

Appendix 3

Traffic Impact Assessment

**Proposed Conversion of part of the Pulse
into Hotel in “Other Specified Uses
(Beach Related Leisure Use)” and
“Government, Institution or Community” Zones
at No. 28 Beach Road, Repulse Bay**

**Traffic Impact Assessment
Final Report
4th February, 2025**

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Prepared for: Goldshine Investment Limited

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1.0 INTRODUCTION

Background

- 1.1 The Subject Site is located at 28 Beach Road, Repulse Bay, Hong Kong. It is now occupied by a retail building, which is known as The Pulse (hereinafter "the Existing Development"). **Figure 1.1** shows the location of the Subject Site.
- 1.2 The Owner, i.e. Goldshine Investment Limited, intends to convert the upper 2 floors (1/F and UG/F) of the Existing Development into a hotel with 96 rooms. In addition, the existing changing room at B1/F will also be converted into an ancillary gym and spa for the hotel. With this conversion, the retail GFA will be reduced from existing 13,728m² to 5,841m² (hereinafter "the Proposed Conversion").
- 1.3 CKM Asia Limited, a traffic and transportation planning consultancy firm, has been commissioned by the Owner to prepare this Traffic Impact Assessment ("TIA") in support of the planning application for the Proposed Conversion. This TIA report has been updated in responses to the comments provided by Transport Department during the pre-submission stage.

Scope of Study

- 1.4 The main objectives of this study are as follows:
- To assess the existing traffic and pedestrian issues in the vicinity of the Subject Site;
 - To justify the provision of internal transport facilities;
 - To quantify the amount of traffic and pedestrian generated by the Proposed Conversion;
 - To examine the traffic and pedestrian impact on the local road network;
 - To identify any deficiencies in the road and pedestrian network in accommodating the expected traffic and pedestrian generation associated with the Proposed Conversion; and
 - To recommend traffic and pedestrian improvement measures, if necessary.

Contents of the Report

- 1.5 After this introduction, the remaining chapters contain the following:

Chapter Two	- Describes the existing condition and surveys,
Chapter Three	- Outlines the Proposed Conversion,
Chapter Four	- Presents the traffic and pedestrian impact analyses, and
Chapter Five	- Summarises the overall conclusion.

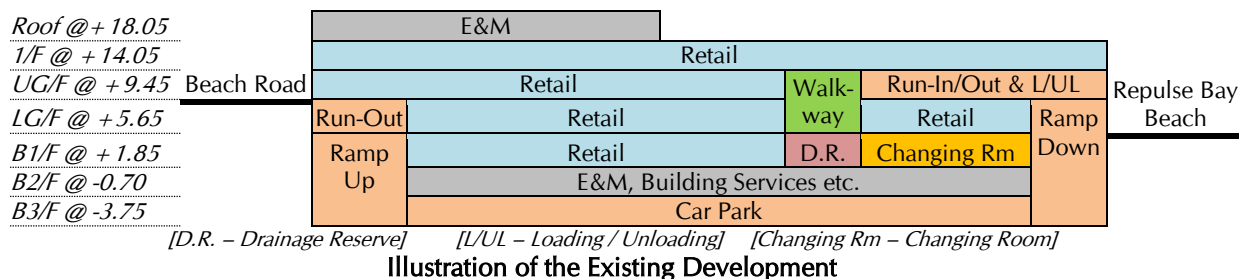
2.0 THE EXISTING SITUATION

The Subject Site

- 2.1 The Subject Site is elongated with a length of some 260m, but has a narrow depth averaging at only 15m. It is bounded by Beach Road to the east, and the Repulse Bay Beach to the west.

The Existing Development

- 2.2 The Existing Development is a 6-storey retail-only building with some 13,728 m² GFA. For easy understanding, the existing building disposition is illustrated below:



- 2.3 Internal transport facilities are provided on UG/F, and B3/F at present. Table 2.1 presents details of the existing internal transport provision.

TABLE 2.1 EXISTING INTERNAL TRANSPORT PROVISION

Facility	Number of Spaces / Bays	Location
Private Car Parking Spaces	Conventional: 26 nos. @ 5.0m (L) x 2.5m (W) x Min. 2.4m (H) Mechanical: 70 nos. on 35 sets of double deck car parking racks @ .0m (L) x 2.5m (W) Accessible: 1 no. @ 5.0m (L) x 3.5m (W) x Min. 2.4m (H) Total: 97 nos.	B3/F
Van-Type Goods Vehicle Loading / Unloading Bays	4 nos. @ 5.0m (L) x 2.5m (W)	UG/F (Indoor)
LGV Layby	1 no. @ 7.0m (L) x 3.5m (W)	UG/F (Semi-Open)

- 2.4 The headroom required for loading / unloading bays and layby are not stated in the Lease or the approved GBP. Hence, the headroom available at the loading / unloading area are measured on-site and summarised in Table 2.2.

TABLE 2.2 EXISTING HEADROOM OF LOADING / UNLOADING BAYS AND LAYBY

Facility	Location	Minimum Clear Headroom
Van-type Loading / Unloading Bays	UG/F (Indoor)	2.9m ^(Note 1)
LGV Layby	UG/F (Semi-Open)	3.8m ^(Note 1)

Note 1: Lowest headroom measured along the driveway, and at the loading / unloading bay or layby.

- 2.5 In addition, the Existing Development has 3 vehicular access points, including:
- (i) Run-out from the car park at the northern end of the building,
 - (ii) Run-in/out of the UG/F indoor loading / unloading area and run-in of the car park at the southern end of the building, and
 - (iii) Run-in/out of the UG/F semi-open LGV loading / unloading bay at the southernmost end.

2.6 Figures 2.1 - 2.5 show the existing internal transport layout, and locations of the 3 vehicular access points.

Existing Goods Delivery Operation

2.7 In view the Existing Development provides limited number and type of goods vehicle loading / unloading bays, a survey was conducted to understand the existing goods delivery operation. Questionnaire survey was conducted with over 30 shop tenants for a 2-week period, i.e. from Monday, 25th December 2023 to Sunday, 7th January 2024, which covers the busy Christmas and New Year period and also normal days. Amongst the surveyed shop tenants, 28 responded, i.e. a response rate of 93%.

2.8 The maximum daily delivery was on Friday, 5th January 2024 with a total of 22 deliveries, of which 50% or 11 nos. used goods van, and the remaining 50% or 11 nos. used LGV. The peak 3-hour periods was from 1300 to 1600 hours with 7 deliveries, i.e. an average of 2.3 deliveries per hour. No M/HGV was used during the 2-week survey period.

2.9 77% of the deliveries were completed within 15 minutes, and the remaining 23% completed between 15 – 30 minutes. No delivery took longer than 30 minutes.

2.10 In terms of seasonal variation, only 6 shops indicated that there are 1 to 2 additional deliveries per week during the busy summer season, and these deliveries occur on weekday during the non-peak time period. Hence, the peak delivery operation on Friday, 5 January 2024 is opined to be representative, and is not affected seasonally.

2.11 Nevertheless, the survey concluded that the Existing Development with 13,728m² retail GFA has a maximum demand for 2 van-type loading / unloading bays, and 1 LGV loading / unloading bays during the peak hour. This demand could be fulfilled with the existing provision with 4 van-type loading / unloading bays and 1 LGV loading / unloading bay.

The Road Network

2.12 Beach Road is a single carriageway 1-way local road connecting Repulse Bay Road to the north and South Bay Road to the south. On-street parking spaces, laybys for passenger pick-off / drop-off, and red minibus and taxi stands are provided along Beach Road. Vehicles exceeding the height of 4.1m are prohibited to enter Beach Road due to restricted headroom. Goods vehicles are prohibited to enter Beach Road between 12noon and 7pm on Saturday, and all day on Sundays and General Holidays.

2.13 South Bay Path is a single carriageway 2-way local road connecting Beach Road and South Bay Road. Goods vehicles are prohibited to enter South Bay Path between 12noon and 7pm on Saturday, and all day on Sundays and General Holidays.

2.14 South Bay Road is a single carriageway 2-way local road connecting Repulse Bay Road to the north and ends at the South Bay Beach.

2.15 Repulse Bay Road is a single carriageway 2-way Primary Distributor connecting Wong Nai Chung Gap Road to the north and continues as Stanley Gap Road to the south. It provides regional access to the Subject Site.

Pedestrian Facilities

2.16 In general, footpaths are provided along both sides of Beach Road fronting the Subject Site. Further north of the Subject Site, footpath is only provided along one side of Beach Road, i.e. the western side along Repulse Bay Beach.

2.17 Pedestrian can reach the public transport service provided at Repulse Bay Road via a stairway which connects Beach Road and Repulse Bay Road.

Public Transport Services

2.18 The Subject Site is located close to public transport services, including franchised bus and green mini-bus (the “GMB”) routes operate along Repulse Bay Road. **Figure 2.6** shows the stop locations of these public transport services in the vicinity, and Table 2.3 presents the details.

TABLE 2.3 PUBLIC TRANSPORT SERVICES OPERATING NEAR THE SUBJECT SITE

Route	Origin - Destination	Frequency (minutes)
CTB 6	Central (Exchange Square) ↔ Stanley Prison	10 - 30
CTB 6A	Central (Exchange Square) → Stanley Fort Gate	20 ⁽¹⁾
CTB 6X	Central (Exchange Square) ↔ Stanley Prison	10 - 25
CTB 63	North Point Ferry ↔ Stanley Prison	30 ⁽¹⁾
CTB 65	North Point Ferry ↔ Stanley Market	12 - 20 ⁽²⁾
CTB 66	Central (Exchange Square) ↔ Ma Hang Estate	20 - 30 ⁽³⁾
CTB 73	Cyberport / Wa Fu (North) ↔ Stanley Prison	12 - 30
CTB 260	Central (Exchange Square) ↔ Stanley Prison	15 - 20
CTB 973	Tsim Sha Tsui (Mody Road) ↔ Stanley	30 - 60
GMB 40	Causeway Bay ↔ Stanley Village	10 - 20
GMB 40X	Causeway Bay ↔ Stanley (Stanley Prison)	4 - 9
GMB 52	Aberdeen (Shek Pai Wan) ↔ Stanley Prison	5 - 12
GMB N40	Causeway Bay ↔ Stanley Village	20 ⁽⁴⁾
RMB	Mong Kok → Repulse Bay Beach	AM Service Only ⁽⁵⁾
	Repulse Bay Beach → Mong Kok	PM Service Only ⁽⁵⁾

Note: CTB – Citybus

GMB – Green Minibus

RMB – Red Minibus

⁽¹⁾ No service on Sundays and Public Holidays.

⁽²⁾ Service on Sundays and Public Holidays only.

⁽³⁾ AM and PM peak hours service. No service on Saturdays, Sundays and Public Holidays.

⁽⁴⁾ Overnight Services.

⁽⁵⁾ Limited services on Saturdays, Sundays, and Public Holidays during swimming season from April to September.

Existing Traffic Flows

2.19 To quantify the existing traffic flows, manual classified counts were conducted during the AM and PM peak periods on a weekday, i.e. Friday, 10th January 2025, and on a weekend, i.e. Saturday, 11th January 2025, at the selected junctions within the Area of Influence (“AOI”). The surveyed junctions are found in Table 2.4.

TABLE 2.4 LIST OF SURVEYED JUNCTIONS

Ref.	Surveyed Junctions
J01	Junction of Repulse Bay Road / Beach Road
J02	Junction of Beach Road / South Bay Path
J03	Junction of South Bay Road / Beach Road
J04	Junction of South Bay Road / South Bay Path
J05	Junction of Repulse Bay Road / South Bay Road
J06	Junction of South Bay Road / South Bay Close

2.20 The AOI and locations of the above listed junctions are shown in **Figure 2.7**, and the existing junction layouts are shown in **Figures 2.8 - 2.12**.

2.21 The traffic counts were classified by vehicle type to enable traffic flows in passenger car units (“pcu”) to be calculated. The AM peak hour are found to be 0800 to 0900 hours on a weekday, and 0900 to 1000 on a weekend; whereas the PM peak hour is found to be 1700 to 1800 for both weekday and weekend respectively.

Seasonal Adjustment

2.22 Reference is made to Core Station 1011, i.e. Repulse Bay Road, found in the 2023 Annual Traffic Census (“ATC”) published by Transport Department. The relevant data sheet is found in **Appendix A**.

2.23 ATC Core Station 1011 shows that traffic flow of Repulse Bay is highest in June, which is some 101% of the annual average for both weekday and weekend (Saturday), and the traffic flow in January is some 99% of the annual average on weekday, and 100% of the annual average on Saturday.

2.24 Since traffic condition in Repulse Bay is the busiest during the summer period, and in view the traffic surveys were carried out in January, a seasonal adjustment factor of 1.05 [*Calculation: 101% ÷ 99% = 1.02 and 100% ÷ 99% = 1.01, hence say 1.05 for both to be conservative*] is applied to the observed traffic flow to take into account the seasonal variation.

2.25 **Figures 2.13 and 2.14** present the adjusted existing AM and PM peak hour traffic flows established in pcu/hour for a weekday and a weekend respectively.

Performance of the Surveyed Junctions

2.26 Performance of surveyed junctions were calculated based on the existing traffic flows and the analysis was undertaken using the methods outlined in Volume 2 of the Transport Planning and Design Manual (“TPDM”), which is published by the Transport Department. Table 2.5 presents the results and detailed calculations are found in **Appendix B**.

TABLE 2.5 EXISTING PEAK HOUR JUNCTION PERFORMANCE

Ref.	Junction	Type	Parameter	AM Peak Hour	PM Peak Hour
Weekday					
J01	J/O Repulse Bay Road / Beach Road	Priority	RFC	0.102	0.056
J02	J/O Beach Road / South Bay Path	Priority	RFC	0.043	0.073
J03	J/O South Bay Road / Beach Road	Priority	RFC	0.118	0.132
J04	J/O South Bay Road / South Bay Path	Priority	RFC	0.246	0.300
J05	J/O Repulse Bay Road / South Bay Road	Roundabout	RFC	0.613	0.573
J06	J/O South Bay Road / South Bay Close	Roundabout	RFC	0.189	0.249
Weekend					
J01	J/O Repulse Bay Road / Beach Road	Priority	RFC	0.076	0.115
J02	J/O Beach Road / South Bay Path	Priority	RFC	0.035	0.063
J03	J/O South Bay Road / Beach Road	Priority	RFC	0.095	0.164
J04	J/O South Bay Road / South Bay Path	Priority	RFC	0.284	0.384
J05	J/O Repulse Bay Road / South Bay Road	Roundabout	RFC	0.434	0.518
J06	J/O South Bay Road / South Bay Close	Roundabout	RFC	0.239	0.279

Note: RFC – Ratio of Flow to Capacity

2.27 The results in Table 2.6 indicate that the junctions analyzed operate with capacity during the weekday and weekend peak hours.

Existing Pedestrian Flow

2.28 To quantify the existing pedestrian flows, pedestrian counts were conducted during the AM and PM peak periods on Friday, 10th January 2025, and Saturday, 11th January 2025, at the selected footpaths within the Area of Influence (“AOI”). The surveyed footpaths are found in Table 2.6, and their locations are illustrated in Figure 2.15.

TABLE 2.6 LIST OF SURVEYED FOOTPATHS

Ref.	Surveyed Footpaths
FP01	Stairway between Repulse Bay Road and Beach Road
FP02	Southern Footpath of Beach Road (outside Seaview Building)
FP03	Southern Footpath of Beach Road (outside Car Park / Repulse Bay Beach Building)
FP04	Northern Footpath of Beach Road (outside Beach Centre)
FP05	Southern Footpath of Beach Road (opposite South Bay Path)
FP06	Southern Footpath of Beach Road (opposite 49/53/55 Beach Road)
FP07	Northern Footpath of Beach Road (south of South Bay Road)
FP08	Footpath along Repulse Bay Beach (near Repulse Bay Beach Building)
FP09	Footpath along Repulse Bay Beach (outside the the Subject Site)

Seasonal Adjustment

2.29 Visitor record of the retail space of the Existing Development at 1/F and UG/F, during the winter period between December 2023 and February 2024 and for the summer period between May 2024 and August 2024, provided by the Applicant, are presented in Table 2.7.

TABLE 2.7 VISITOR RECORD OF THE RETAIL SPACE OF THE EXISTING DEVELOPMENT AT 1/F AND UG/F

Category	Winter Period				Summer Period				Minimum of Winter [a]	Maximum of Summer [b]	Seasonal Factor [b]/[a]
	Nov. 2023	Dec. 2023	Jan. 2024	Feb. 2024	May 2024	Jun 2024	Jul 2024	Aug 2024			
	Average Daily Visitors (1200 to 1900 hours)										
Weekday	133	123	119	134	103	124	153	147	119	153	1.3
Weekend	386	283	256	255	399	287	284	266	255	399	1.6

Note: Weekend includes Saturday, Sunday and Public Holidays.

2.30 Table 2.7 shows the number of visitors on a weekday during the summer period could be 1.3 times more than during winter period; whereas during weekend, the number of visitors could be 1.6 times higher.

2.31 In view the pedestrian surveys were conducted in January during winter period, to be conservative, a seasonal adjustment factor of 2 (Note: higher than 1.6 as reported in Table 2.7) is applied to the observed pedestrian flow to establish the existing pedestrian flows for both weekday and weekend.

Performance of the Surveyed Footpaths

2.32 Level-of-Service ("LOS") analysis was conducted, and the LOS grading follows TPDM Volume 6, Section 10.4. Table 2.8 summarize the pedestrian flows, and analysis results.

TABLE 2.8 EXISTING FOOTPATH OPERATIONAL PERFORMANCE

Footpath Section	Measured Width (m)	Effective Width (m)	AM Peak Hour		PM Peak Hour	
			2-way Pedestrian Flow (ped/hour)	Flow Rates [LOS] (ped/m/min)	2-way Pedestrian Flow (ped/hour)	Flow Rates [LOS] (ped/m/min)
Weekday						
FP01	3.5m	2.5m	288	2.7 [A]	412	1.9 [A]
FP02	2.5m	1.5m	252	3.0 [A]	266	2.8 [A]
FP03	3.0m	2.0m	176	1.4 [A]	172	1.5 [A]
FP04	1.8m	0.8m	124	0.8 [A]	36	2.6 [A]
FP05	2.8m	1.8m	170	1.7 [A]	186	1.6 [A]
FP06	1.8m	0.8m	108	1.9 [A]	90	2.3 [A]
FP07	1.5m	1.0m	20	0.1 [A]	4	0.3 [A]
FP08	4.0m	3.0m	250	3.0 [A]	546	1.4 [A]
FP09	3.5m	3.0m	208	2.7 [A]	486	1.2 [A]
Weekend						
FP01	3.5m	2.5m	222	1.5 [A]	980	6.5 [A]
FP02	2.5m	1.5m	438	4.9 [A]	678	7.5 [A]
FP03	3.0m	2.0m	246	2.1 [A]	350	2.9 [A]
FP04	1.8m	0.8m	128	2.7 [A]	100	2.1 [A]
FP05	2.8m	1.8m	300	2.8 [A]	364	3.4 [A]
FP06	1.8m	0.8m	220	4.6 [A]	120	2.5 [A]
FP07	1.5m	1.0m	30	0.5 [A]	12	0.2 [A]
FP08	4.0m	3.0m	366	2.0 [A]	1,122	6.2 [A]
FP09	3.5m	3.0m	326	1.8 [A]	944	5.2 [A]

2.33 Table 2.9 shows the footpaths analyzed operate with capacity during the weekday and weekend peak hours.

3.0 THE PROPOSED CONVERSION

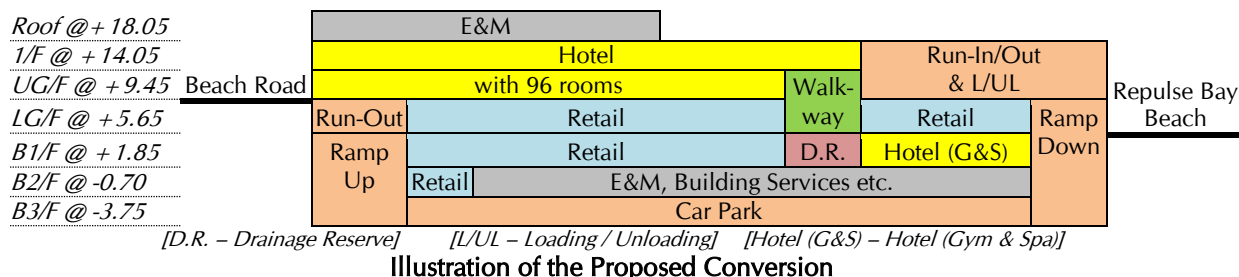
The Proposed Conversion

- 3.1 The Proposed Conversion involves changing some existing 7,887m² retail GFA to become a hotel with 96 rooms at 1/F and UG/F. In addition, the existing changing rooms at B1/F will also be converted into an ancillary gym and spa for the hotel. Whereas, the existing retail use on LG/F and B1/F will remain.
- 3.2 Table 3.1 compares the development parameters for the Existing Development and the Proposed Conversion

TABLE 3.1 COMPARISON ON DEVELOPMENT PARAMETERS

Use	Existing Development	Proposed Conversion	Difference
Retail	13,728m ² GFA (1/F, UG/F, LG/F, B1/F, and B2/F)	About 5,841m ² GFA (LG/F, B1/F [Part] and B2/F)	-7,887m ² GFA
Hotel	-	96 rooms with GFA of about 6,590m ² (1/F, UG/F and B1/F [Part])	+96 rooms (+about 6,590m ² GFA)
TOTAL	13,728m² GFA	About 12,431m² GFA	-1,297m² GFA

- 3.3 For easy understanding, disposition of the Proposed Conversion is illustrated below:



Internal Transport Facilities

- 3.4 Table 3.2 compares the provision of internal transport facilities recommended by the Hong Kong Planning Standards and Guidelines ("HKPSG"), and the proposed provision.

TABLE 3.2 COMPARISON OF THE PROVISION OF INTERNAL TRANSPORT FACILITIES

Use	HKPSG Recommendation (Retail GFA = 5,841m ² GFA, and Hotel with 96 rooms)	Proposed Provision
Car Parking Spaces		
Retail	1 car parking space per 150 – 300 m ² GFA Minimum: 5,841 ÷ 300 = 19.5, say 20 nos. Maximum: 5,841 ÷ 150 = 38.9, say 39 nos.	40 nos., including: - 39 nos. regular @ 5.0m (L) x 2.5m (W) x min. 2.4m (H) - 1 no. accessible @ 5.0m (L) x 3.5m (W) x min. 2.4m (H) = HKPSG Maximum, OK
Hotel	1 car parking space per 100 rooms 96 ÷ 100 = 1.0, say 1 no.	
TOTAL	Minimum: 20 + 1 = 21 nos. Maximum: 39 + 1 = 40 nos.	

TABLE 3.2 COMPARISON OF THE PROVISION OF INTERNAL TRANSPORT FACILITIES (CONT'D)

Use	HKPSG Recommendation (Retail GFA = 5,841m ² GFA, and Hotel with 96 rooms)	Proposed Provision
Motorcycle Parking Spaces		
Overall	5% - 10% of car parking space provided Minimum: 40 x 5% = 2, say 2 nos. Maximum: 40 x 10% = 4, say 4 nos.	4 nos. @ 2.4m (L) x 1.0m (W) x min. 2.4m (H) = HKPSG Maximum, OK
Goods Vehicle Loading / Unloading Bays		
Retail	1 loading / unloading bay per 800 – 1,200 m ² GFA, with 35% HGV and 65% LGV Minimum: 5,841 ÷ 1,200 = 4.8, say 5 nos. Maximum: 5,841 ÷ 800 = 7.3, say 8 nos.	9 nos. , including - 2 nos. HGV @ 11.0m (L) x 3.5m (W) x min. 4.7m (H), - 2 nos. LGV @ 7.0m (L) x 3.5m (W) x min. 3.6m (H), and - 5 nos. Van-type @ 5.0m (L) x 2.5m (W) x min. 2.4m (H)
Hotel	0.5 – 1 loading / unloading bay per 100 rooms Minimum: 96 x 0.5 ÷ 100 = 0.5, say 1 no. Maximum: 96 x 1.0 ÷ 100 = 1.0, say 1 no.	
TOTAL	Minimum: 6 + 1 = 7 nos. HGV: 7 x 35% = 2.5, say 3 nos. LGV: 7 – 3 = 4 nos. Maximum: 8 + 1 = 9 nos. HGV: 9 x 35% = 3.2, say 4 nos. LGV: 9 – 4 = 5 nos.	
= HKPSG Maximum with deviation on type of bays provided, OK <i>[Remarks: Only van-type goods vehicle loading / unloading bays are provided in the Existing Development.]</i>		
Layby for Taxi and Private Cars		
Retail	No Recommendation	2 nos. @ 5.0m (L) x 2.5m (W) x min. 2.4m (H) = HKPSG, OK
Hotel	For Taxi and Private Cars: Minimum 2 nos. for ≤299 rooms	
Layby for Single-Deck Tour Bus		
Retail	No Recommendation	1 no. @ 12.0m (L) x 3.5m (W) x min. 3.8m (H) = HKPSG, OK
Hotel	For Single-Deck Tour Bus: Minimum 1 nos. for ≤299 rooms	

Car Parking Spaces

3.5 Table 3.2 shows that the number of private car parking spaces provided satisfies the HKPSG maximum recommendation.

Motorcycle Parking Spaces

3.6 Table 3.2 also shows that the number of motorcycle parking spaces satisfies the HKPSG maximum recommendation.

3.7 Considering the Existing Development does not provide motorcycle parking space, the introduction of motorcycle parking spaces for the Proposed Conversion is a merit.

Goods Vehicle Loading / Unloading Bays

3.8 Table 3.2 shows that the number of goods vehicle loading / unloading bays provided satisfies the HKPSG maximum recommendation.

3.9 The Proposed Conversion offers a merit which is the introduction of HGV loading / unloading bays, currently not provided within the Existing Development, as well as an additional LGV loading / unloading bay. To enable LGV and HGV to access the existing loading / unloading area at the Pulse, portion of the floor at 1/F will be removed as part of the Proposed Conversion in order to increase the clear headroom available.

Layby for Taxi and Private Cars

3.10 Table 3.2 shows that the number of layby for private car and taxi provided satisfies the HKPSG recommendation.

Layby for Single-deck Tour Bus Parking Space

3.11 Table 3.2 shows that the number of layby for single-deck tour bus provided satisfies the HKPSG recommendation.

Internal Transport Layout

3.12 **Figures 3.1 and 3.2** presents the proposed internal transport layout at UG/F and B3/F for the Proposed Conversion. The 3 existing vehicular access points at Beach Road shall remain unchanged.

3.13 Swept path analyses using CAD-based program were carried out to ensure ease of vehicle manoeuvring with the Proposed Conversion. No manoeuvring issue is found. The swept path analysis drawings are found in the **Appendix C**.

3.14 Visibility assessments meeting the requirement as stipulated in the TPDM at the 3 existing vehicular access points are performed and illustrated in **Figure 3.3**.

Traffic Generation

3.15 Traffic generation for the Existing Development and the Proposed Conversion are estimated based on the mean retail and hotel trip rates found in the TPDM, and are presented in below paragraphs.

Weekday Trip Generation Rates

3.16 Table 3.3 presents the trip generation rates for retail and hotel obtained from the TPDM for weekday AM and PM peak hour.

