

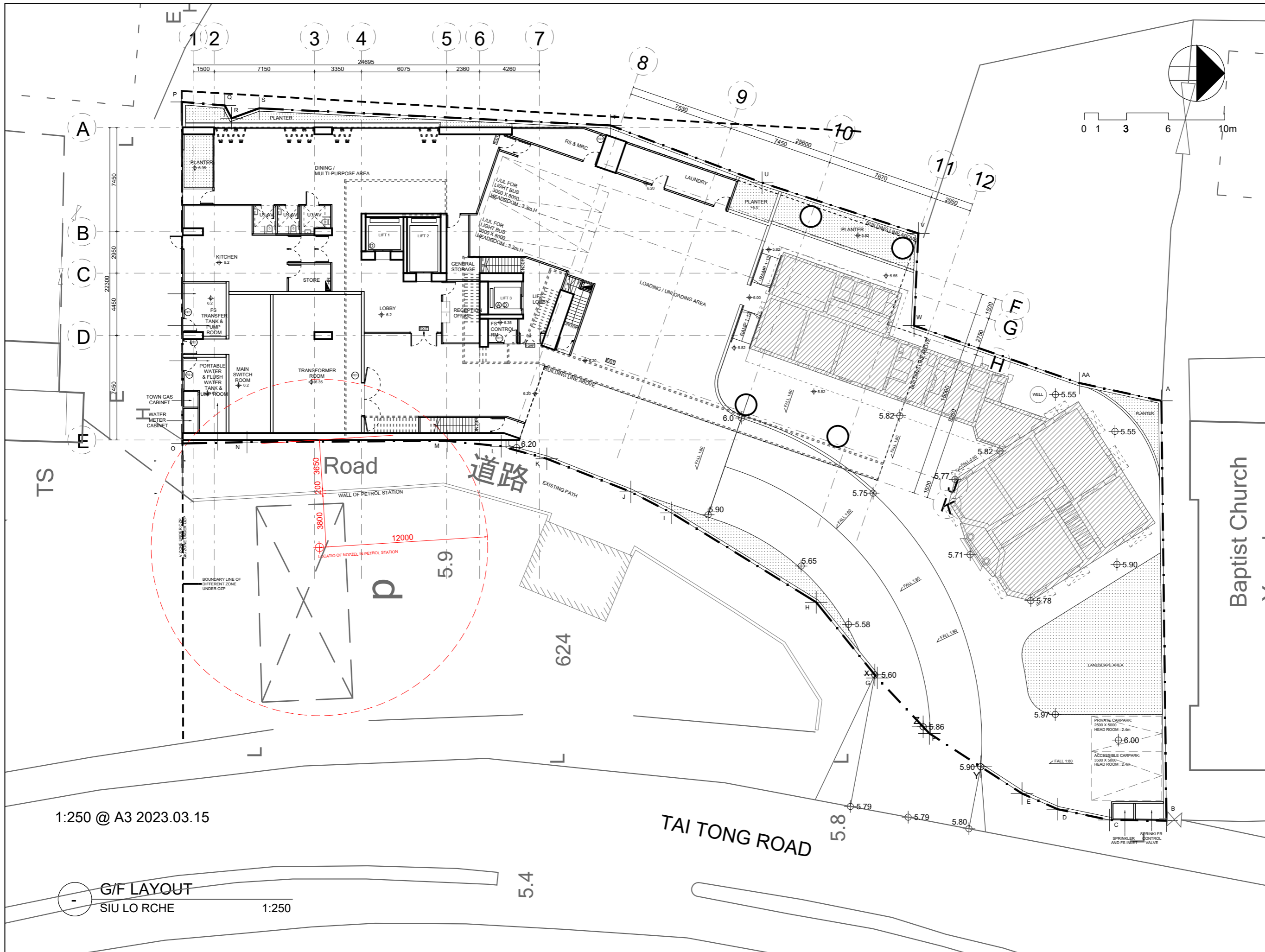
Appendix 5

Supplementary Information for the SDIA

Table 2.1: Parameters for Estimating Wastewater Generation and Hydraulic Capacity

Parameter	Value	Justification
<i>Population</i>		
Elderly Home Guest	260 persons	According to the planning statement, there will be a total of 241 beds (or within a range of 220 – 260) in total, 260 persons is adopted for conservative approach.
Number of Employee in Elderly Home	30 persons	Information provided by the project applicant.
<i>Unit Flow Factors</i>		
Elderly Home Guest	0.27 m ³ /day	'Modern Village / R2 Private Development' based on EPD's GESF Table T-1.
Employee in Elderly Home	0.28 m ³ /day	'Commercial Employee + J11 Community, Social & Personal Services' based on EPD's GESF Table T-2.
Industrial Employee	2.08 m ³ /day	'Industrial Employee + J1 Manufacturing in Yuen Long' based on EPD's GESF Table T-3.
Patrol Station Employee	0.18 m ³ /day	'Commercial Employee + J3 Transport, Storage & Communication' based on EPD's GESF Table T-2.
Institutional Employee	0.28 m ³ /day	'Commercial Employee + J11 Community, Social & Personal Services' based on EPD's GESF Table T-2.
School Student	0.04 m ³ /day	'School Student' based on EPD's GESF Table T-2.
School Employee	0.28 m ³ /day	'Commercial Employee + J11 Community, Social & Personal Services' based on EPD's GESF Table T-2.
<i>Catchment Inflow Factor</i>		
P _{CIF}	1.00	Catchment Inflow Factor = 1 for vicinity located in 'Yuen Long' based on EPD's GESF Table T-4.

