

Annex B

Revised Traffic Impact Assessment

Document Status Control Record

**Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi),
Vehicle Repair Workshop, Shop and Services (Motor Vehicle Showroom),
Eating Place with Ancillary Site Office for a Period of 5 Years
at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land,
Sha Tau Kok Road – Lung Yeuk Tau, Fanling, N.T.**

Traffic Impact Assessment Report

Originating Organisation: LLA Consultancy Limited Unit 610, 6/F Island Place Tower 510 King's Road North Point, Hong Kong	Prepared by: SKL	SKL	Date: 4 November 2025
	Approved by: SLN	SLN	Date: 4 November 2025
	Revision No.: -		Date of Issue: 4 November 2025

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1 INTRODUCTION

1.1 Background

- 1.1.1 The Applicant proposes to use a piece of land for temporary electric vehicle charging station (for electric taxi), vehicle repair workshop, shop and services (motor vehicle showroom), eating place with ancillary site office for a period of 5 Years. The piece of land (hereinafter referred to “the Site”) is located at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road–Lung Yeuk Tau, Fanling, N.T..
- 1.1.2 The Site is zoned as “Open Storage” use under the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan (OZP) No. S/NE-TKL/14. A planning application is required for the proposed temporary use.
- 1.1.3 LLA Consultancy Limited was commissioned to undertake the TIA to support the planning application. This TIA report presents the findings of the study.

1.2 Objectives

- 1.2.1 The objectives of the study are as follows:
- to review the existing traffic conditions in the vicinity of the Site;
 - to estimate the traffic generation and attraction of the proposed temporary use;
 - to project the future traffic situations in the surrounding road network;
 - to appraise the potential traffic impact of the proposed temporary use; and
 - to recommend the internal transport facilities for the proposed temporary use.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

- 2.1.1 As shown in **Figure 2.1**, the Site is located at Sha Tau Kok Road – Lung Yeuk Tau area. It has a total site area of about 4,180 m².

2.2 The Proposed Use and Internal Transport Facilities Provisions

- 2.2.1 The main function of the Site is to provide charging facilities for electric taxis with supporting facilities, including vehicle repair workshop, eating place and ancillary office. The key development parameters are listed out in **Table 2.1**.

Table 2.1 Key Development Parameters

Use	Quantity
Site Area	4,180 m ²
EV Charging Facilities for Electric Taxi only (2.5m x 5.0m)	18 nos.
Parking Spaces / Waiting Spaces for Electric Taxi only (2.5m x 5.0m)	15 spaces
Motor Vehicle Showroom, Vehicle Repair Workshop, Eating Place, Ancillary Office (Retail and Office Use)	2,237 m ²
Parking Space for Retail/Office Use @ 1 space per 150 m ² (2.5m x 5.0m)	15 spaces
Parking Space for Staff/Visitors (2.5m x 5.0m)	6 spaces
Loading/unloading Space for Goods Vehicle (3.5m x 7.0m)	1 space

2.3 Swept Path Analysis

- 2.3.1 The Site is directly abutted to Sha Tau Kok Road – Lung Yeuk Tau, the development traffic is anticipated to enter and leave the Site with a left-in/left out movement onto Sha Tau Kok Road north-eastbound. In order to ensure the safety of pedestrians walking along the public footpath, a standard run-in/out in accordance with Highways Department's standards will be formed and flashing warning lights will be installed at both sides of the run-in/out as shown in **Figure 2.2**.
- 2.3.2 To ensure smooth manoeuvring of the parking area, swept path analysis was conducted to demonstrate that adequate space is provided for the vehicle's manoeuvring as shown in **Figure SP-01 – SP-02**.

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

- 3.1.1 The Site has a frontage along Sha Tau Kok Road – Lung Yeuk Tau and an existing run-in/out is provided for the current use of the Site.
- 3.1.2 Sha Tau Kok Road – Lung Yeuk Tau is a dual two lanes distributor road connecting Fanling and Sha Tau Kok. In 2023, it recorded an AADT of 22,810 vehicles.

3.2 Traffic Count Surveys

- 3.2.1 In order to appraise the existing traffic conditions, a traffic count survey was carried out on 22 May 2025 (Thursday) for the time periods of 14:30 – 17:30, the peak traffic generation period of the vehicle charging station. More details will be discussed in **Section 4.2**.
- 3.2.2 The locations of the surveyed junctions are shown in **Figure 3.1**.
- J1 – J/O Sha Tau Kok Road – Lung Yeuk Tau / Lung Ma Road
- J2 – J/O Sha Tau Kok Road – Lung Yeuk Tau / Lau Shui Heung Road
- 3.2.3 The peak hour identified are 16:30 – 17:30. The observed 2025 traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

- 3.3.1 Based on the observed traffic flows, the performance of the junctions is assessed. It is calculated that all junctions are operating satisfactorily. The results are presented in **Table 3.1** and the detailed calculation sheets are attached in **Appendix A**.

Table 3.1 Existing Junction Capacity Assessment

Ref.	Junction Location	Type/Index ⁽¹⁾	Peak Hour of the Vehicle Charing Station
J1	Sha Tau Kok Road – Lung Yeuk Tau / Lung Ma Road	Roundabout /DFC	0.46
J2	Sha Tau Kok Road – Lung Yeuk Tau / Lau Shui Heung Road	Roundabout /DFC	0.43

Note: (1) DFC = Design Flow to Capacity

3.4 Existing Link Capacity Assessment

- 3.4.1 The Volume to Capacity (V/C) Ratios of Sha Tau Kok Road – Lung Yeuk Tau is assessed and the results are presented in **Table 3.2**.

Table 3.2 Link Capacity Assessments

Road	Capacity ⁽¹⁾ (pcu/hr)	Peak Hour Traffic Volume (pcu/hr)	Peak Hour V/C Ratio
Sha Tau Kok Road E/B (between Lung Ma Road and Lau Shui Heung Road)	3,120	811	0.26
Sha Tau Kok Road W/B (between Lau Shui Heung Road and Lung Ma Road)	3,120	935	0.30

Note: (1) Capacity refers to TPDM Vol.2 Ch. 2.4. A factor of 1.2 (based on the traffic count survey result) is adopted to convert the capacity from veh/hr to pcu/hr.

- 3.4.2 As shown in **Table 3.2**, the concerned road sections are operating with spare capacity during the peak hour.

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

- 4.1.1 The proposed use, if approved by the Town planning Board, will be valid for 5 years until 2030. Hence, Year 2030 is adopted as the design assessment year.

4.2 Traffic Generation of the Proposed Development

Traffic Generation for Electric Vehicle Charging Station

- 4.2.1 For the charging facilities, all EV chargers are direct current (DC) quick chargers with output power of 120kW which can provide 600km of mileage when an electric taxi charged for about 30 minutes.
- 4.2.2 From the taxi trade, the drivers are usually working on two shifts, i.e., the day shift and the night shift. In general, the day shift is 05:00 to 17:00 while the night shift is 17:00 to 05:00. The peak hour usage of charging facilities is expected to be the time periods before the shift such that a fully charged taxi can be passed to the driver in the next shift. As a result, the peak traffic generation of the proposed charging station will be either between 15:00 to 17:00 or after midnight. It is anticipated that minimal drivers will charge their taxis during the normal highway peak hours because these time periods will be the busiest hour in their business.
- 4.2.3 According to the Hong Kong Planning Standard and Guidelines, Section 3.9.4 of Chapter 12, a minimum of two waiting spaces should be provided in each EV charging station to avoid the awaiting vehicles to queue on public roads. In view of the size of the Site, 15 waiting spaces can be provided. In addition, to minimize the waiting time of the taxi drivers and hence maximize the available operation hours, a mobile application catered for the taxi drivers will be introduced which will include the payment platform for EV charging and provide real-time availability of EV charging stations at different locations managed by the Applicant.
- 4.2.4 The estimated traffic generation and attraction for Electric Vehicle Charging Station during the peak operation hour will be a two-way traffic of 36 taxis (36 Nos. of vehicles = 18 EV charging stations x 2 because of 30 minutes charging/servicing time for each taxi).

Traffic Generation for Motor Vehicle Showroom, Vehicle Repair Workshop, Eating Place, Ancillary Office (Retail and Office Use)

- 4.2.5 For conservative assessment purpose, traffic generated/ attracted by these components of the proposed development would be estimated based on the PM trip rates for retail documented in TPDM Volume 1 Chapter 3 – Transport Considerations of Town Plans.
- 4.2.6 Based on the above, the traffic generation of the proposed development has been estimated and presented in **Table 4.1**.

Table 4.1 Development Traffic Generation

Proposed Use	Unit /Content	Operation Peak Hour		
		Generation	Attraction	Total
Adopted Trip rates				
Retail ⁽¹⁾	pcu/hr/100m ²	0.3100	0.3563	-
Estimated Traffic Generation/Attraction				
EV Charging Station	18 stations	36 ⁽²⁾	36 ⁽²⁾	72 ⁽²⁾
Ancillary Office and Retail Use	2,235 m ²	7	8	15
Total		43	44	87

Notes: (1) TPDM mean trip rates for retail use (AM peak) are adopted.
(2) Traffic generation and attraction discussed in **Section 4.2** are adopted.

4.2.7 As shown in **Table 4.2**, the Site will generate a two-way traffic flows of 87 pcu/hour in the peak hour. The distribution of the development traffic is shown in **Figure 4.1**.