TABLE 3.3 WEEKDAY TRIP GENERATION RATES ADOPTED

Use	Parameter	Trip Generation Rate			
		AM Peak Hour		PM Peak Hour	
		Generation	Attraction	Generation	Attraction
Retail	pcu/100m ² /hr	0.2296	0.2434	0.3100	0.3563
Hotel	pcu/room/hr	0.1329	0.1457	0.1290	0.1546

Weekend Trip Generation Rates

3.17 In view the TPDM has no weekend trip generation rates for retail and hotel uses, the weekday TPDM trip generation rates are used with reference to the CKM in-house trip generation database to derive the weekend trip generation rates.

3.18 Trip generation surveys were carried at established retail and hotel developments, and the results are summarised in Tables 3.4 and 3.5.

TABLE 3.4 RESULTS OF TRIP GENERATION SURVEYS AT ESTABLISHED RETAIL DEVELOPMENTS

Development	AM Peak hour				PM Peak Hour			
	Generation (pcu/hour)		Attraction (pcu/hour)		Generation (pcu/hour)		Attraction (pcu/hour)	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
Langham Place	3	9	17	50	110	91	89	67
Kowloon City Plaza	11	14	89	49	70	88	54	99
Dragon Centre	14	33	23	34	82	79	48	77
TOTAL	28	56	129	133	262	258	191	243
Weekend / Weekday Ratio	2.000		1.031		0.985		1.272	

TABLE 3.5 RESULTS OF TRIP GENERATION SURVEYS AT ESTABLISHED HOTEL DEVELOPMENTS

Development	AM Peak hour				PM Peak Hour			
	Generation (pcu/hour)		Attraction (pcu/hour)		Generation (pcu/hour)		Attraction (pcu/hour)	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
3 Kau U Fong, Central	9	8	9	8	13	8	13	8
263 Hollywood Road, Central	5	13	5	13	10	9	10	9
TOTAL	14	21	14	21	23	17	23	17
Weekend / Weekday Ratio	1.533		1.533		0.778		0.778	

3.19 With reference to Tables 3.4 and 3.5, the weekday / weekend trip generation factors are summarised in Table 3.6, and the weekend trip generation rates are presented in Table 3.7.

TABLE 3.6 WEEKDAY / WEEKEND TRIP GENERATION FACTORS

Use	Trip Generation Factors (Multipliers)			
	AM Peak Hour		PM Peak Hour	
	Generation	Attraction	Generation	Attraction
Retail (From Table 3.4)	2.000	1.031	0.985	1.272
Hotel (From Table 3.5)	1.533	1.533	0.778	0.778

TABLE 3.7 WEEKEND TRIP GENERATION RATES ADOPTED

Use	Parameter	Trip Generation Rates (Table 3.3 x Table 3.6)			
		AM Peak Hour		PM Peak Hour	
		Generation	Attraction	Generation	Attraction
Retail	pcu/100m ² /hr	0.4592	0.2509	0.3053	0.4533
Hotel	pcu/room/hr	0.2038	0.2234	0.1003	0.1202

Net Change in Traffic Generation

3.20 Tables 3.8 and 3.9 show the net change in calculated traffic generation between the Existing Development and Proposed Conversion.

TABLE 3.8 NET CHANGE IN WEEKDAY TRAFFIC GENERATION

Use	Trip Generation (pcu/hour)					
	AM Peak Hour			PM Peak Hour		
	Generation	Attraction	2-Way	Generation	Attraction	2-Way
Existing Development (13,728m² Retail GFA)						
Retail	32	33	65	43	49	92
Total [a]	32	33	65	43	49	92
Proposed Conversion (5,841m² Retail GFA and 96-room Hotel)						
Retail	13	14	27	18	21	39
Hotel	13	14	27	12	15	27
Total [b]	26	28	54	30	36	66
Net Change in Traffic Generation						
Net Change [b] – [a]	-6	-5	-11	-13	-13	-26

3.21 Table 3.8 shows that the Proposed Conversion is expected to generate some 11 pcu (2-way) less during the weekday AM peak hour, and some 26 pcu (2-way) less during the PM peak hour.

TABLE 3.9 NET CHANGE IN WEEKEND TRAFFIC GENERATION

Use	Trip Generation (pcu/hour)					
	AM Peak Hour			PM Peak Hour		
	Generation	Attraction	2-Way	Generation	Attraction	2-Way
Existing Development (13,728m² Retail GFA)						
Retail	63	34	97	42	62	104
Total [a]	63	34	97	42	62	104
Proposed Conversion (5,841m² Retail GFA and 96-room Hotel)						
Retail	27	15	42	18	26	44
Hotel	20	21	41	10	12	22
Total [b]	47	36	83	28	38	66
Net Change in Traffic Generation						
Net Change [b] – [a]	-16	+2	-14	-14	-24	-38

3.22 Table 3.9 shows that the Proposed Conversion is expected to generate some 14 pcu (2-way) less during the weekend AM peak hour, and some 38 pcu (2-way) less during the PM peak hour.

Pedestrian Generation

3.23 To derive the pedestrian generation rates for the hotel associated with the Proposed Conversion, pedestrian generation surveys were conducted on Friday, 10th January 2025, and on Saturday, 11th January 2025, at the WM Hotel, located at 28 Wai Man Road Sai Kung, which has 240 rooms. Table 3.10 summarises the survey results, and the derived pedestrian generation rates.

TABLE 3.10 RESULTS OF PEDESTRIAN GENERATION SURVEYS AND DERIVED PEDESTRIAN GENERATION RATES

Period	AM Peak Hour		PM Peak Hour	
	Generation	Attraction	Generation	Attraction
Pedestrian Generation (ped / hour)				
Weekday	9	8	47	68
Weekend	13	10	81	128
Pedestrian Generation Rates (ped / hour / room)				
Weekday	0.0375	0.0333	0.1958	0.2833
Weekend	0.0542	0.0417	0.3375	0.5333

Note: WM Hotel has 240 rooms, i.e. Pedestrian Generation Rate = Pedestrian Generation ÷ 240 rooms.

3.24 Table 3.11 summarises the estimated pedestrian generation for the Proposed Conversion.

TABLE 3.11 PEDESTRIAN GENERATION OF PROPOSED CONVERSION

Period	AM Peak Hour		PM Peak Hour	
	Generation	Attraction	Generation	Attraction
Weekday	4	3	19	27
Weekend	5	4	32	51

Note: Proposed Conversion has 96 rooms, i.e. Pedestrian Generation = Pedestrian Generation Rates x 96 rooms.

4.0 TRAFFIC IMPACT

Design Year

- 4.1 The Proposed Conversion is anticipated to complete in 2027 and the design year adopted for this traffic study is 2030, i.e. 3 years after completion.

Historic Traffic Growth

- 4.2 Table 4.1 presents the historic annual average daily traffic ("AADT") from the Annual Traffic Census ("ATC") published by the Transport Department for roads located nearby for the latest 5 years, i.e. from 2019 to 2023.

TABLE 4.1 AADT OF ATC STATIONS LOCATED NEAR THE SUBJECT SITE

Station No.	1011	1245	1835	2603	OVERALL
Road	Repulse Bay Road & Stanley Gap Road	Repulse Bay Road	Repulse Bay Road	Beach Road	
From	South Bay Road	Wong Nai Chung Gap Road	Island Road	Repulse Bay Road	
To	Tai Tam Road	Island Road	South Bay Road	South Bay Road	
Year	Annual Average Daily Traffic (vehicles / day)				
2019	15,490	9,020	21,890	2,890	49,290
2020	14,340	8,480	21,150	2,560	46,530
2021	15,680	8,810	22,730	2,910	50,130
2022	14,930	8,080	21,390	3,000	47,400
2023	15,230	8,030	21,870	3,020	48,150
Average Annual Growth (2019 – 2023) =					-0.6%

- 4.3 Table 2.3 shows that the traffic growth in vicinity of the Subject Site is -0.6% per annum in recent years.

Population Projection

- 4.4 Reference is made to the "Projections of Population Distribution 2023 - 2031" for Southern District, published by the Planning Department and is presented in Table 4.2.

TABLE 4.2 PROJECTED POPULATION FOR SOUTHERN DISTRICT

Year	Population in Southern District
2025	259,600
2030	266,900
Average Annual Growth (2025 to 2030)	+0.6%

- 4.5 Table 4.1 shows that population in the Southern District is projected to increase by 0.6% per annum between 2025 and 2030.

Traffic Forecast

- 4.6 The design year traffic flows are estimated with reference to:
- (i) Expected traffic growth from 2025 to 2030 with reference to the historic traffic growth from the ATC;
 - (ii) Traffic generated by other known planned / committed developments located in the vicinity, and
 - (iii) Net change in traffic generation between the Existing Development and the Proposed Conversion.

4.7 Details of the above are presented in below paragraphs.

(i) Traffic Growth Rate

4.8 With reference to Table 4.1, a conservative growth rate of 1.0% per annum is adopted to produce the 2030 traffic flows from 2025.

(ii) Other Known Planned / Committed Developments

4.9 Information on other known major planned / committed developments are summarised in Table 4.1. These are obtained from the available public domains including "Monthly Digest" published by Buildings Department, and the Town Planning Board's Statutory Planning Portal 3 by Planning Department, etc.

TABLE 4.3 DETAILS OF OTHER KNOWN MAJOR PLANNED / COMMITTED DEVELOPMENTS IDENTIFIED

Ref.	Address	Use	GFA(m ²) (Approx.)	No. of Flat / Unit
Approved General Building Plan				
A.	18A, 18B, 18C & 18D Cape Road	Residential	2,000	4
B.	22 Tung Tau Wan Road	School	11,000	-
C.	72 Repulse Bay Road	Residential	1,800	-
D.	18 Carmel Road	Residential	500	1
E.	R.B.L. 1201, Wong Ma Kok Road	Residential	20,600	86
F.	2 Headland Road	Residential	1,600	-
G.	7 Stanley Market Road / 78 & 79 Stanley Main Street	Hotel	1,000	-
H.	125 Repulse Bay Road	Residential	2,900	-
I.	3 South Bay Close	Residential	2,500	9
J.	14 Stanley Beach Road	Residential	1,100	3
Approved Planning Application				
K.	39 South Bay Road	Residential	1,300	4
L.	86 & 88 Stanley Main Street	Residential	1,400	10
M.	30 Stanley Link Road	Residential	300	3

4.10 Traffic generated by the above other known major planned / committed developments is included in the design year.

(iii) Net change in traffic generation between the Existing Development and the Proposed Conversion

4.11 The net change in peak hour traffic generation on weekday and weekend between the Existing Development and the Proposed Conversion presented in Tables 3.8 and 3.9 are added to the 2030 traffic flow.

Year 2030 Traffic Flows

4.12 The future traffic flows are derived as follow:

$$2030 \text{ Traffic Flows without the Proposed Conversion [A]} = 2025 \text{ Existing Traffic Flows} + \text{Total Traffic Growth from 2025 to 2030} + \text{Traffic Generated by Other Developments}$$

$$2030 \text{ Traffic Flows with the Proposed Conversion} = [A] + \text{Net change in Traffic Generation between the Existing Development and the Proposed Conversion}$$

4.13 Figures 4.1 and 4.2 shows the year 2030 weekday and weekend peak hour traffic flows without the Proposed Conversion; and Figures 4.3 and 4.4 shows the year 2030 weekday and weekend peak hour traffic flows with the Proposed Conversion.

Year 2030 Junction Capacity Analyses

4.14 Year 2030 junction capacity analyses for the cases without and with the Proposed Conversion are summarised in Table 4.4 and detailed calculations are found in the Appendix B.

TABLE 4.4 YEAR 2030 PEAK HOUR JUNCTION PERFORMANCE

Ref.	Junction	Type	Parameter	Without the Proposed Conversion		With the Proposed Conversion	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Weekday							
J01	J/O Repulse Bay Road / Beach Road	Priority	RFC	0.109	0.059	0.109	0.059
J02	J/O Beach Road / South Bay Path	Priority	RFC	0.045	0.076	0.043	0.072
J03	J/O South Bay Road / Beach Road	Priority	RFC	0.125	0.139	0.116	0.119
J04	J/O South Bay Road / South Bay Path	Priority	RFC	0.259	0.316	0.258	0.314
J05	J/O Repulse Bay Road / South Bay Road	Roundabout	RFC	0.649	0.603	0.647	0.602
J06	J/O South Bay Road / South Bay Path	Roundabout	RFC	0.199	0.263	0.195	0.254
Weekend							
J01	J/O Repulse Bay Road / Beach Road	Priority	RFC	0.081	0.122	0.081	0.122
J02	J/O Beach Road / South Bay Path	Priority	RFC	0.036	0.066	0.036	0.058
J03	J/O South Bay Road / Beach Road	Priority	RFC	0.100	0.173	0.076	0.151
J04	J/O South Bay Road / South Bay Path	Priority	RFC	0.301	0.404	0.299	0.403
J05	J/O Repulse Bay Road / South Bay Road	Roundabout	RFC	0.460	0.544	0.457	0.543
J06	J/O South Bay Road / South Bay Path	Roundabout	RFC	0.252	0.293	0.241	0.284

Note: RFC – Ratio of Flow to Capacity

Pedestrian Forecast

4.15 Table 4.4 shows that the analyzed junctions will have capacity to accommodate the expected traffic growth to Year 2030 and the expected change in traffic generation between the Existing Development and the Proposed Conversion.

4.16 The design year pedestrian flows are estimated with reference to:

- (i) Expected population growth from 2025 to 2030 with reference to the project population change in Southern District;
- (ii) Pedestrian generation of the Proposed Conversion.

4.17 Details of the above are presented in below paragraphs.

(i) Pedestrian Growth Rate

4.18 With reference to Table 4.1, a conservative growth rate of 1.0% per annum is adopted to produce the 2030 traffic flows from 2025.

(ii) Pedestrian Generation of the Proposed Conversion

4.19 Peak hour pedestrian generation on weekday and weekend for the Proposed Conversion presented in Table 3.11 are added to the 2030 pedestrian flow. It should be noted that pedestrian generations of the Existing Development are not subtracted from the future pedestrian forecast providing more conservative analyses.

Year 2030 Pedestrian Flows

4.20 The future pedestrian flows are derived as follow:

$$2030 \text{ Pedestrian Flows without the Proposed Conversion [A]} = 2025 \text{ Existing Pedestrian Flows} + \text{Total Pedestrian Growth from 2025 to 2030}$$

$$2030 \text{ Pedestrian Flows with the Proposed Conversion} = [A] + \text{Pedestrian Generation of the Proposed Conversion}$$

Year 2030 Footpath Operational Performance

4.21 Year 2030 peak hour footpath operational performance are calculated and summarised in Table 4.5

TABLE 4.5 YEAR 2030 PEAK HOUR FOOTPATH PERFORMANCE

Pedestrian Facilities	Actual Width (m)	Effective Width (m)	Without the Proposed Conversion				With the Proposed Conversion			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Ped. Flow (p/hr)	Flow Rate (p/hr/m) [LOS]	Ped. Flow (p/hr)	Flow Rate (p/hr/m) [LOS]	Ped. Flow (p/hr)	Flow Rate (p/hr/m) [LOS]	Ped. Flow (p/hr)	Flow Rate (p/hr/m) [LOS]
Weekday										
FP01	3.5m	2.5m	302	2.0 [A]	433	2.9 [A]	309	2.1 [A]	479	3.2 [A]
FP02	2.5m	1.5m	265	2.9 [A]	279	3.1 [A]	267	3.0 [A]	288	3.2 [A]
FP03	3.0m	2.0m	185	1.5 [A]	181	1.5 [A]	189	1.6 [A]	205	1.7 [A]
FP04	1.8m	0.8m	130	2.7 [A]	38	0.8 [A]	130	2.7 [A]	38	0.8 [A]
FP05	2.8m	1.8m	179	1.7 [A]	196	1.8 [A]	186	1.7 [A]	242	2.2 [A]
FP06	1.8m	0.8m	113	2.4 [A]	95	2.0 [A]	113	2.4 [A]	95	2.0 [A]
FP07	1.5m	1.0m	22	0.4 [A]	4.0	0.1 [A]	22	0.4 [A]	4.0	0.1 [A]
FP08	4.0m	3.0m	263	1.5 [A]	573	3.2 [A]	263	1.5 [A]	573	3.2 [A]
FP09	3.5m	3.0m	218	1.2 [A]	510	2.8 [A]	221	1.2 [A]	532	3.0 [A]

- FP01 - Stairway between Repulse Bay Road and Beach Road
- FP02 - Southern Footpath of Beach Road (outside Seaview Building)
- FP03 - Southern Footpath of Beach Road (outside Car Park / Repulse Bay Beach Building)
- FP04 - Northern Footpath of Beach Road (outside Beach Centre)
- FP05 - Southern Footpath of Beach Road (opposite South Bay Path)
- FP06 - Southern Footpath of Beach Road (opposite 49/53/55 Beach Road)
- FP07 - Northern Footpath of Beach Road (south of South Bay Road)
- FP08 - Footpath along Repulse Bay Beach (near Repulse Bay Beach Building)
- FP09 - Footpath along Repulse Bay Beach (outside the the Subject Site)

TABLE 4.5 YEAR 2030 FOOTPATH OPERATIONAL PERFORMANCE (CONT'D)

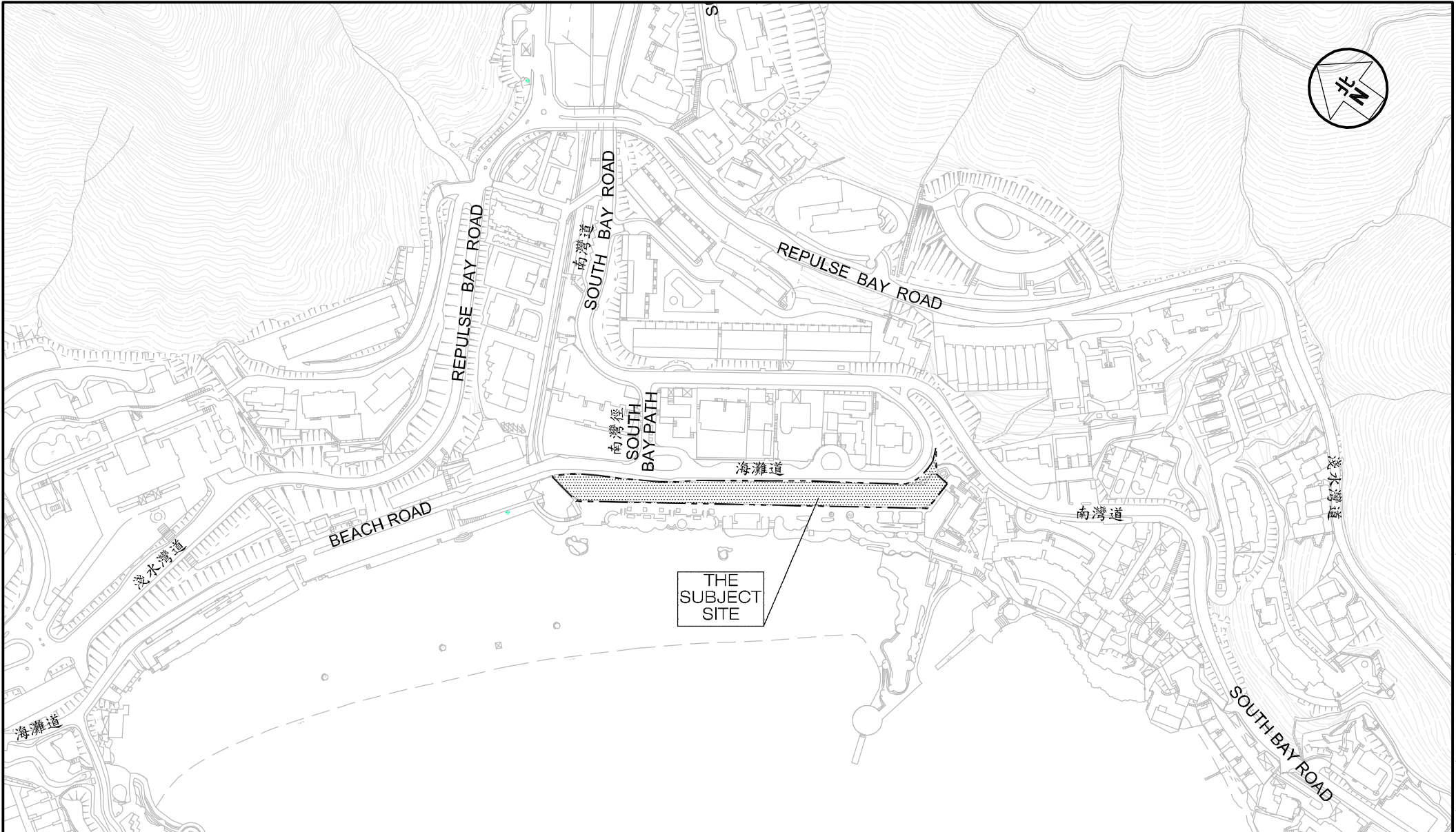
Pedestrian Facilities	Actual Width (m)	Effective Width (m)	Without the Proposed Conversion				With the Proposed Conversion			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Ped. Flow (p/hr)	Flow Rate (p/hr/m) [LOS]	Ped. Flow (p/hr)	Flow Rate (p/hr/m) [LOS]	Ped. Flow (p/hr)	Flow Rate (p/hr/m) [LOS]	Ped. Flow (p/hr)	Flow Rate (p/hr/m) [LOS]
Weekend										
FP01	3.5m	2.5m	234	1.6 [A]	1,031	6.9 [A]	243	1.6 [A]	1,114	7.4 [A]
FP02	2.5m	1.5m	460	5.1 [A]	712	7.9 [A]	462	5.1 [A]	728	8.1 [A]
FP03	3.0m	2.0m	259	2.2 [A]	367	3.1 [A]	264	2.2 [A]	409	3.4 [A]
FP04	1.8m	0.8m	134	2.8 [A]	105	2.2 [A]	134	2.8 [A]	105	2.2 [A]
FP05	2.8m	1.8m	317	2.9 [A]	383	3.5 [A]	326	3.0 [A]	466	4.3 [A]
FP06	1.8m	0.8m	231	4.8 [A]	126	2.6 [A]	231	4.8 [A]	126	2.6 [A]
FP07	1.5m	1.0m	31	0.5 [A]	12	0.2 [A]	31	0.5 [A]	12	0.2 [A]
FP08	4.0m	3.0m	385	2.1 [A]	1,178	6.5 [A]	385	2.1 [A]	1,178	6.5 [A]
FP09	3.5m	3.0m	343	1.9 [A]	992	5.5 [A]	347	1.9 [A]	1,033	5.7 [A]

- FP01 - Stairway between Repulse Bay Road and Beach Road
- FP02 - Southern Footpath of Beach Road (outside Seaview Building)
- FP03 - Southern Footpath of Beach Road (outside Car Park / Repulse Bay Beach Building)
- FP04 - Northern Footpath of Beach Road (outside Beach Centre)
- FP05 - Southern Footpath of Beach Road (opposite South Bay Path)
- FP06 - Southern Footpath of Beach Road (opposite 49/53/55 Beach Road)
- FP07 - Northern Footpath of Beach Road (south of South Bay Road)
- FP08 - Footpath along Repulse Bay Beach (near Repulse Bay Beach Building)
- FP09 - Footpath along Repulse Bay Beach (outside the the Subject Site)

4.22 Table 4.5 shows that the analyzed footpaths will have capacity to accommodate the expected pedestrian growth to Year 2030 and the expected pedestrian generation of the Proposed Conversion.

5.0 SUMMARY

- 5.1 The Owner intends to convert the 1/F, UG/F and B1/F [part] of the Existing Development into a hotel with 96-room, and hence, retail GFA will be reduced substantially from existing 13,728 m² to become 5,841m².
- 5.2 The Proposed Conversion provides internal transport facilities in accordance to the HKPSG recommendation, including:
- 40 nos. car parking spaces,
 - 4 nos. motorcycle parkings,
 - 9 nos. goods vehicle loading / unloading bays,
 - 2 nos. laybys for taxi and private cars, and
 - 1 no. layby for single deck tour bus.
- 5.3 The Existing Development provides limited limited number and type of goods vehicle loading / unloading bays, i.e. van-type goods vehicles, and LGV only. With the Proposed Conversion, modification will be undertaken to provide sufficient headroom for LGV and HGV loading / unloading bays, and layby for single deck tour bus.
- 5.4 Manual classified counts were conducted at junctions located in the vicinity of the Subject Site during the weekday and weekend AM and PM peak hours. Capacity analyses found that these junctions operate with capacity.
- 5.5 Pedestrian counts were conducted at footpaths located in the vicinity during the weekday and weekend AM and PM peak hours. Capacity analyses found that these footpaths operate with capacity.
- 5.6 Weekday and weekend peak hour traffic generation for the Existing Development and the Proposed Conversion are estimated, and found that the Proposed Conversion will have negligible change in traffic generation comparing with the Existing Development. The future year junction capacity analyses found that the Proposed Conversion will not have adverse effect on the local road network.
- 5.7 Weekday and weekend peak hour pedestrian generation the Proposed Conversion are estimated. The future year footpath capacity analyses found that the Proposed Conversion will not have adverse effect on the local pedestrian network
- 5.8 From traffic engineering grounds, the Proposed Conversion is acceptable.



Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

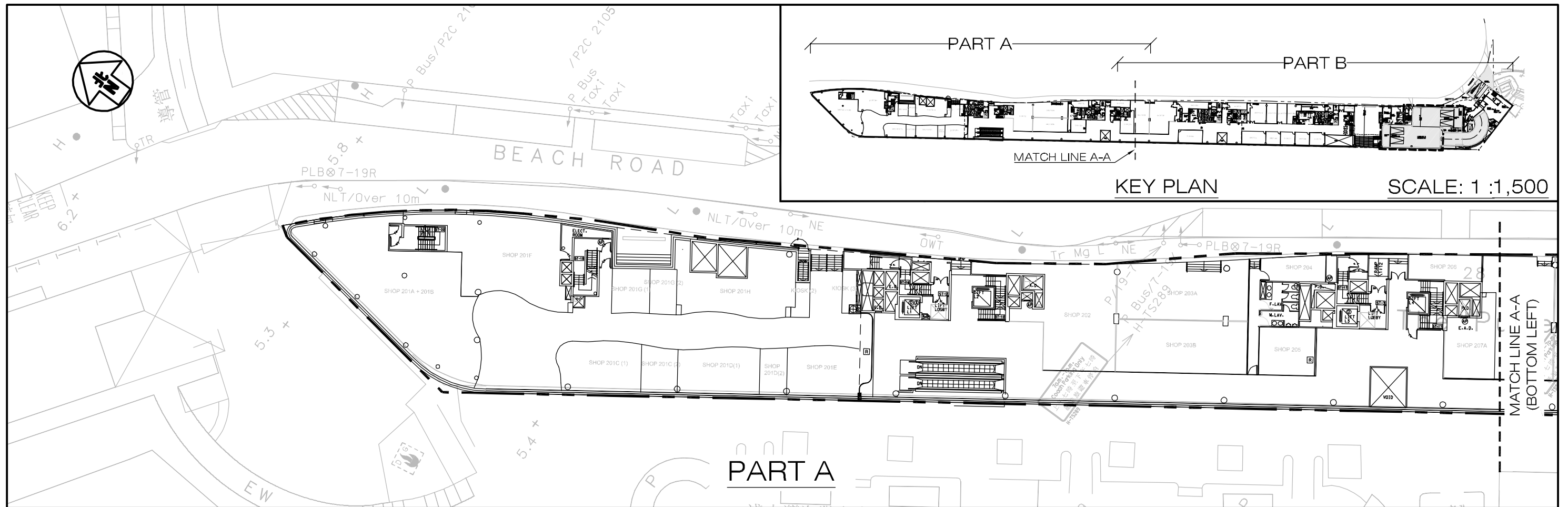
Figure No. 1.1
Revision A

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Traffic and Transportation Planning Consultants

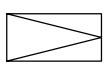
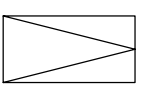
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LOCATION OF THE SUBJECT SITE

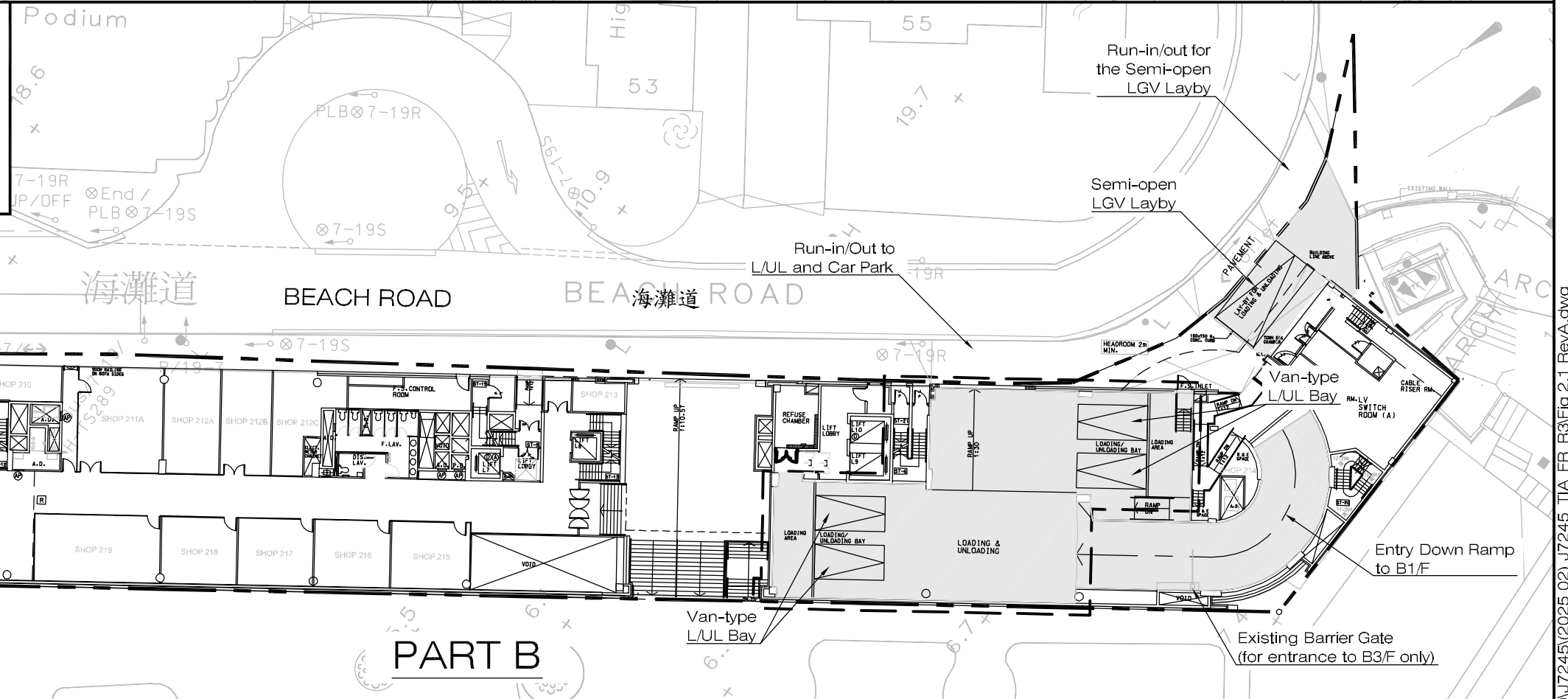
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Date 04 FEB 2025

21st Floor, Methodist House, 36 Hennessy Road,
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
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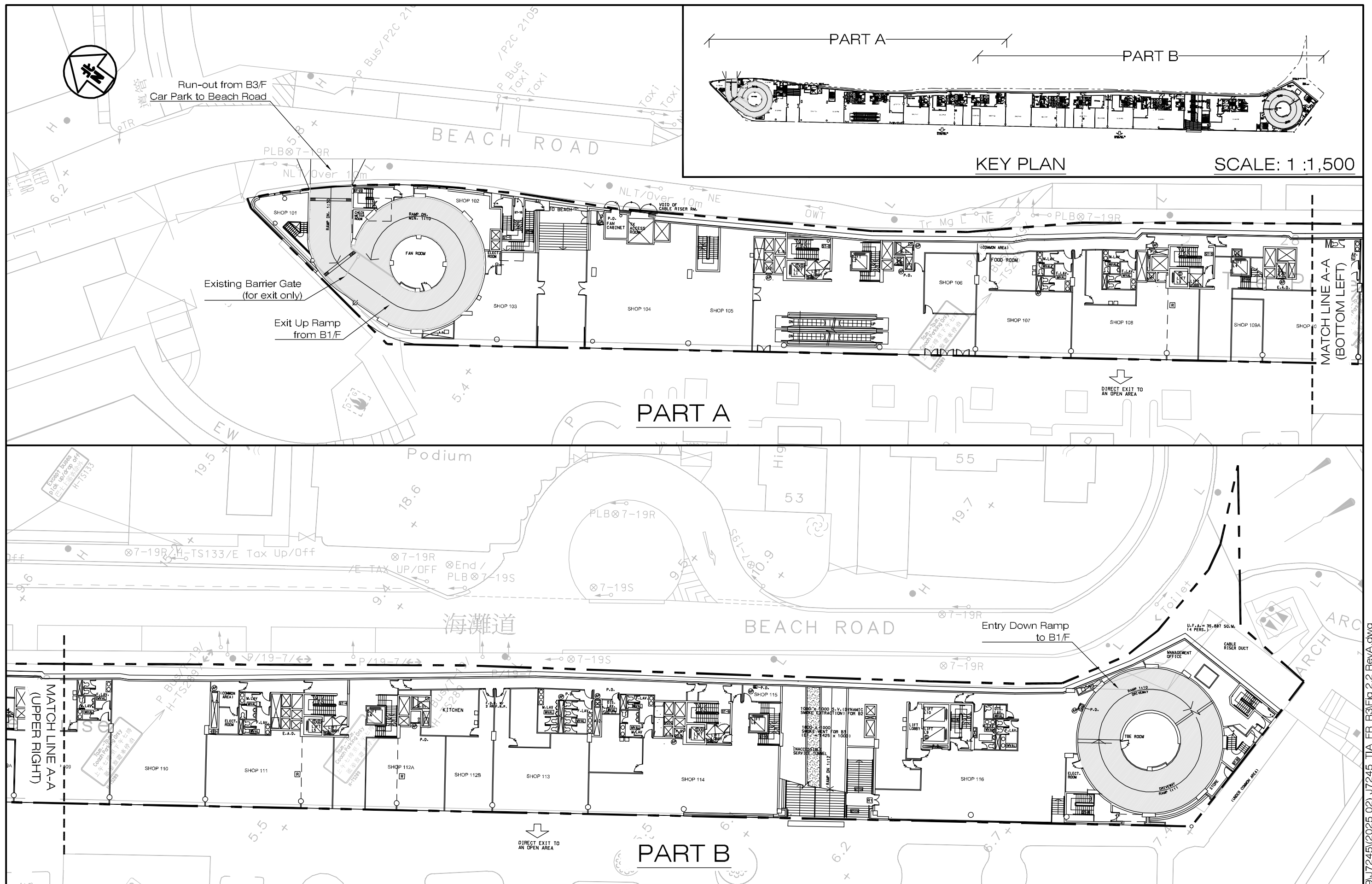
LEGEND :

-  Approved Van-Type L/UL Bays @5.0m(L) X 2.5m(W) X 2.8m(H)
-  Approved LGV L/UL Bay @7.0m(L) X 3.5m(W) X 3.8m(H)



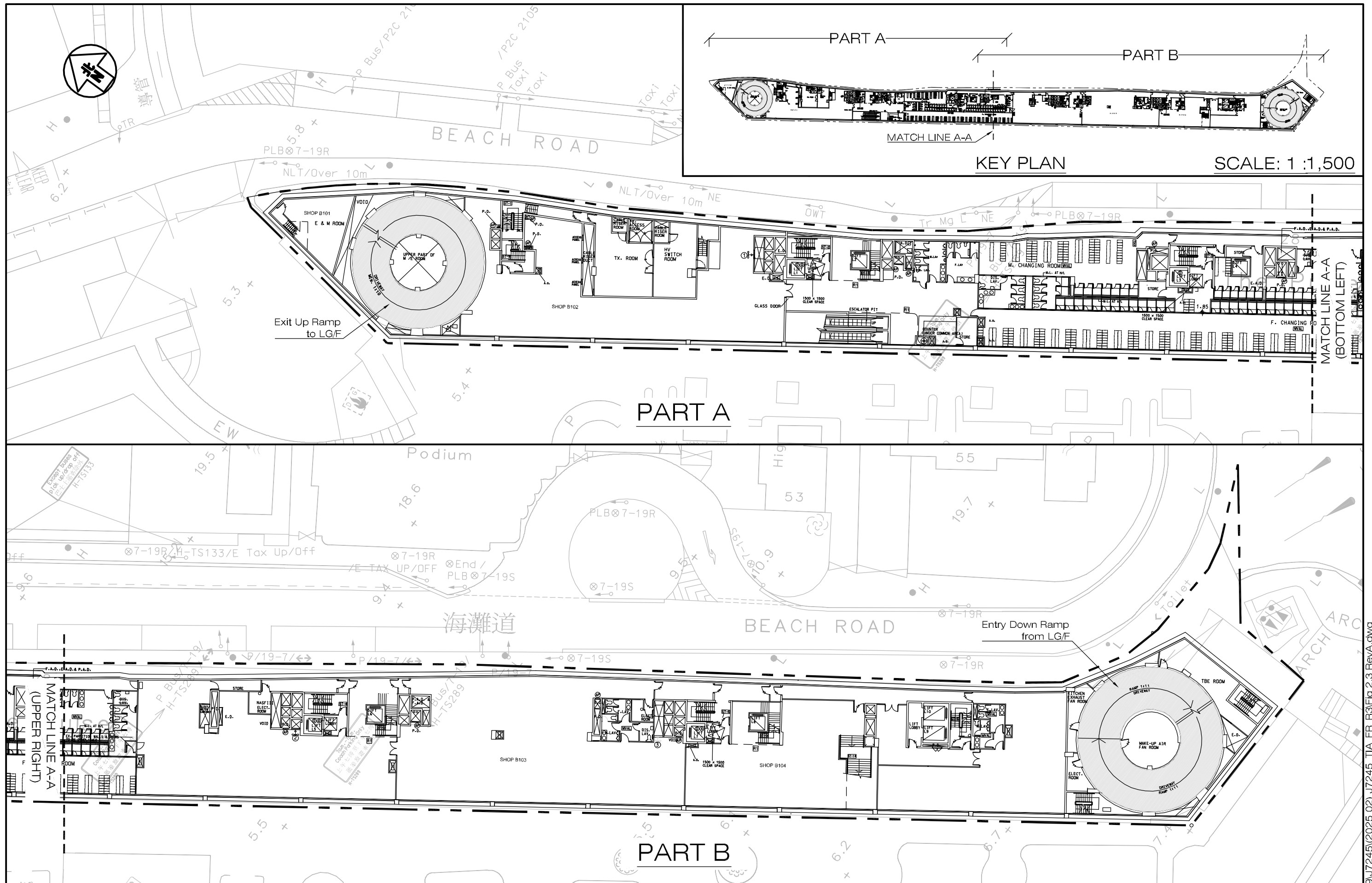
Project Title	PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY			Figure No.	2.1	Revision	A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Figure Title	APPROVED UG/F LAYOUT OF THE EXISTING DEVELOPMENT			Designed by	W C H	Drawn by	S C Y	
				Scale in A3	1 : 400	Date	04 FEB 2025	

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Project Title	PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY	Figure No. J7245	2.2	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Figure Title	APPROVED LG/F LAYOUT OF THE EXISTING DEVELOPMENT	Designed by W C H	Drawn by S C Y	Checked by K C	
		Scale in A3 1 : 400	Date 04 FEB 2025		

T:\JOB\J7200-J7249\J7245(2025 02) J7245_TIA_FR_R3\Fig 2.2 RevA.dwg



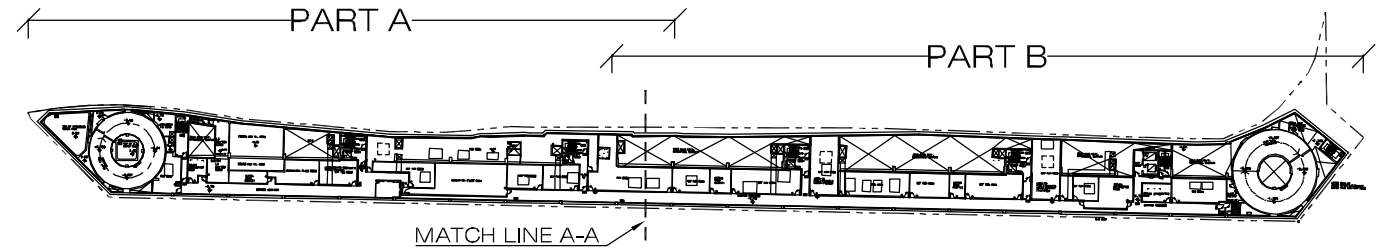
Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Figure Title APPROVED B1/F LAYOUT OF THE EXISTING DEVELOPMENT

Figure No.	2.3	Revision	A
Designed by	W C H	Drawn by	S C Y
Checked by	K C	Date	04 FEB 2025
Scale in A3	1 : 400		

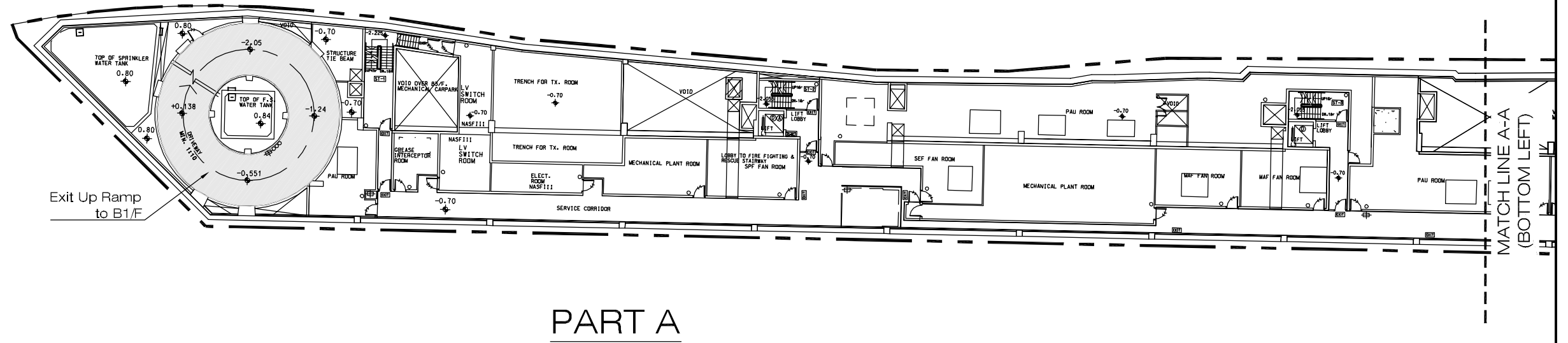
CKM Asia Limited
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 Tel : (852) 2520 5990 Fax : (852) 2528 6343
 Email : mail@ckmasia.com.hk

T:\JOB\J7200-J7249\J7245(2025 02) J7245_TIA_FR_R3\Fig 2.3 RevA.dwg

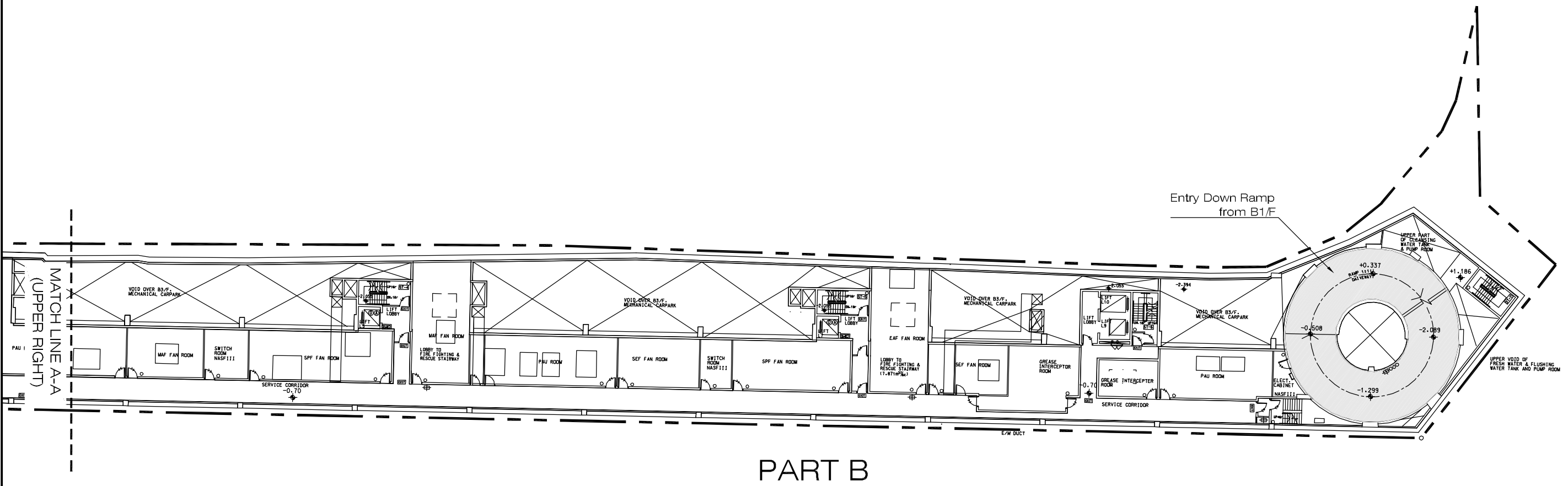


KEY PLAN

SCALE: 1 : 1,500



PART A



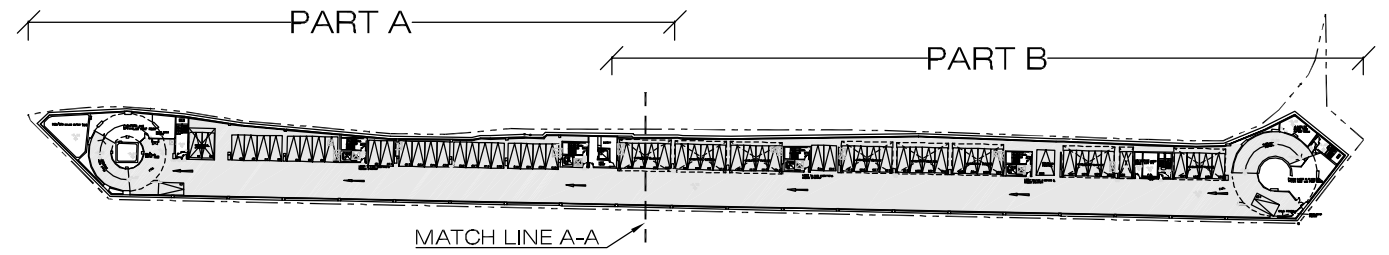
PART B

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Figure Title APPROVED B2/F LAYOUT OF THE EXISTING DEVELOPMENT

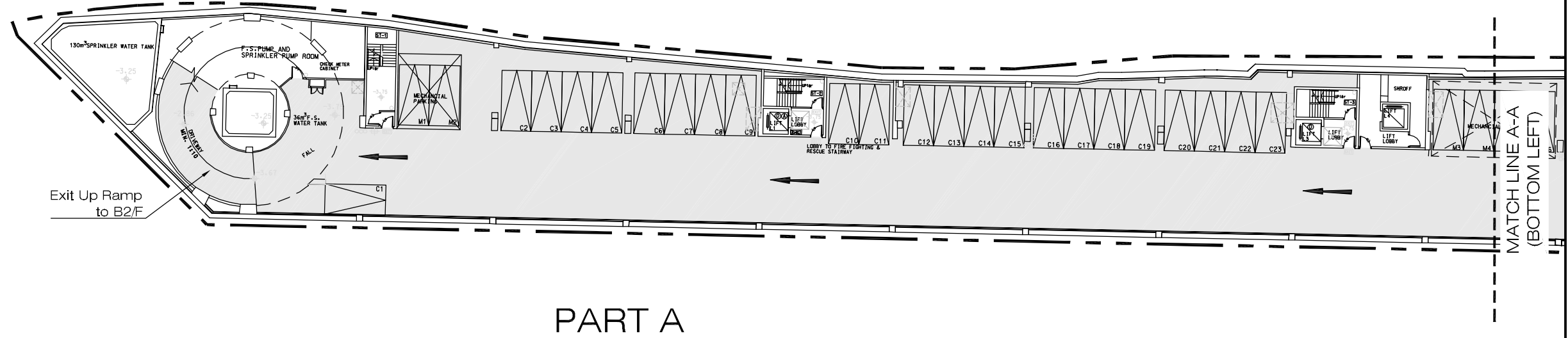
Figure No.	2.4	Revision	A
Designed by	W C H	Drawn by	S C Y
Scale in A3	1 : 400	Checked by	K C
Date	04 FEB 2025		

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KEY PLAN

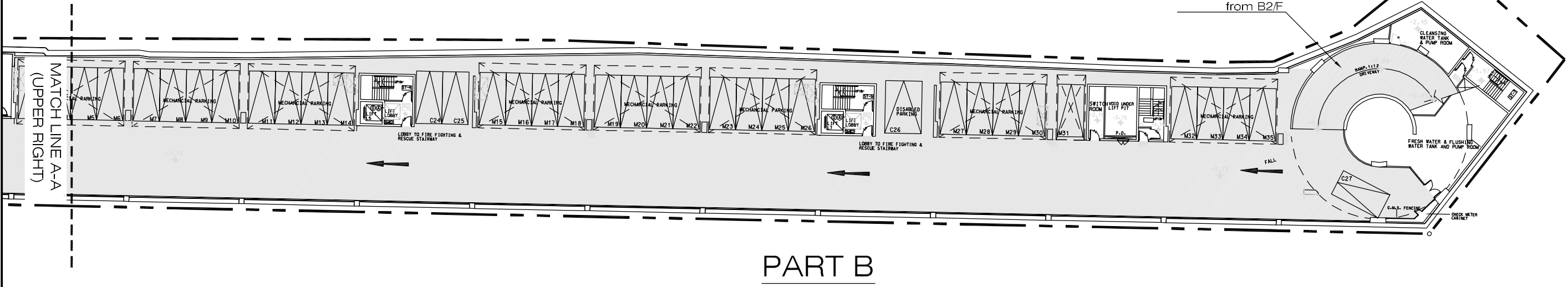
SCALE: 1 : 1,500



PART A

LEGEND :

- C1 Approved Conventional car parking space @5.0m(L) X 2.5m(W) X Min. 2.4m(H) [26 nos.]
- M1 Approved Double deck car parking rack @5.0m(L) X 2.5m(W) [35 sets with 70 nos.]
- C26 Approved Accessible car parking space @5.0m(L) X 3.5m(W) X Min. 2.4m(H) [1 no.]