APPENDIX A MASTER LAYOUT PLAN



PROJECT NO. HK-A22006
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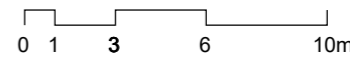
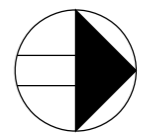
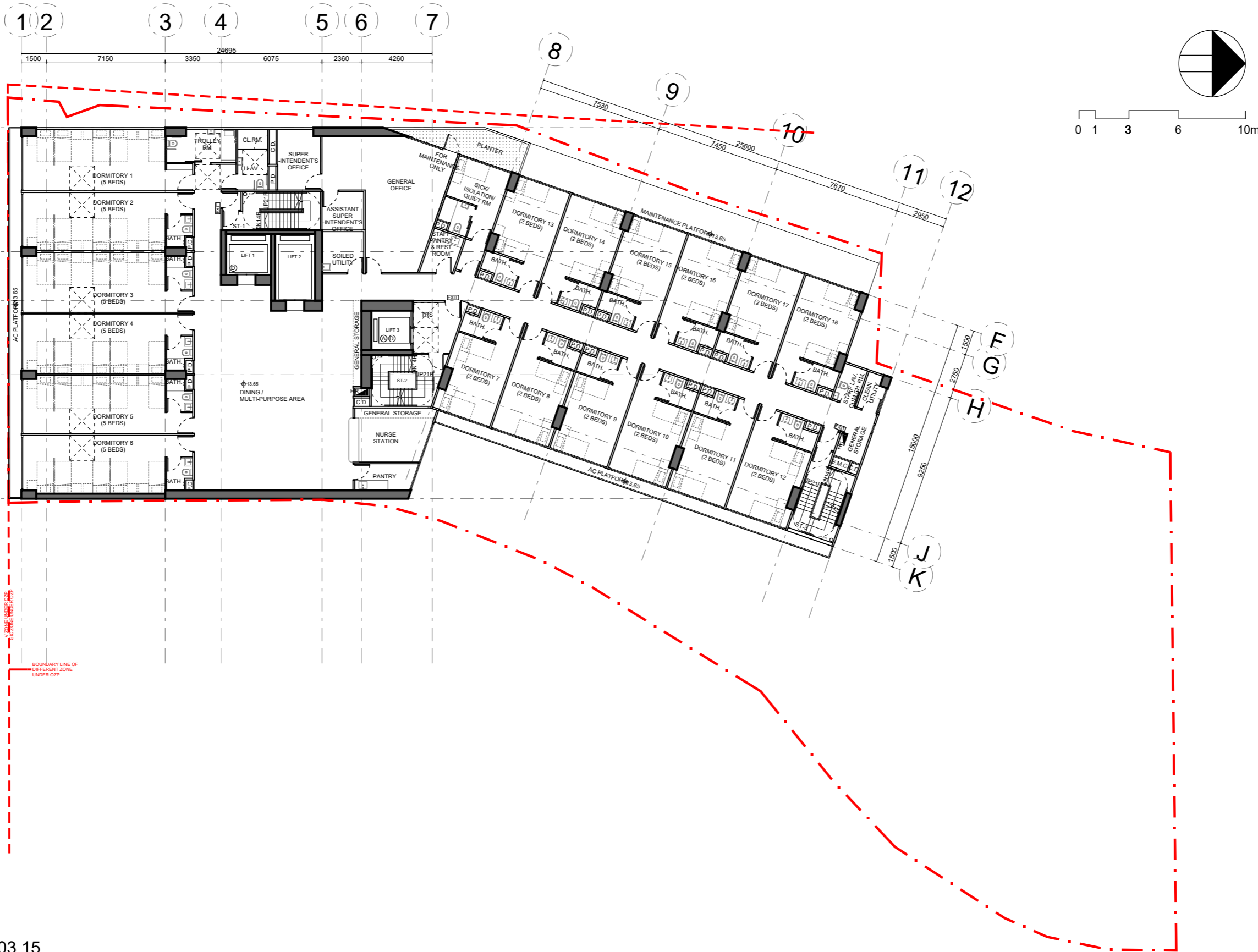
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DRAWING TITLE 圖紙名稱: G/F LAYOUT PLAN

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DATE 日期: 20230505	

1:250 @ A3 2023.03.15

G/F LAYOUT
SIU LO RCHE 1:250



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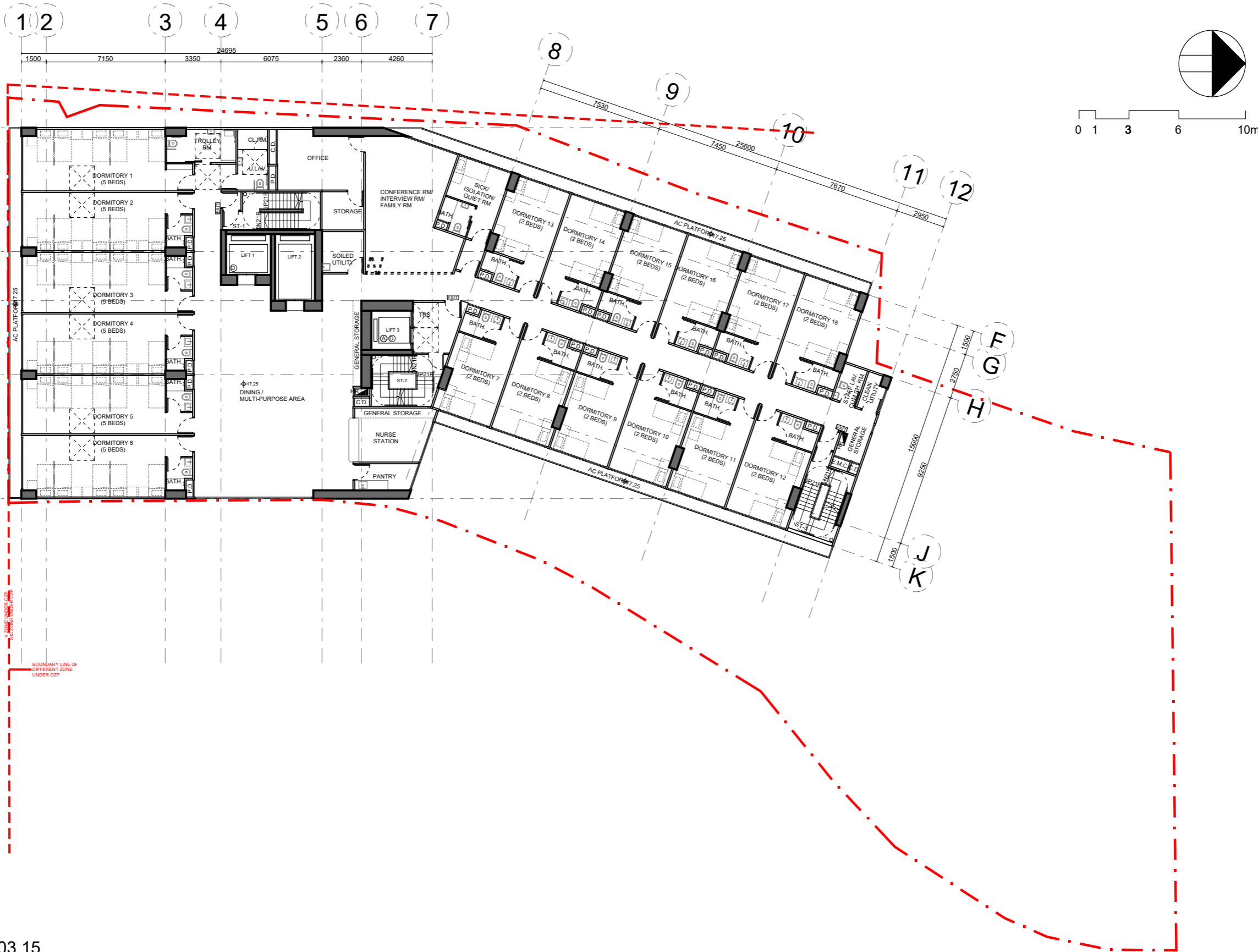
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DRAWING TITLE
圖紙名稱: 1/F LAYOUT PLAN

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1/F LAYOUT
SIU LO RCHE
1:250



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DRAWING TITLE
 圖紙名稱: **2/F LAYOUT PLAN**

