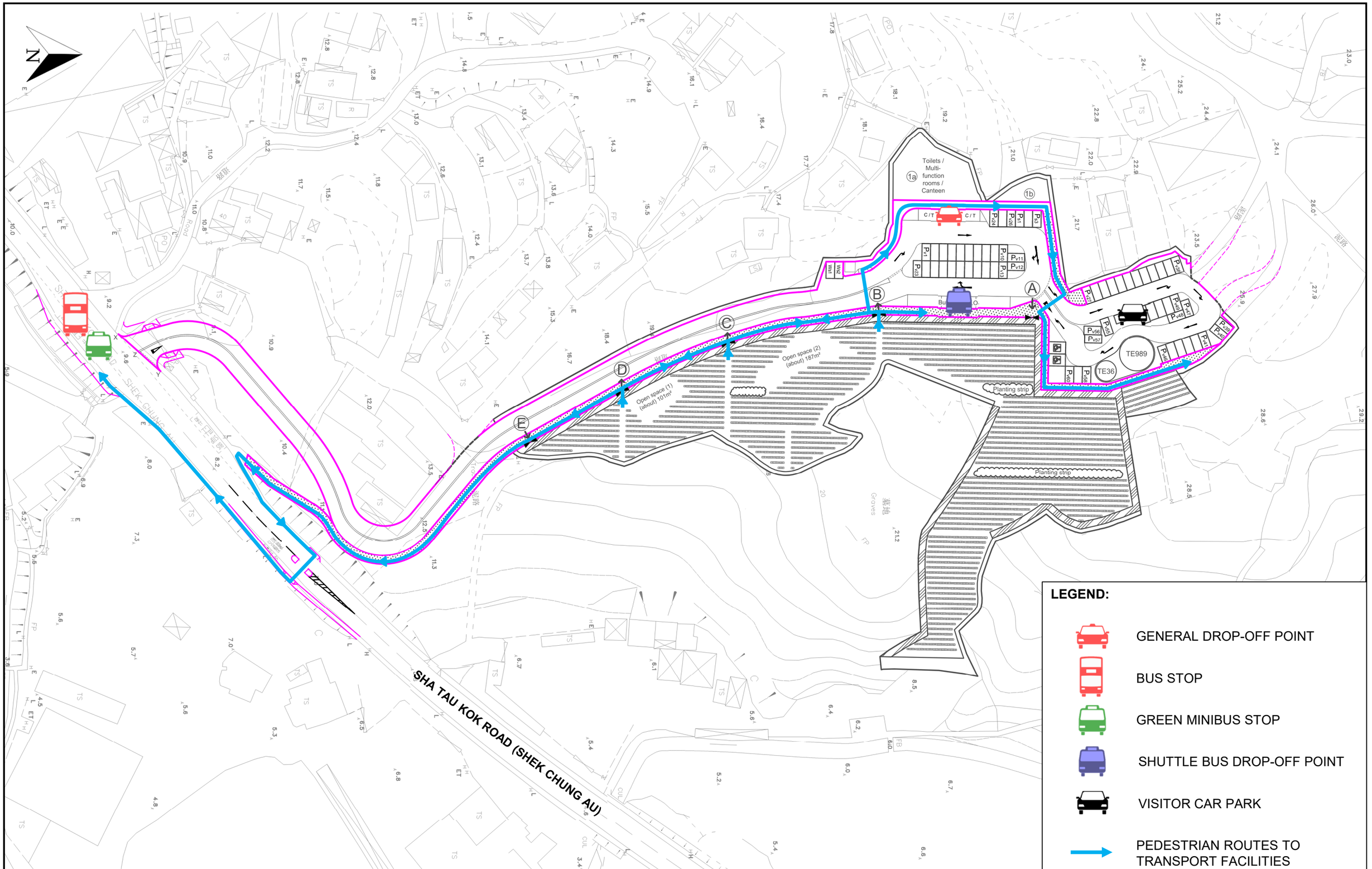


Job Title
SHA TAU KOK COLUMBARIUM PROJECT

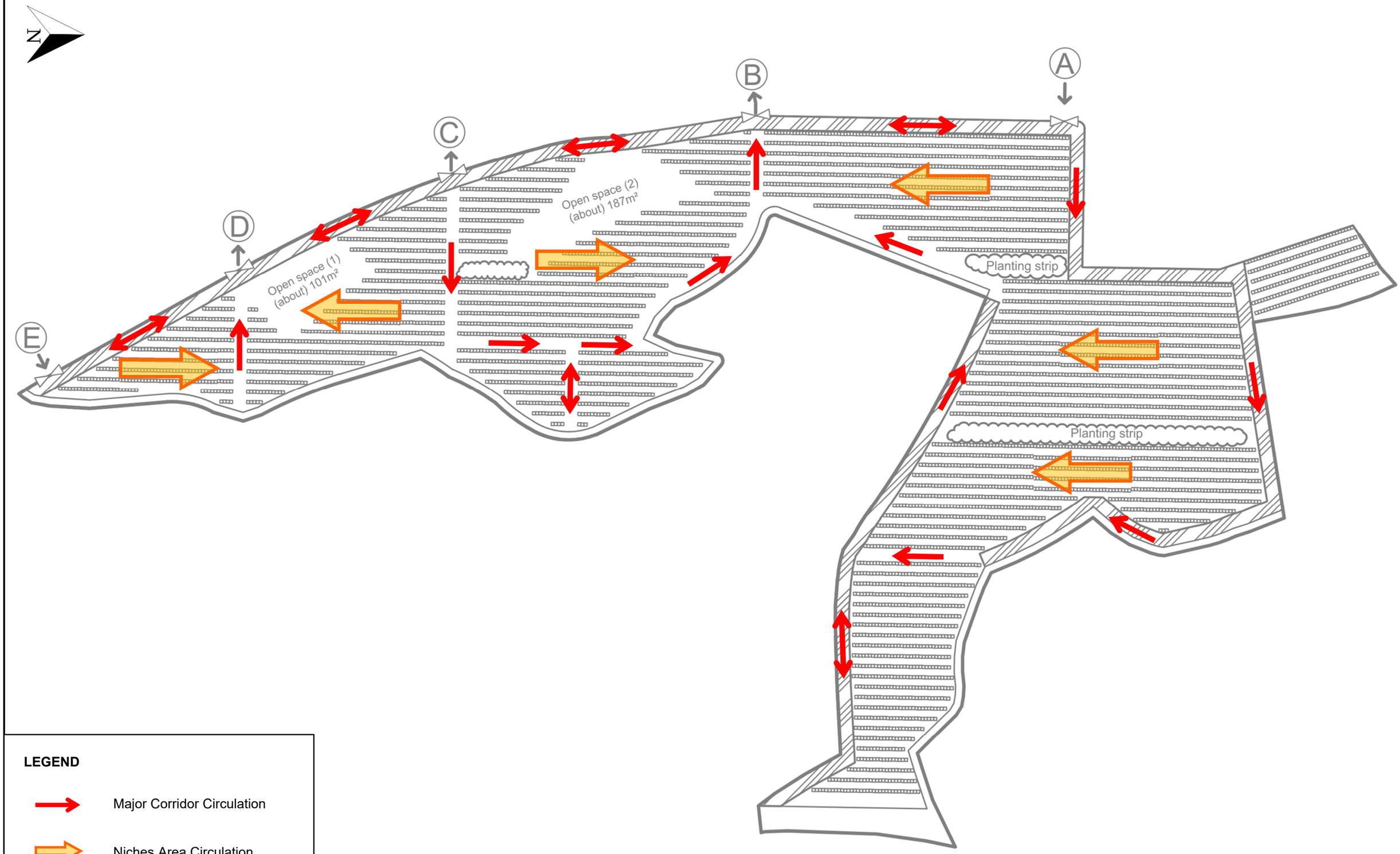
FIGURE 3.6

Date	Scale	Drawing Title
1/2026	N.T.S	**PEDESTRIAN ROUTES FROM TRANSPORT FACILITIES**
Drawn	Job No.	
CKTY	278273	

ARUP



Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**		**FIGURE 3.7**
Date: 1/2026	Scale: N.T.S	Drawing Title: **PEDESTRIAN ROUTES TO TRANSPORT FACILITIES**
Drawn: CKTY	Job No.: 278273	ARUP