PART B

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

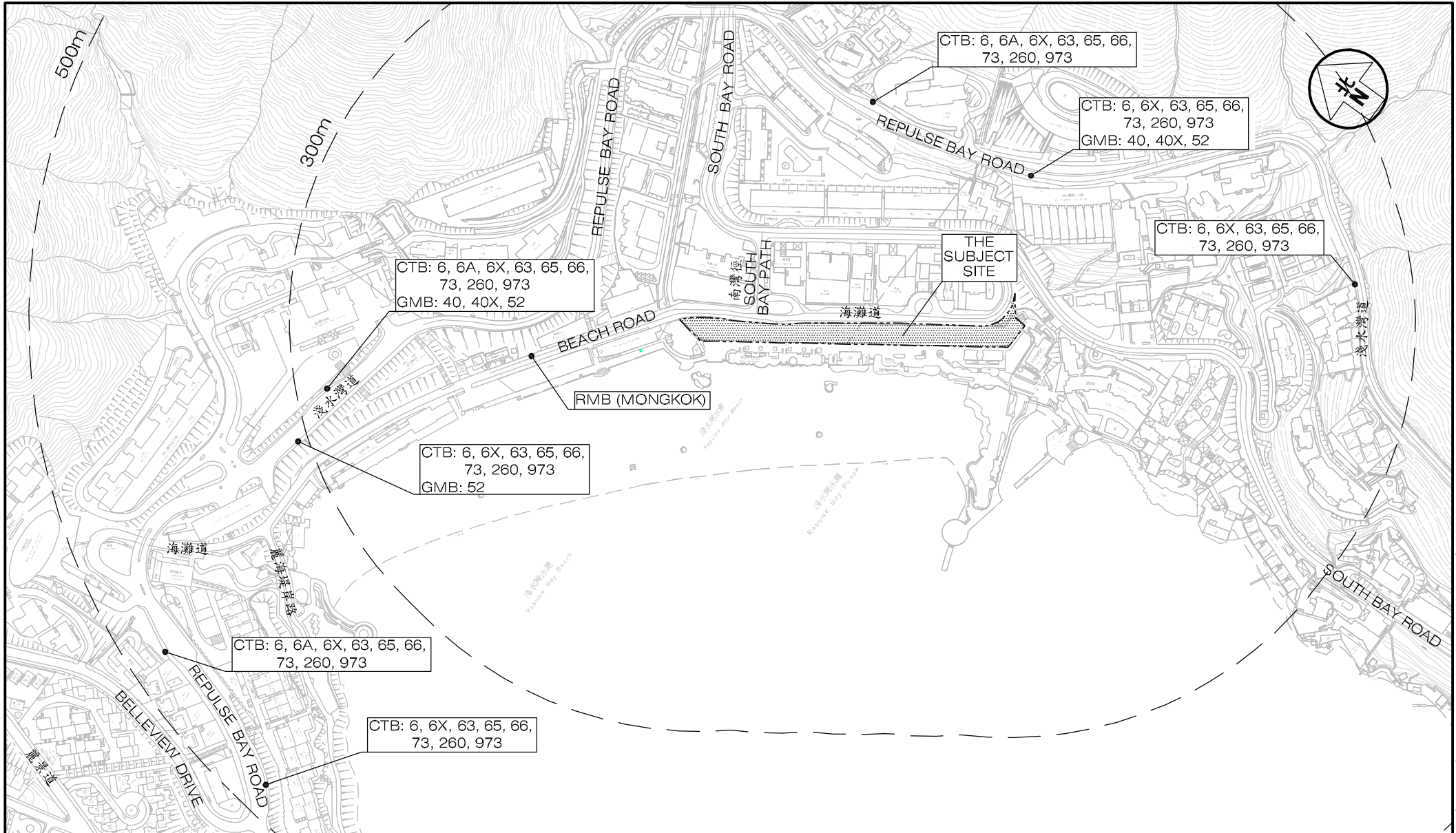
Figure Title APPROVED B3/F LAYOUT OF THE EXISTING DEVELOPMENT

Figure No. J7245 2.5

Revision A

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Scale in A3 1 : 400	Date 04 FEB 2025	

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Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Figure No. 2.6
Revision A

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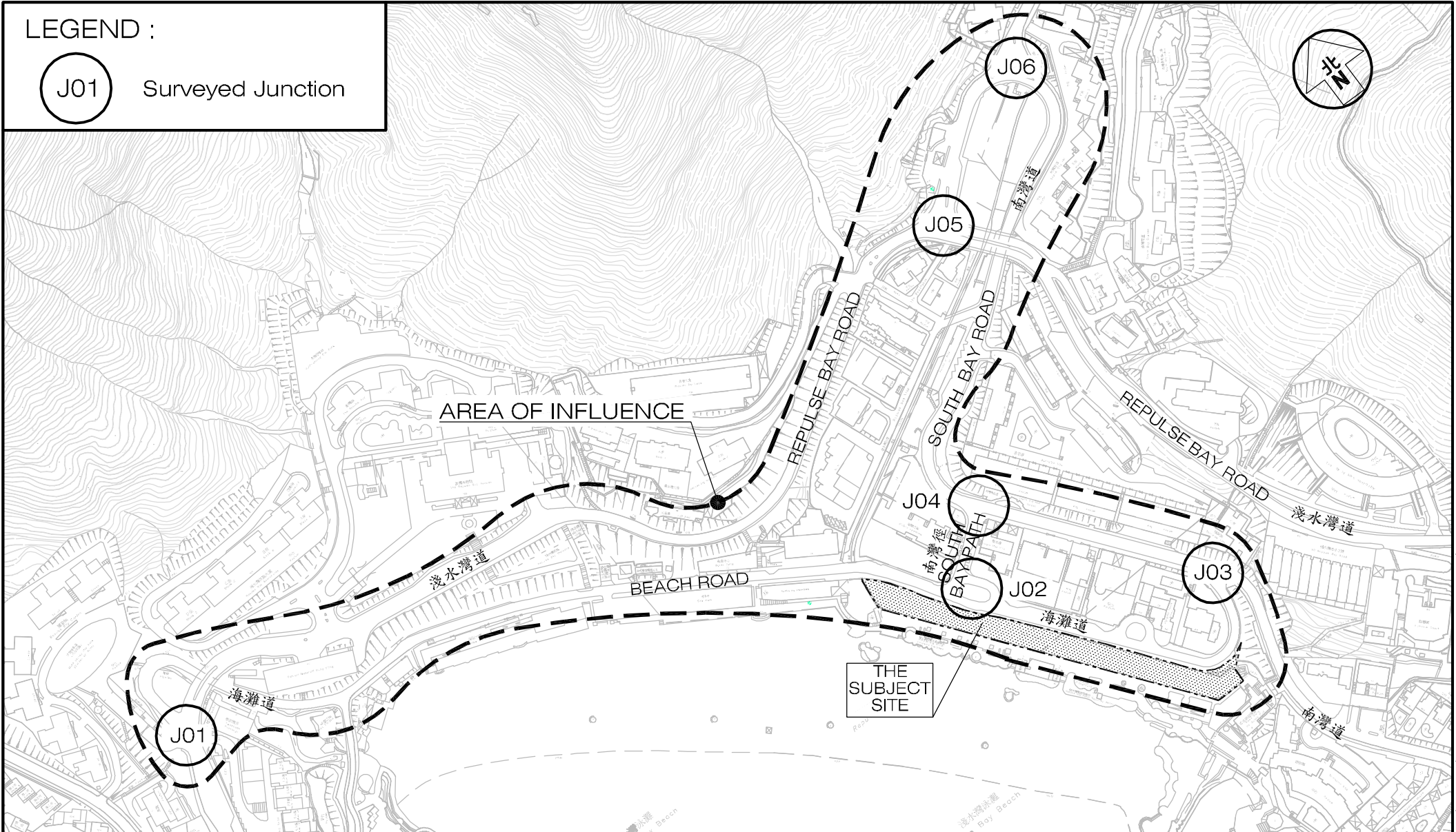
Figure Title
PUBLIC TRANSPORT SERVICES OPERATING NEAR THE SUBJECT SITE

Designed by M C Y
Drawn by S C Y
Checked by K C
Scale in A4 1 : 4,000
Date 04 FEB 2025

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LEGEND :

J01 Surveved Junction



Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY J7342

Figure No. 2.7 Revision A

CKM Asia Limited
Traffic and Transportation Planning Consultants

Figure Title
**AREA OF INFLUENCE AND
LOCATION OF THE SURVEYED JUNCTIONS**

Designed by M C Y	Drawn by S C Y	Checked by K C
Scale in A4 1 : 3,000		Date 04 FEB 2025

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T:\JOB\J7200-J7249\J7245(2025 02) J7245_TIA_FR_R3\Fig 2.7 RevA.dwg



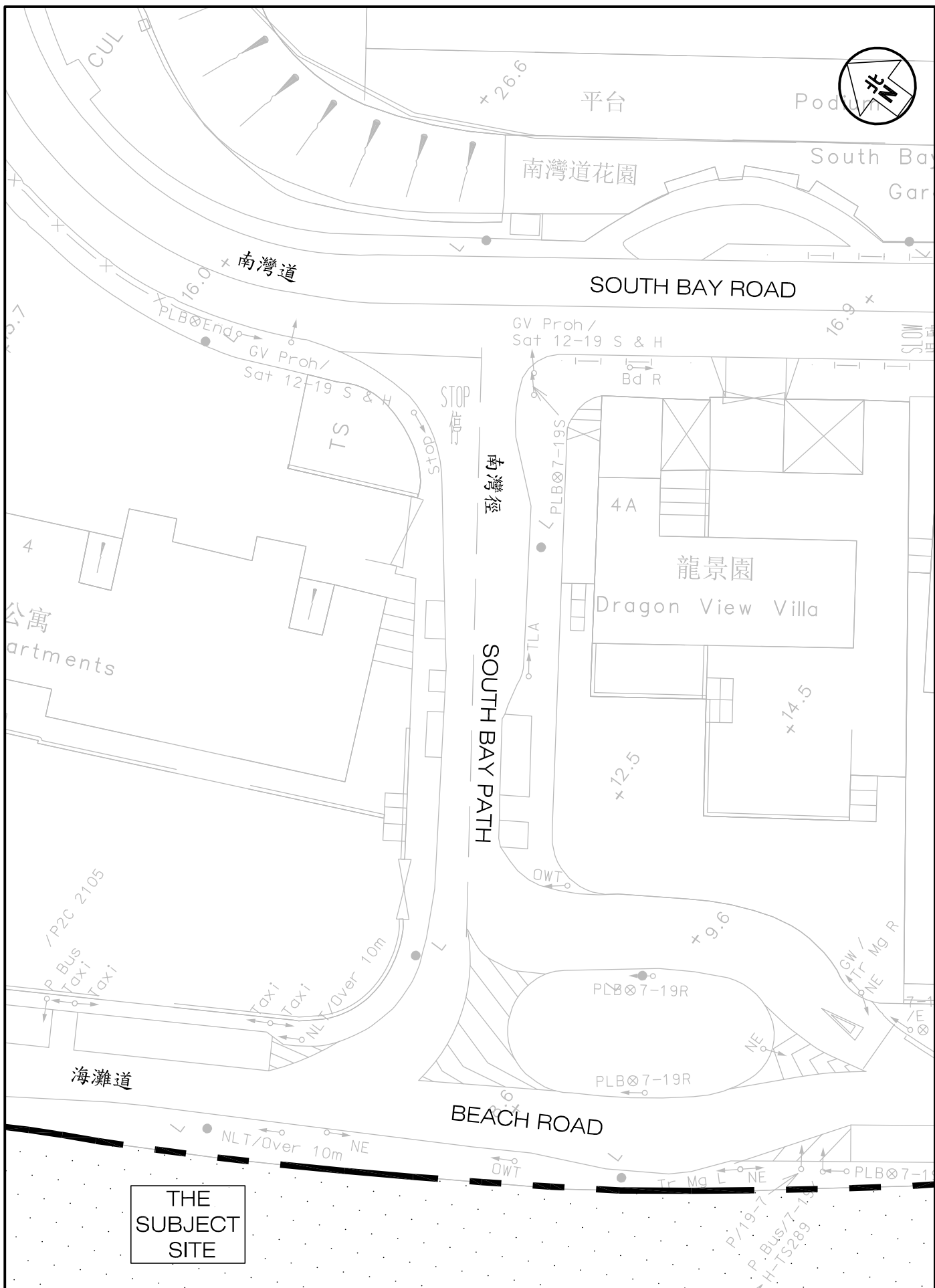
Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY J7245

Figure No. 2.8 Revision A

Figure Title JUNCTION OF REPULSE BAY ROAD / BEACH ROAD (J01)

Designed by M C Y Drawn by S C Y Checked by K C Scale in A4 1 : 400 Date 04 FEB 2025

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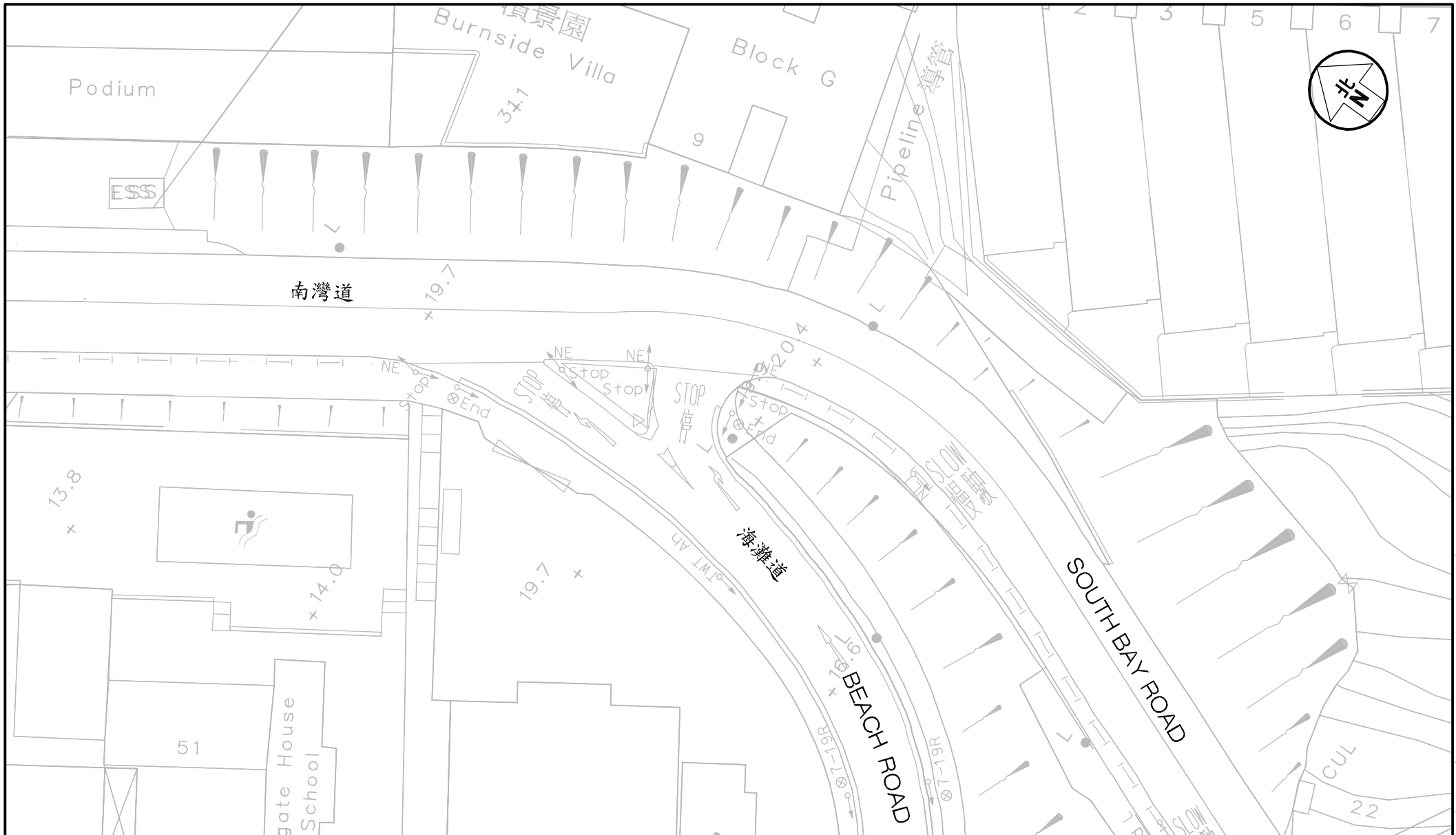
Project Title
PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Figure Title
**JUNCTION OF BEACH ROAD / SOUTH BAY PATH (J02)
 AND JUNCTION OF SOUTH BAY ROAD / SOUTH BAY PATH (J04)**

Job No. J7245	Figure No. 2.9	Scale in A4 1 : 400	
Designed by M C Y	Drawn by S C Y	Checked by K C	Revision A
		Date 04 FEB 2025	

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T:\JOB\J200-J7249\J7245(2025 02) J7245_TIA_FR_R3\Fig 2.9 RevA.dwg



Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Figure No. 2.10

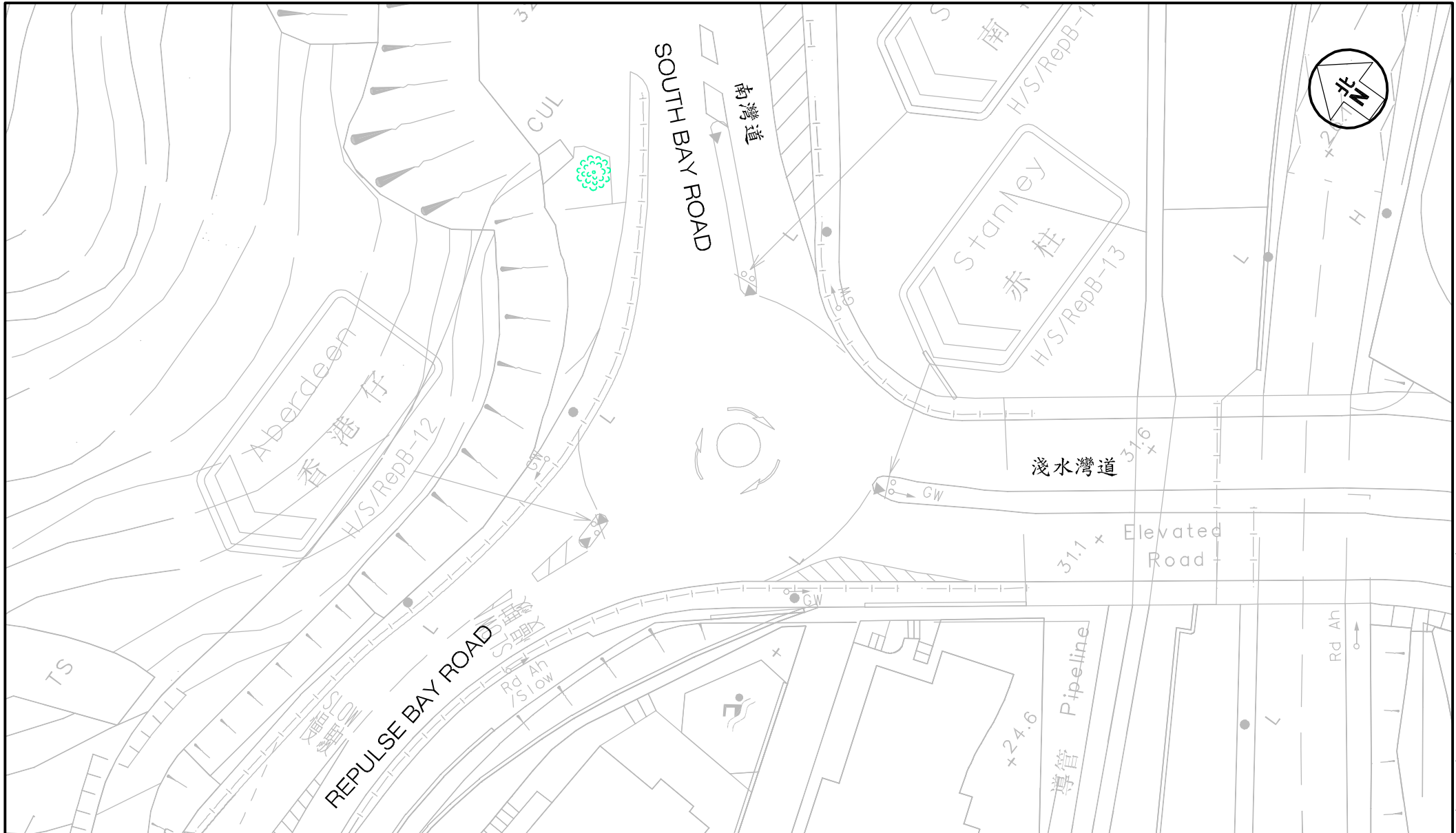
Revision A

Figure Title

JUNCTION OF BEACH ROAD / SOUTH BAY ROAD (J03)

Designed by M C Y	Drawn by S C Y	Checked by K C
Scale in A4 1 : 400		Date 04 FEB 2025

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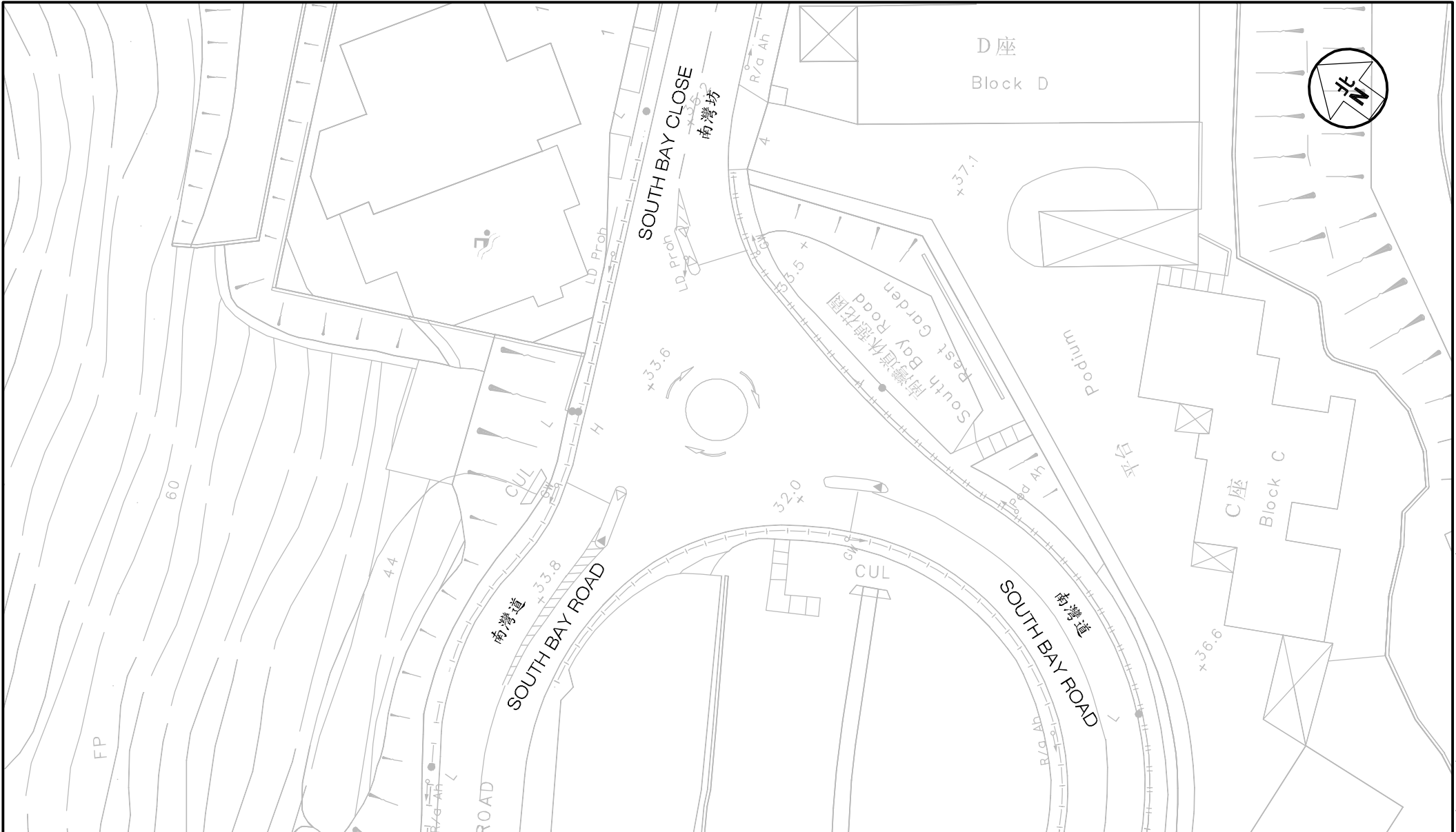
Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY J7245

Figure No. 2.11 Revision A

Figure Title JUNCTION OF REPULSE BAY ROAD / SOUTH BAY ROAD (J05)

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Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

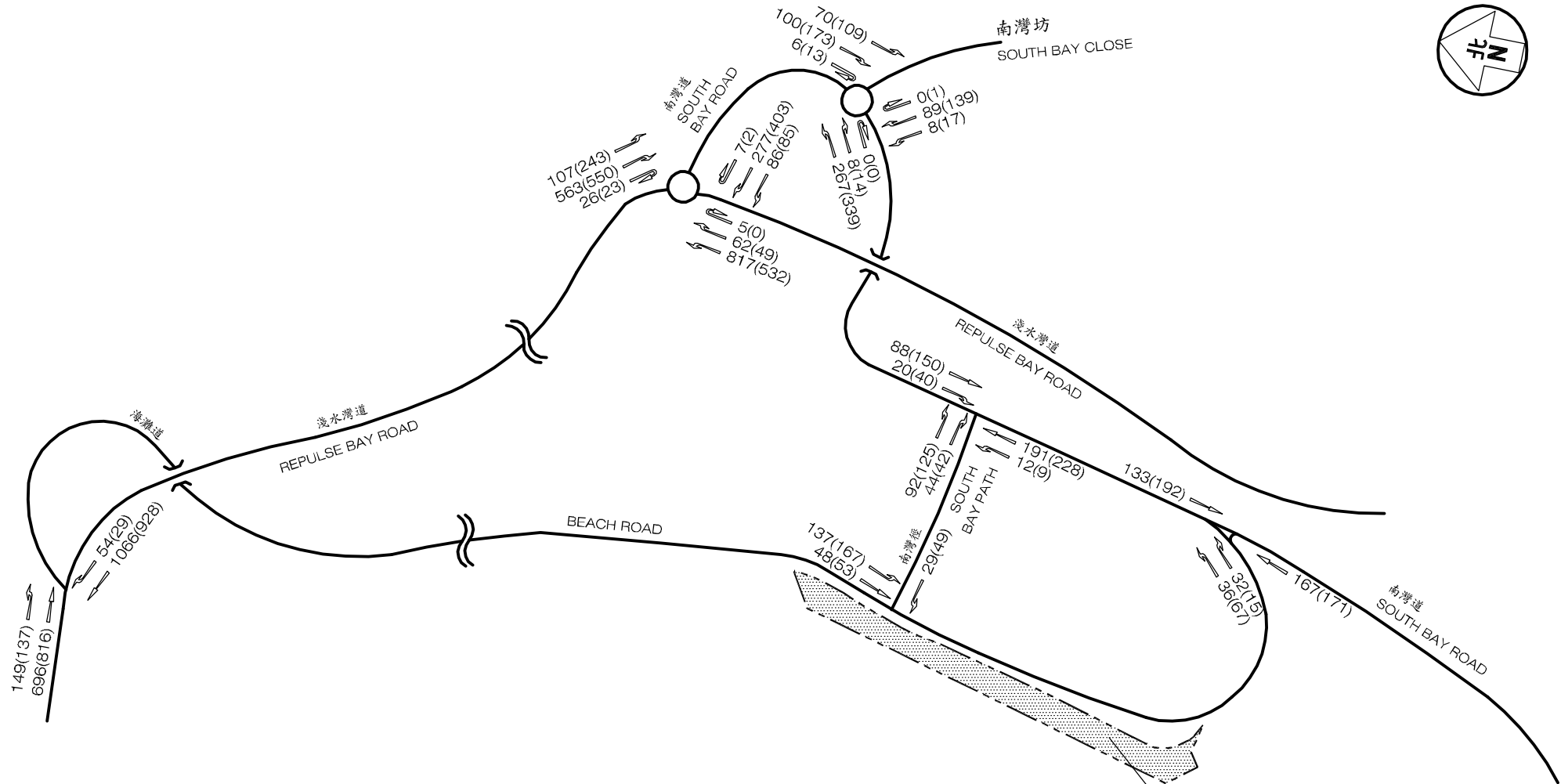
Figure No. 2.12
Revision A

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Traffic and Transportation Planning Consultants

Figure Title
JUNCTION OF SOUTH BAY ROAD / SOUTH BAY CLOSE (J06)

Designed by M C Y
Drawn by S C Y
Checked by K C
Scale in A4 1 : 500
Date 04 FEB 2025

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Wan Chai, Hong Kong
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LEGEND:

← AM PEAK HOUR (PM PEAK HOUR)