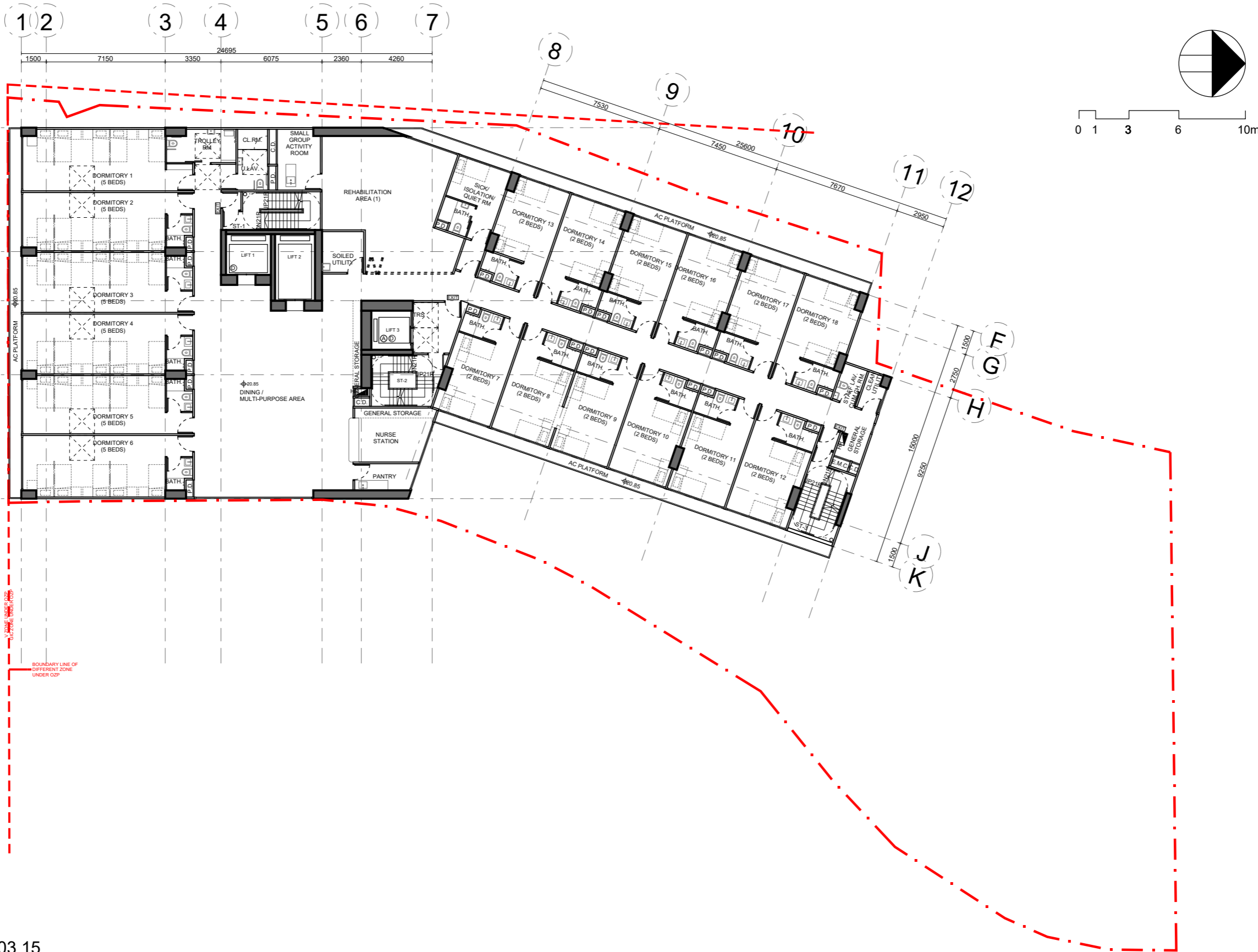
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 圖紙編號:
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1:250 @ A3 2023.03.15

2/F LAYOUT
 SIU LO RCHE 1:250



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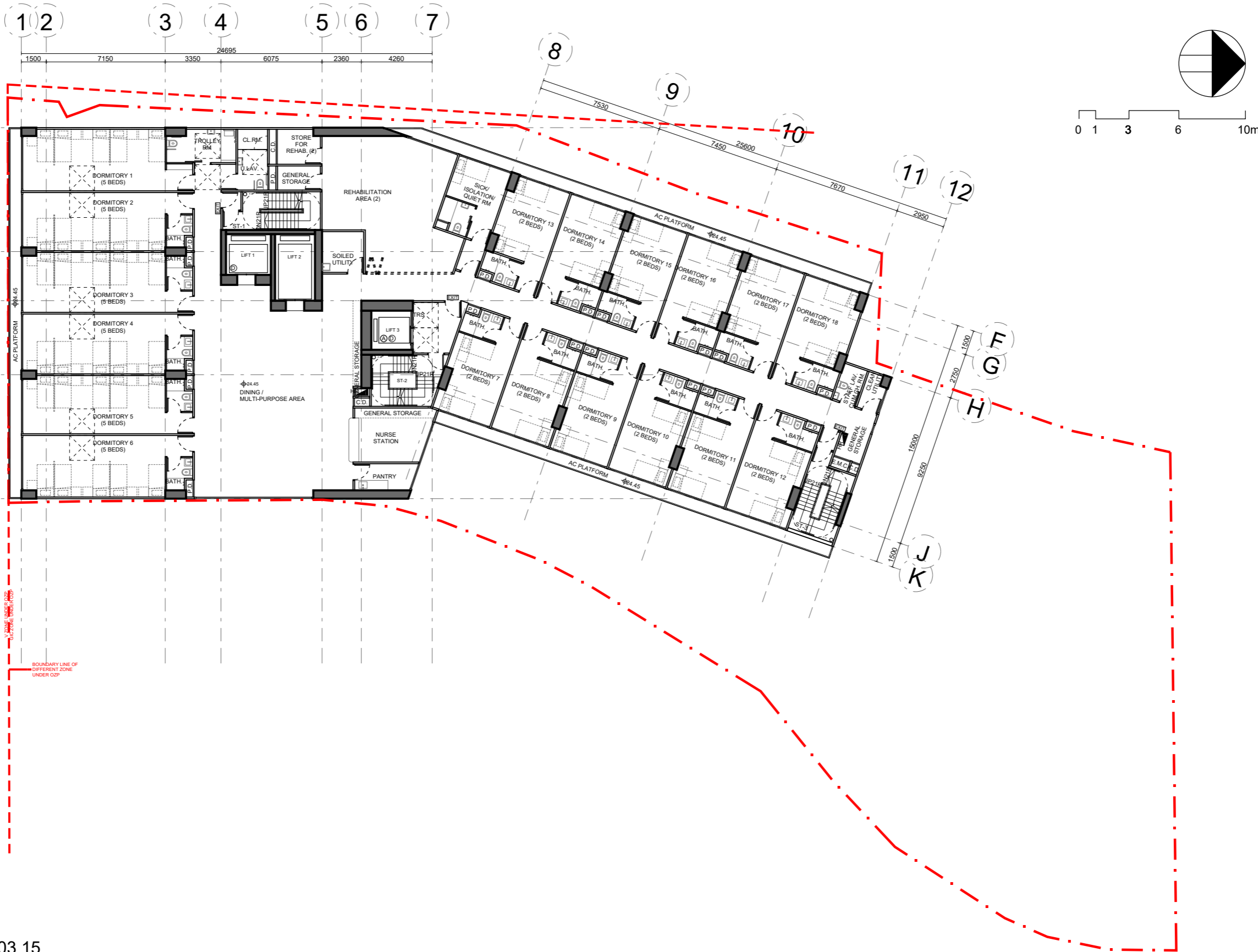
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DRAWING TITLE
 圖紙名稱: **3/F LAYOUT PLAN**

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3/F LAYOUT
 SIU LO RCHE
 1:250