LEGEND

Major Corridor Circulation

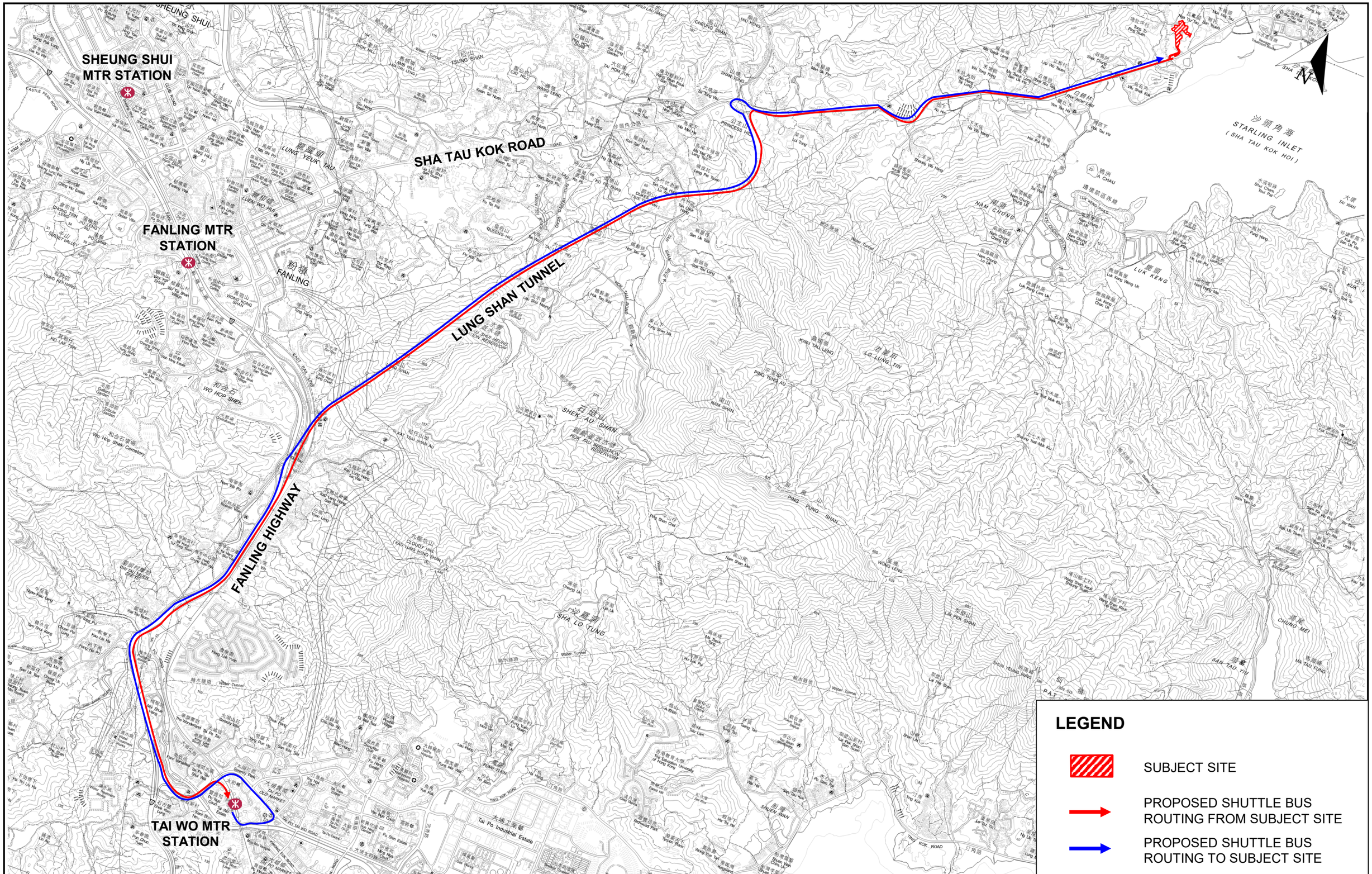
Niches Area Circulation

Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 3.8

Date	Scale	Drawing Title
1/2026	N.T.S	**PEDSTRIAN FLOW DIRECTION WITHIN THE COLUMBARIUM ZONE**
Drawn	Job No.	
CKTY	278273	

ARUP



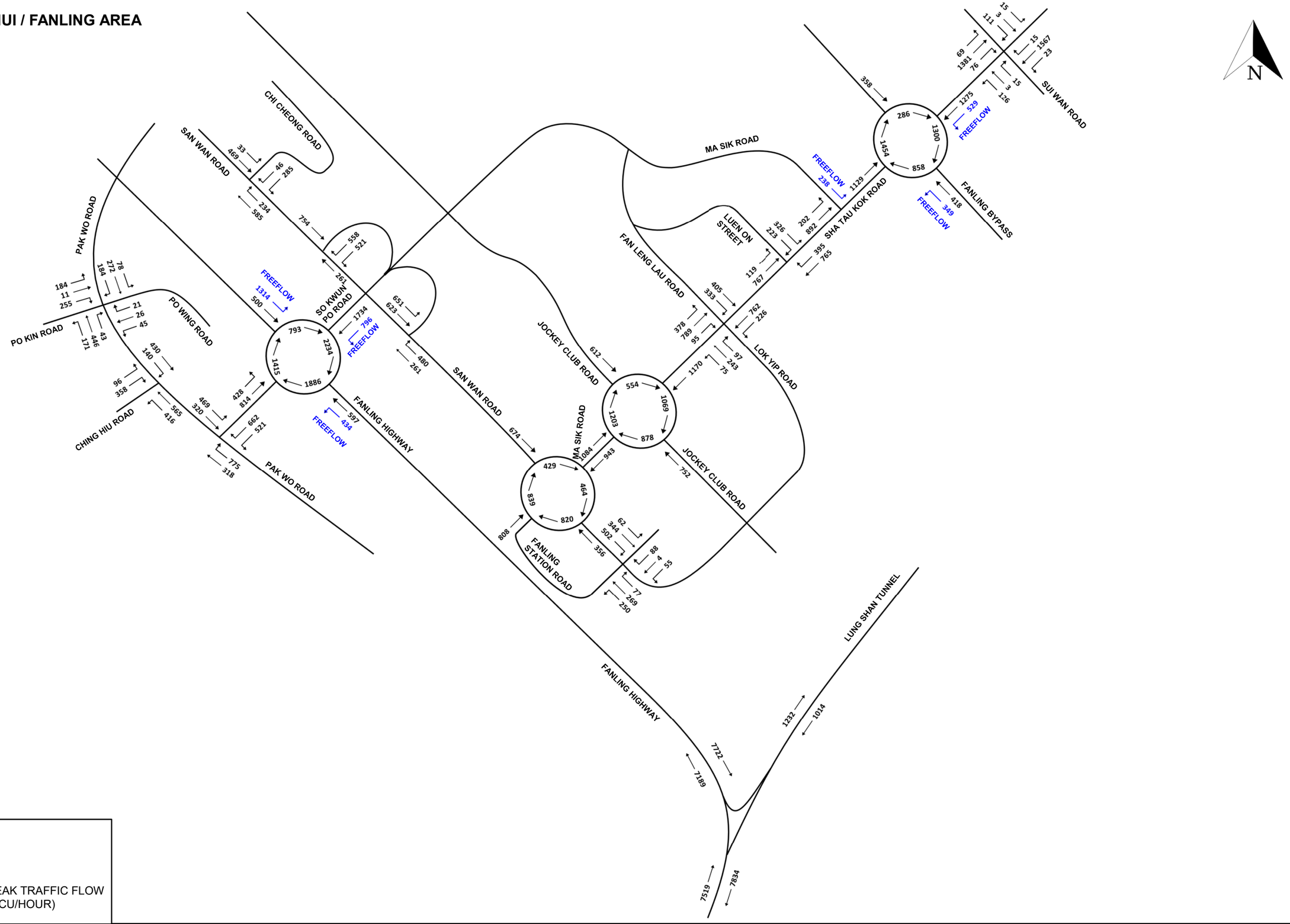
Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 3.9

Date	Scale	Drawing Title
1/2026	N.T.S	**PROPOSED ROUTING OF SHUTTLE BUS SERVICE**
Drawn	Job No.	
CKTY	278273	