THE SUBJECT SITE

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY J7245

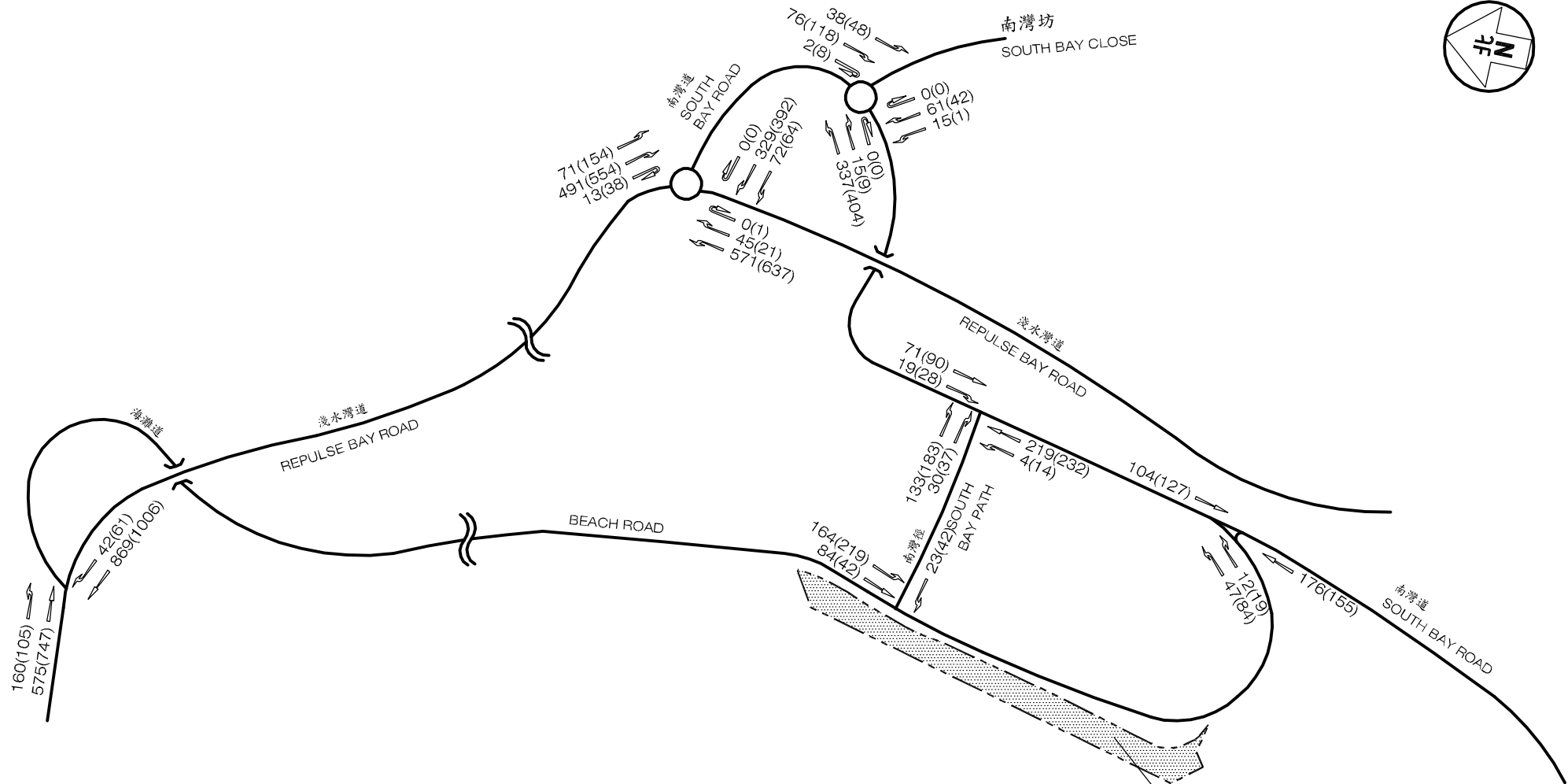
Figure No. 2.13 Revision A

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Figure Title EXISTING WEEKDAY PEAK HOUR TRAFFIC FLOWS

Designed by M C Y Drawn by S C Y Checked by K C
Scale in A4 N.T.S. Date 04 FEB 2025

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LEGEND:

← AM PEAK HOUR (PM PEAK HOUR)

THE SUBJECT SITE

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

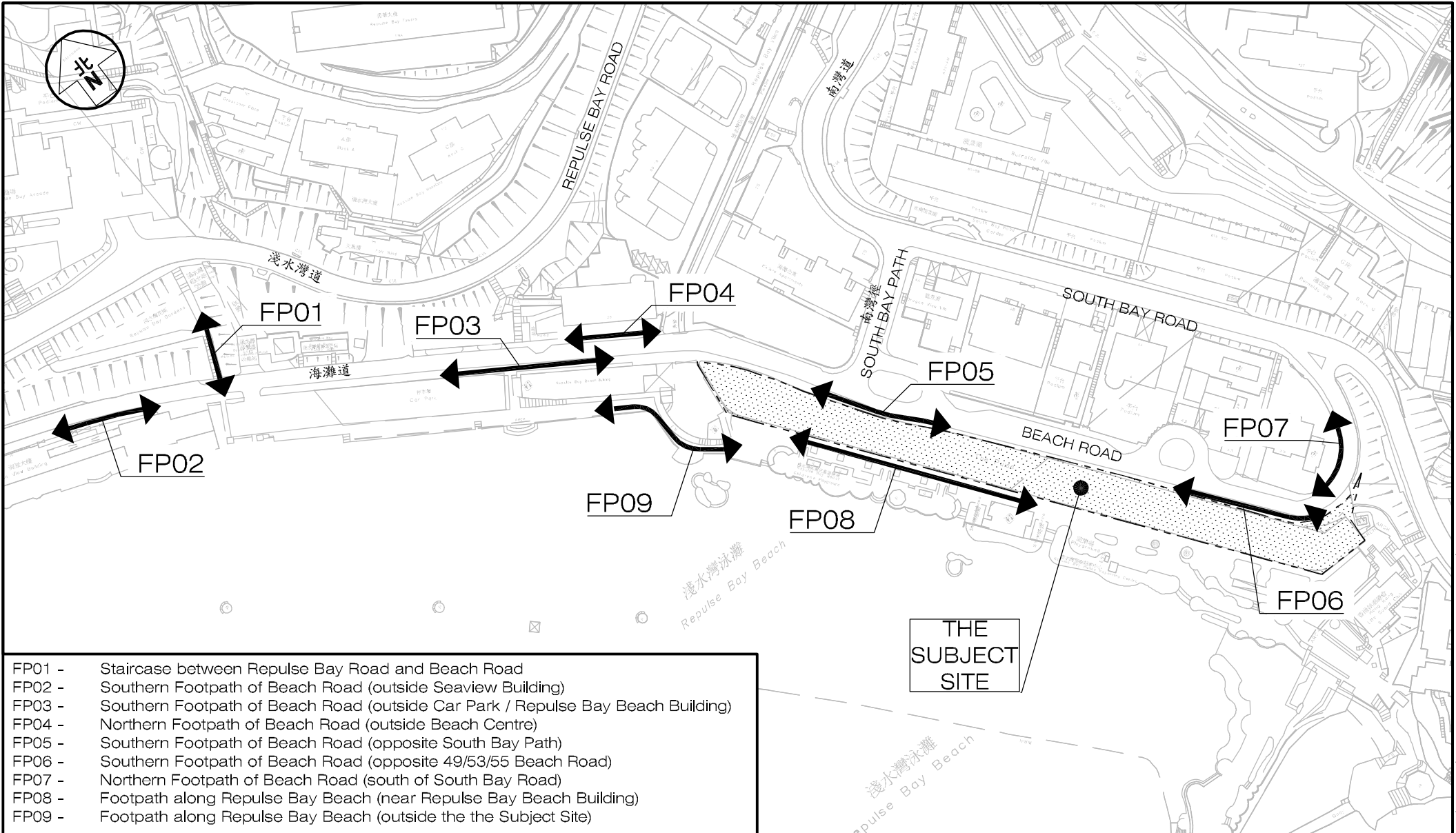
Figure No. 2.14

Revision A

Figure Title EXISTING WEEKEND PEAK HOUR TRAFFIC FLOWS

Designed by M C Y
 Drawn by S C Y
 Checked by K C
 Scale in A4 N.T.S.
 Date 04 FEB 2025

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- FP01 - Staircase between Repulse Bay Road and Beach Road
- FP02 - Southern Footpath of Beach Road (outside Seaview Building)
- FP03 - Southern Footpath of Beach Road (outside Car Park / Repulse Bay Beach Building)
- FP04 - Northern Footpath of Beach Road (outside Beach Centre)
- FP05 - Southern Footpath of Beach Road (opposite South Bay Path)
- FP06 - Southern Footpath of Beach Road (opposite 49/53/55 Beach Road)
- FP07 - Northern Footpath of Beach Road (south of South Bay Road)
- FP08 - Footpath along Repulse Bay Beach (near Repulse Bay Beach Building)
- FP09 - Footpath along Repulse Bay Beach (outside the the Subject Site)

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Figure No. 2.15
 J7245

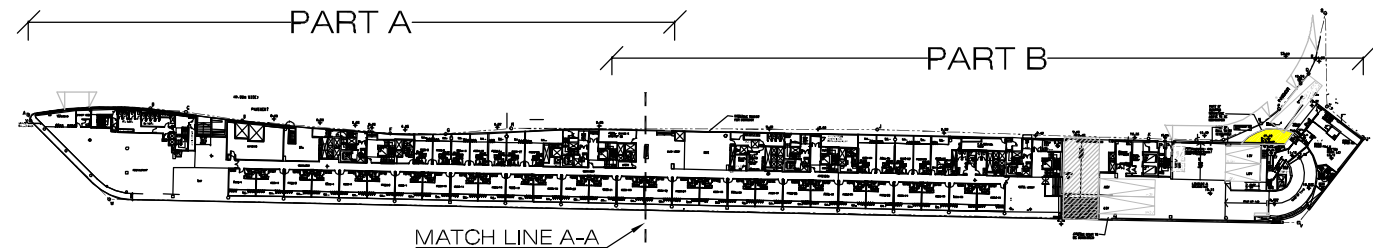
Revision A
CKM Asia Limited
 Traffic and Transportation Planning Consultants

Figure Title
LOCATION OF THE SURVEYED FOOTPATHS

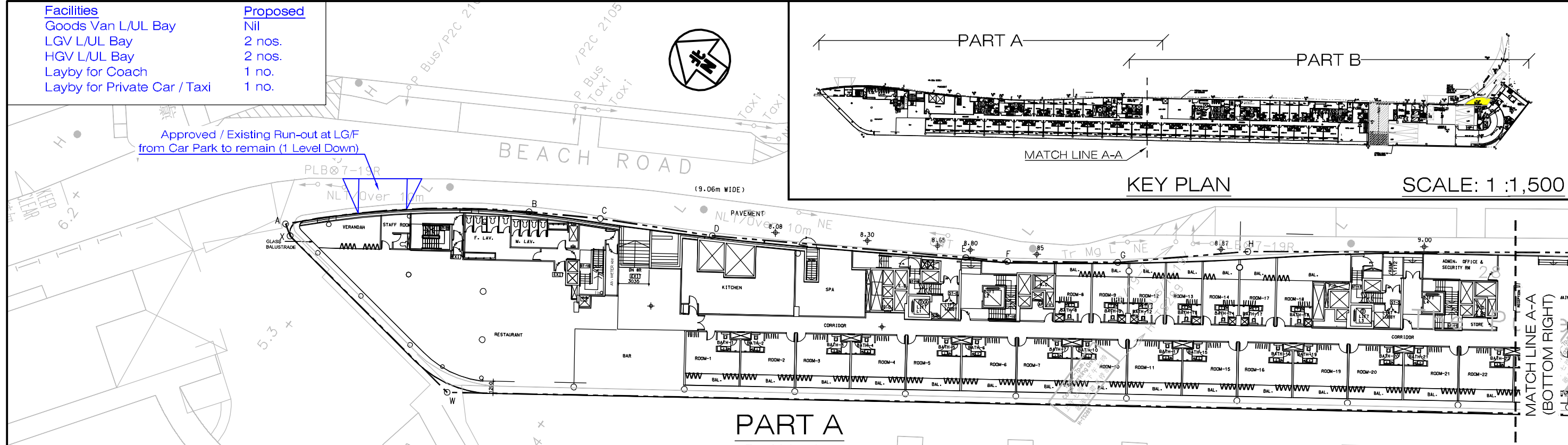
Designed by M C Y
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 Date 04 FEB 2025

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Facilities	Proposed
Goods Van L/UL Bay	Nil
LGV L/UL Bay	2 nos.
HGV L/UL Bay	2 nos.
Layby for Coach	1 no.
Layby for Private Car / Taxi	1 no.



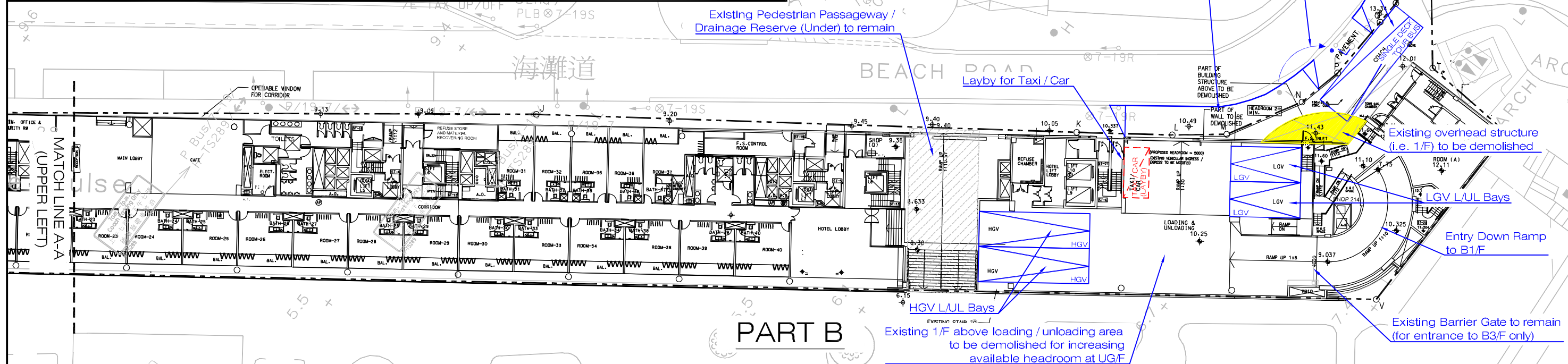
KEY PLAN SCALE: 1 : 1,500



PART A

LEGEND :

	Existing Goods Van L/UL Bay @5.0m(L) X 2.5m(W)
	Existing LGV L/UL Bay @7.0m(L) X 3.5m(W)
	Proposed layby for taxi / private car @5.0m(L) X 2.5m(W) X Min. 2.4m(H)
	Proposed LGV L/UL Bay @7.0m(L) X 3.5m(W) X Min. 3.6m (H)
	Proposed HGV L/UL Bay @11.0m(L) X 3.5m(W) X Min. 4.7m (H)
	Proposed Layby for Single Deck Tour Bus @12.0m(L) X 3.5m(W) X Min. 3.8m (H)



PART B

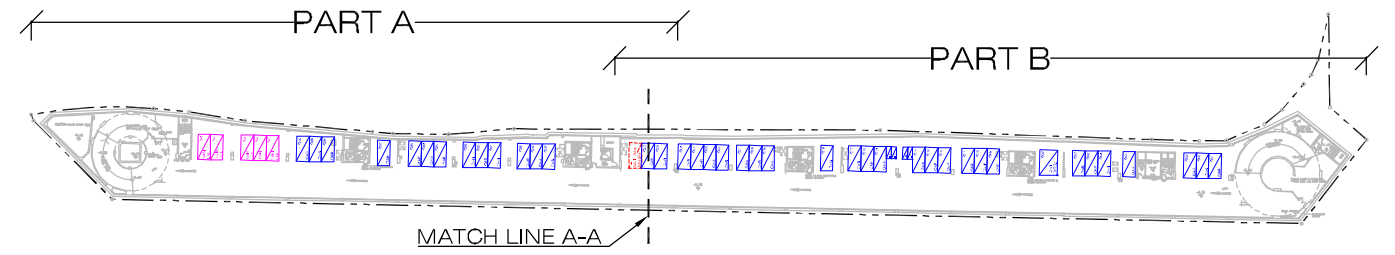
Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Figure Title **PROPOSED INTERNAL TRANSPORT LAYOUT AT UG/F WITH THE PROPOSED CONVERSION**

Figure No. J7245	3.1	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Designed by WCH	Drawn by SCY	Checked by KC	
Scale in A3 1 : 400	Date 04 FEB 2025		

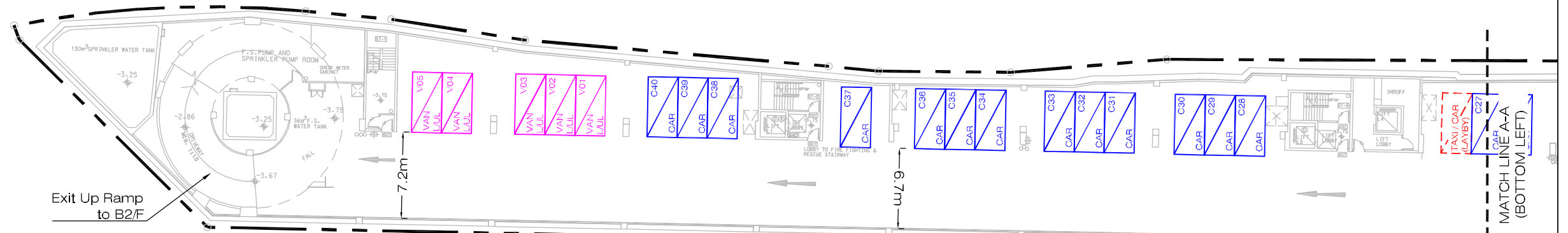
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Facilities	Proposed
Car Parking Spaces	Total 40 nos., including:
- Conventional	39 nos.
- Accessible	1 no.
Motorcycle	4 nos.
Layby for Taxi / Private Car	1 no.
Goods Van Loading / Unloading Bays	5 nos.



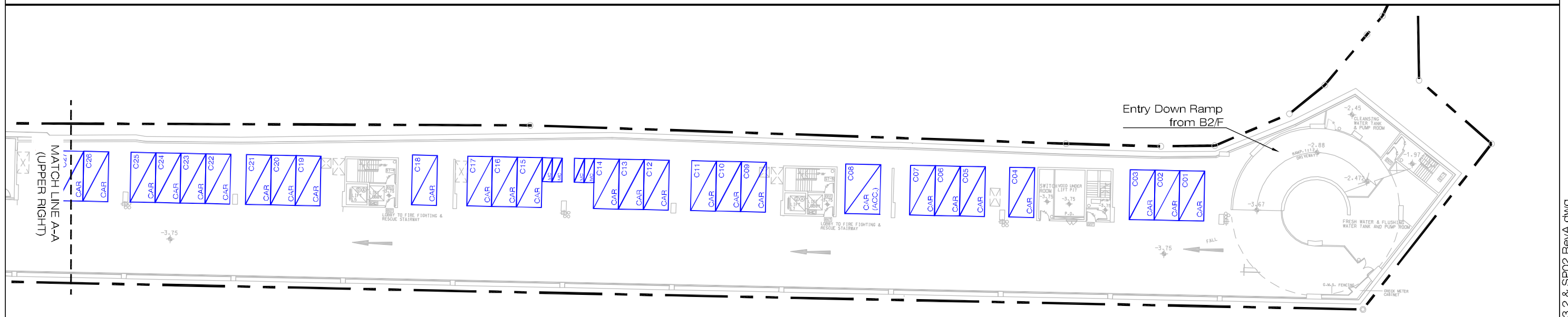
KEY PLAN

SCALE: 1 : 1,500



PART A

NOTE:
ALL existing mechanical parking racks are to be removed.



PART B

NOTE:
ALL existing mechanical parking racks are to be removed.

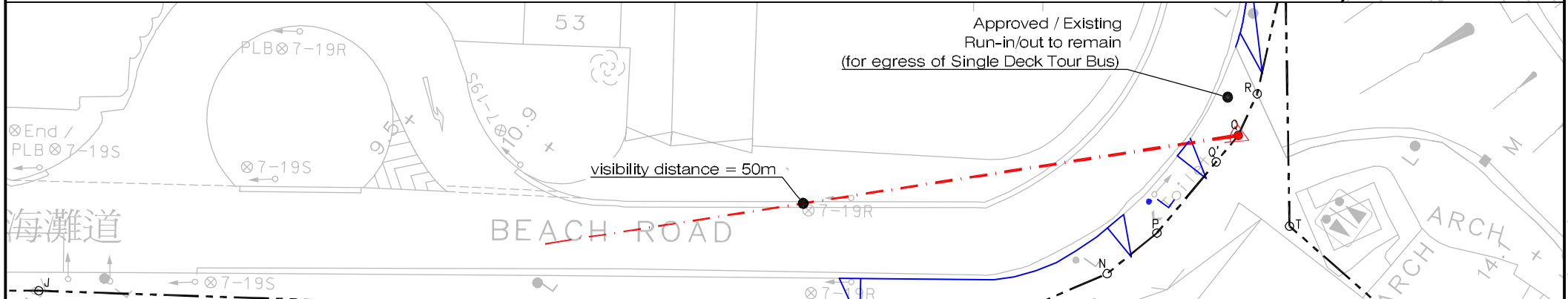
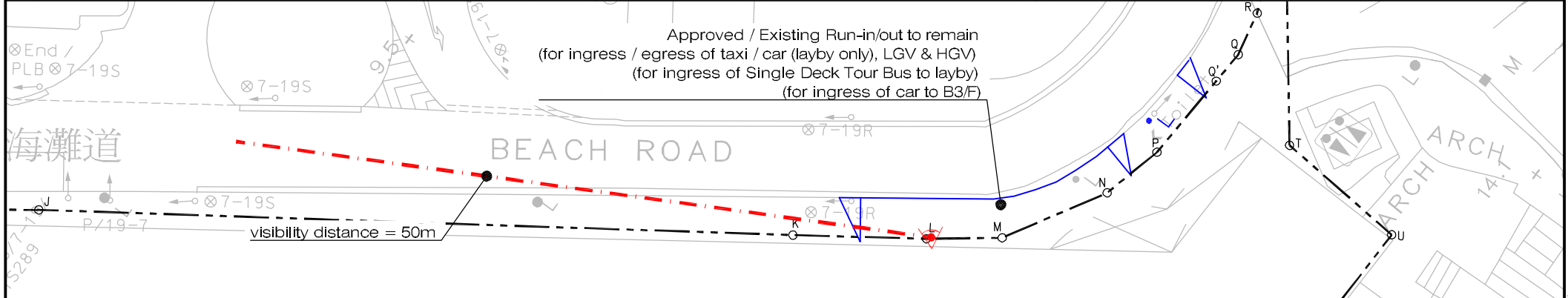
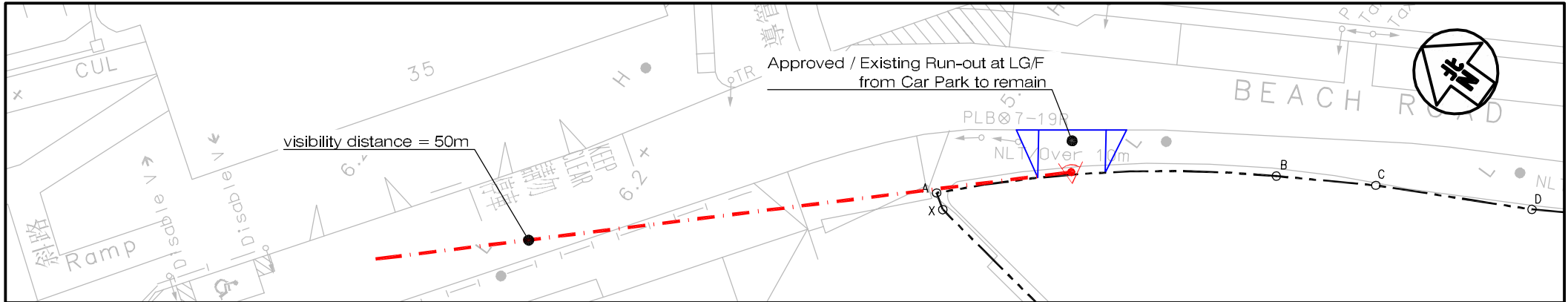
LEGEND :

- Proposed car parking spaces @5.0m(L) X 2.5m(W) X Min. 2.4m(H)
- Proposed accessible car parking space @5.0m(L) X 3.5m(W) X Min. 2.4m(H)
- Proposed layby for taxi / private car @5.0m(L) X 2.5m(W) X Min. 2.4m(H)
- Proposed motorcycle parking spaces @2.4m(L) X 1.0m(W) X Min. 2.4m(H)
- Proposed Goods Van loading / unloading bay @ 5.0m(L) X 2.5m(W) X Min. 2.4m(H)

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

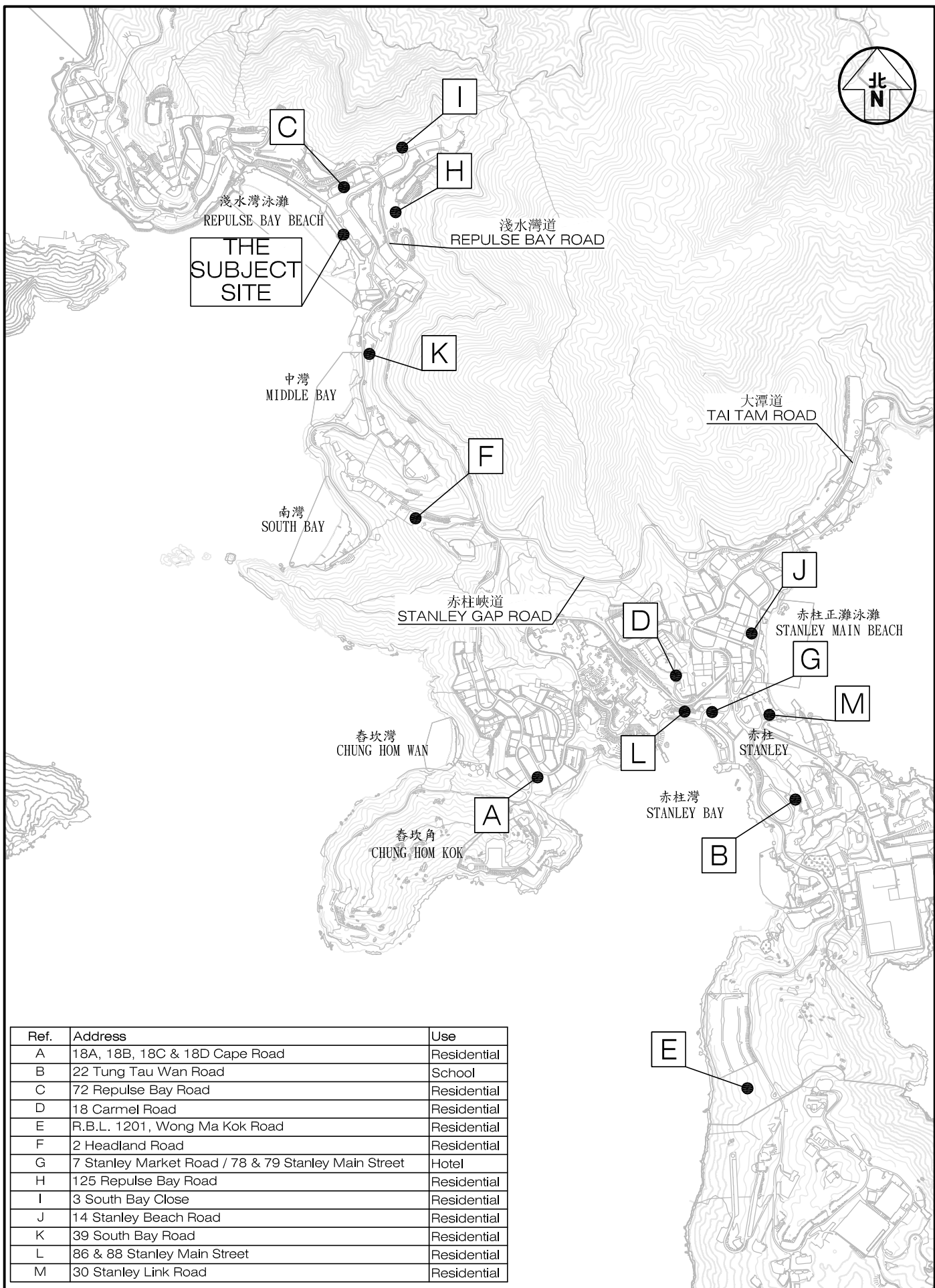
Figure Title PROPOSED INTERNAL TRANSPORT LAYOUT AT B3/F WITH THE PROPOSED CONVERSION

Figure No. 3.2	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk	
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Scale in A3 1 : 400	Date 04 FEB 2025		



Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY	Figure No. 3.3	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title VISIBILITY ASSESSMENTS AT APPROVED / EXISTING VEHICULAR ACCESSES ALONG BEACH ROAD	Designed by W C H	Drawn by S C Y	Checked by K C
	Scale in A4 1 : 400	Date 04 FEB 2025	21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

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Ref.	Address	Use
A	18A, 18B, 18C & 18D Cape Road	Residential
B	22 Tung Tau Wan Road	School
C	72 Repulse Bay Road	Residential
D	18 Carmel Road	Residential
E	R.B.L. 1201, Wong Ma Kok Road	Residential
F	2 Headland Road	Residential
G	7 Stanley Market Road / 78 & 79 Stanley Main Street	Hotel
H	125 Repulse Bay Road	Residential
I	3 South Bay Close	Residential
J	14 Stanley Beach Road	Residential
K	39 South Bay Road	Residential
L	86 & 88 Stanley Main Street	Residential
M	30 Stanley Link Road	Residential

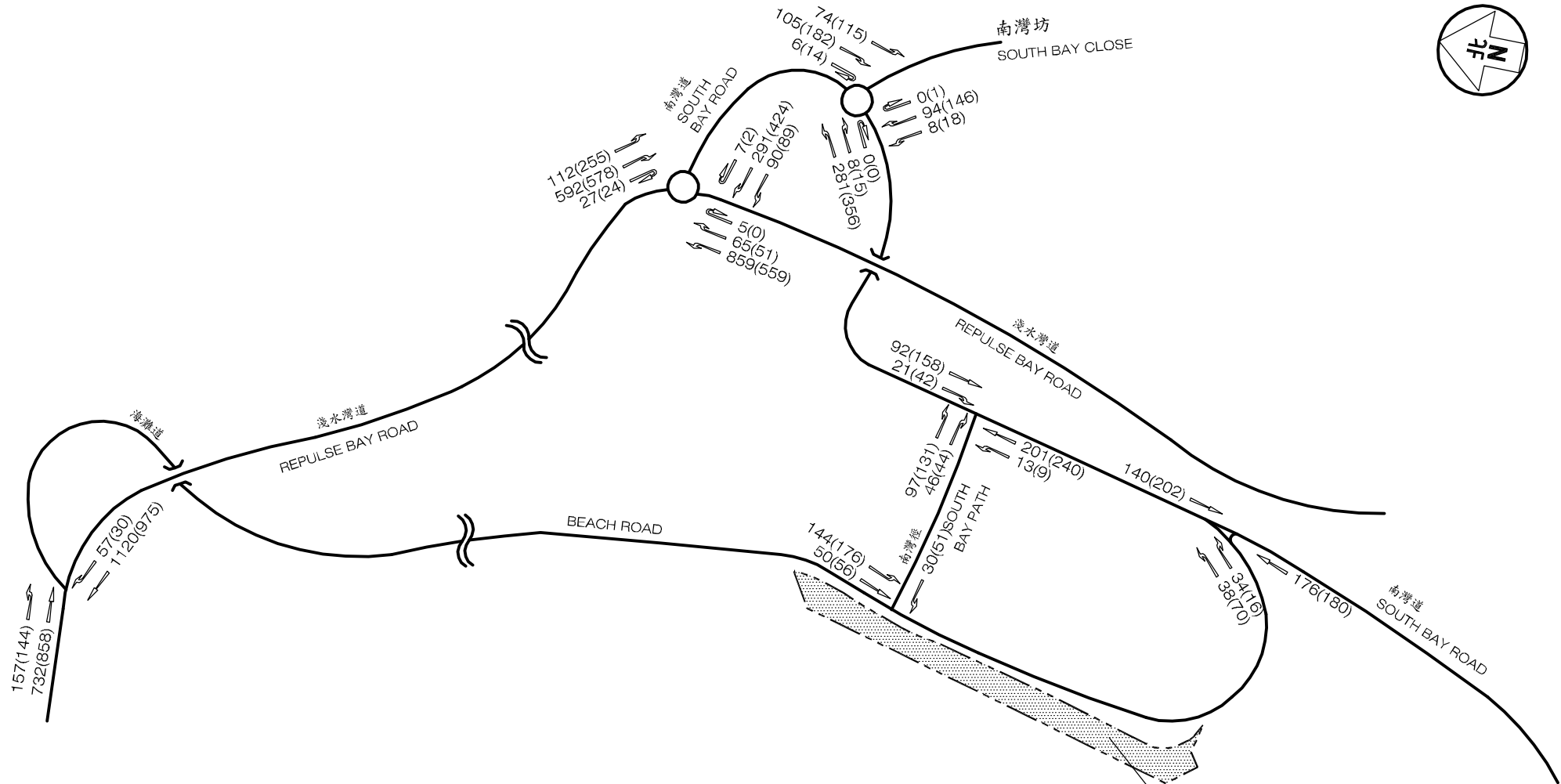
Project Title
PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Job No. J7245	Figure No. 4.1	Scale in A4 1 : 20,000	
Designed by M C Y	Drawn by S C Y	Checked by K C	Revision A
		Date 04 FEB 2025	

Figure Title
LOCATIONS OF OTHER PLANNED / COMMITTED DEVELOPMENTS IN THE VICINITY

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T:\JOB\J200-J7249\J7245(2025 02) J7245_TIA_FR_R3\Fig 4.1 RevA.dwg



THE SUBJECT SITE

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY J7245

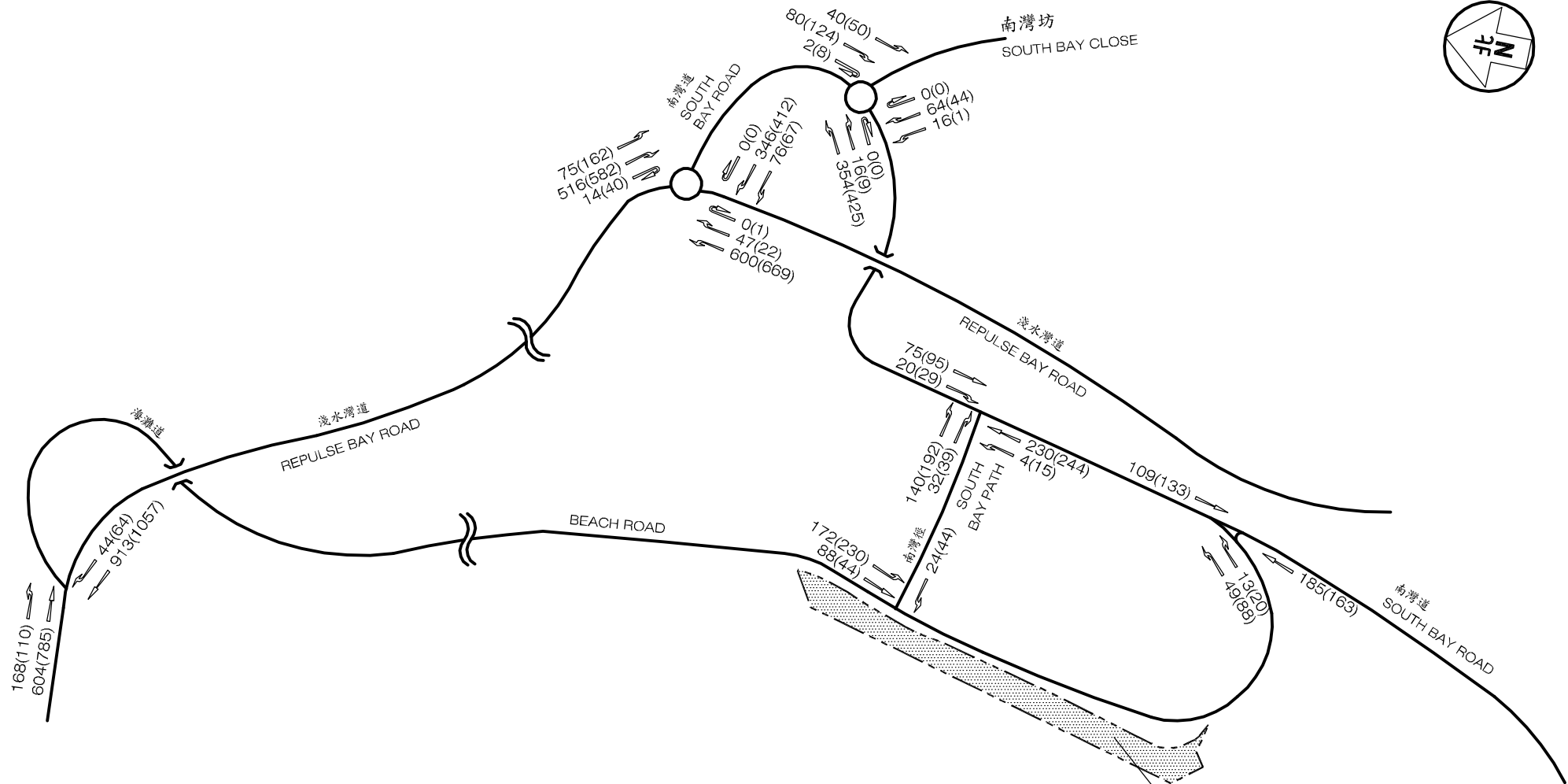
Figure No. 4.2 Revision A

CKM Asia Limited
 Traffic and Transportation Planning Consultants

Figure Title YEAR 2030 WEEKDAY PEAK HOUR TRAFFIC FLOW WITHOUT THE PROPOSED DEVELOPMENT

Designed by M C Y Drawn by S C Y Checked by K C
 Scale in A4 N.T.S. Date 04 FEB 2025

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LEGEND:

← AM PEAK HOUR (PM PEAK HOUR)

THE SUBJECT SITE

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

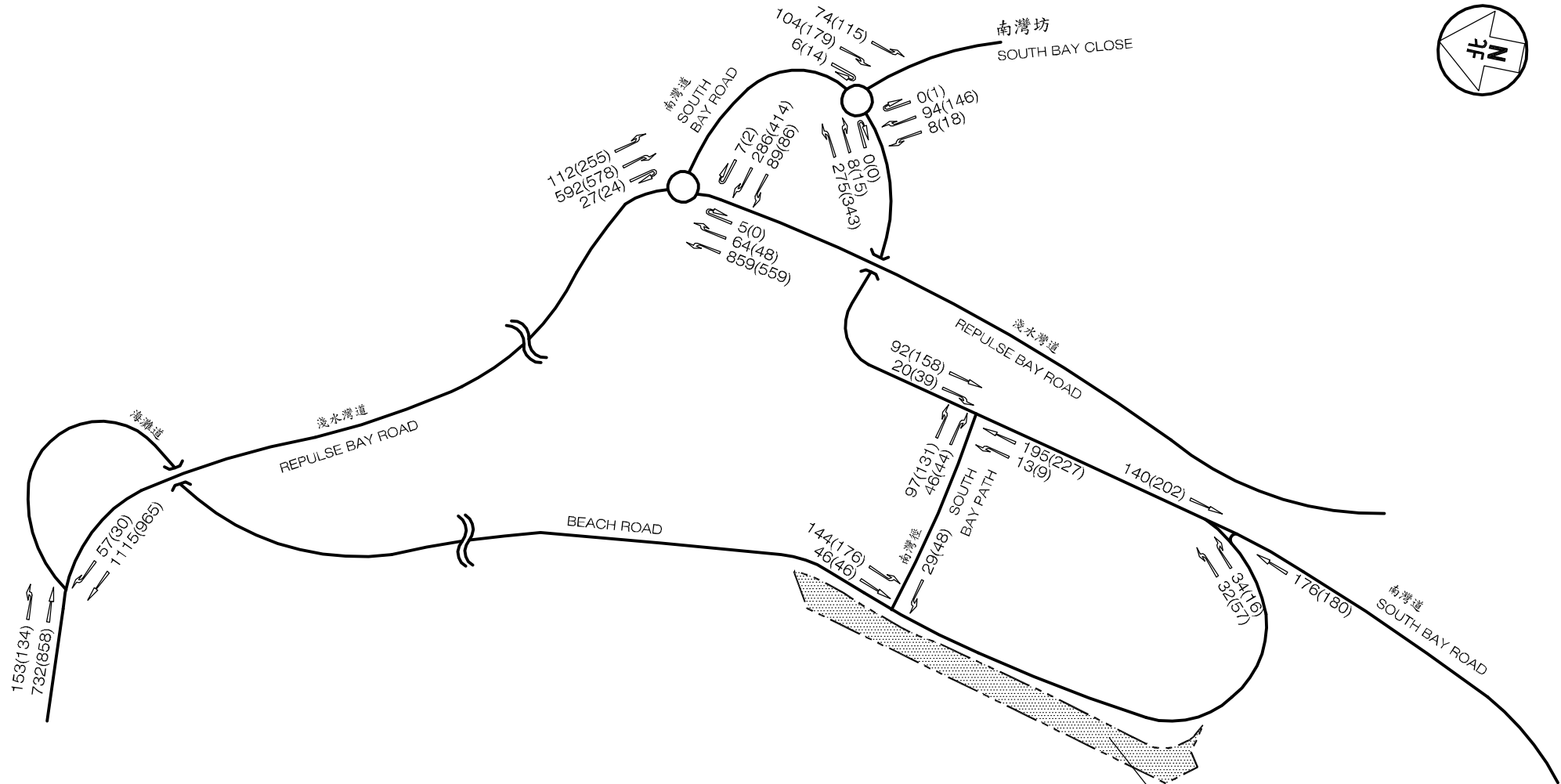
Figure No. **4.3**

Revision **A**

Figure Title **YEAR 2030 WEEKEND PEAK HOUR TRAFFIC FLOW WITHOUT THE PROPOSED CONVERSION**

Designed by **M C Y**
 Drawn by **S C Y**
 Checked by **K C**
 Scale in A4 **N.T.S.**
 Date **04 FEB 2025**

CKM Asia Limited
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 Wan Chai, Hong Kong
 Tel : (852) 2520 5990 Fax : (852) 2528 6343
 Email : mail@ckmasia.com.hk



LEGEND:

← AM PEAK HOUR (PM PEAK HOUR)

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY J7245

Figure No. 4.4 Revision A

CKM Asia Limited
Traffic and Transportation Planning Consultants

Figure Title
YEAR 2030 WEEKDAY PEAK HOUR TRAFFIC FLOW WITH THE PROPOSED CONVERSION

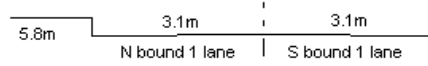
Designed by M C Y Drawn by S C Y Checked by K C
Scale in A4 N.T.S. Date 04 FEB 2025

21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

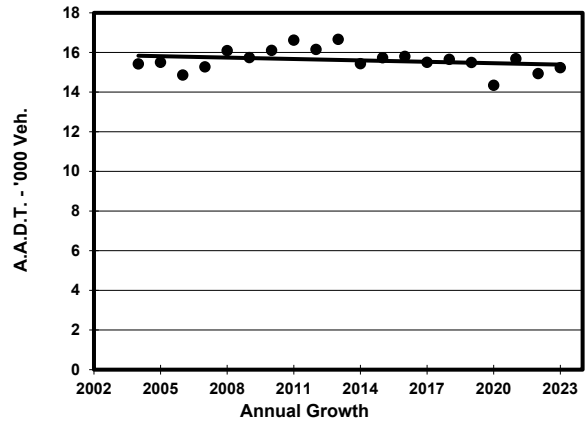
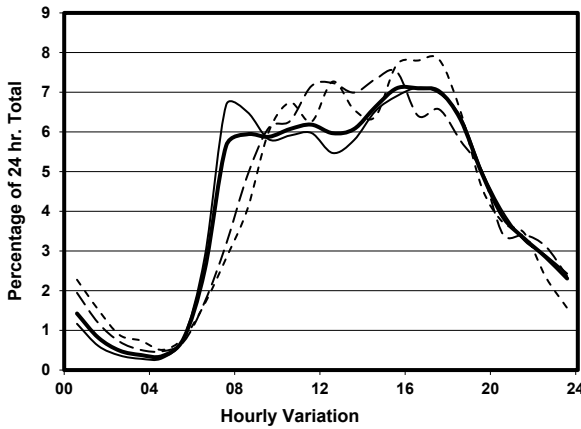
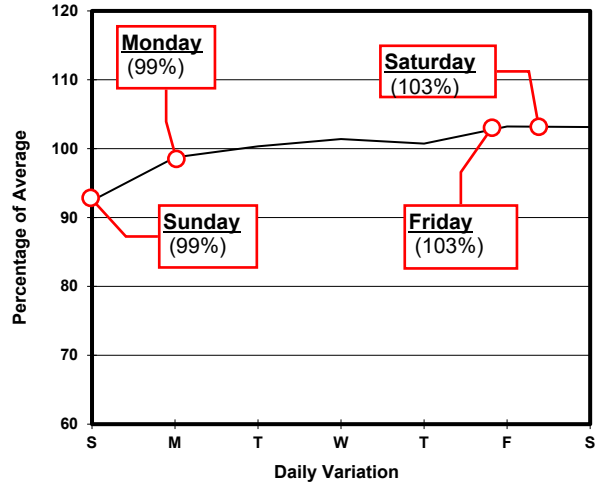
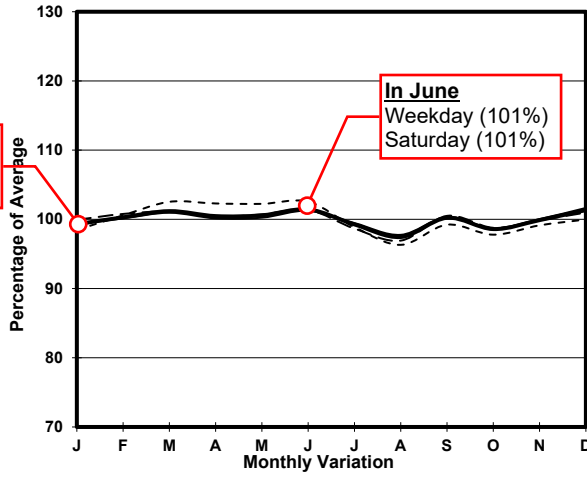
**Appendix A –
Extract of 2023 ATC**

YEAR 2023
 CORE STATION 1011
 ROAD NETWORK MAJOR
 ROAD TYPE PRIMARY DISTRIBUTOR

LINK REPULSE BAY RD & STANLEY GAP RD (from SOUTH BAY RD to TAI TAM RD)



1. TRAFFIC FLOW VARIATION AND GROWTH



Legend: — All day - - - - - Mon.- Fri. Sat. - . - . - Sun.

2. TRAFFIC CHARACTERISTICS (BY DIRECTION)

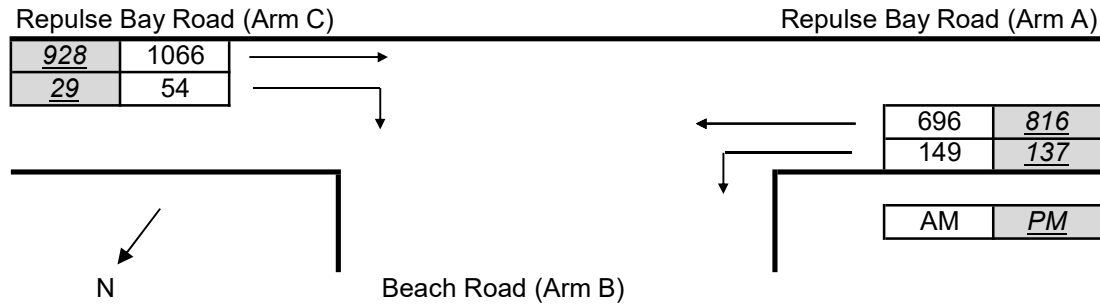
Parameter	All - Day	Mon. - Fri.	Sat.	Sun.
SOUTH BOUND				
A.A.D.T.	7580	7640	7960	7160
R 12 / 24 - %	75.1	74.7	76.5	76
R 16 / 24 - %	90.4	90.6	90.2	89.9
AM Peak Hour	0800-0900	0800-0900	0800-0900	0900-1000
One-way flow at AM peak hour	440	470	440	460
T - % (AM)	-	-	-	-
PM Peak Hour	1600-1700	1600-1700	1600-1700	1600-1700
One-way flow at PM peak hour	550	550	540	580
T - % (PM)	-	-	-	-
Prop.of commercial vehicles - 16 hr.	-	-	-	-
NORTH BOUND				
A.A.D.T.	7650	7800	7820	6980
R 12 / 24 - %	76.7	77.4	74.3	75.9
R 16 / 24 - %	91.4	91.8	90.6	90.1
AM Peak Hour	0700-0800	0700-0800	0900-1000	0900-1000
One-way flow at AM peak hour	470	590	540	390
T - % (AM)	-	-	-	-
PM Peak Hour	1700-1800	1700-1800	1700-1800	1700-1800
One-way flow at PM peak hour	570	570	550	630
T - % (PM)	-	-	-	-
Prop.of commercial vehicles - 16 hr.	-	-	-	-

3. OTHER INFORMATION AND COMMENT

**Appendix B –
Junction Capacity Analyses**

Priority Junction Analysis

Junction: Beach Road / Repulse Bay Road Job Number: J7245
 Scenario: Existing Condition (Weekday) J01 - P. 1
 Design Year: 2025 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	9.50	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	0.00	E	0.6155	
		V-rBC	50	w-CB	3.20	F	0.8974	
		V-rCB	50			Y	0.4963	

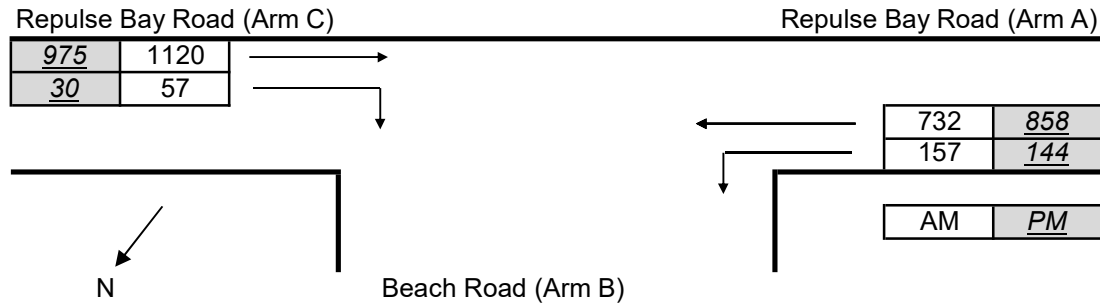
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	1066	928	Q-BA	206	206
q-CB	54	29	Q-BC	375	362
q-AB	149	137	Q-CB	532	514
q-AC	696	816	Q-BAC	206	206
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.102	0.056
B-AC	0.000	0.000

Priority Junction Analysis

Junction: Beach Road / Repulse Bay Road Job Number: J7245
 Scenario: Without Proposed Conversion (Weekday) J01 - P. 2
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	9.50	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	0.00	E	0.6155	
		V-rBC	50	w-CB	3.20	F	0.8974	
		V-rCB	50			Y	0.4963	

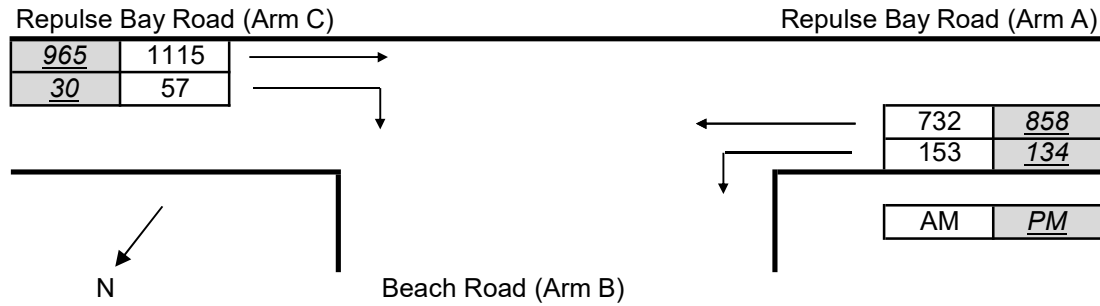
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	1120	975	Q-BA	198	199
q-CB	57	30	Q-BC	370	357
q-AB	157	144	Q-CB	524	506
q-AC	732	858	Q-BAC	198	199
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.109	0.059
B-AC	0.000	0.000

Priority Junction Analysis

Junction: Beach Road / Repulse Bay Road Job Number: J7245
 Scenario: With Proposed Conversion (Weekday) J01 - P. 3
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	9.50		V-rBA	50	w-BA	0.00	D	0.5786
W-CR	0.00		V-IBA	50	w-BC	0.00	E	0.6155
			V-rBC	50	w-CB	3.20	F	0.8974
			V-rCB	50			Y	0.4963

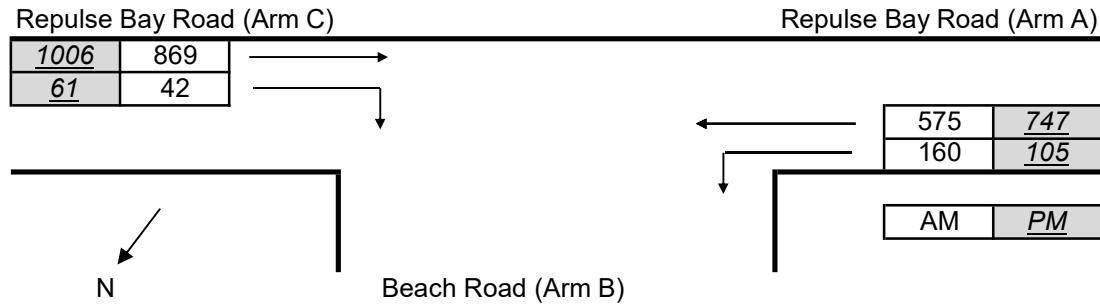
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	1115	965	Q-BA	198	200
q-CB	57	30	Q-BC	370	357
q-AB	153	134	Q-CB	525	508
q-AC	732	858	Q-BAC	198	200
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.109	0.059
B-AC	0.000	0.000

Priority Junction Analysis

Junction: Beach Road / Repulse Bay Road Job Number: J7245
 Scenario: Existing Condition (Weekend) J01 - P. 4
 Design Year: 2025 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	9.50	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	0.00	E	0.6155	
		V-rBC	50	w-CB	3.20	F	0.8974	
		V-rCB	50			Y	0.4963	

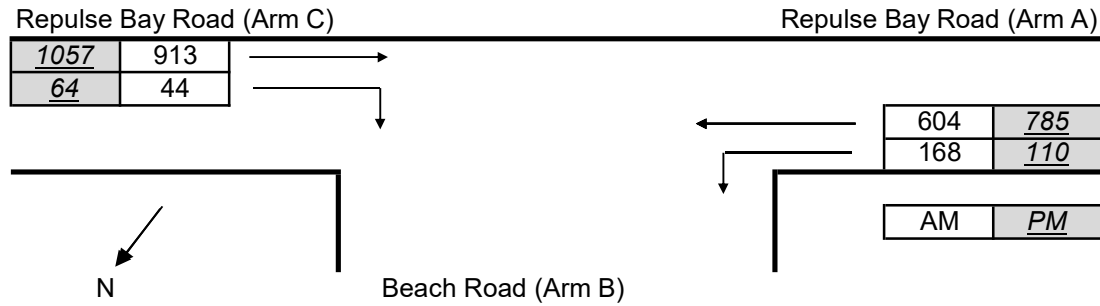
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	869	1006	Q-BA	233	205
q-CB	42	61	Q-BC	388	371
q-AB	160	105	Q-CB	549	530
q-AC	575	747	Q-BAC	233	205
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.076	0.115
B-AC	0.000	0.000