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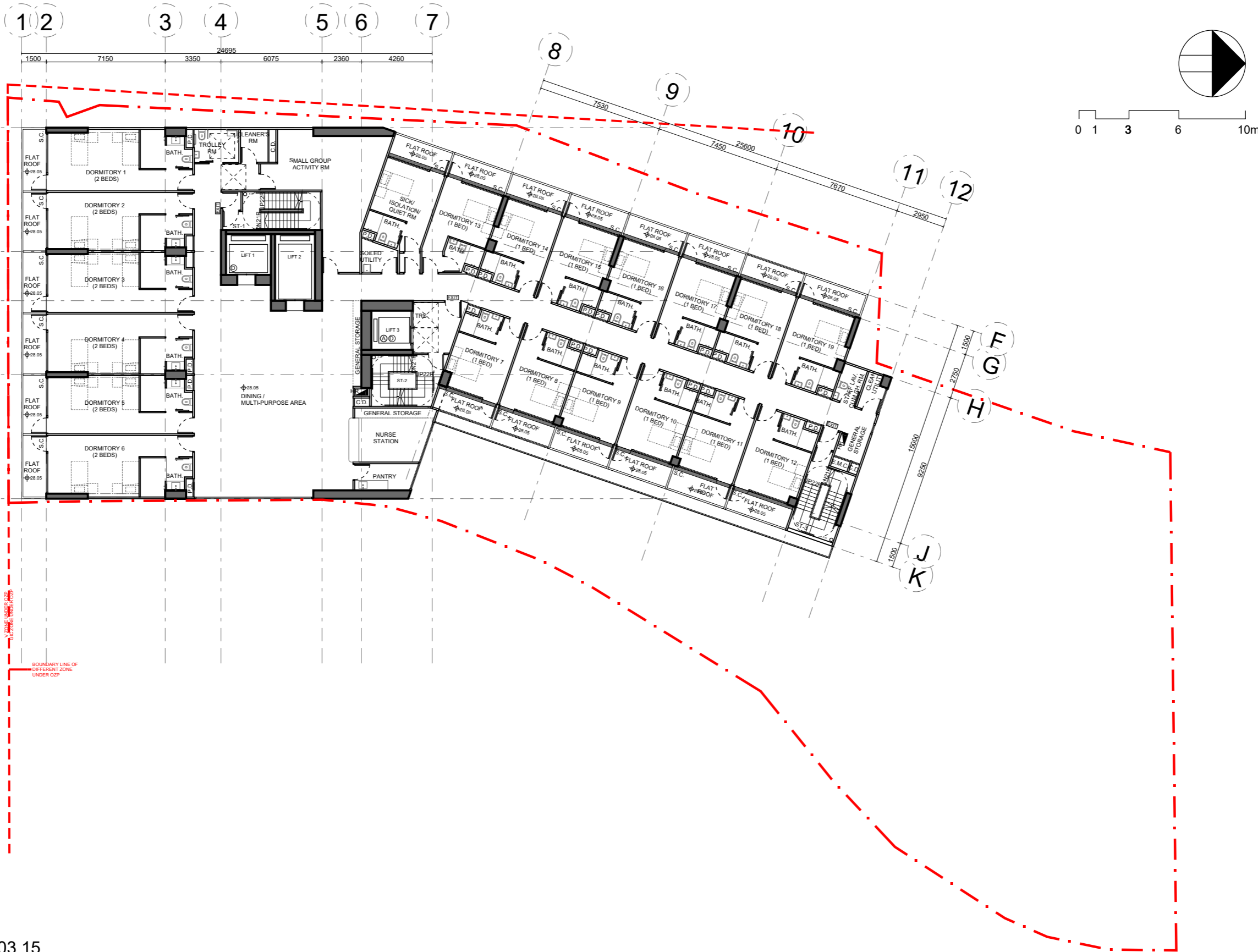
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4/F LAYOUT
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 1:250



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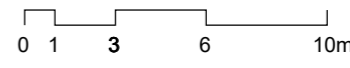
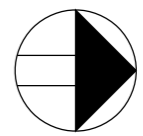
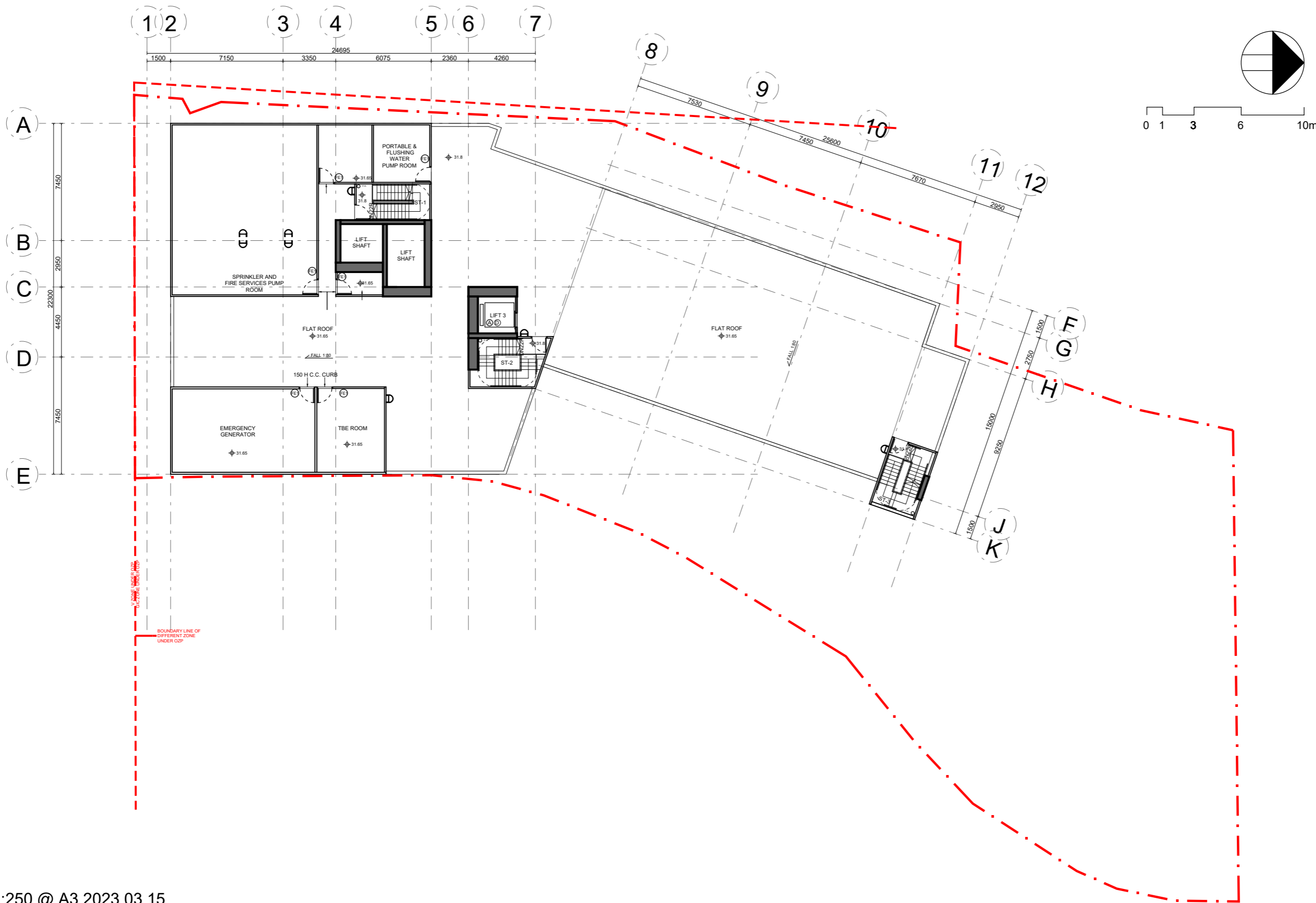
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DRAWING TITLE
 圖紙名稱: **5/F LAYOUT PLAN**

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5/F LAYOUT
 SIU LO RCHE
 1:250



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R/F LAYOUT
SIU LO RCHE
1:250

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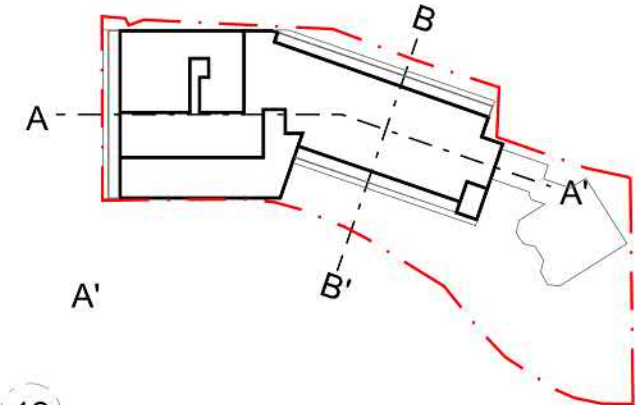
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DATE 日期: 20230315	