4.3 Traffic Generation of the Adjacent New Planning Application

4.3.1 One new application (Planning Application No. A/NE-LYT/860) at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, is identified in the vicinity of the Site and it is a temporary electric vehicle charging station. Having considered this application would have similar operation hours and patterns as the proposed temporary use, the traffic generation and attraction of this application are incorporated in the subsequent assessment and shown in **Table 4.2**.

Table 4.2 Traffic Generation of the Adjacent New Planning Application

Proposed Use	Unit /Content	Operation Peak Hour ⁽¹⁾		
		Generation	Attraction	Total
Estimated Traffic Generation/Attraction				
EV Charging Station	12 charging station	24	24	48

Note: (1) Traffic generation and attraction numbers are abstracted from the TIA report of the application.

4.3.2 As shown in **Table 4.2**, this development would generate two-way traffic flows of 48 pcu/hr in the operation peak hour.

4.4 Traffic Growth

Annual Traffic Census (ATC) Data

4.4.1 Reference was made to the 2019 to 2023 Annual Traffic Census Reports, published by the Transport Department, to determine the natural traffic growth. The traffic data recorded at counting station in the vicinity of the Site is shown in **Table 4.3**.

Table 4.3 Annual Traffic Census Data

Stn. No.	Road Section			AADT (vehicle/day) ⁽¹⁾					Average Annual Growth (%)
	Road	From	To	2019	2020	2021	2022	2023	
5660	Sha Tau Kok Rd	On Kui St	Ping Che Rd	33,630	23,740 (-29.4%)	22,980 (-3.2%)	22,280 (-3%)	22,810 (2.4%)	-1.3% (Between 2020 and 2023)

Note: (1) Figures in bracket indicated the % increase between two successive years.

- 4.4.2 From **Table 4.3**, the recorded traffic flows in 2020 dropped significantly by almost 30% and was due to the opening of Lung Shan Tunnel in 2019. From 2020 to 2023, the recorded traffic flows have been quite steady with only -1.3% decrease annually.

Territorial Population and Employment Data Matrix (TPEDM)

- 4.4.3 Reference was also made to the 2021–based TPEDM published by Planning Department. The population and employment data of year 2026 and 2031 in Northeast New Territories are summarized in **Table 4.4**.

Table 4.4 Population and Employment Data in Northeast New Territories

Year	Population	Employment	Total
2026	1,361,150	421,350	1,782,500
2031	1,416,800	448,600	1,865,400
Average Annual Growth Rate			+0.9%

- 4.4.4 As shown in **Table 4.4**, the projected average annual growth rate of the population and employment total number under the TPEDM in Northeast New Territories is +0.9% between the years 2026 to 2031, which is larger than the annual growth rate derived from ATC. To be conservative, the larger growth rate of +0.9% is adopted for the subsequent assessments.

4.5 Reference and Design Flows

- 4.5.1 The 2030 Reference Flows, i.e. the future traffic flows in the local road network WITHOUT the development traffic, were estimated based on the following equation:

$$2030 \text{ Reference Flows} = 2025 \text{ Existing Flows} \times (1 + 0.9\%)^5 + \text{Traffic generated and attracted by adjacent new planning application}$$

- 4.5.2 The 2030 Design Flows, i.e. the future traffic flows in the local road network WITH the development traffic, are estimated based on the following equations.

$$2030 \text{ Design Flows} = 2030 \text{ Reference Flows} + \text{Traffic generated and attracted by the proposed development}$$

- 4.5.3 The forecast traffic flows for the two scenarios are shown in **Figures 4.2 and 4.3** respectively.

4.6 Junction Capacity Assessment

4.6.1 Junction capacity analysis is carried out for the assessment year 2030. The assessment results are shown in **Table 4.5** and the detailed calculation sheets are attached in **Appendix B**.

Table 4.5 2030 Junction Capacity Assessment

Ref.	Junction Location	Type/ Index ⁽¹⁾	2030 Reference Peak Hour	2030 Design Peak Hour
J1	Sha Tau Kok Road – Lung Yeuk Tau / Lung Ma Road	Roundabout /DFC	0.49	0.51
J2	Sha Tau Kok Road – Lung Yeuk Tau / Lau Shui Heung Road	Roundabout /DFC	0.46	0.47

Note: (1) DFC = Design Flow to Capacity.

4.6.2 The results in **Table 4.5** show that the assessed junctions will operate satisfactorily in both reference and design scenarios. Therefore, it is anticipated that the proposed temporary EV charging station will not induce significant traffic impact to the surrounding road network.

4.7 Link Capacity Assessment

4.7.1 The V/C Ratios of Sha Tau Kok Road were assessed and the results are presented in **Table 4.6**.

Table 4.6 2030 Link Capacity Assessments

Road	Capacity ⁽¹⁾ (pcu/hr)	2030 Traffic Volume		2030 V/C Ratio	
		Reference Scenario	Design Scenario	Reference Scenario	Design Scenario
Sha Tau Kok Road E/B (between Lung Ma Road and Lau Shui Heung Road)	3,120	853	897	0.27	0.29
Sha Tau Kok Road W/B (between Lau Shui Heung Road and Lung Ma Road)	3,120	1,002	1,036	0.32	0.33

Note: (1) Capacity refers to TPDM Vol.2 Ch. 2.4. A factor of 1.2 (based on the traffic count survey result) is adopted to convert the capacity from veh/hr to pcu/hr.

4.7.2 As shown in **Table 4.5**, all the concerned road sections will operate with capacity during AM and PM peak hours in all scenarios. Hence, it can be concluded that the traffic induced by the proposed temporary EV charging station will not induce significant traffic impact to the road network.