Priority Junction Analysis

Junction: Beach Road / Repulse Bay Road Job Number: J7245
 Scenario: Without Proposed Conversion (Weekend) J01 - P. 5
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	9.50	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	0.00	E	0.6155	
		V-rBC	50	w-CB	3.20	F	0.8974	
		V-rCB	50			Y	0.4963	

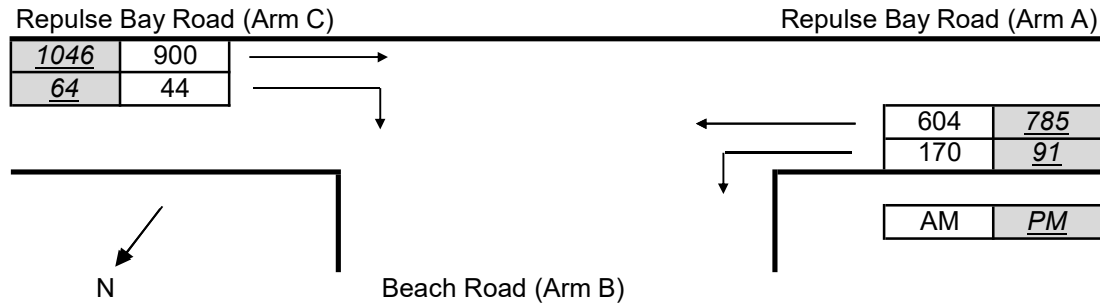
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	913	1057	Q-BA	226	197
q-CB	44	64	Q-BC	384	366
q-AB	168	110	Q-CB	543	523
q-AC	604	785	Q-BAC	226	197
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.081	0.122
B-AC	0.000	0.000

Priority Junction Analysis

Junction: Beach Road / Repulse Bay Road Job Number: J7245
 Scenario: With Proposed Conversion (Weekend) J01 - P. 6
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input	Input	Input	Input	Calculated		
W	9.50	V-rBA	50	w-BA	0.00	D	0.5786
W-CR	0.00	V-IBA	50	w-BC	0.00	E	0.6155
		V-rBC	50	w-CB	3.20	F	0.8974
		V-rCB	50			Y	0.4963

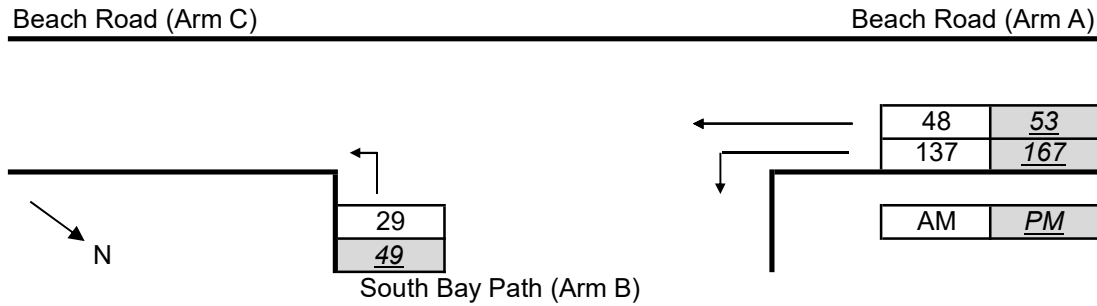
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	900	1046	Q-BA	227	199
q-CB	44	64	Q-BC	384	367
q-AB	170	91	Q-CB	543	527
q-AC	604	785	Q-BAC	227	199
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.081	0.122
B-AC	0.000	0.000

Priority Junction Analysis

Junction: South Bay Path / Beach Road Job Number: J7245
 Scenario: Existing Condition (Weekday) J02 - P. 1
 Design Year: 2025 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	9.60	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

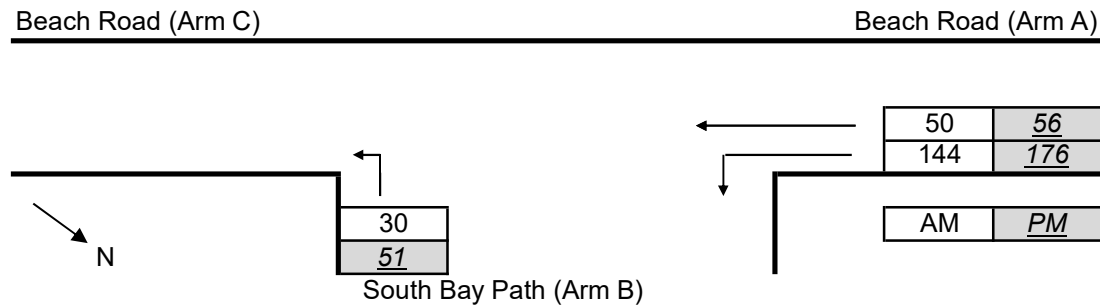
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	352	350
q-CB	0	0	Q-BC	671	668
q-AB	137	167	Q-CB	438	434
q-AC	48	53	Q-BAC	671	668
q-BA	0	0			
q-BC	29	49			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.043	0.073
C-B	0.000	0.000
B-AC	0.043	0.073

Priority Junction Analysis

Junction: South Bay Path / Beach Road Job Number: J7245
 Scenario: Without Proposed Conversion (Weekday) J02 - P. 2
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	8.60	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

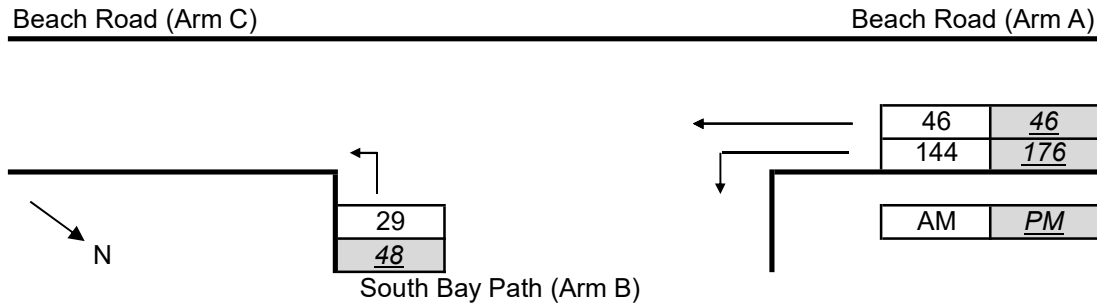
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	352	350
q-CB	0	0	Q-BC	670	667
q-AB	144	176	Q-CB	437	433
q-AC	50	56	Q-BAC	670	667
q-BA	0	0			
q-BC	30	51			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.045	0.076
C-B	0.000	0.000
B-AC	0.045	0.076

Priority Junction Analysis

Junction: South Bay Path / Beach Road Job Number: J7245
 Scenario: With Proposed Conversion (Weekday) J02 - P. 3
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	8.60	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

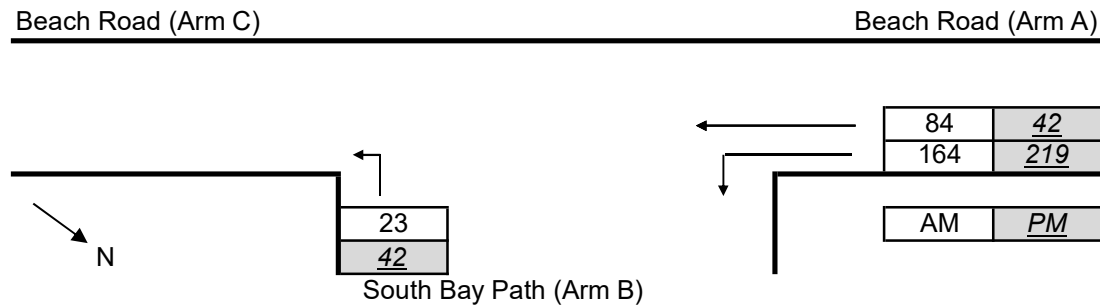
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	352	351
q-CB	0	0	Q-BC	671	669
q-AB	144	176	Q-CB	437	434
q-AC	46	46	Q-BAC	671	669
q-BA	0	0			
q-BC	29	48			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.043	0.072
C-B	0.000	0.000
B-AC	0.043	0.072

Priority Junction Analysis

Junction: South Bay Path / Beach Road Job Number: J7245
 Scenario: Existing Condition (Weekend) J02 - P. 4
 Design Year: 2025 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
	W	9.60	V-rBA	50	w-BA	0.00	D	0.5786
	W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238
			V-rBC	50	w-CB	0.00	F	0.6155
			V-rCB	50			Y	0.4963

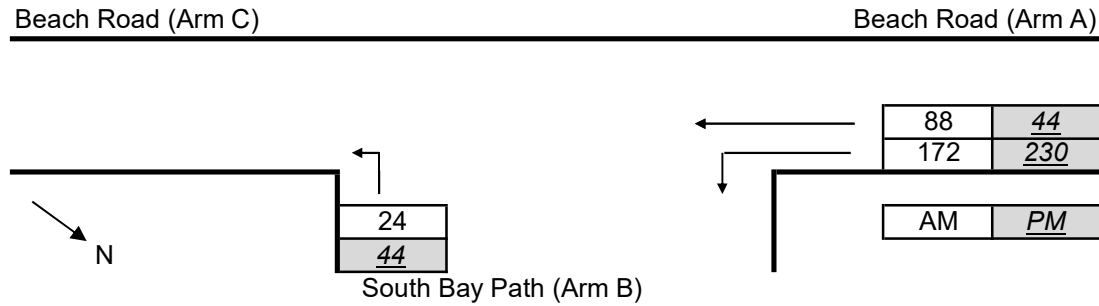
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	347	349
q-CB	0	0	Q-BC	663	667
q-AB	164	219	Q-CB	431	430
q-AC	84	42	Q-BAC	663	667
q-BA	0	0			
q-BC	23	42			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.035	0.063
C-B	0.000	0.000
B-AC	0.035	0.063

Priority Junction Analysis

Junction: South Bay Path / Beach Road Job Number: J7245
 Scenario: Without Proposed Conversion (Weekend) J02 - P. 5
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	8.60	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

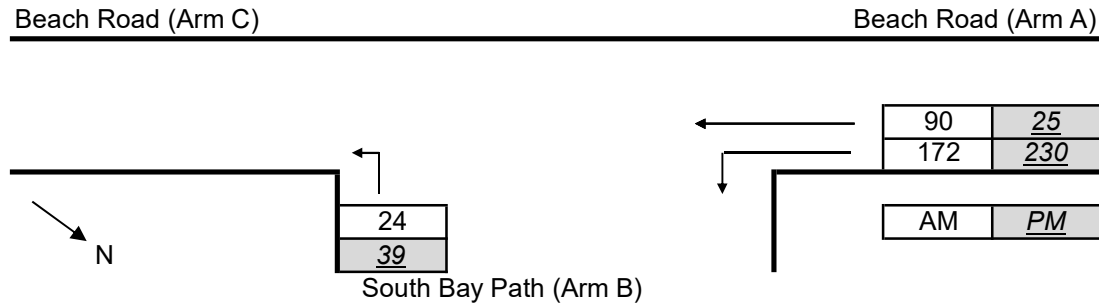
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	346	349
q-CB	0	0	Q-BC	662	666
q-AB	172	230	Q-CB	430	428
q-AC	88	44	Q-BAC	662	666
q-BA	0	0			
q-BC	24	44			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.036	0.066
C-B	0.000	0.000
B-AC	0.036	0.066

Priority Junction Analysis

Junction: South Bay Path / Beach Road Job Number: J7245
 Scenario: With Proposed Conversion (Weekend) J02 - P. 6
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	8.60	V-rBA	50	w-BA	0.00	D	0.5786	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

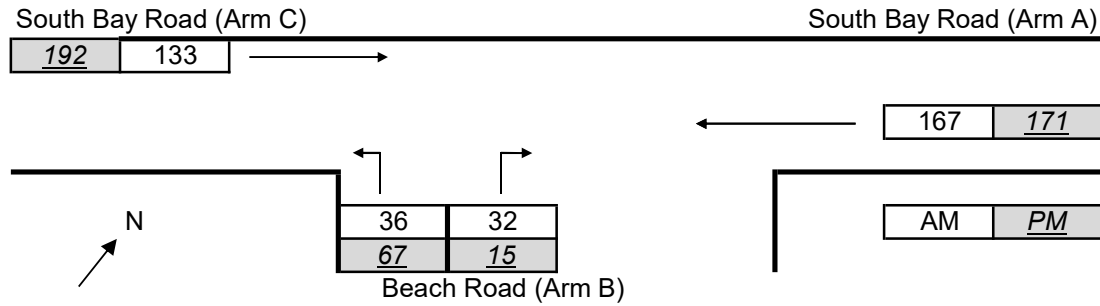
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	346	351
q-CB	0	0	Q-BC	662	669
q-AB	172	230	Q-CB	429	430
q-AC	90	25	Q-BAC	662	669
q-BA	0	0			
q-BC	24	39			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.036	0.058
C-B	0.000	0.000
B-AC	0.036	0.058

Priority Junction Analysis

Junction: South Bay Road / Beach Road Job Number: J7245
 Scenario: Existing Condition (Weekday) J03 - P. 1
 Design Year: 2025 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.00	V-rBA	50	w-BA	3.50	D	0.8684	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

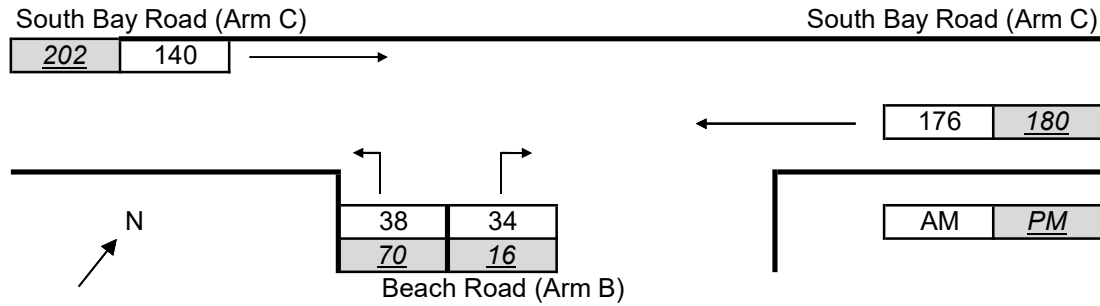
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	133	192	Q-BA	505	499
q-CB	0	0	Q-BC	660	660
q-AB	0	0	Q-CB	440	440
q-AC	167	171	Q-BAC	577	623
q-BA	32	15			
q-BC	36	67			
f	0.529	0.817			

Ratio-of-flow to Capacity	AM	PM
B-A	0.063	0.030
B-C	0.055	0.102
C-B	0.000	0.000
B-AC	0.118	0.132

Priority Junction Analysis

Junction: South Bay Road / Beach Road Job Number: J7245
 Scenario: Without Proposed Conversion (Weekday) J03 - P. 2
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.00	V-rBA	50	w-BA	3.50	D	0.8684	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

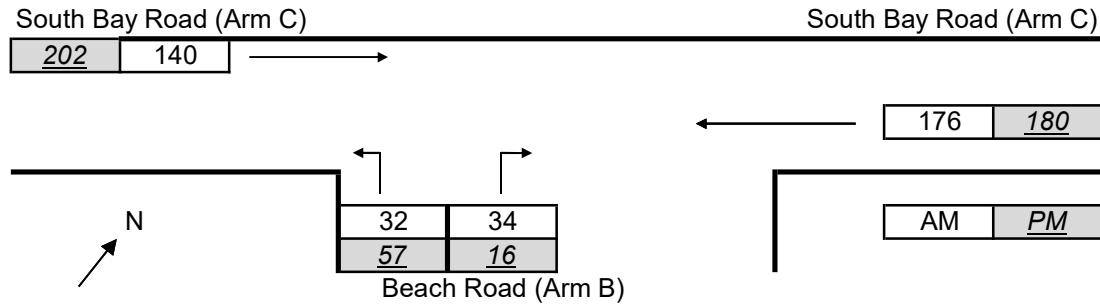
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	140	202	Q-BA	503	496
q-CB	0	0	Q-BC	659	658
q-AB	0	0	Q-CB	439	439
q-AC	176	180	Q-BAC	575	621
q-BA	34	16			
q-BC	38	70			
f	0.528	0.814			

Ratio-of-flow to Capacity	AM	PM
B-A	0.068	0.032
B-C	0.058	0.106
C-B	0.000	0.000
B-AC	0.125	0.139

Priority Junction Analysis

Junction: South Bay Road / Beach Road Job Number: J7245
 Scenario: With Proposed Conversion (Weekday) J03 - P. 3
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.00	V-rBA	50	w-BA	3.50	D	0.8684	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

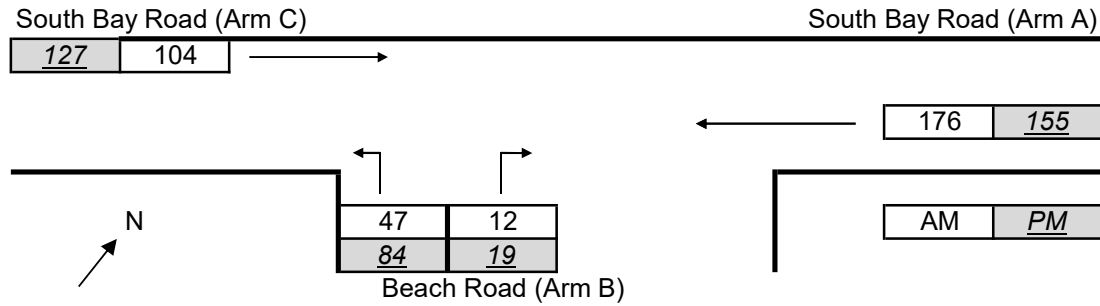
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	140	202	Q-BA	503	496
q-CB	0	0	Q-BC	659	658
q-AB	0	0	Q-CB	439	439
q-AC	176	180	Q-BAC	568	614
q-BA	34	16			
q-BC	32	57			
f	0.485	0.781			

Ratio-of-flow to Capacity	AM	PM
B-A	0.068	0.032
B-C	0.049	0.087
C-B	0.000	0.000
B-AC	0.116	0.119

Priority Junction Analysis

Junction: South Bay Road / Beach Road Job Number: J7245
 Scenario: Existing Condition (Weekend) J03 - P. 4
 Design Year: 2025 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.00	V-rBA	50	w-BA	3.50	D	0.8684	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

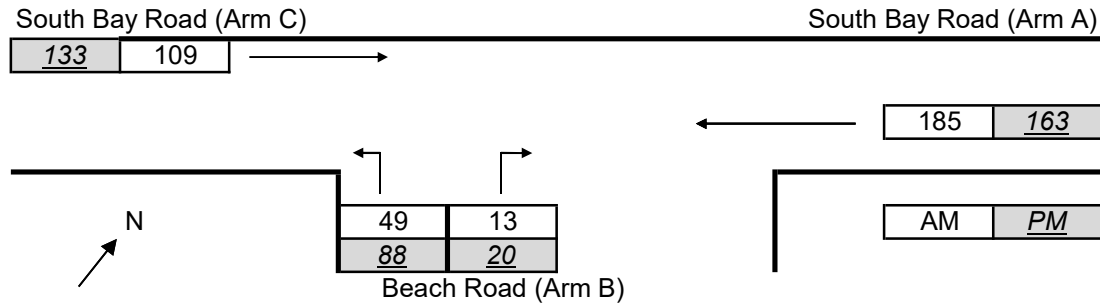
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	104	127	Q-BA	507	508
q-CB	0	0	Q-BC	659	662
q-AB	0	0	Q-CB	439	441
q-AC	176	155	Q-BAC	621	627
q-BA	12	19			
q-BC	47	84			
f	0.797	0.816			

Ratio-of-flow to Capacity	AM	PM
B-A	0.024	0.037
B-C	0.071	0.127
C-B	0.000	0.000
B-AC	0.095	0.164

Priority Junction Analysis

Junction: South Bay Road / Beach Road Job Number: J7245
 Scenario: Without Proposed Conversion (Weekend) J03 - P. 5
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.00	V-rBA	50	w-BA	3.50	D	0.8684	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

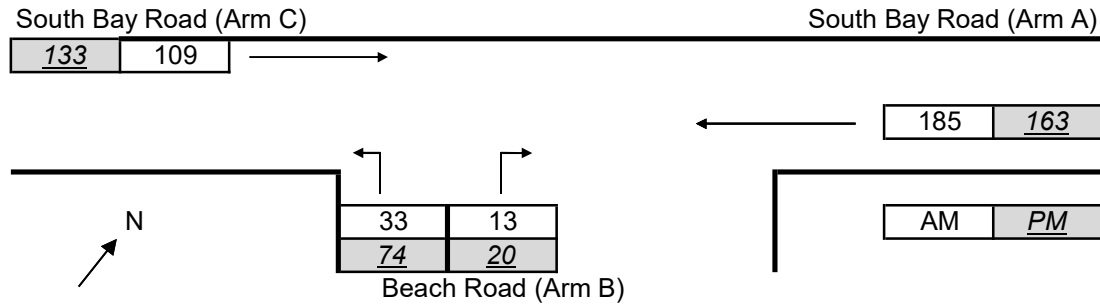
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	109	133	Q-BA	505	506
q-CB	0	0	Q-BC	657	661
q-AB	0	0	Q-CB	438	440
q-AC	185	163	Q-BAC	618	625
q-BA	13	20			
q-BC	49	88			
f	0.790	0.815			

Ratio-of-flow to Capacity	AM	PM
B-A	0.026	0.040
B-C	0.075	0.133
C-B	0.000	0.000
B-AC	0.100	0.173

Priority Junction Analysis

Junction: South Bay Road / Beach Road Job Number: J7245
 Scenario: With Proposed Conversion (Weekend) J03 - P. 6
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.00	V-rBA	50	w-BA	3.50	D	0.8684	
W-CR	0.00	V-IBA	50	w-BC	3.50	E	0.9238	
		V-rBC	50	w-CB	0.00	F	0.6155	
		V-rCB	50			Y	0.4963	

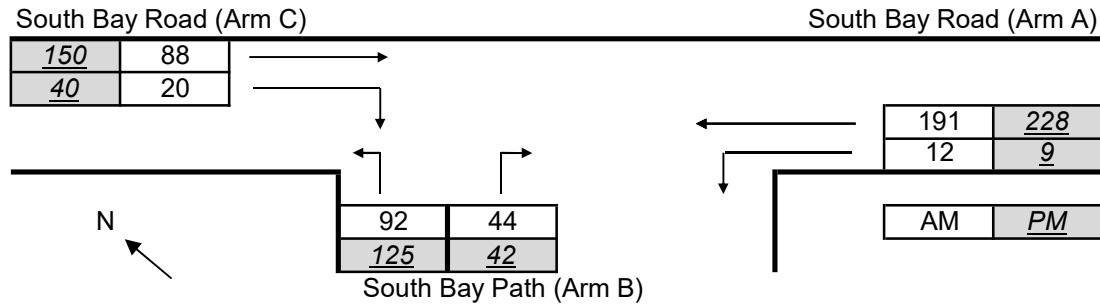
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	109	133	Q-BA	505	506
q-CB	0	0	Q-BC	657	661
q-AB	0	0	Q-CB	438	440
q-AC	185	163	Q-BAC	606	620
q-BA	13	20			
q-BC	33	74			
f	0.717	0.787			

Ratio-of-flow to Capacity	AM	PM
B-A	0.026	0.040
B-C	0.050	0.112
C-B	0.000	0.000
B-AC	0.076	0.151

Priority Junction Analysis

Junction: South Bay Path / South Bay Road Job Number: J7245
 Scenario: Existing Condition (Weekday) J04 - P. 1
 Design Year: 2025 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.30	V-rBA	30	w-BA	3.00	D	0.8007	
W-CR	0.00	V-IBA	30	w-BC	3.00	E	0.8628	
		V-rBC	30	w-CB	0.00	F	0.6037	
		V-rCB	30			Y	0.4963	

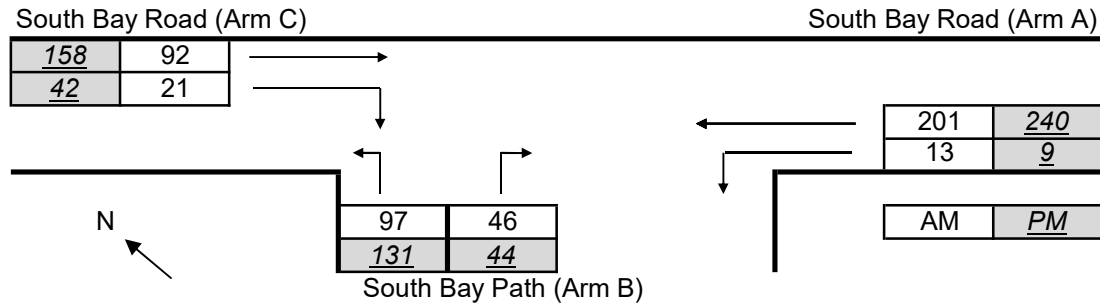
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	88	150	Q-BA	462	447
q-CB	20	40	Q-BC	612	607
q-AB	12	9	Q-CB	428	424
q-AC	191	228	Q-BAC	554	557
q-BA	44	42			
q-BC	92	125			
f	0.676	0.749			

Ratio-of-flow to Capacity	AM	PM
B-A	0.095	0.094
B-C	0.150	0.206
C-B	0.047	0.094
B-AC	0.246	0.300

Priority Junction Analysis

Junction: South Bay Path / South Bay Road Job Number: J7245
 Scenario: Without Proposed Conversion (Weekday) J04 - P. 2
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.30	V-rBA	30	w-BA	3.00	D	0.8007	
W-CR	0.00	V-IBA	30	w-BC	3.00	E	0.8628	
		V-rBC	30	w-CB	0.00	F	0.6037	
		V-rCB	30			Y	0.4963	

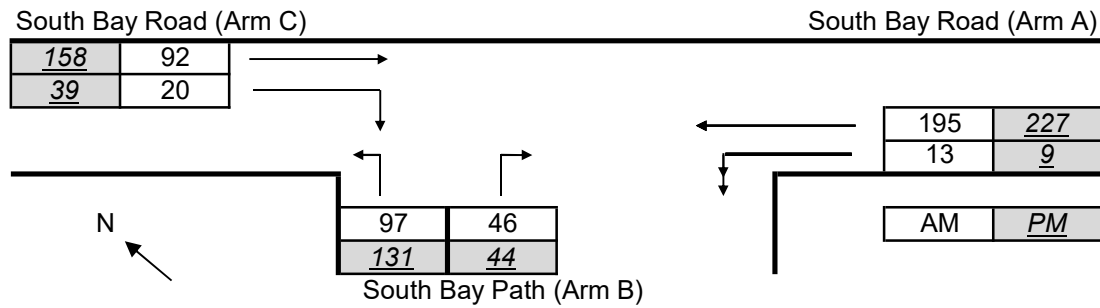
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	92	158	Q-BA	460	444
q-CB	21	42	Q-BC	611	605
q-AB	13	9	Q-CB	426	423
q-AC	201	240	Q-BAC	552	554
q-BA	46	44			
q-BC	97	131			
f	0.678	0.749			