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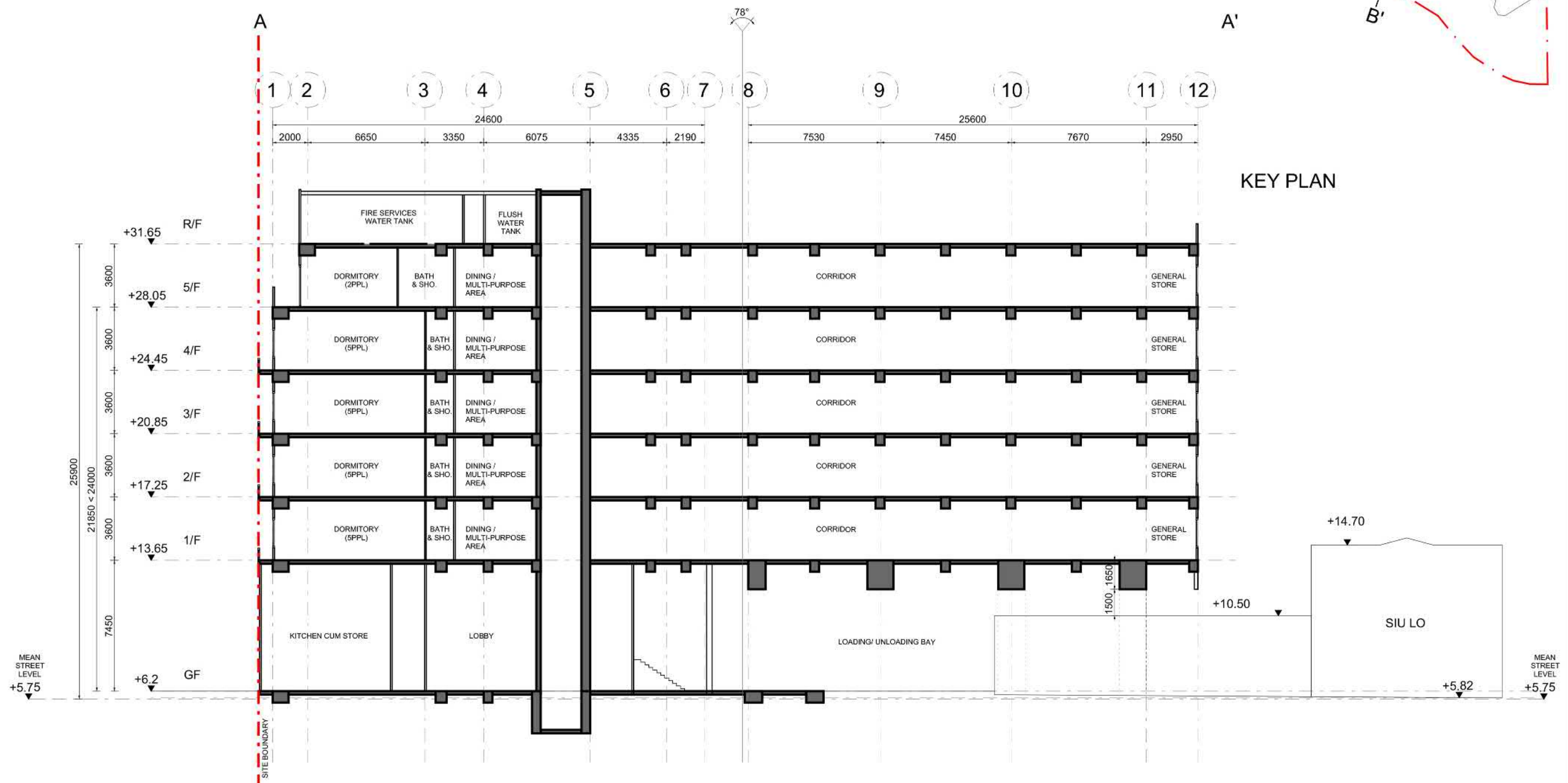
Do not scale drawings: figured dimensions are to be taken in preference. 不可縮放圖紙：如有標示尺寸，須以標示尺寸為準。

All dimensions should be checked and verify on site before commencing any work: discrepancies found in this drawing shall be reported to the designer. 所有於圖紙上標示的尺寸，須於現場覆核和修正。如在地盤發現有任何與圖紙不符之處，須盡快通知設計師。

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KEY PLAN



AMENDMENT PARTICULARS
更改細節:

Revision 修正版	Description 內容	Date 日期
△	DESIGN	20221116
△	DESIGN	20221118
△	DESIGN	20221128
△	DESIGN	20221205
△	DESIGN	20221227
△	DESIGN	20221230
△	DESIGN	20230210
△	DESIGN	20230315

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TRAFFIC CONSULTANT 交通顧問:

CTA Consultants Limited
志達顧問有限公司

PROJECT NAME
項目名稱:

Proposed Minor Relaxation of Building Height Restriction for Permitted Social Welfare Facility (Residential Care Home for the Elderly) and Proposed House Use with Conservation Proposal at Lot nos. 1695 S.E ss.1 RP, 1695 S.F ss.1 and 1695 S.H RP (Part) in D.D. 120 and Adjoining Government Land, Tai Kei Leng, Yuen Long

DRAWING TITLE
圖紙名稱:

SCHEMATIC SECTION A A'

DESIGN IN CHARGE
設計負責人

KL

SCALE
比例:

1:250@A3

DATE
日期:

20230315

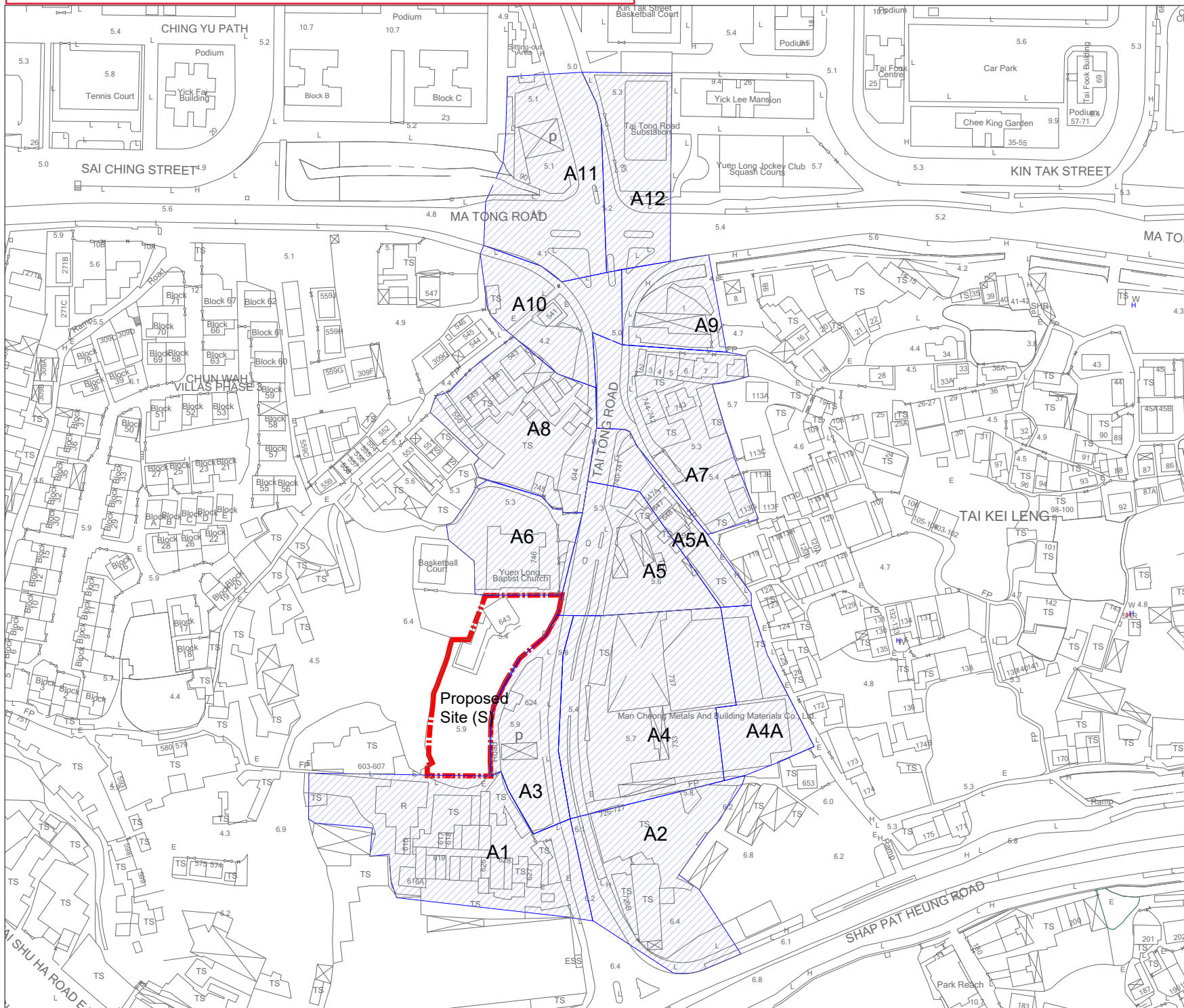
DWG NO.
圖紙編號:

S-101

1:250 @ A3 2023.03.15

SCHEMATIC SECTION AA'
SIU LO RCHE
1:250

APPENDIX F SURROUNDING CATCHMENTS PLAN



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LEGEND:

- PROPOSED SITE
- CATCHMENT TAKEN INTO ACCOUNT

	Prepared	Checked	Approved
Initial	LY	CC	YS
Date	05/ 2023	05/ 2023	05/ 2023

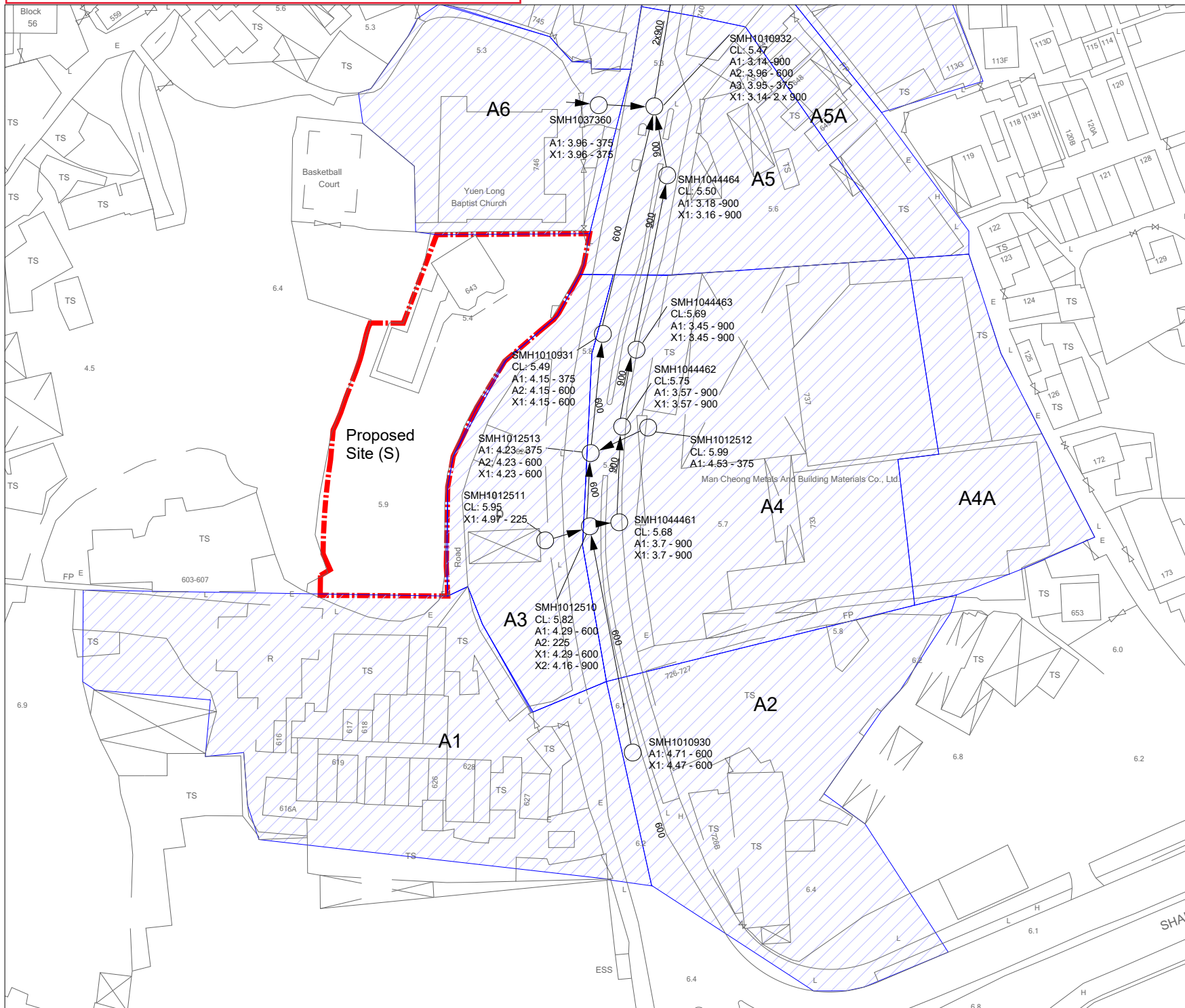
DrawingTitle
LOCATION OF CATCHMENT

Drawing No.	Rev.
DIA - 1001	0

Scale:
A4 - 1:2000



APPENDIX G EXISTING DRAINAGE PLAN



Copyright by BeeXergy Consulting Limited

- LEGEND:**
- PROPOSED SITE
 - CATCHMENT TAKEN INTO ACCOUNT
 - EXISTING DRAINAGE
 - EXISTING CATCHPIT (SCH)
 - EXISTING MANHOLE (SMH)
 - UC** EXISTING U CHANNEL
 - 300** EXISTING PIPE DIAMTER