ARUP

SHEUNG SHUI / FANLING AREA

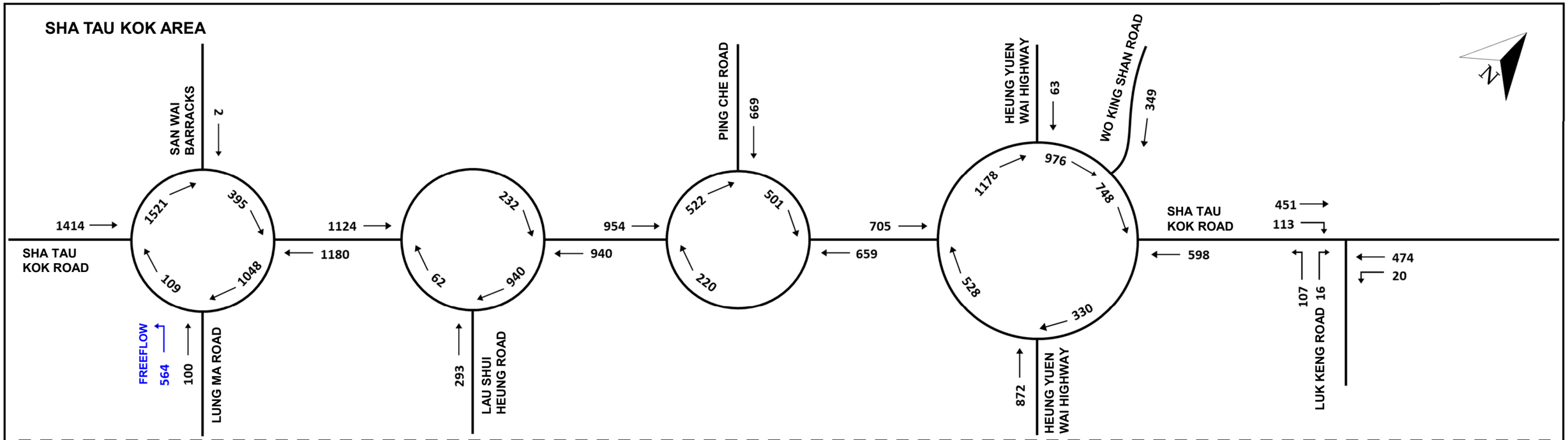


LEGEND

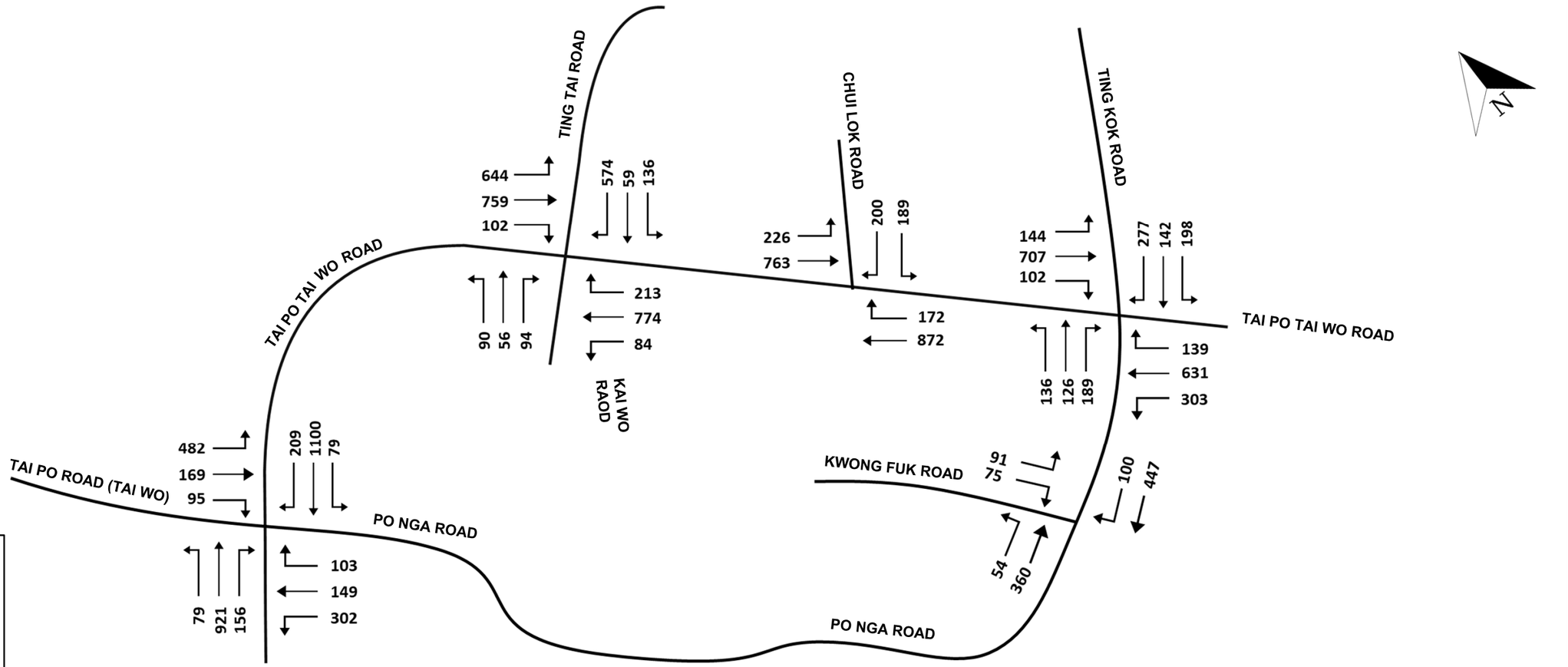
100 — PEAK TRAFFIC FLOW (PCU/HOUR)

Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**		**FIGURE 4.1**
Date: 1/2026	Scale: N.T.S	Drawing Title: **YEAR 2033 CHING MING FESTIVE PERIOD REFERENCE TRAFFIC FLOW (1)**
Drawn: CKTY	Job No.: 278273	ARUP