Ratio-of-flow to Capacity	AM	PM
B-A	0.100	0.099
B-C	0.159	0.217
C-B	0.049	0.099
B-AC	0.259	0.316

Priority Junction Analysis

Junction: South Bay Path / South Bay Road Job Number: J7245
 Scenario: With Proposed Conversion (Weekday) J04 - P. 3
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.30		V-rBA	30	w-BA	3.00	D	0.8007
W-CR	0.00		V-IBA	30	w-BC	3.00	E	0.8628
			V-rBC	30	w-CB	0.00	F	0.6037
			V-rCB	30			Y	0.4963

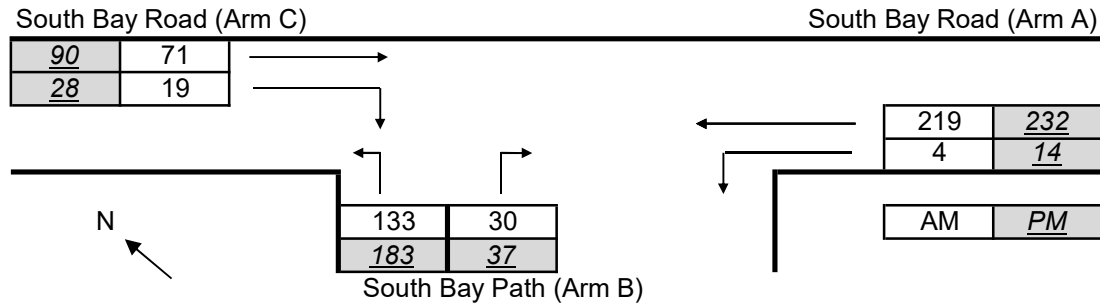
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	92	158	Q-BA	461	446
q-CB	20	39	Q-BC	612	607
q-AB	13	9	Q-CB	427	424
q-AC	195	227	Q-BAC	553	557
q-BA	46	44			
q-BC	97	131			
f	0.678	0.749			

Ratio-of-flow to Capacity	AM	PM
B-A	0.100	0.099
B-C	0.159	0.216
C-B	0.047	0.092
B-AC	0.258	0.314

Priority Junction Analysis

Junction: South Bay Path / South Bay Road Job Number: J7245
 Scenario: Existing Condition (Weekend) J04 - P. 4
 Design Year: 2025 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.30	V-rBA	30	w-BA	3.00	D	0.8007	
W-CR	0.00	V-IBA	30	w-BC	3.00	E	0.8628	
		V-rBC	30	w-CB	0.00	F	0.6037	
		V-rCB	30			Y	0.4963	

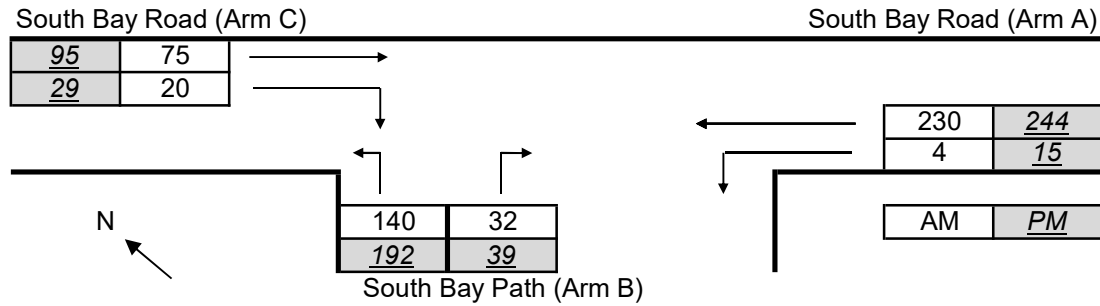
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	71	90	Q-BA	460	454
q-CB	19	28	Q-BC	608	606
q-AB	4	14	Q-CB	425	423
q-AC	219	232	Q-BAC	574	573
q-BA	30	37			
q-BC	133	183			
f	0.816	0.832			

Ratio-of-flow to Capacity	AM	PM
B-A	0.065	0.082
B-C	0.219	0.302
C-B	0.045	0.066
B-AC	0.284	0.384

Priority Junction Analysis

Junction: South Bay Path / South Bay Road Job Number: J7245
 Scenario: Without Proposed Conversion (Weekend) J04 - P. 5
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input	Input	Input	Calculated	
W	7.30	V-rBA	30	D	0.8007
W-CR	0.00	V-IBA	30	E	0.8628
		V-rBC	30	F	0.6037
		V-rCB	30	Y	0.4963

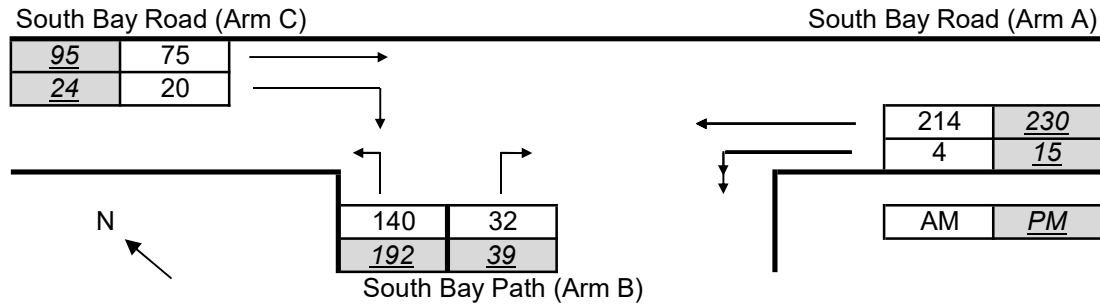
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	75	95	Q-BA	458	451
q-CB	20	29	Q-BC	607	604
q-AB	4	15	Q-CB	424	422
q-AC	230	244	Q-BAC	572	571
q-BA	32	39			
q-BC	140	192			
f	0.814	0.831			

Ratio-of-flow to Capacity	AM	PM
B-A	0.070	0.086
B-C	0.231	0.318
C-B	0.047	0.069
B-AC	0.301	0.404

Priority Junction Analysis

Junction: South Bay Path / South Bay Road Job Number: J7245
 Scenario: With Proposed Conversion (Weekend) J04 - P. 6
 Design Year: 2030 Designed By: MCY Checked By: WCH Date: 04 February 2025



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

	Input		Input		Input		Calculated	
W	7.30		V-rBA	30	w-BA	3.00	D	0.8007
W-CR	0.00		V-IBA	30	w-BC	3.00	E	0.8628
			V-rBC	30	w-CB	0.00	F	0.6037
			V-rCB	30			Y	0.4963

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	75	95	Q-BA	460	454
q-CB	20	24	Q-BC	609	606
q-AB	4	15	Q-CB	426	423
q-AC	214	230	Q-BAC	575	574
q-BA	32	39			
q-BC	140	192			
f	0.814	0.831			

Ratio-of-flow to Capacity	AM	PM
B-A	0.070	0.086
B-C	0.230	0.317
C-B	0.047	0.057
B-AC	0.299	0.403

Roundabout Analysis

Junction: Repulse Bay Road / South Bay Road Roundabout Job Number: J7245
 Scenario: Existing Condition (weekday) J05 - P. 1
 Design Year: 2024 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	5	817	62						884	310
From B	563	26	107						696	74
From C	86	277	7						370	594
From D										
From E										
From F										
From G										
From H										
Total	654	1120	176						1950	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	0	532	49						581	428
From B	550	23	243						816	51
From C	85	403	2						490	573
From D										
From E										
From F										
From G										
From H										
Total	635	958	294						1887	

Legend

Arm	Road (in clockwise order)
A	Repulse Bay Rd (WB)
B	Repulse Bay Rd (EB)
C	South Bay Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	5.0	100.0	100.0	20	15	0.0
From B	5.0	3.5	50.0	10.0	20	20	0.2
From C	5.0	4.0	50.0	10.0	20	30	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	5.000	0.018	1.491	1.091	1515	0.626	1441	1361	884	581	0.613	0.427
From B	4.514	0.018	1.491	1.064	1368	0.596	1408	1423	696	816	0.494	0.573
From C	4.758	0.018	1.491	1.029	1442	0.611	1110	1123	370	490	0.333	0.436
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Repulse Bay Road / South Bay Road Roundabout Job Number: J7245
 Scenario: Without Proposed Development (weekday) J05 - P. 2
 Design Year: 2029 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	5	859	65						929	325
From B	592	27	112						731	77
From C	90	291	7						388	624
From D										
From E										
From F										
From G										
From H										
Total	687	1177	184						2048	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	0	559	51						610	450
From B	578	24	255						857	53
From C	89	424	2						515	602
From D										
From E										
From F										
From G										
From H										
Total	667	1007	308						1982	

Legend

Arm	Road (in clockwise order)
A	Repulse Bay Rd (WB)
B	Repulse Bay Rd (EB)
C	South Bay Road
D	0
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	5.0	100.0	100.0	20	15	0.0
From B	5.0	3.5	50.0	10.0	20	20	0.2
From C	5.0	4.0	50.0	10.0	20	30	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	5.000	0.018	1.491	1.091	1515	0.626	1431	1346	929	610	0.649	0.453
From B	4.514	0.018	1.491	1.064	1368	0.596	1406	1422	731	857	0.520	0.603
From C	4.758	0.018	1.491	1.029	1442	0.611	1091	1105	388	515	0.356	0.466
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Repulse Bay Road / South Bay Road Roundabout Job Number: J7245
 Scenario: With Proposed Development (weekday) J05 - P. 3
 Design Year: 2029 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	5	859	64						928	320
From B	592	27	112						731	76
From C	89	286	7						382	624
From D										
From E										
From F										
From G										
From H										
Total	686	1172	183						2041	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	0	559	48						607	440
From B	578	24	255						857	50
From C	86	414	2						502	602
From D										
From E										
From F										
From G										
From H										
Total	664	997	305						1966	

Legend

Arm	Road (in clockwise order)
A	Repulse Bay Rd (WB)
B	Repulse Bay Rd (EB)
C	South Bay Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	5.0	100.0	100.0	20	15	0.0
From B	5.0	3.5	50.0	10.0	20	20	0.2
From C	5.0	4.0	50.0	10.0	20	30	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	5.000	0.018	1.491	1.091	1515	0.626	1434	1352	928	607	0.647	0.449
From B	4.514	0.018	1.491	1.064	1368	0.596	1407	1423	731	857	0.520	0.602
From C	4.758	0.018	1.491	1.029	1442	0.611	1091	1105	382	502	0.350	0.454
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Repulse Bay Road / South Bay Road Roundabout Job Number: J7245
 Scenario: Existing Condition (weekend) J05 - P. 4
 Design Year: 2024 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	0	571	45						616	342
From B	491	13	71						575	45
From C	72	329	0						401	504
From D										
From E										
From F										
From G										
From H										
Total	563	913	116						1592	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	1	637	21						659	430
From B	554	38	154						746	22
From C	64	392	0						456	593
From D										
From E										
From F										
From G										
From H										
Total	619	1067	175						1861	

Legend

Arm	Road (in clockwise order)
A	Repulse Bay Rd (WB)
B	Repulse Bay Rd (EB)
C	South Bay Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	5.0	100.0	100.0	20	15	0.0
From B	5.0	3.5	50.0	10.0	20	20	0.2
From C	5.0	4.0	50.0	10.0	20	30	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	5.000	0.018	1.491	1.091	1515	0.626	1419	1359	616	659	0.434	0.485
From B	4.514	0.018	1.491	1.064	1368	0.596	1427	1441	575	746	0.403	0.518
From C	4.758	0.018	1.491	1.029	1442	0.611	1167	1111	401	456	0.344	0.410
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Repulse Bay Road / South Bay Road Roundabout Job Number: J7245
 Scenario: Without Proposed Development (weekend) J05 - P. 5
 Design Year: 2029 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	0	600	47						647	360
From B	516	14	75						605	47
From C	76	346	0						422	530
From D										
From E										
From F										
From G										
From H										
Total	592	960	122						1674	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	1	669	22						692	452
From B	582	40	162						784	23
From C	67	412	0						479	623
From D										
From E										
From F										
From G										
From H										
Total	650	1121	184						1955	

Legend

Arm	Road (in clockwise order)
A	Repulse Bay Rd (WB)
B	Repulse Bay Rd (EB)
C	South Bay Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	5.0	100.0	100.0	20	15	0.0
From B	5.0	3.5	50.0	10.0	20	20	0.2
From C	5.0	4.0	50.0	10.0	20	30	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	5.000	0.018	1.491	1.091	1515	0.626	1407	1344	647	692	0.460	0.515
From B	4.514	0.018	1.491	1.064	1368	0.596	1425	1441	605	784	0.424	0.544
From C	4.758	0.018	1.491	1.029	1442	0.611	1150	1092	422	479	0.367	0.439
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Repulse Bay Road / South Bay Road Roundabout Job Number: J7245
 Scenario: With Proposed Development (weekend) J05 - P. 6
 Design Year: 2029 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	0	600	47						647	347
From B	516	14	75						605	47
From C	73	333	0						406	530
From D										
From E										
From F										
From G										
From H										
Total	589	947	122						1658	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	1	669	17						687	441
From B	582	40	162						784	18
From C	64	401	0						465	623
From D										
From E										
From F										
From G										
From H										
Total	647	1110	179						1936	

Legend

Arm	Road (in clockwise order)
A	Repulse Bay Rd (WB)
B	Repulse Bay Rd (EB)
C	South Bay Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	5.0	100.0	100.0	20	15	0.0
From B	5.0	3.5	50.0	10.0	20	20	0.2
From C	5.0	4.0	50.0	10.0	20	30	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	5.000	0.018	1.491	1.091	1515	0.626	1416	1352	647	687	0.457	0.508
From B	4.514	0.018	1.491	1.064	1368	0.596	1425	1444	605	784	0.424	0.543
From C	4.758	0.018	1.491	1.029	1442	0.611	1150	1092	406	465	0.353	0.426
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: South Bay Road / South Bay Close Roundabout Job Number: J7245
 Scenario: Existing Condition (weekday) J06 - P. 1
 Design Year: 2024 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	6	70	100						176	8
From B	89	0	8						97	106
From C	267	8	0						275	95
From D										
From E										
From F										
From G										
From H										
Total	362	78	108						548	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	13	109	173						295	15
From B	139	1	17						157	186
From C	339	14	0						353	153
From D										
From E										
From F										
From G										
From H										
Total	491	124	190						805	

Legend

Arm	Road (in clockwise order)
A	South Bay Rd (EB)
B	South Bay Close (WB)
C	South Bay Rd (NB)
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	3.5	25.0	15.0	25	25	0.2
From B	5.0	4.0	25.0	50.0	25	15	0.0
From C	5.0	4.0	25.0	50.0	25	30	0.0
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	4.636	0.030	1.485	1.027	1405	0.601	1438	1434	176	295	0.122	0.206
From B	4.940	0.030	1.485	1.062	1497	0.620	1520	1467	97	157	0.064	0.107
From C	4.940	0.030	1.485	1.010	1497	0.620	1452	1416	275	353	0.189	0.249
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: South Bay Road / South Bay Close Roundabout Job Number: J7245
 Scenario: Without Proposed Development (weekday) J06 - P. 2
 Design Year: 2029 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	6	74	105						185	8
From B	94	0	8						102	111
From C	281	8	0						289	100
From D										
From E										
From F										
From G										
From H										
Total	381	82	113						576	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	14	115	182						311	16
From B	146	1	18						165	196
From C	356	15	0						371	161
From D										
From E										
From F										
From G										
From H										
Total	516	131	200						847	

Legend

Arm	Road (in clockwise order)
A	South Bay Rd (EB)
B	South Bay Close (WB)
C	South Bay Rd (NB)
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	3.5	25.0	15.0	25	25	0.2
From B	5.0	4.0	25.0	50.0	25	15	0.0
From C	5.0	4.0	25.0	50.0	25	30	0.0
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	4.636	0.030	1.485	1.027	1405	0.601	1438	1433	185	311	0.129	0.217
From B	4.940	0.030	1.485	1.062	1497	0.620	1516	1460	102	165	0.067	0.113
From C	4.940	0.030	1.485	1.010	1497	0.620	1449	1411	289	371	0.199	0.263
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: South Bay Road / South Bay Close Roundabout Job Number: J7245
 Scenario: With Proposed Development (weekday) J06 - P. 3
 Design Year: 2029 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	6	74	104						184	8
From B	94	0	8						102	110
From C	275	8	0						283	100
From D										
From E										
From F										
From G										
From H										
Total	375	82	112						569	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	14	115	179						308	16
From B	146	1	18						165	193
From C	343	15	0						358	161
From D										
From E										
From F										
From G										
From H										
Total	503	131	197						831	

Legend

Arm	Road (in clockwise order)
A	South Bay Rd (EB)
B	South Bay Close (WB)
C	South Bay Rd (NB)
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	3.5	25.0	15.0	25	25	0.2
From B	5.0	4.0	25.0	50.0	25	15	0.0
From C	5.0	4.0	25.0	50.0	25	30	0.0
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	4.636	0.030	1.485	1.027	1405	0.601	1438	1433	184	308	0.128	0.215
From B	4.940	0.030	1.485	1.062	1497	0.620	1517	1462	102	165	0.067	0.113
From C	4.940	0.030	1.485	1.010	1497	0.620	1449	1411	283	358	0.195	0.254
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: South Bay Road / South Bay Close Roundabout Job Number: J7245
 Scenario: Existing Condition (weekend) J06 - P. 4
 Design Year: 2024 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	2	38	76						116	15
From B	61	0	15						76	78
From C	337	15	0						352	63
From D										
From E										
From F										
From G										
From H										
Total	400	53	91						544	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	8	48	118						174	9
From B	42	0	1						43	126
From C	404	9	0						413	50
From D										
From E										
From F										
From G										
From H										
Total	454	57	119						630	

Legend

Arm	Road (in clockwise order)
A	South Bay Rd (EB)
B	South Bay Close (WB)
C	South Bay Rd (NB)
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	3.5	25.0	15.0	25	25	0.2
From B	5.0	4.0	25.0	50.0	25	15	0.0
From C	5.0	4.0	25.0	50.0	25	30	0.0
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	4.636	0.030	1.485	1.027	1405	0.601	1434	1437	116	174	0.081	0.121
From B	4.940	0.030	1.485	1.062	1497	0.620	1538	1506	76	43	0.049	0.029
From C	4.940	0.030	1.485	1.010	1497	0.620	1472	1480	352	413	0.239	0.279
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: South Bay Road / South Bay Close Roundabout Job Number: J7245
 Scenario: Without Proposed Development (weekend) J06 - P. 5
 Design Year: 2029 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	2	40	80						122	16
From B	64	0	16						80	82
From C	354	16	0						370	66
From D										
From E										
From F										
From G										
From H										
Total	420	56	96						572	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	8	50	124						182	9
From B	44	0	1						45	132
From C	425	9	0						434	52
From D										
From E										
From F										
From G										
From H										
Total	477	59	125						661	

Legend

Arm	Road (in clockwise order)
A	South Bay Rd (EB)
B	South Bay Close (WB)
C	South Bay Rd (NB)
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	3.5	25.0	15.0	25	25	0.2
From B	5.0	4.0	25.0	50.0	25	15	0.0
From C	5.0	4.0	25.0	50.0	25	30	0.0
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	4.636	0.030	1.485	1.027	1405	0.601	1433	1437	122	182	0.085	0.127
From B	4.940	0.030	1.485	1.062	1497	0.620	1535	1502	80	45	0.052	0.030
From C	4.940	0.030	1.485	1.010	1497	0.620	1470	1479	370	434	0.252	0.293
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: South Bay Road / South Bay Close Roundabout Job Number: J7245
 Scenario: With Proposed Development (weekend) J06 - P. 6
 Design Year: 2029 Designed By: MCY Checked By: WCH Date: 04 February 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	2	40	80						122	16
From B	64	0	16						80	82
From C	338	16	0						354	66
From D										
From E										
From F										
From G										
From H										
Total	404	56	96						556	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q _c
From A	8	50	119						177	9
From B	44	0	1						45	127
From C	411	9	0						420	52
From D										
From E										
From F										
From G										
From H										
Total	463	59	120						642	

Legend

Arm	Road (in clockwise order)
A	South Bay Rd (EB)
B	South Bay Close (WB)
C	South Bay Rd (NB)
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	5.0	3.5	25.0	15.0	25	25	0.2
From B	5.0	4.0	25.0	50.0	25	15	0.0
From C	5.0	4.0	25.0	50.0	25	30	0.0
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q _E	Entry Capacity
q _c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= 303x ₂
f _c	= 0.210t _D (1+0.2x ₂)
t _D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x ₂	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	4.636	0.030	1.485	1.027	1405	0.601	1433	1437	122	177	0.085	0.123
From B	4.940	0.030	1.485	1.062	1497	0.620	1535	1506	80	45	0.052	0.030
From C	4.940	0.030	1.485	1.010	1497	0.620	1470	1479	354	420	0.241	0.284
From D												
From E												
From F												
From G												
From H												

Appendix C – Swept Path Analyses

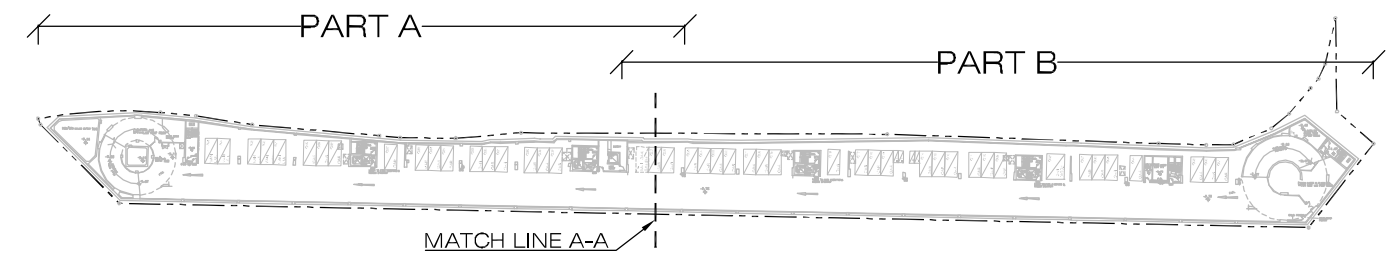


Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

**SWEPT PATH ANALYSES
AT L/UL AREAS AT UG/F**

Figure No. J7245	SP01	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Designed by W C H	Drawn by S C Y	Checked by K C	
Scale in A3 1 : 400	Date 04 FEB 2025		

T:\JOB\J7200-J7249\J7245(2025 02) J7245_TIA_FR_R3\Fig 3.1 & SP01 RevA.dwg



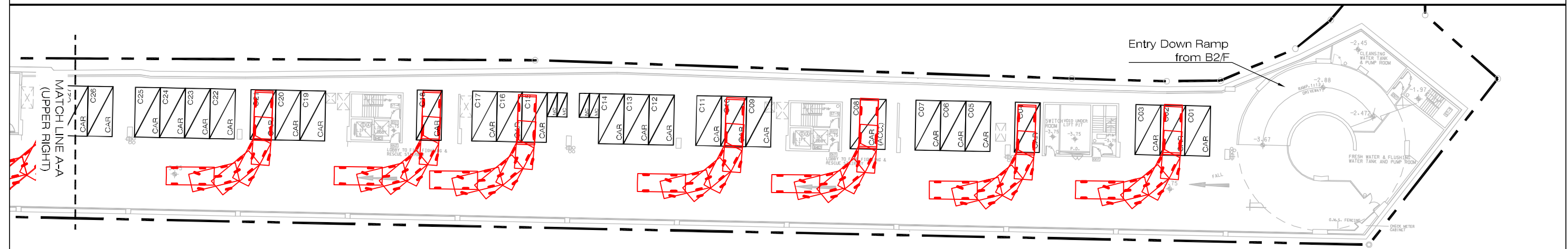
KEY PLAN

SCALE: 1 : 1,500



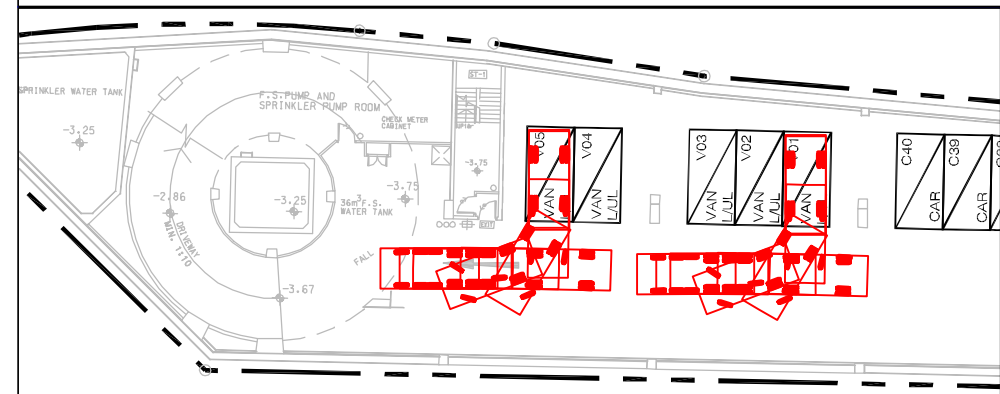
PART A

Swept Path of Private Cars
Entering and Exiting Parking Spaces and Laybys



PART B

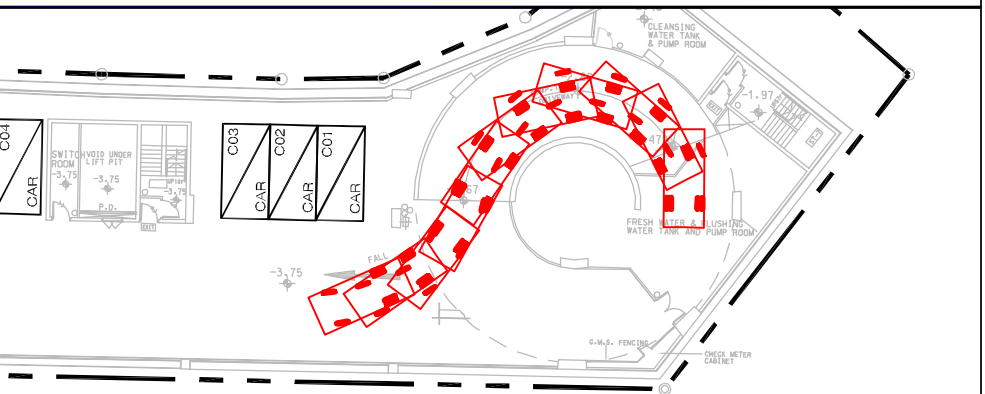
Swept Path of Private Cars
Entering and Exiting Parking Spaces and Laybys



Swept Path of Small-sized LGV
Entering L/UL Bay



Swept Path of Small-sized LGV
Exiting L/UL Bay and on Up-Ramp



Swept Path of Small-sized LGV
Entering from Down-Ramp

Project Title PROPOSED CONVERSION OF PART OF THE PULSE INTO HOTEL IN "OTHER SPECIFIED USES (BEACH RELATED LEISURE USE)" AND "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONES AT NO. 28 BEACH ROAD, REPULSE BAY

Figure Title **SWEPT PATH OF PRIVATE CARS AND GOOD VAN AT B3/F WITH THE PROPOSED CONVERSION**

Figure No. J7245	SP02	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Designed by W C H	Drawn by S C Y	Checked by K C	
Scale in A3 1 : 400	Date 04 FEB 2025		

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