	Prepared	Checked	Approved
Initial	LY	CC	YS
Date	05/2023	05/2023	05/2023

DrawingTitle
DRAINAGE PLAN No. 1

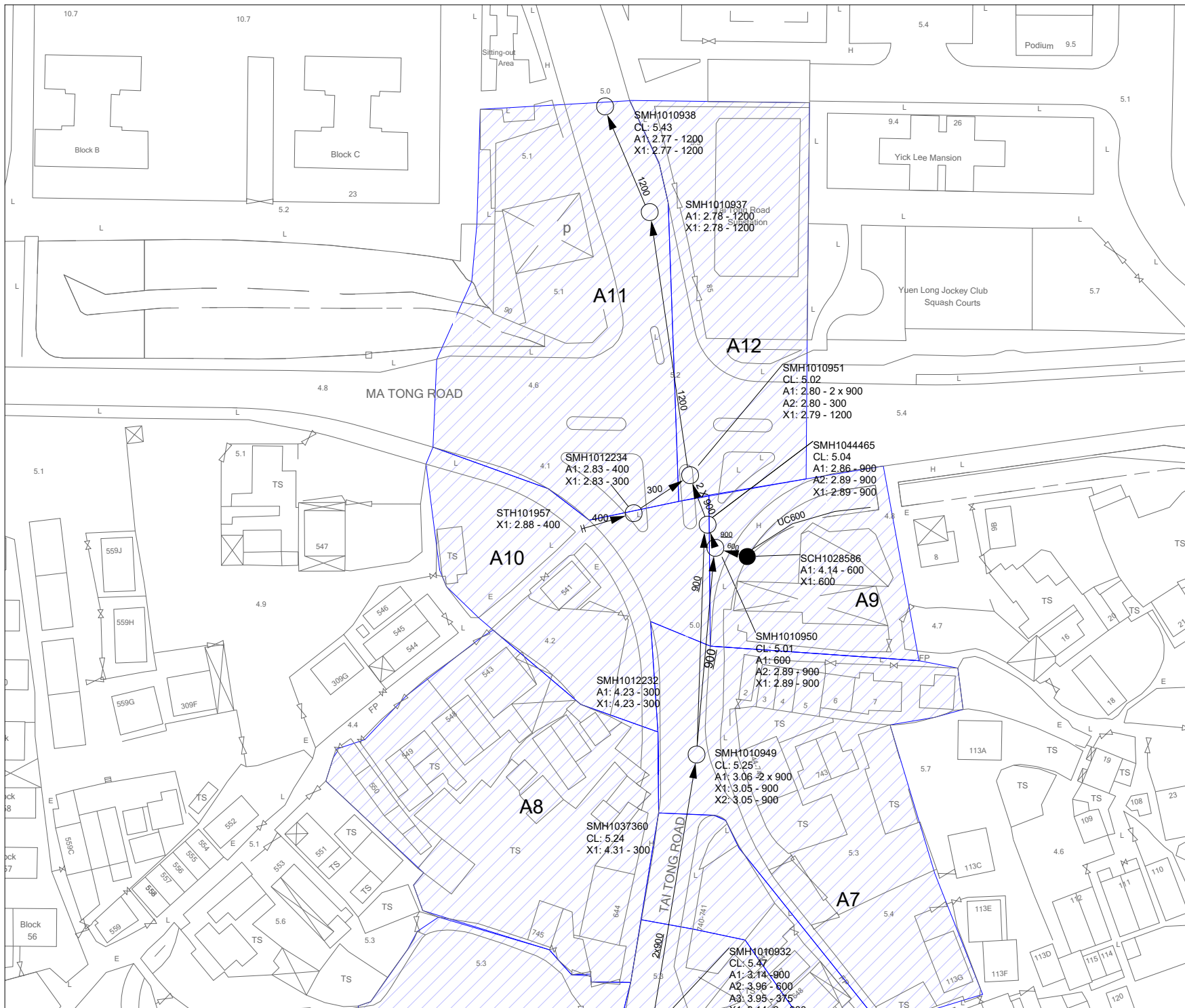
Drawing No.	Rev.
DIA - 1002	0

Scale:
A4 - 1:1000



LEGEND:

- PROPOSED SITE
- CATCHMENT TAKEN INTO ACCOUNT
- EXISTING DRAINAGE
- EXISTING CATCHPIT (SCH)
- EXISTING MANHOLE (SMH)
- UC** EXISTING U CHANNEL
- 300** EXISTING PIPE DIAMTER



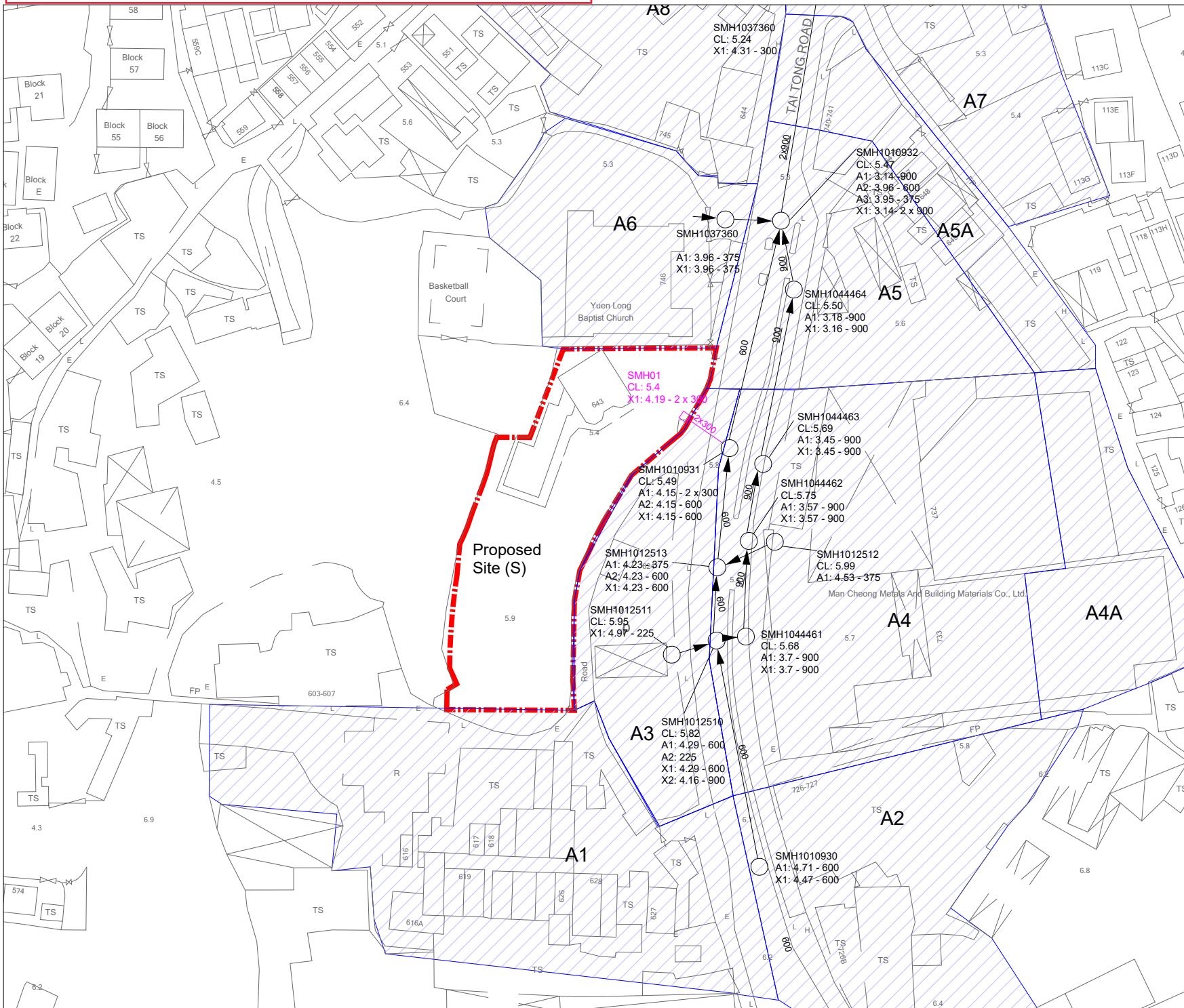
	Prepared	Checked	Approved
Initial	LY	CC	YS
Date	05/ 2023	05/ 2023	05/ 2023