SHA TAU KOK AREA



TAI WO AREA

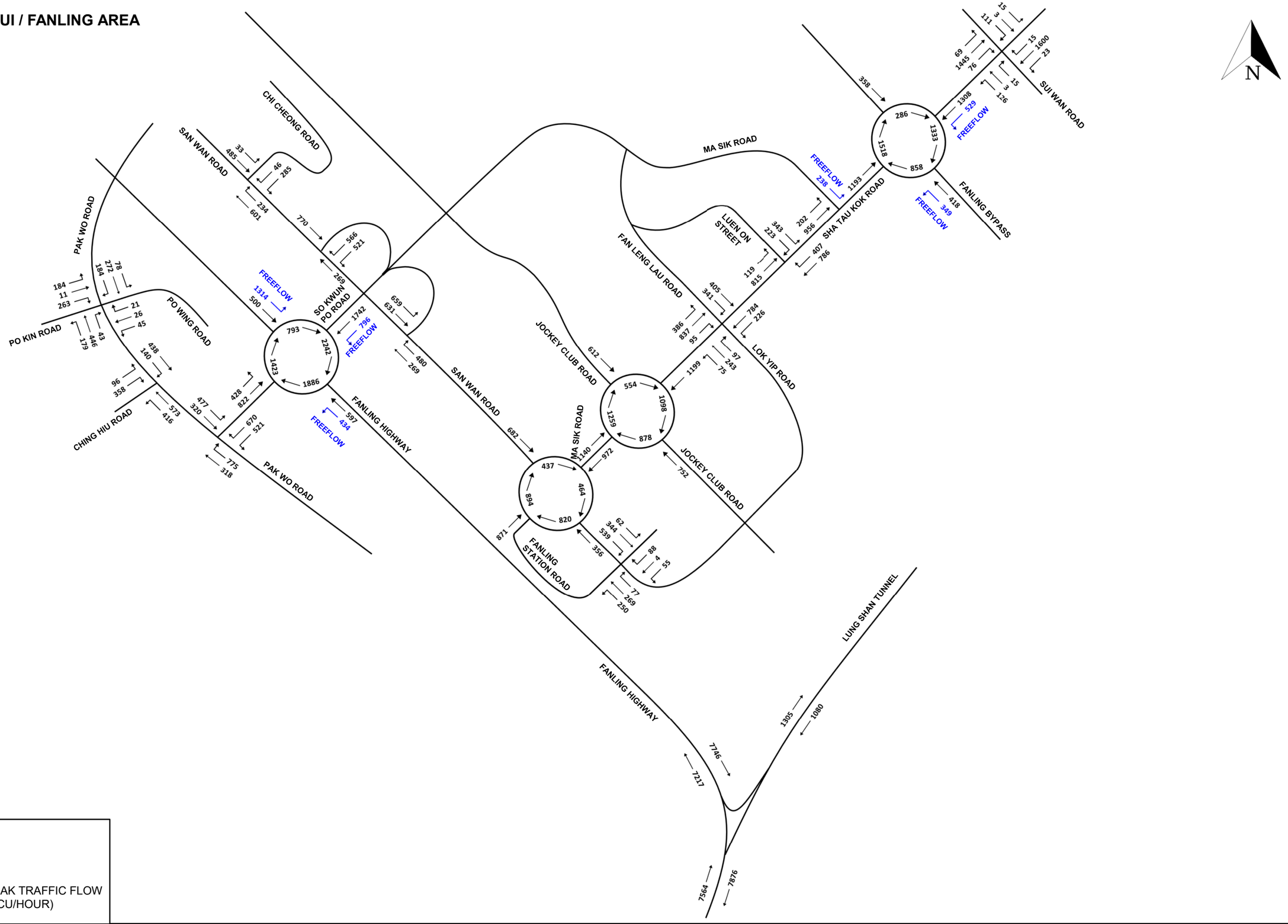


LEGEND

100 — PEAK TRAFFIC FLOW (PCU/HOUR)

Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**		**FIGURE 4.2**
Date: 1/2026	Scale: N.T.S	Drawing Title: **YEAR 2033 CHING MING FESTIVE PERIOD REFERENCE TRAFFIC FLOW (2)**
Drawn: CKTY	Job No.: 278273	ARUP

SHEUNG SHUI / FANLING AREA

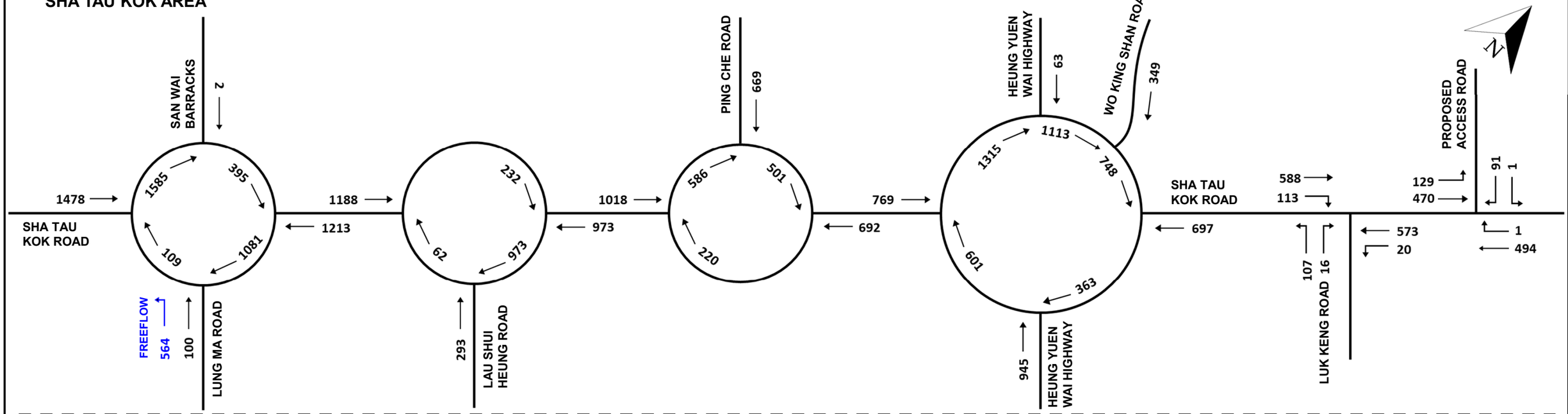


LEGEND

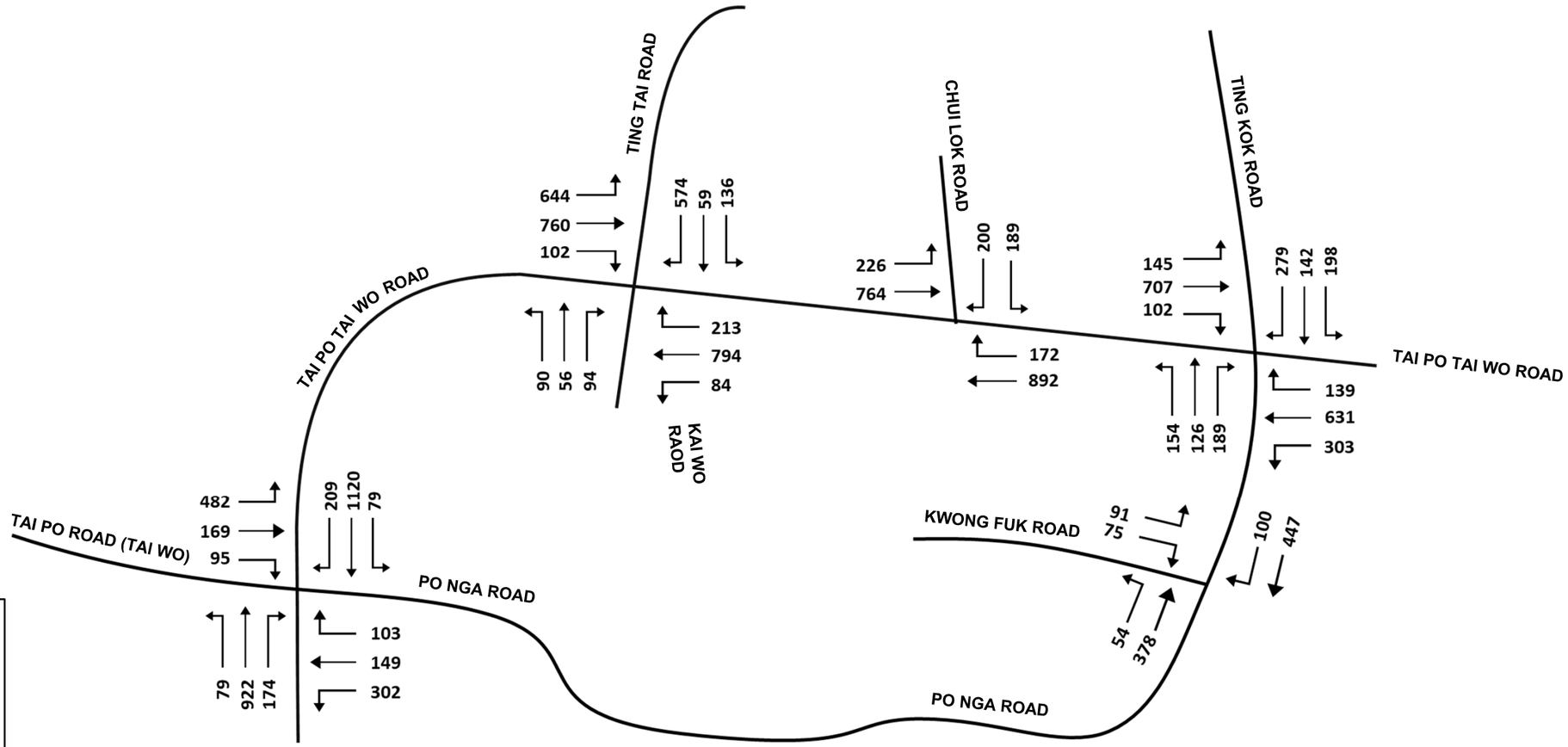
100 — PEAK TRAFFIC FLOW (PCU/HOUR)

Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**			**FIGURE 4.3**
Date: 1/2026	Scale: N.T.S	Drawing Title: **YEAR 2033 CHING MING FESTIVE PERIOD DESIGN TRAFFIC FLOW (1)**	ARUP
Drawn: CKTY	Job No.: 278273		