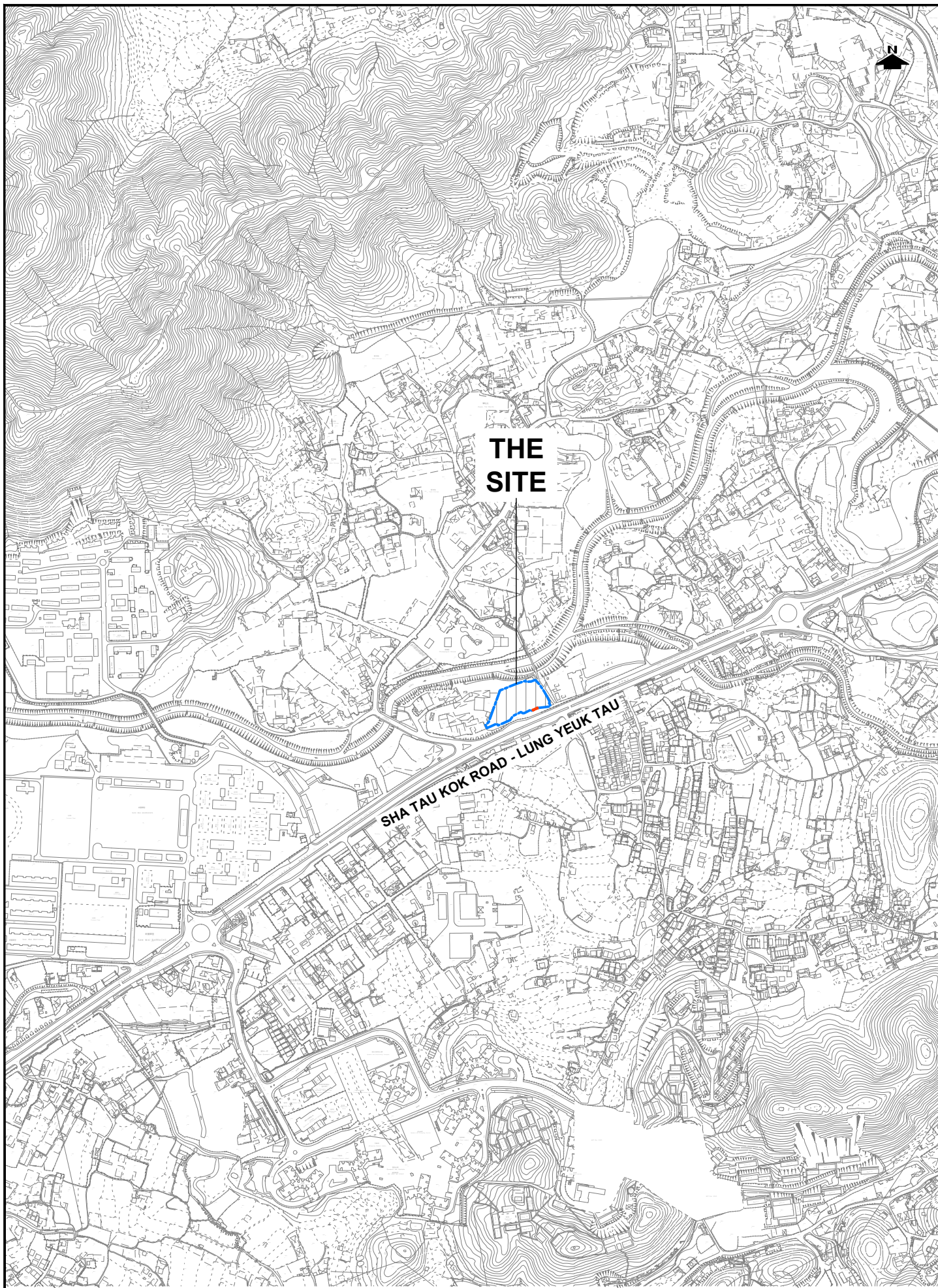
5 SUMMARY AND CONCLUSION

5.1 Summary

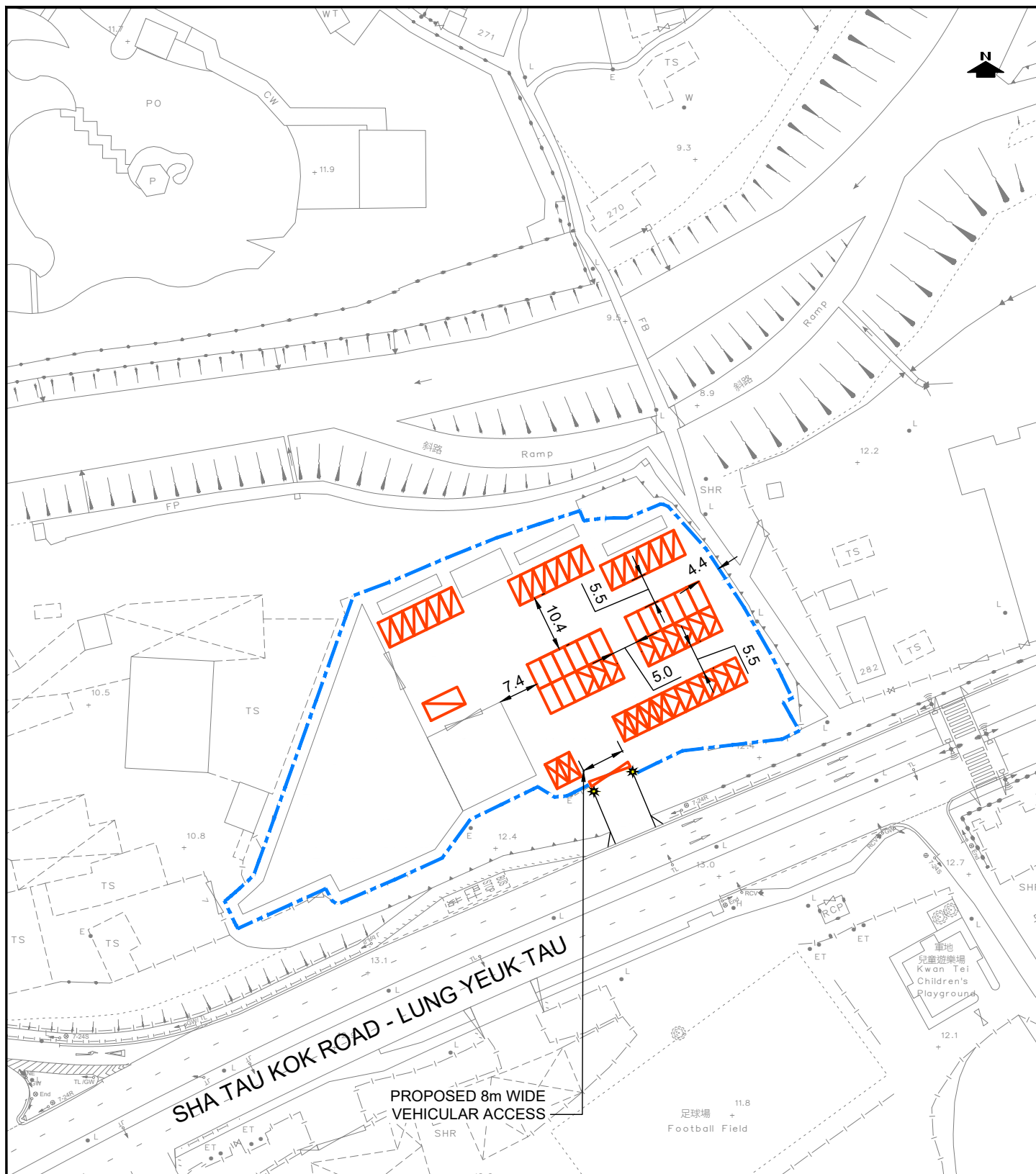
- 5.1.1 The Applicant proposes to use a piece of land for temporary electric vehicle charging station (for electric taxi), vehicle repair workshop, shop and services (motor vehicle showroom), eating place with ancillary site office for a period of 5 Years. The piece of land (hereinafter referred to “the Site”) is located at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road–Lung Yeuk Tau, Fanling, N.T. The main function of the Site is to provide charging facilities for electric taxis with supporting facilities, including vehicle repair workshop, motor vehicle showroom, eating place and ancillary office.
- 5.1.2 Traffic count survey was carried out on 22 May 2025 (Thursday) for the time periods of 14:30 – 17:30 which the time period will be the peak traffic generation period of the proposed development. Based on the existing traffic flows, the junction and link capacity assessments show that they are operating satisfactorily.
- 5.1.3 The proposed development is estimated to generate a two-way traffic of 87 pcu/hour in the operation peak hours. Junction and link capacity assessment was carried out for the reference and design scenarios in 2030 and the results revealed that the concerned junctions and road links would perform satisfactorily with spare capacity in 2030. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.
- 5.1.4 For the 18 nos. of EV charging stations, 15 nos. of waiting spaces can be provided (minimum two spaces in each EV charging station) to avoid the awaiting vehicles to queue on public roads. In addition, to minimize the waiting time of the taxi drivers and hence maximize the available operation hours, a mobile application catered for the taxi drivers will be introduced which will include the payment platform for EV charging and provide real-time availability of EV charging stations at different locations managed by the Applicant.

5.2 Conclusion

- 5.2.1 This planning application is to allow a temporary vehicle charging station with supporting facilities, including vehicle repair workshop, motor vehicle showroom, eating place and ancillary office for a period of 5 years. Based on the assessment result, it can be concluded that the proposed use will not induce additional adverse traffic impact on the surrounding road network and it is considered acceptable from traffic engineering point of view.



PROJECT NO. 40988		PROJECT TITLE PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI), VEHICLE REPAIR WORKSHOP, SHOP AND SERVICES (MOTOR VEHICLE SHOWROOM), EATING PLACE WITH ANCILLARY SITE OFFICE FOR A PERIOD OF 5 YEARS AT TAXI LOT 464 S.A. RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD - LUNG YEUK TAU, FANLING, N.T.		DRAWING NO. FIGURE 2.1	REV. .
DESIGNED SLN	DATE MAY 2025	DRAWING TITLE LOCATION PLAN		LLA 顧問有限公司 Consultancy Limited	
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LEGEND:

- APPLICATION SITE (AREA: ABOUT 4,180M²)
- EV CHARGING SPACES FOR ELECTRIC TAXI (18 NOS.)
- PARKING SPACES/WAITING SPACES FOR ELECTRIC TAXI (15 NOS.)
- PARKING SPACES FOR PRIVATE VEHICLES (FOR MOTOR VEHICLE SHOWROOM AND OFFICE USE) (15 NOS.)
- PARKING SPACES FOR STAFF/VISITORS (6 NOS.)
- LOADING/UNLOADING SPACE FOR LIGHT GOODS VEHICLE (3.5M X 7M) (1 NO.)
- ★ REVOLVING LAMPS

PROJECT NO. 40988		PROJECT TITLE PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI), VEHICLE REPAIR WORKSHOP, SHOP AND SERVICES (MOTOR VEHICLE SHOWROOM), EATING PLACE WITH ANCILLARY SITE OFFICE FOR A PERIOD OF 5 YEARS AT TAXI LOR LOT 464 S.A. RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD - LUNG YEUK TAU, FANLING, N.T.		DRAWING NO. FIGURE 2.2	REV. B
DESIGNED SLN	DATE JUL 2025	DRAWING TITLE PROPOSED LAYOUT PLAN		LLA 顧問有限公司 Consultancy Limited	
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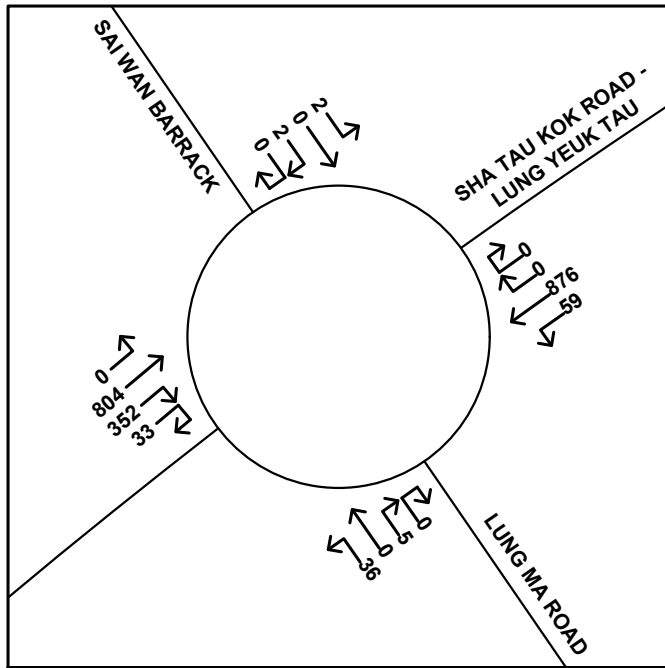


LEGEND:

- AREA OF INFLUENCE**
- J1 **SURVEYED JUNCTION**

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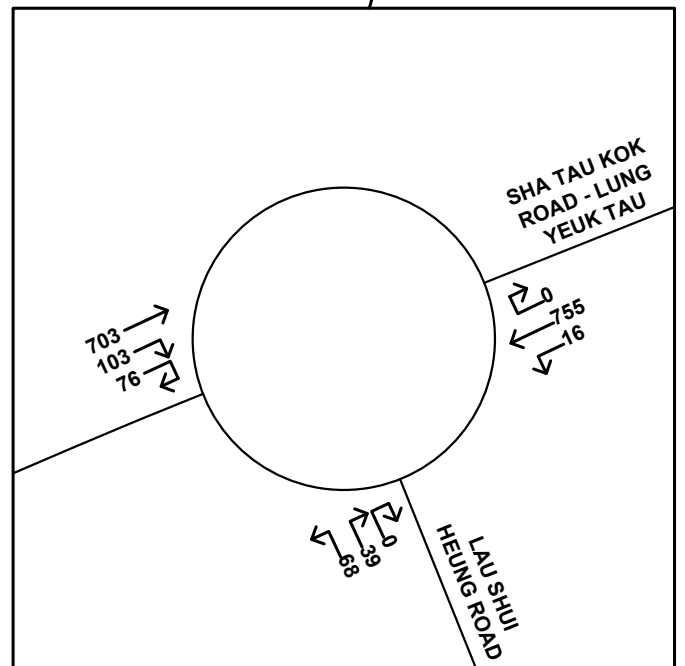
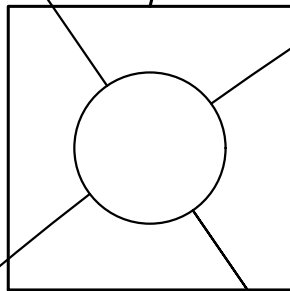
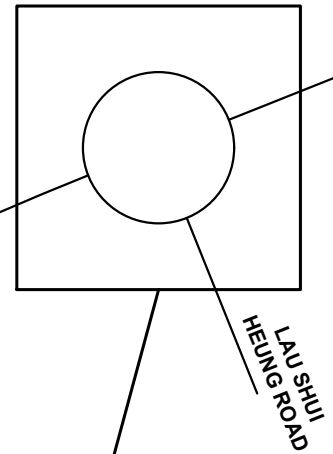
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LLA 顧問有限公司 Consultancy Limited	



THE SITE



SHA TAU KOK ROAD - LUNG YEUK TAU



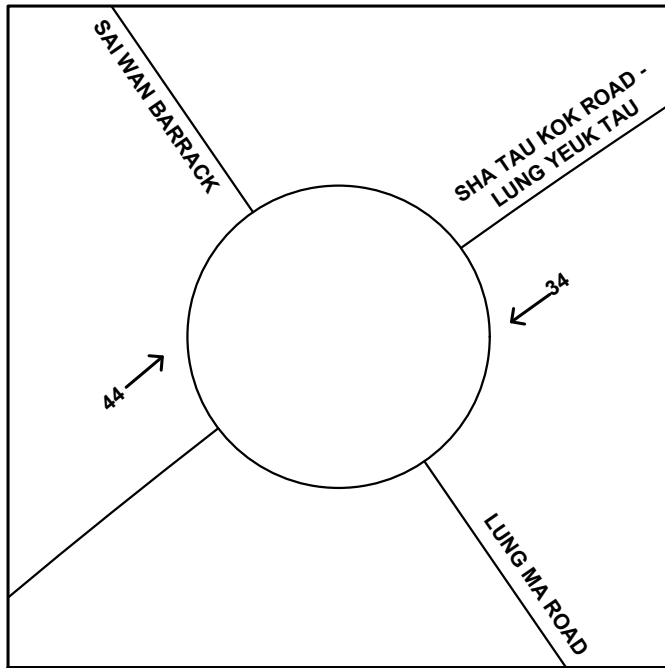
LEGEND:

123 ← PEAK HOUR (1630-1730) TRAFFIC FLOW

NOTE:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

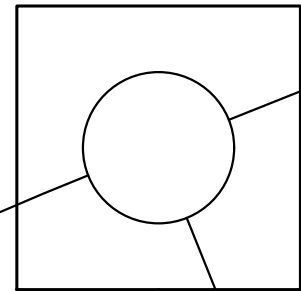
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DESIGNED SLN	DATE SEP 2025	DRAWING TITLE 2025 OBSERVED TRAFFIC FLOWS		LLA 顧問有限公司 Consultancy Limited	
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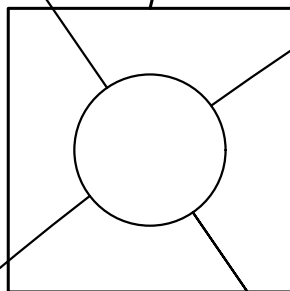
THE SITE



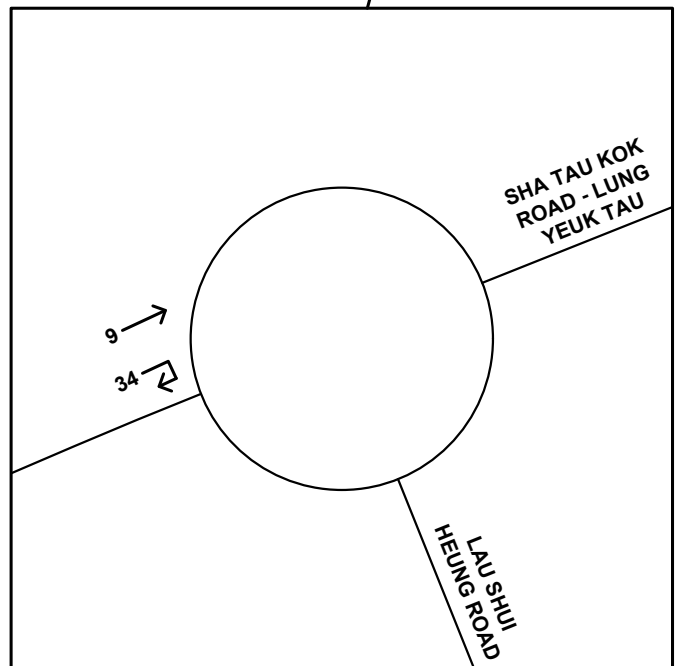
SHA TAU KOK ROAD - LUNG YEUK TAU



LAU SHUI
HEUNG ROAD



LUNG MA ROAD



SHA TAU KOK
ROAD - LUNG
YEUK TAU

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34

LAU SHUI
HEUNG ROAD

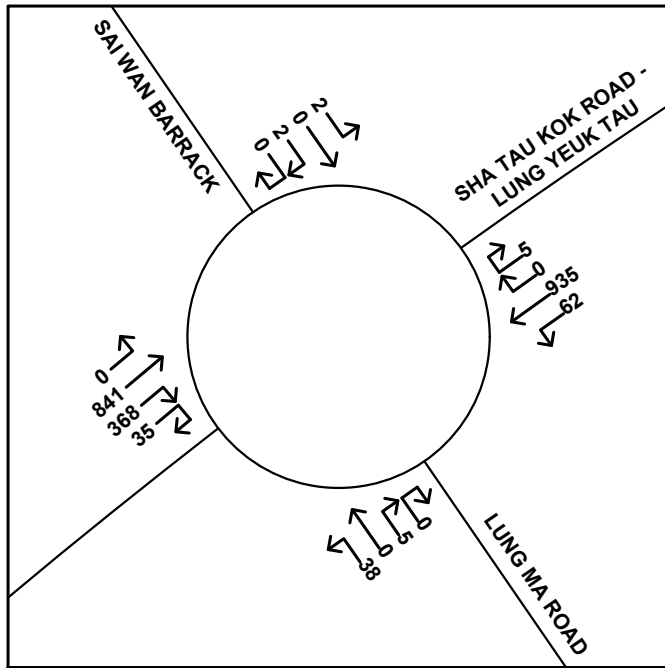
LEGEND:

123 ← PEAK HOUR (1630-1730) TRAFFIC FLOW

NOTE:

- 1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

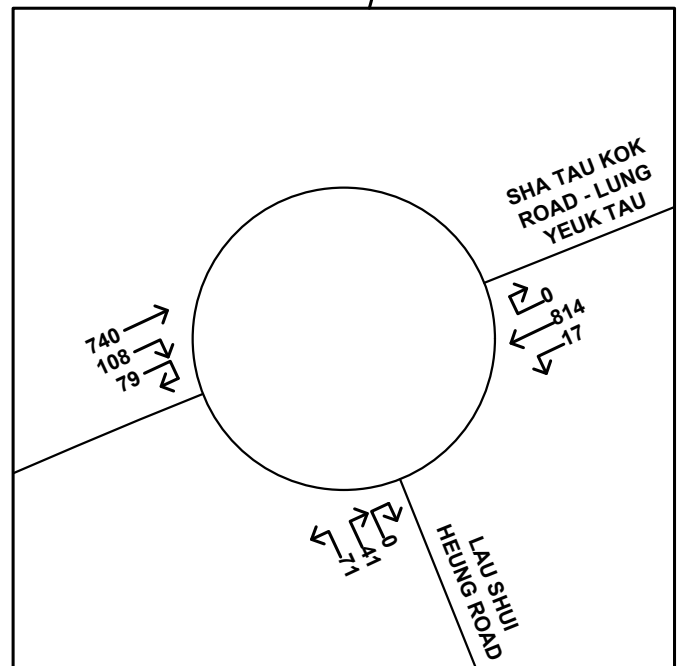
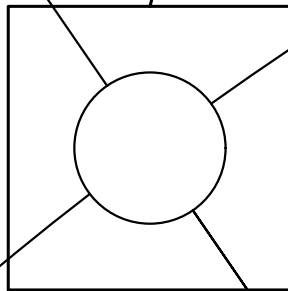
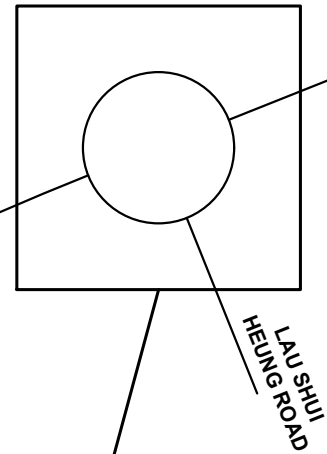
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DESIGNED SLN	DATE SEP 2025	DRAWING TITLE DEVELOPMENT TRAFFIC FLOWS		LLA 顧問有限公司 Consultancy Limited	
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THE SITE



SHA TAU KOK ROAD - LUNG YEUK TAU



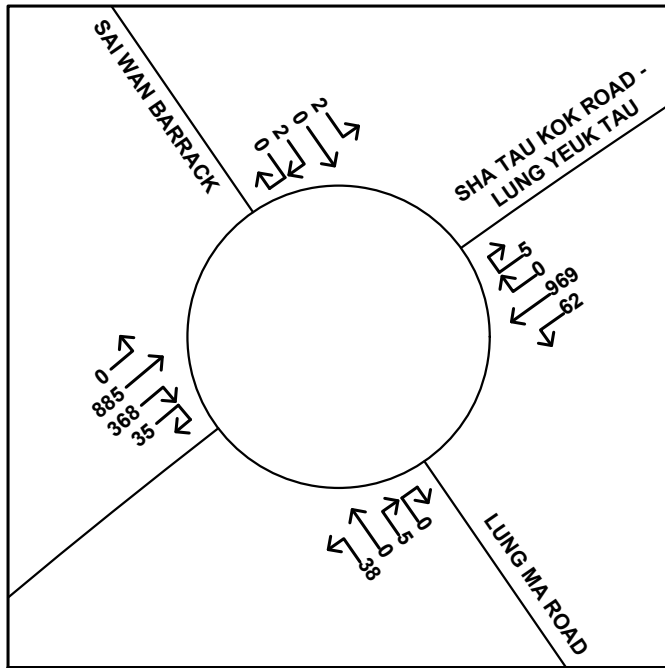
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123 ← PEAK HOUR (1630-1730) TRAFFIC FLOW

NOTE:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
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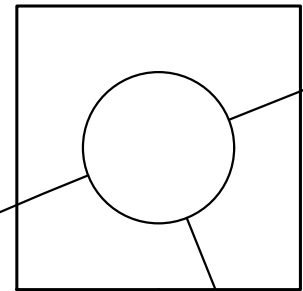
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DESIGNED SLN	DATE OCT 2025	2030 REFERENCE TRAFFIC FLOWS		LLA 顧問有限公司 Consultancy Limited	
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CHECKED SLN					



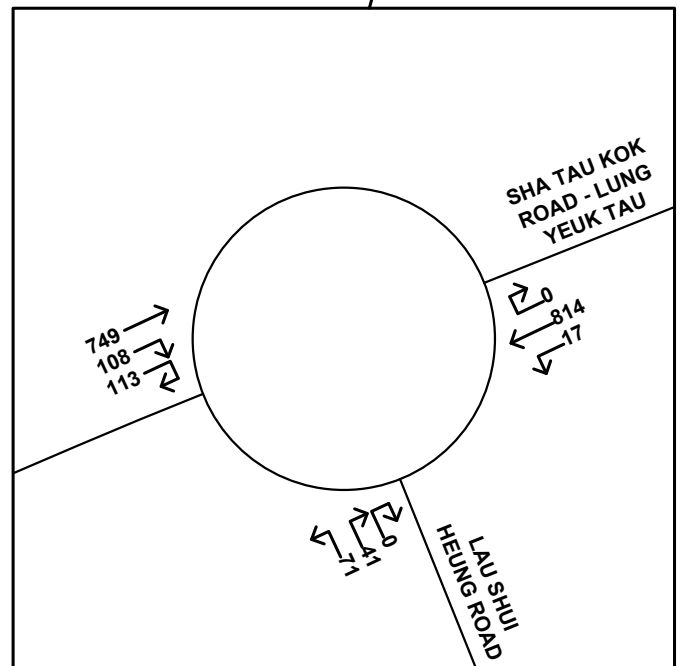
THE SITE



SHA TAU KOK ROAD - LUNG YEUK TAU



LAU SHUI
HEUNG ROAD



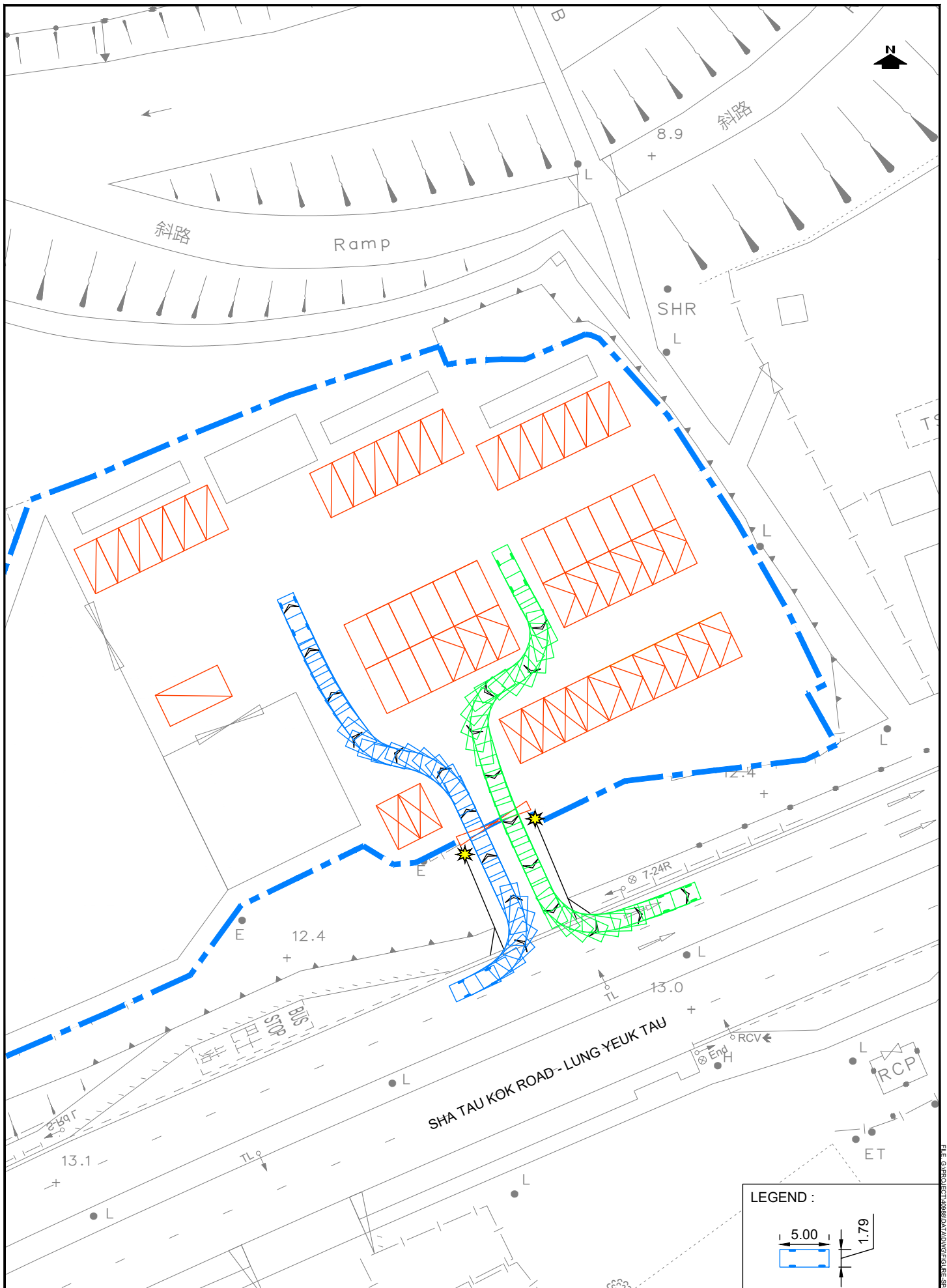
LEGEND:

123 ← PEAK HOUR (1630-1730) TRAFFIC FLOW

NOTE:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40988		PROJECT TITLE PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI), VEHICLE REPAIR WORKSHOP, SHOP AND SERVICES (MOTOR VEHICLE SHOWROOM), EATING PLACE WITH ANCILLARY SITE OFFICE FOR A PERIOD OF 5 YEARS AT TAXI LOR LOT 464 S.A. RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD - LUNG YEUK TAU, FANLING, N.T.		DRAWING NO. FIGURE 4.3	REV. B
DESIGNED SLN	DATE OCT 2025	DRAWING TITLE 2030 DESIGN TRAFFIC FLOWS		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE N.T.S.				
CHECKED SLN					