DrawingTitle
DRAINAGE PLAN No. 2

Drawing No.	Rev.
DIA - 1003	0

Scale:
A4 - 1:1000

APPENDIX H PROPOSED DEAINAGE SYSTEM



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- LEGEND:**
- PROPOSED SITE
 - CATCHMENT TAKEN INTO ACCOUNT
 - PROPOSED TERMINAL MANHOLE
 - EXISTING DRAINAGE
 - EXISTING CATCHPIT (SCH)
 - EXISTING MANHOLE (SMH)
 - UC** EXISTING U CHANNEL
 - 300** EXISTING PIPE DIAMETER
 - 2x300** PROPOSED TWIN PIPE DIAMETER

	Prepared	Checked	Approved
Initial	LY	CC	YS
Date	05/ 2023	05/ 2023	05/ 2023

DrawingTitle
DRAINAGE RECORD PLAN

Drawing No.	Rev.
DIA - 1004	0

Scale:
A4 - 1:500



APPENDIX I RUNOFF CALCULATION

Calculation of Runoff for Return Period of 50 Years

Catchment ID	Paved Catchment Area (km ²)	Average slope (H), m/100m	Flow path length (L), m	Inlet time (t ₀), min	Duration (t _d), min	Storm Constants			Runoff intensity (i), mm/hr	Runoff coefficient for paved area (C _p)	C x A	Peak runoff (Q _p) m ³ /s
						a	b	c				
Before the Proposed Development												
Catchment S	0.001877	0.63	79.0	5.89	5.89	451.3	2.46	0.337	256.01	0.95	0.00178	0.127
Catchment A1	0.004113	0.53	131.0	9.35	9.35	451.3	2.46	0.337	227.84	0.95	0.00391	0.247
Catchment A2	0.003091	0.14	74.0	7.15	7.15	451.3	2.46	0.337	244.19	0.95	0.00294	0.199
Catchment A3	0.001820	1.85	27.0	1.63	1.63	451.3	2.46	0.337	325.67	0.95	0.00173	0.157
Catchment A4	0.004563	0.20	102.0	8.80	8.80	451.3	2.46	0.337	231.50	0.95	0.00433	0.279
Catchment A4A	0.001430	0.45	66.7	5.47	5.47	451.3	2.46	0.337	260.49	0.95	0.00136	0.098
Catchment A5	0.002155	0.44	68.6	5.43	5.43	451.3	2.46	0.337	260.93	0.95	0.00205	0.149
Catchment A5A	0.001166	0.12	84.5	9.24	9.24	451.3	2.46	0.337	228.50	0.95	0.00111	0.070
Catchment A6	0.001701	0.19	51.4	4.90	4.90	451.3	2.46	0.337	267.14	0.95	0.00162	0.120
Catchment A7	0.002864	0.41	97.5	7.60	7.60	451.3	2.46	0.337	240.43	0.95	0.00272	0.182
Catchment A8	0.002629	0.51	19.8	1.49	1.49	451.3	2.46	0.337	329.40	0.95	0.00250	0.229
Catchment A9	0.001264	0.26	38.0	3.51	3.51	451.3	2.46	0.337	286.62	0.95	0.00120	0.096
Catchment A10	0.001782	0.45	66.5	5.34	5.34	451.3	2.46	0.337	262.04	0.95	0.00169	0.123
Catchment A11	0.003074	0.43	23.4	1.80	1.80	451.3	2.46	0.337	321.30	0.95	0.00292	0.261
Catchment A12	0.002068	0.35	28.2	2.34	2.34	451.3	2.46	0.337	308.52	0.95	0.00196	0.168

Remark:

(i) Rainfall Increase due to climate Change at the End of 21st Century = 16.0% (1.16)

APPENDIX J CALCULATION OF DRAINAGE CAPACITY

Calculation of Drainage Capacity for Return Period of 50 Years

SECTION		Pipe	Catchment	Length	Level (Out)	Level (In)	d	r	A _w	P _w	R	s	k _s	V	Q _c	Total Runoff in 50 Years	% of capacity	Remark
From	To			m	mPD	mPD	m	m	m ²	m	m	-	mm	m/s	m ³ /s	m ³ /s	%	
SMH01	SMH1010931	2 x 300mm circular twin pipe	S	7.80	4.19	4.15	0.3	0.15	0.071	0.942	0.08	0.0051282	0.6	1.1224	0.143	0.127	89%	OK
SMH1010931	SMH1010932	1 x 600mm circular pipe	(A1+A2+A3)/2+A4+S	42.70	4.15	3.96	0.6	0.3	0.707	1.885	0.38	0.0044496	0.6	2.8574	1.818	0.708	39%	OK
SMH1010932	SMH1010949	2 x 900mm circular twin pipe	A1+A2+A3+A4+S+A5+A6	49.50	3.14	3.06	0.9	0.45	0.636	2.827	0.23	0.0016162	0.6	1.2523	1.434	1.278	89%	OK
SMH1010949	SMH1010950	1 x 900mm circular pipe	(A1+A2+A3+A4+A4A+S+A5+A5A+A6+A7+A8)/2	37.19	3.05	2.89	0.9	0.45	0.636	2.827	0.23	0.0043022	0.6	2.0510	1.174	0.929	79%	OK
SMH1010949	SMH1044465	1 x 900mm circular pipe	(A1+A2+A3+A4+A4A+S+A5+A5A+A6+A7+A8)/2	41.70	3.05	2.86	0.9	0.45	0.636	2.827	0.23	0.0045564	0.6	2.1111	1.209	0.929	77%	OK
SMH1010950	SMH1044465	1 x 900mm circular pipe	(A1+A2+A3+A4+A4A+S+A5+A5A+A6+A7)/2+A8+A9	1.46	2.89	2.86	0.9	0.45	0.636	2.827	0.23	0.0205479	0.6	4.4976	2.575	1.139	44%	OK
SMH1044465	SMJ1010951	1 x 900mm circular pipe	A1+A2+A3+A4+A4A+S+A5+A5A+A6+A7+A8+A9+A10	6.93	2.89	2.8	0.9	0.45	1.590	2.827	0.56	0.0129870	0.6	6.2595	8.960	2.076	23%	OK
SMJ1010951	SMH1010937	1 x 120mm circular pipe	A1+A2+A3+A4+A4A+S+A5+A5A+A6+A7+A8+A9+A10	48.60	2.79	2.78	1.2	0.6	2.827	3.770	0.75	0.0002058	0.6	0.9267	2.358	2.076	88%	OK
SMH1010937	SMH1010938	1 x 120mm circular pipe	A1+A2+A3+A4+A4A+S+A5+A5A+A6+A7+A8+A9+A10+A11+A12	19.10	2.78	2.77	1.20	0.6	2.827	3.770	0.75	0.0005236	0.6	1.4853	3.780	2.505	66%	OK

Legend

d = pipe diameter, m

r = pipe radius (m) = 0.5d

A_w = wetted area (m²) = π r² (circular) ; πr²/2+2r² (U-channel)

P_w = wetted perimeter (m) = 2πr (circular) ; 2πr/2 (U-channel)

R = Hydraulic radius (m) = A_w / P_w

s = Slope of the total energy line

k_s = equivalent sand roughness, mm

V = Velocity of flow calculated based on Colebrook White Equation, m/s

Q_c = Flow Capacity (10% sedimentation incorporated), m³/s

Q_e = Estimated total peak flow from the Site during peak season, m³/s