SHA TAU KOK AREA



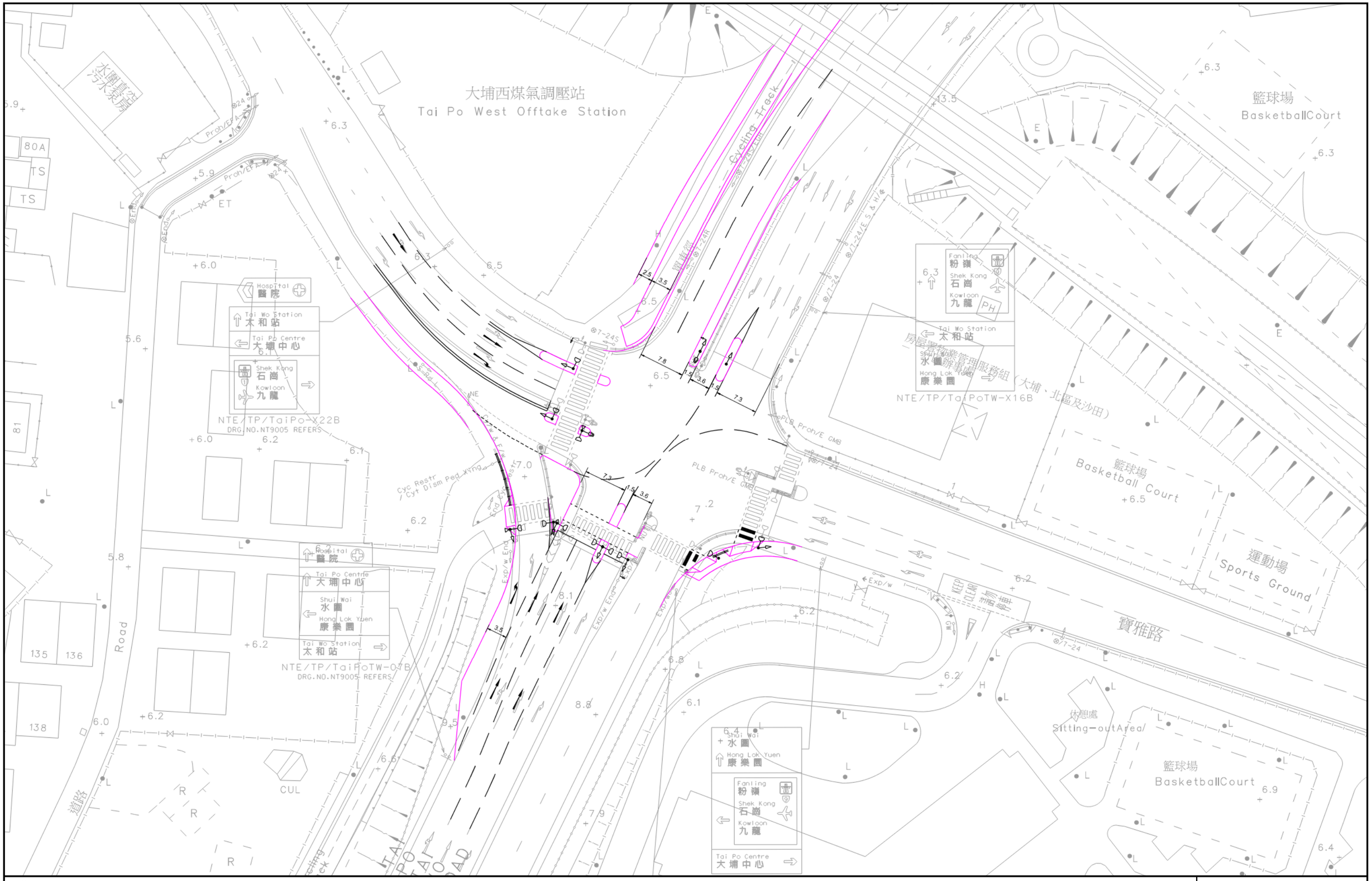
TAI WO AREA



LEGEND

100 — PEAK TRAFFIC FLOW (PCU/HOUR)

Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**		**FIGURE 4.4**
Date: 1/2026	Scale: N.T.S	Drawing Title: **YEAR 2033 CHING MING FESTIVE PERIOD DESIGN TRAFFIC FLOW (2)**
Drawn: CKTY	Job No.: 278273	ARUP

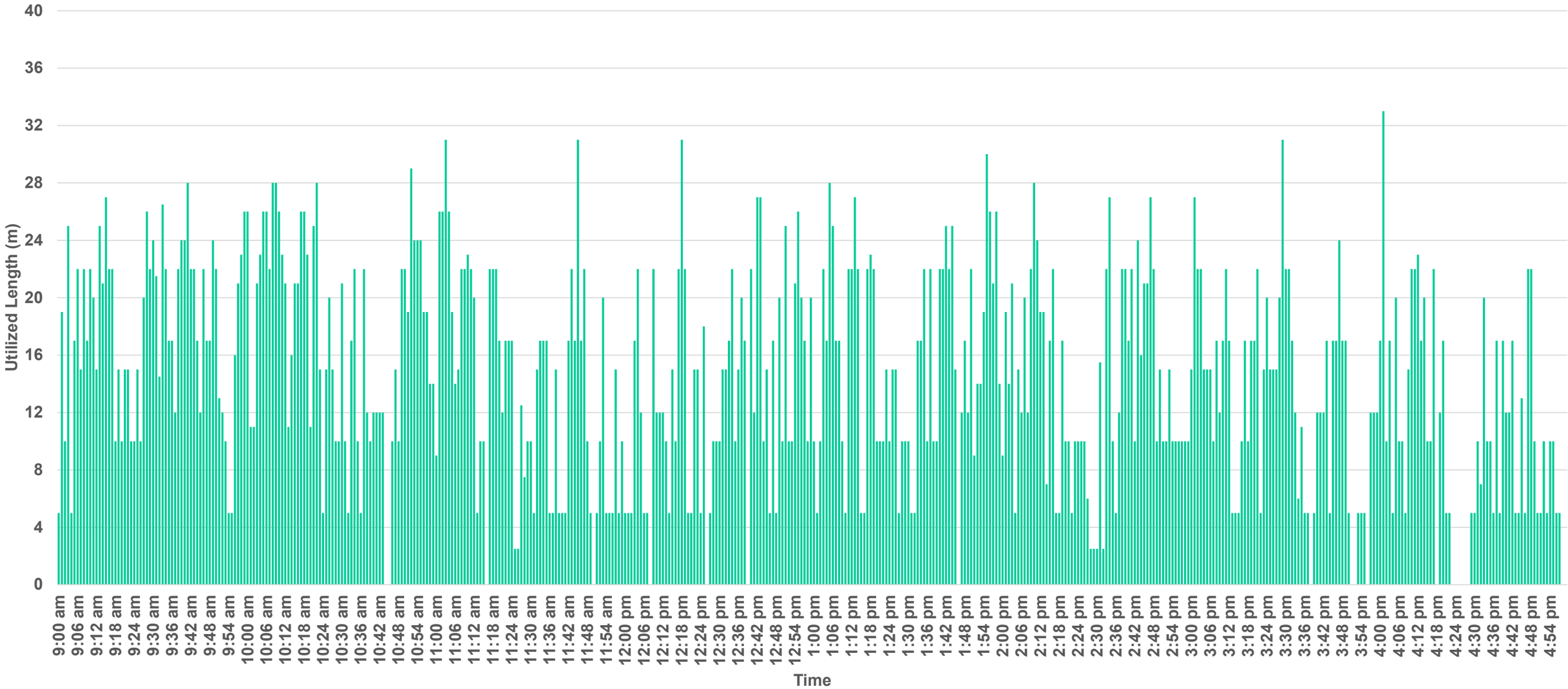


Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 4.5

Date	Scale	Drawing Title
1/2026	N.T.S	**PROPOSED JUNCTION IMPROVEMENT SCHEME FOR J20**
Drawn	Job No.	
CKTY	278273	ARUP

Utilization of General Lay-by at Po Nga Road Near Tai Wo Station in 2025 Ching Ming Festive Period



Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 4.6

Date	Scale	Drawing Title
1/2026	N.T.S	**UTILIZATION OF GENERAL LAY-BY AT PO NGA ROAD NEAR TAI WO MTR STATION DURING 2025 CHING MING FESTIVE PERIOD**
Drawn	Job No.	
CKTY	278273	ARUP

Tai Wo Station

PO NGA ROAD

KWONG FUK ROAD

TING KOK ROAD

TAI WO ESTATE

LAM TSUEN RIVER

	Timeline (x^{th} minute) for the Proposed Contingency Plan									
	0	1	2	3	4	5	6	7	8	9
Shuttle bus	Arriving at Po Nga Road General lay-by	Detouring towards Tai Po Government Office Building		Temporarily stopping outside Tai Po Government Office Building						
				Passengers Alighting	Waiting for boarding passengers					
Queuing Passengers	Queuing at Po Nga Road General lay-by	Walking towards Tai Po Government Office Building						Passengers Boarding		