PROJECT NO. 40988		PROJECT TITLE PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI), VEHICLE REPAIR WORKSHOP, SHOP AND SERVICES (MOTOR VEHICLE SHOWROOM), EATING PLACE WITH ANCILLARY SITE OFFICE FOR A PERIOD OF 5 YEARS AT TAXLORD LOT 464 S.A. RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD - LUNG YEUK TAU, FANLING, N.T.		DRAWING NO. SP-01	REV. A
DESIGNED SLN	DATE JUL 2025	DRAWING TITLE SWEPT PATH ANALYSIS - PC		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE 1:500				
CHECKED SLN					



PROJECT NO. 40988		PROJECT TITLE PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI), VEHICLE REPAIR WORKSHOP, SHOP AND SERVICES (MOTOR VEHICLE SHOWROOM), EATING PLACE WITH ANCILLARY SITE OFFICE FOR A PERIOD OF 5 YEARS AT TAXI LOR LOT 464 S.A.R.P. (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD - LUNG YEUK TAU, FANLING, N.T.		DRAWING NO. SP-02	REV. B
DESIGNED SLN	DATE SEP 2025	DRAWING TITLE		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE 1:500	SWEPT PATH ANALYSIS - LGV			
CHECKED SLN					

Appendix A
Junction Capacity Assessments
- Existing Scenario

LLA CONSULTANCY LIMITED

Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi), Vehicle Repair Workshop, Shop and Services (Motor Vehicle Showroom), Eating Place with Ancillary Site Office for a Period of 5 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yuek Tau, Fanling, N.T.

J1 Sha Tau Kok Road - Lung Yuek Tau / Lung Ma Road

ROUNDBABOUT CALCULATION

2025 Existing 1630-1730

PROJECT NO.: 40988

FILENAME : J1_STKR_LMR.xl

REFERENCE NO.:

PREPARED BY:

CHECKED BY:

REVIEWED BY:

INITIALS

SKL

SLN

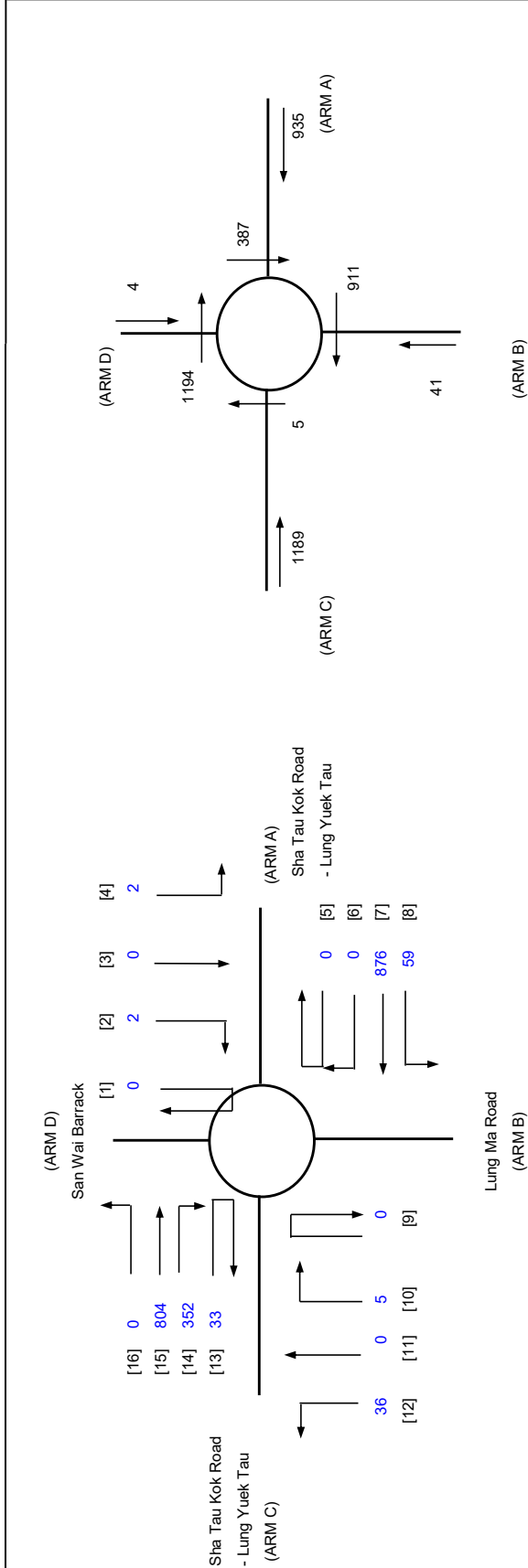
SLN

DATE

Oct-25

Oct-25

Oct-25



ARM

INPUT PARAMETERS:

	A	B	C	D
V = Approach half width (m)	7.10	3.50	7.10	4.20
E = Entry width (m)	7.30	5.20	9.50	4.70
L = Effective length of flare (m)	1.00	12.00	19.00	9.00
R = Entry radius (m)	58.00	69.00	31.00	42.00
D = Inscribed circle diameter (m)	53.00	53.00	53.00	53.00
A = Entry angle (degree)	21.00	10.00	32.00	18.00
Q = Entry flow (pcu/h)	935	41	1189	4
Qc = Circulating flow across entry (pcu/h)	387	911	5	1194

OUTPUT PARAMETERS:

S = Sharpness of flare = $1.6(E-V)/L$	0.32	0.23	0.20	0.09
K = $1-0.00347(A-30)-0.978(1/R-0.05)$	1.06	1.10	1.01	1.07
X2 = $V + ((E-V)/(1+2S))$	7.22	4.67	8.81	4.62
M = $EXP((D-60)/10)$	0.50	0.50	0.50	0.50
F = $303 \times X2$	2188	1415	2669	1401
Td = $1+(0.5/(1+M))$	1.33	1.33	1.33	1.33
Fc = $0.21 \times Td(1+0.2 \times X2)$	0.68	0.54	0.77	0.54
Qe = $K(F-Fc \times Qc)$	2045	1017	2693	808

DFC = Design flow/Capacity = Q/Qe

Total In Sum =

1292 PCU

DFC of Critical Approach = 0.46

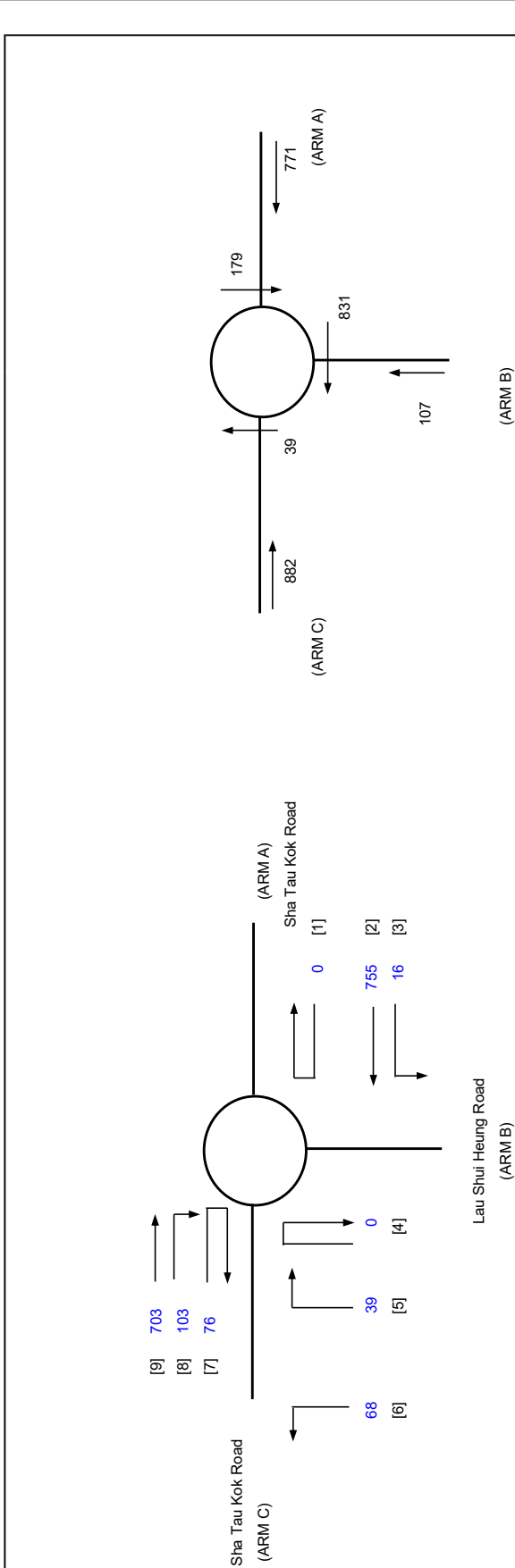
LLA CONSULTANCY LIMITED

Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi), Vehicle Repair Workshop, Shop and Services (Motor Vehicle Showroom), Eating Place with Ancillary Site Office for a Period of 5 Years at Taxford Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling.