LEGEND:

- PROPOSED SHUTTLE BUS PICK-UP/ DROP-OFF POINT IN NORMAL OPERATION
- PROPOSED SHUTTLE BUS PICK-UP/ DROP-OFF POINT FOR CONTINGENCY
- PROPOSED SHUTTLE BUS ROUTING (REMAIN UNCHANGED)
- PEDESTRIAN ROUTES

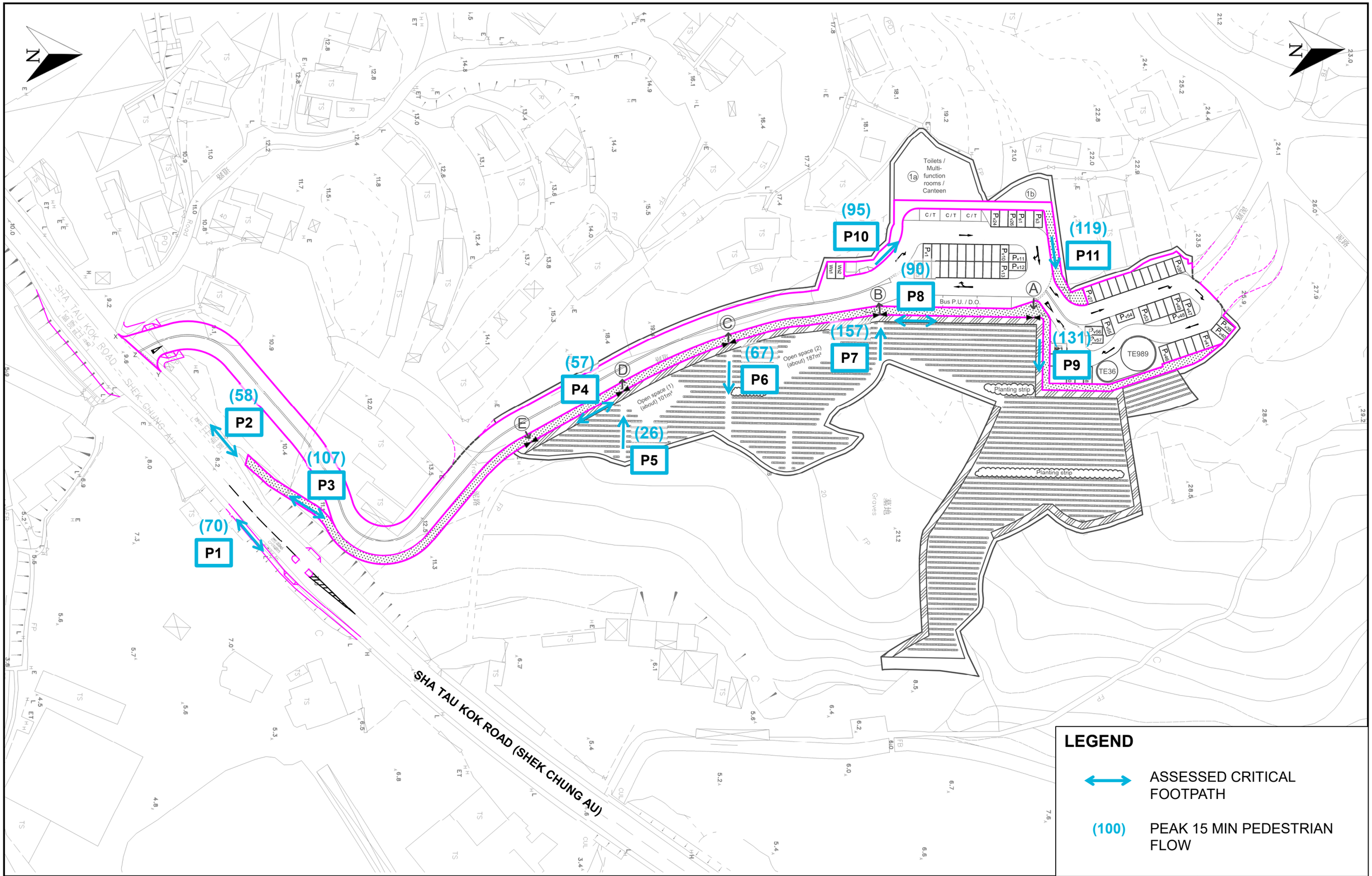
Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 4.7

Date	Scale
1/2026	N.T.S
Drawn	Job No.
CKTY	278273

Drawing Title
CONTINGENCY PLAN FOR BOARDING AND ALIGHTING OF THR PROPOSED SHUTTLE BUS

ARUP



LEGEND

⟷	ASSESSED CRITICAL FOOTPATH
(100)	PEAK 15 MIN PEDESTRIAN FLOW

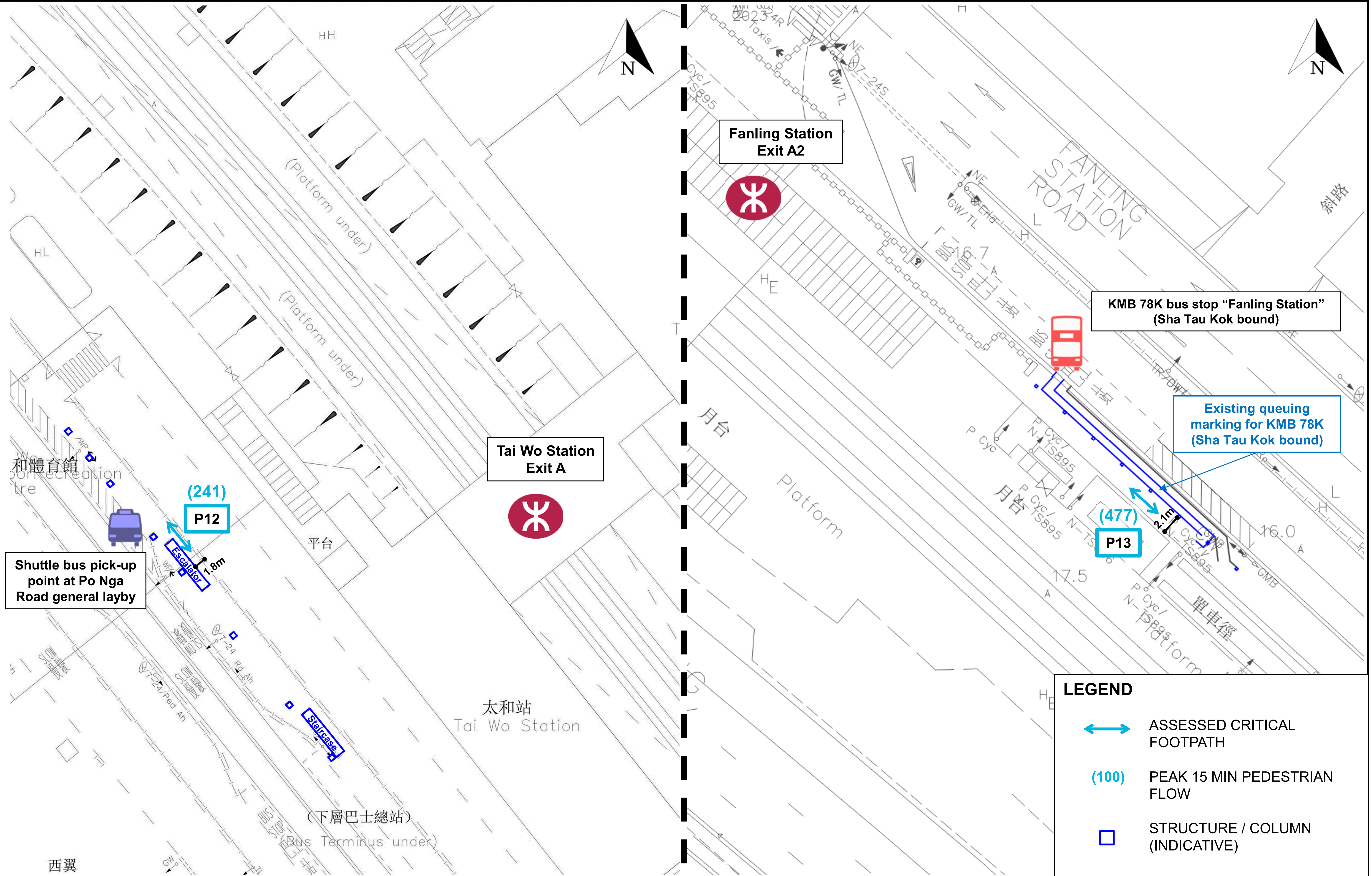
Job Title
SHA TAU KOK COLUMBARIUM PROJECT