J2 Sha Tau Kok Road - Ma Mei Ha / Lau Shui Heung Road

ROUNDAABOUT CALCULATION

PROJECT NO.:	40988	PREPARED BY:	SKL	DATE
FILENAME :	J2_STKR_LSHR.x	CHECKED BY:	SLN	Oct-25
REFERENCE NO.:		REVIEWED BY:	SLN	Oct-25



ARM	A	B	C
INPUT PARAMETERS:			
V = Approach half width (m)	6.80	3.40	6.40
E = Entry width (m)	6.90	5.20	6.50
L = Effective length of flare (m)	1.00	11.90	1.00
R = Entry radius (m)	10.00	60.00	22.00
D = Inscribed circle diameter (m)	52.00	52.00	52.00
A = Entry angle (degree)	39.00	60.00	4.00
Q = Entry flow (pcu/h)	771	107	882
Qc = Circulating flow across entry (pcu/h)	179	831	39
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.16	0.24	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.92	0.93	1.09
X2 = V + ((E-V)/(1+2S))	6.88	4.61	6.48
M = EXP((D-60)/10)	0.45	0.45	0.45
F = 303*X2	2083	1398	1962
Td = 1+(0.5/(1+M))	1.34	1.34	1.34
Fc = 0.21*Td(1+0.2*X2)	0.67	0.54	0.65
Qe = K(F-Fc*Qc)	1806	879	2120
DFC = Design flow/Capacity = Q/Qe	0.43	0.12	0.42
Total In Sum =			1760 PCU
DFC of Critical Approach =			0.43

Appendix B

Junction Capacity Assessments - Reference & Design Scenarios

LLA CONSULTANCY LIMITED

Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi), Vehicle Repair Workshop, Shop and Services (Motor Vehicle Showroom), Eating Place with Ancillary Site Office for a Period of 5 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yuek Tau, Fanling, N.T.

J1 Sha Tau Kok Road - Lung Yuek Tau / Lung Ma Road

ROUNDABOUT CALCULATION

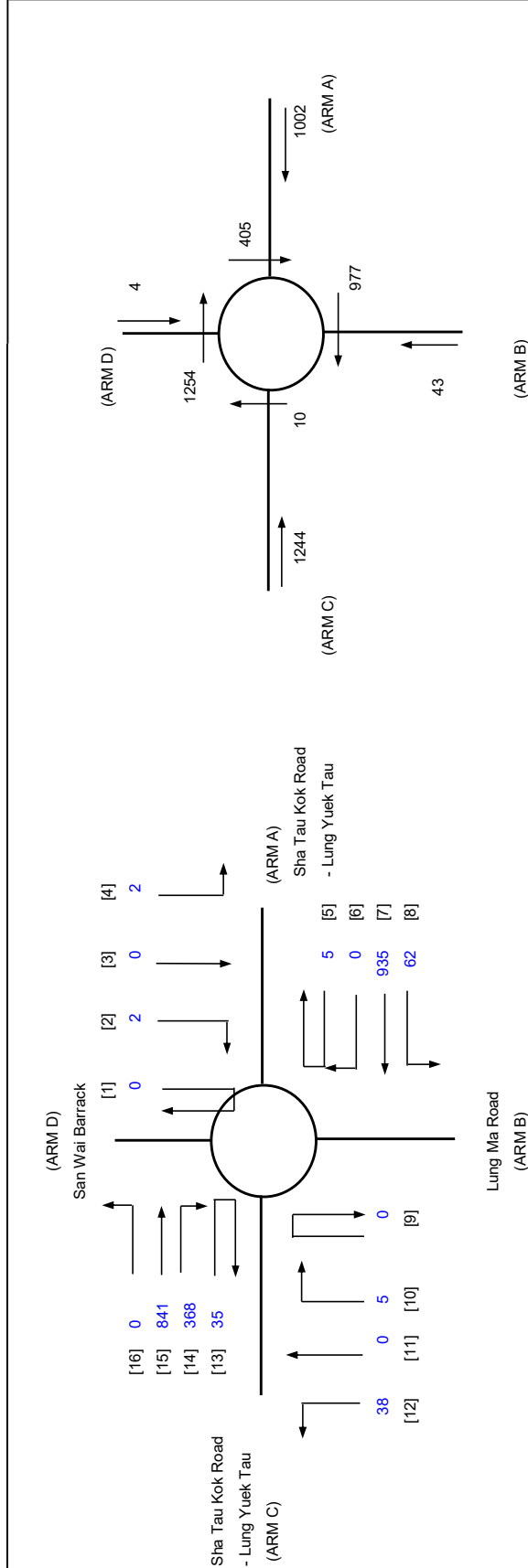
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 FILENAME : J1_STKR_LMR.xl
 REFERENCE NO.:
 PREPARED BY:
 CHECKED BY:
 REVIEWED BY:

INITIALS

SKL
 SLN
 SLN

DATE

Oct-25
 Oct-25
 Oct-25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.10	3.50	7.10	4.20
E = Entry width (m)	7.30	5.20	9.50	4.70
L = Effective length of flare (m)	1.00	12.00	19.00	9.00
R = Entry radius (m)	58.00	69.00	31.00	42.00
D = Inscribed circle diameter (m)	53.00	53.00	53.00	53.00
A = Entry angle (degree)	21.00	10.00	32.00	18.00
Q = Entry flow (pcu/h)	1002	43	1244	4
Qc = Circulating flow across entry (pcu/h)	405	977	10	1254
OUTPUT PARAMETERS:				
S = Sharpness of flare = $1.6(E-V)/L$	0.32	0.23	0.20	0.09
K = $1-0.00347(A-30)-0.978(1/R-0.05)$	1.06	1.10	1.01	1.07
X2 = $V + ((E-V)/(1+2S))$	7.22	4.67	8.81	4.62
M = $EXP((D-60)/10)$	0.50	0.50	0.50	0.50
F = $303 \times X2$	2188	1415	2669	1401
Td = $1+(0.5/(1+M))$	1.33	1.33	1.33	1.33
Fc = $0.21 \times Td(1+0.2 \times X2)$	0.68	0.54	0.77	0.54
Qe = $K(F-Fc \times Qc)$	2032	978	2689	774
DFC = Design flow/Capacity = Q/Qe	0.49	0.04	0.46	0.01
Total In Sum = 1375 PCU				
DFC of Critical Approach = 0.49				

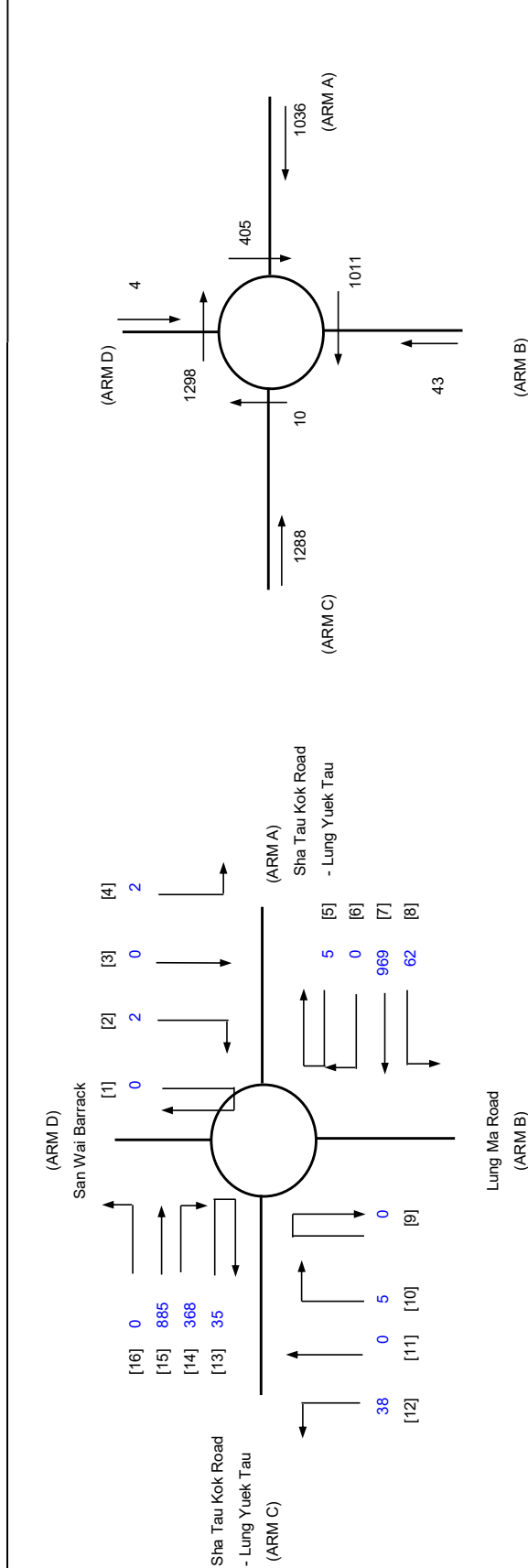
LLA CONSULTANCY LIMITED

Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi), Vehicle Repair Workshop, Shop and Services (Motor Vehicle Showroom), Eating Place with Ancillary Site Office for a Period of 5 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yuek Tau, Fanling, N.T.

J1 Sha Tau Kok Road - Lung Yuek Tau / Lung Ma Road

ROUNDBABOUT CALCULATION

PROJECT NO.:	40988	PREPARED BY:	SKL	DATE
FILENAME :	J1_STKR_LMR.xl	CHECKED BY:	SLN	Oct-25
REFERENCE NO.:		REVIEWED BY:	SLN	Oct-25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	7.10	3.50	7.10	4.20
E = Entry width (m)	7.30	5.20	9.50	4.70
L = Effective length of flare (m)	1.00	12.00	19.00	9.00
R = Entry radius (m)	58.00	69.00	31.00	42.00
D = Inscribed circle diameter (m)	53.00	53.00	53.00	53.00
A = Entry angle (degree)	21.00	10.00	32.00	18.00
Q = Entry flow (pcu/h)	1036	43	1288	4
Qc = Circulating flow across entry (pcu/h)	405	1011	10	1298
OUTPUT PARAMETERS:				
S = Sharpness of flare = $1.6(E-V)/L$	0.32	0.23	0.20	0.09
K = $1-0.00347(A-30)-0.978(1/R-0.05)$	1.06	1.10	1.01	1.07
X2 = $V + ((E-V)/(1+2S))$	7.22	4.67	8.81	4.62
M = $EXP((D-60)/10)$	0.50	0.50	0.50	0.50
F = $303 \times X2$	2188	1415	2669	1401
Td = $1+(0.5/(1+M))$	1.33	1.33	1.33	1.33
Fc = $0.21 \times Td(1+0.2 \times X2)$	0.68	0.54	0.77	0.54
Qe = $K(F-Fc \times Qc)$	2032	957	2689	748
DFC = Design flow/Capacity = Q/Qe	0.51	0.04	0.48	0.01
Total In Sum =				1409 PCU
DFC of Critical Approach =				0.51

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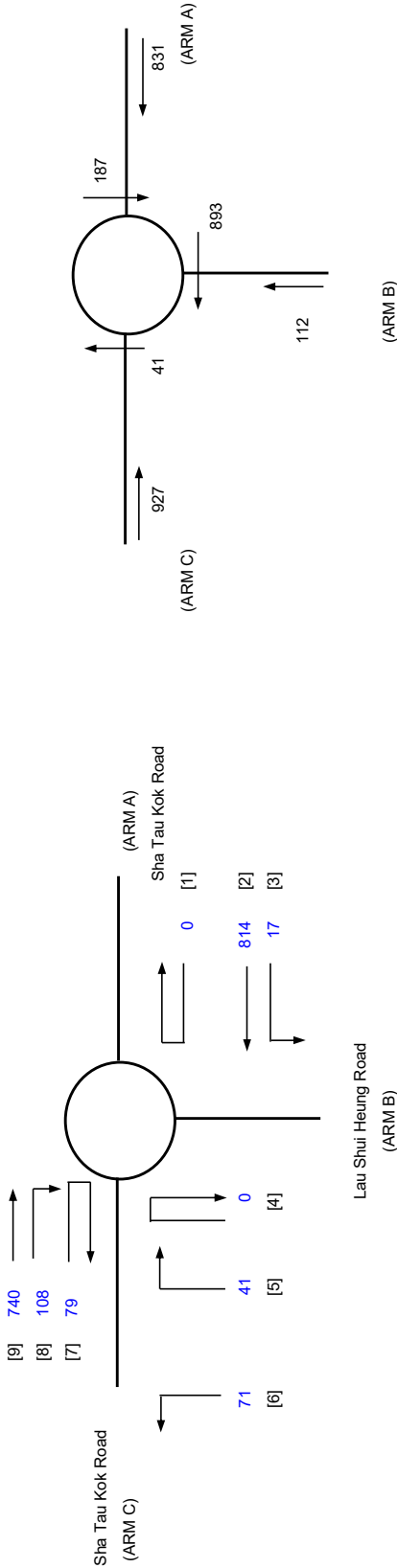
Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi), Vehicle Repair Workshop, Shop and Services (Motor Vehicle Showroom), Eating Place with Ancillary Site Office for a Period of 5 Years at Taxford Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling.

J2 Sha Tau Kok Road - Ma Mei Ha / Lau Shui Heung Road

ROUNDBABOUT CALCULATION

PROJECT NO.:	40988	PREPARED BY:	SKL	DATE
FILENAME :	J2_STKR_LSHR.x	CHECKED BY:	SLN	Oct-25
REFERENCE NO.:		REVIEWED BY:	SLN	Oct-25

2030 Reference 1630-1730



ARM

INPUT PARAMETERS:

	A	B	C
V = Approach half width (m)	6.80	3.40	6.40
E = Entry width (m)	6.90	5.20	6.50
L = Effective length of flare (m)	1.00	11.90	1.00
R = Entry radius (m)	10.00	60.00	22.00
D = Inscribed circle diameter (m)	52.00	52.00	52.00
A = Entry angle (degree)	39.00	60.00	4.00
Q = Entry flow (pcu/h)	831	112	927
Qc = Circulating flow across entry (pcu/h)	187	893	41

OUTPUT PARAMETERS:

S = Sharpness of flare = $1.6(E-V)/L$	0.16	0.24	0.16
K = $1-0.00347(A-30)-0.978(1/R-0.05)$	0.92	0.93	1.09
X2 = $V + ((E-V)/(1+2S))$	6.88	4.61	6.48
M = $EXP((D-60)/10)$	0.45	0.45	0.45
F = $303 \times X2$	2083	1398	1962
Td = $1+(0.5/(1+M))$	1.34	1.34	1.34
Fc = $0.21 \times Td(1+0.2 \times X2)$	0.67	0.54	0.65
Qe = $K(F-Fc \times Qc)$	1801	848	2119

DFC = Design flow/Capacity = Q/Qe

DFC of Critical Approach = 0.46

Total In Sum = 1870 PCU

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Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi), Vehicle Repair Workshop, Shop and Services (Motor Vehicle Showroom), Eating Place with Ancillary Site Office for a Period of 5 Years at Taxford Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling.

J2 Sha Tau Kok Road - Ma Mei Ha / Lau Shui Heung Road

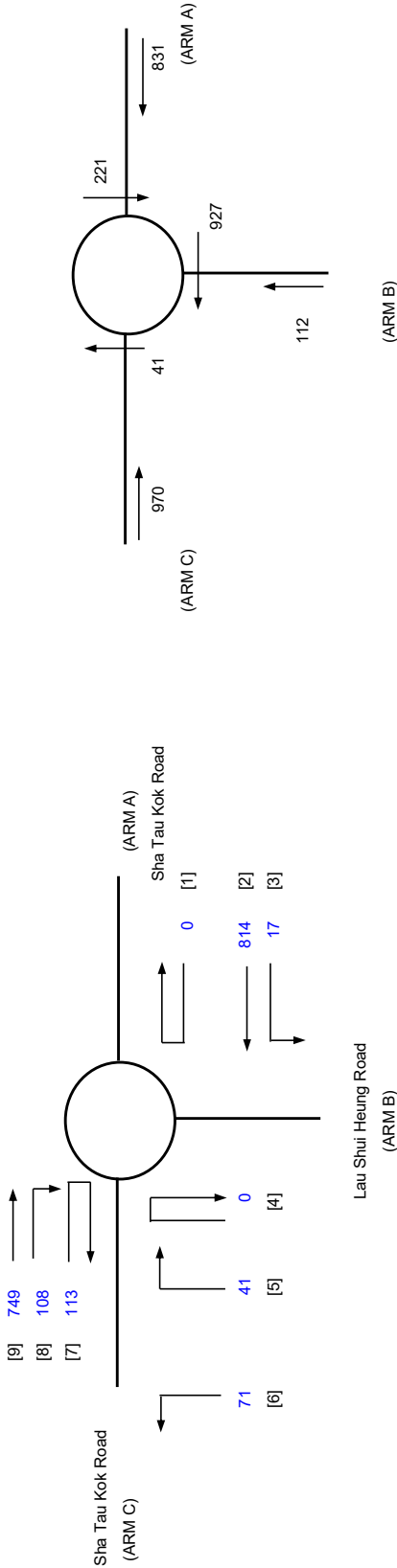
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CHECKED BY:
REVIEWED BY:

INITIALS
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SLN

DATE
Oct-25
Oct-25
Oct-25



ARM

INPUT PARAMETERS:

	A	B	C
V = Approach half width (m)	6.80	3.40	6.40
E = Entry width (m)	6.90	5.20	6.50
L = Effective length of flare (m)	1.00	11.90	1.00
R = Entry radius (m)	10.00	60.00	22.00
D = Inscribed circle diameter (m)	52.00	52.00	52.00
A = Entry angle (degree)	39.00	60.00	4.00
Q = Entry flow (pcu/h)	831	112	970
Qc = Circulating flow across entry (pcu/h)	221	927	41

OUTPUT PARAMETERS:

S = Sharpness of flare = $1.6(E-V)/L$	0.16	0.24	0.16
K = $1-0.00347(A-30)-0.978(1/R-0.05)$	0.92	0.93	1.09
X2 = $V + ((E-V)/(1+2S))$	6.88	4.61	6.48
M = $EXP((D-60)/10)$	0.45	0.45	0.45
F = $303 \times X2$	2083	1398	1962
Td = $1+(0.5/(1+M))$	1.34	1.34	1.34
Fc = $0.21 \times Td(1+0.2 \times X2)$	0.67	0.54	0.65
Qe = $K(F-Fc \times Qc)$	1780	830	2119

DFC = Design flow/Capacity = Q/Qe

DFC of Critical Approach = 0.47

Total In Sum = 1913 PCU