FIGURE 4.8

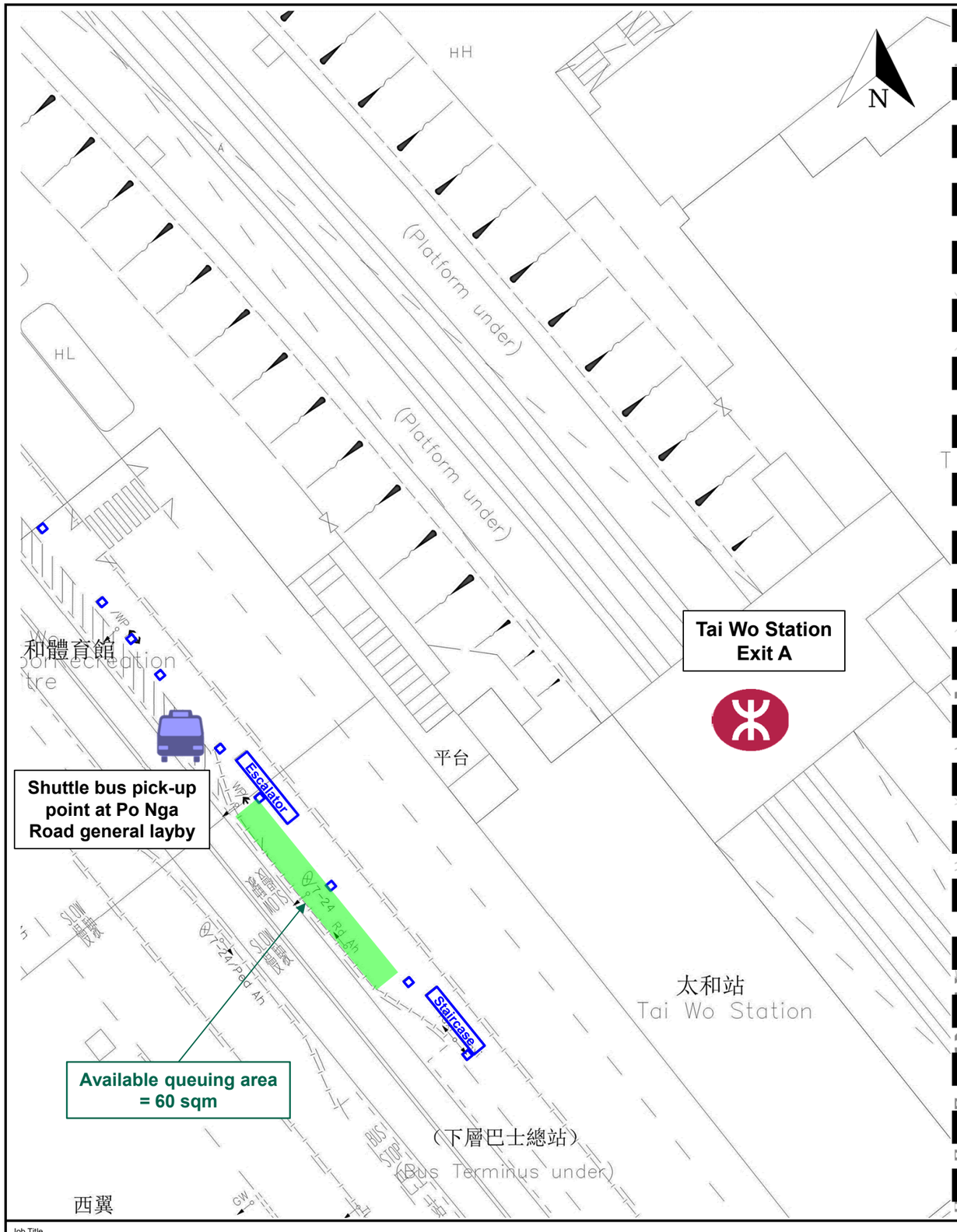
Date	Scale
1/2026	N.T.S
Drawn	Job No.
CKTY	278273

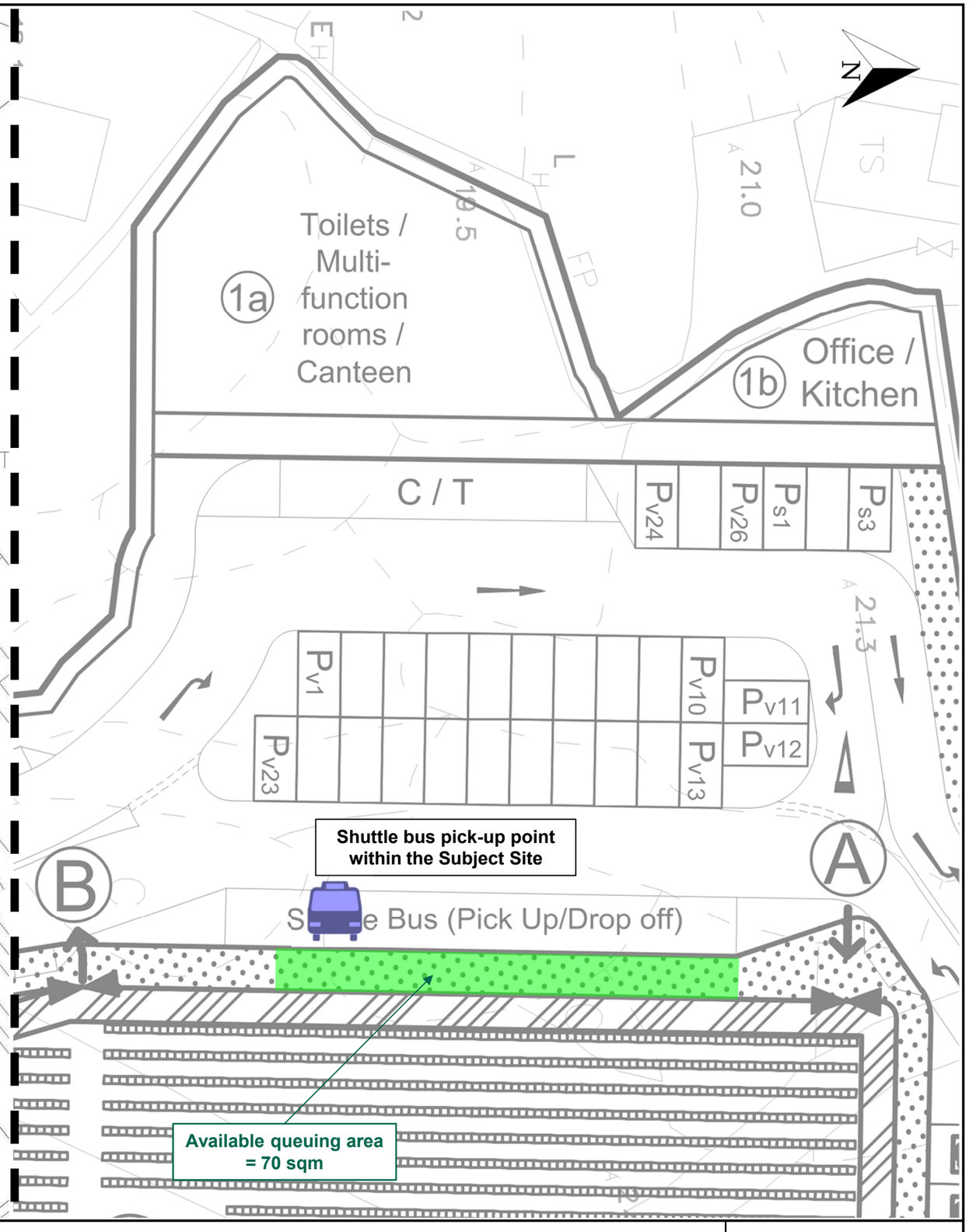
Drawing Title
YEAR 2033 DESIGN PEDESTRIAN FLOW ON CRITICAL FOOTPATH OF THE PROPOSED DEVEOPMENT (1)

ARUP



Job Title: SHA TAU KOK COLUMBARIUM PROJECT		FIGURE 4.9
Date: 1/2026	Scale: N.T.S	Drawing Title: YEAR 2033 DESIGN PEDESTRIAN FLOW ON CRITICAL FOOTPATH OF THE PROPOSED DEVEOPMENT (2)
Drawn: CKTY	Job No.: 278273	ARUP





Job Title: SHA TAU KOK COLUMBARIUM PROJECT		FIGURE 4.10
Date: 1/2026	Scale: N.T.S	Drawing Title: AVAILABLE QUEUING AREA OF CRITICAL PICK-UP POINT OF PROPOSED SHUTTLE BUS
Drawn: CKTY	Job No.: 278273	ARUP

KMB 78K bus stop "Tong To" (Sheung Shui bound)

Fanling Station Exit A2

KMB 78K bus stop "Fanling Station" (Sha Tau Kok bound)

Existing queuing area for bus stop outside the Proposed Development = 36 sqm

Existing queuing area for KMB 78K = 20 sqm

Existing queuing area for KMB 78K = 16 sqm

KMB 78K bus stop "Sheung Shui Terminus" (Sha Tau Kok bound)

LEGEND:

STRUCTURE / COLUMN (INDICATIVE)

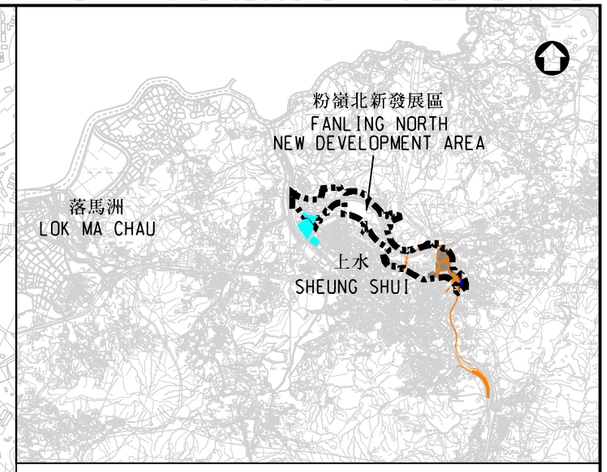
Job Title: **SHA TAU KOK COLUMBARIUM PROJECT**			**FIGURE 4.11**
Date: 1/2026	Scale: N.T.S	Drawing Title: **AVAILABLE QUEUING AREA OF CRITICAL PICK-UP POINT OF KMB 78K**	ARUP
Drawn: CKTY	Job No.: 278273		

Appendix A

Existing Road Improvement Works under Construction

圖例
LEGEND:

- 粉嶺北新發展區界線
  BOUNDARY OF FANLING NORTH NEW DEVELOPMENT AREA
- 擬議工程項目範圍
  PROPOSED WORKS BOUNDARY
- 擬議道路工程（包括合適的噪音緩減設施及基礎設施）
  PROPOSED ROAD WORKS (WITH APPROPRIATE NOISE MITIGATION MEASURES AND INFRASTRUCTURE WORKS)
- 擬議地盤平整（包括合適的基礎設施）
  PROPOSED SITE FORMATION (WITH APPROPRIATE INFRASTRUCTURE WORKS)
- 擬議重置北區臨時農產品批發市場
  PROPOSED REPROVISIONING OF NORTH DISTRICT TEMPORARY WHOLESALE MARKET FOR AGRICULTURAL PRODUCTS
- 擬議粉嶺北污水泵房
  PROPOSED FANLING NORTH SEWAGE PUMPING STATION
- 擬議重置安樂門街遊樂場
  PROPOSED REPROVISIONING OF ON LOK MUN STREET PLAYGROUND
- 擬議擴建及提升石湖墟污水處理廠
  PROPOSED EXPANSION AND UPGRADING OF SHEK WU HUI SEWAGE TREATMENT WORKS



位置圖 LOCATION PLAN

擬議粉嶺繞道(東段)
PROPOSED FANLING BYPASS (EASTERN SECTION)
(詳情請參閱附件1附錄2)
(PLEASE REFER TO ANNEX 2 TO ENCLOSURE 1 FOR DETAILS)

擬議重置安樂門街遊樂場
PROPOSED REPROVISIONING OF ON LOK MUN STREET PLAYGROUND
(詳情請參閱附件1附錄3)
(PLEASE REFER TO ANNEX 3 TO ENCLOSURE 1 FOR DETAILS)

沙頭角公路
SHA TAU KOK ROAD

龍躍頭
LUNG YEUK TAU

擬議重置北區臨時農產品批發市場
PROPOSED REPROVISIONING OF NORTH DISTRICT TEMPORARY WHOLESALE MARKET FOR AGRICULTURAL PRODUCTS
(詳情請參閱附件1附錄3)
(PLEASE REFER TO ANNEX 3 TO ENCLOSURE 1 FOR DETAILS)

粉嶺
FANLING

NG TUNG RIVER 梧桐河

上水
SHEUNG SHUI

擬議粉嶺北污水泵房
PROPOSED FANLING NORTH SEWAGE PUMPING STATION
(詳情請參閱附件1附錄4)
(PLEASE REFER TO ANNEX 4 TO ENCLOSURE 1 FOR DETAILS)

樂業路
LOK YIP ROAD

馬會道
JOCKEY CLUB ROAD

石湖墟
SHEK WU HUI

上水站
SHEUNG SHUI STATION

粉嶺站
FANLING STATION

粉嶺公路
FANLING HIGHWAY

雙魚河 SHEUNG YUE RIVER

擬議擴建及提升
石湖墟污水處理廠
PROPOSED EXPANSION AND UPGRADING OF SHEK WU HUI SEWAGE TREATMENT WORKS

工務計劃項目第747CL號
古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程-平面圖（粉嶺北新發展區）
PWP ITEM NO. 747CL
ADVANCE SITE FORMATION AND INFRASTRUCTURE WORKS FOR KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN (FANLING NORTH NEW DEVELOPMENT AREA)

Construction of Fanling Bypass (Eastern Section) – under CEDD project number 7747CL

A3 420MM X 297MM

Appendix B

House Rules included in the Sales Agreement of Niches

致香港沉香園有限公司：

承諾書 – 拜祭安排

拜祭時需要遵守的規定及注意事項

龕位號碼:_____

本人 _____（姓名）知悉並承諾遵守以下有關拜祭安排的規定，作為購買骨灰龕位的條款及條件的一部分：

1. 香港沉香園有限公司（下稱沉香園 ）採用會員制，購買骨灰龕位的人士自動成為會員。只有會員及家屬方可進入沉香園。

2. 沉香園將會實施人流管制，每個龕位每天只能申請一次拜祭，每次最多四位拜祭人士，限時一小時。拜祭人士須至少於拜祭前兩星期透過通訊軟件/電話向沉香園職員預約進入沉香園，確認進場時段及預計人數。當某進場時段的總預計人數達到上限後，該進場時段將不會再接受預約。拜祭人士只能於預約時段內進入沉香園及需於預約時段完結前離場，遲到人士的離場時間不會相應推遲。

3. 場內設有停車場，由於車位數量有限，只有持有有效泊車許可證的車輛方可進入停車場。每個龕位每天只限為一輛車輛申請泊車許可證，泊車時限與入園時限一致，並先須繳付按金。拜祭人士須於預約進入沉香園同時向職員申請泊車許可證，並於廿四小時內上傳按金轉帳記錄，泊車許可證會於沉香園職員確認申請成功後郵寄至拜祭人士提供的住址，若預約車位廿四小時後仍沒有上傳按金轉帳記錄相關申請將會作廢。車輛只能於預約時段內進入停車場及需於預約時段完結前離場，遲到車輛的離場時間不會相應推遲。按金會於車輛在許可泊車時段內離場後七個工作天內轉帳至拜祭人士的銀行戶口，若車輛未能於許可泊車時段內離場，按金將不獲退回。

4. 清明 / 重陽節拜祭高峰日子期間，沉香園將安排穿梭巴士接載拜祭人士到園拜祭祖先，只有持有乘車許可證的人士方可乘坐，每個龕位每天最多只能申請四張去程乘車許可證及四張回程乘車許可證。拜祭人士須於預約進入沉香園同時向職員申請，乘車許可證會於沉香園職員確認預申請成功後郵寄至拜祭人士提供的住址。

5. 園內不設任何燒冥鏹設施，拜祭人士不得帶冥鏹前來拜祭。

簽署：_____

姓名：_____

日期：_____